

# SCR Commutation Capacitors

## A97F8600 / A97F8700 Series      600 to 1500 Volts Peak

This family of capacitors is designed for high-current applications, such as (1) SCR commutation, (2) snubbers for SCRs, GTOs and other power semiconductors, and (3) for any other circuits where the combination of frequency and voltage results in high RMS currents. An Application Note is provided to assist in the proper use of these devices. It is strongly recommended that users refer to GE engineers for assistance if there are any questions as to the correct selection of capacitors. The A97F8600/ A97F8700 Series have an all-film dielectric and, due to the much lower dissipation factor, can handle much higher currents than the older film paper designs.



**Advances in capacitor Dielectric technology have made paint unnecessary, in most cases. This along with GE's commitment to environmental programs has led to the elimination of painted cases in this product line. Removal of the paint has minimal affect on the RMS current ratings; see the standard ratings charts for proper application.**

### SPECIFICATIONS

<b>Available Capacitance Range:</b>	1 to 50 $\mu$ F
<b>Capacitance Tolerance:</b>	$\pm$ 10%
<b>Capacitance Variation with Temperature:</b>	$\pm$ 3% from -55 °C to +85 °C
<b>Rated Voltage:</b>	See Ratings Tables. Rating is the Maximum Peak voltage permissible in either polarity.
<b>Rated Current:</b>	See Ratings Tables. The value given is for derating purposes only. Refer to the Application Note on Page 12 to determine the required derating. In no circumstances should the RMS Current rating of the terminals be exceeded.
<b>Operating Temperature:</b>	-40 °C to +75 °C
<b>Storage Temperature:</b>	-55 °C to +90 °C
<b>Operating Life:</b>	40,000 hours with 95% survival with proper derating
<b>Dissipation Factor:</b>	0.02% maximum
<b>Case Material/Finish:</b>	<b>Oval Case &amp; Cover:</b> <b>Unpainted Aluminum</b> <b>Rectangular Case &amp; Cover:</b> <b>Unpainted Steel</b>
<b>Terminations/Hardware:</b>	1/4 - 20 screw thread studs (60 A RMS maximum) 3/8 - 16 screw thread studs (100 A RMS maximum) Case Styles C* and D* have 100-A terminals. Nut and washer hardware is supplied in bag
<b>Dielectric Fluid:</b>	A97F8600/ A97F8700 series:      Dielektrol VII
<b>Internal Protection:</b>	These capacitors do not contain an internal protection mechanism. The user is responsible for ensuring that the capacitors are correctly applied for safe use.

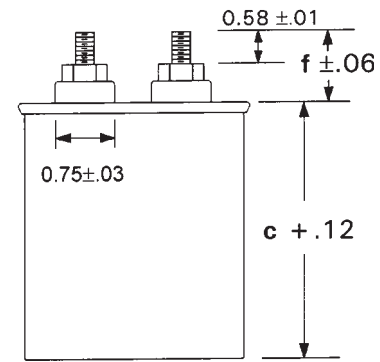
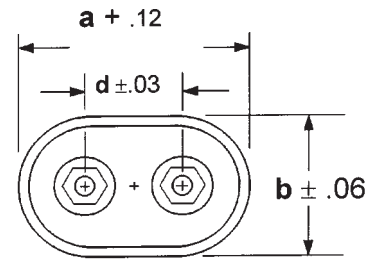
**SCR Commutation Capacitors  
(All Dimensions in Inches)**

