

# Type 4CMC 85 °C, High-Cap, Computer Grade, Radial Leaded

## Best Value Printed Circuit Mount Type



The Type 4CMC is the PC-mount version of the high-capacitance Type DCMC screw-terminal capacitor and has about 50% more capacitance per can size through 250 V. It's for bus filtering applications where more capacitance or smaller can size is important like welders and energy storage. It's a much better value than a large snap-in capacitor. Its extended cathode foil assures cool operation with heatflow from the capacitor element to the can in all mounting orientations.

### Highlights

- ◆ Much better value than large snap-in capacitor
- ◆ Ripple Currents to > 50 amps at 55 °C
- ◆ 3-leads for reverse proof, strong mounting
- ◆ Printed-circuit mounting version of DCMC
- ◆ Thermal-Pak™ extended cathode construction

### Specifications

<b>Operating Temperature:</b>	-40 °C to +85 °C
<b>Rated Voltage:</b>	16 to 500 Vdc
<b>Capacitance:</b>	210 µF to 330,000 µF ± 20%
<b>Capacitance Tolerance:</b>	± 20%
<b>DC Leakage Current:</b>	≤ 6 √CV µA, 6 max, 5 min,
<b>Cold Impedance:</b>	-20 °C multiple of 25 °C Z ≤
<b>Ripple Current Multipliers:</b>	8 for 16 to 50 V, 4 for 63 to 100 V, 3 for 160 V & up

#### Ambient Temperatures

45 °C	55 °C	65 °C	75 °C	85 °C
2.00	2.00	1.73	1.41	1.00

#### Frequency

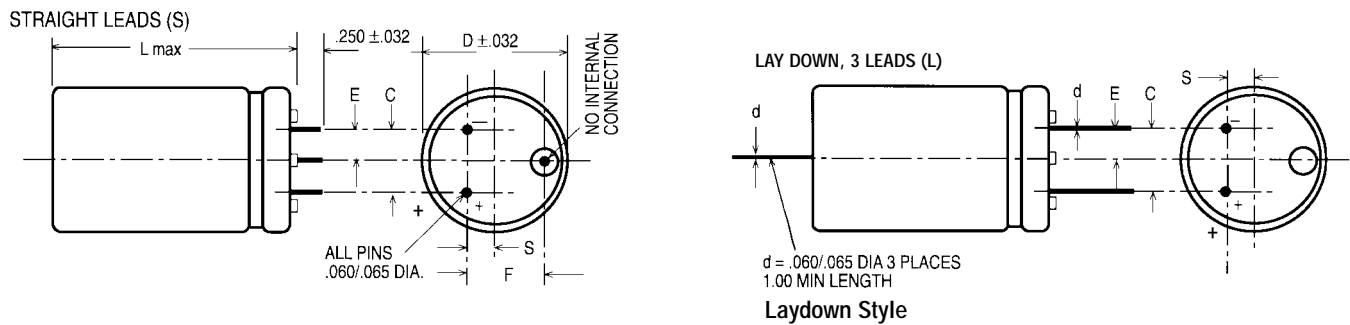
	50 Hz	60 Hz	120 Hz	360 Hz	1 kHz	5 kHz	10 kHz & up
6.3 to 50 V	0.80	0.85	1.00	1.05	1.08	1.08	1.08
63 to 250 V	0.80	0.83	1.00	1.15	1.20	1.20	1.20
300 to 500 V	0.78	0.80	1.00	1.30	1.40	1.40	1.40

<b>EIA Ripple Life:</b>	2000 h @ 85 °C and full load Δ Capacitance ±20% ESR 200% of limit DCL 100% of limit
<b>Shelf Life:</b>	500 h @ 85 °C, capacitance, ESR and DCL, initial requirements
<b>Vibration:</b>	10 to 55 Hz, 0.06" and 10 g max, 2 h in each plane.

Aluminum  
Radial Leaded  
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## Outline Drawings



## Case Dimensions

Case Code	Inches						Millimeters					
	D ±.031	L MAX	C ±.015	S ±.031	E ±.031	F ±.015	D±.78	L MAX	C±.78	S±.78	E±.78	F±.38
AK	1.375	1.75	0.50	0.175	0.25	0.55	34.93	44.45	12.70	4.45	6.35	13.97
AA	1.375	2.25	0.50	0.175	0.25	0.55	34.93	57.15	12.70	4.45	6.35	13.97
AH	1.375	2.75	0.50	0.175	0.25	0.55	34.98	69.85	12.70	4.45	6.35	13.97
AB	1.375	3.25	0.50	0.175	0.25	0.55	34.93	82.55	12.70	4.45	6.35	13.97
AJ	1.375	3.75	0.50	0.175	0.25	0.55	34.93	95.25	12.70	4.45	6.35	13.97
AC	1.375	4.25	0.50	0.175	0.25	0.55	34.93	107.95	12.70	4.45	6.35	13.97
AD	1.375	4.75	0.50	0.175	0.25	0.55	34.93	120.65	12.70	4.45	6.35	13.97
AE	1.375	5.25	0.50	0.175	0.25	0.55	34.93	133.35	12.70	4.45	6.35	13.97
AF	1.375	5.75	0.50	0.175	0.25	0.55	34.93	146.05	12.70	4.45	6.35	13.97
EA	1.75	2.25	0.70	0.375	0.35	0.90	44.45	57.15	17.78	9.53	8.89	22.86
EH	1.75	2.75	0.70	0.375	0.35	0.90	44.45	69.85	17.78	9.53	8.89	22.86
EB	1.75	3.25	0.70	0.375	0.35	0.90	44.45	82.55	17.78	9.53	8.89	22.86
EJ	1.75	3.75	0.70	0.375	0.35	0.90	44.45	95.25	17.78	9.53	8.89	22.86
EC	1.75	4.25	0.70	0.375	0.35	0.90	44.45	107.95	17.78	9.53	8.89	22.86
ED	1.75	4.75	0.70	0.375	0.35	0.90	44.45	120.65	17.78	9.53	8.89	22.86
EE	1.75	5.25	0.70	0.375	0.35	0.90	44.45	133.35	17.78	9.53	8.89	22.86
EF	1.75	5.75	0.70	0.375	0.35	0.90	44.45	146.05	17.78	9.53	8.89	22.86
BA	2.00	2.25	0.80	0.425	0.40	1.00	50.80	57.15	20.32	10.80	10.16	25.40
BH	2.00	2.75	0.80	0.425	0.40	1.00	50.80	69.85	20.32	10.80	10.16	25.40
BB	2.00	3.25	0.80	0.425	0.40	1.00	50.80	82.55	20.32	10.80	10.16	25.40
BJ	2.00	3.75	0.80	0.425	0.40	1.00	50.80	95.25	20.32	10.80	10.16	25.40
BC	2.00	4.25	0.80	0.425	0.40	1.00	50.80	107.95	20.32	10.80	10.16	25.40
BD	2.00	4.75	0.80	0.425	0.40	1.00	50.80	120.65	20.32	10.80	10.16	25.40
BE	2.00	5.25	0.80	0.425	0.40	1.00	50.80	133.25	20.32	10.80	10.16	25.40
BF	2.00	5.75	0.80	0.425	0.40	1.00	50.80	146.05	20.32	10.80	10.16	25.40

