

Amperex[®]

A NORTH AMERICAN PHILIPS COMPANY



vacuum capacitors

Amperex[®] ... Tomorrow's Thinking in Today's Products[®]

HICKSVILLE DIVISION
AMPEREX ELECTRONIC CORPORATION
HICKSVILLE, NEW YORK 11802

VACUUM CAPACITORS

INTRODUCTION

Creative engineering and precision manufacturing are key components to the high quality that is "built into" in every Amperex vacuum capacitor. The utilization of superior equipment, coupled with skilled operators and experienced supervision assures the buyer that he is purchasing the finest in capacitors.

Amperex research, development and manufacturing facilities are outstanding. At the Hicksville, N.Y. plant the company maintains a precision machine shop, super-clean assembly area, chemical laboratory, primary standards laboratory, and a variety of special-purpose processing and test areas.

Quality control is evident throughout the manufacturing cycle. Starting with vendor surveillance, quality control personnel check basic materials upon arrival at the plant, constantly supervise fabrication and assembly activities, and conduct a final inspection and test of all capacitors before they are shipped.

Founded in 1932, Amperex markets a variety of electronic components — electron tubes, microcircuits, semiconductors, electro-optical devices and passive electronic components for commercial and military applications. Amperex is a wholly owned subsidiary of the North American Philips Company, an affiliation that gives it ready access to the basic research facilities and know-how of the world-renowned Philips Laboratories.

CODING SYSTEM

Amperex manufactures vacuum capacitors to suit many applications. The following simplified coding system has been developed to make ordering and customer stocking as easy as possible:

- 1.—The first two letters, "CV", indicate capacitor, vacuum.
- 2.—The third letter indicates the material in the envelope—"G" for glass or "C" for ceramic.

Thus, the first three letters describe physical characteristics:

CVC — capacitor, vacuum, ceramic

CVG — capacitor, vacuum, glass

- 3.—The next letters indicate capacitance values—"C" for hundred and "K" for thousands. They are preceded by numerals to show multiples. Variable capacitors separate minimum and maximum capacitance by a slash.

Thus, capacitance is shown as follows:

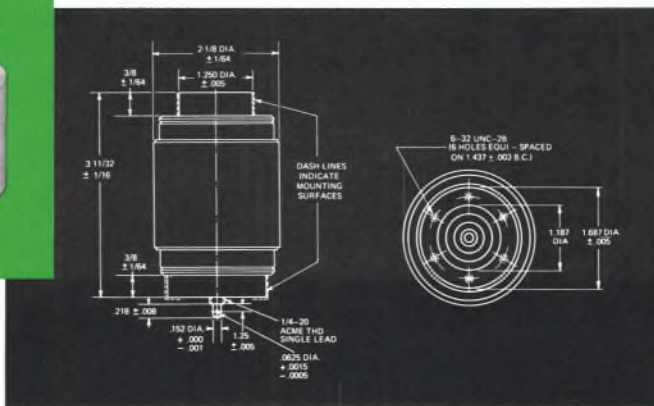
CVC-05/5C — capacitor, vacuum, ceramic, 5 to 500 pF

CVG-10/1K — capacitor, vacuum, glass, 10 to 1,000 pF

The final designation is voltage, shown after capacitance, and separated by a dash and using a "V" after the number.

Type CVC-08/2C-3kV

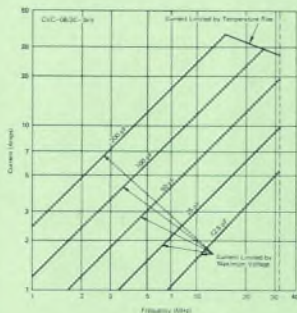
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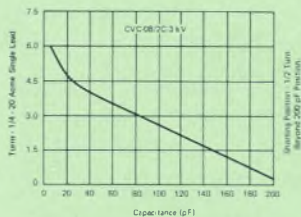
TECHNICAL SPECIFICATIONS

Capacitance Range:	8-200 pF
Peak Voltage:	3 kV
Continuous rms Current:	35 amps
Cycle Life:	10,000 min.
Weight (nom):	1 lb., 2 oz.
Flange Mount:	Variable end has tapped flange Fixed end uses Amperex No. S-334761
Storage Temperature:	-55°C to +125°C
Operating Temperature (measured at seals):	+120°C
Rotation:	C.W. Rotation decreases capacitance
Torque (in.-oz.):	22 max.
Direct Pull (pounds):	30 max.

