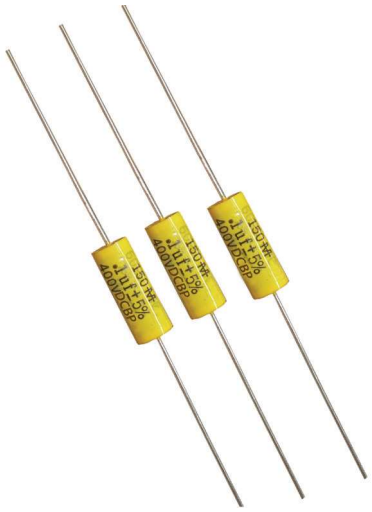
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SERIES	DESCRIPTION
150	150: +125°C, General Purpose
460M	460M: +125°C, General Purpose
461M	461: +85°C, Metallized, Flattened for Low Profile Circuit Boards
704M	704M: +105°C, General Purpose
730P	730P: +85°C, General Purpose
760M	760M: +105°C, General Purpose
761M	761M: +85°C, Metallized, Flattened Oval, General Purpose
930	930: +105°C, Metallized, for High Frequency Switching Power Supplies
936	932: +105°C, Low Loss
935	935: +105°C, Metallized, High Current for High Frequency Switching Power Supplies
936	932: +105°C, Low Loss
946	946: +105°C, High Peak Current
950	950: +105°C, Metallized, General Purpose, 250 VAC (60 Hz)
951C	951C: +85°C, Metallized Axial Leaded
CDEAxialFilms	AFEO: +125°C, General Purpose
CDEAxialFilms	AFEO: +125°C, General Purpose
CDEAxialFilms	AFEO: +125°C, General Purpose
MAR	MAR: +85°C, General Purpose
MMP	MMP: +125°C, Metallized, Flattened for Low Profile Circuit Boards
MMWA	MMWA: +125°C, Metallized, High Capacitance, High Voltage
MPW	MPW: +105°C, General Purpose
MWR	MWR: +105°C, Metallized Polyester Axial Lead
PHC	PH: +85°C, High Frequency Metallized Polypropylene Axial Lead
PPA	PPA: +85°C, High Voltage, High dV/dt Axial Lead
PPS	PPS: +85°C, High Voltage, High dV/dt Axial Lead
PWS	PWS: +105°C, Axial Lead Metallized Film with Foil Electrodes Polypropylene Capacitors
WMC	WMC: +125°C, Film/Foil, Miniature Size for Automatic Insertion
WMF	WMF: +125°C, Film/Foil, Commercial, Industrial Applications
WPP	WPP: +105°C, High Peak Current
CDEAxialFilms	AFEO: +125°C, General Purpose
CDEAxialFilms	AFEO: +125°C, General Purpose

This is the table of contents for a custom generated catalog and may not contain all of the products available. Please refer to our website for our full parametric search of products.

Type 150 Axial Leaded Metallized Polyester

Flame Retardant Wrap and Fill Axial Leaded Capacitors



The Type 150 series axial lead metallized polyester non inductive capacitors are available in bulk or on tape and reel for automatic insertion. Type 150 is a general purpose capacitor for use in blocking, bypass, decoupling, smoothing and some timing applications.

Highlights

- Available on tape and reel or bulk
- Epoxy end fill meets UL94V-0
- Non inductively wound
- Flame retardant outer wrap meets UL510
- Non polar

RoHS Compliant

Specifications

Capacitance Range: 0.001 µF to 10.0 µF

Voltage Range: 63 to 1000 Vdc

Capacitance Tolerance: ±5%, ±10%, ±20%

Operating Tempeature Range: –55 °C to +125 °C (derate linearly to 50% rated voltage at 125 °C)

Dielectric Withstand Voltage: 1.6 x rated voltage for 2 s @ +25 °C ±5 °C

Dissipation Factor (DF): tgδ x 10^{-4} at +25 °C ±5 °C

kHz	C ≤0.1 µF	0.1 µF <C ≤1 µF	C >1 µF
1	80	80	100
10	150	150	—
100	250	—	—

Insulation Resistance: 10,000 MΩ x µF, 30,000 MΩ Min.

Self Inductance: 1 nH max. per 1 mm lead and body length

Life Test: 1000 hrs @ 85 °C 1.25 x Vn

Damp Heat Test: 95% RH @ +45 °C for 21 days

Soldering: 260 °C ±5 °C for 10 s ±1 s

Long Term Storage Stability: ΔC/C ≤ ±3% after 2 years

Maximum Pulse Rise Time dv/dt and Pulse Characteristic (Wo):

V/n	L Max				
	16.5	19 - 20.5	26.5 - 5.28	31.5 - 33	dV/dt (V/µsec) W_o (V^2/µsec)
50 - 63	4 504	2 252	1.5 189	1 126	
100	5 1,000	3 600	2 400	1 300	
250	10 5,000	7 3,500	4 2,000	2.5 1,250	
400	13.5 10,800	10 8,000	6.5 5,200	4 3,200	
630	20 25,200	15 18,900	10 12,600	6 7,500	

Type 150 Axial Leaded Metallized Polyester

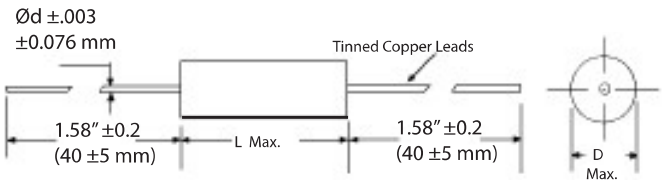
Tape and Reel Specifications

L Max (Body Lengty)		Lead Spacing		Distance Between Reel Flanges		Class
Inches	mm	Inches	mm	Inches	mm	
≤.433	≤11	2.06	52.4	3	75	1
.551 - .808	14 - 20.5	2.5	63.6	3.4	86	2
≥1.03	≥26	2.87	73	3.7	95	3

^Add class number (1, 2, or 3) to catalog number to indicate tape and reel

Diameter		Quantity per Reel
Inches	mm	
0.197	5	3,000
.236 thru .256	6.0 trhu 6.5	1,200
0.276	7	1,100
.315 thru .346	8 thru 8.5	800
.354 thru .413	9 thru 10.5	500
.433 thru .512	11 thru 13	300
.551 thru .571	14 thru 14.5	200
>.571	>14.5	Not available