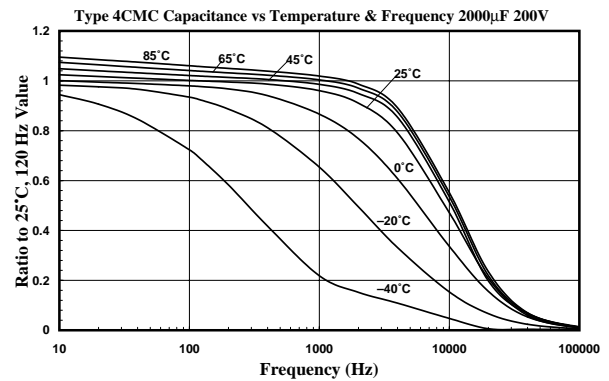
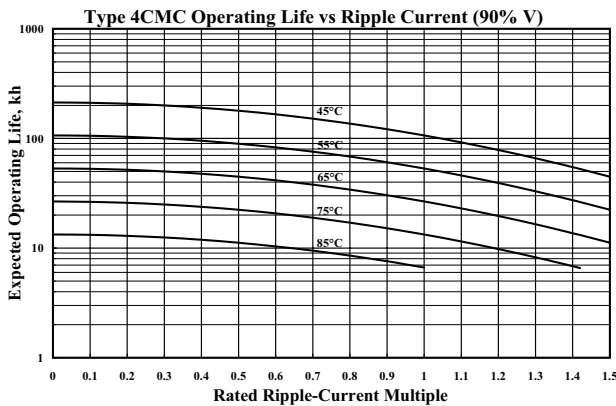
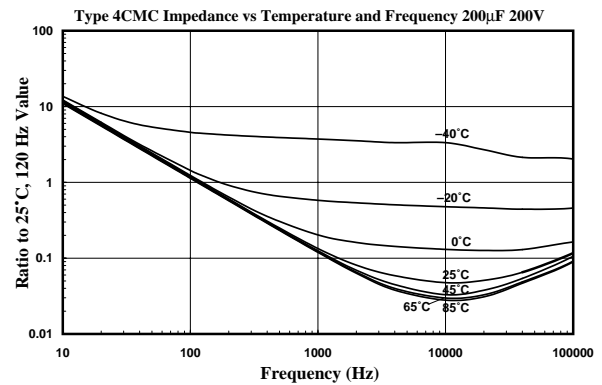
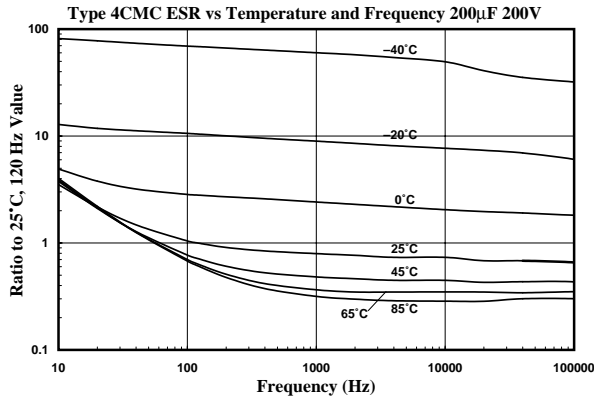
Aluminum Radial Leaded Capacitors

## Part Numbering System

<b>4CMC</b>	<b>382</b>	<b>M</b>	<b>100</b>	<b>AK</b>	<b>8</b>	
<b>Type</b>	<b>Capacitance</b>	<b>Tolerance</b>	<b>Voltage</b>	<b>Case Code</b>	<b>Insulation</b>	<b>Terminal</b>
4CMX	382 = 3800 μF 212 = 2100 μF	M = ±20% T = -10% +50% U = -10% +75%	6R3 = 6.3 V 063 = 63 V 100 = 100 V		0 = Bare Can 8 = PVC & standoffs 9 = Polyester & standoffs	(blank) = Straight Leads L = Lay Down (3 leads)

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## Typical Performance Curves



## Ratings

Cap. $\mu\text{F}$	Catalog Part Number	ESR Max. 25 °C		Ripple Amps, 85 °C		Nom Size D X L (in)
		120 Hz	20 kHz	120 Hz	20 kHz	
<b>16 Vdc (20 Vdc Surge)</b>						
33000	4CMC333M016AK8	34.2	27.2	5.7	6.4	1 3/8 X 1 3/4
55000	4CMC553M016AA8	21.2	16.9	8.4	9.4	1 3/8 X 2 1/4
77000	4CMC773M016AH8	18.3	14.6	9.3	10.4	1 3/8 X 2 3/4
79000	4CMC793M016EA8	23.0	18.3	9.2	10.4	1 3/4 X 2 1/4
99000	4CMC993M016AB8	14.8	11.8	11.1	12.4	1 3/8 X 3 1/4
110000	4CMC114M016EH8	17.4	13.8	11.4	12.7	1 3/4 X 2 3/4
120000	4CMC124M016AJ8	12.8	10.2	12.5	14.0	1 3/8 X 3 3/4
120000	4CMC124M016BA8	17.7	14.1	10.0	11.2	2 X 2 1/4
140000	4CMC144M016AC8	12.5	9.9	13.3	15.0	1 3/8 X 4 1/4
140000	4CMC144M016EB8	15.8	12.6	12.9	14.4	1 3/4 X 3 1/4
150000	4CMC154M016BH8	14.5	11.6	11.9	13.3	2 X 2 3/4
160000	4CMC164M016AD8	11.5	9.1	14.5	16.2	1 3/8 X 4 3/4
180000	4CMC184M016AE8	10.8	8.6	15.8	17.7	1 3/8 X 5 1/4
180000	4CMC184M016EJ8	15.0	12.0	13.6	15.3	1 3/4 X 3 3/4
190000	4CMC194M016BB8	12.3	9.8	13.6	15.2	2 X 3 1/4
200000	4CMC204M016AF8	10.3	8.2	16.9	19.0	1 3/8 X 5 3/4
220000	4CMC224M016EC8	13.0	10.3	15.2	17.0	1 3/4 X 4 1/4
240000	4CMC244M016BJ8	11.7	9.3	15.6	17.5	2 X 3 3/4
250000	4CMC254M016ED8	11.5	9.2	17.0	19.0	1 3/4 X 4 3/4
280000	4CMC284M016EE8	10.5	8.4	18.9	21.2	1 3/4 X 5 1/4
280000	4CMC284M016BC8	11.4	9.1	15.9	17.8	2 X 4 1/4
310000	4CMC314M016EF8	9.7	7.7	21.0	23.5	1 3/4 X 5 3/4
330000	4CMC334M016BD8	10.7	8.5	16.9	19.0	2 X 4 3/4