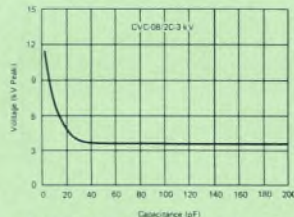
*Current limitations are dependent on voltage, frequency and ambient conditions. For further information please contact Amperex.



CONTINUOUS RMS AMPERES VS.
FREQUENCY VS CAPACITY



CAPACITY VS. TURNS

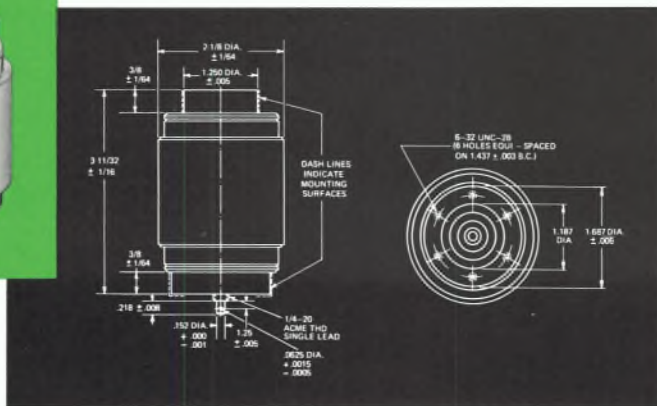


60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

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Type CVC-08/2C-5kV

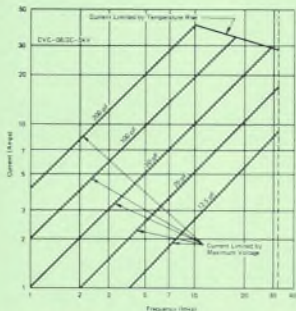
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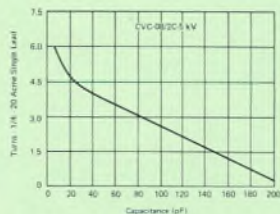
TECHNICAL SPECIFICATIONS

Capacitance Range:	8 200 pF
Peak Voltage:	5 kV
Continuous rms Current [*] :	35 amps
Cycle Life:	10,000 min.
Weight (nom):	1 lb., 2 oz
Flange Mount:	Variable end has tapped flange Fixed end uses Amperex No. S 334761
Storage Temperature:	-55°C to +125°C
Operating Temperature (measured at seals):	+120°C
Rotation:	C W Rotation decreases capacitance
Torque (in.-oz.):	22 max
Direct Pull (pounds):	30 max

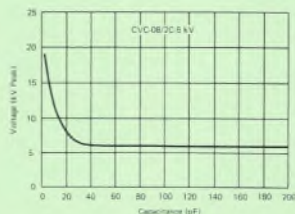
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CONTINUOUS RMS AMPERES VS.
FREQUENCY VS. CAPACITY



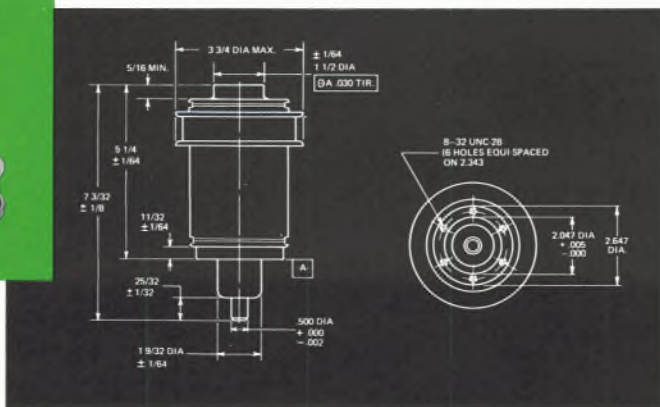
CAPACITY VS. TURNS



60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

Type CVC-10/1K-3kV

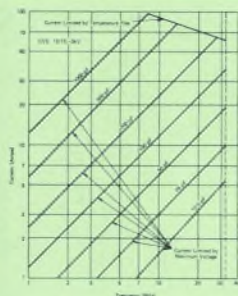
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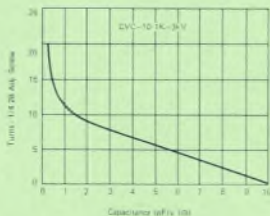
TECHNICAL SPECIFICATIONS

- Capacitance Range: 10-1000 pF
- Peak Voltage: 3 kV
- Continuous rms Current*: 80 amps
- Cycle Life: 10,000 min
- Weight (nom): 3 lbs., 10 oz
- Flange Mount: Variable end has tapped flange
Fixed end uses Amperex No. S 334760
- Storage Temperature: -55°C to +125°C
- Operating Temperature (measured at seals): 120°C
- Rotation: C.W Rotation decreases capacitance
- Torque (in. oz.): 30 max.
- Direct Pull (pounds): 40 max.

