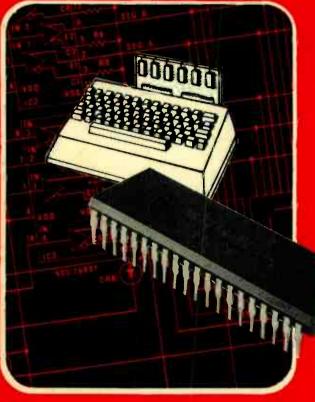
1978 EDITION

SEMICONDUCTOR REFERENCE

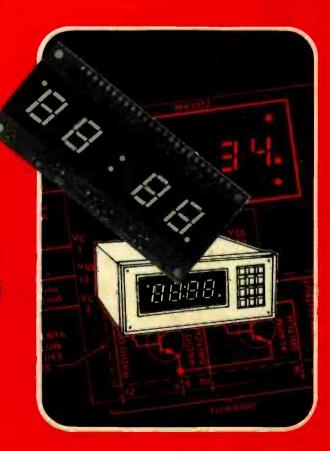
and application MANDBOOK

INCLUDES OVER 46,000 SEMICONDUCTOR SUBSTITUTIONS



RCHERS





INTEGRATED CIRCUIT CROSS REFERENCE BY GENERIC AND CATALOG NUMBER

Generic Number	Cat. No.	Page No.									
21L01	276-2501	52	723	276-1740	42	7402	276-1811	53	7490	276-1808	62
74C00	276-2301	24	741	276-007	42	7404	276-1802	53	7492	276-1819	63
74C02	276-2302	24	741	276-010	42	7406	276-1821	54	7805	276-1770	49
74C04	276-2303	24	1458	276-038	43	7408	276-1822	54	7812	276-1771	49
74C08	276-2305	24	3900	276-1713	43-44	7410	276-1807	54	7815	276-1772	49
74C74	276-2310	25	3909	276-1705	45	7413	276-1815	55	8080	276-2510	19-23
74C76	276-2312	25	3911	276-1706	46	7420	276-1809	55	50252	276-1751	50
74C90	276-2315	26	4001	276-2401	27	7427	276-1823	55	74123	276-1817	63
74C192	276-2321	26	4011	276-2411	27	7432	276-1824	56	74145	276-1828	64
74C193	276-2322	26	4013	276-2413	28	7441	276-1804	56	74150	276-1829	65
301	276-017	35	4017	276-2417	29	7447	276-1805	57	74154	276-1834	66
324	276-1711	36	4020	276-2420	30	7448	276-1816	58	74192	276-1831	67
339	276-1712	37	4027	276-2427	31	7451	276-1825	58	74193	276-1820	68
377	276-702	38	4049	276-2449	32	7473	276-1803	59	74194	276-1832	69
386	276-1731	39	4050	276-2450	32	7474	276-1818	59	74196	276-1833	70
555	276-1723	40	4511	276-2447	33	7475	276-1806	60	75491	276-1701	51
556	276-1728	40	4518	276-2490	34	7476	276-1813	60	75492	276-1702	51
566	276-1724	41	7001	276-1756	47-48	7485	276-1826	61			
567	276-1721	41	7400	276-1801	53	7486	276-1827	61			

INTEGRATED CIRCUIT CROSS REFERENCE BY CATALOG AND GENERIC NUMBER

Cat. No.	Generic F Number	Page No.	Cat. No.	Generic Number		Cat. No.	Generic Number	Page No.	Cat. No.	Generic Number	Page No.
276-007	741	42	276-1756	7001	47-48	276-1819	7492	63	276-2310	74C74	25
276-010	741	42	276-1770	7805	49	276-1820	74193	68	276-2312	74C76	25
276-017	301	35	276-1771	7812	49	276-1821	7406	54	276-2315	74C90	26
276-038	1458	43	276-1772	7815	49	276-1822	7408	54	276-2321	74C 192	26
276-702	377	38	276-1801	7400	53	276-1823	7427	55	276-2322	74C 193	26
276-1701	75491	51	276-1802	7404	53	276-1824	7432	56	276-2401	4001	27
276-1702	75492	51	276-1803	7473	59	276-1825	7451	58	276-2411	4011	27
276-1705	3909	45	276-1804	7441	56	276-1826	7485	61	276-2413	4013	28
276-1706	3911	46	276-1805	7447	57	276-1827	7486	61	276-2417	4017	29
276-1711	324	36	276-1806	7475	60	276-1828	74145	64	276-2420	4020	30
276-1712	339	37	276-1807	7410	54	276-1829	74150	65	276-2427	4027	31
276-1713	3900 4	13-44	276-1808	7490	62	276-1831	74192	67	276-2447	4511	33
276-1721	567	41	276-1809	7420	55	276-1832	74194	69	276-2449	4049	32
276-1723	555	40	276-1811	7402	53	276-1833	74196	70	276-2450	4050	32
276-1724	566	41	276-1813	7476	60	276-1834	74154	66	276-2490	4518	34
276-1728	556	40	276-1815	7413	55	276-2301	74C00	24	276-2501	21L02	52
276-1731	386	39	276-1816	7448	58	276-2302	74C02	24	276-2510	8080	19-23
276-1740	723	42	276-1817	74123	63	276-2303	74C04	24			
276-1751	50252	50	276-1818	7474	59	276-2305	74C08	24			

	il	no 260	mas Hawr Muc feeld, Me
TADIE	0F 0011=1	1303	Down and
INTRODUCTION	OF CONTENTS	You will	1. 11 m.
INTRODUCTION		Speling	pace, in
HOW TO USE THIS BOOK CARE AND HANDLING OF TRANSISTORS			3
TAND HANDLING OF TRANSISTORS			
Operating Considerations SILICON VS SELENIUM RECTIFIERS	*******	• • • • • • • • • • • • • • • • • • • •	3
ABOUT CASE DIMENSIONS GENERAL PRECAUTIONS			4
GENERAL PRECAUTIONS TESTING A TRANSISTOR			5
TESTING A TRANSISTOR		• • • • • • • • • • • • • • • • • • • •	5
HANDLING OF INTEGRATED CIRCUITS DIODES AND RECTIFIERS			5
General Purpose DiodesZener Diodes		• • • • • • • • • • • • • • • • • • • •	6
Bridge RectifiersTRANSISTORS	••••••••		6
BipolorField Effect			7
Unijunction DISPLAY AND OPTOELECTRONIC DEVICES	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • •	· · · · · · · · · · · · 7
Cadmium Sulphide Photo Cell	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	8-18
Clock Display Board		• • • • • • • • • • • • • • • • • • • •	
Clock Module		• • • • • • • • • • • • • • • • • • • •	12
Clock Module			13-18
LASCR		• • • • • • • • • • • • • • • • • • • •	12
LEDPhototransistor			8-10
Phototransistor		• • • • • • • • • • • • • • • • • • • •	
Silicon Solar Cell			
INTEGRATED CIRCUITS		• • • • • • • • • • • • • • • • • • • •	19-70
CMOS		• • • • • • • • • • • • • • • •	24-34
Microprocessor			
SPECIAL PURPOSE DEVICES. DIAC		• • • • • • • • • • • • • • • • • • • •	53-70
SCR		• • • • • • • • • • • • • • • • • • • •	71
TRIAC IMPORTANT SUGGESTIONS ON THE USE AND BE	DI 4.0514545		71
CROSS-REFERENCE/SUBSTITUTION LISTING	PLACEMENT OF TRANS	ISTORS	· · · · · · · · 72
CROSS REFERENCE LISTINGS	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	72
CASE STYLES	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	73-135
SYMBOLS		• • • • • • • • • • • • • • • • • • • •	136-137
SYMBOLS GLOSSARY OF WORDS, SYMBOLS AND ABBREVI RADIO SHACK EXPERIMENTER'S ACCESSORIES	ATIONS		138-139
RADIO SHACK EXPERIMENTER'S ACCESSORIES	ATIONS		140-143

* ©Copyright 1978, Radio Shack, A Division of Tandy Corporation, Fort Worth, Texas 76102

Printed in the United States of America

INTRODUCTION

This SEMICONDUCTOR REFERENCE HANDBOOK is intended to be just that—a reference handbook. It is not a definitive text book on semiconductors. It is a compilation of data on Radio Shack's line of prime-quality ARCHER semiconductors. Every ARCHER device covered in this Handbook is guaranteed prime—they are not "fall-outs" or "seconds"; all are top-quality, with known JEDEC, EIA or manufacturer's numbers.

At the back of the book is a cross-reference listing for replacement of Transistors, Diodes and other interchangeable semiconductor devices. The total number of cross-referenced devices exceeds 46,000. These cross-reference/replacement listings are computer-selected and are based on careful analysis of important parameters of the listed devices.

NOTE: If you can't find a replacement listing for a device you require, refer to the specification listings of the appropriate ARCHER family device. Often you will be able to make suitable replacements based on the information presented

Each ARCHER replacement should meet or exceed the required parameters. However, due to differences in Quality Control and Manufacturing procedures (which often allow for or result in broad parameter variations), and because many of the ARCHER devices are capable of better performance than the original, Radio Shack does not guarantee, nor does it imply, that the listed items will provide an exact replacement in **every** instance. Therefore we recommend that you check the voltage and current requirements of the circuit (and other pertinent specifications) before replacement and compare with the specifications listed for that particular ARCHER device.

HOW TO USE THIS BOOK

This book has been prepared to aid in BOTH replacement and original applications of Semiconduct devices. The information included will be invaluable for the service technician as well as the circuit designer (whether he be an engineer, hobbyist, student or electronics experimenter).

We have included hints on handling Semiconductor devices, operating considerations, and some simple tests to aid you in evaluating the quality of the device in existing equipment (and thus the need for replacement). Also, a complete section on the specifications for each of the ARCHER devices is included; if there is any question in your mind about replacement equivalents or original use, refer to the appropriate category in the book. You will find the important characteristics specified there.

The next to last section is an extensive listing of replacement and cross reference between other manufacturer's numbers (both JEDEC/EIA 2N—numbers and in-house designations) and the ARCHER devices. This listing provides for the substitution of over 46,000 semiconductors with ARCHER devices.

The final section includes case style drawings and some handy reference notes, a comprehensive glossary of commonly used words, plus symbols and abbreviations.

CARE AND HANDLING OF TRANSISTORS

Most modern transistors are somewhat immune from mechanical shock; however, it is always a good idea to keep them from excessive mechanical shocks, especially the metal-case type (avoid dropping, etc).

When cutting transistor leads, use scissor-type cutting tools (rather than diagonal cutting tools which use a crimping action). Crimp-type cutting tools produce a mechanical shock along the lead which when transmitted to the semiconductor chip or material can cause fracture. Consider the force with which the cut lead flies off the crimp-type cutting tool and you have a good idea of the intensity of the equal and opposite force which acts on the lead going into the device.

It is always a good practice to use a heat-sink tool on a transistor lead when soldering (use a low-wattage iron—30-watts or less). Heat from soldering can cause problems (especially with certain types of semiconductor devices). Thus, to be sure, always use a heat-sink on the lead when soldering. Gripping the lead with long nose pliers between the solder connection and the case of the device makes a good heat-sink; or use a tool designed for such use.

SILICON OR GERMANIUM?

The quickest way to determine if a transistor is germanium or silicon type, is to check the normal emitter-base voltage drop. With NPN devices, if the base is approximately 0.25 volts positive with respect to the emitter, it is a germanium type. If the voltage is about 0.65 volts, it is a silicon type. For PNP devices, the voltage will be the same value, but opposite in polarity (0.25 volts for germanium and 0.65 for silicon).

OPERATING CONSIDERATIONS

Before replacing an original-equipment device with the recommended Archer Type:

(A) Compare the lead or terminal arrangement of the Archer replacement device with the lead or terminal arrangement of the original device. If these arrangements are different, and the original transistor is a "plug in" type, bend the leads of the ARCHER device so that the base, emitter and collector leads will mate with the original transistor leads. Trim the leads after soldering in place.

CAUTION: Be particularly careful about "pincircle" and "in-line" lead break-out type transistors. Often one manufacturer makes a type with "in-line" leads, while another may make the same type with "pin-circle" configuration. Double-check both the original and the replacement device before soldering or plugging in transistors.

BOTTOM VIEW

PIN-CIRCLE

IN-LINE





- (B) Certain considerations are involved whenever an original equipment transistor is replaced by one having a different type designation. When an ARCHER series transistor is used to replace an original equipment device in an untuned amplifier stage operating at a low signal level such as the untuned RF-amplifier (antenna) stage of a radio receiver, or a low-level AF amplifier stage, it is generally unnecessary to make any circuit adjustment to assure proper performance of the equipment. However, when a replacement is made in a tuned RF amplifier stage, it is always advisable to check the alignment of the associated tuned circuits to assure proper tracking and to achieve the required gain without loss of stability.
- (C) When replacements are made in stages operating at relatively high power levels, such as Class A and Class B, AF output stages of automobile radio receivers, phonographs and AF-amplifier systems, the transistor bias should be checked and adjusted, if necessary, to protect the ARCHER replacement transistors against excessive dissipation and to minimize distortion. Means for making adjustments are generally provided in the equipment, and the necessary instructions are usually given in the equipment manufacturer's service data.
- (D) When installing an ARCHER transistor as a substitute for an original equipment type in an FM tuner, TV tuner, or other circuits operating at frequencies in the VHF or UHF regions, it is extremely important not to change any of the lead lengths or position of the original circuit. Before removing the original transistor, carefully note its position with respect to other circuit components as well as the lengths and placement

of the transistor leads, and duplicate these details as closely as possible with the ARCHER replacement transistor. Failure to observe this precaution can result in improper tuning or circuit instability. The same holds true for any replacement of Integrated Circuits, especially in FM radios and TV Receivers. Failure to observe this precaution can result in damage in the device. Transistor substitution in tuned circuits will often require realignment of the circuit.

SILICON VS SELENIUM RECTIFIERS

Silicon rectifiers are inherently more efficient than selenium or other metallic-oxide type rectifiers. When a silicon rectifier is used to replace a selenium rectifier in the power supply of a typical line-operated radio or TV receiver, the silicon rectifier will frequently deliver higher DC output voltage than the original device.

In some cases, this higher supply voltage may improve the performance of the equipment. However, in many other cases, it may immediately or eventually damage filter capacitors and/or other components which were designed to withstand only the voltage delivered by the original selenium rectifier. To prevent such damage, it is generally advisable to insert a power type resistor in series with the silicon rectifier either on the input side, between the AC supply and the rectifier, or on the output side between the rectifier and the first filter capacitor. The value of this resistor will depend on the required reduction in the DC output voltage and on the DC load current of the equipment. This value may be determined experimentally or calculated from the equation:

$$R = \frac{E}{I}$$

where R is the required resistance in ohms, E the required reduction in DC output voltage in volts and I the DC load current in amperes.

The wattage rating of the resistor should be at least 2 X EI (in no case less than 10 watts).

SOLDERING PRECAUTIONS

Extreme care should always be used in making solder connections to semiconductors. Momentary application of excessive heat, or even prolonged application of a properly heated soldering tool to a semiconductor lead or terminal, can permanently damage the device. Observe the following precautions in soldering a semiconductor lead or terminal:

- 1. Solder as far as possible from the body of the semiconductor.
- 2. Never, apply heat or molten solder to a lead or terminal for longer than 10 seconds or at a point closer than 1/16 inch to the body of the device.
- 3. Use a low voltage iron (30 watts or less) specifically intended for use with transistors or miniature circuit components.

- 4. Keep the surfaces to be soldered clean and the tip of the soldering tool adequately tinned so that the connection can be made as quickly as possible.
- 5. Always use a heat sink on the lead when soldering. Gripping the lead or terminal with longnose pliers between the solder connection and case or body allows the pliers to act as a heat sink, conducting heat away from the internal elements of the device.

ABOUT CASE DIMENSIONS

In some instances, the case of an ARCHER Semiconductor may be slightly taller or thicker than that of the original device or have a slightly different shape, particularly if the original device is a foreign type not made to U.S.A. EIA (JEDEC) standards. These mechanical differences should not affect the performance of the equipment in which the replacement is made and normally will not prevent or complicate the installation of the ARCHER replacement device.

You should realize that cross-reference substitution listings are created based on electrical parameters (not necessarily on mechanical size or type). Thus, when you make substitutions based on our listings, check for physical/mechanical compatibility. If space is limited, it would be a good idea to check physical dimensions as well as electrical specs before making substitution.

GENERAL PRECAUTIONS

ARCHER transistor and ARCHER semiconductors should not be inserted or withdrawn from circuits with the power on, because transient currents may cause permanent damage to the device. In some cases ARCHER semiconductors are in metal cans and thus could possibly become shock hazards if they are allowed to operate at a voltage appreciably above or below ground potential.

For the most effective protection, a power transistor should be operated with an adequate heat sink and with the lowest value of resistance or impedance in the emitter-to-base circuit consistent with driving signal considerations. The transistor should be protected against extremely high collector voltage pulses which may be generated when the device is operated with inductive loads particularly when current transients are present.

When replacing a power transistor or rectifier which is attached to the equipment chassis, or to a special heat sink, observe the following precautions:

A. In the case of oxide coated metal washers or wafers, which are frequently used as electrical insulators between the cases of power transistors and the chassis or heat sink, it is important not to scratch, chip or otherwise damage the oxide surface.

B. When installing an ARCHER power transistor, where a mica or oxide coated metal washer was

used to insulate the case of the original device electrically from the case, apply a thin coating of Heat Sink Compound (Radio Shack Number 276-1372) between the washer and the chassis or heat sink.

TESTING A TRANSISTOR

Before replacing a transistor you want to be sure it needs to be replaced. Always check the entire circuitry to be sure the transistor requires replacement.

The best method for checking transistors is to use a good transistor checker (dynamic in-circuit and out-of-circuit type). However, a sensitive VOM can give you a good indication of the quality of the device.

I. In-Circuit Testing

- A. First, check to see if the emitter-base junction is forward-biased. An NPN transistor should show the base 0.2 to 0.65 volts positive with respect to the emitter (approximately 0.25 volts for a germanium type and 0.6 volts for silicon). A PNP transistor should show the base 0.2 to 0.65 volts negative with respect to the emitter (0.25 volts for germanium and 0.6 volts for silicon).
- B. Check to see if the device is functioning as an amplifier. Short the emitter-base junction to remove forward bias. Voltage at the collector lead should rise to approximately the potential of the collector supply buss line. Any difference is caused by ICES (collector-to-base leakage current). The closer the collector voltage approaches the buss line, the lower ICES is and the better the transistor.

II. Out-of-Circuit Testing

Again, for the best indication of transistor quality, use a good transistor checker. However, an ohmmeter can be used as described here.

Before using the ohmmeter, find out which polarity of the internal ohmmeter battery is connected to which test lead (not all ohmmeters have the + battery polarity connected to the red lead and the - battery polarity connected to the black lead). To determine the polarity of the leads when using the ohmmeter function, use an external voltmeter or study the schematic of your VOM.

Also, remember that in most transistor circuits you are dealing with low voltages and currents (in some cases, very low). Therefore, **NEVER** use RX1 scale (extensive currents can flow through a junction, permanently damaging the transistor). It is best to determine the maximum amount of current available in each resistance range before using an ohmmeter for testing semiconductor junctions.

After you have evaluated your VOM for the above and are sure you will not damage a transistor (with excessive current or voltage in any given ohmmeter range), proceed as follows:

- A. Small Signal PNP Germanium Transistors
 - 1. Connect the positive lead of your ohmmeter to the emitter. Connect the negative lead to the base. You should read 200-500 ohms.
 - Connect the negative lead to the collector. You should read 10K-100K. Shorting collector base, the resistance should decrease.
- B. Small Signal NPN Germanium Transistors Reverse the polarity of the leads; the readings should be approximately the same.
- C. Power PNP Germanium Transistors
 - Connect the positive lead to the emitter. Connect the negative lead to the base. The reading should be 35-50 ohms.
 - 2. Connect the negative lead to the collector. The reading should be several hundred ohms. Shorting collector to base, the resistance should decrease.
- D. Power NPN Germanium Transistors Reverse the polarity of the leads; the reading should be approximately the same.
- E. Small Signal PNP Silicon Transistors
 - Connect the positive lead to the emitter. Connect the negative lead to the base. The reading should be 1K-3K.
 - 2. Connect the negative lead to the collector. The reading should be very high (may show as an "open").
- F. Small Signal NPN Silicon Transistors Reverse the polarity of the leads; the readings should be approximately the same.

- G. Power PNP Silicon Transistors
 - Connect the positive lead to the emitter. Connect the negative lead to the base. The reading should be 200-1K.
 - Connect the negative lead to the collector.
 The reading should be about 1 megohm or more.
- H. Power NPN Silicon Transistors Reverse the polarity of the leads; the readings should be approximately the same.

The resistance readings noted above can only be approximate; as long as you obtain somewhat **proportionate** readings (emitter-base readings as compared to emitter-collector), you can safely assume the transistor is OK.

HANDLING OF INTEGRATED CIRCUITS

Because MOS devices have extremely high input resistance, they are susceptible to damage when exposed to static electrical charges (even electrical charges that normally build up on the human body can cause damage). To avoid possible damage to the devices during handling, testing, or actual operation, the following procedures shoud be observed:

- 1. Except when being tested or in actual operation, the leads of devices should be in contact with a conductive material, to avoid build-up of static charge.
- 2. Soldering iron tips, tools, metal parts of fixtures and handling facilities should be grounded.
- 3. Transient voltages may cause permanent damage to the device if it is removed, or inserted, with the power on.
- 4. Do not apply signals to the inputs with the power supply off.
- 5. All unused input leads must be connected to either Vss or VDD whichever is appropriate for the logic circuit involved.

DIODES AND RECTIFIERS GENERAL PURPOSE DIODES RATINGS @ 25°C

	mus (!)		Ir (max) @ Vr	Vf (max) @ If	Case
Catalog Number	PIV (min) V	A	μ A	v′	Style
276-1101	50	1.0	10	1.6	DO41
276-1102	200	1.0	10	1.6	DO41
276-1103	400	1.0	10	1.6	DO41
276-1104	600	1.0	10	1.6	DO4
276-1114	1000	2.5	200	1.0	A1vm
276-1122	75	.010	.25	1	A1
276-1123	60	.085	15	1	Α1
276-1141	50	3.0	500	1,2	A3q
276-1142	100	3.0	500	1.2	A3q
276-1143	200	3.0	500	1.2	A3q
276-1144	400	3.0	500	1.2	A3q

ZENER DIODES-1 Watt

	ZLIVEII			
Catalog	Vz	lz	Zz @ lz	Case
Number	Volts + 15	% @ mA	ohms max	Style
276-561	6.2	41	2	A1 ay
276-562	9.1	25	7	A1 ay
276-563	12.0	21	9	A1 ay
276-564	15.0	17	14	A1 ay

BRIDGE RECTIFIERS

Catalog	PIV (min)	if (max)	Case
Number	V	A	Style
276-1146 276-1151 276-1152 276-1171 276-1172 276-1173 276-1180	50 50 100 100 200 400	4 2 2 4 4 4	M532a M548 M548 M532a M532a M532a M532a

BIPOLAR

TRANSISTORS

Catalog Number		Mat.	Appli	. Polarity	Power Diss @ 25° C Free Air	. f _T Typical MHz	V _{СВО}	VCEO	V _{EB}	O I _C	l _B	hFE	@V _{CE}		ICB;	
276-2001	2N1304	G	6	NPN	150mW	5			58743		Max	PROVEST PAR	V	mA	VCE	style
276-2002	2SD 187	G	LL	NPN	200mW	DESCRIPTION OF THE	25	25	25	300m	4	150	1	10	6дА	TO5
276-2003	2SA221	G	G.P.	PNP		-	25			150m	Д	150	15	30	15µA	TO1
276-2004	2SB22/ORN	G	G.P.	PNP	50mW	50	20		1.5	1.5 m	4	75	6	1	12 LIA	
276-2005	2SB22/YEL	G	G.P.	FNP	170mW		25		25	75mA		95	1.5	30	15µA	TO1
276-2006	2SB407	G	P.	PNP	150mW		25	1	1.5	200m/		135	1.5	30	15µA	TO1
276-2007	2N1305	G	S.	PNP	30W	0.35	30	30	10	7A .		80	1.5	1A	500µA	
276-2008	SE7056	S	H.V.	NPN	150mW	5 .	30	. —	25	300mA	i.	130	1	10	6дА	TO5
276-2009	MPS2222A	s	G.P.	NPN	1W	50	300	300	7	30mA		40	20	30		TO92
276-2010	PN2484	S	L.L.	NPN	500mW	300	7 5	40	6	800mA		50	10	1	10017	TO92
276-2011	MPS918	S	RF/IF	DE GLASSIFIC PROPERTY.	360mW	15	60	60	6	50mA		250	5	1	10n A	TO92
276-2012	MPSA42	S	A CONTRACTOR OF THE PARTY OF TH	NPN	200mW	600	30	15	3	50mA	MARKET	20	HE S AS	3	TONA	The last of the last of
276-2013	2N5210	S	H.V.	NPN .	800mW	30	300	300	7	150mA		35	25	30	50nA	TO92
76-2014	MPS3704	S	G.P.	NPN	350mW	30	50	50	4.5	50mA		250	5	1	50nA	TO92
76-2015	T1386	S		NPN	360mW	100	50	30	5	800mA		100	2	50		TO92
76-2016	MPS3904	S	RF/IF	NPN	250mW	600	30	20	4	50mA		40	10	2		TO92
76-2017	TIP31	S	S.	NPN	350mW	300	60	40	6	200mA		100	10	1		TO92
76-2018	TIP29	S	P.	NPN	40W	3	40	40	5	3A	1A	10-50	4	3A	50n,A	TO92
76-2019	TIP33	S	P.	NPN	40W	3	40	40	5	1A	400M	15	4	1A		TO220
76-2020	TIP3055	S	P. P	NPN	90W	3	40	40	5	10A	3A	20	4	3A		TO220
76-2021	MPS3640	S	RICODOSTRUCTORIOS	NPN	90W	3	100	70	7	15A	7A	20	4	4A		TO220
76-2022	2N5087		RF/IF	PNP	350mW	500	12	12	4	80mA	ENEM	30	0.3	TAX DESCRIPTION OF	1mA	TO220
76-2023	MPS2907	S	L.L.	PNP	350mW	40	50	50	3	50mA		250	5	10	10n A	TO92
76-2024	MPS3702	S	S.	PNP	400mW	200	60	40	5	600mA		50	10		50nA	TO92
6-2025	TIP32	S	G.P.		360mW	100	40	25	5	200mA		60	The state of the	1	20n A	TO92
6-2026	TIP30	S	P		40W	3	40	46	5	3A	1A	10-50	5		0.5µА	TO92
6-2027	MJE34	S	P.		40W	3	40	40	5	1A	400M	15	4			TO220
6-2030	2N3053	S	P.		90W	3	40	40	5	10A	3A	20-100	4			TO220
6-2031	MPS3565	S´	P.		1W	100	60	40	5	700mA	0, (50	4			TO220
6-2032	MPS3638		G.P.		200mW	40	30	25	6	50mA		120	10	150	_	TO92+
6-2033			RF/IF	NEW PROPERTY.	600mW	100	25	25	4	500mA		30	5			TO92
6-2034	MPS3704	MARKET STATE		NPN :	350mW	200	60	30	5	500mA	NI SALUES	PRODUCTION AND THE	3		TOTAL TOTAL	TO92
The second second	MPS3906		S.	PNP :	350mW	250	40		5 11 22 20	200mA		100	10		50nA	TO92
6-2038	2N3866			NPN -	W	500	60			400mA		100	10	100000000000000000000000000000000000000	OnA	TO92
6-2039	2N6569			NPN 1	00W		45			12A	EA	100	5		00µА	TO39
6-2040	TOTAL STREET,	411	A CONTRACTOR OF THE PARTY OF TH	PNP 1	oow ,		45			12A	5A	100	4	1A		TO3
6-2041		556 N	Р	NPN 1		CONTRACTOR OF COLUMN	100	and the last of th	Wat become the		5A	100	4	4A		тоз
5-2042		S	Р	NPN 1	2014	-	50			15A	7A	50	4	1A		ГОЗ
5-2043	MJ2955	S F	>		50W 2		100			15A 15A -	.25A 7 A	20,000	3	4A		гоз

NOTE: All ratings given are for 25°C except where otherwise noted. MATERIAL:

S-Silicon; G-Germanium

APPLICATION:

S-Swtich

L.L.-Low Level

RF--RF power G.P.—General purpose P—Power amp/switch H.V.—High voltage

FIELD EFFECT

Catalog Number	Direct Commercia Equivalent	Circuit	N Chan- nel	P Chan- nel	Max. Power Diss. mW	Vdss V (max)	Vgss V (max)	9fs mhos min/max	Case Style
276-2028	2N3821	small signal VHF mixer and AMP					()	THIR/IIIAX	Style
276-2035	2N3819	small signal VIII lilixer and AMP	X		330	, 50	50	1.5m/4.5m	TO92
276-2036	-	small signal general purpose	Х		360	25	25	2.0n/6.5m	TO92
	2N3823	RF Amp to 200 MHz	X		300	30			
276-2037	2N5460	general purpose small signal				30	30	3.5m/6.5m	TO72
		Sample Parpose small signal		X	310		40	1.0m/4.0m	TO92

NOTE: All parameters are at 25°C.

UNIJUNCTION

Catalog Number	Direct Comm. Equivalent	Max Power Diss.	rBB (max)	η (max)	V _{EB1}	V _{OB1}	lp (max)	Case Style
276-2029	MU4891	360mW	9.1K	0.82	4.0V	3.0V	5.0µA	X55



LIGHT EMITTING DIODE

GENERAL DESCRIPTION

These devices are large area light sources which contain diffusing particles in the plastic encapsulant. When the device on "ON", it appears as a large, soft light source, making it ideally suited for front panel applications.

FEATURES

- The 276-040 LED (light emitting diode) is contained in a black case, giving excellent contrast when "ON".
- The 276-026 is a red LED Lamp with a frosted diffused lens.

APPLICATIONS

- Indicator lamps • Pilot lamps
- · Optical coupling

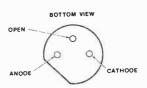
RADIANT CHARACTERISTICS IF=20mA (25°C) (276-026)

	0.3 mcd
Luminous Intensity	1.35 mlumen
Luminous Flux	650 nM
Wavelength @ Peak	25 nM
Spectral Line Width	10 ns
Rise and Fall Time	35 degrees
Angle of Half Intensity	35 degrees
Angle of 0.1 Intensity	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

ABSOLUTE MAXIMUM RATINGS

ABSULUTE MINIMUM AND	
	50 mA
Forward DC Current	3 Volts
Reverse Voltage (276-026)	4 Volts
Reverse Voltage [276-040]	100 mW
Power Dissipation-Derate 1.3 W/7, above 25 California Storage Temperature	40°C to 100°C
Storage Temperature Operating Temperature	40°C to 100°C
Coperating Temperature Relative Humidity @ 65°C Solder Temperature for 5 seconds	m Seating Plane
Solder Temperature for 5 seconds	

PIN CONNECTION



ds Electrically Isolated From Case.



LIGHT EMITTING DIODE

GENERAL DESCRIPTION

These devices are Jumbo LED's with diffused lens, IC compatable-gallium arsenide phosphide (GaAsP) solid state devices. The 276-041 is a red LED lamp.

APPLICATIONS

- · Pilot lamps
- Indicator lamps
- Optical coupling

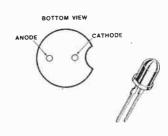
OPERATING SPECIFICATIONS (TA @ 25°C)

01 224	1.75 V Itvbl
Forward Voltage	1.0 mcd (typ)
Light Intensity @ 20 mA Lead Temperature (Soldering, 5 sec)	

ABSOLUTE MAXIMUM RATINGS (TA@ 25°C)

	70 mA
Forward de current	3.0 V
Forward de current	140 mW
Power dissipation	••••

PIN CONNECTION



LIGHT EMITTING DIODE

276-042

GENERAL DESCRIPTION

Subminiature, red LED lamp with a diffused lens. Emits bright light with solid state reliability; is compatible with most TTL and DTL Circuits.

APPLICATIONS

- Visual indicators
- · Built in diagnostics

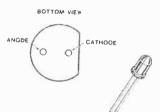
OPERATING SPECIFICATIONS

forward Voltage		
forward Voltage	ti	ſ,
0.1	11	Δ

ABSOLUTE MAXIMUM RATINGS

Reverse Voltage	
Forward Current	3.0 V
The court of the c	40 m A

PIN CONNECTION



0.3" SOLID STATE SEVEN SEGMENT DISPLAY

GENERAL DESCRIPTION

The 276-053 and 276-1210 are common anode LED numeric displays. The 276-062 and 276-1211 are common athode LED numeric displays. The large 0.3" high character size generates a bright, continuously uniform 7 segment display. Designed for viewing distances of up to 10 feet, this single digit display has been human engineered to provide a high contrast ratio and wide viewing angle.

FEATURES

- Fits 14 Pin DIP Socket
- Excellent Character Appearance Continuous Uniform Segments; Wide Viewing Angle; High Contrast
- IC Compatible 1.6 V per Segment
- Standard 0.3" DIP Lead Configuration; PC Board or Standard Socket Mountable
- Categorized for Luminous Intensity Assures Uniformity of Light Output from Unit to Unit within a Single Category

APPLICATIONS

- Electronic Calculators
- TVs

- Credit card verifiers
- Digital clocks
- Radios

RADIANT CHARACTERISTICS (IF=20mA) TA=25°C

	,	.,	 -	
Luminous Intensity				
Luminous Intensity		• • • • • • • • • • • • • • • • • • • •	 250	µcd
Wavelength (Peak)			 ៥55	nN:

ABSOLUTE MAXIMUM RATINGS

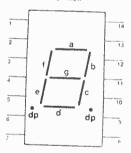
THE WITHHOUT KATINGS
Power Dissipation T _A = 25°(;
Operating Temperature Range
Storage Temporature Paper
Storage Temperature Range
11 Wide TV Ward Cultell (Seement or Dacimal Di T. = 9000 - 25 - 1
Peak Forward Current/Segment or Decimal Pt. TA = 25°C (Pulse Duration 500 us)
Reverse Voltage Segment or Desired Di
Reverse Voltage/Segment or Decimal Pt. 130 mA May Solder Temperature 150 mA 6 V
Max. Solder Temperature 1 15" Below Seating Plant (ts5 sec.) 22000



276-053 276-062 276-1210 276-1211

PIN CONNECTION

TOP VIEW



276-053		
COMM		

PIN	FUNCTION
1	CATHODE a
2	CATHODE
3	ANODE
d	NO PIN
5	NO PIN
6	CATHODE dp
7	CATHODE e
8	CATHODE 6
9	NO COMMECTION
10	CATHODE c
11	CATHODE q
12	NO PIN
13	CATHOOE b
14	ANODE

27	6-962 and 275-121* DMMON CATHODE
PIN	* FUNCTION
1	ANODE

, A	. ANIJUE A
2	ANODE !
3	CATHODE
1 4	NO PIN
: 5	NO PIN
. 6	ANCDE do
7	ANCDE e
8	ANODE 5
9	NO CONNECTION
10	ANODE c
1 71	ANODE G
1 12	NO PIN
13	ANODE b
-1	CATHODE

AL	TI	EF	IN	Α	Ť	F
0						

CONNECTION				
PIN	FUNCTION			
3	NO PIN			
2	ANODE	- 1		
3	CATHODE			
4	CATHODE-G	- 1		
4	CATHODER	- 1		
6	CATHODE-d	- 1		
7	40 PIN			
8	NO PIN	1		
9	ÄNODE	i		
10	CATHODS -dp			
11	CATHOD#-c			
12	#EATHODE-b	- 1		
13	€:ATHODE •a	- !		
14	NO PIN	- 1		

	ALTERNATE CONVECTION	
FIN	FUNCTION	
3 8	NO PIN CATHODE ANODE I ANODE I ANODE I ANODE I NO PIN	
112	NO PIN CATHODE ANODE do ANODE IN ANODE IN ANODE IN ANODE IN	

276-056 276-066

0.6" SEVEN SEGMENT NUMERIC DISPLAY

GENERAL DESCRIPTION

These devices are single digit numeric displays. They are compatible with bipolar and MOS IC's. They provide fast switching - excellent for multiplexing - and the 0.6 inch character height provides a viewing distance up to 25 feet. The 276-056 is common anode. The 276-066 is common cathode.

APPLICATIONS

- Digital clocks
- Panel meters
- TV channel indicators

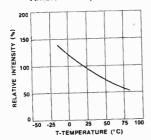
- Elevator floor indicators
- Calculators

ABSOLUTE MAXIMUM RATINGS

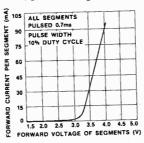
0.000	960mW
Power Dissipation TA = 25°C Power Derate Factor from 25°C	6.6 mW/°C
Power Derate Factor from 25°C	o°C to 85°C
Storage and Operating Temperature	30 mA
DC Current/Segment or DP, TA = 25°C	25 mA
Average Current/Segment of DP, TA = 25°C	250 mA
Peak Current/Segment or DP, TA = 25°C	60 V
Reverse Voltage/Segment	240°C
Solder Temperature 1/16 Delow Seating Franc, 125 Boston	

TYPICAL CHARACTERISTICS

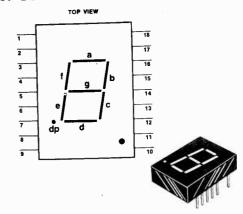
Light Intensity vs Ambient Temperature



Forward Current vs Forward Voltage



PIN CONNECTION



	276-056					
PIN	FUNCTION					
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	NO PIN CATHODE - a CATHODE - 1 ANODE CATHODE - C ANODE CATHODE - dP NP PIN NO PIN ANODE CATHODE - C CATHODE - G CATHODE - B NO PIN ANODE NO PIN					

PIN	FUNCTION
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	NO PIN ANODE - 8 ANODE - 1 CANDOE - 6 CATHODE' ANODE - 6 CATHODE' ANODE - 0 NO PIN NO PIN ANODE - 0 CATHODE' ANODE - 6 ANODE - 6 ANODE - 6 ANODE - 7 ANODE - 7 ANODE - 8 ANODE - 9 ANODE -

276-066

*Common redundant anodes

*Common redundant cathode

276-115 SELENIUM SOLAR CELL

GENERAL DESCRIPTION

The selenium solar cell is a device that can change the energy of the sun into electrical energy for use in your electronic projects. It can be used in place of the battery or it can be used as a light sensor. It produces .5 V at .6 ma in strong sunlight which is enough to power small radios and oscillator circuits. The unit is sensitive to the same range of light as the human eye.

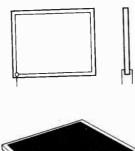
FEATURES

•	Dimensions1-172	; x ı 1.82	-1/0 75 in.
•	Sensitive Area	xible	wire
•	Weight	1.5	gms.

PHOTOELECTRIC CHARACTERISTICS

THOTOELEGING CO	5 V
Max. Voltage Output	6 ma
Max. Current Output	50 uA
Max. Current Output Output at 100 Lux (3K load)	90 uA
Output at 100 Lux (3K load)	nustroms
Output at 500 Lux (3K 1080)	116011

CONNECTION





CADMIUM SULPHIDE PHOTOCELL

276-116

GENERAL DESCRIPTION

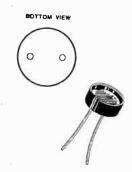
A cadmium sulphide photo cell is a light variable resistor which is most sensitive in the green to yellow portion of the light spectrum. With it you can use light to control many electronic devices. Max. resistance .5 meg., min. resistance 100 ohms, max. voltage 170 V, max. wattage .2 watts, rugged epoxy case.

APPLICATIONS Night light • Light control Burglar alarm Relay **FEATURES**

ABSOLUTE MAXIMUM RATINGS

Max. Applied Voltage (ac or dc)	** ** ·
Max. Power dissipation at 25°C	∕U V peak
Power derating	2 watts
Power derating	0 @ 75°C
Operating Temp. range40°	C to 75°C

PIN CONNECTION



SILICON SOLAR CELL

GENERAL DESCRIPTION

The silicon solar cell is a device that can change the energy of the sun into electrical energy for use in your electronic projects. It can be used in place of a battery, or it can be used as a light sensor.

APPLICATIONS

- Solar-powered battery charger
 Power Radio Circuits
- Use several in series or parallel for added power.

• Discourse to the second seco	
 Dimensions (276-120) Dimensions (276-128) 	2000 1 4
• Dimensions (276-128)	sum x 4cm
(270 120)	2cm x 2cm
PHOTOELECTRIC CHARACTERISTICS	
THOTOELECTRIC CHARACTERISTICS	
Max Voltage output	
Max Current output (276-120)	0.5 V
max Sarrent Sutput [2/6-1/0]	
Max Current output (276-128)	10011171



SILICON PHOTOTRANSISTOR

276-130

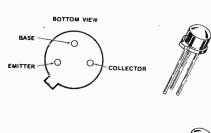
GENERAL DESCRIPTION

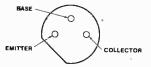
The 3 terminal phototransistor has exceptionally stable characterist cs and high illumination sensitivity. The electrically connected base lead increases its applicability to various circuit designs. It features low leakage, low power, requirements, TTL/DTL compatibility, a large range of sensitivities and minimal response time.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures/Humidity Storage Temperature.....-55°C to 100°C Operating Junction Temperature-55°C to 85°C Maximum Power Dissipation at 25°C Ambient Temperature......100 mW V_{CBO} Collector to Base Voltage50 Volts VCEO Collector to Emitter Sustaining Voltage......30 Volts Maximum Current

PIN CONNECTION





The base lead is for testing only, it is not used in normal applications

276-1095

1.6 AMP LIGHT ACTIVATED SILICON CONTROLLED RECTIFIER (LASCR)

GENERAL DESCRIPTION

The Light Activated Silicon Rectifier (LASCR) is sensitive to both visible and invisible light; light sensitivity up to 200 ft. candles.

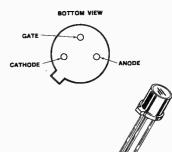
APPLICATIONS

- On time Switch Optical switch Counting Circuits Delay Circuits
- Phase Control

ABSOLUTE MAXIMUM RATINGS

Peak Inverse Voltage	200 V
Peak Inverse Voltage	1.6 amps
Maximum End Current Light Sensitivity	200 Ft. Candles
Light Sensitivity	30 uA
Gate Firing Current	

PIN CONNECTION



276-1201 276-1202

CLOCK DISPLAY BOARD 4-.5" Digits with Colon

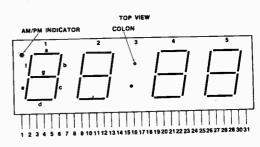
GENERAL DESCRIPTION

These devices 276-1201, 276-1202 are a 24 hour clock display with colon located between digits 2 and 3. This is a direct drive display consisting of 4 digits, for hours and minutes, separated by a colon. It also has AM/PM indicator in the upper left hand corner.

ABSOLUTE MAXIMUM RATINGS

ELECTRICAL DATA	100 - 250 mcd (min - tvp)
Segment Light Intensity	1.7 - 2.0 V (typ max)
Intensity Matching	660 nm (typical)
Peak wave length	(cyp)

PIN CONNECTION





PIN FUNCTION

276-1201											
					Pin No	Ele	ctri	cal	Coune	ction	
P	-				Cathode		Catho	ode	F	Digit	4
1	1				da mouc	18	ŧ		Е	4	†
1	2	Catho	de F	Digit	1	11 -	1		D	i	- 1
	3	i t	E	1	1	19	1 [C	1	
1	4		D]		20	1			- 1	- 1
1	5	\ \	С	- 1	į.	21	1 1		G	ļ	1.
1	6		G			22	1 .		В		+
1	7		В	- 1	1	23	1 1		Α		4
1		1 1	A		1 1	24	} {		F		5
1	8	l 1	F		2	25			Е	- 1	1
	9	l i	_	1	4	26	l. 1		D		
1	10	1 1	Е	- 1	1	NI .			C		- 1
1	11	1 1	D	1		27					
	12]]	C	- 1		28	1		G	- 1	- 1
-	13	1 1	G	- 1	1	29	1 .	ł	В	*	•
		1 1	В	1	1	30	Cath	10d e	Α	Digit	5
1	14	Coah	ode A	Diai	1 2	31	Common Anode				
	15					"					
	16	Cath	ode Co	ion Di	git 3						

276-1202							
Pin No	Electrical	Connection	Pin No				
1	AM/PM Indi	cator Anode	17	Anode	F	Digit	4
2	Anode F	Digit 1	18	1	E	†	1
3	+ E	† †	19		D	ļ	
4	D		20.		С		
5	c		21	•	G		Ì
6	G	1 1	22		В	1	, 1
7	В		23	1 1	Α	1	4
8	A	1	24	1 1	F	- 1	5
9	F	2	25		E	- 1	1
10	E	†	26		D		-
11	ם ו	1 1	27		С		
12	C	-	28	1	G	1	Ì
13	G	1 1	29	\ +	В	ŧ	ŧ
14	B	1 1	30	Anode			5
15	Anode A	Digit 2	31	Common Cathode			
16	Anode Colo	n Digit 3		<u> </u>			

LED DISPLAY DIGITAL ELECTRONIC **CLOCK MODULE**

277-1001

GENERAL DESCRIPTION

Electronic Clock Module combines a monolithic MOS-LSI integrated clock circuit, 4-digit 0.5" LED display, power supply and other associated discrete components on a single printed circuit board to form a complete electronic clock movement. The user need add only a transformer and switches to construct a pretested digital clock for application in clock-radios, alarm or instrument panel clocks. Timekeeping may be from 50 or 60 Hz inputs. Direct (non-multiplexed) LED drive eliminates Rf interference. Time setting is made easy through use of "Fast" and "Slow" scanning controls.

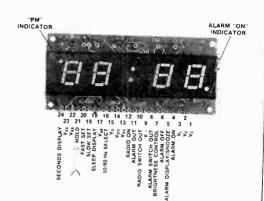
FEATURES

- Bright 4-digit 0.5" LED display
- Complete—add only transformer and switches
- Alarm clock and clock-radio versions
- 12 hour display format
- 50 or 60 Hz operation
- · Power failure indication

Brightness control capability

- "Sleep" and "snooze" timers
 Alarm "on" and PM indicators
- Direct drive-no RFI
- Fast and slow set controls
- · Low cost, compact design

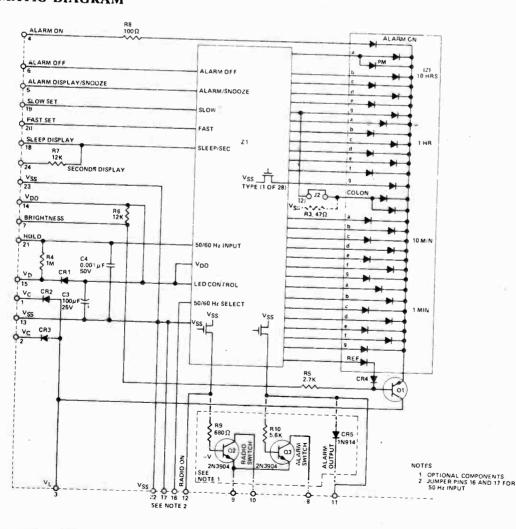
PIN CONNECTION



APPLICATIONS

- Clock-radio timers
- Instrument panel clocks
- · Alarm clocks
- Desk clocks
- TV-stereo timers

SCHEMATIC DIAGRAM



FUNCTIONAL DESCRIPTION

Display Modes

The 277-1001 provides four basic selectable display modes: These are summarized in Table I.

Colon: The display is furnished with a colon which flashes at a 1 Hz rate. If a fixed colon is desired, remove J2 and install R3 (47 Ω) shown in component location diagram.

Alarm "ON" Indicator: Setting the alarm switch to "on" lights a dot in the lower right hand corner of the display.

AM/PM Indicator: PM time indication is given by a dot in the upper left hand corner of the display. Indication applies for both time and alarm display modes.

Power Failure Indication: Power failure is indicated by the entire display flashing at 1 Hz rate. Contact to either the FAST or SLOW time set control cancels this indication.

Zero Blanking: Zeroes appearing in the first digit are blanked.

Control Functions

Setting of Time, Alarm Time, Seconds and Sleep Timer registers is accomplished by selecting the appropriate display mode and simultaneously contacting one or both of the FAST and SLOW time setting switches. This is summarized in Table II.

Alarm On/Off Switch: The Alarm On/Off switch is an SPDT switch—the "ON" position lights the alarm set indicator; the "OFF" position disables the alarm output latch and silences the alarm. The alarm output will continue for 59 minutes unless cancelled by the Alarm On/Off switch or inhibited by the Alarm Display/Snooze button.

Alarm Display/Snooze Button: This momentary switch has four functions: displays the alarm time; enables setting of alarm time (in conjunction with fast or slow-set switches); cancels the Sleep (Radio) output; and inhibits the alarm output for a period of between 8 and 9 minutes (Snooze function). The Snooze alarm feature may be used repeatedly during the 59 minute alarm enable period.

Sleep Display/Timer Button: A momentary contact displays the time remaining in the sleep register and enables programming the desired sleep time by simultaneously using the Fast or Slow buttons, as shown in Table II. The Sleep (Radio) output is latched on for the interval programmed, which may be up to 59 minutes. The Sleep output may be cancelled by momentarily contacting the Alarm Display/Snooze button. Resetting the time-of-day will decrement the Sleep Timer, which will not recycle past 00.

Brightness Control: A fixed 12K brightness control resistor is installed for minimum display brightness for night viewing. Maximum display brightness is obtained by placing a short between pins 7 and 14. This can be accomplished by addition of an external SPST switch or the insertion of a $10 \mbox{K}\Omega$ Pot for variable control of brightness.

Options

Sleep (Radio). If a radio or appliance turn on switch is desired, resistor R9 (680 Ω) and transistor Q2 can be mounted as shown on component lo-

Alarm: If a radio alarm is desired, resistor R10 (5.6K), transistor Q3, and diode CR5 can be mounted as shown on the component location diagram.

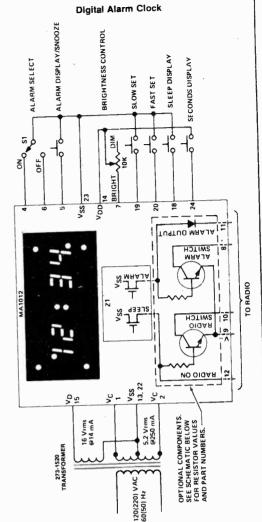
NOTE

Certain outputs of the 277-1001 module are directly connected to MOS device inputs. Normal precautions taken for handling of MOS devices should be applied to the handling of this module.

ABSOLUTE MAXIMUM RATINGS

A DECITE OF A XIVILIAN RATINGS	
ABSOLUTE MAXIMUM RATINGS	20 Vrms
Voltage—Pins 15 to 13	7.0 Vrms
Voltage—Pins 9 to 13	
Storage Temperature Kange Lead Temperature (Soldering, 10 seconds)	

TYPICAL APPLICATION



COMPONENT LOCATION

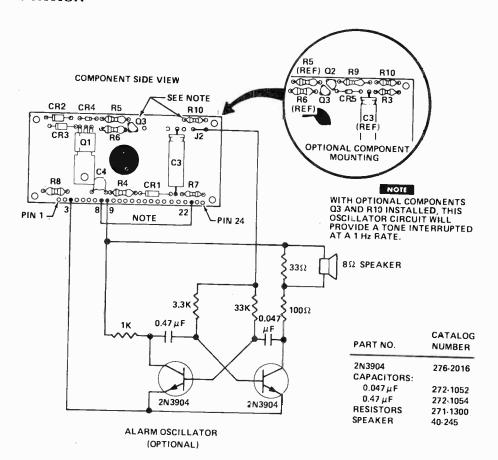


TABLE I. DISPLAY MODES

	*SELECTED				
	DISPLAY MODE	DIGIT NO. 1	DIGIT NO. 2	DIGIT NO. 3	DICKENO
	Alarm Display	10's of Hours & AM/PM Blanked 10's of Hours & AM/PM	Hours Minutes	10's of Minutes 10's of Seconds 10's of Minutes	Seconds
•	Sleep Display	Blanked		10's of Minutes	Minutes Minutes

^{*}If more than one display mode input is applied, the display priorities are in the order of Sleep (overrides all others). Alarm, Seconds, Time (no other mode selected).

TABLE II. CONTROL FUNCTIONS

SELECTED	CONTROL	
DISPLAY MODE	INPUT	CONTROL FUNCTION
*Time	Slow Fast	Minutes Advance at 2 Hz Rate Minutes Advance at 60 Hz Rate
Alarm/Snooze	Both Slow	Minutes Advance at 60 Hz Rate Alarm Minutes Advance at 2 Hz Rate
Seconds	Fast Both Slow Fast	Alarm Minutes Advance at 60 Hz Rate Alarm Resets to 12:00 AM Input to Entire Time Counter is Inhibited (Hold Seconds and 10's of Seconds Reset to Zero
Sleep	Both Slow Fast Both	Without a Carry to Minutes Time Resets to 12:00 AM Subtracts Count at 2 Hz Subtracts Count at 60 Hz Subtracts Count at 60 Hz

^{*}When setting time sleep minutes will decrement at rate of time counter, until the sleep counter reaches 00 minutes (sleep counter will not recycle).

277-1003

12 VDC AUTOMOTIVE/INSTRUMENT CLOCK MODULE

GENERAL DESCRIPTION

The MA-1003 $12V_{DC}$ Automotive/Instrument Clock Module combines the MM5377 monolithic MOS/LSI clock circuit, a 4-digit 0.3" green vacuum fluorescent display, a 2.097 MHz crystal and supporting components to form a complete digital clock for $12V_{\rm DC}$ applications. The module is fully protected against automotive transients and battery reversal conditions with time-keeping maintained down to 9VDC. Automatic display brightness control logic blanks the display with ignition off, reduces brightness to 33% with park or head lamps on and follows the dash lamp dimming control setting. The display features leading zero blanking and has a blinking colon activity indicator. The bright green display color is filterable to various shades in the green, blue-green, blue and yellow color range. Time setting is accomplished by closing hours-advance and minutes-advance switches; these switches are disabled when the display is blanked to prevent tampering. Interconnections are simplified through use of a 6-pin edge connector. Display may be activated with ignition off or park (head) lights off by closing display switch, allowing minimum power consumption in portable applications.

FEATURES

- Ideal for automotive applications
- Operates from 12V_{DC} supply
- Bright 0.3" green display
- Internal crystal timebase
- ±0.5 second/day accuracy
- Protected against automotive voltage transients and reversals
- Timekeeping maintained to 9V_{OC}, memory to 6V_{DC}
- Automatic display brightness control logic
- · Display color filterable to blue, blue-green, green and yellow
- · Complete-just add switches and lens
- · Convenient time setting controls at a 1 Hz rate with no roll-over
- Compact size, built-in connector (optional)
- Low standby power consumption
- · Lockout of time setting when display is "OFF"

APPLICATIONS

- · In-dash autoclocks
- After-market auto/recreational vehicle clocks
- · Aircraft-marine clocks
- 12V_{DC} operated instruments
- Portable/battery powered instruments

FUNCTIONAL DESCRIPTION

DISPLAY FUNCTIONS

Brightness Control: The 277-1003 provides four basic selectable display brightness modes. These are summarized in table I. Note that 33% and 0% brightnesses are boundary values only. Any brightness in between is obtainable by simply varying the dash lamp input (pin 2) voltage between V_{BAT} (pin 3) and GND (pin 6). Note the difference between "display blanked and "0% brightness.

Colon: The 277-1003 is furnished with a colon display which flashes at a 0.5 Hz rate [one second "ON," one second "OFF"]. When setting minutes, the colon blinks at a 1 Hz rate.

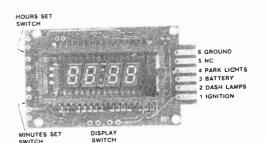
Zero Blanking: Zeros appearing in the first (tens hours) digit are blanked automatically.

CONTROL FUNCTIONS

Control Inputs: Inputs including battery, ignition, park lights, dash lamps and a respective ground are routed to the edge connector tab for easy connection/disconnection. The remaining inputs including hours set, minutes set and display "ON" are available at terminals near the edge of the PC board for facilitating "on board" switch contacts or external switches (user supplied). See Pin Connection diagram.

Battery Input (Pin 3): This input powers the MOS clock circuit only and insures timekeeping above 9VDC. The input is protected against baltery reversals, excessive current and transient overvoltages.

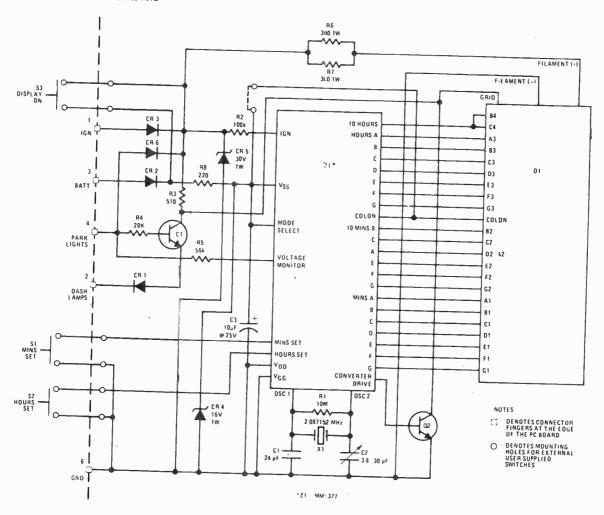
PIN CONNECTION



Ignition Input (Pin 1): This input enables setting of the clock using the hours and minutes set inputs, enables the display to display time of day information and enables the display to be dimmed by the use of the park and dash inputs. Again, this input is similarly protected. When this input is at a voltage equal to V_{BAT} (pin 3), the time set, display and dimming are enabled. When the input is at GND (pin 61, the time set, display and dimming are disabled. Nominal voltage levels on this input are V_{BAT} and GND; however, the actual threshold is approximately 50% of V_{BAT} . The display begins to turn on with minimal brightness at this threshold and increases to maximum brightness as the input voltage approaches V_{BAT} . This input does not affect the accuracy of the timekeeping logic in any manner. When left open, the input is internally pulled to GND (see table 1).

Park Lights Input (Pin 4): This input enables the display and the dimming of the display. If the input is at a voltage equal to $V_{\rm BAT}$ (pin 3), the display is enabled at a brightness of 0-33%, depending upon the dash lamp input (pin 2) voltage level. During this condition, the state of the ignition input (pin 1) does not affect the brightness of the display in any manner. When the input is at GND (pin 6), the dimming of the display is disabled and the display is either blanked or at 100% brightness, depending upon the ignition input voltage level. During this cordition, the state of the dash lamp input does not affect the brightness of the display in any manner. When left open, the state of the input is dependent upon the state of the ignition input. When ignition is high ($V_{\rm BAT}$), park is internally pulled high; when ignition is low (GND), park is internally pulled low. See table I. Nominal voltage levels on this input are $V_{\rm BAT}$ or GND. However, the actual threshold is is approximately 50% of $V_{\rm BAT}$. This input is also protected against transients and reversals.

SCHEMATIC DIAGRAM



Dash Lamps Input (Pin 2): This input controls the display brightness only when the park lights input (pin 4) is active (V_{BAT}). When this input is high, or at V_{BAT} , the relative brightness of the display is 33%. When this input is low, or at GND, the relative brightness is 0%. As the input voltage is varied from GND to V_{BAT} , the brightness varies linearly from 0% to 33%. When the park lights input is not applied, or low, this input does not affect the display brightness in any manner. When left unconnected, the input is internally pulled high (see table I). Like all other edge connector control inputs, this input is similarly protected.

Hours and Minutes Set Inputs: These inputs are used to preset time. Hours set will advance the hours at a 1 Hz rate when the input is held at GND. While setting hours, the minutes counter may also advance the hours count. Minutes set will advance the minutes at a 1 Hz rate, hold the internal seconds counter reset to 00 and cause the colon to blink at a 1 Hz rate when the input is held at GND. When left unconnected, both inputs are internally pulled high, or to V_{BAT} . Unlike the edge connector control inputs, these inputs are unprotected, and normal precautions taken for handling of MOS devices should be applied to the handling of this module. Both inputs include two PC board terminals located near the edge of the module which can accept SPST switches (see Pin Connection diagram).

Display "ON" Switch Input: This input provides a means for displaying time at 100% brightness when both the ignition and park lights inputs (pins 1 and 4) are low or at GND. The input includes two PC board terminals located near the edge of the module which can accept an SPST switch (see Pin Connection diagram).

ELECTRICAL CHARACTERISTICS $T_A = 25$ °C, $V_{BAT} = 14 V_{DC}$, display at 10:08 unless otherwise specified.

	Timekeeping Maintained	9 thru 14	V_{DC}
Power Supply Voltage (V _{BAT})	Time Memory Maintained		V_{DC}
	Display Blanked*	2	mΑ
Power Supply Current (IBAT)	100% Brightness*	83	mΑ
	33% Brightness*	97	mA
	0% Brightness*	104	mA
D Consumption	Display Blanked*	25	mW
Power Consumption	100% Brightness*	1.2	W
	33% Brightness*	1.4	W
•	0% Brightness*	1.5	W
mi	T _A = 25°C	±0.5	Sec/Day
Timing Accuracy	T _A = -25°C to +65°C	±2_	Sec/Day

^{*}See table 1 for corresponding pin connections (pins 1, 2 and 4).

ABSOLUTE MAXIMUM RATINGS

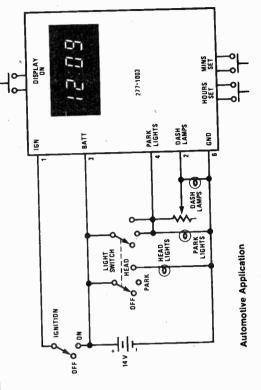
ABSULUTE MAXIMUM KITTINGS	
Voltage—Pins 1, 2, 3, 4 to 624V _{DC}	to +24V _{DC} (Continuous)
Voltage—Pins 1, 2, 3, 4 to 0	
	80V _p , Duration 5 ms
•	-200 Vp, Duration 1 ms
Operating Temperature	40°C to +85°C
Storage Temperature	-65°C to +150°C
Storage Temperature	300°C
Lead Temperature (Soldering, 10 seconds)	***************************************

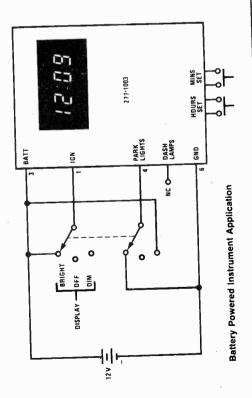
TABLE I: DISPLAY BRIGHTNESS TRUTH TABLE

111000						
DVODY AN	INPL	T PIN CONNECTIONS				
DISPLAY BRIGHTNESS	IGN (Pin 1)	PARK (Pin 4)	DASH (Pin 2)			
Display Blanked 100% Brightness 33% Brightness 0% Brightness	L or Open* H X X	L or Open* L H H	X X H or Open* L			

User may leave this particular input pin unconnected to achieve the same effect as logic level.shown.

TYPICAL APPLICATIONS





X-Don't care condition.

H-Connection to BATT input (pin 3).

L-Connection to GND input (pin 6).

8-BIT N-CHANNEL MICROPROCESSOR

8080 276-2510

GENERAL DESCRIPTION

The INS8080A is an 8-bit microprocessor housed in a standard, 40-pin dualin-line package. The chip, which is fabricated using N-channel silicon gate MOS technology, functions as the central processing unit (CPU) in National Semiconductor's N8080 microcomputer family.

The INS8080A has a 16-bit address bus that is capable of addressing up to 65k bytes of memory and up to 256 input and 256 output devices. Data is routed to and from the INS8080A on a separate bidirectional 8-bit bus. This data bus is also TRI-STATE®, making direct memory addressing (DMA) and multiprocessing applications possible. The INS8080A directly provides signals to control the interface to memory and I/O ports. All buses, including control, are TTL compatible.

An asynchronous interrupt capability is included in the INS8080A to allow external signals to change the instruction sequence. The interrupting device may vector the program to a particular service routine location (or some other direct function) by specifying an interrupt instruction to

FEATURES

- 2µs Instruction Cycle
- Variable Length Instructions
- General Purpose Registers—Six plus an Accumulator
- Direct Addressing up to 65k Bytes
- Variable Length Stack Accessed by 16-bit Stack Pointer
- Addresses 256 Input and 256 Output Ports
- Provisions for Vectored Interrupts
- TRI-STATE® Bus for DMA and Multiprocessing Capability
- TRI-STATE TTL Drive Capabilities for Address and Data Buses
- Decimal Arithmetic Capability
- Multiple Addressing Modes
 - -Direct
 - -Register Indirect -Register
 - -Immediate
- Direct Plug-in Replacement for Intel 8080A

FUNCTIONAL PIN DEFINITION

The following describes the function of all of the INS8080A input/output pins. Some of these descriptions reference internal timing periods.

INPUT SIGNALS

Ready: When high (logic 1), indicates that valid memory or input data are available to the CPU on the INS8080A data bus. The READY signal is used to synchronize the CPU with slower memory or input/output devices. If the INS8080A does not receive a high READY input after sending out an address to memory or an input/output device, the INS8080A enters a WAIT mode for as long as the READY input remains low (logic 0). The CPU may also be single stepped by the use of the READY signal.

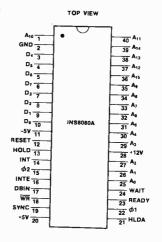
Hold: When high, requests that the CPU enter the HOLD mode. When the CPU is in the HOLD mode, the CPU address and data buses both will be in the high-impedance state. The HOLD mode allows an external device to gain control of the INS8080A address and data buses immediately following the completion of the current machine cycle by the CPU. The CPU acknowledges the HOLD mode via the HOLD ACKNOWLEDGE (HLDA) output line. The HOLD request is recognized under the following con-

- The CPU is in the HALT mode.
- The READY signal is active and the CPU is in the t₂ or the t_w state.

Interrupt (INT) Request: When high, the CPU recognizes an interrupt request on this line after completing the current instruction or while in the HALT mode. An interrupt request is not honored if the CPU is in the HOLD mode (HLDA = logic 1) or the Interrupt Enable Flip-flop is reset (INTE =

Reset: When activated (high) for a minimum of three clock periods, the content of the Program Counter is cleared and the Interrupt Enable and Hold Acknowledge Flip-flops are reset. Following a RESET, program execution starts at memory location 0. It should be noted that the status flags, accumulator, stack pointer, and registers are not cleared during the RESET sequence.

PIN CONNECTION





CENTRAL PROCESSING UNIT (CPU)

01 and 02 Clocks: Two non-TTL compatible clock phases which provide nonoverlapping timing references for internal storage elements and logic circuits of the CPU.

+5 Volts: V_{CC} Supply. -5 Volts: V_{BB} Supply. +12 Volts: V_{DD} Supply. Ground: VSS (0 volt) reference.

OUTPUT SIGNALS

Synchronizing (SYNC) Signal: When activated (high), the beginning of a new machine cycle is indicated and the status word is outputted on the Data

Address (A_{15} - A_0) Bus: This bus comprises sixteen TRI-STATE outputlines. The bus provides the address to memory (up to 65k bytes) or denotes the input/output device number for up to 256 input and 256 output peripherals.

Wait: When high, acknowledges that the CPU is in the WAIT mode.

Write (WR): When low, the data on the data bus are stable for WRITE memory or output operation.

Hold Acknowledge (HLDA): Goes high in response to a logic 1 on the HOLD line and indicates that the data and address bus will go to the highimpedance state. The HLDA begins at one of the following times:

The t₃ state of a READ memory input operation.

• The clock period following the t3 state of a WRITE memory output operation.

In both cases, the HLDA signal starts after the rising edge of the Ø1 clock, and high impedance occurs after the rising edge of the 02 clock.

Interrupt Enable (INTE): Indicates the content of the internal Interrupt Enable Flip-flop. The Enable and Disable Interrupt (EI and DI) Instructions cause the Interrupt Enable Flip-flop to be set and reset, respectively. When the flip-flop is reset (INTE) = logic 0), it inhibits interrupts from being accepted by the CPU. In addition, the Interrupt Enable Flip-flop is automatically reset (thereby disabling further interrupts) at the t1 state of the instruction fetch cycle, when an interrupt is accepted; it is also reset by the RESET Signal.

Data Bus In (DBIN): When high, indicates to external circuits that the data bus is in the input mode. The DBIN Signal should be used to gate data from memory or an I/O device onto the Data Bus.

INPUT/OUTPUT SIGNALS

Data (D_7 - D_0) Bus: This bus comprises eight TRI-STATE input/output lines. The bus provides bidirectional communication between the CPU, memory, and input/output devices for instructions and data transfers. A status word (which describes the current machine cycle) is also outputted on the data bus during the first state of each machine cycle (SYNC = logic 1).

8080A STATUS

Instructions for the 8080A require from one to five machine cycles for complete execution. The 8080A sends out 8 bits of status information on the data bus at the beginning of each machine cycle (during SYNC time). The following table defines the status information.

STATUS INFORMATION DEFINITION

Symbols	Data Bus Bit	Definition
INTA*	D ₀	Acknowledge signal for INTERRUPT request Signal should be used to gate a restart instruction onto the data bus when DBIN is active.
WO	D ₁	Indicates that the operation in the current machine cycle will be a WRITE memory or OUTPUT function (WO = 0). Otherwise, a READ memory or INPUT operation will be executed.
STACK	D ₂	Indicates that the address bus holds the pushdown stack address from the Stack Pointer.
HLTA	D_3	Acknowledge signal for HALT Instruction

Symbols	Data Bus Bit	Definition
OUT	D4	Indicates that the address bus contains the address of an output device and the data bus will contain the output data when WR is active.
M ₁	D ₅	Provides a signal to indicate that the CPU is in the fetch cycle for the first byte of an instruction.
INP*	D ₆	Indicates that the address bus contains the address of an input device and the input data should be placed on the data bus when DBIN is active.
MEMR'	D ₇	Designates that the data bus will be used for memory read data.

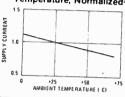
^{*}These three status bits can be used to control the flow of data onto the INS8080A data bus.

CAPACITANCE

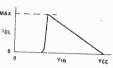
 $T_A = 25$ °C, $V_{CC} = V_{DD} = V_{SS} = OV$, $V_{BB} = -5V$

Symbol				1313	•
<u> </u>	Parameter	Тур.	Max.	Unit	Test Condition
C	Clock Capacitance	17	25		$f_C = 1MHz$
C_{IN}	Input Capacitance	6	10,		Urimeasured Pins
C_{OUT}	Output Capacitance	10	20		
	Typical Supply Correct			- Pr	Returned to V _{SS}

Typical Supply Current vs Temperature, Normalized³



Data Bus Characteristic During DBIN.



Note 1: The RESET signal must be active for a minimum of 3 clock cycles. Note 2: When DBIN is high and $V_{IN} > V_{IH}$ an internal active pullup will be switched onto the Data Bus. Note 3: ΔI supply/ $\Delta T_A = -0.45\%/^{\circ}C$.

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Min.	Тур.	3.4	ICS	
V _{ILC}	Clock Input Low Voltage		Typ.	Max.	Unit	Test Condition
V _{IHC}		V _{SS} -1		V _{SS} +0.8	V '	
	Clock Input High Voltage	9.0	. —	V _{DD} +1	V	
V _{IL}	Input Low Voltage	V _{SS} -1		V _{SS} +0.8	V	
V _{IH}	Input High Voltage	3,3			v	
V _{OL}	Output Low Voltage			V _{CC} +1		
V_{OH}	Output High Voltage	3.7		0.45	V	$I_{OL} = 1.9 \text{mA}$ on all outputs,
DD AV	Avg. Power Supply Current (VDD)		40		V	$I_{OH} = 150 \mu A$.
CC AV	Avg. Power Supply Current (V _{CC})		60	70	mA	Operation
BB AV	Avg. Power Supply Current (VBB)	-		80	mA	$t_{\rm CY} = 0.48 \mu s$
IL _.	Input Leakage		0.01	1	mA	
CL	Clock Leakage			±10	μА	$V_{SS} \leq V_{IN} \leq V_{CC}$
DL ²				±10	μA	$V_{SS} \le V_{CLOCK} \le V_{DD}$
	Data Bus Leakage in Input Mode			-100 -2.0	μА	$V_{SS} \leq V_{IN} \leq V_{CC} + 0.8V$
FL	Address and Data Bus Leakage During HOLD			+10	mΑ	$V_{SS} = 0.8V \le V_{IN} \le V_{CC}$ $V_{ADDR DATA} = V_{CC}$
	Daring HOLD			-100	μА	VADDR DATA * V _{CC} V _{ADDR DATA} * V _{SS} + 0.45V

STATUS WORD CHART

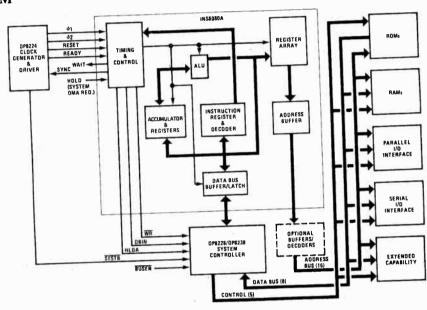
Machine Cycle	Туре		Data Port						
•		D-	- D		Data Bus Bit				
Instruction Fetch		D ₇	D ₆	D_5	$\mathbf{D_4}$	D_3	D_2	D_1	D_0
Memory Read	1	1	0	1	0	:)	0	1	0
	2	1	0	0	0	0			
Memory Write	3	0	0	0	0		0	1	0
Stack Read	4	1	0			0	0	0	0
Stack Write	5			0	0	0	1	1	0
Input Read	6	0	0	0	0	0	1	0	0
Output Write		0	1	0	0	0	()	1	0
	7	0	0	0	1	0	()	0	
Interrupt Acknowledge	8	0	0	1	0	<u> </u>			0
Halt Acknowledge	9	1	0	0			0	1	1
Interrupt Acknowledge While Halt	10	0			0	1	0	1	0
			0	1	0	. 1	0	1	1

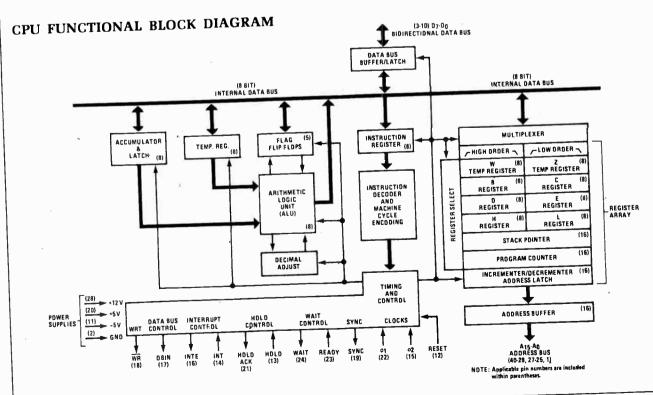
ABSOLUTE MAXIMUM RATINGS

ABSULUTE MINAMONI	0°C to +70°C
Temperature Under Bias	65°C to +150°C
Storage Temperature	
All Input or Output Voltages	0.3V to +20V
with Respect to VBB	0.3V to +20V
with Respect to V_{BB}	1.5W
Power Dissipation	. 1

Note: Maximum ratings indicate limits beyond which permanent damage may occur. Continuous operation at these limits is not intended and should be limited to those conditions specified under dc electrical characteristics.

BLOCK DIAGRAM







Note: Timing measurements are '1' = 8.0V, '0' = 1.0V; INPUTS '1' made at the following referen = 3.3V, '0' = 0.8V; OUTPUTS e voltages: CLOCK l' = 2.0V, '0' = 0.8V.

- 1HF -

-tiE+

Note: 1 This timing diagram shows timing relationships only, it does not represent any specific machine cycle.

-tDF

tos1

-1DS2-

-tDF-

1H-

tDC--

102 -

+ t00-

tp3

A15-A0

HOLD

HLDA

INTE

Note 2: Data in must be stable for this period during DBIN•T $_3$. Both $t_{\rm DS1}$ and $t_{\rm DS2}$ must be satisfied.

Note 3; Ready signal must be stable for this period during $\rm T_2$ or $\rm T_W$ (Must be externally synchronized.)

Note 4: Hold signal must be stable for this period during T_2 or T_W when entering hold mode, and during T_3 , T_4 , T_5 and T_{WH} when in hold mode. (External synchronization is not required.)

Note 5: Interrupt signal must be stable during this period of the last clock cycle of any instruction in order to be recognized on the following instruction. (External synchronization is not required.)

DATA OUT

PIN CONNECTION



QUAD TWO-INPUT NAND GATE QUAD TWO-INPUT NOR GATE HEX INVERTER

GENERAL DESCRIPTION

These logic gates employ complementary MOS (CMOS) to achieve wide power supply operating range, low power consumption high noise in: munity and symmetric controlled rise and fall times. With reatures such as this the 74C logic family is close to ideal for use in digital systems. Function and pin out compatibility with series 74 devices minimizes design time for those designers already familiar with the standard 74 logic landly.

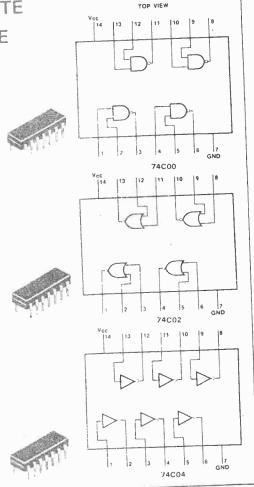
All inputs are protected from damage due to static discharge by diode clamps to $V_{\rm CC}$ and GND.

FEATURES

- Wide supply voltage range 3.0V to 15V
- Guaranteed noise margin 1.0V.
- \bullet High noise immunity 0.45 $V_{\rm CC}$ typ.
- Low power consumption 10 nW package typ.
- Low power TTL compatibility fan out of 2 driving 741.

ABSOLUTE MAXIMUM RATINGS

ADJOBO I M. HELLER
Voltage at Any Pin
Voltage at Any Pin
Voltage at Any Pin
Storage Temperature Kange
Maximum V _{CC} Voltage
Package Dissipation



QUAD TWO-INPUT AND GATE

GENERAL DESCRIPTION

Employing complementary MOS (CMOS) transistors to achieve wide nower supply operating range, low power consumption and high go seem to the these gates provide basic functions used in the implementation of digital integrated circuit systems. The N and P-channel enhancement and transistors provide a symmetrical circuit with output swing essentially equal to the supply voltage. No do power other than that can id 4 views 16 current is consumed during static condition. All inputs are protected from damage due to static discharge by diode clamps to V_{1,2} and GND

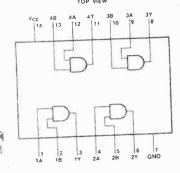
FEATURES

- \bullet Wide supply voltage range 3.0V to 15V
- Guaranteed noise margin 1.0V
- High noise immunity 0.45V_{CC} typ
- Low power TTL compatibility fan out of 2 driving 741
- Low power consumption 10 nW package typ

ABSOLUTE MAXIMUM RATINGS

ABSOLUTE MAXIMUM KATATO	. +0.3V
Voltage at Any Pin	85 C
Voltage at Any Pin	150 C
Operating Temperature Range 6.5 (to Storage Temperature Range 6.5)	500 mM
Storage Temperature Range Package Dissipation	Let 15V
Operating V _{CC} Range	16V
Operating V _{CC} Range	30016
Absolute Maximum V _{CC} . Lead Temperature (Soldering, 10 seconds)	

PIN CONNECTION





	INPUTS		OUTPUT
	A	В	Y
	l.	19	L
Level	1.	H	L,
evel	1 11	L	12:
	11	H	11

H = High L = Low 1

DUAL D FLIP-FLOP

GENERAL DESCRIPTION

The 74C74 dual D flip flop is a monelithic complementary MGS (CMOS) integrated circuit constructed with N- and P-channel enhancement transistors. Each flip flop has independent data, preset, clear and clock usputs and Q and \overline{Q} outputs: The logic level present at the data input is transferred to the output during the positive going transition of the clock pulse. Preset or clear is independent of the clock and accomplished by a low level at the preset or clear input.

APPLICATIONS

• Automotive · Data terminals

Instrumentation

- · Medical electronics
- · Alarm system · Industrial electronics
- Remove in verifig
- Computers

FEATURES

- Supply voltage range 3V to 15V
- Tenth power TTL compatible drive 2LPT I loads
- High noise immunity 0.45 V_{Ct} (typ)
- Low power 50 nW (typ)
- Medium speed operation 10 MHz [typ] with 10V supply

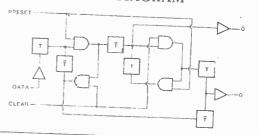
ABSOLUTE MAXIMUM RATINGS

Voltage at any pin (Note 1)	
Voltage at any pin (Note 1) Operating temperature Storage temperature	V.0.+0.3V
Storage temperature	· ····································
Maximum Vere Voltage	· ····································
Package dissination	· · · · · · · · · · · · · · · · · · ·
Lead temperature (Soldering to)	
Operating V _{CC} range	30020
Operating V _{CC} range	
Note 1: These devices should not be o	onnected under power or corditions

TOP VIEW PRESET CLOCK PRESET CLEAR

PIN CONNECTION

LOGIC DIAGRAM



DUAL J-K FLIP-FLOPS WITH CLEAR AND PRESET

GENERAL DESCRIPTION

These dual I-K flip-flops are monolithic complementary MOS (CMOS) integrated circuits constructed with N- and P-channel ennancement transistors. Each flip-flop has independent J. K. clock and clear inputs and Q and \overline{Q} outputs. The 74C76 fl p flops also include preset inputs and a e-supplied in 16 pin packages. These flip flops are edge sensitive to the clock input and change state on the negative going transition of the clock pulses. Clear or preset s independent of the clock and is accomplished by a low level on the respective input.

APPLICATIONS

- Automotive
- Medical electronics
 - · Remote a elering
- · Data terminals Instrumentation
 - Computers

- - · Alarm systems
 - · Industrial electronics

FEATURES

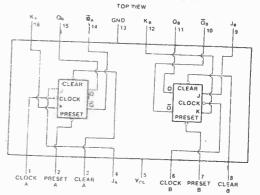
- Supply voltage range 3V to 15V
- Tenth power TTL compatible drive 2 (PTTL loads)
- High noise immunity 0.45 V_{CC} (Typ)
- Low power 50 nW (typ)
- Medium speed operation 10 MHz (typ) with 10V supply

ABSOLUTE MAXIMUM RATINGS

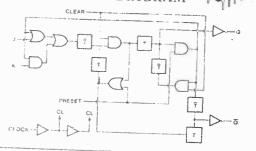
Voltago et
vorcage at any Dir (Note 1)
Voltage at any pin (Note 1)
Storage Temperature
Maximum V _{Ct.} Voltage65°C to 150°C Package Dissipation 16\
Package Dissipation
Lead Temperature (Soldering - A coult - 500 mW
Operating V _{CC} Range
Note 1: This device should not be a min to be a single of the sale

Note 1: This device should not be connected to circuits with the conver on because high transient voltages may cause permanent damage

PIN CONNECTION



LOGIC DIAGRAM



4C90

FOUR-BIT DECADE COUNTER

GENERAL DESCRIPTION

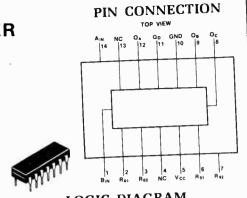
The 74C90 decade counter is constructed with N and P-channel enhancement mode transistors. The 4-bit decade counter can be reset to zero or preset to nine by applying appropriate logic level on the $R_{01},\ R_{02},$ $R_{\scriptscriptstyle \rm HI}$ and $R_{\scriptscriptstyle \rm HZ}$ inputs, also a separate flip-flop on the A-bit enables the user to operate it as a divide-by-2, 5 or 10 frequency counter. All inputs are protected against static discharge damage.

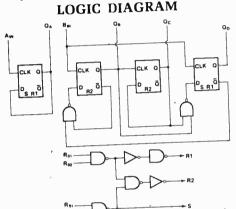
FEATURES

- Wide supply voltage range 3V to 15V
- Guaranteed noise margin 1V
- High noise immunity 0.45 V_{CC} (typ)
- Low power TTL compatibility fan out of 2 driving 74L

ABSOLUTE MAXIMUM RATINGS

11000=	
	0.3V to V _{CC} +0.3V
Voltage at Any Pin	40°C to +85°C
Operating Temperature Range	500 m W
Operating Temperature Range Package Dissipation Operating V _{CC} Range	3V to 15V
Operating V _{CC} Range	16V
Absolute Maximum VCC	65°C to +150°C
Absolute Maximum V _{CC} Storage Temperature Range	300°C
Storage Temperature Range	





SYNCHRONOUS FOUR-BIT UP/DOWN DECADE SYNCHRONOUS FOUR-BIT UP/DOWN BINARY

GENERAL DESCRIPTION

These up/down counters are monolithic complementary MOS (CMOS) integrated circuits. The 74C192 is a BCD counter. While the 74C193 is a binary counter.

Counting up and counting down is performed by two count inputs, one being held high while the other is clocked. The outputs change on the positive going transition of this clock.

These counters feature preset inputs that are set when load is a logical "0" and a clear which forces all outputs to "0" when it is at logical "1". The counters also have carry and borrow outputs so that they can be cascaded using no external circuitry.

FEATURES

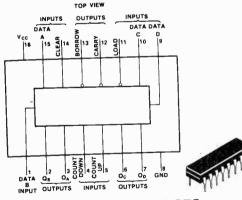
- High noise margin 1V guaranteed
- Tenth power TTL compatible drive 2 LPTTL loads
- Wide supply range 3V to 15V
- Carry and borrow outputs for N-bit cascading
- · Asynchronous clear
- High noise immunity 0.45 V_{CC} typ

ABSOLUTE MAXIMUM RATINGS

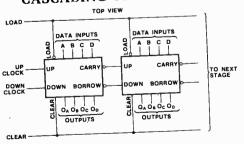
ABSOLUTE MILITARIA	$-0.3V$ to V_{CC} +0.3V
Voltage at Any Pin (Note 1) Operating Temperature Range	-40°C to +85°C
Operating Temperature Range	-65°C to +150°C
Storage Temperature Kange	16V
Maximum V _{CC} Voltage	500 mW
Package Dissipation	+3V to +15V
Package Dissipation Operating Voc Range	300°C
Operating V _{CC} Range	

Note 1: This device should not be connected to circuits with the power on because high transient voltage may cuase permanent damage.

PIN CONNECTION



CASCADING PACKAGES



QUAD TWO-INPUT NOR GATE

GENERAL DESCRIPTION

The 4001 quad 2-Input NOR gate is constructed with MOS P-channel and N-channel enhancement mode devices in a single monolithic structure. These complementary MOS logic gates find primary use where low power dissipation and/or high noise immunity is desired.

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields; however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit. For proper operation it is recommended that V_{in} and V_{out} be constrained to the range V_{SS} $\leq (V_{in} \text{ or } V_{out}) \leq V_{DD}$

Unused inputs must always be tied to an appropriate logic voltage level (e.g., either VSS or Vnn).

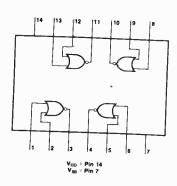
FEATURES

- Quiescent Current = 0.5 nA typ/pkg@ 5 Vdc
- Noise Immunity = 45% of V_{DD} typical
- Diode Protection on All Inputs
- Supply Voltage Range = 3.0 Vdc to 16 Vdc
- Single Supply Operation—Positive or Negative
 High Fanout > 50
- Input Impedance = 10¹² ohms typical
- Logic Swing Independent of Fanout

ABSOLUTE MAXIMUM RATINGS (Voltages referenced to Vss)

DC Supply Voltage	
Input Voltage0.5 to +16 Vdc	С
Input Voltage, All Inputs0.5 to +16 Vdc DC Current Drain per Pin0.5 to V _{DD} +0.5 Vdc Operating Temperature Range	С
Operating Temperature Pance	2
Operating Temperature Range	;
Storage Temperature Range40 to 85°C	;

PIN CONNECTION





QUAD TWO-INPUT NAND GATE

GENERAL DESCRIPTION

The 4011 is constructed with P and N channel enhancement mode devices in a single monolithic structure (Complementary MOS). Their primary use is where low power dissipation and/or high noise immunity is desired.

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields; however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit. For proper operation it is recommended that V_{in} and V_{out} be constrained to the range V_{SS} $\leq (V_{in} \text{ or } V_{out}) \leq V_{DD}$

Unused inputs must always be tied to an appropriate logic voltage level (e.g., either V_{SS} or V_{DD}).

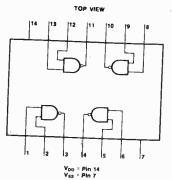
FEATURES

- Quiescent Current = 0.5 nA typ/pkg@5 Vdc
- Noise Immunity = 45% of V_{DD} typ Supply Voltage Range = 3.0 Vdc to 16 Vdc
- Double Diode Protection on All Inputs

ABSOLUTE MAXIMUM RATINGS (Voltages referenced to V_{SS})

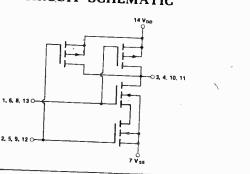
	007
DC Supply	
Input Voltage, All Inputs	-0.5 to +16 Vdc
DC Current Drain per Pin	0.5 to V _{DD} +0.5 Vdc
Operating Temperature Range	10 mAdc
Storage Temperature Range	-65 to +150°C
rang mange	-65 to +1k00C

PIN CONNECTION





CIRCUIT SCHEMATIC





DUAL TYPE D FLIP-FLOP

GENERAL DESCRIPTION

The 4013 dual type D flip-flop is constructed with MOS P-channel and Nchannel enhancement mode devices in a single monolithic structure. Each flip-flup has independent Data, (D), Direct Set, (S), Direct Reset, (R), and Clock [C] inputs and complementary outputs (Q and \overline{Q}). These devices may be used as shift register elements or as type T flip-flops for counter and toggle applications.

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields; however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit. For proper operation it is recommended that V_{in} and V_{out} be constrained to the range $V_{SS} \le (V_{in} \text{ or } V_{out}) \le V_{DD}$

Unused inputs must always be tied to an appropriate logic voltage level (e.g., either VSS or VDD).

FEATURES

- Static Operation
- Quiescent Current = 2.0 nA/package typical @5 Vdc
- Noise Immunity = 45% of V_{DD} typical
- Diode Protection on All Inputs
- Supply Voltage Range = 3.0 Vdc to 16 Vdc
- Single Supply Operation
- Toggle Rate = 4 MHz typical @ 5 Vdc
- Logic Edge-Clocked Flip-Flop Design-Logic state is retained indefinitely with clock level either high or low; information is transferred to the output only on the positive-going edge of the clock pulse
- Capable of Driving Two Low-power TTL Loads, One Low-power Schottky TTL Load or Two HTL Loads Over the Rated Temperature Range

ABSOLUTE MAXIMUM RATINGS (Voltages referenced to V_{SS})

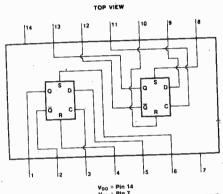
DC Supply Voltage0.5 to +16 Vdc0.5 to V _{DD} +0.5 Vdc	
DC Supply Voltage	
DC Supply Voltage	
DC Current Drain per Pin40 to +85°C	
DC Current Drain per Pin40 to +85°C Operating Temperature Range65 to +150°C	;
Operating Temperature Range	

TRUTH TABLE

Inputs				Out	puts
Clock†	Data	Reset	Set	Q	Q
/	0	0	0	0	1
	1	0	0	1	0
	x	0	0	No C	hange
x	χ,	1	0	0	1
×	x	0	1	, 1	0
x	x	1	1	1	1

x= Don't Care t = Level Change

PIN CONNECTION



DECADE COUNTER/DIVIDER

GENERAL DESCRIPTION

The 4017 is a five-stage Johnson decade counter with built-in code converter. High-speed operation and spike-free outputs are obtained by use of a Johnson decade counter design. The ten decoded outputs are normally low, and go high only at their appropriate decimal time period. The output changes occur on the positive-going edge of the clock pulse. This part can be used in frequency division applications as well as decade counter or decimal decode display applications.

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields; however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit. For proper operation it is recommended that V_{in} and V_{out} be constrained to the range V_{SS} $\leq (V_{in} \text{ or } V_{out}) \leq V_{DD}$

Unused inputs must always be tied to an appropriate logic voltage level (e.g., either VSS or VDD).

FEATURES

- Fully Static Operation
- DC Clock Input Circuit Allows Slow Rise Times
- Carry Out Output for Cascading
- 12 MHz (typical) Operation @ V_{DD} = 10 Vdc
 Quiescent Current = 5.0 nA/package Typical @ 5 Vdc
 Supply Voltage Range = 3.0 Vdc to 16 Vdc
- Capable of Driving Two Low-power TTL Loads, One Low-power Schottky TTL Load or Two HTL Loads Over the Rated Temperature Range

ABSOLUTE MAXIMUM RATINGS (Voltages referenced to Vss)

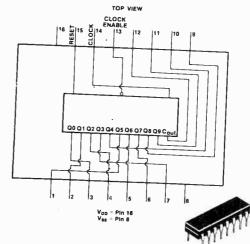
DC Supply Voltage
DC Supply Voltage0.5 to +16 Vdc
DC Current Drain per Pin -0.5 to V _{DD} +0.5 Vdc
DC Current Drain per Pin
Storage Temperature Range40 to +85°C
-65 to +150°C

TRUTH TABLE (Positive Logic)

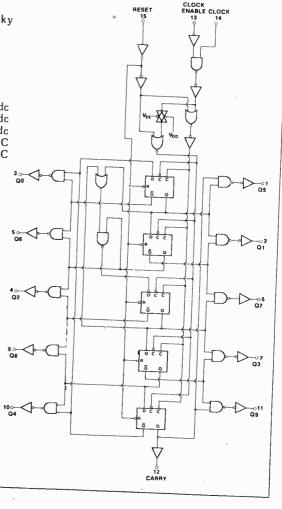
Clock	Clock Enable	Reset	Decode Output = n
0	×	0	n
x	1	0	n
X	×	1	Q0
~	0	0	n + 1
~	x	0	n
X		0	n
		0	n + 1

x = Don't Care If n < 5 Carry = "1", Otherwise = "0"

PIN CONNECTION



LOGIC DIAGRAM





14-BIT BINARY COUNTER

GENERAL DESCRIPTION

The 4020 14-stage binary counter is constructed with MOS P-channel and N-channel enhancement mode devices in a single monolithic structure. This part is designed with an input wave shaping circuit and 14 stages of ripple-carry binary counter. The device advances the count on the negativegoing edge of the clock pulse. Applications include time delay circuits, counter controls, and frequency-dividing circuits.

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields; however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit. For proper operation it is recommended that V_{in} and V_{out} be constrained to the range V_{SS} $\leq (V_{\text{in or }} V_{\text{out}}) \leq V_{\text{DD}}$.

Unused inputs must always be tied to an appropriate logic voltage level (e.g., either VSS or VDD).

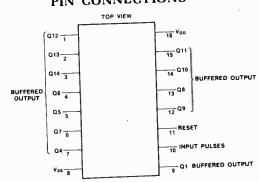
FEATURES

- Fully Static Operation
- Quiescent Current = 5.0 nA/package typical @5 Vdc
- Noise Immunity = 45% of V_{DD} typical
 Diode Protection on All Inputs
- Supply Voltage Range = 3.0 Vdc to 16 Vdc
- Capable of Driving Two Low-power TTL Loads, One Low-power Schottky TTL Load or Two HTL Loads Over the Rated Temperature Range
- Low Input Capacitance = 5.0pF typical
- Buffered Outputs Available from stages 1 and 4 thru 14
- Common Reset Line
- 13 MHz Typical Counting Rate @ V_{DD} = 15V

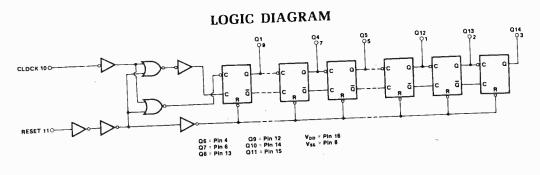
ABSOLUTE MAXIMUM RATINGS (Voltages referenced to V_{SS})

-(n.5 to +16 Vdc
DC Supply Voltage0.5 to	Vpn +0.5 Vdc
Input Voltage, All Inputs	10 mAdc
DC Current Drain per Pin	40 to +85°C
DC Current Drain per Pin Operating Temperature Range	65 to +150°C
Operating Temperature Range Storage Temperature Range	

PIN CONNECTIONS







TRUTH TABLE

Clock	Reset	Output State
	0	No Change
	0	Advance to next
_		state
x	1	All Outputs are low

x = Don't Care

DUAL J-K FLIP-FLOP

GENERAL DESCRIPTION

The 4027 dual J-K flip-flop has independent J, K, Clock (C), Set (S) and Reset (R) inputs for each flip-flop. These devices may be used in control. register, or toggle functions.

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields; however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit. For proper operation it is recommended that V_{in} and V_{out} be constrained to the range V_{SS} $\leq (V_{in} \text{ or } V_{out}) \leq V_{DD}$

Unused inputs must a ways be tied to an appropriate logic voltage level (e.g., either VSS or VDD).

FEATURES

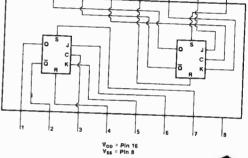
- Quiescent Current = 2.0 nA/package typical @5 Vdc
- Noise Immunity = 45% of V_{DD} typical
- Diode Protection on All Inputs
- Supply Voltage Range = 3.0 Vdc to 16 Vdc
- Single Supply Operation—Positive or Negative
- Toggle Rate = 3.0 MHz typical @5 Vdc
- Logic Swing Independent of Fanout
- Logic Edge-Clocked Flip-Flop Design—Logic state is retained indefinitely with clock level either high or low; information is transferred to the output only on the positive-going edge of the clock pulse
- Capable of Driving Two Low-power TTL Loads, One Low-power Schottky TTL Load or Two HTL Loads Over the Rated Temperature Range

ABSOLUTE MAXIMUM RATINGS (Voltages referenced to Vss)

OC Supply Voltage0.5 to +16 Vdc	DC Su
nput Voltage, All Inputs0.5 to +16 Vdc OC Current Drain per Pin0.5 to V _{DD} +0.5 Vdc	Input
PC Current Drain per Pin	DC Cu
perating Temperature Pages	Operat
torage Temperature Range40 to +85°C	Storag
-65 to +150°C	

PIN CONNECTION

TOP VIEW





TRUTH TABLE

-	Outputs*							
Ct	J	K	S	R	Qn‡			
<u> </u>	1	x	0	0	0	1	0	
	X	0	0	0	1	1	0	
-	0	x	0	0	0	0	1	
	x	1	0	0	1 1	0	1	
_	x	x	. 0	0	x	No C	anoe	
×	x	х	1	0	×	1 1	0	
X	x	x	0	1	x	0	1	
X	х	x	1	1	x	1	1	
D	- Dan't C							

- x = Don't Care
- f ≈ Level Change
- ‡ = Present State
- * = Next State



INVERTING HEX BUFFER NONINVERTING HEX BUFFER

GENERAL DESCRIPTION

The 4049 hex inverter/buffer and 4050 noninverting hex buffer are constructed with MOS P-channel and N-channel enhancement mode devices in a single monolithic structure. These complementary MOS devices find in a single monoithic structure. These complementary WOS devices that primary use where low power dissipation and/or high noise immunity is desired. These devices provide logic-level conversion using only one supply voltage. $V_{\rm CC}$. The input-signal high level $(V_{\rm HI})$ can exceed the $V_{\rm CC}$ supply voltage for logic-level conversions. Two TTL/DTL Loads can be supply voltage for logic-level conversions. Two TTL/DTL converters $(V_{\rm CC})$ when the devices are used as CMOS-to-TTL/DTL converters $(V_{\rm CC})$ = 5.0 V, $V_{\rm OL} \leq$ 0.4 V, $I_{\rm OL} \geq$ 3.2 mA). Note that pin 16 is not connected internally on these devices; consequently connections to this terminal will not affect circuit operation.

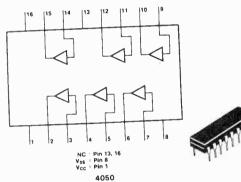
FEATURES

- High Source and Sink Currents
- High-to-Low Level Converter
- Quiescent Current = 2.0 nA/package typical@5 Vdc
- Supply Voltage Range = 3.0 Vdc to 16 Vdc

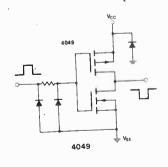
ABSOLUTE MAXIMUM RATINGS (Voltages referenced to Vss, Pin 8)

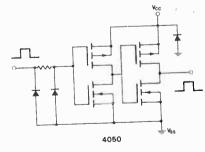
DC Supply Voltage	mAde mAde +85°C
Storage Temperature Range	

LOGIC DIAGRAMS TOP VIEW



CIRCUIT SCHEMATIC (1/6 OF CIRCUIT SHOWN)





BCD-TO-SEVEN SEGMENT LATCH/DECODER/DRIVER

4511

GENERAL DESCRIPTION

The 4511 BCD-to-seven segment latch/decoder/driver is constructed with complementary MOS (CMOS) enhancement mode devices and NPN bipolar output drivers in a single monolithic structure. The circuit provides the functions of a 4-bit storage latch, an 8421 BCD-to-seven segment decoder, and an output drive capability. Lamp test (\overline{LT}), blanking (\overline{BI}), and latch enable (LE) inputs are used to test the display, and to store a BCD code, respectively. It can be used with seven-segment light emitting diodes (LED), incandescent, fluorescent, gas discharge, or liquid crystal readouts either directly or indirectly.

Applications include instrument (e.g., counter, DVM, etc.) display driver, computer/calculator display driver, cockpit display driver, and various clock, watch, and timer uses.

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields; however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit. A destructive high current mode may occur if V_{in} and V_{out} is not constrained to the range $V_{SS} {\leq} (V_{in} \text{ or } V_{out}) {\leq} V_{DD}$

Due to the sourcing capability of this circuit, damage can occur to the device if V_{DD} is applied, and the outputs are shorted to V_{SS} and are at a logical 1 (See Maximum Ratings).

Unused inputs must always be tied to an appropriate logic voltage level (e.g., either V_{SS} or V_{DD}).

FEATURES

- Quiescent Current = 5.0 n.A/package typical@5 Vdc
- Low Logic Circuit Power Dissipation
- High-Current Sourcing Outputs (Up to 25 mA)
- Latch Storage of Code
- Blanking Input
- Lamp Test Provision
- Readout Blanking on all Illegal Input Combinations
- Lamp Intensity Modulation Capability
- Time Share (Multiplexing) Facility
- Supply Voltage Range = 3.0 Vdc to 16 Vdc
- Capable of Driving Two Low-power TTL Loads, One Low-power Schottky TTL Load or Two HTL Loads Over the Rated Temperature Range

ABSOLUTE MAXIMUM RATINGS (Voltages referenced to V_{SS})

(33)
DC Supply Voltage0.5 to +16 Vdc
input Voltage, All Inputs
DC Current Drain per Input Pin10 mAdc
Operating Temperature Range40 to +85°C
Storage Temperature Range65 to +150
waximum Continuous Output Drive Current
(Source) per Output
Maximum Continuous Output Power
(Source) per Output ‡
$P_{OHmax} = I_{OH} (V_{DD} - V_{OH}).$

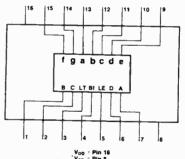
TRUTH TABLE

		Inp	ut	s							Οι	ıtp	uts	;
LE	BI	LT	D	С	В	Α	a	b	С	d	е	f	g	Display
x	х	0	x	х	х	х	1	1	1	1	1	1	1	8
Х	0	1	х	X	х	×	0	0	0	0	0	0	0	Blank
0	1	1	0	0	0	0	1	1	1	1	1	1	0	0
()	1	1	0	0	0	1.	0	1	1	0	0	0	0	1
0	I	1	0	0	1	0	1	1	0	1	1	0	1	2
0	1	1	0	0	1	1	1	1	1	1	0	0	1	3
0	1	1	0	1	0	0	0	1	1	0	0	1	1	4
0	1	1	0	1	0	1	1	0	1	1	0	1	1	5
0	1	1	0	1	1	0	0	0	1	1	1	1	1	6
0	1	1	0	1	1	1	1	1	1	0	0	0	0	7
0	1	1	1	0	0	0	1	1	1	1	1	1	1	8
0	1	1	1	0	0	1	1	1	1	0	0	1	1	9
0	1	1	1	0	1	0	0	0	0	0	0	0	0	Black
0	1	1	1	0	1	1	0	0	0	0	0	0	0	Blank
0	1	1	1	1	0	0	0	0	0	0	0	0	0	Blank
0	1	1	1	1	0	1	0	0	0	0	0	0	0	Blank
0	1	1	1	1	1	0	0	0	0	0	0	0	0	Blank
0	1	1	1	1	1	1	0	0	0	0	0	Ó	0	Blank
1	1	1	х	х	x	x]								

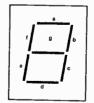
x = Don't Care

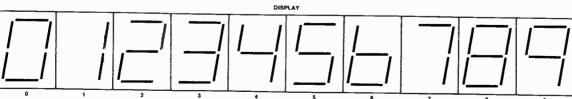
PIN CONNECTION

TOP VIEW









^{*}Depends upon the BCD code previously applied when LE = 0

4518 276-2490

DUAL BCD UP COUNTER

GENERAL DESCRIPTION

The 4518 dual BCD counter is constructed with MOS P-channel and N-channel enhancement mode devices in a single monolithic structure. I'I consists of two identical, independent, internally synchronous 4-stage counters. The counter stages are type D flip-flops, with interchangeable Clock and Enable lines for incrementing on either the positive-going or negative-going transition as required when cascading multiple stages. Each counter can be cleared by applying a high level on the Reset line. In addition, the 4518 will count out of all undefined states within two clock periods. These complementary MOS up counters find primary use in multi-stage synchronous or ripple counting applications requiring low power dissipation and/or high noise immunity.

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields; however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit. For proper operation it is recommended that V_{in} and V_{out} be constrained to the range $V_{SS} \leq \{V_{in} \text{ or } V_{out}\} \leq V_{DD}$.

Unused inputs must always be tied to an appropriate logic voltage level (e.g., either $V_{\rm SS}$ or $V_{\rm DD}$).

FEATURES

- Quiescent Current = 5.0 nA/package typical @5 Vdc
- Noise Immunity = 45% of V_{DD} typical
- Diode Protection on All Inputs
- Supply Voltage Range = 3.0 Vdc to 16 Vdc
- Low Input Capacitance = 5.0 pF typical
- Internally Synchronous for High Internal and External Speeds
- Logic Edge-Clocked Design—Incremented on Positive Transition of Clock or Negative Transition on Enable
- 6.0 MHz Counting Rate
- Capable of Driving Two Low-power TTL Loads, One Low-power Schottky TTL Load or Two HTL Loads Over the Rated Temperature Range

ABSOLUTE MAXIMUM RATINGS

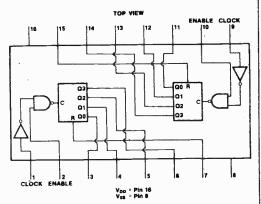
DC Supply Voltage	0.5 to +16 Vdc
Input Voltage, All Inputs	0.5 to V _{DD} +0.5 Vdc
DC Current Drain per Pin	10 mAdc
Operating Temperature Range	40 to +85°C
Storage Temperature Range	65 to +150°C

TRUTH TABLE

Clock	Enable	Reset	Action
	1	0	Increment Counter
0		0	Increment Counter
_	x	0	No Change
х		0	No Change
	0	0	No Change
1	~	0	No Change
v	l x	1	O1 thru O4=0

x = Don't Care

PIN CONNECTION





OPERATIONAL AMPLIFIER

GENERAL DESCRIPTION

The 301 is a monolithic operational amplifier intended for general purpose applications. Operation is completely specified over the range of voltages commonly used for these devices. The design, in addition to providing high gain, minimizes both offset voltage and bias currents. Further, the class-B output stage gives a large output capability with minimum power drain.

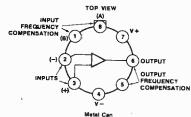
External components are used to frequency compensate the amplifier. Although the unity-gain compensation network specified will make the amplifier unconditionally stable in all feedback configurations, compensation can be tailored to optimize high-frequency performance for any gain

The fact that the amplifier is built on a single silicon chip provides low offset and temperature drift at minimum cost. It also ensures negligible drift due to temperature gradients in the vicinity of the amplifier.

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	+16V
Power Dissipation	500 mW
Differential input Voltage	+30V
mput voitage	+151/
Output Short-Circuit Duration [T _a = 55°C]	Indefinite
Storage Temperature Range	-65°C to +150°C
Operating Temperature Range	0°C to +70°C
Lead Temperature (Soldering, 10 seconds)	300°C
, , , , , , , , , , , , , , , , , , , ,	

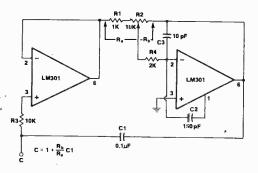
PIN CONNECTION



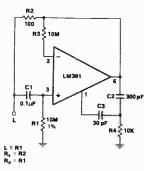


TYPICAL APPLICATIONS

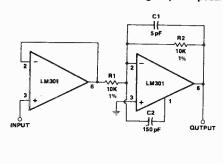
Variable Capacitance Multiplier







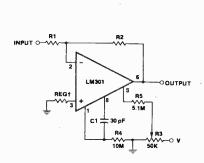
Fast Inverting Amplifler with High Input Impedance



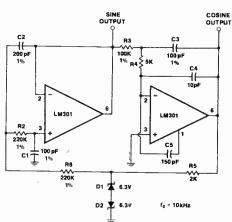
Inverting Amplifier with Balancing Circuit

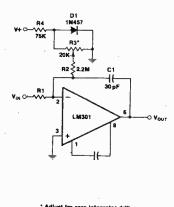
Sinewave Oscillator

Integrator with Bias Current Compensation



† May be zero or equal to parallel combination of R1 and R2 for minimum offset.





QUAD OP AMP

GENERAL DESCRIPTION

The 324 series consists of four independent, high gain, internally frequency compensated operational amplifiers which were designed specifically to operate from a single power supply over a wide range of voltages. Operation from split power supplies is also possible and the low power supply current drain is independent of the magnitude of the power supply voltage.

Application areas include transducer amplifiers, dc gain blocks and all the conventional op amp circuits which now can be more easily implemented in single power supply systems. For example, the 324 series can be directly operated off of the standard +5 V_{DC} power supply voltage which is used in digital systems and will easily provide the required interface electronics without requiring the additional $\pm 15~V_{DC}$ power supplies.

FEATURES

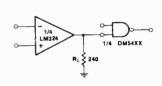
- Internally frequency compensated for unity gain
- Large de voltage gain 100 dB
- Wide bandwidth (unity gain) 1 MHz (temperature compensated)
- · Wide power supply range: Single supply 3 V_{DC} to 30 V_{DC} or dual supplies ±1.5 V_{DC} to ±15 V_{DC}
- Very low supply current drain (800µA)—essentially independent of supply voltage (1 mW/op amp at +5 VDC)
- Low input biasing current 45 nA_{DC} (temperature compensated)
- \bullet Low input offset voltage 2 mV $_{DC}$ and offset current 5 nA_{DC}
- Input common-mode voltage range includes ground
- Differential input voltage range equal to the power supply voltage Large output voltage swing 0 V_{DC} to V^+ -1.5 V_{DC}

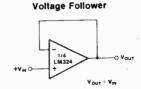
ABSOLUTE MAXIMUM RATINGS

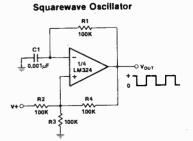
Supply Voltage, V+32	V_{DC} or $\pm 16 V_{DC}$
Differential Input Voltage	32 V _{DC}
Differential Input Voltage0.3	$V_{ m DC}$ to +32 $V_{ m DC}$
Power Dissipation	
Molded DIP	570 mW
Cavity DIP	900 mW
Output Short-Circuit to GND (One Amplifier)	Continuous
$V^{\dagger} \le 15 \text{ V}_{\text{col}}$ and $T_{\text{col}} = 25^{\circ}\text{C}$	
Input Current (V _{IN} <-0.3 V _{OL})	50 mA
Operating Temperature Range	0°C to +70°C
Storage Temperature Range	-65°C to +150°C
Lead Temperature (Soldering, 10 seconds)	300°C

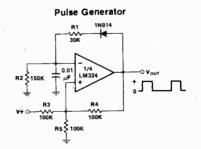
TYPICAL APPLICATIONS

Driving TTL

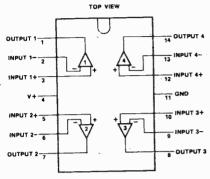








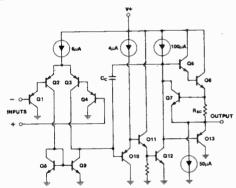
PIN CONNECTION



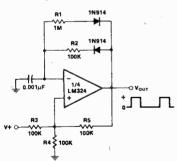
Qual-In-Line and Flat Package



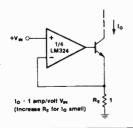
SCHEMATIC DIAGRAM (Each Amplifier)



Pulse Generator



High Compliance Current Sink



QUAD COMPARATOR

339

GENERAL DESCRIPTION

The 339 series consists of four independent voltage comparators which were designed specifically to operate from a single power supply over a wide range of voltages. Operation from split power supplies is also possible and the low power supply current drain is independent of the magnitude of the power supply voltage. These comparators also have a unique characteristic in that the input common-mode voltage range includes ground, even though operated from a single power supply voltage.

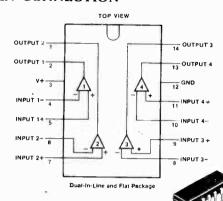
FEATURES

- Wide single supply:
- Voltage range $2V_{DC}$ to $32V_{DC}$ or dual supplies $\pm 1V_{DC}$ to $\pm 16V_{DC}$
- Very low supply current drain (0.8 mA)—independent of supply voltage (1 mW/comparator at +5 V_{DC})
- Input common-mode voltage range includes ground
- Differential input voltage range equal to the power supply voltage
- Low output 1 mV at 5µA; saturation voltage 70 mV at 1 mA
- Output voltage compatible with TTL (fanout of 2). DTL, ECL, MOS and CMOS logic systems

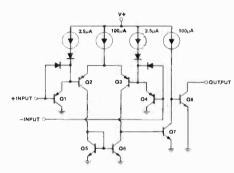
ABSOLUTE MAXIMUM RATINGS

Supply Voltage, V+	32 Vpc or ±16 Vpc
Differential Input Voltage	
Input Voltage	0.3 V_{DC} to +36 V_{DC}
Power Dissipation	
Molded DIP	570 mW
Cavity DIP	900 mW
Output Short-Circuit to GND	Continuous
Input Current (V _{IN} <-0.3 V _{DC})	
Operating Temperature Range	0°C to +70°C
Storage Temperature Range	65°C to +150°C
Lead Temperature (Soldering, 10 seconds)	300°C

PIN CONNECTION



SCHEMATIC DIAGRAM



TYPICAL APPLICATIONS



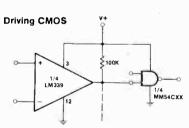
(V+ = 5.0 V_{DC})

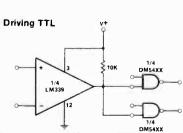
Basic Comparator

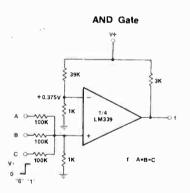
V+

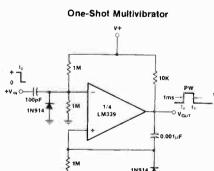
LM339

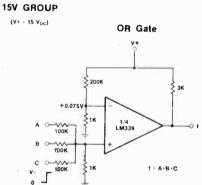
Vour

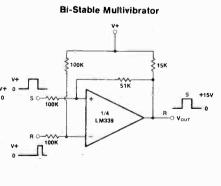












DUAL TWO-WATT AUDIO AMPLIFIER

GENERAL DESCRIPTION

The 377 is a monolithic dual power amplifier which offers high quality performance for stereo phonographs, tape players, recorders, and AM-FM stereo receivers, etc.

The 377 will deliver 2W/channel into 8 or $16\Omega loads$. The amplifier is designed to operate with a minimum of external components and contains an internal bias regulator to bias each amplifier. Device overload protection consists of both internal current limit and thermal shutdown.

FEATURES

- Avo typical 90 dB
- 2W per channel
- 75 dB channel
- separation
- · Self centered biasing
- 70 dB ripple rejection 3 MΩ input impedance
 - 10-26V operation
- Internal stabilization
 Internal current limiting
 - Internal thermal protection

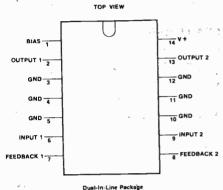
· Servo amplifiers

• Instrument systems

Intercoms

APPLICATIONS

- Multi-channel audio systems
- · Tape recorders and players
- Movie projectors
- Automotive systems
- Stereo phonographs
- Bridge output stages
- AM-FM radio
- receivers



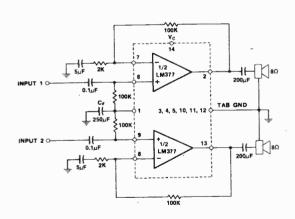
PIN CONNECTION

ABSOLUTE MAXIMUM RATINGS

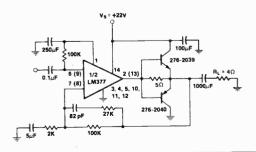
Supply Voltage	26V
Innut Voltage	0V-V _{SUPPLY}
Operating Temperature	0°C to +70°C
Storage Temperature	65°C to +150°C
Junction Temperature	150°C
Lead Temperature (Soldering, 10 seconds)	300°C

TYPICAL APPLICATIONS

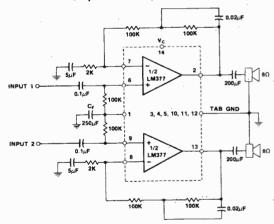
Simple Stereo Amplifier



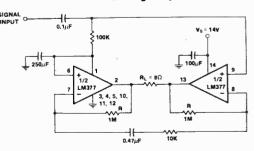
10W Per Channel Audio Amplifier



Simple Stereo Amplifier with Bass Boost



4W Bridge Amplifier



PIN CONNECTION

Dual-In-Line Package

LOW VOLTAGE AUDIO POWER AMPLIFIER

386 276-1731

B GAIN

BYPASS

GENERAL DESCRIPTION

The 386 is a power amplifier designed for use in low voltage consumer applications. The gain is internally set to 20 to keep external part count low, but the addition of an external resistor and capacitor between pins 1 and 8 will increase the gain to any value up to 200.

The inputs are ground referenced while the output is automatically biased to one half the supply voltage. The quiescent power drain is only 18 milliwatts when operating from a 6 volt supply, making the 386 ideal for battery operation.

FEATURES

- · Battery operation
- Minimum external parts
- Wide supply voltage range 4-12 Volts
- Low quiescent current drain 3 mA
- Voltage gains from 20 to 200
- Ground referenced input
- Self-centering output quiescent voltage
 • Low distortion
- · Eight pin dual-in-line package

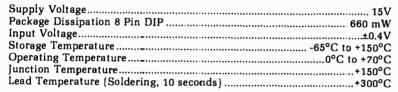
APPLICATIONS

 AM-FM radio amplifiers

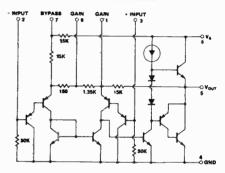
amplifiers

- Intercoms
- TV sound systems • Line drivers
- Portable tape player
- Ultrasonic drivers
- Small servo drivers
- Power converters

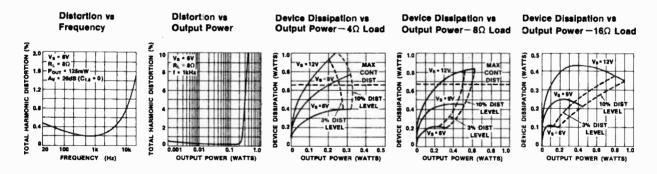
ABSOLUTE MAXIMUM RATINGS



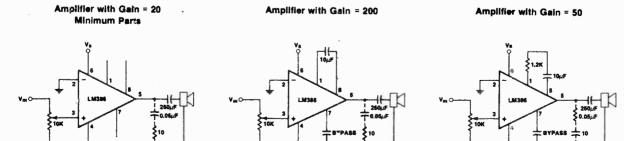
SCHEMATIC DIAGRAM



TYPICAL CHARACTERISTICS



TYPICAL APPLICATIONS



TIMER **DUAL TIMER**

GENERAL DESCRIPTION

The 555 is a highly stable device for generating accurate time delays or oscillation. Additional terminals are provided for triggering or resetting if desired. In the time delay mode of operation, the time is precisely controlled by one external resistor and capacitor. For a stable operation as an oscillator, the free running frequency and duty cycle are accurately controlled with two external resistors and one capacitor. The circuit may be triggered and reset on falling waveforms, and the output circuit can source or sink up to 200 mA or drive TTL circuits. The 556 is a dual 555. The two timers operate independently of each other sharing only V_{CC} and ground.

- · Timing from microseconds through hours
- · Operates in both astable and monostable modes
- Adjustable duty cycle
- Output can source or sink 200 mA
- · Output and supply TTL compatible
- Temperature stability better than 0.005% per °C
- Normally on and normally off output

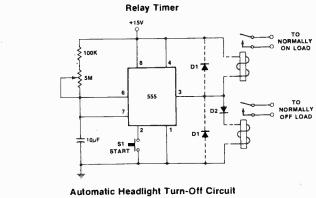
APPLICATIONS

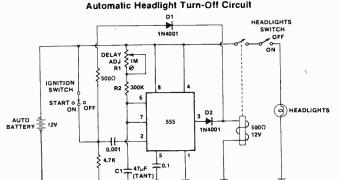
- · Precision timing
- · Pulse generation · Sequential timing
- Time delay generation
 Pulse position • Pulse width
 - modulation
 - Linear ramp generator modulation

ABSOLUTE MAXIMUM RATINGS

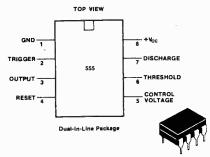
Supply Voltage	±16V
Power Dissipation	600 mW
Operating Temperature Range	0°C to +70°C
Storage Temperature Range	-65°C to +150°C
Lead Temperature (Soldering, 10 seconds)	300°C
Bend Temperature (Boxiering, 10 desones)	

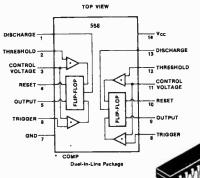
TYPICAL APPLICATION





PIN CONNECTION



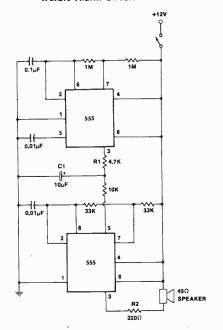


TRUTH TABLE (IC555)

PIN 2 TRIGGER	PIN 6 THRESHOLD	PIN 4 RESET	PIN 3 OUTPUT
н	x	Н	L
L	X	Н	H
Н	L	Н	L
X	X	L.	L

H = High Level . L = Low Level X = Don't Care

Warble Alarm Circuit



VOLTAGE CONTROLLED OSCILLATOR

GENERAL DESCRIPTION

The 566 is a general purpose voltage controlled oscillator which may be used to generate square and triangular waves, the frequency of which is a very linear function of a control voltage. The frequency is also a function of an external resistor and capacitor.

FEATURES

- Wide supply voltage range: 10 to 24 volts
- · Very linear modulation characteristics
- High temperature stability
- · Excellent supply voltage rejection
- 10 to 1 frequency range with fixed capacitor
- · Frequency programmable by means of current, voltage, resistor or capacitor.

APPLICATIONS

- FM modulation
- Function generation
- Tone generation

- Signal generation
- Frequency shift keying

ABSOLUTE MAXIMUM RATINGS

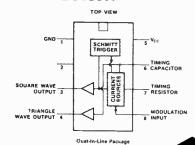
Power Supply Voltage	26V
Power Dissipation	300 m W
Operating Temperature Range	0°C to 70°C
Lead Temperature (Soldering, 10 sec)	300°C

The 566 may be operated from either a single supply as shown in this test circuit, or from a split (±) power supply. When operating from a split supply, the square wave output (pin 4) is TTL compatible (2 mA current sink) with the addition of 4,7 KC resistor from pin 3 to ground.

A 0.001 µF capacitor is connected between pins 5 and 6 to prevent parasitic oscillations that may occur during VCO switching.

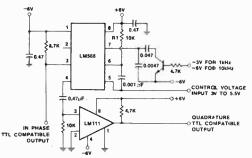
where 2K<R1<20K and V_s is voltage between pin 5 and pin 1.

PIN CONNECTION



TYPICAL APPLICATION

1kHz And 10kHz TTL Compatible Voltage Controlled Oscillator



TONE DECODER

567 276-1721

GENERAL DESCRIPTION

The 567 is a general purpose tone decoder designed to provide a saturated transistor switch to ground when an input signal is present within the passband. The circuit consists of an I and Q detector driven by a voltage controlled oscillator which determines the center frequency of the decoder. External components are used to independently set center frequency, bandwidth and output delay.

FEATURES

- 20 to 1 frequency range with an external resistor
- Logic compatible output with 100 mA current sinking capability
- Bandwidth adjustable from 0 to 14%
- · High rejection of out of band signals and noise
- Immunity to false signals
- · Highly stable center frequency
- · Center frequency adjustable from 0.01 Hz to 500 kHz

APPLICATIONS

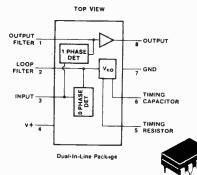
- Touch tone decoding Wide band FSK · Precision oscillator
 - demodulation
- Frequency manitoring Ultrasonic controls
- and control

- · Carrier current remote controls
- Communications paging decoders

ABSOLUTE MAXIMUM RATINGS

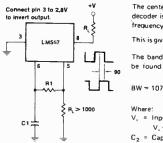
Supply Voltage	9V
Power Dissipation	300 mW
V ₈ (Output Voltage)	15V
V ₃ (-Voltage At Input)	
V ₃ (+Voltage At Input)	V ₈ +0.5V
Storage Temperature Range	65°C to +150°C
Operating Temperature	0°C to +70°C

PIN CONNECTION



TYPICAL APPLICATION

Oscillator with Quadratrature Output



The center frequency of the tone decoder is equal to the free running frequency of the VCO.

This is given by $f_0 \ge \frac{1}{R_1 D_1}$

The bandwidth of the filter may be found from the approximation

f₀C₂ in S of fa

= Input voltage (volts rms), $V_{\star} \le 200 \text{ mV}$

Ca = Capacitance at Pin 2 (uF)



VOLTAGE REGULATOR

GENERAL DESCRIPTION

The 723 is a voltage regulator designed primarily for series regulator applications. By itself, it will supply output currents up to 150 mA; but external transistors can be added to provide any desired load current. The circuit features extremely low standby current drain, and provision is made for either linear or foldback current limiting.

FEATURES

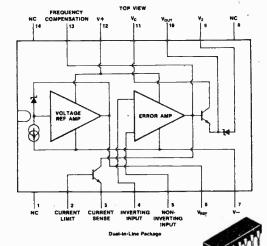
- 150 mA output current without external pass transistor
- Output currents in excess of 10A possible by adding external transistors
- Input voltage 40V max
- Output voltage adjustable from 2V to 37V
- Can be used as either a linear or a switching regulator

The 723 is also useful in a wide range of other applications such as a shunt regulator, a current regulator or a temperature controller.

ABSOLUTE MAXIMUM RATINGS

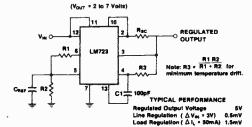
Pulse Voltage from V+ to V- (50 ms)	50V
Continuous Voltage from V+ to V	
Input-Output Voltage Differential	40V
Maximum Amplifier Input Voltage (Either Input)	
Maximum Amplifier Input Voltage (Differential)	
Current from Vz	
Current from V _{REF}	
Internal Power Dissipation Metal Can	
Cavity DIP	
Molded DIP	660 mW
Operating Temperature Range	0°C to +70°C
Storage Temperature Range Metal Can	65°C to +150°C
DIP	55°C to +125°C
Lead Temperature (Soldering, 10 sec)	300°C
(

PIN CONNECTION



TYPICAL APPLICATION

Basic Low Voltage Regulator





OPERATIONAL AMPLIFIER

GENERAL DESCRIPTION

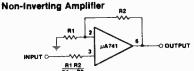
The 741 series are general purpose operational amplifiers which feature improved performance over industry standards.

The amplifiers offer many features which make their application nearly foolproof: overload protection on the input and output, no latch-up when the common mode range is exceeded, as well as freedom from oscillations.

ABSOLUTE MAXIMUM RATINGS

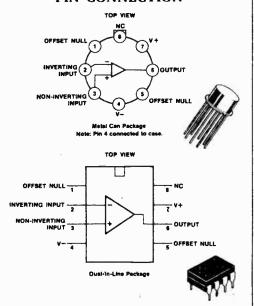
Supply Voltage	±16V
Power Dissipation	
Differential Input Voltage	±30V
Input Voltage	
Output Short Circuit Duration	
Operating Temperature Range	
Storage Temperature Range	65°C to +150°C
Lead Temperature (Soldering, 10 seconds)	

TYPICAL APPLICATION



GAIN	R1	R2	B.W.	Rys
10	116	9K	100kHz	400M
100	100Ω	9.9K	10kHz	280M
1000	100Ω	99.9K	1kHz	8000

PIN CONNECTION



DUAL OPERATIONAL AMPLIFIER

1458 276-038

GENERAL DESCRIPTION

The 1458 is a general purpose dual operational amplifier. The two amplifiers share a common bias network and power supply leads. Otherwise, their operation is completely independent. Features include:

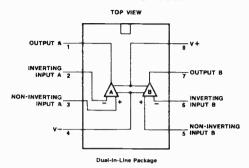
FEATURES

- · No frequency compensation required.
- Short-circuit protection
- Wide common-mode and differential voltage ranges
- Low-power consumption
- · No latch up when input common mode range is exceeded

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	±16V
Power Dissipation	400 mW
Differential Input Voltage	±30V
Input Voltage	±15V
Output Short-Circuit Duration	Indefinite
Operating Temperature Range	0°C to 70°C
Storage Temperature Range	65°€ to 150°€
Lead Temperature (Soldering, 10 sec)	300°C

PIN CONNECTION





QUAD OPERATIONAL NORTON AMPLIFIER

3900

GENERAL DESCRIPTION

The 3900 series consists of four independent, dual input, internally compensated amplifiers which were designed specifically to operate off of a single power supply voltage and to provide a large output voltage swing. These amplifiers make use of a current mirror to achieve the non-inverting input function. Application areas include: ac amplifiers, RC active filters, low frequency triangle, squarewave and pulse waveform generation circuits, tachometers and low speed, high voltage digital logic gates.

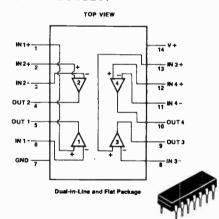
FEATURES

- ullet Wide single supply voltage 4 V_{DC} to 36 V_{DC} range or dual supplies ±2 V_{DC} to ±18 V_{DC}
- Supply current drain independent of supply voltage
- Low input biasing current 30 nA
- High open-loop gain 70 dB
 Wide bandwidth 2.5 MHz (Unity Gain)
- Large output voltage swing (V⁺-1) V_{p-p}
 Internally frequency compensated for unity gain
- Output short-circuit protection

ABSOLUTE MAXIMUM RATINGS

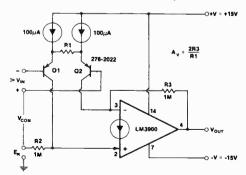
Supply Voltage (Wide Range, Single Supply)32 VD	_
Supply Voltage (Wide Range, Dual Supply)±16 VD	c
Power Dissipation (T _A = 25°C)	
Flat Pack 570 mV	N
Input Currents, I _{IN} ⁺ or I _{IN} ⁻ 20 mA _D	
Output Short-Circuit Duration—One Amplifier	ıs
T _A = 25°C (See Application Hints)	
Operating Temperature Range0°C to +70°C	С
Storage Temperature Range	C
Lead Temperature (Soldering, 10 seconds)300°C	С

PIN CONNECTION



TYPICAL APPLICATIONS

Basic Instrumentation Amplifier

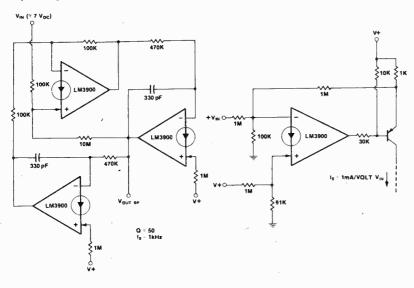


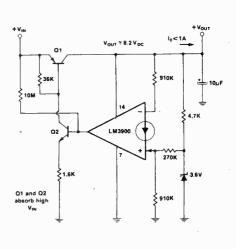
3900 (276-1713) TYPICAL APPLICATIONS (Con't)

Bi-Quad Active Filter (2nd Degree State-Variable Network)

Voltage Controlled Current Source (Transconductance Amplifier)

High V_{IN}, Low (V_{IN} -V_{OUT}) Self Regulator

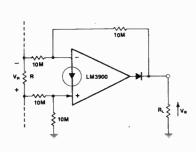


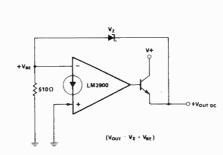


Ground-Referencing a Differential Input Signal

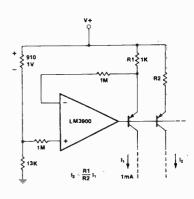
Voltage Regulator

Fixed Current Sources





Buffer Amplifler



Voltage-Controlled Current Sink (Tranconductance Amplifier)

LM3900 $V_{\text{IN}} \ge V_{\text{BE}}$

180K

200K

180K

0.1µF

Vout oc = A f_{IN}

Allows Vout to go to zero

Tachometer

LED FLASHER/OSCILLATOR



GENERAL DESCRIPTION

The 3909 is a monolithic oscillator specifically designed to flash Light Emitting Diodes. By using the timing capacitor for voltage boost, it delivers pulses of 2 or more valts to the LED while operating on a supply of 1.5V or less. The circuit is inherently self-starting, and requires addition of only a battery and capacitor to function as a LED flasher.

It has been optimized for low power drain and operation from weak batteries so that continuous operation life exceeds that expected from battery rating.

Application is made simple by inclusion of internal timing resistors and an internal LED current limit resistor.

Timing capacitors will generally be of the electrolytic type, and a small 3V rated part will be suitable for any LED flasher using a supply up to 6V. However, when picking flash rates, it should be remembered that some electrolytics have very broad capacitance tolerances, for example -20% to +100%.

FEATURES

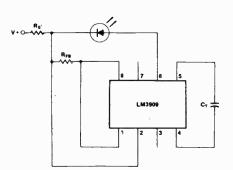
- Operation over one year from one C size flashlight cell
- Bright, high current LED pulse
- · Minimum external parts
- Low voltage operation, from just over 1V to 5V
- Low current drain, averages under 0.5 mA during battery life
- Powerful; as an oscillator directly drives an 8Ω speaker

ABSOLUTE MAXIMUM RATINGS

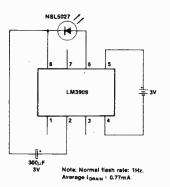
Power Dissipation	500 mW
V ⁺ Voltage	6.4V
Operating Temperature Range	25°C to +70°C
Pulse Width	6 ms
Peak LED Current	45 mA
Operating Current	75 mA
Flash Frequency	1.3 Hz
High Flash Frequency	1.1 kHz

TYPICAL APPLICATIONS

Warning Flasher High Voltage Powered



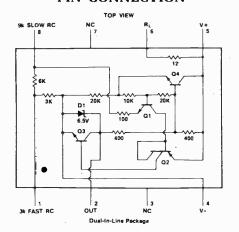
3V Flasher



TYPICAL OPERATING CONDITIONS

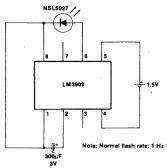
٧+	NORMAL FLASH Hz	C₁	R _S 1W	RFB	V+RANGE
6V	2	400µF	1K	1.5K	5-25V
15V	2	180µF	3.9K	1K	13-50V
100V	1.7	180µF	43K	1K	85-200V

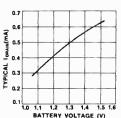
PIN CONNECTION





1.5V Flasher





ESTIMATED BATTERY LIFE (CONTINUOUS 1.5V FLASHER OPERATION)

SIZE CELL	ТҮРЕ				
SIZE CELL	STANDARD	ALKALINE			
AA	3 MONTHS	6 MONTHS			
С	7 MONTHS	15 MONTHS			
D	1.3 YEARS	2.6 YEARS			

Note: Estimates are made from our tests and manufacturers data. Conditions are fresh batteries and room temperature. Clad or "leak-proof" batteries are recommended for any application of five months or more. Nickel Cadmium cets are not recommended.

TEMPERATURE CONTROLLER

GENERAL DESCRIPTION

The 3911 is a highly accurate temperature measurement and/or control system for use over a -25°C to +85°C temperature range. Fabricated on a single monolithic chip, it includes a temperature sensor, a stable voltage reference and an operational amplifier.

The output voltage of the 3911 is directly proportional to temperature in degrees Kelvin at 10 mV/°K. Using the internal op amp with external resistors any temperature scale factor is easily obtained. By connecting the op amp as a comparator, the output will switch as the temperature transverses the set-point making the device useful as an on-off temperature controller.

An active shunt regulator is connected across the power leads of the 3911 to provide a stable 6.8V voltage reference for the sensing system. This allows the use of any power supply voltage with suitable external resistors.

FEATURES

- Uncalibrated accuracy ±10°C
- Internal op amp with frequency compensation
- Linear output of 10 mV/°K (10 mV/°C)
- Can be calibrated in degrees Kelvin, Celsius or Fahrenheit
- · Output can drive loads up to 35V

ABSOLUTE MAXIMUM RATINGS

Ground Referred

TYPICAL APPLICATIONS

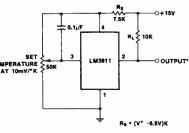
-15V O

Centigrade Thermometer P15V OUTPUT 10mV°C 12K 4 27.3K OUTPUT 10mV°C 38K TEMPERATURE 50K AT 10mV°K 50K

R1 = 1000 (V* ~3.6V)

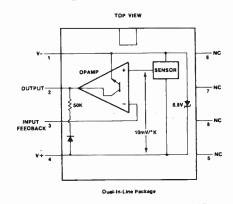
R2 = 500 (V" ~4.0V)
* Trims out initial zener tolerance. Set output to read *

Basic Temperature Controller



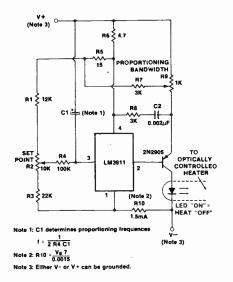
*Output goes negative on temperature increas-

PIN CONNECTION

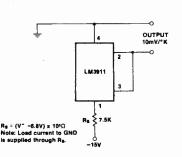




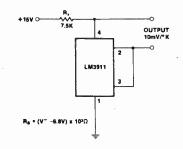
Proportioning Temperature Controller



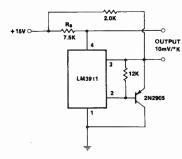
Basic Thermometer for Negative Supply



Basic Thermometer for Positive Supply



Increased Gain and Output Drive



MOS/LSI DIGITAL CLOCK/CALENDAR RADIO TIMER

7001 276-1756

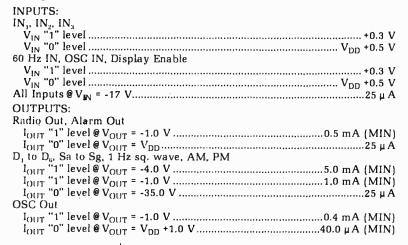
GENERAL DESCRIPTION

The 7001 is an alternating time (8 second display) and calendar (2 second display) chip. To construct this clock/calendar circuit you need only a single power supply, displays and standard interface components. It is compatible with 4 or 6 digit, 7 segment, common cathode, multiplexed displays.

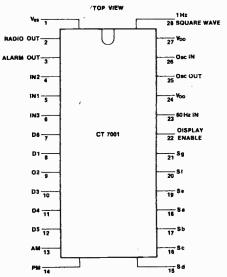
FEATURES

28/30/31 day calendar, 12/24 hour clock and 24 hour alarm with 10 minute snooze control; 50/60Hz operation; 9 hour 59 minute timer; on chip 60Hz back up; 1Hz output and an inhibit input to wire OR the digit and segment outputs to other chips. The setting of any one counter (time, alarm, calendar, timer) does not affect the contents of any other counter.