Outline Drawing



Ratings

Catalog Part Number	Cap (µF)	Inches Max D	Inches Max L	Inches Max Ød	Millimeters Max D	Millimeters Max L	Millimeters Max Ød
63 Vdc							
150154*63AA^	0.150	0.197	0.433	0.024	5.0	11.0	0.6
150154*63BB^	0.150	0.236	0.650	0.024	6.0	16.5	0.6
150184*63AA^	0.180	0.197	0.433	0.024	5.0	11.0	0.6
150184*63BB^	0.180	0.236	0.650	0.024	6.0	16.5	0.6
150224*63BB^	0.220	0.236	0.650	0.024	6.0	16.5	0.6
150274*63BB^	0.270	0.236	0.650	0.024	6.0	16.5	0.6
150334*63BB^	0.330	0.236	0.650	0.024	6.0	16.5	0.6
150394*63CB^	0.390	0.256	0.650	0.024	6.5	16.5	0.6
150474*63DB^	0.470	0.276	0.650	0.024	7.0	16.5	0.6
150564*63DB^	0.560	0.276	0.650	0.024	7.0	16.5	0.6
150684*63DC^	0.680	0.276	0.807	0.024	7.0	20.5	0.6
150824*63EC^	0.820	0.315	0.807	0.031	8.0	20.5	0.8
150105*63EC^	1.000	0.315	0.807	0.031	8.0	20.5	0.8
150155*63HC^	1.500	0.374	0.807	0.031	9.5	20.5	0.8
150225*63HE^	2.200	0.374	1.102	0.031	9.5	28.0	0.8
150335*63KE^	3.300	0.433	1.102	0.031	11.0	28.0	0.8
150475*63ME^	4.700	0.492	1.102	0.031	12.5	28.0	0.8
150685*63QF^	6.800	0.571	1.299	0.031	14.5	33.0	0.8
150106*63TF^	10.000	0.610	1.299	0.031	15.5	33.0	0.8
100 Vdc							
150683*100AA^	0.068	0.197	0.433	0.024	5.0	11.0	0.6
150683*100BB^	0.068	0.236	0.650	0.024	6.0	16.5	0.6
150823*100AA^	0.082	0.197	0.433	0.024	5.0	11.0	0.6
150823*100BB^	0.082	0.236	0.650	0.024	6.0	16.5	0.6
150104*100AA^	0.100	0.197	0.433	0.024	5.0	11.0	0.6
150104*100BB^	0.100	0.236	0.650	0.024	6.0	16.5	0.6
150124*100BB^	0.120	0.236	0.650	0.024	6.0	16.5	0.6
150154*100BB^	0.150	0.236	0.650	0.024	6.0	16.5	0.6
150184*100CB^	0.180	0.256	0.650	0.024	6.5	16.5	0.6
150224*100CB^	0.220	0.256	0.650	0.024	6.5	16.5	0.6
150274*100CB^	0.270	0.256	0.650	0.024	6.5	16.5	0.6
150334*100EB^	0.330	0.315	0.650	0.031	8.0	16.5	0.8
150394*100EB^	0.390	0.315	0.650	0.031	8.0	16.5	0.8
150474*100DC^	0.470	0.276	0.807	0.031	7.0	20.5	0.8
150564*100EC^	0.560	0.315	0.807	0.031	8.0	20.5	0.8
150684*100FC^	0.680	0.335	0.807	0.031	8.5	20.5	0.8
150824*100HC^	0.820	0.374	0.807	0.031	9.5	20.5	0.8
150105*100IC^	1.000	0.394	0.807	0.031	10.0	20.5	0.8
100 Vdc							
150155*100IE^	1.500	0.394	1.102	0.031	10.0	28.0	0.8
150225*100LE^	2.200	0.453	1.102	0.031	11.5	28.0	0.8
150335*100PE^	3.300	0.531	1.102	0.031	13.5	28.0	0.8
150475*100RF^	4.700	0.591	1.299	0.031	15.0	33.0	0.8
150685*100WF^	6.800	0.689	1.299	0.031	17.5	33.0	0.8
150106*100YF^	10.000	0.807	1.299	0.031	20.5	33.0	0.8
250 Vdc							
150123*250AA^	0.012	0.197	0.433	0.024	5.0	11.0	0.6
150123*250BB^	0.012	0.236	0.650	0.024	6.0	16.5	0.6
150153*250AA^	0.015	0.197	0.433	0.024	5.0	11.0	0.6
150153*250BB^	0.015	0.236	0.650	0.024	6.0	16.5	0.6
150183*250AA^	0.018	0.197	0.433	0.024	5.0	11.0	0.6
150183*250BB^	0.018	0.236	0.650	0.024	6.0	16.5	0.6
150223*250AA^	0.022	0.197	0.433	0.024	5.0	11.0	0.6
150223*250BB^	0.022	0.236	0.650	0.024	6.0	16.5	0.6
150273*250AA^	0.027	0.197	0.433	0.024	5.0	11.0	0.6
150273*250BB^	0.027	0.236	0.650	0.024	6.0	16.5	0.6

* Indicates capacitance tolerance
J = ±5%, K = ±10%, M = ±20%

^If ordering tape and reel, insert 1, 2, or 3.

See tape & reel specifications to determine which class applies.

Part Number highlighted in yellow, available until stock is depleted.

Replacement part number with "BB" case size.

Part Number highlighted in green - OBSOLETE

Part number highlighted in light yellow, available until stock is depleted, no replacement

Type 150 Axial Leaded Metallized Polyester

Catalog Part Number	Cap (µF)	Inches Max D	Inches Max L	Inches Max Ød	Millimeters Max D	Millimeters Max L	Millimeters Max Ød
250 Vdc							
150333*250AA^	0.0330	0.197	0.433	0.024	5.0	11.0	0.6
150333*250BB^	0.0330	0.236	0.650	0.024	6.0	16.5	0.6
150393*250AA^	0.0390	0.197	0.433	0.024	5.0	11.0	0.6
150393*250BB^	0.0390	0.236	0.650	0.024	6.0	16.5	0.6
150473*250AA^	0.0470	0.197	0.433	0.024	5.0	11.0	0.6
150473*250BB^	0.0470	0.236	0.650	0.024	6.0	16.5	0.6
150563*250AA^	0.0560	0.197	0.433	0.024	5.0	11.0	0.6
150563*250BB^	0.0560	0.236	0.650	0.024	6.0	16.5	0.6
150683*250BB^	0.0680	0.236	0.650	0.024	6.0	16.5	0.6
150823*250BB^	0.0820	0.236	0.650	0.024	6.0	16.5	0.6
150104*250CB^	0.1000	0.256	0.650	0.024	6.5	16.5	0.6
150124*250DB^	0.1200	0.276	0.650	0.024	7.0	16.5	0.6
150154*250EB^	0.1500	0.315	0.650	0.031	8.0	16.5	0.8
150184*250EB^	0.1800	0.315	0.650	0.031	8.0	16.5	0.8
150224*250FB^	0.2200	0.335	0.650	0.031	8.5	16.5	0.8
150274*250EC^	0.2700	0.315	0.807	0.031	8.0	20.5	0.8
150334*250FC^	0.3300	0.335	0.807	0.031	8.5	20.5	0.8
150394*250GC^	0.3900	0.354	0.807	0.031	9.0	20.5	0.8
150474*250HC^	0.4700	0.374	0.807	0.031	9.5	20.5	0.8
150564*250IC^	0.5600	0.394	0.807	0.031	10.0	20.5	0.8
150684*250GE^	0.6800	0.354	1.102	0.031	9.0	28.0	0.8
150824*250HE^	0.8200	0.374	1.102	0.031	9.5	28.0	0.8
150105*250JE^	1.0000	0.413	1.102	0.031	10.5	28.0	0.8
150155*250ME^	1.5000	0.492	1.102	0.031	12.5	28.0	0.8
150225*250PF^	2.2000	0.531	1.299	0.031	13.5	33.0	0.8
150335*250TF^	3.3000	0.610	1.299	0.031	15.5	33.0	0.8
150475*250XF^	4.7000	0.728	1.299	0.031	18.5	33.0	0.8
150685*250ZF^	6.8000	0.845	1.299	0.031	21.5	33.0	0.8
400 Vdc							
150822*400AA^	0.0082	0.197	0.433	0.024	5.0	11.0	0.6
150822*400BB^	0.0082	0.236	0.650	0.024	6.0	16.5	0.6
150103*400AA^	0.0100	0.197	0.433	0.024	5.0	11.0	0.6
150103*400BB^	0.0100	0.236	0.650	0.024	6.0	16.5	0.6
150123*400AA^	0.0120	0.197	0.433	0.024	5.0	11.0	0.6
150123*400BB^	0.0120	0.236	0.650	0.024	6.0	16.5	0.6
150153*400BB^	0.0150	0.236	0.650	0.024	6.0	16.5	0.6
150183*400BB^	0.0180	0.236	0.650	0.024	6.0	16.5	0.6
150223*400BB^	0.0220	0.236	0.650	0.024	6.0	16.5	0.6
150273*400BB^	0.0270	0.236	0.650	0.024	6.0	16.5	0.6
150333*400BB^	0.0330	0.236	0.650	0.024	6.0	16.5	0.6
150393*400CB^	0.0390	0.256	0.650	0.024	6.5	16.5	0.6
150473*400DB^	0.0470	0.276	0.650	0.024	7.0	16.5	0.6
150563*400EB^	0.0560	0.315	0.650	0.024	8.0	16.5	0.6
150683*400DC^	0.0680	0.276	0.807	0.024	7.0	20.5	0.6
150823*400EC^	0.0820	0.315	0.807	0.031	8.0	20.5	0.8
150104*400EC^	0.1000	0.315	0.807	0.031	8.0	20.5	0.8
150124*400EC^	0.1200	0.315	0.807	0.031	8.0	20.5	0.8
150154*400GC^	0.1500	0.354	0.807	0.031	9.0	20.5	0.8
150184*400EE^	0.1800	0.315	1.102	0.031	8.0	28.0	0.8
150224*400FE^	0.2200	0.335	1.102	0.031	8.5	28.0	0.8
150274*400GE^	0.2700	0.354	1.102	0.031	9.0	28.0	0.8
150334*400IE^	0.3300	0.394	1.102	0.031	10.0	28.0	0.8
150394*400JE^	0.3900	0.413	1.102	0.031	10.5	28.0	0.8
150474*400LF^	0.4700	0.453	1.299	0.031	11.5	33.0	0.8
150564*400LF^	0.5600	0.453	1.299	0.031	11.5	33.0	0.8
150684*400MF^	0.6800	0.492	1.299	0.031	12.5	33.0	0.8
150824*400PF^	0.8200	0.531	1.299	0.031	13.5	33.0	0.8
150105*400QF^	1.0000	0.571	1.299	0.031	14.5	33.0	0.8
150155*400WF^	1.5000	0.689	1.299	0.031	17.5	33.0	0.8
150225*400YF^	2.2000	0.807	1.299	0.031	20.5	33.0	0.8
630 Vdc							
150102*630AA^	0.0010	0.197	0.433	0.024	5.0	11.0	0.6
150102*630BB^	0.0010	0.236	0.650	0.024	6.0	16.5	0.6
150122*630AA^	0.0012	0.197	0.433	0.024	5.0	11.0	0.6
150122*630BB^	0.0012	0.236	0.650	0.024	6.0	16.5	0.6
150152*630AA^	0.0015	0.197	0.433	0.024	5.5	11.0	0.6
150152*630BB^	0.0015	0.236	0.650	0.024	6.0	16.5	0.6
150182*630AA^	0.0018	0.197	0.433	0.024	5.5	11.0	0.6
150182*630BB^	0.0018	0.236	0.650	0.024	6.0	16.5	0.6
150222*630AA^	0.0022	0.197	0.433	0.024	5.5	11.0	0.6
150222*630BB^	0.0022	0.236	0.650	0.024	6.0	16.5	0.6
150272*630AA^	0.0027	0.197	0.433	0.024	5.5	11.0	0.6
150272*630BB^	0.0027	0.236	0.650	0.024	6.0	16.5	0.6
150332*630AA^	0.0033	0.197	0.433	0.024	5.5	11.0	0.6
150332*630BB^	0.0033	0.236	0.650	0.024	6.0	16.5	0.6
150392*630AA^	0.0039	0.197	0.433	0.024	5.5	11.0	0.6
150392*630BB^	0.0039	0.236	0.650	0.024	6.0	16.5	0.6
150472*630AA^	0.0047	0.197	0.433	0.024	5.5	11.0	0.6
150472*630BB^	0.0047	0.236	0.650	0.024	6.0	16.5	0.6
150562*630AA^	0.0056	0.197	0.433	0.024	5.5	11.0	0.6
150562*630BB^	0.0056	0.236	0.650	0.024	6.0	16.5	0.6

