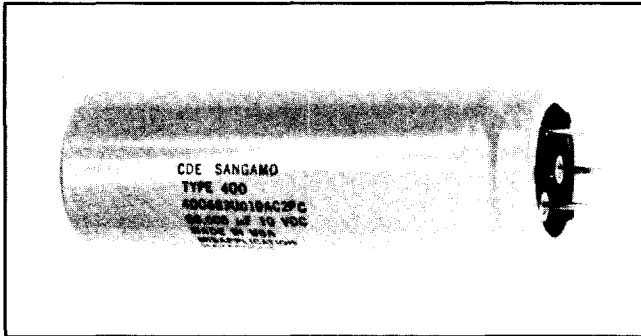


## Long Life High Ripple Computer Grade, 95°C Type 400-Standard/Type 400X-Max Cap/Type 400R-Max Ripple



Designed for minicomputers and other long life power supply filter applications, type 400 delivers nearly the capacitance of the type 4CM but with 2 to 3 times the life. Type 400R is the best value for high ripple applications.

### Performance Highlights:

- Capacitance 56 uF to 50,000 uF, -10% +75%
  - Voltage 6.3 Vdc to 450 Vdc
  - Operating temperature -40°C +95°C
  - 2,000 hours load life test at +95°C
  - 1,500 hours full-ripple life test at +85°C
  - 250 hours shelf life test at 95°C
- Leakage current  $\leq 0.003$  CV uA (4 mA max)

### Ratings:

Capacitance uF	ESR max ohms		Ripple amps @85°C		Nominal Case Size D x L (inches)	Catalog Number	Case Code
	120Hz	20kHz	120Hz, 20kHz	20kHz			
<b>6.3 Vdc — 9 Vdc Surge</b>							
27000	0.0400	0.0270	6.9	9.4	1 3/8 x 1 1/8	400R273U6R3AK8	AK
27000	0.0440	0.0300	4.6	5.9	1 3/8 x 1 1/8	400273U6R3AK8	AK
39000	0.0440	0.0300	4.6	5.9	1 3/8 x 1 1/8	400X393U6R3AK8	AK
39000	0.0260	0.0170	9.2	12.3	1 3/8 x 2 1/8	400R393U6R3AA8	AA
39000	0.0280	0.0200	6.0	7.6	1 3/8 x 2 1/8	400393U6R3AA8	AA
56000	0.0210	0.0150	7.2	9.1	1 3/8 x 2 1/8	400563U6R3AH8	AH
56000	0.0190	0.0130	11.1	14.6	1 3/8 x 2 1/8	400R563U6R3AH8	AH
61000	0.0280	0.0200	6.0	7.6	1 3/8 x 2 1/8	400X613U6R3AA8	AA
68000	0.0160	0.0110	12.5	16.4	1 3/8 x 3 1/8	400R683U6R3AB8	AB
68000	0.0170	0.0120	8.1	10.1	1 3/8 x 3 1/8	400683U6R3AB8	AB
82000	0.0150	0.0110	8.9	10.9	1 3/8 x 3 1/8	400823U6R3AJ8	AJ
82000	0.0130	0.0091	13.7	17.8	1 3/8 x 3 1/8	400R823U6R3AJ8	AJ
83000	0.0210	0.0150	7.2	9.1	1 3/8 x 2 1/8	400X833U6R3AH8	AH
100000	0.0200	0.0160	8.0	8.9	2 x 2 1/8	400104U6R3BA8	BA
100000	0.0150	0.0110	14.0	16.5	2 x 2 1/8	400R104U6R3BA8	BA
100000	0.0110	0.0080	14.7	18.8	1 3/8 x 4 1/8	400R104U6R3AC8	AC
100000	0.0130	0.0094	9.5	11.5	1 3/8 x 4 1/8	400104UR3AC8	AC
110000	0.0210	0.0160	7.6	8.7	1 3/8 x 2 1/8	400X114U6R3EA8	EA
120000	0.0100	0.0076	17.0	20.4	1 3/8 x 3 1/8	400R124U6R3EB8	EB
120000	0.0130	0.0100	10.2	11.5	1 3/8 x 3 1/8	400124U6R3EB8	EB
130000	0.0150	0.0110	8.9	10.9	1 3/8 x 3 1/8	400X134U6R3AJ8	AJ
140000	0.0200	0.0160	8.0	8.9	2 x 2 1/8	400X144U6R3BA8	BA
150000	0.0110	0.0090	11.0	12.3	1 3/8 x 3 1/8	400154U6R3EJ8	EJ
150000	0.0089	0.0066	18.3	21.8	1 3/8 x 3 1/8	400R154U6R3EJ8	EJ
150000	0.0130	0.0094	9.5	11.5	1 3/8 x 4 1/8	400X154U6R3AC8	AC
170000	0.0120	0.0086	9.9	11.9	1 3/8 x 4 1/8	400X174U6R3AD8	AD
180000	0.0100	0.0081	11.6	13.0	1 3/8 x 4 1/8	400184U6R3EC8	EC
180000	0.0078	0.0059	19.5	22.9	1 3/8 x 4 1/8	400R184U6R3EC8	EC
190000	0.0150	0.0130	9.6	10.5	2 x 2 1/8	400X194U6R3BH8	BH
220000	0.0100	0.0082	12.3	13.4	2 x 4 1/8	400224U6R3BC8	BC
220000	0.0071	0.0056	21.4	17.2	2 x 4 1/8	400R224U6R3BC8	BC
240000	0.0130	0.0100	10.8	24.3	2 x 3 1/8	400X244U6R3BB8	BB
270000	0.0089	0.0076	12.9	14.0	2 x 4 1/8	400274U6R3BD8	BD
270000	0.0065	0.0052	22.5	25.3	2 x 4 1/8	400R274U6R3BD8	BD
270000	0.0100	0.0081	11.6	13.0	1 3/8 x 4 1/8	400X274U6R3EC8	EC
290000	0.0110	0.0091	11.6	12.7	2 x 3 1/8	400X294U6R3BJ8	BJ
330000	0.0079	0.0068	13.6	14.5	2 x 5 1/8	400334U6R3BF8	BF