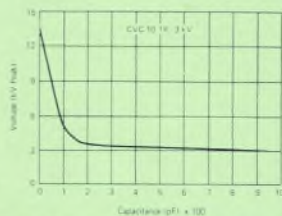
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FREQUENCY VS CAPACITY



CAPACITY VS. TURNS

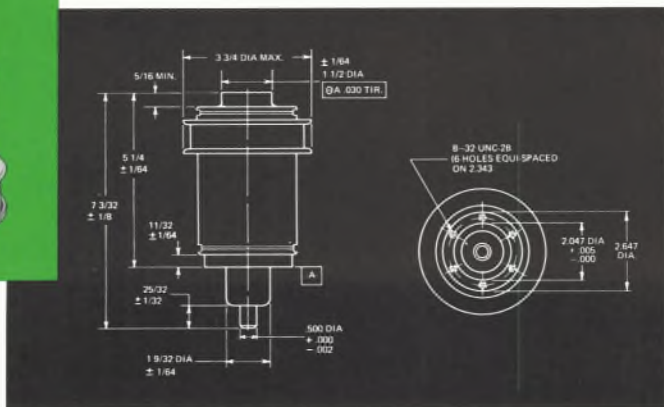


60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

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Type CVC-10/1K-5kV

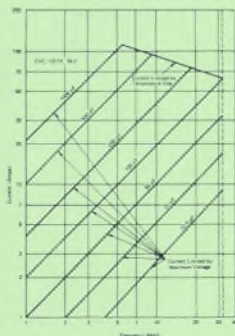
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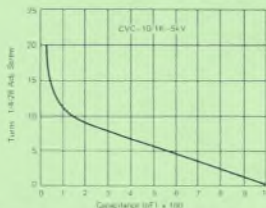
TECHNICAL SPECIFICATIONS

Capacitance Range:	10-1000 pF
Peak Voltage:	5 kV
Continuous rms Current*:	80 amps
Cycle Life:	10,000 min
Weight (nom):	3 lbs., 10 oz.
Flange Mount:	Variable end has tapped flange Fixed end uses Amperex No. S-334760
Storage Temperature:	-55°C to +125°C
Operating Temperature:	(measured at seals): 120°C
Rotation:	C.W. Rotation decreases capacitance
Torque:	30 max
Direct Pull (pounds):	40 max

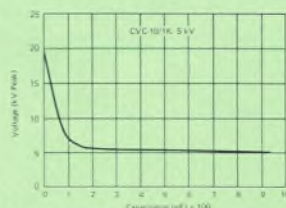
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CONTINUOUS RMS AMPERES VS.
FREQUENCY VS. CAPACITY



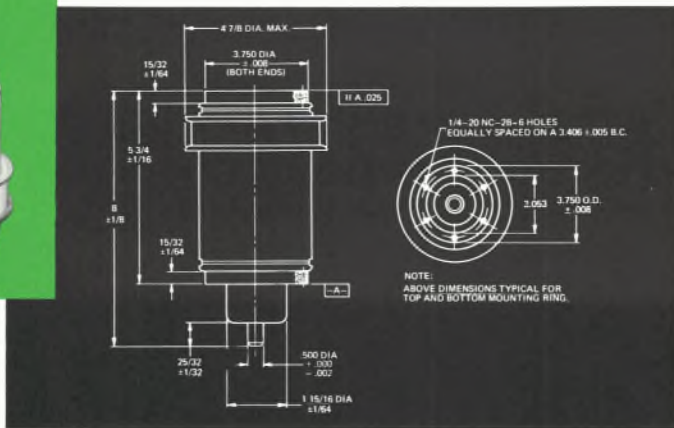
CAPACITY VS. TURNS



60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

Type CVC-25/1K-7.5kV

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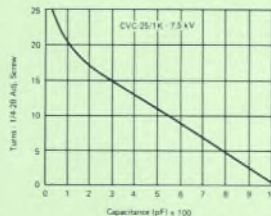
TECHNICAL SPECIFICATIONS

Capacitance Range:	25-1000 pF
Peak Voltage:	7.5 kV
Continuous rms Current*:	125 amps
Cycle Life:	10,000 min.
Weight (nom):	6 lbs., 13 oz
Flange Mount:	Both ends have tapped flanges
Storage Temperature:	-55°C to +125°C
Operating Temperature (measured at seals):	120°C
Rotation:	C.W. Rotation decreases capacitance
Torque (in.-oz.):	50 max.
Direct Pull (pounds):	68 max.