* Indicates capacitance tolerance

J = ±5%, K = ±10%, M = ±20%

^If ordering tape and reel, insert 1, 2, or 3.

See tape & reel specifications to determine which class applies.

Part Number highlighted in yellow, available until stock is depleted.

Replacement part number with "BB" case size.

Part Number highlighted in green - OBSOLETE

Part number highlighted in light yellow, available until stock is depleted, no replacement

Type 150 Axial Leaded Metallized Polyester

Catalog Part Number	Cap (µF)	Inches Max D	Inches Max L	Inches Max Ød	Millimeters Max D	Millimeters Max L	Millimeters Max Ød
630 Vdc							
150682*630AA^	0.0068	0.197	0.433	0.024	5.5	11.0	0.6
150682*630BB^	0.0068	0.236	0.650	0.024	6.0	16.5	0.6
150822*630BB^	0.0082	0.236	0.650	0.024	6.0	16.5	0.6
150103*630BB^	0.0100	0.236	0.650	0.024	6.0	16.5	0.6
150123*630BB^	0.0120	0.236	0.650	0.024	6.0	16.5	0.6
150153*630BB^	0.0150	0.236	0.650	0.024	6.0	16.5	0.6
150183*630CB^	0.0180	0.256	0.650	0.024	6.5	16.5	0.6
150223*630DB^	0.0220	0.276	0.650	0.024	7.0	16.5	0.6
150273*630CC^	0.0270	0.256	0.807	0.024	6.5	20.5	0.6
150333*630EC^	0.0330	0.315	0.807	0.031	8.0	20.5	0.8
150393*630EC^	0.0390	0.315	0.807	0.031	8.0	20.5	0.8
150473*630EC^	0.0470	0.315	0.807	0.031	8.0	20.5	0.8
150563*630FC^	0.0560	0.335	0.807	0.031	8.5	20.5	0.8
150683*630GC^	0.0680	0.354	0.807	0.031	9.0	20.5	0.8
150823*630HC^	0.0820	0.374	0.807	0.031	9.5	20.5	0.8
150104*630FE^	0.1000	0.335	1.102	0.031	8.5	28.0	0.8
150124*630GE^	0.1200	0.354	1.102	0.031	9.0	28.0	0.8
150154*630IE^	0.1500	0.394	1.102	0.031	10.0	28.0	0.8
150184*630JE^	0.1800	0.413	1.102	0.031	10.5	28.0	0.8
150224*630LE^	0.2200	0.453	1.102	0.031	11.5	28.0	0.8
150274*630ME^	0.2700	0.492	1.102	0.031	12.5	28.0	0.8
150334*630NF^	0.3300	0.512	1.299	0.031	13.0	33.0	0.8
150394*630QF^	0.3900	0.571	1.299	0.031	14.5	33.0	0.8
150474*630RF^	0.4700	0.591	1.299	0.031	15.0	33.0	0.8
150564*630TF^	0.5600	0.610	1.299	0.031	15.5	33.0	0.8
150684*630WF^	0.6800	0.689	1.299	0.031	17.5	33.0	0.8
150824*630XF^	0.8200	0.728	1.299	0.031	18.5	33.0	0.8
150105*630YF^	1.0000	0.807	1.299	0.031	20.5	33.0	0.8

Catalog Part Number	Cap (µF)	Inches Max D	Inches Max L	Inches Max Ød	Millimeters Max D	Millimeters Max L	Millimeters Max Ød
1000 Vdc							
150102*1000CB^	0.0010	0.256	0.650	0.024	6.5	16.5	0.6
150152*1000CB^	0.0015	0.256	0.650	0.024	6.5	16.5	0.6
150222*1000CB^	0.0022	0.256	0.650	0.024	6.5	16.5	0.6
150332*1000CB^	0.0033	0.256	0.650	0.024	6.5	16.5	0.6
150472*1000DB^	0.0047	0.276	0.650	0.024	7.0	16.5	0.6
150682*1000EB^	0.0068	0.315	0.650	0.031	8.0	16.5	0.8
150103*1000DC^	0.0100	0.276	0.807	0.024	7.0	20.5	0.6
150153*1000FC^	0.0150	0.335	0.807	0.031	8.5	20.5	0.8
150223*1000HC^	0.0220	0.374	0.807	0.031	9.5	20.5	0.8
150333*1000FE^	0.0330	0.335	1.102	0.031	8.5	28	0.8
150473*1000HE^	0.0470	0.374	1.102	0.031	9.5	28	0.8
150683*1000KE^	0.0680	0.433	1.102	0.031	11.0	28	0.8
150104*1000NE^	0.1000	0.512	1.102	0.031	13.0	28	0.8
150154*1000OF^	0.1500	0.551	1.299	0.031	14.0	33	0.8
150224*1000WF^	0.2200	0.689	1.299	0.031	17.5	33	0.8
150334*1000YF^	0.3300	0.807	1.299	0.031	20.5	33	0.8
150474*1000Z1F^	0.4700	0.945	1.299	0.031	24.0	33	0.8

* Indicates capacitance tolerance
J = ±5%, K = ±10%, M = ±20%

^If ordering tape and reel, insert 1, 2, or 3.
See tape & reel specifications to determine which class applies.

Part Number highlighted in yellow, available until stock is depleted.

Replacement part number with "BB" case size.