Capacitance uF	ESR max ohms		Ripple amps @85°C		Nominal Case Size D x L (inches)	Catalog Number	Case Code
	120Hz	20kHz	120Hz, 20kHz	20kHz			
<b>6.3 Vdc — 9 Vdc Surge</b>							
330000	0.0057	0.0046	23.6	26.1	2 x 5 1/8	400R334U6R3BF8	BF
350000	0.0100	0.0082	12.3	13.4	2 x 4 1/8	400X354U6R3BC8	BC
400000	0.0089	0.0076	12.9	14.0	2 x 4 1/8	400X404U6R3BD8	BD
450000	0.0083	0.0071	13.3	14.3	2 x 5 1/8	400X454U6R3BE8	BE
500000	0.0079	0.0068	13.6	14.5	2 x 5 1/8	400X504U6R3BF8	BF
<b>7.5 Vdc — 10 Vdc Surge</b>							
22000	0.0440	0.0300	4.5	5.9	1 3/8 x 1 1/8	400223U7R5AK8	AK
22000	0.0410	0.0270	6.9	9.4	1 3/8 x 1 1/8	400R223U7R5AK8	AK
33000	0.0260	0.0170	9.1	12.3	1 3/8 x 2 1/8	400R333U7R5AA8	AA
37000	0.0440	0.0300	4.5	5.9	1 3/8 x 1 1/8	400X373U7R5AK8	AK
39000	0.0290	0.0200	6.0	7.6	1 3/8 x 2 1/8	400393U7R5AA8	AA
47000	0.0220	0.0150	7.2	9.1	1 3/8 x 2 1/8	400473U7R5AH8	AH
47000	0.0200	0.0130	11.0	14.6	1 3/8 x 2 1/8	400R473U7R5AH8	AH
56000	0.0160	0.0110	12.4	16.4	1 3/8 x 3 1/8	400R563U7R5AB8	AB
58000	0.0290	0.0200	6.0	7.6	1 3/8 x 2 1/8	400X583U7R5AA8	AA
68000	0.0170	0.0120	8.1	10.1	1 3/8 x 3 1/8	400683U7R5AB8	AB
68000	0.0130	0.0091	13.6	17.8	1 3/8 x 3 1/8	400R683U7R5AJ8	AJ
79000	0.0220	0.0150	7.2	9.1	1 3/8 x 2 1/8	400X793U7R5AH8	AH
82000	0.0200	0.0160	8.0	8.9	2 x 2 1/8	400823U7R5BA8	BA
82000	0.0120	0.0080	14.6	18.8	1 3/8 x 4 1/8	400R823U7R5AC8	AC
82000	0.0130	0.0094	9.4	11.5	1 3/8 x 4 1/8	400823U7R5AC8	AC
100000	0.0110	0.0087	16.5	19.4	2 x 2 1/8	400R104U7R5BH8	BH
100000	0.0170	0.0120	8.1	10.1	1 3/8 x 3 1/8	400X104U7R5AB8	AB
110000	0.0210	0.0160	7.5	8.7	1 3/8 x 2 1/8	400X114U7R5EA8	EA
120000	0.0150	0.0130	9.5	10.5	2 x 2 1/8	400124U7R5BH8	BH
120000	0.0094	0.0072	18.6	21.6	2 x 3 1/8	400R124U7R5BB8	BB
130000	0.0200	0.0160	8.0	8.9	2 x 2 1/8	400X134U7R5BA8	BA
140000	0.0130	0.0094	9.4	11.5	1 3/8 x 4 1/8	400X144U7R5AC8	AC
150000	0.0130	0.0100	10.7	11.8	2 x 3 1/8	400154U7R5BB8	BB
150000	0.0081	0.0063	20.1	23.1	2 x 3 1/8	400R154U7R5BJ8	BJ
150000	0.0079	0.0059	19.3	22.9	1 3/8 x 4 1/8	400R154U7R5EC8	EC
180000	0.0150	0.0130	9.5	10.5	2 x 2 1/8	400X184U7R5BH8	BH
180000	0.0110	0.0091	11.6	12.7	2 x 3 1/8	400184U7R5BJ8	BJ
180000	0.0072	0.0056	21.3	24.3	2 x 4 1/8	400R184U7R5BC8	BC
180000	0.0100	0.0081	11.6	13.0	1 3/8 x 4 1/8	400184U7R5EC8	EC
190000	0.0110	0.0079	10.3	12.3	1 3/8 x 5 1/8	400X194U7R5AE8	AE