ABSOLUTE MAXIMUM RATINGS All specifications are at T_A = 25°C



PIN CONNECTION





TYPICAL APPLICATION (See Page 48)

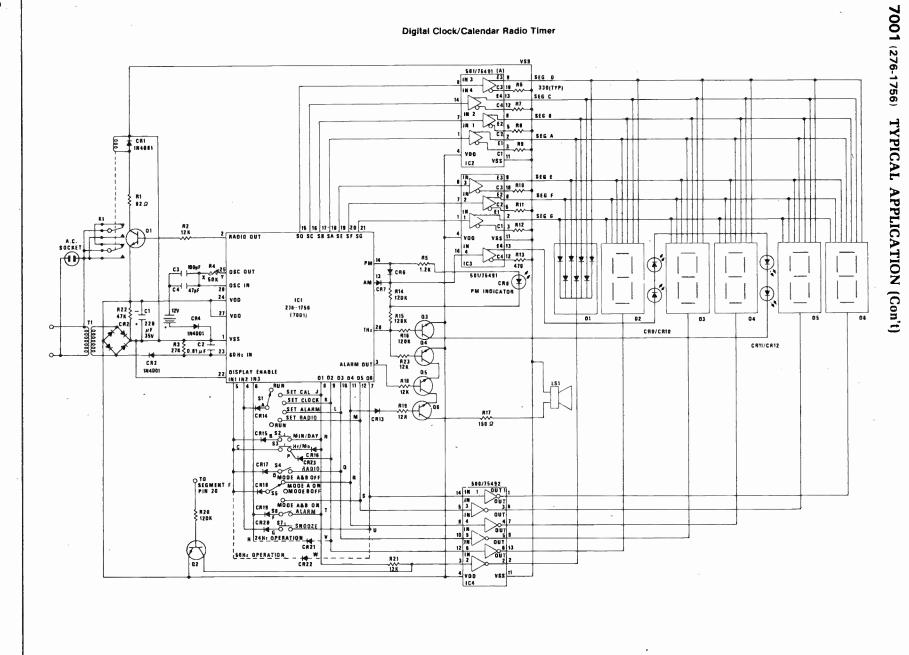
Project Parts List for Schematic on Page 48

This package contains a complete circuit card ready for parts to be added. To construct this Project you'll need the following parts:

SYMBOL	OESCRIPTION	QTY.	CAT. NO.	SYMBOL	OESCRIPTION	QTY.	CAT. NO.
C1	220 uF/35V Electrolytic Capacitor	1	272-1029	R6, 12	330 ohm ½ Watt Resistor	2	271-000
C2	0.01 uF (10,000 pF) Disc Capacitor	1	272-131	R13	470 ohm 1/2 Watt Resistor	1	271-000
C3	100 pF Disc Capacitor	1	272-123	R14-16, 20		4	271-000
C4	47 pF Disc Capacitor	1	272-121	R17	150 ohm ½ Watt Resistor	1	271-000
CR1, 4	1N4001 Rectifier Diode	2	276-1101	R22	47K ½ Watt Resistor	1	271-000
CR2	Bridge Rectifier	1	276-1151	S1	2 Pole, 6 Position Rotary Switch	1	275-1386
CR3, 6, 7,				\$2, 3, 7	SPST Miniature Push Button Switch	3	275-1547
13 - 23 1)	1N914 Diode	14	276-1122	S4, 6	SPST Toggle Switch	2	275-324
CR8 12	Subminiature Red LED	5	276-042	S5	SPDT Toggle Switch, Neutral Center	1	275-325
D1 - D6	Common Cathode LED 7 Segment Display	6	276-062	Ti	12V/300mA Transformer	i	275-1385
IC1	Clock/Calendar/Radio Timer			3)		i	270-261
	Integrated Circuit 1756	1	276-1756	•,	9 V Battery Clip	1	270-326
IC2, 3	Segment Driver Integrated Circuit 501	2	276-1701		8 AA Cell Battery Holder	1	270-387
IC4	Hex Digit Driver Integreted Circuit 500	1	276-1702		AC Socket	i	270-642
K1	Miniature DPDT Relay	1	275-206	4)	½" (12.7 mm) Spacer	8	270-1393
LS1	8 ohm Speeker	1	40-245		28 Pin Dual In-Line Socket	1	276-1997
Q1, 2, 3	Transistor, 2031	3	276-2031	. 4)	14 Pin Dual In-Line Socket	3	276-1999
Q4, 5, 6	Transistor, 2033	3	276-2033	•	Universal Display Board	1	277-108
R1	82 ohm 1/2 Wett Resistor	1	271-000		Project Board (PC Board)	1	277-109
R2, 18, 19,					No. 22 Hookup Wire	1	278-1296
21, 23	12K ½ Watt Resistor	5	271-000		Line Cord	1	278-1255
R3	27K 1/2 Wett Resistor	1	271-000		AA Battery	8	23-453
R4 2)	50K Trim Potentiometer	1	271-219	-	Miscellaneous Hardware	•	25 400
R6	1.2K 1/2 Watt Resistor	1	271-000				

- NOTES: 1) CR21 and CR22 are optional.
 - 10K Resistor is optional for the 50K "Trim Pot".
- 3) This is a suggested cabinet to use for this Project.
- These parts are optional.

NTE





5 V VOLTAGE REGULATOR 12 V VOLTAGE REGULATOR 15 V VOLTAGE REGULATOR



GENERAL DESCRIPTION

This series of three terminal regulators is available with several fixed output voltages making them useful in a wide range of applications. One of these is local on card regulation, eliminating the distribution problems associated with single point regulation. The voltages available allow these regulators to be used in logic systems, instrumentation, HiFi, and other solid state electronic equipment. Although designed primarily as fixed voltage regulators these devices can be used with external components to obtain adjustable voltages and currents.

This series will allow over 1.5A load current if adequate heat sinking is provided. Current limiting is included to limit the peak output current to a safe value. Safe area protection for the output transistor is provided to limit internal power dissipation. If internal power dissipation becomes too high for the heat sinking provided, the thermal shutdown circuit takes over preventing the IC from everheating.

FEATURES

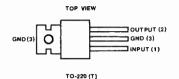
VOLTAGE RANGE

- Internal thermal overload protection
- No external components required
- · Output transistor safe area protection
- Internal short circuit current limit

7805		5	ν
7812	1	2	V
		_	

7815.....

PIN CONNECTION



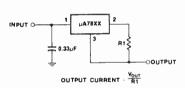


ABSOLUTE MAXIMUM RATINGS

Input Voltage

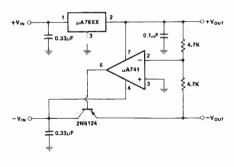
mpm - man	
(Output Voltage Options 5V through 18V)	35V
(Output Voltage Option 24V)	40V
Internal Power Dissipation	Internally Limited
Operating Temperature Range	0°C to +70°C
Maximum Junction Temperature	150°C
Storage Temperature Range	65°C to +150°C
Lead Temperature (Soldering, 10 seconds)	

Current Regulator

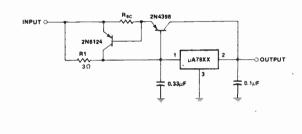


TYPICAL APPLICATIONS

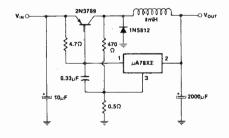
± Tracking Voltage Regulator



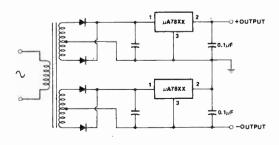
High Output Current, Short Circuit Protected



Switching Regulator



Positive and Negative Regulator



MOS/LSI DIGITAL ALARM CLOCK

GENERAL DESCRIPTION

This 50252 device is a versatile MOS/LSI clock circuit. To construct a digital alarm clock, you need only a simple power supply, display and standard interface components. It is compatible with 4 or 6 digit, 7 segment multiplexed displays. The scanning oscillator is completely internal and requires no external components. The alarm operates in a 24 hour mode, which allows the alarm to be disabled and immediately reenabled to activate 24 hours later. The snooze inhibits an activated alarm for 10 minutes. The alarm output is a tone, thus eliminating an external oscillator.

CAUTION These devices are extremely susceptible to damage from static charge. We recommend that you handle them by the ends. DO NOT TOUCH THE PINS.

APPLICATIONS

- AM/PM and circuit activity signal
- Intensity control
- 12 hr/60 Hz or 24 hr./ 50Hz capability

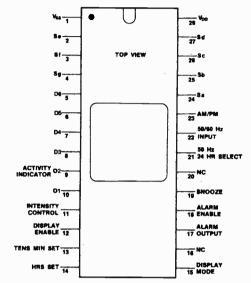
RECOMMENDED OPERATING CONDITIONS FREE AIR:

Operating Voltage					
Relative to VSS			18	V to	-9 V
Input Logic Levels					
"1" Logic Level		Vec -0.3	V to	Vec +).3V
"0" Logic Level	•••••	18	V to V	/ _{nn} +0	.5 V
_				UU "	•

ABSOLUTE MAXIMUM RATINGS

Voltage on any Pin Relative to V _{SS} plus	0.3 V to -18 V
Output Voltage Breakdown on any	
Output Relative to V _{SS}	18 V @10 uA
Operating Free-Air Temperature Range	0°C to 55°C

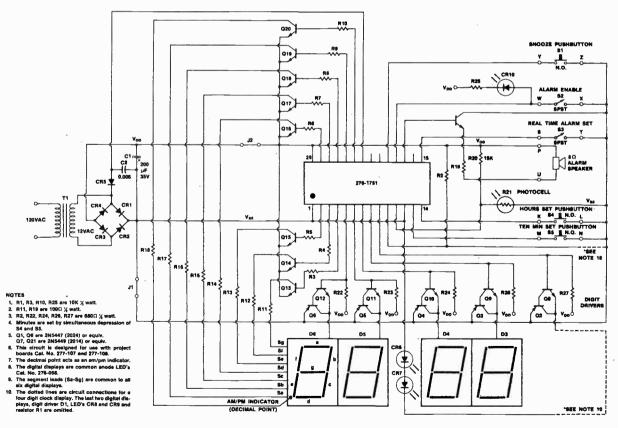
PIN CONNECTION





TYPICAL APPLICATION

Digital Alarm Clock



QUAD LED SEGMENT DRIVER HEX LED DIGIT DRIVER

75491 276-1701 75492 276-1702

GENERAL DESCRIPTION

The 75491 and 75492 are designed to interface MOS logic to common cathode light-emitting diode readouts in serially addressed multi-digit displays. Using a segment address and digit scan LED drive method in a time multiplexing system results in a minimizing of the number of required drivers.

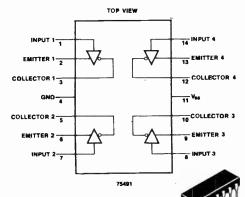
FEATURES

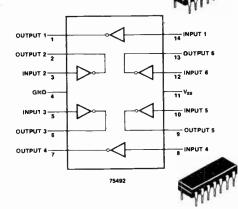
- Low Input Current Requirement for MOS Compatibility
- Low Standby Power Drain
- Source or Sink Current Capability of 50 mA for 75491
- Sink Current Capability of 250 mA for 75492
- Four High-Gain Darlington Drivers in a Single Package-75491
- Six High-Gain Darlington Drivers in a Single Package—75492

ABSOLUTE MAXIMUM RATINGS (T_A = 0 to +70°C unless otherwise noted.)

	75491	75492
Bias Supply Voltage	10 Vdc	10 Vdc
Input Voltage	-5.0 to V _{SS} Vdc	-5.0 to V _{SS} Vdc
Collector Voltage	10 Vdc	10 Vdc
Collector-to-Emitter Voltage	10 Vdc	—Vdc
Collector-to-Input Voltage	10 Vdc	10 Vošc
Emitter Voltage (V _{IN} >5.0 Vdc)	10 Vdc	—Vdc
Emitter-to-Input Voltage	5.0 Vdc	—Vdc
Continuous Collector Current		
(Each Collector)	50 mA	250 mA
(All Collectors)	200 mA	600 mA
Power Dissipation (Package Limitation	n)	
Ceramic and Plastic Dual In-Line Pa	ckages	830 mW
Derate above T _A = +25°C		6.6 mW/°C
Operating Temperature Range		0 to +70°C
Storage Temperature Range		65+ to +150°C

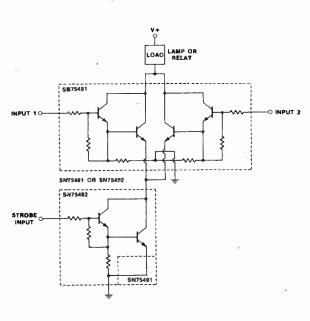
PIN CONNECTION



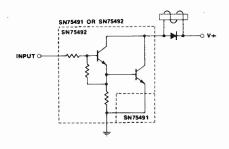


TYPICAL APPLICATIONS

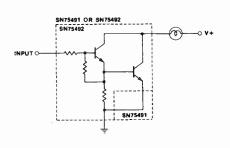
Strobed NOR Driver



Quad or Hex Relay Driver



Quad or Hex Lamp Driver



21L02 276-2501

1024-BIT STATIC RANDOM ACCESS MEMORY

GENERAL DESCRIPTION

The 21L02 is a 1024-bit random access memory fabricated with high-density, high-reliability, N-channel, silicon-gate technology. For ease of use, the device operates from a single power supply, is directly compatible with TTL and DTL, and requires no clocks or refreshing because of static operation.

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields; however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit.

FEATURES

- 1024 Word by 1 Bit Organization
- Access Time = 450 nA or less
- Low Power Dissipation-150mW Typical
- Static Operation
- Single +5-Volt Supply
- Direct TTL/DTL Compatibility
- Three-State Output
- Chip Enable for Memory Expansion
- Cost Effective Data Storage

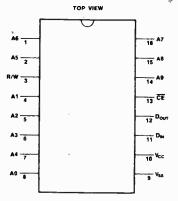
RECOMMENDED DC OPERATING CONDITIONS (Referenced to V_{SS})

Supply Voltage	.4.75 -	5.25	Vdc	(MIN-MAX)
Input Low Voltage	0.3 -	0.65	Vdc	[MIN-MAX]
Input High Voltage	2.2 -	5.25	Vdc	(MIN-MAX)

ABSOLUTE MAXIMUM RATINGS (Referenced to V_{SS})

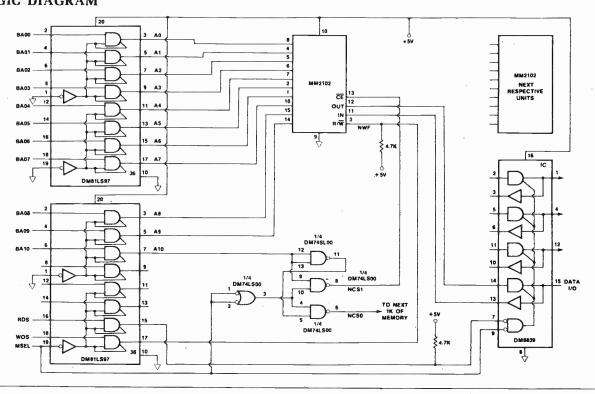
Supply Voltage	0.3 to plus 7.0 Vdc
Input Voltage	0.3 to plus 7.0 Vdc
Operating Temperature Range	0°C to plus 70°C
Storage Temperature Range	

PIN CONNECTION





LOGIC DIAGRAM



QUADRUPLE TWO-INPUT NAND GATE

7400

GENERAL DESCRIPTION

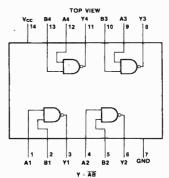
Employing TTI. (Transistor-Transistor-Logic) to achieve high speed at moderate power dissipation, these gates provide the basic functions used in the implementation of digital integrated circuit systems. Characteristics of the circuits include high noise immunity, low output impedance, good capacitive drive capability, and minimal variation in switching times with temperature.

FEATURES

- Guaranteed Noise Immunity 400 mV
- Typical Noise Immunity 1V
- Average Propagation Delay 13 ns
- Fan Out 10
- Average Power Dissipation 10 mW per gate

ABSOLUTE MAXIMUM RATINGS

V _{CC}	5.25V
Input Voltage	
Storage Temperature Range	
Fan-Out	
Lead Temperature (Soldering, 10 sec)	300°C
Supply Voltage [VCC]	
Temperature (T _A)	





QUAD TWO-INPUT NOR GATE

7402 276-1811

GENERAL DESCRIPTION

The 7402 is a quad 2-input NOR gate utilizing TTL (Transistor-Transistor Logic) to achieve high speed at nominal power dissipation.

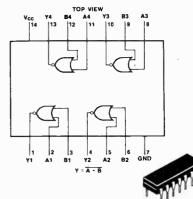
FEATURES

- Input Clamping Diodes
- · Guaranteed Noise Immunity 400 mV
- Typical Noise Immunity 1V
- Fan-out 10
- Allowable Power Supply Variation 4.75V to 5.25V
- Average Propagation Delay 12 ns (with 50 pF)
- Average Power Dissipation 14 mW per gate

ABSOLUTE MAXIMUM RATINGS

V _{CC}	5.25V
Input Voltage	
Operating Temperature Range	
Storage Temperature Range	65°C to +150°C
Lead Temperature (Soldering, 10 sec)	

PIN CONNECTION



HEX INVERTER

7404 276-1802

GENERAL DESCRIPTION

The 7404 is a hex inverter utilizing TTL to achieve high speed at nominal power dissipation. It is totally compatible with other Series 74 devices.

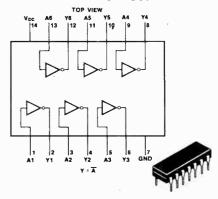
FEATURES

- Input clamping diodes
- Guaranteed Noise Immunity 400 mV
- Typical Noise Immunity 1V
- Fan-out 10
- Allowable Power Supply Variation 4.75V to 5.25V
 Average Propagation Delay 12 ns (with 50 pF)
- Average Power Dissipation 10 mW per gate

ABSOLUTE MAXIMUM RATINGS

V _{CC}	5.25V
Input Voltage	
Operating Temperature Range	
Storage Temperature Range	-65°C to +150°C
Lead Temperature (soldering, 10 sec)	

PIN CONNECTION



HEX INVERTER BUFFER DRIVER

GENERAL DESCRIPTION

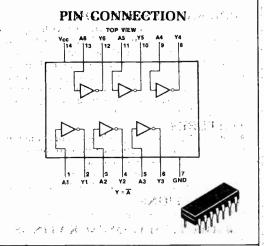
The TTL hex inverter buffer/driver is fully compatible for use with TTL and DTL logic circuits. Each inverter features high-voltage, open-collector outputs [30 volts minimum breakdown.]

FEATURES

- Input clamp diodes 15 ns typical propagation delay:time
- High voltage open-collector outputs 30V
- High sink current capability 40 mA

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	7.0V
Input Voltage	
Output Voltage	30V
Storage Temperature Range	65°C to +150°C
Lead Temperature, [Soldering, 10 Sec]	300°C
Supply Voltage	4.75—5.25V
Temperature (T _A)	
Output Sink Current	
•	



7408

QUAD TWO-INPUT AND GATE

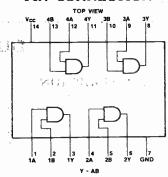
GENERAL DESCRIPTION

7408 provides the non-inverting AND function in the popular quad 2-input pin configuration.

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	7V
Input Voltage	
Output Voltage	
Storage Temperature Range	
Lead Temperature (Soldering, 10 sec)	
Supply Voltage (V _{CC})	
Temperature (T _A)	

PIN CONNECTION



7410 276-1807

TRIPLE THREE-INPUT NAND GATE

GENERAL DESCRIPTION

Employing TTL (Transistor-Transistor-Logic) to achieve high speed at moderate power dissipation, these gates provide the basic functions used in the implementation of digital integrated circuit systems. Characteristics of the circuits include high noise immunity, low output impedance, good capacitive drive capability, and minimal variation in switching times with temperature.

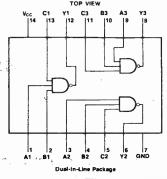
FEATURES

- Typical Noise Immunity 1V
- Guaranteed Noise Immunity 400 mV
- Fan Out 10
- Average Propagation Delay 13 ns
- Average Power Dissipation 10 mW per gate

ABSOLUTE MAXIMUM RATINGS

V _{CC}	7.0V
Input Voltage	
Storage Temperature Range	65°C to +150°C
Fan-Out	
Lead Temperature (Soldering, 10 sec)	300°C
Supply Voltage (V _{CC})	
Temperature (T ₄)	

PIN CONNECTION



Y = ABC



DUAL SCHMITT-TRIGGER

7413 276-1815

GENERAL DESCRIPTION

The 7413 is a dual Schmitt-trigger with input gating. It differs from a conventional dual 4-input gate in that instead of having a single threshold voltage, the 7413 has different thresholds for positive-and negative-going inputs. When the output is in the logical "0" state an input must be lowered to 0.9 volts typically before the output changes state. Conversely in order to return to the logical "0" state the input must rise to 1.7V typically. This hysteresis is extremely beneficial in applications where slow rise and fall time signals are prevalent.

FEATURES

- 800 mV hysteresis typ.-higher noise immunity
- Operation from very slow ramp voltages
- Temperature compensated design
- Typical propagation delay-17 ns
- Typical power dissipation 42 mW per function

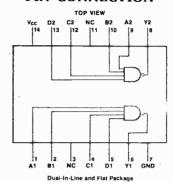
APPLICATIONS

• Pulse shaper • Threshold detector

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	5.25V
Input Voltage	5.5V
Output Voltage	5.5V
Operating Temperature Range	0°C to +70°C
Storage Temperature Range	
Lead Temperature (Soldering, 10 sec)	

PIN CONNECTION





DUAL FOUR-INPUT NAND GATE

7420 276-1809

GENERAL DESCRIPTION

Employing TTL (Transistor-Transistor-Logic) to achieve high speed at moderate power dissipation, these gates provide the basic functions used in the implementation of digital integrated circuit systems. Characteristics of the circuits include high noise immunity, low output impedance, good capacitive drive capability, and minimal variation in switching times with temperature.

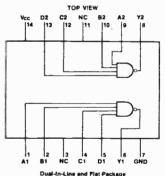
FEATURES

- Typical Noise Immunity 1V
 Fan Out 10
- Guaranteed Noise Immunity 400 mV Average Propagation Delay 13 ns
- Average Power Dissipation 10 mW per gate

ABSOLUTE MAXIMUM RATINGS

V _{CC}	5.25V
Input Voltage	5.5V
Storage Temperature Range	65°C to +150°C
Fan-Out	10
Lead Temperature (Soldering, 10 sec)	300°C
Supply Voltage (V _{CC})	4.755.25V
Temperature (T _A)	0°C to 70°C

PIN CONNECTION



Y = ABCD



TRIPLE THREE-INPUT NOR GATE

7427 276-1823

GENERAL DESCRIPTION

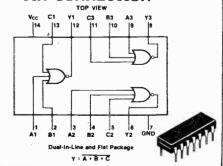
The NOR gate described here is designed to provide additional versatility to the line of 74 functions.

The 7427 has neither expandable inputs nor Strobe.

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	5.25V
Input Voltage	5.5V
Output Voltage	5.5V
Storage Temperature Range	85°C to +150°C
Lead Temperature (Soldering, 10 seconds)	300°C
Supply Voltage (Vcc)	4.75—5.25V
Temperature (T _A)	f°C to 70°C
Supply Voltage (V _{CC})	4.75—5.25V

PIN CONNECTION



QUAD TWO-INPUT OR GATE

GENERAL DESCRIPTION

The 7432 is a quad 2-input OR gate utilizing TTL (Transistor-Transistor Logic) to provide the basic functions used in the implementation of digital integrated circuit systems. The device is completely compatible with all other Series 74 devices.

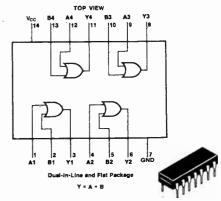
FEATURES

- Popular digital logic block
- · Saves inverter function when sign inversion is not needed

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	5.25V
Input Voltage	5.5V
Output Voltage	5.5V
Operating Temperature Range	0°C to 70°C
Storage Temperature Range	65°C to 150°C
Lead Temperature (Soldering, 10 sec)	300°C

PIN CONNECTION



7441 276-1804

BCD TO DECIMAL DECODER/DRIVER

GENERAL DESCRIPTION

The 7441 is monolithic binary-coded-decimal to decimal decoder. The BCD number to be decoded is applied to the four input lines; and the unique output corresponding to the decimal equivalent of the input number falls to a logical 0 level. Outputs are designed to drive gas-filled-readout tubes but are also able to operate with other low current lamps and relays.

An over-range feature provides that if binary numbers between 10 and 15 are applied to the input the least significant bit of these numbers (0 through 5) will be decoded on the output.

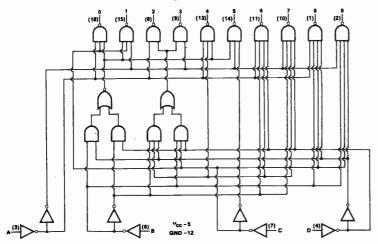
FEATURES

- Drive cold-cathode, numeric indicator tubes directly
- Fully decoded inputs
- Low leakage current 1.8 µ A @ 50V
- Low power dissipation 105 mW typical

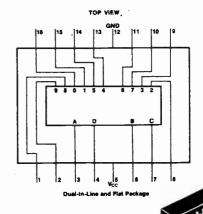
ABSOLUTE MAXIMUM RATINGS

Supply Voltage (V _{CC})	5.25V
Output Voltage	
Input Voltage	
Operating Temperature Range	0°C to +70°C
Storage Temperature Range	65°C to +150°C
Lead Temperature (Soldering, 10 sec)	300°C

LOGIC DIAGRAM



PIN CONNECTION



TRUTH TABLE

	INP	UT	٠.	LOW OUTPUT
D	С	В	Α	
0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1 ،	7
1	0	0	0	8
1	0	0	1	g
(C	OVER 1	RANC	GE)	
1	0	1	0	0
1	0	1	1	1
1	1	0	0	2
1	1	0	1	3
1	1	1	0	4
1	1	1	1	5

BCD TO SEVEN-SEGMENT DECODER/DRIVER

7447 276-1805

GENERAL DESCRIPTION

This versatile series of 7-segment display drivers fulfills a wide variety of requirements for most active high (common cathode) and active low (common anode) Light Emitting Diodes (LED) or lamp displays. Each device fully decodes a 4-bit BCD input into a number from 0 through 9 in the standard 7-segment display format, and BCD numbers above 9 into unique patterns that verify operation. All circuits operate off of a single 5.0V supply. The 7447 outputs withstand 15V at a maximum leakage current of 250µ A.

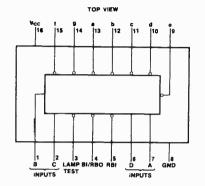
FEATURES

- Lamp-test input
- Leading/trailing zero suppression (RBI and RBO)
- Blanking input that may be used to modulate lamp intensity or inhibit output
- TTL and DTL compatible
- · Input clamping diodes

ABSOLUTE MAXIMUM RATINGS

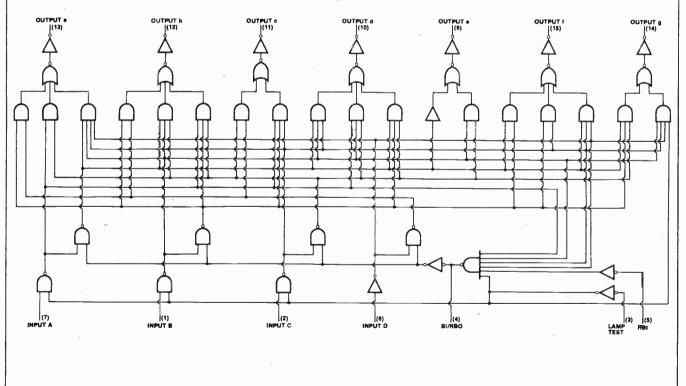
Supply voltage V _{CC}	4.75-5.25 volts
Continuous voltage at outputs a-g	
Logic 1 input voltage	
Logic 0 input voltage	
Logic 0 output voltage	
Logic 1 output voltage at a-g	
Logic 1 output voltage at BI/RBO	

PIN CONNECTION





LOGIC DIAGRAM



BCD TO SEVEN-SEGMENT DECODER/DRIVERS

GENERAL DESCRIPTION

This versatile series of 7-segment display drivers fulfills a wide variety of requirements for most active high (common cathode) and active low (common anode) Light Emitting Diodes (LED) or lamp displays. Each device fully decodes a 4-bit BCD input into a number from 0 through 9 in the standard 7-segment display format, and BCD numbers above 9 into unique patterns that verify operation. All circuits operate off of a single 5.0V supply.

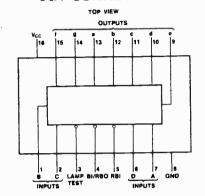
FEATURES

- · Lamp-test input
- Leading/trailing zero suppression (RBI and RBO)
- Blanking input that may be used to modulate lamp intensity or inhibit output
- TTL and DTL compatible
- · Input clamping diodes

ABSOLUTE MAXIMUM RATINGS

Supply voltage V _{CC}	i.25 volt	S
Continuous voltage at outputs a-g	5.5 volt	s
Logic 1 input voltage Mi	n. 2 volt	S
Logic 0 input voltage	0.8 volt	S
Logic 0 output voltage	0.4 volt	S
Logic 1 output voltage at a-g	2.4 volt	S
Logic 1 output voltage at BI/RBOMin	2.4 volt	S

PIN CONNECTION





7451 276-1825

DUAL TWO-WIDE TWO-INPUT AND-OR-INVERT GATE

GENERAL DESCRIPTION

The devices described in this data sheet employ TTL to achieve high speed at moderate power dissipation. They are consolidated onto one sheet since they perform the AND-OR-INVERT function with only differing numbers of AND inputs and OR terms. Characteristics include high noise immunity, low output impedance, good capacitance drive capability, and minimal variation in switching time with temperature. The gates are compatible with and interchangeable with Series 74 devices.

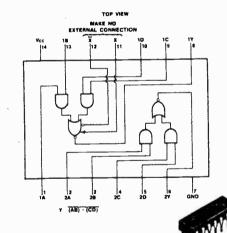
FEATURES

- Input Clamping Diodes
- Typical Noise Immunity 1 Volt
- Guaranteed Noise Immunity 400 mV
- Fan-out 10
- Average Propagation Delay 13 ns
- Average Power Dissipation 14 mW/gate

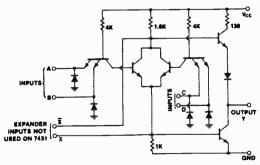
ABSOLUTE MAXIMUM RATINGS

V _{CC}	5.25V
Input Voltage	5.5V
Storage Temperature Range	65°C to +150°C
Fan-Out	
Lead Temperature (Soldering, 10 sec)	300°C
Supply Voltage (V _{CC})	4.75—5.25V
Temperature (T_A)	0°C to 70°C

PIN CONNECTION



SCHEMATIC DIAGRAM



DUAL JK MASTER SLAVE FLIP FLOP

7473 276-1803

GENERAL DESCRIPTION

The flip flops described herein are TTL (Transistor-Transistor Logic) dual JK Master/Slave flip flops. Asynchronous CLEAR inputs are provided on the flip flops. The device is totally monolithic and designed for use in high speed control and counting applications, where economy is required, and multiple data inputs are not required. These devices meet all of the electrical and mechanical requirements of the equivalent 74 device.

FEATURES

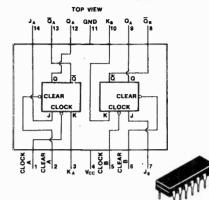
- · High Speed of Operation 25 MHz toggling
- Optimum Power Dissipation 45 mW/ff
- High Noise Immunity 1V
- Guaranteed Clock Skew 15 ns

This device also features a special clock line clamp to reduce ringing and prevent false clocking. In addition, the usual speed-power efficiency and high output drive-capability normally gained with TTL circuits are retained.

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	5.25V
Input Voltage	5.5V
Fan Out	
Storage Temperature Range	65°C to +150°C
Operating Temperature Range	0°C to +70°C
Lead Temperature (soldering 10 sec)	300°C
Lead Temperature (soldering 10 sec)	

PIN CONNECTION



TRUTH TABLE (Each Flip-Flop)

t	t_{n+1}	
J	Q	
0	0	Qn
0	1	0
1	0	1
1	1	$\overline{\mathbb{Q}}_{\mathbf{n}}$

 t_n = bit time before clock pulse. t_{n+1} = bit time after clock pulse.

DUAL D FLIP FLOP

7474 276-1818

GENERAL DESCRIPTION

The 7474 is designed for use where the flexibility of 2 inputs is not required. It has only a single DATA (D) input. The logical level applied to this input is transferred to the Q output when the clock pulse voltage rises to a logical 1. Since only one pin is used for data entry, fully asynchronous (both PRESET and CLEAR) capability can be provided in a 14 pin dual-in-line package.

ABSOLUTE MAXIMUM RATINGS

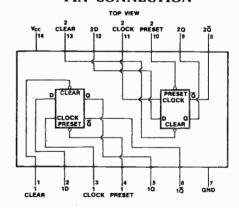
Supply voltage V _{CC}	4.75—5,25V (MIN-NOM)
Normalized fan-out from each output, N	10 (MAX)
Width of clock pulse, tp (clock)	30 ns (MIN)
Width of preset pulse, to (preset)	30 ns (MIN)
Width of clear pulse, to (clear)	30 ns (MIN)
Operating free-air temperature range, TA	0—70°C (MIN-MAX)

TRUTH TABLE (Each Flip-Flop)

t _n	t _{n+1}		
INPUT	OUTPUT	OUTPUT	
D	Q	Q	
0	0	1	
1	1	0	

NOTES: 1. t_n = bit time before clock pulse. 2. t_{n+1} = bit time after clock pulse.

PIN CONNECTION



POSITIVE LOGIC: Low input to preset sets Q to logical 1 Low input to clear sets Q to logical 0 Preset and clear are independent of cloc



7475 276-1806

QUAD LATCH

GENERAL DESCRIPTION

This latch is ideally suited for use as temporary storage for binary information between processing units and input/output or indicator units. Information present at a data (D) input is transferred to the Q output when the enable (G) is high, and the Q output will follow the data input as long as the enable remains high. When the enable goes low, the information (that was present at the data input at the time the transition occurred) is retained at the Q output until the enable is permitted to go high.

The 7475, features complementary Q and \overline{Q} outputs from a 4-bit latch, and are available in 16-pin packages.

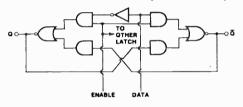
ABSOLUTE MAXIMUM RATINGS

Supply voltage V _{CC} 4.7	5-5.25	V
Logic input 1 voltage2		
Logic input 0 voltage0		
Logic output 1 voltage2		
Logic output 0 voltage		

TOP VIEW O1 02 02 1-12 GND 03 03 04 16 15 14 13 12 111 10 9 11 2 3 8 4 5 6 7 8

PIN CONNECTION

LOGIC DIAGRAM (Each Latch)



TRUTH TABLE (Each Latch)

INPUTS		OUTPUTS		
D	G	QQ		
L	Н	I.	Н	
Н	Н	H	. L	
· X	L	Q_0	\overline{Q}_0	

H = High Level, L = Low Level, X = Don't Care Q_0 = The Level of Q Before the High-to-Low Transition of G

7476 276-1813

DUAL JK MASTER/SLAVE FLIP-FLOP

GENERAL DESCRIPTION

Incorporates separate presets, clears, and clocks. Clock pulse controls inputs to master section, and also regulates coupling between master and slave sections.

ABSOLUTE MAXIMUM RATINGS

Supply voltage V _{CC}	4.75—5.25V
Logic input 1 voltage	
Logic input 0 voltage	
Logic output 1 voltage	2.4V Min.
Logic output 0 voltage	0.4V Max.

TRUTH TABLE

INPUTS			OUT	PUTS		
PR	CLR	CLK	J	K	Q	Q
I.	Н	X	X	X	Н	I.
Н	L	X	X	Х	L	Н
L	L	X	X	X	.H*	H*
Н	H	厂	L	L	Q0	\overline{Q}_0
Н	Н	\mathcal{T}	Н	I.	Н	L
Н	Н	7.7	L	Н	I.	Н
Н	н Л		Н	Н	TOC	GLE

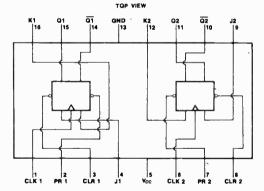
Notes: JL = high-level pulse; data inputs should be held constant while clock is high; data is transferred to output on the falling edge of the pulse.

Q0 = the level of Q before the indicated input conditions were established

TOGGLE: Each output changes to the complement of its previous level on each active transition (pulse) of the clock.

*This configuration is nonstable; that is, it will not persist when preset and clear inputs return to their inactive (high) level.

PIN CONNECTION





FOUR-BIT MAGNITUDE COMPARATOR

7485 276-1826

GENERAL DESCRIPTION

This four-bit magnitude comparator performs comparison of straight binary or BCD codes. Three fully-decoded decisions about two, 4-bit words $\{A, B\}$ are made and are externally available at three outputs. This device is fully expandable to any number of bits without external gates. Words of greater length may be compared by connecting comparators in cascade. The A>B, A<B, and A=B outputs of a stage handling less-significant bits are connected to the corresponding inputs of the next stage handling more-significant bits. The stage handling the least-significant bits must have a high-level voltage applied to the A=B input. The cascading paths of the 85 are implemented with only a two-gate-level delay to reduce overall comparison times for long words.

TYPICAL RATINGS

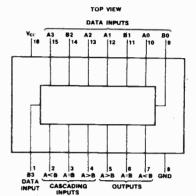
Typical power dissipation.	
Typical delay (4-bit words)23 ns

TRUTH TABLE

COMPARING				CASCADING			OUTPUTS		
INPUTS			[]	NPUT	S				
A3, B3	A2, B2	A1, B1	A0, B0	A>B	A <b< td=""><td>A = B</td><td>A>B</td><td>A<b< td=""><td>A = B</td></b<></td></b<>	A = B	A>B	A <b< td=""><td>A = B</td></b<>	A = B
A3>B3	X	X	X	X	X	X	Н	L	L
A3 <b3< td=""><td>Χ.</td><td> x</td><td>X</td><td>X</td><td>X</td><td>X</td><td>l.</td><td>H</td><td>L</td></b3<>	Χ.	x	X	X	X	X	l.	H	L
A3 = B3	A2>B2	X	X	X	X	X	Н	L	L,
A3 = B3	A2 <b2< td=""><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>L</td><td>Н</td><td>L</td></b2<>	X	X	X	X	X	L	Н	L
A3 = B2	A2 = B2	A1>B1	X	X	X	Х	Н	L	L
A3 = B3	A2 = B2	A1 <b1< td=""><td>X</td><td>X</td><td>X</td><td>X</td><td>L</td><td>Н</td><td>L</td></b1<>	X	X	X	X	L	Н	L
A3 = B3	A2 = B2	A1 = B1	A0>B0	X	X	X	H	L	L
A3 = B3	A2 = B2	A1 = B1	A0 <b0< td=""><td>X</td><td>X</td><td>X</td><td>L</td><td>Н</td><td>L</td></b0<>	X	X	X	L	Н	L
A3 = B3	A2 = B2	A1 = B1	A0 = B0	Н	L	L	Н	L	L
A3 = B3	A2 = B2	A1 = B1	A0 = B0	I.	Н	L	L	Н	L
A3 = B3	A2 = B2	A1 = B1	A0 = B0	I.	L	Н	L	L	Н

H = High Level, L = Low Level, X = Don't Care

PIN CONNECTION





QUAD EXCLUSIVE-OR GATE

7486 276-1827

GENERAL DESCRIPTION

The 7486 utilizes TTL (Transistor-Transistor Logic) to provide four exclusive-OR gates in one package. Characteristics of the circuits include high noise immunity, low output impedance, good capacitive drive capability, and minimal variation in switching times with temperature.

FEATURES

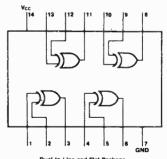
- · Input clamp diodes
- Typical noise immunity 1V
- · Average propagation delay 15 ns
- · Average power dissipation 40 mW per gate

ABSOLUTE MAXIMUM RATINGS

V _{CC}	5.25V
Input Voltage	
Operating Temperature Range	
Storage Temperature Range	
Fan Out	
Lead Temperature (Soldering, 10 sec)	

PIN CONNECTION

OP VIEW





DIVIDE BY 2/5, BCD COUNTER

GENERAL DESCRIPTION

This monolithic counter contains four master-slave flip-flops and additional gating to provide a divide-by-two counter and a three-stage binary counter for which the count cycle length is divide-by-five.

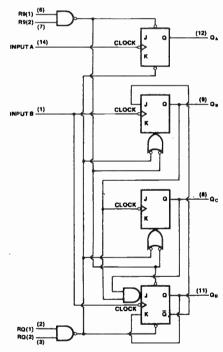
This counter has a gated zero reset and gated set-to-nine inputs for use in BCD nine's complement applications.

To use maximum count length (decade, divide-by-twelve, or four-bit binary, the B input is connected to the Q_A output. The input count pulses are applied to input A and the outputs are as described in the appropriate truth table. A symmetrical divide-by-ten count can be obtained from the 90 counter by connecting the Q_D output to the A input and applying the input count to the B input which gives a divide-by-ten square wave at output Q_A .

TYPICAL RATINGS

Typical power dissipation	145 mW
Count frequency	
High Level Input Voltage	
Low Level Input Voltage	(Max) 0.8V
High Level Input Current	Αμ008
Low Level Output Current	(Max) 16 mA

LOGIC DIAGRAM

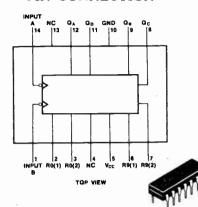


The J and K inputs shown without connection are for reference only and an functionally at a high level.

Notes:

- (A) Output Q_A is connected to input B for BCD count.
- (B) Output Q_D is connected to input A for bi-quinary count.

PIN CONNECTION



TRUTH TABLE'S

RESET/COUNT TRUTH TABLE

RI		ดบา	rpu1	•			
R0(1)	R0(2)	R9(1)	R9(2)	Qp	Q_{C}	Q_B	Q_A
Н	Н	L	X	L	L	L	L
H	H	X	L	L	L	L	L
X	X	Н	Н	Н	L	L	H
X	L	X	L		COU	NT	
L	X	L	X		COU	INT	
L	X	X	L		COU	NT	
X	L	L	. X		COU	INT	

BCD COUNT SEQUENCE (See Note A)

COUNT	OUTPUT					
	QD	$Q_{\mathbf{C}}$	Q_B	Q_{A}		
0	L	L	L	L		
1	L	L	L	Н		
2	L	L	Н	L		
3	L	\mathbf{L}_{\perp}	H	Н		
4	L	Н	L	L		
5	L	Н	L	Н		
6	L	Н	Н	L		
7	L	Н	H	Н		
8	Н	L	L	L		
g	Н	L	L _	Н		

BI-QUINARY (5-2) (See Note B)

OUTPUT					
Q_A	Q_{D}	Q _C	Q _B		
L	L	L	L		
L	L	L	Н		
L	L	Н	L.		
L	L	Н	н		
L	Н	L	L		
Н	L	L	L		
Н	L	L	н		
Н	L	Н	L		
Н	L	Н	н		
Н	Н	L	L		
	L L L L H H H	Q _A Q _D L L L L L L L L L L L H H L H L H L H	QA QD QC L L L L L L L L H L L H L H L H L L H L L H L H H L H H L H H L H		

DECADE, DIVIDE BY 12, AND BINARY COUNTER

7492 276-1819

GENERAL DESCRIPTION

This monolithic counter contains four master-slave flip flops and additional gating to provide a divide-by-two counter and a three-stage binary counter for which the count cycle length is divide by six.

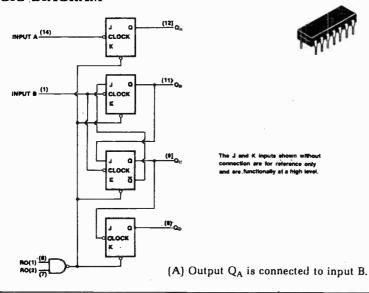
This counter has a gated zero reset.

To use maximum count length (decade, divide-by-twelve, or four-bit binary), the B input is connected to the Q_A output. The input count pulses are applied to input A and the outputs are as described in the appropriate truth table.

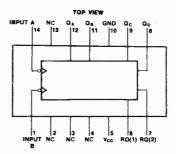
TYPICAL RATINGS

Supply voltage	5.25V
Typical power dissipation	130 mW
Count frequency	42 MHz

LOGIC DIAGRAM



PIN CONNECTION



TRUTH TABLES

COUNT SEQUENCE (See Note A)

	<u> </u>	Our	111 1/1-	-,	
COUNT	OUTPUT				
	Q_D	Q_{C}	Q_B	Q_A	
0	L	L	L.	L	
1	L	L	L	Н	
2	L	L	Н	L	
3	L	L	Н	Н	
4	L	H	L	L	
5	L	H	L	Н	
6	Н	L	L	L	
7	Н	L	L	Н	
8	н	L	Н	· L	
9	Н	L	Н	Н	
10	н	Н	L	L	
11	· H	Н	L	Н	

RESET/COUNT TRUTH TABLE

RESET		OUT	PUT		
R0(1)	R0(2)	Q_D	Q_C	Q_B	Q_A
Н	Н	L	L	L	L
L	X		COU	INT	ĺ
X	L		CQU	INT	

DC TRIGGERING FROM GATED LOW-LEVEL-ACTIVE (A) AND HIGH-LEVEL-ACTIVE (B) INPUTS

74123 276-1817

GENERAL DESCRIPTION

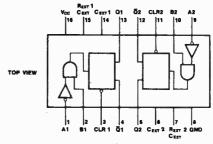
Designed for dc triggering from gated low-level-active (A) and high-level-active (B) inputs. Provides overriding direct clear inputs and controls pulse width, e.g. lengthens pulse by retriggering or shortens by clearing.

ABSOLUTE MAXIMUM RATINGS

Supply voltage V _{CC}	4.75-5.25 volts
Logic 1 input voltage	
Logic 0 input voltage	Max. 0.88 volts
Logic 1 output voltage	Min. 2.4 volts
Logic 0 output voltage	Max. 0.4 volts
A or B inputs high	Min. 40 ns
A or B inputs low	Min. 40 ns
Clear low	



PIN CONNECTION



TRUTH TABLE

	INPUTS		OUTF	PUTS
Α	В	CLR] Q	\overline{Q}
Н	X	H	L	Н
Х	L	Н	L	Н
L	†	Н	_T	T
↓	H	Н	1	П
X	. X	L	L	Н

BCD/DECIMAL DECODERS/DRIVERS

GENERAL DESCRIPTION

These BCD-to-decimal decoders/drivers consist of eight inverters and ten, four-input NAND gates. The inverters are connected in pairs to make BCD input data available for decoding by the NAND gates. Full decoding of BCD input logic ensures that all outputs remain off for all invalid (10-15) binary input conditions. These decoders feature high-performance, NPN output transistors designed for use as indicator/relay drivers, or as open-collector logic-circuit drivers. The high-breakdown output transistors are compatible for interfacing with most MOS integrated circuits.

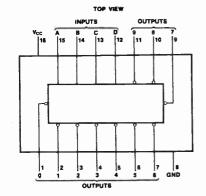
FEATURES

- Full decoding of input logic
- 80 mA sink-current capability
- All outputs are off for invalid BCD input conditions

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	5.25V
Input Voltage	
Output Voltage	15V
Operating Temperature Range	0°C to +70°C
Storage Temperature Range	-65°C to +150°C
Lead Temperature (Soldering, 10 sec)	300°C
Supply Voltage (V _{CC})	4 75—5 25V
auphty voitage (vCC)	

PIN CONNECTION



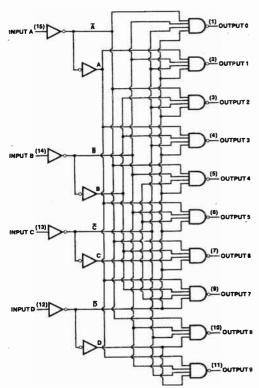


TRUTH TABLE

NO.		INP	UTS		ĺ	OUTPUTS								
	D	C	В	A	0	1	2	3	4	5	6	7_	8	9
0	L	L	L	L	L	Н	Н	Н	Н	Н	Н	Н	Н	Н
1	L	L	L	Н	Н	L	Н	H	Н	Н	H	H	H	Н
2	L	L	Н	L	Н	Н	L	Н	Н	Н	Н	Н	Н	H
3	L	L	H	H	Н	H	H	L	H	Н	Н	Н	Н	Н
4	L.	Н	L	L	Н	Н	Н	Н	L	Н	, H	Н	Н	Н
5	L	Н	L	Н	Н	Н	Ĥ	Н	Н	L	Н	Н	Н	Н
6	L	Н	Н	L	Н	H	H	Н	Н	Н	L	Н	Н	Н
7	L	Н	Н	H	Н	Н	Н	Н	Н	Н	H	L	H	Н
8	Н	L	L	L	Н	H	H	H	Н	Н	H	Н	L	Н
9	Н	L	L	Н	Н	Н	H	Н	Н	Н	Н	Н	Н	L
	Н	L	Н	L	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н
	Н	L	H	H	Н	Н	H	\mathbf{H}_{\cdot}	Н	H	H	Н	H	Н
INVALID	Н	H	L	L	Н	Н	H	Н	H	H	H	H	H	Н
≥	Н	H	L	H	Н	Н	H	H	H	H	H	H	H	Н
	Н	H	Н	L	Н	H	H	Н	Н	Н	H	H	\mathbf{H}	Н
	Н	Н	Н	H	Н	Н	Н	Н	Н	H	Н	Н	Н	Н

H = High Level (Off), L = Low Level (On)

LOGIC DIAGRAM



16-LINE TO 1-LINE MULTIPLEXER

74150 276-1829

GENERAL DESCRIPTION

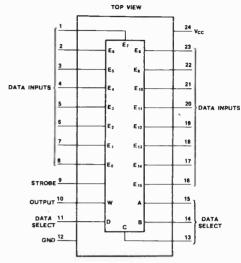
The 74150 multiplexes sixteen digital lines to one output. A four-bit code determines the particular one-of-sixteen inputs which is routed to the output. The data is inverted from input to output. A strobe override places the output in the logical 1 state.

FEATURES

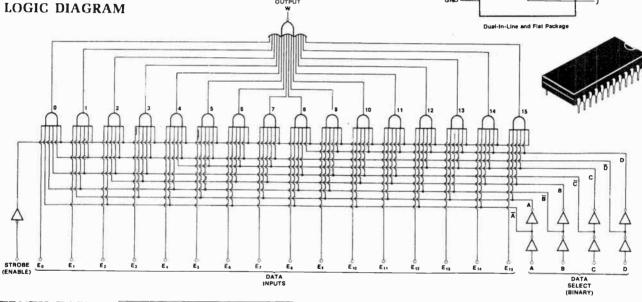
- Typical propagation delay 10 ns
- Typical power dissipation 225 mW

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	5.25V
Input Voltage	5.5V
Storage Temperature Range	0.00V
Lead Temperature (Soldering, 10 sec)	730 C 10 7130 C
Supply Voltage (V)	300°C,
Supply Voltage $(V_{(C)})$	4.755.25V
remperature [1 VI	(°(' to 70°('



PIN CONNECTION



OUTPUT

TRUTH TABLE

INP	OUTPUT	
SELECT	STROBE	w
D C B A	S	
$X \times X \times X$	Н	Н
LLLL	I	E0
LLLH	I	ET
LLHL	I	E2
LLHH	L	$\overline{E3}$
LHLL	L	E4
LHLH	L	E5
LHHL	L	E 6
LHHH	I.	E7
HLLL	L	E8
HLLH	I.	$\overline{\text{E9}}$
HLHL	L	E10
H L H H	L	E11
HHLL	L	E12
HHLH	L	E13
HHHL	L	E14
нннн	Ĺ	E15

H = High Level L = Low Level

X = Don't Care

 $\overline{E0}$, $\overline{E1}$ $\overline{E15}$ = The Complement of the Level of the Respective E Input.

4-LINE TO 16-LINE DECODER/DEMULTIPLEXER

GENERAL DESCRIPTION

The 74154 is a TTL monolithic 4-line-to-16-line decoder which allows decoding of a 4 hit binary coded input into one of 16 separate outputs. The device is provided with two strobe lines, both of which have to be in the low state in order to perform the decoding function; if either of the strobes is high, all 16 outputs will remain high. The device can be used as a demultiplexer by passing information from one of the strobes (the other being low) to an output selected by the 4 line input address.

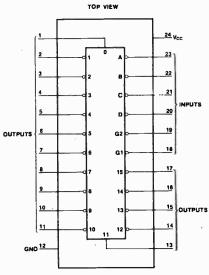
FEATURES

- All inputs contain clamp diodes
- Unit performs as a one line to 16 line demultiplexer
- Unit performs as a decoder of a 4 bit binary input to 1 or 16 outputs
- Typical propagation delay is 20 ns from inputs and 17 ns from strobe

ABSOLUTE MAXIMUM RATINGS

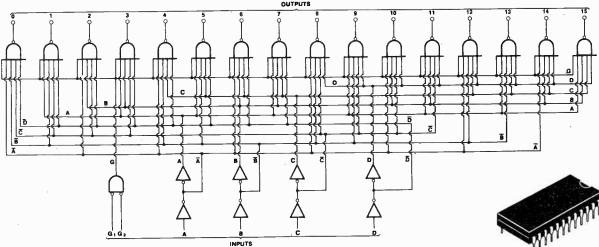
V _{CC}	5.25V
Input Voltage	5.5V
Operating Temperature Range	0°C to 75°C
Storage Temperature Range	65°C to +150°C
Lead Temperature (Soldering, 10 sec)	300°C

PIN CONNECTION



Dual-In-Line and Flat Package

LOGIC DIAGRAM



TRUTH TABLE

INPUTS							OUTPUTS														
G1	G2	D	С	В	A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
L	L	L	L	L	L	I.	Н	Н	Н	Н	Н	Η	Н	Η	Η	Η	Н	Η	Η	Η	Η
L	I.	L	L	L	Н	Н	L	Η	Η	Η	Н	Η	Η	Η	Η	Н	Η	Н	Η	Η	Н
L	L	I,	L	Н	Į,	H	Н	L	Η	Η	Η	Η	Η	Н	Η	Η	Η	Н	Η	Н	Н
L	L	L	L	Н	Н	Н	Η	Η	L	Η	Η	Η	Η	Η	Η	Η	Η	Н	Н	Η	Н
L	H.	L	Н	L	L	H	Η	Η	Η	L	Н	Н	Η	Н	Η	Н	Н	Н	Н	Η	Н
L	L	L	Н	L	Η	H	Н	Н	Η	Η	L	Η	Η	Η	Н	Η	Н	Н	Н	Η	Н
L	L	L	Н	Η	I.	H	Н	Н	Η	Η	Η	L	Η	Н	Η	Η	Н	Н	Н	Η	Н
I,	L	·L	Η	Н	Η	H	Η	Η	Η	Η	Η	Η	L	Н	Н	Η	Н	Η	Н	Н	Н
I.	l,	Н	L	L	L	H	Η	Η	H	Η	Н	Η	Η	L	Н	Η	Н	Н	Η	Н	Н
L	L	Н	L	L	Η	Н	Η	Н	Η	Η	Η	Н	Н	Η	L	Η	Н	Η	Η	Н	Н
L	L	Н	L	Н	I.	Н	Η	Η	Η	Η	Н	Н	Η	H	Η	L	Н	Η	Н	Η	Н
L	L	Н	L	Η	Η	H	Н	Η	Η	Η	Η	Η	Η	Η	Η	Н	L	Η	Н	Н	Н
L	L	Н	Η	L	L	H	Η	Η	Η	Н	Η	Η	Н	Η	Η	Η	Н	L	Н	Н	Н
L	L	Н	Η	L	Η	H	Н	Η	Η	Н	Η	Η	Η	Η	Н	Н	Η	Н	L	Н	Н
L	L	Н	Η	Η	L	H	Η	Η	Η	Н	Η	Η	Н	Н	Н	Н	Н	Н	Н	L	Н
L	L	Н	Н	Η	Н	Н	Η	Η	Н	Η	Η	Н	Н	Н	Н	Н	Н	Н	Н	Н	L
L	Н	X	X	X	X	Н	Η	Η	Η	Н	Η	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н
Н	L	X	Χ	X	Х	H	Η	H	Η	Η	Н	Н	Η	Н	Н	Н	Н	Н	Н	Н	Н
Н	Н	X	Х	Χ	Х	H	Н	Η	Η	Н	Н	Н	Н	Н	Н	<u>H</u>	<u>H</u>	H	Н	Н	H

H = High Level L = Low Level X = Don't Care

UP/DOWN DECADE COUNTER

74192 276-1831

GENERAL DESCRIPTION

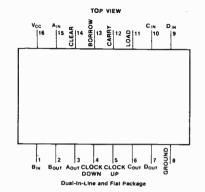
The 74192 is a TTL, up-down decade counter which is capable of being preset to any number from 0 through 9. A load input controls the asynchronous entry of these numbers, and sets all outputs to appropriate state.

Counting is performed through two cock lines—one controlling the count in the up direction, and the other in the down direction. Two outputs. Borrow and Carry, are connected to the clock inputs of subsequent counters to provide for counting in ...imbers greater than 9. The counter is synchronous by itself, and "semi-synchronous" (two-gate delays between stages) when cascaded.

ABSOLUTE MAXIMUM RATINGS

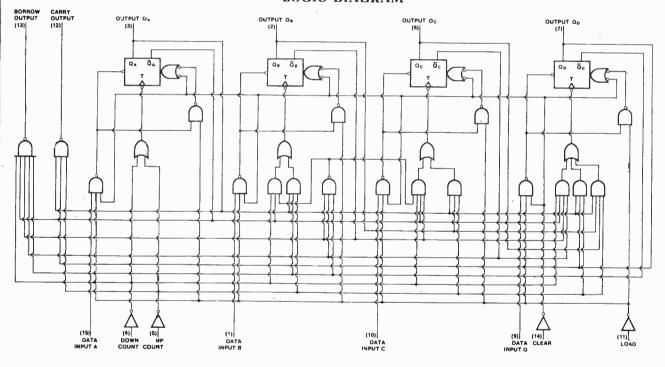
V _{CC}	5 25V
Input Voltage	5.5V
Operating Temperature Range	0°C to +70°C
Storage Temperatus Cangalian	65°C to +150°C
Fanout	10
Lead Temperature (Soldering, 10 sec)	300°C

PIN CONNECTION





LOGIC DIAGRAM





SYNCHRONOUS UP/DOWN COUNTER WITH DUAL CLOCK

GENERAL DESCRIPTION

The 74193 is a 4-bit binary counter. Synchronous operation is provided by having all flip-flops clocked simultaneously, so that the outputs change together when so instructed by the steering logic. This mode of operation eliminates the output counting spikes normally associated with asynchronous (ripple-clock) counters.

The outputs of the four master-slave flip-flops are triggered by a low-to-high level transition of either count (clock) input. The direction of counting is determined by which count input is pulsed, while the other count input is held high.

All four counters are fully programmable; that is, each output may be preset to either level by entering the desired data at the inputs while the load input is low. The output will change independently of the count pulses. This feature allows the counters to be used as modulo-N dividers by simply modifying the count length with the preset inputs.

A clear input has been provided which, when taken to a high level, forces all outputs to the low level; independent of the count and load inputs. The clear, count, and load inputs are buffered to lower the drive requirements of clock drivers, etc., required for long words.

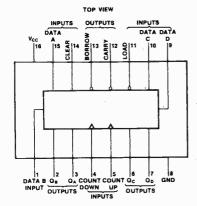
FEATURES

- Fully independent clear input Synchronous operation
- Cascading circuitry provided internally Individual preset each flip-flop

ABSOLUTE MAXIMUM RATINGS

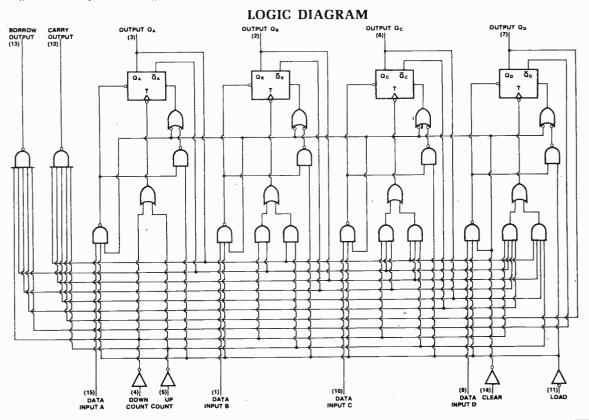
Supply voltage V _{CC}	4.75—5.25V (MIN-MAX)
Normalized fan-out from each output, N	10 (MAX)
Input count frequency, f count	
Width of any input pulse, tw	20 ns (MIN)
Data setup time, t _{setup}	20 ns (MIN)
Data hold time, thold	1 ns (MIN)
Operating free-air temperature range, Ta	0—70°C (MIN-MAX)

PIN CONNECTION



Note: Low input to load sets $Q_A = A$, $Q_B = B$, $Q_C = C_1$ and $Q_D = D$.





FOUR-BIT BIDIRECTIONAL UNIVERSAL SHIFT REGISTERS

GENERAL DESCRIPTION

The 74194 is a bidirectional shift register designed to incorporate virtually all of the features a system designer may want in a shift register. The circuit contains 46 equivalent gates and features parallel inputs, parallel outputs, right-shift and left-shift serial inputs, operating mode control inputs, and a direct overriding clear line. The register has four distinct modes of operation, namely:

Parallel (Broadside) Load

Shift Right (In the direction QA toward QD) Shift Left (In the direction QD toward QA)

Inhibit Clock (Do nothing)

Synchronous parallel loading is accomplished by applying the four bits of data and taking both mode control inputs, So and So, high. The data is loaded into the associated flip-flop and appears at the outputs after the positive transition of the clock input. During loading, serial data flow is inhibited.

Shift right is accomplished synchronously with the rising edge of the clock pulse when So is high and So is low. Serial data for this mode is entered at the shift-left serial input.

Clocking of the flip-flop is inhibited when both mode control inputs are low. The mode controls should be changed only while the clock input is high.

FEATURES

- Typical power dissipation 195 mW
- Typical clock frequency 36 MHz (max)
- · Parallel inputs and outputs
- · Four operating modes: Synchronous parallel load Right shift Left shift

Do nothing

- · Positive edge-triggered clocking
- · Direct overriding clear

ABSOLUTE MAXIMUM RATINGS

Supply Voltage, V _{CC}
Input Voltage5.5V
Output Voltage
Storage Temperature Range65°C to +150°C
Lead Temperature (Soldering, 10 seconds)300°C
Supply Voltage (V _{CC})
Temperature $\{T_A\}$
тотрина (түүлийн төмөн том төмөн том төмөн том том том төмөн төмөн төмөн төмөн том

TRUTH TABLE

	INPUTS											OUTPUTS					
CLEAR	MODE		CLOCK	SE	PARALLEL				0	Q_B	0 -	0					
	S1	So		LEFT	RIGHT	A	В	С	D	QA	~ B	Q _C	QD				
I.	Х	Χ	х	x	X	Х	Х	Χ	X	L	L	L	L				
Н	Х	X	I.	X	X	X	Х	Χ	X	Q_{AO}	Q_{BO}	Q_{GO}	Q_{DO}				
Н	Н	H	+	X	X	a	b	C,	d	a	b	С	d				
Н	I.	Н	t	X	H	X	X	X	Χ	H	Q_{AN}	Q_{BN}	Q _{CN}				
Н	I.	Н	<u>†</u>	Х	Į.	Χ	X	X	X	L		Q_{BN}					
H	Н	l.	†	Н	X	X	X	X	X	Q_{BN}	Q_{CN}	Q_{DN}	H				
H	Н	I,	t	I.	X	Χ	X	X	Χ	Q_{BN}		Q_{DN}	L				
Н	L	L	Х	X	X	X	Х	X	X	Q_{AO}	Q _{BO}	_	Q_{DO}				

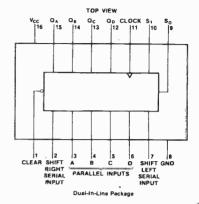
H = High Level (steady state), L = Low Level (steady state), X = Don't Care (any input, including transitions)

† = Transition from low to high level

a, b, c, d = The level of steady state input at inputs A. B, C, or D, respectively. QAO, QBO, QCO, QDO = The level of QA, QB, QC, or QD, respectively, before the indicated steady state input conditions were established. QAN, QBN, QCN, QDN = The level of QA, QB, QC, respectively, before the

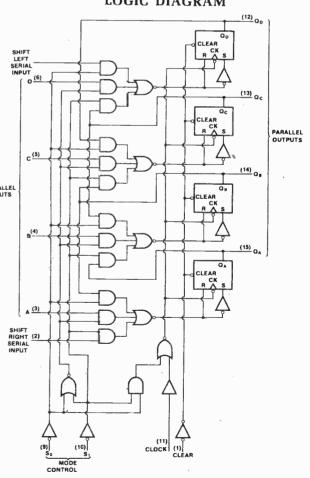
most recent | transition of the clock.

PIN' CONNECTION





LOGIC DIAGRAM





40 MHz PRESETTABLE DECADE AND BINARY COUNTERS/LATCHES

GENERAL DESCRIPTION

These high-speed monolithic counters consist of four dc coupled master/ slave flip-flops which are internally interconnected to provide either a divide-by-two and a divide-by-five counter. These counters are fully programmable; that is, the outputs may be preset to any state by placing a low on the count/load input and entering the desired data at the data inputs. The outputs will change to agree with the data inputs independent of the state of the clocks.

These counters may also be used as 4-bit latches by using the count/load input as the strobe and entering data at the data inputs. The outputs will directly follow the data inputs when the count/load is low, but will remain unchanged when the count/load is high and the clock inputs are inactive.

These high-speed counters will accept count frequencies of 0 to 40 MHz at the clock 1 input and 0 to 20 MHz at the clock 2 input. During the count operation, transfer of information to the outputs occurs on the negative-going edge of the clock pulse. The counters feature a direct clear which when taken low sets all outputs low regardless of the states of the clocks.

All inputs are diode-clamped to minimize transmission line effects and simplify system design. The circuits are compatible with most TTL and DTL logic families. Typical power dissipation is 150 mW.

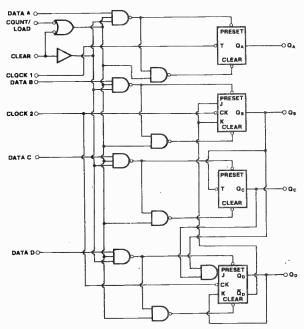
FEATURES

- Performs BCD, bi-quinary, or binary counting
- · Fully independent clear input
- Guaranteed to count at input frequencies from 0 to 40 MHz
- Input clamping diodes simplify system design

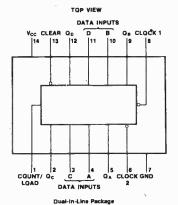
ABSOLUTE MAXIMUM RATINGS

	Supply Voltage, V _{CC}	5.25V
	Input Voltage	5.5V
	Interemitter Voltage	5.5V
•	Storage Temperature Range	65°C to +150°C
	Lead Temperature (Soldering, 10 seconds)	300°C
	Supply Voltage (V _{CC})	4.75—5.25V
	Temperature (T _A)	0°C to 70°C
	Temperature (TA)	

LOGIC DIAGRAM



PIN CONNECTION





TRUTH TABLES

DECADE (BCD) 74196 (Note A)

COUNT	OUTPUT									
	Qπ	$Q_{\rm C}$	Q_B	Q_A						
0	I.	I.	I.	l.						
1	I.	I.	I.	Н						
2	L	L	Н	L						
3	I.	I.	Н	Н						
4	L	H	I,	I.						
5	I,	Н	L	H						
6	L	Н	Η .	I.						
7	I.	H	Н	Н						
8	Н	L	L	I.						
9	Н	I.	I.	H						

BI-QUINARY (5-2) 74196 (Note B)

COUNT	OUTPUT			
	Q_A	Q _D	Q_{C}	Q _B
0	I.	L	I.	I.
1	I.	L.	I.	. H
2	L	I.	Н	L
3	L	I.	Н	Н
- 4	I.	Н	L.	I.
5	Н	L	I.	L
6	Н	L	L	H
7	Н	L	Н	L
8 .	Н	L	Н	Н
9	Н	Н	I,	L

Note A: Output Q_A connected to clock 2 input.

Note B: Output Q_D connected to clock 1 input.

SPECIAL PURPOSE DEVICES

SCR'S						TRIAC'S					
Catalog Number	lmax A	Vmax V	IGT (max) mA	V _{GT} (max) V	Case Style	Catalog Number	lmax A	Vmax V	IGT (max) mA	V _{GT} (max) V	Case Style
276-1067	6	200	25	1.5	MU27	276-1001	6	200	50	2.5	TO220AB
276-1020	6	400	25	1.5	MU27	276-1000	6	400	50	2.5	MU27

Catalog	(Forwa Revo V	er Voltage and and erse) bo lits	Breakover Voltage Symmetry V _{bo} (1+V _{bo} 1 1 V _{bo} 1) Max	Change and R	ck Voltage (Forward everse) bb t = 6 ma	Peak Breakover Curre∩t at Breakover Voltage Ibo	Color Band or Dot
Number	Min	Max	Volts	Тур	Min	μa	Identification
276-1050	30	40	. 2	4	3	50	Orange

IMPORTANT SUGGESTIONS ON THE USE AND REPLACEMENT OF TRANSISTORS

You can use various styles and sizes of transistors in any given circuit application, as long as the electrical characteristics of the device are within the required range of operation. Thus, a tab-type device can be used to replace a TO-3 or TO-66 case device; or a small epoxy-type device can be used in place of TO-5 or other size transistor.

Generally speaking, you must observe the following maximum characteristics of a transistor when contemplating substitution or selection:

Power dissipation
Maximum collector current
Maximum collector-to-emitter voltage
Maximum collector-to-base voltage
Maximum emitter-to-base voltage

Also, it is useful to consider the following characteristics for actual circuit operation:

Gain Frequency limitations Caution: It may be necessary in some cases to adjust bias values to achieve required operation. With tuned circuits, it is a good practice to check alignment after replacing any transistor.

When replacing power transistors, always check driver devices to be sure they are OK. Also, check other circuit components to be sure they were not shorted (or otherwise defective) when the original device failed. If you fail to correct such problems before applying power to the circuit once again, the replacement transistor could easily be permanently damaged. Be sure to use proper heat-sink precautions and use silicon grease to reduce the thermal resistance between the case of the transistor and the heat-sink.

Always observe temperature limitations as specified with transistor ratings.

It almost goes without saying, but let us remind you anyway—

Always observe voltage polarity with all semiconductor devices.

CROSS-REFERENCE/SUBSTITUTION LISTING

Most users of semiconductors realize that it is almost impossible to guarantee absolute equivalents (as in the case of tubes). Thus, the only way to create replacement or cross-reference listings is by carefully evaluating each characteristic of both devices (original transistor and the possible alternate). This is how the Technical Staff of Radio Shack went about preparing the following cross-reference/replacement lists.

IMPORTANT NOTE

We caution you that in many cases the listed cross reference ARCHER device may be different in appearance, size or mounting style. Thus, before beginning replacement or installation procedures, check to be sure you have enough room for proper mounting.

Also, when making substitutions or replacements in radio or high frequency circuitry, it may be necessary to realign tunable circuit elements.

This is true even when making **exact** replacements (junction capacitances normally vary between devices even from the same production run).

Information contained in this guide is based on the latest available data and is believed to be accurate. Every care has been taken to assure technical accuracy. However, Radio Shack does not assume responsibility for any contingencies of the use of this information. Nor does Radio Shack assume any responsibility for any infringements of patents or other rights of third parties which may result from its use.

When you are looking for a specific number and it does not show up in the following listing—refer to the technical data provided for our line of ARCHER devices. With this information you probably will be able to make a suitable substitution.

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-
0000000FR1 0000000FR2	1104	0002SC1023 0002SC1026	2011 2011	002-12000 002SC668D	2009	01-119185-01 01-119185-02	1725 1725	09-302078 09-302079	2009	09-306060 09-306061	1102 1123	09-306276 09-306283	1102 1102
0000000FRI 0000000MV4	1104	0002SC1026A 0002SC1026B	2011	002SC735-OY 002SC735OY	2009	01-119185-03 02-1001-1221-3	1725 1123	09-302092	2011	09-306062	1102	09-306285	1104
0000000S15	1104	0002SC1026C	2011	002SC7350Y	2009	02-1006-2/222 -3	1102	09-302095 09-302101	2009	09-306063 09-306064	1104 1123	09-306287 09-306288	562 1102
0000000SD1 0000001N60	1104 1123	0002SC1032 0002SC1032A	2011	003-00 003-001	2013 1104	02-1078-01 02-3002-2/2221-3	2009 1104	09-302103 09-302106	2011	09-306073 09-306077	561 1101	09-306290 09-306291	1123 1102
00000010D1	1104	0002SC1032B	2011	003-005400	1123	02Z6.2	561	09-302114	2011	09-306083	1104	09-306300	1104
000000DS17 000000DS18	1104(2) 1104(2)	0002SC1032C 0002SC1317	2011	003-006700 003-007500	1123 1123	02Z6.2A 02Z-9.1A	561 562	09-302118 09-302122	2009	09-306088 09-306089	1104 1101	09-306302 09-306303	1104 1104
000000DS-38 00000DS38	1104 1104	0004-003500 000546-1	1104 2009	003-009000 003-009100	1123 564	02Z9.1A 02Z12A	562 563	09-302124 09-302129	2009	09-306091 09-306093	1123 1123	09-306309 09-306311	1102
000000SD1AB	1104	000653	2009	003-009200	563	02Z62A	561	09-302131	2009	09-306100	1104	09-306312	1104
000000SD1Y 000000SD46	1104 1123	000704 0001849R	1104	003-009400 003-009600	1104	02Z102A 03-0018-0	562 1104	09-302138 09-302140	2011	09-306103 09-306104	1104 1104	09-306313 09-306315	1102
000001S188 000001S331	1123 561	00023645 000RS1542	2009 1104	003-009700 003-009900	563 1104	03-0021-0 03-0063-04	1123	09-302142 09-302143	2011 2011	09-306106 09-306107	562 1123	09-306323 09-306326	1104 1102
000001S334	562	000SD-1AUF	1102	003-01	2013	03-034-042	1122	09-302144	2011	09-306108	1123	09-306327	562
000001S990 0000010DC1	1102 1104	000WG1010 001-00	1102 2009	003-010000 004-00	563 2009	03-160 03-1585/G	1123 2009	09-302145 09-302148	2011	09-306110 09-306111	1102 1102	09-306330 09-306331	1123 1123
00000DS18	1104	001-0010-00 001-0020-00	1123 1123	004-00(LAST-IF) 004-002000	2010	03-3016	1104	09-302151	2011	09-306112	1104	09-306332	562
00000DS131 00000DS410	1102	001-0072-00	1114	004-002700	1104	04-000653 04-00460-03	1122 2009	09-302152 09-302153	2009	09-306113 09-306114	1102 1104	09-306333 09-306334	1104 1123
00000FR202 00000S1B01	1104 1104	001-0077-00 001-0081	1104 1123	004-002800 004-003000	1104 1104	04-00461-02 04-00535-02	2011	09-302165 09-302172	2009	09-306115 09-306119	1104 1104	09-306336 09-306339	1123 1123
00000WZ090	562	001-0081-00	1104	004-003300	1104	04-01585-06	2009	09-302175	2009	09-306124	562	09-306341	1104
0000-00011-046 0000-00011-049	1102 2009	001-0095-00 001-0101-01	1102 562	004-003400 004-003600	1104 1104	04-01585-07 04-01585-08	2009	09-302189 09-302191	2009	09-306125 09-306129	1104 1102	09-306349 09-306350	1123 1104
0000-00011-054 0000-00011-055	2035 2035	001-0151-00 001-01101-0	1102 2001	004-003900 004-004000	1104 1104	04-02090-02 04-8054-3	2009 1104	09-302192 09-302193	2020 2020	09-306134 09-306135	1102 1122	09-306351 09-306353	562 1104
00001N60	1123	001-01202-1	2007	004-004100	1104	04-8054-4	1104	09-302200	2010	09-306138	1104	09-306365	1104
00001S155 00001S188	1102 1123	001-01203-1 001-01501-0	2007 1123	004-009200 004-03300	1123 1104	04-8054-7 04-15850-06	1104 2011	09-302203 09-302204	2011	09-306145 09-306148	1102 1102	09-306366 09-306367	1104 564
00001S188AM 00001S334	1123 562	001-02011 001-02020	2009	004-03500 004-03600	1104	04-38190-01 04-46000-02	2035	09-302206 09-302207	2013	09-306149 09-306154	1104	09-306368	1102
00001S446D	1123	001-02101-0	2009	004-03700	1104	05-00000-00	1123	09-302215	2009	09-306157	1102	09-306370 09-306373	1123 1102
00001S1210 00001S1555	1102 1102	001-02101-1 001-02102-0	2009 2009	005-02 006-0000004	2009 1122	05-00060-00 05-00060-01	1123 1123	09-302216 09-302222	2011	09-306158 09-306159	562 1102	09-306375 09-306376	562 1104
00001S1849	1104(2)	001-02103-0	2009	006-0000134	2009	05-00160-01	1123	09-302224	2013	09-306160	1104	09-306377	561
00001S1849R 00001S2076	1104(2)	001-02104-0 001-02105-0	2009	006-6400902 006-6450032	1122 2009	05-02160-01 05-03016-01	1102 1104	09-303012 09-303025	2001	09-306161 09-306162	1102 1104	09-306382 09-306383	562 5 61
00001S4460 00002S606	1123 2011	001-02106-0 001-02107-0	2009	007-00 007-0040-00	2012	05-04001-02 07-07124	1104 2009	09-303042 09-304017	2013 2035	09-306163	1102	09-306384	1104
00002SC373	2009	001-02108-0	2009	007-6016-00	1122	07-07125	2009	09-304019	2011	09-306165 09-306168	562 1102(2)	09-306389 09-306390	1104 1102
00002SC460 00002SC535	2011 2011	001-02109-0 001-02110-0	2009	007-6060-00 007-25005-01	1122 1122	07-07129 07-07139	2013 2009	09-304042 09-304043	2009	09-306169 09-306170	1104 1102	09-306391 09-306394	563 - 1104
00002SC537	2009	001-02111-0	2009	007-25013-01	1122	07-07156	2009	09-304044	2009	09-306171	1102	09-306421	1104
00002SC735 00002SC772	2009 2011	001-02111-1	2009 2009	007-25016-01 007-74655-02	1122 2009	07-07158 07-07159	2035 2035	09-304044(LAST-IF	2009	09-306172 09-306176	1104 1104	09-306422 09-306423	1104 1104
00002SC828 00002SC829	2009	001-02113-3 001-02113-4	2009 2009	007-74655-06 007-74661-01	2009	07-07166 07-1458-85	2009	09-304046 09-304048	2012	09-306177 09-306178	1104 1102	09-306424 09-307039	1114 1102
00002SC838	2009	001-02113-5	2009	007-1669901	1740	07-5134-14	1123	09-304058	2009	09-306179	563	09-307043	1104
00002SC870 00002SC870A	2009	001-02121-0 001-02303-3	2009 561	007-7450301 007-7466101	2041 2009	07-5134-14A 07-5134-14B	1123	09-305007 09-305014	2011	09-306180 09-306183	562 561	09-307045 09-307055	1102
00002SC870B 00002SC870C	2009	001-02303-4 001-02405-0	564 1104	008-024-00 0012-911	1104	07-5134-14C 07-5160-15	1123	09-305021 09-305023	2035 2035	09-306192 09-306194	1104 562	09-307075 09-307080	1102
00002SC968	2009	001-02405-1	1104	0013-911	1104	07-5160-15A	1101	09-305031	2035	09-306195	1102	09-307081	1102
00002SC1023 000010DC1R	2009 1104(2)	001-02405-2 001-02601-0	1104 1104	0014-911 0015-911	1102	07-5160-15B 07-5160-15C	1101 1101	09-305032 09-305033	2035	09-306198 09-306199	1102 1102	09-307083 09-307084	1102
000072020	1104 1104	001-02603-0 001-02701-1	1104 2035	0018 001422	2031 2009	07-5331-86 08	561	09-305034	2009	09-306200	1123	09-307085	1102
000072050 000072090	1123	001-02702-0	2035	004567	1104	08-0040	562 1104	09-305036 09-305041	2011	09-306202 09-306205	1102 1104	09-307089 09-308072	1102 2011
000072130 000072150	1102 562	001-02703-0 001-011010	2036	004763 004792	1102 2011	08-0821 08-08111	1104	09-305050 09-305051	2013	09-306206 09-306208	1102 561	09-308078 09-309006	702 2009
000072160	1123	001-015010	1123	004887	563 1123	08-08112 08-08117	1123 1102	09-305062	2009	09-306209	1101	09-309012	2009
000072190 000073090	562 2009	001-015011 001-021010	1123 2009	0012060 0023645	2011	08-08119	1102	09-305063 09-305064	2009 2009	09-306210 09-306211	1101 1102	09-309023 09-309049	2009 2009
000073100 000073120	2009 2009	001-021020 001-021030	2009 2009	0023828 0023829	2009 2011	08-08120 08-08122	564 1104	09-305065 09-305066	2009 2009	09-306211(REC 09-306212(REC	T) 1102 TIFIER)	09-309050 09-309060	2009 2009
000073130	2009	001-021040	2009	0099203-005	1104	08-08125	562	09-305067	2009		1114	09-309064	2009
000073140 000073230	2013	001-021050 001-021060	2009	0099203-007 00352080	1104 2009	08-302152 08A159-007	2013 1102	09-305068 09-305077	2009 2009	09-306213 09-306214	1104 1104	09-309065 09-309069	2013
000073231 000073290	2009	001-021070 001-021080	2009	00444028-010 00444028-014	2009 2009	08A165-001 08A8300-2	1102 2009	09-305093 09-305094	2013 2013	09-306216 09-306219	1101 1102	09-309072 09-309074	2011
000073310	2009	001-021090	2009	004440028-002	2009	09-002012	2009	09-305096	2013	09-306220	1102	09-309076	2009
000073332 000073333	2009 2009	001-021110	2009 2009	004440028-006 004440028-007	2009	09-306-083 09-30012	1104 2004	09-305133 09-305135	2035 2035	09-306221 09-306222	1102 1123	09-309672 09-3002006	2011 2013
000073370	2010	001-021132	2009 2009	004440028-008 004440028-010	2009 2009	09-300084 09-302002	2004	09-305137	2020 2009	09-306223 09-306224	1102	09-3060111	1102
000073390 000073391	2009 2009	001-021133 001-021134	2009	004440028-014	2009	09-302003	2013 2013	09-305139 09-305148	2031	09-306226	1104 1114	09N1 010-694	2009 2012
0000DS410 0000DS410R	1102	001-021135	2009 2009	0063050118 01-1501	1104	09-302004 09-302006	2010	09-305152 09-306002	2031 1123	09-306231 09-306232	1102 562	011-H01 011H01	2007 2007
0000FR202	1104	001-021232	2009	01-2101	2009	09-302007	2009	09-306009	1123	09-306233	1102	012-0121-001	1102
0000RS1542 0000SD1	1104	001-021270	2041 564	01-2101-0 01-2102	2009 2009	09-302012 09-302014	2009 2011	09-306010 09-306012	1123 1123	09-306236 09-306239	1102 562	012-1 012-1-12	2009
0000SD-1AUF 0000SD46	1104 1123	001-023037 001-024050	563 1104	01-2104 01-2105	2009 2009	09-302016 09-302019	2010 2009	09-306020 09-306024	1123 564	09-306241 09-306244	562 1122	012-1-12-7 012-1020-005	2009 1102
0000WZ090	562	001-024051	1104	01-2106	2009	09-302032	2011	09-306033	1104	09-306245	1104	012-1021-001	1102
000-04 0001S49	2009 1104	001-024052 001-026010	1104 1122	01-2107 01-2108	2009 2009	09-302033 09-302034	2009 2009	09-306034 09-306036	1104	09-306247 09-306248	562 1102	012-1024-001 012-H02	1102
0001S188	1123	001-026030	1102	01-2109	2009	09-302036	2013	09-306037	1123	09-306249	1104	012E	2009
0001S188AM 0001S334	1123 562	001-026060 001-027030	1102 2035	01-2405-0 01-2405-1	1104 1104	09-302037 09-302039	2013 2009	09-306040 09-306042	1123	09-306250 09-306254	1104 1104	012H01 013-339	2007 1104
0001S2144Z 0002SC373	1102	001-21011 001-226010	2009 1122	01-2405-2 01-2406-1	1104 1104	09-302041 09-302044	2009	09-306042(RECT) 09-306042(RECT)	1104 (ER)	09-306255 09-306257	1104 1102	014-680 014-686	2009
0002SC458B	2009	002-006500	2009	01-2601	1102	09-302045	2009		1104	09-306258	1104	014-698	2009
0002SC458C 0002SC531F	2009 2009	002-008300 002-009500	2031 2009	01-2601-0 01-2603-0	1102 1102	09-302045-12 09-302054	2009	09-306046 09-306047	1104 1123	09-306259 09-306261	1104 1101	014-784 015-002	2009 1104
0002SC537F	2009	002-009501 002-009502	2009 2009	01-9011-5/2221-3 01-9011-52221-3	2009 2009	09-302058	2009	09-306049	1123	09-306262	1101 1104	015-006 016B12	1104 2009
0002SC710B 0002SC710C	2009 2009	002-009900	2009	01-9013-72221-3	2009	09-302061 09-302062	2011	09-306050 09-306051	1104 1123	09-306263 09-306264	1104	-016B810	2009
0002SC772C 0002SC828	2011	002-03 002-010400	2009 2009	01-9014-2/2221-3	2031	09-302063 09-302072	2011	09-306054 09-306055	1104 561	09-306266 09-306270	1102 1123	016B812 017E824	2009
0002SC828H	2009	002-010800	2009	01-9016-4/2221-3	2009	09-302073	2011	09-306058	1123	09-306274	1114	018-00003	2009
0002SC828Q	2009	002-012000	2009	01-9018-6/2221-3	2030	09-302074	2009	09-306059	1104	09-306275	562	018-00006	1104

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	270
18-00007	1104	025-100018	2009	0103-0088H 0103-0088P	2009 2009	03500 03571	1123 1123	0573202 0573418	2009	.4T9.1A .4T9.1B	562 562	1/4Z6.2T5 1/4Z12T5	5 5
18-00008 18-00009	1104 1104	025-100024 025-100026	1104 2011	0103-0088R 0103-0088S	2009	04049B	1104	0573418	2009	.419.1B	563	1/4Z15D5	5
18B	2011	025-100027	1123	0103-00608	2009	04770	1123	0573460	2009	.4T12B	563	1/4Z15D10	5
19-00009	2009	025-100028	1104	0103-0473	2009	04970 06246-00	1114	0573468 0573468(HITACH	2009 I) 2011	.4T15 .4T15B	564 564	1/4Z15T5 1/2Z6.2T5	5 5
19-00010 19-001918	2009 1123	025-100029 025-100030	1104 2009	0103-0482 0103-0491	2009	08050	1104	0573469	2009	.5E05	1104	1/2Z9.1T5	5
19-001980	1123	025-100035	1104	0103-0491/4460	2009	09502-8	2009	0573469H	2009	.5E1	1104	1/2Z15T5	5
19-002718	1123	025-100040	2009	0103-0504	2009	011950	1122	0573479H	2009 2009	.5E2	1104 1104	3/4Z12D5	5 5
19-002935 19-002964	1104	025B 025B-YEL	2009	0103-0521(B) 0103-0531/4460	2030	011956 012013-1	1122	0573481H 0573485	2009	.5E3 .5E4	1104	3/4Z12D10	11
19-003317	2001	026-100017	2009	0103-0540	2009	013339	1104	0573486	2010	.5E5	1104	1-0002-0001	11
19-003318	2001	026-100026	2009	0103-0568	2011	013339(RECTIFIE		0573487	2010	.5E6	1104 1104	1-0006-0021	20 20
19-003319 19-003324	2001	027-000296 027-000306	1104 1104	0103-0568/4460 0103-90	2011	014002-1 014007-1	1102 1122	0573487H 0573490	2011	.5J05 .5J1	1104	1-0006-0022 1-001/2207	11
19-003342	2007	027-000312	1104	0103-94	2009	014007-2	1122	0573491H	2009	.5J2	1104	1-001-003-15	20
19-003343	2007	031A	2009	0105-0012	2035	014024	1122	0573507	2011	.5J3	1104	1-002	20
19-003420 19-003675-196	1104 2009	033-31(SYLVANIA 037	2009	0110 0110-0011	1104 1104	021154 023606	1104 2035	0573508 0573509	2011 2013	.5J4 .5J5	1104 1104	1-003	20 11
19-003675-203	2009	041	2009	0110-0141	1104	023762	2041	0573509H	2011	.5J6	1104	1-016	- 11
19-003675-207	2009	042	2009	0110-0141/4460	1104	025026	1104	0573510	2011	.7E05	1104	1-017	11
19-003675-246	2009 1122	044-9667-02 045-1	2009	0110-0209 0111	1104	025056 025072	1104	057351GH 0573523	2011	.7E1	1104 1104	1-037/2207	11
19-003676-334 19-003870-013	1104	045-1	2011	0112	1104	026237	2009	0573529	2009	.7E3	1104	1-044/2207	20
19-003870-020	1104	046-0134	1102	0112-0019	1123	030010	2009	0573532	2009	.7E4	1104	1-021270	20
19-003932	2009	046-0909	1104	0112-0026	1123	030010-1	2009	0573556 0573562	2009	.7E5	1104	1-20-001-890	11
19-003934 19-004111	2009 2009	047(DIODE) 050-0011-00	1102	0112-0028 0112-0028/4460	1123 1123	030512-1 030512-2	2009 2009	0573607	2041	.7E6 .7J05	1104 1104	1-21-73 1-21-74	20 20
19-004428-002	2009	051-0003	1102	0112-0037	1123	030515	2009	0573981	2009	.7J1,	1104	1-21-75	20
19-005006	2009	051-0006	1104	0112-0046	1123	030515-4	2009	0575001	1123	.7J2	1104	1-21-76	20
19-005021 19-005043	2009	051-0016-00 051-0020	1104 1102	0112-0073 0112-0082	1123	030527 030536	2009	0575001H 0575002	1123 1123	.7J3 .7J5	1104 1104	1-21-78	20
19-005043	1123	051-0020	562	0114-0017	562	030536-1	2009	0575002 0575002H	1123	.7J6	1104	1-21-91	2
20-00011	1123	051-0049	2011	0114-0090	562	030537	2009	0575004	1123	.7JZ9.1	562	1-21-92	20
20-00012	1123	051-0155	2009	0121	2009	030537-1	2009	0575005 0575005H	1123 1123	.7JZ12	563 564	1-21-93 1-21-100	20
20-00024 20-00025	2011	054 055	2009	0125 0126	2009 2009	030537-2 030538	2009	0575005H 0575007	1123	.7JZ15 .7Z9.1A	564 562	1-21-100	20
20-00028	2011	057	2009	0127	2009	030539-1	2041	0575050	1114	.7Z9.1B	562	1-21-103	20
20-00030	1123	062	2009	0128	2009	030542	2009	0575051	1104	.7Z9.1C	562	1-21-104	20
20-1110-010(SC	2009	065-001 065-002	2035	0131 0131-000473	2009	030542-1 030543	2009	0575067 0575099	1123 1123	.7Z9.1D .7Z12A	562 563	1-21-105	20
20-1110-011	2009	065-004	2009	0131-000704	2009	030543-1	2009	0576054	1104	.7Z12B	563	1-21-161	20
20-1110-011(SC		065-012	1102	0131-0026	1104	030543-2	2009	0576054(BIAS)	1104	.7Z12C	563	1-21-162	20
20 1110 012/00/	2009	065-013	1123	0131-0035 0131-0044	1104	031033 031034	1123 1104	0576054(SW) 0577001	1102 1123	.7Z12D .7Z14A	563 564	1-21-179	20
20-1110-012(SC	2009	065-015 065-210	1104 2020	0131-0044	1104	031034	1123	0820220	2010	.7Z14B	564	1-21-186	20
20-1110-013(SC		069	2009	0131-001417	2009	037085	2041	04000655-1	1122	.7Z14C	564	1-21-234	20
	2009	070	2041	0131-001418	2009	040001	2011	04040505	010	.7Z15D	564	1-21-235	20
20-1110-016 20-1110-017	2035 2009	070-004 070-005	1114	0131-001421 0131-001422	2009	041200-30110 041616	1102 1102	04040505-001 04040751-001	010 1740	.7ZM9.1A .7ZM9.1B	562 562	1-21-236 1-21-240	20
20-1110-017(SC		070-006	1114	0131-001423	2009	053492	2009	04410025-001	1122	.7ZM9.1C	562	1-21-241	20
	2009	070-007	1114	0131-001424	2009	055210	1104	04410025-005	1122	.7ZM9.1D	562	1-21-254	20
20-1110-018 20-1110-021	2035	070-008 070-009	1114	0131-001464 0131-001597	2009	055210H 055228	1104 1114	04410042-001 04440028-001	1122 2009	.7ZM12A .7ZM12B	563 563	1-21-273	20
20-1111-002	2041	070-010	1114	0131-001864	2009	055228H	1114	04440028-003	2009	.7ZM12C	563	1-21-276	20
20-1111-002(SCI	DTT)	070-013	1114	0131-002068	2041	057001	1123	04440028-006	2009	.7ZM12D	563	1-21-277	20
20 1111 002/00	2041	070-014 070-015	1114	0131-004323 0131-004367	2009 2041	057001H 057005	1123 1123	04440028-008 04440028-013	2009 2009	.7ZM15A .7ZM15B	564 564	1-21-278 1-21-279	20 20
20-1111-003(SCI	2041	070-015	1114	0131-004367	1104	057005 057005H	1123	04440052-001	2009	.7ZM15C	564	1-21-289	20
20-1111-007	2041	070-017	1114	0131-053	1104	057293	1102	04440052-002	2009	.7ZM15D	564	1-101	11
20-1111-007(SC	OTT) 2041	070-019 070-020	1104	0132 0134	2041	057500 059395	1123	04450002-001	2009	.25N9.1 .25N12	562 563	1-425-636 1-530-012-11	= 11
20-1111-008	2041	070-020	564	0140-6	2009	061366	1123	04450002-004	2009	.25N13	563	1-531-027	FILM 4
20-1111-008(SC		070-022	1102	0140-8	1104	075005	1123	04450023-001	2041	.25N15	564	1-531-5-11	- 11
20 1111 010	2041	070-028	1114	0140-9 0234	1104	080040 080050	1104 1104	04450023-006 05320074H	2041	.25NN15 .25T5.8	564 561	1-531-105	11
20-1111-019 20-1112-001	2041 2009	070-030 070-032	1114	0244	1104 1104	082006	2009	0A7	1123	.25T5.8A	561	1-531-105-13	1.
20-1112-002	2036	070-033	1114	0300	1104	082019	2009	0A9	1123	.25T6.2	561	1-531-106	1
20-1112-002(SC		070-047	1102	0301	1104	082020	2010	0A9M	1123	.25T6.2A	561	1-531-106-13	1
20-1112-004	2035	078-0016	1104	0301-3055-00 0302	2041 1104	085002 085003	1123	0A70 0A73	1123 1123	.25T6.2B	561 562	1-531-106-17 1-531-10513	D= 1
20-1112-004(SC		078-1696 078-2400	1104	-0304	1104	085004	1123	0A81	1123	.25T8.7A	562	1-534-105-13	1
	2009	078-5001	1104	.0307	1114	085005	1123	0A90	1123	.25T8.8	562	1-534-106-13	1
20-1112-005 20-1112-006	2035 2035	085 086-005132-02	2041	0310	1104	085006 085016	1123 1123	0A90M 0A90Z	1123 1123	.25T8.8A .25T9.1	562 562	1-801-003 1-801-004	2 2
20-1112-008	2036	088-2	1114	0312	1104	085026	1123	0A91	1123	.25T9.1A	562	1-801-004-17	2
21-0121-00	2009	088C	2007	0314	1104	0170301	1102	0A95	1123	.25T9.1B	562	1-801-304-15	2
22 22-006500	1102 2009	088C-12 088C-12-7	2007 2007	0317 0320	1114 1104	0330302 0510006	563 1104	0A180 0A12612	1123 563	.25T12 .25T12A	563 563	1-801-314 1-801-314-15	2
22-0063-00	1122	089-223	2007	0321	1104	0517022	1123	0AZ213	563	.25T12B	563	1-801-314-16	2
22-2823-002	562	089-226	2009	0322	1104	0517132	1102	0C238	2009	.25T15	564	1-8259	1
22-2823-004 22-2823-005	1102	089-233 089-236	2001	0324 0327	1104 1114	0517133 0517550-3	1102	0F160 0F162	1104 1102	.25T15A .25T15B	564 564	1-13989 1-16549	ALIES.
22-2823-005	1123	089-236	1123 1102	0400	1104	0517750	1104	0F164	1104	.75N5	564	1-20363	nim)
22-2823-008	1123	089-248	1123	0401	1104	0517750H	1104	0F173	1123	.75N6.2	561	1-522223720	2
22-2823-011	1104	089-252	1104	0402	1104	0517826	1123	0N047204-2	2009	.75N12	563	1-6147191229	2
22-2876-003 22-2876-005	2013 2035	089-293 090A64-1	1123	0410 0411	1104 1104	0517828 0517829	1123 1123	0N271 0N47204-1	2030 2009	1/4A9.1 1/4A9.1A	562 562		1
22-2876-006	2036	094-007	1122	0412 -	1104	0518926	1102	0N120623	1122	1/4A9.1B	562	1-DI-007	1
22-2876-007	2014	094-010	1104	0450	1104	0525002	1123	0N143285	1122	1/4A12	563	1-DI-009	1
22-2876-009 22-2876-012	2036 2020	094-011 094-014	1114	0460 0500	1104	0525002H 0526224	1123 1123	0N187840 0N206068	007 1122	1/4A12A 1/4A12B	563 563	1-RE-004 1-TR-048	1
22-2076-012	1123	098-1	1123 1104	0557-010	1102	0526232	1102	0\$4.000654	1102	1/4A12B	564	1+12/1	1
22-3902-001	1123	098G1219	1114	0575-005	1123	0537640	1104	0\$4.000654 0\$22.3901-001	1123	1/4A15A	564	1+12/1 1&12/1	1
22-3905-001	1104	098GI219	1114	0700	1104	0537640(DIO) 0537640(XSTR)	1104	0522.3902-001	1123	1/4A15B	564	1A0020	2
22D 22.3901-001	1104 1123	0100	1104 1102	0701 0702	1104 1104	0537640(XSTH) 0537820	2007 1123	0S22.3905-001 0S-90	1104 1123	1/4AZ6.2D5 1/4LZ6.2D	561 561	1A0021 1A0022	2
22.3902-001	1123		2009	0704	1104	0551029	1104	0S536G	2009	1/4LZ6.2D5	561	1A0024	2
22.3905-001	1104	0101-0491 0101-0540	2009	0707	1114	0552006	1104	0Z12T5	563	1/4M6.2AZ5	561	440000	2
25-009600	2041	0102	1104 2009		1104	0552006H	1104 1104	0Z12T10	563 561	1/4M9.1Z 1/4M9.1Z5	562 562	1A0029	2
25-009600 25-10029	1114	0103-0014	2009	0727-50 0776-0160	2009	0552007H 0552010	1104	.4T6.2 .4T6.2A	561	1/4M9.1Z5 1/4M9.1Z10	562 562	1A0025 1A0029 1A0032 1A0033 1A0034 1A0035	2 2
25-10030	2009	0103-0060(B)	2030	01122-0073	1123	0552010H	1104	.416.2B	561	1/4M15Z	564 564	1A0034	2
25-100008	1101	0103-0060A	2030	01339	1104	0570519	1123	.4T6.8A	561	1/4M15Z5			2

DEVICE	276-	DEVICE	276-	DEVICE 2	76-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	270
A0043	2009	1E12Z	563		1123	1N99A	1123	1N281	1123	1N390	1102	1N511	11
10044	2009	1E12Z5	563		1123	1N100	1123	1N282	1123	1N391	1102	1N512	11
A0045 A0051	2030	1E12Z10 1E15Z	563 564		1123 1123	1N100A 1N103	1123 1123	1N283 1N285	1123 1123	1N392 1N393	1102 1102	1N513 1N514	11
A0063	2009	1E15Z5	564		1123	1N104	1123	1N287	1123	1N394	1102	1N515	11
A0067	2009	1E15Z10	564		1123	1N105	1123	1N288	1123	1N400	1104	1N516	11
40070 40076	2009 2009	1E535A 1E535A/7825B	2013 2013		1123	1N107 1N108	1123 1123	1N289 1N290	1123 1123	1N400B 1N414B	1104 1102	1N517 1N518	11 11
A0077	2009	1E535B	2011	1N54G	1123	1N109	1123	1N292	1123	1N416B	1101	1N519	11
A0078	2009	1EA10A	1104		1123	1N110	1101	1N294	1123	1N417	1123	1N520	- 11
A0079 A0080	2009	1EA20A 1EA30A	1104 1104		1123 1123	1N111 1N112	1123	1N294A 1N295A	1123 1123	1N418 1N419	1123 1123	1N521 1N522	11 11
A0081	2009	1EA40A	1104	1N57	1123	1N113	1123	1N295S	1123	1N429	561	1N523	- 11
A0083	2009	1EA50A	1104		1123	1N114	1123	1N295X	1123	1N431	1102	1N524	-11
A0084 A9.1M	2009 562	1EA60A 1ET02	1104 1104		1123	1N115 1N116	1123 1123	1N296 1N297	1123 1123	1N432 1N432A	1102 1102	1N525 1N526	11 11
A9.1MA	562	1ET05	1104	1N60	1123	1N116A	1123	1N297A	1123	1N432B	1102	1N527	11
A12M	563	1ET1	1104		1123	1N117	1123	1N298	1123	1N433	1102	1N530	11
A12MA A15M	563 564	1ET2 1ET3	1104 1104	1N60/0112-0028-643	1123	1N117A 1N118	1123 1123	1N298A 1N299	1°23 1101	1N433A 1N433B	1102 1102	1N531 1N532	11 11
A15MA	564	1ET4	1104		1123	1N118A -	1123	1N299B	1101	1N434	1102	1N533	11
A35	1122	1ET5	1104		1123	1N119	1123	1N300	1102	1N434A	1102	1N534	11
A50 A62	1104 561	1ET6 1ET7	1104 1114		1123 1123	1N119A 1N120	1123 1123	1N300A 1N300B	1102 1102	1N434B 1N435	1102 1123	1N535 1N536	11
A4757-1	2009	1ET8	1114		1123	1N120A	1123	1N301	1102	1N440	1104	1N537	11
10425	1104	1ET10	1114		1123	1N124	1101	1N301A	1102	1N440B	1104	1N538	11
A 10952 A 11184	1104 1104	1EZ9.1 1EZ12	562 563		1123	1N124A 1N125	1101 1123	1N301B 1N303	1102 1102	1N441 1N441B	1104 1104	1N539 1N540	11 11
A11306	1123	1EZ15	564		1123	1N126	1123	1N303A	1102	1N442	1104	1N541	11
11671	1104	1F05	1104	1N60D	1123	1N126A	1123	1N303B	1102	1N442B	1104	1N542	1
12214	1104 1104	1F2	1104 1114		1123 1123	1N128 1N128A	1123 1123	1N304 1N305	1123 1123	1N443 1N443B	1104 1104	1N547 1N548	1
12407 12688	562	1F8 1F14A	1104		1123	1N132	1123	1N305	1123	1N444	1104	1N550	1
12689	1123	1FM2	1104	1N60G	1123	1N133	1123	1N307	1123	1N444B	1104	1N554	1
A12690 A13210	1104	1G01	1123		1123	1N134 1N135	1123 1102	1N308 1N309	1123 1123	1N445 1N445B	1104 1104	1N555 1N560	1
A13219 A13719	1104 1104	1G02 1G2C1	1123 1104		1123	1N135	1102	1N310	1123	1N445B	1123	1N561	1
13720	1104	1G2Z1	1104	1N60P	1123	1N137B	1102	1N312	1123	1N448	1104	1N564	11
114384	1123	1G8	1114		1123	1N138 1N138A	1102	1N314	1123	1N449 1N450	1123	1N568 1N569	11
115790 116549	1104 1102	1G25 1G86	1123 1123		1123	1N138B	1102 1102	1N315 1N315A	1104 1104	1N450 1N451	1104 1104	1N571	1
16550	1104	1GA	1104		1123	1N139	1123	1N316	1104	1N452	1123	1N596	1
16551	1102	1GD2	1123		1123	1N140	1123	1N316A	1104	1N453	1104	1N597	1
\69425-1 \99812-1001	1122	1GD4 1GD5X	1123 1123		1123	1N142 1N143	1123 1123	1N317 1N317A	1104 1104	1N454 1N455	1123 1123	1N598 1N599	1
AC12	563	1GD5X	1123		1123	1N144	1123	1N318	1104	1N456	1102	1N599A	1
C12A	563	1GD10	1123		1123	1N145	1123	1N318A	1104	1N456A	1102	1N600	11
AC12B AC15	563 564	1HY40 1HY50	1104 1104		1123	1N147 1N147A	1101 1101	1N319 1N319A	1104 1104	1N457 1N457A	1102 1102	1N600A 1N601	1
AC15A	564	1HY80	1114		1123	1N148	1123	1N320	1104	1N457M	1102	1N601A	11
AC15B	564	1HY100	1114	1N65	1123	1N151	1104	1N320A	1104	1N458	1102	1N602	11
B05J20 B05J40	1104	1J1 1JZ61	2009 1104		1123	1N152 1N153	1104 1104	1N321 1N321A	1104 1114	1N458A 1N458M	1102 1102	1N602A	11
B2 ·	1104	1K60	1123		1123	1N158	1104	1N322	1114	1N459	1102	1 .J3A	11
B-2C1	1104(2)	1K60A	1123	1N67	1123	1N169	1104	1N322A	1114	1N459A	1102	1N604	11
B10J20	1104	1M6.2ZS5 1M6.2ZS10	561		1123	1N172	1101	1N323	1104	1N459M	1102	1N604A 1N605	1
3759 32992	563 1122	1M9.1Z	561 562		1123	1N173 1N191	1101 1123	1N323A 1N324	1104 1104	1N460 1N460A	1102 1102	1N605A	1
C0009	1104	1M9.1Z5	562	1N69	1123	1N192	1123	1N324A	1104	1N460B	1102	1N606	11
20017	1104	1M9.1Z10 1M9.1ZS5	562 562		1123	1N193	1104	1N325	1104	1N461 1N461A	1102	1N606A	1
C0025 C0026	1104 1104	1M9.1ZS10	562		1123	1N194 1N194A	1102 1102	1N325A 1N326	1104 1104	1N461A	1102 1102	1N613 1N613A	- 1
C0029	1123	1M12Z	563	1N71	1123	1N195	1102	1N326A	1104	1N462A	1102	1N614	1
C0031	1104	1M12Z5	563		1123	1N196	1162	1N327	1104	1N463	1102	1N614A	1
C0039 C05	1123 1104(2)	1M12Z10 1M12ZS5	563 563		1123	1N198 1N198A	1123 1123	1N327A 1N328	1104 1114	1N463A 1N464	1102 1102	1N616 1N617	1
C1	1104(2)	1M12ZS10	563	1N74	1123	1N198B	1123	1N328A	1114	1N464A	1102	1N618	11
C2	1104(2)	1M15Z	564	44170	1123	1N200	1102	1N329	1114	1N476	1123	1N619	1
26 26	1104(2)	1M15Z5 1M15Z10	564 564	1N76A	1123	1N201 1N202	1102(2) 1102	1N329A	1114	1N477 1N478	1123	1N622 1N625	_ 1
C10	1114	1M15ZS5	564	1N76C	1123	1N203	1102	1N348	1104	1N479	1123	1N625A	1
C12Z	563	1M15ZS10	564	1N76G	1123	1N204	1102	1N350	1102	1N480	1123	1N625M	1
C12ZA C15Z	563 564	1M753A 1M1614D	561 2009		1123 1123	1N205 1N206	1102 1102(2)	1N351 1N352	1102 1102	1N480B 1N482	1104 1102	1N626 1N626A	. 1
C15ZA	564	1M2086	1104	1N82	1101	1N207	1102	1N353	1102(2)	1N482A	1102	1N626M	1
3576	2009	1M8513A	1104	1N82A	1101	1N208	1102	1N354	1104	1N482B	1102	1N627	1
008 0098-001V-022	564 1102	1MA4 1N10	1104 1123		1101	1N209 1N210	1102(2) 1102	1N355 1N359	1123 1104	1N482C 1N483	1102 1102	1N627A 1N628	1
01	1104(2)	1N10D-4F	1104		1101	1N210	1102	1N359 1N359A	1104	1N483A	1102	1N628A	1
)2	1104(2)	1N22	1123	1N84	1123	1N212	1102	1N360	1104	1N483AM	1102	1N629	1
)2Z1	1104 1104(2)	1N31A 1N34	1123 1123		1123	1N213	1102 1102	1N360A 1N361	1104 1104	1N483B 1N483BM	1102 1102		
)6)6.2	561	1N34A	1123		1123 1123	1N214 1N215	1102	1N361A	1104	1N483C	1102		
6.2A	561	1N34AM	1123	1N87A	1123	1N216	1102	1N362	1104	1N484	1102	1N633	1
06.2B	561	1N34AS	1123		1123	1N217	1102	1N362A	1104	1N484A	1102		
6.2SA 6.2SB	561 561	1N34A-Z 1N34G	1123 1123		1123 1123	1N218 1N225	1102 562	1N363 1N363A	1104 1104	1N484B 1N484C	1102 1102		
8	1114	1N34GA	1123	1N87T	1123	1N225A	562	1N364	1114	1N485	1102	1N643A	•
010	1114	1N34M	1123	1N88	1123	1N228	564	1N364A	1114	1N485A	1102	1N645	•
)261)C1	1104 1104	1N34Z 1N35	1123 1123		1123 1123	1N251 1N251A	1102 1102	1N365 1N365A	1114	1N485B 1N485C	1102 1102	1N645A 1N645B	200
)G2	1104	1N36	1123	1N90G	1123	1N252	1102	1N367	1123	1N486	1102	1N646	1
:05	1104	1N38	1123	1N90GA	1123	1N252A	1102	1N367B	1123	1N486A	1102	1N647	1
1	1104	1N38A	1123		1104	1N255	1104	1N368	1104	1N486B	1102		
2 2Z5	1104 563	1N38B 1N40	1123 1123		1104	1N256 1N265	1104 1123	1N379 1N380	1102(2) 1102	1N497 1N498	1123 1123		1
E3 .	1104	1N41	1123	1N93A	1104	1N266	1123	1N381	1102	1N500	1123	1N658A	1
4	1104	1N43	1123	1N95	1123	1N267	1123	1N382	1102	1N503	1104	1N658M	1
E5	1104 1104	1N44 1N45	1123	1N96	1123 1123	1N268 1N270	1123 1123	1N383 1N384	1102	1N504 1N505	1104 1104		1
E6 E7	1114	1N45A	1123 1123	1N96A 1N97	1123	1N270	1123	1N384 1N385	1102(2) 1102(2)	1N505 1N506	1104	1N659A	1
E8	1114	1N46	1123	1N97A	1123	1N276	1123	1N386	1102	1N507	1104	1N660	1
E9.1Z	562	1N46A 1N47	1123 1123	1N98	1123 1123	1N277 1N278	1123 1123	1N387 1N388	1102(2) 1102(2)	1N508 1N509	1104 1114	1N660A 1N661	1
E9.1Z10	562												

DEVICE	276-	DEVICE	276-	DEVICE	2 76~	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
N662	1102	1N814M	1102	1N906AM	1102	1N1051	1104	1N1557	1104	1N2016	1104	1N2489	11
N662A N663	1102	1N815 1N815M	1102 1102	1N906M 1N907	1102 1102	1N1052 1N1053	1104 1104	1N1558 1N1559	1104	1N2017 1N2018	1104 1104	1N2609 1N2610	110
N663A	1102	1N816	561	1N907/A	1102	1N1054	1104	1N1560	1104	1N2019	1104	1N2611	110
N663M N665	1102 563	1N817 1N818	1102 1102	1N907A 1N907AM	1102 1102	1N1055 1N1081	1104 1104	1N1561 1N1562	1123 1123	1N2020 1N2033	1104 561	1N2612 1N2613	110
N666	564	1N818M	1102	1N907M	1102	1N1081A	1104	1N1563	1104	1N2033-2	561	1N2614	110
N673	1104	1N819	1104	1N908	1102	1N1082	1104	1N1563A	1104	1N2035-1	562	1N2615	110
N675 N676	561 1104	1N821 1N821A	561 561	1N908/A 1N908A	1102 1102	1N1082A 1N1083	1104 1104	1N1564 1N1564A	1104 1104	1N2035-12 1N2037-1	562 563	1N2620 1N2620A	5
N677	1104	1N822	561	1N908AM	1102	1N1083A	1104	1N1565	1104	1N2037A	563	1N2620B	, 5
N678 N679	1104 1104	1N822AG 1N823	1101 561	1N908M 1N909	1102 1123	1N1084 1N1084A	1104 1104	1N1565A 1N1566	1104 1104	1N2038-1 1N2038A	564 564	1N2621 1N2621A	5
N681	1104	1N823A	561	1N910	1123	1N1093	1123	1N1566A	1104	1N2046	563	1N2621B	5
N682 N683	1104 1104	1N824 1N825	561 561	1N911 1N914	1123 1122	1N1095 1N1096	1114 1114	1N1567 1N1567A	1104 1104	1N2069 1N2069A	1104 1104	1N2622 1N2622A	. 5
N684	1104	1N825A	561	1N914/A/B	1122	1N1100	1104	1N1568	1104	1N2009A	1104	1N2622B	5
N685	1104	1N827	561	1N914A	1122	1N1101	1104	1N1568A	1104	1N2070A	1104	1N2623	5
N686 N687	1104 1104	1N827A 1N829	561 561	1N914B 1N914M	1122 1122	1N1102 1N1103	1104 1104	1N1617 1N1618	1104 1104	1N2071 1N2071A	1104 1104	1N2623A 1N2623B	5
N689	1104	1N829A	561	1N915	1102	1N1104	1104	1N1619	1104	1N2072	1104	1N2624	5
N690	1102	1N835	1123	1N916	1104	1N1105	1104	1N1620	1104	1N2073	1104	1N2624A	5
N692 N695	1104 1123	1N837 1N837A	1102 1102	1N916A 1N916B	1102 1102	1N1119 1N1120	1104 1104	1N1630 1N1638	1102 1102	1N2074 1N2075	1104	1N2624B 1N2638	5 11
N695A	1123	1N838	1102	1N917	1102	1N1122A	1104	IN1644	1104	1N2075K	1102	1N2650	11
N696 N697	1102 1102	1N839 1N840	1102 1102	1N919 1N920	1102 1102	1N1169 1N1169A	1104 1104	1N1645 1N1646	1104 1104	1N2076 1N2077	1104 1104	1N2790	. 5
N698	1123	1N840M	1102	1N921	1102	1N1217	1104	1N1646 1N1647	1104	1N2077 1N2078	1104	1N2801 1N2850	11 11
1709	561	1N841	1102	1N922	1102	1N1217A	1104	1N1648	1104	1N2079	1104	1N2851	11
1709A 1709B	561 561	1N842 1N843	1102 1102	1N924 1N925	1102 1102	1N1217B 1N1218	1104 1104	1N1649 1N1650	1104	1N2080 1N2081	1104 1104	1N2858 1N2858A	11
N713 \	562	1N844	1102	1N926	1102	1N1218A	1104	1N1651	1104	1N2082	1104	1N2859	11
1713A	562	1N845	1102	1N927	1102	1N1218B	1104	1N1652	1104	1N2083	1104	1N2859A	11
1713B 1716	562 563	1N846 1N847	1104 1104	1N928 1N929	1102 1102(2)	1N1219 1N1219A	1104 1104	1N1653 1N1692	1104 1104	1N2084 1N2085	1104 1104	1N2860 1N2860A	11
716(ZENER)	563	1N848	1104	1N930	1102	1N1219B	1104	1N1693	1104	1N2086	1104	1N2861	1
1716A 1716B	563 563	1N849 1N850	1104 1104	1N931 1N932	1102 1102	1N1220 1N1220A	1104 1104	1N1694 1N1695	1104 1104	1N2088 1N2089	1104 1104	1N2861A 1N2862	1
1718	564	1N851	1104	1N933	1102	1N1220B	1104	1N1696	1104	1N2090	1104	1N2862A	i
1718A	564	1N852	1104	1N934	1102	1N1221	1104	1N1697	1104	1N2091	1104	1N2863	1
1718B 1719	564 564	1N853 1N854	1114 1114	1N935 1N935A	562 562	1N1221A 1N1221B	1104 1104	1N1701 1N1702	1104 1104	1N2092 1N2093	1104 1104	1N2863A 1N2864	11
1753	561	- 1N855	1114	1N935B	562	1N1222	1104	1N1703	1104	1N2094	1104	1N2864A	11
1753A 1757	561 562	1N856 1N857	1114 1104	1N936 1N936A	562 562	1N1222A 1N1222B	1104 1104	1N1704 1N1705	1104 1104	1N2095 1N2096	1104	1N3019 1N3019A	
1757A	562	1N858	1104	1N936B	562	1N1223	1104	1N1706	1104	1N2103	1104 1104	1N3019B	
1759	563	1N859	1104	1N937	562	1N1223A	1104	1N1707	1104	1N2104	1104	1N3022	
1759A 1760	563 1102	1N860 1N861	1104 1104	1N937A 1N937B	562 562	1N1223B 1N1224	1104 1104	1N1708 1N1709	1104 1104	1N2105 1N2106	1104 1104	1N3022A 1N3022B	
V764	562	1N862	1104	1N938	562	1N1225A	1114	1N1710	1104	1N2107	1104	1N3024	ì
N764-3 N765	562 563	1N863 1N864	1104, 1114	1N938A 1N938B	562 562	1N1226A 1N1251	1114	1N1711	1104	1N2108	1104	1N3024A	
N766-1	563	1N865	1114	1N939	562	1N1251	1104 1104	1N1712 1N1713	1104 563	1N2115 1N2116	1104 1104	1N3024B 1N3062	11
1767	564	1N866	1114	1N939A	562	1N1253	1104	1N1730	1114	1N2117	1104	1N3063	11
¥767-1 ¥770	564 1123	1N867 1N868	1114 1104	1N939B 1N941	562 563	1N1254 1N1255	1104 1104	1N1730A 1N1735	1114 561	1N2163 1N2163A	562 562	1N3064 1N3065	11
N771	1123	1N869	1104	1N941A	563	1N1255A	1104	1N1736	563	1N2164	562	1N3066	11
N771A N771B	1123 1123	1N870 1N871	1104 1104	1N941B 1N942	563 563	1N1256 1N1257	1104 1104	1N1736A 1N1763	563 1104	1N2164A	562	1N3067 1N3068	11 11
N772A	1123	1N872	1104	1N942A	563	1N1258	1114	1N1763A	1104	1N2165 1N2165A	562 562	1N3069	11
N773	1123	1N873	1104	1N942B	563	1N1259	1114	1N1764	1104	1N2166	562	1N3069M	11
N773A N774	1123 1123	1N874 1N875	1104 1114	1N943 1N943A	563 563	1N1260 1N1261	1114 1114	1N1764A 1N1766	1104 561	1N2166A 1N2167	562 562	1N3070 1N3071	11
N774A	1123	1N876	1114	1N943B	563	1N1313	562	1N1766A	561	1N2167A	562	1N3072	11
N775 N776	1123 1123	1N877 1N878	1114 1114	1N944 1N944A	563 563	1N1313A 1N1316	562 564	1N1770 1N1770A	562 562	1N2168 1N2168A	562 562	1N3073 1N3074	11
N777	1123	1N879	1104	1N944B	563	1N1337-5	1104	1N1773	563	1N2169	562	1N3075	į.
N778	1102	1N880	1104	1N945	563	1N1391	1123	1N1773A	563	1N2169A	562	1N3076	1
N779 N781	1102	1N881 1N881B	1104	1N945A 1N945B	563 563	1N1406 1N1407	1114	1N1775 1N1775A	564 564	1N2170 1N2170A	562 562	1N3077 1N3078	11
N788	1102	1N882	1104	1N946	563	1N1408	1114	1N1779	561	1N2171	-562	1N3079	1
N789 N789M	1102 1102	1N883 1N884	1104 1104	1N946A 1N946B	563 563	1N1415 1N1426	1104 563	1N1839 1N1840	1102	1N2171A 1N2181	562 1104	1N3080 1N3081	11
N790	1102	1N885	1104	· 1N947	1104	1N1427	564	1N1841	1102	1N2217	1104	1N3082	1
N790M N791	1102 1102	1N886 1N887	1114	1N948 1N949	1102	1N1439 1N1440	1104	1N1842	1102(2) 1102	1N2218 1N2219	1104	1N3082 1N3083 1N3084 1N3094 1N3106 1N3108 1N310 1N3121 1N3122 1N3123 1N3124 1N3125 1N3146 1N3147	1
791M	1102	1N888	1114 1114	1N960	1123 562	1N1441	1104 1104	1N1843 1N1844	1102	1N2220	1104 1104	1N3084	1
792	1102	1N889	1114	1N960A	562	1N1442	1104	1N1845	1102	1N2221	1104	1N3106	1
792M 793	1102 1102	1N890 1N891	1102 1102	1N960B 1N963	562 563	1N1443 1N1443A	1114 1114	1N1846 1N1847	1102 1102	1N2267 1N2268	1104 1104	1N3108	1
793M	1102	1N892	1102	1N963A	563	1N1448	1102	1N1877	563	1N2267 1N2268 1N2269 1N2270	1104	1N3121	1
794	1102	1N897 1N898	1102	1N963B	563	1N1485	561	1N1877A 1N1878	563	1N2270	1104	1N3122	1
795 796	1102 1102	1N898 1N899	1102 1102	1N965 1N965A	564 564	1N1486 1N1487	1104 1104	1N1878 1N1878A	564 564	1N22/1	1104 1104	1N3123	
797	1102	1N900	1102	1N965A 1N965B	564	1N1488	1104	1N1907	1104	1N2289 1N2289A	1104	1N3125	- 1
798 799	1102 1102	1N901 1N902	1102 1102	1N966 1N993	564 1102	1N1489 1N1490	1104 1104	1N1908 1N1909	1104 1104	1N2290A 1N2323	1104 1104	1N3146 1N3147	
800	1102	1N903	1102	1N994	1123	1N1491	1104	1N1910	1104	1N2326	1123	1N3148	
801	1102	1N903/A	1102	1N995	1102	1N1492	1104	1N1911	1104	1N2373	1104	1N3160	1
802 803	1102 1102	1N903 1N903/A 1N903A 1N903AM 1N903M	1102 1102	1N996 1N997	1123 1102	1N1513 1N1513A	563 563	1N1912 1N1913	1104 1104	1N2395 1N2396	1104 1104	1N3183	
804	1102	1N903M	1102	1N998	1104	1N1514	564	1N1933	563	1N2404	1104	1N3189	1
805	1123	1N904/A 1N904/A 1N904A 1N904AM 1N904M	1102	1N999	1102	1N1514A	564	1N1934	564	1N2405 1N2413 1N2414 1N2422	1104	1N3190	1
1806 1 80 7	. 1102 1102	1N904/A	1102 1-102	1N1008 1N1028	1104 1104	1N1524 1N1524A	563 563	1N1934A 1N1934B	564 564	1N2413 1N2414	1104 1104	1N3191 1N3193	
1808	1102	1N904AM	1102	1N1029	1104	1N1525	564	1N1960	563	1N2422	1104	1N3194	1
1809	1102	1N904M	1102	1N1030	1104	1N1525 1N1525A 1N1525A 1N1530 1N1530A 1N1543	564	1N1960A	563		1104	1N3195	1
l810 l811	1102 1102	1N905 1N905/A	1102 1102	1N1031	1104 1104	1N1530 1N1530A	562 562	1N1960B 1N1987	563 563	1N24/3 1N2482	1102 1104	1N3196 1N3197	1
l811M	1102	1N905A	1102	1N1033	1104	1N1543	1104	1N1988	564	1N2483	1104	1N3203	1
1812 1812M	1102 1102	1N905AM 1N905M	1102 1102	1N1046	1104	1N1544 1N1553	1104	1N1988A 1N1988B	564 564	1N2484	1104 1104	1N3204	1
V813	1102	1N906	1102	1N1008 1N1029 1N1029 1N1030 1N1031 1N1032 1N1032 1N1046 1N1047 1N1049 1N1049	1104	1N1554	1104 1104	1N1988B	1104	1N2423 1N2473 1N2482 1N2483 1N2484 1N2485 1N2486 1N2487	1104	IN3160 IN3183 IN3184 IN3189 IN3190 IN3191 IN3193 IN3195 IN3196 IN3197 IN3204 IN3204 IN3204 IN3207 IN3207 IN3221	1
N813M	1102	1N906/A	1102	1N1049	1104	1N1555	1104	1N2014	1104	1N2487	1104	1N3221	1
N814	1102	1N906A	1102	1N1050	1104	1N1556	1104	1N2015	1104	1N2488	1104	1N3223	1

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
1N3227 1N3228	1104 1104	1N3666 1N3668	1102 1102	1N4311 1N4315	1102 1102	1N4828 1N4829	1102 1102	1N5713	1102	1\$75	1123	15207	110
1N3229	1104	1N3669	1104	1N4318	1102	1N4830	1102	1N5719 1N5731	1102 561	1S76 1S77	1123 1123	1S208 1S208/2SJ2A	110 110
1N3230 1N3237	1104	1N3678 1N3678A	562 562	1N4322 1N4326	1102 562	1N4831 1N4831A	562 562	1N5735 1N5738	562 563	1S78 1S79	1123 1123	1S209 1S209/2SJ4A	110 110
1N3238 1N3239	1104 1104	1N3681 1N3681A	563 563	1N4326A 1N4326B	562 562	1N4834	563	1N5740	564	1\$80	1123	15210	111
1N3240	1104	1N3681B	563	1N4329	563	1N4834A 1N4836	563 564	1N5767 1N5858A	1102 563	1S81 1S82	1104 1123	1S210/2SJ6A 1S211	111 111
1N3241 1N3246	1104 1104	1N3683 1N3683A	564 564	1N4329A 1N4329B	563 563	1N4836A 1N4861	- 564 110 2	1N5858B 1N33974	563 562	1S83 1S84	1104 1102	1S211/2SJ8A 1S212	111 56
1N3247	1104	1N3683B	564	1N4331 1N4331A	564	1N4862	1102	1N58080A	2510	1S85V	1104	15213	56
1N3248 1N3249	1104	1N3722 1N3748	1102	1N4331B	564 564	1N4863 1N4864	1102 1102	1N70980 1NA4	1102 1123	1\$88 1\$89	1123 1102	1S214 1S224	56 56
1N3250 1N3253	1104 1104	1N3749 1N3753	1104 1123	1N4361 1N4363	1114 1102	1N4896 1N4896A	563 563	1NA4G 1NC61684	1123 1104	1S90 1S91	1104 1104	1S227 1S230	56 56
1N3254	1104	1N3754	1123	1N4364	1104	1N4938	1102	1NJ27	1114	1S92	1104	15268	110
1N3255 1N3257	1104 1102	1N3755 1N3756	1104 1104	1N4365 1N4366	1104 1104	1N4949 1N4950	1102 1102	1NJ33233 1NJ60284	1123 1123	1S93 1S93/SGJ	1104 1104	1S268AA 1S268T	110 110
1N3258 1N3277	1102 1104	1N3757 1N3758	1104 1104	1N4367 1N4368	1104 1104	1N4951 1N4952	1102(2) 1102(2)	1NJ61224 1NJ61433	1123 1102	1S94 1S95	1104 1104	1S301.5 1S306	56 110
IN3278	1104	1N3759	1104	1N4369	=1104	1N5004	1104	1NJ61675	1123	1S96	1114.	15307	110
1N3279 1N3280	1104	1N3773 1N3828	1123 561	1N4375 1N4376	1102 1102	1N5005 1N5006	1104 1104	1NJ61676 1NJ61677	1104 1102	1S97 1S98	1114	1S309 1S310	110 110
IN3281 IN3282	1114	1N3828A 1N3855A	561 562	1N4382 1N4383	1102 1104	1N5007 1N5054	1104 1114	1NJ61725	1102	1\$99	1114	15311	110
1N3287	1123	1N3864	1102	1N4384	1104	1N5054A	1114	1NJ61726 1NJ70973	1104 1123	1S99A 1S100	1102 1104	1S312 1S313	110 110
1N3287N 1N3287W	1123 1123	1N3866 1N3867	1104 1104	1N4385 1N4389	1104 1102(2)	1N5055 1N5056	1104 1104	1NJ70980 1NJ71126	1102 1104	1S101 1S102	1104 1104	1S314 1S315	110 110
IN3298	1104	1N3868 .	1104	1N4392	1102	1N5057	1104	1NJ71185	1123	1S103	1104	15318	112
N3403 N3404	563 564	1N3872 1N3873	1102 1102	1N4395 1N4395A	1102 1102	1N5058 1N5059	1104	1NJ71186 1NJ71224	1104 1102	1S104 1S105	1104 1104	1S322 1S-331	110 56
N3411 N3416	561 563	1N3895 1N3938	1104 1104	1N4403 1N4403A	562 562	1N5060 1N5061	1104 1104	1P541 1P542	1123 1123	1S106 1S106A	1104 1104	1\$331	56
N3417	564	1N3939	1104	1N4403B	562	1N5062	1102	1R0	1102	1\$107	1114	1\$331A 1\$331AZ	56 56
N3435 N3436	563 564	1N3940 1N3952	1104 1104	1N4406 1N4406A	563 563	1N5062(SEARS 1N5179	1102(2)	1R01 1R0E	1104 1102	1S108 1S109	1114 1114	1\$334 1\$334K	56 56
N3443 N3447	561	1N3953	1102	1N4406B	563	1N5194	1102	1R0F	1104	15110	1104	1S334M	56
N3448	563 564	1N3954 1N3956	1102 1102	1N4408 1N4408A	564 564	1N5195 1N5196	1102 1102	1R0H 1R1D	1104 1104	1S110A 1S111	1104 1104	1S334N 1S337	56 56
N3465 N3466	1123 1123	1N3991 1N4001	1123	1N4408B 1N4444	564 1102	1N5198 1N5208	1104 1102	1R1K 1R2	1104	1S112	1104	1S337-Y	56
N3467	1123	1N-4002	1102	1N4446	1122	1N5209	1102	1R2A	1102	1\$113 1\$113A	1104	1S337A 1S337E	56 56
N3468 N3469	1123 1123	1N4002 1N4003	1102	1N4447 1N4448	1122 1122	1N5210 1N5211	1102 1104	1R2D 1R2E	1104 1104	1\$114 1\$115	1104 1104	1S337Y 1S347	56 56
N3470	1123 1102	1N4004 1N4005	1103 1104	1N4449	1122	1N5212	1104	1R3A	1102	1\$116	1104	18354	112
N3471 N3 48 3	1123	1N4006	1114	1N4450 1N4451	1102 1102	1N5213 1N5214	1104 1114	1R3D 1R3G	1104 1104	1S117 1S119	1114 1104	1S355 1S357	112 112
N3484 N3493	1123 1104	1N4007 1N4009	1114 1102	1N4453 1N4454	1102 1122	1N5215 1N5216	1104 1104	1R3J 1R4	1104 1102	1S120 1S121	1104 1104	1S358	110
N3496	561	1N4010	561	1N4455	1102	1N5217	1104	1R5A	1104	1S121(RECT)	1104	1S358(S) 1S358S	110 110
N3497 N3498	561 561	1N4011 1N4014	1114 562	1N4499 1N4502	561 1123	1N5218 1N5219	1114	1R5B 1R5G	1104	1\$122 1\$123	1104 1104	1S390 1S395	110
N3499 N3500	561 561	1N4043 1N4048	1102 1102	1N4523 1N4531	1123 1102	1N5220	1102	1R5GZ61	1114	1S124	1104	1S396	110
N3513	561	1N4087	1102	1N4532	1102	1N5234 1N5234A	561 561	1R5H 1R9	1104 1104	1\$125 1\$126	1104 1104	1S397 1S398	111 111
N3517 N3520	562 563	1N4088 1N4089	1123 1104	1N4533 1N4534	1102 1102	1N5234B 1N5238A	561 562	1R9H 1R9J	1104 1104	1S127 1S130	1123 1102	1S399 1S400	110 110
N3522	564	1N4092	1102(2)	1N4536	1102	1N5239	562	1R9L	1104	1S130(ZENER)	562	1S401	111
N3537 N3544	563 1104	1N4093 1N4102	1102(2) 562	1N4547 1N4548	1102 1102	1N5239A 1N5239B	562 562	1R9U 1R9.1A	1104 562	1S131 1S132	1102 1102	1S402 1S426	111 112
N3545 N3546	1104	1N4103 1N4103A	562 1123	1N4586 1N4606	1104 1102	1N5242 1N5242A	563 563	1R9.18 1R10D3K	562 1102	15136	561 1104	1S426FM	112
N3547	1104	1N4106	563	1N4607	1102	1N5242B	563	1R12	563	1S136(RECT) 1S136(ZENER)	561	1S426G 1S426GFM	112 112
N3548 N3549	1104	1N4106A 1N4109	563 564	1N4608 1N4610	1102 1102	1N5245 1N5245A	564 564	1R12A 1R12B	563 563	1S137 1S138	564 1114	1S428 1S430	112 110
N3550 N3553	1102 561	1N4139 1N4141	1104	1N4627	561	1N5245B	564	1R15	564	15141	563	15431	110
N3564	1123	1N4147	1104 1102	1N4631 1N4634	56 2 563	1N5282 1N5315	1102 1102	1R15A 1R15B	564 564	1S146 1S147	1104 1104	1S432 1S441	110 112
N3575 N3576	1102 1102	1N4148 1N4149	1122 1122	1N4636 1N4656	564 561	1N5316 1N5317	1102 1102	1R90 1R96	1104 1114	1S148 1S149	1104 1104	1S442 1S444	112 110
N3577	1102	1N4150	1102	1N4660 1N4663	562	1N5318	1102	15005	1104	1\$150	1104	1\$446	112
N3583 N3583A	563 563	1N4151 1N4152	1102 1102	1N4665 1N4691	563 564	1N5319 1N5320	1102 1102	1S031 1S032	1104 1104	1S155 1S155-1	1102 1102	1S-446D 1S446D	112 112
N3583B N3592	563 1123	1N4153 1N4154	1122 1122	1N4691 1N4695	561 562	1N5392 1N5393	1104 1104	1S1-0336-00-A 1S1Z09	2041	1S-180 1S180	1102	15447	112
N3593	1102	1N4156	1102	1N4699	563	1N5394	1104	1S12	1102	1S180/5GB	1102 1104	1S447P 1S448	112 112
N3594 N3595	1102 1102	1N4157 1N4161	1102 562	1N4702 1N4718	564 1104	1N5395 1N5396	1104 1104	1S13 1S15	1123 1123	1S180B 1S181	1102 1102	1S449 1S451	112 112
N3596	1102	1N4161A	562	1N4720	1104	1N5397	1104	1\$17	1102	1S181FA	1102	1\$452	112
N3599	1102 1102	1N4161B 1N4164	562 563	1N4726 1N4727	1102 1102	1N5400 1N5401	1104 1104	1\$17D1 1\$18	1123	1S182 1S183	1102 1104	1S453 1S454	112 112
N3598 N3599 N3600 N3601 N3602 N3603	1122 1102	1N4164A 1N4164B	563 563	1N4730 1N4730A	1114 1114	1N5412 1N5413	1104 1102	1S20 1S32	1123 1123	1S185 1S185OR	1123	1S455	112
N3602	1102	1N4166	564	1N4735	561	1N5414	1102	1533	1123	1S186	1104 1123	1S456 1S457	110
N3603 N3604	1102 1102	1N4166A 1N4166B	564 564	1N4735A 1N4739	561 562	1N5426 1N5525	1102 561	1S34 1S34A	1123 1123	1S186(FM) 1S187	1123 1123	1S458 1S459	110
13605 13606	1102 1102	1N4198 1N4242	1123	1N4739A	562	1N5525A	561	15345	1123	1\$188	1123	1S466	112
13607	1102	1N4243	1102 1102	1N4742 1N4742A	563 563	1N5529 1N5529A	562 562	1S35 1S37	1123 561	1S188A 1S-188AM	1123 1123	1S467R 1S472	112 56
13608 13609	1102	1N4245 1N4246	1104 1104	1N4743 1N4743A	563 563	1N5532	563 563	1S38 1S40	1102	1S188AM	1123	1\$480	56
N3612	1104	1N4247	1104	1N4744	564	1N5532A 1N5535	564	1841	1104 1104	1S188AR 1S188FM	1123 1123	1S482 1S543	56 110
N3613 N3614	1104	1N4250 1N4251	1114 1114	1N4744A 1N4765	564 562	1N5535A 1N5562	564 562	1S42 1S43	1104 1104	1S188FM-1 1S188FM1	1123 1123	1\$555 1\$557	110
V36 15	1104	1N4297	562	1N4765A	562	1N5562A	562	1544	1104	1S188FM2	1123	1\$558	110
N3625 N3639	1102 1104	1N4297A 1N4298	562 562	1N4770 1N4770A	562 562	1N5565 1N5565A	563 563	1S45 1S46	1104 1104	1S188G 1S188MPX	1123 1123	1\$559 1\$560	110
N3640 N3641	1104 1104	1N4298A 1N4302	562 562	1N4816 1N4817	1104 1104	1N5567 1N5567A	564	1S54 1S55	1104	1S188PM 1S188S	1123	1S588	110
N3642	1104	1N4302A	562	1N4818	1114	1N5605	564 1102	1\$58	562 1104	15189	1123 1123	1S589 1S597	112 56
N3653 N3654	1102 1102	1N4305 1N4306	1122	1N4819 1N4820	1114 1104	1N5606 1N5607	1102 1102	1S60P 1S71	1123 1104	1\$194 1\$197	562 563	1S642 1S685	110. 110
N3656	1104	1N4307	1102	1N4821	1104	1N5610	1102	1872	1123	15204	1104	15686	111
1365 7 136 58	1104	1N4308 1N4309	1102	1N4822 1N4827	1104	1N5711 1N5712	1102	1S73 1S74	1123	1S205 1S206	1104	1S687 1S693	111

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276~	DEVICE	276-	DEVICE	276-	DEVICE	276
S696	563	1S1544	1102	1S2091BL	1102	1S-M2511-8010		1Z9.1T10	562	2G339	2001	2N140#	200
S697 S750	564 1101	1S1545 1S1553	1102	1S2091W 1S2092	1102 1102	15030	1122	1Z9.1T20 1Z12	562 563	2G339A 2G383	2001 2007	2N145 2N145#	200
S750(2)	1101	1S1554	1102	1S2097	1102	15031	1104	1Z12A	563	2G394	2007	2N146	200
S750GR S757A	1101 562	1S1555 1S1555-1	1102 1102	1S2098 1S2112A	1102 561	1SO32 1SO34	1104 1104	1Z12B 1Z12C	563 563	2G396 2G397	2007 2007	2N146# 2N147	200
S758	562	1S1555-S	1102	1S2116A	5€2 563	1SO36 1SO38	1104	1Z12T5 1Z12T10	563 563	2G524	2007 2007	2N147 # 2N148	200 200
S758GS S788	562 1123	1S-1555-Z 1S1555-Z	1102 1102	1S2119A 1S2120	563	1SO54	1104	1Z12T10	563	2G525 2G526	2007	2N148C	200
S844	1104	1S-1555V	1102 1102	1S2120A	563	1SO58 1SR1FM4	1114 1104	1Z15 1Z15A	564 564	2G527 2G577	2007 2007	2N148C/D 2N148D	200
S846 S848	1104 1114	1S1555V 1S1555Z	1102	1S2121A 1S2144	564 1102	1SS16	1101	1Z15B	564	2G603	2007	2N149	200
S849 S849.R	1104 1104	1S1579 1S1580	1102(2) 1102	1S-2144Z 1S2144Z	1102- 1102	1T6.2 1T6.2B	561 561	1Z15C 1Z15D	564 564	2G604 2G605	2007 2007	2N150 2N150A	200
S849R	1104(2)	1S1585	1102	1S2150	564	1T9.1	562	1715D5	564	2G805	1104	2N160	201
S850 S885	1114 1104	1S1586 1S1587	1102 1102	1S2150A 1S2186	564 1102	1T9.1A 1T9.1B	562 562	12 5D10 1Z15T5	564 564	2G1024 2G1025	2007 2007	2N160A 2N161	201 201
S920	1102	1S1588	1122	1\$2186GR	1102	1T12	563	1Z15T10	564	2G1026	2007	2N161A	201
S921 S922(DIODE)	1102 1102	1S1589 1S1621	1102 1102	1\$2198 1\$2198HC	1101 1101	1T12A 1T12B	563 563	1Z15T20 1Z91.1D10	564 562	2G3055 2GA	2041 1104	2N162 2N162A	20
S923	1102	1S1621-O	1102	1\$2230	1104	1T13	1101	1Z91.D10	562	2H1254	2022	2N163	201
S926G S940	1123	1S1621-R 1S1621-Y	1102 1102	1S2276 1S2310	1102 1104	1T13A 1T13B	1101	1ZB12 1ZB12B	563 563	2H1255 2H1256	2022 2022	2N163A 2N164	201
S941	1102	1S1622	1104	152311	1114	1T15	564	1ZB15	564	2H1257	2022	2N164A	200
S941/4454C S942	1104 1102	1S1623 1S1624	1104 1104	1S2312 1S2313	1114 1104	1T15B 1T22	564 1123	1ZB15B 1ZC6.2	564 561	2H1258 2H1259	2022 2022	2N165 2N166	20
S943	1104	1S1625	1104	1S2314	1114	1T22A	1123	1ZC9.1	562	2HR3J	1114	2N167	200
S951 S952	1102 1102	1S1650 1S1651	1102 1102	1S2315 1S2351	1114 1104	1T22AJ 1T22B	1123 1123	1ZC9.1T5 1ZC9.1T10	562 562	2HR3M 2J8138	1114 1104	2N167A 2N168	20 20
S953	1102	1S1655	1104	1S2352	1104	1T22G	1123	1ZC12	563	2JMW961	2009	2N168#	20
S954 S955	1102 1102	1S1658 1S1664	1123 1104	1S2353 1S2354	1114	1T23 1T23A	1123 1123	1ZC12T5 1ZC12T10	563 563	2K02 2M78	1114 2001	2N168A 2N168A#	20 20
S963	1104	1S1665	1104	1S2356	1104	1T23B	1123	1ZC12T20	563	2M214	562	2N169	20
S983 S990	1102 564	1S1666 1S1668	1104 1104	1S2357 1S2361	1104	1T23G 1T23J	1123 1123	1ZC15 1ZC15T5	564 564	2M6219 2MN6374	2011 2011	2N169# 2N169A	20
S990(ZENER)	564	1S1668F	1104	1S2362	1104	1T23M .	1123	1ZC15T10	564	2MW665	1123	2N169A#	20
S990-AM S990A	1102	1S1690 1S1691	1102 1104	1S2363 1S2364	1104 1114	1T26 1T26-2	1123 1123	1ZF9.1T5 1ZF9.1T10	562 562	2MW742 2N27	561 2007	2N170 2N171	20 20
S990AM	1123	1S1692	1104	1S2365	1114	1T40	1102	1ZF9.1T20	562	2N28	.2001	2N172	20
S990S S990S(DIODE)	564 1102	1S1693 1S1694	1104	1S2367 1S2371	1104 1104	1T188 1T213	1123	1ZF12T5 1ZF12T10	563 563	2N29 2N30	2001 2007	2N172# 2N175	20 20
S990S(ZENER)	564	1S1695	1114	152372	1104	1T231	1123	1ZF12T20	563	2N31	2007	2N182	20
S994A S1000	1102 1101	1S1697 1S1698	1104 1104	1S2373 1S2374	1104 1104	1T236 1T240	1123 1123	1ZF15T5 1ZF15T10	564 564	2N36# 2N38#	2003 2003	2N182# 2N183	20 20
S1000A	1101	1S1701	1102(2)	152375	1104	JT240A	1123	1ZF15T20	564	2N63	2007	2N183#	20
S1001 S1007	1102 1123	1S1715 1S1717	561 562	1S2376 1S2401	1104 1104	1T243 1T243M	1102 562	1ZM6.2 1ZM6.2T5	561 561	2N63# 2N64	2007 2007	2N184 2N185#	20 20
S1007 S1007S	1123	1S1717L	562	152401	1104	1T261	1123	1ZM6.2T10	561	2N64#	2007	2N191	20
S1052	1102 1102	1S1718 1S1722	562 1101	1S2403 1S2404	1114 1104	1T262 1T378	1123	1ZM6.2T20 1ZM9.1T5	561 562	2N65 2N65#	2007 2007	2N193 2N193#	20 20
S1053 S1061	1104	1S1728	562	1S2405	1114	1T501	1104	1ZM9.1T10	562	2N76	2007	2N194	20
S1062	1104	1S1807	1101	1S2406	1114	1T502	1104	1ZM9.1T20 1ZM12T5	562 563	2N77	2007 2001	2N194# 2N194A	20
S1063 S1064	1104	1S1825 1S1829	1102	1S2461 1S2462	1102 1104	1T503 1T504	1104 1104	1ZM12T10	563	2N78 2N78#	2001	2N194A#	20
S1065 S1066	1114 1114	1S1848 1S1849	1104	15-2472 152472	1102	1T505	1104 1104	1ZM12T20 1ZM15T5	563 564	2N78A 2N78A#	2001 2001	2N207B# 2N211	20 20
S1072	1104	1S1849R	1104 1104(2)	152473	1102 1122	1T506 1T507	1114	1ZM15T10	564	2N82AG	1101	2N211#	20
S1096	1104 1102	1S1850 1S1851	1104(2)	1S2473H 1S2473HC	1102	1T508	1114	1ZM15T20	564	2N83 2N94	2007	2N212 2N212#	20
S1155 S1207	1102	1S1851R	1104 1104	1S2473K	1122 1102	1T509 1T510	1114 1114	1ZT12 1ZT12B	563 563	2N94 2N94#	2001	2N212# 2N214A	20 20
S-1209 S1209	1104 1102	1S1881AM 1S1885	1104 1104	1S2473T 1S2473VE	1102 1102	1T1331 ~ 1T2011	1101 1104	1ZT15 1ZT15B	564 564	2N94A 2N94A#	2001 2001	2N215# 2N216	20
S1210	1104	1S1885-3	1104	152597	1102	1T2012	1104	2-0A90	1123	2N97	2001	2N216#	20
S1211 S1212	1102 1102	1S1886 1S1887	1104 1104	1S2606 1S2608	1104 1114	1T2013 1T2014	1104 1104	2-1K60 2-5SR	1102 1104	2N97A 2N98	2001 2001	2N218# 2N219#	20 20
S1212A	1102	1S1888	1104	152610	1114	1T2015	1104	2-36	2001	2N98A	2001	2N220	20
S1213 S1214	1102 1102	1S1906 1S1922	1104 1101	1S2692 1S2692AB	1104 1104	1T2016	1104 561	2-80 2-8454-031	1101 2009	2N99 2N100	2001 2001	2N222A 2N224#	20
S1215	1102	1S1925	1101	1\$2788	1102	1TA6.2 1TA6.2A	561	2-64701508	1114	2N102	2001	2N226#	20
S1216	1102	1S1926	1101	1S2788B	1102	1TA6.2B	561	2-G-3055	2041	2N103	2001	2N232	20
S1217 S1218	1102	1S1926K 1S1928	1101	1S3009 1S3012	562 563	1TA9.1 1TA9.1A	562 562	2A119 2AA113	1123	2N104 2N104#	2007 2007	2N233 2N233#	20
S1218GR S1219	1102 1102	1S1941 1S1942	1104	1S3016 1S3016(RECT)	564 1104	1TA12 1TA12A	563 563	2B 2C	2007 2007	2N105 2N106#	2007 2007	2N233A 2N233A#	20
S1220	1102	1S1943	1104	1S3016R	1104	1TA15	564	2CD198S	2041	2N111	2007	2N234	20
S1221 S1222	1104 1104	1S1950 1S1956	1104 561	1S3076 1S3195	1102 1104	1TA15A 1TB06	564 1104	2CS900 2CY33	2009 2034	2N111A 2N112	2007 2001	2N238 2N243	20
S1223	1114	1S1959	562	1S3585	1123	1TH61	1114	2CY34	2034	2N112A	2007	2N244	2
S1224 S1225	1104 1114	1S1962 1S1964	563 564	1S4266FM 1S5454	1123 1123	1TS05 1U585F	1104 2009	2CY38 2D002	2023 2009	2N113 2N114	2007 2007	2N245 2N246	21
S1225A	1114	1S1992	1102	157062	561	1U585F/7825B	2009	2D002-41	2009	2N117	2011	2N249	20
S1230 S1231	1104 1104	1S1993 1S1994	1102 1102	1S7062A 1S7062B	561 561	1V3074A20 1V3074A21	1104 1104	2D002-168 2D002-169	2009 2009	2N117# 2N118	2013 2031	2N252# 2N253	20
S1232	1104	1S1995	1102	157091	562	1V9002	1123	20002-170	2009	2N118#	2013	2N253#	20
S1233 S1234	1114	1S2062 1S2062A	561 561	1S7091A 1S7091B	562 562	1VA10 1W1706	1104 2035	2D002-171 2D002-175	2009 2009	2N118A 2N118A#	2031 2013	2N254 2N254#	21
S1255A	1114	1S2062B	561	1S7120	563	1W8358	2009	2D-02	1104	2N119	2031	2N262	2
S1302 S1303	1102		562 562	1S7120A 1S7120B	563 563	1W9723 1W9787	2009	2D010 2D017	2041 2009	2N119# 2N120	2013 2013	2N263	20
S1305	1102 1102	1S2068 1S2069	562	187150	563 564	1W9/8/ 1WM6	2009 1104	2D017 2D026	2009	2N120#	2013	2N264 2N270#	21
S1341	1104	1S2074H	1102	1S7150A	564	1X9179	1102	2D026-274	2009	2N123	2007	2N271	2
S1342 S1343	1104 1104	1S2075 1S2075K	1122 1122	1S7150B 1S9413	564 1104	1X9805 1X9809	1102 1102	2D031 2D033	2035 2009	2N124 2N124#	2001 2001	2N271A 2N273	20
S1344	1104	1\$2076	1102	159908	1123	1Z6.2	561	2D038	2009	2N125	2001	2N292	2
S1345 S1346	1114 1104	1S2076A-07 1S2076A	1102 1102	1S11941 1S15551	1102 1102	1Z6.2A 1Z6.2T5	561 561	2D 2D165	2007 1102	2N125# 2N126	2001 2001	2N292# 2N292A	20
S1347	1114	1S2090	1101	1S19413	1104	1Z6.2T10	561	2DO33	2030	2N126#	2001	2N293	20
S1348 S1420H	1114 1102	1S2091 1S2091(DIODE)	1102 1102	1S20751C 1SB01-02	1102 1104	1Z9.1 1Z9.1A	562 562	2F4 2G8	1104 1104	2N127 2N131#	2001 2007	2N293# 2N299	20
S1472	1104	1S2091(ZENER)	562	1SC2367	1102	1Z9.1B	562	2G13	1104	2N132#	2007	2N300	20
S1473 S1514	1102 1102	1S2091-BK 1S2091-BL	1102 1102	1SD-2 1SD2	1104 1104	1Z9.1C 1Z9.1D5	562 562	2G138 2G139	2007 2007	2N133# 2N135	2007 2007	2N302 2N306#	20
S1515	1102	1S2091-W	1102	1SD1212	1104	1Z9,1D10	562	2G140	2007	2N136	2007	2N308	20
S1516	1102	1S2091A	562	1SIZ09	1104	1Z9.1D15	562	2G319	2007	2N137	2007	2N309	20

[#] Type with same number, but with slightly different specifications (usually case style).