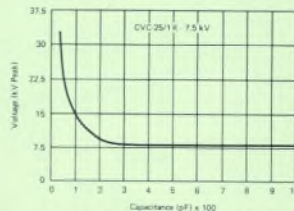
*Current limitations are dependent on voltage, frequency and ambient conditions. For further information please contact Amperex.



CONTINUOUS RMS AMPERES VS. FREQUENCY VS CAPACITY



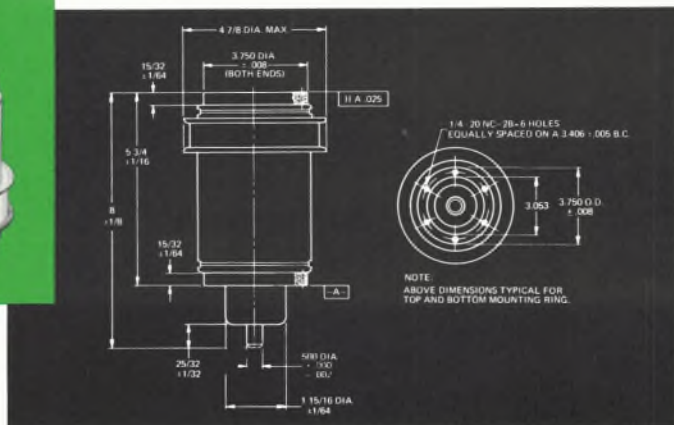
CAPACITY VS. TURNS



60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

Type CVC-25/1K-10kV

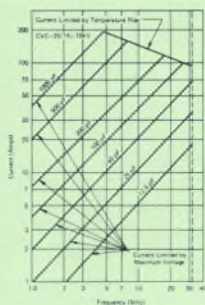
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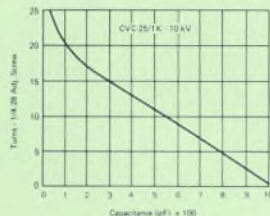
TECHNICAL SPECIFICATIONS

Capacitance Range:	25-1000 pF
Peak Voltage:	10 kV
Continuous rms Current ¹ :	125 amps
Cycle Life:	10,000 min.
Weight (nom):	6 lbs., 13 oz.
Flange Mount:	Both ends have tapped flanges
Storage Temperature:	-55°C to +125°C
Operating Temperature (measured at seals):	120°C
Rotation:	C.W. Rotation decreases capacitance
Torque (in.-oz):	50 max.
Direct Pull (pounds):	68 max.

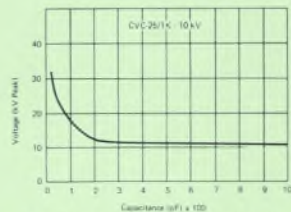
¹Current limitations are dependent on voltage, frequency and ambient conditions. For further information please contact Amperex.



CONTINUOUS RMS AMPERES VS. FREQUENCY VS. CAPACITY



CAPACITY VS. TURNS

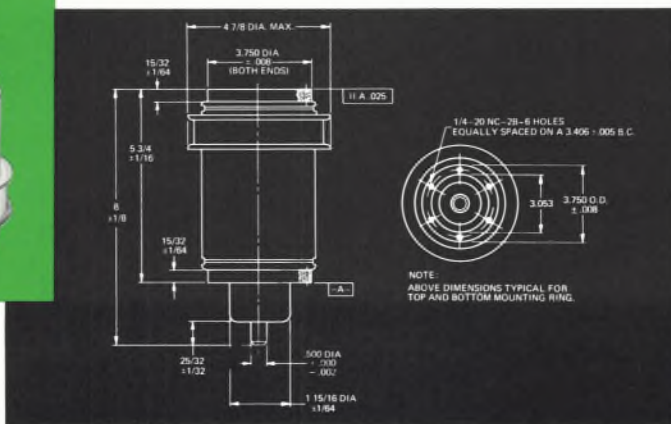


60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

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Type CVC-25/1K-15kV

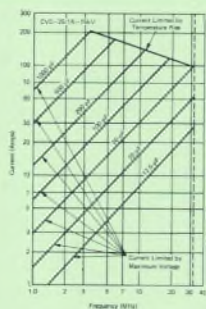
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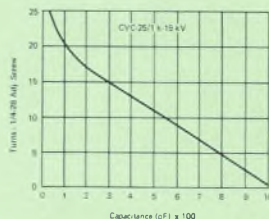
TECHNICAL SPECIFICATIONS