# RADIAL LEADED CAPACITORS

Capacitance µF	ESR max ohms		Ripple amps @85°C		Nominal Case Size D x L (inches)	Catalog Number	Case Code
	120Hz	20kHz	120Hz, 20kHz	120Hz, 20kHz			
<b>350 Vdc — 400 Vdc Surge</b>							
340	0.3200	0.2100	1.8	2.5	1½ x 2½	400X341U350AA8	AA
390	0.2400	0.1500	3.7	5.2	2 x 2½	400R391U350BA8	BA
390	0.2500	0.1600	2.6	3.5	2 x 2½	400391U350BA8	BA
470	0.2100	0.1400	3.5	4.8	1½ x 4½	400R471U350AC8	AC
470	0.2100	0.1400	2.5	3.4	1½ x 4½	400471U350AC8	AC
480	0.2300	0.1500	2.2	3.0	1½ x 2½	400X481U350AH8	AH
560	0.1700	0.1100	4.6	6.4	2 x 2½	400R561U350BH8	BH
560	0.1800	0.1100	3.2	4.4	2 x 2½	400561U350BH8	BH
620	0.1900	0.1300	2.7	3.5	1½ x 2½	400X621U350EA8	EA
680	0.1400	0.0870	5.4	7.4	2 x 3½	400R681U350BB8	BB
680	0.1400	0.0900	3.7	5.1	2 x 3½	400681U350BB8	BB
790	0.1600	0.1100	3.1	3.9	2 x 2½	400X791U350BA8	BA
820	0.1200	0.0780	3.8	5.1	1½ x 4½	400821U350EC8	EC
820	0.1200	0.0760	5.4	7.4	1½ x 4½	400R821U350EC8	EC
880	0.1300	0.0820	3.2	4.3	1½ x 4½	400X881U350AC8	AC
1000	0.0940	0.0610	6.5	8.9	2 x 4½	400R102U350BC8	BC
1000	0.0960	0.0630	4.5	6.1	2 x 4½	400102U350BC8	BC
1100	0.1100	0.0790	3.8	4.8	2 x 2½	400X112U350BH8	BH
1200	0.0840	0.0550	4.9	6.6	2 x 4½	400122U350BD8	BD
1200	0.0820	0.0530	7.1	9.6	2 x 4½	400R122U350BD8	BD
1400	0.0900	0.0620	4.4	5.6	2 x 3½	400X142U350BB8	BB
1500	0.0750	0.0490	5.2	6.9	2 x 5½	400152U350BE8	BE
1500	0.0670	0.0440	5.4	7.2	2 x 5½	400152U350BF8	BF
1500	0.0650	0.0420	7.9	10.7	2 x 5½	400R152U350BF8	BF
1600	0.0750	0.0510	4.6	5.9	1½ x 4½	400X162U350EC8	EC
1700	0.0740	0.0510	4.9	6.1	2 x 3½	400X172U350BJ8	BJ
2000	0.0630	0.0440	5.4	6.7	2 x 4½	400X202U350BC8	BC
2400	0.0550	0.0390	5.8	7.2	2 x 4½	400X242U350BD8	BD
2700	0.0490	0.0340	6.1	7.5	2 x 5½	400X272U350BE8	BE
3000	0.0440	0.0310	6.4	7.9	2 x 5½	400X302U350BF8	BF
<b>400 Vdc — 450 Vdc Surge</b>							
100	1.0000	0.6000	1.4	2.0	1½ x 1½	400R101U400AK8	AK
100	1.0000	0.6000	1.0	1.4	1½ x 1½	400101U400AK8	AK
150	0.6000	0.3600	1.3	1.9	1½ x 2½	400151U400AA8	AA