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	.276-	DEVICE	276-	DEVICE	276
N312	2001 2001	2N471A 2N472	2013 2013	2N635 2N635A	2001 2001	2N809	2007	2N1091 2N1093	2001	2N1318	2007	2N1783	200
2N313 2N314	2001	2N472A	2013	2N636	2001	2N810 2N811	2007 2007	2N1095	2007 2009	2N1319 2N1338	2007 2009	2N1808 2N1838	200
N315 N315A	2007 2007	2N473 2N474	2031	2N636A 2N646	2001 2001	2N812 2N815	2007 2001	2N1096 2N1102/5	2012 2001	2N1343 2N1344	2007 2007	2N1839 2N1840	200
N315B	2007	2N474A	2013	2N647	2001	2N816	2001	2N1103	2013	2N1345	2007	2N1853	20
N317 N317A	2007 2007	2N475 2N475A	2013 2013	2N648 2N649	2001 2001	2N821 2N822	2001 2001	2N1104 2N1108#	2013 2003	2N1346 2N1347	2007 2007	2N1858 2N1872	20
N327	2022 2007	2N476	2031 2031	2N649/22 2N674	2001	2N823 2N824	2001	2N1109#	2003	2N1349	2007	2N1873	20
N327A N328	2022	2N476A 2N477	2013	2N679	2003 2001	2N834	2001 2016	2N1110# 2N1111A	2003	2N1350 2N1351	2007 2007	2N1874 2N1875	20 20
N329 N330	2022	2N478 2N479	2031 2013	2N680 2N696	2007 2012	2N834/45 2N834A	2009 2016	2N1111B 2N1112	2003 2001	2N1354 2N1355	2007 2007	2N1891 2N1892	20
N332	2013	2N479A	2013	2N697A	2009	2N835	2016	2N1114	2001	2N1356	2007	2N1923	20
N332A N333	2012	2N480 2N480A	2013 2013	2N698 2N701	2012 2009	2N835/46 2N839	2009 2013	2N1116 2N1117	2009	2N1357 2N1361	2007 2007	2N1940 2N1941	20
N333A N334	2012 2013	2N480B 2N481	2009 2007	2N702 2N703	2016 2016	2N840 2N841	2013 2013	2N1121 2N1121#	2001	2N1366 2N1367	2001	2N1944	20
N334A	2009	2N482	2007	2N706	2016	2N841/46	2013	2N1128#	2001 2007	2N1386	2001 2013	2N1945 2N1946	20
N334B N335	2012	2N483 2N484	2007 2007	2N706/46 2N706/51	2009 2016	2N842 2N843	2013	2N1130# 2N1131/46	2007 2021	2N1387 2N1388	2013 2009	2N1947 2N1948	20
N335A	2009	2N485	2007	2N7'06A	2016	2N844	2009	2N1132/46	2023	2N1389	2013	2N1949	20
N335B N336	2009 2013	2N486 2N486B	2007 2007	2N706A/46 2N706A/51	2016 2016	2N849 2N850	2016 2016	2N1132A46 2N1139	2023 2009	2N1390 2N1391	2013 2001	2N1950 2N1951	20
N336A	2009 2013	2N495	2022 2021	2N706B 2N706B/46	2016 2009	2N851	2016	2N1140	2009	2N1393	2007	2N1952	20
N337 N337A	2009	2N496 2N503	2007	2N706B/51	2016	2N852 2N864A	2016 2021	2N1149 2N1150	2013 2013	2N1395 2N1409	2007 2012	2N1953 2N1958	20
N338 N338A	2013 2009	2N515 2N515#	2001 2001	2N706C 2N707	2016 2016	2N865A 2N866	2021 2009	2N1150/904 2N1151	2030 2013	2N1409A 2N1410	2012 2030	2N1958/18 2N1959	20
N339A	2008	2N516	2001	2N707A	2009	2N867	2009	2N1151/904A	2030	2N1410A	2030	2N1962	20
N340 N340A	2008	2N516# 2N517	2001	2N708 2N708/46	2031 2030	2N869 2N869A	2034	2N1152 2N1153	2013 2013	2N1417 2N1418	2031 2013	2N1963 2N1964	20
N341	2008	2N517#	2001	2N708/51	2016	2N902	2013	2N1153/910	2030	2N1420	2009	2N1965	20
N341A N342A	2008 2008	2N518 2N519	2007 2007	2N708/TNT 2N708A	2011 2016	2N903 2N904	2013 2013	2N1154 2N1154/951	2012 2012	2N1420A 2N1422	2009 2041	2N1972 2N1973	20
N342B N355	2012 2021	2N519A 2N520	2007 2007	2N709/TNT 2N709A46	2011 2009	2N905 2N909	2013 2009	2N1155 2N1155/952	2012 2012	2N1423 2N1428	2041 2021	2N1974 2N1975	20
N356	2001	2N520A	2007	2N715	2009	2N912	2012	2N1156	2012	2N1429	2009	2N1983	20
N356A N357	2001	2N521 2N521A	2007 2007	2N716 2N717	2009 2009	2N913 2N914	2016 2016	2N1156/953 2N1169	2012 2001	2N1444 2N1469	2009 2007	2N1984 2N1985	.20
N357A	2001	2N522	2007	2N719	2012	2N914/46	2009	2N1170	2001	2N1470	2041	2N1986	20
N358 N358A	2001 2001	2N522A 2N523	2007	2N719A 2N722	2012 2023	2N914/51 2N915	2016 2009	2N1171 2N1176	2007 2007	2N1471 2N1472	2007 2016	2N1987 2N1988	20
N364 N365	2001	2N523A 2N529	2007 2007	2N726 2N727	2034 2034	2N915A	2011	2N1176A	2007	2N1473	2001	2N1990/46	20
N366	2001	2N529/N	2001	2N728	2030	2N916 2N916A	2016 2016	2N1176B 2N1185	2007 2007	2N1490 2N1491	2041 2009	2N1990R 2N1990S	20
N368# N369	2007 2007	2N529/P 2N530	2004 2007	2N729 2N730	2030 2009	2N916B 2N917	2016 2015	2N1186 2N1187	2007 2007	2N1492 2N1505	2009 2030	2N1992 2N1993	20
N369#	2007	2N530/N	2001	2N731	2009	2N917/46	2038	2N1188	2007	2N1506	2030	2N1994	20
N377 N377A	2001 2001	2N530/P 2N531	2004	2N734A 2N738	2012 2008	2N917/51 2N917A	2011 2038	2N1196 2N1197	2021 2021	2N1510 2N1516	2001 2005	2N1995 2N1996	20
N385	2001	2N531/N	2001	2N742	2009	2N918	2015	2N1198	2001	2N1528	2031	2N1997	20
2N385A · 2N388	2001 2001	2N532 2N532/N	2007 2001	2N742A 2N743	2012 2016	2N918/51 2N919	2015	2N1199 2N1199A	2016 2016	2N1570 2N1572	2007 2012	2N1998 2N2038	20
N388A N394	2001 2007	2N532/P 2N533	2004 2007	2N743A 2N744	2016 2016	2N920 2N921	2009 2009	2N1200 2N1201	2016 2016	2N1581 2N1583	2007 2007	2N2039 2N2040	2 20
N394A	2007	2N533/N	2001	2N744A	2016	2N922	2009	2N1205	2031	2N1584	2007	2N2041	20
N395 N396	2007	2N533/P 2N541	2004 2031	2N745 2N746	2013 2013	2N929 2N929/46	2010 2010	2N1206 2N1207	2008 2008	2N1585 2N1586	2001 2011	2N2049 2N2085	20
N396A	2007	2N541A	2011	2N747	2031	2N929A	2009	2N1213	2005	2N1587	2011	2N2094	20
N397 N413	2007 2007	2N542 2N542A	2013	2N748 2N749	2013 2009	2N930 2N930/46	2010 2010	2N1214 2N1215	2005 2005	2N1588 2N1589	2016 2031	2N2094A 2N2095	20
2N413A 2N414	2007 2007	2N543 2N543A	2013 2013	2N750 2N751	2009 2009	2N930/TNT 2N930A	2030	2N1216 2N1217	2005 2001	2N1590 2N1591	2031 2016	2N2095A 2N2096	20
N414A	2007	2N546	2009	2N753	2016	2N930A/46	2010	2N1217#	2001	2N1592	2031	2N2096A	20
N414B N414C	2007 2007	2N547 2N548	2009 2009	2N753/46 2N754	2009 2012	2N930B 2N947	2010 2016	2N1247 2N1248	2031 2011	2N1593 2N1594	2031 2010	2N2097A 2N2102A	20
N415	2007	2N549	2009	2N755	2012	2N951	2009	2N1249	2031	2N1595	1067	2N2161	20
N415A N416	2007 2007	2N550 2N551	2009 2009	2N756A	2012	2N955. 2N955A	2001	2N1251# 2N1252	2001	2N1596 2N1597	1067 1067	2N2171 2N2172	20
N417 N425	2007 2007	2N552 2N556	2009	2N757 2N757A	2012 2012	2N957 2N958	2016 2016	2N1253 2N1254	2030 2034	2N1605 2N1605A	2001	2N2182	20
N426	2007	2N557	2001	2N758A	2009	2N959	2016	2N1255	2034	2N1613A	2001 2008	2N2186 2N2187 2N2194	20
N427 N428	2007	2N558 2N560	2001 2009	2N758B 2N759A	2009 2009	2N981 2N988	2011	2N1256 2N1257	2034 2034	2N1613B	2008 2001	2N2194 2N2194A	20
N428A	2007	2N571	2007	2N759B	2009	2N989	2016	2N1258	2034	2N1622 2N1624	2002	2N2194B	20
N431 N432	2009 2009	2N572 2N576	2007 2001	2N760A 2N760B	2009	2N995 2N995A	2034 2034	2N1264 2N1265/5	2003 2007	2N1625 2N1644	2004 2009	2N2198 2N2205	20
N433	2009	2N576A	2001	2N761 2N770	2009	2N996	2034	2N1267	2016	2N1644A	2009	2N2205 2N2206 2N2208 2N2209	2
N438 N438A	2001 2007	2N578 2Ñ579	2007 2007	2N770 2N771 2N772	2016 2016	2N1000 2N1005	2001 2031	2N1268 2N1269	2016 2016	2N1663 2N1664	2016 2007	2N2208 2N2209	20
N439 N439A	2001 2007	2N580 2N581	2007	2N772 2N773	2016 2016	2N1006 2N1010	2031	2N1270 2N1271	2016 2016	2N1674 2N1676	2013	2N2214 2N2216	20
N440	2001	2N582	2007	2N774	2016	2N1010#	2001 2001	2N1272	2016	2N1677	2034 2034	2N2217	20
N440A N444	2007 2001	2N585 2N585#	2001 2001	2N775 2N776	2016 2016	2N1012 2N1026A	2001 2034	2N1276 2N1277	2013 2013	2N1682 2N1683	2009 2007	2N2217/51 2N2218	21
N444#	2001	2N586	2007	2N777	2016	2N1051	2009	2N1278	2013	2N1684	2007	2N2218/51	2
N444A N445	2001 2001	2N587 2N592 2N593	2001 2007	2N778 2N780	2016 2011	2N1058 2N1058#	2001 2001	2N1279 2N1280	2013 2007	2N1685 2N1694	2001 2001	2N2218A 2N2219/51	2
N445# N445A	2001 2001	2NSQ4	2007 2001	2N781 2N783	2007	2N1059-1	2001	2N1281	2007	2N1702	2041	2N2219A	2
N446	2001	2N595	2001	2N784	2016 2016	2N1060 2N1069	2016 2041	2N1284 2N1288	2007 2001	2N1703 2N1704	2041 2009	2N2220 2N2221 2N2221A 2N2222	2 2
N446# N446A	2001 2001	2N596 2N597	2001 2007	2N784A 2N784A/46	2016 2016	2N1070 2N1072	2041 2041	2N1289 2N1299	2001 2001	2N1708	2009 2033	2N2221A	20
N447	2001	2N598	2007	2N784A/51	2016	2N1081	2009	2N1302	2001	2N1708A 2N1729	2007	2N2222A	2
N447# N447A	2001 2001	2N599 2N600	2007 2007	2N789 2N790	2013 2013	2N1082 2N1084	2031 2021	2N1304 2N1305	2001 2007	2N1730 2N1731	2001 2007	2N2222A 2N22234 2N22335 2N2236 2N2237 2N2240 2N2241 2N2242	2
N447B	2001	2N614	2007	2N791	2013	2N1085	2011	2N1306	2001	2N1732	2001	2N2236	20
N448 N448 #	2001 2001	2N615 2N616	2007 2007	2N792 2N793	2013 2009	2N1086 2N1086#	2001 2001	2N1308 2N1309	2001 2007	2N1743 2N1744	2007 2007	2N2237 2N2240	20
N449	2001	2N617	2007	2N797	2001	2N1086A	2001	2N1310	2001	2N1753	2007	2N2241	20
N449# N450	2001 2007	2N622 2N625	2009	2N799 2N800	2007 2007	2N1086A# 2N1087	2001 2001	2N1311 2N1312	2001 2001	2N1763 2N1779	2009 2001	2N2242 2N2244	20
N470	2011	2N634	2001	2N801	2007	2N1087#	2001	2N1316	2007	2N1780	2001	2N2245	20
N471	2013	2N634A	2001	2N802	2007	2N1090	2001	2N1317	2007	2N1781	2001	2N2246	2

[#] Type with same number, but with slightly different specifications (usually case style).

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
2N2247	2009	2N2645	2009	2N3055-2	2041	2N3451	2021	2N3855	2016	2N4427	2038	2N5246	203
N2248 N2249	2009 2009	2N2651 2N2656	2033 2016	2N3055-4 2N3055-5	2041 2041	2N3452 2N3453	2035 2035	2N3855A 2N3856	2016 2011	2N4432 2N4432A	2038	2N5247 2N5248	203 203
N2250	2009	2N2673	2010	2N3055-9	2041	2N3454	2035	2N3856A	2011	2N4433	2011	2N5258	203
N2251 N2252	2009 2009	2N2674 2N2675	2010 2010	2N3055-10 2N3055S	2041 2041	2N3455 2N3456	2035 2035	2N3858 2N3858A	2016 2009	2N4434 2N4435	2016 2016	2N5272 2N5277	201 203
N2252 N2253	2009	2N2676	2010	2N3066	2035	2N3457	2035	2N3859	2009	2N4436	2033	2N5304	203
N2254	2009 2009	2N2677	2013 2013	2N3067 2N3069	2035 2035	2N3458 2N3459	2035 2035	2N3859A 2N3860	2009 2011	2N4449 2N4450	2016 2033	2N5358 2N5359	203 203
N2255 N2256	2016	2N2678 2N2692	2009	2N3070	2035	2N3460	2035	2N3862	2009	2N4451	2034	2N5360	203
N2257	2016	2N2693	2009	2N3071	2035 2007	2N3462 2N3463	2009 2009	2N3863 2N3864	2041	2N4453 2N4867	2034 2035	2N5361 2N5362	203
N2272 N2275	2033 2022	2N2699 2N2710	2001 2009	2N3075 2N3082	2007	2N3465	2009	2N3866	2038	2N4868	2035	2N5362 2N5363	203
N2277	2022	2N2711	2016	2N3083	2038	2N3466	2035	2N3869	2009	2N4869	2035	2N5364	203
N2279 N2281	2022 2021	2N2713 2N2714	2016 2009	2N3084 2N3085	2035 2035	2N3478 2N3493	2038 2016	2N3880 2N3885	2009 2009	2N4874 2N4875	2038 2038	2N5368 2N5369	200
N2303/46	2021	2N2715	2016	2N3086	2035	2N3498	2009	2N3900	2009	2N4876	2038	2N5370	200
N2305 N2309	2041	2N2719 2N2720	2016 2009	2N3087 2N3088	2035 2035	2N3510 2N3526	2009 2012	2N3900A 2N3901	2009 2009	2N4901 2N4902	2040 2043	2N5371 2N5380	20
N2310	2009	2N2721	2009	2N3089	2035	2N3528	1067	2N3903	2016	2N4904	2040	2N5381	200
N2312	2009	2N2722	2009	2N3115	2009	2N3542	2009	2N3904	2009	2N4905	2043	2N5382	203
N2314 N2315	2016 2016	2N2726 2N2727	2008 2012	2N3116 2N3119	2009 2012	2N3544 2N3545	2038 2034	2N3905 2N3924	2034	2N4907 2N4908	2043 2043	2N5391 2N5392	203
N2318	2016	2N2729	2038	2N3122	2030	2N3546	2009	2N3932	2038	2N4913	2039	2N5393	20:
N2319 N2320	2016 2009	2N2784/TNT 2N2787	2009 2009	2N3128 2N3129	2009 2009	2N3563 2N3563-1	2038 2013	2N3933 2N3946	2038 2016	2N4914 2N4915	2041 2041	2N5394 2N5395	20:
N2322 N2322	1067	2N2790	2009	2N3130	2009	2N3564	2016	2N3947	2009	2N4936	2038	2N5396	20:
N2323	1067	2N2791	2009	2N3137	2011	2N3565	2009	2N3948 2N3966	2038 2035	2N4940 2N4941	2023 2023	2N5397 2N5398	20: 20:
N2324 N2325	1067 1067	2N2792 2N2802	2009 2034	2N3209 2N3210	2034 2009	2N3566 2N3576	2009 2034	2N3966 2N3967	2035	2N4941 2N4950	2023	2N5398 2N5399	20
N2326	1067	2N2803	2034	2N3211	2009	2N3600	2038	2N3968	2035	2N4951	2033	2N5417	20
N2330 N2331	2009	2N2804 2N2805	2034	2N3226 2N3232	2039 2041	2N3605 2N3605A	2016 2016	2N3969 2N3973	2035	2N4952 2N4953	2009 2009	2N5418 2N5419	20 20
N2345	2001	2N2806	2034	2N3233	2041	2N3606	2016	2N3974	2033	2N4954	2009	2N5420	20
N2349	2009	2N2807	2034	2N3234	2041	2N3606A	2016	2N3975 2N3976	2033	2N4964	2023	2N5450	20
N2353 N2353A	2009 2009	2N2831 2N2845	2009 2009	2N3235 2N3241	2041 2038	2N3607 2N3608	2016 2035	2N3976 2N3983	2033 2015	2N4966 2N4967	2016 2009	2N5456 2N5457	20 20
N2354	2001	2N2847	2016	2N3241A	2009	2N3633/46	2011	2N3984	2015	2N4968	2031	2N5458	20
N2368 N2368A	2009 2009	2N2857 2N2861	2038 2034	2N3242 2N3242A	2038 2009	2N3633/TNT 2N3639	2011 2034	2N3985 2N4006	2015 2032	2N4969 2N4970	2033 2009	2N5459 2N5460	20 20
N2369	2009	2N2862	2034	2N3246	2009	2N3640	2034	2N4007	2032	2N4994	2009	2N5484	20
N2369A	2016	2N2865	2011	2N3247	2009	2N3641	2033	2N4013	2009 2009	2N4995	2009 2033	2N5485 2N5485-1	20
N2383 N2384	2041 2041	2N2868 2N2876	2009 2020	2N3248 2N3253	2034 2020	2N3642 2N3643	2033 2009	2N4014 2N4063	2009	2N5027 2N5028	2033	2N5486	20
N2387	2009	2N2885	2016	2N3261	2009	2N3646	2016	2N4064	2009	2N5029	2016	2N5487-1	20
N2388 N2389	2009 2009	2N2886 2N2894	2012 2016	2N3268 2N3287	2009 2016	2N3647 2N3648	2009 2009	2N4072 2N4074	2016 2009	2N5030 2N5031	2016 2011	2N5487-3 2N5555	20 20
N2399 N2390	2009	2N2994 2N2901	2016	2N3288	2016	2N3662	2015	2N4093	2036	2N5032	2011	2N5581	20
N2391	2034	2N2909	2012	2N3289	2015	2N3663	2015	2N4100	2010	2N5058S	2011	2N5582	20
N2392 N2395	2034	2N2910 2N2913	2009	2N3290 2N3291	2015 2016	2N3667 2N3678	2041	2N4104 2N4105	2009 2001	2N5059S 2N5060	2011 1067	2N5614 2N5622	204
N2396	2009	2N2914	2009	2N3292	2016	2N3681	2011	2N4117	2035	2N5061	1067	2N5668	. 203
N2397 N2411	2016 2034	2N2917 2N2918	2009	2N3293 2N3294	2015 2015	2N3683 2N3684	2015 2035	2N4118 2N4119	2035 2035	2N5062 2N5063	1067 1067	2N5702 2N5735	203
N2412	2034	2N2921	2016	2N3298	2016	2N3685	2035	2N4123	2016	2N5066	2010	2N5736	20:
N2413	2016	2N2922	2016	2N3300	2009	2N3686	2035	2N4124	2009 2034	2N5067 2N5068	2039	2N5769	20: 20:
N2417 N2426	2009 2001	2N2923 2N2924	2016 2009	2N3301 2N3302	2033 2009	2N3687 2N3688	2035 2016	2N4125 2N4130	2034	2N5078	2041 2036	2N5785 2N5810	20
N2427	2009	2N2925	2009	2N3307	2034	2N3689	2016	2N4134	2016	2N5081	2009	2N5814	20
N2432 N2433	2009 2012	2N2926 2N2926-6	2016	2N3308 2N3310	2034 2009	2N3690 2N3691	2016 2016	2N4135 2N4137	2016 2016	2N5082 2N5086	2038 2022	2N5816 2N5818	20 20
N2435	2012	2N2926-BRN	2016	2N3326	2009	2N3693	2009	2N4140	2016	2N5087	2022	2N5824	20
N2437 N2438	2012 2012	2N2926-RED 2N2926G	2016 2009	2N3328 2N3337	2004 2016	2N3694 2N3704	2009 2009	2N4220 2N4222	2035 2035	2N5088 2N5089	2009 2009	2N5830 2N5830A	20 20
N2439	2012	2N2926GRN	2009	2N3338	2016	2N3705	2014	2N4223	2036	2N5103	2030	2N5845	20
N2463 N2466	2012 2009	2N2926Y 2N2927/46	2031 2023	2N3339 2N3340	2016 2009	2N3706 2N3707	2009 2010	2N4224 2N4227	2035 2016	2N5107 2N5126	2009 2016	2N5845A 2N5851	20 20
N2472	2009	2N2930	2007	2N3341	2023	2N3708	2016	2N4248	2034		2016		20
N2473	2009	2N2931	2031	2N3365	2035	2N3708-BRN	2016	2N4254	2011	2N5128	2033	2N5998	20
N2475 N2475/46	2013 2013	2N2932 2N2933	2031	2N3366 2N3367	2035 2035	2N3708-GRN 2N3708-ORG	2010 2010	2N4255 2N4256	2011 2009	2N5129 2N5130	2033 2016	2N6000 2N6004	20
N2475/51	2013	2N2934	2016	2N3368	2035	2N3708-RED	2016	2N4259	2009	2N5132	2011	2N6008	20
N2476 N2477	2009 2009	2N2935 2N2936	2016 2009	2N3369 2N3370	2035 2035	2N3708-YEL 2N3709	2010 2016	2N4264 2N4265	2016 2009	2N5133 2N5134	2013 2016	2N6232 2N6232-4	20
N2481	2033	2N2937	2009	2N3390	2009	2N3710	2010	2N4274	2034	2N5136	2033	2N6253	20
N2482	2001	2N2938	2009	2N3391	2009	2N3711	2009	2N4275	2016	2N5137	2033	2N6304	20
N2483 N2484	2009 2009	2N2951 2N2952	2009 2009	2N3391A 2N3392	2009 2009	2N3713 2N3714	2041 2041	2N4286 2N4287	2009 2009	2N5138 2N5140	2034 2034	2N6305 2N6370	20
N2489A	2011	2N2954	2009	2N3393	2009	2N3715	2041	2N4292	2015	2N5142	2023	2N6371	20
N2501 N2514	2016 2012	2N2958 2N2959	2009 2009	2N3393-U29 2N3394	2016 2016	2N3721 2N3723	2011 2009	2N4293 2N4294	2015 2016	2N5143 2N5144	2023 2009		20
N2520	2009	2N2960	2009	2N3394-U29	2016	2N3736	2009	2N4295	2016	2N5163	2035	2N6569	20
N2521	2009	2N2961	2009	2N3395	2009	2N3789	2043	2N4302	2035	2N5172	2009 2015	2N6576 2N6594	20
N2522 N2523	2009 2009	2N2966 2N2967	2007 2016	2N3396 2N3397	2016 2016	2N3791 2N3793	2043 2033	2N4303 2N4304	2035 2035	2N5179 2N5180	2015		20
N2524	2009	2N2974	2009	2N3397-RED	2016	2N3794	2009	2N4338	2035	2N5181	2038	2N29260RN	20
N2529 N2530	2013 2013	2N3009 2N3011	2016 2016	2N3398 2N3398-RED	2016 2016	2N3819 2N3821	2035 2028	2N4339 2N4340	2035 2035	2N5182 2N5183	2038 2009		20
N2531	2013	2N3013	2016	2N3409	2009	2N3822	2035	2N4341	2035	2N5185	2008	2NJ8A	20
N2532	2013	2N3014	2016	2N3410	2009	2N3823	2036	2N4389	2034	2N5186	2009	2NJ233B	20
N2533 N2534	2013 2013	2N3015 2N3039	2009 2023	2N3411 2N3413	2009 2021	2N3825 2N3826	2016 2011	2N4390' 2N4395	2012 2041	2N5201	2009 2007	2NSM-1 2P2150M	11
N2539	2009	2N3043	2030	2N3414	2009	2N3827	2013	2N4396	2041	2N5208	2034	2PD-358	11
N2540	2009 2016	2N3044	2030 2030	2N3415 2N3416	2009 2009	2N3828 2N3829	2016	2N4400	2009 2009	2N5209 2N5210	2013 2010		20
N2569 N2570	2016	2N3045 2N3046	2030	2N3416 2N3417	2009	2N3839	2023 2015	2N4401 2N4411	2034	2N5219	2010	25003	20
N2571	2009	2N3047	2030	2N3423	2009	2N3843	2016	2N4416	2036	2N5222	2011	25004	20
N2572 N2586	2009 2009	2N3048 2N3049	2030 2034	2N3424 2N3436	2009 2035	2N3843A 2N3844	2016 2016	2N4417 2N4418	2036 2016		2009 2009		20
N2610	2013	2N3050	2034	2N3437	2035	2N3844A	2016	2N4419	2016	2N5225	2009	2\$033	20
N2615	2016	2N3051	2034	2N3438	2035	2N3845	2016	2N4420	2016	2N5228	2022	25034	20
N2616 N2617	2038 2009	2N3052 2N3053	2016	2N3445 2N3446	2041 2041	2N3845A 2N3846	2016 2011	2N4421 2N4422	2016 2016		2032 2009		20
N2618/46	2009	2N3055	2041	2N3447	2041	2N3854	2016	2N4423	2034	2N5232A	2009	2S1K	11
	2021	2N3055-1	2041	2N3448	2041	2N3854A	2016	2N4424	2009	2N5245	2036	2\$12	2

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
2513	2007	2SA70Y	2004	2SA106	2003	2SA113B	2004	2SA221	2003	2SA286	2003	2SA422	200
S-16E S25	1104 2007	2SA72 2SA73	2003 2003	2SA106B 2SA106C	2004	2SA113C 2SA113D	2004 2004	2SA224 2SA227	2003	2SA287 2SA296	2003	2SA423 2SA424	200
S30 S31	2007 2007	2SA73A 2SA73B	2004	2SA106D 2SA106E	2004 2004	2SA113E 2SA113F	2004 2004	2SA233D 2SA233E	2004	2SA299	2003 2003	2SA430 2SA433	200
S45	2007	2SA73C	2004	2SA106F	2004	2SA113G	2004	2SA233F	2004	2SA300 2SA301	2007	2SA458	200
S49 S51	2007	2SA73D 2SA73E	2004 2004	2SA106G 2SA106H	2004 2004	2SA113GN 2SA113H	2004 2004	2SA233G 2SA233GN	2004	2SA302 2SA303	2007 2007	2SA459 2SA466	20
S52	2007	2SA73F	2004	2SA106K	2004	2SA113J	2004	2SA233H	2004	2SA304	2007	2SA468A	200
S53 S57	2007	2SA73G 2SA73H	2004	2SA106L 2SA106M	2004	2SA113L 2SA113M	2004	2SA233J 2SA233K	2004	2SA304-RED 2SA304-YELLOW	2007	2SA468B 2SA468C	20 20
\$60	2007	2SA73K	2004	2SA106OR	2004	2SA113R	2004	2SA233L	2004	2SA305	2007	2SA468D	20
S82 S91	2011 2007	2SA73L 2SA73M	2004 2004	2SA106R 2SA106X	2004 2004	2SA113X 2SA113Y	2004 2004	2SA233M 2SA2330R	2004 2004	2SA305-RED 2SA305-YELLOW	2007	2SA468E 2SA468F	20
S92	2007	2SA730B	2004	2SA 06Y	2004	2SA114A	2004	2SA233R	2004	2SA31 L_	2007	2SA468G	20
S92A S93	2007 2007	2SA73R 2SA73X	2004 2004	2SA107 2SA107A	2003 2004	2SA114B 2SA114C	2004 2004	2SA233X 2SA233Y	2004 2004	2SA312 2SA322K	2007 2007	2SA468GN 2SA468H	20 20
S93A	2007	2SA73Y	2004	2\$A107B	2004	2SA114D	2004	2SA235H	2004	2SA325	2007	2SA468J	20
S95A S101	2016 2016	2SA79 2SA83A	2007 2004	2SA107C 2SA107D	2004 2004	2SA114E 2SA114F	2004 2004	2SA236 2SA236A	2003 2004	2SA326 2SA328	2007 2003	2SA468K 2SA468L	20
S102	2009	2SA83B	2004	2SA107E	2004	2SA114G	2004	2SA236B	2004	2SA330	2007	2SA468M 2SA468OR	20 20 20
S111 S131	2007 2016	2SA83D 2SA83E	2004 2004	2SA107F 2SA107G	2004 2004	2SA114H 2SA114K	2004 2004	2SA236C 2SA236D	2004 2004	2SA332 2SA333	2003	2SA4680R 2SA468R	. 20
S155	2007	2SA83F	2004	2SA107H	2004	2SA114L	2004	2SA236E	2004	2SA334	2003	2SA468X	20
S159 S160	2007	2SA83G 2SA83H	2004	2SA107K 2SA107L	2004 2004	2SA114M 2SA114OR	2004 2004	2SA236F 2SA236G	2004	2SA338 2SA339	2003	2SA468Y 2SA469A	20
S167	2007	2\$A83K	2004	2SA107M	2004	2SA114R	2004	2SA236GN	2004	2SA350AV	2003	12SA469B	20 20 20
S174	2007	2SA83L	2004 2004	2SA107OR 2SA107R	2004	2SA114X	2004	2SA236H	2004 2004	2SA351A-2	2004	2SA469C	20
S175 S178	2007	2SA83M 2SA83OR	2004	2SA107X	2004 2004	2SA114Y - 2SA115A	2004 2004	2SA236J 2SA236K	2004	2SA351C 2SA351D	2004 2004	2SA469C 2SA469D 2SA469E	20 20
5302	2034	2SA83R	2004	2SA107Y	2004	2SA115B	2004	2SA236L	2004	2SA351E	2004	2SA469F	20
S363 S471-1	2009	2SA83X 2SA83Y	2004 2004	2SA108A 2SA108B	2004 2004	2SA115C 2SA115D	2004 2004	2SA236M 2SA236OR	2004 2004	2SA351F 2SA351G	2004 2004	2SA469GN	20
28501	2016	2SA84A	2004	2SA108C	2004	2SA115E	2004	2SA236R	2004	2SA351GN	2004	2SA469H	20
2502 2503	2009 2009	2SA84B 2SA84C	2004 2004	2SA108D 2SA108E	2004 2004	2SA115F 2SA115G	2004 2004	2SA236X 2SA236Y	2004	2SA351K 2SA351L	2004 2004	2SA469J 2SA469K	20 20
S512 °	2016	2SA84D	2004	2SA108F	2004	2SA115GN	2004	2SA239GREEN	2004	2SA351M	2004	2SA469L	20
S645 S701	2009 2031	2SA84E 2SA84F	2004 2004	2SA108G 2SA108H	2004 2004	2SA115H 2SA115J	2004 2004	2SA239RED 2SA240GREEN	2004 2004	2SA351OR 2SA351R	2004 2004	2SA469M 2SA469OR	20 20
S702	2031	2SA84G	2004	2SA108K	2004	2SA115K	2004	2SA240RED	2004	2SA351X	2004	2SA469R	20
S703 S711	2031 2030	2SA84H 2SA84K	2004 2004	2SA108L 2SA108M	2004 2004	2SA115L 2SA115M	2004	2SA248 2SA254	2007 2003	2SA351Y 2SA360G	2004 2004	2SA469X 2SA469Y	20
S712	2030	2SA84L	2004	2SA108OR	2004	2SA115OR	2004	2SA255	2003	2SA360H	2004	2SA471-1	20
S731 S732	2009 2009	2SA84M 2SA84OR	2004 2004	2SA108R 2SA108X	2004 2004	2SA115R 2SA115X	2004 2004	2SA256 2SA257	2003 2003	2SA360K 2SA361A	2004	2SA471-2 2SA472-1	20
S733	2038	2SA84R	2004	2SA108Y	2004	2SA115Y	2004	2SA257A	2004	2SA361B	2004	2SA472-2	20
S741A	2013	2SA84X 2SA84Y	2004	2SA109A 2SA109B	2004	2SA126	2005	2SA257B	2004	2SA361C	2004	2SA472-3	20
S742A S743A	2012 2012	2SA92A	2004 2004	2SA109C	2004 2004	2SA130OR 2SA137	2004 2007	2SA257C 2SA257D	2004 2004	2SA361D 2SA361E	2004 2004	2SA472-4 2SA472-5	20 20
S744A	2013	2SA92B	2004	2SA109D	2004	2SA139	2007	2SA257E	2004	2SA361F	2004	2SA472-6	20
2S745A 2S746A	2012 2012	2SA92C 2SA92D	2004 2004	2SA109E 2SA109F	2004 2004	2SA141 2SA142	2007 2007	2SA257F 2SA257G	2004	2SA361G 2SA361GN	2004	2SA472F 2SA472G	20 20
2S1182D	2009	2SA92E	2004	2SA109G	2004	2SA145	2007	2SA257GN	2004	2SA361H	2004	2SA472GN	20
2S3040 2S6856	2034 2012	2SA92F 2SA92G	2004	2SA109K 2SA109L	2004 2004	2SA146 2SA147	2007 2007	2SA257H 2SA257J	2004 2004	2SA361J 2SA361K	2004	2SA472H 2SA472J	20 20
2S10032	1102	2SA92H	2004	2SA109M	2004	2SA148	2007	2SA257K	2004	2SA361L	2004	2SA472K	20
2SA12 2SA12H	2007 2007	2SA92K 2SA92L	2004 2004		2004 2004	2SA149 2SA151	2007 2007	2SA257L 2SA257OR	2004 2004	2SA361M 2SA361OR	2004 2004	2SA472L 2SA472M	20 20
2SA13	2007	2SA92M	2004	2SA109X	2004	2SA153	2003	2SA257R	2004	2SA361R	2004	2SA472OR	20
SA14 SA15RD	2007 2004	2SA920R 2SA92R	2004		2004 2004	2SA154 2SA155	2003 2003	2SA257X 2SA257Y	2004 2004	2SA361X 2SA361Y	2004	2SA472R 2SA472X	20
2SA19	2003	2SA92X	2004	2SA110B	2004	2SA156	2003	2SA258	2003	2SA363	2005	2SA472Y	20
2SA20 2SA21	2003	2SA92Y 2SA93A	2004	2SA110C 2SA110D	2004 2004	2SA157 2SA159	2003	2SA258A 2SA258B	2004 2004	2SA368A 2SA368B	2004 2004	2SA473B 2SA475	20 20
2SA23	2007	2SA93B	2004	2SA110E	2004	2SA160	2003	2SA258C	2004	2SA368C	2004	2SA476	20
2SA24 2SA25	2004 2004	2SA93C 2SA93E	2004 2004		2004 2004	2SA167 2SA168	2007 2007	2SA258D 2SA258E	2004 2004	2SA368D 2SA368E	2004 2004	2SA477 2SA480	20 20
2SA26	2007	2SA93F	2004		2004		2007	2SA258F	2004		2004	2SA494-O	20
2SA27	2003	2SA93G 2SA93H	2004	2SA110L	2004	2SA169	2007	2SA258G	2004	2SA368G	2004	2SA494GR	20
2SA29 2S A 31	2003 2007	2SA93K	2004 2004	2SA1100R	2004 2004	2SA170 2SA171	2007	2SA258GN 2SA258H	2004 2004	2SA368H	2004	2SA4940 2SA494Y 2SA495	20
2SA33 2SA36	2007	2SA93L	2004	2SA 110R	2004	2SA171 2SA172 2SA172A	2007	2SA258H 2SA258J	2004	2C V 3CB I	2004	2SA495	20
SA37	2007 2007	2SA93M 2SA93OR	2004 2004	2SA110X 2SA110Y	2004 2004	2SA173	2007 2007	2SA258K 2SA258L	2004 2004		2004 2004	2SA495-O 2SA495-ORG 2SA495-ORG-G	20
SA39	2007	2SA93R	2004	2SA110Y 2SA111A	2004	2SA176	2003	2SA258M	2004	2SA368M	2004	2SA495-ORG-G	20
SA40 SA44	2007 2007	2SA93X 2SA93Y	2004 2004		2004 2004		2003 2007	2SA258OR 2SA258R	2004 2004	2SA3680H 2SA368R	2004 2004	2SA495-R 2SA495-RED	20
SA45	2007	2SA101D	2004	2SA111D	2004	2SA182	2007	2SA258X	2004	2SA368X	2004	2SA495-RED 2SA495-RED-G	20
SA47 SA48	2007 2007	2SA101F 2SA101G	2004 2004		2004 2004	2SA184 2SA189	2007 2007	2SA258Y 2SA259	2004 2003		2004 2004		20
SA49	2007	2SA101H	2004	2SA111G	2004	2SA194	2007	2SA270A	2004	2SA380B	2004	2SA495G-R	20
SA49G SA52	2007 2007	2SA101K 2SA101L	2004	2SA111K 2SA111L	2004 2004		2007	2SA270B 2SA270C	2004 2004		2004 2004	2SA499 2SA499-R	20
SA52G	2007	2SA101M	2004	2SA111M	2004	2SA197	2007	2SA270D	2004	2SA380E	2004	2SA499-RED	20
SA53 SA55	2007 2007	2SA1010R 2SA101R	2004 2004	2SA1110R 2SA111R	2004 2004	2SA198 2SA199	2003 2003	2SA270E 2SA270F	2004	2SA380F	2004 2004	2SA500 2SA500-O	20
SA56A	2032	2SA102H	2007	2SA111X	2004	2SA200	2003	2SA270G	2004	2SA380GN	2004	2SA500-ORG	20
SA57 SA59	2003 2003	2SA103(CA) 2SA103CB	2007 2004		2004 2004	2SA201 2SA201-N	2007 2007	2SA270GN 2SA270H	2004 2004	2SA380H	2004 2004	2SA500-R 2SA500-RED	20
SA59A	2004	25A103Y	2004	2044420	2004	2SA2010	2007	2SA270J	2004	2SA380K	2004	2SA517	20
2SA59B 2SA59C	2004 2004	2SA104A 2SA104B 2SA104C 2SA104E	2004 2004	2SA112C	2004 2004	2SA201TVO	2004 2007	2SA270K 2SA270L	2004 2004	2SA380L	2004 2004	2SA517 2SA522 2SA522A	20
2SA59D	2004	2SA104C	2004	2SA112E	2004	2SA203	2007	2SA270M	2004 2004 2004	2SA3800R	2004	2SA524	20
SA59E	2004	2SA104E	2004	2SA112F	2004	2SA204	2007	2SA270M 2SA2700R	2004	2SA380R	2004	2SA542	20
2SA59F 2SA59G	2004 2004	2SA104F	2004 2004	25A112G 2SA112GN	2004 2004	2SA205 2SA206	2007 2007	2SA270R 2SA270X	2004 2004	2SA380X 2SA380Y	2004 2004	2SA549AH	20
2SA59L	2004	2SA104H	2004	ZOATIZM	2004	2SA 207	2007	2SA270Y	2004	2SA385C	2004	2SA550A(Q)	20
SA59M SA59OR	2004 2004	2SA104K 2SA104L	2004 2004		2004 2004		2007 2007	2SA277 2SA278	2007 2007	2SA387 2SA391	2005 2007	2SA549AH 2SA550A(Q) 2SA550A(R) 2SA550A(R,Q,S	20
SA59R	2004	2SA 104M	2004	2SA112M	2004	2SA210	2007	2SA279	2007	2\$A392	2007	2SA550A(S)	20
2SA59X 2SA59Y	2004 2004	2SA1040R 2SA104R	2004 2004		2004 2004		2007 2007	2SA281C 2SA282	2031	2SA405-0 2SA414	2004 2007	2SA553 2SA554	20
2SA65	2007	2SA104X	2004	2SA112X	2004	2SA217	2007	2SA283	2007	2SA415	2007	2SA556	20
SA70-08	2004	2SA104Y	2004		2004		2003	2SA284	2007	2SA419	2003	2SA557	20

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
2SA559 2SA559A	2034 2034	2SB257 2SB264	2007 2007	2SC25 2SC26	2009	2SC82R 2SC83	2011	2SC148GN 2SC148H	2013 2013	2SC183S 2SC183W	2009 2038	2SC206E 2SC206G	20
SA560A	2032	2SB266	2005	2SC27	2009	2SC87	2009	2SC148J	2013	2SC184	2016	2SC206GN	20
2SA561Y 2SA562	2032 2023	2SB267 2SB269	2005	2SC28 2SC29	2016 2016	2SC89 2SC90	2001 2001	2SC148K 2SC148L	2013 2013	2SC184(R) 2SC184A	2031	2SC206H 2SC206J	20
2SA562-R 2SA562-RED	2023	2SB270 2SB277	2007 2005	2SC30 2SC31	2009 2030	2SC91 2SC96	2001 2009	2SC148M 2SC148OR	2013 2013	2SC184AP 2SC184B	2013 2013	2SC206K 2SC206L	20 20
2SA564(P) 2SA564A(P)	2032	2SB288 2SB290	2007 2007	2SC32 2SC33	2030 2016	2SC100 2SC100-OY	2016 2009	2SC148R 2SC148X	2013 2013	2SC184BK 2SC184C	2013 2013	2SC206M 2SC206OR	20
2SA564A(R) 2SA564A(S)	2032	2SB291 2SB292	2007 2007	2SC34 2SC36	2001	2SC103 2SC103A	2016 2009	2SC148Y 2SC150	2013 2030	2SC184D 2SC184E	2013 2009	2SC206R 2SC206X	20
2SA565K 2SA608	2022 2034	2SB292A 2SB293	2007	2SC37 2SC38	2016 2038	2SC104 2SC104A	2015 2016	2SC150A 2SC150B	2013 2013	2SC184F 2SC184G	2013	2SC206Y 2SC207	20 20
2SA608(D) 2SA608(F)	2009	2SB294 2SB299	2007 2007	2SC38A 2SC38Y	2009	2SC105 2SC109	2016 2030	2SC150C 2SC150D	2013 2013	2SC184GN 2SC184H	2013 2038	2SC208 2SC208A	20
2SA608D(F)	2032	2SB302	2007	2SC39	2016	2SC110	2030	2SC150E	2013	2SC184J	2038	2SC209	20
2SA609 2SA616(1,2)	2034 2043	2SB303 2SB314	2007 2007	2SC39A 2SC40	2016 2038	2SC111 2SC114	2030 2030	2SC150F 2SC150G	2013 2013	2SC184K 2SC184L	2013 2038	2SC210 2SC211	20:
2SA617K 2SA618K	2022 2022	2SB315 2SB316	2007 2007	2SC45 2SC47	2009 2030	2SC116 2SC120	2030 2016	2SC150GN 2SC150H	2013 2013	2SC184M 2SC184OR	2013 2013	2SC217 2SC218	20:
SA628 SA638E,F	2034	2SB321 2SB322	2007 2007	2SC48 2SC48C	2009	2SC121 2SC122	2016 2016	2SC150J 2SC150K	2013 2013	2SC184Q 2SC184R	2013 2038	2SC218A 2SC220	20
SA678C SA684(R)	2032	2SB323 2SB328	2007	2SC49Y 2SC50	2041	2SC122D 2SC124	2009 2016	2SC150L 2SC150M	2013	2SC184X 2SC184Y	2013 2013	2SC221 2SC227	20:
SA720Q,R,S SA726Y	2032 2032	2SB329 2SB335	2007 2007	2SC50A 2SC51	2001 2030	2SC126 2SC127	2012	2SC150OR 2SC150R	2013 2013	2SC185 2SC185A	2016 2038	2SC230 2SC232	20
SA733(P)	2032	2SB336	2007	2SC52	2009	2SC128	2001 2001	2SC150T	2030	2SC185J	2038	2SC237	20
SA741 SA741H	2034 2034	2SB345 2SB347	2007	2SC53 2SC54	2038 2016	2SC129 2SC130L	2020	2SC150X 2SC150Y	2013 2013	2SC185M 2SC185Q	2038 2038	2SC239 2SC240	20 20
SA778AK SA812	2021	2SB349 2SB350	2005 2005	2SC55 2SC55A	2016 2013	2SC131 2SC132	2033 2033	2SC151 2SC152	2030 2030	2SC185R 2SC185V	2038 2038	2SC241 2SC242	20 20
SA828A SA838	2009 2034	2SB371 2SB382BK	2007 2030	2SC55B 2SC55C	2013 2013	2SC133 2SC134	2033 2033	2SC154(C) 2SC155	2008 2015	2SC186 2SC187	2015 2016	2SC244 2SC250	20 20
SA-NJ-101 SB12	2032	2SB382BN 2SB384	2030 2005	2SC55D 2SC55E	2013 2013	2SC134A 2SC134B	2013 2009	2SC156 2SC157	2016 2011	2SC188 2SC189	2030 2030	2SC251 2SC251A	20
SB13 SB14	2007	2SB385 2SB386	2005 2007	2SC55F 2SC55G	2013 2013	2SC134C 2SC134D	2013 2013	2SC 158 2SC 159	2011	2SC191 2SC192	2010 2010	2SC252 2SC253	20
SB22/ORN	2004	2SB387	2007 2007 2007	2SC55GN	2013 2013 2013	2SC134E 2SC134F	2013 2013 2013	2SC159A	2013 2013	2SC192 2SC193 2SC194	2010 2010 2009	2SC263	20
SB22/YEL SB23	2007	2SB389 2SB392	2007	2SC55H 2SC55J	2013	2SC134G	2013	2SC159B 2SC159C	2013	2SC195	2013	2SC264 2SC265	20
SB24 SB33	2007	2SB393 2SB394	2007 2007	2SC55K 2SC55L	2013. 2013	2SC134GN 2SC134H	2013 2013	2SC159D 2SC159E	2013° 2013	2SC195A 2SC195B	2013 2013	2SC266 2SC267	20
SB39 SB43	2007 2007	2SB395 2SB396	2007 2007	2SC55M 2SC55OR	2013 2013	2SC134J 2SC134K	2013 2013	2SC159F 2SC159GN	2013	2SC195C 2SC195D	2013 2013	2SC267A 2SC268	20
SB44 SB46	2007 2007	2SB400 2SB401	2007 2007	2SC55R 2SC55X	2013 2013	2SC134L 2SC134M	2013 2013	2SC159H 2SC159J	2013	2SC195E 2SC195F	2013 2013	2SC268A 2SC269	20
SB47	2007	2SB402	2007	2SC55Y	2013	2SC134OR	2013	2SC159K	2013	2SC195G	2013	2SC271	20
SB54 SB54G	2007 2007	2SB403 2SB407	2007 2006	2SC56 2SC58	2016 2038	2SC134R 2SC134X	2013 2013	2SC159L 2SC159M	2013 2013	2SC195GN 2SC195H	2013 2013	2SC280 2SC280AO	20 20
SB56 SB56G	2007	2SB408 2SB409	2007	2SC58AC 2SC58B	2009	2SC134Y 2SC135	2013	2SC159OR 2SC159R	2013 2013	2SC195J 2SC195K	2013 2013	2SC281 2SC281A	20
SB57 SB58	2007	2SB416 2SB417	2007	2SC58D 2SC58E	2012 2012	2SC135A 2SC135B	2013 2013	2SC159X 2SC159Y	2013 2013	2SC195L 2SC195M	2013 2013	2SC281B 2SC281C	20
SB60 SB64_	2007 2007	2SB422 2SB423	2007 2007	2SC58F 2SC58G	2012 2012	2SC135C 2SC135D	2013 2013	2SC160 2SC160A	2011 2013	2SC195OR 2SC195R	2013 2013	2SC281C-EP 2SC281D	20 20
SB66 SB70	2007 2007	2SB429 2SB436	2007 2005	2SC58GN 2SC58H	2012 2012	2SC135E 2SC135F	2013 2013	2SC160B 2SC160C	2013 2013	2SC195X 2SC195Y	2013 2013	2SC281EP 2SC281H	20 20
SB71 SB73	2007 2007	2SB439 2SB440	2007	2SC58J	2012	2SC135G 2SC135GN	2013	2SC160D	2013 2013	2SC196 2SC196A	2013	2SC281HA	20
SB74	2005	2SB443	2007	2SC58K 2SC58L	2012	2SC135H	2013 2013	2SC160E 2SC160F	2013	2SC196B	2013 2013	2SC281HB 2SC281HC	20 20
SB75 SB75H	2007	2SB458B 2SB458BC	2009 2031	2SC58M 2SC58OR	2012 2012	2SC135J 2SC135L	2013 2013	2SC160G 2SC160GN	2013 2013	2SC196C 2SC196D	2013 2013	2SC282 2SC282H	20 20
SB76 SB77	2007 2007	2SB458BL 2SB458C	2009 2009	2SC58R 2SC58X	2012 2012	2SC135M 2SC135OR	2013 2013	2SC160H 2SC160J	2013	2SC196E 2SC196F	2013 2013	2SC282HA 2SC282HB	20 20
SB78 SB90	2007	2SB475 2SB482V	2007	2SC58Y 2SC60	2012 2001	2SC135R 2SC135X	2013 2013	2SC160K 2SC160L	2013 2013	2SC196GN 2SC196GN	2013 2013	2SC282HC 2SC283	20 20
SB91 SB92	2007 2007	2SB498 2SB516	2005 2005	2SC62 2SC63	2016 2016	2SC135Y 2SC136	2013 2009	2SC160M 2SC160OR	2013 2013	2SC196H 2SC196J	2013 2013	2SC283H 2SC284	20
SB93 SB94	2007 2007	2SB645E	2009 1104	2SC64A 2SC64B	2009 2009	2SC136D	2011 2033	2SC160R	2013 2013	2SC196K	2013 2013	2SC284H	20
SB95 SB96	2007	2SC3T2Y	2009 2041	2SC66EV	2011	2SC137A	2013	2SC160Y	2013 2030	2SC196M	2013	2SC284HB	20
SB97	2007	2SC3T2Y 2SC7 2SC9 2SC11	2020	2SC66EV 2SC67 2SC68 2SC70	2016 2016	2SC137C	2013 2013	2SC166	2016	2SC196M 2SC196OR 2SC196R 2SC196X	2013 2013	2SC284HC 2SC285	20
SB98 SB99	2007 2007	2SC11 2SC13 2SC14	2001 2001	2SC/UA	2008 2012 2001	2SC137A 2SC137B 2SC137C 2SC137D 2SC137D 2SC137E	2013 2013	2SC160Y 2SC162 2SC166 2SC167 2SC168	2010 2016	2SC1961	2013 2013	2SC284HB 2SC284HC 2SC285 2SC285 2SC285A 2SC286	20
SB100 SB101	2007 2007	2SC15	2001 2009	2SC71 2SC72	2001 2001	2SC137F 2SC137G	2013 2013	2SC169 2SC170	2016 2016	2SC197 2SC197A	2013 2013	2SC286 2SC287 2SC287A 2SC288 2SC288A 2SC288A1 2SC288AB	20
SB103 SB104	2007 2007	2SC15-1 2SC15-2	2009 2009	2SC73	2001 2038	2SC137GN 2SC137H	2013 2013	2SC171 2SC172	2016 2016	2SC197A 2SC197B 2SC197C 2SC197D 2SC197E 2SC197F 2SC197F	2013 2013	2SC288 2SC288A	20
SB110 SB111	2007 2007	2SC15-3	2009 2016	2SC74 2SC74A	2013 2013	2SC137J 2SC137K	2013 2013	2SC172A 2SC173	2016 2001	2SC197D	2013 2013	2SC288A1	20
SB112	2007	2SC16A	2016	2SC74B 2SC74C 2SC74D	2013	2SC137L	2013	2SC174	2016	2SC197F	2013	2SC288B 2SC289	20
SB112 SB113 SB114 SB115	2007 2007	2SC16A 2SC17 2SC17A	2015 2015	2SC74E	2013	2SC137M 2SC137OR	2013 2013	2SC174A 2SC175	2016 2001	2SC197GN	2013 2013	2SC294 .	20
SB116	2007 2007	2SC178 2SC17C	2013 2013	2SC74F 2SC74G 2SC74GN	2013 2013	2SC137R 2SC137X	2013 2013	2SC175B 2SC176	2001 2001	2SC197H 2SC197J	2013 2013	2SC295 2SC296	20
SB117 SB120	2007 2007	2SC17D 2SC17E	2013	2SC74GN 2SC74H	2013 2013	2SC137Y 2SC138	2013 2009	2SC177 2SC178	2001 2001	2SC197K 2SC197L	2013 2013	2SC298 2SC300	20
SB153 SB154	2007 2007	2SC17F 2SC17G	2013 2013	2SC74H 2SC74J 2SC74K	2013 2013	2SC138A 2SC138S	2009 2009	2SC179 2SC182	2001 2016	2SC197M 2SC197OR	2013 2013	2SC301	20
SB154 SB155	2009	2SC17GN 2SC17H	2013 2013	2SC74L 2SC74M	2013 2013	2SC139	2009 2016	2SC182(V) 2SC182Q	2009 2038	2SC197R 2SC197X	2013 2013	2SC-313 2SC313 2SC315	20
SB161	2007	2SC17J	2013	2SC74R	2013	2SC141 2SC142	2016	2SC183	2031	2SC197Y	2013	2SC315	20
SB163 SB165	2007	2SC17K 2SC17L 2SC17M	2013 2013	2SC74X 2SC74Y	2013 2013	2SC143 2SC144		2SC183(P) 2SC183(Q)(R)	2031 2031	2SC198H 2SC200	2041 2038	2SC317 2SC317C	20
SB168 SB169	2007 2007	2SC17OR	2013 2013	2SC75 2SC76	2001 2001	2SC144A 2SC145	2016 2016	2SC183(R) 2SC183A	2009	2SC201 2SC202	2038 2009	2SC318 2SC318A	20
SB175(A) SB177A	2007 2001	2SC17R 2SC17X	2013 2013	2SC77 2SC77C	2001	2SC146 2SC146A	2016 2016	2SC183E 2SC183J	2038 2038	2SC202 2SC203 2SC204 2SC205	2016 2016	2SC318A 2SC319 2SC320 2SC321	20
SB179 SB183	2007	2SC17Y 2SC18	2013 2015	2SC77Z 2SC78	2013	2SC148A 2SC148B	2013 2013	2SC183K 2SC183L	2038	2SC205	2009 2015	2SC321 2SC321H	20
SB184 SB190	2007 2007	2SC18A 2SC19	2030	2SC79	2016	2SC148D	2013	2SC183M	2038	2SC206 2SC206A	2013	2SC321HA	20
SB191	2007	2SC20	2030 2030	2SC80 2SC81	2016 2009	2SC148E 2SC148F	2013 2013	2SC183P 2SC183Q	2038 2038	2SC206B 2SC206C	2013 2013	2SC321HB 2SC321HC	20
SB192	2007	2SC21	2041	2SC82BN	2011	2SC148G	2013	2SC183R	2038	2SC206D	2013	2SC322	_ 20

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
2SC323 2SC324	2016	2SC369V 2SC370	2009 2016	2SC374Y 2SC375	2013 2038	2SC381-R 2SC381-RED	2016 2016	2SC389H 2SC389J	2014 2014	2SC400-O 2SC400-R	2016 2016	2SC430J 2SC430K	20
2SC324A	2009	2SC370-0 2SC370-G	2013 2016	2SC376 2SC377	2009	2SC381A 2SC381B	2013	2SC389K	2014	2SC400-Y	2009	2SC430L	201
2SC324B 2SC324C	2013	2SC370-0	2009	2SC377-BN	2016	2SC381BN	2011	2SC389L 2SC389M	2014 2014	2SC401 2SC401A	2016 2013	2SC430M 2SC430OR	20
2SC324D 2SC324F	2013 2013	2SC370-T 2SC370A	2016 2013	2SC377-BRN 2SC377-O	2015 2016	2SC381BN-1 2SC381C	2013 2013	2SC389OR 2SC389X	2014 2014	2SC401B 2SC401C	2013 2013	2SC430R 2SC430X	20
2SC324G 2SC324GN	2013 2013	2SC370B 2SC370C	2013 2013	2SC377-ORG 2SC377-R	2016 2016	2SC381D 2SC381E	2013 2013	2SC389Y 2SC390A	2014	2SC401D 2SC401E	2013 2013	2SC430Y 2SC433	20° 200
2SC324H 2SC324HA	2009	2SC370D 2SC370E	2013 2013	2SC377-RED 2SC377A	2016	2SC381F 2SC381G	2013	2SC390B	2014	2SC401F	2013	2SC439	200
2SC324J	2013	2SC370G	2016	2SC377B	2013	2SC381GN	2013	2SC390C 2SC390D	2014	2SC401G 2SC401GN	2013 2013	2SC440 2SC441	201
2SC324K 2SC324L	2013	2SC370GN 2 2SC370L	2013 2013	2SC377C 2SC377D	2013	2SC381H 2SC381J	2013	2SC390E 2SC390F	2014	2SC401H 2SC401J	2013 2013	2SC442 2SC454	201
2SC324M 2SC324OR	2013 2013	2SC370M 2SC3700R	2013 2013	2SC377E 2SC377F	2013	2SC381K 2SC381L	2013	2SC390G 2SC390GN	2014	2SC401K 2SC401L	2013	2SC454(A) 2SC454(B)	200
2SC324R 2SC324X	2013	2SC370R 2SC370X	2013 2013	2SC377G 2SC377GN	2013 2013	2SC381M 2SC381OR	2013 2013	2SC390H . 2SC390J	2014 2014	2SC401M 2SC401OR	2013 2013	2SC454-3 2SC454-5	20
2SC324Y	2013	2SC370Y	2013	2SC377H	2013	2SC381R	2011	2SC390K	2014	2SC401R	2013	2SC454A	200
SC325 SC326	2015	2SC371 2SC371(0)	2016	2SC377J 2SC377K	2013 2013	2SC381RL 2SC381X	2013	2SC390L 2SC390M	2014	2SC401X 2SC401Y	2013	2SC454B-6 2SC454BL	20
SC327 SC328A	2015	2SC371(0) 2SC371-0	2009	2SC377L 2SC377M	2013	2SC381Y 2SC382	2013 2016	2SC390OR 2SC390R	2014 2014	2SC402 2SC402A	2016 2016	2SC454C 2SC454D	201
2SC329 2SC329B	2011	2SC371-O 2SC371-ORG-G	2016 2016	2SC3770R 2SC377R	2013 2013	2SC382G 2SC382GR	2038 2013	2SC390X 2SC390Y	2014 2014	2SC402B 2SC403	2016 2016	2SC454E	20
2SC329C	2011	2SC371-R	2016	2SC377X	2013	2SC382R	2038	2SC391	2038	2SC403(C)	2009	2SC454F 2SC454G	20
2SC332 2SC333	2016 2016	2SC371-R-1 2SC371-RED-G	2009 2016	2SC377Y 2SC378	2013 2016	2SC383 2SC383(3RD-IF)	2016 2010	2SC393 2SC394	2011 2016	2SC403A 2SC403B	2016 2016	2SC454GN 2SC454H	20
SC334 SC335	2016 2016	2SC371-T 2SC371A	2016 2013	2SC378-O 2SC378-ORG	2016 2016	2SC383(FINAL-IF) 2SC383(T)	2010 2013	2SC394(0) 2SC394-0	2013 2013	2SC403C 2SC403D	2016 2013	2SC454J 2SC454K	20
SC336 SC337	2016	2SC371B 2SC371C	2009	2SC378-R 2SC378-RED	2016 2016	2SC383A 2SC383B	2013 2013	2SC394-O 2SC394-ORG	2016	2SC403E 2SC403F	2013 2013	2SC454L 2SC454LA	20 20
SC344	2011	2SC371D	2013	2SC378-YEL	2014	2SC383C	2013	2SC394-R	2016	2SC403G	2013	2SC454M	20
SC344(Y) SC344Y	2011	2SC371E 2SC371F	2013	2SC378A 2SC378B	2013	2SC383D 2SC383E	2013	2SC394-RED 2SC394-Y	2016	2SC403GN 2SC403H	2013 2013	2SC454OR 2SC454R	20 20
2SC348A 2SC348B	2014	2SC371G 2SC371GN	2016 2013	2SC378C 2SC378D	2013 2013	2SC383F 2SC383GN	2013 2013	2SC394-YEL 2SC394A	2016 2013	2SC403J 2SC403K	2013 2013	2SC454X 2SC454Y	20 20
SC348C SC348D	2014	2SC371G-O 2SC371G-R	2016 2016	2SC378E 2SC378F	2013 2013	2SC383H 2SC383J	2013 2013	2SC394AP 2SC394B	2013 2013	2SC403L 2SC403M	2013 2013	2SC455 2SC455A	20
SC348E	2014	2SC371H	2013	2SC378G	2013	2SC383K	2013	2SC394C	2013	2SC403OR	2013	2SC455B	20 20
SC348F SC348G	2014	2SC371J 2SC371K	2013 2013	2SC378GN 2SC378H	2013	2SC383L 2SC383M	2013	2SC394D 2SC394E	2013	2SC403R 2SC403X	2013 2013	2SC455C 2SC455D	20 20
SC348ĞN SC348H	2014 2014	2SC371L 2SC371M	2013	2SC378J 2SC378K	2013	2SC383OR 2SC383R	2013 2013	2SC394F 2SC394G	2013 2013	2SC403Y 2SC404	2013 2016	2SC455E 2SC455F	20
SC348J	2014	2SC3710	2009	2SC378L	2013	2SC383T(LAST-IF)	2010	2SC394GN	2013	2SC404A	2013	2SC455G	20
SC348K SC348L	2014 2014	2SC3710R 2SC371R	2013 2009	2SC378M 2SC378OR	2013 2013	2SC383X 2SC384	2013 2016	2SC394GR 2SC394H	2013	2SC404B 2SC404C	2013 2013	2SC455GN 2SC455H	20 20
SC348M SC348OR	2014 2014	2SC371X 2SC371Y	2013 2013	2SC378R 2SC378X	2013 2013	2SC384(O) 2SC384(Y)	2011	2SC394J 2SC394K	2013	2SC404D 2SC404E	2013 2013	2SC455J 2SC455K	20 20
SC348X SC348Y	2014	2SC372 2SC372(3RD-IF)	2009	2SC378Y 2SC379	2009 2016	2SC384-0 2SC384A	2011	2SC394L -2SC394M	2013	2SC404F	2013	2SC455L	20 20
2SC349	2011	2SC372(H)	2031	2SC380	2016	2SC384B	2013	2SC394OR	2013	2SC404GN 2SC404GN	2013 2013	2SC455M 2SC455OR	20
SC349R SC350	2009 2016	2SC372(O) 2SC372(Y)	2009 2009	2SC380/4454C 2SC380-0	2013 2013	2SC384C 2SC384D	2013	2SC394R 2SC394W	2013	2SC404H 2SC404J	2013 2013	2SC455R 2SC455X	20 20
SC350A SC350H	2009 2016	2SC372/4454C 2SC372-0	2009	2SC380-0/4454C 2SC380-0	2013	2SC384E 2SC384F	2013	2SC394X 2SC394Y	2013 2013	2SC404K 2SC404L	2013 2013	2SC455Y 2SC456	20 20
SC351 SC351(FA)	2038 2011	2SC372-1 2SC372-2	2009 2009	2SC380-O/4454C 2SC380-ORG	2013 2016	2SC384G 2SC384GN	2013 2013	2SC395 2SC395A	2016 2033	2SC404M 2SC404OR	2013 2013	2SC457 2SC458(C,D)	20 20
SC351FA1	2009	2SC372-0	2016	2SC380-R	2016	2SC384H	2013	2SC395A-ORG	2033	2SC404R	2013	2SC458(D)	20
SC356 SC360	2016	2SC372-OR6-G 2SC372-R	2016 2009	2SC380-RED 2SC380-Y	2016	2SC384J 2SC384K	2013	2SC395A-R 2SC395A-RED	2009	2SC404X 2SC404Y	2013 2013	2SC458(LG) 2SC458BD	20 20
SC360D SC361	2009	2SC372-Y 2SC372-Z	2009	2SC380-YEL 2SC380A-0	2014	2SC384L 2SC384M	2013	2SC395A-YEL 2SC395R	2010	2SC405 2SC406	2001 2001	2SC458C/L6 2SC458L(C)	20 20
SC361A SC361B	2013 2013	2SC372A 2SC372AR	2013 2013	2SC380A-0(TV) 2SC380A	2013 2013	2SC384OR 2SC384R	2013 2013	2SC396 2SC397	2016 2015	2SC423 2SC423B	2009 2009	2SC458LG 2SC458LG(B)	20 20
SC361C	2013	2SC372B	2013	2SC380A(O)	2013	2SC384X	2013	2SC398	2016	2SC423C	2009	2SC458LG(C)	20
SC361D SC361E	2013 2013	2SC372BL 2SC372C	2009 2013	2SC380A(R) 2SC380A-O	2009 2016	2SC385 2SC385A	2015 2011	2SC398A 2SC398B	2013 2013	2SC423D 2SC423E	2009 2009	2SC458LG(D) 2SC459	20 20
SC361F SC361G	2013 2013	2SC372D 2SC372E	2013 2013	2SC380AO 2SC380A-O(TV)	2013 2013	2SC386 2SC386-O	2015 2009	2SC398C 2SC398D	2013 2013	2SC423F 2SC424	2009 2033	2SC459A 2SC459C	20 20
SC361GN SC361H	2013 2013	2SC372F 2SC372G	2013 2016	2SC380A-R	2016 2013	2SC386A	2015 2015	2SC398E 2SC398F	2013 2013	2SC424D 2SC425	2009 2009	2SC459D	20 20
SC361J	2013	2SC372GN	2013	2SC380A-R(TV)	2013	2SC387 2SC387-G	2015	2SC398FA1	2011	2SC425B	2009	2SC459F	= 20
SC361K SC361L	2013 2013	2SC372G-O 2SC372GR	2016	2SC380A-B 2SC380A-R 2SC380A-R 2SC380A-R(TV) 2SC380ATV 2SC380AY	2013 2013	2SC387A 2SC387A(FA-3)	2015 2015	2SC398G 2SC398GN	2013 2013	2SC425C 2SC425D	2009 2009	2SC459A 2SC459C 2SC459C 2SC459E 2SC459E 2SC459F 2SC459G 2SC459GN	20
SC361M SC361OR	2013 2013	2SC372H 2SC372J	2009 2013	2SC380B 2SC380B-Y	2013 2013	2SC387FA3 2SC387G	2011 2015	2SC398H 2SC398J	2013 2013	2SC425E 2SC425F	2009 2009		20
SC361R SC361X	2013	2SC372K 2SC372L	2013 2013	2SC380C 2SC380C-Y	2013 2013	2SC388 2SC388A	2011 2016	2SC398K 2SC398L	2013 2013	2SC426 2SC427	2016 2016	2SC459J 2SC459K 2SC459L	20
SC361Y	2013	2SC372M	2013	2SC380D	2013	2SC388A(3RD-IF)	2010	2SC398M	2013	2SC428	2016	2SC459M	20
SC362 SC363	2011	2SC372OR 2SC372OR	2031	2SC380D-Y 2SC380E	2013	2SC388B 2SC388C	2009 2013	2SC398OR 2SC398R	2013	2SC429 2SC429A	2011 2013	2SC459OR 2SC459R	20
SC364 SC366	2016	2SC372R 2SC372X	2013 2013	2SC380E-Y 2SC380F	2013 2013	2SC388D 2SC388E	2013 2013	2SC398X 2SC398Y	2013 2013	2SC429B 2SC429C	2013 2013	2SC459R -2SC459X 2SC459Y	20
SC366-ORG-G SC366-RED-G	2009	2SC372Y 2SC373(GR)	2009 2009	2SC380F-Y 2SC380G	2013 2013	2SC388F 2SC388G	2013 2013	2SC399 2SC399A	2016 2013	2SC429D 2SC429E	2013 2013	2SC460 2SC460(A)	20
SC366G	2009	2SC374(BL)	2009	2SC380GN	2013	2SC388GN	2013	2SC399B	2013	2SC429F	2013	2SC460(B) 2SC460-5	20
SC366G-R SC367	2009 2009	2SC374(V) 2SC374A	2009 2013	2SC380H 2SC380J	2013 2013	2SC388H 2SC388J	2013 2013	2SC399C 2SC399D	2013 2013	2SC429G 2SC429GN	2013 2013	2SC460-B	20
SC367-ORG-G	2033	2SC374B 2SC374C 2SC374D 2SC374E	2013	2SC380K 2SC380L	2013	2SC388K 2SC388L	2013 2013	2SC399E 2SC399F	2013	2SC429H 2SC429K	2013 2013	2SC460-C	20
SC367-R SC367-RED-G	2033	2SC374D	2013	2SC380M	2013	2SC388M 2SC388OR	2013	2SC399FA1	2011	2SC429L	2013	2SC460A 2SC460B 2SC460C	20
SC367-YEL-G	2033	2503/45	2013	2SC380O 2SC380OR	2013	2SC388R	2013	2SC399G 2SC399GN	2013	2SC429M 2SC429OR	2013 2013	2SC460D	20
SC367G SC367G-O	2033	2SC374G 2SC374GN	2013 2013	2SC380R 2SC380R/4454C	2013 2013	2SC388X 2SC388Y	2013	2SC399H 2SC399J	2013 2013	2SC429R 2SC429Y	2013 2013	2SC460E 2SC460F	20
SC367G-R SC369	2033 2009	2SC374H 2SC374J	2013 2013	2SC380X 2SC380Y	2013 2013	2SC389 2SC389A	2016 2014	2SC399K 2SC399L	2013 2013	2SC430 2SC430A	2011 2013	2SC460G 2SC460GB	20
SC369BL	2009	2SC374K	2013	2SC381	2016	2SC389B	2014	2SC399M	2013	25C430B	2013	2SC460GN	20
SC369G-BL	2009	2SC374L 2SC374M	2013 2013	2SC381(BN) 2SC381-0	2030	2SC389C 2SC389D	2014	2SC399OR 2SC399R	2013	2SC430D 2SC430D 2SC430E 2SC430F	2013	2SC460H 2SC460J	20 20
SC369GBL SC369G-GR	2009	2SC374OR 2SC374R	2013 2013	2SC381-BN 2SC381-BRN	2016 2015	2SC389E 2SC389F	2014 2014	2SC399X 2SC399Y	2013 2013	2SC430E 2SC430F	2013 2013	2SC460K 2SC460L	20 20
SC369GGR	2009	2SC374V	2013	2SC381-O	2016 2016	2SC389G 2SC389GN	2014	2SC400 2SC400-0	2016	2SC430G	2013	2SC460M	20

SC460R SC460X SC460Y SC460Y SC4618F SC4618F SC461-8F SC461-8F SC461-B SC461-B SC461-B SC461BL SC461BL SC461BL SC461BL SC461BL SC461BL SC461BL SC461BL SC464BSL SC464BC SC464C SC465C SC46C	2013 2013 2013 2013 2016 2030 2011 2013 2013 2013 2013 2013 2013	2SC472G 2SC472GN 2SC472H 2SC472J 2SC472K 2SC472K 2SC472K 2SC472C 2SC472R 2SC472R 2SC472R 2SC475 2SC475 2SC475 2SC476 2SC476 2SC476 2SC482-O 2SC482-O 2SC482-O 2SC482-O 2SC496-ORG 2SC496-OR	2013 2013 2013 2013 2013 2013 2013 2013	2SC534 2SC535 2SC535(8) 2SC536(9) 2SC536(9) 2SC536(9) 2SC536(9) 2SC537(9) 2S	2009 2009 2016 2009 2009 2009 2009 2009	2SC544Y 2SC545A 2SC545A 2SC545B 2SC545B 2SC545C 2SC5545 2SC556 2SC556 2SC556 2SC556 2SC5561 2SC561A 2SC561B	2013 2016 2011 2011 2011 2011 2011 2011 2013 2013	2SC506A 2SC506B 2SC506B 2SC506B 2SC506B 2SC506G 2SC506G 2SC506G 2SC506G 2SC506A 2SC506A 2SC506A 2SC506A 2SC506A 2SC506A 2SC506A 2SC506A 2SC506A 2SC506A 2SC506A 2SC506A 2SC506A 2SC506A 2SC506B 2SC506	2013 2013 2013 2013 2013 2013 2013 2013	2SC645R 2SC645V 2SC645V 2SC645Y 2SC645Y 2SC647Q 2SC647R 2SC649 2SC650B 2SC650B 2SC655 2SC655 2SC657 2SC657A 2SC657B 2SC657B 2SC657C 2S	2013 2009 2013 2013 2013 2041 2041 2041 2013 2016 2009 2009 2011 2016 2013 2013 2013 2013 2013 2013 2013 2013	2SC682J 2SC682K 2SC682M 2SC682M 2SC682P 2SC682P 2SC682P 2SC683P 2SC683 2SC683 2SC683 2SC683 2SC683D 2SC683D 2SC683F 2SC683F 2SC683F 2SC683H 2SC683M 2SC683M 2SC683M 2SC683M 2SC683M 2SC683M 2SC683M 2SC683M 2SC683P 2SC683P 2SC683P 2SC683P 2SC683P 2SC683P 2SC683P 2SC683P 2SC683P 2SC683P 2SC683P 2SC683P 2SC683P 2SC683P 2SC683P 2SC683P 2SC684P 2SC684P 2SC688P 2SC688P 2SC688P 2SC68BP 2SC68BP 2SC68BP	200 201 201 201 201 201 201 201 201 201
SC460Y SC4618F SC461-8F SC464-8F SC464-8F SC464-8F SC464-8F SC464-8F SC464-8F SC464-8F SC464-8F SC464-8F SC465-8F SC465-	2013 2013 2013 2013 2013 2013 2013 2013	2SC472H 2SC472L 2SC472K 2SC472K 2SC472K 2SC472R 2SC472R 2SC472R 2SC472R 2SC4778 2SC4775 2SC475 2SC475 2SC476 2SC476 2SC496 2SC496-RED 2SC496-PED 2SC496-PE	2013 2013 2013 2013 2013 2013 2013 2013	29C535(8) 29C535(A) 29C535(A) 29C535(A) 29C535(B) 29C536(B) 29C536(B) 29C536(B) 29C536(B) 29C537(C) 29C537	2013 2013 2013 2013 2013 2013 2013 2013	2SC545A 2SC545B 2SC545B 2SC545C 2SC5545 2SC556 2SC556 2SC556 2SC5561 2SC561D 2SC561D 2SC561C 2SC561B 2SC562B	2011 2011 2011 2011 2011 2009 2038 2013 2013 2013 2013 2013 2013 2013 2013	28C60BC 28C60BD 28C60BE 28C60BG 28C60BG 28C60BGN 28C60BH 28C60BH 28C60BH 28C60BH 28C60BM 28C613 28C613 28C613 28C613 28C613BD 28C613BD 28C613BD 28C613BD 28C613BD 28C613BD 28C613BD	2013 2013 2013 2013 2013 2013 2013 2013	2SC645Y 2SC645Y 2SC6477 2SC647R 2SC648R 2SC649 2SC650B 2SC650B 2SC655 2SC655 2SC657 2SC657A 2SC657B 2SC657B 2SC657D 2SC657C 2SC657TD	2013 2013 2041 2041 2041 2013 2016 2009 2009 2009 2011 2016 2013 2013 2013 2013 2013 2013 2013 2013	2SC682L 2SC682M 2SC682PM 2SC682PM 2SC682X 2SC682X 2SC683 2SC683 2SC683 2SC683D 2SC683D 2SC683B 2SC683B 2SC683H 2SC683H 2SC683H 2SC683H 2SC683H 2SC683H 2SC683R 2SC683R 2SC683B 2SC683B 2SC683B 2SC683B 2SC683B 2SC683B 2SC683B 2SC683B 2SC683B 2SC683B 2SC683B 2SC683B 2SC683B 2SC68BB 2SC68BB 2SC68BB 2SC68BB	21 21 21 21 21 21 21 21 21 21 21 21 21 2
SC461 SC461-8F SC461-8F SC461-8F SC461-1-8 SC4	2016 2030 2011 2013 2013 2013 2013 2013 2013	2SC472J 2SC472K 2SC472K 2SC472L 2SC472DR 2SC472R 2SC472R 2SC472X 2SC474 2SC475 2SC475 2SC476 2SC476 2SC477 2SC478 2SC482 2SC482-ORG 2SC490-RED 2SC499-VEL 2SC496-ORED 2SC496-O	2013 2013 2013 2013 2013 2013 2016 2009 2009 2009 2016 2016 2016 2030 2030 2030 2030 2030 2030 2041 2041 2041 2041 2041 2041 2041 204	2SC535ABC 2SC535ABC 2SC535ABC 2SC535ABC 2SC535BC 2SC535C 2SC535E 2SC535E 2SC535G 2SC535G 2SC535G 2SC535G 2SC535ABC 2SC535BBC 2SC535BBC 2SC535BBC 2SC535BBC 2SC535BBC 2SC535BBC 2SC535BBC 2SC535BC 2SC535BC 2SC535BC 2SC535BC 2SC535BC 2SC535BC 2SC535BC 2SC536CBC 2SC536GP 2SC537CC 2SC537C	2013 2013 2013 2013 2013 2013 2013 2013	29C545B 29C545C 29C545C 29C545C 29C554 29C556 29C556 29C556 29C5561 29C561C 29C561D 29C561C 29C561G 29C561G 29C561G 29C561H 29C562H 29C5644H 29C5652H 29C5652H 29C5652H 29C5652H 29C5652H 29C5652H 29C5654H 29C5652H 29C5654H 29C564H 29C56	2011 2011 2011 2011 2009 2038 2038 2013 2013 2013 2013 2013 2013 2013 2013	2SC606D 2SC506E 2SC506E 2SC606GN 2SC606GN 2SC606SJ 2SC606SL 2SC606SL 2SC606M 2SC506M 2SC506M 2SC506M 2SC506N 2SC606R 2SC606R 2SC606R 2SC606R 2SC606R 2SC606R 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC606S 2SC60S 2	2013 2013 2013 2013 2013 2013 2013 2013	2SC6457 2SC6477 2SC6470 2SC6478 2SC648H 2SC650B 2SC650B 2SC652 2SC655 2SC657 2SC657A 2SC657A 2SC657C 2SC657C 2SC657C 2SC657F 2SC657F 2SC657F 2SC657F 2SC657F 2SC657F 2SC657H 2SC657H 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K 2SC657C	2013 2041 2041 2041 2013 2016 2018 2009 2009 2009 2011 2013 2013 2013 2013 2013 2013 2013	2SC682M 2SC682P 2SC682P 2SC682Y 2SC683Y 2SC683(B) 2SC683(B) 2SC683C 2SC683B 2SC683G 2SC683G 2SC683H 2SC683H 2SC683H 2SC683H 2SC683H 2SC683N 2SC683N 2SC683N 2SC683N 2SC683R 2SC683R 2SC683R 2SC683R 2SC683R 2SC683R 2SC683R	24 24 24 24 24 24 24 24 24 24 24 24 24 2
SC461-8F SC461-8F SC461-B SC46	2011 2013 2013 2013 2013 2013 2013 2013	2SC47ZL 2SC47ZM 2SC47ZM 2SC47ZR 2SC47ZR 2SC47ZX 2SC47Z 2SC47Z 2SC47Z 2SC47Z 2SC47Z 2SC47Z 2SC47Z 2SC47Z 2SC48Z-O 2SC48Z-O 2SC48Z-O 2SC49Z-ORG 2SC49G-PED 2	2013 2013 2013 2013 2016 2009 2009 2009 2016 2030 2030 2030 2020 2020 2020 2020 202	2SC535AL 2SC535B 2SC535C 2SC535C 2SC535E 2SC535E 2SC535G 2SC535G 2SC535G 2SC535A 2SC535A 2SC535A 2SC535A 2SC535A 2SC535A 2SC535A 2SC535A 2SC535A 2SC535A 2SC536(P) 2SC536GP 2SC536GP 2SC537C 2SC537C 2SC537C 2SC537C 2SC537C	2013 2013 2013 2013 2013 2013 2013 2013	2SC545D 2SC545E 2SC5545E 2SC5564 2SC5569 2SC5561 2SC5561A 2SC5561B 2SC5561C 2SC5561C 2SC5561C 2SC5561G 2SC5561H 2SC5562	2011 2011 2009 2038 2038 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC606F 2SC506G 2SC506GN 2SC506H 2SC606J 2SC606L 2SC606L 2SC506N 2SC506N 2SC506N 2SC506N 2SC506N 2SC506ST 2SC606Y 2SC606Y 2SC613 2SC613 2SC613 2SC618 2SC619 2SC619(E)	2013 2013 2013 2013 2013 2013 2013 2013	2SC647Q 2SC647R 2SC648H 2SC649 2SC650B 2SC650B 2SC655 2SC655 2SC657 2SC657A 2SC657B 2SC657B 2SC657C 2SC657G 2SC657G 2SC657G 2SC657G 2SC657G 2SC657G 2SC657G 2SC657G 2SC657T 2SC657D	2041 2041 2013 2016 2009 2038 2009 2009 2011 2013 2013 2013 2013 2013 2013 2013	2SC682R 2SC682X 2SC682Y 2SC683C 2SC683G 2SC683G 2SC683G 2SC683G 2SC683G 2SC683G 2SC683G 2SC683H 2SC683H 2SC683H 2SC683C 2SC683C 2SC683C 2SC683C 2SC683C 2SC683C 2SC683C 2SC683C 2SC683C 2SC683C 2SC683C 2SC683C 2SC683C 2SC684C 2SC688C	20 20 20 20 20 20 20 20 20 20 20 20 20 2
SC461-A SC461A SC461A SC461A SC461A SC461B SC461B SC461B SC461B SC461E SC461E SC461E SC461E SC461E SC464 SC464 SC464 SC464 SC464 SC464 SC464B SC465B SC46B S	2013 2013 2013 2013 2013 2013 2013 2013	2SC472M 2SC472OR 2SC472R 2SC472R 2SC4774 2SC474 2SC475 2SC476 2SC476 2SC476 2SC477 2SC478 2SC482 2SC482-ORG 2SC490-RED 2SC490-PEL 2SC496-ORG 2SC496-PEL 2SC49-PEL 2SC49-PEL 2SC49-PEL 2SC49-PEL 2SC49-PEL 2SC49-P	2013 2013 2013 2013 2016 2009 2009 2016 2030 2030 2030 2030 2020 2020 2020 202	2SC535B 2SC535C 2SC535D 2SC535E 2SC535F 2SC535F 2SC535G 2SC535H 2SC535H 2SC535H 2SC535H 2SC535H 2SC535R 2SC535R 2SC535R 2SC535R 2SC536G 2SC536G 2SC536G 2SC536G 2SC536G 2SC537G 2SC537G 2SC537C 2SC537C 2SC537C 2SC537D	2013 2013 2013 2013 2013 2013 2013 2013	2SC545E 2SC545E 2SC554 2SC556 2SC559 2SC5611 2SC5618 2SC561B 2SC561B 2SC561C 2SC561B 2SC561G 2SC561G 2SC561G 2SC561H 2SC562H 2SC562H	2011 2009 2038 2038 2013 2013 2013 2013 2013 2013 2013 2013	2SC606G 2SC606GN 2SC606H 2SC6005J 2SC6006K 2SC6006L 2SC6006N 2SC6006N 2SC6006N 2SC6006R 2SC6006R 2SC6006Y 2SC6006Y 2SC6013 2SC6118 2SC618 2SC618 2SC619(B) 2SC619(B) 2SC619(B) 2SC619(B) 2SC619B 2SC619B 2SC619B 2SC619B	2013 2013 2013 2013 2013 2013 2013 2013	2SC647R 2SC648H 2SC649 2SC650B 2SC6552 2SC655 2SC655 2SC657A 2SC657A 2SC657B 2SC657C 2SC657C 2SC657C 2SC657F 2SC657F 2SC657F 2SC657F 2SC657F 2SC657F 2SC657H 2SC657H 2SC657H 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K	2041 2013 2016 2009 2009 2009 2011 2016 2013 2013 2013 2013 2013 2013 2013 2013	2SC682Y 2SC682Y 2SC683(B) 2SC683(B) 2SC683C 2SC683C 2SC683F 2SC683F 2SC683GN 2SC683J 2SC683L 2SC683L 2SC683M 2SC683M 2SC683R 2SC683R 2SC683R 2SC683R 2SC683R 2SC683R 2SC683R 2SC683R 2SC683R 2SC683R 2SC683R 2SC683R 2SC684 2SC688B 2SC688B	20 22 21 22 22 22 22 22 22 22 22 22 22 22
SC461-B SC461A SC461AL SC461BL SC461BL SC461BL SC461BL SC461BL SC461E SC461E SC461E SC461E SC461E SC462 SC463 SC463 SC464 SC464B SC464BB SC465BB SC46BB	2013 2013 2013 2013 2013 2013 2013 2013	2SC472OR 2SC472R 2SC472R 2SC472X 2SC475 2SC475 2SC475 2SC476 2SC478 2SC482 2SC482-O 2SC482-ORG 2SC490-YEL 2SC496-ORG 2SC490-YEL 2SC496-PED 2SC4	2013 2013 2013 2016 2009 2009 2009 2016 2030 2030 2030 2030 2020 2020 2020 202	2SC535C 2SC535D 2SC535E 2SC535E 2SC535G 2SC535G 2SC535G 2SC535H 2SC535L 2SC535L 2SC535M 2SC535M 2SC535M 2SC535M 2SC535M 2SC535M 2SC535M 2SC535M 2SC535M 2SC535M 2SC536(P) 2SC536(P) 2SC536(P) 2SC536(P) 2SC536(P) 2SC537	2013 2013 2013 2013 2013 2013 2013 2013	2SC554 2SC556 2SC559 2SC551 2SC551A 2SC551B 2SC551C 2SC551C 2SC551C 2SC551F 2SC551F 2SC551GN 2SC551H 2SC551J 2SC551H 2SC551L 2SC551H 2SC551L 2SC551H 2SC551L 2SC552L 2	2009 2038 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC606GN 2SC606H 2SC506H 2SC506SL 2SC506SL 2SC506SL 2SC506SN 2SC506SN 2SC506SN 2SC506SN 2SC506SN 2SC506SN 2SC506SN 2SC5013 2SC513 2SC518 2SC518 2SC518 2SC519 2SC520	2013 2013 2013 2013 2013 2013 2013 2013	2SC649 2SC650B 2SC650B 2SC652 2SC654 2SC655 2SC657 2SC657A 2SC657A 2SC657C 2SC657C 2SC657C 2SC657F 2SC657F 2SC657F 2SC657H 2SC657H 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K 2SC657C	2013 2016 2009 2008 2009 2001 2011 2013 2013 2013 2013 2013 2013	2SC682Y 2SC683 2SC683B 2SC683D 2SC683B 2SC683B 2SC683G 2SC683G 2SC683H 2SC683H 2SC683H 2SC683H 2SC683K 2SC683K 2SC683K 2SC683K 2SC683R 2SC683R 2SC683R 2SC683B 2SC683B 2SC683B	20 21 21 21 22 22 21 21 21 22 22 22 22 22
SC461AL SC461BL SC461BL SC461BL SC461E SC461E SC461E SC461E SC461E SC464C SC461C SC464C SC464C SC464A SC464A SC464B SC465B SC465B SC465C SC465B	2013 2013 2013 2013 2013 2013 2013 2013	2SC472X 2SC4774 2SC475 2SC4756 2SC4776 2SC4776 2SC4778 2SC482 2SC482-ORG 2SC482-ORG 2SC490-RED 2SC490-ORG 2SC490-ORG 2SC496-PEL 2SC496-YEL 2SC4	2013 2016 2009 2009 2016 2016 2030 2030 2020 2020 2020 2020 2020 2041 2041 204	2SC535E 2SC535F 2SC535G 2SC535GN 2SC535H 2SC535J 2SC535L 2SC535M 2SC535OR 2SC535OR 2SC535SN 2SC535X 2SC535Y 2SC536(JP) 2SC536(JP) 2SC536(JP) 2SC536GJ 2SC537(G) 2SC537(G) 2SC537(C) 2SC537(C) 2SC537(C) 2SC537(C) 2SC537(C)	2013 2013 2013 2013 2013 2013 2013 2013	2SC559 2SC551 2SC561A 2SC561B 2SC561C 2SC561C 2SC561C 2SC561E 2SC561F 2SC561F 2SC561G 2SC561G 2SC561H 2SC561H 2SC561J 2SC561L 2SC561L 2SC561L 2SC561L 2SC561C 2SC561C 2SC561C 2SC561C 2SC561C 2SC561C 2SC561C 2SC561C 2SC561C	2038 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC606J 2SC606K 2SC606K 2SC606M 2SC606M 2SC606N 2SC606R 2SC606R 2SC606R 2SC606Y 2SC611 2SC611 2SC618 2SC618 2SC618 2SC619(B) 2SC619(B) 2SC619(B) 2SC619B 2SC619B 2SC619B	2013 2013 2013 2013 2013 2013 2013 2013	2SC650B 2SC652 2SC654 2SC655 2SC656 2SC657A 2SC657A 2SC657B 2SC657D 2SC657D 2SC657D 2SC657F 2SC657F 2SC657G 2SC657H 2SC657H 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K	2009 2038 2009 2011 2016 2013 2013 2013 2013 2013 2013 2013 2013	2SC683D 2SC683B 2SC683F 2SC683G 2SC683G 2SC683H 2SC683H 2SC683K 2SC683K 2SC683R 2SC683M 2SC683R 2SC683R 2SC683R 2SC683R 2SC684 2SC684 2SC684B 2SC688B 2SC688B	20 22 22 22 22 22 22 22 22 22 22 22 22 2
SC461B SC461BL SC461BL SC461BL SC461EP SC461EP SC461EP SC464B SC465B	2013 2013 2013 2013 2013 2013 2013 2013	2SC474 2SC475 2SC475 2SC475 2SC477 2SC477 2SC477 2SC482-0 2SC482-0 2SC482-0 2SC490-RED 2SC490-RED 2SC496-ORG 2SC496-PEL 2SC496-PEL 2SC496-PEL 2SC496-SEC496-PEL 2SC496-SEC496-PEL 2SC496-SEC496-PEL 2SC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC496-SEC499-SEC49-SEC4	2016 2019 2009 2009 2016 2016 2030 2030 2030 2020 2020 2020 2029 2041 2041 2041 2041 2041 2041 2041 2041	2SC535F 2SC535G 2SC535GN 2SC535H 2SC535J 2SC535K 2SC535K 2SC535M 2SC535M 2SC535G 2SC535K 2SC535K 2SC536(P) 2SC536(P) 2SC536GP 2SC536GP 2SC537(G) 2SC537(G) 2SC537(G) 2SC537C 2SC537C 2SC537D 2SC537D 2SC537D 2SC537D 2SC537D	2013 2013 2013 2013 2013 2013 2013 2013	2SC551 2SC551A 2SC551B 2SC551C 2SC551D 2SC551E 2SC551G 2SC551G 2SC551G 2SC551H 2SC551H 2SC551H 2SC551L 2SC551L 2SC551L 2SC551R 2SC551R 2SC551R 2SC551Y 2SC562 2SC552B	2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC606K 2SC606L 2SC606M 2SC606N 2SC606OR 2SC606OR 2SC606E 2SC606X 2SC611 2SC613 2SC613 2SC618 2SC618 2SC619(C) 2SC619(C) 2SC619(C) 2SC619D 2SC619D 2SC619D 2SC619D	2013 2013 2013 2013 2013 2013 2013 2013	2SC652 2SC654 2SC655 2SC656 2SC657 2SC6578 2SC657B 2SC657B 2SC657D 2SC657C 2SC657G 2SC657G 2SC657G 2SC657G 2SC657H 2SC657H 2SC657H 2SC657L 2SC657L 2SC657L 2SC657D	2038 2009 2009 2011 2016 2013 2013 2013 2013 2013 2013 2013 2013	2SC683D 2SC683B 2SC683F 2SC683G 2SC683G 2SC683H 2SC683H 2SC683K 2SC683K 2SC683R 2SC683M 2SC683R 2SC683R 2SC683R 2SC683R 2SC684 2SC684 2SC684B 2SC688B 2SC688B	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
SC461BK SC461BL SC461E SC461E SC461E SC461E SC461L SC462 SC463 SC464 SC464 SC464B SC465B SC46B SC	2013 2013 2013 2013 2013 2013 2013 2016 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC475 2SC475K 2SC476 2SC477 2SC478 2SC482 2SC482-ORG 2SC490-RED 2SC499-VEL 2SC499-ORG 2SC496-RED 2SC496-YEL 2SC496-RED 2SC49	2009 2016 2016 2030 2030 2030 2030 2020 2029 2009 2041 2041 2041 2041 2041 2041 2041 2041	29C5535G 29C535GN 29C535H 29C535H 29C535K 29C535K 29C535M 29C535M 29C535R 29C535R 29C535R 29C536G 29C536G 29C536G 29C536G 29C536G 29C536G 29C536G 29C537G 29C537G 29C537C 29C537C 29C537C 29C537C 29C537D 29C537D 29C537D 29C537D 29C537D	2013 2013 2013 2013 2013 2013 2013 2013	28C551A 29C551B 29C551B 29C551C 29C551E 29C551F 29C551G 29C551G 29C551J 29C551J 29C551L 29C551L 29C551D 29C551R 29C551R 29C551R 29C551Y 29C552 29C552 29C552 29C552 29C552 29C552 29C552 29C552 29C552 29C552 29C552 29C552	2013 2013 2013 2013 2013 2013 2013 2013	2SC606L 2SC506M 2SC506N 2SC506N 2SC5060R 2SC606R 2SC606Y 2SC6013 2SC613 2SC618 2SC618A 2SC519(E) 2SC619(E) 2SC619(E) 2SC619B 2SC619D 2SC619D 2SC619D	2013 2013 2013 2013 2013 2013 2013 2016 2015 2015 2016 2009 2009 2009 2009 2009	28C655 28C655 28C657 28C657A 28C657A 28C657B 28C657C 28C657C 28C657F 28C657F 28C657G 28C657H 28C657H 28C657H 28C657K 28C657K 28C657K 28C657K 28C657K	2009 2011 2016 2013 2013 2013 2013 2013 2013 2013 2013	2SC683D 2SC683E 2SC683G 2SC683GN 2SC683GN 2SC683J 2SC683L 2SC683L 2SC683M 2SC683M 2SC683R 2SC683R 2SC683R 2SC683R 2SC683R 2SC684 2SC684B 2SC684B 2SC688B	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
SC461 C SC461 E SC461 E SC461 E SC461 E SC461 E SC462 SC463 SC464 S SC4644 S SC4644 S SC4644 S SC4644 S SC4644 S SC4644 S SC464 S SC465 S SC46	2013 2013 2013 2013 2019 2016 2013 2013 2013 2013 2013 2013 2013 2013	2SC4777 2SC4778 2SC478 2SC482 2SC482-ORG 2SC490-RED 2SC490-YEL 2SC496-ORG 2SC496-RED 2SC496-YEL 2SC	2009 2016 2030 2030 2030 2020 2020 2009 2009 2009	2SC535H 2SC535J 2SC535K 2SC535K 2SC535M 2SC535M 2SC535R 2SC535R 2SC535X 2SC535X 2SC536(F) 2SC536(F) 2SC536GP 2SC536GP 2SC536GP 2SC537(G) 2SC537(G) 2SC537(C) 2SC537C 2SC537D 2SC537D 2SC537D 2SC537D 2SC537D	2013 2013 2013 2013 2013 2013 2013 2016 2009 2010 2009 2009 2009 2009 2009 2009	29C561C 29C561D 2SC561D 2SC561E 2SC561G 2SC561G 2SC561GN 2SC561H 2SC561L 2SC561L 2SC561L 2SC561R 2SC561R 2SC561R 2SC561Y 2SC562 2SC562B	2013 2013 2013 2013 2013 2013 2013 2013	2SC606N 2SC606R 2SC606R 2SC600X 2SC600X 2SC611 2SC613 2SC618 2SC618A 2SC619(C) 2SC619(C) 2SC619(C) 2SC619B 2SC619D 2SC619D 2SC619D 2SC619D	2038 2013 2013 2013 2013 2018 2016 2015 2016 2009 2009 2009 2009 2009 2016	2SC657 2SC657 2SC657A 2SC657B 2SC657C 2SC657C 2SC657C 2SC657F 2SC657F 2SC657GN 2SC657GN 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K 2SC657CN	2011 2016 2013 2013 2013 2013 2013 2013 2013 2013	2SC683E 2SC683F 2SC683G 2SC683GN 2SC683H 2SC683H 2SC683K 2SC683K 2SC683R 2SC683M 2SC683M 2SC683R 2SC683R 2SC684 2SC688B 2SC688B 2SC688B 2SC688B	2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2
SC461E SC461E SC461E SC461E SC461E SC462 SC463 SC464 SC464 SC464B SC465B	2013 2013 2003 2009 2016 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC4777 2SC4778 2SC478 2SC482 2SC482-ORG 2SC490-RED 2SC490-YEL 2SC496-ORG 2SC496-RED 2SC496-YEL 2SC	2016 2016 2030 2030 2030 2020 2020 2029 2009 2041 2041 2041 2041 2041 2041 2041 2041	2SC535-J 2SC535-K 2SC535-K 2SC535-M 2SC535-OR 2SC535-OR 2SC535-X 2SC535-Y 2SC536-(P) 2SC536-(P) 2SC536-(P) 2SC536-(P) 2SC536-(P) 2SC537-(P) 2SC537-(P) 2SC537-(P) 2SC537-C 2SC537-C 2SC537-C 2SC537-C 2SC537-C 2SC537-D 2SC537-C 2SC537-D	2013 2013 2013 2013 2013 2013 2013 2016 2009 2010 2009 2009 2009 2009 2009 2009	2SC561D 2SC561E 2SC561F 2SC561G 2SC561GN 2SC561H 2SC561J 2SC561L 2SC561L 2SC561M 2SC561DR 2SC561R 2SC561R 2SC561Y 2SC561Y 2SC561Y 2SC562 2SC562B	2013 2013 2013 2013 2013 2013 2013 2013	2SC606OR 2SC606R 2SC606X 2SC606X 2SC606Y 2SC611 2SC613 2SC618 2SC6198 2SC619(E) 2SC619(E) 2SC619(E) 2SC619C 2SC619D 2SC619D 2SC619D 2SC619D 2SC619D	2013 2013 2013 2013 2038 2016 2015 2015 2019 2009 2009 2009 2009 2016	2SC657A 2SC657A 2SC657B 2SC657C 2SC657D 2SC657D 2SC657F 2SC657G 2SC657G 2SC657H 2SC657H 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K	2016 2013 2013 2013 2013 2013 2013 2013 2013	2SC683G 2SC683GN 2SC683H 2SC683H 2SC683K 2SC683M 2SC6830R 2SC6830R 2SC6830R 2SC683X 2SC683X 2SC684 2SC684B 2SC684B 2SC688B	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
SC461EP SC4661L SC462 SC463 SC4648 SC464A SC464B SC464B SC464B SC464B SC464G SC464H SC464G SC464H SC464H SC464H SC464H SC464B SC465B	2013 2013 2009 2016 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC478 2SC482 2SC482-ORG 2SC490-RED 2SC490-RED 2SC496-ORG 2SC496-RED 2SC496-RED 2SC496-RED 2SC496-RED 2SC496-RED 2SC496B 2SC496B 2SC496B 2SC496B 2SC496F 2SC496G 2SC496C 2SC496C 2SC496C 2SC496C 2SC496C 2SC496C 2SC496C 2SC496B	2016 2030 2030 2030 2020 2020 2029 2009 2009	2SC535K 2SC535L 2SC535M 2SC535G 2SC535R 2SC535F 2SC535X 2SC536(F) 2SC536GP 2SC536GP 2SC536GP 2SC536GP 2SC537(G) 2SC537(G) 2SC537C 2SC537C 2SC537C 2SC537D 2SC537D 2SC537D 2SC537D	2013 2013 2013 2013 2013 2013 2016 2009 2010 2009 2009 2009 2009 2009 2009	2SC561E 2SC561F 2SC561G 2SC561G 2SC561H 2SC561H 2SC561L 2SC561L 2SC561DE 2SC561DE 2SC561OB 2SC561P 2SC561Y 2SC562 2SC562B	2013 2013 2013 2013 2013 2013 2013 2013	2SC606R 2SC606X 2SC606Y 2SC606Y 2SC611 2SC613 2SC618 2SC618 2SC619 2SC619(B) 2SC619(B) 2SC619(B) 2SC619(B) 2SC619(B) 2SC619(B) 2SC619(B) 2SC619(B) 2SC619(B)	2013 2013 2013 2013 2038 2016 2015 2015 2016 2009 2009 2009 2009 2009 2016	2SC657A 2SC657B 2SC657B 2SC657C 2SC657C 2SC657F 2SC657G 2SC657GN 2SC657H 2SC657H 2SC657K 2SC657K 2SC657K 2SC657K 2SC657K	2013 2013 2013 2013 2013 2013 2013 2013	2SC683GN 2SC683H 2SC683J 2SC683L 2SC683L 2SC683DR 2SC683DR 2SC683R 2SC683R 2SC683Y 2SC6844 2SC684B 2SC688A 2SC688B	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
SC462 SC463 SC464A SC464A SC464B SC464B SC464B SC464B SC464B SC464B SC464G SC464G SC464G SC464G SC464H SC464B SC464B SC464B SC464B SC464B SC464B SC464B SC465B SC465B SC465C SC465B	2009 2016 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC482-O 2SC482-ORG 2SC490-PEL 2SC496-ORG 2SC496-ORG 2SC496-RED 2SC496-PEL 2SC496-PEL 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496G 2SC496G 2SC496G 2SC496G 2SC496B 2SC499B 2SC499B	2030 2030 2020 2020 2029 2009 2041 2041 2041 2041 2041 2041 2041 2041	2SC535M 2SC535OR 2SC535R 2SC535X 2SC535Y 2SC536(2SC536(2SC536(2SC536(2SC537(2S)(2S(2S)(2S(2S(2013 2013 2013 2013 2016 2009 2010 2009 2009 2009 2009 2009 2009	2SC561G 2SC561GN 2SC561H 2SC561H 2SC561K 2SC561K 2SC561D 2SC561D 2SC561OR 2SC561OR 2SC561Y 2SC561Y 2SC562 2SC562A 2SC562B	2013 2013 2013 2013 2013 2013 2013 2013	2SC606Y 2SC611 2SC613 2SC618 2SC618A 2SC619 2SC619(B) 2SC619(C) 2SC619(C) 2SC619B 2SC619D 2SC619D 2SC619D 2SC619D	2013 2038 2016 2015 2015 2016 2009 2009 2009 2009 2009 2009 2016	2SC657C 2SC657D 2SC657E 2SC657F 2SC657G 2SC657GN 2SC657H 2SC657H 2SC657K 2SC657K 2SC657K 2SC657CN	2013 2013 2013 2013 2013 2013 2013 2013	2SC683J 2SC683K 2SC683L 2SC683M 2SC683OR 2SC683R 2SC683Y 2SC683Y 2SC684H 2SC684B 2SC688B 2SC688B	2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2
SC463 SC464A SC464B SC464B SC464B SC464B SC464B SC464G SC464G SC464G SC464G SC464G SC464A SC464A SC464A SC464B SC464B SC464B SC465B	2016 2013 2013 2013 2013 2013 2013 2013 2013	2SC490-RED 2SC490-RED 2SC490-YEL 2SC496-ORG 2SC496-RED 2SC496-RED 2SC496A 2SC496B 2SC496B 2SC496B 2SC496D 2SC496D 2SC496B 2SC496F 2SC496G 2SC496G 2SC496H 2SC496H 2SC496J 2SC496A 2SC496A 2SC496A 2SC496A 2SC496A 2SC496A 2SC496A 2SC496A 2SC496A 2SC496B	2030 2020 2020 2009 2009 2009 2041 2041 2041 2041 2041 2041 2041 2041	2SC535OR 2SC535R 2SC535X 2SC535X 2SC5356 2SC536(B) 2SC536A (3RD-IF) 2SC536GP 2SC536GP 2SC537(G) 2SC537(G) 2SC537-O1 2SC537C 2SC537D 2SC537D 2SC537D 2SC537D	2013 2013 2013 2016 2009 2010 2009 2016 2009 2009 2009 2009 2009 2009	2SC561GN 2SC561H 2SC561H 2SC561J 2SC561K 2SC561L 2SC561DR 2SC561OR 2SC561P 2SC561Y 2SC562 2SC562B	2013 2013 2013 2013 2013 2013 2013 2013	2SC611 2SC613 2SC618 2SC618 2SC619 2SC619(B) 2SC619(C) 2SC619(C) 2SC619D 2SC619D 2SC620	2038 2016 2015 2015 2016 2009 2009 2009 2009 2009 2009 2016	2SC657D 2SC657F 2SC657F 2SC657G 2SC657GN 2SC657H 2SC657J 2SC657K 2SC657K 2SC657M 2SC657OR	2013 2013 2013 2013 2013 2013 2013 2013	2SC683K 2SC683M 2SC683M 2SC683OR 2SC683X 2SC683X 2SC683Y 2SC684 2SC684B 2SC688B 2SC688B	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
IC464 IC464B IC465B IC46B IC46	2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC490-RED 2SC490-YEL 2SC496-ORG 2SC496-RED 2SC496-YEL 2SC496A 2SC496B 2SC496B 2SC496B 2SC496E 2SC496E 2SC496E 2SC496G 2SC496G 2SC496H 2SC496H 2SC496H 2SC496H 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC499B	2020 2020 2009 2009 2009 2041 2041 2041 2041 2041 2041 2041 2041	2SC535R 2SC535X 2SC535X 2SC536Y 2SC536(E) 2SC536(A) 2SC536GJ 2SC537GJ 2SC537(G) 2SC537(G) 2SC537C 2SC537C 2SC537D2 2SC537D2 2SC537D2	2013 2013 2013 2016 2009 2010 2009 2009 2009 2009 2009 2009	2SC561H 2SC561J 2SC561K 2SC561K 2SC561M 2SC561OR 2SC561OR 2SC561X 2SC561X 2SC561Y 2SC562 2SC562A 2SC562B	2013 2013 2013 2013 2013 2013 2013 2013	2SC613 2SC618 2SC618 2SC619 2SC619(B) 2SC619(C) 2SC619B 2SC619C 2SC619D 2SC620	2016 2015 2015 2016 2009 2009 2009 2009 2009 2016	2SC657E 2SC657F 2SC657G 2SC657GN 2SC657H 2SC657H 2SC657K 2SC657K 2SC657M 2SC657M 2SC657OR	2013 2013 2013 2013 2013 2013 2013 2013	2SC683L 2SC683M 2SC683OR 2SC683R 2SC683X 2SC683Y 2SC684 2SC684R 2SC688A 2SC688B 2SC688B	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
C464A - C464B	2013 2013 2013 2013 2013 2013 2013 2013	2SC499-YEL 2SC496-ORG 2SC496-RED 2SC496-YEL 2SC496A 2SC496B 2SC496B 2SC496B 2SC496F 2SC496F 2SC496F 2SC496G 2SC496GN 2SC496H 2SC496H 2SC496H 2SC496M 2SC496M 2SC496M 2SC496M 2SC496M 2SC496M 2SC496M 2SC496M 2SC496M 2SC496M 2SC499A	2020 2009 2009 2009 2041 2041 2041 2041 2041 2041 2041 2041	29C535X 29C535Y 29C536 29C536(F) 29C536A(3RD-IF) 29C536GP 29C536GP 29C537(F) 29C537(G) 29C537-C 29C537C 29C537D2 29C537D2 29C537D2 29C537D2 29C537D2	2013 2016 2009 2010 2009 2009 2016 2009 2009 2009 2009 2009	2SC561J 2SC561K 2SC561L 2SC561M 2SC561OR 2SC561R 2SC561X 2SC561Y 2SC562 2SC562A 2SC562A	2013 2013 2013 2013 2013 2013 2013 2013	2SC618 2SC618A 2SC619 2SC619(B) 2SC619(C) 2SC619B 2SC619C 2SC619D 2SC620	2015 2016 2016 2009 2009 2009 2009 2009 2016	2SC657F 2SC657G 2SC657GN 2SC657H 2SC657J 2SC657K 2SC657K 2SC657M 2SC657OR	2013 2013 2013 2013 2013 2013 2013 2013	2SC683M 2SC683CR 2SC683R 2SC683X 2SC683Y 2SC684 2SC684B 2SC688B 2SC688B 2SC688BC 2SC688BD	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
(2464D) (2464E) (2464F) (2464F) (2464F) (2464H) (2464H) (2464H) (2464K) (2464H) (2464H) (2464H) (2464P) (2464F) (2464F) (2465F)	2013- 2013 2013 2013 2013	2SC496-RED 2SC496-YEL 2SC496A 2SC496B 2SC496C 2SC496D 2SC496F 2SC496F 2SC496F 2SC496G 2SC496G 2SC496H 2SC496J 2SC496A 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC496B 2SC499A	2009 2009 2041 2041 2041 2041 2041 2041 2041 2041	29C536 2SC536(E) 2SC536(A) 2SC536(G) 2SC536(G) 2SC537(F) 2SC537(G) 2SC537-C1 2SC537-C 2SC537D2 2SC537D2 2SC537D2	2016 2009 2010 2009 2009 2016 2009 2009 2009 2009 2009	2SC561L 2SC561M 2SC561OB 2SC561R 2SC561X 2SC561Y 2SC562 2SC562A 2SC562A	2013 2013 2013 2013 2013 2013 2016 2013	2SC619 2SC619(B) 2SC619(C) 2SC619B 2SC619C 2SC619D 2SC620	2016 2009 2009 2009 2009 2009 2016	2SC657L 2SC657M 2SC657OR	2013 2013 2013 2013 2013 2013 2013 2013	2SC683R 2SC683X 2SC683Y 2SC684 2SC684R 2SC688A 2SC688B 2SC688B 2SC688C 2SC688D	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
IC464E IC464GN IC465GN	2013 2013 2013 2013 2013 2013 2013 2013	2SC496-YEL 2SC496A 2SC496B 2SC496B 2SC496D 2SC496D 2SC496F 2SC496G 2SC496G 2SC496G 2SC496H 2SC496H 2SC496H 2SC496L 2SC496A 2SC496A 2SC496A 2SC496A 2SC496A 2SC499A	2009 2041 2041 2041 2041 2041 2041 2041 2041	2SC536(F) 2SC536A(3RD-IF) 2SC536GJ 2SC536GP 2SC537(F) 2SC537(F) 2SC537(G) 2SC537-01 2SC537-C 2SC537D 2SC537D 2SC537D 2SC537D 2SC537D 2SC537D	2009 2010 2009 2009 2016 2009 2009 2009 2009 2009	2SC561M 2SC5610R 2SC561R 2SC561X 2SC561Y 2SC562 2SC562A 2SC562B	2013 2013 2013 2013 2013 2016 2013	2SC619(B) 2SC619(C) 2SC619B 2SC619C 2SC619D 2SC620	2009 2009 2009 2009 2009 2016	2SC657L 2SC657M 2SC657OR	2013 2013 2013 2013 2013 2013 2013 2013	2SC683X 2SC683Y 2SC684 2SC684R 2SC688A 2SC688B 2SC688C 2SC688D	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
C464F C464GN C464H C464H C464H C464C C465C	2013 2013 2013 2013 2013 2013 2013 2013	2SC496A 2SC496B 2SC496C 2SC496E 2SC496E 2SC496E 2SC496G 2SC496G 2SC496H 2SC496H 2SC496L 2SC496L 2SC496D 2SC496OR 2SC499A 2SC499B	2041 2041 2041 2041 2041 2041 2041 2041	2SC536A(3RD-JF) 2SC536GP 2SC536GP 2SC537(F) 2SC537(F) 2SC537(G) 2SC537C 2SC537D 2SC537D 2SC537D	2010 2009 2009 2016 2009 2009 2009 2009 2009	2SC5610R 2SC561R 2SC561X 2SC561Y 2SC562 2SC562A 2SC562B	2013 2013 2013 2013 2016 2013	2SC619B 2SC619C 2SC619D 2SC620	2009 2009 2009 2009 2016	2SC657L 2SC657M 2SC657OR	2013 2013 2013 2013 2013 2013 2013	2SC684 2SC684R 2SC688A 2SC688B 2SC688C 2SC688D	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
C464G C464H C464J C464L C464K C464C C464C C464C C464C C465C	2013 2013 2013 2013 2013 2013 2013 2013	2SC496B 2SC496C 2SC496D 2SC496F 2SC496F 2SC496G 2SC496G 2SC496H 2SC496H 2SC496K 2SC496K 2SC496M 2SC496M 2SC496N 2SC496N 2SC496N 2SC496N 2SC4998	2041 2041 2041 2041 2041 2041 2041 2041	2SC536GJ 2SC536GP 2SC5377 2SC537(F) 2SC537(G) 2SC537-01 2SC537C 2SC537D 2SC537D2 2SC537D2	2009 2009 2016 2009 2009 2009 2009 2009	2SC561R 2SC561X 2SC561Y 2SC562 2SC562A 2SC562B	2013 2013 2016 2013	2SC619B 2SC619C 2SC619D 2SC620	2009 2009 2009 2016	2SC657L 2SC657M 2SC657OR	2013 2013 2013 2013 2013	2SC684 2SC684R 2SC688A 2SC688B 2SC688C 2SC688D	
C464H C464K C464K C464K C464K C464C C464C C464C C464S C465A C465A C465B C465C	2013 2013 2013 2013 2013 2013 2013 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC496D 2SC496E 2SC496F 2SC496G 2SC496GN 2SC496H 2SC496H 2SC496K 2SC496K 2SC496K 2SC496K 2SC496K 2SC496K 2SC496K 2SC496X 2SC496X 2SC4998	2041 2041 2041 2041 2041 2041 2041 2041	2SC537 2SC537(F) 2SC537(G) 2SC537-01 2SC537C 2SC537D 2SC537D 2SC537D2 2SC537E	2016 2009 2009 2009 2009 2009	2SC561Y 2SC562 2SC562A 2SC562B	2013 2016 2013	2SC619D 2SC620	2009 2016	2SC657M 2SC657OR	2013 2013 2013 2013	2SC688A 2SC688B 2SC688C 2SC688D	
C464J C464K C464L C464DR C464R C464R C464Y C465A C465B C465B C465C	2013 2013 2013 2013 2013 2013 2013 2013	2SC496E 2SC496G 2SC496G 2SC496GN 2SC496H 2SC496J 2SC496K 2SC496K 2SC496M 2SC496M 2SC496M 2SC499A 2SC499A	2041 2041 2041 2041 2041 2041 2041 2041	2SC537(F) 2SC537(G) 2SC537-01 2SC537C 2SC537D 2SC537D 2SC537D2 2SC537E	2009 2009 2009 2009 2009	2SC562 2SC562A 2SC562B	2016 2013	2SC620	2016	2SC657OR	2013 2013 2013	2SC688B 2SC688C 2SC688D	
C464K C464M C464CR C464R C464X C464X C464S C465B C465B C465C	2013 2013 2013 2013 2013 2013 2013 2013	2SC496F 2SC496GN 2SC496GN 2SC496J 2SC496J 2SC496K 2SC496M 2SC496M 2SC496OR 2SC499A 2SC499A 2SC499B	2041 2041 2041 2041 2041 2041 2041 2041	2SC537(G) 2SC537-01 2SC537C 2SC537D 2SC537D2 2SC537E	2009 2009 2009 2009	2SC562A 2SC562B	2013			2SC657R	2013 2013	2SC688C 2SC688D	EUD
C464L C464P C464P C464P C4654 C465A C465B C465B C465B C465C	2013 2013 2013 2013 2013 2013 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC496G 2SC496GN 2SC496H 2SC496J 2SC495K 2SC495L 2SC495M 2SC495OR 2SC496X 2SC499A 2SC499A	2041 2041 2041 2041 2041 2041 2041 2041	2SC537-01 2SC537C 2SC537D 2SC537D2 2SC537E	2009 2009 2009	2SC562B		2SC620(C)			2013	2SC688D	
C464OR C464R C464Y C465A C465A C465B C465B C465C C465C C465C C465G C485G C485G C485G C485C C465K C465L C465L C465L C465L	2013 2013 2013 2013 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC496H 2SC496J 2SC496K 2SC496L 2SC496M 2SC496OR 2SC496OR 2SC499A 2SC499A	2041 2041 2041 2041 2041 2041 2041	2SC537D 2SC537D2 2SC537E	2009		2013	2SC620(D)	2009	2SC657X			1
C464R C464Y C465A C465B C465B C465C C465C C465C C465C C465C C465C C465C C465C C465C C465C C465C C465C C465C	2013 2013 2013 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC496J 2SC496K 2SC496M 2SC496M 2SC496OR 2SC496X 2SC499A 2SC499B	2041 2041 2041 2041 2041 2041	2SC537D2 2SC537E		2SC562C 2SC562D	2013	2SC620C	2009	2SC657Y	2013	2SC688E	
C464X C4654 C4655 C4656 C4656 C465C C465C C4656 C4656 C4656 C4656 C4655 C4655 C4655 C4655 C4655 C4655 C4655 C4655 C465M	2013 2015 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC496K 2SC496L 2SC496M 2SC496OR 2SC496X 2SC499A 2SC499B	2041 2041 2041 2041 2041	2SC537E	2009	2SC562D 2SC562E	2013	2SC620CD 2SC620D	2009 2009	2SC659 2SC662	2016 2011	2SC688F 2SC688G	
C464Y C465A C465B C465B C465C C465C C465C C465G C465G C465G C465H C465J C465L C465L C465L	2013 2015 2013 2013 2013 2013 2013 2013 2013 2013	2SC496L 2SC496M 2SC496OR 2SC496X 2SC499A 2SC499B	2041 2041 2041 2041	00055555	2009	2SC562F	2013	2SC620DE	2009	2SC662A	2013	2SC688GN	3 4
C465A C465B C465C C465C C465E C465F C465G C465G C465H C465J C465H C465L C465M C465M	2013 2013 2013 2013 2013 2013 2013	2SC496OR 2SC496X 2SC499A 2SC499B	2041 2041	2SC537EF	2009	2SC562G	2013	2\$C620E	2009	2SC663	2015	2SC688H	
C465B C465C C465D C465E C465F C465G C465GN C465H C465H C465L C465L C465L C465L C465OR	2013 2013 2013 2013 2013 2013	2SC496X 2SC499A 2SC499B	2041	2SC537EH 2SC537EJ	2009 2009	2SC562GN 2SC562H	2013	2SC621 2SC622	2016 2016	2SC663A 2SC663B	2014 2014	2SC688J 2SC688K	
C465C C465D C465F C465F C465G C465G C465H C465H C465L C465L C465L C465C	2013 2013 2013 2013 2013	2SC499A 2SC499B		2SC537ES 2SC537EK	2009	2SC562J	2013	2SC623	2016	2SC663C	2014	2SC688L	
C465E C465F C465G C465GN C465H C465J C465K C465L C465C C465OR	2013 2013 2013	2SC499B	2012	2SC537F	2009	2SC562K	2013	2SC624	2016	250563D	2014	2SC688M	
C465F C465G C465GN C465H C465J C465K C465L C465L C465OR	2013 2013	2SC499C	2012	2SC537F1	2009	2SC562L	2013	2SC626	2009	2SC663E	2014	2SC688OR	
C465G C465GN C465H C465J C465K C465L C465M C465OR	2013	2SC499D	2012 2012	2SC537F2 2SC537FC	2009	2SC562M 2SC562OR	2013	2SC628E 2SC628F	2030 2030	2SC663F 2SC663G	2014 2014	2SC688R 2SC688X 2SC688Y	
C465GN C465H C465J C465K C465L C465M C465OR		2SC499E	2012	2SC537F-C7	2009	2SC562R	2013	2SC629	2015	2SC663GN	2014	2SC688Y	Sile.
C465J C465K C465L C465M C465OR		2SC499F	2012	2SC537FV	2009	2SC562X	2013	2SC629A	2013	2SC663H	2014	2SC689	
C465K C465L C465M C465OR	2013	2SC499FA1	2012	2SC537G	2009	2SC563(3RDIF)	2010	2SC629B	2013	2SC663J	2014	2SC689H	
C465L C465M C465OR	2013 2013	2SC499G 2SC499GN	2012 2012	2SC537G1 2SC537G2	2009	2SC563A(3RDIF) 2SC563B	2010 2013	2SC629C 2SC629D	2013 2013	2SC663K 2SC663L	2014 2014	2SC695 2SC696AA	
C465M C465OR	2013	2SC499H	2012	2SC537GF	2009	2SC563D	2013	2SC629E	2013	2SC663M	2014	2SC696AB	
C465OR	2013	2SC499J	2012	2SC537GFL	2013	2SC563E	2013	2SC629F	2013	2SC663OR	2014	2SC696AD	
	2013	2SC499K	2012	2SC537H	2009	2SC563F	2013	2SC629G	2013	2SC663R	2014	2SC696AE	
C465X	2013	2SC499L 2SC499M	2012 2012	2SC537HT 2SC537W	2009	2SC563G 2SC563GN	2009	2SC629GN 2SC629H	2013 2013	2SC663X 2SC663Y	2014 2014	2SC696AF 2SC696AG	
C465Y	2013	2SC499OR	2012	2SC537WF	2031	2SC563H	2013	2SC629J	2013	2SC664	2041	2SC696AH	
C466	2015	2SC499X	2012	2SC538	2016	2SC563J	2013	2SC629K	2013	2SC664B	2041	2SC696AI	
C466A C466B	2013 2013	2SC500A 2SC500B	2012 2012	2SC538A 2SC538A(Q)	2016	2SC563K 2SC563L	2013	2SC629L 2SC629M	2013 2013	2SC664C 2SC668	2041 2038	2SC696GU 2SC702	
C466C	2013	2SC500C	2012	2SC538AQ	2009	2SC563M	2013	2SC629OR	2013	2SC668(C)	2030	2SC705	- 3
C466D	2013	2SC500D	2012	2SC538AR	2013	2SC563OR	2013	2SC629R	2013	2SC668(D)	2011	2SC705B	
C466E C466F	2013	2SC500E 2SC500F	2012 2012	2SC538P 2SC538Q	2009	2SC563R 2SC563X	2013	2SC629X 2SC629Y	2013 2013	2SC668-0 2SC668A	2013 2013	2SC705C 2SC705D	-
C466G	2013	2SC500G	2012	2SC538R	2009	2SC563Y	2013	2SC631	2009	2SC668B	2013	2SC705E	-33
C466GN	2013	2SC500GN	2012	2SC538S	2009	2SC564	2030	2SC631A	2009	2SC668B1	2013	2SC705F	
C466J	2013	2SC500H	2012	2SC538T	2009	2SC564(Q)	2009	2SC632	2009	2SC668BC2	2013	2SC705TV	
C466K C466L	2013	2SC500J 2SC500K	2012 2012	2SC539 2SC539(L)(K)	2016	2SC565 2SC566	2016 2009	2SC632(1) 2SC632A	2010 2009	2SC668C 2SC668C1	2013 2013	2SC705TV(3RD 2SC705TVV)-IF)
C466M	2013	2SC500L	2012	2SC539(R)	2009	2SC568	2038	2SC633	2016	2SC668C2	2009	2SC705TW	
C466OR	2013	2SC500M	2012	2SC539K	2009	2SC569	2016	2SC633-7	2009	2SC668CD	2013	2SC706	
C466R	2013	2SC500OR	2012	2SC539L	2009	2SC570	2016	2SC633A	2016	2SC668D	2013	2SC707	
C466X C466Y	2013	2SC500X 2SC501	2012 2038	2SC539R 2SC539S 2SC540 2SC543A 2SC543B	2009	2SC578 2SC579	2030	2SC633B 2SC633G	2009	2SC668D1 2SC668DF	2013 2013		
C467	2013	2SC501-ORG	2038	2SC540	2009	2SC581	2016	2SC633G 2SC633H 2SC634	2009	2SC668DE 2SC668DV 2SC668DV	2013	2SC709(B)(C)	15.00
C468	2016	2SC501-RED 2SC504-O	2030	2SC543A	2013	2SC583	2011	2SC634	2016	2SC668DV	2013	2SC709(C)	
C468A C468H	2009	2SC504-O 2SC505-ORG	2030	2SC543B 2SC543C	2013	2SC587 2SC587A	2009	2SC634(2) 2SC634A	2010 2009	25C668DX	2013 2013	2SC709B	
C469	2016	2SC506-ORG	2012	2SC543D	2013	2SC587A 2SC588	2009	2SC635A	2031	2SC668E	2013		-
C469A	2038	2SC509(O)	2009	2SC543E	2013	2SC593	2016	2SC638C	2013	2SC668E1	2013	2SC709D	
C469B	2013	2SC509(Y)			2013	2SC595	2016	2SC639	2016	2SC668E2	2013	2SC710	
C469C C469D	2013	2SC520 2SC520A	2041 2041	2SC543F 2SC543G 2SC543GN 2SC543H 2SC543J 2SC543K 2SC543L 2SC543N 2SC543OR	2013 2013	2SC596 2SC601	2009 2016	2SC640 2SC640B	2009 2009	2SC668EV	2013 2013	2SC710(B) 2SC710(C)	
C469E	2013	2SC520A 2SC521	2041	2SC543H	2013	2SC601N	2016	2SC641	2009	2SC668EX	2013	2SC710(D)	0.00
C469F	2038	2SC521A	2041	2SC543J	2013	2SC602	2038	2SC641H	2016	2SC668F	2013	2SC710-1	
C469G C469GN	2013		2016	2SC543K	2013	2SC604	2011	2SC641K	2021	25C668G	2013	2SC710-2	
C469H	2013	2SC529 2SC529A	2009	2SC543L	2013	2SC605 2SC605(Q)	2016 2038	2SC644(H) 2SC644(R) 2SC644(R,S) 2SC644H(S)	2031 2031		2013 2013	2SC7104	
C469J	2013	2SC529A 2SC529B 2SC529C	2009		2013	2SC605A	2013	2SC644(R,S)	2031	2SC668K	2013	2SC710B	_
C469K	2038	2SC529C	2013	2SC543R	2013	2SC605B	2013	2SC644H(S)	2031	2SC668L	2013	2SC710B2	
C469L C469M	2013 2013	2SC529D	2013 2013	2SC543X 2SC543Y	2013 2013	2SC605C 2SC605D	2010	25C645	2016 2011	30000000	2013 2013	2SC710BC	
C469OR	2013	2SC529D 2SC529E 2SC529F	2013	2SC544	2013	DECEMEN	2013 2013	2SC645A 2SC645A 2SC645B 2SC645B-1 2SC645C 2SC645C	2011	2SC668R 2SC668X 2SC668Y 2SC674 2SC674(D) 2SC674(F)	2013	2SC710D	
C469Q	2038	2SC529G	2013	2SC544 2SC544A	2013	2SC605F	2013	2SC645B-1	2013	2SC668X	2013	2SC710E	-
C469R	2038	2SC529G 2SC529GN	2013	2SC544AG	2013	2SC605G	2013	2SC645C	2011	2SC668Y	2013	2SC710F	200
C469X	2013	2SC529H	2013	2SC544B	2013	2SC605GN	2013	25C645D	2013	2SC674	2038	2SC710G	1150
C469Y C470-4	2013	2SC529H 2SC529J 2SC529K	2013 2013	2SC544D(VHF) 2SC544F	2011	2SC605H 2SC605J	2013	2SC645E 2SC645F	2013 2013	2SC674(D)	2009 2009	25C/10GN	
C470-5	2008	2SC529L	2013	2SC544F	2013	2SC605K	2038	2SC645G	2011	2SC674(F)	2009	2SC710K	_
C470-6	2008	2SC529M	2013	2SC544GN	2013	2SC605L	2038	2SC645GN 2SC645GR	2013	2SC677	2032	2SC710L	
C471	2016	2SC529OR	2013	2SC544H	2013	20000EM	2038	2SC645GR	2013	2SC678	2041	2SC710M	
C472	2016 2013	2SC529R 2SC529X	2013	2SC544J	2013	2SC605OR	2013	2SC645H	2013	2SC682	2038	2SC7100R	
C472A C472B	2013	2SC529Y	2013 2013	2SC544K 2SC544L	2013	2SC605Q 2SC605R	2011	2SC645J 2SC645K	2013 2013	2SC682D	2013 2013	2SC710X	100
C472C	2013	2SC529Y 2SC530 2SC531 2SC532	2016	2SC544M	2013	2SC605M 2SC605OR 2SC605Q 2SC605R 2SC605X 2SC605Y 2SC606	2013	2SC645K 2SC645L 2SC645M	2013	2SC682C 2SC682D 2SC682F 2SC682G	2013	2SC710XL	
C472D	2013	2SC531	2016	2SC544M 2SC544OR 2SC544R	2013	2SC605Y	2013	2SC645M	2013	2SC682G	2013	2SC710Y	1630
C472E C472F	2013 2013	2SC532 2SC533	2016 2016	2SC544R 2SC544X	2013	2SC606 2SC606(VHF)	2016	2SC645N 2SC645OR	2011 2013	ZOCBOZGN	2013 2013	2SC711AN 2SC711B	923