**STANDARD RATINGS \***

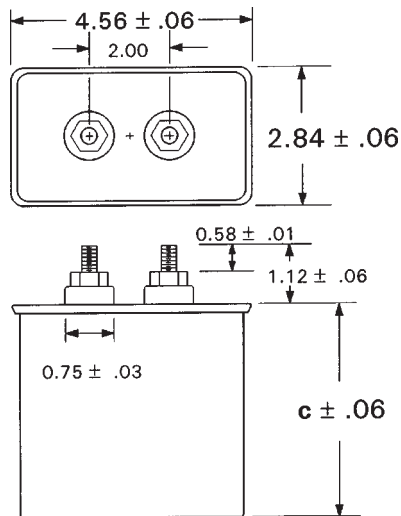
Capacitance (μF)	Catalog #	Case Style	Height c (in)	Current (A)
<b>600 Volts Peak</b>				
2	A97F8670	A	2.38	38
5	A97F8671	A	4.50	86
10	A97F8672	C	4.25	136
20	A97F8673	D	5.25	235
30	A97F8674	D	7.25	339
40	A97F8675	G	5.18	414
50	A97F8676	G	6.25	610
<b>800 Volts Peak</b>				
1	A97F8677	A	2.62	28
2	A97F8678	A	3.50	47
5	A97F8679	C	3.88	92
10	A97F8680	C	5.75	158
20	A97F8681	G	4.62	276
25	A97F8682	G	5.62	340
30	A97F8683	G	6.25	394

\* ALL UNITS ARE UNPAINTED CASE & COVER

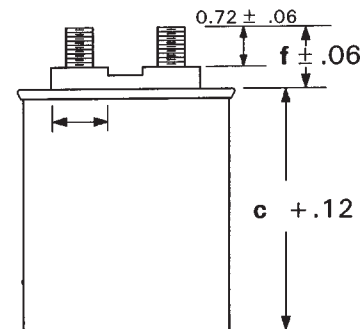
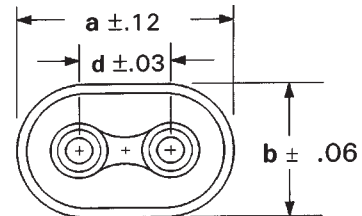
**Case Styles A, C and D**



**Case Style G**



**Case Styles C\* and D\***



Case Style	a	b	d	f
A	2.16	1.31	0.81	1.18
C	2.91	1.91	1.38	1.12
D	3.66	1.97	1.38	1.12
C*	2.91	1.91	1.25	0.91
D*	3.66	1.97	1.25	0.91

# SCR Commutation Capacitors

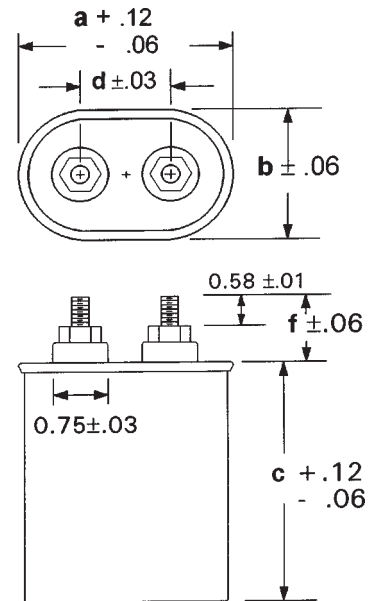
(All Dimensions in Inches)

## STANDARD RATINGS \*

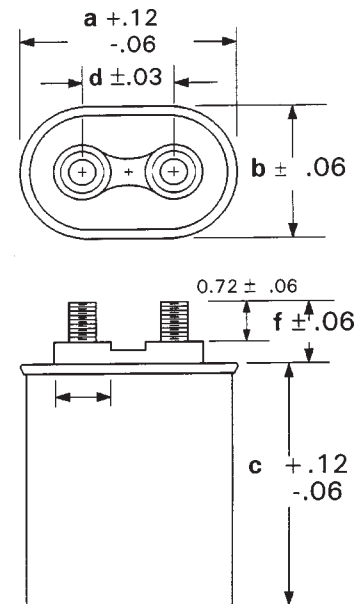
Capacitance (μF)	Catalog #	Case Style	Height c (in)	Current (A)
<b>1000 Volts Peak</b>				
2	A97F8614	A	4.75	55
3	A97F8615	C	3.88	71
5	A97F8616	C	4.75	102
5	A97F8617	C*	5.25	107
10	A97F8618	D	6.25	182
10	A97F8619	D*	6.75	189
<b>1500 Volts Peak</b>				
1	A97F8620	A	3.88	35
2	A97F8621	C	3.88	58
3	A97F8622	C	4.50	76
5	A97F8623	C	6.25	116
5	A97F8624	C*	6.75	121
10	A97F8625	G	5.18	207