Cap. $\mu\text{F}$	Catalog Part Number	ESR Max. 25 °C		Ripple Amps, 85 °C		Nom Size D X L (in)
		120 Hz	20 kHz	120 Hz	20 kHz	
370000	4CMC374M016BE8	10.0	8.0	18.1	20.3	2 X 5 1/4
420000	4CMC424M016BF8	9.0	7.2	19.8	22.2	2 X 5 3/4
<b>25 Vdc (30 Vdc Surge)</b>						
22000	4CMC223M025AK8	63.2	50.4	4.2	4.7	1 3/8 X 1 3/4
37000	4CMC373M025AA8	23.9	19.1	7.9	8.8	1 3/8 X 2 1/4
52000	4CMC523M025AH8	20.6	16.4	8.8	9.8	1 3/8 X 2 3/4
54000	4CMC543M025EA8	22.9	18.3	9.3	10.4	1 3/4 X 2 1/4
67000	4CMC673M025AB8	16.6	13.2	10.5	11.7	1 3/8 X 3 1/4
78000	4CMC783M025EH8	19.0	15.1	10.9	12.2	1 3/4 X 2 3/4
82000	4CMC823M025AJ8	14.3	11.4	11.8	13.2	1 3/8 X 3 3/4
83000	4CMC833M025BA8	19.0	15.2	10.9	12.2	2 X 2 1/4
97000	4CMC973M025AC8	13.9	11.1	12.6	14.2	1 3/8 X 4 1/4
100000	4CMC104M025BH8	15.5	12.4	13.0	14.6	2 X 2 3/4
100000	4CMC1003M025EB8	17.3	13.8	12.3	13.8	1 3/4 X 3 1/4
110000	4CMC114M025AD8	12.8	10.2	13.8	15.4	1 3/8 X 4 3/4
120000	4CMC124M025AE8	11.9	9.5	15.0	16.8	1 3/8 X 5 1/4
120000	4CMC124M025EJ8	16.4	13.0	13.1	14.6	1 3/4 X 3 3/4
130000	4CMC134M025BB8	12.7	10.1	15.2	17.0	2 X 3 1/4
140000	4CMC144M025AF8	11.4	9.1	16.1	18.0	1 3/8 X 5 3/4
150000	4CMC154M025EC8	14.1	11.2	14.6	16.3	1 3/4 X 4 1/4
160000	4CMC164M025BJ8	12.5	10.0	17.1	19.2	2 X 3 3/4
170000	4CMC174M025ED8	12.5	10.0	16.3	18.3	1 3/4 X 4 3/4
190000	4CMC194M025EE8	11.3	9.0	18.2	20.4	1 3/4 X 5 1/4
190000	4CMC194M025BC8	12.2	9.7	17.4	19.5	2 X 4 1/4

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## Ratings

Cap. $\mu$ F	Catalog Part Number	ESR Max. 25 °C		Ripple Amps, 85 °C		Nom Size D X L (in)
		120 Hz (m $\Omega$ )	20 kHz (m $\Omega$ )	120 Hz (A)	20 kHz (A)	
210000	4CMC214M025EF8	10.5	8.3	20.2	22.6	1 3/4 X 5 3/4
220000	4CMC224M025BD8	11.4	9.1	18.6	20.8	2 X 4 3/4
250000	4CMC254M025BE8	10.6	8.5	19.9	22.3	2 X 5 1/4
280000	4CMC284M025BF8	9.6	7.6	21.8	24.4	2 X 5 3/4
<b>35 Vdc (40 Vdc Surge)</b>						
15000	4CMC153M035AK8	63.2	50.4	4.2	4.7	1 3/8 X 1 3/4
25000	4CMC253M035AA8	23.9	19.1	7.9	8.8	1 3/8 X 2 1/4
35000	4CMC353M035AH8	20.6	16.4	8.8	9.8	1 3/8 X 2 3/4
38000	4CMC383M035EA8	22.7	18.1	9.3	10.4	1 3/4 X 2 1/4
45000	4CMC453M035AB8	16.6	13.2	10.5	11.7	1 3/8 X 3 1/4
52000	4CMC523M035EH8	19.0	15.1	10.9	12.2	1 3/4 X 2 3/4
55000	4CMC553M035AJ8	14.3	11.4	11.8	13.2	1 3/8 X 3 3/4
56000	4CMC563M035BA8	19.0	15.2	10.9	12.2	2 X 2 1/4
65000	4CMC653M035AC8	13.9	11.1	12.6	14.2	1 3/8 X 4 1/4
67000	4CMC673M035EB8	17.3	13.8	12.3	13.8	1 3/4 X 3 1/4
68000	4CMC683M035BH8	15.5	12.4	13.0	14.6	2 X 2 3/4
75000	4CMC753M035AD8	12.8	10.2	13.8	15.4	1 3/8 X 4 3/4
83000	4CMC833M035EJ8	16.4	13.0	13.1	14.6	1 3/4 X 3 3/4
84000	4CMC843M035AE8	11.9	9.5	15.2	17.1	1 3/8 X 5 1/4
87000	4CMC873M035BB8	12.7	10.1	15.2	17.0	2 X 3 1/4
93000	4CMC933M035AF8	11.4	9.1	16.1	18.1	1 3/8 X 5 3/4
100000	4CMC104M035EC8	14.1	11.2	14.6	16.3	1 3/4 X 4 1/4
110000	4CMC114M035BJ8	12.5	10.0	17.1	19.2	2 X 3 3/4
110000	4CMC114M035ED8	12.5	10.0	16.3	18.3	1 3/4 X 4 3/4
130000	4CMC134M035EE8	11.3	9.0	18.2	20.4	1 3/4 X 5 1/4
130000	4CMC134M035BC8	12.2	9.7	17.4	19.5	2 X 4 1/4
140000	4CMC144M035EF8	10.5	8.3	20.2	22.6	1 3/4 X 5 3/4
150000	4CMC154M035BD8	11.4	9.1	18.6	20.8	2 X 4 3/4
170000	4CMC174M035BE8	10.6	8.5	20.0	22.4	2 X 5 1/4
190000	4CMC194M035BF8	9.6	7.6	21.7	24.4	2 X 5 3/4
<b>50 Vdc (65 Vdc Surge)</b>						
10000	4CMC103M050AK8	44.3	35.3	5.0	5.7	1 3/8 X 1 3/4
17000	4CMC173M050AA8	27.3	21.8	7.4	8.2	1 3/8 X 2 1/4
24000	4CMC243M050AH8	23.4	18.7	8.2	9.2	1 3/8 X 2 3/4
27000	4CMC273M050EA8	28.2	22.5	8.4	9.4	1 3/4 X 2 1/4
31000	4CMC313M050AB8	18.9	15.1	9.8	11.0	1 3/8 X 3 1/4
33000	4CMC333M050BA8	27.9	22.3	9.0	10.1	2 X 2 1/4
36000	4CMC363M050EH8	21.2	16.9	10.3	11.5	1 3/4 X 2 3/4
38000	4CMC383M050AJ8	16.2	13.0	11.1	12.4	1 3/8 X 3 3/4
39000	4CMC393M050EB8	20.3	16.2	11.3	12.7	1 3/4 X 3 1/4
45000	4CMC453M050AC8	15.7	12.5	11.9	13.3	1 3/8 X 4 1/4
47000	4CMC473M050AD8	14.9	11.9	12.7	14.3	1 3/8 X 4 3/4
47000	4CMC473M050BH8	19.6	15.6	11.6	13.0	2 X 2 3/4
48000	4CMC483M050EJ8	19.2	15.3	12.1	13.5	1 3/4 X 3 3/4
53000	4CMC533M050AE8	13.9	11.0	13.9	15.6	1 3/8 X 5 1/4
56000	4CMC563M050BB8	16.3	13.0	13.4	15.0	2 X 3 1/4
58000	4CMC583M050EC8	16.5	13.1	13.5	15.1	1 3/4 X 4 1/4
60000	4CMC603M050AF8	13.2	10.5	15.0	16.8	1 3/8 X 5 3/4
67000	4CMC673M050ED8	14.5	11.6	15.1	17.0	1 3/4 X 4 3/4
68000	4CMC683M050BJ8	15.0	12.0	15.6	17.5	2 X 3 3/4
76000	4CMC763M050EE8	13.1	10.5	16.9	18.9	1 3/4 X 5 1/4
82000	4CMC823M050BC8	14.3	11.4	16.1	18.0	2 X 4 1/4
85000	4CMC853M050EF8	12.1	9.6	18.8	21.1	1 3/4 X 5 3/4
91000	4CMC913M050BD8	12.7	10.1	17.6	19.8	2 X 4 3/4
100000	4CMC104M050BE8	11.8	9.4	19.0	21.3	2 X 5 1/4
120000	4CMC124M050BF8	10.5	8.4	20.7	23.2	2 X 5 3/4