150	0.6000	0.3600	1.9	2.7	1½ x 2½	400R151U400AA8	AA
190	0.5600	0.3400	1.3	1.8	1½ x 1½	400X191U400AK8	AK
220	0.4300	0.2600	1.6	2.3	1½ x 2½	400221U400AH8	AH
220	0.4300	0.2600	2.3	3.3	1½ x 2½	400R221U400AH8	AH
270	0.3300	0.2000	1.9	2.7	1½ x 3½	400271U400AB8	AB
270	0.3300	0.2000	2.7	3.9	1½ x 3½	400R271U400AB8	AB
310	0.3300	0.2100	1.8	2.5	1½ x 2½	400X311U400AA8	AA
330	0.2700	0.1700	2.1	3.0	1½ x 3½	400331U400AJ8	AJ
390	0.2300	0.1400	2.3	3.3	1½ x 4½	400391U400AC8	AC
390	0.2300	0.1400	3.3	4.7	1½ x 4½	400R391U400AC8	AC
440	0.2400	0.1500	2.2	3.0	1½ x 2½	400X441U400AH8	AH
470	0.1900	0.1100	4.4	6.2	2 x 2½	400R471U400BH8	BH
470	0.1900	0.1200	3.1	4.3	2 x 2½	400471U400BH8	BH
560	0.1900	0.1100	2.5	3.5	1½ x 3½	400X561U400AB8	AB
570	0.2000	0.1300	2.6	3.5	1½ x 2½	400X571U400EA8	EA
680	0.1300	0.0800	3.6	5.0	1½ x 4½	400681U400EC8	EC
680	0.1300	0.0780	5.1	7.3	1½ x 4½	400R681U400EC8	EC
730	0.1700	0.1100	3.0	3.9	2 x 2½	400X731U400BA8	BA
810	0.1300	0.0800	3.1	4.3	1½ x 4½	400X811U400AC8	AC
820	0.1200	0.0760	4.0	5.5	2 x 3½	400821U400BJ8	BJ
820	0.1200	0.0730	5.7	8.0	2 x 3½	400R821U400BJ8	BJ
1000	0.1200	0.0790	3.7	4.8	2 x 2½	400X102U400BH8	BH
1000	0.1000	0.0620	6.2	8.8	2 x 4½	400R102U400BC8	BC
1000	0.1000	0.0640	4.3	6.0	2 x 4½	400102U400BC8	BC
1200	0.0800	0.0500	4.9	6.8	2 x 5½	400122U400BE8	BE
1200	0.0780	0.0480	7.1	10.0	2 x 5½	400R122U400BE8	BE
1300	0.0930	0.0620	4.3	5.5	2 x 3½	400X132U400BB8	BB
1500	0.0780	0.0500	4.5	5.9	1½ x 4½	400X152U400EC8	EC
1600	0.0770	0.0510	4.8	6.1	2 x 3½	400X162U400BJ8	BJ
1900	0.0650	0.0440	5.2	6.6	2 x 4½	400X192U400BC8	BC
2200	0.0570	0.0380	5.6	7.1	2 x 4½	400X222U400BD8	BD
2500	0.0510	0.0340	5.9	7.5	2 x 5½	400X252U400BE8	BE
2800	0.0460	0.0310	6.2	7.8	2 x 5½	400X282U400BF8	BF
<b>450 Vdc — 500 Vdc Surge</b>							
56	1.1000	0.6100	1.3	1.9	1½ x 1½	400R560U450AK8	AK
68	1.1000	0.6200	0.9	1.4	1½ x 1½	400680U450AK8	AK
100	0.6400	0.3700	1.8	2.6	1½ x 2½	400R101U450AA8	AA
120	0.6500	0.3700	1.3	1.9	1½ x 2½	400121U450AA8	AA