\* ALL UNITS ARE UNPAINTED CASE & COVER

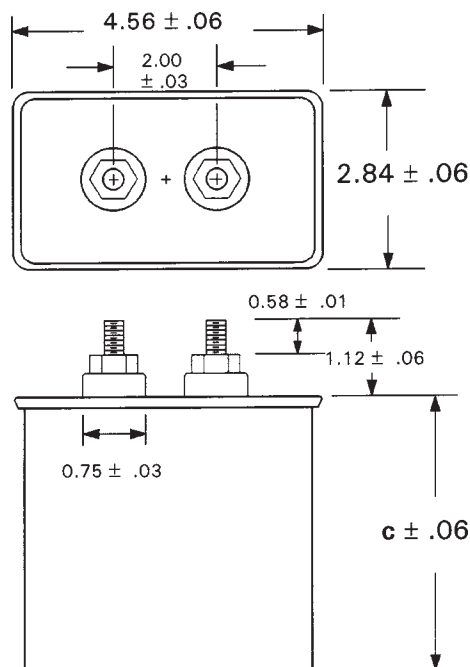
## Case Styles A, C and D



## Case Styles C\* and D\*



## Case Style G



Case Style	a	b	d	f
A	2.16	1.31	0.81	1.18
C	2.91	1.91	1.38	1.12
D	3.66	1.97	1.38	1.12
C*	2.91	1.91	1.25	0.91
D*	3.66	1.97	1.25	0.91

# Mounting Hardware

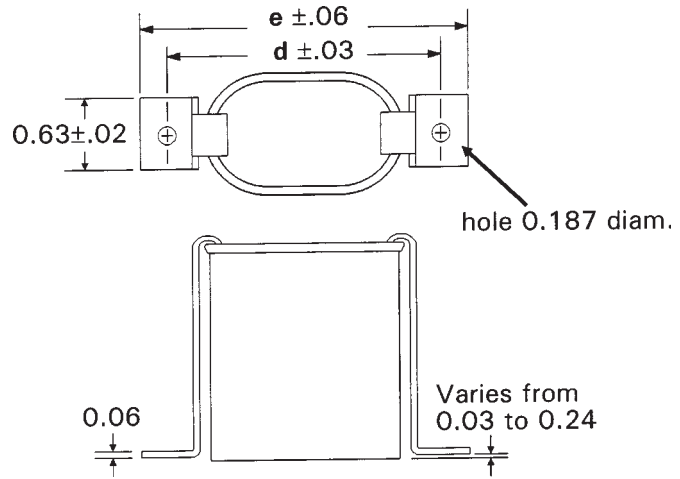
(All Dimensions in Inches)

## FOOTED BRACKETS FOR OVAL CASE STYLES

(2 per Capacitor)

For the proper bracket, match the capacitor case height to the case height shown next to the bracket part

Case Height	Bracket Part Number
2.12	302C920000210
2.38	302C920000200
2.62	302C920000200
2.88	302C920000113
3.12	302C920000179
3.50	302C920000119
3.88	302C920000115
4.25	302C920000122
4.50	302C920000211
4.75	302C920000116
5.25	302C920000153
5.50	302C920000233
5.75	302C920000209
6.25	302C920000152
6.75	302C920000213
7.25	302C920000214