Capacitance Range:	25-1000 pF
Peak Voltage:	15 kV
Continuous rms Current*:	125 amps
Cycle Life:	10,000 min.
Weight (nom):	6 lbs., 13 oz.
Flange Mount:	Both ends have tapped flanges
Storage Temperature:	-55°C to +125°C
Operating Temperature	
(measured at seals):	120°C
Rotation:	C.W. Rotation decreases capacitance
Torque (in.-oz.):	50 max.
Direct Pull (pounds):	68 max.

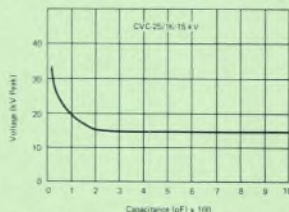
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CONTINUOUS RMS AMPERES VS
FREQUENCY VS CAPACITY



CAPACITY VS. TURNS

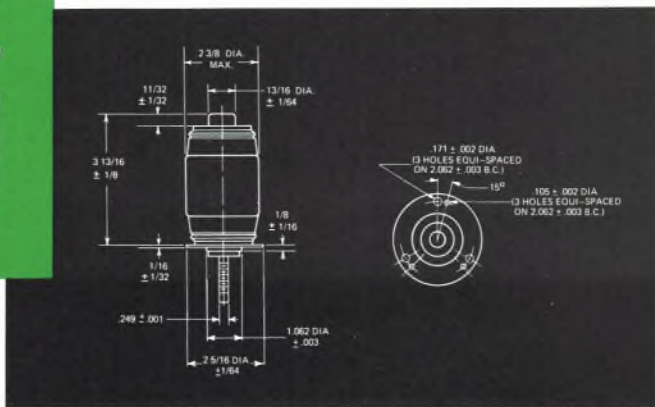


60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

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Type CVG-05/5C-3kV

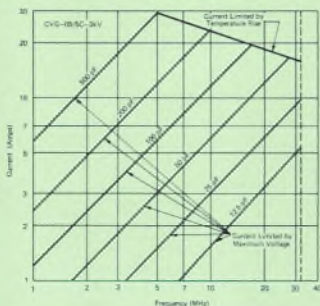
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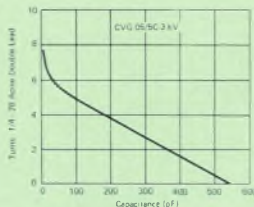
TECHNICAL SPECIFICATIONS

- Capacitance Range: 5-500 pF
- Peak Voltage: 3 kV
- Continuous rms Current*: 20 amps
- Cycle Life: 10,000 cycles min.
- Weight (nom): 1 lb., 4 oz.
- Flange Mount: Variable end has tapped flange
Fixed end uses Amperex No. S-334759
- Storage Temperature: -65°C to +125°C
- Operating Temperature (measured at seals): +85°C max.
- Rotation: C.W. Rotation decreases capacitance
- Torque (in.-oz.): 48 max.
- Direct Pull (pounds): 44 max.

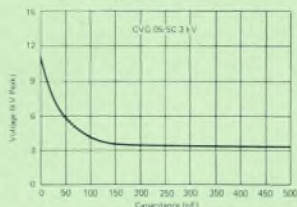
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CONTINUOUS RMS AMPERES VS. FREQUENCY VS. CAPACITY