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
2SC711C	2013 2013	2SC744	2030	2SC772KD1	2013	2SC793GN	2041	2SC837L	2011	2SC871GN	2013	2SC921Y	201
2SC711GN 2SC711H	2013	2SC751 2SC752	2011	2SC772KD2 2SC772l.	2013	2SC793H 2SC793J	2041	2SC837M 2SC837OR	2013 2013	2SC871H 2SC871J	2013 2013	2SC922 2SC922A	201 201
2SC711J	2013 2013	2SC752-ORG-G 2SC752-RED-G	2016 2016	2SC772M	2013	2SC793K	2041	2SC837R	2013	2SC871K	2013	2SC922B	201
2SC711L 2SC711M	2013	2SC752-NED-G	2010	2SC772OR 2SC772R	2013 2013	2SC793L 2SC793M	2041	2SC837WF 2SC837X	2011 2013	2SC871L 2SC871M	2013 2013	2SC922C 2SC922L	201 201
2SC7110R 2SC711R	2013 2013	2SC752G 2SC752G-O	2016 2016	2SC772RB-D 2SC772RD	2013 2013	2SC793OR 2SC793R	2041 2041	2SC837Y 2SC838	2013 2016	2SC871OR	2013	2SC922M	201
2SC711X	2013	2SC752G-R	2016	2SC772RS-D	2009	2SC793X	2041	2SC838(E)	2009	2SC871R 2SC871X	2013 2013	2SC-923 2SC923	200 201
2SC711Y 2SC712	2013 2009	2SC754 2SC758OR	2016	2SC772X 2SC772Y	2013 2013	2SC793Y 2SC794R	2041	2SC838(F) 2SC838(O)	2009 2009	2SC871Y 2SC877	2013	2SC923(E)(F)	200
2SC712(D)	2009	2SC761	2015	2SC773	2016	2SC795(BN)	2011	2SC838-O	2009	2SC878	2016 2016	2SC924 2SC925	201 20 0
2SC712-CD 2SC712A	2009 2016	2SC761OR 2SC762	2013	2SC773(E) 2SC773A	2009	2SC796 2SC797	2009	2SC838A 2SC838B	2009 2009	2SC879 2SC889	2011 2041	2SC925(M) 2SC927	200
2SC712B	2009	2SC762B	2009	2SC773B	2013	2SC800	2011	2SC838C	2009	2SC894	2016	2SC927E,Z	200
2SC712C 2SC712D	2009 2009	2SC762C 2SC762D	2013 2013	2SC773C 2SC773D	2009	2SC802 2SC805A	2030 2012	2SC838D 2SC838E	2009 2009	2SC896 2SC898D	2016 2013	2SC927F 2SC927G	201- 201-
2SC712E	2009 2009	2SC762E	2013	2SC773E	2009	2SC805B	2012	2SC838F	2009	2SC898E	2013	2SC927GN	201
2SC712W 2SC713	2009	2SC762F 2SC762G	2013 2013	2SC773F 2SC773G	2013 2013	2SC805C 2SC805D	2012 2012	2SC838H 2SC838HF	2009 2009	2SC898F 2SC898G	2013 2013	2SC927H 2SC927J	201 201
2SC713E 2SC713F	2009 2009	2SC762GN 2SC762H	2013 2013	2SC773GN 2SC773H	2013	2SC805E 2SC805F	2012	2SC838J	2009	2SC898GN	2013	2SC927K	201
2SC714	2009	2SC762J	2013	2SC773J	2013 2013	2SC805G	2012	2SC838K 2SC838M	2009 2009	2SC898H 2SC898J	2013 2013	2SC927L 2SC927M	201
2SC715 2SC715A	2016 2009	2SC762K 2SC762L	2013	2SC773K 2SC773L	2013	2SC805GN	2012	2SC838S	2009	2SC898K	2013	2SC927OR	201
2SC715B	2009	2SC762M	2013	2SC773M	2013	2SC805H 2SC805J	2012	2SC839 2SC839(H)	2016 2009	2SC898L 2SC898M	2013 2013	2SC927R 2SC927X	201
2SC715C 2SC715D	2009 2009	2SC762R 2SC762X	2013 2013	2SC773OR 2SC773R	2013	2SC805L 2SC805OR	2012 2012	2SC839(J) 2SC839(Ji)	2009 2009	2SC898OR	2013	2SC927XL 2SC927Y	201
2SC715E	2009	2SC762Y	2013	2SC773X	2013	2SC805R	2012	2SC839(L)	2009	2SC898X 2SC898Y	2013 2013	2SC9271 2SC928	201 201
2SC715EJ 2SC715EV	2009 2011	2SC763 2SC763(C)	2016	2SC773Y 2SC780G	2013	2SC805X 2SC805Y	2012	2SC839(M) 2SC839A	2009 2009	2SC899	2016	2SC928A	201
2SC715F	2009	2SC763À	2013	2SC784	2016	2SC810	2038	2SC839B	2009	2SC899K 2SC900	2009 2010	2SC928F 2SC928G	201
2SC715XL 2SC716	2009 2016	2SC763B 2SC763C	2013 2013	2SC784(BN) 2SC784-0	2011	2SC812 2SC814Y	2016	2SC839C 2SC839D	2009 2009	2SC903 2SC906	2033 2009	2SC928GN 2SC928H	201 201
2SC716B	2009	2SC763CD	2013	2SC784-6	2013	2SC815	2009	2SC839E	2009	2SC906(F)	2032	2SC928J	201
2SC716C 2SC716D	2009 2009	2SC763D 2SC763E	2013 2013	2SC784-BN 2SC784-BRN	2016 2015	2SC815(M) 2SC815A	2009	2SC839F 2SC839G	2009 2013	2SC906F 2SC907A	2009 2016	2SC928K 2SC928L	201
2SC716E 2SC716F	2009	2SC763F	2013	2SC784-O	2016	2SC815B	2009	2SC839GN	2013	2SC912	2016	2SC928M	201
2SC716G	2009	2SC763G 2SC763GN	2013 2013	2SC784-R 2SC784-RED	2016 2016	2SC815C 2SC815F	2009 2009	2SC839H 2SC839J	2009 2009	2SC913 2SC914	2009 2009	2SC928OR 2SC928R	201
2SC717(3RD-IF) 2SC717(LAST-IF	2010	2SC763H 2SC763J	2013	2SC784-Y 2SC784A	2030 2013	2SC815K	2009	2SC839JH	2013	2SC914A	2033	2SC928X	201
2SC720	2011	2SC763K	2013	2SC784B	2013	2SC815L 2SC815M	2009	2SC839JI 2SC839K	2009 2009	2SC915 2SC915A	2033 2033	2SC928Y 2SC929	201
2SC721 2SC722	2011 2011	2SC763L 2SC763M	2013 2013	2SC784BN 2SC784BN-1	2013	2SC815S 2SC815SA	2009	2SC839L 2SC839M	2009 2009	2SC917	2016	2SC929(0)	200
2SC723	2011	2SC763OR	2013	2SC784C	2013	2SC815SC	2009	2SC839N	2009	2SC917(K) 2SC917K	2013 2013	2SC929(E) 2SC929-0	200 201
2SC723BL 2SC724	2009 2016	2SC763X 2SC763Y	2013 2013	2SC784D 2SC784E	2013	2SC828 2SC828(H)	2016 2009	2SC839OR 2SC839R	2013 2013	2SC918	2016	2SC929B	201
2SC725	2016	2SC764	2016	2SC784F	2013	2SC828(N)	2009	2SC839S	2009	2SC918A 2SC918B	2013 2013	2SC929C 2SC929C1	201 201
2SC725-O 2SC726	2009 2016	2SC765 2SC768	2041	2SC784G 2SC784GN	2013	2SC828(O) 2SC828(P)	2031	2SC839X 2SC839Y	2013 2013	2SC918C 2SC918D	2013 2013	2SC929D 2SC929D1	201
2SC732(BL)	2009	2SC768A	2013	2SC784H	2013	2SC828(P)(Q)	2009	2SC844	2009	2SC918E	2013	2SC929DE	201
2SC732-V10 2SC733	2009 2016	2SC771 2SC771A	2013	2SC784J 2SC784K	2013 2013	2SC828(Q) 2SC828(R)	2009	2SC847 2SC848	2009 2009	2SC918F 2SC918G	2013 2013	2SC929DP 2SC929DU	201
2SC733-O	2016	2SC771B	2013	2SC784L	2013	2SC828(S)	2009	2SC849	2009	2SC918GN	2013	2SC929DV	201
2SC733-ORG 2SC733E	2016 2010	2SC771BX 2SC771C	2013 2013	2SC784M 2SC784O	2013 2013	2SC828(T) 2SC828A(Q)	2009	2SC850 2SC851	2009 2041	2SC918H 2SC918J	2013 2013	2SC929E 2SC929ED	201: 201:
2SC733GN	2009	2SC771D	2013	2SC784OR	2013	2SC828A(R)	2013	2SC852	2038	2SC918K	2013	2SC929EZ	200
2SC735 2SC735-O	2033 2033	2SC771E 2SC771F	2013 2013	2SC784Q 2SC784R	2009 2013	2SC828PQ 2SC828RH	2013	2SC857K 2SC860	2021 2038	2SC918L 2SC918M	2013 2013	2SC929F 2SC929FK	201
2SC735-ORG 2SC735-OY	2033 2010	2SC771G 2SC771GN	2013 2013	2SC784R/4454C 2SC784RA	2013 2013	2SC828RS 2SC829	2009	2SC860A	2014	2SC918OR	2013	2SC929NP	201
2SC735-R	2033	2SC771H	2013	2SC784X	2013	2SC829A	2016	2SC860B 2SC860F	2014 2014	2SC918R 2SC918X	2013 2013	2SC930 2SC930(E)	201
2SC735-RED 2SC7350	2033	2SC771J 2SC771K	2013	2SC784Y 2SC785	2013 2016	2SC829AK 2SC829B	2013	2SC860GN	2014	2SC918Y 2SC920	2013	2SC930A	201
2SC736	2041	2SC771L	2013	2SC785(O)	2009	2SC829B/4454C	2009	2SC860H	2014 2014	2SC920-0Q	2016 2013	2SC930B 2SC930BB	201
2SC736R 2SC737	2013 2009	2SC771M 2SC771OR	2013 2013	2SC785-0 2SC785-BN	2009 2016	2SC829BC 2SC829BJ	2009 2013	2SC860J 2SC860K	2014 2014	2SC920A 2SC920B	2013	2SC930BK	201
2SC737Y	2009	2SC771B	2013	2SC785-BRN	2015	2SC829BK	2013	2SC860L	2014	2SC920C	2013 2013	2SC930BV 2SC930C	201: 201:
2SC738 2SC738A	2016 2013	2SC771X 2SC771Y 2SC772 2SC772A 2SC772B	2013	2SC785-O 2SC785-ORG	2016 2016	2SC829BY 2SC829C	2009	2SC860M 2SC860OR	2014 2014	2SC920CL 2SC920D	2013 2013	2SC930CK 2SC930CL 2SC930CS 2SC930D	201:
2SC738B	2013	2SC772	2016	2SC785-R	2016	2SC829CL	2013	2SC860R	2014	2SC920E	2011	2SC930CS	201:
2\$C738C 2\$C738D	2011 2011	2SC772B	2013	2SC785-RED 2SC785A	2016 2010	2SC829D 2SC829E	2009 2013	2SC860X 2SC860Y	2014 2014	2SC920F 2SC920G	2013 2013	2SC930D 2SC930DE	201:
2SC738E 2SC738F	2013	25C//2BG	2013	2SC785B	2010	2SC829F	2009	2SC863A	2014	2SC920GN	2013	2SC930DE 2SC930DH 2SC930DS	201:
2SC738G	2013 2013	2SC772BH 2SC772BV	2013 2013	2SC785BL 2SC785BN	2010 2013	2SC829G 2SC829GN	2013 2013	2SC863B 2SC863C	2014 2014	2SC920H 2SC920L	2013 2013	2SC930DS 2SC930DT	201:
2SC738GN 2SC738H	2013 2013	2SC772BX	2013	2SC785BR	2011	2SC829H	2013	2SC863D	2014	2SC920M	2013	2SC930DT-2	201:
2SC738J	2013	2SC772BY 2SC772C	2013 2013	2SC785C 2SC785D	2010 2013	2SC829K 2SC829L	2013 2013	2SC863E 2SC863F	2014 2014	2SC920OR 2SC920Q	2013 2013	2SC930DX 2SC930DZ	201:
2SC738K 2SC738L	2013 2013	2SC772C1 2SC772C2	2013	2SC785E 2SC785F	2013	2SC829M	2013	2SC863G	2014	2SC920R	2013	2SC930E	201:
2SC738M	2013	2SC772CA	2013	2SC785G	2013 2013	2SC829OR 2SC829R	2013	2SC863GN 2SC863H	2014 2014	2SC920X 2SC920Y	2013 2013	2SC930EP 2SC930ET	201:
2SC738OR 2SC738R	2013 2013	2SC772CK 2SC772CL	2013 2013	2SC785GN 2SC785GR	2013	2SC829X 2SC829Y	2009	2SC863J	2014	2SC921	2016	2SC930EV	2013
2SC738X	2013	2SC772CS	2013	2SC785H	2010	2SC833	2009	2SC863K 2SC863L	2014 2014	2SC921(L) 2SC921(VHF)	2009 2011	2SC930EX 2SC930F	201:
2\$C738Y 2\$C739	2013 2016	2SC772CS 2SC772CU 2SC772CV	2011 2013	2SC785K 2SC785L 2SC785M	2013	2SC834L	2031	2SC863M	2014	2SC921A	2013	2SC930G	2013
2SC739A	2013	2SC772CV 2SC772CX 2SC772D	2011	2SC785M	2010 2013	2SC835 2SC836M	2011	2SC863OR 2SC863R	2014 2014	2SC921B 2SC921C	2013 2013	2SC930GN 2SC930H	2013
2SC739B 2SC739C	2013 2011	2SC772D 2SC772D.I	2013 2013	2SC785R 2SC785RA	2013 2013	2SC837	2015	2SC863X	2014	2SC921C1	2011	2SC930H 2SC930J 2SC930K 2SC930L 2SC930M	2013
2SC739D	2013	2SC772DJ 2SC772DU 2SC772DV	2013	2SC785V	2010	2SC837(K) 2SC837(KL)	2013	2SC863Y 2SC864	2014 2016	2SC921CL 2SC921D	2013 2013	2SC930K	201:
2SC739E 2SC739F	2013 2013	2SC772DV 2SC772DX	2013 2013	2SC785X 2SC785Y	2013 2010	2SC837(L) 2SC837A	2013 2013	2SC870 2SC870BL	2009	2SC921E	2013	2SC930M	201:
2\$C739G	2013	2SC772DY	2013	2SC786	2038	2SC837B	2013	2SC870E	2009 2009	2SC921F 2SC921G	2013 2013	2SC9300R	201:
2SC739GN 2SC739H	2013 2013	2SC772E 2SC772F	2013 2013	2SC786R 2SC787	2013 2015	2SC837C 2SC837D	2013	2SC870F	2009	2SC921G 2SC921GN	2013	2SC930X 2SC930Y	2013
2SC739K	2013	2SC772G	2013	2SC793	2041	2SC837E	2013 2013	2SC871A 2SC871AM	2013 2013	2SC921H 2SC921J	2013 2013	2SC933	2013
2SC739L 2SC739M	2013 2013	2SC772GN 2SC772H	2013 2013	2SC793A 2SC793B	2041 2041	2SC837F 2SC837G	2011	2SC871B	2013	2SC921K	2011	2SC933(F)	2009
2SC739OR	2013	2SC772J	2013	2SC793BL	2041	2SC837GN	2013 2013	2SC871BL 2SC871C	2009 2013	2SC921L 2SC921M	2011 2011	2SC933BB 2SC933C	2009
2SC739R 2SC739Y	2013 2013	2SC772K 2SC772KB	2013 2013	2SC793C 2SC793E	2041	2SC837H 2SC837.I	2011 2013	2SC871D 2SC871E	2009 2009	2SC921OR 2SC921R	2013 2013	2SC933D 2SC933D(F)	2009
2SC740	2015	2SC772KC	2013	2SC793F	2041	2SC837J 2SC837K	2011	2SC871F	2009	2SC921W	2013	2SC933E	2009
2SC741	2009	2\$C772KD	2013	2SC793G	2041	2SC837KL	2013	2SC871G	2009	2SC921X	2013	2SC933E(F)	2009

EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
C933F	2009	2SC1000-Y	2009	2SC1047GR	2013	2SC1217	2012	2SC1359C	2013	2SC1740Q	2009	2SC8290	200
C933FP	2009	2SC1007	2009 2016	2SC1047H 2SC1047J	2013	2SC1235G 2SC1237	2009	2SC1360 2SC1361	2011	2SC1766 2SC1766C	2016 2016	2SC9011E 2SC9011F	200
SC933FPC SC933FPD	2009	2SC1009 2SC1023	2015	2SC1047K	2013	2SC1237E	2020	2SC1362	2016	2SC1777	2041	2SC9011H	200
C933FPE	2009	2SC1023(O)	2030	2SC1047L	2013	2SC1240	2038	2SC1363	2009	2\$C1778	2038	2SC10898 2SC13901	201
C933FPF	2009	2\$C1023-O	2011	2SC1047M 2SC1047R	2013 2013	2SC1244 2SC1254	2009 2038	2SC1364 2SC1364-6	2009 2009	2SC1779 2SC1780	2015 2031	2SCF1A	20
C933FPG C933G	2009	2SC1023-Y 2SC1023A	2013	2SC1047X	2013	2SC1260	2015	2SC1364A	2009	2SC1789	2031	2SCF1B	20
C934-O	2009	2SC1023B	2013	2SC1047Y	2013	2SC1274	2033	2SC1372	2016	2SC1790	2031	2SCF1C	20
C934C	2009	2SC1023C	2013 2013	2SC1054 2SC1062	2038	2SC1293 2SC1293(3RD-IF)	2016	2SC1372Y 2SC1373	2009 2016	2SC1816 2SC1854	2020 2013	2SCF1D 2SCF1E	20
C934D C934E	2009	2SC1023D 2SC1023E	2013	2SC1063	2012	2SC1293(A)	2013	2SC1374	2016	2SC1854C	2013	2SCF1F	20
C934F	2009	2SC1023F	2013	2SC1066	2011	2SC1293A(LAST		2SC1374H	2038	2SC1854S	2013	2SCF1G 2SCF1GN	20 20
C934G	2009	2SC1023G 2SC1023GN	2011 2013	2SC1067 2SC1071	2016	2SC1293B(3RD-II 2SC1293B(FINAL		2SC1375 2SC1376	2016	2SC1855 2SC1908	2013 2009	2SCF1GN 2SCF1H	20
C934P C934Q	2009	2SC1023GIV	2013	2SC1089B	2012	20012302(111112	2010	2SC1377	2020	2SC1908E	2011	2SCF1J	20
C938	2009	2SC1023J	2013	2SC1089C	2012	2SC1293B(LAST		2SC1385H	2030	2SC1919C 2SC1923	2011 2016	2SCF1K 2SCF1L	20 20
C938-O	2009 2009	2SC1023K 2SC1023L	2013 2013	2SC1090 2SC1106(K)	2013 2041	2SC1293C 2SC1293C(3RD-I	2010 F) 2010	2SC1390 2SC1390(L,Y)	2009 2031	2SC1923A	2013	2SCF1M	20
C938A C938B	2009	2SC1023L	2013	2SC1106(L)	2041	2SC1293D	2010	2SC1390(V)	2009	2SC2012	2009	2SCF1OR	20
C938C	2009	2SC1023OR	2013	2SC1106(M)	2041	2SC-1307	2020	2SC1390(W)	2009	2SC2076	2010	2SCF1R	20
C938R	2009	2SC1023R	2013	2SC1123	2011	2SC1307 2SC1307-1	2020	2SC1390(X) 2SC1390(Y)	2009	2SC2076CB	2010 2010	2SCF1X 2SCF1Y	20 20
C939I C941	2041	2SC1023X 2SC1023Y	2013 2013	2SC1123A 2SC1123B	2013		2009	2SC1390i	2009	2SC2076CD	2010	2SCF-2	20
C941-O	2016	2SC1026	2031	2SC1123C	2013	2SC1318(P,R)	2010	2SC1390I(W)	2009	2SC2076D	2010	2SCF2	20
C941-OY	2010	2SC1026(G)	2030	2SC1123D	2013	2SC1318(Q)	2010	2SC1390IW	2009	2SC2818	2009	2SCF2A 2SCF2B	20
C941-R C941-Y	2016 2009	2SC1026-R 2SC1026D	2013 2013	2SC1123E 2SC1123F	2013 2013		2010 2010	2SC1390J 2SC1390J(X)	2009 2009	2SC2884 2SC3710	2011 2009	2SCF2B 2SCF2C	20
C941-Y C941K	2009	2SC1026E	2013	2SC1123GN	2013	2SC1318C	2010	2SC1390JX	2009	2SC3720	2013	2SCF2D	20
C941R	2009	2SC1026F	2013	2SC1123H	2013	2SC1318E	2010	2SC1390K	2009	2SC3720A	2013	2SCF2E	20
C942	2038	2SC1026G	2011	2SC1123J 2SC1123K	2013 2013	2SC1318F 2SC1318G	2010 2010	2SC1390L 2SC1390V	2009	2SC3720B 2SC3720C	2013 2013	2SCF2G 2SCF2GN	20
C943 C943A	2009 2009	2SC1026GN 2SC1026H	2013 2013		2013		2010	2SC1390W	2009	2SC3720D	2013	2SCF2H	21
C943B	2009	2SC1026J	2013	2SC1123M	2013	2SC1318H	2010	2SC1390WH	2009	2SC3720F	2013	2SCF2J	20
C943C	2009	2SC1026K	2013	2SC1123OR	2013		2010	2SC1390WI 2SC1390WX	2009 2009	2SC3720G 2SC3720GN	2013 2013	2SCF2K 2SCF2L	2
C944	2009 2009	2SC1026L 2SC1026M	2013 2013		2013 2013		2010 2010	2SC1390WX	2009	2SC3720H	2013	2SCF2M	2
C944K C945	2016	2SC1026OR	2013	2SC1123Y	2013	2SC1318M	2010	2SC1390XJ	2009	2SC3720J	2013	2SCF2R	2
C945(K)	2009	2SC1026R	2013	2SC1126	2015		2010	2SC1390XK	2009	2SC3720K	2013	2SCF2X	2
C945(P) C945(TK.P)	2009	2SC1026X 2SC1026Y	2013 2011		2013 2013		2010 2010	2SC1390Y 2SC1390YM	2009	2SC3720L 2SC3720OR	2013 2013	2SCF2Y 2SCF5	20
C945(TR,P)	2009	2SC10201	2041		2013		2013	2SC1393	2009	2SC3720R	2013	2SC-F6	20
C945(TQ,Q)	2009	2SC1032	2016	2SC1126F	2013	2SC1320A	2013	2SC1394	2011	2SC3720X	2013		20
C947	2015	2SC1032(Y)	2030		2013 2013		2013 2013	2SC1395 2SC1396	2011	2SC3720Y 2SC3724	2013 2009		20
C948 C957	2015 2038	2SC1032A 2SC1032B	2013 2013		2013		2013	2SC1409	2012	2SC3800	2013	2SC-F11B	20
C962	2041	2SC1032BL	2013	2SC1126L	2013	2SC1320E	2013	2SC1409A	2012	2SC3800A	2013		20
C963	2016	2SC1032C	2013		2013		2013 2013	2SC1409AB 2SC1409B	2012 2012		2013 2013		20
C964 C966	2016 2009	2SC1032D 2SC1032E	2013 2013		2013 2013		2013	2SC1409C	2012	2SC3800D	2013		20
C967	2009	2SC1032F	2013	2SC1126X	2013	2SC1320H	2013	2SC1411	2031	2SC3800E	2013	2SC-F11G	2
C968	2009	2SC1032G	2011		2013		2013	2SC1417	2016 2009	2SC3800F 2SC3800G	2013 2013		20
C968P C971A	2009 2013	2SC1032GN 2SC1032H	2013 2013		2010 F) 2010		2011 2013	2SC1417(V,G) 2SC1417(W)	2009	2SC3800GN	2013		20
C971B	2013	2SC1032J	2013	2SC1128-0	2013	2SC1320M	2013	2SC1417C	2011	2SC3800H	2013	2SC-F11K	20
C971C	2013	2SC1032K	2013		2013		2013	2SC1417D	2011	2SC3800J 2SC3800K	2013 2013		21
C971D C971E	2013 2013	2SC1032L 2SC1032M	2013 2013		2013 2013		2013 2013	2SC1417D(U) 2SC1417DU	2011 2011	2SC3800L	2013		2
C971F	2013	2SC1032OR	2013	2SC1128C	2013	2SC1320Y	2013	2SC1417F	2011	2SC3800M	2013	2SC-F11R	2
C971G	2013	2SC1032R	2013		2009		2009	2SC1417G 2SC1417H	2011 2011	2SC3800OR 2SC3800R	2013		2 2
C971GN C971H	2013 2013		2013 2011		2013		2009 2009	2SC1417H	2011	2SC3800X	2013		2
C971J	2013		2009	2SC1128R	2013	2SC1327S	2016	2SC1417V	2011	2SC3800Y	2013	2SCF14	2
C971K	2013		2009		2013		2038	2SC1417VF	2009 2011	2SC3854 2SC3940	2011		2 2
C971L C971M	2013 2013		2038 2014) 2010 2013		2016 2010	2SC1417VW 2SC1417W	2011		2013		2
C971OR	2013		2014		2016		2010		2015	2SC3940B	2013	2SC-F14D	2
C971R	2013	2SC1035F	2014	2SC1129-0	2013		2010		2016	2SC3940C	2013		2
C971X -	2013 2013		2014 2014		2013		2010 2010		2009 2010		2013 2013	2SC-F14G	
C983-R	2013	2SC1035J	2014	2SC1129BL	2013	2SC1335L	2010	2SC1544	2010	2SC3940F	2013	2SC-F14GN	2
C983Y	2012	2SC1035L	2014	2SC1129C	2013	2SC1335M	2010	2SC1547	2015	2SC3940G	2013	2SC-F14H	
C984 C984A	2009 2009		2014 2014		2013 2013		2010 2010		2012 2016	2SC3940GN 2SC3940H	2013 2013		2
C984B	2009	2SC1035R	2014	2SC1152(F)	2041	2SC1335X	2010	2SC1571L	2016	2SC3940J	2013	2SC-F14L	- 2
C984C	2009	2SC1035X	2014	2SC1159	2011	2SC1335Y	2010	2SC1585F	2011	2SC3940K	2013	2SC-F14M 2SC-F14OR	- 3
C985	2031 2013	2SC1035Y 2SC1036	2014 2038		R) 2020 VR) 2020		2015 2009		2011 2011		2013 2013	2SC-F14R	2
C985A C987	2013		2014	2SC1175	2009	2SC1342(B)	2009	2SC1589	2018	2SC39400R	2013	2SC-F14X	- 2
C987A	2031	2SC1036B	2014	2SC1175C	2009	2SC1342(C)	2009	2SC1618	2041	2SC3940R	2013	2SC-F14Y	- 2
C988	2031	2SC1036C 2SC1036D	2014 2014		2009		2013 2013		2041 2016	2SC3940X 2SC3940Y	2013		
C988A C988B	2031 2031	2SC1036E	2014		2009		2013	2SC1623	2016	2SC-4033	2013	2SCM93D	- 2
C991	2009	2SC1036F	2014	2SC1182	2013	2SC1342D	2013	2SC1634	2009	2SC4033A	2013	2SCS183E	- 2
C992	2009		2014 2014	2SC1187	2013		2013		2009 2009		2013 2013		2
C993 C993E	2016 2009		2014		2016 2009		2013 2013	2SC1641Q	2009	2SC4033D	2013	2SCS429A	2
C994	2038	2SC1036J	2014	2SC1214(B)	2009	2SC1342GN	2013	2SC1641R	2009	2SC4033E	2013	2SCS429B	2
C997A	2013	2SC1036K	2014		2011		2013		2038 2013	25C4033G	2013 2013		2
C997B C997C	2013 2013		2014 2014		2013 2013		2013 2013		2013 2013	2SC4033GN	2013	2SCS429E	
C997D	2013	2SC1036OR	2014	2SC1215E	2013	2SC1342L	2013	2SC1674L	2013	2SC4033H	2013	2SCS429F	- 2
SC997E	2013	2SC1036R	2014	2SC1215F	2013	2SC1342M	2013	2SC1674M	2013		2013	2SCS429G	11
C997F	2013 2013		2014		2013 2013		2013 2013		2016 2013	2SC4033K	2013	2SCS429H	
SC997G SC997GN	2013	2SC1044	2038		2013	2SC1342X	2013	2SC1675L	2013	25C4033M	2013	2SCS429K	:
SC997H	2013	2SC1047	2015	5 2SC1215J	2013	3 2SC1342Y	2013	2SC1675M	2013		2013	2SCS429L	- 3
SC997J SC997K	2013		2013		2013 2013		2016 2009		2013		2013 2013	25C5429M 25C5429OP	
SC997K SC997L	2013 2013		2013 2013	3 2SC1215L 3 2SC1215M	2013		2009		2009		2013	2SCS429R	- 2
SC997M	2013	2SC1047D	2013	3 2SC1215OR	2013	3 2SC1359(A)	2014	2SC1709	2033	2SC4116 .	204		2
SC997OR	2013		2013 2013		2013		2014		2030 2030		201:	2SCS429Y	
SC997R SC997X	2013 2013		2013		2013		2013		2009		200		4
	2010	2SC1047GN	2013		2013		2013		2009		200		11-

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
SCS430C SCS430D	2013 2013	2SD151E 2SD151F	2041 2041	2SK17R 2SK17Y	2035 2035	2SK304 2SK491	2035 2035	2XAA111	1123	3N29	2001	4-2020-06800	110
SCS430E	2013	2SD151G	2041	2\$K19	2035	2SR1K	1104	2XAA112 2XAA1-13	1123 1123	3N30 3N31	2001	4-2020-07300 4-2020-07500	110 56
SCS430F SCS430GN	2013	2SD151GN 2SD151H	2041	2SK19(I3L) 2SK19(GR)	2036 2035	2SR24 2SR68AM	2035 2036	3-0033 3A90	2009	3N34	2016	4-2020-07600	110
SCS430J	2013	2SD151J	2041	2SK19BL	2035	2T15X3	2011	3A152	1123 1104	3N35 3N36	2016 2001	4-2020-07601 4-2020-07700	110 110
SCS430K SCS430L	2013	2SD151K . 2SD151L	2041 2041	2SK19FET 2SK19GB	2036 2036	2T40 2T41	2009 2009	3A154 3A156	1104	3N37 3N71	2001 2015	4-2020-08001	110
SCS430M SCS430R	2013	2SD151M	2041	2SK19GC	2035	2T42	2009	3A158	1114	3N72	2015	4-2020-08200 4-2020-08500	110 110
SCS430X	2013	2SD1510R 2SD151R	2041 2041	2SK19GE 2SK19GR	2035 2035	2T43 2T44	2009 2009	3A-200 3A200	1114 1104	3N73 3N87	2015 2011	4-2020-08900	110
SCS430Y SCS461	2013	2SD151Y	2041	2SK19K	2036	2T51	2001	3A252	1104	3N88	2011	4-2020-8000 4-2020-8700	111
SCS461A	2013	2SD161 2SD162	2001 2001	2\$K19V 2\$K19Y	2036 2035	2T52 2T53	2001	3A254 3A256	1104	3N90 3N91	2022	4-2020-10100 4-2020-10500	110 110
SCS461B SCS461C	2013	2SD163 2SD164	2041 2041	2SK22Y 2SK23	2035 2036	2T54	2001	3A258	1114	3N92	2022	4-2020-12400	56
SCS461D	2013	2SD167	2001	2SK23A	2035	2T55 2T56	2001 2001	3A1510 3A2510	1114 1114	3N93 3N94	2022 2022	4-2020-12700 4-2020-13600	56- 110-
SCS461E SCS461G	2013	2\$D172 2\$D173	2041 2041	2SK23A540 2SK24	2036 2036	2T57 2T58	2001 2001	3AS1 3AS2	1104	3N95	2022	4-2020-14500	110
SC\$461GN	2013	2SD174	2041	2SK24DR	2035	2T61	2001	3BB-20801	1104 1104	3N114 3N115	2022 2022	4-2020-15600 4-2020-16200	110: 110:
SCS461H SCS461J	2013	2SD175 2SD176	2041 2041	2SK24E 2SK25	2035 2035	2T62 2T63	2001	3BS1 3BS2	1104 1104	3N116	2022	4-2021-04770	111
SCS461K	2013	.2SD180	2041	2SK25C	2035	2T64	2001	3BZ61	1104	3N117 3N118	2022	4-2021-04970 4-2021-05000	110- 1102(2
SCS461L SCS461M	2013	2SD180M 2SD187	2010	2SK25D 2SK25E	2035 2035	2T64R 2T65	2001	3CS1 3CS2	1104	3N119 3N120	2022 2011	4-2021-05170 4-2021-05870	110
SCS461OR SCS461R	2013 2013	2SD188	2041	2SK25ET	2035	2T65R	2001	3DS1	1104	3N121	2011	4-2021-03670	112
SCS461X	2013	2SD188A 2SD188B	2041 2041	2SK25F 2SK25G	2035 2035	2T66 2T66R	2001 2001	3DS2 3E-1	1104 2009	3N123 3N127	2022 2031	4-2021-07670 4-2021-08270	110
SCS461Y SCS469	2013	2SD188C 2SD195	2041	2SK30	2035	2T67	2001	3E-2	2009	3N129	2022	4-2021-09370	1104 1104
CS469A	2013	2SD195A	2001	2SK30(O) 2SK30-0	2035 2035	2T69 2T71	2001	3E-3 3E-4	2009 1123	3N130 3N131	2022 2022	4-2021-10270 4-2021-10470	1104
CS469B CS469C	2013	2SD198(H)	2041	2\$K30-C	2035	2T72	2001	3E-64	1104	3N132	2022	4-2040-08000	110
CS469D	2013	2SD198(Q) 2SD198(R)	2041 2041	2SK30-R 2SK30A	2035 2035	2T73 2T73R	2001	3E-65 3E91	1104 1104	3N133 3N134	2023 2022	4-3033 4-3034	110 110
CS469E CS469G	2013	2SD201 2SD201(0)	2041	2SK30A(D)	2035	2T74	2001	3ES2	1104	3N135	2022	4-5145	200
SCS469GN	2013	2SD201M	2041 2041	2SK30AD 2SK30AGR	2035 2035	2T75 2T75R	2001 2001	3FS1 3FS2	1104 1104	3N136 3S004	2023 2009	4-68682-3 4-68687-3	2009 1104
CS469H CS469J	2013	2SD2010 2SD201Y	2041 2041	2SK30AO 2SK30A-Y	2035 2035	2T76	2001	3G2	2035	3\$30B	2035	4-68689-3	111
CS469K	2013	2SD211	2041	2SK30AY	2035	2T76R 2T77	2001	3G8 3G152	1104 1104	3SB629 3SB-B732	1104 1104	4-68697-3 4-686105-3	111-
CS469L . CS469M	2013	2SD212 2SD215	2041 2001	2SK30D 2SK30GR	2035	2T77R	2001	3G154	1104	3SK23	2035	4-686106-3	111
CS469R	2013	2SD227	2033	2\$K30R	2035 2035	2T78 2T78R	2001	3G156 3G158	1104	3SK30 3SK30A	2035 2035	4-686116-3 4-686132-3	1104
CS469X CS469Y		2SD227(R) 2SD227A	2030	2SK30Y 2SK31	2035	2T82 2T83	2001	3G252	1104	3SK30C	2035	4-686139-3	1114
D11 -	2001	2SD2278	2009	2SK31(C)	2036	2T84	2001	3G254 3G256	1104 1104	3SK34 3SK34C	2035 2035	4-686143-3 4-686144-3	2009
D12 D15	2041	2SD227C 2SD227D	2009	2SK31C 2SK32B	2035 2035	2T85 2T85A	2001 2001	3G258 3G1510	1114	3SK49	2036	4-686147-3	1104
D16	2041	2SD227E	2009	2SK33	2035	2T86	2001	3G2510	1114 1114	3SK49E2 3SK49Q	2036 2036	4-686148-3 4-686149-3	1104 1104
D17 D18(RECTIFIER	2041	2SD227F 2SD227L	2009	2SK33(E) 2SK33E	2035	2T89 2T172	2001 2009	3GA 3GS1	1104	3T201 3T202	2001	4-686150-3	1104
	104(2)	2SD227R	2009	2SK33F	2035	2T202	2009	3GS2	1104	3T203	2001 2001	4-686151-3 4-686173-3	1104 2009
D20	2001	2\$D227S 2SD227V	2009	2SK33GFI 2SK33H	2035	2T402 2T403	2009	3HS1 3HS2	1104	3T501 3T502	1104	4-686177-3 4-686179-3	1104
D21 D22	2001	2SD227W 2SD241H	2009	2SK34	2035	2T404	2009	3L4-2001-1	1123	3T503	1104	4-686183-3	2009
D23	2001	2SD247	2041 2041	2SK34(E) 2SK34B	2035 2035	2T501 2T502	1104 1104	3L4-2001-1A 3L4-2001-3	1123 1102	3T504 3T505	1104 1104	4-686184-3 4-686186-3	1114
D25 D26	2001	2SD256 2SD-258	2020	2SK34C 2SK34D	2035	2T503	1104	3L4-2001-4	1102	3T506	1104	4-686189-3	1114 1114
D26A	2041	2SD260	2041	2SK34E	2035 2035	2T504 2T505	1104 1104	3L4-2003-1 3L4-2003-3	1123 1102	3T507 3T508	1114 1114	4-686199-3 4-686201-3	1114
D26B D26C		2SD327 2SD327A	2009	2SK37 2SK37(K)	2035	2T506	1104	3L4-2003-4	1123	3T509	1114	4-686212-3	1114
D31	2001	2SD327B	2009	2SK37H	2035	2T507 2T508	1114	3L4-3001-1 3L4-3001-5	1102	3T510 3TE120	1114 2041	4-686231-3 4-686257-3	2009
D32 D33		2SD327C 2SD327D	2009	2SK37K 2SK37L	2035 2035	2T509 2T510	1114	3L4-3001-7	1102	3TE140	2041	4-3023212	2009
D35	2001	2SD327E	2009	2SK39Q	2035	2T513	2001	3L4-3001-8 3L4-3002-01	1104 1122	3TE230 3TE240	2041	4-3023221 4-3023843	2009
D36 D41		2SD327F 2SD341	2009	2SK40 2SK40(C)	2036	2T520	2001	3L4-3002-7	1123	3TX003	2041	4-3025766	2009
D43	2001	2SD392	2033	2SK41	2035	2T521 2T522	2001	3L4-3002-10 3L4-3002-25		3TX004 3X11/1		4-3540012 4-202003571	1104 1123
D43A D44	2001	2SD428 2SD492	2041	2SK41D 2SK41F	2035 2035	2T523 2T524	2001	3L4-3002-31	1102	4-0294	2041	4-202104170	1104
D50	2041	2SD502	2042	2SK41E 2SK41F	2035	2T551	2001	3L4-3002-32 3L4-3506-29	1102 564	4-0563 4-12-1A7-1	2009	4-202104970 4-2020035000	1102 1123
D51 D53		2SD523 2SD639	2042	2SK42 2SK42-CM1	2035	2T552 2T650	2001	3L4-5007-3 3L4-6001-01	2009 2041	4-47(SEARS) 4-50	1104	4AJ4DX52D 4AJ4DX520	1104
D63	2001	2SD735	2001	2SK42-CMI	2036	2T681	2001	3L4-6007-02	2009	4-50(SEARS)	1104	4C28	1104 2013
D64 D65	2001	2SD829 2SD-F1		2SK42CM1 2SK43	2035 2036	2T682 2T918		3L4-6007-03 3L4-6007-04	2009 2009	4-65-4A7-1 4-74-3A7-1	2001	4C29 4C30	2014
D66 D69	2001	2\$G536GN	2009	2SK44	2035	2T919	2011	3L4-6007-08	2009	4-88C17-1	2007	4C31	2013 2013
073	2041	2SH203 2SJ2A	2007 1104	2SK44(D) 2SK44C		2T2708 2T2785		3L4-6007-09 3L4-6007-1	2009	4-202A16 4-202R101		4C43 4D4	2012
075 075(A)	2001	2SJ4A	1104	2SK44D	2035	2T2857	2009	3L4-6007-2	2009	4-282	1123	4D6-	1104
075(8)	2001	2SJ8A 2SJ60A		2SK47 2SK47M		2TN15 2TN32	2007	3L4-6007-3 3L4-6007-17		4-850 4-851	2011	4D8 4D20	1104
077 . 080 .	2001	2SK2SET	2035	2SK49	2035	2TN48	2007	3L4-6007-21	2011	4-852	1123	4D21	2013
D81	2041	2SK11 2SK11-0		2SK49E2 2SK49F		2TN49 2TN52	2007	3L4-6007-23 3L4-6007-35		4-853 4-854		4D22 4D24	2009
082	2041	2SK11-R	2035	2\$K49H	2035	2TN53	2007	3L4-6007-37	2009	4-855	1123	4D25	2031 2031
D82A D101	2001	2\$K11-Y 2\$K12		2SK49H1 2SK49H2		2V464 2V465		3L4-6007-38 3L4-6007-17		4-857 4-1545	1123	4D26 4G8	2009 1114
D118A D118C	2041	2SK12-GR	2035	2SK49HK	2035	2V466	2007	3L4-6010-03	2009	4-1724	1102	4GA	1104
D118D		2SK12-0 2SK12-R	2035	2SK49M		2V467 2V482		3L4-6010-6 3L4-6015-01		4-1726 4-1790	1102	4139104002	1104
D119A	2041	2SK12-Y	2035	2SK55D	2036	2V483	2007	3L46007-1	2009	4-1807	1104	4J24X539 4JA2FX355	563 1104
D119B D119C		2SK13 2SK15-GR		2SK55DE 2SK55E		2V484 2V486		3L46007-2 3MS5		4-2020 4-2020-03173	1123	4JA2X355 4JA4DR700	1104
01 19D	2041	2SK15-0	2035	2\$K55R	2036	2V631	2007	3MS10	1104	4-2020-03200	1104	4JA4DX520	1,104 1104
D130-YEL D131		2SK15-R 2SK15-Y		2SK61 2SK68		2V632 2V633	2007	3MS20 3MS30	1104	4-2020-03500	1123	4JA6MR700	1104
D134	2009	2SK17	2035	2SK68A	2035	2W3A	1104	3MS40	1104	4-2020-03571 4-2020-03600		4JA10DX3 4JA10DX32	1104 1104
D146 D147		2SK17(O) 2SK17-0		2SK68AM 2SK68M		2W4A 2W5A	1104	3MS50 3N22	1104	4-2020-03900	1114	4JA10EX3	1104
D151	2041	2SK17A	2035	2SK68Y	2035	2W6A	1114	3N23	2001	4-2020-05200 4-2020-05800		4JA16MR7C0M 4JA211A	1114 1104
D151A D151B		2SK17B 2SK17BL		2SK83 2SK170		2W7A 2W9A		3N23A 3N23B	2001	4-2020-05800 4-2020-06100 4-2020-06200	1102	4JB2C6	1101
		2SK17GR		2SK170R		2X9A116	1114	014500	2001	4~2020~05200	.1102	4JBC12	1101

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
ND3B1	2001	5A6D	1104	6M404-3	1104	8-697-020-570	2009	8A11667 8A12789	1104: 2009	10B553-3 10B555-2	2016 2015	11/1592 11-0422	110- 200
JX1A520D JX1A520E	2007	5A6D-C 5A8	1104 1114	6M404-4 6M404-5	1104	8-697-020-571 8-710-222-21	1123 1104	8C91	562	10B555-3	2015	11-0429	110
JX1C850A	2007	5A8D	1114	6M404-6	1104	8-719-205-10	1104 1102	8CG15 8CG15RE	1104 1104	10B556-2 10B556-3	2016 2016	11-0430 11-0769	110 110
IJX 1E596 IJX 1E821	2009	5A8DC 5A10	1114	6M404-7 6R522PC7BAD1	1104 1104	8-719-815-55 8-722-923-00	2011	8D4	1104	10B-Y	1104	11-0771	110
JX1E850	2001	5A10C	1114	6RW62HY	1104	8-723-650	2001	8D6	1104 1114	10C05 10C	1104 1104	11-0774	200 200
1JX2A60	2007 2001	5A10D-C 5A-D	1114 1104	6X97047A01 6X97174A01	2009 1102	8-724-034-00 8-724-733-30	2011	8D8 8D10	1114	10C1	1104	11-0781	110
1JX2A601 1JX2A801	2001	5B-1	1104	6X97174XA08	1102	8-902-0706-071	2009	8G7	1114	10C2	1104 1104	11-085001	112
4JX2A816	2001	5B-2	1104 1104	6.2SR1 6.2SR1A	561 561	8-905-013-752 8-905-013-759	1104	8GA 8Q-3-12	1114	10C3 10C4	1104	11-085004	112
4JX2A822 4JX7A972	2001 2009	5B2 5B-2-H5W	1104	6.2SR2	561	8-905-013-760	1104	8Q-7-01	1104	10C4D	1104	11-085005	112 112
4JX16A567	2009	5B3	1104	6.2SR2A	561 561	8-905-014-017 8-905-198-001	2009 1104	8Q-7-02 8Q-7-03	1104 1104	10C5 10C6	1104 1104	11-085007 11-085008	112
4JX16A569 4JX16A667	2001 2009	5B-15H 5D1	1104 1104	6.2SR3 6.2SR3A	561	8-905-198-004	1104	8.75VZENER	562	10C8	1114	11-085010	200
4JX 16A667/G	2030	5D2	1104	6.2SR4	561	8-905-198-005 8-905-198-007	1104 1104	9-003 9-006	2011 2009	10C10 10D-02	1114 1104	11-085012 11-085013	110
\$JX16A667/O \$JX16A667/R	2030 2030	5D8 5D10	1114 1114	6.2SR4A 7-0002	561 1104	8-905-198-008	1104	9-5112	2001	10D-05	1104	11-085014	111
4JX16A667/Y	2030	5E1	1104	7-0004	1104	8-905-198-010	1104	9-5113	2001	10D05 10D-06	1104 1104	11-085015 11-085022	11:
4JX16A667G	2009	5E2	1104	7-0005	1123	8-905-198-034 8-905-305-007	1104	9-5114 9-5120A	2001	10D-06	1104	11-085024	110
4JX16A667R 4JX16A667Y	2009	5E3 .5E4	1104 1104	7-0006 7-0008	1104		1123	9-5216	2009	10D	1104	11-9-156438	11
4JX16A668	2009	5E5	1104	7-0013	1102		1123	9-5221	2009	10D-1 10D1	1104 1104	11-102-001	11
4JX16A668/G	2030 2030	5E6 5E8	1104 1114	7-0015 7-1(SARKES)	2009	8-905-305-318 8-905-305-327	1123 1123	9-5225 9-5226-2	2009 2009	10D-2B(-4)	1104	11-102001	11
4JX16A668/O 4JX16A668/Y	2030	5G8	1114	7-2(SARKES)	2009	8-905-305-330	1123	9-5227	2009	10D-2B(4)	1104		11 11
4JX16A668G	2009	5GA	1104	7-3(SARKES)	2009 2009		1123 1123	9-5296 9-9109-1	2009 2009	10D-2B-4 10D3	1104 1104		20
4JX16A668Y 4JX16A669	2009 2009	5GB 5G-D	1102 1104	7-4(SARKES) . 7-5	2009		1123	9-9109-2	2009	10D3G	1104	11B551-3	20
4JX16A669G	2009	5GD	1104	7-5(SARKES)	2009	8-905-305-342	1123	9-511511500	1114	10D4 10D4C	1104 1104		20
4JX16A669Y	2009	5GF	1114	7-6(SARKES)	2009		1123 1104	9D1 9D11	1102 1102	10D4C	1104	11C557-2	20
4JX16A670 4JX16A670G	2009 2009	5GFH 5GJ	1104	7-7(SARKES) 7-8(SARKES)	2009	8-905-305-405	1123	9D12	1123	10D4E	1104	11C557-3	20
4JX16A6670	2009	5GJ/FR1N	1104	7-11(STANDEL)	1114	8-905-305-555	1123		1102 1102	10D5 10D5B	1104 1104		11
4JX16A6680	2009	5GJFR1N	1104 1104		2041 2041		1123 1123		562	10D5C	1104	12/1N10	1102
4JX16B670/B 4JX16B670/R	2030 2030	5GL 5H	1104	7-13	2041	8-905-305-635	1123	9D16	1123	10D5E	1104		11
4JX16B670/Y	2030	5H4D1	1104	7-13(STANDEL)	2041		1123 1123		562 1102	10D5F 10D6	1104 1104		1
4JX16B670B 4JX16B670G	2009		1104 1104		1114		1123		1102	10D6D	1104	12-085029	
4JX16B670R	2009		1114	7-16	2011	8-905-313-101	1123		562		1104 1114		1
4JX16B670Y	2009		1104 1104	7-16(SARKES) 7-17	2009		1123 1104		2009 1104		1114		11
4JX16E3860 4JX16E3890	2009 2009		1104		2009		1104	9RE1	1104	10D10	1114		1.
4JX16E3960	2009	5MA8	1114	7-18(SARKES)	2009		1104		2009 2011	10DBF 10DC05(RED)	1104 1104		11
4JX24X539	563 2001		1114 1104		2009		1123 1102		2009	10DC05R	1104	12-087004	11
4JX2816 4JX2825	2001		1104	7-20(SARKES)	2009	8-905-405-105	1114	9TR7	2009		1104		26
4JZ4X539	563		1104		2011		1104 1104		2009		1104(2		20
4JZ4XL12 4SD46-2	563 1123		1104 1104		2011		1114	9TR21001-02	2009	10DC	1104(2	12-1-73	20
4T6.2	561	5MS30	1104	7-36	201		1114		2009 2041		1104(2		20
4T6.2A 4T6.2B	561 561		1104 1104	7-39	201		1104 1123		2009	10DC1(BLACK)	110	1 12-1-76	20
4T501	1104		1104	7-45	201	8-905 406-020	1102	9.5037	2009		110		20
4T502	1104		2009 2009		1123		1104 562		2009 1123		110- 110-		20
4T503 4T504	1104 1104		2009		200		564	10-085005	1102	10DC2	110	1 12-1-92	20
4T505	1104	6-04ORNN	2009		200		562 563		1104 1104		1104(2 110		21
4T506	1104		2009		203		564		1104		1104(2) 12-1-102	2
4T507 4T508	1114		2009	7-59-024/3477	203	8-905-421-300	1102	10-085025	1123		110		2 2
4T509	1114		2009		200		563 564		1104 1104		110		2
4T510 4W01-13	1114 563		2009		200		2009	10-2SC380	2011	10DC-4R	110		2
5-3/830136.T	1114	6-0452	2009	7A30	200	8 8-905-705-403	2009		1104 1104		110 111		2
5-8 5-30082.3	2009 1114	6-4 6-11	2009		200 201		2009	2 10-13-002-003	2041	10DCO5R	110	4 12-1-179	2
5-30082.4	1114	6-19	2009	7A31(SHERWOOL	0) 200	9 8-905-706-067	201	2 10-13-002-004	204	I 10DCOB	110	4 12-1-180	2
5-30086.1	1104	6-30	200	7A32	201	1 8-905-706-068	201:	2 10-13-002-3 9 10-13-002-4	2041 2041	1 10DCOH	110 110	4 12-1-234	2
5-30088.1 5-30088.2	1104		200	7D 7D210	110 111	4 8-905-706-201	200	9 10-42	110	1000.5	110	4 12-1-235	2
5-30088.3	1114	1 6-93	200	7D210A	111	4 8-905-706-202	200	9 10-10112	110: 204		,110 110	4 12-1-236 4 12-1-240	2
5-30094.1 5-30095.1	1104	4 6-137 4 6-138(PWR)	204 204		110 110		200	9 10-13002-004	204	1 10DV	110	4 12-1-241	2
5-30098.1	1104	4 6-9029-15D	200	9 8-0001300	111	4 8-905-706-208	200	9 10-102005	111	4 10DX2	110 110		- 3
5-30099.1	110	4 6-9029-15E	200		111	4 8-905-706-211 9 8-905-706-215	200		204 110		110	4 12-1-275	
5-30099.3 5-30099.4	110- 110-	4 6-6450036	110 200		200	7 8-905-706-235	200	9 10A590B	11,0	4 10E-2	110	4 12-1-276	
5-30106.1	.110	4 6-6490004	204	1 8-00243	200	9 8-905-706-236	200	9 10AG2	110		110	4 12-1-278	
5-30109.1	110 110		200	0 0050400	200		200 200		110 110	4 10GA	111	4 12-1-279	
5-30111.1 5-30113.1	110	4 6A10423	200	9 8-0051500	200	9 8-905-706-240	200	9 10AG8	111	4 10H	110	4 12-1-289	4.1
5-30120.1	110	4 6A10520	200	9 8-0052102	200		200 200		111 110		110 110		
5-30122.1 5-70004503	110 200	4 6A10851 9 6A10855	200 200	9 8-0052302	200 204	4 4 005 700 045	000	9 10AL6	110	4 10K	110	4 12-1A2	
5-70005452 5-70005503	200	9 6A11180	200	9 8-0052600	200	9 8-905-706-246	200	9 10AS	110 110		110 110		
5-70005503	200 200	9 6A12678	200 200	7 8-0053001 9 8-0053400	200	9 8-905-706-250	200 200		110	4 10N1	110	4 12-1A4	
5-7000901504 5-\$30082.1003	110	4 6A12682	200	9 8-0318250	200	9 8-905-706-260	200	9 10AT6	110	4 10P1B	170	4 12-1A4-7	
5-\$30082.1003 5-\$30088.1002 5-\$30088.1003	111	4 6A12683	200	9 8-0337390	200	9 8-905-706-263	200	9 10AT8	111	4 10H2B	110 110		
5-\$30088.1003	111	4 6A12725	200 200	9 8-0383940 9 8-0389910	200	9 8-905-706-336	200 204		110	4 10R4B	110	04 12-1A5L	
5-\$30088.1004 5-\$30106.1001	111	6A12681 4 6A12682 4 6A12683 4 6A12725 4 6A12788 4 6A12789	200	9 8-0389930	200	9 8-905-706-556	204	1 10B-2	110	4 10R5B	110)4 12-1A6	
5-S30111.1001	111	4 DA 12993	200	1 8-0414120	204	1 8-905-706-557	204		110 110		110		
5A1	110		200 001 200		204	8-905-706-606 8-905-707-254	200 200		110	4 10R8B	11	14 12-1A7-1	
5A2 5A3	110 110	4 6G8	110	4 8-4(BENDIX)	200	9 8-905-707-265	200	9 10B3	111	4 10R9B	, 11	14 12-1A8	
5A4	110	4 6GA175D	110	4 8-22	110	04 8-905-707-313	200		110		11	14 12-1A9 53 12-1A9G	-
5A4D 5A4D-C	110 110	6GA1750 6LF074-3	110		110		204		110	4 11/1	110	14 12-1A 19	
5A4D-C 5A5	110	4 6M4	110	4 8-619-030-011	113	23 8-2409501	200	9 10B551-2	201 201	6 11/1+12/1	110	04 12-1A21	
5A5D	110	4 6M404-1	. 110	4 8-619-030-012	11	04 8-81250109	200						

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE 2	76-	DEVICE	276-	DEVICE	276-	DEVICE	276
12-1AOR 12-4	2009	13-10321-67 13-10321-70	2011 2030	13-22581	2009		123	14-601-16A	2041	15-085032	1123	16X10	110
2-1.0	2009	13-10321-70	2030	13-22581-1 13-22606-0	2009 1102	13-55332-1 13-55333-1	563	14-601-28 14-601-29	2009 2009	15-085033 15-085037	1114	16X39	110
2-11 2-12	2009	13-10321-72 13-10321-75	2011	13-22609-0	1102	13-67539-1 1	104	14-602-01	2009	15-085040	1123 1104	16Z4 17-10	110
2-13	2009	13-10321-76	2011 2030	13-22690-1 13-22692-1	2035	13-67539-1 (MOTORO)	-A) 104	14-602-02 14-602-03	2009 2009	15-085041 15-085043	1114 1104	17-50(FISHER)	204
2-14 2-15	2009	13-12001-0 13-12002-0	1123 1123	13-22692-2 13-23001-2	2035	13-67583-6 2	009	14-602-12	2009	15-085061	1123	17-410 17-451	110 200
2-16	2009	13-13021-15	2011	13-23001-2	2013		011	14-602-13 14-602-14	2009 2009	15-088003 15-1	2011	17-457 17-12096-1	200
2-17 2-18	2009	13-14065-77 13-14085-3	2009	13-23160-2 13-23160-4	2010	13-67585-4/2439-2 2	009	14-602-16	2009	15-2	2009	17-12096-1 17P2	01 110
-19	2009	13-14085-4	2011	13-23160-5	2009 2013		011	14-602-17 14-602-22	2009 2009	15-20A-90M 15-166N	1123	18/T2C 18-085001	204 110
2-23163-3 2-100001	2013 1104	13-14085-6 13-14085-7	2009	13-23163-2 13-23309-5	2013		009	14-602-23	2009	15-875-075-003	2009	18-085002	56
2-100003	1104	13-14085-15	2009	13-23323-4	2009		031	14-602-26 14-602-35	2009 2009	15-34502-1 15-34502-2	038	18-22-17 18-148A	110 200
2-100008 2-100047	1104 2041	13-14085-16 13-14085-17	2011 2011	13-23323-6 13-23324-6	2009		009	14-602-48	2009	15-100001	1104	18J2	111
2-101001	2009	13-14085-26	2011	13-23594-1	2041	13-67590-1 1	102	14-602-50 14-602-55A	2009 2009	15-100002 15-100003 1	1104 102(2)	18J2F 18P2	111 110
2-102001 2-200009	1104 1102	13-14085-34 13-14085-41	2009 2009	13-23824 13-23824-1(3RDIF	2009		123 102	14-602-61 14-602-62	2009 2009	15-100004	1104	18Z6	56
2A1027-P5 2A6240	1102	13-14085-50	2009	13-23824-1(LASTI	F) 2010	13-68617-1 2	009	14-602-69	2009	15-103022 15-1 0 8001 1	1104 102(2)	18Z6A 18Z6AF	56 56
A6240	2007	13-14085-54 13-14085-72	2030	13-23824-3 13-23916-1	2009		123	14-602-77 14-602-77B	2011	15-108003 15-108004	1104	18Z6F	56
2B-2 2B-2-BIP-M	1104	13-14085-83 13-14085-84	2009	13-23917-1	1102	13-86420-1 2	001	14-602-78	2009	15-108005	1104 1104	19-003935 19-020-033	204
B-2B1P-M	1104	13-14085-85	2009	13-25226-1 13-27404-1	2009		104	14-602-80 14-602-81	2009 2009	15-108006 15-108008	1104 1102	19-020-043 19-020-043A	200
2C2 2C2P-114	1104 1104	13-14085-89 13-14085-122	2009 2009	13-27404-2	2009	13-88302 1	104	14-602-87	2009	15-108010	1104	19-020-058	200 200
PC5Y	563	13-14094-1	1123	13-27433-1 13-27596-5	2009 1102		702 104	14-602-89 14-603-03	2009 2009	15-108011 15-108016	1104 1104	19-020-067 19-020-070	200
CLN CZP-114	2009 1104	13-14094-2 13-14094-3	1123 1123	13-28654-1 13-28654-2	2035	13-547604 1	122	14-603-04	2009	15-108020	1104	19-020-071	201 201
J2	1104	13-14094-5	1123	13-28654-3	2035 2035		702 104	14-603-05 14-603-05-2	2011 2011	15-108021 15-108022	1104 1104	19-020-073 19-020-074	200
J2F P2	1104	13-14094-6 13-14094-9	1114 1123	13-28654-4 13-28654-5	2035	13J2 1	104	14-603-06	2011	15-108024	1104	19-020-115	203
V	563	13-14094-11	1123	13-29033-1	2009	13P1 1	104	14-603-10 14-603-11	2009 2009	15-108025 15-108031	1102	19-040-002 19-040-003	110-
X047 -0003	2009	13-14094-12 13-14094-15	1104 1123	13-29033-6 13-29392-2	2009 2009	13P2 1	102	14-609-02	2012	15-108032	1104	19-040-004	110
1-0003(PACE)	1122	13-14094-16	1104	13-29432-1	2009		114	14-651-12 14-655-13	2009 2009	15-108034 15-108036	1104 1104	19-080-001 19-080-002	110
I-0004 I-0009	1123 2013	13-14094-17 13-14094-24	1104	13-29687-2 13-29867-1	1102 1102	14-0072-1 1	104	14-656-21	2009	15-108037	1104	19-080-008	110
3-004	1123	13-14094-33	1102	13-29867-2	1102	14-0072-1(PHILCC) 1: 14-0072-2 1:	104	14-659-12 14-660-12	2009	15-108042 15-108046	1102	19-080-009 19-09234	1123
-0010 -0015	2013	13-14094-38 13-14094-39	1104	13-29867-2(SUPP) 13-29867-2(SW)	1104		104	14-700-01	2035	15-108049	1104	19-020071	200
-0020	2013	13-14094-42	1104	13-29947-1	1102		104	14-700-02 14-700-03	2036 2035	15-108050 15-22223720	1104	19-085005 19-085010	112
-0021 -0022	2009	13-14094-54 13-14097-7	1104 1102	13-30281 13-31013-1	1123	14-0104-7 - 20	009	14-700-04	2035	15B2	1104	19-085018	112
-0024	2009	13-14261-1	1104	13-31013-2	2032		009	14-700-05 14-700-06	2035 2035	15J2 15J2F	1104 1104	19-085022 19-2-02616	1104
-0029 -0032	562 2041	13-14261-3 13-14606-1	1104 2009	13-31013-6 13-31014-1	1104 1104		009	14-710-21	2035	15N1	1104	19-130-001(DIODE)	110
-0040	2013	13-14627-1	1104	13-31014-3	1104		123	14-713-31 14-713-32	2035 2035	15P2 15\$05	1102 1104	19-10415-00 19-100001	1740
-0041 -0048	2009	13-14627-4 13-14858-1	1104	13-31014-4 13-31014-6	1101	14-507-01 1:	102	14-714-13	2035	15S1	1104	19A11552B-P1	561
-0050	1114	13-14879-1	564	13-33173-1	2036	14-510-01 11	663	14-800-32 14-801-12	2009 2009	15S2 15S4	1104	19A115024-P4 19A115024-P6	1104
-0058 -0062	2009	13-14879-2 13-14879-3	563 564	13-33174-1 13-33174-2	2012		23	14-802-12 14-805-12	2009	1556	1104	19A115061-P1	2009
-0062-1	2009	13-14890-1	1123	13-33176-1	2012	14-513-01 11	23	14-806-12	2009	16-2 16-17	1104	19A115061-P2 19A115086-P1	2009
-0063 -0064	2013 2009	13-15465-1 13-15804-1	1102(2) 2009	13-33179-2 13-33179-6	564 563		23	14-806-23 14-807-23	2009	16-147191229 16-171191368	2009	19A115100-P1	1104
0065 0321-5	2013	13-15840-1 13-15840-2	2009	13-33184-1	2036	14-514-02 11	02	14-809-23	2009	16-501190016	2009	19A115102-P1 19A115103-P1	2009
-0321-6	2009	13-15842-1	2009	13-33187-18 13-33188-2	2041		23	14-809-32 14-851-32	2009 2009	16A1	2016	19A115108-P1	2009
0321-7 0321-8	2009	13-15865-1 13-16104-8		13-33350-1	2009	14-514-06 11	23	14-853-23	2009	16A1(FLEETWOOD) 16A2	2001	19A115108-P2 19A115123-2	2009
0321-9	2009	13-16104-9		13-33376-1 13-33595-1	1104		23	14-854-12 14-858-12	2009	16A2(FLEETWOOD) 16A545-7	2009	19A115123-P1 19A115123-P2	2009
-0321-10 -0321-11		13-16235-8 13-16247-3		13-33595-2 13-33595-3	2009	14-514-09 11	23	14-862-23	2009	16A667-RED	2016	19A115129-2	2009
0321-12	2009	13-16769-1		13-34056-1				14-862-32 14-864-12	2009	16A1938 16B1	2009	19A115129-P1 19A115142-P1	2001
·0321-81 ·085002	2009 1102	13-17174-1 13-17174-2	1104	13-34057-1 13-34375-1		14-514-12 11	22	14-865-12	2009	16B2	2010	19A115142-P2	2009
085012	1123	13-17174-3	1104	13-34375-2	2035 2036	14-514-15 1102 14-514-17 11		14-866-32 14-901-12	2009 2012	16B670-RED 16C-4	2016	19A115145-P3	1104
085015 085022	1102	13-17204-1 13-17546-2	1102	13-34378-1 13-34378-2	2035	14-514-19 11	02	14-40325A	2041	16C4	1104	19A115157-1	2009
085023	1102	13-17557-1	1104	13-34381	2009	14-514-20 1102 14-514-21 11	23	14-40363A 14-40369A	2041	16E1330 16E1330(GE)	2009	19A115157-1 19A115167-2 19A115201-P1 19A115201-P2	2009
085024 085026	1114 1102	13-17569-2 13-17595-2	1102	13-34381-2 13-35226-1	2009	14-514-22 11	23	14-40421A	2041	16G2	2015	19A115201-P2	2001
085027	1114	13-17596-1	1104	13-35621-1	1123	14-514-55 11		14-40464A 14-40465A	2041	16G5 16G28			2007
085028 085029	1123	13-17596-2 13-17596-2(BIAS)	1102	13-35807-2 13-37900-1	2009	14-514-61 11	23	14-40466A	2041	16G28A	1102	19A115208-P1 19A115208-P2 19A115245-P1	2007
085039	1104	13-17596-2(DET/A	GC)	13-39072-2	1104	14-514-64 11	22	14-40471 14-40934-1	2041	16GN 16J1	2011	19A115245-P1 19A115245-P2	2009
085042 08702 7	562 1104	13-17596-2(RECT)	1102	13-39073-1 13-39860-1	1104	14-514-65 1102	(2)	14-60237	2012	16J2	2016	19A115250	1122
17-6	2009	13-17596-3	1102	13-40312-1	2016	14-514-70 11 14-514-72 11	23	14J2 14J2F	1104 1104	16J2(DIODE)- 16J2F	1104	19A115253-P1 19A115253-P2	2009
17-6(SEAR) 53-6	2009 017	13-17596-4 13-17596-5	1102	13-41122-2 13-41123-2	1104	14-514-75 11	04	14P2	1104	16J3	2016	19A115301-P1	2007
5 9- 6	702	13-17596-7	1102	13-41123-4	1104	14-515-03 5	63	15-01999 15-03014-00	2009	16K1 16K2	2016	19A115301-P2 19A115315-P1	2007
61-6 1836-1		13-17596-9 13-17596-10		13-41738-1 13-43112-1	2041	14-515-06/66 11	23	15-03051-00	2011	16K3	2016	19A115315-P2	2009
5020-6 10102-1	1740	13-17825-1	1104	13-50484-1	2007	14-515-09 5	64	15-03068 15-03100	2041	16L2 16L3	2016	19A115322 19A115322-P1	1101
10321-3		13-17918-1 13-18087-1		13-50486-1 13-50631-1	2007	14-515-11 5	64	15-05302 15-05369	2009	16L4	2016	19A115328-1	2009
10321-24	1101	13-18087-2	2009	13-50944-1	2007	14-515-16 5	62	15-05650	2009		2016	19A115330 19A115342-P1	2009
10321-29 10321-31	2011	13-18158-1 13-18363		13-55029-1 13-55046-1	1104	14-515-19 5	62	15-09338	2009	16L23	2016	19A115342-P2	2009
10321-32	2011	13-18363-1	2009	13-55061-1	2009	14-515-24 5	62	15-09980 15-08 20 19	2009	16L24 16L25	2016	19A115359-P1 19A115359-P2	2009
10321-34 10321-35	2011	13-18363-1A 13-18364-1	2009	13-55061-1(HOR-MI	JL)	14-515-25 5	63	15-085002	1123	16L42	2016	19A115362-P1	2009
10321-36	2011	13-18458-1	1104	13-55061-1(SOUND	2009	14-572-10 20:		15-085003 15-085005				19A 115362-P2 19A 115371-1	2009 1102
10321-42 10321-46	2011	13-18481-1 13-18924-1	1104	13-55061-2 13-55061-2(SYL)	2009	14-575-10 20	09	15-085006	1104	16L62	2016	19A115410-P1	2009
10321-54	1102	13-18927-1	2009	13-55066-1	2009	14-601-10 20-		15-085007 15-085008		16L63 16L64	2016	19A115410-P2 19A115528-P1 *	2009
10321-55 10321-59		13-18944-1 13-18 944- 2	2007	13-55066-2 13-55067-1	2009	14-601-12 20-	41 '	15-085009	1123	16P2 11	02(2)	19A115528-P3	561 562
10321-62	2013	13-22017-0	1102	13-55068-1	2009	14-601-13 20- 14-601-15 20-	41	15 -085015 15-08501 6		16U1	2009	19A115546-P1 19A115546-P2	2001
10321-65			1104	13-55166-1	1123	14-601-15A 20-	41 1	15-985018	1101	16X1	2009	19A115548-P1	2001 2007 2030
-10321-65 -10321-66		13-22452-0 13-2246 3 -1	1104	13-55166-1 13-55166-1/2439-2	1123	14-601-15A 20- 14-601-16 20-	41 1		1101	16X1	2009	19A115546-P2 19A115548-P1 19A115552-P1	

EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	270
9A 115552-P2 9A 115552P1	2030	21-810 21-810-2	1104 1104	21A112-020 21A112-050	2009 2009	22A001-17 22Z6AF	1104 562	24MW736 24MW737	2035	25A1 25A2	2009 2009	31-0239 31-0246	20
9A115552P2	2009	21A001-00	1104	21A112-062	2009	22Z6F	562	24MW738	2011	25A561Y	2032	31-0253	20
9A115556-P1	2007	21A006-000 21A007-000	1104	21A112-063 21A112-084	2009	23 23-0003	2009	24MW740 24MW744	2009 1102	25A 1273-001 25B2	2009	31-1 31-10	20 20
9A115569-P1 9A115569-P2	1104	21A008-000	1104	21A112-085	2009	23-0004	1104	24MW760	2009	25B21	2009	31-16	20
A115591P1	2009 2009	21A008-001 21A008-003	1104 1104	21A112-088 21A112-089	2009 2009	23-001R03A10 23-001R03AA10	1122 1122	24MW768 24MW771	1104 1123	25CS58LGBM 25D10	2009 1114	31-194 31-195	11 11
9A115591P2 9A115661P1	1122	21A008-003 21A008-008	1102	21A112-090	2009	23-0010	1104	24MW772	1104	25F-B1F	1114	32-0000	11
A115673-P1	2001	21A009	1102	21A112-091 21A112-092	2009	23-0017 23-0018	1104	24MW773 24MW774	2009	25H2 25J2	2009 1102	32-0001 32-0002	11
9A115673-P2 9A115720-1	2001	21A009-000 21A009-002	1123 1123	21A112-101	2009	23-5020	2009	24MW775	2009	25K10	1114	32-0003	11
9A115720-2	2009	21A009-008	1102	21A112-104	2009	23-5021	2009	24MW776 24MW779	2009	25N15 25T-002	564 2011	32-0004	11
9A115728-1 9A115728-2	2009	21A009-009 21A015-013	1102	21A113-002 21A119-005	2035 1123	23-5022 23-5023	2009	24MW790	2009	2576	563	32-0008	11
9A115786	2009	21A015-020	2009	21A119-030	1104	23-5024	2009	24MW793	2011	25Z6A	563	32-0013 32-0022	11
9A115786A 9A115910P1	2009	21A015-027 21A020-001	2009 1104	21B-14 21B-17	1104 1104	23-5025 23-5026	2009	24MW795 24MW797	2009 2009	25Z6AF 25Z6F	563 563	32-0022	11
9A115944P1	2009	21A020-005	1123	21K60	1123	23-5027	2009	24MW801	2009	26-4701508	1114	32-0026	11
9A115944P2	2009 1102	21A020-006 21A037-001	1104 563	21M007 21M020	2007	23-5029 23-5033	2009 2009	24MW805 24MW807	2011 2009	26D00505 26J2	1104 1102	32-0029 32 -0 036	11
9A116081 9A116297P3	007	21A037-003	563	21M084	2009	23-5035	2041	24MW808	2009	27J2	1102	32-0037	11
9A116297P3-9	007	21A037-008	563	21M085	2009	23-5038 23-5041	2041 2041	24MW809 24MW812	2009 2011	27P1 27T401	1123 2007	32-0038 32-0039	1:
9A116297P3-10 9A116549P1	007	21A040-001 21A040-015	1123 2035	21M086 21M093	2003	23-5052	2009	24MW813	2011	27T402	2007	32-0042	= 1
9A116631P1	2009	21A040-020	2009	21M094	2011	23-PT274-121	2009	24MW814	2011	27T408	2001 2009	32-0045 32-0046	1
9A116755P1 9A116761P1	2009 2041	21A040-023 21A040-024	2011 2011	21M099 21M60	2011 2009	23-PT274-125 23-PT275-124	1102 1101	24MW815 24MW817	2011 2009	27T409 27T410	2001	32-0047	11
9A116774-P1	2009	21A040-025	2011	21M122	2009	23-PT283-125	1102	24MW818	2009	27T411	2009	32-0048	1
9A116865	2009 2041	21A040-032 21A040-033	2009 2009	21M123 21M125	2009 2009	23B114044 23BSC101	2009 1104	24MW823 24MW825	2009	28-1-01 28-1 - 02	1104 1104	32-0050 32-0057	1
9A126813 9A126813A	2041	21A040-033A	2009	21M139	2009	23E001-1	2009	24MW829	1114	28-6-01	1104	32-0059	- 1
9A129207P1	2009	21A040-034	2009	21M140	2011	23J2	1102 2009	24MW851 24MW854	1104 2009	28-7-01 28-13-01	1104 1104	32-0060 32-0061	1
9AR2 9AR3	1104	21A040-037 21A040-045	2009	21M146 21M149	2009 2009	24-000451 24-000457	2009	24MW855	2009	28-14-01	1104	32-0063	1
9AR5	1104	21A040-046	2010	21M150	2009	24-000653-1	2009	24MW858	1102	28-15-01	1104	32-13843-2	2
9AR11 9AR12	1104	21A040-047 21A040-051(DIO)	2010 562	21M151 21M152	2011 2011	24-0003714-1 24-002	2009 2009	24MW860 24MW861	1123 1102	28-15-02 28-19-01	1104 1104	32-18537 32-20738	1 2
9AR17	1104	21A040-053	2013	21M153	2011	24-001327-1	2009	24MW862	1104	28-20-01	1104	32-807072-1	
9AR20	2009	21A040-054	2011	21M154	2011 2011	24-016 24-016-005	2011	24MW863 24MW864	2011 1114	28-20-02 28-21-01	1104 1104	33-0002 33-0006	1
9AR34 9AR36	1104	21A040-055 21A040-056	2011	21M178 21M179	2011	24-198	1104	24MW867	1104	28-22-01	1104	33-0023	1
9B200011-P5	1104	21A040-063	2011	21M182	2011	24-602-25	2009	24M W871	1104	28-22-02	1104	33-0024	1
9B200065-P1 9B200065-P2	2001	21A040-077 21A040-078	2009		2009 2011	24-28201 24-DP1	1102 1104	24MW874 24MW899	2009	28-22-03 28-22-04	1104 1104	33-0026 33-0029	1
9B200129-P1	2007	21A040-091	2013	21M196	2035	24A	2009	24MW924	1114	28-22-05	1104	33-0030	1
9B200248-P1	1067	21A040-092	2009		2009 2009		2009 2009	24MW953 24MW954	2011 2009	28-22-06 28-22-07	1104 1104	33-00706A 33-052	2
9B200248-P3 9B200249-P1	1067 1102	21A040-37 21A040-44	1104		562		1104	24MW956	1102	28-22-10	1104	33-070	2
9B200249-P2	1102	21A040-54	2013	21M224	2035		1102	24MW961	2009	28-22-12 28-22-14	1104 1104	33-071 33-084	2
98200249-P3 19B200379-P1	1102 562	21A051-000 21A079-000	2007 1104		1104 1104	24E-002 24E-002-0	1101 1101	24MW967 24MW974	1123 1104	28-22-15	1104	33-0706	2
9B2000129-P1	2007	21A6	1104	21M288	1123	24E-002-C	1101	24MW975	1104	28-22-17	1104	33G59024	1
9C300076-P1 9C300076-P2	1104	21A7 21A101-001(REC	1104 T) 1104		1123	24E-006 24E-022	1102 1101	24MW988 24MW989	2009 2035	28-22-21 28-25-01	1104 1104	33G59121 33G59122	1
19C300076-P2	1104	21A101-002(BLA	NKER)		2009	24J2	1102	24MW992	2009	28-29-01	1104	33K59	2
19C300076-P4	1104	04 8 4 0 2 0 0 4	1102		1123		2007 2007	24MW995 24MW998	1104 562	28-65-01 28-819-172	1104 2011	33R-09 34-0037-102	1
19C300076-P5 19C300076-P6	1104 1104	21A102-001 21A102-002	1104 1104		562		1123	24MW1023	2009	28-254566-1	1104	34-34-6015-43	2
19C300114-P1	2009	21A103-007	1104	21M312	1104		2009		2009	28J2 28P1	1104 1123	34-1000 34-1000A	2
19C300114-P2 19C300114P1	2009	21A103-010 21A103-011	1123 1123		1104 1104		2001 1104	24MW1029 24MW1030	1123 1123	2876	564	34-1010	2
19C300114P2	2009	21A103-012	1114	21M323	1123	24MW196	1104	24MW1043	1123	28Z6A	564	34-1028	2
19C300114P3	2009	21A103-013	1114		1102 2009		1104 1123		1123 2011	28Z6AF 28Z6F	564 564	34-1028A 34-2001-1	2
19P1 19P2	1102 1104		1114 1123		1104		1123		2011	29-505	1123	34-3015-46	2
19Q820	1122	21A103-018	1104	21M386(PWR)	1104	24MW246	1114	24MW1059	2009	29V008M01	2007 2007		2
19QC17 20-16-3	2011 1123	21A103-019 21A103-021	1123 1104	21M412 21M415	2035 1102		1104 1104		1104 1123		2007	34-6000-64	
20-1111-002	2041	21A103-022	1123	21M416	1104	24MW269	1104	24MW1068	2009	30-8054-7	1104	34-6000-69	- :
20-1111-003	2041	21A103-044	1104	21M417	1104	24MW287	2011 562		2009	30AS 30B5	1104	34-6000-70	
20-1680-143 20-1680-175	1104 1123		1123 1104	21M419 21M432	1104 1123		2009	24MW1081	2011	30BS	1104	34-6000-72	
20-161002	1102	21A103-052	1123	21M433	1104	24MW361	2011	24MW1089	2009	30C 30D2	1104	34-6001-5	
20A0053 20A0054	2009		1123 1104		1104 1104		2009 2009		1123 2009	30H	1114 1104	34-6001-48	
20A0073	2009	21A103-064	562	2 21M436	1104	24MW458	2009	24MW1106	2011	30K	1104	34-6001-49	
20A9M	1123	21A103-065	1102 1104		1104 1104		2009 2009		1104 1102		1104 1123	34-6001-52 34-6001-53	
20A11 20A13	1102 1102		1114		1104	24MW535	2009	24MW1113	1104	31-0007	2009	34-6001-54	
20A-70	1123	21A103-064	562	2 21M488	2009	24MW593	2011	24MW1120	2009 1104		2009 1123		
20A70 20A79	1123 1123		1102 562		1104 2009		2011 2011	24MW1123 24MW1141	2009	31-0048	2011	34-6001-57	
20A-90	1123	21A108-003	1102	2 21M534	2035	5 24MW596	2011	24MW1144	1104	31-0049	2011	34-6001-58	50
20A-90H	1123		1102 1123	2 21M545 3 21M562	1104 1102		2011 1114	24MW1146	1104 2009		201° 201°	34-6001-61	30
20A-90M 20A90M	1123 1123		1123	3 21M562(DIOD	E) 1102	2 24MW603	1123	24MW1162	1104	31-0068	2009	34-6001-62	
20A10849	2009	21A109-022	1123	3 21M562(TRAN	ISISTOR)	24MW605	1114	24MW7796	2009		2009 2009		
20AS 20BS	1104		1104 1104		2009		2009 1104		2030 2011	31-0080	2009		
20C	1104	21A110-003	1104	1 21M577	2013	3 24MW652	2036	24T-011-003	2011	31-0082	2009	34-6001-71	
20H	1104	21A110-004	1114	1 21M578	2009		2011		2013 2011		2009 2009		
20K 20M	1104		1104		2009 563		2009		2009	31-0098	2011	34-6001-77	
20N1	1104	21A110-010	1104	4 21W585	56:	2 24MW658	2009	24T-016	2011	31-011	1102	34-6002-32	90.0
2f-1	2009	21A110-012	1114	4 21M586	1102(2		2009		2011 2011		2009 1103		
21-1L 21-2	2009 2011		1104		110- 112		1102 1104		2011	31-0104	2009	34-6002-54	
21-2 21-4	2011	21A111-002	1103	2 21M605	200	9 24MW670	562	2 24T-016-0B	2011	31-0106	2009	34-6002-55	
21-6	2011	21A112-007	201	1 22-001001	200		1104		2011	31-0115 31-0116	2009 2009		
21-7 21-606-0001	2011 1102		2009		200		201	24T016001	2011	31-0177	200	34-6007-3	
	1102		200		112		201		2011	31-0187	200 201	34-6007-5	
21-606-0001-00H		21A112-018	2009		111		. 110	4 25-0060-4	2009			1 34-6007-6	

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
4-6007-9 4-6015-1	2031 2009	34-8054-4 34-8054-5	1104 1104	42-9029-70C 42-9029-70F	2009	43A128342-5	2009	46-8687-3	1104	46-86352-3	2011	46BD2	110
4-6015-2	2009	34-8054-6	1104	42-9029-70P	2009	43A128342-6 43A128342-7	2009	46-8688-3 46-8689-3	1101	46-86353-3 46-86354-3	2011 2011	46BD5 46BD8	110
4-6015-3 4-6015-4	2009 2009	34-8054-7	1104	42-14027	1104	43A165137P1	2041	46-8695-3	2009	46-86355-2	1104	46BD9	110
4-6015-5	2009	34-8054-9 34-8054-10	1104 1104	42-17443 42-17443A	1104 1104	43A165137P3 43A165137P4	2041	46-8697-3 46-16261	1104	46-86355-3	1104	46BD11	110
4-6015-6	2009	34-8054-11	1104	42-17444	2009	43A167229-01	1102	46-16261-3	1104	46-86358-3 46-86364-3	1104 1104	46BD12 46BD14	110
4-6015-7 4-6015-8	2009	34-8054-12 34-8054-13	1104 1104	42-18111 42-19644	2009 2009	43A167851 43A168016P1	2009	46-61249-3	1104	46-86375-3	2009	46BD19	110
4-6015-9	2009	34-8054-14	1104	42-19645	1104	43A168481	2009 010	46-61267-3 46-61307-3	1102 1102	46-86378-3 46-86379-3	2009 563	46BD25 46BD27	110
4-6015-10 4-6015-11	2009 2009	34-8054-15 34-8054-16	1104 1104	42-19670	2009	43A168481P1	010	46-67120A13	1104	46-86380-3	1102(2)	46BD30	111
4-6015-12	2009	34-8054-17	1104	42-19840 42-19865	2009 1104	43A175989P1 43A180002-P1	1122	46-80309-3 46-81187-3	1102 2012	46-86383-3 46-86388-3	1104	46BD32	111
4-6015-13 4-6015-14	2009	34-8054-18	1104	42-20738	2009	43A180002-P2	2009	46-86101-3	2011	46-86394-3	2041 561	46BD33 46BD34	111
4-6015-21	2009	34-8054-23 34-8054-27	1104	42-20961 42-20961 A	2041	43A212040-1 43A212067	017 2041	46-86109-3 46-86110-3	2011	46-86394-3(10)	561	46BD38	111
4-6015-27	2013	34-8055-3	1104	42-21234	2009	43B140883-1	2009	46-86116-3	2011 1104	46-86402-3 46-86404-3	1104 2009	46BD39 46BD52	111 111
4-6015-37 4-6015-38	2010 2010	34-8056-13(PHI	1102(2)	42-21362 42-21400	1104 1104	43B168610 43C168567	2009	46-86120-3	2011	46-86407-3	2009	46BD101	111
4-6015-41	2009	34-8057-5	1102	42-21407	2009	43N3	2009 2009	46-86121-3 46-86122-3	2009	46-86408-3 46-86409-3	2009 2009	46BR5 46BR7	110
4-6015-42A 4-6015-43	2009	34-8057-6 34-8057-8	1102	42-21408	1104	43N6	2009	46-86126-3	2011	46-86416-3	1104	46BR9	110
4-6015-43A	2009	34-8057-9(PHIL	1102(2) CO) 562	42-21866 42-22158	1104 2009	43P1 43P3	2007	46-86127-3 46-86131-3	2011	46-86419-3 46-86420-3	2009	46BR10	110
4-6015-44	2009	34-8057-11	1104	42-22532	2011	43P6C	2007	46-86132-3	2009	46-86421-3	1104 562	46BR11 46BR15	110 110
4-6015-46 4-6015-47	2009	34-8057-12 34-8057-13	1102(2)	42-22533 42-22537	2009	43X16A567	2009	46-86133-3	2011	46-86422-3	1102	46BR17	110
4-6015-48	2013	34-8057-14	563	42-22538	1123 1102	44-530 44A332168-001	1104 007	46-86134-3 46-86139-3	1101 1104	46-86428-3 46-86431-3	1102 1102	46BR18 46BR21	111
4-6015-50 4-6015-52	2011 2013	34-8057-18	1104	42-22539	1123	44A332168-002	007	46-86141-3	1114	46-86433-3	1104	46BR27	111
4-6015-52 4-6015-54	2013	34-8057-23 34-8057-25	1123 1123	42-22539(DIODE 42-22755	1123 1123	44A332169-002 44A333463-001	2009	46-86143-3 46-86144-3	2009	46-86435-3	2011	46BR62	111
4-6015-60	2009	34-8057-26	1123	42-22786	2009	44A355565-001	2041	46-86145-3	2009	46-86436-3 46-86437-3	1102 1104	46BR63 46BR64	111
4-6015-61 4-6015-62	2010	34-8057-27(PHI 34-8057-28	LCO) 562 1104	42-22787	2009	44A390202-001	017	46-86146-3	1114	46-86438-3	1104	46BR68 -	111
4-6015-63	2009	34-8057-29	1123	42-22809 42-22811	2009 2009	44A390202-003 44A390244-001	2041	46-86147-3 46-86148	1114	46-86457-3 46-86460-3	561 561	46BX2	110
4-6015-64 4-6015-80	2012	34-8057-30	1123	42-22812	2009	44A390247	2009	46-86148-3	1104	46-86463-3	1104	46BX3 47-1	110- 110
4-6015-80 4-6016-2	2009 2009	34-8057-33 34-8057-34	563 1102(2)	42-22835 42-22847	1104 2009	44A390249 44A390251	2009 2009	46-86149-3	1104	46-86481-3	1102	47-2	110
4-6016-3	2009	34-8057-40	1102	42-23348	2009	44A390251-001	2009	46-86150-3 46-86151-3	1104 1104	46-86483-3 46-86488-3	1102 1104	47-2(DIQ) 47-2(XSTR)	110
4-6016-4 4-6016-6	2009 2031	34-8057-41 34-8057-45	. 563	42-23349	2009	44A393605	010	46-86152-3	2009	46-86494-3	1104	47-4	201 110
4-6016-7	2009	34-8057-52	1104 1123	42-23350 42-23350A	1104	44A393611 44A393611-001	1740	46-86168-3 46-86169-3	1102	46-86497-3	1104	47Z102536-P1	110
1-6016-8	2009	34-8057-53	563	42-23542	2009	44A395994-001	2009	46-86171-3	2009	46-86501-3 46-86507-3	561 1104	48-01 48-01-005	2009
1-6016-14 1-6016-16	2009	34-60001-63 34P4	2009 1102	42-23960 42-23960P	2011	44A417033-001	2041	46-86172-3	2011	46-86531-3	2013	48-01-017	201
1-6016-18	2009	35-003-001	1104	42-23961	2011	44A417716 44A417716-001	2041	46-86177-3 46-86178-3	1104	46-86540-3 46-86807-3	2010 1104	48-01-031	201
-6016-19 -6016-24	2009	35-010-04	1122	42-23961P	2011	44A355565001	2041	46-86184	1102	46-96434-3	2011	48-03-041840-2 48-03-04093403	204
I-6016-25	2009	35-1000 35-1003	1114 1114	42-23962 42-23962P	2011	44B311097 44L	2009	46-86184-3	1102	46-136279P1	017	48-05-001	1104
-6016-26	2009	35-1004	1104	42-23963	2011	45A2FX355	1104	46-86186-3 46-86187-3	1102 1102	46-136284-P2 46-156741P2	1740 010	48-05-011 48-06-001	110:
I-6016-49 I-6016-49A	2009	35-1005 35-1014	1104	42-23963P	2011	45AN4AA	2009	46-86192-3	2009	46-836380-3	1102	48-15	1123 204
1-6016-63	2009	35-1014	1102	42-23964 42-23964P	2009	45B1AH 45B1D	702 702	46-86194-3 46-86199-3	562	46-861148-3	1104	48-56P1	2007
-6018-2	2036	35-39306001	2009	42-23966	2009	45B1Z	702	46-86200-3	1104	46-861187-3 46AR1	1102 1104	48-191A01 48-191A01-9	1104
l-6075-46 l-8002-2	2009 1123	35-39306002 35-39306003	2009	42-23966P 42-23969	2009	45817	702	46-86201-3	1104	46AR2	1104	48-191A02	1104
-8002-3	1123	35B611	1104	42-23975	1123	45N1 45N2	2001	46-86201-3(POWE 46-86207-3	R) 1104 2011	46AR3 46AR4	1104	48-191A03	1104
-8002-4	1123	35BL611	1104	42-24387	1102	45N2M	2009	46-86209-3	2011	46AR5	1104 1104	48-191A04 48-191A06	1104 1104
-8002-5 -8002-6	1123 1123	35P4 36-1	1102 2011	42-27278 42-27374	1104 2009	45N3 45N4	2009	46-86212-3	1104	46AR6	1104	48-191A07	1104
-8002-7	1123	36-6015-46	2011	42-27375	2009	45N4M	2009	46-86214-3 46-86228-3	1123 2009	46AR7 46AR8	1104 1104	48-191A07A	1104
-8003 -8022-1	1104	36-6343 36D-32	563	42-27378	1123	45X2	2007	46-86231-3	2009	46AR9	1104	48-191A08 48-191A09	1104
-8022-2	1123	35E004-1	1102 1123	42-27380 42-27381	1123 1123	46-06311-3 46-4	2011	46-86239-3 46-86240-3	2011	46AR10	1104	48-191A11	1104
-8022-3	1123	38	1104	42-27463	1104	46-34-3	1104	46-86240-3	2013	46AR11 46AR12	1104 1104	48-971-A95 48-971A05	2009
-8022-4 -8022-5	1123	38-8057-6 38Z6	1122 561	42-28056	2009	46-86-3	1104	46-86247-3	2009	46AR13	1114	48-1005	1104
-8022-6	1123	38Z6A	561	42-28058 42-28199	1104 1123	46-861-3 46-862	1101	46-86250-3 46-86251-3	1102 2011	46AR15 46AR16	1114	48-4937	2010
-8022-7 -8022-77		39(SHARP)	563	42-28201	1102	46-5002-20	1740	46-86252-3	2009	46AR18		48-6712A02 48-6712A11	1102(2) 1102
-8022-77 -8026-1		39-02 39-13		42-28202 42-28205	1104 2909	46-5002-23 46-6661-2	1725	46-86253-3	1123	46AR21	1104	48-6720A02	1102
-8026-2	1104	39A69-2	1102	42-28207	2009	46-6829	2011	46-86257-3	1102(2)	46AR27 46AR28	1104	48-8240C06	1104
-8026-3 -8026-4	1104	40-0502 40-09297	1104	42-28210	2009	46-8257-3	2009	46-86261-3	1104	46AR29	1104	48-8240C07 48-8240C08	1122
8027	1101	40AS		42-Z6A 42A11	562 1104	46-8601-3 46-8611-4	1104	46-86264-3 46-86265-3	1104(2) 2011	46AR35 46AR50	1104	48-8240C09	1102
8034-1 8034-2	1104	40135	1104	42A14	1123	46-8613	1101	46-86266-3		46AR52	1114	48-8240C11 48-8240C13	1122
8034-3		40BS 40C		42A23 42B2	1104 1104	46-8613-3(SYNC) 46-8614	2004	46-86267-3	1104	46AR59	1114	48-8240C14	1122
8036-1	1104	40D6665A03	1104	42B16		46-8614-3		46-86268-3 46-86271-3		46AX1 46AX2	1104 1104	48-8240C15	1102
8036-2 8036-3		40H 40J2	1104	42J2	1104	46-8619-3	1123	46-86274-3	2009	46AX3		48-8240C16 48-8240C17	1122 1122
8036-4		40JZ		42X25 42X32		46-8622 46-8623-3		46-86284-3	562	46AX4	1104	48-8240C18	1122
8040-2	1104	40K	1104	42X210	2001	46-8624-3		46-86286-3 46-86288-3		46AX5 46AX7	1104	48-8613 48-8619-3	1101
8042-1 8042-2		40KR 40M	1104	42X244	1104	46-8625	1101	46-86289-3	1102	46AX8	1104	48-10001-AG1	1123 1104
8042-3	1104	40N1		42X244B 42X245		46-8627 46-8629	1101 2011	46-86295-3 46-86299-3		46AX9	1104	48-10001-A63	1104
8047-1 8047-2	1102(2)	40NJ	1104	42X245B	1104	46-8638	2036	46-86301-3		46AX10 46AX11		48-10001-A030-1 48-10062A01	1104 1104
8047-2 8048-1		40Y3P 41-0318		42X310 42Z6		46-8643	1101	46-86302-3	2011	46AX12	1114	48-10062A01A	1104
8048-2	1104	41-0318A		43-023212	562 2009	46-8643-3 4 6-8 644-3		46-86303-3 46-86307-3	1104(2)	46AX13 46AX14	1114	48-10062A02	1104
8048-3 8048-4	1104	41-0499	2009	43-023212 43-023221	2009	46-8646-3	1123	46-86309-3	1102	46AX16		48-10062A04 48-10062A05	1104 1104
8048-5		41-0905 41-J2	1104	43-023843 43-025766	2041	46-8647 46-8647-3	2011	46-86310-3	2009	46AX17	1104	48-10062A05A	1104
8050-1	1104	41J2	1104	43-540012	1104	46-8648	2036	46-86311-3 46-86316-3	2011	46AX19 46AX21	1104	48-10577A0%	1102
8050-2 8050-5	1104	41M-19	2011	43A113534	1102	46-8649	2036	46-86321-3	1104	46AX30		48-10577A04 48-10641D62	1114 561
8050-5 8050-6		42-051 42-2	1114	43A114346-1 43A114346-P1		46-8650 46-8651	2011	46-86322-3	1104	46AX34	1104	48-13466	2001
8050-7	. 1104	42-7	1104	43A114832-3		46-8651 46-8652		46-86326-3 46-86327 - 3	1104 2012	46AX52 46AX54	1104	48-13481	2009
8050-8 8050-9		42-9029-31M	2009	43A128340-1	2009	46-8653	2011	46-86337-3	1104	46AX55	1104	48-13707 48-32000	2036 563
8050-9 8050-10	1104	42-9029-31R 42-9029-31V	2009	43A128340-2		46-8654 46-8656	2011	46-86338-3	1102	46AX56	1114	48-34816	1102
8050-14	1104	42-9029-40C	2009	43A128340-3 43A128340-4		46-8656 46-8 661-3	1104	46-86339-3 46-86343-3		46AX59	1114	48-40170G01	2009
8051 8054-1	1104	42-9029-40L	2009	43A128342-1	2009	46-8663-3	1101	46-86344-3		46AX70 46AX82	1114	48-40171G01 48-40235G0	2009 1104
8054-2	1104 4	12-9029-40Y 12-9029-60A	2009	43A128342-2 43A128342-3	2009	46-8676-3 46-8677-3	1102	46-86345-3 46-86346-3	2012	46AX84	1114	48-40235G02	1104
0034-2		- TTEV WYM	- COO3						2012	46AX85	1114	48-40246G0	2009

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-
18-40247G01	2011	48-82139G02	1123	48-97048A07	1104	48-134419 48-134420	2007 2007	48-134733 48-134733A	2009	48-137022 48-137027	2009	48-137998 48-155063	-2009 1104
18-40606J01 18-41508A01	2009 1104	48-82178A01 48-82178A02	1123 1123	48-97048A08 48-97048A10	563 1104	48-134421	2007	48-134734	2009	48-137027A	2041	48-191807	110
18-41508A02	1104	48-82178A03	1123	48-97048A16	563	48-134422 48-134423	2007 2007	48-134734A 48-134737	2009	48-137029 48-137036	1104	48-355002 48-355009	200 112
18-41768G01 18-41815J02	1123 2011	48-82178A04 48-82178A05	1123 1123	48-97048A17 48-97048A18	1102	48-134424	2007	48-134739	2009	48-137036A	2041	48-355014	1102(2
48-41816J01	2011	48-82178A06	1123	48-97048A19	1123	48-134425	2007	48-134765	2009 2009	48-137040 48-137043	2011 2009	48-355016 48-355023	110 110
48-42899J01 48-43265G01	1102 1104	48-82178A07 48-82178A08	1.123 1123	48-97048A20 48-97127A01	1114 1104	48-134426 48-134427	2007 2007	48-134768 48-134769	1104	48-137044	2009	48-355025	110
48-43351A02	2011	48-82178A09	1123	48-97127A06	2011	48-134428	2007	48-134775	2009	48-137047	2009 2041	48-355035 48-355036	110 110
48-43354A81 48-43354A82	2009	48-82178A10 48-82178A11	1123	48-97127A012 48-97127A013	2009	48-134429 48-134432	2007	48-134776 48-134781	2009 1102	48-137053 48-137053A	2041	48-355045	110
48-43992J01	2013	48-82178A12	1123	48-97127A018	2009	48-134433	2007	48-134782	2009	48-137056	2009	48-355046	110
48-44125A07	1114	48-82178A13	1123 561	48-97127A12 48-97127A13	2009 2009	48-134443 48-134444	2007	48-134785 48-134789	2009 2011	48-137057 48-137059	2009 2011	48-355048 48-355049	110
48-44885G02 48-44887G0	2009 1104	48-82256C01 48-82256C14	564	48-97127A18	2009	48-134445	2007	48-134790	1104	48-137071	2011	48-355052	200
48-46669H01	1102	48-82256C17	563	48-97127A19	2009 2009	48-134446 48-134450	2007 2007	48-134791 48-134801	2009 2009	48-137072 48-137073	2009 2009	48-355053 48-355054	201 201
48-57120A01 48-60022A13	1104 2009	48-82256C18 48-82256C22	562 562	48-97127A24 48-97127A29	2009	48-134458	2007	48-134802	2009	48-137074	1104	48-644587	112
48-60022A97	1123	48-82256C25	563	48-97127A33	2009	48-134462	2007	48-134803	2009	48-137075	2011	48-64681 48-646954	112 110
48-60022A98 48-60077A06	1104 1123	48-82256C38 48-82256C43	562 562	48-97162A04 48-97162A05	2009	48-134464 48-134465	2009 2009	48-134804 48-134805	2013	48-137076 48-137077	2011	48-647311	112
48-61074B01	1123	48-82256C45	562	48-97162A09	2009	48-134466	2007	48-134807	2009	48-137079	2041	48-647313	112
48-61767B01	1123	48-82256C54	563 562	48-97162A12 48-97162A15	2009	48-134468 48-134469	2007 2007	48-134808 48-134809	2009	48-137079A 48-137083	2041 2009	48-647829 48-660370A05	110 110
48-62334A01 48-62334A02	1123	48-82256C56 48-82256C59	564	48-97162A21	2009	48-134470	2007	48-134811	2009	48-137089	2009	48-674297U	110
48-63005A66	2009	48-82292A01	1123	48-97162A23	2009	48-134471	2007	48-134816 48-134817	1102	48-137096	2009 2009	48-674970 48-711052	110
48-63005A72 48-63006A56	2009 1123	48-82292A02 48-82292A04	1123 1123	48-97162A26 48-97162A33	2011	48-134472 48-134473	2007 2007	48-134817	2009 2009	48-137101 48-137106	2009	48-733746	110
48-63026A47	2009	48-82292A05	1123	48-97168A01	1123	48-134474	2007	48-134824	2009	48-137107	2009	48-739300	11020
48-63026A48	2009 1123	48-82292\$03 48-82392B01	1123 1102	48-97168A02 48-97168A04	1104 1123	48-134475 48-134476	2007 2007	48-134825	2013 2011	48-137108 48-137109	2009 2009	48-741255 48-741280	1102(
48-63029A20 48-63029A92	2007	48-82392B01 48-82392B02	1102	48-97168A06	1104	48-134477	2007	48-134839	2009	48-137110	2009	48-741656	1102(
48-63075A76	2007	48-82392B03	1102	48-97168A07	1123	48-134494	2007	48-134840 48-134841	2009 2009	48-137111 48-137115	2009	48-741724	1102(
48-63075A78 48-63076A52	1123 2009	48-82392B04 48-82392B05	1102 1102		1123 1104	48-134495 48-134496	2007 2007	48-134841	2009	48-137130	562	48-746831	110
48-63076A81	2011	48-82392B06	1102	48-97168A11	1104	48-134499	2007	48-134844	2009	48-137137	2009	48-752497	110
48-63076A82	2011 2009	48-82392B07 48-82392B08	1102 1102		1123 1104	48-134500 48-134501	2007 2007	48-134845 48-134847	2011 2009	48-137138 48-137139	2009 2009	48-863030 48-867716	112
48-63076A83 48-63077A03	2009	48-82392B09	1102		2035	48-134509	2007	48-134848	2009	48-137143	1104	48-869092	200
48-63077A10	2009	48-82392B10	1102	48-97177A06	2035		2007 2007	48-134852 48-134854	2009	48-137164 48-137167	562 1102(2)	48-869093 48-869226-0	200 200
48-63077A11 48-63077A30	1123 2009		1102 1102		2009 2009		2007	48-134857	2013	48-137170	561	48-869244	204
48-63077A31	2009	48-82392B13	1.102	48-97177A13	2009	48-134535	2007	48-134882	2041	48-137171	2009		200 200
48-63077A32	1123	48-82392B14 48-82392B15	1102 1102		1123 1123		1123 2007	48-134884 48-134889	2041	48-137171D 48-137172	2009 2009		204
48-63078A52 48-63078A54	2011 2011	48-82420C01	1102		1104		2007	48-134894	2009	48-137174	. 2009	48-869278	204
48-63078A59	2007	48-82420C02	1102		2009		2007	48-134895 48-134896	2009 2009	48-137175 48-137175A	2041 2041		200 204
48-63078A60 48-63078A61	2007 2007	48-82420C03 48-82420C04	1122 1122		1123 1104		2007 2007	48-134897	2009	48-137177	563	48-869312	200
48-63078A64	2007	48-82420C05	1102	48-97270A02	1123	48-134543	2007	48-134899	2009	48-137180	2041		204
48-63078A70	2009		1104		1114 2009		2007 2041	48-134903 48-134904	2009 2011	48-137180A 46-137192	2041 2009		200
48-63078A71 48-63079A97	2009 2009		1104 1104		2009		2007	48-134904A10	3 2011	48-137198	1104	48-869444	200
48-63082A15	2007	48-82466H04	1104		2009		2007 2007	48-134904F 48-134905	2011 2009	48-137205 48-137206	1114 2009		200 200
48-63082A25 48-63082A26	2009 2009		1104 1104		2001 2001		2007		2009		1104		204
48-63082A27	2009	48-82466H	1114	48-124218	2001	48-134557	2007		1102(2)	48-137210	561		200
48-63082A45	2009 2009		561 562		2001 2001		2007 2007		1102(2) 2009	48-137212 48-137251	1114 204		200
48-63082A71 48-63084A06	1723		561	48-124307	2007	48-134562	2007	48-134922	2011	48-137257	2009		200
48-63086A16	1104		2009		2007 2007		2007	48-134923 48-134924	2011 2011	48-137260 48-137265	2009		200
48-63590A01 48-64169	1123 1104		1123		2007		2007		2011	48-137272	563	48-V34816	110
48-65112A73	1101	48-86200-3	1123	48-124327	2007		2007		2011		1114		
48-65113A84 48-65123A94	1101 2009		1102 1123		2007		1123 1123		2009		1123		
48-65145A74	1104		2009		2007		2007	48-134931	2001		1114		11
48-65147A72	2009	48-90068A01	2009		2007		2007		2010 (D-IF) 2010	48-137316	1114		
48-65837A02 48-65937A02	1123 1123	48-90172A01	7123	48-124358	2007		2007	48-134933	2009	48-137330	564	48B66629A05	11
48-66037A03	1104	48-90222A08	1123	48-124359	2007	48-134626	2007		2009	48-137333	204	48B67020A11 48B407624P1	11 20
48-66037A04 48-66037A05	1104	48-90229A01	1104 2009		2007		2007		2009	48-137343	203	48C-40235-60	2 11
48-66037A08	1104	48-90232A11	2009	48-124378	2007	48-134637	2007	48-134944	2035	48-137344	204	48C40235C01	11
48-66037A10	1104	40-30232M 13	2009 2035		2007		2007 562		201° 2009	46-137348	1114	48C40235G1	11
48-66037A12 48-66629A02	1104	48-90233A01	1123	48-124389	2007	48-134654	2009	48-134956	2007	48-137350	200	48C40524A02	11
48-66629A03	1104	48-90233A04	1104	48-124398	2007		200	48-134957 48-134958	562 1104	48-137351 48-137353	201:	48C65837A02	11
48-66629A05 48-66629A06	1104		1101		2007		2007	7 48-134959	1104	48-137354	200	48C66037A03	V/0011
48-66654A02	1104	48-90233A08	1123	3 48-124445	2007	7 48-134564	2009	7 48-134959 9 48-134961 9 48-134962	201	48-137368	204 200	48C66037A04	11
48-67020A11	1123	3 48-90234401	110 ₄	48-124446	2007		2009	48-134962	2011	48-137373 48-137374	200	48C66037A10	11
48-67120A01 48-67120A02	1102(2		201	40 405000	200	7 48-134667	2009	48-134964	201	48-137377	200	9 48C66037A12	2 11
48-67120A03	110	2 48-97046A06	201	1 48-125231	200	7 48-134668	2009	48-134965	201° 201°	48-137378	200 200		2 11
48-67120A04 48-67120A05	1114		201		200		2009	9 48-134969	201	48-137385	110	2 48C67120A02	2 11
48-67120A06	110	4 48-97046A20	201	1 48-125234	200	4 40 40 40 74	2009	9 48-134970	200	48-137387	56	1 48C67120A05	5 11
48-67120A07	1104	4 48-97046A21	201	1 48-125235	200		2009	9 48-134980	2009	48-137398	56 200	48C125233	20
48-67120A09 48-67120A0607	1123 7 110		2009	9 48-125237	200	7 48-134691	200	9 48-134988	200	48-137399	200	9 48C125235	20
48-67120A10	111	4 48-97046A24	200	9 48-125238	200	7 48-134700	200	1 48-134990	110 200	48-137400	201 112	48C125236	20 11
48-67120A11	110		200		200	7 48-134701 7 48-134701A	204 204	1 48-134994	200	48-137497	112	3 48C674970	13
48-67120A13 48-67120AB	110	2 48-97046A43	200	9 48-125242	200	7 48-134703	200	0 40 40 4000	200	48-137498	200	9 48C742970	17
48-67926A01	110	4 48-97046A46	200	9 48-125296	200	7 48-134705	200	9 48-136665	200 200	49 127500	200 200	9 48D67 9 48D66037A03	11 3 11
48-68688A79 48-68688A79B	110 110		203 203		200 200	7 48-134715	200	1 48-137007	200	9 48-137514	110	2 48D66037A0	4 11
48-69394A01	200	9 48-97046A50	200	9 48-134173	200	9 48-134715A	204	1 48-137008	204	1 48-137530	200	9 48D66037A0	5 1°
48-82095C01	110	4 48-97046A52	200	9 48-134387	112 200		200 200	9 48-137008A 9 48-137010	204 200	9 48-137573	200 110	2 48D66654A0	2 11
48-82095C02 48-82095C03	110 110		110 112		200	7 48-134721	200	9 48-137013	200 200	48-137514 1 48-137530 1 48-137530 1 48-137543 9 48-137577 9 48-137577 9 48-137612 9 48-137855	56	2 48D67120A0	
48-82095C64	110	4 48-97048A04	110	4 48-134417	200	7 48-134726	200 200	9 48-137014 9 48-137019	200 200	48-137612	203 200	0 40D07 120A0	
48-82139G01	112	3 48-97048A06	112	3 48-134418	200	7 48-134732					200		

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
8D67120A07 8D67120A11	1104 1123	48S191A08 48S10062A01	1104	48\$134949 48\$134950	2009	48X90232A08 48X90232A10	2030	50Z12C 50Z15	563 564	53B010-9 53B011-2	1104 1104	56-3 56-4	112
8D67120A11(DIO 8D67120A11(XST		48S10062A02 48S10062A05	1104	48S134952 48S134957	2009 562	48X90232A11 48X90232A13	2030 2009	50Z15A	564	53B013-1	1102	56-5	110
	2009	48S10062A05A	1104	48\$134958	1104	48X90232A14	2035	50Z15B 50Z15C	564 564	53B014-1 53B018-1	1102 1104	56-7 56-8	112
8D67120A13 8D67120A13(C)	1102	48S10346A02 48S10577A01	1123	48\$134959 48\$134961	1104 2009	48X90232A17 48X90232A18	2011 2011	51-02007-12 51-03007-06	562 1104	53B019-2 53B020-2	1104 1104	56-10 56-11	. 112
BD67120H02 BD82420C01	1104	48S10577A02 48S10577A11	1102	48S134962 48S134963	2009 2009	48X90232A19 48X90232A20	2011 2011	51-04001-01	1123	53C001-1	1123	56-19	56
8D82420C02	1102	48S10577A13	1102	48S134964	2009	48X90233A02	1123	51-08001-11 51-13-14	1122 1102	53C003-1 53C005-3	1104 1104	56-20 . 56-21	112 110
8D82420C03 8D82420C04	1122 1122	48\$10641D62 48\$32000	561 563	48S134990 48S134992	1104	48X90233A04 48X90233A05	1104	51-47-23 51-47-24	2009	53C006-1 53C006-2	1123	56-24 56-25	110
8D82420C05 8G10346A02	1102	48S40235G02 48S40246G01	1104	48S134997 48S137000	2009 563	48X90233A07	563	-51-47-28	1122	53C006-52	1123	56-26	56 112
8K45N2	2001	48S40247G02	2009	48S137002	2012	48X90234A01 48X90234A02	1104	51-10650A01 51-25789H	038 017	53C007-1 53C008-1	1104	56-27 56-28	110 110
8K64169 8K644681	1104	48S40606G01 48S41508A01	2009 1104	48S137003 48S137017	2009 564	48X90234A03 48X97046A17	1104 2030	51A524004-01 51D188	010 2007	53C009-1 53C009-2	1104 1123	56-33	110
8K646954 8K647829	1104	48S44885G01	2009	48S137029	1104	48X97046A18	2009	51D189	2007	53C012-1	11,04	56-35 56-46	200 56
BK746831	1104	48S44885G02 48S44887G01	2009 1102	48S137033 48S137040	2030 1104	48X97046A19 48X97046A20	2009	51IN60P 51IS34S	1123 1123	53C014-1 53C015-1	1104 1104	56-51 56-52	56 110
BK752497 BK863030	1104	48S65123A67 48S67120A13	2011	48S137044 48S137055	2009	48X97046A21 48X97046A22	2009	51S1S34 51S10650A01	1123 038	53C016-1 53C017-1	1104	56-56	110
BK867716 BK869001	1123	48\$134587	1123	48\$137056	2030	48X97046A23	2009	52-020-108-0	2009	53C020-1	1104	56-57 56-58	56 56
8K869515	2007	48\$134665 48\$134718	2009	48S137057 48S137070	2030 2036	48X97046A25 48X97046A50	2030	52-050-021-0 52-051-017-0	1123	53C022-1 53CD01-1	1104 1123	56-62 56-73	56 110
8M355002 8M355004	2009	48\$134719 48\$134720	2009 2009	48S137074 48S137101	f104 1123	48X97046A60 48X97046A61	2009	52-053-013-0 52-1	562 1104	53D001-4	1102	56-78	110
8M355008	1123	48S134721	2031 -	48S137107	2009	48X97046A62	2009	52A011	1104	53D001-7 53D001-8	1104 1102	56-89 56-93-2867	112 110
3M355009 3M355014	1123 1102	48S134732 48S134733	2031 2009	48S137108 48S137109	2009 2009	48X97048A02 48X97048A04	1123 1104	52A011-1 52A4	1114 1102	53D002-1 53D002-2	1123 1123	56-4829 56-4832	201 110
M355016 M355023	1104	48S134733A 48S134734	2009	48S137110 48S137111	2030 2009	48X97048A05 48X97048A07	1123	52BBIA	1104	53D003-1	1104	56-4837	56
3M355025	1104	48S134734A	2009	48\$137113	2012	48X97048A08	1104 563	52DS-18 52SD-1	1104 1104	53D003-2 53E001-1	1104 1123	56-4839 56-4886	110 112
M355035 M355045	1102	48S134736 48S134737	1104	48S137115 48S137133	2009 1102	48X97048A10 48X97048A18	1104	52SD1 53-0051-2	1104 1104	53E003-1 53E003-2	1123	56-8086	201
M355046 M355048	1104 1104	48\$134756	20111	48\$137158	2011	48X97048A19	1123	53-0082-3	1114	53E006-1	1102 1123	56-8086A 56-8086B	201 201
M355048	1104	48S134765 48S134773	2031	48S137164 48S137167	562 1102(2)	48X97127A01 48X97162A05	1104 2009	53-0082-1003 53-0086-1	1104 1104	53E010-1 53E011-2	1104 561	56-8086C 56-8087	201 201
M355052 M355053	2009	48\$134774 48\$134775	2009 2009	48\$137171 48\$137171(D)	2009 2009	48X97162A21	2009	53-0088-1	1104	53F001-1	1104	56-8087B	201
P60077A06	1123	48\$134776	2009	48S137172	2009	48X97168A01 48X97168A03	1123 1123	53-0088-2 53-0088-3	1104	53F002-1 53H001-7	1104 1104	56-8087C 56-8088	201 201
P63005A72 P63076A81	2009	48S134783 48S134784	2030	48\$137190 48\$137191	2009	48X97168A04 48X97168A06	1123 1104	53-0088-1002 53-0088-1003	1114	53H001-2	1123	56-8088A	201
P63076A82	2030	485134785	2030	48\$137192	2009	48X97168A10	1104	53-0088-1004	1114	53J002-2 53J003-1	1104 1104	56-8088C 56-8089	201
P63077A31 P63077A32	2009 1123	48\$134789 48\$134790	2009	48S137208 48S137260	1104 2009	48X97168A16 48X97172A01	1104	53-0094-1 53-0095-1	1104 1104	53J003-2 53J004-1	1102 561	56-8089A 56-8089C	200
P63078A52 P63078A69	2030	48S134797 48S134804	2030	48\$137299 48\$137300	1123	48X97177A03	2009	53-0098-1	1104	53K001-2	1123	56-8090	200
P63078A70	2030	48S134805	2030	48S137314	2009 2032	48X97177A13 48X97177H01	2009 2035	53-0099-1 53-0099-3	1104 1104	53K001-4 53K001-5	561 1123	56-8090A 56-8090C	200
P63078A71 P63078A86(NPN	2009	48S134807 48S134809	2030	48\$137315 48\$137321	2009	48X97222A02 48X97238A04	1104	53-0099-4 53-0106-1	1.104	53K001-6 53K001-6(5,7)	1104 1104	56-8093	112
3P63079A97 3P63082A24	2009	48S134810	2009	48S137330	564	48X97239A01	1123	53-0106-1001	1114	53K001-7	1104	56-8097 56-8198	110
P63082A25	2030	48S134811 48S134816	1102	48S137343 48S137344	2035	48X97271A01 48X134902	1104	53-0109-1 53-0111-1	1104	53K001-7(6,8) 53K001-8	1104 1104	56-8199 56A22-1	110- 200:
P63082A26 P63086A18	2009	48S134820 48S134823	2030	48S137347 48S137348	1104 1104	48X134970 49-1042	2009	53-0111-1001 53-0113-1	1114	53K001-9	1104	56B22-1	2009
P65112A65	2030	48S134825	2030	48S137350	2030	49-3112	1104	53-0120-1	1104	53K001-11 53K001-14	1104 562	57-0006 57-0004503	110- 2009
P65112A73 P65113A88	2030	48S134826 48S134827	2030	48\$137351 48\$137387	2009 561	49\$1 49X90232A05	1102	53-0122-1 53-0136T	1104 1114	53L001-15 53N001-1	1102 1123	57-0005452 57-0005503	2009
P65118A64 P65123A67	2030	48S134830 48S134831	2032	48S137415 48S137476	2012	50-40102-04	2009	53-1086	1104	53N001-2	1104	57-000901504	2009
P65123A95	2011	48\$134832	2032	48S137495	2009 1123	50-40102-05 50-40201-08	2014	53-1110 53-1519	2009 1123	53N001-3 53N001-5	1104	57-01491-B 57-1	110
P65144A72 P65146A61		48S134837 48S134838	2030	48S137498 48S137512	2009	50-40201-09 50-40201-10	2009	53A001-1 53A001-3	1123 1104	53N001-7 53N002-2	1123 1104	57-2 57-6	110
P65146A62 P65175A12	2011	48\$134840 48\$134841	2009	485137530	2009	50A	1104	53A001-4	1114 ^E	53N003-1	1123	57-12	1104 1104
P65193A55	1101	48S134842	2009	48S137543 48S137855	2009	50AS 50B5	1104 1104	53A001-9 53A001-10	1104	53N003-2 53N004-5	1123 1123	57-13 57-15	110- 110-
P65193A56 P65194A92		48\$134843 48\$134844	2012	48\$155037 48\$155039	1104	50C	1104	53A001-12	1104	53N004-6	1123	57-17	1104
R10001-A01	1104	48S134845	2009	48\$155039 48\$155040	1123	50C371 50C372	2009	53A001-32 53A001-34	1102	53N004-9 53N004-11	1104	57-20 57-21	1104
R10001-A03 R10001-A030-1	1104	48S134846 48S134851	2009 562	48\$15504f 48\$155046	1104	50C373 50C374	2009	53A001-35 53A001-36	1104	53N004-12 53N004-14	1102	57-22	1104
R10062A01 R10062A02	1104.	48S134854 48S134855	2031	48S155047 48S155054	1402	50C380-0	2011	53A006-1	1123	53P151	1123 2009	57-23 57-24 57-25	110
R100620A02	1104	48S134857	2009	48\$155060	1104	50C380-OR 50C394-0		53A008-1 53A0081	1123	53P158 53P159	2009	57-25 57-26	1104
R100620A04 R100620A05	1104 1104	48S134860 48S134861	2007	48S155061 48S155063	1123	50C394-R 50C401	2011 2041	53A010-1 53A011-1	1104 1104	53P161 53P162	2009	57-26 57-27	1104
R134665 R134671	2001	48S134862 48S134879	2007	48\$155077	1102	50C538	2009	53A018-1	1102(2)	53P163	2009	57-28 57-29	1104
R660370A05	1104	48\$134889	2031	48S155078 48S155079	1123	50C644 50C784-R	2009	53A019-1 53A020-1	1102 1102	53P165 53T001-1		57-31 57-33	1104 1104
1869092 1869093	2001	48\$134894 48\$134898		48S155083 48S155087	1104	50C828 50C838	2009	53A022-1	1104	53T001-3	1104	57-43	1104
R869244	2041	48S134899	2009	48S155089	2013	50CJ139	2009	53A022-2 53A022-3	1102(2)	53T001-4 53T001-5	1123	57-46 57-49	110
R869248 R869254	2009	48S134903 48S134904		48S155099 48S155100		50D2 50D4	1104	53A022-4 53A022-6	1104 562	53T001-6 53T001-7	1123	57-58 57-59	110
7869283 7869302	2001	48S134905	2031	48\$155106	1104	50D8	1114	53A022-7	562	53U001-1	1123	57-60	1104
R869312	2009	48\$134906 48\$134908	2031	48\$155117 48\$155126		50D10 50E05		53A030-1 53B001-1	1102 1123	53U001-2 53V001-2		57-65 57-4018-60	1104 204
R869321 R869325		48\$134917 48\$134918	1102(2)	48SP134804 48SP134826	2031	50E1 50E2	1104	53B001-2	1123	54-1	2009	57A1-1	1123
R869329	2009	48S134921	1104	48\$P134837	2011	50E3	1104	53B001-3 53B001-5	1104(2)	54A 54B	2009	57A1-2 57A1-51	1123
R86 9 444 R869476	2001	48S134922 48S134923	2030	48SP134855 48SP134857		50E4 50E5	1104	53B001-6 53B001-7	1104	54BLU 54C	2009	57A1-54	1123
R869476A R869525	2001	48S134924 48S134925	2009	48SP134894	2031	50E6	1104	53B001-9	1102	54D	2009	57A1-62 57A1-63	1123
R869563	2009	48\$134926	2009	48SP134897 48SP134903	2031	50E7 50E8		53B003-1 53B003-2		54F 54GRN	2009	57A1-64 57A1-65	1123 1101
R869568 R869570	2009	48S134927 48S134933	2009	48SP134904	2011	50E10	1114	53B004-1	1123	54V001-2	1123	57A1-75	2009
R869767	2009	48S134937	2030	48SP134905 48SP134906	2031	50M 50 Z 9.1	562	53B005-2 53B006-1		54WHT 54YEL	2009	57A1-123 57A1-124	2009
S191A02 S191A04	1104	48S134939 48S134941	1104	48SP134933 48SP134937	2031	50Z9.1A 50Z9.1B	562	53B007-1 53B008-1	1123	55-1	1123	57A2-27	2009
S191A04(A)	1104	48S134943	2032	48X90232A01	2030	50Z9.1C	562	53B010-3	1104	55-1026 55-1034	2009	57 A2-28 57A2-59	2009
S191A05 S191A06	1104	48S134944 48S134945(A2C =	2035	48X90232A02 48X90232A03		50Z12 50Z12A		53B010-4 53B010-6	1104	55-1082 56-1	2009	57A2-62 57A2-63	2009
S191A07		48S134948		48X90232A04		TMT 1			1102	art i	1123	21 / St / 1973.7	2000

EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
7A2-73	2009	57A193-11 57A193-12	2012 2009	57C6-7 57C6-9	2009	61C001-1 61E05	2009 561	63-8824 63-8955	1104 1123	63-12951 63-12952	2009	65-P11305-0001 65-P11308-0001	11
7A2-85 7A2-87	2009	57A196-10	2041	57C6-11	2009	61E15	562	63-9337	2009	63-12953	2009	65-P11311-0001	11
7A2-97	2009	57A199-4	2009	57C6-17	2009	61E36	561	63-9338	2009 2009	63-13080 63-13419	1123	65-P11324-0001 65-P11325-0001	11
7A2-101 7A2-102	2009	57A200-12 57A201-13	2009	57C6-19 57C6-27	2009	61J001-1 61J002-1	2009	63-9339 63-9341	2009	63-13438	2009	65J2	11
7A2-103	2009	57A202-13	2009	57C6-29	2009	61J003-1	2009	63-9516	2009	63-13440	2009	65P117	11
7A2-113	2009	57A203-14 57A204-14	2009	57C6-30 57C6-32	2009	61J2 62-7567	1104 2009	63-9518 63-9523	2009 1123	63-13441 63-13842	2009	65P124 65P124-1	11
7A2-116 7A2-126	2009	57A204-14	2012	57C7-9	2009	62-8555	2009	63-9787	1104	63-13864	2009	65P124-2	11
7A2-153	2009	57A236-11	2012	57C7-10	2009	62-10234	1123 1123	63-9829	2009	63-13903 63-13919	1104	65P153 == 65P155	— 11 — 11
7A2-192 7A5	2009	57A252-1 57A253-14	2009	57C7-15 -57C7-17	2009	62-10655 62-12034	1123	63-9831	2009	63-13926	2035	65P206	11
7A6(PNP)	2032	57A256-10	2041	57C7-18	2009	62-13261	1.104	63-9832	2009	63-13927	2009	65P284	11
7A6-4	2009	57A265-4 57A268-9	2009	57C7-20 57C11-1	2009	62-13477 62-15318	1104 1123	63-9833 63-9847	2009	63-14032 63-14051	2009	65P297 66-2246	11 11
7A6-6 7A6-6A	2007	57B2-5	2001	57C15-1	2009	62-15483	1104	63-9942	563	63-14052	2009	66-6030-00	11
7A6-6B	2007	57B2-27	2009	57C15-2	2009	62-16711	1104	63-10064 63-10188	1104 2009	63-14057 63-14195	2009 1104	66-6031-00 66-8504	11
'A6-6C 'A6-7	2007 2009	57B2-28 57B2-59	2009	57C15-3 57C15-4	2009	62-16769 62-16841	1123 1123	63-10200	2003	63-15483	1104	66-127119	20
A6-9	2009	5782-62	2009	57C16-1	2009	62-16905	2009	63-10377	2009	63-18135	1104	66-F29-1	20
A6-11	2009	5782-63 5782-64	2009	57C21 57C21-5	2011	62-17232 62-17550	1101 2009	63-10708 63-10709	2009	63-18416 63-18426	2007	66A00008A 66A00010A	20
'A6-17 'A6-19{TRANSI		57B2-73	2009	57C24-1	2009	62-18135	1104	63-10725	2009	63-18643	2009	66A10319	1
	2009	57B2-79	2009	57C24-2	2009	62-18415	2007	63-10732	2009	63-19280	2009	66F-001	1
A6-27 A6-29	2009	5782-85 5782-87	2009	57C24-3 57C24-4	2009 2009	62-18416 62-18417	2007 2007	63-10733 63-10734	2009 2009	63-19282 63-25933	2009 1123	66F001 66F-001-1	1
A6-30	2009	57B2-97	2009	57C27-1	2009	62-18423	2007	63-10735	2009	63-25946	2007	66F001-1	1
A6-32	2009	57B2-101	2009	57C105-12	2009 2009	62-18424 62-18425	2007 2009	63-10736 63-10737	2009 2009	63-26382 63-26597	1123	66F016-1 66F016-2	1
A7-9 A7-10	2009	5782-102 5782-103	2009	57C121-9 57C156-9	2009	62-18431	1104	63-10739	1123	63-26849	2007	66F017	1102
A7-15	2009	5782-113	2009	57D1-1	1,123	62-18434	1104	63-10860	2009	63-27278	2007	66F018	1
A7-17 A7-18	2009	5782-116 5782-126	2009	57D1-2 57D1-51	1123	62-18435 62-18436	1104	63-11025 63-11074	2009 1123	63-27279 63-27280	2007	66F027-1 66F028-1	2
A7-18 A7-20	2009	57B2-126	2009	57D1-54	1123	62-18438	1104	63-11143	2009	63-27367	2007	66F029-1	.2
A11-1	2009	57B2-192	2009	57D1-62	1123	62-18641	2009	63-11148	1104	63-27483	1104 1104	66F057-1 66F057-2	2
A15-1 A15-2	2009	5786-4 5786-9	2009 2009	57D1-63 57D1-64	1104 1123	62-18642 62-18643	2009 2009	63-11215 63-11289	1104 2009	63-27622 63-28250	1123	66F074-1	2
A15-3	2009	57B6-11	2009	57D1-65	1101	62-18782	1102	63-11291	1104	63-28888	1123	66F074-2	2
A15-4	2009	5786-19	2009	5701-75	2009	62-18828	2009	63-11468	2009	63-29383 63-29461	1104 2009	66F074-4 66F-084-1	2
A16-1 A21	2009	57B21-9 57B27-2	2011	57D1-123 57D1-124	2009 2009	62-19115 62-19260	1104 1101	63-11469 63-11470	2009	63-29662	2009	66J2	1
A21-2	2011	57B30-12	2011	57D6-4	2009	62-19280	2009	63-11471	2009	63-29663	2007	.66M	.2
A21-8	2009	57B-102-4	2009	57D6-19	2009	62-19516	2009 2009	63-11472 63-11585	2009 2007	63-29664 63-29863	2007	66X0020-000 66X0020-001	1
A21-11 A21-12	2011	57B105-12 57B107-8	2009	57D14-1 57D14-2	2009	62-19548 62-19581	2011	63-11660	2009	63-250128-2	1101	66X0023-001	1
A21-13	2011	57B117-9	2009	57D14-3	2009	62-19620	1101	63-11757	2009	63-250128-8	1101	66X0023-002	1
A21-14	2011 2011	57B118-12	2009 2009	57D136-12 57D180	2009 2007	62-19749 62-19814	1104 1104	63-11758 63-11759	2009	63-250128-12 63-250128-14	1101	66X0023-003 66X0023-004	1
A21-21 A21-26	2011	57B119-12 57B120-12	2009	57D184	2007	62-19837	2009	63-11762	1114	63-250128-16	1101	66X0023-005	1
7A21-45	2011	57B121-9	2009	57L2-2	2009	62-19838	2009	63-11825	2009	63J2	1104 1123	66X0023-006 66X0023-007	1
A24-1 A24-2	2009	57B125-9 57B126-12	2009	57L3-1 57L3-4	2009	62-19846 62-20155	1123 2009	63-11831 63-11832	2009 2009	64-1 64-8054-6	1104	66X0023-007	E 1
A24-3	2009	57B129-9	2009	57M1-14	2009	62-20223	1102	63-11833	2009	64-J2	1104	66X0023-009	-
A24-4	2009 2009	57B135-12 57B136-12	2009 2009	57M1-15 57M1-19	2009	62-20240 62-20241	2009 2009	63-11879	1123 1104	64J2 64T1	1104 2007	66X0023-1 66X0028-001	
'A27-1 'A31-1	2035		2009		2009	62-20242	2009	63-11916	2009	65.	1104	66X0028-008	1
A31-2	2036	57B138-4(LAST-II		57M1-23	2009		2009	63-11934	2009	65(DIODE)	1104	66X0033-000 66X0037-001	1
A31-3 A31-4	2036 2035		2009	57M1-24 57M1-26	2009	62-20319 62-20360	1102 2009	63-11935	2009 2009	65(TRANSISTOR) 65-085002	2011 1123	66X0039-001	
A105-12	2009	57B143-12	2009	57M1-27	2009	62-20437	1102		1104	.65-085003	1123	66X0040-003	
A117-9	2009		2009		2009		1102 564	63-11991 63-11991A	2041 2041	65-085004 65-085010	563 1123	66X0040-005(BR	AUF
A118-12 A119-12	2009		2035		2009		1104	63-12003	2009	65-085012	1123	66X0040-009	
A120-12	2009	57B150-12	2035		2009		2009		2009	65-085013	1104	66X0043-001	
7A121-9 7A125-9	2009 2009		2009 2009		2009 2041		1102 2009		2009 1104	65-1 65-4	2009 2001	66X0044-001 66X0044-100	
A126-12	2011		2009		2041		2009		1123	65-4-70	2001	66X0046-001	
A 135-12	2009		2009		2041	62-22250	2009		2009		2001	66X0047-001	
A136-12	2009		2009		2041		2009 1102		1104 1114		2001	66X0047-901 66X0048-001	112
A138-4(3RD-IF A138-4(LAST-I	F) 2010	578152-7	2009	57M3-6	2041	62-113998	1104	63-12605	2009	65-4A0R	2001	66X0048-001 66X0049-002	-
'A140-12	2009	578152-8	2009		2041	62-114267 62-125528	2011 1102	63-12607 63-12608	1123 2009		2001	66X0051-001 66X0053-001	
'A142-4 'A142-4(3RDIF)	2010	57B152-10	2009	-58-1 (TRUETONE)	2009	62-126321	1102	63-12609	2009	65-4A2	2001	66X0054-001	
A149-12	2035	57B152-11	2009	59-1	1101	62-126856	1104	63-12641	2009	65-4A3	2001	66X0056-001 66X0062-001	
A150-12 A152-1	2035 2009		2009 2009		1102 1104		1101 2007	63-12642 63-12645	2009 1123		2001 2001	66X041-001	
A 152-2	2009	57B153-3	2009	60C	1104	62-129556	1101	63-12696	2009	65-4A4-7	2001	66X053-001	
A152-3	2009	578153-4	2009		1104		2011		2009 2009		2001	66X19 66X20	ò
A152-4 A152-5	2009	57B153-6	2009 2009	60H	1114	62-130046	1102	63-12707	2009	65-4A5L	2001	66X23	
A152-6	2009	57 B 153-7	2009	60J2	1104	62-130047	562	63-12750	2009	85-4A6	2001	66X24	
A152-7 A152-8	2009	57B153-8 57B153-9	2009 2009		1104 1123		564 564		2009		2001 2001	66X26 66X29	
A152-9	2009	578156-9	2009	61-746	2009	62-134074	1101	63-12753	2009	65-4A8	2001	67-1000-00	
A152-10 A152-11	2009	578169-12	2035	61-751	2009	62A01	1104		1123		2001	67-1003-00 67J2	
7A152-11 7A153-1	2009		2041 2041		2009		1104 1104		1123 1123		2001	67J2A	
7A153-2	2009	578182-12	2009	61-756	1104	62A05	1104	63-12757	1123	65-4A21	2001	67P1	
7A153-3	2009	578184-12	2009	61-814	2009		2009 1104		2009		2001	67P1C 67P2	
7A153-4 7A153-5	2009		2009	61-815	1104	62J2 63-7421	2009		2009	65-41	2001	67P2C	
7A153-6	2009	57B194-11	2009	61-926	1104	63-7433	1104	63-12878	2009	65-42	2001	67P3	
7A153-7	2009	57B200-12	2009	61-1320	1104	63-7547	2007	63-12879	2009		2001 2001	67P3C 68A7252	O(X
7A153-8 7A153-9	2009		2009 2012		2009		2009 2009		2009		2001	68A7380-1	
7A153-9 7A156-9	2009	57B253-14	2009	61-1402	2009	63-8381	1123	63-12941	2009	65-46	2001	68A7672P1	
7A166-12	2009	57B256-10	2041	61-1403	2009	63-8555	2009	63-12942	2009		2001	68A7715P1 68A8321	
7A172-8 7A180-4/3RDJE	2012		2001		2009		1104		2009	65-49	2001	68A8319001	
7A180-4(3RDIF 7A181-12	2009		2001	61-1765	1104	63-8702	2009	63-129 46	2009	65-250128-12	1101	69-1810	
7A182-12	2009	57C6-6A	2007	61-7728	1104	63-8707	2041	63-12948	2009		1122	69-1811 69-1812	
7A184-12	2009	57C6-6B	2007	61-59395	1123	63-8707A	2041	63-12949	2005	1 03-61 (303-0001	1122	69-1813	

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
9-1822 9-1823	1102 1104	75Z9.1B 75Z9.1C	562 562	81-46123005 81-46123006-2	1104 1123	86-58-1 86-58-2	562 2009	86-399-1 86-399-2	2009	86-5096-2 86-5097-2	203 5 2009	88C2 88C3	20
9-2246 9-2401	1104 702	75Z12 75Z12A	563	81-46123011-2	1104	86-58-3	1104	86-399-9	2009	86-5101-2	2041	88C4	20
9-2403	702	75Z12B	563 563	81-46123012-2 81-46123013-8	1104 1123	86-59-1 86-59-3	1104	86-403-2 86-420-2	2009	86-5101-2A 86-5103-2	2041 2009	88C5 88C6	20
9-3116 9A49728-P1	702 1102	75Z12C 75Z15	563 564	81-46123014-6	1104	86-60-1	1123	86-445-2	2009	86-5110-2	2009	88C7	20
0-943-083-002	1122	75Z15A	564	81-46123015-3 81-46123018-7	1123 1104	86-60-3 86-61-1	1104 563	86-457-2 86-458-2	2009 2009	86-5111-2 86-5112-2	2009 2041	88C8 88C9	20
0-943-083-003	1122	75Z15B 75Z15C	564	81-46123022-9	1104	86-62-1	1102	86-460-2	2009	86-5112-2(THON	IAS) 2009	88C10	20
0-943-722-001 0-943-754-002	2009	76-12965-26	564 1123	81-46123023-7 81-46123034-4	1102	86-62-3 86-63-3	1104	86-461-2 86-462-2	2009	86-5114-2 86-5117-2	2009	88C10R 88C11	20
0-943-762-001 0-943-772-002	2009	76-13570-65	1101	81-46123035-1	1104(2)	86-64-1	1123	86-465-2	2009	86-5122-2	2035	88C12	20
0-270050	1114	76-13570-85 76-13848-23	1101	81-46123038-5 81-46123043-5	1102	86-65-1 86-65-3	563 1104	86-472-2 86-477-2	2009	86-5911-3 86-10006	1104 2013	88C13 88C13P	20
0F40	1104 2009	76-13866-19(VHF	2011	81-46125007-8	2011	86-65-4	_1102	86-481-1	2009	86-10014	_1102	88C14	2
0N2	2009	76-14196-1 76G1450J	1123 1.104	81-46125012-8 81-46125013-6	2011 2011	86-65-9 86-67-0	1104 1104	86-481-2 86-483-2	2009 2009	86-100002 86-100003	2013 2009	88C14-7 88C14-7B	20
0N3	2011	76N1	2009	81-46125016-9	2009	86-67-2	1114	86-483-3	2009	86-100004	2013	88C15	20
0N4 0S40	2009 1104	76N1(REMOTE) 76N1M	2009	81-46125019-3 81-46125026-8	2009 2009	86-67-3 86-67-8	1104 1104	86-484-2 86-485-2	2009 2009	86-100005 86-100006	2009	88C15L	20
0T40	1104	76N2	2009	81-46125027-6	2009	86-67-9	1104	86-486-2	2009	86-100007	2009 2013	88C16 88C16D	20
0,00.730 1-13/51/60	1122	76N2369-000 76N2369-001	2009	81-46125030-0 81-46125032-6	2011	86-70-1 86-72-3	1102	86-493-2 86-494-2	2009	86-100008	2009	88C17	20
1-126268	2009	77	2007	81-46125033-4	2011	86-74-1	1114	86-495-2	2009	86-100013 86-100014	1102 1102	88C17-1 88C18	20
1N1B 1T2	2009	77-270993-1 77-271031-1	1104	81T2 82-4	2030 1104	86-74-9	1102	86-496-2	2009	86A86A327	2009	.88C19	20
2-11	1104	77-271032-1	1123	82-409501	2009	86-75-3 86-75-3(SEARS)	1104	86-502-2 86-513-2	2009	86A332 86A334	2041 2009	88C19G 88C-70	20
2-15 2-18	1104 1102	77-271166-2 77-271374-1	2004 1104	83-829	1104	86-76-1	1102	86-514-2	2009	86A336	2009	88C-70-12	. 20
2N2B	2009	77-271453-1	2009	83-880 83A30-1	1104 1104	86-77-1 86-78-1	1102	86-515-2(SEARS) 86-520-2	2009	86A350 86X0006-001	2009 2009	88C-70-12-7 88C119	20
2Z 3-15	1104 564	77-271819-1 77-271967-1	2009	83B38-1	1123	86-78-3	1104	86-525-2	2011	86X0007-001	2009	88C121	20
3A64-1	1102(2)	77-273001-2	2009 2009	84A20 85-5	1102	86-80-1 86-80-3	1104	86-534-2 86-536-2	2009	86X0007-004 86X0007-104	2031	88C182	20
3B-140-003-5	2009	77A01	1102	85-5056-2	2009	86-84-1	1104	86-537-2	2031	86X0007-204	2009	88CC-70-12 89WJ75/46N	20
3C182081-31 3N1B	2009	77C710891-2 77N1	2009	85C04 86-0002	2009 1123	86-85-1 86-85-3	563 1104	86-538-2 86-539-2	2031	86X0008-001 86X006-001	2031	90-30	20
3T2	2012	77N2	2009	86-0005	562	86-88-3	1123	86-548-2	2009	86X007-004	2009 2009	90-32 90-47	20
4-3 4-3-70	2007 2007	77N3 77N4	2009	86-0006 86-0007-004	1104 2009	86-89-1 86-89-3	1104 1104	86-551-2	2009	86X007-034	2009	90-48	20
4-3-70-12	2007	77N5	2009	86-001	1123	86-92-1	563	86-554-2 86-556-2	2009 2012	86X0012-001 86X0014-001	2031 2007	90-50 90-55	20
4-3-70-12-7 4-3A0	2007	77N6 77S1017	2009	86-0010 86-0012	1104	86-110-2 86-110-3	2009	86-559-2	2009	86X0019-001	2011	90-57	20
4-3A0R	2007	78-254566-1	1104	86-0012-001	1104 2009	86-111-3	1067	86-560-2 86-561-2	2009	86X0022-001 86X0025-001	2009	90-61 90-62	20
4-3A 4-3A1	2007	78-254566-4 78-271030-1	1104	86-0013	1104	86-119-2	2009	86-564-2	2009	86X0025-001(TIN	() 2031	90-65	20
4-3A2	2007	78-271143-1	1104	86-0016-01 86-0022-001	1104 2009	86-123-2 86-125-1	2009 1123	86-565-2 86-573-2	2009	86X0029-001 86X0031-001	2009	90-69 90-71	20
4-3A3	2007	78-27119 9- 1	1123	86-0029-001	2009	86-128-3	1114	86-574-2	1102	86X0031-002	2009	90-179	20 20
4-3A3P 4-3A4	2007	78-271228-1 78-271383-1	1123 563	86-0031-001 86-0511	2009 1104	86-138-3 86-139-2	2011	86-574-2(DIODE) 86-593-2		86X0031-003	2009	90-180	20
4-3A4-7	2007	78-271383-3	564	86-0515	1102	86-139-3	1104	86-594-2	2013	86X0032-001 86X0034-001	2009 2010	90-452 90-453	20 20
4-3A4-7B 4-3A5	2007	78-271383-4 78-272160-1	564 1104	86-0516 86-0521	1104	86-143-2	2009	86-595-2	2009	86X0034-001(3R		90-455	20
4-3A5L	2007	78-273002-1	1123	86-1-3	563 1104	86-144-2 86-146-1	2009 1123	86-596-2 86-597-2	2011	86X0035-001 86X0036-001	2009 2032	90-457 90-458	20
4-3A6 4-3A6-3	2007	78-273008 78-273008-1	1104	86-3-3	1104	86-146-3	1104	86-598-2	2009	86X0040-00	2009	90-459	20
4-3A7	2007	78-273085	1104 1104	86-4-1 86-4-2	1104	86-147-1 86-147-3	1102	86-599-2 86-619-2	2009 2013	86X0040-001 86X0045-001	2009	90-601 90-602	20
4-3A7-1 4-3A8	2007	78BLK	2007	86-7-1	1104	86-155-2	2009	86-620-2	2013	86X0048-001	2009	90-603	20 20
4-3A9	2007	78GRN 78N1	2007 2009	86-9-3 86-10-1	1104 1123	86-157-2 86-158-2	2009 2009	86-621-2 86-628-2	2013	86X0050-001 86X0051-001	2009	90-605	20
4-3A9G	2007	78N2B	2009	86-10-2	2001	86-166-2	2009	86-628-9	2012	86X0054-001	2009	90-606 90-607	20 20
4-3A19 4-3A21	2007	78RED 78YEL	2007	86-11-2 86-12-1	2001 1101	86-171-2 86-175-2	2009	86-631-2	2012	86X0058-001	2009	90-608	20
4-3A82	2007	79E104-2	1122	86-12-2	2001	86-182-2	2009	86-646-2 86-653-2	2012	86X0058-002 86X0058-003	2009	90-610 90-612	20
- 30 - 31	2007	79F015 80-001300	1123	86-12-3 86-15-1	1101 1123	86-188-2 86-189-2	2009	86-655-2	2009	86X0060-001	2011	90-613	20
4-32	2007	80-001400	1114	86-20-1	1123	86-190-2	2009	86-661-2 86-664-2	2009	86X0061-001	2011	90-2213-00-18 90T2	20
4-33 4-34	2007	80-050100 80-051500	2009	86-21-1	1104	86-191-2	2009	86-665-2	2041	86X0063-001	2009	91-3	11
4-35	2007	80-052102	2009	86-22-1 86-22-3	1123 1104	86-192-2 86-193-2	2009	86-665-9 86-669-2	2041	86X0065-001 86X0079-001	2012	91-46 91A01	11
4-36 4-37	2007	80-052202	2009	86-23-1	1104	86-194-2	2009	86-675-2	2009	86X0081-001	1067	91A02	11 11
1-38	2007	80-052302 80-052402	2009	86-23-3 86-25-1	1104 563	86-195-2 86-196-2	2009	86-702-2 86-1000O	2009	86X0090-001 86X037-001	2009	91A03	- 11
-39	2007	80-052600	2009	86-26-1	1104	86-197-2	2009	86-1392	2009	86X037-001	2001 2009	91A04 91A05	11
IN1	2009 1104	80-053001 80-053400	2009	86-26-2 86-27-1	2001 1102	86-198-2 86-199-2	2009	86-5000-3	1104	86X6-1	2009	91A06	11
iD1	1104	80-60-1	1123	86-28-3	1104	86-201-2	2009	86-5001-3 86-5002-3	1104	86X6-4-518 86X7-2	2009	91A018 91A11	11
5D2 5D8	1104	80-308-2 80-318250	2009	86-30-1	1104	86-202-2	2009	86-5003-3	1104	86X7-3	2009	91C	20
D10	1114	80-318250 80-337390	2009	86-30-3 86-31-1	1104 563	86-237-2 86-238-2	2009	86-5006-3 86-5007-3	1104 1123	86X7-4 86X7-6	2009	91D 91E	20
E1 E2	1104	80-383940	2009	86-31-2	2001	86-247-2	2009	86-5009-3	1104	86X8-1	2009	91N1	20
E2 E3	1104	80-389910 80-389930	2009	86-32-1 86-34-3	1104	86-250-2 86-255-2	2009	86-5010-3 86-5011-3	1102	86X8-2	2009	92-1	11
E4	1104	80-414120	2041	86-35-1	562	86-256-2	2009	86-5012-3	1102	86X8-3 86X8-4	2009	92-1001 92-30942	11
E5 E6	1104	80-414130 80-421980	2041	86-35-3 86-36-1	1104	86-264-2	2009	86-5015-3	1102	86X34-1	2009	92A11-1	11
E7	1114	80A5	1114	86-37-1	1104 562	86-265-2 86-277-2	2009	86-5018-2 86-5024-3	1104	87-0001 87-0002	2035	92A64-1 92B12-2	1102
E8 E10	1114 1114	80AS 80H	1114	86-38-1	1104	86-291-9	2009	86-5027-3	1102	87-0002-1	2013	92L102-2	11
F05	1104	81-27123100-3	1114 1104	86-40-3 86-41-1	1104 1102(2)	86-293-2 86-308-2	2009	86-5028-3 86-5029-3	1114 1104	87-0003 87-0014	2013	93-13 93-302	11 11
N5	564	81-27123150-8	1123	86-41-1(SEARS)	1102	86-309-2	2009	86-5032-3	1114	87-0023-7	2013	93-SE-124	20
N5AA N6.2	2009 561	81-27123300-3 81-27123307-3	1104	86-41-7 (SEARS-A	(GC)	86-310-2 86-323-2	2009	86-6027-2	1102 2009	87-0218-U	2016	93A1-20	11
N12	563	81-27125140-7	2009	86-42-1	2009	86-324-2	2009	86-5041-2	2009	87-10-0 87-10-1	1123 1123	93A1-21 93A1D-1	11
R1B R2B	1104	81-27125140-7A 81-27125140-7B	2009	86-42-3 86-44-2	1104	86-327-2	2009	86-5040-2 86-5041-2 86-5045-2 86-5046-2	2009	87-67-3	1104	93A2	11
R3B	1104	81-27125160-5	2009	86-45-1	2001 1123	86-328-2 86-339-2	2009	86-5049-2	2009	87-190XX-001 88-3	1102 1104	93A3D-2 93A4-2	11
R4B R5B	1104 1104	81-27125160-5A 81-27125160-5B	2009	86-46-3	1104	86-339-9	2009	86-5050-2	2009	88-77-1	1102	93A6-1	11
R6B	1104	81-27125270-2	2009	86-49-1 86-49-3	1123 1104	86-342-2 86-359-2	2009	86-5051-2 86-5055-2	2009	88-125 88-831	1104 1104	93A6-2 93A8-1	11 11
R78	1114	81-27125270-2A	2009	86-50-3	1104	86-362-2	2009	86-5056-2	2030	88-832	1104	93A9-3	20
R8B R9B	1114	81-27125270-2B 81-27125300-7	2009	86-51-2 86-51-3	1104	86-365-2 86-379-2	2009	86-5065-2	2009	88-833	1104	93A9-4	20
R10B Z9.1		81-46123001-3 81-46123004-5	1123	86-52-1	1104	86-379-2 86-389-2	2009	86-5081-2 86-5084-2	2009	88-9304 88-1250109	702 2009	93A10-1 93A11	11 11
	562	X1-46123004-5	1104	86-54-3	1104	86-390-2	2009	86-5084-2A	2041	88C	2007	93A12-1	11