Part Number highlighted in green - OBSOLETE

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Type 460M
Axial Lead
Round Profile
Metallized Polyester
Film Capacitors



Specifications

Capacitance Range:
0.022 to 100.0 µF

Capacitance Tolerance:
+5% and +10%, standard
(other tolerances available)

Voltage Ratings:
63 to 400 VDC
40 to 200 VAC

Operating Temperature:
Units may be operated at full-rated voltage from -55ºC to +85ºC.

Voltage De-rating above +85 ºC:
Units may be operated up to a maximum of 125ºC provided the voltage is de-rated linearly to 50% of rated voltage of +125ºC.

Dissipation Factor:
1.0% maximum @ 1 KHz, +25ºC

Insulation Resistance:
At +25ºC: 10,000 MΩ for C ≤ 1.0 µF
10,000 MΩ-µF for C > 1.0 µF
At +85ºC: 1,000 MΩ for C ≤ 1.0 µF
1,000 MΩ-µF for C > 1.0 µF

Encapsulation:
Wrapped with flame retardant polyester tape (meets UL510 specifications) and potted with flame retardant epoxy (meets UL94V-0 specifications).

Lead Wire:
Tinned copper-clad steel for wire sizes:
0.020 (0.5) diameter (#24 AWG)
0.025 (0.6) diameter (#22 AWG)
0.032 (0.8) diameter (#20 AWG)

Tinned copper for wire sizes:
0.040 (1.0) diameter (#18 AWG)

Dielectric/Construction:
Metallized polyester film, single section design. Non-inductively wound.

In addition to the information provided here, CDE also offers complete design and manufacturing of specific capacitance values, custom form factors, special lead terminations, etc.

Dimensions are in inches, millimeters are in parenthesis.

General Specifications

The 460M series is designed and manufactured for use in many demanding applications. They are non-inductively wound using some of the most reliable metallized polyester film available today. A wide range of capacitance values, voltage ratings, lead terminations and sizes offer the designer an array of options to best meet the form, fit and function requirements specified.

Operating Temperature Range:

Standard operating temperature range is –55°C to +85°C. Units may be operated at the full rated voltage within this temperature range.

The 460M series may be operated up to a maximum temperature of +125°C, however the voltage must be linearly de-rated to 50% of the full rated voltage at +125°C.

Dielectric Withstanding Voltage:

Units shall withstand a DC potential of 150% of rated voltage applied between terminals for not more than 2 minutes.

Lead Bend Test:

After 3 consecutive 180° bends. No damage.

Lead Pull Test:

5 pounds (2.3 Kg) for one minute on lead axis. No damage.

Humidity Testing:

Units subjected to 95% relative humidity for 250 hours with no voltage applied at +40°C. After 4 hours of drying, minimum product of insulation resistance and capacitance shall be 5,000 MΩ-µF, but need not exceed 5,000 MΩ.

DC Voltage Life Test:

500 hours at +85°C at 125% of rated voltage. After test; capacitance shall not have changed by more than ±10% of initial value, insulation resistance shall not have decreased by more than 50% of initial value and dissipation factor shall not have increased to more than 1.25%. In addition, there shall be no open or short circuits, and no sign of visible damage.

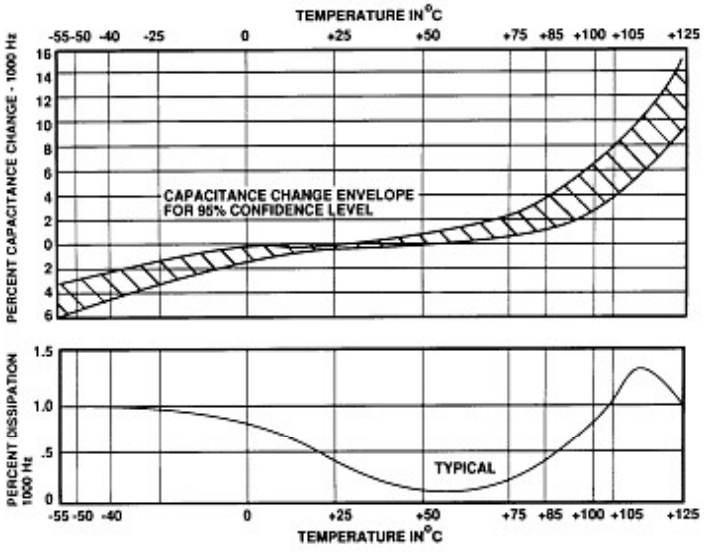
Dielectric Material/Construction:

The 460M series is manufactured using metallized polyester film as the dielectric. The capacitor element is non-inductively wound in a single section design.

Metallized polyester film utilizes a base film of polyester with a thin layer of aluminum vacuum deposited directly on the film as the electrode.

Metallized film exhibits a characteristic called "self-healing" or "self-clearing", which is the ability to remove a fault or short circuit in the dielectric film by vaporizing (from high current density) the metallization near the defect. The metallization is so thin that negligible film damage occurs during the clearing process. The vaporized metal oxidizes over time, aiding in the isolation of a fault area.

Typical Temperature Characteristics:



Ordering/Part Number Information

460M 106 9 2 C – XXX

A suffix may be added to denote special construction, marking, packaging, test requirements, etc.

Compact design indicator. A letter "C" is added to indicate a compact size form factor. Refer to table of part numbers for specific sizes.

DC Voltage Rating. R6 = 63 VDC 4 = 400 VDC
1 = 100 VDC
2 = 250 VDC

Capacitance Tolerance. 9 = ±10%; 5 = ±5%

Capacitance. Expressed in Picofarads. The first two digits are the significant figures, the third is the number of zeros following (i.e. 106 = 10,000,000 pF = 10.0 µF).

CDEType Number. Identifies basic capacitor design.

Standard Marking Format

Sample Marking on unit

CDE460M[C]
106K 250V
0824

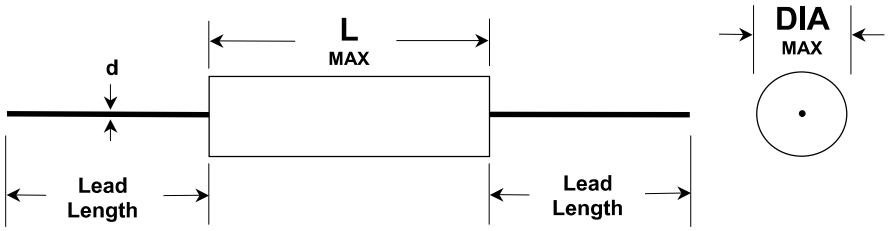
Description

CDE	-	CDE Identification
460M	-	Type Number. 460MC indicates compact design.
250V	-	DC Voltage Rating
106K	-	Capacitance and Tolerance Code
0824	-	Weekly Date Code (i.e. 24th week of 2008)

Tolerance codes per EIA standards

J	±5%
K	±10%

Dimension Outline



Lead Length Table

L MAX dimension	Lead Length (Typical)
0.61 (15.5)	2.00 (50.8)
0.79 (20.1)	1.90 (48.3)
0.99 (25.1)	1.80 (45.7)
1.25 (31.8)	1.65 (41.9)
1.50 (38.1)	1.50 (38.1)
1.74 (44.2)	1.40 (35.6)
2.21 (56.1)	1.25 (31.8)

In all cases a MINIMUM lead length of 1.25 (31.8) will be met.

Lead Wire Size and Additional Termination Options

Standard lead wire sizes used in manufacturing range from 0.020 (0.5) diameter (#24 AWG) to 0.040 (1.0) diameter (#18 AWG). We can also provide a variety of other wire sizes and material (i.e. heavier gauges, insulated wire, tinned copper in smaller gauges, etc.). If the wire size or material listed on our standard items doesn't meet your requirements please contact us. We can accommodate your needs. We can also provide lug/tab terminations upon request. Please contact us with your specific requirements.