CAPACITY VS. TURNS

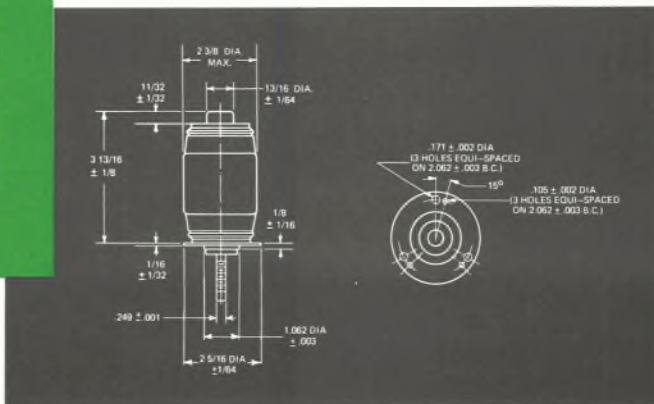


60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

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Type CVG-05/5C-5kV

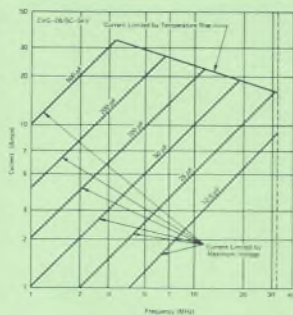
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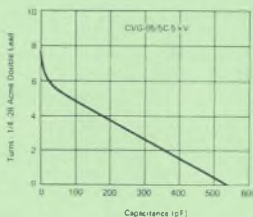
TECHNICAL SPECIFICATIONS

Capacitance Range:	5 500 pF
Peak Voltage:	5 kV
Continuous rms Current*:	20 amps
Cycle Life:	10,000 cycles min.
Weight (nom):	1 lb., 4 oz.
Flange Mount:	Variable end has tapped flange
	Fixed end uses Amperex No. S-334759
Storage Temperature:	-65°C to +125°C
Operating Temperature	
(measured at seals):	+85°C max.
Rotation:	C.W. Rotation decreases capacitance
Torque (in.-oz.):	48 max
Direct Pull (pounds):	44 max.

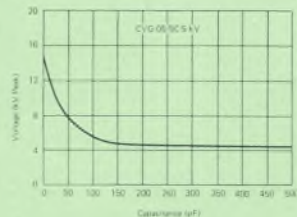
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CONTINUOUS RMS AMPERES VS. FREQUENCY VS. CAPACITY



CAPACITY VS. TURNS

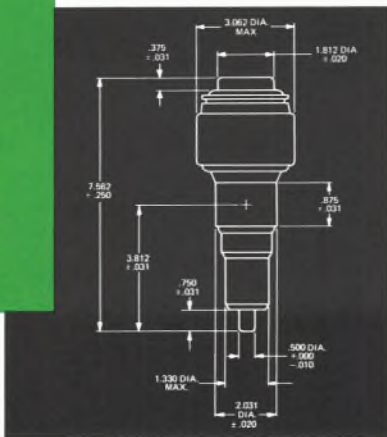


60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

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Type CVG-07/1K-3kV

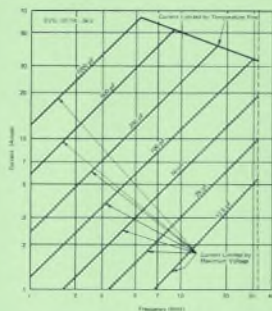
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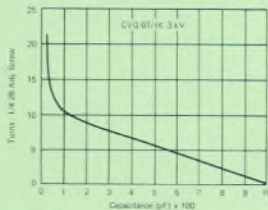
TECHNICAL SPECIFICATIONS

Capacitance Range:	7 1000 pF
Peak Voltage:	3 kV
Continuous rms Current [*] :	42 amps
Cycle Life:	12,500 min.
Weight (nom):	2 lbs.
Flange Mount:	Fixed end uses Amperex No. S-335403 Variable end uses Amperex No. S-335404
Storage Temperature:	-55°C to +125°C
Operating Temperature (measured at seals):	85°C
Rotation:	C.W. Rotation decreases capacitance
Torque:	24 max.
Direct Pull (pounds):	43 max.

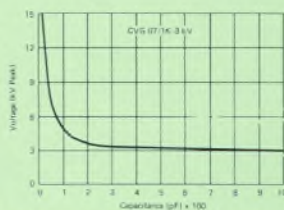
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CONTINUOUS RMS AMPERES VS.
FREQUENCY VS. CAPACITY



CAPACITY VS. TURNS

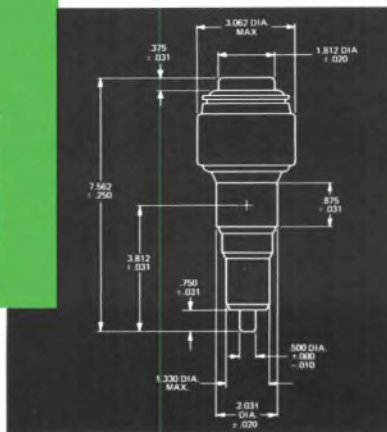


60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

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Type CVG-07/1K-5kV

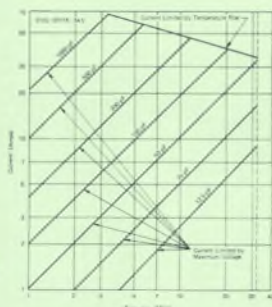
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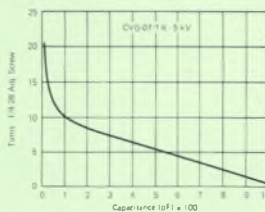
TECHNICAL SPECIFICATIONS