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
93A15-1 93A25-1	1104 1123	93B38-5 93B39-1	1123 562	93L5-7 93L101-2	1104 1104	96XZ6052-52N 96XZ6053/11N	2009	102-0461-02 102-0828-17	2013 2013	106-011 105-1	1104 1104	120-004480 120-004482	*200 200
3A25-2 3A25-3	1123 1123	93839-3 93839-12	562 563	93L102-2 93L107-2	1104 1104	96XZ6053/35N 96XZ6053/36N	2009	102-207 102-339	1123	106-111 106-351	1104 2013	120-004483 120-004498	112
3A27-1 3A27-2	1123 1104	93B39-13 93B41	563 1123	93M8-1 93SC165	1104 2041	96XZ6053-11N 97N2	2009	102-412 102-1317-18	1122 2010	106B6 106M	1104 2036	120-004499 120-004503	110
3A27-3 3A27-8	1102 1102	93B41-1 93B41-2	1123 1123	93SC165133 93SC165133A	2041 2041	98-301 98-302	1104 1104	102-1335-04 102-1342-02	2010 2013	107-8 107 B 6	2009	120-004629 120-004730	1102(
3A30-1	1104	93B41-3	1123	93.20.709	1114	-98A12518 98T2	1104 2010	102B6 102D	1104 1104	107BRN 107N2	2009	120-004877 120-004878	110
3A30-3 3A31-1	1J04 1102	93B41-4 93B41-6	1104	93.20.714 93.24.401	1123	99-109-1	2009	103-19	1123	108	1104	120-004879	56
3A33-1 3A38-1	1123 1123	93B41-8 93B41-12	1104 1104	93.24.601 93.24.604	1123	99-109-2 99BA6	2009 2007	103-22 103-23	1123 1123	108(FARTISA) 108-002	1123 2013	120-004880 120-004882	200
3A39-3 3A39-12	562 563	93B41-14 93B41 ₂ 20	1.104 1104	94-42-9 94-1066-1	1123	99BE6 99K7	2007	103-23-01	1123 1104	108-0049-08 108-0068-12	2036 2035	120-004883 120-004888	200
3A39-12(VOL.	-REG.) 563	93B42-1	1104	94A80-1 94N1	563 2009	99L6 99S003	2001 2007	103-31 103-34	1123 1123	108A4 108B4	1104 1104	120-005299 120-1	112
3A39-17 3A39-24	2011 564	93B42-2 93B42-3	1104 1104	94N1B	2009	99807	2001	103-42	1102	108B6	1104	120-2	200
3A39-43 3A41-2	563 1123	93B42-4 93B42-5	1104 1104	94N1R 94N2	2009 2009	99S012 99S012A	2009	103-44 103-49	1123 1101	108E-E2 109	1104 2009	120-3 120-7	200
3A41-5 3A42-1	1123 1104	93B42-6 93B42-7	1104 1104	94T1 95-112	2007	99S012E 99S020	2009	103-59 103-60	1104 1101	109-036500 109-1	1123	120-8 120-8A	200
3A42-2	3104 1104	93B42-8 93B42-9	1104 1104	95-113 95-114	2001	99S025 99S025A	2009	103-61 103-65	1101	109-1(RCA) 109B6	2009	120A02 120A11	110
3A42-7 3A42-8	1104	93B42-10	1,104	95-120A	2007	99S032(3RD-IF)	2010	103-73	1123	110-629 110-635	1104 1104	120A13 120BLU	110
3A43-1 3A43-2	1101 1101	93B42-11 93B42-12	1104 1104	95-216 95-221	2009 2009	99S033A 99S035	2009 2009	103-74 103-76	1123 1104	110-636	1114	121(SEARS)	200
3A43-4 3A44-2	1101 1101	93B44-1 93B45-1	1101 1104	95-225 95-226-2	2009	99S036 99S038	2009 2009	103-79 103-82	1123 1104	110-672 110-684	1104 1104	121-0041 121-6	20
3A45-1	1104	93B45-2	1104	95-227	2009	99S055 99S056	2013 2013	103-87 103-96	1123 563	110-763 110B6	1123 1114	121-14 121-14(ZENITH)	200
3A45-2 3A47	1104 1104	93B45-3 93B47-1	1114 1104	95-296 95-11511500	1114	99S085	2009	103-101	1102(2)	111-1	1104	121-15	20
3A48-1 3A48-2	1102	93B48-1 93B48-2	1102 1102	96-0008 96-5005-01	1123	99S0102-1 99S103-1	2012 2041	103-114 103-131	1123 1102	111-4-2020-0800 111-4-2020-06100		121-16 121-17	20 20
3A51-3 3A52-1	1104 1104	93B48-3 93B48-4	1102 1102	96-5007-01 96-5022-01	1123 1104	99\$103-3 99\$K5	2041	103-136	564 1122	111-4-2020-06200	(MP) 1102(2)	121-21 121-22	200
3A52-2	1102	93B51-3	1104	96-5022-1 96-5023-01	1104 1104	99SK7 99SQ7	2001 2001	103-142 103-142(DET)	1102 1102(2)	111-4-2020-08000 111-4-2020-08600		121-24 121-25	20
3A53-3 3A56-1	1104 1104	93B59-1 93B64-1	1101 1102	96-5046-01	1104	100-001-01/2228-3	1104	103-142-01	1102	111-4-2020-14500	1104	121-26	20
3A58-1 3A59-1	1104 1101	93B65-1 93B68-14	1114 1101	96-5059-01 96-5080 -0 2	1123 2009	100-003-40/2228-3		103-145 103-145-01	1102 1104	111-4-2020-14600 111-4-2020-15600	1104	121-31 121-33	20
3A59-2 3A60-2	1101 1104	93B122 93B123	1104 1104	96-5082-01 96-5087-01	1104 1123	100-007-13/2228-3 100-0051	1123 1123	103-158 103-159	563 1102	111-731 111-6910	2036	121-50 121-51	20
3A60-5	1102	93C1-20	1104	96-5088-01	1104	100-00310-09	1102 1123	103-178 103-178-01	1102	111N2C 111N4	2041	121-53 121-70	20 20
3A60-6 3A60-7	1102 1104	93C1-21 93C7-1	1104 1123	96-5091-01 96-5096-01	563 1104	100-00340-00 100-011-20	1102	103-185	1104	111N4A	2041	121-71	20
3A60-8 3A60-9	1104 1104	93C7-2 93C7-3	1102 1102	96-5103-01 96-5109-01	1104 1104	100-011-50/2228-3 100-0124	1102 1123	103-191 103-192	1104 1102(2)	111N4B 111N4C	2041 2041	121-80 121-81	20 20
93A60-14 93A63-2	1104 1101	93C8-1 93C12-1	1123 1104	96-5109-02 96-5110-02	1104 564	100-0125	1123 1102	103-202 103-203	1102 1104	111N6 112-000088	2041	121-82 121-83	200
93A64-1	1102	93C12-2	1104	96-5110-03	564	100-01120-09	1102 1102	103-216 103-222	1104 1102	112-001 112-011A	2007 2009	121-84 121-85	20
93A64-2(AFC) 93A64-3	1102(2) 1102	93C12-3 93C16-2	1104 1104	96-5113-01 96-5115-01	1104 2009	100-11 100-12	1123	103-228	1104	112-1A82	2009	121-86	20
93A67-1 93A69-2	1104 1102	93C18-1 93C18-2	1114 1114	96-5115-02 96-5115-03	2009 2009	100-13 100-14	1104 562	103-240 103-245	1102 1104	112-363 112-500-0-50	2041 1102	121-87 121-88	20
93A77-1 93A78-1	1123 1104	93C19-1 93C24-1	1104 1104	96-5115-04 96-5115-05	2009	100-15 100-120	1104 1102	103-254 103-261	1104 1104	112-500-0-501 112-523	1102 2009	121-89 121-90	20
3A79-6	1114	93C24-2	1104	96-5117-01 96-5117-91	2041	100-125 100-130	1102 1102	103-261-0 103-261-01	1104 1104	112-601-0-102 112-826	1104 1104	121-91 121-92	20 20
93A80-1 93A97-1	563 1104	93C24-3 93C24-4	1104 1104	96-5118-01	2041 1102	100-132-00	1104	103-261-02	1102	112-203055	2041	121-93	20
93A97-2 93A97-3	1104 1104	93C25-3 93C25-4	1123 1104	96-5119-01 96-5121-01	1104(2)	100-136 100-137	1123 1102	103-271 103-272	1123 562	113-039 113-118	1104 2009	121-94 121-100	20 20
93A97-37 93A104-1	1104 1104	93C26-1 93C26-2	1104 1104	96-5133-01-02 96-5133-02	563 563	100-138 100-139	1104 562	103-279-01 103-279-13	563 561	113-321 113-392	1104 1104	121-113 121-128	20 20
3A105-1 3A120	1123 1104	93C26-3 93C26-4	1104 1104	96-5152-01 96-5152-03	2009 2009	100-160	1123	103-279-18	562 563	113-998 113A7739	1104 1104	121-145 121-146	20 20
3A3912	1102	93C26-5	1104	96-5153-01	2009	100-162	1104	103-279-24	564 1104	114-013 114-4-2020-14500	1104	121-147	20
93B1-1 93B1-2	1104 1104	93C26-8 93C27-1	1104 1123	96-5153-03 96-5162-03	2009 2041	100-184 100-216	1102	103B6 103G3125	1104	114-42020-14500	1104	121-154	20
93B1-3 93B1-4	1104 1104	93C27-2 93C27-3	1102 1102	96-5162-04 96-5164-02	2041 2041	100-217	1104 1102	103G3125A 104B6	1104 1104		1104 2009	121-T95B	20
93B1-5 93B1-6	1104 1104	93C27-4 93C27-5	1104 1123	96-5164-03 96-5166-01	2041 4104(2)	100-438 100-520	1104 1104	104T2 104T2A	2041 2041	115-4 115-13	2009	121-205 121-206	20 20
93B1-7	1104	93C27-6	1123	96-5177-01	2009	100-522	562 562	105-001-04	2009 2031		2009 1104	121-207	20
93B1-8 93B1-9	1104 1104	93C27-7 93C28-4	1102 1104	96-5187-01	1114 2009	100-527	1104	105-001-07	2009	115-599	1104	121-209	20
93B1-10 93B1-11	1104 1104	93C30-1 93C30-3	1104 1104	96-5196-01 96-5201-01	1104 2041	100-4107 100-10121-05	2011 1104		2009 2009		1104 2009	121-211	20 20
93B1-12 93B1-13	1104 1104	93C39-2	563 562	96-5207-01 96-5213-01	2041 2009	100-10132-00 100A	1104		2009 2011		564 1104		20
93B1-14	1104	93C39-6	563	96-5219-01	2012	100C-4R	1104	105-02	1123 1123	116-074	2009	121-219	20
93B1-15 93B1-16	1104 1104	93C39-12	2009 563	96-5220-01 (NPN 96-5221-01	2009	100K10	1114	105-060-09	2009	116-085	2009	121-221	20
93B1-17 93B1-18	1104 1104	93C42-2	563 1104	96-5228-01 96-5229-01	2009 2009	100R1B	2009 1104	105-085-54	2009 2009	116-588	2009 2009	121-225	20
93B8-1 93B12-1	1123 1104	93C42-7	1104 1123	96-5237-01 96-5248-04	2009 563	100R2B	1104 1104	105-02005-07	2011 2011	116-875	2009		20
93B12-2	1104 1104	93C60-5	1102 1102	96-5248-06 96-5254-01	564 1102	100R4B	1104	105-02008-01	2011	117-134-11	1104	121-236	20
93B12-3 93B20-1	1104	93C60-7	1104	96-5255-01	2009	100R6B	1104	105-08243-05	2009	118-02900	1122	121-254	20
93B20-2 93B20-3	1104 1104	93C64-2	1122 1122	96-5281-01	2009	100R8B	1114 1114	105-904-85	2009	119-0054	1122 2009	121-277	20
93B24-2 93B24-3	1104 1104	93C64-3	1122 1104	96-5290-01	2009	100R9B	1114	105-904-86	2030	119-0056	2009	121-278	20
93B25-1	1123	93C118-1	1114	96-5333-01	1104	100T2	2041	105-931-91/22	28-3 2009	120-001-300	1104	121-286	2
93B25-2 93B25-3	1123 1123	93C218	1114 1123	96-5363-01	1114 1123	100X2	2041	105B6	2009 1104	120-001192	1104 2007	121-302	21
93B27-1 93B27-2	1123 1104		1122 1101	96-5374-01 96XZ0778-44N	702 1123		2041		1104	120-002012	1104 1104	121-364	20
93B27-4 93B27-5	1102 1102	93L3-1	1104	96XZ0868/15X	1123	101-12	2007 1104	106-001	2013 2013	120-002013	1104	121-365	20
93B27-8	1102	93L5-1	1104	96XZ778/21N	1123	102-02	1123	106-007	1122	120-003147	1102	121-367	20
93B30-1 93B30-3	1104 1104	93L5-4	1104 1104	96XZ801/14N	.1123 2009	102-0454-02	2013	106-009	1123 1102	120-003149	1104	121-383	20
93B38-1	1123		1104	96XZ6052/52N	2009	102-0460-02	2013	106-010	562	120-004061	1114	121-397	21

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
21-404 21-422	2009 2009	121-895	2009	130-40357	2009	146-12	2009	151N4	2009	176-048-9-002	2010	212-38	1
21-423	2009	121-907 121-913	2013	130-40896 130-40922	2009	146D-1 146D1	1102(2)	151N5 152-008-9-001	2009 562	176-049-9-002 176-054-9-001	2010	212-39	1
21-430	2009	121-914	2009	130-V10	2011	146D1B112	1102(2)	152-006 -00	1102	176-060-9-002	2009	212-40 212-41	1
21-430B 21-430CL	2009	121-915 121-931	2009	130A17268 130YE	1104	146N3 146N5	2009	152-012-9-001	562	176-060-9-004	2010	212-42	. 1
21-433	2009	121-950	2009	131-001-007	2041	148N2	2009	152-019-9-001 152-047	561 1104	176-072-9-005 176-073-9-001	2013 2030	212-47	1
21-433CL	2009	121-951	2010	131-001007	2041	148N212	2009	152-047-9-001	561	176-073-9-001	2020	212-49 212-50	1
21-434H 21-435	2009	121-953 121-954	2013 2013	131-043-67 131-04367	2041 2041	149-12	2035	152-051-9-001	562	176-073-9-012	2020	212-51	1
21-442	2009	121-972	2009	131AS471	007	149-142-G1 150	1102 1104	152-051-9-002 152-052-9-002	561 561	176-074-9-001 179-46447-08	2013	212-57	1
21-447	2009	121-973	2009	132-002	2009	150-001-005	1123	152-079-9-002	561	179-46447-17	1733	212-58 212-59	1
21-448 21-450	2009	121-974 121-975	2011	132-003 132-004	2012	150-001-9-005	1123	152-079-9-003	561	180-1	1104	212-60	1
21-480	2011	121-982	2009	132-005	2009	150-001-9-007 150-002-9-001	1123 1123	152-082-9-001 152-0242-00	562 1102	180N1 180N1P	2010 2013	212-61 212-62	1
21-499	2009	121-983	2011	132-011	2009	150-004-9-001	1123	152-0333-00	1122	180T2A	2013	212-64	1
21-503 21-504	2013	121-984 121-989	2011 2012	132-014 132-017	2012 2009	150-005-9-001	1123	152-12	2030	180T2B	2041	212-65	i
21-505	2013	121-995	2011	132-017	2009	150-006-9-001 150-015-9-001	1123 1123	152-141-1 152N2	1122 2041	181T2A 181T2B	2041	212-70	1
21-506	2013	121-998	1101	132-021	2009	150-018-9-001	1104	154A3992	1104	181T2C	2041	212-71 212-75	- 1
21-521(MOTOROI	2030	121-1014 121-1019	2012 2032	132-023 132-026	2009	150-022-9-001	1104	154A5941	2009	182-009-9-001	2035	212-77	1
21-521(ZENITH)	2013	121-1330	2007	132-030	2009 2009	150-030-9-002 150-040-9-002	1102(2)	154A5944-410 154A5946	2031	182-014-9-002 182-014-9-003	2035	212-79 212-92	- 1
21-522	2010	121-1350	2007	132-041	2009	150-066-9-001	1102	154A5946-624	2009	182-015-9-001	2035 2035	212-92	1
21-524 21-524A	2010 2010	121-1360 121-1390	2007 2007	132-042	2009	150-1	1102	156	2009	182-021-9-001	2035	212-94B	. 1
21-526	2010	121-1400	2007	132-049 132-050	2035	150-12 150D	2035 564	156-0015-00 156-0049-00	017	182-029-9-001	2036	212-142	1
21-581	2009	121-1410	2001	132-051	2009	150N2	2009	156-0071-00	007 1740	182-039-9-001 182-044-9-001	2036 2036	212-192 212-254	1
21-585 21-585B	2038	121-5065 121-505501	2009	132-054	2009	151-001-9-001	1102	156-032	2041	182-044-9-002	2036	212-505	2
21-587	2009	121-505501 121G3019	2009 2009	132-055 132-057	2009	151-002-9-001 151-0040	1102 2001	156-043 156-043A	2041	182-045-9-001	2036	212-507	2
1-600	2009	121G3020	2009	132-062	2009	151-0040-00	2001	156-043A 156-044	2041 2041	182-046-9-001 184R	2035	212-695 215-51	1
1-610	2009 2013	121J688-1 121J688-2	2011	132-063	2009	151-011-9-001	1102	156-053	2041	185-002	2013	215-51	1
1-612 1-613	2013	121J688-2 122-1	2011	132-069 132-070	2009	151-011-9-011 151-012-9-001	1104 562	156-063	2041	185-003	2009	215-76(GE)	1
1-616	2016	122-2	2009	132-075	2009	151-013-9-001	1102(2)	156WHT 158(SEARS)	2009	185-004 185-009	2009	215-76GE	1
1-629 1-634	2009	122-6	2009	132-077	2009	151-014-9-1	1102	160	563	185-011	2009 1102	215Z4 218-22	2
1-635	2007	122-80 122-229	1104 2007	132-085 132-501	2041	151-015-9-001	1122	160-8	2030	185-012	1102	218-23	2
1-639	2009	122-1962	2001	132-502	2009	151-018-9-001 151-021-001	1104 1102	161-2NC 161-INC	2041 2041	185-013 185-014	1123	218-24	2
1-642	2013	123-003	2035	132-503	2009	151-021-9-001	1102	161N1C	2041	185-015	1104 562	218-25 220-001001	2
1-643 1-646	2013	123-004 123-008	2009 2020	132-504	2009	151-022-9-001	1102	161N4	2041	185-6	1104	220-001002	2
1-647	2009	123-010	2020	132-539 132-540	2009	151-022-9-002 151-023-9-001	1.102 1104	161N4C 162J2	2041	185-6(RCA)	1104	220-003001	1
1-648	2009	123-013	1123	132-541	2041	151-024-9-001	1102	163J2	1104	186-001 186-002	2013	220-008001 221(SEARS)	2
1-649	2009	123-015	1123	133P80057	017	151-025-9-001	1104	164J2	1104	186-007	2009	221-30	-
1-652 1-660	2009	123-016 123-017(DłODE)	1102 1122	133P80067 134B1038-21	010 2031	151-029-9-001	1102	165-4A82	2001	186-011	1102	224HACA0723	- 1
1-662	2009	123-020	562	135-3	1104	151-029-9-002 151-029-9-003	1102 1104	165-432-2-48-1 165A4378P2	1122 1102	186-011(DIODE) 186-012	1102	226-1(SYLVANIA)	2
1-671	2009	123-021	1104	135C44322-542	2009	151-030-9-001	1102	165A4383	2009	186-013	1102 1123	229-0050-13 229-0050-14	2
1-675 1-677	2009	123-022	1102	135H1M	2012	151-030-9-002	1102(2)	165J2	1104	186-014	1104	229-0050-15	2
1-678	2009	123-024 123-025	1122	135ORN 135P4	2009	151-030-9-003 151-030-9-005	561	165N1	2009	186-015	1102	229-0086	2
1-684	2013	123B-003	1102	136RED	2009	151-030-9-005	1104 1102	166J2 167J2	1104	186-016 186-4-127	562 2001	229-0093 229-0095	1
1-687	2011	1238-005	561	137-684	1114	151-030-9-009	1102	167N1	2009	186N1(LAST-IF)	2010	229-0098	2
1-695 1-699	2009	124-0028 124-0178	1114 1104	137-718 137-759	1104	151-031-9-001	561	167N2	2009	188C-1-82	2007	229-0-180-33	2
I-701	2013	124-N16	2001	137-824	564 1123	151-031-9-003 151-031-9-006	561 562	168-107-001 168N1	1102	196-654	1104	229-0-180-34	2
1-702	2009	124J490	1104	137-828	1114	151-032-004	1102	170-1	2009 1102	200 200-016	1104 2009	229-0102 229-0105	1
I-704 I-705	2016	124N1 124N16	2001	138-4	2009	151-032-9-001	1102	171-1	1102	200-053	2035	229-0111	2
1.706	2009	125B132	2009	139N1 139N1D	2013	151-032-9-002 151-032-9-004	1102 1102	172-003-9-001 172-003-9-001A	2041	200-057	2009	229-0112	2
-711	2009	\$25C211	2009	140-0007	2009	151-034-9-001	1102	172-003-9-001A	2041	200-058 200-064	2009 2035	229-0114 229-0117	1
I-713	2010	126-4	1104	140-013	1104	151-035-0-003	1102	172-024-9-003	2020	200-846	2009	229-0119	L,
I-714 I-716	2022	126-7 126-7(ARVIN)	1104 1104	140N1 140N1C	2041	151-035-9-001	1102	172-024-9-005	2041	200-862	2009	229-0120	_ 1
1-723	2009	126-12	2009	140N2	2041	151-035-9-003 151-035-9-004	1102 1102	172-029-9-001 173-1	2020	200-863 200-6582-22	2009	229-0129	2
-726	2041	126-40	017	141-003	1123	151-040-7-003	1104	173-1(SYLVANIA)	2035	200-6562-22 200A	1104 2001	229-0135 229-0144	1 2
-726A -730	2041 2013	127 127-7	2009	141-078-0001	1102	151-040-9-001	1102	173A3981	1104	201-254343-13	2011	229-0147	1
·731	2035	128-9050	2001	141-4 141-430	2030	151-040-9-002 151-040-9-003	1102	173A3981-1 173A4057	1104	201-254343-28	2011	220.0140	2
-733	2013	128WHT	2009	142-001	2009	151-042-9-001	1102	173A4393	2009	201-254343-30 201-254343-33	2011	229-0150	2
-735 -735B	2016	129-11 129-14	2007	142-002(RECT.)	1114	151-045-9-001	1104	173A4394-1	1102	202-5-2300-01710	1104	229-0152	2
-737	2009	129-15	2009	142-006(DIODÉ) 142-009	1102	151-045-9-002 151-046-9-001	1104	173A4399	2009	202-5-9531-01010	1102	229-0150 229-0151 229-0152 229-0154 229-0162	2
-739	2011	129-16	2009	142-010	1102	151-049-9-001	1104 1102	173A4416 173A4470-11	2009	202A 203	2001 1104	229-0162 229-0180-123	1 2
-745 -748	2009	129-21	2009	142-011	1123	151-049-9-002	1102	173A4470-13	2009	203A6137	561	229-0182-65	1
-740 -751	2009	129-33(PILOT) 129BRN	2009	142-012 142-013	562 1104	151-051-9-001 151-059-9-001	1102	173A4470-32	2009	204-1	1102	229-0190-31	2
-754	2013	129WHT	2009	142-014	1104	151-060-9-001	1102 1102	173A4491-2 173A4491-2A	2041	205-142-G1 1 206-709-001	102(2)	229-0190-90 229-0191-29	2
-756 -762	2035	130	2011	142-3	2009	151-064-9-001	1102	173A4491-4	2041	207A10	2009	229-0191-29	2
-762 -764	2001	130-112 130-146	2011	142-4 142N3	2009	151-064-9-002	1102	173A4491-7	2041	207A25	2011	229-0192-20	2
-767CL	2009	130-338-00	1104	142N3P		151-066-9-001 151-0103-00		174-1 174-2	1104 1104	207A29	2009	229-0210-19	2
-768CL	2009	130-398-99	1104	142N3T	2009	151-0127-00		174-2(SYL)	2012	207A31 207A35	2009	229-0220-14 229-0240-20	1
-773 -779	2009	130-30189 130-30192	1102	142N4	2009	151-0140	2041	174-3	1104	209-31	1123	229-0250-11	- 1
-779 -787-01	2030	130-30192	1104	142N5 143-12	2009 2030	151-0140-00 151-0190-00	2041	174-3A82	2007	209-32	1102	229-0260-18	2
-8 12	2009	130-30265	1102	144-1		151-0190-00	2009	174-20989-22 176-008-9-001	2041	209-846 209-862	2009	229-485-2 229-1054-5	2
-822	2012	130-30266	1102	144-3	1102	151-0224-00	2009	176-014-9-001	2009	209-863		229-1054-5	1
-836	2007	130-30274 130-30281		144-12 144N1	2009	151-0238	2001	176-017-9-001	2009	211-40140-18 211A6380-1 211AESU3055	2041	229-1054-82	1
-837	2009	130-30301		144N1G(AMP)	2012	151-0259-00 151-0302-00	2011	176-024-9-001 176-024-9-003	2009	211A6380-1	2041	229-1054-85	- 1
-830 -836 -837 -849 -850	2011	130-30313	1104	144N1G(VID)	2012	151-0336-00	2041	176-025-9-002	2011	211AVPF3415	2041	229-1200-29 229-1200-36	2
-850 -856	2009	130-30702	1102	144N1P	2012	151-0336-00-A	2041	176-025-9-002 176-026-9-001	2013	211AVTE4275	2009	229-1301-19	1
-858	2009	130-40089 130-40214		144N2 144N3	2012 2012	151-0337-00 151-0337-00 A	2041	176-029-9-001	2009	212-7	1104	229-1301-20	1
-862	2009	130-40215		145-2	2012	151-0337-00-A 151-0424-00	2041	176-037-9-001 176-039-9-001	2013 2013	212-18 212-21	1104 1104	229-1301-24 229-1301-64	20
-863	2009	130-40229	1123	145-2(SYL)	2012	151-0427-00	2011	176-042-9-001		212-21		229-1301-64 229-5100-31V	20
-868 -877	2012	130-40294	2009	145-118	562	151-0471-00	2011	176-042-9-001 176-042-9-002 176-043-9-002	2009	212-23	1104	229-5100-164	1
-881	2009	130-40311 130-40312	2009	145A9254 145A9786		151-1 151-6	1104	176-043-9-002	2010	212-27	1104	229-5100-231	1
-88 5	2011	130-40313		145N1(LAST-IF)		151-6	2030 1102	176-044-9-001 176-044-9-002		212-33 212-35	1104	229-5100-232 229-5100-233	11
-888 -889	2009	130-40317	2009	145NIP	2009	151-267-9-001	1102	176-044-9-002 176-047-9-002		212-36	1104	230-0006	11
	2009	130-40318	2009	146-1	2012	151N2	2009	176-047-9-003		212-37		230-0014	i

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
30-0023	562	260P17103	2009	276-2024/RS2024	2024	297V012H09	2007 2007	324-0049 324-0057	1123 1123	352-0400-030 352-0433-00	2009	378-44A 380-1000	204
31-0004 31-0004-01	2041	260P17104 260P17105	2009	276-2030/RS2030 276-2031/RS2031	2030	297V017H01 297V017H02	2007	324-0090	2007	352-0477-00	2009	380-1001	112
31-0004-03	2009	260P17106	2009	276-2032/RS2032	2032	297V019B01	2007	324-0093(PHILCO) 324-012	1123	352-0506-000 352-0519-00	2009	380H61 380K62	110
32-0001 32-0006	1104	260P17501 260P17503	2009	276-2033/RS2033 276-2034/RS2034	2033	297V019H01 297V020H02	2007	324-0102	1104	352-0546-00	2009	380M63	110
32-0006-02	1122	260P17601	2013	276-2038/RS2038	2038	297V020M01	2007	324-0105	1123	352-0569-00 352-0569-010	2009	384A 384B	110 110
32-0009-31	563 1104	260P19101 260P19103	2009	281 284HC	2009	297V021H01 297V021H02	2007 2007	324-0107-01 324-0108	1123 1123	352-0569-020	2009	384C	110
32-1009 32-1011	1104	260P19501	2009	288(SEARS)	1104	297V021H03	2007	324-0113	1101	352-0579-00	2009	384D	110
32N1	2009	260P21001	2007	290-1003 290V034C01	1102	297V022H01 297V026H03	2007	324-0114 324-0117	1101	352-0579-010 352-0579-020	2009	384F 384H	110
35 41ABNG4148	2007 1122	260P21002 260P22001	2007	291-04	1104	297V027C01	1104	324-0119	1104	352-0583-011	2041	384K	111
47-255	1104	260P22002	2035	291-20	1104	297V038H01 297V038H05	2007	324-0120 324-0134	1104 2001	352-0596-010 352-0596-020	2009	384M 384P	111
47-257 47-621	2009 1104	260P22003 260P22203	2035	.292-10 294-42-9	1123	297V038H09	2007	324-0135	1104	352-0596-030	2009	384S	111
47-629	2009	260P24008	2041	295L001H01	1104	297V043H02	2007	324-0141 324-0147	1123 1104	352-0629-010 352-0630	2009 2011	384V 384Z	111
47AS-C1249-001	2009 2013	260P28107 260P36501	2010	295L001M01 295L001M02	1104 1104	297V044H01 297V049H01	2007 2009	324-0151	2009	352-0630-010	2011	385A	110
49N1 50-0380	2013	260P141103	2009	295L002H01	1104	297V049H03	2009	324-0152	2009	352-0653-010	2011	385B	110
50-0712	2009	260Z00402	2009	295L002M03 295L003M01	1104	297V049H04 297V049H05	2009	324-0154 324-0155	2009	352-0653-020 352-0661-010	2011	385C 385D	110
51M1 60-10-006	2001	264-701508 264D00101	1102	295V002H01	1104	297V054C01	2007	324-0160	1123	352-0661-020	2009	385F	110
60-10-011	1102	264D00209	1102	295V005H02	1104	297V054C02 297V055C01	2007	324-0162 324-6005-5	1104 2009	352-0667-010 352-0675-010	2009	385H 385K	110
60-10-020 60-10-025	2009 1123	264D00505 264D00507	1104 561	295V005H03 295V006H01	1104	297V059H01	2009	325-0025-327	1123	352-0675-020	2009	385KW	110
60-10-026	2013	264D00612	1123	295V006H02	1104	297V059H02	2009	325-0028-86	1123	352-0675-030	2009 2009	385M 385P	110
60-10-032	1102	264D00701 264D00901	1123 1123	295V006H03 295V006H05	1104 1104	297V059H03 297V061C01	2009 2041	325-0028-87 325-0028-89	1123 1104	352-0675-040 352-0675-050	2009	385S .	111
60-10-033 60-10-040	1104 2013	264D00901 264D01001	1123	295V006H06	1104	297V061C01A	2041	325-0031-303	2009	352-0677-010	2041	385Z	11
60-10-043	2020	264D01112	1104	295V006H07 295V006H08	1104 1104	297V061C02 297V061C02A	2041	325-0031-304 325-0031-305	2009	352-0677-011 352-0677-020	2041 2041	386-1AY 386-1CY	11
60-10-046 60-10-047	561 1102	264P0080 264P00401	1123 1123	295V006H08 295V006H09	1104	297V061C03	2009	325-0031-310	2009	352-0677-021	2041	386-1FY	11
60-10-048	1123	264P00601	1104	295V007H02	1104	297V061C04	2009	325-0031-335 325-0031-338	1123 1104	352-0677-030 352-0677-031	2041 2041	386-40 386-1102-P1	20
60-10-049 60-10-051	1102 2013	264P00602 264P00801	1114	295V008H01 295V012H01	1104	297V061C06 297V061C07	2009	325-0036-562	1123	352-0677-041	2041	386-1102-P2	20
60-10-053	2020	264P01011	1104	295V012H02	1104	297V061H01	2009 2009	325-0042-351 325-0047-517	2009 1104	352-0677-051 352-0677-40	2041 2041	386-1102-P3 386-7178P1	20 20
260-10-055 260-10-056	2020 2015	264P01012 264P01301	1104	295V012H03 295V012H06	1104 1104	297V061H02 297V061H03	2009	325-0047-317	1104	352-0680-010	2009	386-7183P1	20
60-10-057	1122	264P01305	-1123	295V014H01	1104	297V064B01	2004	325-0076-306	2009	352-0680-020	2009	386-7183P1A 386-7185P1	20 20
60-10-20	2009	264P02001	1104	295V014H04 295V014H7	1104 1104	297V065H01 297V065H02	2007	325-0076-307 325-0076-308	2009 2009	352-0713-030 352-0809	2009 2009	386AK	11
60-10-46 60-61-011	561 1102	264P02402 264P03001	1104	295V015H02	1104	297V065H03	2007	325-0076-315	1104	352-5	2012	386AW	11
60-61-047	1102	264P03301	561	295V016H01	1104 1104	297V072C06 297V074C02	2009	325-0081-100 325-0081-101	2009	352-7500-010 352-7500-450	2009 2009	386AX 386AY	11 11
60-61-067 60D00507	1102 1123	264P03303 264P03401	563 1101	295V017H01 295V020B01	1104		2009	325-0081-109	1114	352-8000-010	2009	386BW	11
60D05704	2011	264P03607	1104	295V020H01	1104	297V074C04	2009	325-0081-110	1104 1104	352-8000-020 352-8000-030	2009 2009	386BY 386CW	11 11
260D05709	2030 2009	264P03701 264P03802	1104 1123	295V023H01 295V027C01	1104 1104	297V074C06 297V074C07	2009 2009	325-0135-B 325-0141-23	1104	352-8000-040	2009	386CX	11
260D07412 260D08013	2011	264P04003	564	295V027C01-1	1104	297V074C08	2009	325-0574-30	2009	352-9036-00	2009	386CY 386DW	11
60D08201	2009	264P04301 264P04303	1104 1114	295V028C01 295V028C02	1104 1104		2009	325-0574-31 325-0670-16	2009 1104	352-9079-00 352-9103-000	2009	386DY	11
260D08801 260D09001	2009	264P04402	1104	295V028C03	1104		2009	325-1370-19	2009	353-2575-00	1102		11
260D09301	2041	264P04501	1102	295V028C04	1114		2009	325-1370-20 325-1376-60	2009 1123		1102 1122		11 11
260D09314 260D106A1	2009	264P04702 264P04703	1104	295V029C01 295V029C02	1104 1104		2009	325-1378-18	2011	353-3083-000	1102	386K	11
260D13702	2009	264P04801	1104	295V035C01	1104		2009 1102	325-1378-19 325-1441-10	2011 1104	353-3273-00 353-3289-000	1102 1122		11 11
260P0770 260P02903	2031 2030	264P04901 264P05001	1104 1104	296-42-9 296-50-9	1102 2009		1102	325-1441-11	1104	353-3338-000	1122	386MW	11
260P02903A	2009	264P05002	1104	296-51-9	2009		1725	325-1446-26	2009 2009		1102 1122		11
260P02908 260P04001	2009		1104 1104		2009		1104 2009	325-1446-27 325-1446-28	2009	353-3627-020	1122	394-1592-1	11
260P04002	2009	264P08002	1104	296-77-9	2009		1104	325-1446-29	1104 2009		1122 1122		11
260P04003 260P04004	2009		1104 1114		2013		1104	325-1513-29 325-1513-30	2009		1122	394-3003-3	20
260P04502	2009	264P09301	563	296L002B01	1122	307D	1104	325-1771-15	2009		2009		20
260P04503	2009		1104		563 1123		1104 1104	325-1771-16 325-4610-100	2011 1114		2009		20
260P04505 260P05402	2009 2011	264P10103	1104 1104	296V002H02	1123	307K	1104	332-2911	2041	353-9306-004	2009		20
260P05402A	2011	264P10105	1104	296V002H05	1123		1104 1123		1102		2009 2009	398-13222-1	1
260P06904 260P07001	2009	264P10502	1104 563	296V002H07	1123	309-327-803	1114	344-6000-2	2009	353-9314-001	2009	400-1371-101	2
260P07002	2009	264Z00201	1104	296V002H08	1123	309-327-910	1104 1123		2009		2009		1
260P07301 260P07701	2009	265D00702	1123 1102	296V002M01 296V006H02	1123 1123	309-327-926	2009	344-6000-5A	2009	353-9319-002	2009	400-2023-101	2
260P07702	2009	265P03301	1104	296V006H03	1104	309-327-927	1104	344-6002-3	2009		2009 1104		1
260P07703 260P07704	2009	265Z00101	1102	296V006H07	1104		1104 1104		2009 2009	354-9101-002	1104	400C-11958	11
260P07705	2009	270-950-030	2009	296V012H01	1123	310-4	1104	344-6005-5	2009	354-9101-006	1104	400D	1
260P07707	2009		2001	296V015B01	1123		2009		1102		1104 1104		2
260P08801 260P08801A	2009		2007		563	3 311-0126-001	1,122	344-6015-8	2011	355D9	2009	403-1	. 1
260P09902	2009	276-2003/RS2003	3 2003	296V018B01	563	3 311-0139-001	1102	344-6015-9	2011		1104) 2
260P029033 260P1760	2009		2004 4 2004	296V019B01	56: 110:		1102 2009	344-6017-3	2009	359C	1104	412	2
260P4002	2009	276-2005	2005	296V020B02	110	4 314-6007-2	2009	344-6017-5	2009	359D	1104	412-1A5	2
260P11102 260P11302	2010	276-2005/RS200	5 2 005	290 4024501	112		2009		112		1104 1104		1
260P11302 260P11303	2009		7 2007	297L006H01	200	9 319C	2009	349-212-003	017	7 359K	1104	413(TRUETONE)	1
260P.11304	2009	276-2008/RS200	8 2008	297L006H02	200	9 320A	1104		200		1104		2
260P11305 260P11502	2009		9 2009 2010		200		1104 1104	351-3031	110	2 359S	111	4 417-67	2
260P11503	2009	9 276-2010/RS201	0 2010	297L007H02	200	9 320D	110	351-7140-010	01	7 359V	111	4 417-69	2
260P11504	200	9 276-2011	201	1 297L007H03/C0	3 200 201		110	352-0195-000 352-0197-001	200	9 359Z 9 360-32	1110		2
260P11505 260P12001	200				200	9 320K	110	352-0206-001	200	9 362-3	201	2 417-92	2
260P12002	200	9 276-2013/RS201	3 201	3 297V008H01	200	7 320M	110	4 352-0316-00	2009	9 365-1	200		2
260P13701 260P13702	200		4 201 201		200		111-	4 352-0318-001	200	9 366-1	200	9 417-94	2
260P14101	200	9 276-2015/RS201	5 201	5 297V012	200	7 320Z	111	4 352-0319-000	200	9 366-2	200	9 417-105	2
260P14102	200	9 276-2016/RS201	6 201	5 297V012H02	200		200 110		200	9 366B 9 369-2	110 110		2 2
260P14103 260P14105	200 200		2 202	2 297V012H05	200	7 324-0014	112	3 352-0365-000	200	9 369-3	110	4 417-108	2
260P17101	200				200		112		200 200		200 204		2

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
417-110-13163 417-114-13163	2009	430-23212 430-23221	2009	519ES068M 520T1	2030 2007	540-028 540-028-00	\$122 1122	606-6021-101 606-9601-101	1102	642-269	2011	690V102H71	200
417-118 417-1 25 -12903	200 9 2011	430-23843 430-25762	2041 2035	521-094 521-145	1104 1123	540-033-00 540J2F	1122	606-9602-101	2009	642-270 642-274	2011	690V103H28 690V103H29	201
\$17-126 \$17-127	2009	430-25766 430CL	2009	521T1 522	2007	542-1034 547J2F	2041	607-030 607-113	2009 1104	642-275 642-281	1102	690V103H31 690V103H32	2009
417-129 417-134	2009 2009	433 433(ZENITH)	2009 2009	522(ZENITH) 522-726	2011 1104	550-026-00 555	1114 2009	608 608-030	1104 1104	642-304 642-319	1104 2009	690V103H33 690V103H53	2009 563
117-134-13271 117-135	2009 2009	433-1(SYLVANIA) 433CL	2009	522-958 523-0001-001	1104 1104	556 560-2	1723 1728	608-101 608-113	1104 1104	642AS407G-101 650	2011 1123	690V103H54 690V105H19	1123
17-139 117-139A	2041	435-40012 436-403-001	1104 2009	523-0001-001 523-0001-002 523-0001-003	1104	565-074	2009	609-030 609-112	1104 2009	650-109 650-110	2001	690V105H22 690V105H-25	2009
17-140 17-154	2035	442-21 444(SEARS)	038	523-0001-003 523-0001-004 523-0001-005	1104 1104 1104	567-0003-011 570-004503	2009	609-113 610	1104 1104	652C7 652C8	561 561	690V105H25 690V105H27	2009
17-1 <u>55-13</u> 163	2009	445-0023 445-0023-P1	2041	523-0001-006 523-0001-007	1104	570-005503 571-844	2009 2041	610-001-103 610-017-706	1104 1102	654-1 654-1(SYL <u>VA</u> NIA)	2036 2035	690V105H28 690V105H29	2030 2030
117-167 117-169	2035 2035	445-0023-P3 445-0023-P4	2041	523-0001-007 523-0001-008 523-0001-009	1114	571-844A 572-1	2041	610-045-3 610-045-4	2009 2009	654C9 656-1	562 2012	690V105H31 690V105H32	1104 562
17-171 17-171-13163	2009	447 447(ZENITH)	2009	523-0001-009 523-0001-010 523-0006-002	1114	572-683 573-469	2009 2009	610-070 610-070-1	2009 2009	656-141 656-142	1104 1123	690V109H44 690V109H46	1104 2011
17-172 17-172-13271	2009	450-1167-2 450-1261	2009	523-0007-001 523-006-002	1122 1122 1102	573-479 573-480 573-481	2009	610-070-2 610-070-3	2009	660-126 660-131	2009	690V114H30 690V1T4H33	2009
17-185 17-190	2009	454-A2534-1 454-A2534-10	1104	523-0013-002 523-0013-201	1104	575-028	1104	610-076 610-076-1	2009	660-134 660-220	2009	690V114H36 690V116H20	1104 2011
17-192 17-194	2009	454A25 460-1009	1104	523-0501-002 523-0501-003	1122 1104	575-042 575-048	1104	610-076-2 610-077	2009	660-221 660-222	2009	690V116H21 690V116H22	2009
17-197 17-205	2009	460-1013 462-0119	1104 2009	523-1000-001 523-1000-067	1104 1104	575-050 576-0001-004	1104 2009	610-077-1 610-077-2	2009	660-225 660-230	2009 1104	690V116H40 690V116H41	563 1104
17-211 17-212	2035	462-1000 462-1009-01	2009	523-1000-007 523-1000-294 523-1000-295	1123	576-0001-005 576-0001-008	2009	610-077-3 610-077-4	2009	665-4A5L 674-3A5L	2001	690V118H57 690V118H58	1102 1104
17-212A 17-213	2041	462-1061 462-1063	2009	523-1000-295 523-1000-326 523-1000-881	1123	576-0001-012 576-0001-018	2009	610-077-5 610-078	2009	675-158 676-1	1123 2010	690V119H14 690V119H1	1104
17-215 17-215 17-215-13286	2041	462-2002 464-100-19	2009	523-1000-881 523-1000-882 523-1000-883	1102	576-0002-003 576-0002-006	2041	610-078-1 610C	2009 1104	684-652423-1 686-0243	1104 2041	690V120H89 693EP	2009
17-215A 17-217	2041	464-103-19 464-106-19	1123 1123 1123	523-1002-326	1122	576-0003-011 576-0003-029	2009	612 612-1A5L	1.104 2009	686-0243-0 686-143	2041	693FS 693G	2009 2009
17-218 17-219	2009	464-110-19 464-111-19	1123	523-1500-002 523-1500-067	1104 1123	576-0003-12(NPN) -576-0004-010	2009	612-16 612C	2009 1102	686-143A 688C-1-5L	2041 2007	693GT 694D	2009 2009
17-219 17-226-1 17-228	2009	464-113-19	1123 1123	523-1500-881 523-1500-883	1104 1122	576-0006-003 576-003-009	2035 2004	613 614	2009 1104	690C092H88 690V08H36	1104 2031	694E 698V102H39	2009
17-229	2009	464-119-19 464-280-19	1123	523-2003-001 523-2003-0-1	1123	576-0036-212 576-0036-847	2009	614-2 614-3	2009	690V028H49 690V031H33	1101 1104	699 700-04	2009
17-231 17-233-13163	2035	464-285-15 464-285-19	1104 1104	523-2003-120 523-2003-150	563 564	576-0036-916 576-0036-917	2009	614-118 614C	1102 1102	690V034H32 690V034H74	1123 1123	700-113 700-134	2041
17-241 17-244	2035	464.062 15 465-4A5	561 2001	523-2003-629 523-2003-919	561 562	576-0036-920 576-0036-921	2009	615-1 616	2011	690V037H91 690V039H52	1123	700-137 700-154	1104 2009
17-245 17-273	2012 2041	465-106-19 465-181-19	2009	523-2005-919 523-1000882	562 1104	576-0040-251 576-1	2041	616C 617-10	1102 2009	690V040H63 690V041H08	1123 1104	700-159 700-325	562 2009
17-273-13286 17-282	2041	465-199-19 471-010	562 1104	524-457 524WHT	1123	580-029 586-024	1104 017	617-15 617-17	1123 1123	690V047H56 690V047H57	2007	700A858-285 700A858-286	1104 1104
17-283 17-801	2009	472-0491-001 472-0946-001	2009	525-24 525-26	1104	586-2 588U	2009	617-29 617-46	2009	690V047H61 690V047H97	1123	700A858-318 700A858-322	2009
17-801-12903 20-2003-173	2009	472-0946-002 472-1198-001	2041	525-212 525-498	1114	590-593031 593D742-1	2009	617-53 617-62	1104	690V052H50 690V052H68	1123	700A858-328	1102 2009
20-210 4-5 70 21-11	2007	474-004 474-025	1104	525-877 526-376	1123 1104	595-1 595-1(SYLVANIA)	2009	617-63 617-64	2009	690V053H57 690V059H63	1123	702-0002 703-056(4)	2011
11-11B 11-12	2007	474-3A5 477-0376-001	2007	527-1 527-798	2011	595-2 595-2(SYLVANIA)	2009	617-66 617-67	1104(2)	690V066H48 690V067H09	1123 1123 1123	709HC 710	017 1104
21-12B 21-13		477-0542-001 479-0547-001	007	528-325 530-082-3	1104	596-2 596-5	1102	617-68 617-71	2009	690V068H32	1123	715EN 715FB	2009 2011
1-13B 1-15	2007	479-0663-005 479-1012-001	1102	530-082-4 530-082-1003	1114	600 600-188-1-13	1104	617-87 617-156	2009	690V069H39 690V073H60	1104	723 723DC	1740 1740
1-15 B 1-4027	2007	479-1013-001 479-1013-002	1122	530-086-1 530-088-1	1104	600-188-1-20 600-188-1 ₂ 23	2009	617-161	2009	690V080H41 690V080H47	1104	723PC 733W00035	1740 010
1-7443 1-7443A	1104	479-1055-001 479-1163-001	1122	530-088-2 530-088-3	1104	600-229-201 600-301-801	2010	617-162 617-163	1104	690V080H52 690V080H53	1104	734EU 737	2035 2009
1-7444	2009	479-1229-001 479-1248-001	1122	530-088-1002 530-088-1003	1114	600C 600X0091-086	1102	618 618C		690V080H91 690V081H92	1104 564	737(ZENITH) 739H01	2009 2009
1-9644 1-9670	2009	483-3141 486-1551	2009	530-088-1004 530-094-1	1114	600X0096-066	1123	620 620C	1102	690V082H40 690V083H89	1123	740HC 741C	1733 010
1-9682 1-9840	2007	486-40235-G02 488C15	1104	530-095-1	1104	600X0097-066 600X0099-066	1104	622 622C	1102	690V084H62 690V086H51	2009	741DC 741HC	010 007
1-9865 2-0738	1104	199 199(ZENITH)	2009	530-098-1 530-099-1	1104	600X0100-066 600X0101-066	563	624 624-0009	1104	690V086H88 690V086H91	2009	741PC 742	1123
2-0961 2-1234	2041	500B10 300S10	1114	530-099-3 530-099-4	1104	600X0141-000 600X0143-000	2011	624-0010 624-0011	1123	690V086H92 690V088H20		742C2030-020 748	2041 2009
2-1362 2-1407	1104	502	2009	530-106-1 530-106-1001	1114	600X0175-000 600X0186-000	1101	625-1 626	2009	690V088H46 690V088H47	2011	748(ZENITH) 750-141	2009 1104
2-1408 2-1866	1114	503-T21271 503-T21472	1123	530-109-1 530-111-1	1104	600X0195-000 601	1104	626(RECT.) 626-1	1114 2009	690V088H49 690V088H50	2011	750A858-285 750A858-319	1104 2031
2-2533	2009	509 509(SEARS)	2009	530-111-1001 530-113-1	1104	601-0100793 601-1	2009	629A02 630-002	1104 1123	690V088H51 690V089H46	2009	750C838-123 750C838-124	2009 2009
2-2534 2-2540	1104	10A90 10ED46	1123	530-120-1 530-122-1	1104	601-1(DIODE) 601-1(RCA)	2009	630-052 630-076	1104	690V089H86 690V089H89	2011	750C838-125 750D858-211	2009 1114
9-0092-56 9-0093-71	1114	510IN60 510IS34	1123	530-136-T 532-341	1104	601-1 (TRANSISTOR		630-079 634-1	1123	690V089H91 690V092H52	1104	750D858-212 750M63-119	2009 2009
9-0910-54 9-0958-41	1104	511-515 511-519	2009	532-341 A 535A	2011	601-2 601C	2009	638 639	2009	690V092H54 690V092H81	2009	750M63-120 750M63-146	2009 2009
9-0958-42 9-0958-43	561	511-898 512RED		536-2(RCA) 536D	2009	601X0048-066 601X0149-086	1104	539(ZENITH) 642-028	2009	690V092H84 690V092H85	2009	750M63-149 751-2001-212	1104
9-0981-12 9-0985-12	2011	514-033338 514-042791		536D9 536F	2009	601X0150-066 601X0151-066	1123	542-102 542-119	1123	690V092H88 690V092H96	1104	751-6300-001	1104
9-0989-68 9-10036-DA	1104	14-6 4214 15	2041	36FS 36FU	2009	601X0152-066 601X0224-066	1104	542-119 542-126 542-132	1102	690V092H97 690V094H17	2009	751-9001-124 753-1303-801	1104 2013
9-10036-0 B 9-10054-0A	1122	515-074 5-299	2030	36G(WARDS) 36J2F	2009		102(2)	542-174 542-199	2009	690V094H21	2009	753-1372-100 753-1828-001	2013
9-20004-0B	1102	50RN 516	2009	37D 37E	2009	601X0227-066 602X0018-000	1104	642-216	1104	690V094H35 690V097H62	2009	753-2000-003 753-2000-004	2009
D(ZENITH) D-31	2009	517-0021 517-0025	1104 5	37FV	2009	602X0019-000	1104	542-219 542-221	1123	690V098H48 690V098H49	2009	753-2000-007 753-2000-008	2013 2009
)-86)-87	2009	517-0025 517-0031 517-0033	1104 5	537J2F 538J2F	1104	604 604(SEARS)	2009 6	642-229 642-230	2011	690V098H50 690V098H52	2009	753-2000-00 9 753-2000-011	2009
1044 0A 1-10034	2009 5	7-518 13-499	2009	39J2F	1104	604B 604C	1102 €	542-242 542-246	2009	690V098H53 690V099H79	1104 2009	753-2000-460 753-2000 -5 35	2011
0-10034-06 0-10053-0	2009 5	19-1	2009 5	640-008 640-010	1114	605 606-113	1104	642-254 642-255	2011 (564 (690V0103H27 690V68H32	2009	753-2000-711 753-2000-735	2009
0-10053-0A		19-1(RCA) 19E\$067M		40-014 40-015		606-6003-101 606-6003-102		542-260 542-268	2011	590V73H60 590V102H40		753-2000-870	2009

EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE 2	27
53-2100-001 53-2100-008	2009	800-102-101-1 800-250-102	1122	903-9B 903-10B	1123 1123	916-31025-5B 916-31026-8B	2016 2009	921-93B 921-99B	2009	941-026-0001 943-086	1102 1122		20
53-3000-535	2013	800-501-00	2009	903-12B	1123	916-31026-9B	2003	921-102	2011	943-087	1122	992-00-4091	20
53-4000-011	2009	800-501-01 800-501-02	2009	903-13B 903-14B	1104 1104	916-32000-7 916-32003-2	1123	921-102A 921-102B	2011	943-087-1 943-105-001	1122		20
53-4000-025 53-4000-101	2009	800-501-03	2009	903-15B	1104	916-32006-2	1123	921-109B	2009	951	2012	992-00271A	20
3-4000-537	2009	800-501-04	2009	903-16B	1123	919-00-1445-002 919-00-1445-2	563 563	921-117B 921-120B	2009	952 953	2012 2012		20 20
53-4000-668 53-4000-929	2011	800-501-11 800-501-22	2009 2009	903-18B 903-20	1123 1102	919-00-2440-1	1104	921-123B	2009	964-2073B	2009	992-004091	20
3-5751-359	2011	800-508-00	2009	903-23	1123	919-00-2440-2	1104	921-124B	2009	964-17443	1104 2009		20
53-5851-359 53-6000-019	2011	800-509-00 800-510-00	2009 2041	903-23A 903-23B	1123	919-00-4326 919-00-4799	1102	921-125B 921-126B	2009 2035	964-17444 964-19865	1104	992-01-1317 992-01-3738	20
53-9000-019	2035	800-510-01	2041	903-23C	1123	919-00-5045	1104	921-127B	2009	964-20738	2009	992-02271	20
53-9000-922 53-9001-674	2011 2013	800-514-00 800-517-00	2009 1123	903-23D 903-23E	1123 1123	919-00-7109 919-00-7394	1104 1102	921-128B 921-141B	2009	964-21866 964-24584	1104 2009	992-011317 992-017169	20
3-5751359	2013	800-521-01	2009	903-25B	1102	919-00-7766	1104	921-142B	2011	964-174443	1104	992-10	11
4-900-124	1104	800-522-01	2009	903-27B	1123	919-00-7776 919-00-9929	1104 1102	921-143B 921-145B	2011 2011	965-4A6-2 972D7	2001 1104	992-531-01 998-0061114	20
54-1003-030 54-2000-001	1123 1102	800-522-02 800-522-04	2009	903-28B 903-29B	1104 1123	919-001172	1104	921-152B	2011	974-2	2012	998-0200816	20
4-2000-002	1104	800-524-02	2041	903-30B	1123	919-001172-1	1104	921-155B	2009 2009	974-3A6-3 974-4	2007 2012	1000-12 1000-17	11
4-2000-005 4-2000-009	1104 1123	800-524-02A 800-524-03	2041	903-34 903-34A	1123 1123	919-001445-2 919-004326	563 1104	921-159B 921-161B	2009	976-0036-921	1102	1000-17	11
4-2000-011	1102	800-524-03A	2041	903-34B	1123	919-004799	1104	921-176B	2011	977-1	1102	1000-130	11
54-2009-150 54-2509-150	1102 1102	800-524-04A 800-525-04A	2041	903-34C 903-34D	1123 1123	919-007109 919-007109RA	1104	921-177B 921-181B	2011 2013	977-2B 977-3B	1104 1114	1000-131 1000-132	11
4-2720-021	1102	800-526-00	2009	903-34E	1123	919-007394	1104	921-189B	2009	977-8B	1104	1000-135	20
4-4000-088	1123	800-529-00	2009	903-36 903-36A	1114 1114	919-007776 919-007776RA	1104 1104	921-191B 921-195B	2009	977-10B 977-11B	1104 1104	1000-136 1000-137	20
4-4000-188 4-4000-410	1123 1123	800-530-00 800-530-01	2009 2009	903-36B	1114	919-009459RA	1104	921-196B	2009	977-13B	1104	1001(JULIETTE)	20
4-5000-021	1104	800-534-00	2009	903-36C	1114	919-01-0459	1104	921-200B	2009	977-18B	1104	1001-02	20
4-5750-283 4-5750-284	1102	800-534-00(XSTR) 800-534-01	2031	903-36D 903-36F	1114 1114	919-01-0623 919-01-0829	1104 1104	921-203B 921-204B	2035 2011	977-19B 977-20B	1104	1001-02(COURIER) 1001-03	20
4-5900-090	1123	800-535-00	2035	903-37B	1123	919-01-0829-1	1104	921-206B	2009	977-22B	1104	1001-04	20
4-9000-460 4-9000-473	1123 1102	800-535-01 800-538-00	2035	903-41B 903-42B	1102 1102	919-01-0867 919-01-0873	1123 1102	921-210B 921-211B	2011 2011	977-23B 977-25B	1104	1001-05 1001-06	21
4-9000-4/3	1104	800-544-00	2009	903-43B	1123	919-01-1172-1	1102	921-213B	2011	977-27B	1104	1001-09	20
4-9001-124	1104	800-544-10	2009	903-45B	1123	919-01-1211	1104	921-214B	2009 2009	977-28B 991-00-1172	1104 1102	1001-10 1001-11	1:
4-9030-009 4-9052-473	562 1102	800-544-20 800-544-30	2009 2009	903-48B 903-49B	1102 1104	919-01-1212 919-01-1213	1104 5 62	921-215B 921-225B	2009	991-00-1172-1	1102	1001-11	'
4-9053-090	562	800-548-00	2009	903-51B	1123	919-01-1215	1102	921-226B	2011	991-00-1219	2009	1002-01	20
5-845049 6	1122 1104	800-50100 800-51500	2009	903-52B 903-54B	1104 1123	919-01-1307 919-01-1339	1102 1104	921-228B 921-229B	2009	991-00-1449 991-00-1449-1	1104 1104	1002-02 1002-03	20
7	2009	800-52102	2009	903-58B	1102	919-01-3035	562	921-231B	2035	991-00-2232	2009	1002-04	20
7(ZENITH)	2009	800-52202	2009 2009	903-65B 903-69B	1123 1104	919-01-3072 919-010867	1102 1123	921-232B 921-233B	2011 2011	991-00-2248 991-00-2298	2009 2009	1002-08 1002-09	1
7CL 2-110	2009 2009	800-52302 800-52402	2009	903-69B 903-72B	1104	919-010873	1104	921-234B	2009	991-00-2356	2009	1002-17	1
2A	2011	800-52600	2009	903-79B	1104	919-010873-050	1122	921-235B	2011	991-00-2356/K	2009	1002-17(DIODE)	1
2B 2B1	2011 2011	800-53001 800-53400	2009	903-82B 903-83B	1102 1123	919-011212 919-011215	1104 1104	921-237B 921-252B	2009 2009	991-00-2440 991-00-2440-1	1104 1104	1002-68 1002-4404	2
2BJ	2011	801B	2009	903-84B	1102	919-011307	1104	921-255B	2009	991-00-2440-2	1104	1002-6219	-1
2BL 2BM	2011	803-18250 803-37390	2009	903-92B 903-95B	1123 1102	919-011340 919-013044	563 1104	921-257B 921-258B	2011	991-00-2873 991-00-3144	2009 2009	1002A(JULIETTE)	20
2BN	2011	803-83940	2009	903-97B	563	919-013058	563	921-264B	2013	991-00-3304	2009	1003-11	11
2BY	2011	803-89910	2009	903-100B	1102	919-013059 919-013060	1102	921-265B 921-266	2013 2009	991-00-7394 991-00-7776	1104	1003-13 1004	1
2CC 2CC	2011	803-89930 804	2009	903-103B 903-104B	1123 1104	919-013067	1102	921-267	2009	991-00-8393	2009	1004(2SC537)	2
2D	2011	804-14120	2041	903-105B	1104	919-013072	1104	921-268B	2009	991-00-8393A	2009	1004(DIODE) 1004-03	1
2D1 2DC	2011 2011	804-14130 804-21980	2041	903-108B 903-112B	1123 1102	919-013081 919-013082	1104 1102	921-269B 921-272B	2009 2009	991-00-8393M 991-00-8394	2009 2009	1004-03	2
2DG	2011	805-1060	1123	903-113B	1123	921-7	2009	921-275B	2009	991-00-8394A	2009	1005	2
'2E '2EH	2011 2011	805-10600 808-206	1123 1104	903-114B 903-115B	1123 1123	921-8 921-20BK	2009 2009	921-275R 921-276B	2009 2009	991-00-8394AH 991-00-8395	2009	1005(2SC537) 1005(JULIETTE-DIC	21 ODI
2F	2011	808-312	1123	903-116B	1102	921-22BG	2009	921-291B	2009	991-002232	2030		1
2FE	2011	818WHT	2009	903-117B	1104		2009 2007	921-301 921-301B	2009 2013	991-002298 991-002356	2009 2009	1005(JULIETTEREC	(TC 1
2G = 3	2011 2009	822 822-1	2009 1104	903-118B 903-119B	1102 562	921-24B 921-26	2009	921-303B	2009	991-002873	2030	1005-03	2
3(ZENITH)	2009	822-2	1104	903-121B	1102		2009	921-304B	2009		2030	1005-3	1
6-2(PHILCO) 6-151	2009 2009		1104 1104	903-156B 903-164B	1104 1104		2009 2009	921-305B 921-306B	2009 2009		2031 2009	1005-20 1006	2
6-183	2009	822-5	1104	903-168B	1123	921-28A	2009	921-307	2009	991-01-1220	2009	1006(DIODE)	1
6GRN 0WHT	2009 2009	822A 822ABLU	2009	903-169B 903-177B	1104 1102		2009 2009		2009 2009		2009 2009	1006(JULIETTE) 1006(JULIETTE-REC	CT
5YEL	2009	822B	2009	903-178	1102	921-43B	2009	921-312B	2013	991-01-1316	2011		1
1 220	2009 1104	823B	2009 2009	903-179	562 1104		2009 2009	921-314B 921-326B	2009 2009	991-01-1317	2041 2009	1006-17 1006-24	1
2-238 2-292	1123	824-09501	2009	903Y00212	1104	921-46A	2009	921-339B	2009	991-01-1705	2009	1006-48	2
0-001-034	2009		2009	903Y00228	562		2009		1102	991-01-1706	2035 2009	1006-1737 1007	1
0-002-00 0-003-00	1123 1123		2009 2009		2009 2013		2009 2009		2009 2009		2035	1007(JULIETTE-DIC	
0-004-00	563	834-6066	2009	904-95	2009	921-47BL	2009	921-349B	2013	991-01-3056	2009		1
0-00 5-00 0-006-00	1123 1104		2009 1104	904-95A 904-96B	2009 2009		2009 2009		2013 2009		2009 2041	1007(JULIETTE-RE	CI
0-013-00	1104	853-0300-632	2009	904-97B	1123	921-50B	2009	921-351B	2009	991-01-3544	2009		
0-014-00	1104	853-0300-900	2009		2013	921-59B	2011	921-352B	2009 2009		2009 2009		
0-014-01 0-016-00	1104 1102		2009 2009	905 905-27	2013 702		2011 2011		2009		2032		
0-020-00	1123	854-0372-020	1104	905-28	702	921-62B	2011	921-355B	2009	991-010462	2009	1007-3062	
0-021-00 0-022-00	1102		2009 1102		1123 2011		2011 2011		2009 2009		2009 2009	1007-3153 1008	2
0-023-00	1123 563	863-567B	1102	909-27125-140	2009	921-63B	2011	921-428	2009	991-011306	2009	1008-02	:
0-024-00	1104	863-776B	1102	909-27125-160	2016	921-64	2011	921-1528	2011	991-011312	2009	1009(JULIETTE-DIC	
0-032-00 0-035-00	1104 563		2041		2013 2009		2011	926C193-1 926C193-2	2009	991-011576	2035	1009(JULIETTE-RE	C
0-036-00	1102	880-207-000	1104	914-000-2-00	2036	921-64C	2011	926C193-P1M4	165 2009	991-011706	. 2035		
0-038-00	, 1104	880-250-102	2009	914-000-6-00	1102 1102		2009 2009	926C206P1	1122	991-013044	2030 2009		ı
0-039-00 0-040-00	1123 1102	880-250-109	2009 2009		2007		2011	930DZ	2011	991-013063	2041	1009-02-16	
0-041-00	1104	881-250-102	2009	916-31001-7B	2007	921-84A	2011	930X1	2009	991-013068	2009	1009-07	
0-042-00 0-046-00	1102 1104		2009 2009		2007 2007		2011 2011		2009 2009		2030 2009		
00-01300-504	1104	902-000-2-04	2010	916-31024-3	2009	921-85A	2011	931	1102	991-015615	2009	1009-2	1
00-01400 00-101-101-1	1104 2009		2010 2013		2016 2011		2011 2011		2009		2009 2041		2
00-101-102-1	2009	903-3	2009	916-31024-5B	2016	921-86A	2011	936-20	1104	992-00-2298	2009	1010(GE)	2
00-102-001	1122		2009		2009		2011		1102		2041		110

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
010-143 010-145	1102 1123	1042-15 1042-16	1102 1102	1145 1146	2007	1612SK24E 1627-1843	2035	1999	2009	2057A2-208	2009	2057B2-152	20
010-7738	2032	1042-17	1104	1186	2032	1634-17	1,102	1999-17 2000-101	2011	2057A2-209 2057A2-215	2009	2057B2-153 2057B2-154	20 20
010-7928 010-8066	2009	1042-18 1042-23	562 1102	1186-5 1202	1101 2009	1674-17 1677-1149	1104	2000-104	2035	2057A2-216	2011	2057B2-155	20
010-8082	2030	1043-0049	1102	1203(GE)	2009	1687-17	1740 2011	2000-105	2036 2010	2057A2-217 2057A2-218	2011	2057B-85 2057B101-4	20 20
010-8090 010-8173	2009 1123	1043-07 1043-10	2009 1102	1203-169 1205(GE)	2009 2009	1699-17 1703-8662	1102	2000-204	2013	2057A2-219	2011	2057B102-4	20
010-9486	1104	1043-1260	2009	1206-17	1123	1705-4834	2009	2000-205	2013 2009	2057A2-220 2057A2-221	2011 2011	2057B103-4 2057B117-9	20 20
010-9494 010A	1104	1043-7382 1044	1104 1104	1207 1207-17	2009 1123	1711 1711-17	2009	2000-210 2000-212	2010	2057A2-222	2009	2057B118-12	20
011 011(VO-6C)	1123	1044-0295	2032	1208(GE)	2009	1711MC	2009	2000-214	2020	2057A2-225 2057A2-226	2009	2057B119-2 2057B120-12	20
011-0302	1104	1045-0534 1045-2951	1104 2009	1210-17 1210-17(MIXER)	2038	1712-17 1713-17	2009	2000-221	2041 1102	2057A2-227 2057A2-228	2009	2057B125-9	20
012	1104 1123	1045-7802 1045-7844	1102	1210-17(OSC)	2009	1723-17	2009	2000-303	1102	2057A2-237	2011	2057B141-4 2057B142-4	20
013	1123	1045-7851	2041 2041	1210-17B 1212	2009 1102	1750-103 1751G036	1102 2009	2000-304 2000-305	1104	2057A2-259 2057A2-264	2011 2009	2057B143-12 2057B146-12	20
013-15 015	2013 564	1048-6421 1048-9904	1102	1212(ROSS) 1227-17	1102	1756-17	1102	2000-308	562	2057A2-278	2009	2057B146-12	200
016-17	1104	1048-9912	2009	1228-17	2009	1766 1778-17	563 1123	2000-317 2000-320	1102	2057A2-279 2057A2-280	2009 2009	2057B152-12 2057S2-276	200
)16-77)16-78	1123 1104	1048-9946 1048-9987	1104 1102	1236-3776 1263A	2009	1794-17	562	2000-322	561	2057A2-281	2009	2060-024	110
16-79	1104	1048-9995	1104	1272	1104	1794-17(10) 1799-17	562 2009	2000-324	561 562	2057A2-285 2057A2-289	2009	2061A45-38 2061A45-72	110
016-85 018-3259	2038 1102	1049-0060 1049-0100	2013 2013	1289 1300RN	1104	1800-17	2009	2000-328	561	2057A2-289(4T)	H-IF) 2010	2061A45-93	110
18-6963	1104	1049-1744	2013	1315	2011	1806-17 1806-17A	2041 2041	2000-329	561 2009	2057A2-294 2057A2-296	2009	2061B45-35 2063-17-12	200
)19-3852)19-6699	2009 1123	1050 1050-64	1104 1104	1316 1340	2009 2007	1809 1811-110-10111	1102	2003	2041	2057A2-297	2009	2064	200
020	. 1104	1060	1104	1344-3767	2007	1812-1	1101 2009	2003-17 2004-01	2009 2011	2057A2-300 2057A2-303	2009 2009	2064(CROWN) 2065-03	200
)20-17)21	2009	1061-8320 1061-8379	2013	1350 1368C/D	2007	1812-1-12	2009	2004-02	2013	2057A2-304	2011	2065-07	20
22-5548	1104	1061-8387	1104	1373-17	2009	1812-1-127 1812-1L	2009	2004-03 2004-14	2009	2057A2-305 2057A2-306	2011	2065-17 2065-55	11 20
23G 23G(GE)	2009	1061-8916	1104	1373-17A 1374-17AC	2011	1812-1L8	2009	2004-67	1102	2057A2-316	2009	2066-17	11
24	1104	1062GE	1102	1390	2009	1818 1820-0058	1102 017	2005-2981 2006	1122	2057A2-319 2057A2-322	2031	2074-17 2076	20
24G 24G(GE)	2009 2009	1063-79 1063-3553	1104 1123	1396 1400	2001	1820-0248	017	2008-17	2009	2057A2-323	2011	2084-17	11
25G	2009	1063-5142	2012	1405-17	2007 1104	1826-0070 1827-17	010 1104	2010-01 2010-02	1102 1104	2057A2-324 2057A2-325	2009 2011	2090 2090A43-1	20 11
25G(GE) 26(GE)	2009	1063-5381 1063-7916	2009 2012	1410 1410-102	2007	1841-17	2009	2010-03	1102	2057A2-326	2011	2093A3D-2	11
26G	2009	1063-8591	1123	1410-102(ROGER	1122 S) 1104	1846-17 1848-17	1102	2010-17 2014-6684	2035	2057A2-331 2057A2-332	2011 2009	2093A4-2 2093A6-1	11
26G(GE) 28	2009	1063-8963 1063-8971	2010 1114	1410-167	1.104	1849	1104	2015-1	2041	2057A2-341	2009	2093A6-2	11
28(G.E.)	2009	1064-6032	2041	1410-169 1410-169(ROGER	1122 S) 1102	1849R 1850	1104(2)	2015-1A 2015-2	2041	2057A2-356 2057A2-374	2011 2009	2093A8-1 2093A9-3	11 20
28G 28G(GE)	2009	1070 1071-3642	1114	1410-171	1123	1850R	1104	2015-2A	2041	2057A2-387	2009.	2093A9-4	20
29	2030	1074-24	2041 1123	1411-135 1412-1	563 2009	1851-17 1854-0003	1104	2015-3 2015-3A	2041 2041	2057A2-390 2057A2-395	2009 2011	2093A12-1 2093A25-3	11
29(G.E.) 29G	2009	1074-118 1074-119	1122 1104	1412-1-12	2009	1854-0005	2009	2015-4	2041	2057A 2-396	2009	2093A33-1	11:
29G(GE)	2009	1074-120	562	1412-1-12-8 1412-170	2009 1104	1854-0033 1854-0353	2009	2015-5 2015-6	2041	2057A2-398 2057A2-399	2009	2093A38-1 2093A38-4	113
30-17 33	- 1123 563	1074-123 1074-124	561 1123	1412-182 1414-174	1114	1854-0417	2011	2015-7	2041	2057A2-401	2009	2093A38-5	110
33-0911	1102	1075	2010	1414-179	2009	1854-0432 1854-0563	2009	2017-111 2017-114	1104	2057A2-412 2057A2-432	2009	2093A38-10 2093A38-11	112
33-0983 33 - 6	1102	1076-1377 1076-1484	2013	1414-183 1414-188	2009	1854-17	1104	2017-115	2009	2057A2-433	2009	2093A38-13	110
33-8	1104	1077-07	2009	1415	2041	1855-17 1858		2018-01 2020-01	2009 2035	2057A2-434 2057A2-445	2009 2035	2093A38-14 2093A38-15	112
33-17 33-1916	1104	1079-01 1079-89	1102 1102	1420-1-1	2011	1858A	562	2020-03	2015	2057A2-449	2009	2093A38-21	112
34-17	2009	1080	1114	1424 1431-8349	2009	1859-17 1859R		2020-04 2022-03	2035	2057A2-452 2057A2-463	2009	2093A38-27 2093A38-28	11:
14-43 18-1	2001	1080-01 1080-03	2011	1455-7-4 1458CP1	2011	1865-4		2022-05	2010	2057A2-464	2009	2093A38-30	11.
38-1-10	2009	1080-08	1104	145821	038	1865-4-12 1865-4L		2022-08 2022-244	1104 2009	2057A2-466 2057A2-477	2011	2093A38-31 2093A38-32	11 11
38-6 38-6CL	2009	1080-10 1080-20	562 2011	1463 - 1465	2009	1865-4L8 1866-17		2026	2009	2057A2-478	2013	2093A38-33	113
38-8	2009	1080-5364	2041	1465-4	2009	1872-6		2026-00 2027	2009	2057A2-479 2057A2-483	2009	2093A38-34 2093A38-37	110
18-10 18-15	2009	1080-6396 1081K94-6	2009	1465-4-12 1465-4-12-8	2001	1874-3	2007	2027(E.F.JOHNS	SON)2009	2057A2-487	2009	2093A38-40	11:
18-15CL	2009	1081K94-7		1471-4778	2001	1874-3-12 1874-3-127		2031-17 2032-36	1104 2035	2057A2-501 2057A2-503	2011 2011	2093A39-12	5
18-18 18-18CL	2009	1081K94-9 1084	007	1471-4802	2041	1874-3L	2007	2032-37	2009	2057A2-507	2013	2093A41 2093A41-2	11
8-21	2009	1087	564	1474-3 1474-3-12	2007	1874-3L8 1879-17	2007	2036-68 2036-72	017 017	2057A2-508 2057A2-510	2013	2093A41-6 2093A41-14	- 11
8-23 8-23CL		1087-02 1090	2009	1474-3-12-8	2007	1882-17	2009	2036-93	017	2057A2-511	2009	2093A41-16	11 5
8-24	2009	1092-16		1479-0273 1479-7989	2009	1883-17 1884-17	2009	2039-2 2041-05	2001 1102	2057A2-526 2057A2-527	2013	2093A41-24	5
8-1697 9-01	1104	1095-01 1095J2F	2036	1482	2009	1885-17(RECT.)	1104	2041-06	562	2057A2-510 2057A2-511 2057A2-511 2057A2-526 2057A2-527 2057A2-539 2057A2-540	2013	2093A41-24A 2093A41-28	5 11
9-0961	2013	1096J2F	1104	1488(SEARS) 1488C	1104	1888C 1888C-12		2044-17 2045-1	2009 702	2057A2-540 2057A2-541	2011	2093A41-38	11
))-03	1104	1102-63 1103-88	2001	1488C-12	2007	1888C-127	2007	2045-17	1104	2057A2-558	2009	2093A41-42 2093A41-43	11 11
0-07	1102	1104-96	1104	1488C-12-8 1489-17	2007 1123	1888CL 1888CL8	2007 2007	2052 2057A2-62	1104	2057A2-559 2057A10-64	2009	2093A41-45 2093A41-49	11
)-08)-2	1123	1106-29	1104	1493-17	2009	1893-17	2009	2057A2-64	2009	2057A42-477	2013	2093A41-50	11 11
)-10	1104	1106-36 1108-73	1104	1501 1512	2013 1123	1907-6553 1915-17	010 2009	2057A2-87 2057A2-103	2013	2057A100 2057A100-53	2041	2093A41-51 2093A41-54	11
0-81 0-155	1104	1109	562	1515	2009	1925-17	2013	2057A2-103 2057A2-109 2057A2-110 2057A2-113 2057A2-116 2057A2-116	2011	2057 B2-27	2031	2093A41-55	11
-9332	1102	1110-86 1112		1515(PNP) 1524	2001	1929-17 1931-17	2009	2057A2-110 2057A2-113	2011	2057B2-38 2057B2-46	2009	2093A41-56 2093A41-57	5
-63 -64	1104	1113-03 1115-16	2009	1540	2009	1932-17	2009	2057A2-116	2011	2057B2-59	2009	2093A41-59	11 11
1-65	1123	1116-42		1543-00 1550	1122 1123	1934-17 1937-17(DIODE)	2033	2057A2-117 2057A2-117(OSC	2011	2057B2-62 2057B2-63	2009 2009	2093A41-60 2093A41-61	5
I-66 I-70		1116-6527 1117(MC)	2041	1561-0403	2041	1941-17	1104	2057A2-117(RF-	ÁMP)	2057B2-69	2009	2093A41-62	11 11
1-71	2013	1117-76	2009 1104	1561-0404 1561-0604	2041	1949-17 1950-17	1104	2057A2-120	2009	2057B2-73 2057B2-97	2009	2093A41-65	11
1-72	2009	1118-17	1123	1561A603	2041	1956-17	1123	2057A2-121	2009	2057B2-101		2093A41-66 2093A41-68	11 11
1-73 1-75		1118-20 1119		1562 1567	1104	1961-17 1966-17	2009	2057A2-122	2009	2057B2-102	2011	2093A41-75	118
1-109	1104(2)	1119(GE)	2012	1567-0	2009	1970-16	1104	2057A2-128 2057A2-131	2011	2057B2-113 2057B2-114	2009	2093A41-76 2093A41-77	11
2-02 2-04		1119-17 1119-8132	1123 2009	1567-2	2009	1970-17	1104	2057A2-143	2030	2057B2-115	2011	2093A41-78	110
2-07	2009	1120-17	1102	1582-0404	2041	1971•17 1977•17	1114	2057A2-145 2057A2-146	2009	2057B2-116 2057B2-117	2011	2093A41-81 2093A41-84	110
2-09 2-3		1120-18 1121-17	1104	582-0405	2041	1979-17	1102	2057A2-149	2004	2057B2-121	2009	2093A41-86	110
2-7	2009	1123(JULIETTE)	1104	1582-0403 1582-0404 1582-0405 1582-0603 1582-0604 1582-0605 1585H		1980-17 1981-17		2057A2-152 2057A2-153	2009	2057B2-122 2057B2-123	2009	2093A41-88 2093A41-89	110
2-12	1123	1123-60 1138	2009	582-0605	2041	1982-17	1104	2057A2-154		2057B2-125	2009	2093A41-89 2093A41-92	112
2-13	1123				2011	1984-17	2009 2	2057A2-155		2057B2-130		2093A41-102	

EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
093A41-104	1104	2209-17	1102	2584	2009	3529	1104	4002(PENNCREST		4733	2009	5084-600-4521-0	11 20
093A41-105 093A41-108	1102 1104	2211B 2213-17	1104 2011	2603-184 2603-186	2009 1123	3530 3530-1	2011	4002(SEARS) 4003(SEARS)	1123	4734 4737	2009	5096 5101S34	11
93A41-110	1104	2224-17	2013	2606-296	1123	3530-2	2011	4005(SEARS)	1123	4746	2011	5120A90	11 5
093A41-115 093A41-116	1104	2225-17 2226-17	2013 2013	2606-299 2634	1104	3532(RCA) 3535	2009	4006(SEARS) 4007(SEARS)	1123	4765 4768	2009	5122 5124	5
93A41-126	1104	2231-17	1102(2)	2667	2013	3535-110-50008	702	4008(SEARS)	1123	4789	2011	5203N1 5205NI	1102
093A41-129 093A41-131	1102 1104	2232-17 2233-17	1123 1104	2703-389 2704	1123 1123	3535-110-50009 3536	702 2030	4009(SEARS) 4010	1123	4800-224	1104 2014	5210DC-1	11
93A41-139	1104	2252	1104	2704-388	1123	3536(RCA)	2009	4010(PENNCREST) 1123	4801-0000-035	2030	5222	5
93A41-141	1123	2263	2009	2704-389 2762	1104	3536-1 3537	2009	4010(SEARS) 4011(PENNCREST	1123	4801-00154 4801-00628	1102	5224 5224(ZENER)	5
93A41-148 93A41-151	1123 1104	2270 2275-17	2009	2763	1104	3536	2030	4011(SEARS)	1123	4801-00629	1123	5226-2	20
93A41-152	1104	2277P	702	2766	1104:	3538(RCA)	2009	4012(SEARS) 4013(RECTIFIER)	1123	4801-00801 4801-1100-0011	562 2030	5300-82-3 5300-82-4	11
193A41-153 193A41-154	561 1123	2279-13 2280-13	1123 1123	2777 2779	1104	3540-1 3541(RCA)	2009	4014	1104	4802-00003	2009	5300-82-1003	11
93A41-155	1102	2281-13	1123	2784	1104	3543	2030	4014-200-30110	1102	4802-00005	2041	5300-86-1 5300-88-1	11
093A41-156 093A41-158	1102 1102	2282-13 2282-17	1123 1123	2786 2787	1104	3543(RCA) 3544-1	2009	4021 4022	2009	4802-00005A 4802-00006	2009	5300-88-2	11
93A41-159	562	2283-13	1123	2789	1123	3546	2030	4041-000-1018	1123	4802-00009	2009	5300-88-3	11
93A41-163	562	2283-17	1104	2794	1104 562	3546(RCA) 3546-1(RCA)	2009	4041-000-10150	1104	4802-00010 4802-00012	2035	5300-88-1002 5300-88-1003	1
093A41-164 093A41-165	1102	2284-13 2284-17	1123 2011	2795A 2796	562	3546-2(RCA)	2009	4041-000-40300	2011	4802-00015	2009	5300-88-1004	11
93A41-167	1123	2285-17	1104	2802	1114	3547	2012	4041-000-60170	2011	4802-2000-012 4802-2000-019	1104	5300-94-1 5300-95-1	1
93A41-169 93A41-171	1123	2289-13 2290-13	1102(2)	2854 2904-003	2009	3548 3548(RCA)	2009	4041-000-60200	1123	4805-1241-200	1122	5300-98-1	. 1
93A41-172	1102	2290-17	2009	2904-034	2009	3551(RCA)	2009	4041-200-1014010		4806-0000-004	1104	5300-99-1	1
93A41-173	1104	2291-17	2011 1104	2904-035 2904-038H05	2009	3551A(RCA) 3554(RCA)	2009	4046(SEARS) 4051-300-10150	2009 1104	4811-0000-015 4811-0000-025	2036 2036	5300-99-3 5300-99-4	1
93A41-180 93A41-181	1104	2302-17	2010	2925	2009	3555(RCA)	2009	4057	2009	4820-0201	1122	5301-06-1	1
93A41-182	1104	2304	1102	2925(E.F.#JOH	NSON) 2009	3556-1 3558	2009	4066 4085	2009	4822-130-30192 4822-130-30256	1104 1104	5301-06-1001 5301-09-1	1
93A41-185 93A41-186	1104 562	2309 2315-046	562 1104	3001A	1104	3558(RCA)	2009	4101-685	1104	4822-130-30259	1104	5301-11-1	1
93A41-187	1123	2319-17	1104	3003	2011	3560	2009	4,150-01	2009	4822-130-30261	1104	5301-11-1001 5301-13-1	1
93A41-189	1104 1123	2320-17 2321-17	2009	3003(SEARS) 3004(SEARS)	2011	3560(RCA) 3560-1(RCA)	2009	4167	2030 2030	4822-130-30281 4822-130-30301	1123	5301-13-1	1
93A41-196 93A41-197	1104	2328	1102	3005(SEARS)	2009	3560-2(RCA)	2009	4169	2030	4822-130-30311	1123	5301-22-1	1
93A42-7	1104	2328-17	1102	3005-861	2009	3561 3561(RCA)	2009	4216 4216(HARMON-KA	2041 ARDON	4822-130-30312 4822-130-40132	1123	5301-36-T 5380-21	1
93A43-2 93A52-1	1101	2330-191 2330-201	1114	3006(SEARS) 3007(SEARS)	2009	3561-1(RCA)	2009	4210(FIARIMON-K)	2041	4822-130-40182	1102	5380-71	2
93A59-1	1101	2330-252	1114	3011	2009	3565-1	2030	4309(AIRLINE)	2009	4822-130-40184	2009	5380-72 5403-MS	- 2
93A69-1 93A71-1	1114	2335-17 2336-17	2035 2036	3011(E.F.JOHNS 3026	2009 2009	3569(RCA) 3569-1	2009	4322-542 4351.0012	2009 1123	4822-130-40214	2011	5403-MS	
93A77-1	1123	2337-17	2009	3029	2011	3571(RCA)	2009	4351.0013	1123	4822-130-40216	2011	5515	
93A78-1	1114	2361-17	2009	3055-1	2041		2009	4351.0031 4354	1123	4822-130-40229 4822-130-40311	1123 2011	5519 5522	-
93A79-6 93A80-1	1114 563	2362-1 2396-17	2009 564	3055-3 3069	2041 1104	3572 3572(RCA)	2009	4354.0012	1104	4822-130-40312	2011	5524	
9384-6	1104	2400-17	1102	3069(ARVIN)	1104	3576	2010	4451	2007	4822-130-40313	2011	5565-001	2
93B38-4	1102	2400-23	1104	3074A20 3074A21	1104	3577 3577(RCA)	2009	4464 4465	2009	4822-130-40317 4822-130-40318	2011		1
93B38-9 93B38-14	1101 1104	2400-27 2402	1104	3107-204-9000	2009	3577(NCA)	2009	4470	2009	4822-130-40333	2009	5612-75(C)	2
93B41-6	1104	2402-459	1123	3107-204-90010	2009	3586(RCA)	2009	4470-31	2009	4822-130-40343 4822-130-40354	2009		2
93B41-8 93B41-9	1104 1104	2402-461 2402-462	1104 1104	3107-204-90020	2009	3588 3589	2009 2009	4470-32 4470-33	2009		2009		2
93841-10	1104	2402-463	1104	3111	2009	3601(RCA)	2009	4470M-32	2009		2009		
93B41-11 93B41-12	1123 1104	2403 2405	1102 1102		2009	3601-1 3603	2009 2004		2009		1104 2013		2
93B41-14	1104	2405-458	1123	3152-170	2041	3603-1	2009	4473-5X	2009	4828-4	1123		3
93B41-18	1104	2405-459	1104		KARDON) 2009	3604-3 3607	2009 2001	4473-9 4473-12	2009		2009 2009		
93B41-20 93B41-21	1104 1104	2405-462	1104				2001	4473-M-3	2009	4841	2009	5613-461	
93841-22	1104	2408-330	1123		2009		2011	4484	2007	4842 4851	2009		
93B41-24 93B41-25	562 1104	2409-17	1122 1104		2011		2012		2007		2009	5613-535	
93B41-28	1104		1104	3377	1104		2009		2041		2009		-
93B41-32 93B41-34	1104 1104		2011 2020	3425 3434	2007 2007		2009 2032		2041		2009		
93841-35	1104	2443	2011		2007	3617	2004	4624	2009	4856-0109	2009		
93B41-37	1104		2009		2041		2009 2009		2009 562		2009		
93B41-62 01-03	1104 1102		2009		2007 1123		2009		2009		2041	5613-711(E)	
02	1104	2447	2009	DEOF/RIOLINE	1102(2)	3628-2(RCA)	2012	4686-87-3	1104	4927	2009	5613-711E 5613-828S	
02-010 02-014	1123 1104	2447(RCA) 2448	2009 2011	3505(RCA)	2009 2009		2009		1114	5001-014	2009	5613-870	
02-017	1104	2448-17	2014	3507(SEARS)	2011	3634.0011	2009	4686-105-3	1114	5001-020	2009	5613-870(F)	
02-025	1123	2449-17	2009 2009	3507(WARDS)	2009		2004		1114 1104	5001-032 5001-037	2013		1.50
02-028	1123 1102		2009	3509(SEARS)	2009	3657-1	2013	4686-132-3	2009	5001-069	2009	5613-1335	
02-032	. 562	2452-17	562	3509(WARDS)	2009	3657-2	2013	4686-139-3	1114	5001-071 5001-072	2020		
02-074	1104 561		1114 T104		2030		2041	4686-143-3 4686-144-3	2009	5001-080	1123	5613-1342	200
06-124	1123	2472-5632	2009	3511(SEARS)	2035	3676(RCA)	2010	4686-147-3	1104	5001-083	1102	5613-1342C	
110N-41	1102 1104	2473	2030 2011		2035		2041	4686-148-3	1104	5001-107 5001-117	1102		
110N-42 116-17	1104	2475(RCA)	2009	3512(SEARS)	2035	3700-153	1104	4686-150-3	140	5001-120	1122	5631-1N60	
22-17	1123	2476	2030	3512(WARDS)	2035		561 561	4686-151-3	1104 2009		112		
132(GE) 134-17	2009 2038		2030 1122		2009		561	4686-177-3	110	5001-129	1104	5632-S1B01-02	
148-17	1104	2495	2011	3514(WARDS)	2009	3704	561	4686-179-3	1114		56°		
150-17 1 51- 17	562 1123		2009		2001		2009 2041	4686-183-3	2009	5001-135	110	4 5632-W06B	8
152	1104	2495-489	1114	3519	2031	3714H1A	2041	4686-186-3	1111	5001-144	110	2 5641-MV11	4
158-1541	2009	2495-522-4	2009	3519(RCA)	2009		2007		1114		110:		
180-41 180-153	1102(2) 2009	2495-529 2496-125-2	2009		2009 563		2036		111	1 5001-152	563	5923	
180-154	2009	2498-513	1114	3520(DIO)	563	3843(HARMON-	KARDON) 4686-212-3	111	4 5001-156	110	2 6003	
182-17	1104	2510-31	1123	3520(WARDS)	563		2041		200		110		. 11
196-17 197-17	1123 2011		1104 2013		2009		2009	4700	200	1 5001-164	110	2 6129-P1	
198-17	1104	2510-102	2013	3 3523(SEARS)	2009	3970	2007	7 4701	204		204	1 6136 0 6171-28	-
199-17	1104		2009 1104		201		2009 DX) 1102		200		200	9 6343-1	
200-17 204-17	2009		1104	4 3526(RCA)	2009	4001-151	1114	4715	204	1 5001-545	201	3 6367	
206	1104	2546	201	1 3527	2009		1123		204		110 112		
206-17	1104	1 2546(RCA)	2009	9 3527-1	201	1 4002(PACE)	2005	7102	200		_		

6432-3 6445 6523-34 6629 6629-A05	562 2007												
6517 6523-34 6629		7711-1	1114	8000-0005-023	1123	8868-8	2009	12112-D	2009	19865	1104	33563	200
6629	2009	7712-1 7713-1	1114	8000-00010-017 8000-00011-004	2035	8886-2 8910-52	2009 1102	12112-E 12112-F	2009	20738 20810-21	2009 1104	34119 34174	200
	1104	7805	1770	8000-00011-041	1104	8910-55	1104	12112C	2009	20810-22	1104	34208	110
	1114	7812 7815	1771 1772	8000-00011-042 8000-00011-043	1102 562	8910-141 8910-142	2035	12112D 12112E	2009 2009	22158 22164-000	2009	34219	200
5854K90-074	2009	7816	2009	8000-00011-044	1104	8910-143	2009	12112F	2009	22635-002	1122 2009	34220 34221	200 200
6954K90-074 7001	2009	7817 7818	2009	8000-00011-045 8000-00011-046	1102 1123	8910-145 8999-201	2009 1104	12116-1 12116-2	2007 2007	22635-003	2009	34394	110
7001 (E.F. JOHNSON	1)2009	7962	1104	8000-00011-047	2009	8999-205	1104	12117-9	2007	22810-173 23114-046	2009	34502-1 34894	03 110
7002 7005G(LOWREY)	2009	7992 8000-00003 -033	2009	8000-00011-048 8000-00011-054	2009	9011 9011(G)	2009	12118-0	2007	23114-053	2009	35001	204
7006	2030	8000-00003-034	2010	8000-00011-055	2035	9011F	2013	12118-6 12123-4	2007 2007	23114-054 23114-070	2009	35219 35242	56: 203
7014 7015	2009 2009	8000-00003-044 8000-00003-045	1123 1123	8000-00011-060 8000-00011-064	1123 562	9011G 9013H	2013	12123-5	2007	23114-082	2009	35259	201
7112	1102	8000-00003-046	1102	8000-00011-004	1104	9013HF	2009	12123-6 12124-0	2007 2007	23114-095 23115-042	2009	35287 35287A	110
7112(TRANSISTOR 7113	2009	8000-00004-003	2014	8000-00012-038	1101	9013HG	2009	12124-1	2007	23115-057	2009	35289	110
7116	2013	8000-00004-044 8000-00004-045	1104 1123	8000-00012-039 8000-00028-037	2009	9013HH 9014	2009	12125-4 12127-3	2007 2007	23115-058 23115-072	2009	35306 35333	110
7117	2009	8000-00004-060	1123	8000-00028-039	2020	9014(D)	2031	12127-5	2007	23316	2009	35500	111
7122-5 7129	2009	8000-00004-061 8000-00004-062	1102 1102	8000-00028-045 8000-00028-206	1102 2013	9014B 9014C	2009	12127-6 12127-7	2009 2009	23606 23762	2035	35860	110
7171	2009	8000-00004-063	1123	8000-00029-006	2009	9014D	2009	12127-8	2009	23826	2041 2032	36201 36503	110
7171(GE) 7172	2009	8000-00004-064 8000-00004-065	1104 562	8000-00029-007 8000-00030-007	2009	9016(F)	2009	12127-9	2009	24002	2011	36503(AIRCASTLE)	110
7176	2009	8000-00004-066	1102	8000-00030-010	1104	9016(G) 9016G	2009	12128-9 12173	2007	24198(RECT.) 25011(HONEYWELI	1104	36508 36535	112
'204A '204A(SEARS)	702 702	8000-00004-067 8000-00004-068	1102	8000-00032-025	2009	9018E	2013	12174	2007		2009	36537	110
204A(SEARS)	1104	8000-00004-068	1104 2009	8000-00032-028 8000-00035-001	2020 1104	9018F 9018G	2013	12175 12176	2007 2007	25114-116 25114-130	2009	36539	56
212-3	1104	8000-00004-080	2036	8000-00035-002	1104	9033	2009	12183	2007	25114-130	2009 2009	36545 36549	204 110
212-3A 213(DIODE)	1104 1104	8000-00004-081 8000-00004-082	2035	8000-00035-003 8000-00038-008	2013	9033(SYLVANIA)	2009	12191	2007	25115-115	1104	36554	140
213-0	1104	8000-00004-85	2009	8000-00038-009	1102	9033-1 9033BROWN	2009	12192 12193	2007 2007	25201-001 25202-002	1123	36555 36564	110
(213-7 (214(LOWREY)	1104	8000-00004-184	1102	8000-00041-015	1123	9033G(SYLVANIA)	2009	12255-235	1122	25260-61-067	1102	36580	200
214(LUWHEY)	2041	8000-00004-239 8000-00004-241	561 2041	8000-00041-018 8000-00041-019	562 1102	9100-1 9128-1503-001	1104 1102	12454 12536	2010 2041	25810-51 25810-52	1104	36582	203
214A	2041	8000-00004-243	2009	8000-00041-046	2009	9300-5	1104	12536A	2041	25810-52 25810-53	1102 1123	36816 36846	200
214S 215-1	1104 1114	8000-00004-298 8000-00004-299	2013 2013	8000-00043-021 8000-00043-064	562 2008	9300-6 9300-7	1104	12593	2009	25810-55	1123	36855	204
215-2	1114	8000-00004-299	2013	8000-00043-065	2020	9300-7	1104	12602 12720	1104 1104	25810-161 25810-162	2009	36892 36917	204
233	2013	·8000-00004-P079	2009	8000-00043-068	562	9302-2	1104	12736	1104	25810-163	2009	36920	200
23 6 2 53	2013	8000-00004-P080 8000-00004-P081	2035 2035	8000-004-P061 8000-004-P063	1114	9302-2A 9302-3	1104	12746 12768	1104	25840-51	1104	36921	200
261	2013	8000-00004-P082	2009	8000-004-P064	1114	9330-006-11112	1104	12786	1104 1104	25840-52 25840-53	1104	36946 36953	204
264 302	2013	8000-00004-P086	2009	8000-004-P067	1114	9330-092-90112	561	12788	1104	25840-55	1123	37126-1	110
306	2009	8000-00005-001 8000-00005-002	2035 2009	8000-004-P068 8003-114	1114 2009	9330-228-60112 9330-229-20112	1102 1104	12803 12808	1104 1123	25840-161 26235-1	2009	37267	204
306-1	2009	8000-00005-007	2009	8003-115	1104	9330-229-60112	2011	12837	1104	26810-51	1104 1123	37475 37510-52	204 110
306-4 306-5	2009	8000-00005-015 8000-00005-016	1123 112 3	8010-52 8010-53	1102	9330-229-70112	2011	12844	1104	26810-151	2013	37510-162	200
314	1104	8000-00005-017	1123	8010-173	1123 2035	9348-3 9440	1104	12850 13002-3	1123 2041	26810-154 27113-100	1104	37510-163 37563	200
318	2009	8000-00005-018	1123	8010-176	2009	9600	2009	13002-4	2041-	27123-050	1104	37585	204
318-1 318-2	2009	8000-00005-020 8000-00005-021	561 562	8020-202 8020-203	1102 1104	9600-5 9623	2009	13298 13782	2041	27123-070	1104	37663	204
320-1	2041	8000-00005-022	1104	8020-205	2009	9644	1102	14027	1104 1104	27123-100 27123-120	1104	37680 37833	110 200
321-1 340-2	2009	8000-00005-023 8000-00005-152	1123 1104	8074-4	2009	9646	1102	14126-1	. 1104	27125-080	2009	37884	200
342-1	1104	8000-00005-152	2009	8075-4 8102-206	2009 1104	9650-001 9803	1104	14303 14588-9	2009 1104	27125-090 27125-140	2009	37888 37986-3563	204
344	1102	8000-00006-005	2011	8102-207	2009	9861B-43	1123	15027(DIODE)	1123	27125-160	2009	37986-4040	201
356-2 3 62- 1	2041	8000-00006-006 8000-00006-007	2041 1123	8102-209 8210-1203	2009	9920-3-6 9920-6-1	1114 2009	15122 15186FM	1102 1123	27125-270	2009	37986-4046	201
398-6117P1	2009	8000-00006-008	1102	8281	2009	9920-6-2	2009	15809-1	2009	27125-300 27125-360	2009	37987 38137	110
398-6118P1 398-6119P	2009	8000-00006-009 8000-00006-146	562 561	8281-1 8300-8	2009	9920-7-2	2009	15810-1	2009	27125-370	2009	38138	204
398-6119P1	2009	8000-00006-147	1114	8302	1104′ 2009	10100 10110	1114	15820-1 15835-1	2009	27125-500 27125-530	2009	38166 38174	204 110
429	2009	8000-00006-201	1104	8319-001	2041	10180	1104	15840-1	2009	27126-100	2041	38175	200
430 431	2009	8000-00006-231 8000-00006-232	1104 562	8500-206 8503	1104 2011	10181 10226/2	1123	15841-1 16001	2009 2041	27127-550	2009	38178	200
432	2009	8000-00006-280	2009	8504	2009	10386	1104	16083	2041	27840-41 27840-42	1104 1123	38199 38200	200
433 501	2009	8000-00006-281 8000-00009-174	1102 2009	8509 8600	2009	10416-009	2009	16176	2041	27840-43	1102	38209	200
502	2009	8000-00009-177 8000-00009-178	2013	8602	2009	10650A01 10895	038 1122	16201 16230	2041	27840-161 27840-162	2009	38272 38283	200
505	2009	8000-00009-178	2035	8710-52	1102	10909	1104	16234	2041	27910-12150	2009	38474	204
506 509	2009	8000-00009-280 8000-0004-042	2015 1123	8710-53 8710-54	1123 562	11236-3 11252	2041 1123	16235 16240	2041	28287	1123	38494	204
510	1114	8000-0004-044	1104	8710-55	1104	11252-3	2009	16261	2041 2041	28474 28810-61	2041 1104	38510-54 38510-161	110
514 515	2041	8000-0004-063	1123	8710-161	2035	11282-6	1104	16266	2041	28810-63	1102	38510-162	201
516	2009	8000-0004-066 8000-0004-P060	1102 1123	8710-163 8710-164	2009	11303-9 11305-0001	1104	16287 16292	2041 2041	28810-171 28810-172	2035	38510-163	200
517	2009	8000-0004-P-061	1104	8710-165	2009	11339-2	1104	16299	2041	28810-173	2009	38510-167	200
518 519	2009	8000-0004-P061 8000-0004-P062	1102 1102	8710-166 8710-167	2009	11352-78 11399-8	1122	16319	2041	28810-174	2009		110
554	562	8000-0004-P064	1102	8710-168	2009	11401-3	1104	16320 16338	2041	30208 30210	2007	38510-331 38626	56 204
68	1104	8000-0004-P065	562	8800-201 8800-202 8800-203 8800-204	1104	11503-9	1104	16681	1104	30219	2009	38731(KALOF)	204
585 586	2009	8000-0004-P066 8000-0004-P067	1102 1104	8800-202	2009	11522-5 11555-9 11559-9	2009 1104	17002 17144	1104 2009	30224 30226	2009	38788	200
86(GE)	2009	8000-0004-P068	1104	8800-204	2009	11559-9	1104	17144 17412-5	2009	30226	2009		204
87 87(GE)	2009	8000-0004-P079	2009	8800-206	1104	11586-7	1104	17443	1104	30228	2009	39042	110
88	2009	8000-0004-P079 8000-0004-P080 8000-0004-P081 8000-0004-P082	2035 2035	8840-53 8840-54	1102 1123	11587-5 11605-2	2009	17444 18410-42	2009 1123	30229 30231	2009	39096	200
588(GE)	2009	8000-0004-P082	2009	8840-55	562	11607-4	2009	18410-141	2035	30235	2009	39148	204
589 5 90	2009	8000-0004-P085 8000-0005-001	2009 2035	8840-56 8840-121	1104	11607-8	2009	18410-142	2011	30241	2009	39213	204
590(GE)	2009	8000-0005-002	2035	8840-122	2036	11608-5 11609-2	2009	18410-143 18410-145	20 09 2010	30242 30243	2009		204
591(GE)	2009	8000-0005-003 8000-0005-007	2011	8840-123	2013	11658-8	2009	18410-146	2009	30248	2009	39414	204
637 6 3 9	2009	8000-0005-007 8000-0005-008	2009 2041	8840-124 8840-161	2010	11687-5	2009	18509	2009	30253	2009	39492	204
641	2009	8000-0005-009	2009	8840-162	2035	11746 12011	1104	18529 18555	2007 2009	30259 30268	2009		204 204
575	2009	8000-0005-015	1123	8840-163	2009	12101	1102	18600-52	1102	30269	2009		110
676 701	2009	8000-0005-016 8000-0005-017	1123 1123	8840-164 8840-165	2009	12110-0 12110-3	2007	18600-53	1123	30276	2041	40024VM	110
702-1A	1114	8000-0005-018	1123	8840-166	2009	12110-4	2007	18600-151 18600-1 5 2	2011	30289 31001	2009	40080 40084	203 200
	1114	8000-0005-018 8000-0005-020	561	8840-167	2009	12110-5	2007	18600-153	2009	31003	2009	40143	110
706-1 708-1	1114	8000-0005-021 8000-0005-022	562 1104	8840-168 8864-1	2009 1104	12112-8 12112-C	2007	19042 19645	1104 2009	31009 33188-2	2009	40151	204 203

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
0218	2033	44005	1114	55810-52	1123	70260-15	2009	75700-05-03	2009	88510-172	2011	100412	110
10219 10220	2033 2033	44006 44007	1114 1114	55986-1 57000-5503	017 2009	70260-16 70260-18	2009 2041	75700-08 75700-08-02	2009 2009	88510-173 88510-175	2009 2009	100520 100617	110
0221	2033	44465-3	1104	58215-01	2009	70260-20	2009	75700-09-01	2009	88641	1104	100624	110
0222 0232	2033 2009	44465-4 44465-5	1104	58810-80 58810-82	1104 1102	70270-05 70270-23	1114	75700-09-21 75700-14-02	2009 1104	88686 88687	2009 2009	100802 100828-003	200 110
0232	2016	44465-6	1104	58810-83	1123	70270-38	1114	75700-14-05	1114	88688	2009	100844	112
0243	2016 2016	44936 44937	1104 1104	58810-85 58810-160	1104 2035	70372-2 70398-1	1102 2009	75700-24-02 75702-15-21	1114 1104	88862 89999-205	2009 1104	101119 101154	200
0244 0245	2018	44938	1104	58810-161	2033	70432-16	1104	75702-15-21	1104	90203-6	1104	101185	20
0246	2013	45184	2009	58810-162	2009	70511	2009	75702-15-34	1114	90209-172	2009	101403	11
0251 0265	2041 1104	45387 45393	702 702	58810-163 58810-165	2009 2009	70581-1 71006-28	1102 1104	76236 76675	2009 1123	90209-182 90326-001	2009 2009	101678	20 20
0269	2007	45395	7,02	58810-166	2009	71006-30	1104	76675A	1123	90429	2009	102009	11
0280 0283	2009 2009	45495-2 45810-51	2001 1104	58810-168 58840-111	2009 1104	71119-1 71119-2	1102 1123	76675B 77190-7	1123 1104	91001 91021	1104 2001	102989 103318	11 11
0290	2009	45810-161	2036	58840-113	1102	71226-1	2009	77190-8	1114	91274	2041	103443	20
0295 0325	2038 2041	45810-163 45810-164	2013 2010	58840-116 58840-191	1104 2036	71226-2 71226-3	2009 2009	77271-3 77271-4	1104 1114	91605 92138-01	2009 007	103514 103521	11 20
0329	2016	46140-2	1104	58840-192	2011	71226-4	2009	77489	1101	93005	1104	104081	11
0363 .	2041	46287-4	1123	58840-193	2009	71226-5	2009	78399	2041	93006	1104	104152	11
0369 0383	2041 1104	46490-2 46590-2	2001 2001	58840-194 58840-195	2009 2009	71226-6 71226-10	2009 2009	78524-39-01 78894	1114	93007 93011	1104 1104	104213 104273	11
0396	2001	46591-2	2001	58840-196	2009	71226-15	2009	78972	1101	93012	1104	104325	11
0397 0398	2009	46592-2 46593-2	2001 2001	58840-197 58840-198	2009 2009	71266- <u>4</u> 71411-2	2009 563	79408 79985	562 1123	93022 93022A	1104 1104	104389 104615	20
0399	2009	46631-2	2001	58840-199	2009	71412-4	2009	80540	2009	93023	1104	104762	11
0400	2009	46774-1	2001	59395	1123	71412-5	2009	80544	2009	93027	1104	105432	20
0403 0404	2007 2033	46775-2 47126	2001 1104	59395(RCA) 59557-49	1123 1104	71447-2 71449-1	2009 1114	80545 80807	2009 2041	93028 94027	1104 2009	105517 106379	11
0405	2009	47126-003	1104	59840	1102	71467-1	1102	80813VM	2009	94047	2009	107540	11
0413	2038	47126-1	1104 1104	59840-1 59844-1	1123 1104	71588-1 71588-2	1104	80814VM 80815VM	2009 2009	94048 94065	2009 2041	107729 110043	11 11
0421 0432	2041	47126-1A 47126-2	1104	59844-2	1114	71588-2	1104	80816VM	2009	94065A	2041	110388	11
0456(RCA)	2009	47126-3	1104	59844-3	1104	71588-6	1104	81170-6	2009	94094(EICO)	2041	110496	11
0461 0464	2035 2039	47126-3A 47126-4	1104 1104	59991-1 60041	563 2041	71667-1 71686-4	1102 2035	81502-0 81502-0A	2007 2007	95000 95001	1123 1123	110610 110629	11 11
0465	2039	47126-4A	1104	60046	2041	71686-5	2035	81502-0B	2007	95002	1123	110636	11
0466	2041	47126-6	1104	60047	2041	71686-6	2035	81502-1	2007	95003	1102	110667	11
0469 0470	2038 2038	47126-7 47126-9	1104 1104	60085 60127	2041	71748-1 71778	2035 1123	81502-1A 81502-1B	2007 2007	95004 95007	1123 1123	110697 110873	20
0471	2038	47126-12	1104	60130	2041	71779	1104	81502-5A	2007	95008	1123	111086	11
0472 0473	2038 2038	47127-3 47645-2	1104 2001	60205 60213(TRANSI	2041	71819-1 71963-1	2009 2009	81502-5B 81502-6	2007 2001	95012 95014	1102 1123	111207 111303	11
0474	2038	48004-07	2009	00213(THANSI	2041	72013	1123	81502-6A	2001	95015	1104	111516	1
0475	2038	48004-08	2009	60215-1	1123	72025	1104	81502-6B	2001	95015(EICO)	1102	111605	- 11
0476 0477	2038 2038	48009 48009(1)	2036 2036	60243 60395	2041 2009	72026 72041	1104 1104	81502-6C 81502-6D	2001 2001	95016 95017	1104 1123	111642 111776	11
0478	2038	48106	1104	60465	2041	72058	1104	81502-7	2007	95018	1123	111820	11
0479 0480	2038	48287 48287-4	1123 1123	60710 60837	2041 2041	72058A 72060	1104 1123	81502-7A 81502-7B	2007 2007	95112 95113	2016 2001	112017 112018	11
0482	2038 2038	48385-2	2001	60944	2041	72080	1123	81502-7C	2007	95114	2001	112329	11
0500	2038	49058-2	2001	60973	2041	72089	1123	81502-8	2007	95115	2001	112329(AMPH	
0517 0518	2009	49138-2 50009	2001 702	61009-4 61009-4-1	2009 2009	72097 72101	1104 1104	81502-8A 81502-8B	2007 2007	95117 95120A	2001 2007	112330	11
0519	2033	50202-1	2009	61010-7-2	2009	72103	1104	81502-8C	2007	95170-1	2013	112356	20
0577	2009 2038	50202-2 50202-13	2009	61011-2	1104 2009	72104 72113	1123 1104	81503-6 81503-6A	2007 2007	95170-2(XSTR) 95171-2	2009 2009	112357 112358	20
10578 10637	2016	50202-13	2009 2009	61011-3-2 61012	2009	72113 72113A	1104	81503-6B	2007	95171-4	2011	112359	20
0637A	2030	50202-23	2009	61012-4-1	2001	72114	2009	81503-6C	2007	95202	2001	112520	20
0650 0782(I.C.)	2012 702	50212-19 50212-28	1102 1102	61013-2-1 61019	2009 2041	72115 72116	2009 2009	81503-7 81503-7A	2007 2007	95211 95216	2001	112521 112522	20
0808	1114	50212-30	1102	61049	2009	72119	1104	81503-7B	2007	95216RED	2009	112523	20
0809 0894	1114 2011	50213-5 50505-01	1122 1123	61086-1 61234	2010	72123 72123A	1104 1104	81503-7C 81503-8	2007	95216YEL 95221	2009 2009	112524 112526	11
0895	2011	50745-06	1104	61366	2030	72128	1123	81504-1	2007	95222-2	2003	112529	11
0896	2011	50745-07	1104	61367	2041	72128A	1123	81504-1A	2007	95223	2009	112529(AMPH	
0897 .0934-1	2011 2041	50745-08 51213	1104 2009	61369/4367 61868	2041 2041	72129 72129A	1123 1123	81504-1B 81504-1C	2007 2007	95224-2 95225	2001 2009	112530	11
1001-4	1104	51213-01	2009	62004	2041	72130	1104	81504-3	2007	95226-2	2009	112531	1
1008	2009	51213-02	2009	62005-1	2041	72130-1	1104	81504-3A	2007	95231	2035	112826	. !
1008A 1020-618	2009 1114	51213-03 51213-2	2009 2009	62140 62143	1114 2041	72145 72146	1104 1102	81504-3B 81504-3C	2007 2007	95242-1 95293	2009 702	113039 113348	1 2
1023-224	1114	51428-01	2009	62382	2041	72147	1102	81506-5	2007	95332-1	1102	113398	1
1023-225 1051	1114 2009	51429-02 51429-03	2009 2009	62792 63234-1 °	2041 017	72151 72152	2009 1102(2)	81506-5A 81506-5B	2007 2007	96457-1 99023-3	2009 1104	113398(TRANS	SISTOR
1173	1122	51429-3	2009	63718(BOSTO	N-GEAR)	72152(TELEDY	NE) 1102	81506-5C	2007	99109-1	2009	113438	2
1176 1501	2009	51441 51441-01	2009 2009	63719(BOSTO	1104	72158 72163-1	1104	81506-6 81506-6A	2007 2007	99109-2 99201	2009	113524 113875	2
1616	2027 1104	51441-02	2009	03/13/80310	N-GEAR) 1104	72168-3	1102(2) 561	81506-6B	2007	99201-110	2007 563	1138/5	1
2020 .	1123	51441-03	2009	66682-42	1104	72171-1	1104	81506-6C	2007	99201-208	561	115060-102	- 1
2021 2025-850	1114 563	51442 51442-01	2009 2009	67055 67193-82	1102 2007	72172-1 72176	1114 1104	81510-3 81510-5	2007 2007	99201-211 99201-212	561	115101 115167	1 2
2221	1104	51442-02	2009	67586	2009	72197	1102	81511-5	2007	99201-212	561 563	115225	2
2396	2035	51442-03 51545	2009	67590	1123	72204	2009	81511-6	2007	99201-221	564	115225 115524	1
2464 3021-017	2009 2009	51545 51547	2009 2009	68177 68177A	1104 1104	72206 72207	2009 2009		2007 2009	99202-22 99203	564 2007	115529 115559	1
3044	2009	52215-00	2041	68504-76	1123	72784-21	2007	81513-8	1104	99203-005	1104	115559A	1
3045	2009	52329	2041	68504-77	1123	72874-52	2009		1104	99203-006	1104	115599	1
3054 3055	2009 2009	52360 53016R	2041 1102	68504-78 68617	1104 2009	72963-14 74200-8	2009 1104	83008 85549	1104 2009	99203-3 99203-5	1102 1104		2 2
3060	2041	53072C	1102	68645-03	1104	74200-9	1104	86001	1123	99203-5(DIODE) 1102	115867	1
3062	1102	53088-4	1114	68994-1	007	74651-02	2009	86287	2009	99203-5(PWRI	RECT.)	115875	2
3095 3114	2041 2041	53092-1 53099-1	1123 1104	69111 69213-78	1104 1104	75230-9 75561-3	1104 2009	86812 86822	2009 2009	99203-6	1104 1104) 1 5) 1
3139	2009	53099-3	1104	70008-0	2041	75561-16	2009	87756	1102	99203-6(RCA)	1104	116048	1
3168	2041 2035	53200-22	2009	70008-3 70023-0-00	2041 2009	75561-28	2009		2009	99203-7 99203-8	1114		1
3296 3959	1123	53200-23 53200-51	2009 2009	70023-1-00	2009	75561-33 75568-3	2009 2011	88060-52 88060-55	1102 1102	99203-8	1114 1104		1 2
3992-2	2001	53300-31	1114	70055	1102	75614-1	2009	88060-141	2035	99206-1	2009	116076	2
14001 14002	1114 1122	53300-41 53301-01	1104 1114	70064-7 70066-3	1104 1104	75700-04 75700-04-01	2009 2009		2013 2009	99206-2 99207-2	2009 2009		21
44002(RCA)	1104	53400-01	2009	70066-4	1104	75700-05	2009	88510-52	1102	100017	1104	116084	20
14003` 14004	1104	55166	1123	70205-8A	1114	75700-05-01	2009	88510-55	1102	100092	2009	116085	20
MAN 15 14 5	1114	55810-51	1123	70260-14	2009	75700-05-02	2009	88510-171	2035	100093	2009	116090	2

16092 16148 16314 16588 16875	2009												
16314 16588	2009	125390 125390(RCA)	2009	129698 129708-101	2009 1122	138195 138196	2041 1102	167956 167957	2009 2009	171207-3	2011	198051-3	20
	1101	125394	2009	129759	1104	138378	2009	168339	1104	171207-4 171217-3	2036 2013	198051-4 198067-1	20
	2009 2009	125397 125458	1102 1104	129899 129904	2009	138789-1	2009	168405	2009	171217-4	1102	198079-2	20
7145	. 1104	125471	1104	129904(RCA)	562 562	138789-2 138789-3	2009	168567 168651	2011	171305 171318	1104(2) 2011	198400 198410-1	- (
7145A	1104	125474	2009	129938	561	139029	1122	168653	561	171319	2011	198581-1	26
7616 7617	2007 2007	125475 125519	2009 2009	129946 129949	2009	139065 139328	1102(2) 1102	168692 168706	1104 1102	171320 171338-1	2011 2011	198581-2 198581-3	2
7659	1123	125528	1102	130013	2009	139362	2009	168910	1123	171338-2	2011	198773-1	1
7760 8200	1123 2009	125529 125549	1104	130013(TRANSIST	OR) 2009	139569 139605	2009 1104	169113 169114	1104 1102	171338-3	2011	198775-1	1
8335	1122	125588	1102	130014	2041	139605(AFC)	1102(2)	169115	1123	171416 171554	1104 2009	198776-1 198779-1	1
8527-04 8713	1102 2009	125835 125856	1104 1104	130045 130046	1102	139634	1123	169116	1104	171558	2009	198785	1
8825	1104	125884	1102	130046	1102 1104	139706 140259	1102 2012	169117 169194	1102 2011	171559 171561	2009 1104	198785-1 198785-2	1
8873	1104	125964	1104	130110	1114	140622	2009	169196	2011	171657	1104	198794-1	2
9199 9232-001	1123 2009	125993 125994(RCA)	1104 2011	130221 130328	017 563	140693 140694	1104(2) 1104(2)	169197 169362	2009 1123	171677 171840	2009	198799-4	1
9258-001	2009	126131	1104	130338-01	1104	140858-12	2009	169363	1104	171841	1102 1102	198809-1 198810-1	1 - 1
264-001	1122	126148	1104	130380	563	140971	1102	169501	1123	171843	1102	198813-1	1
9412 9507	2011 1102	126150 126156	2009	130389-00 130403-13	1104	141330 141331	2009 2009	169505 169558	2011 1102	171983 172165	2011	199596 199919	1
9596	1102	126176	1104	130403-17	2009	141489	1104	169565	1104	172201	1102	200062-5-36	i
9597 9635	1102 2009	126177 126320	1123 1104	130403-18 130537	2009	141872-6 142251	1104	169570	1104	172253	1102	200062-6-32	1
9636	2009	126321	1102	130607	1104	142349	2012 1740	169574 169590	2009 1104	172547 172551	1102 1104	200064-6-107 200064-6-115	1
9662	1101	126331	2009	130761	564	142648	038	169679	2009	172721	1104	200064-6-119	1
9697 9724	1102 2009	126334 126413	2009 1104	130762 130793	564 2011	146144-2 146153-1	2009 2009	169680 169765	2009 1104	172722 175007-275	1102 2009	200064-6-120 200076	1
725	2009	126525	2009	131050	1104	146466-1	2009	169771	2009	175007-275	2009	200076	
726 1919	2009	126526	2009	131214	1101	147115	2009	170133	1104	175027-021	2009	200648-26	
9956	1123 1102	126582 126699	564 2009	131240 131243	2009	147115-5 147115-6	2009 2009	170294 170297	2009 1104	175043-058 175043-059	2009	202315 202315(THOMAS)	
9982	2009	126701	2009	131243-12	2009	147187-2-14	1114	170308	2009	175043-060	2009	202463	1
068 073	1122 2009	126702 126704	2009 2009	131245 131311	1104 2009	147357-1-1 147357-7-1	2009	170370	1102	175043-066 175043-068	1123	202609-0713	- 2
0074	2009	126706	2009	131475	1104	147357-7-1	2009 2031	170373 170388	1123 2013	175043-068 181023	1123 2009	202617 202862-518	1
085	2009	126708	2009	131476	1104	147363-1	2009	170733-1	1102(2)	181073	1102	202862-947	2
1471 1481	1114 2009	126711 126712	2009	131501 131501(DIODE)	1102	147477-8-2 147477-8-3	1114	170750 170794	1104 2013	181214 181504-2	2009	202907-047P1	- 3
482	2009	126713	2009	131502	1102	147477-8-7	1114	170856	1104	181681	2009 1102	202909-827 202914-417	2
483	2009	126714	2009	131502(RCA)	1104	147477-8-8	1114	170857	1102	183015	2011	202915-627	2
503 504	1104 563	126716 126717	2009	131815(RCA) 131950	1101	147477-8-10 147478-8-2	1114 1104	170965 170967	1104 1104	183016 183017	2011	202922-237	2
544	1104	126849	1104	132149	1104	147513	2009	170967(RECTIFI		183017	2009 2011	204210-002 204211-001	2
617	1123	126852	564	132176	2032	147555-1	2009	170967-1	2009	183019	2011	204969	2
153 154	2007 2007	126855 126861	1104 1104	132329 132416	2009 563	147676-1 147704-6-4	2010 563	170968-1 170970-1	2009 1104	183030 183031	2009 2009	205782-97 205782-103	2
1468	1104	126862	564	132553	1122	147922-2	1101	171003(TOSHIB		183033	1102	206617	1
1655 1658	2009 2009	126863 126885	2009 1114	132642 132643	2009	150117	2013	171009	2011	183044	702	210074	2
1660	2009	127017	1123	132645	1102	150741 150763	2009	171009(TOSHIB 171019	A) 2009 1104	183405 183532	702 007	211083 214105	
661(RCA)	2009	127102	1104	132776	2041	150768	2009	171026	2031	184798	1122	215002	2
662 663	2009	127176 127214	1104 2035	132814 132865	1104 563	150834 152473K	1122 1102	171026(TOSHIB. 171027	A) 2009 2009	185236 185335	2009	215008	2
664	2009	127263	2009	132912	1123	153270	007	171029	2011	185411	1122 1102	215031 215038	2
680 061	1104 2001	127354	2009	132915	1123	157008	2009	171029(TOSHIB		185704	1104	215072	2
074	2009	127355 127379	2009 1114	133178 133249	2009	157800 157800-2760	1740 1740	171030(TOSHIB) 171031(TOSHIB)		187218 188056	2009 1122	215074 215081	2
111	2001	127382	564	133265	2012	160201	017	171039	2004	188165	2041	215669	1
112 129	2001 1104	127393 127396	2009 1104	133390 133390(PWRREC	1102	161001 161006	1123 1123	171040 (SEASE)	2031	188660-01	007	216001	1
166	1123	127474	1102	133543	1104	161016	1123	171040(SEARS) 171040(TOSHIB	2009 A) 2009	190426 190428	2009	216014 216020	
519	2009	127529	2009	133684	2041	161021	1102	171044	2011	190715	2009	216445-2	2
519(IFAMP) 519(SW)	2031	127532 127695	1123	133685 133690	2041	161027 161029	1101 1104	171044(TOSHIB. 171046	A) 2009 2009	190716 193207	1123	216449 216817	- 1
520	1123	127784	1123	133743	2009	161030	1104	171092-1	564	193717	1102	218612	1
664 6 65	2009 2009	127899	2009	133950	1104	161031	1104	171144-1	2011	194917	1104	219016	2
788	1104	127993 128256	1102 1104	134074 134143	2009	161034 161037	1101	171149-016 171149-017	1102 1102	195648-6 196023-1	1104 2009	219245 219935	1
902	2011	128474	1102	134144-1	2011	161038	1123	171149-017 171149-024	1104	196023-2	2009	221128	1
904 004	2013 1104	129028 129029	1123	134180 134264	1123	161199	561	171162-005	2009	196184-3	1104	221600	2
274	2009.	129029(DIO)	1104	134444	1101	161918-28 162002-039	2009 11 23	171162-006 171162-008	2009	196259-4 197464	1104 1122	221601 221857	3
296	1104	129029(XSTR)	2031	134587	1123	162002-39	1123	171162-009	2009	198003-1	2009	221897	2
804 804-1	1104	129049 129050	2009 2013	134772 134857	2012	162002-71 162002-101	2041	171162-042	1123	198003-2	2009	221918	2
805(DIODE)	1102	129095	1102	135281	2013 1104	165358	2041 563	171162-113 171162-119	2009	198007-3 198013-P1	2009 2009	221924 222131	2
807	2009	129145	2030	135284	1104	165392	2011	171162-132	2009	198023-1 198023-3	2009	222611	_ 1
813 941	1102 2009	129146 129147	2009	135386 135571	1104 1102	165572 165597	1123 1104	171162-143 171162-161	2009	198023-3	2009	222867 223215 223216	1
024	2011	129157	1123	135716	2012	165668	2009	171162-162	2009	198023-4 198023-5	2009 2009	223216	1
098 511	1104	129158	1123 1104	135872 136162	1123	165739	1104	171162-186	2013	198030	2009	223323	. 1
557	2041	129213 129347	2004	136163	1102 1102	165827 165828	2009	171162-187 171162-190	2013 2009	198030-2 198030-3	2009 2009	223357 223358	1
623	2011	129348	1114	136168	2013	165931	2011	171162-191	2009	198030-4	2009	223367	2
624 753	2011	129348(DIO) 129375	1123 1102	136240 136605	2013 1114	165932 166040	2011 1104	171162-196	1102	198030-6	2009	223368	2
754	2010	129392	2011	136634	563	166273	1123	171162-197 171162-202	1102 2009	198030-7 19803 1- 1	2009 2009	223370 223372	2
756	2009	129393	2030	136635	1104	166593	1104	171162-252	1104	198031-2	2009	223462	1
759 812	2009 1104	129425 129474	2030 1123	136688 137028	1102	166726 166881	1104	171162-269	1123	198034-1 198034-2	2041	223467	1
105	1104	129475	1102	137028-001	1102	166906	1104 2011	171162-271 171162-272	1102 562	198034-2	2041 2041	223473 223475	2
126	563	129494	1104	137057-001	1122	166920	1104	171162-278	2013	198034-4	2041	223489	1
127 135	1104 2009	129509 129510	2011 2030	137338(3RD-IF) 137339	2010 2009	166922	1104	171162-279	2013	198034-5	2041	223684	-2
139	2009	129511	2030	137614	2009	167034 167263	1104 2009	171162-280 171162-286	2013 2009	198039-0507 198039-6	2041 2041	223720 223724	1
140	2009	129512	2030	137652	1104	167413	1104	171162-292	562	198039-7	2041	223753	1
141 143	2009 2009	129513 129556	2030 1101	137875	2009	167540	2009	171162-U90	2009	198039-506	2041	224159	1
261	1101	129572	2009	138172 138173	1104	167541 167543	2009 1104	171206-8 171206-9	2013	198039-507 198042-2	2041 2009	224506 224584	2
329	2011	129573	2011	138175	1102	167544	1104	171206-10	2011	198042-3	2009	224597	1
389 389-14	2009	129604 129682-001	2011	138191 138194	2009	167562 167688	1123 2009	171206-11 171206-13	2011	198051-1 198051-2	2009 2009	224774 224780	1

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
225267	1104	256913 257385	2013	379005N 379101K	1122 2009	530063-10 530063-11	1123	530151-1001 530157-689	1104	610076-1 610076-2	2009	651995-3 652072	200 200
225410 225592	1123	257470	2001 2007	379102	2009	530063-11	1104 1104	530162-1	561 1104	610076-2	2009	652091	200
226058 226181	1104 2007	258882 258993	1104 2001	388060 395253-1	2009 2041	530063-13 530065-1	1102 1123	530162-1001 530163-120	1104 563	610077-1 610077-2	2009	652092 652230	110 200
226182	1104	259315	1104	405457	2009	530065-2	1123	530166-1004	561	610077-3	2009	652615	110
226237 226334	1104 1123	259368 259878	1104 1104	433836 445023-P1	2009 2041	530065-3 530065-1002	1123 1123	530170-1 530171-1	1102 1104	610077-4 610077-5	2009	654000 654032	200 110
226338	2007	260429	1104	454549	2007	530065-1002A	1123	530171-1001	1104	610077-6	2009	654420	111
226344 226441	1123 2001	260468 261463	2001 1104	462580-1 464010	1122 1104	530065-1003 530071-1	1123 1104	530171-1002 530171-1003	1104	610078 610078-1	2009	656204 656524	200 200
226546	1104	261596	1104	464070	1104	530071-2	1104	530179-1	1102	610078-2	2009	656719	200
226788 226922	1104	261898 261975	1104 1104	476690-2 485752 - 090	1102 1101	530071-3 530072-1	1104 1104	530179-2 530179-3	1102	610094 610094-1	2009	658577 658578	200 200
227015	1104	262066	2009	489751-020	1101	530072-2	1104	530179-1001	1102	610094-2	2009	658657	200
27348 27517	1104 2014	262112 262872	1104 1104	489751-025 489751-026	2009 2009	530072-4 530072-5	1104 1104	530180-1001 530181-1-1	1104 1102	610094-3 610100-2	2016	659174 671077-6	204
27565	1104	265164	1104	489751-029	2009	530072-6	1122	530181-1001	1102	610111-2	2041	699739	1104(
27720 27744	1104 1104	265235 265236	1104 1104	489751-030 489751-040	2009 2009	530072-7 530072-8	1123	533013 533034	1102	610111-4 610112	2041 1104	700043-00	110 200
27752	2007	265240	2009	489751-041	2009	530072-9	1104	533038	1104	610124-1	2001	700047-49	200
28417 228560	2009 1114	265634 266583	1104 1104	489751-048 489751-049	2011	530072-10 530072-11	1104 1104	533802 534001H	2009 1102	610129-D 610132	2013	700063-00 700080	110 204
29522	1104	266685	2009	489751-052	2011	530072-14	1104	535151-1001	1104	610132-1	2009	700080A	204
230209 230218	2001 1104	266702 267611	2007 1102	489751-058 489751-107	2011	530072-15 530072-18	1104 1102	537428 551026	2004 1104	610139-1 610139-2	2013	700083 700083A	204
30256	2001	267791	2041	489751-119	2041	530072-1006	1122	552005	1114	610140-1	2041	700180-00	11:
31017 31140-15	2010 2009	267898 267899	2009 2009	489751-120 489751-122	2011	530072-1008 530072-1009	1102 1102	552006 552010	1104 1104	610142-2 610142-3	2009 2009	700181 700230-00	20
31150	1104	268044L	2009	489751-123	2009	530072-1010	1102	552308	2009	610142-4	2009	700231-00	20
31339 31374	1104 2009	269922-001 270642	1102 1114	489751-125 489751-164	2009	530072-1011 530072-1015	1102 1102	555606 562654	2009 1122	610142-5 610142-7	2009	700647 700663	11
31378	2041	270781	2001	489751-166	2009	530072-1017	1104	567312	2009	610142-8	2009	700664	11
31665 31669	1104 1104	270819 275131	2009 2009	489751-172 489751-173	2009 2011	530072-1018 530072-1019	1122 1104	568101 570000-5452	1123 2009	610143-3 610144-1	2009 2012	701662-00 702884	11 20
31923	1104	275831	1114	489751-208	2035	530072-1019	561	570000-5492	2009	610144-2	2012	710398-28	0
32017 32203	2013 1104	276097 276331	1104 2009	489752-001 489752-003	1123 1123	530073-6 530073-8	563 1114	570004-503 570005-452	2009 2009	610144-101 610145-1	2012 2010	710838-1 717399-4	11
32359	2041	281101-97	1102	489752-005	1104	530073-8	564	570005-452	2009	610146-3	2009	717399-49	ŏ
32359A	2041 2009	290458LGD	2009	489752-08 489752-013	1123	530073-12	564	570009-01-504 570029	2009	610146-5	2009	720236	20
32678 32949	2009	299371-1 300113	2009 2009	489752-014	1104	530073-13 530073-14	563 563	572683	2041	610147-1 610148-2	2009 2009	720240 720608-13	20 11
33011	1104	300233	1104	489752-015	1104	530073-17	564	573024	1123	610148-2A	2009	720609-1	11:
33117. 33507	2013 2007	300315 300486	1104 2001	489752-020 489752-022	1101 1104	530073-1013 530073-1017	563 564	573356 573467	2007	610150-2 610151-2	2009	723000-18 723001-19	20 20
33561	1104	300524	1104	489752-025	1104	530073-1031	561	573468	2009	610151-4	2009	726654	11
33597 33945	1104 2007	300536 300542	2001 2001	489752-027 489752-028	1104 1104	530082-1 530082-2	1104 1114	573469 573475	2009 2009	610161-2 610161-4	2041	740183 740289	110
34552	1104	300550	1104	489752-031	1123	530082-3	1102	573479	2009	610164-1	2035	740402	11:
234553 23 45 6 5	1114	300774 301586	2001 1104	489752-035 489752-037	1104 1104	530082-1002 530082-1003	1114	573480 573481	2009	610165-1 610165-2	2009	740437 740441	200
234611	, 1104	301591	2009	489752-041	564	530082-1004	1104	575001	1123	610167-1	2009	740461	200
234612 234758	2009	301915-1 302342	2009	489752-042 489752-043	1123	530084-4 530085-2	1104 1123	575002 575005	1123 1123	610167-2 610168-1	2009	740462 740463	200
34761	1104	302540	561	489752-045	563	530086-1	1104	575009	1123	610168-2	2009	740466	20
234763 235192	2009 2009	304281-P1 304581B	1102 2009	489752-049 489752-050	1123 1104	530088-1 530088-2	1114 1114	575019 575028	1123 1104	610180-1 610180-1(LAST-IF)	2013	740470 740570	200 110
235205	2009	308449	2009	489752-051	1104	530088-4	1104	575037	1101	610226-1	2009	740629	1102(
235206 235313	2009 1104	309442 309449	2009 2041	489752-052 489752-073	1101 1104	530088-1002 530088-1003	1104 1104	575042 575050	1104 1104	610232-1 610232-2	2009 2009	740630 740828	11
235382	1114	309481	1122	489752-076	1123	530088-1004	1104	575051	1104	610249-1	2013	740857	200
235543 235546	1104 1104	310223 313309-1	2007 2009	489752-089 489752-090	1101 1101	530092-1 530092-2	1123 1123	575091 576054	1123 1102	611111 611428	1104	740949 740950	20 20
36265	2001	317208	563	489752-092	1104	530092-1001	1102(2)	576063	1123	612045-1	702	740951	20
36266 36285	562 2009	318835 320007	2041 1123	489752-094 489752-097	1104 1104	530092-1002 530093-1001	1102 1104	580029 581024	1104 2001	612112 612130	1104	740952 740954	11 11
36286	2009	320529	2009	489752-108	1104	530094-1	1104	581034A	2009	612132	1104	741100	11
237025 237223	2009 2009	321517 321573	2009 2009	489752-123 489850-004	1104 1123	530095-1 530098-1	1104 1104	581054 581055	2009 2009	613020 613130	1104 1104	741101 741855	11 20
37227	1104	325079	2009	497442	1122	530098-1001	1104	581070	2041	614010	1104	741856	20
237 453 237929	1104 1104	326309-10A 326809	1122 017	497616 497616·1	1122 1122	530099-1 530099-3	1104 1104	600080-413-001 600080-413-002	2009 2009	614020 614112	1123 1101	741860 741861	20 20
238368	2009	328785	2009	497616-2	1122	530099-4	1104	600096-413	2009	615004-8	1102	741864	`11
39221 39429	1104 1114	330003 330018	1104 1104	500001 500003	1123 1114	530099-6 530105-1001	1104 1123	600098-413-001 600115-413-001	2009	615010 615093-2	1123 2009	741865 741866	11
39970	2009	330019	1104	500009G	1123	530109-1	1104	601030	1123	615154-1	1122	741867	20
40401 40456	2009 1104	330803 333241	2009 2009	500859 501010	1104 1104	530111-1 530111-1001	1104 1104	601122 602081	2009 562	615179-1 615179-2	2009 2009	742004 742008	11
40564	1102	334724-1 335288-4	2009	501152	1104	530113-2	1114	602113(SHARP) 602909-2A	2009	618072	2009	742009	11
40594 40603	1104 1104	335288-4 335774	2009 2009	501343 502349	1102 2041	530116-3 530116-1001	1102 1102	602909-2A 603114	2009 1104	618126-1 618150-3	2009 1102	742728 742730	20
41295	1114	338307	1122	503146-1	1102(2)	530116-1003	1104	603122	2009	618217-2	2009	742730 746003	11
41302 41657	1114 2041	346015-24 346016-14	2009 2009	504720 504720-1	1102 1122	530118-2 530120-1	563 1104	604122 604407	2009 1102	618483-1 618639-1	007 1122	746004 749002	11
42029	1104	346016-18	2009	505198	2041	530123-1	1123	606113	1104	618810-2	2009	749014	20
42141 42226	1114 1104	346016-19 346016-25	2009 2009	505342 506911	017 1114	530124-1 530126-1	1104 1104	606131 608030	1104 1104	618955-2 618984-1	2041 007	752309 755722	11 11
42758	2009	346016-26	2009	508511	007	530127-1	1123	608101	1104	619006	2009	757008-02	20
42759 43364	2009 1104	348048-2 348053-3	1104 1104	508762 514023	2009 2009	530127-4 530127-6	1104 1104	608113 609030	1104 1104	619006-7 619011	2009 1122	760007 760236	11 20
44007	2007	348054-1	1104	514045	2011	530135-1	1114	609112	2009	619087-1	1122	760239	20
44817	2014	348054-2 348054-5	1104	515041S 515043S	2011	530135-2	1122	609113 610020	1104 1104	619130 619526-1	1104	760249 760251	20
45192 45217	1102 562	348054-6	1104 1104	515045S	2009 2009	530135-3 530135-1003	1104	610030	1123	649002	1122 2041	760253	20
45517	1123	348054-7	1114	516009S	2035	530144-1	1102	610045-3	2009	650845	1102	760268	20
48817 48917	1102 1104	348054-9 348054-10	1104 1104	517999 529657	017 1102	530144-3 530144-1001	1102 1122	610045-4 610045-5	2009 2009	650854 651030	1102 1102	760304 761113	11
49217	1104	348054-11	1104	529658	1122	530144-1002	1102	610070	2009	651038	1104	765713	11
49508-3 52817	1102 1104	348054-14 348054-15	1104 1114	530015-2 530051-2	1123 1104	530144-1003 530144-1004	1102 1122	610070-1 610070-2	2009 2009	651891 651955	2009 2009	765722 771907	11 11
56126	2007	348055-2	1104	530057-1	1104	530145-120	563	610070-3	2009	651955-1	2030	771909	- 11
256127 256217	2001 2009	348055-3 348057-8	1104 1114	530063-1 530063-4	1123 1123	530146-1 530146-2	1102(2) 1102(2)	610070-4 610073-13	2009 563	651955-2 651955-3	2030 2030	771910 771911	11
56517	2009	348057-9	1114	530063-6	1104	530150-1	1102	610074-2	2007	651995-1	2009	772712	11
56817	2013	348058-2	1114	530063-7	1104	530151-1	1104	610076	2009	651995-2	2009	772713	11