Cap. $\mu$ F	Catalog Part Number	ESR Max. 25 °C		Ripple Amps, 85 °C		Nom Size D X L (in)
		120 Hz (m $\Omega$ )	20 kHz (m $\Omega$ )	120 Hz (A)	20 kHz (A)	
<b>63 Vdc (75 Vdc Surge)</b>						
7500	4CMC752M063AK8	44.1	35.1	5.1	5.7	1 3/8 X 1 3/4
12000	4CMC123M063AA8	26.8	21.4	7.4	8.3	1 3/8 X 2 1/4
16000	4CMC163M063EA8	28.2	22.5	8.3	9.3	1 3/4 X 2 1/4
16000	4CMC163M063AH8	23.5	18.8	8.2	9.2	1 3/8 X 2 3/4
21000	4CMC213M063AB8	18.7	14.9	9.9	11.1	1 3/8 X 3 1/4
22000	4CMC223M063EH8	21.2	16.9	10.3	11.5	1 3/4 X 2 3/4
26000	4CMC263M063AJ8	16.9	13.5	10.9	12.2	1 3/8 X 3 3/4
26000	4CMC263M063BA8	27.7	22.1	9.0	10.1	2 X 2 1/4
29000	4CMC293M063EB8	20.9	16.7	11.2	12.5	1 3/4 X 3 1/4
30000	4CMC303M063AC8	17.3	13.8	11.3	12.7	1 3/8 X 4 1/4
33000	4CMC333M063BH8	19.5	15.5	11.6	13.0	2 X 2 3/4
35000	4CMC353M063AD8	15.7	12.5	12.4	13.9	1 3/8 X 4 3/4
36000	4CMC363M063EJ8	20.0	16.0	11.8	13.2	1 3/4 X 3 3/4
38000	4CMC383M063AE8	14.5	11.5	13.8	15.5	1 3/8 X 5 1/4
43000	4CMC433M063EC8	17.2	13.7	13.2	14.8	1 3/4 X 4 1/4
44000	4CMC443M063AF8	13.7	10.9	14.7	16.5	1 3/8 X 5 3/4
47000	4CMC473M063BB8	16.2	12.9	13.4	15.0	2 X 3 1/4
50000	4CMC503M063ED8	15.2	12.2	14.8	16.6	1 3/4 X 4 3/4
53000	4CMC533M063BJ8	15.1	12.0	15.6	17.4	2 X 3 3/4
57000	4CMC573M063EE8	13.8	11.0	16.5	18.5	1 3/4 X 5 1/4
59000	4CMC593M063BC8	14.5	11.5	16.0	17.9	2 X 4 1/4
64000	4CMC643M063EF8	12.7	10.1	18.4	20.6	1 3/4 X 5 3/4
69000	4CMC693M063BD8	12.8	10.2	17.6	19.7	2 X 4 3/4
79000	4CMC793M063BE8	11.6	9.2	19.1	21.4	2 X 5 1/4
89000	4CMC893M063BF8	10.7	8.5	20.6	23.1	2 X 5 3/4
5600	4CMC562M080AK8	59.6	47.5	4.4	4.9	1 3/8 X 1 3/4
8500	4CMC852M080AA8	36.2	28.8	6.4	7.2	1 3/8 X 2 1/4
12000	4CMC123M080EA8	38.4	30.6	7.2	8.0	1 3/4 X 2 1/4
12000	4CMC123M080AH8	31.5	25.1	7.1	7.9	1 3/8 X 2 3/4
15000	4CMC153M080AB8	31.6	25.2	7.6	8.5	1 3/8 X 3 1/4
17000	4CMC173M080EH8	34.0	27.1	8.1	9.1	1 3/4 X 2 3/4
18000	4CMC183M080BA8	32.8	26.1	8.3	9.3	2 X 2 1/4
19000	4CMC193M080AJ8	25.2	20.1	8.9	10.0	1 3/8 X 3 3/4
22000	4CMC223M080AC8	20.9	16.7	10.3	11.5	1 3/8 X 4 1/4
22000	4CMC223M080EB8	30.5	24.3	9.3	10.4	1 3/4 X 3 1/4
23000	4CMC233M080BH8	23.1	18.4	10.7	11.9	2 X 2 3/4
26000	4CMC263M080AD8	19.1	15.2	11.2	12.6	1 3/8 X 4 3/4
27000	4CMC273M080EJ8	25.1	20.0	10.5	11.8	1 3/4 X 3 3/4
29000	4CMC293M080AE8	17.7	14.1	12.5	14.0	1 3/8 X 5 1/4
30000	4CMC303M080BB8	19.2	15.3	12.3	13.8	2 X 3 1/4
32000	4CMC323M080AF8	16.7	13.3	13.3	14.9	1 3/8 X 5 3/4
32000	4CMC323M080EC8	21.5	17.1	11.8	13.2	1 3/4 X 4 1/4
37000	4CMC373M080BJ8	18.0	14.3	14.3	16.0	2 X 3 3/4
37000	4CMC373M080ED8	18.9	15.1	13.3	14.9	1 3/4 X 4 3/4
43000	4CMC433M080BC8	15.9	12.6	15.3	17.1	2 X 4 1/4
43000	4CMC433M080EE8	17.0	13.6	14.8	16.6	1 3/4 X 5 1/4
48000	4CMC483M080EF8	15.6	12.4	16.6	18.6	1 3/4 X 5 3/4
50000	4CMC503M080BD8	13.6	10.8	17.1	19.1	2 X 4 3/4
58000	4CMC583M080BE8	12.2	9.7	18.6	20.9	2 X 5 1/4
65000	4CMC653M080BF8	11.2	8.9	20.1	22.5	2 X 5 3/4
<b>100 Vdc (125 Vdc Surge)</b>						
3800	4CMC382M100AK8	58.6	46.7	4.4	4.9	1 3/8 X 1 3/4
6300	4CMC632M100AA8	35.6	28.3	6.5	7.2	1 3/8 X 2 1/4
8100	4CMC812M100AH8	32.8	26.2	2.2	2.5	1 3/8 X 2 3/4