Capacitance Range:	7-1000 pF
Peak Voltage:	5 kV
Continuous rms Current*:	42 amps
Cycle Life:	12,500 min
Weight (nom):	2 lbs.
Flange Mount:	Fixed end uses Amperex No. S-335403 Variable end uses Amperex No. S-335404
Storage Temperature:	-55°C to +125°C
Operating Temperature (measured at seals):	85°C
Rotation:	C.W. Rotation decreases capacitance
Torque:	24 max.
Direct Pull (pounds):	43 max.

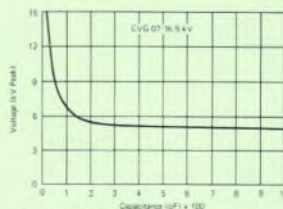
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CAPACITY VS. TURNS

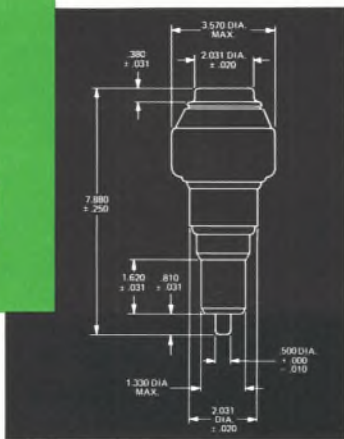


60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

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Type CVG-12/5C-7.5kV

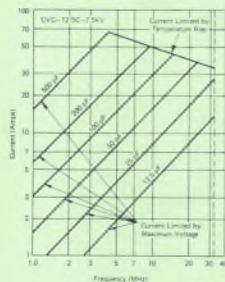
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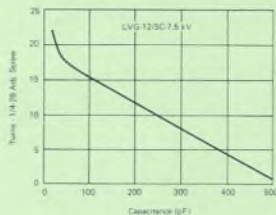
TECHNICAL SPECIFICATIONS

Capacitance Range:	12-500 pF
Peak Voltage:	7.5 kV
Continuous rms Current*:	42 amps
Cycle Life:	12,500 min.
Weight (nom):	2 lbs., 2 oz.
Flange Mount:	Fixed end uses Amperex No. S-335807 Variable end uses Amperex No. S-335806
Storage Temperature:	-55°C to +125°C
Operating Temperature	
(measured at seals):	85°C
Rotation:	C W Rotation decreases capacitance
Torque (in.-oz.):	40 max
Direct Pull (pounds):	46 max.

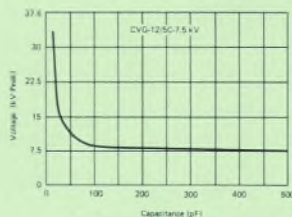
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CONTINUOUS RMS AMPERES VS.
FREQUENCY VS CAPACITY



CAPACITY VS. TURNS

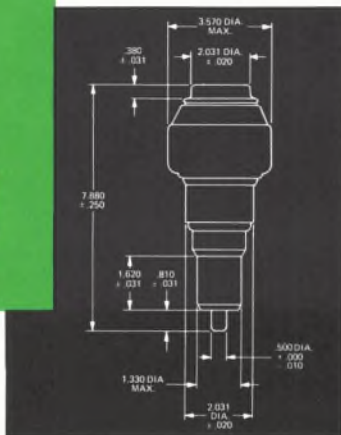


60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

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Type CVG-12/5C-10kV

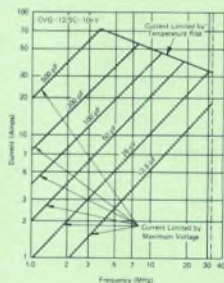
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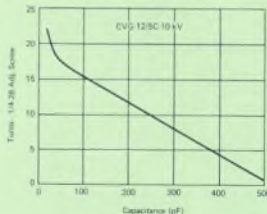
TECHNICAL SPECIFICATIONS

Capacitance Range:	12-500 pF
Peak Voltage:	10 kV
Continuous rms Current ^a :	42 amps
Cycle Life:	12,500 min.
Weight (nom):	2 lbs., 2 oz
Flange Mount:	Fixed end uses Amperex No. S-335807 Variable end uses Amperex No. S-335806
Storage Temperature:	-55°C to +125°C
Operating Temperature (measured at seals):	85°C
Rotation:	C.W. Rotation decreases capacitance
Torque (in.-oz.):	40 max.
Direct Pull (pounds):	46 max.