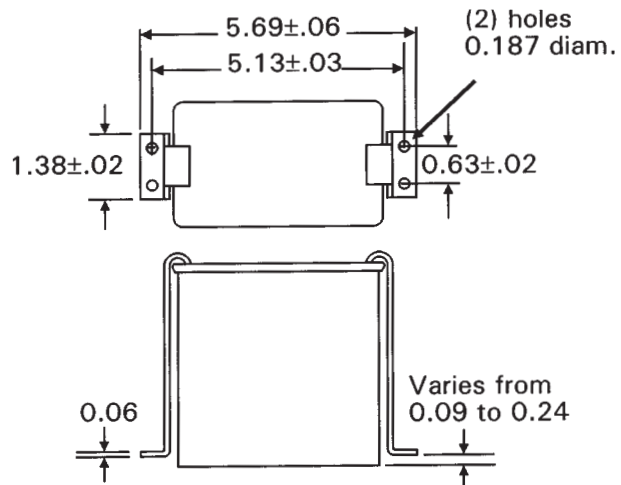
Case Style	d	e
**A	2.56	3.00
B	3.13	3.56
C	3.38	3.81
D	4.13	4.56

\*\* Cannot be used on "A" base size units with threaded terminals (Aluminum covers).

## FOOTED BRACKETS FOR RECTANGULAR CASE STYLE G

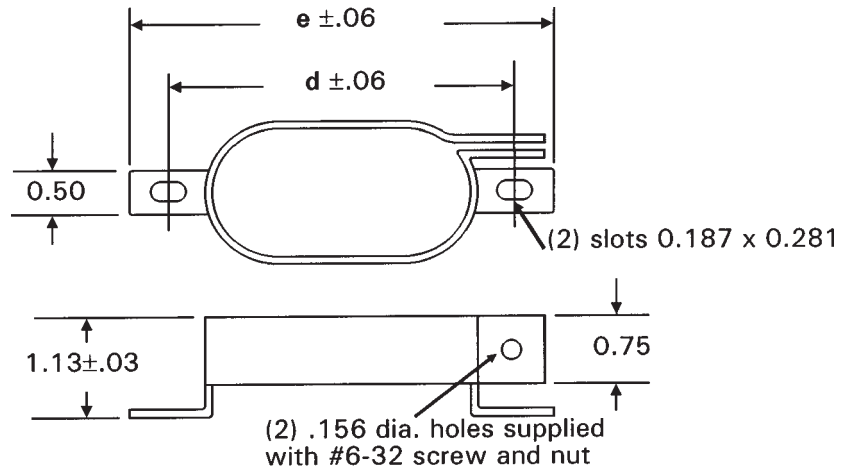
(2 per Capacitor)

Case Height	Bracket Part Number
5.18	302C920000189
6.25	302C920000190
7.25	302C920000207
8.00	302C920000194
9.00	302C920000196



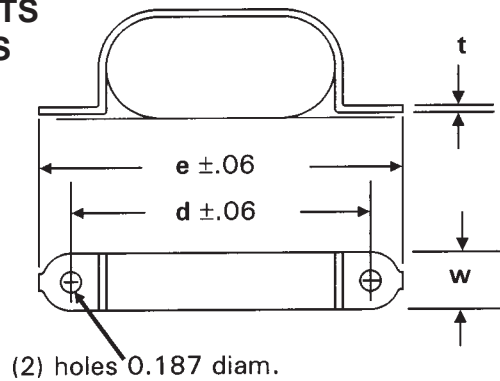
# Mounting Hardware (All Dimensions in Inches)

## UNIVERSAL WRAPAROUND BRACKETS FOR OVAL CASE STYLES



Case Style	Bracket Part number	d	e
A	128A2244AC021	2.69	3.13
B	128A2244AB025	3.27	3.70
C	128A2244AB022	3.44	3.88
D	128A2244AB023	4.19	4.63

## WRAPAROUND BRACKETS FOR OVAL CASE STYLES



Case Style	Bracket Part Number	d	e	w	t
A	9827065000021	2.56	2.94	0.50	0.02
B	9827065000031	3.06	3.50	0.63	0.02
C	614A301000061	3.31	3.81	0.75	0.03
D	614A301000051	4/06	4.56	0.75	0.03