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
72738	2011	815138	1104	916031	2009	972258-6	1123	984286	2009	1417324-1	2009	1473628-2	20
72739 72740	2011 1123	815142 815171	1104	916031(PENNYS) 916049	2031-	972258-8 972258-9	1123	984522 984590	1104	1417340-2 1417352-5	2009 2012	1473631-1 1473632-1	20 20
85278-01	1123	815171D	2009	916050	2009	972259-8	1123	984591	2009	1417362-4	2012	1473633-1	20
85278-101	2009	815174	2009	916059	2009	972306	2011	984593	2009	1417872-11	1122	1473657-1	20
93356-1 00132-001	2041 2009	815174L 815182	2009 2009	916068 916082	2011 2035	972307 972417	2011 2011	984594 984666	1104 1123	1421207-1 1442415-2	1102 1101	1473657-2	20
00743-001	1122	815183	2009	916091	2009	972418	2011	984686	2009	1442415-3	1101	1473665-2 1473676-1(3RD	20 -IF) 20
01512	2009	815184	2009	921150-021	1122	972419	2011	984687	2009	1444875-1	563	1473683-1	20
01513 01514	2009	815184E 815186	2009	921608 922021	1104	972420 972571-4	2011 1104	984713 984745	1104 2009	1464778-9 1470872-6	1104 1102	1473777-2	5
01515	2009	815186C	2009	922092	1104	972571-6	1104	984854	2009	1471072-4	1102	1474613-2	11 20
01516	2009	815186L	2009	922094	1104	972571-7	1104	984876	2011	1471113-2	2009	1474717-2	. 5
01517 01524	2009	815190 815191	2009 2009	922183 922311	1104	973935-20 973936-1	1104	984877 984878	2011	1471113-3 1471115-1	2009 2009	1474777-002 1474777-1	5 5
01529	2009	815198	2009	922358	562	973936-2	1104	984879	2009	1471115-12	2009	1474777-2	5
01530	2009	815201	2009	922360	1104	973936-3	1104	984880	1102	1471120-7	2009	1474777-8	11
01532 01534	2009 2009	815202 815210	2009 2009	922433 922524	1102 562	973936-4 973936-5	1104 1104	984882 985087	1104 2009	1471120-8 1471120-8-9	2009 2009	1474778 1474778-013	11
01536	2009	815212	2009	922567	1104	973936-6	1104	985098	2009	1471120-15	2009	1474778-2	11
01537 01541	2041	815227	2009	922603	562	973936-7	1104	985099	2009	1471135-001	2041	1474778-3	- 11
01543	2009	815233 815237	2009	922604 922693	1123 563	973936-8 973936-9	1104	985100 985101	2009 2009	1471135-1 1471393-4	2041 1102	1474778-7 1474778-9	11 11
01707	1104	815246-1	2041	922799	1104	973936-10	1104	985102	2009	1471858-1	1104	1474778-10	- 11
01711	1104	815308A 817032	2007	922860	1104	973936-11	1104	985104	1104	1471872-001	1104	1474778-11	11
01712 01714	1102 1104	817042	1123 1104	922873 922896	1102 2007	973936-12 973936-13	1104 1104	985105 985106	1104 1102	1471872-004 1471872-006	1104 1104	1474778-16 1474788-10	11 11
01715	1104	817043	1104	922943-1	1122	973936-14	1104	985218	1104	1471872-008	1104	1474872-1	11
01716	1104	817044	1104	922969	1104	973936-15	1104	985442	2011	1471872-1	1102	1476161-13	11
01722 017 2 3	1123	817053 817064	1104	924605-3 924801-5	1104	973936-16 973936-17	1104 1104	985444 985472	2011	1471872-2 1471872-4	1102	1476171-1 1476171-8	11
01724	1122	817066	1104	924805-5	1104	973936-18	1104	985543	2009	1471872-5	1122	1476171-8	11
01726	562	817067	1104	924805-8	1104	973936-19	1104	985619	2011	1471872-6	1104	1476171-19	11
01728 01729	1102 2009	817068 817068P	1104 1104	925075-501B 925252-1	1122	973936-20 973936-21	1114 1104	985715 986414	2035 1104	1471872-7 1471872-8	1102	1476171-24 1476171-27	11
01731	563	817077	1123	925252-2	1122	973962-1	1104	986542	2009	1471872-10	1102(2)	1476171-28	11
02008	1122	817079	1104	925252-4	1122	980136	2007	986576	2011	1471872-11	1122	1476171-29	11
03182-5 03369-6	2009 2009	817088 817104	1104 1104	925252-102 925253-3	1122 1122	980143 980147	1104 2009	986577 986636	1102 2009	1471872-12	1102	1476171-31	11
03372-0	2009	817109	1104	925297	1122	980164	1104	986637	1104	1471872-13 1471872-15	1102 1123	1476171-33 1476179-001	11 11
03373-0	2009	817111	1104	925297-1	1122	980316	2007	986693	2011	1471872-16	1102	1476179-1	, 11
03733-0 03733-3	2009 2009	817112 817114	1104 1104	925521-1B 925521-1C	1102	980426 980432	2007	986694	2011	1471872-17	1123	1476188-1	20
3735-3	2009	817117	1104	925915-101	1102	980434	2007	986934 986935	1102 1104	1471872-18 1471876-6	1102(2)	1476690-1 1476690-2	11
10000-373	2009	817120	1104	925939-101	1102	980438	2007	987010	2009	1471898-3	561	1477022-1	- 41
15020 15020 A	2007 2007	817121 817122	1104 1104	925940-1B 925940-501B	1102 1102	980439 980440	2007	988003	2009	1471922-1	1101	1477046-1	5
15020A 15020B	2007	817125	1123	928103-1	2009	980514	2009 1123	988049 988051	1104 1104	1471922-2 1471922-4	1101 1101	1477046-4 1477080-501	9
15021	2007	817128	1104	930236	2009	980540	1104	988991	2009	1472171-32	1104	1477081-501	è
15021A 15021B	2007 2007	817130	1104 1104	930293 930419	1122	980964 981150	1104	988994	1123	1472460-1	1104	1501883	20
15025	2007	817134	1104	932022-0001	1122	981153	1123 1123	988995 988996	1102 1102	1472460-2 1472460-4	1102 1104	1522237-20 1563295-101	20
15025A	2007	817135	1104	932030-1	017	981207	1123	988997	1123	1472460-5	1104	1588035-42	11
15025B 15026	2007 2001	817138 817140	1104	932033-1 93 20 50-1	1122	981445	1104	988998	1123	1472460-6	1102	1596408	20
15026A	2001	817141	1104 1104	941295-2	1122	981522 981676	1123 1123	989709 991064	017 1114	1472460-7 1472460-8	1102 1102	1604609-2 1611708-2	20
15026B	2001	817143	1104	941295-3	2009	981739	1104	991129	1114	1472460-16	1104	1617510-1	20
15026C	2001	817148	1104	942677-1	1123	981952	1104	991421	1114	1472495-1	2009	1638776-103JS	
15026D 15027	2001	817155 817156	563 1104	942677-6 942677-7	1123	981953 981954	1104 1104	991422 991429	1114 1114	1472636-1 1472872-4	2011 1102	1641141-101 1641141-102	11
15027A	2007	817158	1123	942677-9	1102	981955	1104	992157-1	1122	1473500-1	2009	164260684	5
15027B	2007	817159	1123	943502	1122	981956	1104	995016	2009	1473505-1	2009	1680008-01	11
15027C 15028	2007 2007	817160 817161	1123 1104	943720-001 945820-4	2009 1104	982065 982214	1123 1104	995017 995870-1	2009	1473519-1	2009	1690019-01 1700008	20
15028A	2007	817164	1104	954330-2	2009	982231	2009	995870-3	2009	1473521-1 1473524-1	2011	1700020	20
15028B	2007	817166	1104	959492-2	2009	982253	1104	996746	2009	1473524-3	2011	1700032	20
15028C 15036	2007 2007	817167 817172	1104 1102	960201 960202	2011 2011	982254	562	1022612	2009	1473527-1	2009	1700033	20
15036A	2007	817177	1123	961544-1	2009	982270 982271	1123 1123	1043176-1 1043176-2	1104 1104	1473529-1 1473532-1	2011 2009	1700035 1701790-1	20 20
15036B	2007	817180	1104	962685	1101	982275	1123	1043176-3	1104	1473536-001	2009	1702601-1	20
15036C	2007 2007	817190	1102	964158	1101	982290	1123	1043176-4	1104	1473536-1	2009	1702601-1 1780145-1 1780145-2	20
15037 15037A	2007	817193 817194	1114 1123	964298 964999	1123 1101	982377 982510	1104 2009	1043176-5 1045013	1104	1473538-1 1473539-1	2009 2009	1780145-2 1780145-2-001	20
15037B	2007	817195	1104	965000	2009	982511	2009	1045154-1	1104	1473544-1 1473546-1 1473546-2	2011	1780169-1	11
15037C 15041	2007 2007	817197 817199	562 1123	965073 965936	1101	982512 982526	2009	1045154-2	1104	1473546-1	2009	1780174-1	11
5041A	2007	817208	563	969099-1	1101 1122	982526	1104 1123	1045154-3	1104 1123	14/3546-2	2009 2009	1780724-1 1780738-1	20
15041 B	2007	845050	2009	970047	1101	982823	1104	1127859	2009	1473546-3 1473548-1 1473550-1 1473551-1 1473554-1 1473555-1 1473555-2	2009	1800002	1
5041C	2007	848082	2009	970247	2009	983097	2009	1221648	2007	1473550-1	2009	1800006	11
15043 15043A	2007 2007	851881 852158-7-1	2009 1104	970250 97 02 52	2009	983099 983101	1123 1104	1221649 1221962	2007	14/3551-1	2009 2009	1800009 1800018	11
5043B	2007	860001-153	1122	970253	2035	983233	2011	1222123	2009	1473555-1	2009	1802520-001	- 1
5043C	2007	860011	1102	970311	2011	983234	2011	1222133	2009	1473555-2	2009	1802677-1	13
5055 5056	2007 2007	871125 882028	1123 2041	970659 970660	2009	983235 983239	2011 1123	1222424 1223770	2009	1473556-1 1473557-1	2009	1802765 1811119	17
5057	2007	883802	2009	970661	2009	983413	1104	1223771	1123 1122	1473558-1	2009 2011	1813913-1	11
5065	2007	891032	2041	970662	2009	983689	1102	1223772	1104	1473560-002	2009	1815041	20
5065A 5065B	2007 2007	894876 900545-2	2030 1122	970759 970916	1101 2009	983742 983743	2011 2009	1223781	2011	1473561-Y	2009 2009	1815042	20
5065C	2007	900546-2	1122	970916-6	2009	983744	1102(2)	1223782 1261915-383	2009 2009	1473569-1 1473572-1	2009	1815043 1815054	21
15066	2007	900546-20	1102	970939	2011	984162	1102	1289050	2041	1473576-1 1473582-1 1473586-2 1473589-1 1473595-1	2010	1815139	20
15066A 15066B	2007 2007	900552-6	2009 2009	970940	2009	984163	1123	1320135	2009	1473582-1	2009	1815139 1815154 1817005	21
15066C	2007	900552-8 9005 52 -20	2009	970962 970963	2011 1101	984182 984183	1104 1104	1320135A 1320135BC	2009 2009	14/3586-2	2009 2009	1817005 1817007	20
15101	2007	900552-30	2009	971035	2011	984184	1104	1320135C	2009	1473595-1	2009	1817108	. 20
5103	2007	908098	017	971036	1101	984189	1104	1408649-1	1123	1473601-001	2009	1840399-1	20
15105 15107	2007 2007	908703-1 908705-1	. 1102 1122	971457 971458	1104 1104	984197 984198	2009 2009	1417302-1 1417306-2	2009 2009	1473601-1	2009	1846282-1	20
15108	2007	908705-2	1122	971526	2011	984200	1123	1417306-2	2009	1473610-1	2009 2011	1846794-1 1851515	1° 20
15109	2007	908721-1	1102	971905	2032	984222	2009	1417306-5	2009	1473595-1 1473601-001 1473601-1 1473601-2 1473610-1 1473613-4	2012	1851515 1872425-1 1905490-1	
15115 15116	2007 2007	908742-1 911743-1	1122 2009	972155 972156	2009	984224 98422%	2009	1417312-1	2009	14/3014-1	2009	1905490-1	11
15117	2007	916009	2009	972156	2009	984254	1123 1104	1417312-2 1417318-1	2009 2009	1473614-3 1473617-2	2009 2011	1908519 1945295A1	11
5133	2009	916028	2009	972215		984259					2011		1

EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
950060	1102	2010088-49	2009	2320022	2009	2498902-1	2011	4038260-P1	2007	5340001	1102	7286858	20
956486 9600 2 3	1104	2010499-52 2010957-49	2009,	2320031 2320041	2011	2498902-2 2498903-1	2011	4038260-P2 4038264-P1	2007	5340001(TRANS	STOR) 2009	7287452 7295197	20 20
960177-2	2009	2010967-83	1102	2320042	2011	2498903-2	2013	4038264-P2	2001	5340001H	1102	7296314	20
961843	1104	2013019-117	1104	2320043	2011	2498903-3	2011	4041200-30110	1102	5340021	1104	7296811	20
96 2 594 965019	1104 562	2014400 2041614	1122 2009	2320051(BRADFOF	RD) 2012	2498904-3 2498904-4	2009 2009	4041200-40100 4080187-0504	1123 2041	5340022 5340022H	1104 1102	7297053 7297054	20 20
966808	1104	2057062-0702	1104	2320111	2009	2498904-6	2009	4080320-050B	2041	5340051	1102	7297358	5
967813	1104	2057199-070BA	2041	2320123	2009	2505209	2009	4080320-0501	2041	5340111	1102	7299325	11
968958	2009	2057199-0700 2057199-0701	2041	2320141 2320154	2010	2520063 2530733	2009	4080320-0504 4080866-0001(ME	2041	5490307-P3 5490307-P4	563 564	7302340 7303120	11 20
968977 969497	2041 1104	2057199-701	2041 2041	2320413	2009	2546059	1122	4000000-0001(ME	2041	5490415-P4	1104	7304380	20
000433-150	1123	2057323-0500	2041	2320441	2009	2604688-3	017	-4080866-0002(ME		5490459-P1	1104	7305468	20
000625-36	1104	2057323-0501	2041	2320471(LAST-IF) 2320471-1	2010	2610032 2621499-1	1102	400000C 000C/ME	2041	5490459-P2	1104 1104	7306982	20 20
000626-32 000646-103	1104 2009	2060041 2091211-0014	1104 2007	2320471-1 2320471H	2011	2621567-1	1102 2009	4080866-0006(ME	2041	5490459-P3 5490459-P4	1104	7309160 7314584	20
000646-107	2009	2091241-0013	2007	2320512	2007	2621764	2009	4080866-000A	2041	5490804-P1	1104	7492377-5	5
000646-115	1104	2091241-0014	2007	2320514-1	2007	2621786-1	1122	4080866-8006	2041	5490804-P2	1104	7492377-P5	
000646-119 000646-120	1104 1104	2091241-0015 2091241-1	2007 2007	2320591-1 2320595	2009	2622284 2635012	2009	4082886-001 4082886-002	2041 2041	5490804-P3 5490804-P4	1104 1104	7528157P1 7570004	20
000648-26	1123	2091241-2	2007	2320696	2009	2640830-1	2009	4082886-3	2041	5490804-P5	1104	7570004-01	20
000648-120	1104	2091241-3	2007	2320696-1	2009	2640843-1	2009	4090605-1	702	5490804-P6	1104	7570005	20
000757-18	1123	2091241-4	2007 2007	2320981 2321221	2011	2710002 2712080	2009	4101685 4361620	1104	5491236-P1 5491236-P2	1123 1123	7570005-01 7570005-02	20
01653-22 01786-134	2007 1123	2091241-6 2091241-7	2007	2326953	2009	2760438-1	1102	4450023	2041	5491263-P1	1123	7570005-02	20
01786-141	1104	2091241-8	2007	2327023	2009	2797658-616030A	007	4450023-007	2041	5492639-P1	2001	7570008	20
001786-142	1114	2091241-10	2007	2327031	1104	2865141	1122	4450023-P3	2041	5492639-P2	2001	7570008-01	20
001812-65	2007	2091241-11 2091241-12	2007 2007	2327041	1104 2041	2899414 2970038H05	1740 2007	4450023-P4 4450023-P6	2041 2041	5492653-P1 5492653-P2	2001 2001	7570008-02 7570009-01	20
02151-020 02151-20	1123 1123	2091241-12	2007	2327052 2327053	2041	3005861	2007	4450023-P6	2041	5492655-P1	2001	7570009-01	20
02153-77	2009	2091241-13A	2007	2327071	563	3007680-00	007	4813466	2009	5492655-P2	2001	7570011-01	. 1
02209-1	562	2091241-14	2007	2327122	2009	3007680-01	010	4822354	2041	5492655-P3	2001	7570011-02	1
02209-4 02209-10	561 563	2091241-15 2091241-15A	2007 2007	2327132	2035	3008340 3068305-2	1740 2009	4822354J 4906071	2041	5492655-P4 5492655-P5	2001	7570014-02 7570014-05	1
02332-57	1104	2091241-15A 2091260	2007	2327142(JFET)	2036	3100017	564	4906072	2009	5492655-P6	2001	7570015-34	
02332-58	1104	2091260-1	2001	2327172	2041	3110883-P01	1102	4906073	2009	5492659-P1	2001	7570016	1
02336-20	1123	2091260-2	2001	2327363	2009	3130058 3130091	2041	5001266-3	1102	5492659-P2	2001	7570016-02	1
02336-115 02402	1104 1102	2091260-3 2092055-0001	2001 1123	2330011 2330201	1104 1104	3130091	2041	5076054 5113642	1102 017	5494922-P1 5494922-P2	1104 1104	7570016-03 7570024-02	1
02402-29	1104	2092055-0007	1123	2330241	563	3146977A	2041	5294477-1	2009	5494922-P3	1104	7570215-21	1
02621-2	2009	2092055-001	1123	2330251H	1104	3152170	2041	5294477-2	2009	5494922-P4	1104	7570215-24	1
03069	1104	2092055-0010	1123	2330252	1104	3152170A	2041	5300073-15	564	5494922-P5	1104	7570215-34	1
03069-1 03069-2	1114 1102	2092055-0708 2092055-0711	1101 1123	2330254	1104	3160000-00-08A 3180006	1122	5300113-1 5301710-001	1104	5494922-P6 5494922-P7	1104 1104	7576015-01 7582439-01	1
03069-4	1123	2092055-0713	1123	2330352_	1102	3195638	1102	5320023	2009	5494922-P8	1104	7777146-P2	i
03069-5	1104	2092055-0714	2009	2330362	1104	3201104-10	2009	5320023H	2009	5573505-1	1122	7777146-P3	1
03069-6	1102	2092055-0714(DI		2330551	1114	3263029-10	1122	5320024	2009 2009	5573505-2 5955749	1122 1104	7777146-P4 7777146-PIO	1
103073-0701 103073-9	2009 2009	2092055-1	1102 1123	2330553 2330561	1104 1104	3311133 3403787	1122 2009	5320026 5320032	2035	6100724-2	2007	7840540-1	1 2
03073-10	2009	2092055-7	1123	2330562	1104	3430063	1104	5320051	2009	6101161-1	2041	7851324-01	2
03073-67	1104	2092117-0018	2011	2330612	1104	3457107-1	2009	5320064	2010	6208839	2013	7851325	2
03073-68 03073-91	1104 2041	2092417-0017 2092417-0018	2011	2330721 2330773	1104	3457632-5 3463101-1	2009	5320064H 5320074	2009	6212839 6218945	2009	7851326 7851327	2 2
03073-91A	2041	2092417-0019	2011	2331142	1104	3464611	1122	5320241	2009	6480000	2041	7851379-01	2
03168-135	2009.	2092417-0719	2009	2331152	563.	3468182-1	2009	5320326	2009	6984590	2009	7851380-01	2
03168-136	2009 2009	2092417-0720	2009	2331351	1104	3468182-2	2009 2009	5320326H	2011	6984600 6993650	2009 2009	7851441-01 7851654-01	1
03229-25 0323 9- 65	2009	2092417-0721 2092417-0724	2009 2009	2337011 2337071	1102 1104	3468242-2 3596061	1102	5320372 5320372H	2009	7002453	2009	7851655-01	i
03342-244	2011	2092417-0725	2009	2337101	563	3596062	1123	5320373	2009	7011507	2009	7851657-01	1
03779-22	2011	2092417-17	2009	2347021	1104	3596117	2009	5320386	2001	7011507-00	2009	7851947-01	1
03779-23 03779-24	2011 2011	2092417-18	2009	2360924-5601 2391773	2009 017	3596338 3596339	2009	5320583 5320651	2035	7012109-01 7012126	1740 1102	7851949-01 7851950-01	2 2
03779-25	2011	2092418-0708	2004	2402277	702	3596440	2011	5320702	2035	7012157	1122	7851952-01	2
03779-26	562	2092418-0711	2001	2412275	702	3596559	1102	5320772	2013	7023416-00	1104	7851953-01	2
04357-106	1123	2092605-0705	2009	2469749	2009	3596570	2009	5320851	2009	7026014	2009	7852223-01	-
04358-142 06227-51	1104 2009	2092608-22	2009 2009	2469755 2479692	2009	3597114 3598070	2030 2030	5320861 5320942	2011 2036	7026015 7026016	2009	7852223-01A 7852264-01	1
06334-115	2009	2092609-0001	2009	2479836	2009	3700072	2009	5321261	2009	7026018	2041	7852438-01	
06422-132	1123	2092609-0002	2009	2485078-1	2009	3700109	2009	5321291	2009	7026020	2009	7852439-01	110
06422-133 06431-45	1104 2009	2092609-001	2009	2485078-2 2485078-2/DENNC	2009	3700135	2041	5330001	1114	7027002	1104 1104		
06431-45	2009	2092609-0022 2092609-0023	2009	2485078-2(PENNC	2009	3700164 3700171	2009	5330011 5330012	562 562	7027005 7027023	1104	7852454-01 7852455-01	
06431-49	2009	2092609-0023 2092609-0024	2009	2485078-2(PENNC	REST)	3700219	2041	5330031	1104	7027031	1104	7852459-01	2
06431-50	1123	2092609-0026 2092609-0027	2009		2009	3700228	2041	5330041	1104	7027038	1104	7852577-01	+ -
06436-38 06436-89	1104	2092609-0027	2009 2009	2485078-2(PENNC	REST) 2009	3700279 3731132-1	2009	5330041(HR-5A) 5330041H	1114	7027039 7043216	1104 1104	7852781-01 7852782-01	
06441-91	1104	2092609-0705	2009	2485078-2(SEARS)	2009	3755864	1102	53300411	1104	7043261	1104	7852902-01	
06441-122	1123	2092609-0706	2009	2485078-3	2009	4002862-0001	2009	5330101	1104	7070692	1104	7852907-01	
06441-13 2 06463-89	1102	2092609-0707	2009	2485079-1	2009	4010577-0701	1122	5330101H	1104 1104	7071021	2009	7853090-01 7853091-01	
06512-40	1104 1104	2092609-0713 2092609-0715	2009 2009	2485079-2 2485079-3	2009	4017621-0701 4036612-P1	2009 2007	5330102 5330102H	1104	7071031 7090612	2009 1122	7853091-01	
06513-39	2011	2092609-0718	2009	2485080	1102	4036612-P2	2007	5330104	1114	7100460	1123	7853093-01	
06514-60	2009	2092609-0720	2009	2485080(DIODE)	1123	4036707-P1	2007	5330104H	1104	7100628	1104	7853094-01	:
06582 06582-20	1104 1123	2092609-0721 2092609-1	2009	2486836 2487305	1104	4036707-P2 4036749-P1	2007	5330131 5330133	1102	7100630	1104 2009	7853098-01 7853099-01	-63
0658 2 -20	1114	2092609-2	2009		1102	4036749-P2	2002	5330212H	1102 1102	7121105-01 7129386-P2	1123	7853357-01	_
06582-22	1104	2092609-3	2009	2495084	1123	4036754-P1	2001	5330261	1102	7141123-1	1102	7853358-01	
06582-25	2009	2092609-5	2009	2495166-2	2009	4036754-P2	2001	5330261H	1102	7200953	1104	7853463-01	
06607-60 06613-77	2009	2092693-0724 2092693-0725	2011 2011	2495166-4 2495166-8	2009 2009	4036887-P8 4036924-P1	2009 2009	5330322 5330331	· 562	7201212 7276211	1104 2007	7853464-01 7853465-01	
06613-77 06623-4 7	2009	2093308-0701	2009		2009	4036924-P1 4036924-P2	2009	5330331	1123	7278421	2007	7855282	
06623-48	1102	2093308-0702	2009	2495380	1123	4036937-P1	2007	5330334	1102	7279379	2007	7855282-01	
06623-49	1104	2093308-0703	2009	2495383	1123	4036937-P2	2007	5330335	1123	7279497	1104	7855283-01	
06623-145	2009	2093308-0704	2011	2495521-1	2009	4037289-P1	2001	5330336	1104	7279779(G.M.)	2009	7855284-01	
06627-54 06681-93	1102 2011	2093308-0705 2093308-0706	2011	2495522-4 2495529(DIODE)	2009 1123	4037289-P2 4037325-P1	2001 1104	5330341 5330371	1114	7279782 7279788	2007 2007	7855291-01 7855292-01	
06681-94	2011	2093308-0708	2009	2496125-2	2009	4037413-P1	561		1104(2)	7279789	2007	7855293-01	2
06681-95	2011	2093308-0725	2011	2496436	1123	4037586-P1	2009	5330381	1104	7279893	1123	7855294-01	2
06681-96	2009	2093308-8708	2009	2498456-2	2011	4037586-P2	2009	5330431	1104	7279940	2007	7855352-01	1
08292-56	2011	2095083	1123	2498457-2	2009	4037800-P1	2009	5330571	1122	7281307	2007 2007	7855357-01 7910076-01	1
08292-88 08292-89	1102	2132524-1 2182124-1	1122 1122	2498482-2 2498508-2	2011	4037800-P2 4037839-P1	2009	5330572 5330721	1122 1123	7281308 7281309	2007	7910076-01	1 2
08299-1	2011	2185494-1	1122	2498508-3	2011	4037839-P2	2001	5330731	1123	7281891	2007	7910268-01	2
08299-3	1104	2185494-2	1122		1104	4037993-P1	2007	5330732	1123	7282358	1123	7910269-01	2

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-
7910275-01 7910278-01	1104 562	11069934A 11083979	2041 1122	23114119 23114126	2009 2011	26006910 26008020	1102 1102	43023221 43023843	2009 2041	62562226 62563362	1104 2009	83167405 83167503	2013
7910584-01	2009	11103439	1122	23114148	2011	26010006	2035	43023844	2009	:62564504	563	83167503 83167505	2013 2013
7910585-01 7910586-01	2009	11159860 11166527	1122 2041	23114155 23114157	2009 2011	26010011 26010020	1102 2009	43024216 43024225	2041	62564539 62593687	1102 2009	84667800 86140070	2009
7910587-01 7910590-01	2009 1104	11176377 11198132	1102 2009	23114165 23114212	2011 2009	26010026 26010028	2013 1102	43024878 43024972	2013 2009	62593707 62596279	2009 2009	86401000 87096010	2009
7910781-01 7910804-01	2011 2009	11210016/7825 11210024/7825	1123 -1104	23114213 23114214	2009 2009	26010029 26010030	561 1102	43025055 43025056	2009 2009	62604727 62608528	2009 2035	87100600 87100605	1123
7910805-01 7910872-01	1104 1104	11220046/7825 11242096	2009 017	23114215 23114218	2009	26010032± 26010033	1102 1104	43025059 43025972	2009	62618663 62638214	2009 2009	87201881 87204260	1123
7910873-01 7914009-01	1104 2011	11268821 11290111	1122 1102	23114249 23114250	2012 2012	26010046 26010047	561 1102	43027379 43027618	2009	62638230 62638281	2009	87219410 87227880	1104
7914010-01 7914011-01	2011 1104	11728100 11787173	007 1122	23114251 23114255	2012	26010051 26010053	2013	43027620 43029471	2009	62638303 62638311	2009	87227881 87302650	1102
7914014-01 7932638	1102 1102	11802400 11802500	2009	23114267	2009	26010057 26501505	1102 2009	43029472 43200103	2010	62652381	2009	87400020	1102
7936256	2009	11803000	1102	23114276	2009	27113100	1104	43300203	1123 1123	62675004 62675012	2009 2009	87500720 87500920	1104 562
7936331 7937586	2009 2041	12947206 12965471	1122 2009	23114280 23114282	2013 2013	27123050 27123070	1104 1104	43540012 -43600101	1104 1104	62691263 62695919	2009 2011	87600920 88125010-9	562 2009
8010520 8014712	2007	12994851 12997748	2009 1122	23114296 23114299	2009 2031	27123100 27123100A	1104	44011001 44089001	2009	62695927 62697571	2011 1102	89942601 89942702	2009 2013
8031837 8031839	2011	13023002-2 13030189	2013 1102	23114344 23115012	2012 1114	27123120 27123150	1104 1123	44090004 46156741P1	2009	62711914 62727772	2009 1104	89960404 89962306	2013
8033690 8033696	2009	13030192 13030256	1104	23115019 23115023	1104(2) 1104	27123220 27123240	1104 1123	46156741P2 48134666	010 2009	62728574 62733942	2001 2009	89962307 89962308	2009
8033720 8033730	2009 2009	13030266 13030274	1102 1102	23115025 23115042	1101 1104	27123270 - 27125080	1123	48134842 50210104	2009 2009	62734655 62737395	2010 2012	89962404 89963008	2009
8033944	2009	13030301	1123	23115044	1104	27125090	2009	50210300-00	2009	62737409	2009	89963009	2009
8036683 8037330	2011	13030312 13030313	1123	23115046 23115049	1104 1102	27125140 27125150	2009	50210300-00VF 50210300-01	2009	62737425 62737476	2041	90270020 90270060	1067 1104
8037332 8037333	2009	13033801 13035807-1	1104 2009	23115050 23115051	1102 1102	27125160 27125220	2009 2014	50210300-01VF 50210300-11	2009	62737484 62737492	2009 2009	91011500 91013300	017 010
8037353 8037722	2009	13037215 13038115	2009 2013	23115057 23115058	2009	27125240 27125250	2007	50210310-10 50210310-10VF	2009	62741406 62741422	1102 	91013600 91190032	1733
8051060 8052446	1123 1123	13038900 13040216	1104 2009	23115064 23115065	1102 1102(2)	27125270 27125300	2009	50210310-11 50210510	2009 2009	62744162 62746483	1104 564	92115000-23 93037230	1102
8113034 8113051	2009 2009	13040229 13040313	1123 2009	23115068 23115070	1102 1123	27125370 27125380	2009	50210800-00 50210800-01	2009	62748451	2012	93037240	2009
8113052	2009	13040317	2009	23115071	1102	27125460	2009	50210800-01VF	2009	62749067 62749558	1104 1104	93038040 93039440	2009
8113060 8113134	2009	13040318 13040357	2009	23115072 23115074	1102 1102(2)	27125470 27125500	2009	50210800-02 50210800-02VF	2009	62752319 62752327	2007 2007	93063240 93063270	2009
8114031 8120037	2009 11 04	13050221 13083908	1104(2)	23115076 23115080	562 1102	27126100 28100812-001	2041	50210800-11 50221300-01	2009 2041	62760087 62761261	1104 1123	93063280 93063470	2009
8120067 8120069	1304 562	13104367 14500016-001	2041 010	23115085 23115088	1104 1123	28102163-001 30200053	1102	50251300 51003059	2009	62761334 62761350	1104 1102	93064450 93073340	2009
8120126 8120133	1102 1104	14500022-001 14714661	2009	23115098	1114 1123	30200062 30200101	2010 2041	51003092 51122245	2009	62761377 62766220	1102 2009	93073540 93078420	2009
8121002 8121014	1123 1123	14714703 14714760	1122 2009	23115108 23115109	1102 1102	30400021 30600010	2035 1123	51126850 51565600VF	2041	62771208 62771364	2012	93082830 93082840	2009
8130014 8131010	1102 1102	14714786 14734248	2009	23115113 23115115	1101	30600020 30600040	1123	51581300	2009	62784822	1123	93082920	2011
8505214-1	1102	15038433	2009	23115117	1114	30600140	1104 563	51631000 55310007-115	1122 562	62785225 62793163	2009 2009	93094502 93938040	2009
8510694-1 8510744-1	2041	15039456 15039464	2009	23115118 23115120	1114	30677435-001 32510001	1104	55440007-001 55440043-001	2009 2009	62798564 62921967	2011 563	93939440 94824100-CO-PS20	2011 3 2009
8511632-5 8512001-2	1122 2001	15039472 15039480	1122 1122	23115120(DIOD 23115120(RECT		32600025-01-08A 34621786-1	2009 1122	55440048-001 55440087-001	2009	70260450 70260540	2011 562	94824100-01-PS203	3 2009 2009
8513070-1 8521502-1	11,22 2001	16270092 16270175	2009 1122	23115121	1114	35045416 35045502	2009	55440091-001 55440111-001	2041 2011	70270050 70270250	1104 1102	94913000-01 95115115-00	010
8521502-2 8521502-4	2001	16520001-1 16658600	2009 1122	23115129 23115130	1123	35045708 35045712	2009	55460014-001 56301500	2035	70270390 70270720	1104 1104	96421866 110654492-001	1114
8521587-1 8522468-1	1104 2009	16763333-001 16797300	017 2009	23115140 23115142	1104 1104	35046911 35046912	2041 2041	57000901-504 59700278	2009	70370050 74140226-001	1104	120001192	2007
8523209-1 8524402-1	1122	16797301 17101881	2009	23115168	561	35046913	2041	62009616	1123	74140226-002	2041 2041	120001300 120004883	1104 2009
8524402-4	2001	17101882	1123 1123	23115185 23115194	1104 1102	35047218 35047219	2009 2009	62034 29 7 62042583	2009	74140226-003 75857322	2041 2009	_131001007 134804204-101	2041 1104
8526849-1 8532787-2	2007 1122	17200000 17200240	1102 1102	23115199 23115200	1104 1104	35393060-01 35393060-02	2009 2009	62045612 62047119	562 1104	76276722 80001300	1104	134804596-301 229005013	1104 2009
8532787-3 8532787-4	1122 1122	17210010 17240010	1104 1104	23115201 23115227	1104 1101	35393060-03 36001004	2009 1102	62047895 62050217	1114 2001	80001400 80002400	1104 1104	229005014 229005015	2009
8533519-1 8549020-1	1122	17809000 17854700	2041	23115249 23115250	1102 1104	36107051 36107062	1104 1104	62052791 62084960	1104 2009	80050100 80051001	2009 2041	231150050 402003173	1123
8975103-2 8981399-1	2001	17854700 18179900 18341300	2009	23115263 23115273	1104	36107153 36171100	1102 2009	62085053 62087447	1104	80051500 80052102	2009	420208700 436005001	1114
8981399-2 9001630	1104 2009	18458117 19020095	007 2041	23115285	1102	37001003	1102	62087617	2001	80052202	2009	440008401	1104
9002159 9008964-01	2009	19080002	1104	23115296 23115300	1104 1104	37003001 38970300	1102 2009	62087684 62094613	2007 1123	80052302 80052402	2009 2041	440009905 440011001	1102 2009
9176494	2009	19901606 19901607	2014 2014	23115337 23115338	1104 1104	39126500 41013566	007 1104	62103264 62103272	1104 1104	80052600 80053001	2009	485134922 485134923	2009
9246053 9246055	1104 1104	20001786-134 20001786-141	1123	23115947 23115955	1114 561	41020618 41021007	1104	62105038 62105275	2011	80053400 80053501	2009 2035	485134924 485134925	2009
9248015 9248055	1104 1104	20001786-142 20025153-7?	1104 2009	23115955 23115966 23115978	1114 1102	41023224 41023225	1104 1104	62105291 62119551	2011 1123	80318250 80366830	2009 2011	485134926 485155085	2009
9248058 9330006	1104	20030703-0701	2009 2009	23126177 23126184	2011 2009	41025773 41025849	1114 1104	62134496 62134941	1123 1123	80366840 80383840	2011 2009	570004503 570005452	2009
9340311 9340311-D5514	2041	20052600 20080127 20115070	1102 1123	23126289 23126290	2011 2011	41027063 41027612	1104 1123	62139455 62140844	1101	80383930	2009	570005503	2009
9739636-20 10000020	1104	20278600 22115181	2041	23126291	2011	41027613	1123	62166916	1104 564	80383940 80389910	2009 2009	881250108 881250109	2009
10015595	2009	22115182	1123	23126577 24501000	1101 2009	41027991 41027992	1114	62236302 62256877	2009 1104	80414120 80414130	2041 2041	1348042041 1348045963	1104 1104
10022104-101	2009	22115183 22115192	1123	24553500 24553501 24553600 24562000 24562001 24562100	1122	41029009 41029290	1123 1123	62260408 62360755	2009 1104	80510600 80521881	1123 1123	1522 22372 0 1522270100	2009
10041264-101 10041265-101	1122 1102	22692012 23113056	1102 2009	24553600 24562000	2009	41029499 41520419	1104	62379995 62389699	2009 2009	82409501 83037204	2009 2009	1522270101 1523270105	1123 1104
10106058 10180316	2009 1102	23114044 23114046	2010	24562001 24562100	2009 2009	41522875 41527380	1123 1123	62390174 62468211	563 1102	83038004 83039404	2013 2030	1611819064 1760089001	2009
10180722 10545502	2009 2009	23114070 23114070A	2041 2041	24562101 24562200	2009	41622859 41624836	1102	62506334	2009	83073205 83073206	2009	2003037227	2013
10644433 10646032	2009	23114078	2010	25114116	2009	43021017	1123 2009	62506350 62506377	2009	83073304	2009	2003038092 2003038812	2011
10676144	1122	23114087 23114100	2041	25114121 25115108	2009 1104	43021067 43021083	2011	62522674 62522720	1104	83073305 83073504	2009	2003082837 2003098316	2013 2012
10713642 10805364	2041	23114104 23114108	2010 2041	25115115 25175800	1104	43022134 43022860	2035	62522739 62537140	1104 2009	83078402 83093005	2013 2011	2004700116 2008000001	2010 1123
10849792 10896074	2009	23114112 23114118	2011	26004001 26006820	2009 1102	43022861 43023212	2009	62539283 62543299	2009 1123	83094502 83167403	2009 2013	2008000064 2008010028	1123

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
008010094	1402	16102190930	2009	134882921705	1123 561	A069-106 A069-109	2009 1123	A2B4 A2B5	1104	A4C1 A4C5	1104 1104	A6LBLK-1 A6LBRN	20
008010110 008010131	1102	16103190930 16104190668	2011	134883461505 134883461515	562	A069-112	1104	A2B9	1104	A4C9	1104	A6LBRN-1	20
008100027	1104	16104191168	2009	134883461536	561	A069-114 A069-115	2011 1123	A2BRN A2C1	2009	A4D1 A4D5	1104	A6LRED-1	20
008100093 008130084	1114 1104	16105190536 16106190537	2009 2009	202530001710 301720490201	1104(2)	A069-116	2011	A2C4	1104	A4D9	1104	AGN	20
008230042	561	16106190772	2030	3.10720490000	2009	A069-119	2011	A2C5	1104	A4E	2011	A6N-6	20
009120101 009120187	1104 1104	16109209536 16112190710	2009	310720490010 310720490020	2009	A069-120 A069-122	2009 2009	A2C9 A2D1	1104 1104	A4E1 A4E5	1104 1104	A6R A6S	20
009130017	1114	16112190772	2030	310720490100 '	2009	A090	1123	A2D4	1104	A4E9	1104	A6T5222	20
009130075	1104 1104	16114190772 16116190634	2030	310720490150 353511050009	702	A0375 A0377	1104	A2D5 A2D9	1104 1104	A4F1 A4F5	1104	A6V A7-12	20
295100232 295100233	1114	16118190634	2009	404100900160	2009	A0491A	1104	A2E	2041	A4F9	1104	A7-13	20
295100234	1104	16147191229	2009	404120010180	1123	A04049 A-04049-B	1104 1104	A2E1 A2E-2	1104 2041	A4G1 A4G5	1104 1104	A7A A7C	20
295100235 791012150	1104 2009	16171190693 16171190858	2009	404120030100 404120030110	1102	A04049B	1104	A2E4	1104	A4G9	1104	A7D	1
39306001	2009	16171191368	2009	404120040100	1123	A-04091-A	1104	A2E5	1104	A4J A4J(RED)	2041	A7E A7E(TRANSISTOR	1
39306002 339306003	2009 2009	16172190693 16172190858	2009	404130010150 505130010150	1104	A04091A A-04092	1104 1104	A2E9 A2EBLK	1104 2041	A4J(HEU)	2041 2041	A7E(THANSISTOR	R) 2
100208283	2013	16307190632	2009	933000611112	1104	A04092	1104	A2EBRN	2041	A4JBRN	2041	A7M	_ 2
100208292	2013	16377190632	2009	933009290112 933022960112	2009	A-04092-B A04092A	1104 1104	A2EBRÑ-1 A2F1	2041 1104	A4JD3B1 A4JRED-1	2001	A7M-5(TRANSIST	OR)
100208293 100210472	2013 2013	16400690060 16401190188	1123	2025911018810	1123	A04092B	1404	A2F4	1104	A4M	2009	A7R	.2
04204602	2011	16405990022	1102	2025953101010	1102	A-04093	1104	A2F5	1104	A4N	2009	A7S	2 2
04204603 04204612	2011	16411190188 16411992473	1123 1102	3535110500009 20225230001701	702 1104	A04093 A04093-X	1104	A2F9 A2FGRN	1104 2009	A4P A4R	2009 2009	A7T A7Y	2
04204613	2013	16412190410	1123	20252300018101	1104	A-04093A	1104	A2G1	1104	A4S	2041	A8B	2
04205352	2009	16415490000	1123	A0-54-195 A01	2009 1102	A04093A A04166-2	1104 564	A2G4 A2G5	1104 1104	A4S-1 A4U	2041 2009	A8G A8L	2
04206440 04213421	2009 2009	16419990032 16501090016	1123 1104	A01(MOTOROLA)	1102	A04210A	1104	A2G5 A2G9	1104	A4V	2009	A8P	2
08296047	2009	16501190005	1104	A02	1123	A-04212-A	1104.	A2J	2009	A4Y-1	2011	A8T3708	3
08296238 08296255	2009	16501190016 16505090005	1104	A03 A-04	1104	A-04212-B A04212-B	1104 1104	A2M A2M-1	2011 2011	A4Y-2 A4Z	2009 2041	A8T3709 A8U	
108296257	2009	16516390010	1104	A04	1104	A04212A	1104	A2N	2011	A5A1	1104	A8W	- 2
109208284	2009	16629291210	1104	A05	1104	A04212B	1104	A2N-1	2011	A5A2	1104 1104	A9B A9E	3
20100090	1123 1123	57000901504 62170835330	2009 1102	A06 A06-1-12	1104	A-04226 A04230-A	1104 1104	A2N-2 A2P	2011 2011	A5A5 A5A9	1104	A9F	
20200090	1123	134800847274	1123	A07	1123	A04233	1104	A2S	2041	A5B1	1104	A9G	2
129100000 129100600	1102 1123	134800849022 134800854093	1102 1102	A08 A08-105018	1102	A04234-2 A04241-A	562 1104	A2S-3 A2SC538PQR	2041 2009	A5B2 A5B5	1104 1104	A9H A9J	
29104002	1104	134800855216	1123	A054-103	1123	A-04242	1104	A2Y	2011	A5B9	1104	A9S	
29400003	1102	134800863030	1123	A054-105	1123	A04242	1104	A3A1	1104	A5C	2009	A9T	3
29501200 39000005	563 1104	134800867716 134800869525	1123	A054-108 A054-114	2009	A04331-021 A04331-023	1104	A3A3 A3A5	1104 1104	A5C1 A5C2	1104 1104	A9U A9W	
39104002	1104	134804596301	1104	A054-115	2009	A04331-043	1104	A3A9	1104	A5C5	1104	A9Y	2
50003770	702	134882095301 134882095302	1104	A054-148 A054-150	2011 1104	A04350-022 A04731	1104 1104	A3B1 A3B3	1104 1104	A5C9 A5D1	1104 1104	A10C A10D	
202003173 202003500	1104 1123	134882095302	1104 1104	A054-151	563	A-04901A	1104	A3B5	1104	A5D2	1104	A10E	1
202005600	1123	134882095304	1104	A054-154	2041	A04901A	1104	A3B9	1104	A5D5	1104	A10G05-010-A	
202006100 202006200	1102	134882139701	1123 1123	A054-155 A054-170	2009	A-042313 A042313	1104	A3C1 A3C3	1104	A5D9 A5E1	1104 1104	A 10G05-011-A A 10G05-015-D	i.
202006500	1102	134882178101	1123	A054-173	2009	A1A1	1104	A3C5	1104	A5E2	1104	A10M	18
202006800	1104	134882178102	1123	A054-175	2009	A1A5	1104	A3C9	1104 1104	A5E5	1104 1104	A10N A11	3
202007600 202007802	1104 1104	134882178103 134882178104	1123	A054-187 A054-195	1123	A1A9 A1B	1104 2009	A3D1 A3D3	1104	A5E9 A5F1	1104	A12-1-70	
202007806	1114	134882178105	1123	A054-221	2009	A1B1	1104	A3D5	1104	A5F2	1104	A12-1-705	
202008000 202008500	1104 1104	134882178106 134882178107	1123 1123	A054-222 A054-225	2009	A1B5 A1B9	1104 1104	A3D9	1104 2009	A5F5 A5F9	1104 1104	A12-1A9G A13	1
202008600	1123	134882178108	1123	A054-226	1123	A1C1	1104	A3E1	1104	A5G1	1104	A13(RECTIFIER)	
202008700	1114 1102	134882178110	1123 1123	A054-228 A054-230	1102	A1C5 A1C9	1104	A3E3 A3E5	1104 1104	A5G2 A5G5	1104		
202010100 202012700	564	134882178112	1123		2009	A1D1	1104	A3E9	1104		1104		
202013600	1104	134882178113	1123	A054-234	2009	A1D5	1104	A3F	2009		2009		
202014500 202015600	1104 1102	134882256301 134882256314	561 564	A059-109 A059-114	2009 1104	A1D9 A1E1	1104 1104	A3F1 A3F3	1104 1104	A5K A5L	2009 2009		13
202016000	1102	134882256317	563	A060-100	2011	A1E5 .	1104	A3F5	1104	A5M	2009	A13A2	
202016200	1102		562		2011	A1E9	1104	A3F9	1104		2009 2009		
202017600 202018500	1104 1104	134882256322 134882256325	562 563		2011	A1F A1F1	1104	A3G A3G1	2009 1104		2009	A13C2	
202018700 202020100 202021900 2020104470 202107470 202107670	1102	134882256338	562	A061-109	2011	A1F5	1104	A3G3	1104	A5S	2009	A13D2	- 1
202020100	1102 1102		562 562		2011 1104	A1F9 A1G	1104 2011	A3G5 A3G9	1104 1104	A5T2222 A5T2907	2009 2023		
202104470	1114	134882256354	563	A061-119	562	A1G-1	2011	A3L4-6001	2041	A5T3638	2032	A13N1	39
202107470	1102	134882256356	562	A065-101	1104	A1G1	1104 1104	A3L4-6001-01 A3N	2041	A5T3707 A5T3708	2016 2016		
20210767 <u>0</u> 202108270	1102 1104	134882256359 134882392202	564 1102	A065-103	2009	A1G5 A1H	2009		2009	A5T3709	2016	A14-601-13	
02109170	1102	134882392203	1102	A065-104	2009	A1J .	2009	A3T	2009	A5₹3710	2016	A14B	
202109370 202110270	1104 1104	134882392204	1102 1102	A005.100	2009	A1L A1M-1	2009 2011	A3T201 A3T202	2001 2001		2010		
202110370	1104	134882392206 134882392207 134882392208	1102	A065-110	2009	A1P	2011	A3T203	2001	A5T3903	2016	A14E	
202110470	1104	134882392208	1102 1102	A065-113	2009 1102	A1P/4922 A1P/4923	2011	A3T918 A3T929	2015 2009		2016 2034		
202970330 360021001	564 2009	134882392209 134882392210	1102	A066-109	2009	A1P-1	2011	A3T930	2009	A5T3906	2034	A14M	
700045452	2009	134882392211	1102	AU66-111	2013	A1P-1A	2011	A3T2221	2033	A5T4123	2016	A15-1007	
001100001 001100003	1122 1122		1102 1102		2009		2011 2011	A3T2221A A3T2222	2009		2016 2034		Ħ
01100005	1102	134882392214	1102	A066-119	1123	A1R/4925	2011	A3T2222A	2009	A5T4126	2034	A18	
001200001	2009		1102 1102) 11 <u>02</u> 1123		2011 2011		2034 2016		2012 2012		
511510200 511511500	1123 1114	134882393301 134882393305	1102	A066-119(GE)	1102		2011	A3TE120	2041	A5T5219	2030	A25-1007	
3480084523	1104	134882420301	1102	A066-120	1123	A1T	2009	A3TE230	2041	A5T5220	2030	A25-1008	
3480084555	1104 1104		1102 1122		1123 1104	A1T-1 A1U(3RDIF)	2009 2010		2041 2041		2032		
3480204101 3488240306	1104		1122	A068-100	1104	A1U(LASTIF)	2010	A3TX004	2041	A5T5225	2030	A30(DIODE)	
3488240307	1122	134882420305	1102	A068-101	1123	A1V	2009	A3U	2041	A5T5226	2032	A31 '	н
3488240308 3488240309	1104 1102		1104 1104		1104 562	A1VE A1W	2009 2009		2041 2009		2009 2009		
3488240311	1122	134882466803	1104	A068-108	2009	A1Z	2010	A3Z	2009	A-6-67703	2041	A42X00269-01	
3488240313	1102	134882466804	1104		2009	A-1.5-01 A2A1	1104 1104		2009 1104		2041 2009		NE
13488240314 13488240315	1122 1102	134882466807	1104 1104		2011	A2A4	1104	A4A5	1104	A6HD	2009		
3488240316	1122	134882466808	1114	A069-102/103	2009	A2A5	1104	A4A9	1104	A6J	2009	A42X00374-01	
3488240317 3488240318	1122 1122		1123 1123		2019	A2A9 A2B	1104 2009		1104 1104		° 2009 2041		64
	2009		1123		2009		1104		1104		2041		

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
46-8614-3	2001	A156	2009	A-494	2009	A-1854-0215-1	2009	AA50	1104	AG100G	1104	AM-G-22	1
46-86101-3 46-86109-3	2011	A157 A157A	2009	A494 A494(JAPAN)	2016	A-1854-0241-1 A-1854-0246-1	2009	AA 100 AA 111	1104	AG100J	1104	AM-G22	1
46-86110-3	2011	A157B	2009	A495	2016	A-1854-0251-1	2009	AA112	1123 1123	AJ5 AJ10	1104 1104	AMP2919-2 AMU5B7741393	2
46-86133-3 46-86301-3	2011	A157C	2009	A496	2016	A-1854-0255-1	2009	AA112P	1123,	AJ15	1104	AMU6A7723393	_ 1
46-86302-3	2011 2011	A158 A158A	2009 2009	A500 A514-022057	1104 1123	A-1854-0291-1 A-1854-0294-1	2041	AA113 AA114	1123 1123	AJ20	1104	AMU6A7741393	
48-63078A52	1123	A-158B	2009	A514-023553	2001	A-1854-0354-1	2009	AA116	1123	AJ25 AJ-30	1104 1104	AN AN-1	1
48-124216 48-124217	2001 2001	A158B A-158C	2009	A514-023626	1104	A-1854-0408-1	2009	AA117	1123	AJ30	1104	AN-G-5B	i
48-124218	2001	A158C	2009	A514-025607 A514-027757	1104	A-1854-0434-1 A-1854-0471-1	2009	AA118 AA119	1123 1123	AJ35	1104	A01	2
48-124220	2001	A159	2009	A514-028072	1104	A-1654-0492-1	2009	AA120	1123	AJ40 AJ50	1104 1104	AO7 AO4092	1
48-124221 48-125233	2001	A159A A159B	2009	A514-028073	1104	A-1854-0541-1	2009	AA121	1123	AJ60	1104	AO4092A	ıı i
48-125234	2001	A159C	2009	A514-032815 A514-033338	2001	A-1854-0554-1 A1858	2009	AA123 AA130	1123 1123	ALC-1A	1102(2)	AO4092B	1
48-125235	2001	A160	2034	A514-033903	1104	A-1901-0025-1	1102	AA131	1123	ALD-35 ALD-3141	2009 2009	AO4093 AO4093-A	1
48-125236 48-128239	2001	A160(JAPAN) A164	2007 2016	A514-035596	1104	A-1901-0033-1	1102	AA132	1123	ALS-8922	2009	AO4093A	1
48-134520	2001	A165	2016	A514-040296 A514-042791	2035 1123	A-1901-0050-1 A-1901-0053-1	1122 1102	AA134 AA135	1123 1123	ALZ10	2007	AO4166-2	
48-134700	2001	A167	2007	A514-0339903	1104	A-1901-0096-1	1102	AA136	1123	AM005 AM-010	1104	AO4210A AO4212-A	1
48-134 931 50 —	2001	A-168	2009	A515	2041	A-1901-044-1	1122	AA137	1123	AM010	1104	AO4212-B	-1
50(RECTIFIER)	1104 1104	A168 A168(JAPAN)	2009	A522 A522-3	2041	A-1901-0150-1 A-1901-0156-1	1102	AA138 AA139	1123	- AM-020	1104	A04233	1
54-96-001	2009	A168A	2007	A523	2041	A-1901-0196-1	1122	AA140	1123 1123	AM020 . AM-025	1104 1104	AO4234-2 AO4716	1
54-96-002	2009	A169	2007	A556-142	1123	A-1901-0461-1	1122	AA142	1123	AM025	1104	AO4901A	
55 55-4-70	2007 2001	A170(JAPAN) • A171(JAPAN)	2007	A-567 A567	2001	A-1901-1067-1 A-1946	1102	AA143	1123	AM-030	1104	AQ2(PHILCO)	1
5 5-4 -705	2001	A172	2007	A-567A	2009	A1946	1104 1104	AA143S AA144	1123 1123	AM030 AM-035	1104 1104	AQ3(PHILCO) AQ4	1 2
55-4A9G	2001	A172A	2007	A567A	2009	A-2008-9140	1122	AA200	1104	AM035	1104	AQ6	2
55-P11311-0001 6X0043-001	1102	A182 A198	2007	A572 A572-1	2041	A2019ZC A2039-2	2009	AA218 AA300	1123	AM040	1104	AR7C	_ 1
67-08-760	2015	A200	1104	A593 .	2009	A2057B2-115	2001	AA400	1104	AM050 AM-060	1104 1104	AR15 AR15-L8-0026	2
7-37-940 7-7 6 -200	2013	A204	2007	A600	1104	A2410	2009	AA500	1104	AM060	1104	AR16	m
72-49-600	1102	A205 A206	2007	A600(RECTIFIER) A615-1012	1104	A2411 A2412	2009	AA600 AA779	1104:	AM3	1104	AR17	1
3-16-179	1102	A207	2007	A640L	2016	A2413	2009	AA113852-2	1123 017	AM-6-5 AM13	1104 1104	AR18 AR19	1
4-3-3A9G	2007	A208(JAPAN)	2007	A640S	2016	A2418	2041	AAY15	1123	AM21 •	1104	AR20	i
'4-3-70 '4-3-705	2007 2007	A209 A210(JAPAN)	2007	A641(NPN) A643L	2009 2013	A2419 A2420	1123 1123	AAY18 AAY-22	1123 1104	AM-22	1104	AR21	1
4-3A9G	2007	A211	2038	A643S	2013	A2421	1104	AAY22	1123	AM22 AM23	1104 1104	AR22 AR-22(DIO)	.1
5-68-500	1104	A211(JAPAN)	2007	A644L	2013	A2422	1104	AAY27	1123	AM24	1104	AR22(RECTIFIER)	
6-10-2 6-44-2	2001	A212 A217	2007 2007	A644S A649L	2013	A2434	2009	AAY30	1123	AM32	1104	AR-107	
8	2009	A246	2009	A649S	2009	A2460 A2461	1104 1104	AAY33 AAY46	1123 1123	AM-33 AM33	1104 1104	AR107 AR-108	. 2
8(JAPAN)	2009	A246(AMC)	2009	A667-RED	2016	A2462	1104	AAY139	1123	AM42	1104	AR108	2
8C19G 8C-70	2007 2007	A248(AMC) A248(JAPAN)	2009 2007	A691M4 A691M5	1102	A2466	2009	AAZ10	1123	AM43	1104	AR-200	2
8C-705	2007	A249	2009	A691M5-2	1102 1102	A2468 A2469	2009	AAZ18 AAZ18D	1123 1104	AM53 AM62	1104	AR200(GREEN) AR200(W)	2
95-5281	1,104	A277(JAPAN)	2007	A692T5	1104	A2470	2009	A-B1000-139	1101	AM63	1104	AR200(W)	2
5-5281 95- 5289	1104	A278 A278(JAPAN)	2012	A692T5-0 A692X13-4	1104	A2473	1123	A-B1000-162	1101	AM65	1104	AR-201	2
5-5289	1104	A279	2012	A692X16-0	1123	A2474 A2476	563 1123	AC50(DIODE) AC107N	1102	AM66 AM300	1104 1102	AR201(Y) AR201YELLOW	2
9\$07	2001	A279(JAPAN)	2007	A694X1	563	A2481	1104	AC122	2007	AM300A	1102	AR-201 TELLOW	2
9SK5 9SK7	2001	A282 A283	2007	A694X1-0A A747	563	A2485	1104	AC130	2001	AM301	1102	AR202GREEN	2
00	1104	A284	2007	A747A	2009	A2499 A3607	2009	AC150 AC157	2007	AM301A AM302	1102 1102	AR204 AR205	2
00(RECTIFIER)	1104	A300	1104	A748	2016	A3609	2001	AC-175A	2009	AM302A	1102	AR206	2
100(RECT.) 01-A	1104 1104	A301 A305	2009 2007	A748B A749B	2009	A3772.01	2011	AC-175B	2009	AM303	1102	AR208	2
01-A(RECT.)	1104	A306	2009	A772B1	2011	A4212-A A4700	1104 2001	AC-175P AC187/01	2009	AM303A AM304	1102 1102	AR219YY AR220(YELLOW)	2
DIA(RECTIFIER)		A307	2009	A772EH	2011	A-10105	1104	ACR83-1004	2007	AM304A	1102	AR220GV	2
04 06	2013	A310 A311	2008	A772FE A909-1011	2011	A10105	1104	ACR83-1005	2007	AM305	1102	AR222(BLUE)	2
06	2013	A311(JAPAN)	2007	A909-1012	2009	A-10113 A10113	1104	ACR83-1006 ACR83-1007	2007 1123	AM305A AM306	1102	AR222(YELLOW) AR222BY	2
DE(JAPAN)	2009	A312	2007	A909-1013	2009	A-10118	1104	ACR83-1008	1104	AM306A	1102	AR224	2
08 08 A	2013	A321 A323	2016 2009	A909-1015	1123	A10118	1104	ACR810-104	2007	AM307	1102	AR224(WHITE)	2
08B	2009	A324	2009	A909-1017 A909-1018	1123	A10142 A10164	1104 1104	ACR810-105 ACR810-106	2007	AM307A AM308	1102	AR224(YELLOW)	2
11	2013	A330	2007	A909-1019	1104	A10165	1104	ACR810-107	1123	AM308A	1102	AR306 AR306(BLUE)	2
15 16	2013	A332 A344	2007	A937	2009	A10169	1104	ACR810-108	1104	AM405	1104	AR306(ORANGE)	- 2
21-15	2001	A345	2016 2016	A937-1 A937-3	2009	A20371 A20372	1123 2009	ACY40 AD-1UF	2007 1104	AM410 AM415	1104	AR882	1
21-16	2001	A346	2016	A1024	1101	A24100	2009	AD10	1104	AM415 AM420	1104 1104	AS-2	1
21-17 21-21	2001	A350A A400	2007	A1086	2031	A36508	1123	AD30	1102	AM425	1104	AS-3	1
21-50	2001	A400(RECTIFIER)	1104	A1087 A-1141-6062	2031	A36539 A-36617	563 1122	AD50 AD100	1104	AM430 AM435	1104	AS3	1
21-585	2011	A414	2007	A1243	2007	A95115	2001	AD100(DIODE)	1102	AM440	1104 1104	AS-4 AS4	1
21-585 B 21-687	2011	A-415 A415	2009	A-1379	2009	A95211	2001	AD150(DIODE)	1102	AM445	1104	AS-5	- 1
1-762	2001	A415 A415(JAPAN)	2016	A1379 A-1380	2030	A112363 A-120077	2041 563	AD200 AD200(DIODE)	1104 1102	AM450 AM460	1104	AS5	1
21-1410	2001	A417	2016	A1380	2009	A-120125(DIODE)	1102	AD741CH	007	AM620	1104 1102	AS6 AS11	1
23-7 27-7	1104	A417-154 A417-190	2011	A1396	2001	A-120278	2009	AD741CN	010	AM620A	1102	AS-14	1
28	2031	A417-190 A417-205	2011	A1412-1 A1465-4	2009	A-120327 A-125278	2041 561	AD4001 AE10	1104	AM626	1102	AS14	1
28	2009	A418	2016	A1465-49	2001	A-125332	2009	AE30	1102	AM626A AM632	1102	AS-15 AS15	_1
!8A !9-30	2009	A419	2016	A1472-19	2009	A-134166-2	563	AE50	1102	AM632A	1102	AS3428	2
10	2001 2012	A420 A422-A	2016 1104	A1474-3 A1474-39	2007 2007	A-140605 A198794-1	2041	AE100 AF150	1102	AM3235	2041	ASY-26	2
12	2012	A427	2015	A1488C	2007	A417033	2041	AE150 AE200	1102 1102	AMF104 AMF105	2039 2041	ASY26 ASY-27	2
12-1 17	1104	A454	2009	A1488C9	2007	A2092418	2001	AEX9846	2041	AMF.115	2041	ASY27	2
17 17(NPN)	2009	A455 A467	2030 2016	A-1567 A1567	2009	A2092418-0711	2001	AEX79846	2041	AMF116	2041	ASY28	2
11	2009	A472	2009	A1567-1	2009	A3902441 A7568250	2041 1104	AF-101 AF-106	2007	AMF117 AMF117A	2041	ASY29 ASY53	2
12	2009	A-473	2013	A-1634-1125	1122	A-11095924	2009	AF-137	2004	AMF118	2041	ASY56N	2
13 16	2009	A480 A481	2015	A1820-0203-1	007	A-11166527	2041	AF138/290	2007	AMF118A	2041	ASY57N	2
17	2007	A481A0028		A1826-0007-1 A-1854-0003-1	2009	A-11237336 A11414257		AF186G AF186W		AMF119		ASY58N	2
18	2007	A481A0031	2009	A-1854-0019-1	2009	A43021415		AF187		AMF119A AMF120		ASY-62 ASY63N	2
19 51	2007	A482	2011	A-1854-0025-1	2009	A43023843	2041	AF192	2001	AMF120A	2039	ASY-72	2
52	2009	A483 A484	2011	A-1854-0027-1 A-1854-0071-1	2009	A80052402 A80414120	2041	AF306		AMF-121	2041	ASY72	2
i3	2009	A484(ZENITH)	2011	A-1854-0092-1	2011	A80414130	2041	AFC3527 AFS-160-1017	2009	AMF201 AMF210	2039	ASY73 ASY74	2
i4 ·	2016	A486	2011	A-1854-0094-1	2009	AA015	1101	AFZ23	2007	AMF210A	2039	ASY75	2
5	2016	A488-A0001	1102	A-1854-0099-1	2009	AA1	2007	AG30	1102	AM-G-5	1104	ASY76	2

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
LSY80	2007	AZ9.1	562	B3B5	1104	B74-3-A-21	2007	B170005	2041	BAY87	1104	BC171	200
SY86 SY87	2001	AZ12 AZ13	563 563	B3B9 B3C1	1104	B74-3A21 B75A	2007	B170005-BLK B170005-BRN	2041	BB1A BB-2	1104 1104	BC171A BC171B	20
SY88	2001	AZ-15	564	B3C5	1104	B88C-1-21	2007	B170006	2041	BB2A184	1104	BC172	. 20
SY89	2001	AZ15	564 563	B3C9 B3D1	1104 1104	B92-1-A-21 B103	2001 2007	B170007 B170009	2041	BB-6\$ BB71	1104	BC172A . BC172B	20
T-5 T-10	2007 2041	AZ-120 AZ-145	564	B3D5	1104	B104	2007	B170010	2039	BB107	1104	BC172C	20
T-15	2007	AZ-150	564	B3D9	1104	B-169	2009	B170011	2041	BB-109	1104 1104	BC173A	20
T16 T17	2016 2016	AZ753 AZ753A	561 561	B3E1 B3E5	1104 1104	B200C40 B250C7K4S	1104 1104	B170012 B170013	2041 2041	BB117 BB127	1104	BC173B BC173C	20
T52	2001	AZ757	562	B3E9	1104	B250C75	1104	B170014	2041	BBIA	1104	BC175	20
T53	2001	AZ757A AZ759	562 563	B3F1 B3F5	1104 1104	B250C75K4 B250C75K5	1104	B170015 B170016	2041	BC-71 BC71	2009	BC178V BC178VI	20 20
1772	2001	AZ759A	563	B3F9	1104	B250C75K41	1104	B170018	2039	BC-107	2009	BC180	20
T73R	2001	AZ960	562	B3G1	1104	B250C75K45	1104 1104	B170019 B170020	2039 2041	BC107 BC-107A	2009 2009	BC180B BC181	20 20
175R 176R	2001 2001	AZ960A AZ960B	562 562	B3G5 B3G9	1104 1104	B250C100 B250C100TD	1104	B170020	2041	BC107A	2009	BC182	20
.T77	2001	AZ963	563	B3H1	1114	B250C125	1104	B170022	2041	BC107B	2009	BC182A	20
T310 T311	2011	AZ963A AZ963B	563 563	B3H5 B3H9	1114 1114	B250C125K4 B250C125N2	1104 1104	B170023 B170024	2041 2041	BC-108 BC108	2009 2009	BC182L BC183	20
T312	2011	AZ964	563	B3K5	1114	B250C125X4	1104	B170025	2041	BC108A .	2009	BC183A	20
T313	2011	AZ964A	563	B3K9	1114	B250C150	1104	B-722246-2 B8780010	2009 2009	BC-108B BC108B	2009 2009	BC183B BC183L	20
T314 T315	2011	AZ964B AZ965	563 564	B3M1 B3M5	1114 1114	B250C150K4 B269-3345	1104 1122	BA67	2009	BC108C	2009	BC184	20
T316	2011	AZ965A	564	B3M9	1114	B290	2007	BA71	2009	BC109	2009	BC184B	20
T318	2011	AZ965B	564	B-3P B4	1123 2016	B291 B292	2007 2007	BA-100 BA 100	1104 1104	BC-109B BC109BP	2009 2009	BC184L BC185	20 20
NT319 NT321	2011 2011	AZG AZY	2011 2011	B4A1	1104	B292A	2007	BA-104	1104	BC109C	2009	BC186	20
AT322	2011	A.184/5	2009	B4A5	1104	B294	1104	BA104	1104	BC110	2009	BC188	20
AT323 AT324	2011	B01-02 B090	1104 562	B4A9 B4B1	1104 1104	B294(RECTIFIER B314	1104	BA105 BA108	1104	BC112 BC113	2016 2009	BC189 BC194	20
AT325	2011	B1A1	1104	B4B5	1.104	B387	2007	BA114	1102	BC-114	2009	BC196VI	20
AT326	2011	B1A5	1104	B4B9 B4C1	1104	B392 B393	2007 2007	BA119 BA120	1104 1104	BC114 BC114TR	2013 2009	BC197 BC197A	20
AT327 AT328	2011	B1A9 B1B	1104 1104	B4C1 B4C5	1104 1104	B393 B394	2007	BA127	1104	BC115	2013	BC197B	20
T329	2009	B1B1	1104	B4C9	1104	B395	2007	BA128	1104	BC116	2023	BC198	20
AT330 AT335	2011 2009	B1B5 B1B9	1104 1104	B4D1 B4D5	1104 1104	B396 B401	2007 2007	BA129 BA130	1104 1104	BC117 BC118	2012 2009	BC198A BC199	20
T336	2009	B1C1	1104	B4D9	1104	B402	2007	BA-142-01	1104	BC119	2012	BC200	20
T337	2009	B1C5	1104	B4E1	1104	B403	2007	BA142-01	1104	BC120 BC-121	2012 2009	BC200R BC200Y	20
T338 T347	2011	B1C9 B1D1	1104 1104	B4E5 B4E9	1104	B408 B416	2007	BA147 BA148	1102 1104	BC121	2011	BC202	20
T348	2009	B1D5	.1104	B4F1	1104	B417	2007	BA153	1104	BC-122	2009	BC205	20
T349	2009 2009	B1D9 B1E1	1104 11 04	B4F5 B4F9	1104 1104	B539R B601-1011	2009 1123	BA167 BA168	1102 1102	BC122 BC-123	2011 2009	BC205V BC205VI	20
T370 T400	2009	B1E5	1104	B4G1	1104	B601-1012	1104	BA170	1102	BC123	2011	BC-207	1
AT401	2009	B1E9	1104	B4G5	1104	B614-007-0	1102	BA174	1102	BC125	2013	BC207	20
AT402 AT403	2009 2009	B1F1 B1F5	1104 1104	B4G9 B5A1	1104 1104	B692X13 B-1338	1123 2009	BA182 BA187	1102	BC125A BC125B	2009 2016	BC207A BC207B	20
AT404	2009	B1G1	1104	B5A5	1104	B-1421	2009	BA202	1122	BC126	2023	BC207BL	20
AT405	2009	B1G5	1104	B5A9	1104	B-1433	2009	BA216	1102	BC126A	2023 2009	BC208 BC208A	20
AT406 AT407	2009 2009	B1G9 B1H(DIODE)	1104 1104	B5B1 B5B5	1104 1104	B-1501U B-1599	1104	BACSH2M1 BACSH2M2	2009	BC129 BC130	2009	BC208AL	20
AT420	2009	B1H1	1114	B5B9	1104	B-1666	2009	BACSH2M3	2009	BC131	2009	BC208B	20
AT421 AT422	2009 2009	B1H5 B1H9	1114 1114	B5C1 B5C5	1104 1104	B-1702 B-1842	1102 2009	BACT2F BAW10TF20	2009 1102	BC132 BC134	2013 2009	BC208BL BC208C	20
AT423	2009	B1K	2009	B5C9	1104	B-1872	2009	BAW11TF21	1102	BC135	2009	BC208CL	20
AT424 AT425	2009 2009	B1K1 B1K5	1114 1114	B5D1 B5D5	1104 1104	B-1881U B-1882U	1104(2) 1104(2)	BAW12TF22 BAW13TF23	1102 1102	BC136 BC144	2009 2012	BC209 BC209A	20
AT426	2009	B1K9	1114	B5D9	1104	B2090	562	BAW16	1102	BC145	2012	BC209B	20
AT427 AT490	2009	B1M1	1114	B5E1	1104	B5020 B-6001	2041 2035	BAW17 BAW18	1102 1102	BC146 BC146R	2009 2016	BC209BL BC209C	20
AT491	2009 2009	B1M5 B1M9	1114	B5E5 B5E9	1104 1104	B-6002	564	BAW24	1102	BC147	2009		- 20
AT492	2009	B1N	2009	B5F1	1104	B-12822-2	2041	BAW24A	1102	BC147A	2009	BC210	20
AT493 AT494	2009 2009	B1P9 B1P7201	1104 2009	B5F5 B5F9	1104 1104	B17307 B36564	2041 1104	BAW24B BAW25	1102 1102	BC147B BC148	2009 2009		20
AT495	2009	B1R	2009	B5G1	1104	B-75568-2	2011	BAW25A	1102	BC-148A	2009	BC222	20
AT521	2001 2001	B2 B2A1	2015 1104	B5G5 B5G9	1104 1104		2009 2009	BAW25B BAW45	1102 1102		2009 2009	BC223A	2
AT551 AT-1856	2041	B2A5	1104	B5H1 .	1114		2009	BAW53	1102	BC148B	2009	BC223B BC224	2
AT1856	2041	B2A9	1104	B5H5	1114	B-75589-3	2009	BAW59	1102	BC-148C	2009	BC225	2
AT3260 ATC-TR-15	2041 2041	B2B1 B2B5	1104 1104	B5H9 B5K1	1114	B-75589-13 B-75608-3	2009 2009	BAW59A BAW59B	1102 1102		2009 2009		2 2
AU2012	563	B2B9	1104	B5K5	1114	B133550	2041	BAW63A	1102	BC149A	2009	BC232M	2
AV0000105-0	1102	B2C1	1104	B5K9	1114	B133577	2041	BAW63B	1102	BC149B	2009	BC233A	2
AV5 AV2012	563 563	B2C5 B2C9	1104 1104	B5M1 B5M5	1114 1114		2009 2041	BAW99 BAX12	1102 1104		2009 2009		2
AV-2015	564	B2D	2009	B5M9	1114	B133685	2041	BAX-13	1122	BC150	2009	BC237A	2
W2015	564 563	B2D1 B2D5	1104 1104	B12-1-A-21 B12-1A21	2009 2009	B170000 B170000-BLK	2041 2039	BAX13 BAX-16	1122 1102		2009 2009		2
W01-06	561	B2D9	1104	B-28	1123	B170000-BEN B170000-ORG B170000-RED B170000-YEL	2039	BAX16	1102	BC153	2022	BC238A	2
AW-01-07	562	B2E1	1104	B28	1123	B170000-ORG	2039	BAX28	1102		2011	BC238B BC239	2
AW-01-09 AW01-09	562 562	B2E5 # B2E9	1104	B-30 B30	1123 1123	B170000-RED	2039	BAX30 BAX74	1102 1102		2031 2009	BC250A	2
W01-9	562	B2F1	1104	B30C50KP	1114	B1/0000BLK	2041	BAX87	1102	BC156	2011	BC253A	2
W01-9/CP3112 W-01-12	2030 562 1104	B2F5 B2F9	1104 1104		1104 1104		2041 2041	BAX87A BAX88TF11	1102 1102		2031 2009		2
W01-12	563	B2G1	1104	B30C250KP	1114	B170001-BLK	2039	BAX89A	1102	BC158VI	2034	BC255	2
W-01-12C	563	B2G5	1104 1104	B30C350-1	1104	B170001-BRN B170001-ORG	2039 2039	BAX91C/TF102	1122		2009 2009		2
AW01-12C AW01-12V	563 563	B2G9 B2H1	1104		1104 1104	B170001-ORG B170001-RED	2039	BAX95TF600 BAY17	1102		2009	BC263A	2
AW01-13	563	B2H5	1114	B30C600CB	1104	B170001-YEL	2039	BAY18	1102	BC167B	2009	BC263B	2
AW01-15 AW09	564 562	B2H9	1114 1114		1104 1123	B170001BLK B170001BRN	2041	BAY19 BAY20	1102		2009 2009		2 2
AWH-24	2009	B2K1 B2K5	1114		1123	B170002	2041	BAY31	1102		2009	BC269	2
AWOL-13	563	B2K9	1114	B31	1104	B170002-BLK	2041	BAY36	1102	BC168C	2009	BC270	2
AX12 AZ-058	563 561	B2M1 B2M5	= 1114 1114		R) 1104 1104		2041 2041	BAY41 BAY41A	1102 1102		2009 203.1		2
AZ-058 AZ-061	561	B2M9	1114		1102(2)	B170002-0RG	2041	BAY41B	1102	BC169A	2009	BC280B	2
AZ-063	561	B2Z	2030	B65-4-A-21	2001	B170003	2041	BAY44	1104	BC-169B	2009	BC280C	2
AZ-085 AZ-088	562 562		2016 1104		2001 2030	B170003-BLK B170003-BRN	2041 2041	BAY52 BAY64	1102 1104		2009 2009		2
AZ-090	562	B3A5	1104	B66X0040-001	563	B170004	2041	BAY68	1102	BC169C	2009	BC284	2
AZ-092	562	B3A9	1104	B66X0040-003	562	B170004-BLK	2041	BAY73	1102	BC169CL	2009	BC284A	2

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	270
3C285	2009	ВСУ36	2009	BF200	2015	BF459	2012	BFV81B	2034	BFY76	2009	BSW39	200
BC289 BC289A	2009	BCY38 BCY40	2023 2023	BF200(ZENITH) BF-214	2011	BF494 BF495	2016 2016	BFV82 BFV82A	2034 2034	BFY77 BFY78	2009	BSW41 BSW42	20:
3C289B	2009	BCY42	2016	BF-215	2009	BF506	2034	BFV82B	2034	BFY79	2016	BSW42A	20
C290 C290B	2009	BCY-50	2016 2009	BF216 BF217	2011	BF594 BF595	2016	BFV82C	2034	BFY80	2012	BSW43	20
C290C	2009	BCY50	2009	BF218	2011	BF596	2016 2016	BFV83 BFV83A	2016 2016	BFY85 BFY86	2012 2012	BSW43A BSW51	20
3C295	2016	BCY51	2009	BF219	2011	BF597	2013	BFV83B	2016	BFY87	2031	BSW52	20
C-307 C308(ALGG)	1104	BCY56 BCY57	2009	BF220 BF224	2011 2016	BF26235-5 BFR10	1104 2038	BFV83C BFV85	2016 2009	BFY87A BFY88	2031 2038	BSW53 BSW58	20
3C308VI	2034	BCY-58	2009	BF224J	2016	BFR11	2009	BFV85A	2009	BFY90	2015	BSW59	20
3C309A 3C317	2034	BCY58 BCY58B	2009	BF225 BF225J	2016 2016	BFR18 BFR19	2012	BFV85B BFV85C	2009	BFY90(SIEG) BFY90B	2015	BSW82 BSW83	20
3C317A	2009	BCY58C	2009	BF-226	2009	BFR20	2012	BFV85D	2013	BFY371	2009	BSW84	20
C317B C318	2009	BCY58D BCY59	2009	BF228 BF229	2012 2016	BFR21 BFR25	2008	BFV85E	2013	BFY391	2009	BSW85	20
C318A	2009	BCY59A	2009	BF230	2016	BFR26	2013 2016	BFV86 BFV86B	2023 2023	BG-66 BG71	2030	BSW88 BSW88A	20 20
C318B	2009	BCY59B	2009	BF233-2	2016	BFR28	2015	BFV87	2009	BG-94	2010	BSW88B	20
3C318C 3C319	2009	BCY59C BCY59D	2009 2009	BF233-3 BF233-4	2016 2016	BFR36 BFR57	2012 2012	BFV87A BFV87B	2009 2016	BH4R1 BH71	1104 2009	BSW89 BSW89A	20 20
3C319B	2009	EICY69	2009	BF235	2016	BFR58	2012	BFV88	2009	BI71	2009	BSW89B	20
C319C C394	2009	EICY70 BCY72	2023 2034	BF237 BF238	2013	BFR59 BFS11	2012 2038	BFV88A BFV88B	2009	BI-82	2032	BSW92	20
C408	2016	BCY84A	2009	BF240	2016	BFS13E	2013	BFV88C	2009	BIP7201 BLX88	2009	BSX19 BSX20	20 20
C409	2009	BCY87	2013	BF240B	2016	BFS13F	2013	BFV89	2016	BLY10	2041	BSX24	20
3C418 3C429	2034	BCY88 BCY89	2013 2013	BF241C	2016 2016	BFS13G BFS14E	2013 2022	BFW19 BFW29	2038 2038	BLY11 BLY12	2041 2041	BSX25 BSX26	20 20
3C442	2011	BCY90	2022	BF241D	2016	BFS14F	2022	BFW32	2009	BLY15	2041	BSX27	20
3C456 3C478	2013	BCY90B BCY91	2023 2022	BF245A BF248	2036 2009	BFS14G BFS15E	2022	BFW33 BFW41	2012 2038	BLY47 BLY48	2041	BSX28	20
3C478A	2034	BCY91B	2023	BF249	2023	BFS15F	2013	BFW42	2038	BN7133	2041	BSX30 BSX36	20 20
3C478B	2034	BCY92	2022	BF250	2009	BFS15G	2013	BFW46	2009	BN7214	2041	BSX38	20
BC507A BC507B	2009	BCZ13	2022	BF253 BF254	2011	BFS16E BFS16F	2022	BFW59 BFW60	2009 2009	BN7517 BN7518	2009	BSX38A BSX38B	20 20
3C508A	2016	BD0A	1104	BF254(ALGG)	2016	BFS16G	2022	BFW63	2038	BN7551	563	BSX39	20
3C508B 3C508C	2009	BD-1A BD3A-184	1104 1104	BF254(PHIN) BF254(SIEG)	2016 2016	BFS17R BFS18	2011 2015	BFW64 BFW68	2038 2016	BP67 BPS-S-50	2009 1122	BSX44 BSX48	20
BC509B	2009	BD-107	1104	BF254B	2016	BFS18R	2015	BFW70	2038	BQ67	2009	BSX49	20 20
BC509C	2009	BD-107(RECT.)	1104	BF-255	2009	BFS19	2016	BFX12	2034	BR42	1104	BSX51	20
3C510B 3C510C	2009	BD111 BD112	2041	BF255 BF255(ALGG)	2016 2016	BFS19CB BFS19R	2010 2016	BFX13 BFX18	2034 2016	BR44 BR46	1104	BSX51A BSX52	20 20
BC513	2034	BD113	2041	BF255(PHIN)	2016	BFS20	2016	BFX19	2016	BR47	1104	BSX52A	20
IC513A IC514A	2034	8D116 BD117	2041 1104	BF255(SIEG) BF255C	2016 2016	BFS20R BFS26E	2015	BFX20	2016	BR48	1104	BSX53	20
C546	2009	BO118	2041	BF255D	2015	BFS26F	2022	BFX21 BFX31	2016 2038	BR52 BR67	1104 2009	BSX54 BSX66	20
C546B \$	2009	BD121	2041	BF260	2038	BFS26G	2022	BFX32	2038	BR51400-1	1104	BSX67	20
3C547B 3C548	2009	BD-127 BD130	1104 2041	BF261 BF262	2038 2015	BFS27E BFS27F	2031 2031	BFX43 BFX44	2016 2016	BR51401-2 BRC-116	1104 2041	BSX68 BSX69	20 20
3C548VI	2038	BD142	2041	BF263	2015	BFS27G	2031	BFX45	2016	BRN-SPEC-24-12	1122	BSX70	20
3C583 3C-1072	2009	BD145 BD181	2041	BF264	2015	BFS31P	2016	BFX59	2038	BS-1	1104	BSX71	20
3C-1082	2009	BID182	2041	BF273C BF273D	2038	BFS36A BFS36B	2033 2009	BFX59F BFX62	2016 2015	BS1 BS2	1104	BSX75 BSX76	20 20
3C-1086	2009	BID183ELK	2041	BF274C	2038	BFS36C	2009	BFX65	2022	BS67	2009	BSX77	20
3C-1096 3C1096	2009	BD245 BD245A	2041 2041	BF288 BF291	2016 2016	BFS38 BFS38A	2009 2033	BFX73 BFX74	2038 2030	BS475 BS9011G	2009	BSX78 BSX79	20
BC1478	2009	BDX40	2041	BF291A	2016	BFS40	2023	BFX77	2016	BSA01	1102	BSX79A	20 20
3C-1690 3CF5	2009 1104	BDY17 BDY23	2041 2041	BF291B BF292	2016 2012	BFS40A	2023	BFX92	2013	BSA02	1102	BSX79B	20
CM1002-2	2011	BDY38	2041	BF293	2009	BFS42 BFS42A	2009 2009	BFX93 BFX94	2013 2009	BSA11 BSS10	1102	BSX80 BSX81	20 20
CW29	2034	BDY39	2041	BF293A	2009	BFS42B	2009	BFX95A	2038	BSS19	2012	BSX81A	. 20
CW29R CW31	2034	BDY53 BE6	2041 2007	BF293D BF302	2009	BFS42C BFS43	2009	BFX96A BFX97A	2038 2038	BSS20 BSS21	2012	BSX81B BSX87	20 20
CW31R	2016	BE:6A	2007	BF304	2038	BFS43A	2009	BFX98	2012	BSS22	2034	BSX87A	20
BCW34 BCW36	2009	BE-66 BE107	2030 1104	BF306 BF310	2016 2016	BFS43B BFS43C	2009 2009	BFY BFY10	2009 2013	BSS26 BSV21	2016	BSX88 BSX88A	20
CW48A	2030	BE117	1104	BF310(ALGG)	2038	BFS55A	2013	BFY17	2038	BSV35	2034	BSX89	20 20
BCW50 BCW60A	2012	BE127	1104 2011	BF311 BF314	2011	BFS69	2034	BFY18	2016	BSV35A	2033	BSX90	20
CW60AA	2009	B£173 BF71	2009	BF314(ALGG)	2016 2016	BFS99 BFT55	2012 2016	BFY19 BFY-22	2016 2009	BSV40 BSV41	2016 2009	BSX91 BSX92	20 20
CW60AB	2010	BF115	2016	BF321A	2009	BFV10	2009	BFY22	2031	BSV52	2015	BSX93	20
CW60AC	2010	BF120 BF121	2012	BF321B BF321C	2009	BFV11 BFV12	2009 2009	BFY-23 BFY23	2009 2031	BSV52R	2015	BSX94A	20
CW60C	2010	BF123	2013	BF321D	2009	BFV20	2023	BFY-23A	2009	BSV53P	2016 2015	BSX97 BSY10	20 20
CW65EA CW65EB	2014	B£125 B£127	2016	BF321E BF321F BF3224 BF3229 BF3332 BF3333 BF333C BF333D BF333D BF334 BF344	2009	BFV27	2011	BFY23A	2009	BSV53 BSV53P BSV54 BSV54P	2016	BSY11	20
CW83	2009	BF137	2013 2012	BF321F	2009 2034	BFV28 BFV29	2011 2034	BFY-24 BFY24	2009 2031	BSV54P BSV55	2011	BSY17 BSY18	20
CW94	2009	BF152	2038	BF329	2038	BFV30	2034	BFY25	2009	BSV55A	2034	BSY19	20
CW94A CW94B	2009	BF153 BF154	2011 2016	BF332	2016 2016	BFV31 BFV32	2034	BFY26	2016	BSV55AP	2021	BSY20	20
CW94C	2009	BF158	2038	BF333C	2016	BFV33	2034 2034	BFY28 BFY-29	2009 2009	BSV55P BSV59	2034 2016	BSY21 BSY24	20
CW94KA	2009	RF159	2038	BF333D	2011	BFV34	2034	BFY29	2013	BSV65FA	2016	BSY25	20
CW94KB CW94KC	2009	BF160 BF165	2038 2016	BF335	2016 2016	BFV35 BFV36	2034 2034	BFY-30 BFY30	2009 2013	BSV65FB BSV77	2016 2038	BSY26 BSY27	20
CX19	2010	BF166	2016	BF340	2034	BFV37	2016	BFY33	2009	BSV84	2009	BSY28	20
CX19R CX20	2010	BF167 BF174	2016 2008	BF342	2034	BFV40 BFV41	2016 2016	BFY37 BFY-39	2016	BSV86	2009	BSY29	20
CX20R	2033	BF175	2016	BF343	2034	BFV42	2016	BFY39	2009 2016	BSV87 BSV88	2009 2033	BSY34 BSY38	20 20
CX58VII	2038	BF176	2016	BF343 BF344 BF345	2016	BFV43	2016	BFY39/1	2009	BSV89	2016	BSY39	20
CX58VIII CX70AG	2030	BF-180 BF180	2030 2015	BF345 BF355	2015 2012	BFV44 BFV45	2016 2016	BFY39/2 BFY39/3	2009 2009	BSV90 BSV91	2016 2016	BSY40 BSY41	20 20
CX70AH	2010	BF181	2015	BF357	2031	BFV46	2016	BFY39-1	2016	BSV92 BSV95	2016	BSY44	20
CX70AJ ICY13	2010	BF182 BF183	2015	BF362 BF363	2015 2015	BFV47 BFV49	2016	BFY47	2011	BSV95	2038	BSY45	20
CY15	2009	BF183A	2009	BF364	2016	BFV50	2016	BFY48 BFY49	2031 2013	BSV97 BSV98	2023	BSY46 BSY48	20 20
ICY16	2009	BF184	2016	BF365	2016	BFV51	2009	BFY56	2008	BSW11	2016	BSY49	20
CY17 CY18	2022	BF185 BF189	2016 2009	BF384 BF385	2038 2015	BFV53 BFV54	2009 2009	BFY63 BFY65	2038 2012	BSW12 BSW19	2016	BSY51	20
CY19	2022	BF194	2016	BF414	2021	BFV55	2009	BFY66	2012	BSW19A	2016 2034	BSY58 BSY59	20 20
CY21	2022	BF194B	2011	BF440	2034	BFV59	2011	BFY69	2031	BSW19VI	2034	BSY61	20
CY23 CY24	2022	BF195 BF195C	2016	BF441 BF450	2034	BFV60 BFV61	2013 2013	BFY69A BFY69B	2031 2031	BSW20A BSW20VI	2034	BSY62 BSY62A	20
CY25	2022	BF195D	,2011	BF451	2034	BFV62	2010	BFY72	2038	BSW24	2023	BSY63	20
ICY26 ICY27	2022	BF196 BF197	2016	BF456	2012	BFV80	2011	BFY73	2009	BSW32	2012	BSY68	20
V121	2022	BF197	2011 2016	BF457 BF458	2012 2012	BFV81 BFV81A	2034 2034	BFY74 BFY75	2009	BSW33 BSW34	2016	BSY70 BSY72	20

DEVICE	276-	DEVICE	276-	DEVICE 2	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	270
BSY73	2016	BYX60-300	1104	BZY85C9V1	562 563	C106Y	1067	C287A C288	2038 2038	C387A(TRANSI		C537(G) C537-01	200
3SY74 3SY75	2016	BYX60-400 BYX60-500	1104	BZY85C12 BZY85C13	563	C110 C111	2009	C288A	2038	C387G(TRANSI	STOR)	C537A	20
SY76 SY80	2033	BYX60-600 BYX60-700	1104 1114	BZY85C15 BZY85D12	564 563	C111E C122	2016	C300 C301	2009	C388	2015 2010	C537B C537C	20
SY89	2009	BYY-31	1104	BZY85D15	564	C128	2001	C302(JAPAN)	2009	C388(TRANSIS	TOR) 2010	C537D	20
SY91 SY92	2012 2030	BYY31 BYY-32	1104 1104	BZY88/6V2 BZY88/C6V2	561 561	C129 C131	2001 2009	C315 C317	2009	C388A C388ATV	2010 2010	C537D2 C537E	20 20
SY93	2016	BYY32	1104	BZY88/C9V1	562	C132	2009	C317-0	2009	C394	2013	C537EF	20
SY95 SY95A	2016 2016	BYY33 BYY34	1104	BZY88/C9V5 BZY88C9V1	562 562	C133 C134	2009	C317C :C318(JAPAN)	2009	C394(TRANSIS C394-0	TOR) 2013 2013	C537EH C537EJ	20
SY165	2009	BYY-35	1104	BZY88C12	563	C134B	2009	C318A(JAPAN)	2009	C394-O	2013	C537EK	20
SY168 T67	2009	BYY35 BYY36	1104 1104	BZY88C13 BZY88C15	563 564	C135 C136	2009	C319 C320	2009	C394GR C394R	2013 2013	C537F C537F1	20
T71	2009.	BYY37	1114	BZY92/C15	564	C137(TRANSIST	OR) 2009	C321	2009	C394W	2013	C537F2	20
-T-1000-139 -T1000-139	2011	BYY89 BYY91	1104 1114	BZY92C6V2 BZY92C9V1	561 562	C138(TRANSIST	OR) 2009 2009	C321H C321HA	2009 2009	C394Y C395	2013 2009	C537FC C537FV	20
TM50	1104	BZ-058	561	BZY92C12	563	C139(TRANSIST	OR) 2009	C321HB	2009	C395A	2009	C537G	20
TX068 TX-070	2009 2009	BZ-061 BZ-063	561 561	BZY92C15 BZY94/C12	564 563	C151 C157	2009 2009	C321HC C323	2009 2009	C395R C396	2009 2009	C537G1 C537GF	20
TX-094	2009	BZ-080	562	BZY94/C15	564	C158	2009	C324	2009	C400	2009	C537GI	20
TX-095 TX-096	2009	BZ-085 BZ-088	562 562	BZY94C12 BZY94C13	563 563	C159 C160	2009	C324A C324H	2009	C400-0 C400-R	2009 2009	C537HT	20
TX-2367B	2009	BZ-090	562	BZY94C15	564	C166	2009	C324HA	2009	C400-Y	2009	C537W	20
TX2367B	2031	BZ090	562	C00-68602300	2009	C167	2009	C328A	2009	C401(JAPAN) C402(JAPAN)	2009	C538	20
U029 U67	1104 2009	BZ-090(DIODE) BZ-090(ZENER)	1123 562	C1A 11	1104	C171 C173	2011 2001	C329 C329B	2011	C402(JAPAN)	2009	C538A C538AQ	20
U71	2009	BZ-092	562	C1H	1104	C174	2011	C329C	2011	C403	2009	C538P	20
UC97704-2 UY10	2009 2041	BZ-094 BZ094	562 562	C1.0E02 C2AJ102	1114	C174A C175	2011 2001	C350(TRANSISTO C350H	2009 2009	C403(C) C403A	2009 2009	C538Q C538R	20
UY11	2041	BZ-0900	562	C-10-20A 11	02(2)	C176	2001	C351	2011	C403C	2009	C538S	20
V25 V67	1104 2009	BZ-0901 BZ1-9	562 562		102(2) 102(2)	C177 C178	2001 2001	C351(FA) C352	2011	C404 C407	2009 2012	C538T C539	20
V71	2009	BZ1-90	562	C11S1C1E1C	1104	C182	2038	C352(JAPAN)	2009	C420	2030	C539K	20
W67 W71	2009	BZ9.1_ BZ-12	562 563	C13(TRANSISTOR)	2001	C182Q C183	2038 2038	C352A C356	2009	C423 C423B	2009 2009	C539L C539R	20
X090	562	BZ67	2009	C15(TRANSISTOR)	2009	C183E	2038	C360	2009	C423C	2009	C539S	20
X67 X71	2009 2009	8Z71 8Z-120	2009 563	C15-1 C15-2	2009 2009	C183J C183K	2038 2038	C360D C361	2009	C423D C423E	2009 2009	C540 C545	20
X909	562	BZ120	563	C15-3	2009	C183L	2038	C362	2011	C423F	2009	C545A	20
XY10 XY63	1114 562	BZ-145 BZ-150	564 564	C16 C16A	2009	C183M C183P	2038 2038	C363 C366	2009	C424 C424(JAPAN)	2016 2009	C545B C545C	20
Y67	2009	BZ150	564	C18	2009	C183Q	2038	C367	2009	C424(JAPAN)	2009	C545D	20
Y71	2009	BZX10	561	C21	2041	C183R	2038	C369	2009	C425	2009	C545E	20
Y100 Y100S	1114	BZX14 BZX17	562 563	C23H12B C26	J104.	C183W C184	2038 2038	C369BL C369G	2009	C425B C425C	2009 2009	C563A(3RDIF)	20
Y101	1104	BZ-X19	564	C28	2009	C184H .	2038	C369G-BL	2009	C425D	2009	C587	20
Y102 Y104	1104 1114	BZX19 BZX29C6V2	564 561	C29 C33	2009 2009	C184J C184L	2038 2038	C369GBL C369G-GR	2009 2009	C425E C425F	2009 2009	C587A C588	20
Y105	1114	BZX29C9V1	562	C36(TRANSISTOR)	2001	C185	2038	C369GGR	2009	C426	2030	C593	20
Y106 Y107	1104 1104	BZX29C12 BZX29C15	563 564	C37 C37(TRANSISTOR)	2009	C185(TRANSIST	OR) 2038 2038	C369GR C369G-V	2009	C440 C441	2009	C595 C596	20
Y108	1114	BZX48C6V2	561	C38	2009	C185J	2038	C369V	2009	C442	2016	C602E	20
Y109 Y111	1114 1104	BZX46C9V1 BZX46C12	562 563	C38(TRANSISTOR) C39-207	2009	C185M C185Q	2038 2038	C371 C371(0)	2009	C444 C450	2016	C605 C605(NEC)	20
Y112	1104	BZX46C13	563	C45	2009	C185R	2038	C371-0	2009	C454(A)	2009	C605(Q)	. 20
Y113 Y114	1104	BZX-46C15 BZX55C6V2	564 561	C47 C48	2009 2009	C186 · C187	2011 2011	C371-O C371-R	2009 2009	C454A C454C	2009 2009	C605K C605L	20
Y115	1104	BZX55C9V1	562	C48C	2009	C191	2009	C371B	2009	C454D	2009	C605M	20
Y116 Y117	1104	BZX55C12 BZX55C13	563 563	C49Y C50(TRANSISTOR)	2041	C192 C193	2009	C371G C371R	2009	C454L C454LA	2009 2009	C605Q C605TW	20
Y118	1114	BZX71C6V2	561	C50A	2001	C194	2009	C372	2009	C458LG(B)	2009	C606	20
Y119 Y121	1114	BZX71C9V1 BZX71C9V2	562 562	C52(TRANSISTOR)	2009	C195 C196	2009 2009	C372(0) C372-0	2009	C460 C460(A)	2010 2010	C606(NEC) C619	20
Y122	1104	BZX71CJ2	563	C54	2009	C197	2009	.C372-1	2009	C460(B)	2010	C619B	. 20
Y123 Y124	1104 1104	BZX71C13 BZX-71C15	563 564	C55 C56	2009	C200(TRANSIST C201(JAPAN)	OR) 2009 2009	C372-2 C372-O	2009	C460A C460B	2010 2010	C619C C619D	20
Y125	1104	BZX71C15	564	C60(DIODE)	1123	C202(JAPAN)	2009	C372-R	2009	C460C	2010	C620	20
Y126	1104	BZX72	562	C60(TRANSISTOR)		C203	2009	C372-Y	2009	C460D	2010	. C620C	20
Y127 Y127/ 5 00	1104	BZX72A BZX72B	562 562	C62(TRANSISTOR)	2009	C204 C205	2009	C372-Z C372GR	2009	C460GB	2010 2010	C620CD C620D	20
Y127/600	1114	BZX72C	562	C64	2009	C218	2009	C372H	2009	C460H	2010	C620DE	20
Y127/700 Y128	1114	BZX79C6V2 BZX79C9V1	561 562	C66-P11111-0001 C66-P11150-00001	2009	C218A C230	2009 2009	C372Y C375	2009 2011	C460K C460L	2010	C620E C621	20
Y129	1114	BZX79C12	563	C67	2009	C237	2009	C375-O	2011	C461	2013	C622	20
Y130 Y134	1104 1104	BZX79C13 BZX-79C15	563 564	C68 C71	2009	C239 C244	2009 2041	C377 C378	2009 2009	C461A C461B	2013 2013	C629 C631	20
Y135	1104	BZX79C15	564	C72	2001	C266	2011	C379	2009	C461C	2013	C631A	2
Y141 Y153	1104 1104	BZX83C9V1 BZX83C12	562 563	C73 C73(JAPAN)	2007	C267 C267A	2009 2009	C380 C380(TRANSIST	2013 DR) 2013	C461E C461L	2013 2013	C632 C632A	20
Y164	1104	BZX83C13	563	C75	2007	C281	2009	C380-0	2013	C468	2009	C633	2
Y1001 Y1002	1114 1114	BZX83C15 BZY18	564 563	C75(JAPAN) C76	2001 2007	C281A C281B	2009	C380-O/4454C	2013 2013	C468A C469	2009 2038	C633-7 C633A	21
Y1101	1114	BZY-19	564	C76(JAPAN)	2001	C281C	2009	C380A-0(TV)	2013	C469A	2038	C633G	2
Y1102 Y1200	1114 1114	BZY19 BZY59	564 561	C77 C77C	2001 2001	C281C-EP C281D	2009 2009	C380A C380A(O)	2013 2013	C469F	2038 2038	C633H	2
Y1201	. 1114	BZY63	562	C78	2001	C281EP	2009	C380AO	2013	C469Q	2038	C634A	2
Y1202 YX10	1114 1114	BZY66 BZY68	561 562	C83-829 C83-880	1104 1104	C281H C281HA	2009 2009	C380A-R C380A-R(TV)	2013 2013	C469R C475	2038 2009	C640 C640B	2
YX12/400	1114	BZY69	563	C87	2009	C281HB	2009	C380ATV	2013	C475K	2009	C645	2
YX13/600 YX22/200	1114	BZY83/C15 BZY83/D15	564 564	C89	2001	C281HC C282	2009	C380AY C380D	2013 2013	C476 C-505	2009 1102	C645A C645B	2
YX22/400	1104	BZY83C6V2	561	C91	2001	C282H	2009	C380R	2013	C520(TRANSIS	TOR) 2041	C645C	2
YX22/600	1104	BZY83C9V1	562 563	C100 C100-OY	2009	C282HA C282HB	2009	C380R/4454C C380Y	2013 2013	C520Å C521	2041 2041	C645G C645N	20
YX22/800 YX36/150	1114 1104	BZY83C12 BZY83C13V5	563	C103	2009 2009	C282HC	2009	C381	2011	C521A	2041	C647Q	20
YX36/300	1104	BZY-83C15	564	C103(JAPAN)	2009	C283	2009	C381-0	2011	C529	2009	C647R	20
YX36/600 YX36-300	1104 1104	BZY83C15 BZY83C16	564 564	C103A(TRANSISTO	2009	C283(TRANSIST	2009 2009	C381-O C381-R	2011 2011	C529A C535	2009	C650B C652	20
YX36-600	1104	BZY83D12	563	C104	2009	C284H	2009	C381BN	2011	C535A	2013	C654	20
YX58-50 YX58-100	1102 1102	BZY-83D15 BZY83D15	5 64 5 6 4	C104A C105	2009	C284HA C284HB	2009	C381R C385(TRANSIST	2011 OR) 2011	C535B C535C	2013	C655 C656	20
YX58-200	1102	BZY85/C15	564	C106A	1067	C285	2009	C385A	2011	C535G	2013	C657	20
YX60-50	1104	8ZY85/D15	564	C106B	1067	C285A	2009	C387(TRANSIST		C537	2009	C664	20

The street of the street of the

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
C664C C668	2041	C764 C765	2012 2041	C839 C839(H)	2009	C934(RECTIFIER) C934(TRANSISTOR	1104	C1390YM C1393	2009	CB5 CB10	1104	CD6150 CD6157	200
668-0 668A	2013 2013	C768 C772	2041	C839(J) C839(M)	2009	C934C C934D	2009	C1394	2011	CB20	1104	CD6161P1N013-75	112
668B	2013	_C772B	2011	C839A	2009	C934E	2009		2015 2011	CB50 CB-10	1104 2007	CD6375 CD8000	200
668B1 668BC2	2013 2013	C772BG C772BH	2013 2013	C839B C839C	2009 2009	C934F C934G	2009	C1417C C1417D	2011 2011	CB106 CB150	1123 1104	CD8000-1 CD-8457	200
668C 668C1	2013 2013	C772BV C772BX	2013	C839D C839E	2009 2009	C934P C938	2009 2009	C1417D(1) C1417DU	2011 2011	CB163 CB200	1123 1104	CD8457 CD8547	110
668C0 668D0	2013 2013	C772BY	2013	C839F C839H	2009	C938A C938B	2009	C1417F C1417G	2011	CB246 CB250	2009	CD9525	200
668D 668D1	2013 2013	C772C1 C772C2	2013 2013	C839J C839L	2009	C938C C941	2009	C1417H C1417U	2011	CB393	1104	CD12000 CD13332	200 110
668DE	2013	C772CK	2013	C839M	2009	C941-0	2009	C1417V	2011 2011	CC102BA CC102DA	1104 1104	CD13333 CD13334	110 110
668DV	2013	C772CL .C772CS	2013 2013	C839N C839S	2009	C941-O C941-R	2009	C1417VW C1417W	2011 2011	CC102FA CC102HA	1.104 1104	CD13335 CD13336	110
668DX 668DZ	2013 2013	C772CU C772CV	2011 2013	C844 C847	2009 2009	C941-Y C941R	2009 2009	C1424 C1437	2015 2007	CC102KA CC102MA	1104 1104	CD13337 CD13338	110
668E 668E1	2013 2013	C772CX	2011 2013	C848 C849	2009 2009	C943 C943A	2009 2009	C1438 C1542	2007 2009	CC102PA CC102RA	1114	CD13339 CD-84857	110
668E2 668EP	2013 2013	C772DJ C772DU	2013 2013	C850 C851	2009	C943B C943C	2009	C1547 ~ C1639	2015	CC102VA	1114	CD86003	110
668EV	2013	C772DV	2013	C870	2009	C944	2009	C1674	2009 2013	CC152VA CC1168F	1114 2009	CD-860037	102(2
668EX 668F	2013	C772DX	2013 2013	C870BL C870E	2009	C944A C944B	2009	C1674K C1674L	2013 2013	CC59018F CCS1235G	2030	CD860037 CD3112039	110 56
689 689H	2009 2009	C772E C772F	2013 2013	C870F C871	2009 2009	C944C C944D	2009 2009	C1674M C1675	2013 2013	CCS2001H CCS2004	2009 2009	CD3122055 CD3212055	56 56
694D 695	2009	C772K C772KB	2013 2013	C871BL C871D	2009 2009	C944K C960	2009 2009	C1675K C1675L	2013 2013	CCS-2006D CCS4004	2030 2009	CD3212055(ZENER) CDC86X7-5	
701(TRANSIST		C772KC C772KD	2013	C871E C871F	2009	C966 C967	2009	C1675M C1686	2013	CCS6168 CCS6168F	2009	CDC430	200
705 705B	2011	G772KD1 C772KD2	2013 2013	C871G C894	2009	C968 C968P	2009	C1687	2009	CCS9018E	2009	CDC731 CDC745(ZENITH)	200
705C	2011	C772R	2013	C896	2009	C984	2009	C1688 C1739	2009	CD-0000 CD0000	1123	CDC746 CDC1201BC	200
705D 705E	2011	C772R(JAPAN) C772RB-D	2013 2013	C899 C899K	2009 2009	C984A C984B	2009	C1816 C1908E	2011	CD0000/7825B CD-0000N	1123	CDC2010 CDC2010C	200
705F 705TV	2011 2011	C772RD C773	2013 2009	C903D C913	2013 2009	C984C C991	2009 2009	C1964 C2300.037-096	2020 2009	CD0000NC CD000	1102 1123	CDC2010D CDC2510C	200
707 707H	2011 2011	C773C C773D	2009	C917 C917K	2013 2013	C992 C1000-Y	2009 2009	C2538-14 C3710	2009	CD-00-9 CD0014	1102	CDC2510C-G	20
709 7098	2009	C773E C784	2009	C920 C920E	2011	C1001	2016	C4011	561	CD0014(MORSE		CDC2510G CDC4023A130	200
709C	2009	C784-0	2013	C920Q	2011 2013	C1004 C1007	2013 2009	C4015 C4018	562 563	CD-0014N CD0014NA	1123 2009	CDC5000 CDC8000	20
709CD	2009	C784-O C784A	2013 2013	C920R -C921	2013 2011	C1023(JAPAN) C1023-O	2011	C4020 C-4401	564 1102	CD0014NG CD0015N	2009	CDC-8000-1	20:
10 10(B)	2009 2009	C784BN C784R	2013 2013	C921C1 C921K	2011	C1023-Y C1023G	2011	C5005 C6090	1123 702	CD0021 CD-0033	2009 561	CDC-8001 CDC8001	20
'10(D) '10-1	2009 2009	C784Y C785	2013 2011	C921L . C921M	2011 2011	C1026 C1026G	2011	C6102P C6103P	038 017	CD0033 CD05	. 561	CDC8011B	20
10-2 10-4	2009	C785(0) C785BN	2013	C922 C922A	2011	C1026Y	2011	C7076	2016	CD2	1104 1104(2)	CDC8021 CDC8054	200
10B	2009	C785D	2013	C922B	2011	C1032G	2011	C7335-BL C7350RN	2009 2009	CD-2N CD-4	1104 1104	CDC8201 CDC8457	203
10BC 10C	2009 2009	C785E C785R	2013 2013	C922C C922K	2011	C1032Y C1033	2011	C7840 C9080	2013	CD4 CD-20	1104 1102	CDC12000 CDC12000-1C	200
10D 10E	2009 2009	©786 €793	2013 2041	C922L C922M	2011	C1033A C1047	2009	C9082	2023	CD31-00008 CD31-00012	561 562	CDC12018C CDC12030B	200
12 12A	2009	C793BL C793R	2041 2041	C923E C925	2009 2009	C1047B C1047C	2013 2013	C9604 C10110	2009 1104	CD31-00015 CD31-00017	563	CDC12077F	200
712C 712D	2009 2009	C793Y C794R	2041	C929	2013	C1047D	2013	C10159	1104	CD31-10365	564 564	CDC12108 CDC13000	200
712E	2009	C796	2009	C929-0 C929B	2013 2013	C1047E C1071	2013	C10176 C10279-1	2009	CD31-12019 CD31-12022	562 563	CDC-13000-1 CDC13000-1	200
12W 13	2009	C799 C800	2020 2011	C929C C929C1	2013 2013	C1123 C1126	2011	C10279-3 C12711	2009 2009	CD31-12024 CD31-12039	564 562	CDC1300G-1B CDC1300G-1C	200
714 715(JAPAN)	2009	C815 C815(M)	2009	C929D C929D1	2013 2013	C1128(3RD-IF) C1128D	2010	C13901 C21382	2009 1104	CD-37 CD37	1102	CDC-13009-1D CDC13000-1D	200
715A 715B	2009 2009	€815A €815B	2009 2009	C929DE C929DP	2013 2013	C1159 C1173(RF-PWR)	2011 2020	C21383 C21480	562 1123	CD-37A CD37A	1102	CDC13000-18	200
15C 15D	2009 2009	CB15C CB15F	2009	C929DU C929DV	2013	C1175	2009	C23018	1122	CD37A2	1102 1104	CDC13000C CDC13016A	200
15E	2009	C815K	2009	C929E	2013 2013	C1175C C1175D	2009	C36580 C248507	2009 1104	CD38 CD446	2009 2009	CDC13019B CDC13500-1	200
715EJ 715EV	2009	C815L C815M	2009	C929ED C929F	2013	C1175F C1187	2009	C255110-011 C256125-011 C523383	1102 1122	CD461 CD461-014-614	2041 2041	CDC15018 CDC25100-6	200
15F 15XL	2009 2009	C815S C815SA	2009	C929FK C930	2013 2013	C1217 C1237E	2012 2020	C1945295DY1	2030 2009	CD541 CD1111	017 1104	CDC60132 CDC4306813	20
16 16B	2009 2009	C815SC C825	2009	C930B C930BK	2013 2013	C1244 C1260	2009	C6141990 C6862400	1102	CD1112 CD1113	1104	CDG-00	11
16C 16D	2009 2009	C828AS C829	2009 2009	C930BV C930C	2013 2013	C1293A(LAST-IF) C1293B(3RD-IF)	2010 2010	CA-092 CA10	562	CD1114	1104	CDG005	11
16E 16F	2009	C829A	2009	C930CL	2013	C1293B(LAST-IF)	2010	CA20	1104 1104	CD1115 CD1116	1104 1104	CDG025 CDG-20	11
16G	2009	C829B C829BC	2009	C930CS C930D	2013 2013	C1307 C1359	2020	CA50 CA90	1104 1102	CD1121 CD1122	1104	CDG-20/494 CDG-21	11
17(FINAL-IF) 20	2010 2016	C829C C829D	2009	C930DE C930DS	2011 2013	C1359A C1359B	2013 2013	CA100 CA102BA	1104 1104	CD1123 CD1124	1104	CDG-22 CDG22	110
22	2016 2009	C829R C829X	2009	C930DT C930DT-2	2013 2013	C1359C C1360	2013	CA102DA CA102FA	1104 1104	CD1125 CD1126	1104	CDG-24 CDG24	110
25-0 35-0	2009 2009	C829Y C835	2009 2011	C930DX	2013 2013	C1361 C1362	2009	CA102HA CA102MA	1104	CD1127	1104	CDG24/3490	11
735-R 736	2009 2041	C836M C837	2009	C930E C930EP	2013	C1363	2009	CA102PA	1104 1114	CD1141 CD1142	1104 1104	CDG27 CDJ-00	110
38	2011	C837F	2011	C930ET C930EV	2011 2013	C1364 C1364A	2009	CA102RA CA102VA	1114 1114	CD1143 CD1147	1104 1104	CDK-4 CDQ1018	20
38C 38D	2011	C837H C237K	2011	C930EX C930F	2013 2013	C1372Y C1377	2009	CA150 CA152VA	1104 1114	CD1148 CD1149	1104	CDQ1021 CDQ1024	20
739 739C	2011	C837L C837WF	2011	C933 C933BB	2009 2009	C1390A C1390i	2011 2009	CA200 CA250	1104 1104	CD1151 CD1224	1104 1102	CDQ10001 CDQ10002	200
741	2009	CE38A CE38B	2009	C933C C933D	2009	C1390J	2009	CA741CT	007	CD4116	563	CDQ10003	200
752 752 G	2009	C838C	2009	C933E	2009	C1390K C1390V	2009	CA1020A CA1458S	1104 038	CD4117 CD4118	563 563	CDQ10004 CDQ10005	20
60	2009	C838D C838E	2009 2009	C933F C933FP	2009 2009	C1390W C1390WH	2009 2009	CA3741CT CA6664	007 1104	CD4121 CD4122	563 563	CDQ10006 CDQ10007	200
63 (63(C)	2011	C838F C338H	2009	C933FPC C933FPD	2009	C1390WI C1390WX	2009	CA6665 CA7248	1104	CD5002 CD5003	1122 1102	CDQ10008 CDQ10009	200
763B 763C	2013 2013	C338J C338K	2009	C933FPE C933FPF	2009	C1390WY C1390X	2009	CA8314 CA-9011H	1104	CD-5038 CD6016	1122	CDQ10010 CDQ10016	200
763CD 763D	2013	C338M	2009	C933FPG C933G	2009	C1390XJ	2009	CAC5028A	2011	CD6016-013-689	1122	CDQ10017	200
	2013	3330A	2009	J333G	2009	C1390XK	2009	CAM-12	2009	CD6019	2009	CDQ10018	20

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	270
DQ10019	2009	CF-2 CF2	2009 2009	CK759 CK759A	2007 2007	CS-460B CS696	2009 2009	CS2006F CS2007G	2013 2009	CS-9013HE CS9013HE	2031	CX-0052 CX-0054	56 11
DQ10021	2009	CF5	2009	CK760	2007	CS697	2009	CS2007H	2009	CS9013HF	2009	CX-0055	110
DQ10022 DQ10023	2009	CF11 CF14	2038 2010	CK760A CK761	2007	CS706 CS718	2009 2009	CS2008 CS2218	2009 2009	CS9013HG CS9013HH	2009	CX-9001 CX9001	111
DQ10024	2009	CF102DA	1104	CK768	2007	CS718A	2009	CS2219	2009	CS9014(C) CS9014/3490	2009 2009	CXL100	20 20
DQ10025 DQ10026	2009 2009	CF102PA CF102RA	1114 1114	CK776 CK776A	2007 2007	CS720A CS-901ZHF	2009 2032	CS2221 CS2222	2009 2009	CS9014/3490	2009	CXL101 CXL103	20
DQ10027	2009	CG1	2009	CK942	2022	CS925M	2009	CS2369	2009	CS-9014B CS9014B	2009 2009	CXL107 CXL109	20
DQ10028 DQ10032	2009 2009	CG12E CG64H	1123	CL05 CL010	1104	CS1068 CS-1120C1	2009	CS2481 CS2711	2009	CS9014B-C	2009	CXL110	-11
DQ10035	2009	CG65H	1123	CL025	1104	CS-1120C2	2009	CS2712	2009	CS9014C	2009	CXL112 CXL116	11
DQ10036 DR-2	2009 1104	CG66H CG74H	1123 1123	CL1 CL1.5	1104	CS-1120D1 CS-1120H	2009	CS2713 CS2714	2009 2009	CS9014C/3490 CS-9014D	2009	CXL117	11
DR-4	1104	CG86H	1123	CL2	1104	CS-11201	2031	CS2922	2009	CS9014D CS9014G	2009	CXL123A CXL130	20
DS-16B DZ-9V	1104 562	CG23018 CGD462	1122 1123	CL3 CL4	1104	CS1120I CS1166	2030 2009	CS2923 CS2924	2009 2009	CS9015	2009	CXL132	20
DZ-C9V	562	CGD591	1123	CL5	1104	CS1166D CS1166D-G	2009	CS2925 CS2941	2009 2032	CS9015B CS9016	2009 2031	CXL133 CXL137	20
E0360/7839 E0361/7839	2009 2009	CGD685 CGD1029	1123 1123	CL6 CL7	1104	CS1166E	2031 2009	CS3001B	2009	CS9016(G)	2009	CXL139	- 1
E0362/7839	2009	CGE-61	2010	CL8	1104	CS1166F	2009	CS3390	2009	CS-9016D	2011	CXL142 CXL145	
E0398/7839 E0495/7839	1104 1123	CGE-500 CH119D	1102 1104	CLM05 CLM1	1104	CS1166G CS1166H	2009	CS3391 CS3391A	2009	CS9016D CS9016E	2013	CXL177	1
E37	1102	CHAZ6.2	561	CM7163	2031	CS1166H/F	2009	CS3392	2009	CS9016EF	2009	CXL178MP	1
E502 E504	1104 1104	CHAZ6.2A CHAZ62.A	561 561	CM8470 CMC334-423	1104	CS1168F CS1168G	2009	CS3393 CS3394	2009	CS9016F CS9016F(TRUE)	2013 ONE)	CXL519 CXL5013	1.
E506	1104	CI2712	2009	CMO770	2009	CS1168H	2009	CS3395	2009		2030	CXL5018	
E508 E510	1114 1114	CI2713 CI2714	2009 2009	CO49 COD1-6045	1104 1104	CS1226N CS1229	2009 2009	CS3396 CS3397	2009 2009	CS9016F(WEST	2009	CXL5021 CXL5024	
E4001B	2009	C12923	2009	COD1-6046	1104	CS1229A	2009	CS3398	2009	CS9016FG	2009	CXL5452	10
E4001E E4003E	2009	C12924 C12925	2009	COD1-6047 COD1-6048	1104	CS1229B CS1229C	2009 2009	CS3402 CS3403	2009	CS9017 CS9017F	2031	CXL5454 CXL5455	10
E4004C	2009	C12926	2009	COD1531	1104	CS1229D	2009	CS3404	2009	CS9018	2031	CXL6453	1:
E4008B	2013	C13390	2009 2009	COD1532	1104	CS1229E CS1229F	2009 2009	CS3405 CS3414	2009 2009	CS-9018D CS9018EF	2030 2009	CY40 CY50	1
E4008C EC6050	2013 1104	CI3391 CI3391A	2009	COD1533 COD1534	1104	CS1229G	2009	CS3415	2009	CS9018FG	2009	CY100	1
ER6B	1104	CI3392	2009	COD1535	1104	CS1229H	2009 2009	CS3416 CS3417	2009 2009	CS9019 CS9021HF(LAST	2013	CZ-092 CZ092	
ER67 ER67A	1104	CI3393 CI3394	2009 2009	COD1536 COD1537	1104 1114	CS1235C CS1235E	2009	CS3605	2009	CS9021HG(LAS		CZ-92	
ER67B	1104	CI3395	2009	COD1538	1114	CS-1235F	2009	CS3606	2009	CS9101B	2009	CZD012-5 CZD015	-
ER67C ER68	1104 1104	C13396 C13397	2009	COD1551 COD1552	1104	CS1235G CS1236D	2009	CS3607 CS3843	2009 2009	CS-9104 CS-9125B	2009	CZD015	000
ER68A	1104	CI3398	2009	COD1553	1104	CS1236H	2009	CS3844	2009	CS9125B	2009	D004	1
ER68B ER68C	1104	CI3402 CI3403	2009 2009	COD1554 COD1555	1104	CS-1238F CS1238F	2009	CS3845 CS3854	2009 2009	CS9126 CS9600-4	2009	D006 D009	2
ER-69	1104	CI3404	2009	COD1556	1104	CS-1238P	2009	CS3854A	2009	CS9600-5	2009	D-00169C	1
ER69 ER69A	1104 1104	CI3405 CI3414	2009 2009	COD1575 COD1611	1104 1104	CS1238P CS-1244X	2009 2030	CS3855 CS3855A	2009 2009	CS-12941 CS13401	2031 2009	D-00184R D-00204R	1
ER69B	1104	CI3415	2009	COD1612	1104	CS1245F	2009	CS3859	2009	CS-90111	2009	D-00269C	1
ER69C ER70	1104	C13416 C13417	2009	COD1613 COD1614	1104	C\$1245G C\$1245H	2009	CS3859A CS3860	2009	CS90111 CS90144	2009 1101	D-00384R D-00469C	-
ER70A	1104	C13900	2009	COD1615	1104	CS12451	2009	CS3900	2009	CT100	1104	D-00484R	
ER70B ER70C	1104 1104	CI3900A CI3901	2009 2009	COD1616 COD1617	1104 1114	CS1245T CS1250E	2009 2009	CS3900A CS3901	2009 2009	CT200 CT300	1104 1104	D-00569C D-00669C	- 1
ER-71	1104	CI4256	2009	COD1618	1114	CS1257	2009	CS3903	2009	CT461	1123	D01-100	1
ER71 ER71A	1104 1104	CI4424 CI4425	2009 2009	COD11556 COD15524	1104 1104	CS-1258 CS1258	2030 2009	CS3904 CS4001	2009 2038	CT600 CT1012	1104 2011	D-05 D05	1
ER71B	1104	CII-225-Q	2041	COD15534	1104	CS-1259	2031	CS4003	2013	CT1013	2011	D019	2
ER71C ER-71CA	1104 1104	CIL-531 CIL-532	2009 2009	COD15544 COD15564	1104 1104	CS1259 CS1283A	2009 2009	CS4021 CS4060	2013 2013	CT2002 CT2007	1123 1123	D028 D031(CHAN.M	ASTER
ER72	1114	CJ5201	2009	COD16047	1104	CS1286	2009	CS4061	2013	CT-3003	1104		2
ER72A	1114	CJ5202 CJ5203	2009 2009	CODI1531 CODI6045	1104 1104	CS1288 CS1289	2009 2009	CS4193 CS4194	2031 2031	CT3003 CT-3005	1104 1104	D048 D053	2
ER72B ER72C	1114	CJ-5206	2009	CODI6047	1104	CS1295E	2009	CS4424	2009	CT3005	1104	D072	2
ER72D	1114 1114	CJ5206 CJ-5207	2009 2009	CODI11556 CODI15534	1104 1104	CS1295G CS-1305	2009 2030	CS4425 CS5088	2009 2009	CTN50 CTN100	1114	D078	1
ER72F ER73	1114	CJ5207	2009	CODI15544	1104	CS-1330	2009	CS5369	2009	CTN200	1104	D1-2	1
ER73A	1114	CJ-5208	2009 2009	CODI15564 CODI115524	1104 1104	CS1330D CS1340I	2030 2009	CS-6168F	2031	CTN400	1114	D1-7 D1-8	- 1
ER73B ER73C	1114	CJ-5211 CJ5211	2009	CP102	1114	CS1344	2009	CS-6168G	2009	CTN500	1114	D1-20	1
ER73D ER73F	1114		2009 2009	CP102BA	1104 1104	CS1345 CS1348	2009 2009	CS-6168H CS-6225E	2009 2011	CTN600 CTN800	1114	D1-26 D1-52S	
ER500	1114 1104	CK14	2007	CP102DA CP102FA	1104	CS1349	2009	CS6225E	2030	CTN 1000	1114	DIA .	2
ER500A ER500B	1104	CK14A	2007 2007	CP102HA CP102KA	1104 1104	CS1353	2009 2030	CS-6225F CS-6225G	2009 2009	CTP50 CTP100	1114 1114	D1D D1E	
ER500B	1104 1104		2007	CP102MA	1104	CS-1361E	2009	CS-6227E	2009	CTP200	11.14	D1G	
ER670	1104	CK17	2007	CP102PA	1114	CS-1361F	2009 2031	CS-6227F CS6229F	2009 2009	CTP300 CTP400	1114 1114	D1H D1J	1
ER670A ER670B	1104 1104	CK17A CK25	2007 2007	CP102RA CP102VA	1114 1114	CS1361G	2009	CS6229G	2009	CTP461	1123	D1J70544	1
ER670C	1104	CK25A	2007	CP103	1114	CS1362	2009	CS7229G CS9010	2009 2031	CTP500 CTP573	1114 1123	D1J70545	No.
ER680 ER680A	1104 1104	CK26 CK26A	2007 2007		1714 2041	CS1368	2009 2009	CS-9011	2009	CTP600	1114	D1L .	
ER680B	1104	CK27	2007	CP401	2041	CS1368A	2009	CS9011	2013	CTP800 CTP1000	1114	D1R35	B ()
ER680C ER690	1104 1104		2007 2007		2041 2041		2009 2009	CS9011(E)(F) CS9011(EF)	2009	CTP-2001-1007	2009	D1R39	
ER690A	1104	CK131	1101	CP406	2041	CS1368D	2009	CS9011(GH)	2009	CTP-2001-1008	2009	DIY	
ER690B ER690C	1104 1104		2001 2001		2041 2041		2009 2009		2009 2009	CTP-2001-1011	1123 1104	D1Z D1ZBLU	
ER700	1104	CK398	2012	CP3212055	562	CS1372	2009	CS9011E	2009		1104	DIZYEL	
ER700A ER700B	1104 1104		2016 2010		1123 1104		2009 2009	CS-9011F CS9011F	2009	CV425	1123	D-2 D2-1	è
ER700C	1104	CK474	2016	CR101/6515,	1123	CS-1386H	2009	CS-9011G	2009	CV442	1123	D2-77-1	3 3
ER710 ER710A	1104 1104		2016 2016		1123 1102		2009 2009	CS9011G CS9011G/349	2009 0 2009	CX0036 CX-0037	1123 1104	D2G-3 D2G-4	
ER710A ER710B	1104	CK477	2016	CR501/6515 -	1104(2)	CS1463A	2009	CS9011H	2009	CX0037	1104	D2H(DIODE)	-
ER710C	1104	CK661	2007		1104 563		2009 2009		2009 2009		1104 1104	D2J D2R31	
ER720 ER720A	1114 1114	CK705	2007 1123	CR1034	1104	CS1585G	2009	CS9011N	2009	CX-0040	1104	D2R38	2
ER720B	1114	CK706	1123	CR1035	1104	CS1585H	2011	CS-9012HF	2032 ST-IF) 2010	CX0040	1104 1123	D2T918 D2U	1
ER720C ER730	1114	CK706P	1123 1123	CS16E	1104	CS1665	2009 2009	CS-9013	2009	CX-0047	1123	D2X4	
ER730A	1114	CK710	1101	CS131D(AXIAL)	1104	CS2001H	2009	CS9013A	2009	CX0047	1104 1104	D2Z D3A	8
ER730B ER730C	1114		1123 2007		2009 2009		2009 2009	CS9013B CS9013C	2009 2009	CX0048	1104	D3F	
		CK731	1101		2009		2009		2009		1104		110

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
D3H D3R	561	D43	2001	D1201F	1104	DDCY006001	2036	DND800	1102	DS16NA	1114	DS130YE	110
3R38	1104 1104	D43A D44	2001 2001	D1201M D1201N	1114	DDE-201 DDFY004002	1104	DO31 DO83	2009	DS16NB DS16NC	1104	DS-131 DS131	110
3R39 3U	1104 1104	D45C D45CZ	1104 1104	D1201P D1420	1114	DDMV-1	1123	DO85	2001	DS-16ND	1104	DS-131A	110
)3V	1104	D48	1104	D1421	2035	DDMV-2 DE14	1123	DO87 DO88	2011	DS16ND DS-16NE	1104	DS131A DS-131B	110
03W 03Y	563 561	D50 D53	1104 2041	D1445 D2201M	1104 1104	DE14A DE16	1104	DP100	1114	DS16NE	1104	DS131B	110
)3Z	1104	D65C	1104	D2201N	1104	DE16A	1104	DR1 DR1PR	1104	DS-16NY DS-16YA	1104	DS-132 DS-132A	110
04D24 04D25	2030 2009	D68 D69	1104 2041	D2600EF D3005VN	1104	DE-201 DE201	1104	DR2	1104	DS-17	1104	DS132A	110
04D26	2009	D77	1102	D3356	1102	DER1	1104	DR3 DR4	1104 1104	DS17(ADMIRAL) DS-17-6A	1104	DS-132B DS132B	110
04L 04M	1114 1104	D77(DIODE) D80	1102 2041	D3436 D3530	1104 1101	D-F1 DF1	2001	DR5 DR100	1104	DS17N DS-18	1104	DS159	56
04R	1123	D81	2041	D6462	1102	DF-2	2041	DR200	1104	DS18	1104	DS160(G.E.) DS-410	110
04R26 04R39	1104 1104	D81K D82	1104 2041	D6623 D6623A	1104	DFFY007001 DG1N	1102 1104	DR291 DR300	1123 1104	DS-18(DELCO) DS18N	1123 1104	DS410 DS-410(AMPEX)	112
05B 05G	564 1104	D82A D85C	2041	D6624	1104	DG1PR	1104	DR351	1123	DS-19(RECTIFIER)	1104	DS410(COURIER)	110
5R35	1104	D88	1114 1114	D6624A D6625	1104	D-GM-2 DGM-2	1123	DR352 DR365	1123 1123	DS21 DS-22	2007 2007	DS410(EMERSON) DS410(FANON)	110
)5R39)5V	1104 1102	D100 D101	1104 2001	D6625A D6726	1104	DGM-3	1123	DR385	1123	DS22	2007	DS410(G.E.)	112
5W	561	D105C	1114	D8410	1123	DGM3 DH-001	1123	DR400 DR426	1104	DS23 DS25	2007	DS-410(MOTOROL	۹) 200
06HZ 06.2	1104 561	D108 D133	1114 2030	D10167 D10168	1104 1104	DH-002 DH4R2	1104 1104	DR427 DR434	1104	DS-27	1123	DS410(OLYMPIC)	110
7A30	2008	D144S	1104	D21489	1104	DH14	1104	DR435	1123	DS27 DS-28(DELCO)	1123 2007	DS410(WESTINGHO	110
)7E)7Z	1102 1102	D146 D147	2041 2041	D101167 D917254-2	1104 2009	DH14A DH16	1104 1104	DR449 DR464	1123 1123	DS31	1123	DS410R	110
8HZ	1114	D151	2041	D919039-2	1122	DH16A	1104	DR500	1104	DS-31(DELCO) DS31(DELCO)	1102 1123	DS410R(G.E.) DS-430	112
18U 10B1051	562 2011	D160 D161	2011	D921881-1 D926640-1	2009	DHD800 DHD805	1102 1102	DR600 DR668	1104 1104	DS-32 DS32	1123 1123	DS430 DS441	110
10B1055	2011	D162	2001	D928121	2009	DHD805(ZENER)	564	DR669	1104	DS-33	1123	DS-442	110
10G1051 10G1052	2011	D163 D164	2041	D4000411 D34003220-001	017 1102	DHD806 DHD8001	1.102 1102	DR670 DR671	1104	DS33(DELCO) DS-38	1123 1104	DS442 DS-442(SEAFS)	110
11 11C1F1	2001 2030	D167 D175	2001	DA000	1104	Di-1	1123	DR695	1104	DS38(CRAIG)	1104	DS442FM	110
11C2D1B20	2030	D176	2041 562	DA001 DA002	1104 1104	Df-2 Df-3	1123 1102	DR698 DR699	1104 1104	DS38(SANYO) DS41	1104 2005	DS448 DS-509	110 204
11C5F1 -12	2030 1102	D180M D188	2041 2041	DA058 DA90	1114 1123	DI-7 DI7	1104	DR700	1114	DS-43	562	DS509	204
12	2041	D188A	2041	DA205	1102	Di-8	1104 562	DR800 DR826	1114	DS43 DS-44	562 2009	DS-514 DS-519	204
15 15A	2041 1104	D188B	2041	DA2068 DAAY002001	1114	DI-8(COURIER)	562	DR848	1104	DS44	2009	DS519	204
15C	1104	D195	2001	DAAY003002 .	1104	DI-8(DIODE) DI-20	1123	DR863 DR900	1104 1114	DS-45 DS45	2009	DS1005-1X8628 DS1-104-2	112
16 16E7	2041	D195A D200	2001 1104	DAAY004001 DAAY010092	1102 562	DI-42S DI42S	1104 1104	DR1000 DR1575	1114	DS-46	2009	DS-IM	110
16E9	2009	D200MP	1102	DANZ006000	1123	DI-46	1104	DR5101	1102 1104	DS46 DS-47	2009	DSS16685 DT18(CHAN.MASTE	112 ER)
16EC18 16G6	2009	D201 D201(O)	2041	DANZ0060000 DASZ158860	1123	DI46 DI-52S	1104 1104	DR5102 DRC-87540	1104 2009	DS47 DS48	2009	N T	110
16K1	2011	D201M	2041	DBCZ039404	2013	D152S	1104	DRS1	1104	DS-51	562 2004	DT161 DT230A	200 110
16K2 16K3	2011	D201Y D211	2041	DBCZ073304 DBCZ073504	2009	DI-55 DI-56	1104	DRS101 DRS102	1104	DS-52 DS53	2004	DT230F	110
16K4	2011	D212	2041	DBCZ083905	2013	D156	1104	DRS104	1104	DS56	2007	DT230G DT1510	110
-18 18	562 1104	D215 D-215-1	2001	DBCZ083906 DBCZ136406	2009	DI-71 DI-72S	1104	DRS106 DRS107	1104	DS58(SANYO) DS-65	1104 2004	DT1511 DT1520	203
19	2001	D220	1104	DC-13	1123	D172S	1104	DRS108	1114	DS-66	2009	DT1602	201
20 21	2001 2001	D220M D227	1104 2009	DC8457 DD-000	1102 1104	DI-172S DI-645	1104 1104	DS-0065 DS0065	1104 1104	DS66 DS-66L	2009	DT1603 DT1610	201
22 23	2001	D227(DIODE)	1104	DD-003	1104	DI645	1104	DS-1	1104	DS-66W	2009	DT1612	201
24A3394	2016	D227A D227B	2009	DD003 DD-006	1104 1104	DI-646 DI646	1104 1104	DS1 DS1-002-0	1104	DS-67 DS67	2009	DT1613 DT4011	201
25 25A	1104	D227C D227D	2009	DD006 DD-007	1104	DI-647	1104	DS1B	2009	DS-67W	2009	DT4110	204
25B ′	1104	D227E	2009	DD-007	1104	DI-648 DI-649	1104	DS-1K DS1K	1114	DS67W DS-71	2009	DT4111 DT4120	204
25C 26A	1104 2041	D227F	2009	DD056 DD058	1104 1114	DI-650 DI-705	1114	DS1K7 DS-1M	1104	DS71	2031	DT4121	204
26B	2041	D227R	2009	DD-79D107-1	2041	DI-1649	1104	DS-1N	1104	DS-72 DS72	2011	DTS-103 DU3	204
26B1 26B2	2016 2016	D227S D227W		DD175C DD176C	1104 1104	DI1649 DICR1	1104	DS1N DS-1P	1104	DS-73	2011	DU400	110
26C	2041	D241H	2041	DD177C	1104	DID	1114	DS1P	1104 1104	DS73 DS-74	2011	DU600 DU800	110
26C1 26C2	2031	D286 D292(CHAN.MAS	1123 STER)	DD236 DD266	1104	DIE	1104 1104	DS-1U DS2	1104	DS74	2031	DU1000	111
26C3	2011		2011	DD268	1114	DIJ61224	1123	DS2K	2001 1104	DS-75 D\$75	2030	DW6034/M DW-6505	2009
26E-2 26E2	2016	D294 D300		DD2066 DD2068	1104	DIJ70486 DIJ70488	1102	DS2M DS2N	1114	DS-76 DS76	2009	DW-7375	2009
26E-3	2016	D327	2009	DD2320	1104	DIJ70542	1123	DS2N22	1104	DS-77	2009	DX520 DX6873	1104
26E-6 26G-1	2016 2015	D327A D327B		DD2321 DDAY001001	1104 1123	DIJ70544 DIJ70545	1104 1102	DS4 DS5	2001 2001	D\$77 D\$-79	2009 1104	DX7429 DZ10	112
26G 1 28	2011	D327C	2009	DDAY001022	1123	DIJ70644	1123	DS6	2001	DS79	1104	DZ-12	563 563
28B	2012	D327D D327E		DDAY002001 DDAY002002	1104	DIJ70645 DIJ70646	1123 1123	DS7 DS8	2001 2001	DS-79(DELCO) DS-81	1104 2013	DZ12A DZ15A	563 564
28E 29A4	2012	D327F D328	5009	DDAY004001	1102	DIJ70695	1104	DS9	2001	DS81	2011	E0018	112
9F1	2034	D342	2009	DDAY008001 DDAY010002	561 562	DIJ71273 DIJ71711	1102 1102	DS-10 DS11	1104	DS83 DS-88	2034	E09-306112 E-075L	110
9F2 10A1		D353 D355	1102	DDAY010005 DDAY042001	562	DIJ71776	1123	DS12	2001	DS88 ·	2035	E075L	1104
10A2	2034	D372BL	2009	DDAY047001	1104		1102(2)	DS-13 DS-13(COURIER)	1104	DS89 DS-94	1104	E0704-W E-0704W	1104
32K1 32K2		D400 D400(RECT.)	1104 1104	DDAY047005 DDAY048001	1102 1102	DIJ71958 DIJ71959	1104	DS-13A(SANYO)	1104	DS-97	1102	E0771-3	562
12P1	2016	D500	1104	DDAY048008	1102	DIJ71960	1102	DS-13B(SANYO) DS-14(DIODE)	1104	DS97 DS97(DELCO)	1123 1102	E0771-7 E0788-C	563 1104
32P2 3 2 P3		D600 D800		DDAY048012 DDBY002001	1102	DIJ72164 DIJ72165	1102 562	DS-16(SEARS-DIC	DDE)	DS99	562	E0788C	1104
3D21	2009	D912	2009	DDBY209003	2014	DIJ72166	1123	DS-16A	1104	DS104 DS-117	1102	E03090-002 E03155-001	1104
3D22 3D24	2009	D975 D976		DDBY216002 DDBY219001	2013	DIJ72168 DIJ72172	1104	DS16A	1104	DS117	1102	E03155-002	1104
3D25	2009	D1000	1114	DDBY222002	2009	DIJ72293		DS-16A(SANYO) DS-16B	1114	DS-130 DS130	1104 1104	E1. E1A	1104
33D26 33D27		D1101 D1102		DDBY224003 DDBY231002	2009 2020	DIJ72294 DIJ72349	1123	DS-16B(SANYO)	1104	DS-130B	1104	E1M3	1114
33D28	2009	D1172S	1104	DDBY233001	2009	DIK	1114	DS-16B(SYLVANIA DS16C	1104	DS130B DS-130C	1104	E1N3 E2	1114
36 40N 1		D1177 D1178	2035	DDBY270001 DDBY273001	2009 2010	DIL DIS-1S	1104	DS-16C(SANYO) DS-16D	1104	DS-130E	1104	E3	1104
40N2	2012	D1180	2035	DDBY277002	2013	DIS1S	1104	DS-16D(SANYO)	1104	DS130E DS130ND		E5 E6	1104
40N3 40N4		D1181 D1201A	2035	DDBY283001 DDBY287001	2010	DK19 DK20	1123	DS-16E DS16E	1104	DS130Y	1104	E8	1114
40N5		D1201B		DDCY001002	2035	DK20 DK21		DS-16E(SANYO)		DS-130YB DS130YC		E9 E10:	1114
41		D1201D		DDCY002002	2035	DN ·		DS16N					1114

EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE 27	76-	DEVICE	276-	DEVICE	276
13-000-04	2009	EA15X24	2009	EA15X8529	2031	EA2741	1104 2009		013	EF3 EF100	2035 1114	EP57X4 EP57X5	110
13-002-03 13-003-00	2009	EA15X31 EA15X37	2009 2009	EA15X8601 EA15X8609	2013 2009	EA2770 (N)	2009		009	E.G 100	1104	EP57X12	110
13-003-01	2009	EA15X44	2009	EA16X1	1123	EA2812	2011		009	EG100H	1104	EP200	110
13-004-00	2010	EA15X45	2009	EA16X2	1104	EA3127	1123	ED1702L/09-305068 2	009	EH2C11/7+12/1 EH16X20	1104	EP400 EP600	110
13-005-02	2009 2012	EA15X52 EA15X56	2009 2009	EA16X5 EA16X8	1123	EA3149 EA3278	2009 2035		104	EK159	2007	EP800	111
13-007-00 13-017-01	1102	EA15X58	2009	EA16X9	1123	EA3447	1102	ED1892 1	104	EL75	2013	EP1000	111
13-020-00	1104	EA15X59	2009	EA16X11	1123	EA3713	2011		104	EL131	2035	EP1259	110
13-20-00	1104	EA15X60	2009	EA16X13	1104	EA3718	1123 563		104	EL231 EL232	2011	EP-1428-2H	110
14C350	1104 1123	EA15X63 EA15X68	2009 2009	EA16X20 EA16X21	1102	EA3719 EA3827	1104		104	EL238	2009	EP1428-2H	110
20C30 21	1104	EA15X72	2009	EA16X22	1123	EA3866	562		1104	EL434	2011	EP2798	110
5C5	1104	EA15X73	2009	EA16X27	1123	EA3989	1104		104	EL642	2009	EP3149	110
0C60	1123	EA15X75	2009	EA16X29	563	EA4112	2009		1104	EM1J2	1104	EP-5619-2/7628 EPX2	20
41	1104	EA15X76	2009	EA16X30	1104 1104	EA5711 EC100	1104 1114		104	EM401 EM402	1104	EQ-09R	5
11 102(ELCOM)	1104 1104	EA15X77 EA15X83	2009 2009	EA16X33 EA16X34	1104	EC401	1104		104	EM403	1104	EQA01-01	5
03	2035	EA15X84	2009	EA16X39	1102	EC402	1104	ED2847 1	1114	EM404	1104	EQA01-06S	5
06(ELCOM)	1104	EA15X85	2009	EA16X48	1123	EC961	2041		1114	EM405	1104	EQA01-09	5
08(ELCOM)	1114	EA15X86	2009	EA16X49	1102	ECG100	2007		1114	EM406 EM407	1104	EQA01-09R EQA01-12	5
25C200	1104	EA15X89	2009	EA16X55 EA16X60	1104	ECG101 ECG103	2001		1114	EM408	1104	EQA01-12R	5
35 43	1104	EA15X90 EA15X91	2009 2009	EA16X61	1102	ECG103	2011		114	EM410	1104	EQA01-12S	
46	1104	EA15X96	2009	EA16X62	562	ECG108	2038	ED2913 1	1114	EM501	1104	EQA01-12Z	
50L	1104	EA15X98	2009	EA16X68	1102	ECG109	1123		1104	EM502	1104	EQA01-15R	
10	2009	EA15X100	2041	EA16X69	1102	ECG110	1123		1104	EM503	1104	EQA09R EQA-0109S	5
12	2009	EA15X101	2009 2009	EA16X71 EA16X73	1104 1102	ECG111 ECG112	1101 1101		1104 1104	EM504 EM505	1104	EQA-9	5
62 95ZZ01	563 1123	EA15X103 EA15X111	2009	EA16X73	562	ECG112 ECG116	1104		1104	EM506	1104	EQB01	
00	2036	EA15X112	2009	EA16X75	1102	ECG117	1104	ED2919	1104	EM507	1114	EQB01-02R	
00L	1104	EA15X130	2013	EA16X77	563	ECG123	2009	ED2920	1104	EM508	1114	EQB01-06	
00L	1104	EA15X134	2011	EA16X80	561	ECG123A	2009		1104	EM510 EM1021	1114	EQB01-09 EQB01-12	
50L 50(ELCOM)	1104 1104	EA15X135 EA15X136	2011 2009	EA16X82 EA16X84	562 1102	ECG130 ECG132	2041 2035		1114	EM-1171	1104	EQB01-12A	9
52(ELCOM)	1104	EA15X136	2009	EA16X92	1102	ECG132	2035		1114	EMS72258	1122	EQB01-12R	
56(ELCOM)	1104	EA15X142	2009	EA16X97	1123	ECG171	2012		1104	EMS72272	1122	EQB01-12Z	
58(ELCOM)	1114	EA15X143	2009	EA16X101	1102	ECG177	1102		1104	EMS-73500	2009	EQB01-15	
60(ELCOM)	1114	EA15X153	2009	EA16X110	1102	ECG229	2013 2038		1104 1104	EN10 EN30	2030 2031	EQB01-15Z EQB01-15ZB	
010	1104	EA15X157	2009 2009	EA16X122 EA16X124	1102 564	ECG233 ECG236	2020		1104	EN40	2009	EQB01-90S	200
011 018N	1104	EA15X162 EA15X163	2009	EA16X134	1102	ECG312	2036		1104	EN697	2016	EQF-0009	2
121R	1102	EA15X165	2035	EA16X135	1122	ECG313	2016	ED3002	1104	EN706	2016	EQF-3	2
124	1104	EA15X167	2009	EA16X140	1123	ECG316	2015		1104	EN708	2016	EQF-4	2
138R	1102	EA15X168	2009	EA16X162	563		2016		1104	EN722 EN914	2023	EQG-12A EQS-0018	2
146J	1104 1104	EA15X169 EA15X189	2035 2009	EA57X1 EA57X3	1104 1104		1122 702		1104	EN916	2016	EQS-0100	2
146R 153RB	1104	EA15X190	2009	EA57X8	1104		1725	ED3003B	1104	EN918	2015	EQS-0159	2
156RD	1104	EA15X192	2035	EA57X10	1104		1725		1104	EN930	2009	EQS-0165	2
157RNA	1104	EA15X193	2035	EA57X11	1104	ECG778	038		1104	EN1132	2023	EQS-0192 EQS-0196	2
176R	1102(2)	EA15X213	2009	EA57X14 EA75X1	\$104 1104	ECG804 ECG909	702 017		1104 1104	EN2219 EN2222	2009	EQS-0198	2 2
410 411	1104 1104	EA15X237 EA15X239	2009 2009	EA/5X1	1104		1740		1104	EN2369A	2016	EQS-5	2
412	1104	EA15X240	2009	EA1072	1104	ECG940	1733	ED3005A	1104	EN2484	2009	EQS-9	2
413	1104	EA15X241	2010	EA1080	2009		007		1104	EN3009	2016	EQS-13	2
1415	1104	EA15X246	2009	EA1123 EA1128	1123 2009	ECG941D ECG5012	010 561		1104	EN3011 EN3013	2016 2016	EQS-18 EQS-19	2
440 852	1104 563	EA15X272 EA15X325	2009 2009	EA1129	2009	ECG5012	561		1104	EN3014	2016	EQS-20	2
412	2007	EA15X330	2009	EA1135	2009		562		1114	EN3250	2034	EQS-22	2
427	2001	EA15X331	2009	EA1145	2009		562		1114	EN3903	2016	EQS-61 EQS-62	2
428	2001	EA15X336	2014	EA1318 EA1344	563 2009		561 562		1114	EN3904 EN3905	2016	EQS-64	2
429 430	2001 2009	EA15X355 EA15X361	2009 2009	EA1344	2009		1067		1114	EN3906	2034		2
431	2009	EA15X364	2014		1102		1067	ED3008B	1114	EN5172	2011	EQS-139	2
436	2009	EA15X365	2014	EA1406	2009		1067	LDGGGG	1114	E065	2007	EQS-141	3
444	2009	EA15X367	2014	EA1407	2009		1067	LBGGGGT	1114	E066	2007 2007	ER1 ER1B22-15	1
452	2009	EA15X370	2009		2009		1104 1101		1114	EO67 EO68	2007		
454	2009 2009		2009 2010		1104 2009		1101		1114	EO105	2007	ER11	
455 459	2009	EA15X376	2013	EA1452	2009		1104	ED3010B	1114	EO704	1104	EP12	
461	2009	EA15X378	2010	EA1499	2009	ED4	1104	ED219464	1123	E0771-3	562	ER21	
2462	2004	EA15X379	2009		2009		1123	ED224548	1104 1104	EP5X5 EP6X10	1104		
486	561	EA15X400	2036 2036	EA1578	2009 2009		1104 1104		1104	EP15X1	2009		- 31
497 499	2009		2036		2009	ED-6	1104	ED329130	1104	EP15X2	2009	ER42	
006	1104	EA15X4064	2011	EA1629	2009	ED6	1104	ED491130	562	EP15X6	2013	ER51	
002	2001	EA15X7112	2009	EA1630	2009	ED6(ELCOM)	1123		1104	EP15X7	2009	ER57X2	
676B	1104	EA15X7113	2009	EA1638	2009		561 1104	EB544704	1104 1102	EP15X8 EP15X9	2009 2009		
441 625	1104	EA15X7115 EA15X7117	2009 2030		1102 1104	ED7 ED7(ELCOM)	1104	ED514721 ED515790	1102	EP15X20	2010	ER61	
625 0116	1104	EA15X7119	2009	EA1695	2009	ED9(ELCOM)	1123	ED516420	1102	EP15X27	2012	ER62	
0157	1104	EA15X7125	2011	EA1696	2009	ED12(ELCOM)	1123	ED536062	1102	EP15X37	2011	ER81	
0171	1104	EA15X7140	2011	EA1697	2009	ED21(ELCOM)	1102	ED560913	1102	EP15X38	2011	ER101 ER102	10
0172	1104	EA15X7175	2009	EA1703	2009 2009	ED31(ELCOM) ED32(ELCOM)	1102 1102	EDC-Q10-1	2009 1123	EP15X39 EP15X41	2013	ER102D	
1430 1431	1123 561		2009		2009		1123		1123	EP15X42	2013	ER103D	
4100	1104	FA15X7231	2011	EA1735	2009	ED46	1123	EDG-6	1123	FP15Y47	2009	ER103E	
4103	2009	EA15X7232	2009	EA1740	2041	ED52	2007	EDH6023	1122	EP15X48(NPN)	2009		
.005	1104	EA15X7233	2013		2009		2007	EDJ-363	1104	EP15X48(NPN) EP15X49 EP15X54	2009		
0015	1104	EA15X7234	2013		2009		2007 1123		2009 1102	EP15X92	2036		
10016	1104		2013 2013		2011 2011		1123		1104	EP15X92 EP16X1	1102(2)	ER108D	
00031 00092	1104 2009	EA15X7244	2013		1104		2009	EDS-0014	1102	EP16X3 EP16X4	1123	ER181	
4010 4010	1104	EA15X7262	2009	EA2271	2009	ED592K	2013	EDS-0017	1104	EP16X4	1102	ER182	
1020	1104	EA15X7263	2009	EA2489	2009	ED-1402	2009		1104	EP16X5	564		
1030	1104	EA15X7264	2011	EA2490	2009	ED1402A	2009		1102 1104	EP16X13 EP16X15	1104 564		
A040	1104	EA15X7514	2009		201		2009		1104	EP16X15	1102		
4060 4080	1104		2009 2009		1104		2009		1104	EP16X21	1123	ER187	
A080 A1SY11	1114 2004		2009		563		2009	EDS-24	1104	EP16X22	1102	ER201	
A15X1	2009	FA15X7589	2009	EA2501	1104	4 ED1402E	2009	EDS-25	1102	EP16X23	1102	ER301	-3
A15X9	2009	EA15X7638	2009	EA2502	1123	3 ED1502	2009	EDS-100	2009		1102		
A15X18	2009	EA15X8122 EA15X8511	2009		110		2013		562 1104		2032		
A15X20	2009			EA2739	2009	9 ED-1502C	2013	3 EER600-2		EP25			