Aluminum Radial Leaded Capacitors

# Type 4CMC, 85 °C, High-Cap, Computer Grade, Radial Leaded

## Ratings

Cap. $\mu$ F	Catalog Part Number	ESR Max. 25 °C		Ripple Amps, 85 °C		Nom Size D X L (in)
		120 Hz (m $\Omega$ )	20 kHz (m $\Omega$ )	120 Hz (A)	20 kHz (A)	
8200	4CMC822M100EA8	39.2	31.2	7.1	7.9	1 3/4 X 2 1/4
10000	4CMC103M100AB8	32.9	26.2	7.4	8.3	1 3/8 X 3 1/4
11000	4CMC113M100BA8	35.9	28.7	7.9	8.9	2 X 2 1/4
12000	4CMC123M100EH8	34.7	27.7	8.0	9.0	1 3/4 X 2 3/4
13000	4CMC133M100AJ8	31.7	25.3	7.9	8.9	1 3/8 X 3 3/4
15000	4CMC153M100EB8	31.1	24.8	9.2	10.3	1 3/4 X 3 1/4
15000	4CMC153M100AC8	27.4	21.8	0.9	1.1	1 3/8 X 4 1/4
16000	4CMC163M100BH8	26.4	21.0	10.0	11.2	2 X 2 3/4
17000	4CMC173M100AD8	24.2	19.3	10.0	11.2	1 3/8 X 4 3/4
19000	4CMC193M100EJ8	25.6	20.4	10.4	11.7	1 3/4 X 3 3/4
20000	4CMC203M100AE8	21.9	17.5	11.2	12.6	1 3/8 X 5 1/4
21000	4CMC213M100BB8	22.9	18.3	11.3	12.6	2 X 3 1/4
22000	4CMC223M100AF8	20.1	16.0	12.1	13.6	1 3/8 X 5 3/4
22000	4CMC223M100EC8	21.9	17.5	11.7	13.1	1 3/4 X 4 1/4
26000	4CMC263M100ED8	19.3	15.4	13.2	14.7	1 3/4 X 4 3/4
26000	4CMC263M100BJ8	23.6	18.8	12.5	13.9	2 X 3 3/4
30000	4CMC303M100EE8	17.3	13.8	14.7	16.5	1 3/4 X 5 1/4
30000	4CMC303M100BC8	20.2	16.1	13.5	15.2	2 X 4 1/4
33000	4CMC333M100EF8	15.8	12.6	16.4	18.4	1 3/4 X 5 3/4
35000	4CMC353M100BD8	17.8	14.2	14.9	16.7	2 X 4 3/4
40000	4CMC403M100BE8	16.1	12.8	16.3	18.2	2 X 5 1/4
45000	4CMC453M100BF8	14.7	11.7	17.5	19.6	2 X 5 3/4
<b>160 Vdc (200 Vdc Surge)</b>						
1500	4CMC152M160AK8	81.7	65.2	3.7	4.2	1 3/8 X 1 3/4
2500	4CMC252M160AA8	51.8	41.3	5.3	6.0	1 3/8 X 2 1/4
3500	4CMC352M160AH8	37.5	29.9	6.5	7.3	1 3/8 X 2 3/4
3700	4CMC372M160EA8	47.1	37.5	6.1	6.9	1 3/4 X 2 1/4
4500	4CMC452M160AB8	29.6	23.6	7.8	8.8	1 3/8 X 3 1/4
4800	4CMC482M160BA8	35.4	28.2	7.2	8.1	2 X 2 1/4
5200	4CMC522M160EH8	29.0	23.1	8.3	9.3	1 3/4 X 2 3/4
5500	4CMC552M160AJ8	23.5	18.7	29.3	32.8	1 3/8 X 3 3/4
6600	4CMC662M160AC8	20.2	16.1	10.5	11.7	1 3/8 X 4 1/4
6800	4CMC682M160EB8	22.5	17.9	10.2	11.5	1 3/4 X 3 1/4
7100	4CMC712M160AD8	18.6	14.8	11.4	12.8	1 3/8 X 4 3/4
7100	4CMC712M160BH8	26.5	21.2	9.0	10.1	2 X 2 3/4
8000	4CMC802M160AE8	16.8	13.4	12.6	14.2	1 3/8 X 5 1/4
8300	4CMC832M160EJ8	18.5	14.7	11.7	13.1	1 3/4 X 3 3/4
9000	4CMC902M160AF8	19.2	15.3	12.4	13.9	1 3/8 X 5 3/4
9300	4CMC932M160BB8	20.6	16.4	10.8	12.1	2 X 3 1/4
10000	4CMC1002M160EC8	15.8	12.6	13.1	14.6	1 3/4 X 4 1/4
11000	4CMC113M160BJ8	16.9	13.5	13.3	14.9	2 X 3 3/4
12000	4CMC123M160ED8	13.9	11.1	14.7	16.5	1 3/4 X 4 3/4
13000	4CMC133M160EE8	12.5	9.9	16.5	18.4	1 3/4 X 5 1/4
13000	4CMC133M160BC8	14.5	11.6	14.5	16.2	2 X 4 1/4
15000	4CMC153M160EF8	11.4	9.1	18.4	20.6	1 3/4 X 5 3/4
16000	4CMC163M160BD8	12.8	10.2	15.9	17.8	2 X 4 3/4
18000	4CMC183M160BE8	11.5	9.2	17.4	19.5	2 X 5 1/4
20000	4CMC203M160BF8	10.5	8.4	18.8	21.0	2 X 5 3/4
<b>200 Vdc (250 Vdc Surge)</b>						
1200	4CMC122M200AK8	105.2	60.4	3.1	4.1	1 3/8 X 1 3/4
1900	4CMC192M200AA8	66.6	38.2	4.5	5.9	1 3/8 X 2 1/4
2700	4CMC272M200AH8	48.0	27.6	5.4	7.2	1 3/8 X 2 3/4
2700	4CMC272M200EA8	60.0	34.4	5.3	7.0	1 3/4 X 2 1/4
3500	4CMC352M200AB8	37.8	21.7	6.6	8.7	1 3/8 X 3 1/4
3500	4CMC352M200BA8	44.2	30.7	6.6	7.9	2 X 2 1/4
3700	4CMC372M200EH8	38.1	21.9	6.9	9.1	1 3/4 X 2 3/4
4300	4CMC432M200AJ8	29.9	17.2	7.8	10.2	1 3/8 X 3 3/4