Type 460M Sizes and Ratings – 63 VDC/40 VAC

		Standard Dimensions			Compact Dimensions[1]		
Cap µF	Base Part #	L MAX	DIA MAX	Wire (d)	L MAX	DIA MAX	Wire (d)
0.22	460M2249R6	0.61 (15.5)	0.21 (5.3)	0.020 (0.5)			
0.27	460M2749R6	0.61 (15.5)	0.23 (5.8)	0.020 (0.5)			
0.33	460M3349R6	0.61 (15.5)	0.24 (6.1)	0.020 (0.5)			
0.39	460M3949R6	0.61 (15.5)	0.26 (6.6)	0.025 (0.6)			
0.47	460M4749R6	0.79 (20.1)	0.23 (5.8)	0.020 (0.5)	0.61 (15.5)	0.28 (7.1)	0.025 (0.6)
0.5	460M5049R6	0.79 (20.1)	0.23 (5.8)	0.020 (0.5)	0.61 (15.5)	0.29 (7.4)	0.025 (0.6)
0.56	460M5649R6	0.79 (20.1)	0.24 (6.1)	0.020 (0.5)	0.61 (15.5)	0.30 (7.6)	0.025 (0.6)
0.6	460M6049R6	0.79 (20.1)	0.25 (6.4)	0.020 (0.5)	0.61 (15.5)	0.31 (7.9)	0.025 (0.6)
0.68	460M6849R6	0.79 (20.1)	0.26 (6.6)	0.025 (0.6)	0.61 (15.5)	0.33 (8.4)	0.025 (0.6)
0.75	460M7549R6	0.79 (20.1)	0.27 (6.9)	0.025 (0.6)	0.61 (15.5)	0.34 (8.6)	0.025 (0.6)
0.82	460M8249R6	0.99 (25.1)	0.24 (6.1)	0.020 (0.5)	0.79 (20.1)	0.29 (7.4)	0.025 (0.6)
0.9	460M9049R6	0.99 (25.1)	0.25 (6.4)	0.020 (0.5)	0.79 (20.1)	0.30 (7.6)	0.025 (0.6)
1.0	460M1059R6	0.99 (25.1)	0.26 (6.6)	0.025 (0.6)	0.79 (20.1)	0.31 (7.9)	0.025 (0.6)
1.2	460M1259R6	0.99 (25.1)	0.28 (7.1)	0.025 (0.6)	0.79 (20.1)	0.33 (8.4)	0.025 (0.6)
1.5	460M1559R6	0.99 (25.1)	0.31 (7.9)	0.025 (0.6)	0.79 (20.1)	0.37 (9.4)	0.025 (0.6)
1.8	460M1859R6	0.99 (25.1)	0.34 (8.6)	0.025 (0.6)	0.79 (20.1)	0.40 (10.2)	0.032 (0.8)
2.0	460M2059R6	0.99 (25.1)	0.36 (9.1)	0.025 (0.6)	0.79 (20.1)	0.42 (10.7)	0.032 (0.8)
2.2	460M2259R6	0.99 (25.1)	0.37 (9.4)	0.025 (0.6)	0.79 (20.1)	0.44 (11.2)	0.032 (0.8)
2.5	460M2559R6	0.99 (25.1)	0.39 (9.9)	0.032 (0.8)	0.79 (20.1)	0.47 (11.9)	0.032 (0.8)
2.7	460M2759R6	0.99 (25.1)	0.41 (10.4)	0.032 (0.8)	0.79 (20.1)	0.48 (12.2)	0.032 (0.8)
3.0	460M3059R6	1.25 (31.8)	0.37 (9.4)	0.025 (0.6)	0.99 (25.1)	0.43 (10.9)	0.032 (0.8)
3.3	460M3359R6	1.25 (31.8)	0.39 (9.9)	0.032 (0.8)	0.99 (25.1)	0.45 (11.4)	0.032 (0.8)
3.6	460M3659R6	1.25 (31.8)	0.41 (10.4)	0.032 (0.8)	0.99 (25.1)	0.47 (11.9)	0.032 (0.8)
3.9	460M3959R6	1.25 (31.8)	0.42 (10.7)	0.032 (0.8)	0.99 (25.1)	0.48 (12.2)	0.032 (0.8)
4.0	460M4059R6	1.50 (38.1)	0.39 (9.9)	0.032 (0.8)	0.99 (25.1)	0.49 (12.4)	0.032 (0.8)
4.7	460M4759R6	1.50 (38.1)	0.42 (10.7)	0.032 (0.8)	0.99 (25.1)	0.53 (13.5)	0.032 (0.8)
5.0	460M5059R6	1.50 (38.1)	0.43 (10.9)	0.032 (0.8)	0.99 (25.1)	0.54 (13.7)	0.032 (0.8)
5.6	460M5659R6	1.50 (38.1)	0.45 (11.4)	0.032 (0.8)	0.99 (25.1)	0.57 (14.5)	0.032 (0.8)
6.0	460M6059R6	1.50 (38.1)	0.47 (11.9)	0.032 (0.8)	0.99 (25.1)	0.59 (15.0)	0.032 (0.8)
6.8	460M6859R6	1.50 (38.1)	0.49 (12.4)	0.032 (0.8)	0.99 (25.1)	0.63 (16.0)	0.032 (0.8)
7.0	460M7059R6	1.50 (38.1)	0.50 (12.7)	0.032 (0.8)	0.99 (25.1)	0.64 (16.3)	0.032 (0.8)
7.5	460M7559R6	1.50 (38.1)	0.52 (13.2)	0.032 (0.8)	0.99 (25.1)	0.66 (16.8)	0.032 (0.8)
8.0	460M8059R6	1.50 (38.1)	0.53 (13.5)	0.032 (0.8)	1.25 (31.8)	0.59 (15.0)	0.032 (0.8)
9.0	460M9059R6	1.50 (38.1)	0.56 (14.2)	0.032 (0.8)	1.25 (31.8)	0.62 (15.7)	0.032 (0.8)
10.0	460M1069R6	1.50 (38.1)	0.59 (15.0)	0.032 (0.8)	1.25 (31.8)	0.66 (16.8)	0.032 (0.8)
12.0	460M1269R6	1.50 (38.1)	0.64 (16.3)	0.032 (0.8)	1.25 (31.8)	0.72 (18.3)	0.032 (0.8)
15.0	460M1569R6	1.50 (38.1)	0.71 (18.0)	0.032 (0.8)	1.25 (31.8)	0.80 (20.3)	0.040 (1.0)
20.0	460M2069R6	1.50 (38.1)	0.82 (20.8)	0.040 (1.0)			
25.0	460M2569R6	1.50 (38.1)	0.91 (23.1)	0.040 (1.0)			
30.0	460M3069R6	1.50 (38.1)	0.99 (25.1)	0.040 (1.0)			
35.0	460M3569R6	1.50 (38.1)	1.07 (27.2)	0.040 (1.0)			
40.0	460M4069R6	1.50 (38.1)	1.14 (29.0)	0.040 (1.0)			
45.0	460M4569R6	1.50 (38.1)	1.21 (30.7)	0.040 (1.0)			
50.0	460M5069R6	1.50 (38.1)	1.27 (32.3)	0.040 (1.0)			
55.0	460M5569R6	1.50 (38.1)	1.34 (34.0)	0.040 (1.0)			
60.0	460M6069R6	1.50 (38.1)	1.39 (35.3)	0.040 (1.0)			
65.0	460M6569R6	1.50 (38.1)	1.45 (36.8)	0.040 (1.0)			
70.0	460M7069R6	1.50 (38.1)	1.50 (38.1)	0.040 (1.0)			
75.0	460M7569R6	1.50 (38.1)	1.55 (39.4)	0.040 (1.0)			
80.0	460M8069R6	1.50 (38.1)	1.60 (40.6)	0.040 (1.0)			
85.0	460M8569R6	1.50 (38.1)	1.65 (41.9)	0.040 (1.0)			

[1] Please refer to Ordering/Part Number page for specific part numbering details.