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
R410 R501	1104 1104	ES76(ELCOM) ES85(ELCOM)	2012 2009	EVR5 EVR5A	561 561	F9600 F9623	2009 2009	FMPS-A20	2009	FUIU	1104	G05-064-A	2
R510	1104	ES89	2012	EVR5B	561	F9623F	2009	FMPSA20 FN-51-1A	2009	FV-22 FV22	561 561	G05-065-A G05-413B	2
R601 R801	1104 1114	ES89(ELCOM) ES1627	2012 1102	EVR9 EVR9A	562 562	F10124 F10148	1104 1104	FO5 FOS100	1104	FV-23	1123	G08-005L	2
R1001	1114	ES10186	2011	EVR9B	562	F10180	1104	FO\$104	2016 2016	FV23 FV-24	1123 561	G08-007-B G01036	2
RB11-01 RB22-15	1104 1104	ES10188 ES10189	2011 1123	EVR12 EVR12A	563 563	F11034 F15840	1114 2009	FPR40-1001 FPR40-1006	2009 1123	FV914 FV918	2016	G01036A	
RB24	1104	ES10222	2009	EVR12B	563	F15840-1	2009	FPR50-1001	2009	FV2369A	2038 2016	G01036G G01209	1
RB24(GE) RB24-06	1104 1104	ES10223 ES10224	2009 1123	EVR15 EVR15A	564 564	F20303 F75116	1123 2009	FPR50-1002 FPR50-1011	2009 1104	FV2747C FV2894	2007 2034	G01209B	1
RB-24-06A RB24-06A	1104 1104	ES10225 ES10232	1123	EVR15B	564	FA-1(DIODE)	1123	FR-1	1104	FV3014	2016	G01211 G01803	1
RB24-06B	1104	ES10233	2009 1104	EW163 EW164	2011	FA-1(SEARS)	2009	FR1D	1104 1102	FV3299 FW100	2016. 1104	G01803A G04041B	1 2
RB24-06C RB2406A	1114 1104	ES10234 ES15046	563 2011	EW165 EW165V	2011 2009	FA4	1104	FR-1H	1104	FW200	1104	G05015C	2
RD300	1104	ES15047	2011	EW166	1123	FA6 FA8	1104 1114	FR-1H(M) FR-1HM	1104 1104	FW400 FW500	1104 1104	G05035E G05036	2
RD400 RD700	1104 1114	ES15048 ES15050	2009 2009	EW167 EW169B	1123 1104(2)	FA111 FA8009	1102	FR-1M	1104	FW600	1104	G05036B	- 2
RD800	1114	ES15054	1123	EW181	2009	FA8010	564 564	FR1M FR1MB	1104 1104	FW600A FWL100	1104 1104	G05036C G05036D	2
RD900 RD1000	1114	ES15056 ES15057	1104	EW182 EX16X10	2009 1102	FA8011 FA8012	564 564	FR-1MD	1104	FWL200	1104	G05036E	- 2
RS100	2012	ESA-06	1104	EX16X27	1102	FB1043	1123	FR1MD FR-1N	1104	FWL300 FX709	1104 2011	G05037B G05059	2
RS120 RS140	2012	ESK-1 ESK1	1104 1104	EX76-X EX142-X	1104	FB6853 FBC237	2009	FR-1P	1104	FX914	2016	G08005L	- 2
IS160	2012	ESK1/06	1104	EX499-X	2009	FBN-36220	2009	-FR1P FR-1U	1104 1104	FX918 FX2368	2038 2016	G0Q-535-3 G1	-
IS180 IS200	2012 2012	ESKE40C500 ESKE125C500	1104 1114	EX500-X EX695-X	2009	FBN-36485	2041	FR1U	1104	FX2369A	2016	G1HA	1
S225	2012	ESQ-141	2020	EX746-X	2032	FBN-36603 FCD0003PC	2041 1102	FR-2 FR2	1104 1104	FX2894 FX3013	2034 2016	G2 G2A	1
\$250 \$ 275	2012	ET6 ET8	1104 2001	EX748-X EX868-X	2009	FCD0014NCS	1102	FR2(S1B1)	1104	FX3014	2016	G3	
S301	2012	ET9	2001	EX888-X	2009	FCS1168F813 FCS1168G	2009	FR2-02 FR2-02(DIO)	1104 1104	FX3299 FX3300	2016 2010	G4 G5	5
S325 V-02F2150	2012 1104	ET10 ET11	2001	EYV-320D1R2J EYV-420D1R5JA	1102 1104	FCS1168G704 FCS1229F	2009	FR2-06 FR2-020	1104	FX4046	2010	G5C	
1KX 122	2013	ET15X2	2011	EYV420D1R5JB	1123	FCS1229G	2009	FR2-OZ	1104 1104	FZ6.2T10 FZ12A	561 563	G5F G5K	*
5 15X1	2001	ET15X3 ET15X10	2011 2009	EYZP-384 EYZP-632	1102 2009	FCS8050C FCS9011F	2010	FR-2M	1104	FZ12T5	563	G6	
15X7	2009	ET15X11	2009	EYZP-791	2009	FCS9011G	2009	FR2M FR-2P	1104 1104	FZ12T10 FZ15A	563 564	G7 G7A	
15X11 15X12	2009 2009	ET15X12 ET15X13	2009 2009	EZ9(ELCOM) EZ12(ELCOM)	562 563	FCS9014(B) FCS9016	2009	FR2P	1104	FZ15T5	564	G7D	
15X14 .	2009	ET15X14	2009	EZ15(ELCOM)	564	FC\$9016E	2009	FR-10 FR10	1114	FZ15T10 FZ101	564 2009	G7E G7F	
15X16 15X20	2009	ET15X15 ET15X16	2009	EZ150 F-05	564	FCS-9016F	2014	FR-202	1104	FZ1215	563	G7G	90.0
15X22	2010	ET15X20	2009	F05	1104	FCS9016F FCS-9016G	2013	FR202 FRH-101	1104	G00003A G00004A	1123 1123	G8 G9.1T5	36.7
15X23 15X24	2009	ET15X24 ET15X27	2009	F1 F2	2016 2016	FCS9016G	2014	FRH101	1104	G00009A	1123	G9.1T10	
15X37	2009	ET15X37	2009	F3	2016	FC\$9018D FCS-9018F	2009	FRS3693 FR-U	2009 1104	G00-003-A G00-004-A	1123 1123	G9.1T20 G10	1
15X42 15X58	2009	ET15X41 ET15X42	2009 2009	F4 F5	2016	FD01880	1122	FS19	1123	G00-008-A	1123	G12T5	
15X62	2009	ET15X45	2009	F6	1104	FD06193 FD3	1122 1104	FS-1133 FS1168E641	2030 2009	G00-009-A G00-012-A	1123 1102	G12T10 G12T20	
15X64 15X66	2009	ET15X54 ET16X1	2031 1123	F8 F10	1114	FD6	1104	FS1168F813	2009	G00-012A	1102	G15T10	
15X67	2011	ET16X6	1101	F14	1114	FD100 FD111	1102	FS1221 FS1308	2009	G00-013-8 G00-014-A	1123 1102	G15T20	
15X68 15X70	2009	ET16X13 ET16X14	1101	F14-C F-14A	1104	FD200	1102	FS1974	2009	G00-502-A	1104	G16 G17	2
15X76	2009	ET16X15	1101	F14A	1114	FD222 FD300	1102 1104	F\$2003-1 F\$2043	2041	G00-534-A G00-535-B	1104	G18 G23-45	2
15X80 15X81	2011	ET16X16	1104	F14B	1114	FD333	1104	FS27604	2009	G00-535A	1104	G23-67	
15X82	2011	ET16X16X ET16X19	1104 1123	F14C F14D	1114	FD600 FD777	1122 1122	FS32669 FS36999	2011	G00-536-A G00-536A	1104 1104	G100 G100A	- 1
15X83 15X84	2009	ET16X20	1123	F14E	1114	FD-1029-DF	1104	FSP1	2011	G00-543-A	1104	G100B	1
15X85	2009	ET16X21 ET41X37	1123	F14F F14H	1114	FD-1029-DG FD-1029-GP	1104	FSP-288-1 FST2	1104	G00-551-A G00-803-A	1104	G100D G100G	
15X92 15X97	2035	ET51X25	1104	F14J	1114	FD-1029-JA	2009	FST3	1104	G005-036C	1102 2009	G100J	,
15X102	2011	ET52X25 ET55-25	1104	F16H1 F20-1010	561 1123	FD-1029-LL FD-1029-MC	1102	FT005	2009	G005-036E G00502A	2009	G100K G100M	
15X 106 15X 120	2010 2011	ET55X25	1104	F20-1012	1123	FD-1029-NG	2009	FT008	2009	G00535	1104	G130	
15X 121	2011	ET55X29 ET57X25	1104	F20-1013 F20-1014	1123 1123	FD-1029-PP FD-1029-PT	2009	FT008A FT023	2009	G00535A G01		G156	1
15X125 15X127	2012	ET57X29	1104	F20-1015	1104	FD1599	1104	FT024	2033	G01-036-G	562	G157 G158	1
16(ELCOM)	2010	ET57X30 ET57X35	1104	F20-1016 F24T-011-013	2011	FD1708 FD1843	1102	FT025 FT026	2016 2016	G01-036A G01-037-A	561	G159	1
16X2 16X3	1123 1123	ET57X38 ET200	. 1104	F24T-011-015	2011	FD1980	1123	FT053	2009	G01-083-A	1102	G182AG G198	
16X4	1102	ET400	1104	F24T-016-024 F121-546	2011	FD3389 FD6451	1104	FT-1 FT1	1104	G01-209-B G01-209B		G199 G200	1
6X5 6X6	1123 1123	ET234843 ET238894	2009	F121-433804	2009	FD6489	1102	FT1(SHARP)	1104	G01-217-A	1102	G222	1
6X7	1123	ET368021	2009	F136 F215-1010	1123 1123	FDH-9 FDH400	1102 1104	FT-1N FT1N	1†04 1104	G01-803-A G01-803A	1102(2)	G296	1
6X9 6X10	1104 1104	ET412626	2009	F215-1012	1123	FDH444	1102	FT-10	1104	G01A	1101	G297 G409	1
6X12	1123	ET491051 ETD-1N60		F215-1013 F215-1014		FDH666 FDH694		FT10 FT14A	1114 1104	G02 G02A	1104	G498	1
6X13 6X14	1104	ETD-10D1	1104	F215-1016	f104	FDH900	1102	FT34G	2036	G04-041B	2011	G580 G657	1
6X23	1102	ETD-10D2 ETD-SD46		F215-1017 F222	1104	FDH6229 FDM1006		FT34Y FT40	2035	G05-003-A G05-003-B	2011	G659	1
6X24 6X25	1102	ETD-V06C	1104	F-302-1	2009	FDM1007	1102	FT107B	2016	G05-010-A	2009	G700 G701	1
6X27	1102	ETP2008 ETP3923		F302-1 F302-2		FDN600 FDN666		FT118 FT1341	2016	G05-011-A G05-015-D	2009	G702 G766	1
6X30 6X32	1102	ETS-003	2041	F-302-1532	2009	FE-100	2036	FT1746	2034	G05-015C	2009	G769	1
6X38	1102 1104	ETS-068 ETTC-458LG		F302-1532 F-302-2532		FE100 FE5245		FT3567 FT3569		G05-034-D G05-035-D	2009	G770 G788	1
6X40 6X103		ETTC-CD8000	2009	F302-2532	2009	FG-2NA	1104	FT3643	2009	G05-035E	2009	G789	1
O(ELCOM)	2009	ETTC-CD12000 ETTC-CD13000	2009	F306-001 F306-022		FG-12377 FH100		FT5040 FU1M	2032	G05-036-B G05-036-C		G790	1
5 ´ ´ ´ ´ ´ ´ ´ ´ ´ ´ ´ ´ ´ ´ ´ ´ ´ ´ ´	2007	ETT-CDC-12000	2009	F366	2009	FI-1023	2011	FU-1MA	1104	G05-036-C,D,E		G814 G815	1
1(ELCOM)	2007	ETX18 EU15X4		F572-1 F587		FK914 FK918		FU-1N FU1N	1104	G05-036-D G05-036-E	2009	G816	1
16	2009	EU16X1	1123	F1462	2035	FK2369A	2016	FU-1NA	1104	G05-036B		G820 G821	1
6(ELCOM) 7X1		EU16X2 EU16X4		F1463 F2443		FK2894 FK3014		FU1U FU5B7709393	1104	G05-036C	2009	G822	1
i1	1104	EU16X7	1104	F2448	2009	FK3299	2016	FU5B7740393	1733	G05-036D G05-036E		G823 G824	1
3(ELCOM) 7X1		EU16X14 EU16X19		F2584 F3519		FK3484 FK3494	2030	FU5B7741393 FU6A7723393	007	G05-037-A	2009	G825	1
7X2 7X4	1104	EU57X30	1104	F3532	2009	FLV110	026	FU6A7741393	010	G05-037-B G05-037-D		G844 G845	1
7X5		EU57X40 EVD-3		F3569 F3571		FLV112 FM1J2	040	FU9A7723393 FU9A7741393	1740	G05-037B	2009	G846	1
7X12		EVM511		F7316		FM211N		FU-IM		G05-050-C G05-063-R		G847 G868	- 1

EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
869	1123	GE-17	2030	GI2714	2009 2016	GRASS-R2982 GRF-3	2041 2035	GZ9.1 H50	562 1104	HA17741M HAR10	007 1104	HD2000110 HD2000110-0	110
1010 1010A	1123	GE-19 GE-20	2041	GI-2715 GI2715	2009	GS73E/3	1123	H100 -	1104	HAR15	1104	HD2000206	110
242 288	1104 1123	GE-22 GE-26	2032	GI2716 GI-2921	2009	GS9014 GS90141	2031	H102 H104	2009	HAR20 HB2	1104 1104	HD2000301 HD2000301-0	110
423	2013	GE-27	2012	GI2921 GI-2922	2009 2031	GS9014J GS9018F	2031 2031	H200 H300	1104 1104	HB3 HC-00372	1104 2013	HD2000305 HD2000307	110 110
600 600(G.E.)	2009	GE-50 GE-60	2004 2016	GI2922	2009	GS9023H	2031	H316	1123	HC-00380	2011	HD-2000308	110
9623 9625	2009 2013	GE-61 GE-85	2016 2016	GI-2923 GI2923	2031	GS90231 GSM51	2031 1104	H400 H475	1104 1104	HC-00394 HC-00458	2013 2031	HD2000308 HD2000413	110
9696	2009	GE-86	2015	GI-2924	2010 2009	GSM52 GSM53	1104	H500 H585	1104	HC-00460 HC-00461	2009 2009	HD2000501 HD2000510	110
10119 16506	1104 2001	GE-210 GE-211	2010 2016	GI2924 GI-2926	2010	GSM54	1104	H600	1104	HC-00535	2030	HD2000703	110
10107 9 390076S1	2001	GE-213 GE-214	2009	GI-3394 GI-3403	2016	GSM482 GSM483	1104	H616 H617	1104 1104	HC-00537 HC-00693	2009 2009	HD2000903 HD2001105	f10
90506-S1	1733	GE-216	2020	GI-3405 GI-3415	2010 2010	GSR1 GT1	1114 2007	H618 H619	1104 1104	HC-00730 HC-00735	2001 2009	HD2001310 HD3000101-0	11 5
190507\$ 2 195967	1740 2009	GE-235 GE-278	2008 2013	GI-3416	2010	GT2	2007	H620	1104	HC-00784	2011	HD-3000301	11
95967-2 57061	2009 1122	GE-280 GE-300	2015 1102	GI-3417 GI-3605	2010 2016	GT3 GT11	2007 2007	H621 H623	1114 1102	HC-00828 HC-00829	2009 2011	HD3000401 HD3001109	5
57123	1122	GE-320	2030	GI-3606	2016	GT12	2007 2007	H624 H625	1123 1104	HC-00838 HC00838	2009 2009	HD3002409 HD4000109	11
\52829 \53149	2007 2007	GE-324 GE-327	2018 2038	GI-3607 GI-3638	2016 2034	GT13 GT14	2005	H626	1104	HC-00871	2009	HD10000101	11
153242	2007 2001	GE414 GE-504	1102 1104	GI-3641 GI3641	2033	GT14H GT15T5	2005 564	H781 H783	1104 1104	HC-00920 HC-00921	2011 2009	HD10000302 HD10001050	11 11
153270 * NRE	561	GE-504A	1104	GI-3642	2010	GT20H	2005	H800	1114 1114	HC-00924 HC-00945	2009 2009	HD20000703 HD20000903	11 11
B-1 C31	1123 2007	GE-510 GE-514	1114 1122	GI-3643 GI3643	2010 2009	GT24H GT31	2005 2007	H-881 H881	1104	HC-01047	2011	HD20003010	11
C3 2	2007	GE3265	2031 1123	GI-3704 GI3704	2009 2009	GT32 GT33	2007 2007	H889 H890	1102 1104	HC-01359 HC-01390	2011 2009	HE-00829 HE-1N34	11 13
33 34	2007 2007	GE3638 GE6063	1102	GI-3705	2014	GT34S	2007	H891	1104	HC-01417	2009	HE-1N34A HE-1N60	11
35 60	2007 2007	GE6366 GED05B850	1104 1123	G13705 G1-3706	2009 2009	GT-35 GT74	2001 2005	H931 H933	2009 2009	HC-01820 HC01820	2009 2009	HE-1N60P	1
261	2007	GE-FET-1	2035 2036	GI3706 GI-3707	2009 2010	GT75 GT81	2005 2007	H934 H1000	2009 1114	HC01830 HC-2	2030	HE-1S188 HE-1S426	1
C181 C182	2007 2007	GE-FET-2 GEIC-27	702	GI3707	2009	GT81H	2005	H-1567	2009	HC-30	1104	HE-1S446	1
C360 C452	2007 2001	GEIC-31 GEIC-220	1725 038	GI-3708 GI3708	2010 2009	GT82 GT83	2005 2007	H1567 H7126-3	2009 1104	HC-39 HC-56	1104 2009	HE-1024 HE-10001	1:
2453	2001	GEIC-249	017	GI-3709	2016	GT87	2007	H8287 H8287-4	1123 1123	HC67 HC-68	1104 1104	HE-10002 HE-10003	1
C454 C532	2001 2007	GEIC-260 GEIC-262	1740 1733	GI3709 GI-3710	2009 2010	GT88 GT100	2007	H8513	1102	HC68	1104	HE-10024	1
783	2009	GEIC-263	007 010	GI3710 GI3711	2009	GT122 GT153	2007 2007	H9423 H9618	2009 2009	HC69 HC71	1104 1104	HE-10025 HE-10027	1
0784 01034	2009 2001	GEIC-264 GEL277	702	GI-3793	2033	GT167	2001	H9623	2009	HC72	1114	HE-10030 HE-10040	1
C1035 C1036	2001 2001	GEMR-5 GET706	1067 2016	GI3992-17 GI6506	1.104 2001	GT210H GT222	2005 2007	H9696 H10174	2009 1104	HC73 HC80	1104	HE-20011	1
C1144	2009	GET708	2016	GI-P100-D GIP100D	1104 1104	GT229 GT269	2001 2007	H20052 HA00052	1104 2007	HC371 HC372	2009 2009		1
C1159 C1302	2007 2007	GET880 GET881	2007 2007	GJ4M	1104	GT758	2007	HA00053	2007	HC-373	2030	HEP-0700	1
C4022 C5012	2007 1123	GET882 GET887	2007	GLA62 GLA62A	561 561	GT759 GT760	2007 2007	HA-00102 HA-12	2007 2007	HC373 HC380	2009	HEP50	2
D1E	1123	GET888	2007	GLA62B	561	GT761	2007 2007	HA15 HA49	2007 2007	HC381 HC394	2011 2011	HEP53 HEP54	2
D1P D4E	1123 1123	GET889 GET890	2007 2007	GLA91 GLA91A	562 562	GT761R GT762	2007	HA50	1104	HC454	2011	HEP55	20
DSE D6E	1123 1123	GET891 GET892	2007 2007	GLA91B GM1J2	562 1114		2007 2007	HA-52 HA-53	2007 2007	HC458 HC460	2009 2011	HEP75	21
D8E	1123	GET895	2007	GM-770	2011	GT766	2007	HA100	1104	HC461 HC500	2011 1104		
D10 D11E	1123 1123	GET896 GET897	2007 2007	GM770 GME1001	2011 2009	GT766A GT792	2007 2001	HA200 HA202	1104 2007	HC-535	2030	HEP105	
D12	1104 1123	GET914 GET2221	2016 2033	GME1002 GME2001	2009		2007 2001	HA300 HA400	1104 1104		2011 2011	HEP134 HEP135	1
D12E D13E	1123	GET2221A	2009	GME2002	2009	GT904	2001	HA500	. 1104		2011	HEP154 HEP156	
D-25 D-26	1123 1123	GET2222 GET2222A	2009 2009	GME4001 GME4002	2009		2001 2001	HA800	1114	HC539	2009	HEP157	- 1
D-29	1123	GET2369 GET2483	2016 2016		2009		2001 2001		1114 2001	HC545 HC-561	2011		1
D-30 D72E/3	1123	GET3013	2016	GME6002	2011	GT947	2001	HA5002	2001	HC561	2009	HEP160	1
D72E/4 D72E/5	1123 1123		2016 2015		2009 2030		2001 2001	HA5005	2001 2001	HC680	1104 1104	HEP162	- 1
D73E/4	1123	GET3563	2015	GO0535	1104	GT949	2001 2001	HA5009	2001 2001		1104 1104		1 2
D73E/5 D74E/3	1123 1123	GFT3638A	2023 2023	GO5-003-A	2009	GT1200	2001	HA5012	2001	HC720	1114	HEP607	
D74E/4 D74E/5	1123 1123		2016 2016	GO5-004A	2009	GT1202	2001	HA5016	2001 2001	HC-772	2030	HEP704	2
D101	1122	GET3904	2016 2034	GO5-010-A	2009	GT1604	2007	HA5020	2001	HC784	201	HEP709	
D102 D400	1122 1123	GET3906	2034	GO5-015-C	2009	GT1606	2007	HA5022	2001	HC1000217-0	010	HEP721	2
D401 D402	1123 1123		2001 1104	GO5-036B	2009 2009	GT1608	2007 2001	HA5024	2001 2001	HCL-6066	2009 2009	HEP723	
D403	1123	GEX66	1104	GO5-036C	2009	GT1609	2001	HA5025	2001 2001	HCV	1104 2009	HEP724	e 1
D404 D405	1123 1123	GEZD-9.1	561 562	GO5-037B	2009	GT1658	2001	HA7507	2032	HD-1	1104	HEP727	
D406 D409	1123		563 564		2030	GT2693 GT2694	2007 2007		2032 2023		112:	HEP729	
D-510	1102	GEZJ252A	1104	GO1036	562	GT2695	2007	7 HA7632	2023 2023	HD-187	200° 112°	HEP731	-
iD510 iD556	1123 1123	GI1	1104 2007	GO1211	1102	GT2766	2001	HA7806	2023	HD2000	110	HEP733	
D663	1123	GI-1N4385	1104 2001	GO1803	1102		2001 2001		2023 2023		110- 112:		
D1001 D3638	1123 1103	G16	2001	GO5059	2009	GT2886	2001	1 HA7815	2023	HD2155	112	3 HEP738	
D3638-00 D5004	1123 1123		2001 2001		112		2001	HA9049	203	HD6125	110 110	2 HEP802	XX.
E-1	2007	7 GI10	2009	GP08B	110	4 GT3150	200	1 HA9054	202	HD6147	110	4 HEP-C6090	
E-1N506 E-1N5061	1104		1104	I GP1	110- 110-	4 GTE1	2007	7 HA9056	202	2 HD200207	110	4 HEP-C6102P	7.7
E-5	200	GI-300D	1104	GP2-345	110	2 GTE2	2007 110	7 HA9057	202: 202:		110 112	3 HEP-C6103P	
SE-6 SE6.2	56	GI420	1104	GP25G	110	4 GTV	200	7 HA9059	202	2 HD1000101	112	3 HEPC6103P	
GE6.2A GE6.2B	56 56		2016		110- 110		110: 200:	9 HA9079	202 202	2 HD1000301	112	3 HEP-F0015	
3E-7	200	GI-2712	2010	6 GP-354	112	3 GVL20077	200: 112:	9 HA9531	202 202	3 HD1000302	112 112	3 HEPF0015	
GE-8 GE-10	200 203	1 GI-2713	2009	GPM1NA	112 112	3 GVL20265	112 112 112	2 HA9532	202 202 202	3 HD1000303-0	112	3 HEPF0021	100
	203		2009		112						110		

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	2
EPG0005P/G EPG0006	2007 2007	HF-20088 HF-20095	1123 1102	HR8A HR9A	2007 2007	HST4454 HST5002	2012 2012		2009	HV46GR	1104	IP20-0122	
EPG0006P/G EPG0007	2007 2007	HF-20105 HF-20124	1104	HR10	1104	HST5003	2012	HT304581B-O	2009	HV46GR(DIOOE) HV-80	1104	IP20-0145 IP20-0154	
EPG0007P/G	2007	HF200191A-0	1102 2035	HR-11 HR11	2009 1104	HST5004 HST5005	2012 2012		2009	HV80 HV-100	1102	IP20-0167	
EP-G0011 EPR0050	2001 1104	HF200191A0 HF200191A	2036 2035	HR-11A HR11A	2009 2009	HST5006 HST5007	2012	HT304601CO	2009	HV460R	1104 1102	IP20-0179 IP20-0184	
EPR0051 EPR0052	1104	HF200191A/	2035	HR-11B	2009	HST5008	2012 2012		2009 2041	HV-801 HW9.1	1123 562	IP20-0191 IP20-0192	
EPR0053	1104 1104	HF200191AO HF200191B-0	2036 2035	HR11B HR-13	2009 2009	HST5009 HST5010	2012 2012		2030 2009	HW9.1A	562	IP20-0203	
PR0054 P-R0700	1104 1101	HF200191B0 HF200191BO	2035 2035	HR13 HR-13A	1104 2009	HST5051 HST5052	2012	HT305361G	2009	HW9.1B HW12	562 563	IP20-0216 IR1D	
PR0700 P-R9001	1101	HF200301B0	2035	HR13A	2009	HST5053	2012 2012		2009 2009	HW12A HW12B	563 563	IR2A IR2E	
P-R9002	1102(2) 1102(2)	HF200301B HF200301BO	2035 2035	HR14 HR-14A	2009	HST5054 HST5055	2012		2009 2009	HW15	564	(IR)2SC372	
P-R9003 P-R9134	1102(2) 1123	HF200301C-0 HF200301C-O	2036 2035	HR14A HR-15A	2009	HST5056	2012	HT306441B0	2009	HW15A HW15B	564 564	(IR)2SC380AO (IR)2SC454B	-
PR9134 PR9134A	1123	HF200301E	2035	HR15A	2009 2009	HST5502 HST5503	2012 2012	HT306441C-0	2009	HX50002 HX50003	2009	(IR)2SC458B (IR)2SC460B	
P-R9135	1123 1123	HF200411B HF2000411B	2035 2035	HR-16 HR16	2009 2009	H\$T5504 H\$T5505	2012 2012		2009 2011	HX-50063 '	2009	(IR)2SC537B	
P\$0002 P-\$0004	2010	HF-DS410 HF-MV2	1102	HR-16A HR16A	2009	HST5507	2012	HT306451H	2030	HX-50072 HX-50110	2009	(IR)2SC682A (IR)2SC719	
PS0004	2009	HFOW05	1104	HR-17	2009	HST5508 HST5509	2012 2012	HT306962A-O HT307321A	2030	HX-50113 HY3045801C	2009	(IR)2SC717 (IR)2SC772	
P-S0008 PS0008	2013 2016	HF-SD1 HF-SO-1A	1104 1104	HR17 HR-17A	2009	HST5510 HST5551	2012 2012	HT307321B-0 HT307321B-0	2009	HZ-6B	561	(IR)2SC82BA	
PS004 P-S0010	2009 2013	HFSD1A HFSD1B	1104 1104	HR17A HR-18	2009	HST5552	2012	HT307322A	2009 2009	HZ-6C HZ-9	561 562	(IR)2SC829B (IR)2SC838	-
PS0010	2038	HF-SD-1C	1104	HR18	2009 2009	HST5553 HST5554	2012 2012	HT307331B HT307331C0	2009	HZ-9B HZ9B	562 562	IR5JA IR20	
P-S0011 PS0011	2009 2010	HF-SD-1Z HFSG005	1104 1104	HR-18A HR18A	2009 2009	HST5555 HST5556	2012 2012	HT307331C HT307341B	2009	HZ-12	563	IRC20	
PS0015 PS0016	2010 2038	HG1090 HG5002	1123 1123	HR-19 HR 19	2009	HST5906	2020	HT307341C-0	2009	HZ-12A HZ-12B	563 563	IRTR05	02
PS0017	2038	HG5004	1123	HR-19A	2009 2009	HST7402 HST7403	2012 2012	HT307720B HT307721C	2011	HZ-212 I9A115728-2	563 2009	IRTR09	
P-\$0020 P\$0020	2013	HG5006 HG5007	1123 1123	HR19A HR-32	2009	HST7412 HST7413	2012	HT307721D	2011	1964(6	1102	IRTR11 IRTR12	
P-S0022 PS0024	2009 2016	HG5008 HG5009	1123	HR32	2009	HST7415	2012	HT308281B HT308281C	2009	185436 IC-20	1740	IRTR17 IRTR20	=
PS0025	2010	HG5078	1123 1123	HR-36 HR36	2009 2009	HST7416 HST9002	2012 2012	HT308281G HT308281Q	2009 2009	IC-20(PHILCO) IC-23	1740	IRTR22	
P-S0030 PS0030	2009 2016	HG5079 HG5085	1123 1123	HR-37 HR37	2009 2009	HST9003 HST9005	2012	HT308282A-0	2009	IC23	1725 17 2 5	IRTR24 IRTR51	
P-S0033	2013	HG5088	1123	HR-38	2009	HST9006	2012 2012	HT308282A HT308282A-O	2009	IC37(ELCOM) IC-40(ELCOM)	1733	IRTR-58 IR-TR59	
S3013	2016	HG5808 HGR1	1123	HR39 HR-40	2011	HST9008 HST9009	2012 2012	HT308291A HT308291A-O	2011	IC40(ELCOM)	007	IRTR-60	
P-S7002 PS7002	2041	HGR2 HGR3	1104	HR-43	2004	HST-9201	2041	HT308291B-0	2011	IC-53(ELCOM) IC53(ELCOM)	1740 1740	IRTR60 IRTR-61	
P-S7004	2041	HGR4	1104	HR-45 HR-48	2004	HST-9205 HST-9206	2041 2041	HT308291B0 HT308291B	2011	IC-109(ELCOM) IC-210(ELCOM)	010 017	IRTR61	- 2
PS7004 P-Z0214	2041	HGR-5 HG-R10	1104 1104	HR48 HR-58	2009	HST-9210 HT040519C	2041	HT308291B-O	2009	IC210(ELCOM)	017	IRTR-62 IRTR62	
Z0214 2-Z0219	561 562	HGR-10	1104	HR-59	2011	HT-23G	2001 1102	HT308291BO HT308291C		IC-296(ELCOM) IC317(ELCOM)	038 007	IRTR63 IRTR-70	:
Z0219	562	HGR-20 HGR-30	1104	HR-60 HR62	2009	HT100 HT101	2022	HT309291E HT309301D	2011	IC-531(ELCOM) IC-602(ELCOM)	1740	IRTR70	- 3
P-Z0222 P-Z0225	563 564	HGR-40 HGR-60	1104	HR63 HR64	2009	HT400 HT401	2013	HT309842A-0	2009	IC743040	702 2013	IRTR-71 IRTR71	
7-Z0408 Z0408	561	HIFI	1104	HR65	2009	HT30494	2013 2041	HT340519C HT401191	2001	IC743041 IC743042	2013	IRTR79 IRTR86	
- Z 0412	562	HJ22D HJ41	2007 2007	HR76	2009	HT30494X HT38281D	2041 2009	HT401191A HT401191B	2041	IC743046	2035	IRTRFE100	- 2
Z0412 -Z0415		HJ56 HJ75		HR77 HR78	2013 2013	HT104941B-O	2032	HT800011F	2009	IC743047 IC743048	562 1104	IS-446D 1 ISD-162	110
-Z0418 SO1	564	HK-00049	2036	HR79	2011	HT105611BO HT105621BO	2032 2032	HT800011G HT800011H		IC743049 IC743050		ISD162 FT22	1
SW05	1104	HK-00330 HKT-158		HR80 HR84(NPN)	2011	HT303620B HT303711A0	2009 2009	HT800011K HT3036201	2009	IC743051	1102	IT23	1
W05		HKT-161 HL24510	2009	HR87	2013	HT303711A	2011	HT3036210	2009	IE12Z5 IE460B		IT23G IT108	1
B \$334	1104	HL24593	007	HS133 HS902A	1101	HT303711A-O HT303711AO	2030	HT3037210 HT3037210-0		IE850 IM4004	2009	IT120 IT121	2
S339	562	HL24630 HM-00049		HS1001 HS1002	1104 1104	HT303711B-0 HT303711B0	2009	HT3037210-O HT3037310	2031	IN60-1	1123	IT122	2
Z		HM9,1 HM9,1A	562	HS1003 HS1007	1104	HT303711B	2011	HT3038013-B	2011	INJ60284 INJ61224		IT205A IT918	2
	2009	HM9.1B	562	H\$1008	4404	HT303711B-O HT303711BO	2030 2009	HT3073310 HT8000710		INJ61225 INJ61227 1	561	IT918A IT918A	2
-		HM12 HM12A		HS1009 HS1010		HT303711C HT303721-0	2011	HT8001810 HT30373100	2009	NJ61433	1102	IT929	2
		HM12B HM13	563	HS1011	1104	HT3037210	2009	HV0000105	1104	NJ61434 NJ61675	1104	IT930 IT2218	2
m 29	2009	HM13A	563	HS1012 HS1020	1104	HT303730 HT303730A	2009	HV0000105-0 HV0000206	1104	NJ61677 NJ61725	1102	IT2219	2
2 0	2009	HM15 HM15A	564 564	HS-1168 HS-1229	2009	HT303801 HT303801A0	2011	HV00003U2	2011	NJ61726	1104	T2221 T2222	2
3	2012	HM15B HN-00002	564	HS2062	561	HT303801A		HV0000406 HV0000502	1102	NJ70980 P20-0001		T2483 T2904	2
003	1122	HN-00003	1123	HS2120 HS2150		HT303801AO HT303801B-0	2009 2011	HV0000705 HV00001050	1104	P20-0002 P20-0003	2009	T2905 T2906	2
0024 0004	562	HN-00005 HN-00008	563	H\$3103 H\$3104	1104	HT303801B0	2011	HV-15	1123 I	P20-0006	2009	T2907	2
0008 0011	1123	HN-00012 HN-00018	562	HS3108	1114	HT303801B HT303801B-O	2009	HV15 HV-23		P20-006 P20-0010		TC918A TE4416	2
0014	1102	HN-00024	562	HS3110 HS5810	1114 2030	HT303801BO HT303801C0		HV23 HV23(DIODE)	1102 1	P20-0011 P20-0012	2035	TT73	1
0032 032		HN-00029 HN-00032	1104	H\$5814 H\$7062	2030	HT303801C	2011	HV-23(ELGIN)	1104	P20-0015	1123	TT73N TT200	1
0034 0041	1102	HN-0047 HO89	1102	HS7091-	562	HT303801CO HT304508K	2031	HV23(TRANSISTOR		P20-0016 P20-0018	1123	TT350 TT402	1
0042	1104	HO91	1123	H\$7120 H\$7150	563 1 564	HT304531 HT304531A		HV-23BL HV23F	1123 I	P20-0019 P20-0020	562 1	TT413	1
0047 0048		HP-5A HP205	1104	HS-40017 HS-40020	2009	HT304531B	2009	HV-23G(BL)	1102 I	P20-0021	1102	TT709(METAL-CAN TT709-5(WETAL-CA	
0050 0052	1104	1P5082-2800	1122	HS-40037	2009	HT304531C HT304540AO	2009	HV-25 HV25		P20-0022 P20-0023	1104	TT723(D.I.P.)	1
0060	1102	1P35860A 1R-05A	1104	HS-40039 HS-40044	2009	HT304540B0 HT304540BO	2009	HV-25(DIODE) HV25(HITACHI)	1102 II	P20-0024	1104	TT723-5(Q.I.P.)	1
060 0061	1102 H	IR-2A IR-2A(PENNCRE	1104 I	HS-40046	2009	HT304580	2009	HV-25(RCA)	1102	P20-0025 P20-0026	1114	TT741(D.L.P.) TT741(METAL-CAN	() ()
0063	1102		1104	1S40046 1S-40054	2014	HT304580A HT304580B		HV-26 HV26	1104	P20-0029 P20-0035	2014	TT741-5(D.I.P.)	1
0064 0065		1R4A 1R5	2007	HS-40055 HSFD-1A	2009 I	HT304580C0 HT304580CO	2009	HV-26G	1104	P20-0039	2010	TT741-5(NETÁL-CA	AN)
0066 0 66	1104 F	IR-5A IR5A	1104 H	ISFD-1Z	1104 H	HT304580K	2009	HV-27 HV-46		P20-0040 P20-0041		FT921 FT992	11
0067	1104 F	IR5A8E	1104	ISFD-12(SONY-	STANDBY 1	HT304580Y0 HT304580YO	2009	HV46 HV46 # OR # (OIODE	1104	P20-0054 P20-0061	1104 1	TT7215	11
0071 0083		IR-5AX2 IR-5B	1104 H	IST4451 IST4452	2012	1T304580Z	2009		1104 11	P20-0078	2036 J	(8055-375005N -05	11
0084		IR5B		IST4453	AUIZ F	HT304581	2009	HV46(DIODE)	1104 11	20-0110	2013 J	-1	11

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
2-4570	1104	JC-00028	1104	K4G5	1104	K49H	2035 2035	KC2DP KC2DP11/1	1104 1104	LAA800 LC.09M	1104 1104	LRR-100 LRR100	110
-4 -6	1104	JC-00032 JC-00033	1104	K4H5 K4K5	1114	K49H(1-GATE) K49HK(1-GATE)	2035	KC2DP12/1	1104(2)	LD128	1101	LRR-200	110
100	1104	JC-00035	1104	K4M5	1114	K49I	2035	KC2DP12/1N KC2DP12/2	1104	LD128(RCA) LDA400	1101 2016	LRR200 LRR-300	110 110
107 139A	2011	JC-00037 JC-00044	1104 1104	K5A5 K5B5	1104	K49I(1-GATE) K49M(1-GATE)	2035	KC2DP121N	1104	LDA400MP	2016	LRR300	110
241	1123	JC-00045	1104	K5C5	1104	K52	1123	KC2DP122	1104	LDA401 LDA401MP	2010 2016	LRR-400 LRR400	110 110
242	1123	JC-00047 JC-00049	1104 1104	K5D5 K5E5	1104 1104	K55(1-GATE) K55D(1-GATE)	2036 2036	KC2DP221 KC2DP221B	1104	LDA402	2010	LRR-500	110
243 308	2036	JC-00049	1104	K5F5	1104	K55E(1-GATE)	2036	KC2G11/1	1104	LDA404	2009	LRR500	110 200
685	1123	JC-00055	1104	K5G5 K5H5	1104	K60 K115J511-2	1123	KC2G11/1+12/1 KC2G11/1&12/1	1104	LDA406 LDA410	2038 2013	LS-0085-01 LS3705	200
961B(G.E.) 2441	2009 1123	JC-00059 JC-0025	1104	K5K5	1114	K119J804-5	1102	KC2G12/1	1104	LDA414.	2038	LS5484	203
20437	1104	JC-10D1	1104	K5M5	1114	K120Y(1-GATE)	2035	KC13C221 KC1322/1	1104	LDA420 LDA454	2016 2034	LS5485 LT1016(E)	203
20438	563 1104	JC-DS16E JC-KS05	1104 1104	K6 K10	1123	K121J688-1 K170(1-GATE)	2035	KCO-8CP	1104	LDS200	2016	LT1016H	201
24127 24262	561	JCN1	1104	K11(1-GATE)	2035	K170R(1-GATE)	2035	KCO-8CP11/1+1		LDS201	2016 2023	LT1016I,H	200
24458	2009	JCN2	1104	K11-0(1-GATE)	2035 2035	K198L K200	2035 1104	KD27	1104 1123	LDS202 LDS205	2023	LT1016T,H LTE1016	201
24561 24562	2011 2011	JCN3 JCN4	1104 1104	K11-R(1-GATE) K11-Y(1-GATE)	2035	K882	1123	KD2102	2009	LDS206	2031	LTH1016	20
24563	2011	JCN5	1104	K12(1-GATE)	2035	K2001	2011	KD2103	1104	LDS207 LDS208	2013 2033	LT11016 M-0027	20
24564	2009	JCN6	1104	K12-3(1-GATE) K12-GR(1-GATE)	2035 2035	K2109 K2110	2015 2015	KD2104 KD2124	2001	LDS210	2033	M0027	110
24565 24570	2009 1104	JCN7 JC-SD-1X	- 1104	K12-R(1-GATE)	2035	K2111	2015	KD2503	561	LDS257	2022	M,KIM,I-/U	11:
24624	2009	JC-SD-1Z	1104	K13(1-GATE)	2035		2015	KD2504 KD2505	.562 563	LH740A LH740AC	1733 1733	M1-301 M1H	111
124625	2009 1104	JC-SD1Z JC-SG005	1104 1104	K14-0066-4 K14-0066-6	2007 2013	K2113 K2114	2015 2015	KD5000	2011	LID929	2013	M1S-12795B	20
124630 124631	561	JC-V03C	1104(2)	K14-0066-12	2031	K2115	2015	KE-262	1104	LID930	2013	M2N168A	20
124632	562	JCV-2	1104	K15-0(1-GATE)	2035		2015 2015	KE-1007 KE4416	2041 2036	LL-2 LL2	1104 1104	M4HZ M4Z6.2	11
124641 124643	2009 1123	JCV2 JCV-3	1104 1104	K15-GR-(1-GATE K15-R(1-GATE)	2035		2015	KE5105	2036	LLB-23	2009	M4Z6.2-20	5
124645	1104	JCV3	1104	K15-Y(1-GATE)	2035	K2119	2011	KGE41007	1104	LM377	702 702	M4Z6.2A M4Z9.1	5
124647	1104	JCV7	1114	K17	2035 2035		2011 2011	KGE41055 KGE41959	2009 1123	LM-377N LM377N	702	M4Z9.1-20	5
J24658 J24701	2009 2011	JD-00040 JD-BB1A	1104 1104	K17(1-GATE) K17A(1-GATE)	2035		2011	KGE46109	1102	LM380	1725	M4Z9.1A	5
J24752	2009	JD-SD1D	1104	K17B(1-GATE)	2035	K2123	2011	KLH704	2009	LM-566	1724 1721	M4Z12 M4Z12-20	5
J24753	2009	JDSD1D	1104	K17BL(1-GATE) K17GR(1-GATE)	2035 2035		2011 2011	KLH1422 KLH4567	2009 1104	LM-567 LM709C	017	M4Z12-20 M4Z12A	5
J24755 J24756	1102 1104	JD-SD1Z JE1033B	1104 2035	K17R(1-GATE)	2035		2011	KLH4577	1104	LM709CH	017	M4Z15	5
J24730 J24817	2009	JE9011	2009	K17Y(1-GATE)	2035	K2127	2011	KLH4763 KLH4792	1102	LM723CD LM741	1740 007	M4Z15-20 M4Z15A	5
124833	2007	JE9011H	2009	K19 K19(1-GATE)	2035		2011	KUH4/92 KOS25201-1	2011 1123	LM741C	007	M6HZ	11
J24842 J24843	2030 2009	JF-1033 JF1033	2036	K19(GR)	2035		2011	KOS25201-2	1123	LM741CH	007	M8HZ	11
124844	2013	JF1033G	. 2036	K19BL(1-GATE)	2035		2011	KOS25671-20	2013 2013	LM741CN LM741H	010 007	M9Z M12	11
J24845	2009	JF1033S	2035 1102	K19GC K19GC(1-GATE)	2035		2011 2011	KOS25671-21 KOS25671-23	2013		2009	M12Z	5
J24846 J24855	2031	JL-40A JL40A	1102	K19GE(1-GATE)	2035		2011	KPG6682	2009	LM1090F	2009	M14	11
J24871	1104	JLM-20	2009	K19GR	2035		2011	KR8417	2030 1123		2009 2011	M15Z M22	11
J24874	2009	JM-40 JM40	1102 1102	K19GR(1-GATE) K19Y	2035 2035		2011 2011	KR-Q0005 KR-Q1013	2009		2009	M24	20
J24877 J24878	1104 2009	JM401	1102	K19Y(1-GATE)	2035	K2616	2011	KS-05	1104	LM1120B	2011	M24A	20
J24903	2011	JN271	2009	K22(1-GATE)	2035		2011 1104	KS05 KS-05X	1104 1104		2011 2009	M24B M25	20
J24906	2009 2009	JR40 JSP7001	2001 2009	K22-Y(1-GATE) K22Y(1-GATE)	2035		1104		561	LM-1130	2009	M25A	20
J24907 J24909	2009	JT-1601-40	2009	K23(1-GATE)	2035	KA4559	2035		561	LM-1132	2009 2009	M25A2 M25B	20
J24911	1123		1101	K23A	203 203		1102 1102		561 562	LM-1133 LM1133	2010		20
J24912 J24913	1102 1123		1123 1104	K25(1-GATE) K25C(1-GATE)	2035		1102		562	LM1138	2013	M26	11
J24914	1123	JT-E1031	1123	K25D(1-GATE)	2035	KB-162C5	1102		563 563		2013 2013		11
J24916	2009		1104 1102	K25E(1-GATE) K25ET(1-GATE)	203		1102		563		2013		1
J24919 J24920	1104 1104		2041	K25F(1-GATE)	203		1102	KS44BF	563	LM1138G	2013		1 2
J24935	1104		1104	K25G(1-GATE)	203		1102		564 564		2013 2013		2
J24939	1104		1104 1104	K30-0(1-GATE) K30A(1-GATE)	203		1102		564		2013	M54B	2
J24940 J101183	1104 1104		1104	K30AD(1-GATE	203	5 KB-262	1102	KS120A	563		2013 2009		2
J241054	2009	K1E5	1104	K30AGR(1-GAT	E) 203:		1104 1102		563 564		2009		2
J241099	2009 1104		1104 1104	K30B(1-GATE) K30C(1-GATE)	203		110		564	LM-1154	2012	M54C	2
J241100 J241102	1104		1104	K30D(1-GATE)	203	5 KB265A	1103	KS2062A	56		2009		2
J241142	1104	K1K5	1114	K30GR(1-GATE	203		1104		56° 56°		110		2
J241177 J241179	2011 561		1114 1104	K30R(1-GATE) K30Y	203		110	2 KS2091B	562	LM1159	110	M54ORN	2
J241182	1102	K2A5	1104	K30Y(1-GATE)	203	5 KB8339	2009	KS2120A	563		110-		2 2
J241188	2011	K2B5	1104	K31(1-GATE)	203		203 110		563 564		200		2
J241189 J241209	2011 1104		1104 1104		203 203	5 KC0-8CP11/1+	12/1110	KS2150B	56	LM1415-6	200	€ M60	1
J241210	1104	K2E5	1104	K33(1-GATE)	203	5 KC0-8CP11/1&	12/1 110	KS-19938	204		200		1
J241211	1104 1104	K2F5	1104 1104		203 203	5 KC08C11/8	110	4 KSD1051 4 KSD1055	204 204		03	M67A	1
J241212 J241213	1102	K2G K2G5	1104		203	5 KC08C11/10	110	4 KSD1056	204	LM1540	200	M67B	1
J241214	1104	1 K2H5	1114	K33F	203	5 KC08C21/5	110		204 204		200		
J241230	2009 1104		1114 1123		203 203	5 KC08C21719	110 110		111	4 LM-1862	110	4 M68A	1
J241232 J241234	110		1101) 203	5 KC08C221	110	4 KSKE40C200	110	4 LM1862	110		
J241235	1102	2 K3B5	1104	K34	203	5 KC08C1110	110 110		110 111		204 110		1
J241242	110: 112:		1104 1104		203 203		110		56	1 LP2H	110	4 M69A	1
J241245 J241251	2009	K3E	1101	K34B(1-GATE)	203	5 KC06911	110	4 KSO91A	56		110		
J241260	1104	4 K3F5	1104	K34C	203	5 KC0.8	110 110		201 201		110 56		
J241271	110- 200:		1104 1114	K34C(1-GATE)	203	5 KC0.8CP 5 KC0.8CP11	110	4 KX-1	110	2 LPM9.1A	56	2 M70A	
J310249 J310250	200		1114	K34D(1-GATE)	203	5 KC0.8CP11/1	110	4 L3/2H	110		56		
J320020	110	4 K3M5	1114	K34E	203	5 KC0.8CP11/1+	121Y110	4 L4 4 L6/2H	201 110		56 56		Ball
J320041	112		2009 2041		TE) 110 203	1 KC0.8CP11/1& KC0.8CP12/1	110	4 L8/2H	110	4 LPM15A	56	4 M71A	
JA1200 JA-H	200 200		1123		203	5 KC1.3C	. 110	4 L32H	110	4 LPZT12	56	3 M71B	
JA-L	200	9 K4-555	1104	K37L(1-GATE)	203	5 KC1.3C3X11/1	110		110 111		. 56 56		
JAM702C	110		1104 1104		203 203		110		03	8 LR91CH	56	2 M72A	
JB-00030 JB-00036	110 110		1104		203	15 KC1.3G22/1A	110	4 LA300	170	4 LR120CH	56		
JB-BB1A	110	4 K4C5	1104	K47M(1-GATE)	203	5 KC1.3G22/12	110		110 110	4 LR150CH 4 LRQ849	56 200		
JC-00012 JC-00014	110	4 K4D5	1104 1104		203		110		110	4 LRR-50	110	4 M73A	
	110	4 K4E5	1104		203		110		110		110		

EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	2
73C 32	1114 1114 2011	M-1002-17-NC M1400-1 M2497	2009 2011 1104	M9282 M9302 M9312	2009 2041 1104	MC19 MC100 MC170	1104 1114	ME4102 ME4103	2009	MK-10-E MK102	2035 2036	MPS-2716 MPS2716	
91A01 91A02	1104 1104	M3016 M3519	1104 2009	M9314 M9317	1104	MC-301 MC301	1104 1102 1102	ME4104 ME6001 ME6002	2009 2013 2013	MK5485 ML2812 MM0	2035 1102	MPS2823 MPS2894	
91A03 91A06	1104 1114	M4389 M4464	2007 2009	M9319 M9321	1104 2041	MC308 MC456	1123 1104	ME6003 ME9001	2016 2016	MM2 MM3	1104 1104 1104	MPS2907 MPS2923 MPS2924	
91A 91B 91BGRN	2009	M4465 M4594	2009	M9475 M9515	2009 2041	MC1458CP1 MC1458P1	038 038	ME9002 ME9003	2015 2038	MM4 MM5	1104 1104	MPS2925 MPS2926	
91C 91CM624	2009 2009 2009	M4624 M4630 M4653	2009 2009 562	M9525 M9532 M9563	2009	MC1520 MC1521	1104	ME9021 ME9022	2016 2015	MM6 MM7	1104 1114	MPS2926-BRN MPS2926-OFG	
1D 1E	2009	M4700 M4706	2001	M9568 M9570	2009 2009 2009	MC1522 MC1523 MC1524	1104 1104 1104	MEF-25 MER-65-L11324	2009 1122	MM8 . MM9	1114 1114	MPS2926-RED MPS2926-YEL	
1F 1FM624	2009 2009	M4706 M4714	2009 2009	M31001 M41032A	2009	MC1527 MC1528	1114 1114	MEZ12T5 MEZ12T10 MEZ15T5	563 563 564	MM10 MM709 MM869B	1114 2009 2034	MPS2926BRN MPS2926GRN MPS2926ORN	N
5 02	1123	M4715 M-4721	2041 2031	M41223-2 M51709T	1104 017	MC1529 MC1709CG	1114 017	MEZ15T10 MF1161	564 2011	MM1755 MM1756	2016 2009	MPS2926RED MPS2926YEL	
24J779-1 28J510-1 40-1	1104 2011 2011	M4732 M4734 M4736	2009	M75549-2 M-75557-1	2041	MC1709CP1 MC1723CL	017 1740	MF1162 MF1163	2011 2011	MM1757 MM1758	2016 2009	MPS3392 MPS3393	
10-3 50	2009	M4737 M4739	1104 2009 2009	M-75557-2 M-75557-3 M-75557-4	2009 2009 2009	MC1741C2P MC1741CG MC1741CP2	010 007	MF1164 MG9623	2011	MM1812 MM1941	2012 2038	MPS3394 MPS3395	
50-1 72A	1102 1104	M4746 M4757	2011	M-75557-5 M-75557-6	2009	MC2326 MC2526	010 1102 1123	MGLA62A MGLA62B	561 561 561	MM1943 MM2894 MM3003	2016 2034	MPS3396 MPS3397	
04B 17	1104 2009	M4765 M4768	2009 2009	M75565-1 MA0404	2009 2023	MC5321 MC6008	1102	MGLA91 MGLA91A	562 562	MM3903 MM3904	2012 2016 2009	MPS3398 MPS-3563 MPS3563	7
34 00 00 A	2009 1104 1104	M4789 M4816	2011 562	MA0404-1 MA0413	2023 2034	MC6008A MC6016	561 563	MGLA91B MH67	562 1104	MM3905 MM4257	2034	MPS3565 MPS3567	
00B	1104	M4821 M4825 M4834	2009 2011 2009	MA0414 MA2 MA3	1104	MC6016A MC6018	563 564	MH68 MH70	1104 1104	MM8006 MM8007	2015 2015	MPS3568 MPS3638	
14 14HT	1104	M4840 M4840A	2009	MAS MA-23B	1123 1123 1123	MC6018A MC6108	564 561	MH71 MH72	1104	MMCM918 MMCM2222	2011 2016	MPS3640 MPS3643	
0 0A	1104 1104	M4841 M4842	2009	MA-25A MA25A	1102	MC6108A MC6116 MC6116A	561 563 563	MH670 MH680	1104 1104 1104	MMCM2369 MMCM2907 MMT70	2016	MPS3646 MPS3693	
0B 0C	1104	M4842A M4842C	2009 2009	MA-26 MA26	1102 1102	MC6118 MC6118A	564 564	MH700 MH710	1104 1104	MMT71 MMT72	2013 2022 2016	MPS3694 MPS3702 MPS3704	
1 0 0	1104	M4844 M4852	2009	MA-26-1 MA26A	1104 1102	MC9427 MCV	2009 1104	MH720 MH730	1114	MMT73 MMT74	2034 2015	MPS-3705 MPS-3705	
0A 0B 0C	1104 1104 1104	M4854 M4882 M4898	2009 2041 2009	MA26WA MA50	1102	MD04 MD-34	1104 1123	MH9623 MH9630	2009 2009	MMT75 MMT76	2034 2016	MPS3706 MPS3707	E
0 0A	1104	M4904 M4906	2009 2011 2009	MA51A MA55	1104 1123 1123	MD34A MD34A MD46	1123 1123	MHT2002 MHT2003	2001	MMT918 MMT2222	2015 2010	MPS3708 MPS3709	
0B 0C	1104 1104	M4926 M4933	2009 2009	MA90 MA100	1123	MD60 MD-60A	1123 1123 1123	MHT2004 MHT2008 MHT2009	2001 2001 2001	MMT2369 MMT2857 MMT3014	2016 2015 2016	MPS3710 MPS3711 MPS3721	
0 0 A	1104 1104	M4935 M4937	2009 2009	MA101 MA102	1104 1104	MD134 MD135	1104	MHT2010 MHT4402	2001	MMT3903 MMT3904	2016 2009	MPS3826 MPS3827	3
0B 0C 1B	1104	M4937(3RD-IF) M4941	2010	MA110 MA150	1104 2012	MD136 MD137		MHT4411 MHT4453	2030	MMT3905 MMT8015	2034 2011	MPS3904 MPS3906	
2 2B	1104 1114 1114	M4952 M4953 M4970	2009	MA161 MA162	1102	MD138 MD604A	1104 1123	MHT4454 MHT5001	2012	MN34A MN51	1123 1123	MPS3992 MPS4145	- 2
2 C	1104(2)	M5141T M7003	2030 007 2009	MA203 MA211 MA215	1104 1104 1104	MD753 MD753A	561	MHT5002 MHT5003	2012	MN54 MN60(DIODE)	2009 1123	MPS5172 MPS5668	. 2
DA DB	1104	M7006 M7014	2009	MA242 MA242C	1104 1104	MD757 MD757A MD759	562 562 563	MHT5004 MHT5005 MHT7413	2012	MP-01 MP01	1104 1104	MPS6351 MPS6413	2
0C 0	1104 1114	M7015 M7033	2009	MA286 MA287	2007	MD759A MD2369AF	563	MHT7415 MHT7416	2012 2012 2012	MP100 MP225 MP300	1104	MPS6507 MPS6511 MPS6511-S	2
0A 0B	1114	M7108 M7108/A5N	2009	MA350 MA351	1104 1104	MD2369BF MD2369F		MHT7601 MHT7602	2041	MP400 MP500(RECT.)	1104 1104 1104	MPS6512 MPS6513	2 2 2
0C 0 0A	1114	M7109 M7109/A5P	2009	MA433 MA4101	1101 2013	MD3133F MDA104	2023 1104	MHT7603 MHT7607	2041	MP549 MP651	1114	MPS6514 MPS6516	2
0B 0C	1114 1114 1114	M7171 M7543-1 M8014(TRANSIS	2009 2041	MA4103 MA4104 MA6001	2016 2016 2009	MDA920-2 MDA920-4	1104	MHT7608 MHT7609	2041	MP1003-1 MP1003-2	1104 1104	MPS6520 MPS6521	2
3 BRED	2009	M8105	2007	MA6002 MA6003	2038	MDA920-6 MDA920-7 MDP173	1104	MHT9008 MHT9009 MI-301	2012	MP1003-4 MP1014-2	1104 2009	MPS6528 MPS6529	2
4 4ORN	2009	M8120 M-8124	2001	MA9002 MA9003	2038	ME0404 ME0404-1	2034	MI301 MI9623	1102 1102 2009	MP5113 MP-5115 MP9602	1104 1104 1104	MPS6530 MPS6531	2
5 5BRN		M8221 M8222	1104	MA9426 MAQ7786	2009	ME0404-2 ME0413	2034	MI9630 MIC709-5(METAL	2009	MP4300158 MPC3500	1122	MPS6532 MPS6535 MPS6539	2 2 2
6 BGRN 9	2009	M8399 M8482	1101	MB01 MB244	1104	ME0414 ME0463	2022	MIC723-5(D.I.P.)	017	MPF101 MPF-102	2035	MPS6540 MPS6541	2
MIII	2009	M8482C	1101	MB257	1104	ME-1	7009	MIC741AIN I PI	010	MORANA	1000	Lindaria	-
	1911	N HA			att							MAILE	- 1
WI II		01004	1011	HAM!					111	14.1	1011	The second	11.0
	- 611	T.							11			2500,000	
		Magne											Ш
		1911											ш
		1							111		-411		Ш
		l in l											
									111				
									18	MIG.	-000		ш
						1							Ш
													Ш
									110	1111111			
									14		110		
									14		14.1	17 16	
										1001			
													Ш
		11111	1 111 1	11111111111	1 11 111								
											11.7		H

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-
MPS8001 MPS8097 MPS9185	2016 2010 2009	MPSA42 MPSA70 MPSA70-RED	2012 2034 2034	MS35H MS36H MS50	1104 1104 1104	MZ92-15A MZ206 MZ207	564 561 1102	NK65-4A19 NK74-3A19 NK88C119	2001 2007 2007	NR-261AS NR261AS NR271AY	2009 2009 2009	OA200 OA202 OA205	1102 1102 1102
MPS9423 MPS94231 MPS9426 MPS9426A	2009 2009 2013 2009	MPSD01 MPSD02 MPSD03	2034 2012 2012 2012	MS510 MS1010 MS3694 MS7502R	2030 2030 2030 2009	MZ-209 MZ209 MZ209A MZ209B	562 562 562 562	NKT12 NKT42 NKT43 NKT62	2007 2007 2007 2007	NR-431AG NR-431AS NR461AF NR-461AS	2009 2009 2011 2009	OA210 OA211 OA214 OA541	1104 1104 1104 1123
MPS9426A.B MPS9426B MPS9426C	2009 2013 2013	MPSD05 MPSD06 MPSD55	2033 2016 2023	MS7503R MSR-500 MSR500	2009 1104 1104	MZ209C MZ-212 MZ212	562 563 563	NKT63 NKT64 NKT72	2007 2007 2007	NR700 NR7916 NS316	2001 2035 2035	OA909 OA12612 OAZ203	1123 563 561
MPS9427 MPS9427B MPS9427B.C MPS9427C	2013 2013 2009 2009	MPSD56 MPSEL239 MPSH02 MPSH07	2034 2009 2038 2009	MSR7503 MSR-V5 MSS-1000 MSS1000	2009 1104 1104 1102	MZ409-02B MZ500-11 MZ500-15 MZ500-18	562 561 562 563	NKT73 NKT74 NKT128 NKT129	2007 2007 2007 2007	NS381 NS475 NS476 NS477	2016 2009 2009 2009	OAZ207 OAZ210 OAZ212 OAZ213	562 561 562 563
MPS9433J MPS9433K MPS9444	2009 2009 1102	MPSH08 MPSH09 MPSH10	2009 2011 2038	MT021 MT021A MT022	1104 1104 1104	MZ500-20 MZ500.15 MZ500.18	564 562 563	NKT133 NKT141 NKT142	2007 2007 2007	NS478 NS479 NS480	2009 2009 2009 2009	OAZ230 OAZ243 OAZ247 OAZ270	563 561 562 561
MPS9600 MPS9600(G) MPS9600F MPS9600G	2009 2009 2009 2009	MPSH11 MPS-H17 MPSH17 MPSH19	2038 2013 2008 2016	MT022A MT0404 MT0404-1 MT0404-2	1104 2034 2034 2034	MZ605 MZ610 MZ620 MZ640	561 561 561 561	NKT143 NKT144 NKT162 - NKT163	2007 2007 2007 2007	NS731 NS731A NS733 NS733A	2009 2009 2009	OAZ272 OAZ273 OC-34	562 563 2009
MPS9604 MPS9604D MPS9604E	2013 2009 2009	MPSH20 MPSH24 MPSH30	2016 2011 2016	MT0411 MT0412 MT0413	2022 2022 2022 2022	MZ-1000-15 MZ1000-15 MZ1000-17 MZ1012	563 563 564 563	NKT164 NKT202 NKT203 NKT204	2007 2007 2007 2007	NS734 NS734A NS949 NS1500	2009 2009 2009 2009	OC-44 OC-45 OC-46 OC-47	2007 2007 2007 2007
MPS9604F MPS9604FG MPS9604I MPS9604R	2009 2009 2009 2009	MPSH31 MPS-H32 MPSH32 MPSH37	2016 2030 2009 2016	MT0414 MT0463 MT14 MT24	2034 1104 1104	MZ2360 MZ2361 MZ4627	1102 1102 561	NKT205 NKT206 NKT207	2007 2007 2007	NS1510 NS1972 NS1973	2011 2009 2009	OC-130 OC139 OC-140	2007 2001 2007
MPS9606 MPS9606(H,1) MPS9606H MPS9611-5	1102 1102 1102 2009	MPSH85 MPSK20 MPSK21 MPSK22	2034 2016 2016 2016	MT44 MT64 MT84 MT104	1104 1104 1114 2009	MZX9.1 N-02 N1X N2A	562 1104 2012 1123	NKT221 NKT222\$1 NKT222\$2 NKT243	2007 2007 2007 2007	NS1974 NS1975 NS3039 NS3040	2009 2009 2011 2011	OC140 OC141 OC200 OC201	2001 2001 2022 2022
MPS9616 MPS9618 MPS9618(J)	2009 2009 2009	MPX=25 MPX25 MPX215	1104 1104 1104	MT696 MT697 MT706	2009 2009 2009	N4T N-41 N48	2009 1104 1123	NKT261 NKT262 NKT263	2007 2007 2007	NS3041 NS3903 NS3904	2011 2016 2016	OC202 OC204 OC206	2022 2023 2023
MPS9618H MPS9618I MPS9618J MPS9623	2009 2009 2009 2009	MPX9623 MPX9623H MPX9623H/I MPX9623I	2009 2009 2009 2009	MT706A MT706B MT707 MT708	2009 2009 2009 2009	N201AY N-756A N3563 N5406	2009 562 2009 1102	NKT264 NKT713 NKT732 NKT734	2007 2001 2001 2001	NS3905 NS3906 NS6114 NS6115	2034 2034 2009 2009	OC-308 OC-318	2009 2009 2009 2009
MPS9623C MPS9623C(F) MPS9623E	2011 2009 2009	MPX9630I MQ1 MQ2	2009 2009 2009	MT1075 MT1100 MT3001	2008 2008 2038	N5406(RCA) N5558V N5709T	1102 038 017	NKT736 NKT753 NKT773	2001 2001 2001	NS6207 NS6210 NS7262	2009 2009 2009	OC-340 OC-341 OC-342	2009 2009 2009
MPS9623E.G MPS9623F MPS9623G MPS9623G/H	2009° 2009 2009 2009	MQ3/2 MQ6/2 MQ8/2 MQ32	1104 1104 1104 1104	MT3002 MT3011 MT4101 MT4102	2038 2038 2009 2009	N5723A N5740T N5741A N5741T	1740 1733 010 007	NKT10339 NKT10419 NKT10439 NKT10519	2009 2016 2009 2009	NSB5431 NSB5441 NSS1021 NU34	1202 1201 1114 1123	OC-410 OF156	2009 2007 1102 1104
MPS9623H MPS9623H/I MPS9623I	2009 2009 2009	MQ62 MQ82 MR-1	1104 1104 1104	MT4102A MT4103 MT6001	2009 2009 2033	N-52329 N-121122 N121122	2041 2041 2041	NKT12329 NKT12429 NKT13329	2009 2009 2033	NU398B NZ-206 O4-8054-3 O4-8054-4	1104 561 1104	OF164 OF173	1102 1104 1123 1104
MPS96231/J MPS9623J MPS9625 MPS9625C	2009 2009 2013 2013	MR-1C MR1C MR1M MR62C-H	1104 1104 1104 561	MT6002 MT6003 MT9001 MT9002	2033 2016 2009 2038	NA13 NA20 NA21 NA-22	1104 2001 1104 1104	NKT13429 NKT16229 NKT16325 NKT16425	2033 2011 2007 2007	O4-8054-7 O9-306113 O9-306195	1104 1104 1102 1102	ON047204-2 ON67A	2009 1123 2009
MPS9625D MPS9625E MPS9625F	2013 2013 2013	MR62E-H MR62H MR91C-H	561 561 562	MT9003 MTZ608 MTZ608A	2015 561 561 562	NA22 NA-25 NA25 NA32	1104 1104 1104 1104	NKT20329 NKT20339 NKT35219 NL5	2034 2023 2011 1104	O9-309060 O101 O234 OA6	2009 1104 1104 1123	ON47204-1 OS70	2009 2009 1123 2031
MPS9625G MPS9625H MPS9630 MPS9630H	2013 2013 2009 2009	MR91E-H MR120C-H MR-150-01 MR150C-H	562 563 1104 564	MTZ613A MTZ616 MTZ616A	562 563 563	NA-33 NA33 NA35	1104 1104 1104	NL-10 NL10 NL15	1104 1104 1104	OA7 OA8 OA9	1123 1104 1123	OS-16308 OS16308 OSS-16308	1104 1104 1104
MPS9630H3 MPS-9630I MPS9630I MPS9630T	2009 2009 2009 2009	MR990 MR1031 MR1237FB MR1237FL	1114 1114 1104 1104	MTZ618A MU4891	564 564 2029 1102	NA-36 NA36 NA42 NA45	1,104 1104 1104 1104	NL20 NL25 NL30 NL40	1704 1104 1104 1104	OA9D OA9Z OA47 OA50	1123 1123 1123 1123	OSS-16685 OSS16685	1123 1123 1123 1104
MPS9631 MPS9631(I) MPS9631I	2009 2009 2009	MR1237SB MR1237SL MR1247FB	1104 1104 1104	MV1 MV-2 MV-3	1104 1102 1102	NA-46 NA46 NA62	1104 1104 1104	NL50 NL60 NL100B	1104 1104 2011	OA70 OA71 OA71C	1123 1123 1123	OSS36685 OSS-36885 OSS36885	1104 1104 1104
MPS9631J MPS9631K MPS9631T MPS9632	2009 2009 2009 2009	MR1247FL MR1247SB MR1247SL MR1267	1104 1104 1104 1104	MV3(DIODE) MV3(RECTIFIER	1102 1102 1104 1102	NA65 NA66	1104 1104 1104 1114	NN50 NP50A	2009 1104 1104	OA73 OA73C OA74	1123 1123 1123 1123	OY-5061 OY5061 OY-5062	1104 1104 1104 1104
MPS9632 MPS9632(I) MPS9632(K) MPS9632H MPS9632I	2009 2009 2009	MR1337-1 MR1337-2 MR1337-3	1104 1104 1104	MV-5 MV11 MV-12	1104 1104 1102	NA76 NA84	1114 1114 1114 1114	NPC0050 NPC069	1104 1104 2016 2016	OA74A OA79 OA81 OA81C	1123 1123 1123 1123	OY5063 OY5064	1104 1104 1104 1104
MPS9632J MPS9632K MPS9632T	2009 2009 2009 2009	MR1337-4 MR1337-5 MR2064 MR2065	1104 1104 1104 1104	MV-13(BIAS) MV-13(DIO) MV5051	1104 1104 1102 047	NA86 NA104 NA105	1114 1114 1114	NPC079-98 NPC0100	2023 2023 1104	OA85 OA85C OA-90	1123 1123 1123	OY5066 OY5067 OZ6.2T5	1104 1114 561
MPS9633G MPS9644 MPS9646 MPS9646G	2009 1102 1102 1102	MR2261 MR2262 MR3932 MR9600	1104 1104 2009 1104	MVA-05A MVA-05A(DIO)	041 1104 1104 1104	NC29 NC207AL	017 1123 2009 017	NPC108A NPC115	1104 1104 2016 2016	OA-90(G) OA-90G	1123 1123 1123 1123	OZ12T5 OZ12T10	561 563 564
MPS9646H MPS9646I MPS9646J	1102 1102 1102	MR9601 MR9602 MR9604	1104 1104 2009	MY-1 MZ-00 MZ6.2	1104 1102 561	NCS9018D NE-446AQ N-EA15X130	2011 1102 2011	NPC173 NPC187 NPC189	2038 2016 2016	OA90Z OA90ZA OA-91	1123 1123 1123	OZ15T10 P04-41-0025-0 P04-42-0011	564 01 1122 11 2 2
MPS9682(I) MPS9696F MPS9696H	1102 2032 2009 2009	MRD100 MRD150 MRD450 MRF402	2009 2013 2013 2008	MZ6.2B MZ6.2T5	561 561 561 562	N-EA15X134 N-EA15X135 N-EA15X136 N-EA15X137	2011 2011 2009 2009	NPC1075 NPS404	2009 2010 2032 2016	OA92 OA-95	1123 1123 1102 1123	P04-45-0014-F	5 2009
MPS65611 MPS65611 MPS96041	2009 2009 2009	MRF404 MRF501 MRF502	2030 2015 2038	MZ-11 MZ-12 MZ12	563 563 563	N-EA15X138 N-EA16X29 N-EA16X30	2009 563 1104	NPS6513 NPS6514 NPS6516	2016 2009 2034	OA126/12 OA126-12 OA127	563 563 1104	P04410042-00 P04410042-00 P04440028-00	1 1122 2 1122 1 2009
MPS96321 MPS96800 MPS964611	1102 2009 2032 1102	MRV-20C MS1H	2011 1104 1104 1104	MZ-12B MZ12B	563 563 564	NF501 NF506	1104 1104 1104 1104	NPS6520 NPSA20	2034 2009 2016 2001	OA129 OA130 OA131	1104 1104 1104 1104	P04440028-01 P04440028-8	4 2009 2009 1 2009
MPSA05 MPSA09 MPS-A10	2009 2013 2009	MS3H MS4H MS5C	1104 1104 1104	MZ15T20 MZ70MA MZ92-6,0B	564 561 561	NGP3002 NGP5002 NGP5007 NGP5010	1123 561 562 563	NR071AU NR091ET	2009 2009 2009 2001	OA134Q	1104 1123 1123 1123	P1A5 P1B5	2009 1104 1104
MPSA10-RED MPSA10-WHT MPSA18 MPSA20	2016 2016 2016 2009	MS11H MS12H	1104 1104 1104 1104	MZ92-6.2A MZ92-9.1A	561 561 562 562	NJ100A NJ100B	2011 2009 2009	NR-10 NR10	2001 2001 2001 2001	OA160 OA161 OA172	1123 1123 1123	P1D5 P2A5 P2B5	1104 1104 1104
MPSA20-RED	2016		1104	MZ92-9.18	562	NJ202B	2011 ////	NR30	2001	0A174	1123	P2C5	1104
	HI		11										The state of the s
							1				1		
							11 -460						
				164-1	W	orld Radio Hi	story						

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
M73C M82	1114	M-1002-17-NC M1400-1	2009	M9282	2009	MC19	1104	ME4102	2009	MK-10-E	2035	MPS-2716	20
M91	2011	M2497	2011 1104	M9302 . M9312	2041 1104	MC100 MC170	1114	ME4103 ME4104	2009	MK102 MK5485	2036	MPS2716	20
M91A01 M91A02	1104 1104	M3016 M3519	1104 2009	M9314 M9317	1104 1104	MC-301 MC301	1102	ME6001	2013.	ML2812	2035 1102	MPS2823 MPS2894	- 20 20
M91A03	1104	M4389	2007	M9319	1104	MC308	1102 1123	ME6002 ME6003	2013 2016	MM0 MM2	1104 1104	MPS2907 MPS2923	20
M91A06 M91A	1114 2009	M4464 M4465	2009 2009	M9321 M9475	2041 2009	MC456 MC1458CP1	1104 038	ME9001 ME9002	2016	MM3	1104	MPS2924	20
M91B M91BGRN	2009	M4594	2009	M9515	2041	MC1458P1	038	ME9003	2015 2038	MM4 MM5	1104 1104	MPS2925 MPS2926	20
M91C	2009 2009	M4624 M4630	2009	M9525 M9532	2009 2009	MC1520 MC1521	1104 1104	ME9021 ME9022	2016 2015	MM6	1104	MPS2926-BRN	20
M91CM624 M91D	2009 2009	M4653 M4700	562 2001	M9563	2009	MC1522	1104	MEF-25	2009	MM7 MM8	1114	MPS2926-CRG MPS2926-RED	20
M91E	2009	M4705	2009	M9568 M9570	2009 2009	MC1523 MC1524	1104 1104	MER-65-L11324 MEZ12T5	1122 563	MM9 MM10	1114	MPS2926-YEL	_ 20:
M91F M91FM624	2009 2009	M4706 M4714	2009 2009	M31001 M41032A	2009 1114	MC1527 MC1528	1114	MEZ12T10	563	MM709	2009	MPS2926BRN MPS2926GRN	20
M95 M102	1123	M4715	2041	M41223-2	1104	MC1529	1114 1114	MEZ15T5 MEZ15T10	564 564	MM869B MM1755	2034 2016	MPS2926ORN MPS2926RED	20 20
M124J779-1	1114 1104	M-4721 M4732	2031 2009	M51709T M75549-2	017 2041	MC1709CG MC1709CP1	017 017	MF1161 MF1162	2011	MM1756	2009	MPS2926YEL	20
M-128J510-1 M140-1	2011 2011	M4734 M4736	2009	M-75557-1	2009	MC1723CL	1740	MF1163	2011	MM1757 MM1758	2016 2009	MPS3392 MPS3393	20 20
#140-3	2009	M4737	1104 2009	M-75557-2 M-75557-3	2009	MC1741C2P MC1741CG	010 007	MF1164 MG9623	2011	MM1812 MM1941	2012	MPS3394	20
A150 A150-1	1104	M4739 M4746	2009	M-75557-4 M-75557-5	2009 2009	MC1741CP2 MC2326	010	MGLA62	561	MM1943	2038 2016	MPS3395 MPS3396	20 20
1172A	1104	M4757	2011	M-75557-6	2009	MC2526	1102 1123	MGLA62A MGLA62B	561 561	MM2894 MM3003	2034 2012	MPS3397 MPS3398	20 20
M-204B M447	1104 2009	M4765 M4768	2009 2009	M75565-1 MA0404	2009 2023	MC5321 MC6008	1102 561	MGLA91 MGLA91A	562	MM3903	2016	MPS-3563	20
A484 A500	2009	M4789	2011	MA0404-1	2023	MC6008A	561	MGLA91A	56 2 56 2	MM3904 MM3905	2009 2034	MPS3563 MPS3565	20 20
4500A	1104 1104	M4816 M4821	562 2009	MA0413 MA0414	2034	MC6016 MC6016A	563 563	MH67 MH68	1104 1104	MM4257	2021	MPS3567	20
1500B 1500C	1104 1104	M4825 M4834	2011	MA2	1104	MC6018	564	MH70	1104	MM8006 MM8007	2015 2015	MPS3568 MPS3638	20
1604	1104	M4840	2009	MA3 MA8	1123 1123	MC6018A MC6108	564. 561	MH71 MH72	1104	MMCM918 MMCM2222	2011	MPS3640 MPS3643	20
1604HT 1670	1104	M4840A M4841	2011	MA-23B MA-25A	1123	MC6108A	561	MH500	1104	MMCM2369	2016	MPS3646	20 20
1670A	1104	M4842	2009	MA25A	1102 1123	MC6116 MC6116A	563 563	MH670 MH680	1104	MMCM2907 MMT70	2023	MPS3693 MPS3694	20 20
1670B 1670C	1104 1104	M4842A M4842C	2009	MA-26 MA26	1102 1102	MC6118 MC6118A	564	MH700	1104	MMT71	2022	MPS3702	20
1671	2009	M4844	2009	MA-26-1	1104	MC9427	564 2009	MH710 MH720	1104	MMT72 MMT73	2016 2034	MPS3704 MPS-3705	20 20
1680 1680A	1104 7104	M4852 M4854	2009	MA26A MA26W	1102 1102	MCV MD04	1104	MH730	1114	MMT74	2015	MPS3705	20
1680B 1680C	1104	M4882	2041	MA26WA	1102	MD-34	1123	MH9623 MH9630	2009	MMT75 MMT76	2034 2016	MPS3706 MPS3707	20 20
690	1104	M4898 M4904	2009	MA50 MA51A	1104	MD34 MD34A	1123 1123	MHT2002 MHT2003	2001	MMT918	2015	MPS3708	20
1690A 1690B	1104	M4906 M4926	2009	MASS	1123	MD46	1123	MHT2004	2001	MMT2222 MMT2369	2010	MPS3709 MPS3710	20 20
690C	1104	M4933	2009	MA90 MA100	1123 2007	MD60 MD-60A	1123 1123	MHT2008 MHT2009	2001 2001	MMT2857	2015	MPS3711	20
1700 1700 A	1104 1104	M4935 M4937		MA101	1104	MD134	1104	MHT2010	2001	MMT3014 MMT3903	2016 2016	MPS3721 MPS3826	20 20
1700B	1104	M4937(3RD-IF)		MA102 MA110	1104	MD135 MD136	1104 1104	MHT4402 MHT4411	2008	MMT3904 MMT3905	2009	MPS3827 MPS3904	200
1700C 1701B	1104	M4941 M4952	2009	MA150 MA161	2012	MD137	1104	MHT4453	2012	MMT8015	2011	MPS3906	203
1702	1114	M4953	2009	MA162	1102 1102	MD138 MD604A	1104 1123	MHT4454 MHT5001	2012	MN34A MN51	1123	MPS3992 MPS4145	200
1702B 1702C	1114	M4970 M5141T	2030	MA203 MA211	1104 1104	MD753 MD753A	561 561	MHT5002	2012	MN54	2009	MPS5172	201
710 710 A	1104	M7003	2009	MA215	1104	MD757	562	MHT5003 MHT5004	2012	MN60(DIODE)_ MP-01	1123	MPS5668 MPS6351	200
710B	1104	M7006 M7014		MA242 MA242C	1104 1104	MD757A MD759	562 563	MHT5005 MHT7413	2012	MP01	1104	MPS6413	200
710C 720	1104	M7015 M7033	2009	MA286	2007	MD759A	563	MHT7415	2012	MP100 MP225	1104 1104	MPS6507 MPS6511	203
720A	1114	M7108		MA287 MA350	2007	MD2369AF MD2369BF	2009	MHT7416 MHT7601	2012	MP300 MP400	1104 1104	MPS6511-S	201
720B 720C	1114	M7108/A5N M7109		MA351 MA433	1104	MD2369F	2009	MHT7602	2041	MP500(RECT.)	1104	MPS6512 MPS6513	201
730	1114	M7109/A5P	2009	MA4101	1101	MD3133F MDA104	2023 1104	MHT7603 MHT7607	2041	MP549 MP651	1114	MPS6514 MPS6516	200
730A 730B	1114	M7171 M7543-T		MA4103 MA4104	2016	MDA920-2 MDA920-4	1104	MHT7608 MHT7609	2041	MP1003-1	1104	MPS6520	200
730C 773	1114	M8014(TRANSIST	OR)	MA6001	2009	MDA920-6	1104 1104	MHT9008	2041	MP1003-2 MP1003-4	1104 1104	MPS6521 MPS6528	200 201
773RED		M8105		MA6002 MA6003		MDA920-7 MDP173	1104	MHT9009 MI-301		MP1014-2 MP5113	2009	MPS6529	201
774 7740RN		M8120 M-8124	2001	MA9002	2038	ME0404	2034	MI301	1102	MP-5115	1104 1104	MPS6530 MPS6531	200
775	2009	M8221		MA9003 MA9426		ME0404-1 ME0404-2	2034	MI9623 MI9630	2009	MP9602 MP4300158	1104	MPS6532	200
775BRN 776		M8222 M8399	1104	MAQ7786 MB01	2009	ME0413	2022	MIC709-5(METALC	AN)	MPC3500		MPS6535 MPS6539	202
776GRN	2009	M8482	-1101	MB244	1104	ME0414 ME0463	2022	MIC723-5(D.I.P.)		MPF101 MPF-102		MPS6540 MPS6541	201
779 779BLÜ		M8482C M8482F		MB257 MB258		ME-1	2009	MIC741-5(D.I.P.)	010	MPF102	2035	MPS6542	201
780	2009	M8482FA-4	1101	MB269		ME-2 ME-3	2009 2009	MIC741-5(METÁL-		MPF103 MPF104		MPS6543 MPS6544	203 201
780WHT 783		M8489 M8489-A		MB270 MBD101		ME-4 ME213		MIS14150-18	2001	MPF105	2035	MPS6545	201
83RED	2009	M-8489A	1102	MBS4991	1104	ME213A		MIS-14150-18A MJ450		MPF-106 MPF106	2036	MPS6548 MPS6552	200
784 7840RN		M8489A M8513	1102	MC010 MC015		ME216 ME217	2016	MJ480	2039	MPF107	2035	MPS6553	200
785	2009	M8513(LAFAYETT	E) 1102	MC020	1104	ME501	2023	MJ481 MJ490		MPF108 MPF109	2035	MPS6554 MPS6555	200
85YEL 86		M8513A0 M-8513A		MC020A MC021		ME502 ME503	2023	MJ491	2043	MPF111	2035	MPS6556	200
787 787BLU	2009	M8513A	1102	MC021A	1104	ME511	2023	MJ2267 MJ2268		MPF112 MPM5006	2035 2016	MPS6561 MPS6564	200 201
91	2009	M8513A-R M8513R	1102	MC022 MC022A		ME512 ME900		MJ2801 MJ2802		MPN-3401 MPN3401	1102	MPS6565	200
318 318WHT		M8569 M8640E(C-M)	1102(2)	MC023 MC023A	1104	ME900A	2009	MJ2840	2041	MPS393	2009	MPS6566 MPS6567	200 201
322	2009	M8640E(DIO)	1102	MC025	1104	ME901 % ME901A		MJ2841 MJ2901		MPS404A MPS654	2034	MPS6568 MPS6568A	201
322A 322A-BLU		M-8641 M9032	2009	MC030 MC030A	1104	ME1001	2009	MJ2940	2043	MPS-706	2009	MPS6569	201 201
322B	2009	M9092	2001	MC030B	1104	ME1002 ME1138	2013	MJ2955 NJE34		MPS706 MPS706A	2016	MPS6570 MPS-6571	201
323 323B		M9093 M9095		MC035 MC040	1104	ME2001 ME2002	2016	MJE345	2012	MPS834	2016	MPS6571	200
B23WHT	2009	M9159	2009	MC040A	1104	ME3001	2038	MJE2940 MJE9411T		MPS918 MPS960T		MPS6573 MPS6574	200 201
327 327BRN		M9206 M9226		MC070 MC070A	1114 1114	ME3002 ME3011	2038	MJF1033G MJF10335	2036	MPS2222A	2009	MPS6574-YEL	201
28GRN 147	2009	M9235	1104	MC080	7114	ME4001	2013	MJR1C	1104	MPS2369 MPS2711		MPS6575 MPS6576	200
47BLK	2009 1	M9244 M9248		MC080A MC090		ME4002 ME4003		MK-10 MK10	2035	MPS2712	2009	MPS6579	203
24 1002-2	2009	M9259 M9278	2041 1	MC090A	1114	ME4003C	2009	MK-10-2	2035	MPS2713 MPS2714	2016	APS6580 APS6590	203
	2009	113210	2041	MC2	1102	ME4101	2009	MK10-2	2035	MPS2715		MPS7513	201

EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
P\$8001	2016	MPSA42	2012	MS35H	1104	MZ92-15A	564	NK65-4A19	2001 2007	NR-261AS NR261AS	2009	OA200 OA202	11
P\$8097	2010	MPSA70-RED	2034 2034	MS36H MS50	1104	MZ206 MZ207	1102	NK74-3A19 NK88C119	2007	NR271AY	2009	DA205	11
PS9185 PS9423	2009	MPSA70-WHT	2034	MS510	2030	MZ-209	562	NKT12	2007	NR-431AG	2009	OA210	11
PS94231	2009	MPSD01	2012	MS1010	2030	MZ209 MZ209A	562 562	NKT42 NKT43	2007	NR-431AS NR461AF	2009	OA211 OA214	11
PS9426 PS9426A	2013 2009	MPSD02 MPSD03	2012 2012	MS3694 MS7502R	2030 2009	MZ209B	562	NKT62	2007	NR-461AS	2009	OA541	11
S9426A.B	2009	MPSD05	2033	MS7503R	2009	MZ209C	562	NKT63	2007 2007	NR700 NR7916	2001 2035	OA909 OA12612	11 5
PS9426B PS9426C	2013 2013	MPSD06 MPSD55	2016 2023	MSR-500 MSR500	1104	MZ-212 MZ212	563 563	NKT64 NKT72	2007	NS316	2035	OAZ203	5
PS9427	2013	MPSD56	2034	MSR7503	2009	MZ409-02B	562	NKT73	- 2007	NS381	2016	OAZ207	19
S9427B	2013	MPSEL239	2009 2038	MSR-V5 MSS-1000	1104	MZ500-11 MZ500-15	561 562	NKT74 NKT128	2007 2007	NS475 NS476	2009 2009	OAZ210 OAZ212	
PS9427B.C PS9427C	2009 2009	MPSH02 MPSH07	2009	MSS1000	1102	MZ500-18	563	NKT129	2007	NS477	2009	OAZ213	
S9433J	2009	MPSH08	2009	MT021	1104	MZ500-20	564	NKT133	2007 2007	NS478 NS479	2009	DAZ230 OAZ243	-
PS9433K PS9444	2009 1102	MPSH09 MPSH10	2011 2038	MT021A MT022	1104	MZ500.15 MZ500.18	562 563	NKT141 NKT142	2007	NS480	2009	OAZZ47	
S9600	2009	MPSH11	2038	MT022A	1104	MZ605	561	NKT143	2007	NS731	2009	OAZ270	
S9600(G)	2009	MPS-H17	2013	MT0404	2034	MZ610 MZ620	561 561	NKT144 NKT162	2007 2007	NS731A NS733	2009 2009	OAZ272 OAZ273	
PS9600F PS9600G	2009 2009	MPSH17 MPSH19	2008 2016	MT0404-1 MT0404-2	2034	MZ640	561	NKT163	2007	NS733A	2009	OC-34	2
S9604	2013	MPSH20	2016	MT0411	2022	MZ-1000-15	563	NKT164	2007	NS734	2009	OC-44 OC-45	2
S9604D	2009	MPSH24	2011	MT0412 MT0413	2022	MZ1000-15 MZ1000-17	563 564	NKT202 NKT203	2097 2007	NS734A NS949	2009 2009	OC-46	2
PS9604E PS9604F	2009	MPSH30 MPSH31	2016 - 2016	MT0414	2022	MZ1012	563	NKT204	2007	NS1500	2009	OC-47	2
S9604FG	2009	MPS-H32	2030	MT0463	2034	MZ2360	1102	NKT205	2007 2007	NS1510	2011 2009	OC-130 OC139	2
PS96041	2009	MPSH32	2009 2016	MT14 MT24	1104 1104	MZ2361 MZ4627	1102 561	NKT206 NKT207	2007	NS1972 NS1973	2009	OC-140	2
PS9604R PS9606	2009 1102	MPSH37 MPSH85	2016	MT44	1104	MZX9.1	562	NKT221	2007	NS1974	2009	OC140	2
P\$9606(H,I)	1102	MPSK20	2016	MT64	1104	N-02	1104	NKT222S1 NKT222S2	2007	NS1975 NS3039	2009 2011	OC141 OC200	2
PS9606H	1102 2009	MPSK21 MPSK22	2016 2016	MT84 MT104	1114	N1X N2A	2012 1123	NKT243	2007	NS3040	2011	OC201	2
PS9611-5 PS9616	2009	MPX-25	1104	MT696	2009	N4T	2009	NKT261	2007	NS3041	2011	OC202	2
S9618	2009	MPX25	1104	MT697	2009	N-41	1104 1123	NKT262 NKT263	2007 2007	NS3903 NS3904	2016 2016	OC204 OC206	2
PS9618(J) PS9618H	2009	MPX215 MPX9623	1104 2009	MT706 MT706A	2009	N48 N201AY	2009	NKT264	2007	NS3905	2034	OC-307	2
259618H 259618I	2009	MPX9623H	2009	MT706B	2009	N-756A	562	NKT713	2001	NS3906	2034	OC-308	2
PS9618J	2009	MPX9623H/I	2009	MT707 MT708	2009	N3563 N5406	2009 1102	NKT732 NKT734	2001 2001	NS6114 NS6115	2009 2009	OC-318 OC-330	2
PS9623 PS9623C	2009 2011	MPX96231 MPX96301	2009 2009	M1708 MT1075	2009	N5406(RCA)	1102	NKT736	2001	NS6207	2009	OC-340	2
PS9623C(F)	2009	MQ1	2009	MT1100	2008	N5558V	038	NKT753	2001 2001	NS6210 NS7262	2009	OC-341 OC-342	2
PS9623E	2009	MQ2 MQ3/2	2009 1104	MT3001 MT3002	2038	N5709T N5723A	017 1740	NKT773 NKT10339	2009	NSB5431	1202	OC-343	2
PS9623E.G PS9623F	2009 2009	MQ6/2	1104	MT3011	2038	N5740T	1733	NKT10419	2016	NSB5441	1201	OC-410	2
PS9623G	2009	MQ8/2	1104	MT4101	2009	N5741A	010	NKT10439 NKT10519	2009	NSS1021 NU34	1114 1123	OF156 DF160	
PS9623G/H	2009 2009	MQ32 MQ62	1104 1104	MT4102 MT4102A	2009	N5741T N-52329	007 2041	NKT12329	2009	NU398B	1104	OF162	1
PS9623H PS9623H/I	2009	MQ82	1104	MT4103	2009	N-121122	2041	NKT12429	2009	NZ-206	561	OF164	1
PS96231	2009	MR-1	1104	MT6001	2033	N121122	2041 1104	NKT13329 NKT13429	2033 2033	O4-8054-3 O4-8054-4	1104 1104	OF 173 OG-30L125	
P\$96231/J	2009 2009	MR-1C MR1C	1104 1104	MT6002 MT6003	2033 2016	NA13 NA20	2001	NKT16229	2011	04-8054-7	1104	ON047204-2	2
PS9623J PS9625	2013	MR1M	1104	MT9001	2009	NA21	1104	NKT16325	2007	09-306113	1102		1
PS9625C	2013	MR62C-H	561	MT9002	2038 2015	NA-22 NA22	1104 1104	NKT16425 NKT20329	2007 2034	O9-306195 O9-309060	1102 2009		
PS9625D PS9625E	2013 2013	MR62E-H MR62H	561 561	MT9003 MTZ608	561	NA-25	1104	NKT20339	2023	0101	1104	ON47204-1	
PS9625F	2013	MR91C-H	562	MTZ608A	561	NA25	1104 1104	NKT35219 NL5	2011	O234 OA6	1104 1123		1 2
P\$9625G P\$9625H	2013 2013	MR91E-H MR120C-H	562 563	MTZ613 MTZ613A	562 562	NA32 NA-33	1104		1104	OA7	1123	OS-16308	1
PS9630	2009	MR-150-01	1104	MTZ616	563	NA33	1104	NL10	1104	OA8	1104		
PS9630H	2009	MR150C-H	564 1114	MTZ616A MTZ618	563 564	NA35 NA-36	1104 1104		1104 1104	OA9 OA9D	1123 1123		55
PS9630H.I PS-9630I	2009 2009	MR990 MR1031	1114	MTZ618A	564	NA36	1104	NL25	1104	OA9Z	1123	OSS-16685	
PS96301	2009	MR1237FB	. 1104	MU4891	2029	NA42	1104		1104 1104	OA47 OA50	1123 1123		
PS9630T PS9631	2009 2009	MR1237FL MR1237SB	1104 1104	MV-1 MV1	1102 1104	NA45 NA-46	1104 1104		1104		1123	OSS36685	4 1
PS9631(I)	2009	MR1237SL	1104	MV-2	1102	NA46	1104	NL60	1104	OA71	1123		, .
PS96311	2009		1104 1104	MV-3 MV3	1102 1102		1104 1104		2011 2009		1123 1123		
PS9631J PS9631K	2009 2009		1104	MV3(DIODE)	1102		1104	NN50	1104	DA73	1123	OY-5061	
DC9631T	2009	MR1247SL	1104	MV3(RECTIFIER)	1104	NA66	1104		1104		1123 1123		-14
PS9632	2009	MR1267 MR1337-1	1104		1102 1104		1114		1104 1104		1123	OY5062	
PS9632(K)	2009	MR1337-2	1104	MV11	1104	NA76	1114	NPC0050	1104	OA79	1123	OY5063	
PS9632 PS9632(I) PS9632(K) PS9632H PS9632I	2009	MR1337-3	1104	MV-12	1102		1114		2016 2016		1123 1123		
PS9632I PS9632J	2009 2009		1104 1104		1104 1104		1114		2023	OA85	1123	OY5066	
PS9632K	2009	MR2064	1104	MV-13(DIO)	1102	NA104	1114	NPC079-98	2023	OA85C	112	OY5067	
PS9632T	2009	MR2065	1104	MV5051	047 041		1114 017		1104 1104		112 112		
PS9633G PS9644	2009 1102		1104 1104		1104		1123	NPC108A	1104	OA-90(G)	1123	DZ12T5	
PS9646	1102	MR3932	2009	MVA-05A(DIO)	1104	NC207AL	2009	NPC115	2016		112		
PS9646G	1102		1104 1104		1104		017 2011		2016 2038		112 112	3 OZ15T10	
PS9646H PS9646I	1102		1104	MZ-00	1102	NE-446AQ	1102	NPC187	2016	OA90ZA	112	P04-41-0025-00	1
PS9646J	1102	MR9604	2009	MZ6.2	561	N-EA15X130	201	I NPC189	2016		112: 112:		13
IPS9646M IPS9682(I)	1102		2009 2013		561 561		201° 201°		2009 2010		112	P04-45-0014-P2	
IPS9696F	2032 2009	MRD450	2013	MZ6.2T5	561	N-EA15X136	2009	NPS404 .	203	2 OA-95	110:	P04-45-0014-P5	,
PS9696H :	2009	MRF402	2008		562	N-EA15X137	2009		2016 2016		112 56		
MPS96961 MPS6 56 11	2009		2030		563 563		2009 563	3 NPS6514	2009	OA126-12	56	P04410042-002	
APS96041	2009	MRF502	203	MZ12	563	N-EA16X30	1104	4 NPS6516	203	4 OA127	110	4 P04440028-001	
MPS96061	1102	MRS6548	201	MZ12A	563	NF500	110		203	0A128 0A129	110 110		
MPS96321 MPS96800	2009	MRV-20C MS1H	110- 110-		563 563		110- 110-		2010	6 OA130	1.10	4 P04440028-8	
MPS96800 MPS964611	1102	MS2H	110-	MZ15A	564	NF550	110	4 NR05	200	1 DA131	110	4 P04440032-001	
MPSA05	2009	MS3H	110	MZ15T20	564		112		2009		110 112		
MPSA09	2013 2009		110- 110-		56°		56 56		200	9 OA150	112	3 P1B5	
MPS-A10 MPSA10-RED	2009		110		56	1 NGP5010	56	3 NR5	200	1 OA159	112	3 P1C5	
MPSA10-WHT	2010	MS11H	110	4 MZ92-6.2A	56	1. NJ100A	201		200	1 OA160	112 112		
MPSA18	2010		110 110		56: 56:		200 200		200 200		112	3 P2B5	
MPSA20 MPSA20-RED	200		110		56		201	1 NR30	200	1 OA174	112	3 P2C5	
		MS22B	200		56:		200		200	9 OA180	110	4 P2D5	

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
P3/2H P3A5	1104 1104	PA-320A PA320A	1104 1104	PE5010 PE5013	2016 2016	PL4021 PL4022	2016 2016	PS2208	1104	PTC139	2010	Q5123E	20
P3B5 P3C5	1104 1104	PA-320B PA320B	1104	PE5015	2016	PL4023-	2016	P\$2247	1104 1104	PTC140 PTC151	2041 2035	Q5123F Q5137BA	20
P3D5	1104	PA325	1104 1104	PE5025 PE5029	2009	PL4031 PL4033	2023 2023	PS2249 PS2411	1104 1104	PTC152 PTC186	2036	Q-10115C	20
P4A5 P4B5	1104 1104	PA325A PA325B	1104 1104	PE5031 PEP2	2038 2009	PL4051 PL4052	2009	PS2412	1104	PTC201	2020 1104	Q-14115C Q-15115C	20
24C5 24D5	1104	PA330	1104	PEP5	2009	PL4053	2009 2009	PS2413 PS2415	1104 1104	PTC202 PTC205	1104 1114	Q-16115C Q-20115C	2
5 A 5	1104 1104	PA330A PA330B	1104 1104	PEP6 PEP7	2009	PL4054 PL4055	2009 2009	PS2416 PS2417	1114	PTC206	1123	Q-21115C	1
5B5 5C5	1104 1104	PA340 PA340A	1104 1104	PEP8 PEP9	2009	PL4061	2013	PS4559	1114	PTC207M PTC214	1123 1102	Q-22115C Q-23115C	1
5D5	1104	PA340B	1104	PEP95	2016 2016	PL4062 PL4112	2013 2038	PS4560 PS4725	1104	PTC214M PTC215	1102 1102	Q-24115C Q-25115C	1
P6/2H P6A5	1104	PA350 PA350A	1104 1104	PET1002 PET2001	2009	PM194 PM195	2011	PS5300 PS5301	1104	PTC217	1101	Q-26115C	_ 1
685 6C5	1104 1104	PA360 PA360A	1104 1104	PET2002	2009	PM1121	2009	PS5302	1104 1104	PTC403 PTC406	1104 1102(2)	Q35242 QA01-07R	2
6D5	1104	PA380	1114	PET3704 PET3705	2009	PMC-QP0010 PMC-QP0012	2041 2041	PS8908 PS8912	561 562	PTC407 PTC503	1102(2) 561	QA01-12S QA-12	
6RP8 6RP10	1114	PA400 PA600	1104 1104	PET3706 PET4002	2009 2009	PMT1767 PN70	2038 2023	PS8915 PS-8917	563	PTC505	562	QA-13	-2
7A5 7B6	1104 1104	PA7001/0001 PA7001/501	2009	PET6001	2014	PN72	2034	PS8917	564 564	PTC507 PTC509	563 564	QA-14 QA-15	2
7 C 5	1104	PA7001/503	017* 007	PET6002 PET8000	2009	PN107 PN108	2010 2016	PS10019B PS10022B	562 563	PTC736 PU6C22	038 1104	QA-16	2
7D5 8/2H	1104 1104	PA7615 PA7709	1104 017	PETB001 PETB002	2009	PN109 PN204	2010	PS10024B	564	PV-8	1104	QA-18 QA-19	2
20 32H	1104 1104	PA7709C	017	PET8003	2009	PN350	1104 2041	PS10063 PS10066	562 563	PV8 PY-5	1104 1104	QA-20 QB01-15ZB	2
62H	1104	PA7741 PA7741C	007 007	PET8004 PET9002	2009 2009	PN918 PN929	2038 2013	PS-10068 PS10068	564 564	Q-00169	2035	QD-G1N60PXT	1
82H 100	1104 1104	PA8261 PA8645	564 1104	PF-AR15 PH9D5	2041	PN930	2013	PS30802	1122	Q-00169A Q-00169B	2035 2035	QD-S1S953XA QD-SS1555XT	1
100A	1104	PA9006	2009	PH9DS22	1114	PN930(NTLB) PN2369	2013 2030	PS209800 PT-3	2009 1104	Q-00169C Q-00184R	2035 2035	QD-SS1885XT QD-SSR1KX4P	1
100B 100D	1104	PA9160 PA9267	1104 561	PH25C22 PH25C22/1	1104 1104	PN2369A PN2904	2030 2023	PT4-2268-01B PT4-2268-011	1122	Q-00269	2009	QDSSR3AMBE	1
100G 100J	1104 1104	PA10556 PA10887	1104	PH25C22/21	1104	PO93	1123	PT4-2287-01	1122 1102	Q-00269A Q-00269B	2009 2009	QD-SSS53XXA QD-SV06CXXB	1
150A	1104	PBC183	1104 2016	PH-108 PH109	1104	PP3000 PP3003	2041 2041	PT4-2311-011 PT4-7158	1122 2009	Q-00269C Q-00284R	2009	QD-ZMZ409BE	
50B 50D	1104	PBE3322 PC02P1/2	1123 1104	PH204 PH208	1104	PP3006 PR617	2041	PT4-7158-01A	2009	Q-00369	2013 2009	QD-ZRD9EXAA QG0254	2
50G 50J	1104	PC0211/2	1104	PH404	1104	PR-620	563 564	PT4-7158-02A PT4-7158-012	2009	Q-00369A Q-00369B	2009 2009	QKT-0033XBE QKT0033XBE	2
00	1104	PC0.2P11/2 PC4004	1104	PH1021 PL-150-001-9-005	1104	PR620 PRT-101	564 2009	PT4-7158-013	2009	Q-00369C	2009	QOV60529	2
00 80A0028	1104	PD101 PD102	1104	PL-150-006-9-001	1123	PRT-104	2009	PT4-7158-021 PT4-7158-022	2009	Q-00384R Q-00484R	2010	QOV60530 QP001200A	2
80A0029	2009	PD103	1104 1104	PL-150-040-9-002 PL-151-030-9-001	1102	PRT-104-1 PRT-104-2	2009 2009	PT4-7158-023 PT5	2009 1104	Q-00569 Q-00569A	2009	QP-8	2
80 00	1114	PD104 PD105	1104	PL-151-030-9-005 PL-151-032-9-004	1104	PRT-104-3	2009	PT-58	1104	Q-00569B	2009 2009	QP8 QP-11	2
00	1114	PD106	1104	PL-151-035-9-001	1102 1102	PS005 PS010	1104 1104	PT5B PT9C22/1	1104 1114	Q-00584 Q-00584R	2011 2010	QP-12 Q-RF-2	2
000 087	1114	PD107 PD107A		PL-151-040-9-001 PL-151-040-9-002	1102 1102	PS015 PS020	1104 1104	PT-505 PT505	1104	Q-00669	2009	QRF-3	2
172 172-1	1102 1102	PD108 PD110	1104	PL-151-040-9-003	1104	PS-025	1104	PT-510	1104 1104	Q-00669A Q-00669B	2009 2009	QRF3 QRG-3	20
901-50	2009	PD111		PL-151-045-9-001 PL-151-045-9-002	1104	PS025 PS030	1104	PT510 PT-515	1104	Q-00669C Q-00684R	2009	QS054	20
2271 113 9	2041	PD114 PD115		PL-151-045-9-004 PL-152-044-9-001	1104	PS-035 PS035	1104	PT-520	1104	Q-0115C	2009 2009	QS-0254 QS0254	20
326 034	1102 2041	PD116	1114	PL-152-047-9-001	561	PS-040	1104 1104	PT520 PT-525	1104	Q-01115C Q-02115C	2011	Q-SE1001 QSE1001	20
100	1114	PD122 PD125	1104	PL-152-051-9-001 PL-152-052-9-002	562 561	PS040 PS050	1104	PT525 PT-530	1104	Q-03115C	2009	QT-C0372XAT	20
149 152		PD129 PD130	1104	PL-172-013-9601 PL-172-024-9-003	2020	PS-060	1104	PT-530A	1104 2007	Q-04115C Q-05115C	2009	QT-C0710XAE QT-C0710XBE	20
153	2009	PD131	1104	PL-176-026-9-001	2020	PS060 PS63A205	1104 1122	PT-540 PT540		Q-06115C Q-07115C		QT-C0735XBT	20
394	1102	PD132 PD133		PL-176-029-9-001 PL-176-037-9-001	2009	PS105 PS110	1104	PT-550	1104	Q0V60529	2009	QT-C0828XDN QT-C0829XBN	20
776 3393	1104	PD134 PD135	1104	PL-176-042-9-001	2013	PS-120	1104	PT550 PT-560		Q0V60530 Q0V60537		QT-C0839XDA QT-C131BXDN	20
393	2009	PD137		PL-176-042-9-002 PL-176-042-9-004		PS120 PS125	1104	PT560 PT580	1104	Q0V60538 Q1/6515	2009	QT-C1307XZA	20
394 459	2009 1104	PD154 PD155		PL-176-042-9-006 PL-176-047-9-002	2009	PS130	1104	PT627	2009	Q-1A		QT-C1687XAN QT-CBC546AA	20
623 0115	2009	PD910		PL-176-047-9-002		PS135 PS140	1104	PT703 PT720		Q1B Q1H	1104	QT-CQ460CBB QT-K0023AAS	20
0115		PD913 PD914 -		PL-182-009-9-001 PL-182-014-9-002		PS150 PS160	1104	PT851	2009	Q-2	2001	QT-K0033XBE	20
D115A D155	1114	PD915 PD916	1114	PL1021	2013	PS405	1104	PT886 PT887		Q2 Q2/6515		QVD1KF114 QZ6.2T5	11
0156	1104	PD6009	1114 561	PL1022 PL1023		PS410 PS415	1104	PT888 PT897	2012	Q-3 Q3	2001	QZ6.2T10	
)156A)619-1		PD6009A PD6013	561	PL1024 PL1025	2011	PS420	1104	PT898	2009	Q3/2	2038 1104	QZ12T5 QZ12T10	
0954-1 0954-2	2041	PD6013A	562	PL1026	2031	PS425 PS430	1104 1104	PT1558 PT1559		Q3/6515 Q4	2009	QZ-15T5 QZ15T5	- 5
1901-1		PD6016 PD6016A		PL1031 PL1033	2023	PS435 PS440	1104	PT1610 PT1835	2009	Q4/6515	2011	QZ-15T10	5
309	2009	PD-6018 PD6018	564	PL1051	2016	PS450	1104	PT1836		Q4B Q-5		QZ15T10 QZ1575	5
316	1104	PD-6018A	564	PL1052 PL1053		PS460 PS603		PT1837 PT1941		Q6/2 Q6/6515	1104	R080	- 11
317 344		PD6018A PD6050		PL1054 PL1055	2009	PS604	1104	PT2523	2012	Q8/2		R1 R1A	11
443 103/507-10	1104	PD6054	562	PL1061	2013	PS605 PS609	1104	PT2524 PT2525		Q-9 Q32	2001	R18 R1K	11
200-11	2041	PD6057 PD-6059		PL1062 PL1063		PS610 PS611	1104	PT2760 PT2896	2016	2-35	2009	R-1S188	11
447 3567	2009	PD6059 PE-401	564 I	PL1064	2013	PS615	1104	PT3141	2009	249 250		R-2-02 R-2SC535	11
069	1104	PE401	1104 F	PL1065 PL1066		PS616 PS617		PT3141A PT3141B		251 252	1123 I	R-2SC537	20
69 70		PE401N PE402	1104 F	PL1067 PL1081	2031	PS621	1104	PT3151A	2009 (253	1104	R-2SC772 R-2SC858	20
71.	1104	PE403	1104 F	PL1082	2016	PS622 PS623		PT3151B PT3151C		254 255	1104 F	R3/2H R4A	11
3	1104	PE404 PE405		PL1084 PL1085	2012	PS627 PS628	1104	PT3500	2009	256	1104 F	35	11
00 77	1104	PE406	1104 F	L1091	2035	PS629	1104	PT3501 PT4800		257 258	1104 F	15B 15C	11
00	1104 F	PE408 PE410		PL1092 PL1093	2035 F	PS632 PS633	1104	PT4816	2011	259	1104 F	36	11 11
05 05 A	1104 F	PE502 PE504	1104 F	PL1094	2035 F	PS636	1104	PT4830 PT40063		260 262		16/2H 18	11
10	1104 F	PE506	1104 F	PL1101 PL1102		PS637 PS700	1104	PT72130 PTC101	1104	282	1104 F	R8/2H	11
110A 115		PE508 PE510	1114 F	L1103	2022 F	PS720	1102	PTC102	2007	2301 25053		R9A 110D1	110
115A	1104 F	PE3001	2009 F	L1104 L1111	2011 F	PS-801 PS1140	1740 1114	PTC108 PTC119	2001 0	15053C 15073D	2009 F	110DC	110
320 20		E3015 E3100	2016 P	L1112 L1113		PS1325		PTC126		15073E		l12 l14	200

EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-
34 34-6016-58	2001 2009	R7582 R7682	2009 1104	RC741T RC-1700	007 2041	RE-47 RE47	1†23 1123	RFJ70977 RFJ71122	1104 1104	RS1290 R-S1347	562 1104 1104	RS2914 RS-3277 RS-3278	2009 2007 2007
11 50-1007	2001 1123	R7743 R7887	1123 2009	RC1700 RCA-1000	2041 2042 1104	RE-48 RE-49	1301 1101 1104	RFJ71480 RFJ72360 RFJ72787	562 1104 1104	RS-1347 RS1348 RS1428	563 1102	RS-3279 RS3281	2007 2007
62 63 66-8504	2001 2001 1104	R7892 R7893 R7894	1 23 7 23 563	RCC-7022 RCP111A RCP111B	2012 2012	RE49 RE-50	1104	RFJ71112 RFJZ0432	1104 1104	RS1513 RS1530	2001 2001	RS3287 RS-3288	2007 2007
117 118	2001	R7953 R7954	2009 1104	RCP111C RCP111D	2012 2012	RE50 RE-51	1104	RFL-30596 RFL30596	1104 1104 1104	RS1531 RS1532 RS1534	2001 2001 2001	RS3306 RS-3309 RS-3570	2001 2007 1104
119	2007 2007 1104	R8022 R8023 R8024	1102 1102 1104	RCP113A RCP113B RCP113C	2012 2012 2012	RE51 RE-52 RE52	1114 1102 1102	RFM-33160 RFM33160 RFP-33118	1104	RS-1536 RS1536	2001 2001	RS-3727	.1104 1104
122G 125 125	2001	R8060 R8061	1123	RCP113D RCP115	2012 2012	RE62 RE66	2022 2010	RFP33118 RFS61436	1104 1104	RS-1537 RS1537 RS-1538	2001 2001 2001	RS3727 RS-3867 RS-3868	110- 200 200
-135 135	2001	R8066 R8067	2009 2009 2009	RCP115B RCP117	2012 2012 2012	RE-67 RE-73	2031 2010 2012	RFV80500 RG100D	1104 1104 1104	RS1538 RS-1539	2001 2007	RS3892 RS-3901	200 200
135-1 -136 136	2041 2001 2001	R8068 R8069 R8070	2009 2009 2009	RCP117B RCS242	2012 2041	RE73 RE86	2012 1123	RG100G RG100J	1104 1104	RS-1545 RS-1547	2001 2001	RS-3907 RS-3913	200 200
-137 137	2001 2001	R8115	2009	RD-3 RD3A-1B	1104	RE-94 RE94	1122 1122 561	RG1004 RG1127 RH120	1104	RS1547 RS-1550 RS-1553	2001 2007 2001	RS-3914 RS-3914 RS-3915	200 200 200
-154B 154B	1104 1104 2007	R8117 R8118 R8119	2009 2009 2009	RD6AN RD-6L RD6.2E	561 561 561	RE-109 RE109 RE-114	561 562	RH3761 RH-DX0003SEZZ	2038 1104	RS1553 R-S-1720	2001 1104	R\$3915 R\$-3926	200 200
-163 163 170	2007	R8120 R8219	2009 1123	RD6.2FA	561 561	RE114 "RE-118	562 563	RH-DX0003TAZZ		RS1720 RS1749	1104 1104 1104	RS-3929 RS-5104 RS5104	200 200 200
-186 186	2007 2007	R8223 R8224	2009	RD6.2FB RD-7A	561 562 562	RE118 RE-121 RE121	563 564 564	RH-DX0025CEZZ RH-DX0026AGZZ RH-DX0033TAZZ	1104	RS1811	1123	RS-5105 RS5105	200
1-202 1202 1-203	2001 2001 2001	R8225 R8243 R8244	2009 2009 2009	RD7A RD9 RD-9A	562 562	RE-168 RE168	1067	RHDX0033TAZZ	1102	RS1832 RS-2001	1104 2001	RS-5106 RS5301	200
1203 1203 1204B	2001 1104	R8257 R8259	1123- 2009	RD9A RD9A(10)	562 562	RE-171 RE171	1067 1067	RH-DX0041CEZZ	1104	RS-2002 RS-2003 RS-2004	2002 2003 2004	RS-5401	200 200 200
1-227 1227	2007 2007	R8260 R8261	2009 2009 2009	RD-9AL RD9AL RD9AM	562 562 562	RE-321-IC	2020 1725 1725	RHDX0043TAZZ	1104	RS-2005	2005 2006	RS5403	200
R-244 R244 R258	2007 2007 2007	R8305 R8312 R8314	2009 1102	RD9A-N RD9AN	562 562	RE-322-IC	702 702	RH-DX0048CEZ	7 1102 7 1102	RS-2007 RS-2008	2007 2008	RS-5511	200
1340 1-424	2009 2007	R8364 R8470	563 1104	RD-9L RD-9.1E	562 562	RE2001	1104 2016	RH-DX0056CEZ	Z 1104	RS-2010	2009 2010 2011	RS-5540	200 200 200
1-425 1-488	2007 2007 2007	R8475 R8528	1104 1123 2009	RD9.1EA RD9.1EB	562 562 562	RE3001	2016 2038 2038	RH-DX0063CEZ	Z 1104	RS-2012	2012 2013	RS5743.3 RS-5851	20
1488 1-506 150 6	2007	R8529 R8530	2011 2009	RD9.1F RD9.1FA	562 562	RE4001 REJ70643	2013 1104	RH-DX0065CEZ	Z 1114	RS-2015	2014 2015	RS-5853	20 20 20
582 592	2009 2001	R8543 R8551	2009 2009	RD9.1FB RD12	562 563	REJ71253	1104 1102 1102(2)	RH-DX0072CEZ	Z 1104	RS-2017	2016 2017 2018	RS-5856	20 20 20
855-2 1035	1104 1104 1123	R8552 R8553 R8554	2009 2009 2009	RD12E RD12EA RD12F	563 563 563	RET20	1104	RH-DX0081CEZ	Z 1104	RS-2019	2019 2020	RS-5857 RS5857	20 20
R1106 R107 R1109	1123 1123	R8555	2009 2009	RD12FA RD12FB	563 563	RF3160	1104	RH-DY0003SEZ	Z 1/10- Z 56:	RS-2022	2021	RS6344	11 11 11
R1329 R-1348	4 104 563	R8557 R8620	2009	RD13AL RD13AM	563 563 563	RF-6235-1	1104 1104 1104	RH-EX0024CEZ	Z 56	RS-2024	2023 2024 2021	1 RS6461	11
R-1533 R1533 R1667	2001 2001 1123	R8646 R8647 R8648	2009 2009 2009	RD13E	563 563	RF26234-1	1104	RH-EX0048CEZ	Z 56 Z 110	RS-2026 RS-2027	2020 2021	R\$6471 7 R\$6705	11 11
31889 32159	1123 1104	R8658 R8721	2009 1104	RD13EB RD13K	560 560	RF26235-5	1104 1104	4 RKZ12003	Z 110 112 112	2 RS-2029	2021 2021 2031	RS-7103	20 20 20
R2164 R2252	1123	R8889	2009 2009	RD15E	564 564 564	RF31903P	1104 1104 1104	4 RL005	111	4 RS-2031	203 203	1 RS-7105 2 RS7105	20
R2270-75497 R2270-78399 R2334	2041 2041 1123	R8916	2009 2009	RD15EB	564 564	RF32101-8 RF32101-9	1104 1104	4 RL020 4 RL040	111	4 RS-2033 4 RS-2034	203 203 203	4 RS7111	20 20 20
R2442 R2460-1	1104	R8964 R8965	2009	T RD15FB	56 56	4 RF32101R	110- 110- 1102(2	4 RL31	111 112 112	3 RS-2036	203 203	6 RS7121	20
R2460-4 R2982 R3273-P1	1104 2041 2009	R8968	2009 2009 1123	RD16A	56- 56-	4 RF32645	110	4 RL32G	112 112	3 RS-2038 3 RS-2039	203 203	9 RS7127	20
R3273-P2	2009	R9004 R9005	2009	RD-16H	56 56	4 RF33976	110	4 PL41	112 112 112	3 RS-2041	203 203 204	9: RS7129	20 20 20
R3285 R3293(GE)	1104 2009	R9025	2009 2009 2009	RD-91	56 56 56	4 RF34661 2 RF34720 2 RF35123 2 RF60034	110 110 112	4 RL42	112	3 RS-2043 3 RS2356	204 200	3 RS7133	20
R3410-P1 R3576-1 R3676-1	1122 2010 2010	H9382	2012	RD-96	56 110	4 RFA70597	112 110	3 RL232G 4 HL246	112 112	3 , RS2359	200 200 200	1 RS7160	20
R4057 R4369	2009	R9384 R9385	200l 200l	RD1343 RD-3472	110 110	# RFC61197	110 · 110 110	4 FL709T	112 01 110	7 RS2360	200	1 RS-7201	21
R5096 R5522 R5970	1123 1123 1104	R9483	. 110 200 112	RD9037	110 110	4 RFJ-30704	110	4 RP-9A	56	2 RS2364 RS 2365	200	1 RS7219	20
R5971 R6048	1104	R9597 R9600	1104 2013	RD26235-1 RD-29799P	110 110	4 RFJ-31218 4 RFJ31218	110	4 RR7504 4 RR8068	200	9 RS-2366	200 200 200	1 RS7224	2 2 2
R6110 R6422	1104 1104	R22707-8399 R-106379	204: 1104 1104	RD-31903P	110 2110 110	4 RFJ31362	116 110 110	4 RS1FM-12	200 110 110	4 RS-2373	200	RS7232	2
R-7026 R-7027 R7028	110: 110: 112:	2 R-113321	1104 1104 1104	4 RE-1	200 200	7 RFJ31363 7 RFJ-33292	110 110	04 RS-104 04 RS-107	200 200	01 RS-2375 09 RS2375	200 200	1 RS7235	2 2 2
R7029 R-7051	112: 112:	3 R-113392	110- 110-	4 RE2 4 RE-3	200 200	7 RFJ60033	110	1 RS128	200 200	9 RS-2684	200 200 200	7 RS7238	2
R-7092 R-7093	110 56	1 B227075497	204 204	RE3 1 RE-5 1 RE5	110 200 200	1 RFJ60173	112 110 110	4 RS220AF	110	04 RS-2686 04 RS-2687	200 200	7 R\$7242 7 R\$7405	2 2
R-7096 R-7097 R-7103	110 56 56	2 RA-1	110 110	4 RE-9 2 RE9	201 203	RFJ60286 RFJ-60366	110	04 RS-253C 04 RS-253S	110	02 RS-2690	200	7 RS7407	2 2
R7762 R7163	110 200	4 RA-1B 9 RA1B	110 110	4 RE-10 4 RE10	203 203	80 RFJ60366 88 RFJ60614	110 112 110	23 RS-272US	110 110 110	02 RS-2691	200 200 200	7 RS-7409 7 RS7409	2 2
R7165 R7248	200 110	4 RA1ZC	110 110 110	2 RE13	200 200 204	9 RFJ70147	110	04 RS-805US	20 20	13 RS-2692 09 RS2692	20 20	07 RS7410	. 2
R7249 R7271 R7343	200 110 200	4 RA26	110 110 110	4 RE1	202 203	1 RFJ70487 2 RFJ70703	140	04 RS1059 04 RS1234	20 11	09 RS-2694 04 RS-2695	20	07 RS-7412	2 2 2
R7359	200		174	0 RE26	203	32 -RFJ70931	14(11)		11		20 20 11	U/ HS-7413	

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
RS7415 RS7421	2009 2009	RT-218 RT218	1102 1102	RT6921MHF25 RT6989	2009	RVDVD1211L RVDVD1212L	1104	S1SD-1HF	1104	S75	1104	S750	111
RS-7504 RS7504	2009	RT-240 RT-243	562 563	RT7322 RT7325	2009	RVDVD1213	1102 1102	S1SD-1X S1SM-150-01	1104 1104	S77 S79	1104	S750C S-810	111
S7510 S-7511	2009	RT-245	564	RT7326	2009 2009	RVTCS1381 RVTCS1383	2009	S1SM-150-02 S1SW-05-02	1104 1104	S81 S82	1104	*S1010	110 201
RS7513	2009	RT-308 RT-313	2016 2038	RT7327 RT7330	2009 1123	RVTMK10-2 RVTMK10-E	2035 2035	S-1.5 S1.5	1104 1104	S83	1104 1104	S1016 S-1019	200 201
S7513-15 S7514	2009	RT476 RT482	2009 2012	RT7511 RT7514	2009 2009	RVTS22410 RX090	2009	S-1.5-0	1104	S84 S85	1104 1104	S-1019(WHF) S1041	201 201
S7515 S7516	2009	RT483 RT484	2012 2012	RT7515 RT7517	2009	RYN121105	562 2009	S1.5-01 S-2	1104 1104	S86 S88C-1-3P	1104 2007	S1041-16GN S1060	201 203
S7517 S7517-19	2009	RT697M RT-929-H	2009	RT7518	2009	RYN121105-3 RYN121105-4	2009	S2A06 S2A10	1104 1104	S91 S91-A	1104	S-1061	200
S7518 S7519	2009	RT-929H	2009 2009	RT7528 RT7538	2009 1123	RZ6.2 RZ9.1	561 562	S2A30 S2AR1	1104 1104	S91-H S92	1104	S1061 S-1065	200
S7521	2009 2009	RT929H RT-930H	2009	RT7539 RT7557	561 2009	RZ12 RZ13	563 563	S2AR2 S2C30	1104	S92-A	1104	S1065 S-1066	2009
S7523 S7525	2011	RT1008 RT1106	1123 1123	RT7634 RT7636	1104 1123	RZ15 RZ15A	564	S2C40	1104 1104	S92-H S93	1104 1104	S1066 S-1068	2009
S7526 S7527	2009	RT1108 - RT1116	1123 2012	RT7638	2009	RZ-15AB	564 564	S2C40A S2E20	1104 1104	S93A S93H	1104	S1068 S1069	2009
7528 7529	2009	RT1184	1123	RT7689 RT7703	1123	RZZ6.2 RZZ9.1	561 562	S2E60 S2E60-1	1104 1104	S93SE133 S93SE165	2041	S1074	2009
37530	2009	RT1595 RT1669	1104 1102	RT7704 RT7845	2011	RZZ12 RZZ13	563 563	S2E100 S3A06	1114	S93.24.401		S1074(R) S1074R	2009
67542 67543	2009	RT1689 RT1840	1104 1104	RT7849 RT7850	1104	RZZ156	564	S3AR1	1104 1104	S93.24,601 S93.24,604		\$1080 \$1080(TRANSIST	2009
S7544 S7555	2009	RT1893 RT-2016	2012	RT7851	1123	S0002 S0015	2010	S3G4 S-3MX	1114	S94 S95	1104	\$1090	2009
5-7606 57606	2009	RT2016		RT7943 RT7946	2009 1102	S0022 S0024	2009	S3MX S4A06	1104	S100 S101	1114	S1122	2009
5-7607	2009	RT2061(G.E.) RT2332		RT8195 RT8197	2009	S0025 S001466	2009	S4AO6	1104	S102		S1126 S-1128	2011
7 6 07 -7609	2009	RT2334 RT2452	1123	RT8198 RT8199	2009	S04	1102	S4AR1 S4AR2	1104	S-102V S103		S1128 S-1143	2009
7609 -7610	2009	RT-2669 RT2694	1104	RT8200	1104 563	S04-1 S04A-1	1102	S4AR30 S4C	1104 1104	S104 S105	1104	S1143 S1201F	2009
7610	2009	RT2914	2009	RT8201 RT8231	2009	S04B-1 S-05		S4FN300 S5AR1	1104	S106	1104	S-1221	1114 2009
7611 7611	2009	RT3063 RT3064	2009	RT8330 RT8331	2030	S05 S-05/01	1104	S5AR2 S-5S	1104 1104	S107 S108	1104	S1221 S-1221A	2009 2009
7612 7612	2009	RT3072 RT3099	1123	RT8332 RT8333	2009	S-05-005	1104	S5S	1104 1104(2)	S129 S133-1	1104	S1221A	2009
-7613 7613	2009	RT3228	2009	RT8339	562	S-05-01 S010G		S-5SR S5SR	1104	S169N S180	2009	S1226 S1240	2009
-7614	2009	RT3233 RT3336 RT3443	1123	RT8340 RT8665		S028 S031A	2001	S6AR1 S6AR2	1104	S191G	1104	S1241 S1241N	2009 2035
7614 7620	2009	RT3443 RT3469	1104	RT8667 RT8668	2035	5037	2009	S7-8		S200 S201		S1242 S1242N	2009 2035
7621 7622	2009	RT3565	2009	RT8669	2011	S-050 S074-005-0001		S7AR1 S8AR1	1114	S202 S203	1104	S1243	2009
7622	2009	RT3567 RT3585	1104	RT8671 RT8839		S074-007-0001 S082A	1102	S8AR2 S9AR1	1114	S204	1104	S1243N S-1245	1104 2009
7623 7623		RT3671 RT3671A		RT8840 RT8841	1104	S-0501 S0501	1104	S-10	1104	S205 S206	1104	S1245 S1272	2009 2009
7624 7625	2009	RT-3858 RT3858	1104	RT61012 RT69221	1123	S0702	562	S10 S10A		S208 / S210	1114	S1307 S1308	2009
626 627	2009	RT3981	1104	RTN1001		S0704 S022010	2009	S10AR1 S10AR2	1114.	S217	1104	\$1309	2011
7628	2009	RT4050 RT4069	1104	RV06 RV06/7825B		S022011 S024428	2009	S10B01-02	1104	S218 S219		S-1313 S1331	2011
76 34 7635	2009 F	T-4232 T4232	1104	RV6.2 RV1017	561	S024987	2009	S11 S12-1-A-3P		S220 S221		S1331N S-1331W	2009 2009
7636 7637	2009 F	T4293 T4644	1123 F	RV1068	2013	S025232 S025289	2009	S13 S14	1104	S222 S223	1104 5	S1331W	2009
7638	2009 ₣	RT4760	2009 F	RV1226 RV1424		S S1-1		S15 S-15-10	1104 5	5224	1104 5	S-1363 S1363	2009 2009
7639 7640	2009	RT4761 RT4764	2009 F	RV1471 RV1474		S1-B01-02 S1-RECT-35	1104 5	\$16	1104 5	3230 3232		S-1364 S1364	2009 2009
7641 7642	2009 F	RT5070 RT5151	1104 F	RV1476 RV1478	1104 5	S1-RECT-102	1104 5	S16A S16B		5233 5234	1104 5	61369 61373	2009
'643 '814	2009 F	T5152 T5202	2030 F	RV1479	1123 5	S1A06 S1A060		5-17 517		235 238	1104 5	1374	2009
916	2035 F	T5203	2012 F	RV2071 RV2072		61A 61A3	1104 5	5-17A 517A	1104 5	239	1104 5	5-1403 51403	2009
1430 1442		T5206 T5207	2009 F	RV2213 RV2220	562 5	51A60 51AR1	1104 5	318	1104 5	5240 5241		1405 1419	2009
503 510	2009 R	T5213 T5214	1123 F	RV2249	2009 5	SIAR2	1104 5	S18A S18B	1104 S	3 243 3 2 50	1104 S	1420 1428	2009
511 512	2011	T5216	1104 R	IV-2289	1104 5	31B01 31B01-01		619 619A	1104 5	251 252	1104 S	1429-3	1102
5048	2009 A	T5217 T5385	1104 R	IV2289 IV2327	1104 5	61B-01-02 61B01-02	1104 S	20	1114 S	253		1432 1443	2009
6057332 00		T5464 T5465	2011 R	VD08C22/1A VD1K110	1104 S	1B01-06	1104 S	20ND400 20NH400	1104 S	254 255	1104 S	1453 1475	2009
00 102	2009 R	T5472 T5551	1104 R	VD1N34A	1123 S	1B01-0226 1B02 1B02-0	1104 S	21 22	1104 S	256 257	1104 S	1476	2009
104 107	2016 R	T5554	1102 R	VD2-1K110 VD2DP	1104 S	1B02-C	1104(2) S	22A 23	1104 S	258	1114 S	1477 1487	2032 2009
108	2038 R	T5793 T5908	561 R 1123 R	VD2DP22/18 VD2DP221P	1104 S	1B02-CR	1104(2) S	23A	1104 S 1104 S	260 -262 262		1502 1510	2009
110 11	2008	T5909 T5911	1102 R	VD2P22/1B VD4B265J2	1104 S	1B0101CR		24 26	1114 S	262 -305	1104 S	-1512 1512	2009
12 12	2038 R	T5939	1123 R	VD10D1	1104 S	1B0102 1B0201CR	1104 S	28 30	1114 S	305	2041 S	1526	2009
13	2038 常	T6119 T6179	1123 R 1123 R	VD10DC1 . VD10DC1R	1104 S	1B-0306 1B	1114 S	31	1104 S	305-PD 305A		1527 1529	2009
14 19		T6180 T6181	1123 R	VD10E1 VD10E11F	1104 S	181	1104 S	32 33	1104 S	305A 305D	2041 S1	1530 1533	2009
126 131	2034 R	T6182 T6183	1123 R	VDCD0033	561 S	1BD1-02 1C		34 35	1104 S-	315 320F	1104 S1	1533	2009
54	2041 R	T6184	1123 R	VDDS-410 VDEQA0106S		1CN1 1D	1104 S	36	1104 S	353	2041 S1	1559 559	2009
59 59		T6204	1123 R	VDKB162C5 VDKB265J2	1104 S 1102 S	1D50B861-A 1D51C052-19	1102 S	40A	1104 S	356 356	2041 S1	568 570	2009
75 75	2036 R	T6322 T6332	1104 R	VDMZ-206	561 S	1D51C169-1	1104 S4	14	1104 S4	128 131	1104 S1	600	1104
76 76	2035 R	T6600MHF25	2009 R	VDMZ209 VDR5R6EB	561 S	1L200 IR12B	1104 S4 563 S4	16	1104 S-	500	1114 S1	619 620	2009
10	1114 R	76601 76602		VDRD5R6EB VDRD11AN	561 S	IR13B IR20	563 S4	18	1104 S-	500B 500C	1104 S1 1104 S1	629 685	2009
0 12	1114 RT	76605 76619	1104 R	VDSD-1	1104 St	IR-80	1114 S4 1104 S6	61		02 02A	1102 S1	691 692	2041
13 13	1104 RT	6729	1104 R	/DSD-1U /DSD-1Y	1104 S1	IR80 IRC20 1	1114 S6 104(2) S6	62	1114 S5	02B	1102 S1	697	2041
14	1104 RT	6732 6733		/DSR3AM2N /DVD1150L	1104 S1	RC20R	1104 S6	5-4-A-3P	2001 55	06 06A	1102 S1	761 761 A	2009
14 15		6787 6791	2011 RV	/DVD1205M /DVD1210L	1102 S1	S11	1123 S7			06B 09	1102 S1	761B 761C	2009
15		6921		/DVD1210M	1102 S1	S20	1123 57	3		09A		764	2009

EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
1766	2009	SA2B	1104	SC108B	2009	SD-1CUF	1104 1104	SD94S SD-95	1104 1104	SE5-0367 SE5-0456	2009 1122	SF195C SF195D	2010 2011
768	2009	SA2H SA2Z	1114	SC109A SC-110	2009 1104	SD1CUF SD1DM-4	1104	SD95	1104	SE5-0567	2009	SF196	2010
1770 1772	2009	SA3B	1104	SC110	1104	SD-1HF	1104	SD-95A SD95A	1104	SE5-0608 SE5-0848	2009	SF197 SF294	201
1784	2009	SA-7 SA7	2001	SC148 SC148A	2016 2016	SD1HF SD-1L	1104	\$D96	1104	SE5-0854	2009	SF294B	201
1785 1801-02	1104	SA310	2022	SC158	2034	SD1L	1104	SD96A SD96S	1104 1104	SE5-0855 SE5-0887	2009 2009	SF295 SF295C	201 201
1835	2009 2041	SA311 SA312	2022 2022	SC158A SC158VI	2034 2034	SD-1LA SD1LA	1104	SD98	1114	SE5-0888	2009	SF295D	201
1865 1871	2009	SA313	2022	SC159	2034	SD-1U	1104	SD98A SD98S	1114	SE5-0938-54 SE5-0966	2009 1102	SF310 SF314	201 201
1878	2031	SA314	2022	SC159A SC258	2034 2034	SD-1UF SD-1X	1104	SD100	1102	SE6	1104	SF334	201
1891 1891A	2009	SA315 SA316	2022	SC258A	2034	SD1X	1104	SD-101	1104	SE30B26A SE46	1104 1104	SF334B SF335	201 201
1891B	2009	SA354B	2001 2022	SC258VI SC259	2034 2034	SD-1Y SD1Y	1104	SD101 SD102	1104	SE50	2013	SF335C	201
18 9 7 1905	2011 2041	SA410 SA411	2022	SC259A	2034	SD1Z	1104	SD103	1104 1104	SE-1001 SE1001	2013 2013	SF335D SF1001	201 200
1905A	2041	SA412	2022	SC305 SC350	1104 2009	SD1ZHF SD2	1104	SD104 SD105	562	SE1001-1	2013	SF1713	200
1907 1955	2041	SA413 SA414	2022 2022	SC741T	007	SD2A	1104	SD-109	2009	SE1001-2 SE-1002	2013 2009	SF1714 SF1726	200
1993	2009	SA415	2022	SC785	2009 561	SD2B SD2C	1104	SD109 SD-110	2009 1102	SE-1010	2011	SF1730	200
2003-1 2020	2041	SA416 SA537	2022 2022	SC821 SC821A	561	SD4	1104	SD110	1102	SE1010	2015 2009		110
2034	2009	SA538	2021	SC823	561	SD-5	1102 1104	SD-150 SD165	1123 1102	SE-1331 SE1331	2009	SFD83	110
2043	2009 2009	SA539 SA540	2022 2021	SC823A SC825	561 561	SD5 SD-5(PHILCO)	1102	SD-201	1104	SE1730	1114		112
2044 2045	2009	SA821	561	SC825A	561	SD6	1104	SD201 SD202	1104 1104	SE-2001 SE2001	2009 2016		113
-2064-G	1122	SA821A	561 561	SC827 SC827A	561 561	SD-6AUF SD-7	1114 1102	SD282A	1101	SE2020	2011	SFE145	20:
2085 2087G	1123 1102	SA823 SA823A	561	SC829	561	SD7	1102(2)	SD-404	1101 1104	SE2397 SE2401	2011 2009		11:
2090	2009	SA825	561 561	SC829A SC-832	561 2009		1102(2)	SD-470 SD470	1104	SE2402	2009	SFR152	11
2121 2122	2009	SA825A SA827	561 561	SC832	2009	SD8	1114	SD500	1102	SE3001	2036 2036		11
2123	2009	SA827A	561	SC842 SC1001	2009		562 1104	SD500C SD501	1104 1104	SE3002 SE-3033	2041	SFR155	11
2124 2131	2009 2011	SA829 SA829A	561 561	SC1001	2009		1123	SD600	1102	SE3033	2041		11
2132	2011	SA-93792	1102		1122		1123 1102	SD600C SD-630	1104 1102	SE3035 SE3036	2041 2041		11
2133	2011 2011	SA-93794 SAW-1S1941	562 1104		2009		1123	SD630	1102	SE3100	2038		11
2134 2171	2009	SAW-151944	1104	SC1229G	2009	SD12E	1123		562 562	SE-3646 SE3646	2009 2016		11
2172	2009	SAW-2SC372G SAW-2SC372Y	R 2009		1104		1123 1104		562	SE-4001	2009	SFR255	1
2225 2241	2009 2041	SAW-25C3/21	2009		110	2 SD13	1104		1102	SE4001 SE-4002	2013 2009		11 11
2392	2041	SB01	1104		1104 1104		1123 1123		1114 1101	SE4002	200	9 SFR264	11
2397 2403B	2009		1102		200		1123	SD910	1114		200		11
2403C	2041	SB1-01-04	1104	SC-4044	2009		1123		1114		201		1
2471	2041 2009		1104		110		1123	SD950	1104	SE5001	201		11 20
S2581 S2582	2009		1114	SC4131-1	200		1123		1102 2015		201		20
2590	2009		1104		200		1104		1104	SE-5006	200	9 SFT226	20
S2593 S-2617	2009 2011		110		110	4 SD-18	1104		1104		201 201		20
\$2617(UHF)	2011	SB-3N	110		110 110		1104		1104		201	6 SFT229	20
S2635 S2636	2009 2009		204 204		110	4 SD23	1104	4 SDD421	2009		201 201		20
S2741	2041	SB7	204		110 110		56: 56:		2011 2009		201	5 SFT252	2
\$2935 \$2944	2009		200 200		110	4 SD33	56:	3 SDD3000	2009		201 201		21
S2984	2009	SB302	110		111		110: 112:		1123 1101		201		2
S2985 S2989	2009		110 110		111 110		110	2 SDR-25	1104	SE5029	201		2 2
S2996	2009		110	4 SCA3022	203		110 110		1104 1104		200		2
\$2997	2009		110		203 203		112		110	SE5031	201	6 SFT298	2
S2998 S2999	200		110	4 SCA3240	203	8 SD46	112		204: 204:		201 203		2
S3004-1715	56		56 56		111		112 112		204	SE5040	201	6 SFT713	2
S3004-1716 S3004-1718	110: 56:		56		111	4 SD46-2	112		204		201	E CE7716	
S3016	110	2 SB823A	56	1 SCD-T320	204		112 110		204		201	5 SF.T171	
S-3016R S3016R	110 110		56 56		200	9 SD51	110	1 SDT9205	204	1 SE5055	20	16 SF.T172	
\$3030G	112	3 SB827	56	ST SCE1	110	4 SD53	56 112	3 SDT9206 3 SDT9210	204 204	1 SE5151	200	9 SF.T174	
S3577G S3603G	112 112		56 56		110	04 SD56	112	3 SDT9261	204	1 SE-6001	20° 200 200 200	9 SF.T184	
S3639	202	1 SB829A	56	ST SCE4	110	4 SD-60	112 112	3 SDT9301 3 SDT9302	204 204	1 SE-6002 1 SE6010	200	9 SF. 1237	
\$3640 \$3771	202 204	1 SB-1000	111		110		110	4 SDT9304	204	1 SE7056	200		
S3776B	112	3 SBR-260	110	04 SCE10	11	14 SD80	110	4 SDT9305	204 204		20° 20°	09 SG-105	
S3885G	112	3 SC05	110		111		110	1 SDT9308	204	1 SE9002	204	41 SG105	
S4001 S5089-A	110	4 SC1	110	O4 SCPSE	11	04 SD82A	110	1 SD-Y	110 201	4 SE9080	20- 11		
S6005	110	4 SC2	110	D4 SCT1	11 11		110	01 SE0001 04 SE002(1)	201	1 SELEN-70	11	04 SG-305	
S6801 S9631	200 200	9 SC2C 9 SC4	11	04 SCT2 04 SCT3	11	14 SD91	- 110	04 SE0	111	4 SELEN-701	11 20	04 SG305 41 SG323	
S15649	200	9 SC-6	11	23 SCT4	11	14 SD-91A	110		110	4 SES632 4 SES881	20	41 SG505	-
S15657	201 201	6 SC6 6 SC8	11 11	04 SCT5 14 SD-02		04 SD-91S	110	04 SE-05-01	110	4 SES3819	20	35 SG709CT	
S15658 S-21271	112	23 SC8A	11	14 SD05	11	04 SD91S	110		110	4 SF1CN1	11	14 SG723CD 14 SG723CN	
S21271	112		11	14 SD07 14 SD040		04 SD-92 04 SD92	111	04 SE-05A	110	4 SF3CN1	11	14 SG741CD	
S21648 S22543	200	9 SC12(DIODE)	11	02 SD1	-11	04 SD-92A	11	04 SE05B	110	4 SF4	11	14 SG741CD 14 SG741CN 14 SG741CT	
S24591	200	9 SC-16	11	04 SD1-1		04 SD92A 04 SD-92S	= 11	04 SE05D	110	4 SF5	11	14 SG-805	
S24596 S29445	200		11	23 SD1-2118	11	04 SD-93	11	04 SE05S	110	4 SF6	11	14 SG805	
S32550	20	09 SC23-3	11	04 SD-1-211C	11 monetal	04 SD93	11 11		110	04 SF115 04 SF115A	20	16 SG-1198 16 SG1198	
S34540	20 20			04 SD1-211C 07 SD1-Z		04 SD-93A 04 SD93A	11	04 SE-0566	200	9 SF115B	20	16 SG3182	
S36999 S40545	20	11 SC44	20	07 SD-1A	11	04 SD93S		04 SE0S-01	110	04 SF115C 04 SF115D		16 SG3183 13 SG3198	`
S-88576	11	01 SC46		07 SD1A 23 SD-1AHF		04 SD-94 104 SD94	. 11	04 SE-2	111	04 SF115E	20	13 SG3400	
S88576 S95202	11 20	01 SC54 09 SC-65	20	09 SD-1AUF	. 11	02 SD-94A	11	04 SE-5	111	04 SF167	20	113 SG3198 113 SG3400 116 SG3432 128 SG3516 129 SG3583 129 SG5028 129 SG5392	
S1977634	20	41 SC65	20	09 SD-1B		104 SD94A 114 SD-94AB		04 SE5-0128 04 SE5-0247-C	= 11	22 SF194	20	16 SG3583	
SA-2 SA2		14 SC91 04 SC108	20	562 SD1C 016 SD-1C-4F	1	104 SD94AB	11	04 SE5-0253	20	09 SF194B	20	16 SG5028	
SA-2B		04 SC108A		16 SD-1C-UF	1 1	104 SD948	11	04 SE5-0274	20	09 SF195	20 20	303332	

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
G5400 G-9150	1102 1102	SI-RECT-122 SI-RECT-126	1104	SKA1080 SKA1117	2009	SLA539 SLA540	1104 1104	SM210 SM-217	1104 2007	SP1U-2	1102	SPS4143	20
G9150	1102	SI-RECT-136	1114	SKA1395	2009	SLA547	1104	SM220	1104	SP82 SP82A	1101 1101	SPS4168 SPS4169	20
GC-7202	2009	SI-RECT-140	561	SKA1416	2011	SLA560	1114	SM230	1104	SP90	2034	SPS4199	20
GR100 H-1	1104 1104	SI-RECT-140/TR-6 I SI-RECT-140/TR6S	561 561	SKA-4075 SKA4141	2011 2009	SLA561 SLA599	1114	SM240 SM250	1104 1104	SP4231 SP7056	2041 2012	SPS4303 SPS4313	20
H1	1104	SI-RECT-144	1104	SKA-6256	2009	SLA599A	1104	SM260	1104	SPC40	2009	SPS4345	20
H-1A H1A	1104 1104	SI-RECT-152 SI-RECT-204	1102	SKA-6437 SKA-8105	2009 2009	SLA600 SLA600A	1104 1104	SM270 SM280	1114 1114	SPC42 SPC50	2009 2009	SPS4347 SPS4356	20
H-1B	1104	SI-RECT-218	1104	SKB8339	2009	SLA601	1104	SM300	1114	SPC51	2009	SPS4359	20
H1B H1C	1114	SI-RECT-220 SI-RECT-222	1104	SL-030 SL030/3490	1104 1104	SLA601A SLA602	1104 1104	SM483 SM486	1104	SPC52 SPD-80062	2009 2041	SPS4360 SPS4363	20
H-1DE	1104	SI-RECT-226	1104	SL030S	1104	SLA602A	1104	SM487	1104	SPN-01	1104	SPS4367	20
H-1S H1S	1104 1104	SI-RECT-228 SI-RECT-230	563 563	SL-030T SL030T	1104 1104	SLA603A	1104 1104	SM488 SM505	1104	SPN01 SPS-41	1104	SPS4368	20
H4D05	1104	SIR-RECT-44	1104	SL0305,T	1104	SLA604	1104	SM510	1104 1104	SPS41	2009 2009	SPS4382 SPS4446	20
H4D1	1104	SIS2	1123	SL07040	017	SLA604A	1104	SM512	1104	SPS43-1	2011	SPS4450	20
H4D2 H4D3	1104 1104	SIS11 SIS20	1123 1123	SL07055 SL08066	017 017	SLA605 SLA605A	1104 1104	SM513 SM514	1104 1104	SPS429 SPS816	2011 2011	SPS4451 SPS4453	20
H4D4	1104	SISD-1HF	1114	SL08797	010	SLA606	1104	SM515	1104	SPS817	2009	SPS4455	20
H4D6 H4D8	1104 1114	SISD-1X SISD-K	1104	SL-2 SL2	1104 1104	SLA606A SLA1095	1104	SM516 SM517	1104	SPS817N SPS-856	2009 2011	SPS4456 SPS4457	20
H15	1104	SISM-150-01	1104	SL-3	1104	SLA1096	1104	SM518	1114	SPS856	2011	SPS4459	20
H1064 HAD-1	2009 1104	SISW-05-02 SISW-0502	1104	SL3 SL-4	1104 1104	SLA1100 SLA1101	1104 1104	SM520 SM576-1	1114	SPS-860 SPS860	2011 2011	SPS4472 SPS4476	20
HAD1	1104	SJ051E	1104	SL-5	1104	SLA1102	1104	SM576-2	2009	SP\$868	2009	SPS4478	20
61-05A 61-1A	1114 1114	SJ051F SJ052E	1104 1104	SL5 SL91	1104	SLA1104 SLA1105	1104 1104	SM645 SM646	1104 1104	SPS907 SPS-934	2009 2009	SPS4491 SPS4493	20
I-2A	1114	SJ052F	1104	SL92	1104	SLA1487	1104	SM705	1104	SPS-952-2	2014	SPS4494	2
I-3A	1114	SJ60F	1104	SL93	1104	SLA1488	1104	SM710	1104	SPS1045	2009	SPS4498	21
I-4A I-5A	1114	SJ102F SJ201F	1104	SL103 SL300	1102 2009	SLA1489 SLA1490	1104 1104	SM-716 SM716	2009	SPS-1473RT SPS-1475	2011	SPS4920 SPS4942	2
1-6A	1114	SJ202F	1104	SL301A	2038	SLA1491	1104	SM720	1104	SPS1475	- 2009	SPS5000	2
61-7A 61-8A	1114 1114	SJ301F SJ302F	1104	SL301AE SL301B	2038 2038	SLA1492 SLA1692	1104 1104	SM730 SM740	1104	SPS-1475(YT). SPS-1475YT	2031 2009	SPS5006 SPS5006-1	2
i-10A	1114	SJ401F	1104	SL301BE	2038	SLA 1693	1104	SM750	1104	SPS-1539WT	2032	SPS5006-2	2
150E 191G	1104 1104	SJ402F SJ501F	1104 1104	SL301C SL301CE	2012 2012	SLA1694 SLA1695	1104 1104	SM760 SM770	1104 1114	SPS1593WT SPS2164	2032 2009	SPS5457 SPS5569	2
1100E	1104	SJ-570	2009	SL3G1E	2038	SLA1696	1104	SM780	1114	SPS2167	2009	SPS6111	2
11000E	1114	SJ570	2009	SL3Q1EE	2038	SLA1697	1104	SM800	1114	SPS2224	2011	SPS6112	2
IB-01-02 IB01-06	1104 1104	SJ601F SJ619	1104	SL303AE SL303AT	2038 2038	SLA2610 SLA2611	1104 1104	SM2700 SM2701	2009 2009	SPS2225 SPS-2265	2009 2011	SPS6113 SPS6571	2
IB01-06B	1104	SJ619-1	2041	SL363BE	2038	SLA2612	1104	SM3104	2009	SPS-2266	2011	SPS6682	2
IB-01-022 IB02-03C	1104 1104	SJ820 SJ1106	2041	SL3G3BT SL354BE	2038 2038	SLA2613 SLA2614	1104 1104	SM3117A SM3505	2009	SPS2270 SPS3015	2009 2009	SP\$7652 SPT3713	2
IB02-03CR	1104	SJ1470	2041	SL354BF	2038	SLA2615	1104	SM3986	2009	SPS3735	2009	SQ7	2
1B02-CR 1B02-CR1	1104 1102(2)	SJ2000 SJ2008	2041	SL608 SL610	1114	SLA2616 SLA2617	1114	SM4304-S SM-4508-B	2013 2009	SPS3751	2009	SQ46	1
IB0102	1104	SJ3464	2041	SL708	1114	SLA3193	1114 1104	SM4508-B	2009	SPS3787 SPS3900	2011 2009	SQD-2170 SR0004	110
IB0201CR	1104	SJ3604	2041	SL710	1114	SLA3194	1104	SM5379	2009	SP\$3907	2009	SR-05K-2	1
IB-0306 IB0L-02	1114	SJ3678 SJ8701	2041	SL-833 SL8#3	1104 1104	SLA3195 SLA3196	1104	SM-5564 SM5564	2009	SPS3908 SPS3909	2009 2009	SR05K-2 SR-1	1
IB0L	1104	SJ9110	2041	SL-833A	1104	SM07275	2009	SM-5643	2009	SPS3915	2009	SR1-2	1
IB1 IB-C1-02	1104 1102	SK-1B SK1FM	1104	SL833A SL918	1104 2038	SM-1 SM-1-005	1104 1104	SM5643 SM5981	2009 2009	SPS3923 SPS3925	2009 2009	SR1-K2 SR1A-1	1
ID01E	1104	SK1K-2	1104	SL3693	2038	SM1-02	1104	SM6762	2031	SPS3926	2009	SR1A1	1
ID01K ID01L	1114 1104	SK-1WS0 SK-7	1123 2001	SL7990 SL20927	2009 017	SM-1-47 SM-1K	1104 1104	SM6773 SM7545	2009 2009	SPS3930 SPS3936	2009 2009	SR1A-2 SR1A2	1
ID02E	1104	SK7	2001	SL20929	007	SM4	1104	SM-7815	2009	SPS3938	2009	SR1A-4	1
ID02K	1114	SK19	2035	SL21385 SL21673	1740	SM5	1104	SM7815	2009	SPS3940	2009	SR1A4	
ID02L ID50B851	1104 1102	SK-218 SK1640A	1114	SL21923	007 017	SM-10 SM10	1104	SM-7836 SM7836	2009	SPS3951 SPS3957C	2009	SR1A-8 SR1A8	1
D51C169	1104	SK1641	2009	SL22310	1740	SM11	1104	SM8112	2009	SPS3967	2009	SR1A-12	1
ID50894 IG1/200	1102	SK3005 SK3010	2007	SL22935 SL29324	1740 017	SM20 SM30	1104	SM8113 SM8978	2009	SPS3972 SPS3973	2009 2009	SR1A12 SR1D1M	1
G1/600	1104	SK3011	2001	SL23325	1740	SM31	1104	SM9008	2009	SPS3999	2009	SR1DM	1
IL-200 IL200	1104 1104	SK3016 SK3017	1104 1104	SL23326 SL23482	010 017	SM40	1104 1104	SM9135 SM9253	2009 2009	SPS4003	2009	SR1DM-1	1
IR-80	1104	SK3017A	1104	SL23482	007	SM50 SM51	1104	SM-A-595830-12	2011	SPS4004 SPS4006	2009 2009	SR1DM1 SR1DM-2	1
I-REC-73	1104	SK3020	2009	SLA01	1114	SM60	1104	SM-A-726655	2009	SPS4009	2009	SR1DM-4	1
I-RECT-044 I-RECT-2	1104 1104	SK3030 SK3031	1104	SLA11AB SLA11C	1104 1104	SM70 SM71	1114 1114	SM-A-726664 SMB-541191	2009 1102	SPS4017	2009 2009	SR1DMX SR1E	1
IRECT-2	1104	SK3038	2009	SLA12AB	1104	SM73(DIODE)	1114	SM-B-610342	2009	SP\$4020 SP\$4029	2009	SR1EM	i
I-RECT-20 I-RECT-25	1104 1104	SK3040 SK3046	2008	SLA12C SLA13AB	1104 1104	SM80 SM81	1114 1114	SM-B-686767 SM-C-583256	2009 2009	SPS4032	2009 2009	SR1EM-1 SR1EM1	1
I-RECT-27	1104	SK3058	561	SLA13C	1104	SM83	1114	SM-C-706156	1122	SPS4037	2009	SR1EM-2	1
I-RECT-33	1104	SK3060 SK3062	562 563	SLA 14AB	1104	SM100	1114	SMC750123-1	007	SPS4039	2009	SR1EM2	1
I-RECT-34 I-RECT-35	1104 1102	SK3063	564	SLA14C SLA15AB	1104 1104	SM101 SM103	1114 1114	SN0303 SN-1	1104 1104	SPS4040	2009 2009	SR1EM-X SR1FM	1
RECT-36	1104	SK3081	1114	SLA.15C	1104	SM105	1104	SN1	1104	SP54029 SP54032 SP54034 SP54037 SP54039 SP54040 SP54042 SP54044 SP54044 SP54045 SP54049	2009	SR1FM-1	1
-RECT-37 -RECT-39	1104 1104	SK3087 SK3088	1123 1123	SLA16AB SLA16C	1104 1104	SM110 SM120	1104 1104	SN-1Z SN60	1104 2016	SPS4044 SPS4045	2009	SR1FM-1 SR1FM4 SR1FM-8	
-RECT-48	1104	SK3089	1101	SLA17AB	1104	SM130	1104	SN80	2001	SPS4049	2009	SRIFMIO	1
RECT-48 RECT-49 RECT-53	1104 1104	SK3090 SK3091	1123 1123	SLA17C SLA18AB	1104 1114	SM140 SM-150	1104 1114	SN72558 SN72558P	038 038		2009 2009	SR1FM12 SR1FM20	1
-RECT-53	1104	\$K3100	1102	SLA18C	1114	SM150	1114	SN72709L	017	SP\$4053 SP\$4055	2009	SR1FMA	1
-REC1-59	1104	SK3112	2035	SLA19AB	1114	SM-150-005	1114	SN72741L	007	SPS4059	2009	SR-1HM-2	1
RECT-59 I-RECT-69	1104 1104	SK3116 SK3117	2035 2038	SLA19C SLA440	1114 1104	SM150-01 SM-150-02	1114 1114	SN72741N SN76177	010 702	SPS4060 SPS4061	2009 2009	SR1HM-2 SR1HM-4	1
I-RECT-73	1104	SK3122	2009	SLA440B	1104	SM150-02	1114	SN76177ND	702	SPS4062	2009	SR1HM-12	1
I-RECT-74 I-RECT-75	1104 1104	SK3124 SK3165	2010 1740	SLA441 SLA441B	1104 1104	SM150-6 SM150-11	1114 1114	SNO303 SNW-Q-2	1104(2)	SPS4063 SPS4066	2009 2009	SR1HM-16 SR1K08	1
I-RECT-77	1104	SK3174	1104	SLA442 SLA442B	1104	SM-150A	1114	SNW-Q-3	2001	SPS4067	2009	SR1K08 SR-1K SR1K	. 1
I-RECT-84	1104	SK3183	2040	SLA442B	1104	SM150A	1114	SNW-Q-5	2001	SPS4069	2009 2009	SR1K	1
I-RECT-92 IRECT-92	1104 1104	SK3434A SK3510	2009	SLA443 SLA443B	1104 1104	SM-150B SM150B	1104 1114	S-05 S05	1104 1104	SPS4074 SPS-4075	2009	SR1K/494 SR1K-1	1
I-RECT-94	1104	SK3552	017	SLA444	1104	SM150C	1114	SO10G	1114	SPS4075	2009	SR-1K-2 SR-1K2	1
I-RECT-100 I-RECT-100-102	1104 2 1104	SK3557 SK-3960	038 2009	SLA444A SLA444B	1104 1104	SM150D SM150S	1114 1114	SO501 SO-632	1104 562	SPS4077 SPS4081	2009 2009	SH-1K2 SR1K-2	1
I-RECT-102	1104	SK3960	2009	SLA-445 SLA-445	1104	SM150SS	1114	SOA	1114	SPS4083	2009 2009	SR1K-2 SR1K2	1
I-RECT102 IRECT-102	1104 1104	SK5801 SK5915	2009	SLA445B	1104	SM160	1104	SOD200D SP-1	1104	SPS4084	2009 2009	SR1K-2/494	1
HRECT-102A	1114	SK8215	2009	SLA536	1104 1104	SM170 SM180	1114 1114	SP1	1104 1104	SPS4085 SPS4088	2009	SR-1K-2A SR-1K-2B	1
I-RECT-102A I-RECT-110/SB I-RECT-112	3F 1104	SK8251	2009	SLA537	1104	SM200	1114	SP1K-1	1104	SP\$4089	2009	SR-1K-2C	1
FILE ITE	1104	SKA0030	2009	SLA538	1104	SM205	1104	SP1K-2	1104	SPS4095	2009	SR-1K-2D	

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
R1K-4	1104 1104	SR1266	1104	ST55	2009	SV-01B SV-02	1104	SYL-101	2001	T065 T-075	1104 1104	T-399 T399	20
R1K-8 R1K8	1104	SR1378-1 SR1378-3	1104 1104	ST56 ST57	2009	SV-02 SV-02(RECTIFIER)	561 1104	SYL101 SYL-102	2001 2001	T075	1104	T-400	20
R1K-Z	1104	SR1493	1104	ST58	2009	SV02A	1104	SYL102	2001	T0101	2007	T400	11
R1T R-1Z	1104 1104	SR1549 SR-1668	1104	ST59 ST63	2009	SV-03 SV-04	1104	SYL103 SYL104	2001 2001	T0102 T-0150	2007 1104	T416-16(SEARS) T417	20 20
R1Z	1104	SR1668	1104	ST64	2009	SV04	1104	SYL-105	2007	T0150	1104	T-450	11
R-2 R2A-1	1114	SR1692 SR1693	1104 1104	ST150 ST151	2009	SV-05 SV05	1104	SYL105 SYL-106	2007 2007	T1-1A6 T1-741	2009 2035	T450 T457-16	11 20
R2A1	1104	SR1694	1104	ST152	2009	SV-3	1102	SYL106	2007	TIG	1123	T457-16(SEARS)	20
R2A-2 R2A2	1104	SR1695 SR1731-1	1104 1104	ST153 ST154	2009	SV-3A SV-3B	1102	SYL152 SYL-160	2009 2007	T1P3055 T1\$-18	2041 2013	T458-16 T459(SEARS)	20 20
R2A-4	1104	SR1731-2	1104	ST155	2009	SV-3C	1102	SYL160	2007	T1S18	2013	T460	20
R2A4	1104	SR1731-3	1104	ST156	2009	SV-8	1102	SYL792	2007	T1S34	2035	T461-16	20
R2A-8 R2A8	1114	SR1731-4 SR1731-5	1104 1104	ST157 ST160	2009	SV-9 SV9	562 1102	SYL-1182 SYL1182	2009 2009	T1S55 T1S58	2009 2035	T461-16(SEARS)	20 20
R2A-12	1114	SR1742	1104	ST161	2009	SV-9(ZENER)	562	SYL1279	2001	T1S59	2035	T462(SEARS)	20
R2A12 R-3	1104	SR1766 SR-1849-1	1104	ST162 ST163	2009	SV30 SV-31	1123	SYL-1297 SYL1297	2001 2001	T1S88 T1S95	2035 2031	T472 T472(SEARS)	20
3	1104	SR1984	1104	ST-172	2001	SV-31(DIODE)	1123	SYL-1310	2001	T1SDS1K	1104	T483(SEARS)	20
R3AM	1114	SR2121 SR2301	1104 1104	ST172 ST175	2001	SV135 SV138	563° 564	SYL1310	2001 2001	T2G(DIODE) T2R	1123 038	T484(SEARS)	20
R3AM-2 R3AM2	1104	SR2301A	1104	ST176	2009	SV-138A	564	SYL-1311 SYL1311	2001	T3/2	1104	T485(SEARS) T486(SEARS)	20 20
R3AM-3	1114	SR3010	1104	ST177	2009	SV1017	563	SYL1312	2001	T3G	- 1123	T-500	11
R3AM-4 R3AM-8	1114 1104	SR3582 SR3943	1104 1104	ST178 ST180	2009 2009	\$V1020 SV-1020A	564 564	SYL1313 SYL1326	2001 2001	T7 T8/2	1123 1104	T500 T-550	11
R3BM-6	1104	SR6134	1104	ST181	2009	SV1238	1104	SYL1327	2001	T8G	1123	T550	11
R4	1104	SR6324	1104	ST182	2009	SV-1238E	1104	SYL1329	2001	T9	1123	T-600	11
R-5 R5	1104	SR6325 SR6385	1104	ST250 ST251	2009 2009	SV1238E SV4012	1104 563	SYL1380 SYL1396	2001 2001	T9G T11	1123	T600 T615A002	11
R-13H	1104	SR6415	1104	ST-370	2007	SV4012A	563	SYL1408	2001	T12	1123	T615A006-1	20
R13H R-14	1104 1104	SR6560 SR6567	1104 1104	ST403 ST501	2009	SV4015 SV-4015A	564 564	SYL1454 SYL1524	2001 2001	T12-1 T12-2	1102 1102	T-650 T650	11
R16	1104	SR6617	1104	ST502	2009	SV4015A	564	SYL1536	2001	T12A	1102	T650(TRANSISTO	
R-17	1104	SR6723	1104	ST503	2009	· SV-12388	1104	SYL1537	2001	T12B	1102	T-750-713	11
R17 R-18	1104 1104	SR6724 SR-9001	1104 1114	ST504 ST-1242	2009 2009	SV12388 SV12388E	1104	SYL1538 SYL1539	2001 2001	T12C T12G	1102	T-750-714 T800	11
₹18	1104	SR9005	1104	ST1242	2009	SVC625	561	SYL1547	2001	T-13	1104	T800X	11
R-22 R22	1104 1104	SR-9007 SR50253-2	1114 1104	ST-1243 ST1243	2009 2009	SVC650 SVD02Z9.5A	561 562	SYL1588 SYL1591	2007 2001	T13 T-13G	1123 1104	T-1000 T-1000X	11
R-23	1104	SR50411-1	1104	ST-1244	2009	SVD0229.3A SVD0A79	1123	SYL-1608	2007	T13G	1123	T1000X	11
R23	1104	SR50517	1104	ST1244	2009	SVD-1S1717	562	SYL1608	2007	T-14	1104	T1008-834	20
R-24 R24	1104	SR75844 SRIDM	2009 1104	ST-1290 ST1290	2009	SVD1S1717 SVD1S1850	562 1104	SYL1617 SYL1690	2001 2007	T14 T-14G	1123 1104	T1085 T1208	20
1-27	1104	SRIDM-1	1104	ST1506	2009	SVD10D-1	1104	SYL 1697	2007	T14G	1123	T1224	20
27	1104	SRIDM-4	1104	ST1607	2009	SVD20A70	1123	SYL1717	2007	T16	1102	T1251	20
₹-28 ₹28	1104 1104	SRIEM-1 SRIEM-2	1104	ST-2040P ST2040P	1104 1104	SVD20A79 SVDMA26	1123	SYL1750 SYL1941	2001 2001	T17 T18	1123 1123	T1275 T1276	20
R-30	1104	SRIEM-4	1104	ST4150	2012	SVDMA26-1	1123	SYL-1987 .	2001	T20	1123	T1289	20
730 7-34	1104	SR-IK-2 SRK1	1104	ST4201 ST4202	2012	SVDOA70 SVDOA90	1123	SYL1987 SYL2120	2001	T20G T21	1123 1123	T1291 T1312	20
R-35	1114	SRK-2	1104	ST5060	2009	SVDSC20	1123	SYL-2130	2001	T21G	1123	T1322	20
R35	1104	SRLFM-1	1104	ST5641	2031	SVDVD1121	1102	SYL2130	2001	T22	1123	T1326	20
R40 R50	1104 1104	SS00010 SS0007	1104	ST6510 ST6511	2011	SVDVD1223 SVM61	1104 561	SYL-2131 SYL2131	2001	T-22G T22G	1104 1123	T1340A3I T1340A3J	20
R60	1104	\$\$0008	1123	ST6512	2009	SVM601	561	SYL-2132	2001	T23	1123	T1340A3K	20
R76 R100	1104 1104	SS0009 SS00010	1104 1104	ST22546-1 ST32012-0637	1122 1122	SVM602 SVM605	561 561	SYL2132 SYL2134	2001 2001	T23G T24G	1123	T1340A31 T1408	20
R-101-1	1104	SS-1	1104	ST61000	2022	SVM6010	561	SYL2135	2001	T-26G	1104	T1413	20
R101-1 R-101-2	1104	SS1-145128 SS29A4	2009 2022	STB01-02	1102	SVM6011 SVM6020	561	SYL2136	2001	T26G	1123	T1414	20
1101-2	1104	SS29A5	2022	STB576 STBOL-02	1102 1104	SVM6021	561 561	SYL-2245 SYL2245	2001 2001	T27G T35A-5	1123 2009	T1415 T-1416	20
105	1104	SS321	1104	STC-1035	2041	SW01	563	SYL-2246	2001	T-46	2007	T1416	2
R-112 R112	1104 1104	SS322 SS324	1104	STC1035 STC-1035A	2041 2041	SW-05 SW05	1104	SYL2246 SYL2247	2001	T-47 T-48	2007 2007	T1417 T1450	1
3114	1104	SS334	1104	STC1035A	2041	SW-05-005	1104	SYL-2248	2007	T-50	1104	T1474	20
R-120	1104	SS337	1104	STC-1036	2041	SW05-01	1104	SYL-2249	2007	T-78	2007	T1495	2
₹120 ₹-120-1	1104 1104	SS455 SS2308	1104 2009	STC1036 STC-1036A	2041 2041	SW-05-02 SW05-02	1104	SYL-2250 SYL2250	2007 2007	T-82 T-100	2007 1104	T1510 T1642B	2
R-130-1	1104	SS2504	2009	STC1036A	2041	SW05A	1104	SYL2650	2001	T-109	2007	T1746	2
R-131-1	1104	SS3534-4	2035	STC1080	2039 2041	SW05B SW05C	1104	SYL3460 SYL4315	2009 2001	T-116 T131	2007	T1746A T1746B	2
l131-1 l-132-1	1104 1104	SS3638 SS3638A	2034 2034	STC1081 STC1082	2041	SW05D	1114	SYL4315 SYL4339	2001	T143	2007	T1746C	2
132-1	1104	S\$3694	2009	STC1083	2039	SW05S	1104	SZ6.2	561	T151	1102	T1748	2
135-1 -136	1104	SS-3704 SS3704	2035 2035	STC1084* STC-1085	2041	SW05SS SW-05V	1104	SZ6.2A SZ-9	561 562	T152 T153	1102 1102	T1748A T1748B	2
144	1104	SS3735	2035	STC4252	2041	SW05V	1104	SZ9	562	T154	1102	T1748C	2
145 150	1104	SS9328	2009 1104	STC4253 STC4254	2041	SW0501	1104	SZ9.1	562	T155	1102 1104	T1802 T1802A	2
-150-01	1114 1104	SSD974 ST01	2009	STC4254	2041	SW0.5A SW-1A	1104	SZ12 SZ12.0	563 563	T156 T157	2009	T1802B	2
-150-1	1104	ST02	2009	STI-10	2008	SW1C	1114	SZ15	564	T158	2009	T1804	2
151 152	1104	ST03 ST04	2009 2009	STI-20 STI-30	2008 2008	SW1D SWC	1114	SZ-15B SZ15.0	564 564	T159 T170	1104 2009	T1805 T1810	2
200	1104	ST05	2009	STT2405	2020	SWD	1114	SZ-150	564	T171	2009	T1810B	2
200B	1104	ST06	2009	STT2406	2020	SWO.5A	1104	SZ150	564	T185	2009	T-1877	2
205 -390	1104 1104	ST/123/CR ST/146/CR	1122 1122	STT4483 STT9001	2020 2020	SWT1728 SWT3588	2004 2004	SZ-200-8 SZ-200-9V	562 562	T-200 T200	1104 1104	T1877 T1902	2
390	1104	ST/217/Q	2009	STT9002	2020	SX55	2009	SZ-200-15	564	T-203	2011	T1909	2
390-2	1104	ST11	2011	STT9004	2020	SX408	2013	SZ-200-15A	564	T235A013-2	2009	T-2038	2
-401 401	1104	ST-12 ST-14	1104	STT9005 STV-3	2020 1104	SX623 SX631	1104	SZ671-B SZ671-G	563 563	T237 \ T-255	2009	T2038 T-2039	2
1405	1104	ST16	1104	STX0014	2041	SX633	1104	SZ961-B	564	T255	2009	T2039	2
1500 1500P	1104	ST18	1114	STX0027	2041	SX641	1104	SZC9	562	T-256	. 2009	T-2040	2
R500 B R605	1104 1104	ST25A ST25B	2009	STX0032 ST.082.112.005	2041 2009	SX-642 SX642	1104	SZT8 SZT-9	563 562	T256 T277	2009 2009	T2040 T-2091	2
1806-126	1104	ST25C	2009	ST.082.114.015	2009	SX643	1104	SZT9	562	T291	2009	T2091	2
R-846-2	1104	ST-28B	2007	SU5	564	SX644	1104	T0-101	2007	T-300	1104	T2122	2
₹846-2 ₹846-3	1104	ST-28C ST-37C	2007 2007	SU-31 SUC650	1123 561	SX645 SX780	1104	T0-102 T01-013	2007 2009	T300 T327	1104 2009	T2172 T2173	21
R851	1104	ST-37D	2007	SUM6010	561	SX-990	1123	T01-014	2009	T327-2	2009	T2256	21
R-889	1104 1104	ST47 ST50	1101 2009	SUM6011 SUM6020	561 561	SX3709	2009	T01-101 T01-104	2009 2009	T328	2009 2009	T2257 T2258	20
R889	1104	ST51	2009	SUM6021	561 561	SX3711 SX3819	2009	T01-105	2009	T339 T342	2009	T2259	20
11024		ST53	2009	SV-01A	.1104	SX3826	2013	T033Z3	2007	T346	2007	T2260	20

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
r-2439 r-2440	2007 2007	TA7068 TA7069	2041	T-E1118	1102	TG2SC536(E)	2009	TI-421	2013	TIS-62	2009	TKF100	11
-2441	2007	TA7802	2041 1104	T-E1119 T-E1121	1102 1102	TG2SC536-E-B TG2SC927A	2009	TI-422 TI422	2016 2009	TIS62 TIS62A	2016 2009	TL1 TL2	11
2446	2009	TA7803	1104	T-E1124	1104	TG2SC927C	2011	TI-423	2016	TIS63	2015	TL11	11
3565 3568	2009 2011	TA7804 TA7805	1104	T-E1133 T-E1138	1104 1104	TG2SC1175(C) TG2SC1293(A)	2009	TI424 TI-430	2009 2016	TIS63A TIS64	2009	TL12 TL21	11
3601	2009	TA7806	1114	T-E1140	563	TG2SC1293-A-A	2013	T1430	2009	TIS64A	2009	TL22	11
3601(RCA) -4590	2011 1104	TA7996 TA198030-4	1104 2009	T-E1144 T-E1148	1104 1104	TG2SC1293-B-A TG2SC1293-C-A	2013 2013	TI-431 TI-432	2016	TIS71 TIS72	2009 2009	TL31 TL32	11
4590	1104	TA 198785-2	1122	T-E1155	1104	TG2SC1293-D-A	2013	T1432	2009	TIS83	2009	TL41	11
6565 9011A1C	2009	TA8532787 TAA521	1122 017	T-E1157 T-E1171	1104	TG-11 TG-12	1104	TI-433 TI-474	2009	TIS84 TIS85	2016 2016	TL42 TL51	11 11
9011A1G	2009	TAA521/709	017	T-E1176	1104	TG12	1104	TI-475	2013	TIS86	2011	TL61	11
9011AZ 9011G(CD)	2009	TAA522 TAA522/709	017 017	T-E1177 TE1420	1123 2009	TG20A TG-21	1104	TI-480 TI480	2012	TIS87 TIS-88	2011 2035	TM-33 TM33	11
9011G(EF)	2009	TAC-047	2009	TE1990	2012	TG21	1104	TI-481	2012	TIS88	2035	TM-43	11 11
9011H(EF) 9011I(EF)	2009	TAC047 TBA221	2009	TE2369 TE2484	2033 2010	TG-22 TG22	1104	T1481 T1-482	2009 2030	TIS90	2009	TM43	. 11
9011J(GH)	2009	TBA221/741C	007	TE2711	2016	TG-28	1123	T1482	2009	TIS90-2 TIS92	2009	TM62 TM63	11
9423 -10010	2013 1122	TBA221A TBA221A/741C	010	TE2712	2016 2016	TG-31	1104	Ti-483	2030	TIS92-BLU	2009	TM65	11
10144	1104	TBA222	007	TE2713 TE2714	2016	TG31 TG-32	1104	T1483 T1484	2009 2009	TIS92-GRN TIS92-GRY	2009 2009	TM66 TM86	11
10175	1104	TBA222/741	007	TE2715	2015	`TG32	1104	T1485	2009	TIS92-VIO	2009	TM2613	20
10185	1104 1104	TBRC147B TC02P12	2031 1104	TE2716 TE2921	2013	TG-41 TG41	1104	TI-492 TI492	2013 2009	TIS92-YEL TIS94	2009	TM2711 TMD03	20 5
21237	1123	TC02P112	1104	TE2922	2016	TG-42	1104	Ti-493	2013	TIS94(AFAMP)	2031	TMD03A	5
21238 21271	1123 1123	TC0P11/2 TC0.2P11/2	1104 1104	TE2923 TE2926	2016 2016	TG42 TG-48	1104 1123	TI493 TI-494	2009 2013	TIS94(XSTR) TIS95	2031 2009	TMD07 TMD07A	5 5
21312	1104	TC-136	1104	TE3393	2016	TG-51	1104	T1494	2009	TIS96	2009	TMD10	5
21313 21333	1123 1104	TC136 TC311200600	1104 1123	TE3394 TE3396	2016 2016	TG51 TG-52	1104 1104	TI-495 TI495	2013 2009	TIS97 TIS98	2011	TMD10A TMD41	11
21334	562	TC312307222	2031	TE3397	2016	TG52	1104	TI-496	2012	TIS99	2011	TMD41	11
21507 21600	1104 1102	TC3112006000 TC3112319300	1123 1104	TE3398 TE3414	2016 2033	TG-61 TG61	1104 1104	TI496 TI642B	2009 2031	TIS107 TIS108	2016 2016	TMD45 TMT-1543	11
21602	1104	TC3123036722	2009	TE3415	2009	TG-62	1104	TI-714	2009	TIS108	2009	TMT1543	20
21638 21639	1104 562	TC3123036900 TC3123037111	2009 2009	TE3605 TE3605A	2016 2016	TG62 T-G1138	1104	T1714	2009	TIS110	2009	TN2SC1520-K-3A	20
21649	1104	TC3123037222	2009	TE3606	2016	TGB0331	1123 2010	TI-714A TI722	2009 2012	TIS111 TIS112	2009 2023	TN53 TN55	20
21679	1104 1104	TC3123037412	2009	TE3606A	2016	T-H1S557	1104	TI-741	2035	TIS113	2009	TN59	20
30155 30155-001	1104	TCH98 TD-15-BL	2022 1102	TE3607 TE3662	2016 2015	TH1S557 T-H1S750	1104	TI741 TI-751	2035	TIS114 TIS-125	2009 2030	TN60 TN61	20
30155-1	1104	TD100	2010	TE3663	2015	TH-1S750	1101	TI751	2009	TIS125	2016	TN62	20
42692-001 42692-1R	1104 1104	TD101 TD102	2033	TE3704 TE3705	2014	T-H2SC536 TH2SC536	2009	T!802B TI803B	2009	TIS138 TIS412	2034	TN63 TN64	20
50944	2007	TD200	2010	TE3707	2013	T-H2SC693	2009	TI-806G	2009	TI-UG-1888	1102	TN80	20
52147 52147Z	2007 2007	TD201 TD202	2033 2033	TE3708 TE3709	2013 2013	TH2SC693 T-H2SC715	2009	TI810B TI-890	2009	TI-UG1888	1102	TN237	20
-52148Z	2007	TD250	2010	TE3710	2013	TH2SC715	2009	T1904	2034	TIX712 TIX895	2009 2007	TN-3200 TN3200	20 20
52148Z -52149	2007 2007	TD2219 TD960016-1M	2033 1102	TE3711 TE3843	2013	TH50 TH400	1104	Ti-907	2009	TIX896	2001	TNC61689	20
52149	2007	T-E01029D	1104	TE3844	2016 2016	TH600	1104	T1907 TI-908	2009	TIXA01 TIXA02	2007	TNC61702 TNJ1036	20
-52149Z	2007	TE500	2036	TE3845	2016	TH800	1114	T1908	2009	TIXA-03	2007	TNJ6172(2SC722	2) 20
52149Z 59235A	2007	TE-500-E TE697	2035	TE3854 TE3854A	2016 2016	TH801 TH802	1104	TI-3016 TIA03	2011 2007	TIXA03 TIXA-04	2007	TNJ60069(2SC74 TNJ-60076	4) 20 20
59276	2001	TE706	2015	TE3855	2016	TH803	1104	TIA05	2007	TIXA04	2007	TNJ60076	20
59277 -152148	2001 2007	TE1010 T-E1011	1104 1104	TE3855A TE3859	2016 2016	TH804 TH805	1104 1104	TIA05A TIA06	2007 2009	TIXA-05 TIXA05	2007	TNJ60447 TNJ60448	. 20
152148	2007	TE-1011	1104	TE3903	2016	TH806	1104	TIA102	2009	TIXD753	561	TNJ60449	20
1004671	2009 2009	TE1011 T-E1014	1104 1123	TE3904 TE3905	2016 2034	TH808 TH810	1114 1114	TIC44 TIC45	1067 1067	TIXS09 TIXS10	2031 2031	TNJ-60604 TNJ60604	20
407185152	2032	TE1014	1123	TE3906	2016	TH1000	1114	TIC45	1067	TIXS10	2009	TNJ-60605	20 20
A2A A-6	2009 2009	T-E1024 TE1024	1104	TE4123	2016 2016	T-HS6105 T-HSG105	1104	TIC47	1067	TIXS13	2009	TNJ60605	20
A6	2009	T-E1024C	1104	TE4125	2034	THSG105	1104	TIJ6G TIL209	1104	TIXS29 TIXS30	2016 2016	TNJ-60606 TNJ60606	20 20
A7 A50	2009 1104	TE1024C T-E1024D	1104	TE4126	2034	TI1A6	2009	TIP29	2018	TIXS31	2016	TNJ-60607	20
A100	1104	TE1024D	1104 1104	TE4424 TE4951	2009 2033	TI24A TI24B	2009	TIP30 TIP31	2026	TIXS39 TJ-5A	2038 1104	TNJ60607 TNJ60608	20 20
A200	1104	T-E1029	1104	TE4952	2033	TI-51	1102	TIP32	2025	TJ5A	1104	TNJ-60610	20
A300 A400	1104	TE-1029 TE1029	1102	TE4954	2009	T151 T152	1102	TIP33 TIP3055	2019 2020	TJ10A TJ15A	1104 1104	TNJ-60611	20 20
A500	1104	T-E1031	1123	TE5086	2022	TI-53	1104	TIR01	1104	TJ20A	1104	TNJ-60612 TNJ61217	20
A600 A800	1104 1114	TE1031 T-E1042	1123	TE5087 TE5309A	2022	T153	1104	TIRO2	1104	TJ25A	1104	TNJ61218	20
A1000	1114	TE1042	1104 1104	TE5311A	2009	TI54 TI54A	1104	TIR03	1104 1104	TJ30A TJ35A	1104 1104	TNJ61219 TNJ61220	20
A1062 . A1063	1104	T-E1050	1104	TE5365	2023	TI54B	2009	TIR05	1104	TJ40A	1104	TNJ-61217 TNJ61218 TNJ61219 TNJ61219 TNJ61671 TNJ61671(2SC68	20
A1064	1104 1104	TE-1050 TE1050	1104 1104	TE5368 TE5369	2033 2033	TI54C TI54E	2009 2009	TIR06 TIR07	1104 1114	TJ60A TK5	1104 1104	TNJ61671(25068	88) 20 5) 20
A-1575B	2007	T-E1064	1104	TE5370 TE5371 TE5376 TE5377	2033	TI-55	1104	TIR08	1114	TK-10	1104	TNJ61672(25%25 TNJ61672(26%25%25 TNJ61672(RECT) TNJ61679 TNJ61730 TNJ61731 TNJ70479-1) 1
A1620A A1620B	2001 2001	TE1064 T-E1068	1114 563	TE5371	2033 2033	T155 T156	1104 1104	TIR09 TIR10	1114 1114	TK10 TK11	1104 1104	TNJ61679	20
A-1655B	2007	TE1068	563	TE5377	2033	T157	1104	TIS-1B	2011	TK20	1104	TNJ61731	20
A-1704 A1704	2007 2007	T-E1077 TE1077	563 563	TE5447	2034 2023	TI58 Ti59	,1104 1104	TIS14 TIS18	2035 2015	TK21 TK-30	1104	TNJ70479-1 TNJ70537	20
A-1759	2001	T-E1078	1104	TE5449 TE5450 TE5451 TEH0147	2014	T160	1104	TIS22	2009	TK30	1104	TNJ70537	20
A1759 A-1763	2001 2007	TE1078 T-E1078A	1104	TE5450	2014 2014	TI-71 TI71	1104	TIS23 TIS34	2009	TK33C	2001	TNJ70637	20
A1763	2007	T-E1080	1104	TEH0147	2009	TI152	1104 1104	TIS38	2035 2034	TK-40 TK-41	1104 1104	TNJ70638 TNJ70639	20
A-1763A A1763A	2007 2007	TE1080 T-E1088	1104 1104	1F20	1104	TI-363	2007	TIS39	2038	TK50	1104	TNJ70640	20
A-1767	2001	TE1088	1104	TF21 TF22	1104	TI-364 TI-407	2007 2011	TIS42 TIS44	2035 2015	TK60 TK61	1104 1104	TNJ/1036 TNJ/1629	20
A1767	2001	T-E1089	1104	TF23	1104	Ti-408	2011	TIS45	2016	TK400	1104	TNJ71036 TNJ71629 TNJ71937 TNJ71963 TNJ72148 TNJ72276 TNJ72277 TNJ72279 TNJ72280 TNJ72281 TNJ72783 TNJ72783 TNJ72784	20
A-1771 A1771	2001	TE1089 T-E1090	1104	TF34 TF44	1102 1102	TI-409 TI411	2011	TIS46 TIS47	2016 2016	TK600 TK800	1104 1114	TNJ71963 TNJ72148	20
A-1772	2001	TF1000	1104	TF44J	1102	TI-412	2009	TIS48	2016	TK1000	1114	TNJ72276	20
A1772 A-1778	2001 2007	T-E1097 TE1097 T-E1098	1104 1104	TF70 TF71	2001 2001	TI-413 TI-414	2014 2009	TIS49 TIS50	2016 2034	TK1228-1008 TK1228-1009 TK1228-1010 TK1228-1011	2009 2009	TNJ72277	20
A1778	2007	T-E1098	1102	TF72	2001	TI-415	2013	TIS51	2016	TK1228-1010	2009	TNJ72280	20
A-1782 A1782	2007 2007	TE1098 T-E1102	1123 1104	TE-78	2009	TI415	2009	TISS2	2016	TK1228-1011	2009	TNJ72281	20
A-1783	2007	T-E1102A	1104	TFR110	1114 1114	TI416 TI-417	2009 2013	TIS54 TIS55 TIS56	2034 2016	TK1228-1012 TKF5	2009 · 1104	TNJ/2/83 TNJ72784	20
A1783	2007	TE1105	1123.	TFR-120	1104	TI417	2009	TIS56	2015	TKF10	1104		20
A 1990 A 2577 A	2004 2041	T-E1106 T-E1108	563 1104	TFR105 TFR110 TFR-120 TFR120 TFR140	1104	TI418 TI419	2009	TIS57 TIS58	2015 2035	TKF20 TKF40	1104 1104	TNT-843 TO-033	20
A2888	1067	TE1108	1104	1 G2 SA201(C)	2004	TI-420	2013	TIS59	2035	TKF60	1104	TO-038	20
A2889	1067	T-E1116	1123	TG2SC536(C)	2009	TI420	2009	TIS60	2009	TKF80	1114	TO-039	. 20

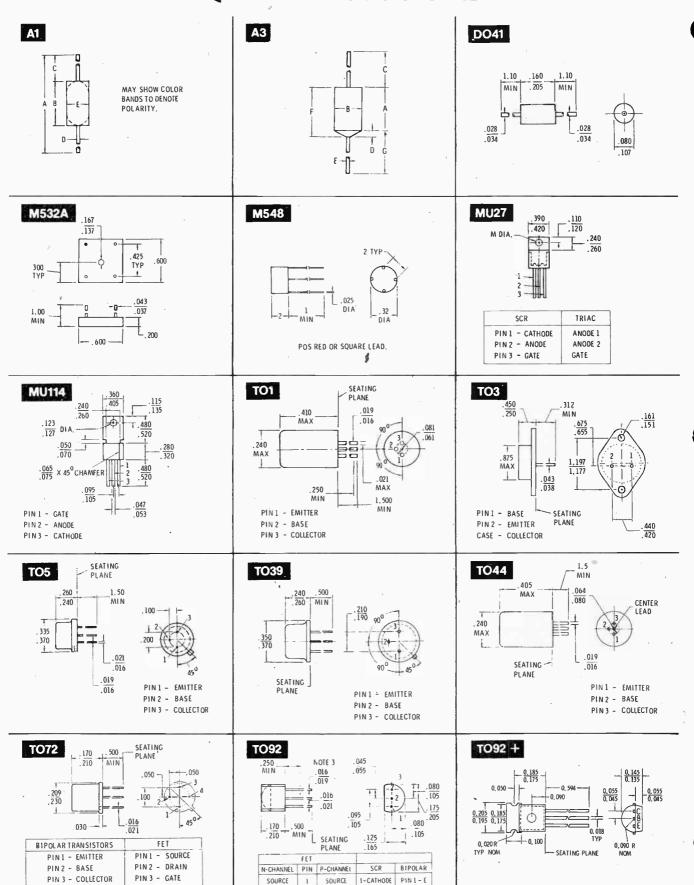
EVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
0-040 01-101	2009	TR2SC735 TR2SC1342	2009 2013	TR482A TR508	2007 2007	TRA36 TRAPLC711	2009 2009	TV17 TV-18	2009 2009	TV24803 TV24806	1104 2011	TVS-182G TVS-185D	11 11
01-104 01-105	2009 2009	TR2SC3677 TR2SK55	2009 2036	TR601 TR721	2009	TRAPLC871 TRAPLC871A	2009	TV18B TV-20	2009 2010	TV24941 TV24942	1104 1114	TV\$550 TVS-828A	11
D-101	2009	TR-3R38	2009	TR722	2007	TR-BC147B	2009	TV-21	2010	TV24979	1104	TVS828A	20
D-102 P34	2007 1123	TR-4R33 TR-5R33	2009	TR758A TR759	2007	TRBC1478 TR-BRC149C	2009	TV-23 TV27	2009 2001	TV34232 TV241073	1104 1104	TVS1850 TVSB01-02	11
P34A	1123	TR-5R35	2009	TR760	2003	TR-C44	2007	TV36	2009	TV241074	1104	TVSB01-2	11
2101 2201	1104	TR-5R38 TR-6R33	2009	TR764 TR792	2007	TRC44 TR-C44A	2007 2007	TV37 TV38	2009 2009	TV241077 TV241078	2009 2009	TVSBAX-13 TVSBAX13	11
302	1104	TR6S	561	TR801	2007	TRC44A	2007	TV39	2009	TVC-3	1104	TVSBB2	11
9402 93638	1104	TR-7R35 TR-7SB	2009 563	TR802 TR-1000-7	2007	TR-C45 TRC45	2007 2007	TV-40 TV40	2009	TVCM-26 TVCM-35	702 1725	TVSBB10 TVSBBE	11
3705	2016	TR-8R35	2009	TR1007	2041	TR-C45A	2007	TV-42	2009	TVCM-61	038	TVS-CS1255H	20
3707 3709	2010 2016	TR-9GS T-R9S	562 562	TR1011 TR1031	2009	TRC45A TR-C70	2007	TV43 TV-46	2009 2009	TVDS1M TVM35	1104 1104	TVS-CS1255HF TVSD1K	11
3710	2010	TR-9S	562	TR1033	2009	TR-C71	2005	TV46	2009	TVM56	1104	TVSD52K	1
4067-409 4123	1104 2016	TR9S TR-9SA	562 562	TR-1033-1 TR-1033-2	2009 2009	TR-C72 TR-C72(DIODE)	2005	TV-47 TV-48	2032 2013	TVM-511 TVM-530	1104 1102(2)	TVS-DG-1N-R TVSDG1NR	1
4124	2016	TR-9SB TR9SB	562	TR-1033-3 TR-1039-4	2009	TR-FE100	2036	TV48	2009	TVM554A TVM-EH2C	1102(2)	TVS-DS-1K	1
4125 4126	2034 2034	TR-10	562 2001	TR1039-4	2041 2041	TRM13	2035	TV-51 TV-52	2009	TVM-EH2C11	1104 1104	TVS-DS1K TVSDS1K	1
4257° 4258	2021 2021	TR10 TR-10C	2001	TR1039-6 TR1077	2041	TRM14 TRM15	2005 2005	TV-53	2009 2009	TVM-EH2C11/1		TVS-DS-1M	1
4258 4274	2021	TR10C	2001	TR-1347	2009	TRM16	2005	TV-56 TV56	2009	TVM-EH2C11/1	1104	TVS-DS1M TVSDS-1M	1
4275	2016 2032	TR11	2007 2005	TR1490 TR1491	2041 2041	TRM17 TRM21	2005	TV57	2011 2009	TVM-EH2C12/1 TVMHS151B	1104	TVS-DS2K	1
5142 S6512	2016	TR12 TR12S	564	TR1491	2041	TRM81	2005	TV57A TV-58	2009	TVM-K-112C	1102(2)	TVSDS2M TVSEA01-07R	1
S6513	2016	TR12SB TR13	564 2005	TR1493 TR1993-2	2041	TRO1026 TRO2012	2009	TV58 TV58A	2011	TVML00.09M11 TVM-M204B	15 1104	TVSEQA01-125	
S6514 S6515	2009	TR14	2005	TR2083-42	1102	TRO6011	2036	TV59A	2009 2009	TVMM2048	1104	TVSEQB01-12 TVSEQB01-15	
S6516 ·	2034 2034	TR15 TR16	2005 2005	TR2083-44 TR2083-70	1102 2036	TRO10602-1 TRR6	2009 561	TV-60 TV60	2009 2011	TVM-PH9D22/1 TVMPH9DZ2/1		TVSEQB01-15Z TVSERB-06B	
S6517 S6520	2009	TR17	2005	TR2083-71	2030	TR-RR38 ·	2009	TV60A	2009	TVM-PT6D22/1	1104	TVSERB24-06	1
S6521 •	2009	TR18 TR19	2007 2007	TR2083-72 TR2083-73	2009 2009	TRS100 TRS100A	2008 2012	TV-62 TV-65	2009	TVM-TC0.2P11/ TVS-0A70	2 1104 1123	TVSERB24-06A TVSERB24-06B	1
64	2023	TR20	2007	TR-2880	1104	TRS101	2008	TV65	2009	TVS0A70	1123	TVSESA06	1
64A 15020	2023	TR-21 TR21	2009 2005	TR2880 TR4010-2	1104 2009	TRS120 TRS140	2012 2012	TV-66 TV-68	2009 2009	TVS0A71 TVS-0A81	1104 1123	TVS-ET1P TVS-FR1-PC	1
5020	2007	TR-21-6	2009	TR5528	2035	TRS140HP	2012	TV71	2009	TVS-0A90	1123	TVS-FR1MD	1
25031 5031	2001 2001	TR-21C TR-22	2009 2009	TR-8004 TR8004-4	2009	TRS160 TRS160HP	2012 2012	TV80 TV81	2035 2010	TVS0A90 TVS-0A91	1123 1123	TVS-FR-1P TVSFR1P	1
5032	2001	TR-22C	2009	TR-8010	2011	TRS180	2012	TV-83	2035	TVS0A91	1123	TVS-FR-1P(FR1P)	
15039 5039	2001	TR-24(PHILCO) TR-26	2009 2041	TR8010 TR-8014	2009	TRS180HP TRS200	2012 2012	TV83 TV-84	2036 2009	TVS-0A95 TVS-1N82G	1123 1101	TVS-FR1PC TVSFR1PC	1
5049	2011	TR26	2041	TR8014	2009	TRS200HP	2012	TV-85	2012	TVS1N741A	563	TVSFR2-06	1
5050 -5052	2001	TR26C TR-30	2041 2034	TR8021 TR-8025	2009 2009	TRS225 TRS225HP	2012	TV85 TV-92	2012 2009	TVS1N741H TVS1N4002	563 1104	TVS-FR-2M TVS-FR2M	1
5052	2009	TR48	1123	TR8025	2009	TR\$250	2012	TV92	2009	TVS1P20	1104	TVS-FR-2PC	1
15053 -5053	2009	TR-51 TR53	2030	TR-8027 TR8028	2035	TRS250HP TRS275	2012	TV2419 TV-2496	1104 1104	TVS1P80 TVS-1S750	1114	TVSFR2PC TVS-FR10	1
5053	2009	TR55	2007	TR8029	2009	TRS275HP	2012	TV2496	1104	TVS1S750	1101	TVS-FT-1N	1
25053C -5054	2009	TR-59 TR59	2041	TR8030 TR8031	2009	TR\$301HF TR\$301HP	2012	TV4152 TV24103	2007 1101	TVS-1S1211 TVS-1S1850	1102 1104	TVS-FT-1P TVSFT1P	1
5054	2009	TR-62	2009	TR8034	2009	TRS325	2012	TV24103A	1101	TVS1S1850	1104	TVS-FT10	1
-5060 5060	2009 2009	TR64 TR65	2007 2007	TR-8035 TR8035	2009 2009	TRS325HP TRS3014	2012 2012	TV24103B TV24103C	1101 1101	TVS-1S1906 TVS1S1906	1104 1104	TVS-FU1N TVSFU1N	. 1
-5063	2012	TR-70	2038	TR8038	2009	TRS3015LP	2011	TV24103D	1101	TVS1\$1922G	1104	TVSFUIN	1
15073 15078	2009 2010	TR70 TR-75	2013 563	TR-8039 TR8039	2009	TRSR3AM TR-TR38	1114 2009	TV-24104 TV24104	1104 1104	TVS1S1926K TVS1S1950	1101 1104(2)	TVSGP2-354 TVSHFSD-1A	1
25079 25105	2011	TR-77 TR77	1104 2007	TR8040	2009	TR-U1650E	2035	TV-24125	1104	TVS1S2076	1102	TVS-HFSD1Z	1
15106	2011	TR-79	2012	TR-8042 TR-8043	2011	TR-U1650E-1 TR-U1835E	2036 2035	TV24125 TV24130	1104 1101	TVS-2CS645A TVS-2S288A	2009	TVS-HF-SD-12 TVSHFSD12C	1
PD-3055 0-2012	2041	TR79 TR-86	2012	TR8043 TR8330	2009	TS05 TS1	1104 1104	TV24136 TV24152	1104 2007	TVS-2SA171 TVS-2SB172A	2007 2007	TVS-HS7/1	1
-01B(PENNCE	REST)	TR86	2009	TR9100	2009	TS2	1104	TV24155	1104	TVS2SC58A	2007	TVSIS1850 TVSJA1200	1 2
-01C(PENNCF	2009 REST)	TR87 TR88	2007 2005	TR-9100-18 TR12001-4	2009 1123	TS-2A TS2A	1104	TV24159 TV24182	1101 1101	TVS-2SC183P TVS-2SC183Q	2011 2011	TVSJL41A TVSJL41AM	1
	2009	TR-95	562	TR14002-6	563	T\$3	1114	TV-24191	1104	TVS-2SC206	2009	TVS-KC2-LP	1
-02E 03	1104 2001	TR-95(B) TR-95B	562 562	TR14002-12 TR310015	564 2007	TS4 TS6	1104 1104	TV24191 TV24193	1104 1104	TVS-2SC208A TVS-2SC429A	2009	TVS-KC2CP12/1 TVS-KC2DP12/2	1
04	2001	TR104	2007	TR310161	2007	TS8	1114	TV24200	1104	TVS-25C469A	2011	TVS-KC20P12/1	1
·05 05	2007	TR105 TR109	2007 2005	TR310231 TR310243	2009	TS-337 TS-601	563 2007	TV24210 TV24215	2011 2009.	TVS-2SC538 TVS-2SC538A TVS2SC538A	2009 2009	TVSM1-02 TVSMA26	1
05C	2007	TR123	2007	TR310245	2009	TS-602	2007	TV24216	2009	TVS2SC538A	2009	TVSMR1C .TVS-OA70	1
·06 ·06(PENNCRE	2007 EST) 2009	TR1258 TR139	564 2003	TR320008 TR320020	1123 1104	TS615 TS669A	2007 2007	TV24221 TV24222	1114 1104	TVS-2SC644 TVS2SC644	2011 2009	TVSOA71	1
07	2001	TR-159(OLSON)	2001	TR320022	1104	TS669B	2007	TV24224	1104	TVS-2SC645	2011	TVS-OA81 TVS-OA90	1
07C 08	2007 2001	TR-160(OLSON) TR-162(OLSON)	2001 2009	TR320039 TR320041	1114	T\$669D T\$669E	2007 2007	TV-24232 TV24232	1104 1104	TVS-2SC645A TVS-2SC645B	2011 2011	TVSOA90	1
08	2001	TR167	2001	TR320048	1114	TS669F	2007	TV24234	1104	TVS2SC645B	2009	TVS-OA91 TVS-OA95	1
08C 08C	2001	TR182 TR183	2001 2001	TR320048 TR330027 TR2320063 TR2327031	1104	TS-1193-736 TS2221	2041	TV-24266 TV24266	1104	TVS-2SC645C TVS2SC647	2011 2041	TVS-OA95 TVS-OV-02	10
09	2001	TR184	2001	TR2327031	1104	T\$2222	2009	TV24278	1104	TVS2SC647A	2001	TVS-PC02P11/2	- 1
09C	2001 2001	TR193 TR194	2001	TR2327041	1104 2010	TS2906 TSB-245	2023 1104	TV24281 TV24282	2009 1104	TVS2SC684 TVS-2SC828	2009 2009	TVS-PCD2P11/2 TVSPCD2P11/2	1
09C 01015	2001 2016	TR211	2001	TR2327333	2010	TSB245	1104	TV24283	1104	TVS2SC828	2009	TVSQA01-07R	
01037	2009	TR212 TR213	2001	TR2327363 TR2337011	2010 1102	TSB-1000 TSC136	1104 1102	TV24285 TV24292	1104 1104	TVS2SC828(Q) TVS-2SC828A	2009 2009	TVSQA01-12S TVSQA01-15RB	
01073 01 074	2009 2009	TR214 TR215	2001 2007	TR2337123 TR228735046011	561 2011	TSC159 TSC499	1104 2009	TV24298 TV24372	1104 2009	TVS2SC828A TVS2SC828P	2009 2009	TVSQA01-15S TVSQB01-15ZB	
06011	2035	TR216	2001	TR228735120325	2035	TSC695	2009	TV24380	2011	TVS-2SC828Q	2009	TVSRA1A	1
06014 09010	2035 702	TR217 TR218	2005	TR228736002003 TR228736002004	1123 1123	TST705899A TSV-1000	2009 1104	TV24382 TV24383	2011 2011	TVS2SC828R TVS2SC829(B)	2009 2009	TVSRA-1Z TVS-RD(M)(P)D	1
0573486	2013	TR271TR26	2041	TRA-4	2009.	TT2SC983-O-A	2012	TV24385	2011	TVS2SC829B	2011	TVSRDQAL	U.
0573491 0573507	2010	TR302 TR320	2009 2007	TRA4 TRA-4A	2009	TT66X26 TT-1097	1104 2009	TV24438 TV24453	2011 2009	TVS2SC968 TVS10D	2009 1104	TVS-RD13A TVS-RD13D	
0575002	1123	TR321	2007	TRA4A	2009	TT1097	2009	TV24454	2009	TVS10D1(PWR		TVS-RD13M	
1N4002 -1R33	1104 2009	TR321(HFGH1) TR323	2007 2007	TRA-4B TRA4B	2009	TUS34 TUS-185D	2035 1104	TV24458 TV24554	2009 1102	TVS-10D8	1104 1104	TVS-RD13P TVSRMP5020	1
2A	1104	TR335	2001	TRA-9R	2009	TV2SC208	2009	TV24576	2009	TVS10D8	1104	TVS-S1802-03C TVS-S1802-03CR	1
-2SC367 -2SC373	2009 2009	TR336 TR337	2001	TRA9R TRA-34	2009	TV4 TV-6	1104 2009	TV24582 TV24586	1104 1104	TVS25C208 TVS25C562	2009 2009	TVS-S1B02-03CR TVSS1P20	1 1
2SC373	2009	TR338	2001	TRA34	2009	TV8	1114	TV24651	1104	TVS25C645	2009	TVS\$1R8D	- 1
-2SC735	2009	TR482	2007	TRA-36	2009	TV-17	2009	TV24655	2009	TVS-82G	1101	TVSS1R20	. 1

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVICE	27
TVSS1R80 TVSS3-2	1104 1104	TZ551 TZ1153	2034	ULX2 277 UO-5E	702 1102	V09E V09G	1104 1104	VFQ-2745F VFY-2745E	2007	VS-FT-1N - VSFT1N	1104 1104	WEP641B WEP704	20 20
TVSS3G4	1114	TZ-1160	2009	UO5E	1104	V0G	1104	VFY2745E	2007	VSG-20024	1104	WEP709	20
VSS4C VS-S8-2C	1104 1114	TZ1180 TZ1182	2009	UO6C UPI706	1104 2016	V6C V10/2S	1104 2007	VHD1N60-1 VHD1S1555-R-1	1123	VS-PC02P11/2 VS-PH9D522/1	1104 1104	WEP710 WEP723	20 20
VSS34RECT	1104	U0-5E	1102	UP1706A	2016	V10/2SJ	2007	VHD1S1834	1104	VSPH9D522/1	1104	WEP724	20
VS-S82 VSSA-2	1101	U05E U05G	1104 1104	UPI7068 UPI718A	2016 2009	V11J V11L	1104 1104	VHD1S1885-1 VHD1S2076-1	1104 1102	VSSD1B VS-SD-1Z	1104 1104	WEP728 WEP729	20 20
VSSA-2B	1114	U	1104	UPI1347	2007	V13/11	2007	VHDIS1555-R-1	1102	VSSD1Z	1104	WEP735	20
VSSA2B VSSA-2H	1104 1104	U1S102 U2N474A	1104	UPI1613 UPI2222	2008 2009	V15C200/80-VF V17L	1104	VHEXZ-090-1 VL/8RJ	562 2007	VS-SD-82A VS-SD82A	1101	WEP735A WEP736	20 20
VSSB-2T VS-SB-20	1104 1114	U5B770939X U5B7709393	017 017	UP12222B UP12222P	2009	V50A260-36	1123	VM-30209 VM30209	2009	VS-TC0-2P11/2 VS-TC02P11/2	1104	WEP772	20
VS-SD-1	1104	U5B7740393	1733	UP14046-46	2009	V50A260-36(GE DI	1123	VM-30241	2009	VSTC02P11/2	1104	WEP773 WEP801	20 20
VS-SD1A VSSD1A	1104 1104	U5B7741393 U6A7723393	007 1740	UP14047-46 UPT121	2009 2020	V50A260-36(GE-DI	1123	VM30241 VM-30242	2009	VS-TC0.2P11/2 VZ-063	1104 561	WEP802 WEP828	20
VS-SD-1B	1114	U6A7741393	010	UPT611	2020	V50A260-36(SI DIC) 1102	VM30242	2009	VZ-085	562	WEP829	20
'VS-SD18 'VSSD-1Y	1114 1104	U9A7723393 U9A7741393	1740 010	UPT621 UR105	2020 1104	V50A260-36(SI-DIC V66	1102	VM-PH9D522/1 VM-PH11D522/1	1104	VZ-088 VZ-090	562 562	WEP838 WEP906	20
VS-SD82	1101	U119	1114	UR110	1104	V74	1123	VMPH11D522-1	1104	VZ-092	562	WEP920	20
VS-SD82A VSSD82A	1101	U120 U212	1114	UR115 UR120	1104	V78 V115	1104	VM-PH90522/1 VM-TC02P11/2	1104	VZ-094 VZ-120	562 563	WEP925 WEP956	11
VSSF-1	1114	U212-25	1104	UR125	1104	V117	1123	VM-TC0.2P11/2	1104	VZ-125	563	WEP1060	- 11
V\$\$ID30-15 V\$-\$PN01	1114	U213 U214	1104	US1555 USFD-1	1102 1104	V118 V119	2011	VO3-C VO3-G	1104 1114	VZ-130 W005M	563 1104	WEP1075 WEP1082	11 11
VSSV02	1104	U361	1114	USFD-1A	1104	V126	564	VO-3C	1114	W0-6A	1102	WEP1083	11
VS-TC009M11/1 VSUF2	1104	U-422 U460A	1104 2011	UT11 UT14	1104 1104	V129 * V135	2011 1123	VO3C VO3G	1114 1104	W0-61 W03B	561 1104	WEP1112 WEP1307	20
VS-UFSD-1 VSUFSD1F	1104 1104	U460A,B	2011	UT15 UT-16	1104	V143 V148	2011	VO-5E	1104	W04	1104	WEP1717	20
VSWF2	1104	U460B U535	2011 2013	UT16	1104 1104	V148 V159	1104	VO6-C VO-6A	1104	W06 W-06A	1104	WF2 WG0A-90	11
VSZB1-6	561	U535/7825B(TRA	ANS)	UT17	1104	V160	563	VO6B	1104	W06A	1102	WG-10AS	20
'V\$-ZB1-15 'W3	564 1104	U535/7825B(ZEN	2013 MER 561	UT18 UT21	1104 1104	V169 V171	2009 1104	VO-6C VO6C	1104 1104	W06B W06C	1104 1104	WG91 WG-101DA	1
W5	1104	U535A	2013	UT22	1104	V183	2035	VO9E	1104	W/6A	1104	WG-599	11
W10 W20	1104 1104	U535A,B U535B	2011 2013	UT23 UT24	1104 1104	V205 V-210C	2034 1123	VOG VR9B	1104 562	W1 W1A	2007 2036	WG599 WG-713	11
W30	1104	U535B/7825B	2013	UT25	1104	V210C	1104	VR-9.1	562	W1P	2035	WG713	11
W40 W50	1104 1104	U-633 U633	1104 1104	UT26 UT27	1104 1104	V270-D1 V-270D1	1104	VR9.1 VR9.1A	562 562	W1R W1R(DIODE)	1102 1102	WG851 WG1010	1
W60	1104	U1282	2035	UT-112	1104	V297	2009	VR9.18	562	W2	2001	WG-1010-A	11
W80 W100	1114	U1420 U1421	2035 2035	UT112 UT116	1104 1104	V405A V415	2021	VR12 VR12A	563 563	W10 W16	2009 2041	WG-1010A WG1010A	1
WV .	1104	U1422	2035	UT221	1104	V417	2015	VR12B	563	W20	2009	WG1010B	11
X1N645 X1N647	1104	U1585E U1585F	2009	UT222 UT223	1104 1104	V435A V-442	2034 1104	VR-14 VR15	564 564	W24 W29	2009 2011	WG-1012 WG1012.	1
X1N3190	1104	U1585F,H	2011	UT224	1104	V442	1104	VR15A	564	W4002	1104	WG1014A	11
X1N3191 X-100-1	1104	U1585H U1650E	2011 2035	UT225 UT226	1104 1104	V655 V721	2022	VR158 VS-0A70	564 1123	WA0A-90 WA-26	1102 1102	WG1021 WH1012	11
X 100-1	2009	U1835E	2035	UT227	1104	V741	2022	VS-1	1104	WC120	1104	WL-150	
TX-100-2 TX 100-2	2009 2009	U1837E U1916	2036 2035	UT228 UT229	1104 1104	V1112 V-1266	1102 564	VS1 VS-1N82AG	1104	WC-14020 WC14020	1104 1104	WL-150A WL-150B	
TX100-3	2009	.U1994E	2036	UT231	1,104	V1650E-1	2035	VS-2SA288A	2030	WC-14027	1104	WL-150C	
TX-101-12 TX101-12	2009	U2047E U-2400-03	2035 1104	UT232 UT233	1104	V1833E V3074A20	2035	VS2SB324 VS2SC206	2009 2009	WC14027 WC19865	1104 1104	WL-150D WM-061	
TX-102-1	2031	U2400-03	1104	UT-234	1104	V3074A21	1104	VS2SC208	2009	WD001	. 1104	WM-061A	
TX102-1 TX102-2	2009 2009	U2848-1 U-45054-1	2009 007	UT234 UT235	1104 1104	V-8634-3 V8634-3	1101	VS2SC288A VS-2SC324	2009 2013	WD002 WD003	1104 1104	WM-061B WM-061C	
TX-107-1	2009	U13033801	1104	UT-238	1104	V9446-4	1104	VS-2SC324H	2009	WD004	1104	WM-061D	
X107-1 X-107-3	2009	UA709C(METAL	-CAN) 017	UT238 UT345	1104 1114	V10158 V-10916-3	1104	VS2SC324H VS-2SC371-R-1	2009	WD005 WD006	1104 1104	WM-063 WM-063A	
X107-3	2009	UA709CT	017	UZ6.2	561	V10916-3	1123	VS2SC394-0-1	2013	WD007	1104	WM-063B	200
X-107-4 X107-4	2009	UA723C(D.I.P.) UA723CA	1740 1740	UZ9.1 UZ15	562 564	V11189-1 V15920	1104	VS2SC394-Y-1 VS2SC454-B/1E	2013	WD008 WD009	1104 1104	WM-063C WM-063D	
X-107-5	2009	UA740(METAL-C	AN)	UZ-15C	564	V50260-10	1102	VS-2SC-458	2009	WD010	1104	WM-065	
ГХ107-5 ГХ-107-6	2009 2009	UA740CT	1733 1733	UZ8709 UZ8712	562 563	V50260-16 V50260-36	1123 1102	VS-2SC458 VS2SC458	2009 2009	WD011 WD012	1104 1104	WM-065A WM-065B	
X107-6	2009	UA741C(D.I.P.)	010	UZ8714	562	VAMV-1	1104	VS2SC460B-1	2013	WD013	1104	WM-065C	
X-107-10 X107-10	200 9 2009	UA741C(METAL	-CAN) 007	UZ8715 UZ8809	564 562	VAR VAR-1R2	1102 1102	VS-2SC466 VS-2SC538	2013 2009	WD014 WD015	1104 1104	WM-065D WM-088	
X-107-12	2011	UA741CA	010	UZ8812	563	VARIST-5	1104	VS2SC538	2009	WD1	1123	WM-088A	
X107-12 - X-107-16	2009	UA741CT UC155	007 2035	UZ8814 UZ8815	562 564	VB-11 VB100	1104 1104	VS2SC645A VS-2SC645B	2009 2013	WD2 WD4	1101 1102	WM-088B WM-088C	
X107-16	2009	UC201	2035	V0-3C	1114	VB300	1104	VS-2SC645C	20,13	WD90	562	WM-088D	
X-108-1 X108-1	2009	UC210 UC547C	2035	V0-6 V0-6A	1104 1114	VB-400 VB400	1104	VS-2SC683Y VS2SC684	2013	WED8748-2 WEP2	017 2007	WM-090 WM-090A	
X-112-1	2009	UC588	2035	V0-6E	1104	VB500	1104	VS2SC732-VIF	2010	WEP50	2010	WM-090B	
X112-1 X-119-1	2009	UC701 UC703	2035 2035	V0-6C V0-6C-401	1104 1104	VB-600 VB600	1104	VS2SC784-R1F VS2SC1237-1	2013 2020	WEP54 WEP55	2009 2010	WM-090C WM-090D	
X120	2011	UC704	2035	V01G	1114	VB600A	1104	VS2SC1335D/1	< 2010	WEP55 WEP56	2038	WM-092	
X 124-1 X-128-1	2009	UC705 UC714	2035 2035	V03-C	1114 1114	VBH600 VC6E	1104 1104	VS2SK49F-1 VS9-0001-911	2036	WEP103 WEP104 WEP105	561 562	WM-092A WM-092B	
X-138	2009	UC734	2035	V03-E	1104	VD6	1104	V\$9-0002-911	1104	WEP105	563	WM-092C	
X-141 X141	2009	UC734E UC750	2035 2035	V03C V03E	1114 1114	VD11 VD12	1123 1123	VS9-0003-911 VS9-0004-911	1114	WEP134 WEP156	1123 1104	WM-092D WM-094A	
X-145	1067	UC751	2035	V030	1114	VD13	1123	VS9-0005-911	1104	WEP158	1104	WM-094A WM-094B	
Y-107-4 Y-107-12	2009 2009	UC752 UC753	2035 2035	V05E V06	1104 1104	VD-121C VD1120	1104	VS9-0005-913 VS9-0006-911	2009 1104	WEP170 WEP247	1114 2041	WM-094C WM-094D	
Z 8.2	562	UF01	1104	V06(DIO)	1104	VD-1121	1102	VS9-0006-913	2009	WEP247MP	2041	WM-120	
Z9.1 Z9.1A	562 562	UF-1 UF-2	1104 1104	V06 RECT) V06-C	1104 1104	VD1121 VD-1122	1102 1104	VS9-0007-911 VS9-0008-911	1104 1102	WEP250 WEP253	2007	WM-120A WM-120B	
Z9.1B	562	UF2	1104	V06-E	1104	VD1122	1104	VS9-0014-911	1102	WEP254	2007	WM-120C	
729.1C 72.12	562 563	UF-SD1 UFSD-1	1123 1104	V-06A V-06B	1104 1104	VD-1123	1102 1102	VS-102	1104 1104	WEP371	2013	WM-120D WM-150	
Z12A .	563	UFSD-1A	1104	V068	1104	VD1123 VD-1124	1102	VS120 VS202	1104	WEP372 WEP380	2013 2013	WM-150A	
TZ12B	563	UFSD-1B	1114	V068X4	1104	VD1124	1104	VS-DG1N	1104	WEP394	2013	WM-150B	
TZ12C TZ15	563 564	UFSD1F UFSD-18	1104 1114	V-06C V06C(POWER-	1104 RECTIFIER	VD1127 VD1210	1102	VS-DG1NR VSF2745	1104 2007	WEP454 WEP458	2010 2010	WM-150D	
TZ-15A	564	UG1888	1102		1104	VD1210L -	1102	VS-FR-1	1104	WEP460	2013	WN-061	
ΓΖ15A ΓΖ-15AB	564 564	ULN2275P ULN2275Q	702 702	V06E V09	1104 1114	VD1212 VD1213	1102	VS-FR1 VSFR1	1104 1104	WEP607 WEP630	564 2007	WN-061A WN-061B	
TZ15B	. 564	ULN2277P	702	V09-E	1104	VD-1222	1104	VS-FR-1P	1104	WEP631	2007	WN-061C	
TZ-158C TZ-15C	564 564	ULN2277Q ULN2278P	702 702	V09A V09B	1114 1114	VD-S-7-013626-00 VFA-2745C	1 1122	VS-FR1P VSFR1P	1104	WEP632 WEP641	2007 2033	WN-061D WN-063	
Z15C	564	ULN2280A	1725	V09C	1114	VFA2745C	1104	VS-FR-1U	1104	WEP641A	2033		

DEVICE	276-	DEVICE	276-	DEVICE	276-	DEVIÇE	276-	DEVICE	276-	DEVICE	276-	DEVICE	276
WN-063B WN-063C	561 561	WP-088C WP-088D	562 562	WR-094 WR-094A	562 562	WT-090A	562	WV-092	562	WX-120D	563	X19001-A	200
WN-063D	561	WP-090	562	WR-094B	562	WT-090B WT-090C	562 562	WV-092A WV-092B	562 562	WX-150 WX-150A	564 564	X-19002 X-19031-A	01 112
VN-065 VN-065A	561 561	WP-090A WP-090B	562 562	WR-094C WR-094D	562° 562	WT-090D WT-092	562 562	WV-092C WV-092D	562	WX-150B	564	X330302	56
VN-065B VN-065C	561 561	WP-090C WP-090D	562	WR100	1104	WT-092A	562	WV-094	562 562	WX-150C WX-150D	564 564	X925940-501B X925940-5018	110
VN-065D	561	WP-092	562 562	WR-120 WR-120A	563 563	WT-092B WT-092C	562 562	WV-094A WV-094B	562 562	WY-061 WY-061A	561	X1022220-1	110
VN-088 VN-088A	562 562	WP-092A WP-092B	562 562	WR-120B	563	WT-092D	562	WV-094C	562	WY-061B	561 561	XA121 XA701	110 200
VN-088B	. 562	WP-092C	562	WR-120C WR-120D	563 563	WT-094 WT-094A	562 562	WV-094D WV-120	562 563	WY-061C WY-061D	561	XA702	200
VN-088C VN-088D	562 562	WP-092D WP-094	562 562	WR-150 WR-150A	564	WT-094B	562	WV-120A	563	WY-063	561 561	XA703 XA-1071	200 200
VN-090	562	WP-094A	562	WR-150B	564 564	WT-094C WT-094D	562 562	WV-120B WV-120C	563 563	WY-063A WY-063B	561 561	XA-1078 XA-1139	204
VN-090A VN-090B	562 562	WP-094B WP-094C	562 562	WR-150C WR-150D	564 564	WT-120 WT-120A	563 563	WV-120D	563	WY-063C	561	XA-1161	200 204
VN-090C VN-090D	562	WP-094D	562	WR-200	1104	WT-120B	563	WW-061 WW-061A	561 561	WY-063D WY-065	561 561	XAN692 XAN694	05 06
VN-092	562 562	WP-120 WP-120A	563 563	WR200 WR300	1104 1104	WT-120C WT-120D	563 563	WW-061B WW-061C	561 561	WY-065A	561	XB4	200
VN-092A VN-092B	562 562	WP-120B WP-120C	563 563	WR400	1104	WT-150	564	WW-061D	561	WY-065B WY-065C	561 561	XB152 XC371	56 201
VN-092C	562	'WP-120D	563	WRE-981 WRE981	1104 1104	WT-150A WT-150B	564 564	WW-063 WW-063A	561 561	WY-065D WY-088	561 562	XC372 XC373	200
VN-092D VN-094	562 562	WP-150 WP-150A	564 564	WRR1952 WRR1953	2009	WT-150C	564	WW-063B	561	WY-088A	562	XC374	200
/N-094A	562	WP-150B	564	WRR1954	2009	WT-150D WTVB6	564 2007	WW-063D	561 561	WY-088B WY-088C	562 562	XC723 XEJ040017	204
VN-094B VN-094C	562 562	WP-150C WP-150D	564 564	WRR1955 WRR1956	1104 1104	WTV-L6 WTVL6	2001 2001	WW-065	561	WY-088D	562	XG30	200
/N-094D /N-120	562 563	WQ-061	561	WS-061	561	WTVSA7	2001	WW-065A WW-065B	561 561	WY-090 WY-090A	562 562	XN-400-318-P1 XNC101	200
/N-120A	563	WQ-061A WQ-061B	561 561	WS-061A WS-061B	561 561	WTVSK7 WTVSQ7	2001 2001	WW-065C WW-065D	561	WY-090B	562	XS9.1B	56
/N-120B /N-120C	563 563	WQ-061C WQ-061D	561	WS-061C	561	WU-061	561	WW-088	561 562	WY-090C WY-090D	562 562	XS-10 XS10	110
/N-120D	563	WQ-063	561 561	WS-061D WS-063	561 561	WU-061A WU-061B	561 561	WW-088A WW-088B	562 562	WY-092 WY-092A	562 562	XS16	110
/N-150 /N-150A	564 564	WQ-063A WQ-063B	561	WS-063A	561	WU-061C	561	WW-088C	562	WY-092B	562	XS16A XS17	110- 110-
/N-150B	564	WQ-063C	561 561	WS-063B WS-063C	561 561	WU-061D WU-063	561 561	WW-088D WW-090	562 562	WY-092C WY-092D	562 562	XS17A XS18	110
/N-150C /N-150D	564 564	WQ-063D WQ-065	561 561	WS-063D WS-065	561	WU-063A	561	WW-090A	562	WY-094	562	XS21	1104 2009
O-061	561	WQ-065A	561	WS-065A	561 561	WU-063B WU-063C	561 561	WW-090B WW-090C	562 562	WY-094A WY-094B	562 562	XS22 XS22(RECT.)	2009
O-061A O-061B	561 561	WQ-065B WQ-065C	561 561	WS-065B WS-065C	561 561	WU-063D WU-065	561	WW-090D	562	WY-094C	562	XS23	1104
O-061C	561	WQ-065D	561	WS-065D	561	WU065A	561 561	WW-092 WW-092A	562 562	WY-094D WY-120	562 563	XS23A XS-31	1104 1104
O-061D O-063	561 561	WQ-088 WQ-088A	562 562	WS-088 WS-088A	562 562	WU-065B WU-065C	561 561	WW-092B WW-092C	562	WY-120A	563	XS31	1104
O-063A O-063B	561 561	WQ-088B	562	WS-088B	562	WU-065D	561	WW-092D	562 562	WY-120B WY-120C	563 563	XS40 XS40A	2011 1104
O-063C	561	WQ-088C WQ-088D	562 562	WS-088C WS-088D	562 562	WU-088 WU-088A	562 562	WW-094 WW-094A	562	WY-120D	563	XT-548A	2041
O-063D O-065	561 561	WQ-090 WQ-090A	562	WS-090	562	WU-088B	562	WW-094B	562 562	WY-150 WY-150A	564 564	XU604 XV604	1104
O-065A	561	WQ-090B	562 562	WS-090A WS-090B	562 562	WU-088C WU-088D	562 562	WW-094C WW-094D	562 562	WY-150B WY-150C	564 564	XZ-090	562
O-065B O-065C	561. 561	WQ-090C WQ-090D	562 562	WS-090C WS-090D	562 562	WU-090	562	WW-115	563	WY-150D	564	XZ090 XZ-092	562 562
O-065D	561	WQ-092	562	WS-092	562	WU-090A WU-090B		WW-115A WW-115B	563 563	WZ-061 WZ061	561 561	XZ092 XZ-122	562 563
O-088 O-088A	562 562	WQ-092A WQ-092B	562 562	WS-092A WS-092C	562 562	WU-090C WU-090D		WW-115C WW-115D	563	WZ-061A	561	XZ-152	564
O-088B O-088C	562	WQ-092C	562	WS-092D	562	WU-092		WW-120		WZ-063 WZ-063A	561 561	Y0-6A Y49001-21	1104 2009
O-088D		WQ-092D WQ-094		WS-094 WS-094A	562 562	WU-092A WU-092B		WW-120A WW-120B	563	WZ065	561	Y56001-21	1122
O-090 O-090A		WQ-094A WQ-094B	562	WS-094B WS-094C	562	WU-092C	562	WW-120C	563	WZ-065A WZ-085	561 562	Y56001-86 Y56601-08	2009 2009
O-090B	562	WQ-094C		WS-094D		WU-092D WU-094		WW-120D WW-150		WZ085 WZ-088	562	Y56601-45	2009
O-090C O-090D		WQ-094D WQ-120		WS100 WS100A	1102	WU-094A	562	WW-150A	564	WZ-090	562 562	Y56601-49 Y56601-51	2009 2009
0-092	562	WQ-120A	563	WS100B		WU-094B WU-094C		WW-150B WW-150C		WZ090 WZ-092	562 562	Y56601-73 Y56601-75	2009
O-092A O-092B		WQ-120B WQ-120C		WS100C WS-120		WU-094D WU-20B	562	WW-150D	564	WZ092	562	Y56601-80	2009
D-092C D-092D	562	WQ-120D	563	WS-120A	563	WU-120	563 563	WX-061 WX-061A		WZ-094 WZ6.2		Y56601-86-AD. Y56601-86-AH(GR	2009
0-094	562 562	WQ-150 WQ-150A	F	WS-120B WS-120C		WU-120A WU-120C		WX-061B WX-061C	561	WZ9.1	562		2009
D-094A D-094B	562	WQ-150B ' WQ-150C	564	WS-120D	563	WU-120D	563	WX-061D		WZ12 WZ15	563 564	Y56601-86-AH(OR	ANGE) 2009
O-094C	562	WQ-150D	564 564	WS-150 WS-150A		WU-125 WU-125A	563 563	WX-063 WX-063A	561	WZ-90	562	Y56601-86AH(YEL	LOW)
D-094D D-6A		WR006 WR-013	1104	WS-150B	564	WU-125B	563	WX-063B	561	WZ-120 WZ120		Y56601-93	2009 2009
D6A	1104	WR013	1104(2)	WS-150C WS-150D	564 564	WU-125C WU-125D	563 563	WX-063C WX-063D	561	WZ140 WZ-145	564	YAAD004	1104
D6B D-61		WR-061 WR-061A	561	WS200 WS200A	1102	WU-150	564	WX-065	561	WZ-150	564	YAAD007 YAAD009	1104 1123
O-120	563	WR-061B	561	WS200B	1102	WU-150A WU-150B	564	WX-065A WX-065B		WZ150 WZ535	564	YAAD010 YAAD018	1102
D-120A D-120B		WR-061C WR-061D	561 1 561	WS200C WS300	1102	WU-150C WU-150D	564	WX-065C WX-065D	561	WZ-538	564	YAAD019	1102 1104
D-120C D-120D	563	WR-063	561	WS300A	1102	WV-061	561	WX-088		WZ538 WZ917	564 563	YAAD020 YAAD022	1104 1104
D-150	564.	WR-063A WR-063B		WS300B WS300C	1102	WV-061A WV-061B	561	WX-088A	562	WZ-920	564	YBAD009	1104
D-150A D-150B	564	WR-063C	561	WSD002C	1102	WV-061C	561	WX-088B WX-088C	562 562	WZ920 WZ.061	564 561	YD1121 YEAD015	1102 562
D-150C	564 N	WR-063D WR-065	561 1 561	WT-061 WT-061A		WV-061D WV-063	561	WX-088D WX-090	562	K092	562	YEAD030	1104
0-150D P-061	564	VR-065A VR-065B	561	WT-061B	561 N	NV-063A	561	WX-090A	562	(1-548 (5M6		YEAD032 YEAN2SC941	1123 2010
P-061A	561 N	WR-065C	561	WT-061C WT-061D		WV-063B WV-063C		WX-090B WX-090C	562	(16	1123	YOD4	1104
P-061B P-061C		VR-065D VR-088	561	NT-063	561 N	WV-063D	561	WX-090D	562	(16A545-7 (16A1938	2009	YR-011 YR011	1104 1104
-061D	561 N	VR-088A	562	NT-063A NT-063B	561 -1	VV-065 VV-065A		WX-092 WX-092A	562) 562)	(16E3860 (16E3960	2009	YSG-20024 YSG-V47-1-3	1104
2-063 2-063A		VR-088B VR-088C	562	WT-063C WT-063D	561 N	WV-065B	561 \	NX-092B	562	(16N1485	2009	YSG-V47-7-51-1	1104 1104
-063B	561 V	VR-088D	562	NT-065	561 V	VV-065C VV-065D		WX-092C WX-092D		(18 (32C4211	1123	YSG-V47-7-51-2	1104
2-063C 2-063D		VR-090 VR-090A	562 V	NT-065A NT-065B	561 V	VV-088 VV-088A	562 \	WX-094	562	(32C4296	2009	/SG-V139-2-2	1102(2)
-065 -065A	561 V	VR-090B	· 562 \	NT-065C	561 V	VV-088B	562 V	VX-094A VX-094B		(32C5026 (32C5198	2009	YSG-V139-22 20-12	1123
-065B		VR-090C VR-090D		VT-065D VT-088		VV-088C VV-088D	562 V	VX-094C	562	(32D5422	2009 2	ZO-12A	563 563
-065C -065D	561 V	VR-092	562 V	VT-088A	562 V	VV-090	562 V	VX-094D VX6		(34E2111 (72A42416		10-12B 10214	563 561
-088	562 V	VR-092A VR-092B	562 V	VT-088B VT-088C	562 V	VV-090A VV-090B	562 V	VX-120 VX-120A	563 X	78	2007 2	20219	562
-088A	562 V	VR-092C		VT-088D		VV-090C		VX-120A VX-120B		(194-3005829A (735-41		0222 0225	563 564

Mais Second Mais Second Secon	562 563 564 561 562 563 563 564 564 561	3. ZA9.1B	562				_						
Mail	564 561 562 563 563 564 564 561 562			ZEN430	1123	ZR15	1104	ZS108	1104	ZT84	2009	ZX9.1	
186,2 56' 189,1 56' 189,1 56' 189,1 56' 181,2 56' 181,2 56' 181,5 56'	561 562 563 563 564 564 561 562		562 563	ZEN431 ZEN432	1101 1102(2)	ZR50B793-1 ZR50B921-3	563 564	ZS120 ZS121	1104	ZT86 ZT87	2009 2033	ZX12 ZY12	
18-12 56; 18-12 56; 18-15 564; 18-15 564; 18-15 564; 18-15 564; 18-15 564; 18-15 564; 18-15 564; 18-15 564; 18-15 564; 18-15 564; 18-15 564; 18-16 564; 18-16 564; 18-17 564; 18-18 564; 18-19 564; 18-19 564; 18-19 564; 18-10 565; 18-10 566; 18-10	563 563 564 564 561 562	ZA12A	563	ZEN500	561	ZR60	1104	ZS122	1104	ZT88	2009	ZY12A	
BB12 566 BB15 566 BB16 566 BB17 566 BB18	563 564 564 561 562		563	ZEN502	563	ZR-61	1104	ZS123	1104	ZT89	2009	ZY12B ZY-15	
18-15 566 18-15 566	564 564 561 562		564 564	ZEN508 ZENER-122	564 563	ZR61 ZR62	1104 1104	ZS124 ZS142	1104 1102	ZT-110 ZT110	2009 2033	ZY15	
CGC	561 562	ZA15B	564	ZF6.2	561	ZR-63	1104	ZS173	1104	ZT111	2009	ZY-15A	
NC9.1 S62	562		564 564	ZF9.1 ZF12	562 563	ZR63 ZR64	1104	ZS174 ZS174B	1104 1104	ZT112 ZT113	2009 2009	ZY15A ZY-15B	
DC12 566			1104	ZF12A	563	ZR66	1104	ZT6.2	561	ZT114	2009	ZY15B	
DC15 564 DD12 566 DD12 566 DD12 566 DD12 566 DD12 566 DD15 566 DD1	563	ZA29312	1122	ZF12B	563	ZR-500	1104	ZT6.2A	561	ZT116	2009	ZZ6.2	
DOG 2 56'			562 561	ZF-15 ZF15	564 564	ZR500 ZR-590	1104	ZT6.2B ZT9.1	561 562	ZT117 ZT118	2033 2009	ZZ9.1 ZZ12	10.7
DD12 56: DD15 56:	561		561	ZF-15A	564	ZR590	1104	ZT9.1A	562	ZT119	2009	ZZ-15	
DD-15 566	562		562	ZF15A	564	ZR-590A	1104	ZT9.1B	562 563	ZT180	2023 2023	ZZ15	
D015 56-			562 562	ZF-15B ZF15B	564 564	ZR590A ZR-1025	1104 1104	ZT12 ZT12A	563	ZT181 ZT202	2023		
IB6,2 56' IB9,1	564	1 ZB1-10	563	ZF-16	564	ZR1025	1104	ZT12B	563	ZT202P	2033		
IB9,1 562 IB9,1 562 IB9,1 563 IB9,1 564 IB9,1 565 IB9,1 566 IB9,1 IB9,	1114		563 564	ZG9.1 ZG12	562 563	ZR-1031 ZR1031	1104 1104	ZT-15 ZT15	564 564	ZT203 ZT203P	2016 2033		40.7
B12 56: B-15 56: B-15 56: B-15 56: B-15 56: B-15 56: B-15 56: B-16 56: C12 56: C12 56: C12 56: C15 56: C10 56: C10 56: C10 56: C10 56: C2491F 5	562		561	ZG-15	564	ZR-1031	1104	ZT-15A	564	ZT204	2016	- 30 1	
BB15 56- 106-2 56- 107-1 107-1 56- 107-1 56- 107-1 56- 107	563	3 ZB6.2A	561	ZG15	564	ZR1035	1104.	ZT15A	564	ZT204P	2033		
C6.2 56: C69.1 56: C9.1 56: C12 56: C12 56: C15 56: C15 56: C16 56: C16.2 56: D19.1 56			561 562	ZG15A ZG-15B	564 564	ZR-1076 ZR1076	1104	ZT-15B ZT15B	564 564	ZT280 ZT281	2023 2023	F 398 9	
C9.1 56: C12 56: C15 56- D9.1 56: D9.1 56: D9.1 56: D12 56: D12 56: D12 56: A.150F 56- A.150F 56- A.150F 56- B.15 56- B.15 56- B.11 56: B.15 56-			562	ZG15B	564	ZS4F	1102	ZT20	2016	ZT323.55	2023		
IC-15 IC-15 IC-15 IC-15 IC-15 IC-15 IC-15 IC-15 IC-16 ID-1 ID-1 ID-1 ID-12 ID-15 ID-16 ID-	562	2 ZB9.1B	562	ZG100119	564	ZS7	1104	ZT20-1	2009	ZT402	2016		
C15 56-	563		563	ZH9.1 ZH9.1A	562 562	ZS8 ZS9.1	1104 562	ZT20-12 ZT20-55	2009 2009	ZT402P ZT403	2033 2016		
ID6.2 56: ID9.1 56:	564		563 563	ZH9.1B	562	ZS9.1A	562	ZT20A	2009	ZT403P	2033		
D12	561	1 ZB13A	564	ZH12	563	ZS9.1B	562	ZT20B	2009	ZT404	2016		0.61
D-15 56-D15 56-D	562		564 564	ZH12A ZH12B	563 563	ZS10A ZS10B	1104 1104	ZT20C ZT21	2009 2016	ZT404P ZT406	2033 2009	3 1	04.35
D15 56- A62 F 56- A64 F	564		564	ZH-15	564	ZS12	563	ZT21-1	2009	ZT696	2030		
A91F	564	4 ZB15B	564	ZH15	564	ZS12A	563	ZT21-12	2009	ZT697	2009		- 4
A120F 56: A-150F 56: A-150F 56: B15 56: B15 56: B15 56: B15 56: MW333 200: XX12 56: XX15 56: XX15 56: XX16.2B 56: XX16.2 56: XX16.2B 56: XX16.B	561 562		563 562	ZH-15A ZH15A	564 564	ZS12B ZS15	563 564	ZT21-55 ZT21A	2009 2009	ZT706 ZT706A	2016 2016		
A-150F A-150F A-150F B-15 B-15 B-15 B-15 B-15 B-15 B-15 B-15	563		563	ZH-15B	564	ZS-15A	564	ZT21B	2009	ZT708	2016		
B9.1 56; B12 56; B15 56; B15 56; MW333 200; X9.1 56; X12 56; X15 56; X15 56; X15 56; X15 56; X15 56; X16.2 56; X16.2 56; X19.1	564	4 ZC-015	564	ZH15B	564	ZS15A	564	ZT21C	2009	ZT709	2038		
B12	564		564 1123	ZJ12 ZJ12A	563 563	ZS-15B ZS15B	564 564	ZT22 ZT22-1	2009 2009	ZT1420 ZT1487	2009 2041		
B-15 56. B15 56. MW333 200: X9.1 56. XY12 56. XY12 56. XY15 56. XY15 56. XY16 2 56. XY16 2 56. XY16 2 56. XY19.1 56. XY19	563		1102	ZJ123	563	ZS-20A	1104	ZT22-12	2009	ZT1488	2041		
MW333 200: X9.1 56: X12 56: X12 56: X15 56: X15 56: X16.2 56: X16.2 56: X19.1 56	564	4 ZCOM3679	1104	ZJ-15	564	ZS20A	1104	ZT22-55	2009	ZT1489	2041		
X9.1 56; X12 56; X12 56; X15 56; X15 56; X16.2 56; X16.2 56; X19.1	564		1104 563	ZJ15 ZJ-15A	564 564	ZS-20B ZS20B	1104 1104	ZT22A ZT22B	2009 2009	ZT1490 ZT1702	2041 2041		
X12 56: X15 56: X15 56: X15 56: X15 56: X15 56: X15 56: X16.2B 56: X19.1B 56:	562		564	ZJ-13A ZJ15A	564	ZS-21	1104	ZT22C	2009	ZT1708	2016		
X15 56 XL5.2 56 XL6.2B 56 XL9.1 56 XL9.1 56 XL9.1 56 XL9.1 56 XL9.1 56 XL12 56 XL12 56 B12 56 B6.2 56 B8.1 56 B8.1 56 B15 56 C6.2 56 C15 56 C16 56 C17	563	3 ZD015	564	ZJ-15B	564	ZS21	1104	ZT23	2009	ZT1711	2009		
XL6.2 56 XL9.1 56 XL9.1 56 XL9.1 56 XL9.1 56 XL19.1 56 XL19.2 56 B6.2 56 B6.2 56 B8.1 56 B8.1 56 B8.1 56 C6.2 56 C6.2 56 C6.2 56 C6.2 56 C6.2 56 C15 56 C12 56 C15 56 C16 56 C17 50 C11 110 C16 56 C17 50 C17	564		561	ZJ15B	564 1104	ZS22	1104 1104	ZT23-1 ZT23-12	2009 2009	ZT2205 ZT2206	2016 2016		
IXL6.28 IXL6.28 IXL9.18 IXL9.18 IXL12 IXL1	561		561 562	ZJ252B ZM6.2	561	ZS-23 ZS23	1104	ZT23A	2009	ZT2368	2016		
IXL9.18 \$56; IXL12B \$56; IXL1AB \$56; IXL1AB \$56; IXL1AB \$56; IXL1AB \$56; IXL1AB \$56; IXL1AB \$56; IXL1B \$56	561	1 ZD9.1A	562	ZM6.2A	561	ZS-24	1104	ZT23B	2009	ZT2369	2016	A 1 5	
IXL12 56; IXL12B 56; IXL12B 56; IXL12B 56; IXL12B 56; IXL12B 56; IXL12	562		562	ZM6.2B	561 562	ZS24 ZS-25	1104 1104	ZT23C ZT24	2009 2009	ZT2369A ZT2475	2016 2038	- ENG	
IXL128	563		562 563	ZM9.1 ZM9.1A	562	ZS25	1104	ZT24-1	2009	ZT2476	2038	25.4	
\$86.2 56 \$89.1 56 \$89.1 56 \$89.1 56 \$81.2 56 \$81.2 56 \$81.1 56 \$81	563	ZD12A	563	ZM9.1B	562	ZS30	1104	ZT24-12	2009	ZT2477	2038	40.74	-
BB9.1	563		563 564	ZM12 ZM12A	563 563	ZS-30A ZS30A	1104 1104	ZT24-55 ZT24A	2009 2009	ZT2708 ZT2938	2038 2033	İ	
1812 56 18-15 56	562		564	ZM12B	563	ZS-30B	1104	ZT24B	2009	ZTR-1N60	1123		
B15 56 C6.2 56 C9.1 56 C9.1 56 C9.1 56 C12 56 C15 56 C15 56 C15 56 D9.1 56 D9.	563	3 ZD-15A	564	ZM15	564	ZS30B	1104	ZT24C	2009	ZTR-W06B	1104		
C6.2 56 C9.1 56 C12 56 C12 56 C15 56 C15 56 D6.2 56 D9.1 56 D15 56 D15 56 D15 56 C15 56 C17 56 C17 56 C18 56 C19 5			564 564	ZM15A ZM15B	564 564	ZS31 ZS-31A	1104 1104	ZT40 ZT41	2016 2016	ZTR-W06C ZTR-W06B	1104 1104		-
C12 56: C15 56 C15 56 C15 56 C15 56 C15 56 C15 56 D12 56: D12 56: D15 56 D15 56 C2 56 C2 56 C3 56 C4 56 C4 56 C5 5 56 C5 5 56 C6 5 5 56 C7 5 50 C7 5 5	561		564	ZO-12	563	ZS31A	1104	ZT42	2009	ZTX300	2033		
C-15 56 C-15 56 D6.2 56 D6.2 56 D9.1 56 D12 56 D12 56 D15 56 D16 56 D17 50 D17 56 D18 56 D19 56	562		561	ZO-12A	563	ZS-31B	1104	ZT43	2009	ZTX301	2009		
C15			2009	ZO-12B* ZO-15	563 564	ZS31B ZS32	1104 1104	ZT44 ZT50	2009 2009	ZTX304 ZTX310	2009 2016		
D9.1 56	564		2016	ZO-15A	564	ZS-32A	1104	ZT60	2033	ZTX311	2016		
D12 56: D-15 56- D-16	561		2016	ZO-15AC	564	ZS32A	1104	ZT60-1	2009	. ZTX312	2009	}	
D-15 56. D15 56. D15 56. D15 56. C2 56. C2 A 56. C2 A 56. C3 A 56. C5 S 56. C6 S 5 S 56. C7 S 50. C7 S	562 563		2016 2016	ZO-15B ZO-15BY	564 564	ZS-32B ZS32B	1104 1104	ZT60-12 ZT60-55	2009 2009	ZTX313 ZTX314	2009 2009		
D15 56 1 56 2 2 56 2 3 56 2 4 56 2 56 2 56 2 56 2 56 2 56 3 56 5 60 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5	564		2016	ZOB6.2	561	ZS-33A	1104	ZT60A	2009	ZTX320	2015		
.2	564	4 ZE-1.5	1123	ZOB12	563	ZS-33B	1104	ZT60B	2009	ZTX321	2015	1000	
2A 56 2K 56 2CK 56 2.0 56 6.15 56 5 58 6.15K 56 1172 56 6.175-011 110 94 56 14 56 01 56 001 56 0014 56 1016 56 1016 56 1016 56 1016 56 1016 56 1016 56			562 563	ZOB-15 ZOB15	564 564	ZS34 ZS-34A	1104 1104	ZT60C ZT61	2009 2009	ZTX325 ZTX326	2015 2015	10000	
2K 56 2.0 56 6.15 56 5.5 56 5.5 56 5.5 56 5.5 56 11.2 56 6.175-011 110 94 56 01 56 1014 56 1014 56 1014 56 1016 56 1016 56 1016 56 1016 56 1016 56 1016 56 1016 56 1016 56	563		563	ZOD6.2	561	ZS34A	1104	ZT61-1	2009	ZTX327	2038		
15 56 5 5 56 15K 56 15K 56 11Z 56 175-011 110 94 56 14 56 101 54 363B 56 1014 56 1016 56 1016 56 1016 56	5€3	3 ZE12B	563	ZOD-15	564	ZS-34B	1104	ZT61-12	2009	ZTX330	2033		1100
5 56 56 56 56 56 57 56 57 56 57 56 57 56 57 57 57 57 57 57 57 57 57 57 57 57 57	563		564 564	ZOD15 ZP6.2	564 - 561	ZS34B ZS40	1104 1102	ZT61-55 ZT61A	2009 2009	ZTX341 ZTX342	2012 2012		
15K 56 5K 56 1112 56 175-011 110 94 56 14 56 01 56 001 56 0014 56 1016 56 1016 56 1016 56 1016 56 1016 56 1016 56 1016 56 1016 56	564		564	ZP9.1	562	ZS-50	1104	ZT61B	2009		2023	1	
112 56 175-011 110 94 56 14 56 01 56 963B 56 1014 56 1014 56 1016 56 1016 56 1016A 59 109 56 1109 56	564	4 ZE15A	564	ZP9.1A	562	Z\$50	1104	ZT61C	2009	ZTX501	2023		
75-011 110 94 56 14 56 14 56 101 56 1014 56 1014 56 1016 56 1016 56 1016 56 1016 56	564		564 564	ZP9.1B ZP12	562 563	ZS51 ZS-52	1104 1104	ZT-62 ZT62-1	2009	ZTX510 ZTX530	2034 2023		-
94 56 14 56 001 56 663B 58 1014 56 0014 56 0016 56 1016 56 1016A 56 1019 56 1112 56	1102		563	ZP12A	563	ZS52	1104	ZT62-12	2009	ZU12 ZU12A	563		
01 56 963B 56 9014 56 1014 56 1016 56 1016 56 1016A 56 109 56 112 58	562	2 ZEN100	2009	ZP12B	563	ZS-53	1104	ZT62-15	2009	ZU12A	563	-9 4	
363B 58 1014 56 014 56 1016 56 016 56 1016A 56 109 56	562		2009	ZP-15 ZP15	564 564	ZS53	1104 1104	ZT62C ZT63	2009 2009	ZU12B	563 564		
014 56 014 56 016 56 016 56 016A 56 016A 56 109 56	563		2038	ZP-15A	564 564	ZS70 ZS-71	1104	ZT63-1	2009	ZU-15 ZU15	564		
016 56 016 56 1016A 56 109 56 112 58	563	3 ZEN105	2038	ZP-15A ZP15A	564	ZS71	1104	ZT63-12	2009	ZU-15A .	564		
016 56 1016A 56 109 56 112 58	563 564		2038	ZP-15B	564 564	ZS72	1104	ZT63-55	2009 2009	ZU15A ZU-15B	564 564		
1016A 56 109 56 112 56	564		2016 2016	ZPD6.2	564 561	ZS-73 ZS73	1104 1104	ZT63A ZT63B	2009	ZU15B	564		
112 56	564	4 ZEN112	2009	ZQ-6	561	ZS74	1104	ZT63C	2009	ZV9.1	562	10-1-1	DOM:
	562	2 ZEN113	2009	ZQ9.1	562	Z\$74B	1104	ZT64	2009	ZV9.1A	562		
112-0	563	3 ZEN114 3 ZEN115	2009 2009	ZQ9.1A ZQ9.1B	562 562	ZS76 ZS78	1104 1114	ZT64-1 ZT64-5	2009	ZV9.1B ZV12	562 563	E 8	100
1112C 56	563	3 ZEN117	2013	ZQ12	563	ZS78A	1114	ZT64-12	2009	ZV12A	563		
112C 56	563	3 ZEN118	2016	ZQ12A	563	ZS78B	1114	ZT64-55	2009	ZV12B	563		
	554 564		2009 2009	ZQ12B ZQ-15	563 564	ZS90 ZS91	1104 1104	ZT64A ZT64B	2009 2009		564 564		
	564		2013		564	ZS92	1104	ZT64C	2009	ZV-15A	564		
212 56	563	3 ZEN123	2035	ZQ-15A	564	ZS94	1104	ZT66	2009	ZV15A	564		
	564 1740		2033	ZQ15A	564 564	ZS100 ZS101	1104 1104	ZT68 ZT80	2009 2033	ZV-15B ZV15B	564 564	- 1	
	2009		2009	ZQ-15B ZQ15B	564	ZS101	1104	ZT81	2009	ZW0-9.1	562	419	
30611 110	1104 562	4 ZEN310	2009 2001	ZQ15X ZR-10B	564 1104	ZS103 ZS104	1104 1104	ZT82(TRANSIS		ZW2	1104 562		

QUICK REFERENCE: CASE STYLE



PIN4 - CASE

PIN4 - CASE

DRAIN

GATE

2-GATE

3 - ANODE

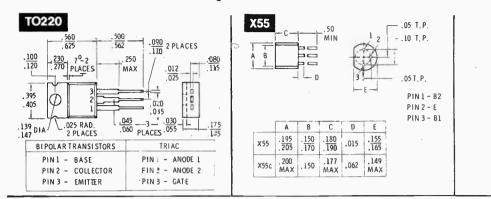
PIN 2 - B

PIN 3 - C

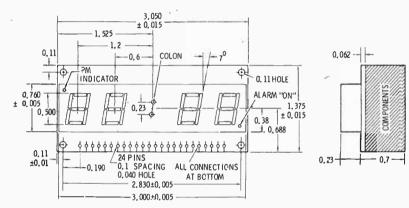
GATE

DRAIN

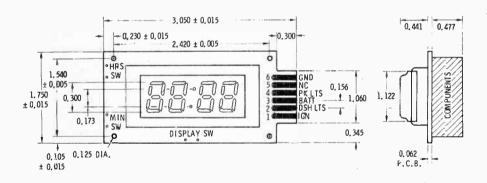
QUICK REFERENCE: CASE STYLE



277-1001



277-1003



MAJOR SEMICONDUCTOR COMPONENTS

•		MAJOR	SEMICON	JUCTOR C	OMPON	EN 15	
NAME OF DEVICE	CIRCUIT SYMBOL	COMMONLY USED JUNCTION SCHEMATIC	ELECTRICAL C	CHARACTERISTICS	MAX RATINGS AVAILABLE	MAJOR APPLICATIONS	ROUGHLY ANALOGOUS TO:
Diode or Rectifier	ANODE	ANODE P n CATHODE	VANODE (-)	Conducts easily in one direction, blocks in the other	1500 Amps 3000 Volts	Rectification Blocking Detecting Steering	Check valve Diode tube Gas diode
Avalanche (Zener) Diode	ANODE	ANODE P CATHODE	VANODE (-)	Constant voltage characteristic in negative quadrant	22 Volts 1 Watt	Regulation Reference Clipping	V-R tube
Integrated Voltage Regulator (IVR)	3 IVR 2	3 n n n n n n n n n n n n n n n n n n n	R ₃₁ + R ₂₁ V ₂₁	Programmed to desired V ₂₁ by two resistors	40 Volts 100 mA 0.4 Watts	Shunt voltage regulator Reference element Error modifier Level sensing Level shifting	Avalanche Diode
Tunnel Diode	POSITIVE ELECTRODE NEGATIVE ELECTRODE	POSITIVE ELECTRODE P NEGATIVE ELECTRODE	VANDOE (-)	Displays negative resistance when current exceeds peak point current lp	Peak point current = 100 mA Resistive cutoff freq. = 40 Gc	UHF converter Logic circuits Microwave circuits Level sensing	None
Back Diode	ANODE	ANODE n P CATHODE	VANODE (-)	Similar characteristics to conventional diode except very low forward voltage drop	5 mA 400 mV	Microwave mixers and low power oscillators	None
Thyrector	*	P	VOLTAGE	Rapidly increasing current above rated voltage in either direction	70 A peak pulse (2" Sq. cell)	Transient voltage suppression and arc suppression	Thyrite Two avalanche diodes in inverse-series connection
n-p-n Transistor	COLLECTOR BASE IB EMITTER	COLLECTOR n P n EMITTER	Ic IBS IB4 IB3 IB2 IB1 VCOLLECTOR (-)	Constant collector current for given base drive	300 Volts 25 Watts	Amplification Switching Oscillation	Pentode Tube
p-n-p Transistor	COLLECTOR BASE IB EMITTER	BASE P P EMITTER	VCOLLECTOR (-) 0 IB1	Complement to n-p-n transistor	75 Volts 25 Watts	Amplification Switching Oscillation	None
Photo Transistor	BASE	BASE P EMITTER	H4 H3 H2 H1 Vce	Incident light acts as base current of the photo transistor	45 Volts 0.25 Amps 0.6 Watts	Tape readers Card readers Position sensor Tachometers	None
Unijunction Transistor (UJT)	BASE 2	EMITTER P	VOLTAGE BETWEEN EMITTER & BASE 1 O O D S S S S S S S S S S S S S S S S S	Unijunction emitter blocks until its voltage reaches V _p ; then conducts	35 Volts 0.450 Watts	Interval timing Oscillation Level Detector SCR Trigger	None

MAJOR SEMICONDUCTOR COMPONENTS

NAME OF DEVICE	CIRCUIT SYMBOL	COMMONLY USED JUNCTION SCHEMATIC	ELECTRICAL CHA	RACTERISTICS	MAX RATINGS AVAILABLE	MAJOR APPLICATIONS	ROUGHLY ANALOGOUS TO:
Comple- mentary Unijunction Transistor (CUJT)	BASE 1	BASE 1	PEAK POINT VALLEY POINT	Functional com- plement to UJT	30 Volts 0.30 Watts 0.15 Amps	High stability timers Oscillators and level detectors	None
Program- mable Unijunction Transistor (PUT)	ANODE	P GATE	VALLEY POINT PEAK POINT	Programmed by two resistors for V _p , I _p , I _v . Function equivalent to mormal UJT.	40 Volts 0.30 Watts 0.15 Amps	Low cost timers and oscillators Long period timers SCR trigger Level detector	UJT
Silicon Controlled Rectifier (SCR)	ANODE GATE CATHODE	ANODE P P P P P P P P P P P P P P P P P P P	V _{ANODE} (-)	With anode voltage (+), SCR can be triggered by 1g, remaining in con- duction until smode i is reduced to zero	1000 Amps 1800 Volts	Power switching Phase control Inverters Choppers	Gas thyratron or ignitron
Comple- mentary Silicon Controlled Rectifier (CSCR)	ANODE GATE CATHODE	AMODE GATE	VAC (-) VAC ()	Polarity complement to SCR	50 Volts 0.25 Amps 0.45 ₩atts	Ring counters Low speed logic Lamp driver	None
Light Activated SCR* (LASCR)	GATE CATHODE	ANODE P N P P N P P P P P P P P P P P P P P	Vanoue ()	Operates similar to SCR, except can also be triggered into conduction by light falling on junctions	1.6 Amps 200 Volts	Relay Replace- ment Position controls Photoelectric applications Slave flashes	None
Silicon Controlled Switch* (SCS)	CATHODE GATE	CATHODE GATE CATHODE CATHODE ANODE CATHODE V _{ANODE} (-)	Operates similar to SCR except can also be triggered on by a negative signal on amode-gate. Also several other specialized modes of operation	100 Volts 200 mA	Logic applications Counters Nixie drivers Lamp drivers	Complementa transister pai	
Silicon Unilateral Switch (SUS)	ANODE GATE CATHODE	ANODE GATE P N P P P CATHODE	Vanode (-)	Similar to SCS but zener added to anode gate to trigger device into conduction at ~ 8 volts. Can also be triggered by megative pulse at gate lead.	10 Volts	Switching Circuits Counters SCR Trigger Oscillator	Shockley or 4-layer diode
Silicon Bilateral Switch (SBS)	ANODE 2 GATE ANODE 1	GATE ANODE 2	RB VANODE 2(-)	Symmetrical bilateral version of the SUS. Breaks down in both directions as SUS does in forward.	0.350 Watts 0.200 Amps 10 Volts	Switching Circuits Counters TRIAC Phase Control	Two inverse Schockley diodes
Triac	ANODE 2 GATE ANODE 1	ANODE 2	Vanode 2(-)	Operates similar to SCR except can be triggered into conduction in either direction by (+) or (-) gate signal	25 Amps 500 Volts	AC switching Phase control Relay replacement	Two SCR's in inverse parallel
Diac Trigger		n p n	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	When voltage reaches trigger level (about 35 volts), abruptly switches down about 10 volts.	40 Volts 2 Amps peak	Triac and SCR trigger Oscillator	Neon lamp

^{*}Light Activated SCS also available.

GLOSSARY OF WORDS, SYMBOLS AND ABBREVIATIONS

The following letter symbols and abbreviations are recommended by the Joint Electron Device Engineering Council ([EDEC) of the Electronic Industries Association (EIA) and the National Electrical Manufacturers Association (NEMA) for use in semiconductor device data sheets and specifications.

- A. a -Anode
- B, b -Base
- -Common-source small-signal forward transfer \mathbf{b}_{fs} susceptance
- -Common-source small-signal input susceptance \mathbf{b}_{is}
- -Common-source small-signal output susceptance \mathbf{b}_{os}
- $\boldsymbol{b}_{\mathrm{rs}}$ -Common-source small-signal reverse transfer susceptance
- C, c -Collector
- -Collector-base interterminal capacitance Cab
- -Collector-emitter interterminal capacitance \mathbf{C}_{ce}
- $C_{\rm ds}$ —Drain-source capacitance
- -Drain-substrate capacitance C_{du}
- -Emitter-base interterminal capacitance $C_{\rm cb}$
- -Common-base open-circuit input capacitance Cibo
- $C_{\rm ibs}\,$ -Common-base short-circuit input capacitance -Common-emitter open-circuit input capacitance
- $C_{\rm ieo}$ -Common-emitter short-circuit input capacitance
- C_{ies}
- -Common-source short-circuit input capacitance C_{iss}
- -Common-base open-circuit output capacitance Cobo
- -Common-base short-circuit output capacitance $C_{\rm obs}$
- $C_{\rm oeo}$ -Common-emitter open-circuit output capaci-
- $C_{\rm oes}$ -Common-emitter short-circuit output capaci-
- $C_{\rm oss}$ -Common-source short-circuit output capacitance
- -Common-base short-circuit reverse transfer $\mathbf{C}_{\mathrm{rbs}}$ capacitance
- Common-collector short-circuit reverse transfer $\mathbf{C}_{\mathrm{res}}$ capacitance
- Common-emitter short-circuit reverse transfer $\mathbf{C}_{\mathrm{res}}$ capacitance
- C_{rss} Common-source short-circuit reverse transfer capacitance
- C_{tc} -Collector depletion-layer capacitance
- -Emitter depletion-layer capacitance Cie
- D, d -Drain
- E, e -Emitter
- η -Intrinsic standoff ratio
- -Common-base small-signal short-circuit forward \mathbf{f}_{hfb} current transfer ratio cutoff frequency
- -Common-collector small-signal short-circuit for- $\mathbf{f}_{\mathrm{hfc}}$ ward current transfer ratio cutoff frequency
- -Common-emitter small-signal short-circuit for- \mathbf{f}_{life} ward current transfer ratio cutoff frequency
- —Maximum frequency of oscillation \mathbf{f}_{\max}
- -Transition frequency (frequency at which common-emitter small-signal forward current transfer ratio extrapolates to unity)
- G, g -Gate
- -Common-source small-signal forward transfer conductance
- -Common-source small-signal input conductance gis
- -Common-base static transconductance $g_{\rm MB}$
- -Common-collector static transconductance **g**MC
- -Common-emitter static transconductance **g**ME
- -Common-source small-signal output conduc g_{os}
- -Common-base large-signal insertion power gain \mathbf{G}_{PB}
- -Common-base small-signal insertion power gain \mathbf{G}_{ph}
- GPC -Common-collector large-signal insertion power gain

- -Common-collector small-signal insertion power
- -Common-emitter large-signal insertion power $G_{\rm PE}$ gain
- \mathbf{G}_{pe} -Common-emitter small-signal insertion power gain
- $G_{\rm pg}$ -Common-gate small-signal insertion power gain
- \mathbf{G}_{ps} -Common-source small-signal insertion power
- -Common-source small-signal reverse transfer g_{rs} conductance
- -Common-base large-signal transducer power G_{TB}
- -Common-base small-signal transducer power G_{th} gain
- -Common-collector large-signal transducer \mathbf{G}_{TC} power gain
- \mathbf{G}_{16} Common-collector small-signal transducer power gain
- G_{TE} -Common-emitter large-signal transducer power gain
- G_{te} -Common-emitter small-signal transducer power
- \mathbf{G}_{fg} -Common-gate small-signal transducer power
- -Common-source small-signal transducer power \mathbf{G}_{ts} gain
- -Common-base static forward current transfer her ratio
- -Common-base small-signal short-circuit forward \mathbf{h}_{fb} current transfer ratio
- -Common-collector static forward current trans- \mathbf{h}_{FC} fer ratio
- \mathbf{h}_{fc} -Common-collector small-signal short-circuit forward current transfer ratio
- -Common-emitter static forward current trans- \mathbf{h}_{FE} fer ratio
- \mathbf{h}_{fe} -Common-emitter small-signal short-circuit forward current transfer ratio
- h_{FEL} -Inherent large-signal forward current transfer
- \mathbf{h}_{IB} -Common-base static input resistance
- \mathbf{h}_{ib} -Common-base small-signal short-circuit input impedance
- \mathbf{h}_{IC} Common-collector static input resistance
- \mathbf{h}_{ic} -Common-collector small-signal short-circuit input impedance
- -Common-emitter static input resistance \mathbf{h}_{IE}
- \mathbf{h}_{ie} -Common-emitter small-signal short-circuit input im pedance
- $\mathbf{h}_{\mathrm{ie(imag)}}$ —Imaginary part of common-emitter small-signal short-circuit input impedance
- h_{iefreall} -Real part of common-emitter small-signal shortcircuit input impedance
- Common-base small-signal open-circuit output \mathbf{h}_{ob} admittance
- -Common-collector small-signal open-circuit output admittance
- -Common-emitter small-signal open-circuit output admittance
- $h_{\text{oe}(imag)}$ —Imaginary part of common-emitter small-signal open-circuit output admittance

 $\mathbf{h}_{oe[real]}$ —Real part of common-emitter small-signal open-circuit output admittance

h_{rb} —Common-base small-signal open-circuit reverse voltage transfer ratio

h_{rc} —Common-collector small-signal open-circuit reverse voltage transfer ratio

h_{re} —Common-emitter small-signal open-circuit reverse voltage transfer ratio

I_B —Base-terminal dc current

I_b —Alternating component (rms value) of base-terminal current

i_B —Instantaneous total value of base-terminal current

IBEV -Base cutoff current, da

 $I_{B2(mod)}$ —Interbase modulated current

Ic -Collector-terminal dc current

I_c —Alternating component (rms value) of collectorterminal current

i_C —Instantaneous total value of collector-terminal current

I_{CBO} —Collector cutoff current (dc), emitter open

ICEO -Collector cutoff current (dc), base open

I_{CER} —Collector cutoff current (dc), specified resistance between base and emitter

I_{CES} —Collector cutoff current (dc), base shorted to emitter

I_{CEV} -Collector cutoff current (dc), specified voltage between base and emitter

I_{CEX} —Collector cutoff current (dc), specified circuit between base and emitter

In -Drain current, dc

ID(off) —Drain cutoff current

I_{D(on)} -On-state drain current

IDSS -Zero-gate-voltage drain current

I_E —Emitter-terminal dc current

I_e —Alternating component (rms value) of emitterterminal current

i_E —Instantaneous total value of emitter-terminal current

IEBO -Emitter autoff current (dc), collector open

I_{EB20} —Emitter reverse current

IEC[ofs] -Emitter-collector offset current

I_{ECS} —Emitter cutoff current (dc), base short-circuited to collector

IE1E2(off) - Emitter cutoff current

I_F —For voltage-regulator and voltage-reference diodes: dc forward current. For signal diodes and rectifier diodes: dc forward current (no alternating component)

If —Alternating component of forward current (rms value)

if -Instantaneous total forward current

I_{F(AV)} —Forward current, dc (with alternating component)

I_{FM} -Maximum (peak) total forward current

I_{F(OV)} —Forward current, overload

IFRM -Maximum (peak) forward current, repetitive

I_{F(RMS)} —Total rms forward current

IFSM -Maximum (peak) forward current, surge

I_G —Gate current, dc

I_{GF} —Forward gate current

IGR --Reverse gate current

I_{GSS} —Reverse gate current, drain short-circuited to source

 I_{GSSF} —Forward gate current, drain short-circuited to source

I_{GSSR} —Reverse gate current, drain short-circuited to source

 I_I —Inflection-point current

Im(h_{ie})—Imaginary part of common-emitter small-signalshort-circuit input impedance

Im(h_{oe})—Imaginary part of common-emitter small-signal open-circuit output admittance

Io —Average forward current, 180° conduction angle, 60-Hz half sine wave

IP —Peak-point.current

I_R —For voltage-regulator and voltage-reference diodes: dc reverse current. For signal diodes and rectifier diodes: dc reverse current (no alternating component)

I_r —Alternating component of reverse current (rms

value)

i_R —Instantaneous total reverse current

 $I_{R(AV)}$ —Reverse current, dc (with alternating component)

I_{RM} -Maximum (peak) total reverse current

IRRM -Maximum (peak) reverse current, repetitive

IR(RMS) -Total rms reverse current

IRSM -Maximum (peak) surge reverse current

Is —Source current, dc

I_{SDS} —Zero-gate-voltage source current

Isloft -Source cutoff current

Iv -Valley-point current

Iz -Regulator current, reference current (dc)

I_{ZK} —Regulator current, reference current (dc near breakdown knee)

I_{ZM} —Regulator current, reference current (dc maximum rated current)

K, k -Cathode

L. —Conversion loss

M -Figure of merit

NF₀ —Overall noise figure

NR_o —Output noise ratio

 P_{BE} —Power input (dc) to base, common emitter

PBE -Instantaneous total power input to base, common emitter

PCB —Power input (dc) to collector, common base

 \mathbf{p}_{CB} —Instantaneous total power input to collector, common base

PCE -Power input (dc) to collector, common emitter

p_{CE} —Instantaneous total power input to collector, common emitter

PEB —Power input (dc) to emitter, common base

p_{EB} —Instantaneous total power input to emitter, common base

P_s —Forward power dissipation, dc (no alternating component)

pr —Instantaneous total forward power dissipation

 $\mathbf{P}_{\mathsf{F[AV]}}$ —Forward power dissipation, dc (with alternating component)

P_{FM} —Maximum (peak) total forward power dissipation

PIB —Common-base large-signal input power

p_{ib} —Common-base small-signal input power

P_{IC} —Common-collector large-signal input power

pic —Common-collector small-signal input power

PIE —Common-emitter large-signal input power

pie - Common-emitter small-signal input power

POB -Common-base large-signal output power

p_{ob} —Common-base small-signal output power

Poc —Common-collector large-signal output power

p_{oc} —Common-collector small-signal output power

POE —Common-emitter large-signal output power

poe —Common-emitter small-signal output power

—Reverse power dissipation, dc (no alternating component)

R —Instantaneous total reverse power dissipation

 $P_{R(AV)}$ —Reverse power dissipation, dc (with alternating component)

-Maximum (peak) total reverse power dissipation

-Total nonreactive power input to all terminals

-Nonreactive power input, instantaneous total, to \mathbf{p}_{T} all terminals

 Q_S -Stored charge

-Interbase resistance FRR

r' Cc -Collector-base time constant

r_{CE(sat)} -Saturation resistance, collector-to-emitter

r_{DS(on)} -Static drain-source on-state resistance

r_{ds(on)} -Small-signal drain-source on-state resistance

Re(hie)—Real part of common-emitter small-signal shortcircuit input impedance

Re(hoe) — Real part of common-emitter small-signal opencircuit output admittance

 $\mathbf{r}_{e1e2(on)}$ — Small-signal emitter-emitter on-state resistance

-Dynamic resistance at inflection point

-Thermal resistance \mathbf{R}_{Θ}

ROCA -Thermal resistance, case to ambient

 $\mathbf{R}_{\Theta | A}$ —Thermal resistance, junction to ambient

 $\mathbf{R}_{\Theta \mid C}$ —Thermal resistance, junction to case

S, s -Source

 \mathbf{T}_{A} -Ambient temperature or free-air temperature

 $\mathbf{T}_{\mathbf{C}}$ -Case temperature

-Delay time ta

 $t_{d(off)}$ —Turn-off delay time

 $\mathbf{t}_{d(on)}$ —Turn-on delay time

—Fall time tı

-Forward recovery time tír

-Junction temperature T_i

-Turn-off time toff

-Turn-on time t_{on}

—Pulse time t_p

 t_r -Rise time

 $t_{\rm rr}$ -Reverse recovery time

-Storage time

TSS.—Tangential signal sensitivity

 $\begin{array}{ll} T_{stg} & -Storage \ temperature \\ t_w & -Pulse \ average \ time \end{array}$

U, u -Bulk (substrate)

V_{BB} —Base supply voltage (dc)

 V_{BC} -Average or dc voltage, base to collector

-Instantaneous value of alternating component V_{bc} of base-collector voltage

-Average or dc voltage, base to emitter

-Instantaneous value of alternating component of base-emitter voltage

V_[BR] -Breakdown voltage (dc)

v_[BR] -Breakdown voltage (instantaneous total)

V_{IBRICBO} —Collector-base breakdown voltage, emitter

V_{(BR)CEO} —Collector-emitter breakdown voltage, base open

V_{IBRICER} —Collector-emitter breakown voltage, resistance between base and emitter

V(BR)CES -Collector-emitter breakdown voltage, base shorted to emitter

 $\mathbf{V}_{(\mathsf{BR})\mathsf{CEV}}$ —Collector-emitter breakdown voltage, specified voltage between base and emitter

V_{(BR)CEX} —Collector-emitter breakdown voltage, specified circuit between base and emitter

 $\mathbf{V}_{(BR)EBO}$ —Emitter-base breakdown voltage, collector

V_{(BR)ECO} —Emitter-collector breakdown voltage, base

 $V_{(BR)E1E2}$ —Emitter-emitter breakdown voltage

V(BR)GSS -Gate-source breakdown voltage

V_{(BR)CSSF}-Forward gate-source breakdown voltage V_{(BR)CSSR}-Reverse gate-source breakdown voltage

V_{B2B1} -Interbase voltage

VCB -Average or dc voltage, collector to base

-Instantaneous value of alternating component of collector-base voltage

V_{CB(ff)} —Collector-base dc open-circuit voltage (floating potential)

VCBO -Collector-base voltage, dc, emitter open

V_{CC} —Collector supply voltage (dc)

V_{CE} —Average or dc voltage, collector to emitter

-Instantaneous value of alternating component of collector-emitter voltage

V_{CE(fi)}—Collector-emitter dc open-circuit voltage (floating potential)

VCEO -Collector-emitter oltage (dc), base open

 $\begin{array}{l} V_{\text{CE}(ofs)} \! - \! \text{Collector-emitter offset voltage} \\ V_{\text{CER}} \! - \! \text{Collector-emitter voltage (dc), resistance be-} \end{array}$ tween base and emitter

V_{CES} —Collector-emitter voltage (dc), base shorted to

V_{CE[sal]} —Collector-emitter dc saturation voltage

V_{CEV} -Collector-emitter voltage (dc), specified voltage between base and emitter

V_{CEX} -Collector-emitter voltage (dc), specified circuit between base and emitter

V_{DD} -Drain supply voltage (dc)

VDG -Drain-gate voltage

VDS -Drain-source voltage

V_{DS(onf} —Drain-source on-state voltage

V_{DU} -Drain-substrate voltage

VEB -Average or dc voltage, emitter to base

-Instantaneous value of alternating component of emitter-base voltage

V_{EB(II)}—Emitter-base dc open-circuit voltage (floating potential)

VEBO - Emitter base voltage (dc), collector open

V_{EB1(sat)}—Emitter saturation voltage

VEC -Average or dc voltage, emitter to collector

-Instantaneous value of alternating component of emitter-collector voltage

 $\mathbf{V}_{\mathrm{EC}(\mathrm{fl})}$ —Emitter-collector dc open-circuit voltage (floating potential)

 $V_{EC(ofs)}$ —Emitter-collector offset voltage

V_{EE} —Emitter supply voltage (dc)

-For voltage-regulator and voltage-reference diodes: dc forward voltage. For signal diodes and rectifier diodes: dc forward voltage (no alternating component)

 \mathbf{V}_{f} -Alternating component of forward voltage (rms value)

-Instantaneous total forward voltage

 $\begin{array}{ll} V_{F(AV)} - Forward\ voltage,\ dc\ (with\ alternating\ component) \\ V_{FM} & - Maximum\ (peak)\ total\ forward\ voltage \end{array}$

V_{F(RMS)} - Total rms forward voltage

V_{GG} -Gate supply voltage (dc)

V_{GS} -Gate-source voltage

V_{CSF} —Forward gate-source voltage

V_{GS(off)} —Gate-source cutoff voltage

V_{GSR} -Reverse gate-source voltage

V_{GS(th)} -Gate-source threshold voltage

 V_{GU} —Gate-substrate voltage V_I -Inflection-point voltage

VOB1 -Base-1 peak voltage

V_P -Peak-point voltage

V_{PP} —Projected peak-point voltage

-For voltage-regulator and voltage-reference diiodes: dc reverse voltage. For signal diodes and rectifier diodes: dc reverse voltage (no alternating component)

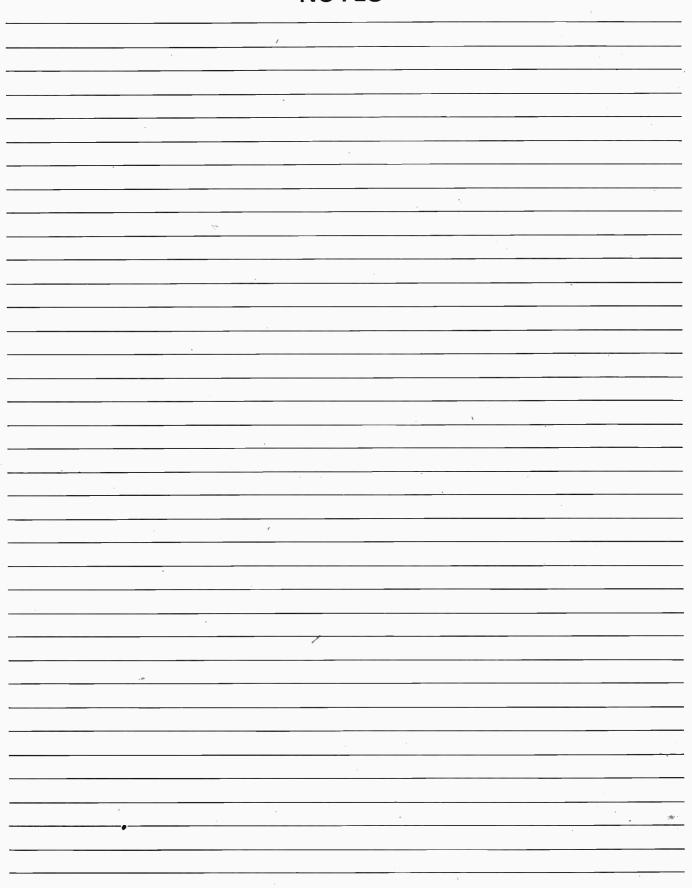
Alternating component of reverse voltage (rms

valuel

- v_R -Instantaneous total reverse voltage
- $V_{R(AV)}$ —Reverse voltage, dc (with alternating component)
- V_{RM} -Maximum (peak) total reverse voltage
- V_{RRM} -Repetitive peak reverse voltage
- V_{R(RMS)}—Total rms reverse voltage
- V_{RSM} -Nonrepetitive peak reverse voltage
- VRT -Reach-through voltage
- V_{RWM}-Working peak reverse voltage
- Vss -Source supply voltage (dc)
- V_{SU} -Source-substrate voltage
- $V_{(TO)}$ —Threshold voltage
- V_V -Valley-point voltage
- Vz -Regulator voltage, reference voltage (dc)
- V_{ZM} —Regulator voltage, reference voltage (dc at maximum rated current)
- \mathbf{y}_{fb} —Common-base small-signal short-circuit forward transfer admittance
- y_{fc} —Common-collector small-signal short-circuit forward transfer admittance
- y_{fe} —Common-emitter small-signal short-circuit forward transfer admittance
- y_{fs} —Common-source small-signal short-circuit forward transfer admittance
- $\mathbf{y}_{\text{fs\{imag\}}}$ —Common-source small-signal forward transfer susceptance
- y_{fs(real)} —Common-source small-signal forward transfer conductance
- \mathbf{y}_{ib} —Common-base small-signal short-circuit input admittance
- \mathbf{y}_{ic} —Common-collector small-signal short-circuit input admittance
- y_{ie} —Common-emitter small-signal short-circuit input admittance
- y_{ie(imag)} Imaginary part of small-signal short-circuit input admittance (common-emitter)
- y_{ie(real)} —Real part of small-signal short-circuit input admittance (common-emitter)
- \mathbf{y}_{is} —Common-source small-signal short-circuit input admittance
- y_{is[imag]}—Common-source small-signal input susceptance
- $\mathbf{y}_{is[real]}$ —Common-source small-signal input conductance

- yoli —Common-base small-signal short-circuit output admittance
- $y_{oc} \qquad -\text{Common-collector small-signal short-circuit} \\ \text{output admittance}$
- yoe —Common-emitter small-signal short-circuit output admittance
- y_{oe(imag)}—Imaginary part of small-signal short-circuit output admittance (common-emitter)
- y_(real) Real part of small-signal short-circuit output admittance (common-emitter)
- y_{cs} —Common-source small-signal short-circuit output admittance
- y_{es(imag)}—Common-source small-signal output suscep-
- y_{us(real)} —Common-source small-signal output conduc-
- y_{rb} —Common-base small-signal short-circuit reverse transfer admittance
- yre —Common-collector small-signal short-circuit reverse transfer admittance
- y_{re} —Common-emitter small-signal short-circuit reverse transfer admittance
- yrs —Common-source small-signal short-circuit reverse transfer admittance
- y_{rs(imag)}—Common-source small-signal reverse transfer susceptance
- y_{rs(real)} —Common-source small-signal reverse transfer conductance
- zif -Intermediate-frequency impedance
- **z**_m -Modulator-frequency load impedance
- **z**_{rf} —Radio-frequency impedance
- **Z**_{θ|A(t)}—Junction-to-ambient transient thermal impedance
- Z_{O|C(1)}—Junction-to-case transient thermal impedance
- $\mathbf{Z}_{\theta(t)}$ —Transient thermal impedance
- z_v -Video impedance
- Z_x —Regulator impedance, reference impedance (small-signal at I_x)
- \mathbf{z}_{zk} —Regulator impedance, reference impedance (small-signal at \mathbf{I}_{ZK})
- \mathbf{z}_{zm} —Regulator impedance, reference impedance (small-signal at \mathbf{I}_{ZM})

NOTES



RADIO SHACK A DIVISION OF TANDY CORPORATION

U.S.A.: FORT WORTH, TEXAS 76102

CANADA: BARRIE, ONTARIO, CANADA L4M 4W5

TANDY CORPORATION

AUSTRALIA

BELGIUM

280-316 VICTORIA ROAD RYDALMERE, N.S.W. 2116

PARC INDUSTRIEL DE NANINNE 5140 NANINNE

U.K. BILSTON ROAD WEDNESBURY, STAFFS WS10 7JN

PRINTED IN U.S.A.