Capacitance µF	ESR max ohms		Ripple amps @85°C		Nominal Case Size D x L (inches)	Catalog Number	Case Code
	120Hz	20kHz	120Hz, 20kHz	120Hz, 20kHz			
<b>450 Vdc — 500 Vdc Surge</b>							
140	0.6200	0.3600	1.2	1.7	1½ x 1½	400X141U450AK8	AK
150	0.4600	0.2600	2.2	3.3	1½ x 2½	400R151U450AH8	AH
180	0.4600	0.2700	1.6	2.3	1½ x 2½	400181U450AH8	AH
180	0.3600	0.2100	2.6	3.8	1½ x 3½	400R181U450AB8	AB
220	0.3600	0.2100	1.8	2.7	1½ x 3½	400221U450AB8	AB
220	0.2900	0.1700	2.9	4.2	1½ x 3½	400R221U450AJ8	AJ
240	0.3700	0.2200	1.6	2.4	1½ x 2½	400X241U450AA8	AA
270	0.2900	0.1700	2.4	3.4	2 x 2½	400271U450BA8	BA
270	0.2500	0.1400	3.2	4.7	1½ x 4½	400R271U450AC8	AC
330	0.2000	0.1200	4.2	6.1	2 x 2½	400R331U450BH8	BH
330	0.2500	0.1400	2.2	3.3	1½ x 4½	400331U450AC8	AC
390	0.2100	0.1200	2.9	4.2	2 x 2½	400391U450BH8	BH
390	0.1600	0.0910	4.9	7.1	2 x 3½	400R391U450BB8	BB
390	0.1600	0.0940	4.5	6.6	1½ x 3½	400R391U450EJ8	EJ
430	0.2100	0.1200	2.4	3.4	1½ x 3½	400X431U450AB8	AB
440	0.2200	0.1300	2.5	3.4	1½ x 2½	400X441U450EA8	EA
470	0.1400	0.0800	4.9	7.1	1½ x 4½	400R471U450EC8	EC
550	0.1800	0.1100	2.9	3.8	2 x 2½	400X551U450BA8	BA
560	0.1600	0.0940	3.4	4.9	2 x 3½	400561U450BB8	BB
560	0.1300	0.0750	5.4	7.9	2 x 3½	400R561U450BJ8	BJ
620	0.1500	0.0850	2.9	4.1	1½ x 4½	400X621U450AC8	AC
680	0.1300	0.0770	3.8	5.4	2 x 3½	400681U450BJ8	BJ
680	0.0950	0.0550	6.4	9.3	2 x 4½	400R681U450BD8	BD
780	0.1300	0.0830	3.5	4.7	2 x 2½	400X781U450BH8	BH
820	0.0970	0.0580	4.5	6.3	2 x 4½	400821U450BD8	BD
820	0.0840	0.0490	6.8	9.8	2 x 5½	400R821U450BE8	BE
1000	0.1000	0.0650	4.1	5.4	2 x 3½	400X102U450BB8	BB
1000	0.0860	0.0510	4.7	6.7	2 x 5½	400102U450BE8	BE
1100	0.0860	0.0530	4.3	5.8	1½ x 4½	400X112U450EC8	EC
1200	0.0840	0.0540	4.6	6.0	2 x 3½	400X122U450BJ8	BJ
1400	0.0720	0.0460	5.0	6.5	2 x 4½	400X142U450BC8	BC
1700	0.0620	0.0400	5.4	7.0	2 x 4½	400X172U450BD8	BD
1900	0.0560	0.0360	5.7	7.4	2 x 5½	400X192U450BE8	BE
2100	0.0500	0.0320	6.0	7.7	2 x 5½	400X212U450BF8	BF