Type 460M Sizes and Ratings - 100 VDC/63 VAC

		Standard Dimensions			Compact Dimensions[1]		
Cap µF	Base Part #	L MAX	DIA MAX	Wire (d)	L MAX	DIA MAX	Wire (d)
0.15	460M15491	0.61 (15.5)	0.20 (5.1)	0.020 (0.5)			
0.18	460M18491	0.61 (15.5)	0.21 (5.3)	0.020 (0.5)			
0.22	460M22491	0.61 (15.5)	0.23 (5.8)	0.020 (0.5)			
0.27	460M27491	0.79 (20.1)	0.20 (5.1)	0.020 (0.5)	0.61 (15.5)	0.25 (6.4)	0.020 (0.5)
0.33	460M33491	0.79 (20.1)	0.22 (5.6)	0.020 (0.5)	0.61 (15.5)	0.27 (6.9)	0.025 (0.6)
0.39	460M39491	0.79 (20.1)	0.23 (5.8)	0.020 (0.5)	0.61 (15.5)	0.29 (7.4)	0.025 (0.6)
0.47	460M47491	0.99 (25.1)	0.22 (5.6)	0.020 (0.5)	0.61 (15.5)	0.31 (7.9)	0.025 (0.6)
0.5	460M50491	0.99 (25.1)	0.22 (5.6)	0.020 (0.5)	0.61 (15.5)	0.32 (8.1)	0.025 (0.6)
0.56	460M56491	0.99 (25.1)	0.23 (5.8)	0.020 (0.5)	0.61 (15.5)	0.34 (8.6)	0.025 (0.6)
0.6	460M60491	0.99 (25.1)	0.24 (6.1)	0.020 (0.5)	0.79 (20.1)	0.28 (7.1)	0.025 (0.6)
0.68	460M68491	0.99 (25.1)	0.25 (6.4)	0.020 (0.5)	0.79 (20.1)	0.29 (7.4)	0.025 (0.6)
0.75	460M75491	0.99 (25.1)	0.26 (6.6)	0.025 (0.6)	0.79 (20.1)	0.31 (7.9)	0.025 (0.6)
0.82	460M82491	0.99 (25.1)	0.27 (6.9)	0.025 (0.6)	0.79 (20.1)	0.32 (8.1)	0.025 (0.6)
0.9	460M90491	0.99 (25.1)	0.28 (7.1)	0.025 (0.6)	0.79 (20.1)	0.33 (8.4)	0.025 (0.6)
1.0	460M10591	1.25 (31.8)	0.26 (6.6)	0.025 (0.6)	0.79 (20.1)	0.35 (8.9)	0.025 (0.6)
1.2	460M12591	1.25 (31.8)	0.28 (7.1)	0.025 (0.6)	0.79 (20.1)	0.38 (9.7)	0.025 (0.6)
1.5	460M15591	1.25 (31.8)	0.31 (7.9)	0.025 (0.6)	0.79 (20.1)	0.42 (10.7)	0.032 (0.8)
1.8	460M18591	1.25 (31.8)	0.33 (8.4)	0.025 (0.6)	0.79 (20.1)	0.45 (11.4)	0.032 (0.8)
2.0	460M20591	1.25 (31.8)	0.35 (8.9)	0.025 (0.6)	0.79 (20.1)	0.47 (11.9)	0.032 (0.8)
2.2	460M22591	1.25 (31.8)	0.36 (9.1)	0.025 (0.6)	0.99 (25.1)	0.42 (10.7)	0.032 (0.8)
2.5	460M25591	1.25 (31.8)	0.39 (9.9)	0.032 (0.8)	0.99 (25.1)	0.44 (11.2)	0.032 (0.8)
2.7	460M27591	1.25 (31.8)	0.40 (10.2)	0.032 (0.8)	0.99 (25.1)	0.46 (11.7)	0.032 (0.8)
3.0	460M30591	1.25 (31.8)	0.42 (10.7)	0.032 (0.8)	0.99 (25.1)	0.48 (12.2)	0.032 (0.8)
3.3	460M33591	1.25 (31.8)	0.44 (11.2)	0.032 (0.8)	0.99 (25.1)	0.50 (12.7)	0.032 (0.8)
3.6	460M36591	1.25 (31.8)	0.46 (11.7)	0.032 (0.8)	0.99 (25.1)	0.52 (13.2)	0.032 (0.8)
3.9	460M39591	1.25 (31.8)	0.47 (11.9)	0.032 (0.8)	0.99 (25.1)	0.54 (13.7)	0.032 (0.8)
4.0	460M40591	1.50 (38.1)	0.44 (11.2)	0.032 (0.8)	0.99 (25.1)	0.55 (14.0)	0.032 (0.8)
4.7	460M47591	1.50 (38.1)	0.47 (11.9)	0.032 (0.8)	0.99 (25.1)	0.59 (15.0)	0.032 (0.8)
5.0	460M50591	1.50 (38.1)	0.48 (12.2)	0.032 (0.8)	0.99 (25.1)	0.61 (15.5)	0.032 (0.8)
5.6	460M56591	1.50 (38.1)	0.51 (13.0)	0.032 (0.8)	0.99 (25.1)	0.65 (16.5)	0.032 (0.8)
6.0	460M60591	1.50 (38.1)	0.52 (13.2)	0.032 (0.8)	1.25 (31.8)	0.58 (14.7)	0.032 (0.8)
6.8	460M68591	1.50 (38.1)	0.55 (14.0)	0.032 (0.8)	1.25 (31.8)	0.62 (15.7)	0.032 (0.8)
7.0	460M70591	1.50 (38.1)	0.56 (14.2)	0.032 (0.8)	1.25 (31.8)	0.62 (15.7)	0.032 (0.8)
7.5	460M75591	1.50 (38.1)	0.58 (14.7)	0.032 (0.8)	1.25 (31.8)	0.64 (16.3)	0.032 (0.8)
8.0	460M80591	1.50 (38.1)	0.60 (15.2)	0.032 (0.8)	1.25 (31.8)	0.66 (16.8)	0.032 (0.8)
9.0	460M90591	1.50 (38.1)	0.63 (16.0)	0.032 (0.8)	1.25 (31.8)	0.70 (17.8)	0.032 (0.8)
10.0	460M10691	1.74 (44.2)	0.60 (15.2)	0.032 (0.8)	1.50 (38.1)	0.66 (16.8)	0.032 (0.8)
12.0	460M12691	1.74 (44.2)	0.66 (16.8)	0.032 (0.8)	1.50 (38.1)	0.72 (18.3)	0.032 (0.8)
15.0	460M15691	1.74 (44.2)	0.73 (18.5)	0.032 (0.8)	1.50 (38.1)	0.80 (20.3)	0.040 (1.0)
20.0	460M20691	2.21 (56.1)	0.72 (18.3)	0.032 (0.8)	1.74 (44.2)	0.84 (21.3)	0.040 (1.0)
25.0	460M25691	2.21 (56.1)	0.81 (20.6)	0.040 (1.0)	1.74 (44.2)	0.93 (23.6)	0.040 (1.0)
30.0	460M30691	2.21 (56.1)	0.88 (22.4)	0.040 (1.0)	1.74 (44.2)	1.02 (25.9)	0.040 (1.0)
35.0	460M35691	2.21 (56.1)	0.95 (24.1)	0.040 (1.0)	1.74 (44.2)	1.10 (27.9)	0.040 (1.0)
40.0	460M40691	2.21 (56.1)	1.01 (25.7)	0.040 (1.0)	1.74 (44.2)	1.17 (29.7)	0.040 (1.0)
45.0	460M45691	2.21 (56.1)	1.07 (27.2)	0.040 (1.0)	1.74 (44.2)	1.24 (31.5)	0.040 (1.0)
50.0	460M50691	2.21 (56.1)	1.13 (28.7)	0.040 (1.0)			
55.0	460M55691	2.21 (56.1)	1.18 (30.0)	0.040 (1.0)			
60.0	460M60691	2.21 (56.1)	1.23 (31.2)	0.040 (1.0)			
65.0	460M65691	2.21 (56.1)	1.28 (32.5)	0.040 (1.0)			
70.0	460M70691	2.21 (56.1)	1.33 (33.8)	0.040 (1.0)			
75.0	460M75691	2.21 (56.1)	1.37 (34.8)	0.040 (1.0)			
80.0	460M80691	2.21 (56.1)	1.42 (36.1)	0.040 (1.0)			
85.0	460M85691	2.21 (56.1)	1.46 (37.1)	0.040 (1.0)			
90.0	460M90691	2.21 (56.1)	1.50 (38.1)	0.040 (1.0)			
95.0	460M95691	2.21 (56.1)	1.54 (39.1)	0.040 (1.0)			
100.0	460M10791	2.21 (56.1)	1.58 (40.1)	0.040 (1.0)			

[1] Please refer to Ordering/Part Number page for specific part numbering details.