Cap. $\mu$ F	Catalog Part Number	ESR Max. 25 °C		Ripple Amps, 85 °C		Nom Size D X L (in)
		120 Hz (m $\Omega$ )	20 kHz (m $\Omega$ )	120 Hz (A)	20 kHz (A)	
4800	4CMC482M200EB8	29.4	16.9	8.5	11.2	1 3/4 X 3 1/4
5000	4CMC502M200BH8	33.1	23.0	8.2	9.8	2 X 2 3/4
5100	4CMC512M200AC8	25.7	14.7	8.8	11.7	1 3/8 X 4 1/4
5800	4CMC582M200AD8	22.6	13.0	9.8	12.9	1 3/8 X 4 3/4
5900	4CMC592M200EJ8	24.1	13.8	9.7	12.7	1 3/4 X 3 3/4
6600	4CMC662M200AE8	20.3	11.6	10.9	14.4	1 3/8 X 5 1/4
6800	4CMC682M200BB8	25.6	17.8	9.8	11.8	2 X 3 1/4
7100	4CMC712M200EC8	20.5	11.8	10.8	14.3	1 3/4 X 4 1/4
7400	4CMC742M200AF8	23.1	13.3	10.7	14.2	1 3/8 X 5 3/4
8100	4CMC812M200BJ8	21.0	14.6	12.2	14.6	2 X 3 3/4
8200	4CMC822M200ED8	17.9	10.3	12.2	16.1	1 3/4 X 4 3/4
9300	4CMC932M200EE8	16.0	9.2	13.7	18.1	1 3/4 X 5 1/4
9500	4CMC952M200BC8	19.1	13.3	12.8	15.4	2 X 4 1/4
10000	4CMC103M200EF8	14.5	8.3	15.4	20.3	1 3/4 X 5 3/4
11000	4CMC113M200BD8	15.7	10.9	14.6	17.5	2 X 4 3/4
12000	4CMC123M200BE8	14.1	9.8	16.0	19.2	2 X 5 1/4
14000	4CMC143M200BF8	12.8	8.9	17.3	20.8	2 X 5 3/4
<b>250 Vdc (300 Vdc Surge)</b>						
890	4CMC891M250AK8	137.0	78.6	2.6	3.4	1 3/8 X 1 3/4
1500	4CMC152M250AA8	86.5	49.7	3.7	4.9	1 3/8 X 2 1/4
1900	4CMC192M250EA8	68.7	39.4	4.8	6.3	1 3/4 X 2 1/4
2100	4CMC212M250AH8	62.3	35.7	4.5	6.0	1 3/8 X 2 3/4
2700	4CMC272M250BA8	54.2	37.6	5.8	7.0	2 X 2 1/4
2700	4CMC272M250AB8	48.8	28.0	5.5	7.2	1 3/8 X 3 1/4
2800	4CMC282M250EH8	47.8	27.4	6.1	8.1	1 3/4 X 2 3/4
3200	4CMC322M250AJ8	38.6	22.1	6.5	8.5	1 3/8 X 3 3/4
3700	4CMC372M250EB8	36.8	21.1	7.6	10.0	1 3/4 X 3 1/4
3800	4CMC382M250BH8	40.5	28.1	7.2	8.7	2 X 2 3/4
3900	4CMC392M250AC8	33.0	18.9	7.4	9.7	1 3/8 X 4 1/4
4400	4CMC442M250AD8	29.0	16.6	8.2	10.8	1 3/8 X 4 3/4
4500	4CMC452M250EJ8	30.1	17.3	8.6	11.4	1 3/4 X 3 3/4
5000	4CMC502M250AE8	25.9	14.9	9.1	12.0	1 3/8 X 5 1/4
5000	4CMC502M250BB8	31.2	21.7	8.7	10.4	2 X 3 1/4
5400	4CMC542M250EC8	25.5	14.7	9.7	12.8	1 3/4 X 4 1/4
5600	4CMC562M250AF8	29.4	16.9	9.0	11.9	1 3/8 X 5 3/4
6200	4CMC622M250BJ8	25.5	17.7	10.7	12.9	2 X 3 3/4
6300	4CMC632M250ED8	22.3	12.8	11.0	14.5	1 3/4 X 4 3/4
7200	4CMC722M250EE8	19.8	11.4	12.3	16.3	1 3/4 X 5 1/4
7300	4CMC732M250BC8	21.7	15.1	11.7	14.0	2 X 4 1/4
8100	4CMC812M250EF8	18.0	10.3	13.8	18.3	1 3/4 X 5 3/4
8500	4CMC852M250BD8	19.0	13.2	12.9	15.5	2 X 4 3/4
9700	4CMC972M250BE8	17.0	11.8	14.2	17.0	2 X 5 1/4
11000	4CMC113M250BF8	15.4	10.7	15.4	18.4	2 X 5 3/4
<b>300 Vdc (350 Vdc Surge)</b>						
520	4CMC521M300AK8	245	141	2.2	2.9	1 3/8 X 1 3/4
870	4CMC871M300AA8	148	84.7	3.1	4.1	1 3/8 X 2 1/4
1200	4CMC122M300AH8	106	60.7	4.0	5.3	1 3/8 X 2 3/4
1300	4CMC132M300EA8	111	63.8	4.2	5.5	1 3/4 X 2 1/4
1600	4CMC162M300BA8	93.2	51.9	5.0	6.7	2 X 2 1/4
1600	4CMC162M300AB8	82.7	47.5	4.8	6.3	1 3/8 X 3 1/4
1800	4CMC182M300EH8	99.2	56.9	4.8	6.3	1 3/4 X 2 3/4
1900	4CMC192M300AJ8	68.0	39.0	5.6	7.4	1 3/8 X 3 3/4
2200	4CMC222M300BH8	67.1	37.4	6.3	8.4	2 X 2 3/4
2300	4CMC232M300AC8	57.9	33.2	6.4	8.4	1 3/8 X 4 1/4
2300	4CMC232M300EB8	76.1	43.7	5.8	7.7	1 3/4 X 3 1/4
2600	4CMC262M300AD8	50.6	29.0	7.1	9.4	1 3/8 X 4 3/4
2900	4CMC292M300AE8	45.0	25.8	7.8	10.3	1 3/8 X 5 1/4
2900	4CMC292M300BB8	51.6	28.7	7.6	10.2	2 X 3 1/4