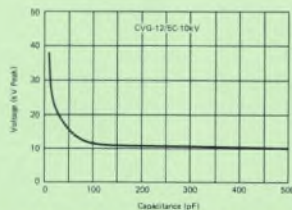
^aCurrent limitations are dependent on voltage, frequency and ambient conditions. For further information please contact Amperex.



CONTINUOUS RMS AMPERES VS.
FREQUENCY VS CAPACITY



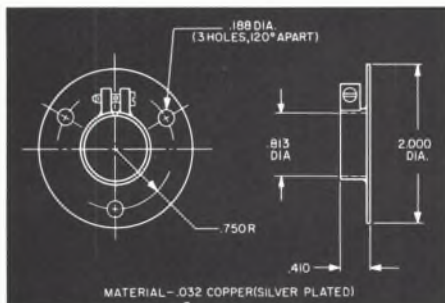
CAPACITY VS. TURNS



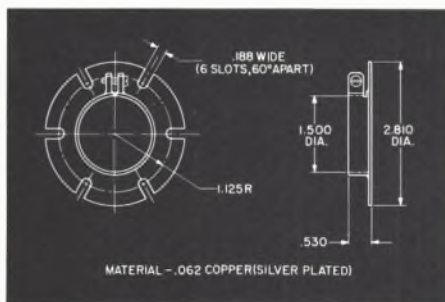
60 CYCLE PEAK TEST VOLTAGE VS. CAPACITY

Accessories

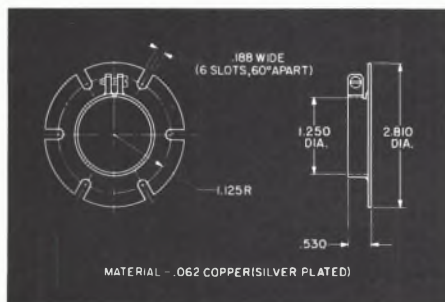
FLANGE MOUNTS



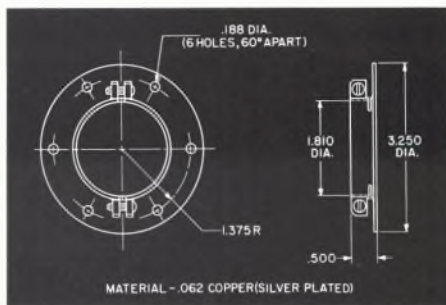
S-334759



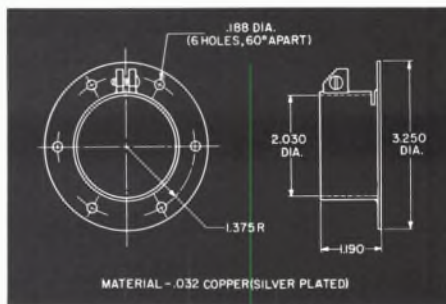
S-334760



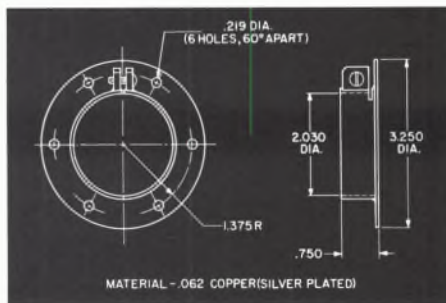
S-334761



S-335403



S-335404



S-335807

HICKSVILLE DIVISION
AMPEREX ELECTRONIC CORPORATION
HICKSVILLE, NEW YORK 11802

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TOMORROW'S THINKING IN TODAY'S PRODUCTS®

Information on Amperex VACUUM CAPACITORS is available from Field Sales Offices

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TWX: 710-324-1937

29 Whalley Avenue
New Haven, Connecticut 06511
Tel: 203-777-6279

24 Maple Court, P.O. Box 447
E. Longmeadow, Massachusetts 01028
Tel: 413-525-3059

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Buffalo, N. Y. 14226
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Tel: 215-434-5220

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Harrisburg, Pennsylvania 17109
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4391 Crest Heights Road
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Tel: 304-HU 6-6127

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Tel: 301-823-5063

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P.O. Box 4760
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Tel: 504-887-5225

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Tel: 404-261-6060-61

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Raleigh, North Carolina 27609
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