Type 460M Sizes and Ratings - 250 VDC/160 VAC

		Standard Dimensions			Compact Dimensions[1]		
Cap µF	Base Part #	L MAX	DIA MAX	Wire (d)	L MAX	DIA MAX	Wire (d)
0.068	460M68392	0.61 (15.5)	0.19 (4.8)	0.020 (0.5)			
0.075	460M75392	0.61 (15.5)	0.20 (5.1)	0.020 (0.5)			
0.082	460M82392	0.61 (15.5)	0.20 (5.1)	0.020 (0.5)			
0.1	460M10492	0.61 (15.5)	0.22 (5.6)	0.020 (0.5)			
0.12	460M12492	0.61 (15.5)	0.24 (6.1)	0.020 (0.5)			
0.15	460M15492	0.79 (20.1)	0.21 (5.3)	0.020 (0.5)	0.61 (15.5)	0.26 (6.6)	0.025 (0.6)
0.18	460M18492	0.79 (20.1)	0.22 (5.6)	0.020 (0.5)	0.61 (15.5)	0.28 (7.1)	0.025 (0.6)
0.22	460M22492	0.79 (20.1)	0.24 (6.1)	0.020 (0.5)	0.61 (15.5)	0.30 (7.6)	0.025 (0.6)
0.27	460M27492	0.79 (20.1)	0.26 (6.6)	0.025 (0.6)	0.61 (15.5)	0.33 (8.4)	0.025 (0.6)
0.33	460M33492	0.99 (25.1)	0.25 (6.4)	0.020 (0.5)	0.79 (20.1)	0.29 (7.4)	0.025 (0.6)
0.39	460M39492	0.99 (25.1)	0.26 (6.6)	0.025 (0.6)	0.79 (20.1)	0.31 (7.9)	0.025 (0.6)
0.47	460M47492	0.99 (25.1)	0.28 (7.1)	0.025 (0.6)	0.79 (20.1)	0.33 (8.4)	0.025 (0.6)
0.5	460M50492	0.99 (25.1)	0.29 (7.4)	0.025 (0.6)	0.79 (20.1)	0.34 (8.6)	0.025 (0.6)
0.56	460M56492	0.99 (25.1)	0.31 (7.9)	0.025 (0.6)	0.79 (20.1)	0.36 (9.1)	0.025 (0.6)
0.6	460M60492	0.99 (25.1)	0.32 (8.1)	0.025 (0.6)	0.79 (20.1)	0.37 (9.4)	0.025 (0.6)
0.68	460M68492	0.99 (25.1)	0.33 (8.4)	0.025 (0.6)	0.79 (20.1)	0.39 (9.9)	0.032 (0.8)
0.75	460M75492	0.99 (25.1)	0.35 (8.9)	0.025 (0.6)	0.79 (20.1)	0.41 (10.4)	0.032 (0.8)
0.82	460M82492	0.99 (25.1)	0.36 (9.1)	0.025 (0.6)	0.79 (20.1)	0.43 (10.9)	0.032 (0.8)
0.9	460M90492	0.99 (25.1)	0.38 (9.7)	0.025 (0.6)	0.79 (20.1)	0.45 (11.4)	0.032 (0.8)
1.0	460M10592	1.25 (31.8)	0.35 (8.9)	0.025 (0.6)	0.99 (25.1)	0.40 (10.2)	0.032 (0.8)
1.2	460M12592	1.25 (31.8)	0.38 (9.7)	0.025 (0.6)	0.99 (25.1)	0.43 (10.9)	0.032 (0.8)
1.5	460M15592	1.25 (31.8)	0.42 (10.7)	0.032 (0.8)	0.99 (25.1)	0.48 (12.2)	0.032 (0.8)
1.8	460M18592	1.25 (31.8)	0.45 (11.4)	0.032 (0.8)	0.99 (25.1)	0.52 (13.2)	0.032 (0.8)
2.0	460M20592	1.50 (38.1)	0.43 (10.9)	0.032 (0.8)	0.99 (25.1)	0.55 (14.0)	0.032 (0.8)
2.2	460M22592	1.50 (38.1)	0.45 (11.4)	0.032 (0.8)	0.99 (25.1)	0.57 (14.5)	0.032 (0.8)
2.5	460M25592	1.50 (38.1)	0.48 (12.2)	0.032 (0.8)	0.99 (25.1)	0.61 (15.5)	0.032 (0.8)
2.7	460M27592	1.50 (38.1)	0.50 (12.7)	0.032 (0.8)	0.99 (25.1)	0.63 (16.0)	0.032 (0.8)
3.0	460M30592	1.50 (38.1)	0.52 (13.2)	0.032 (0.8)	1.25 (31.8)	0.58 (14.7)	0.032 (0.8)
3.3	460M33592	1.50 (38.1)	0.54 (13.7)	0.032 (0.8)	1.25 (31.8)	0.60 (15.2)	0.032 (0.8)
3.6	460M36592	1.50 (38.1)	0.57 (14.5)	0.032 (0.8)	1.25 (31.8)	0.63 (16.0)	0.032 (0.8)
3.9	460M39592	1.50 (38.1)	0.59 (15.0)	0.032 (0.8)	1.25 (31.8)	0.65 (16.5)	0.032 (0.8)
4.0	460M40592	1.74 (44.2)	0.54 (13.7)	0.032 (0.8)	1.25 (31.8)	0.66 (16.8)	0.032 (0.8)
4.7	460M47592	1.74 (44.2)	0.58 (14.7)	0.032 (0.8)	1.25 (31.8)	0.71 (18.0)	0.032 (0.8)
5.0	460M50592	1.74 (44.2)	0.60 (15.2)	0.032 (0.8)	1.25 (31.8)	0.74 (18.8)	0.032 (0.8)
5.6	460M56592	1.74 (44.2)	0.63 (16.0)	0.032 (0.8)	1.25 (31.8)	0.78 (19.8)	0.040 (1.0)
6.0	460M60592	1.74 (44.2)	0.65 (16.5)	0.032 (0.8)	1.25 (31.8)	0.81 (20.6)	0.040 (1.0)
6.8	460M68592	1.74 (44.2)	0.69 (17.5)	0.032 (0.8)	1.50 (38.1)	0.76 (19.3)	0.040 (1.0)
7.0	460M70592	1.74 (44.2)	0.70 (17.8)	0.032 (0.8)	1.50 (38.1)	0.77 (19.6)	0.040 (1.0)
7.5	460M75592	1.74 (44.2)	0.73 (18.5)	0.032 (0.8)	1.50 (38.1)	0.80 (20.3)	0.040 (1.0)
8.0	460M80592	1.74 (44.2)	0.75 (19.1)	0.032 (0.8)	1.50 (38.1)	0.82 (20.8)	0.040 (1.0)
9.0	460M90592	1.74 (44.2)	0.79 (20.1)	0.040 (1.0)	1.50 (38.1)	0.87 (22.1)	0.040 (1.0)
10.0	460M10692	1.74 (44.2)	0.83 (21.1)	0.040 (1.0)	1.50 (38.1)	0.92 (23.4)	0.040 (1.0)
12.0	460M12692	2.21 (56.1)	0.79 (20.1)	0.040 (1.0)	1.74 (44.2)	0.91 (23.1)	0.040 (1.0)
15.0	460M15692	2.21 (56.1)	0.87 (22.1)	0.040 (1.0)	1.74 (44.2)	1.01 (25.7)	0.040 (1.0)
20.0	460M20692	2.21 (56.1)	1.00 (25.4)	0.040 (1.0)	1.74 (44.2)	1.17 (29.7)	0.040 (1.0)
25.0	460M25692	2.21 (56.1)	1.12 (28.4)	0.040 (1.0)			
30.0	460M30692	2.21 (56.1)	1.22 (31.0)	0.040 (1.0)			
35.0	460M35692	2.21 (56.1)	1.32 (33.5)	0.040 (1.0)			
40.0	460M40692	2.21 (56.1)	1.41 (35.8)	0.040 (1.0)			
45.0	460M45692	2.21 (56.1)	1.49 (37.8)	0.040 (1.0)			
50.0	460M50692	2.21 (56.1)	1.57 (39.9)	0.040 (1.0)			
55.0	460M55692	2.21 (56.1)	1.65 (41.9)	0.040 (1.0)			

[1] Please refer to Ordering/Part Number page for specific part numbering details.