Aluminum Radial Leaded Capacitors



# Type 4CMC, 85 °C, High-Cap, Computer Grade, Radial Leaded

## Ratings

Cap. $\mu$ F	Catalog Part Number	ESR Max. 25 °C		Ripple Amps, 85 °C		Nom Size D X L (in)
		120 Hz (m $\Omega$ )	20 kHz (m $\Omega$ )	120 Hz (A)	20 kHz (A)	
2900	4CMC292M300EJ8	61.9	35.5	6.8	8.9	1 3/4 X 3 3/4
3300	4CMC332M300AF8	50.7	29.1	7.6	10.1	1 3/8 X 5 3/4
3500	4CMC352M300EC8	52.2	30.0	7.7	10.2	1 3/4 X 4 1/4
3600	4CMC362M300BJ8	51.2	28.5	8.1	10.8	2 X 3 3/4
4000	4CMC402M300ED8	45.3	26.0	8.6	11.4	1 3/4 X 4 3/4
4300	4CMC432M300BC8	43.3	24.1	9.2	12.3	2 X 4 1/4
4600	4CMC462M300EE8	40.1	23.0	9.5	12.6	1 3/4 X 5 1/4
4900	4CMC492M300BD8	38.0	21.2	10.2	13.7	2 X 4 3/4
5100	4CMC512M300EF8	36.0	20.6	10.4	13.7	1 3/4 X 5 3/4
5700	4CMC572M300BE8	33.3	18.5	11.3	15.1	2 X 5 1/4
6400	4CMC642M300BF8	29.9	16.7	12.3	16.5	2 X 5 3/4
<b>350 Vdc (400 Vdc Surge)</b>						
430	4CMC431M350AK8	264.1	151.6	2.1	2.8	1 3/8 X 1 3/4
710	4CMC711M350AA8	158.9	91.2	3.1	4.0	1 3/8 X 2 1/4
1000	4CMC102M350EA8	119.2	68.4	4.1	5.4	1 3/4 X 2 1/4
1000	4CMC102M350AH8	113.9	65.4	3.7	4.9	1 3/8 X 2 3/4
1200	4CMC122M350BA8	98.1	54.6	4.8	6.4	2 X 2 1/4
1300	4CMC132M350EH8	105.1	60.3	4.6	6.1	1 3/4 X 2 3/4
1300	4CMC132M350AB8	89.0	51.1	4.5	6.0	1 3/8 X 3 1/4
1600	4CMC162M350BH8	71.8	40.0	6.0	8.1	2 X 2 3/4
1600	4CMC162M350AJ8	73.2	42.0	5.2	6.9	1 3/8 X 3 3/4
1700	4CMC172M350EB8	80.6	46.3	5.7	7.5	1 3/4 X 3 1/4
1800	4CMC182M350AC8	62.3	35.8	6.0	7.9	1 3/8 X 4 1/4
2100	4CMC212M350BB8	55.1	30.7	7.3	9.7	2 X 3 1/4
2100	4CMC212M350AD8	54.4	31.2	6.7	8.8	1 3/8 X 4 3/4
2100	4CMC212M350EJ8	65.5	37.6	6.5	8.6	1 3/4 X 3 3/4
2400	4CMC242M350AE8	48.3	27.7	7.4	9.8	1 3/8 X 5 1/4
2500	4CMC252M350EC8	55.3	31.7	7.4	9.7	1 3/4 X 4 1/4
2600	4CMC262M350BJ8	47.9	26.7	8.7	11.7	2 X 3 3/4
2700	4CMC272M350AF8	54.5	31.3	7.4	9.7	1 3/8 X 5 3/4
2900	4CMC292M350ED8	47.9	27.5	8.3	11.0	1 3/4 X 4 3/4
3100	4CMC312M350BC8	45.7	25.5	9.0	12.1	2 X 4 1/4
3300	4CMC332M350EE8	42.4	24.3	9.4	12.4	1 3/4 X 5 1/4
3600	4CMC362M350BD8	40.1	22.4	9.9	13.3	2 X 4 3/4
3700	4CMC372M350EF8	38.0	21.8	10.6	14.0	1 3/4 X 5 3/4
4200	4CMC422M350BE8	35.1	19.6	11.0	14.7	2 X 5 1/4
4700	4CMC472M350BF8	31.6	17.6	12.0	16.0	2 X 5 3/4
<b>400 Vdc (450 Vdc Surge)</b>						
320	4CMC321M400AK2B	382	195	1.7	2.4	1 3/8 X 1 3/4
590	4CMC591M400AA2B	212	108	2.6	3.7	1 3/8 X 2 1/4
800	4CMC801M400AH2B	156	79.4	3.2	4.5	1 3/8 X 2 3/4
840	4CMC841M400EA8	154	78.8	3.6	5.0	1 3/4 X 2 1/4
1000	4CMC102M400BA8	130	72.2	4.2	5.6	2 X 2 1/4
1000	4CMC102M400AB2B	119	60.9	3.9	5.5	1 3/8 X 3 1/4
1200	4CMC122M400EH8	107	54.6	4.6	6.4	1 3/4 X 2 3/4
1300	4CMC132M400AJ2B	96.9	49.5	4.5	6.4	1 3/8 X 3 3/4
1400	4CMC142M400BH8	93.6	52.1	5.3	7.1	2 X 2 3/4
1500	4CMC152M400EB8	87.4	44.6	5.5	7.7	1 3/4 X 3 1/4
1500	4CMC152M400AC2B	81.8	41.7	0.5	0.8	1 3/8 X 4 1/4
1600	4CMC162M400AD2B	78.6	40.1	5.5	7.8	1 3/8 X 4 3/4
1800	4CMC182M400EJ8	71.0	36.2	6.3	8.8	1 3/4 X 3 3/4
1800	4CMC182M400AE2B	69.5	35.4	6.2	8.7	1 3/8 X 5 1/4
1900	4CMC192M400BB8	71.9	40.0	6.4	8.5	2 X 3 1/4
2000	4CMC202M400AF2B	77.9	39.7	6.2	8.6	1 3/8 X 5 3/4
2100	4CMC212M400EC8	59.9	30.5	7.1	9.9	1 3/4 X 4 1/4
2300	4CMC232M400BJ8	58.4	32.5	7.9	10.6	2 X 3 3/4
2500	4CMC252M400ED8	51.9	26.5	8.0	11.2	1 3/4 X 4 3/4
2700	4CMC272M400BC8	49.3	27.5	8.7	11.6	2 X 4 1/4

Cap. $\mu$ F	Catalog Part Number	ESR Max. 25 °C		Ripple Amps, 85 °C		Nom Size D X L (in)
		120 Hz (m $\Omega$ )	20 kHz (m $\Omega$ )	120 Hz (A)	20 kHz (A)	
2900	4CMC292M400EE8	45.8	23.4	9.0	12.7	1 3/4 X 5 1/4
3200	4CMC322M400EF8	41.1	21.0	10.2	14.3	1 3/4 X 5 3/4
3200	4CMC322M400BD8	42.8	23.8	9.6	12.9	2 X 4 3/4
3600	4CMC362M400BE8	37.9	21.1	10.6	14.2	2 X 5 1/4
4100	4CMC412M400BF8	34.0	18.9	11.5	15.4	2 X 5 3/4
<b>450 Vdc (500 Vdc Surge)</b>						
330	4CMC331M450AK8	281	143	1.8	2.5	1 3/8 X 1 3/4
490	4CMC491M450AA8	188	95.7	2.5	3.4	1 3/8 X 2 1/4
600	4CMC601M450AH8	138	70.4	3.0	4.1	1 3/8 X 2 3/4
690	4CMC691M450EA8	163	83.3	3.3	4.6	1 3/4 X 2 1/4
860	4CMC861M450BA8	116	64.8	4.1	5.6	2 X 2 1/4
860	4CMC861M450AB8	106	54.0	3.6	5.1	1 3/8 X 3 1/4
930	4CMC931M450EH8	121	61.5	4.1	5.7	1 3/4 X 2 3/4
1000	4CMC102M450AJ8	86.1	43.9	4.2	5.9	1 3/8 X 3 3/4
1100	4CMC112M450BH8	98.9	55.1	4.8	6.5	2 X 2 3/4
1200	4CMC122M450EB8	92.4	47.1	5.0	7.0	1 3/4 X 3 1/4
1200	4CMC122M450AC8	72.7	37.1	4.8	6.8	1 3/8 X 4 1/4
1300	4CMC132M450AD8	69.9	35.7	5.1	7.2	1 3/8 X 4 3/4
1500	4CMC152M450BB8	75.9	42.2	5.8	7.8	2 X 3 1/4
1500	4CMC152M450AE8	61.8	31.5	5.7	8.0	1 3/8 X 5 1/4
1500	4CMC152M450EJ8	75.1	38.3	5.7	8.0	1 3/4 X 3 3/4
1600	4CMC162M450AF8	69.3	35.4	5.7	8.0	1 3/8 X 5 3/4
1800	4CMC182M450EC8	63.3	32.3	6.5	9.1	1 3/4 X 4 1/4
1900	4CMC192M450BJ8	61.7	34.3	7.2	9.7	2 X 3 3/4
2100	4CMC212M450ED8	54.8	28.0	7.3	10.3	1 3/4 X 4 3/4
2200	4CMC222M450BC8	52.1	29.0	7.9	10.6	2 X 4 1/4
2300	4CMC232M450EE8	48.4	24.7	8.3	11.6	1 3/4 X 5 1/4
2600	4CMC262M450EF8	43.5	22.2	9.3	13.0	1 3/4 X 5 3/4
2600	4CMC262M450BD8	45.7	25.4	8.7	11.7	2 X 4 3/4
3100	4CMC312M450BE8	38.8	21.6	9.8	13.1	2 X 5 1/4
3400	4CMC342M450BF8	35.0	19.5	10.7	14.3	2 X 5 3/4
<b>500 Vdc (550 Vdc Surge)</b>						
210	4CMC211M500AK8	487	287	1.5	2.1	1 3/8 X 1 3/4
310	4CMC311M500AA8	325	191	2.1	3.0	1 3/8 X 2 1/4
440	4CMC441M500EA8	238	140	2.9	4.0	1 3/4 X 2 1/4
450	4CMC451M500AH8	225	133	2.6	3.7	1 3/8 X 2 3/4
560	4CMC561M500BA8	193	114	3.4	4.6	2 X 2 1/4
590	4CMC591M500AB8	173	102	3.2	4.5	1 3/8 X 3 1/4
630	4CMC631M500EH8	165	97.2	3.7	5.2	1 3/4 X 2 3/4
730	4CMC731M500AJ8	140	82.6	3.8	5.3	1 3/8 X 3 3/4
780	4CMC781M500BH8	134	78.7	4.4	5.9	2 X 2 3/4
820	4CMC821M500EB8	126	74.4	4.5	6.4	1 3/4 X 3 1/4
820	4CMC821M500AC8	125	73.6	4.2	5.9	1 3/8 X 4 1/4
900	4CMC901M500AD8	113	66.4	4.6	6.5	1 3/8 X 4 3/4
1000	4CMC102M500BB8	103	60.3	5.3	7.1	2 X 3 1/4
1000	4CMC102M500AE8	99	58.5	5.2	7.3	1 3/8 X 5 1/4
1000	4CMC102M500EJ8	103	60.4	5.2	7.3	1 3/4 X 3 3/4
1100	4CMC112M500AF8	114	67.3	5.1	7.1	1 3/8 X 5 3/4
1200	4CMC122M500EC8	86.4	50.9	5.9	8.3	1 3/4 X 4 1/4
1300	4CMC132M500BJ8	83.2	49.0	6.6	8.9	2 X 3 3/4
1400	4CMC142M500ED8	74.8	44.0	6.7	9.4	1 3/4 X 4 3/4
1500	4CMC152M500BC8	70.2	41.3	7.3	9.7	2 X 4 1/4
1600	4CMC162M500EE8	66.0	38.8	7.5	10.6	1 3/4 X 5 1/4
1800	4CMC182M500EF8	59.1	34.8	8.5	11.9	1 3/4 X 5 3/4
1800	4CMC182M500BD8	60.7	35.8	8.1	10.8	2 X 4 3/4
2100	4CMC212M500BE8	52.1	30.7	9.0	12.1	2 X 5 1/4
2300	4CMC232M500BF8	46.9	27.6	9.8	13.2	2 X 5 3/4

Aluminum Radial Leaded Capacitors