Type 460M Sizes and Ratings - 400 VDC/200 VAC

		Standard Dimensions			Compact Dimensions[1]		
Cap µF	Base Part #	L MAX	DIA MAX	Wire (d)	L MAX	DIA MAX	Wire (d)
0.022	460M22394	0.61 (15.5)	0.19 (4.8)	0.020 (0.5)			
0.027	460M27394	0.61 (15.5)	0.20 (5.1)	0.020 (0.5)			
0.033	460M33394	0.61 (15.5)	0.22 (5.6)	0.020 (0.5)			
0.039	460M39394	0.61 (15.5)	0.23 (5.8)	0.020 (0.5)			
0.047	460M47394	0.61 (15.5)	0.25 (6.4)	0.020 (0.5)			
0.05	460M50394	0.61 (15.5)	0.26 (6.6)	0.025 (0.6)			
0.056	460M56394	0.61 (15.5)	0.27 (6.9)	0.025 (0.6)			
0.062	460M62394	0.79 (20.1)	0.22 (5.6)	0.020 (0.5)	0.61 (15.5)	0.28 (7.1)	0.025 (0.6)
0.068	460M68394	0.79 (20.1)	0.23 (5.8)	0.020 (0.5)	0.61 (15.5)	0.29 (7.4)	0.025 (0.6)
0.075	460M75394	0.79 (20.1)	0.24 (6.1)	0.020 (0.5)	0.61 (15.5)	0.31 (7.9)	0.025 (0.6)
0.082	460M82394	0.79 (20.1)	0.25 (6.4)	0.020 (0.5)	0.61 (15.5)	0.32 (8.1)	0.025 (0.6)
0.1	460M10494	0.79 (20.1)	0.27 (6.9)	0.025 (0.6)	0.61 (15.5)	0.35 (8.9)	0.025 (0.6)
0.12	460M12494	0.99 (25.1)	0.25 (6.4)	0.020 (0.5)	0.79 (20.1)	0.29 (7.4)	0.025 (0.6)
0.15	460M15494	0.99 (25.1)	0.27 (6.9)	0.025 (0.6)	0.79 (20.1)	0.32 (8.1)	0.025 (0.6)
0.18	460M18494	0.99 (25.1)	0.29 (7.4)	0.025 (0.6)	0.79 (20.1)	0.35 (8.9)	0.025 (0.6)
0.22	460M22494	0.99 (25.1)	0.32 (8.1)	0.025 (0.6)	0.79 (20.1)	0.38 (9.7)	0.025 (0.6)
0.27	460M27494	0.99 (25.1)	0.35 (8.9)	0.025 (0.6)	0.79 (20.1)	0.42 (10.7)	0.032 (0.8)
0.33	460M33494	1.25 (31.8)	0.33 (8.4)	0.025 (0.6)	0.99 (25.1)	0.38 (9.7)	0.025 (0.6)
0.39	460M39494	1.25 (31.8)	0.36 (9.1)	0.025 (0.6)	0.99 (25.1)	0.41 (10.4)	0.032 (0.8)
0.47	460M47494	1.50 (38.1)	0.36 (9.1)	0.025 (0.6)	0.99 (25.1)	0.45 (11.4)	0.032 (0.8)
0.5	460M50494	1.50 (38.1)	0.37 (9.4)	0.025 (0.6)	0.99 (25.1)	0.46 (11.7)	0.032 (0.8)
0.56	460M56494	1.50 (38.1)	0.38 (9.7)	0.032 (0.8)	0.99 (25.1)	0.48 (12.2)	0.032 (0.8)
0.6	460M60494	1.50 (38.1)	0.39 (9.9)	0.032 (0.8)	0.99 (25.1)	0.50 (12.7)	0.032 (0.8)
0.68	460M68494	1.74 (44.2)	0.38 (9.7)	0.032 (0.8)	0.99 (25.1)	0.53 (13.5)	0.032 (0.8)
0.75	460M75494	1.74 (44.2)	0.40 (10.2)	0.032 (0.8)	0.99 (25.1)	0.55 (14.0)	0.032 (0.8)
0.82	460M82494	1.74 (44.2)	0.41 (10.4)	0.032 (0.8)	0.99 (25.1)	0.58 (14.7)	0.032 (0.8)
0.9	460M90494	1.74 (44.2)	0.43 (10.9)	0.032 (0.8)	0.99 (25.1)	0.60 (15.2)	0.032 (0.8)
1.0	460M10594	1.74 (44.2)	0.45 (11.4)	0.032 (0.8)	0.99 (25.1)	0.63 (16.0)	0.032 (0.8)
1.2	460M12594	1.74 (44.2)	0.49 (12.4)	0.032 (0.8)	1.25 (31.8)	0.60 (15.2)	0.032 (0.8)
1.5	460M15594	1.74 (44.2)	0.54 (13.7)	0.032 (0.8)	1.25 (31.8)	0.66 (16.8)	0.032 (0.8)
1.8	460M18594	1.74 (44.2)	0.59 (15.0)	0.032 (0.8)	1.25 (31.8)	0.72 (18.3)	0.032 (0.8)
2.0	460M20594	1.74 (44.2)	0.62 (15.7)	0.032 (0.8)	1.25 (31.8)	0.77 (19.6)	0.040 (1.0)
2.2	460M22594	1.74 (44.2)	0.64 (16.3)	0.032 (0.8)	1.25 (31.8)	0.80 (20.3)	0.040 (1.0)
2.5	460M25594	1.74 (44.2)	0.68 (17.3)	0.032 (0.8)	1.50 (38.1)	0.75 (19.1)	0.032 (0.8)
2.7	460M27594	1.74 (44.2)	0.71 (18.0)	0.032 (0.8)	1.50 (38.1)	0.78 (19.8)	0.040 (1.0)
3.0	460M30594	1.74 (44.2)	0.75 (19.1)	0.032 (0.8)	1.50 (38.1)	0.82 (20.8)	0.040 (1.0)
3.3	460M33594	1.74 (44.2)	0.78 (19.8)	0.040 (1.0)	1.50 (38.1)	0.86 (21.8)	0.040 (1.0)
3.6	460M36594	2.21 (56.1)	0.70 (17.8)	0.032 (0.8)	1.50 (38.1)	0.90 (22.9)	0.040 (1.0)
3.9	460M39594	2.21 (56.1)	0.73 (18.5)	0.032 (0.8)	1.50 (38.1)	0.93 (23.6)	0.040 (1.0)
4.0	460M40594	2.21 (56.1)	0.74 (18.8)	0.032 (0.8)	1.50 (38.1)	0.94 (23.9)	0.040 (1.0)
4.7	460M47594	2.21 (56.1)	0.80 (20.3)	0.040 (1.0)	1.50 (38.1)	1.02 (25.9)	0.040 (1.0)
5.0	460M50594	2.21 (56.1)	0.82 (20.8)	0.040 (1.0)	1.74 (44.2)	0.95 (24.1)	0.040 (1.0)
5.6	460M56594	2.21 (56.1)	0.87 (22.1)	0.040 (1.0)	1.74 (44.2)	1.01 (25.7)	0.040 (1.0)
6.0	460M60594	2.21 (56.1)	0.89 (22.6)	0.040 (1.0)	1.74 (44.2)	1.04 (26.4)	0.040 (1.0)
6.8	460M68594	2.21 (56.1)	0.95 (24.1)	0.040 (1.0)	1.74 (44.2)	1.11 (28.2)	0.040 (1.0)
7.0	460M70594	2.21 (56.1)	0.96 (24.4)	0.040 (1.0)	1.74 (44.2)	1.12 (28.4)	0.040 (1.0)
7.5	460M75594	2.21 (56.1)	1.00 (25.4)	0.040 (1.0)	1.74 (44.2)	1.16 (29.5)	0.040 (1.0)
8.0	460M80594	2.21 (56.1)	1.03 (26.2)	0.040 (1.0)	1.74 (44.2)	1.20 (30.5)	0.040 (1.0)
9.0	460M90594	2.21 (56.1)	1.09 (27.7)	0.040 (1.0)			
10.0	460M10694	2.21 (56.1)	1.14 (29.0)	0.040 (1.0)			
12.0	460M12694	2.21 (56.1)	1.25 (31.8)	0.040 (1.0)			
15.0	460M15694	2.21 (56.1)	1.40 (35.6)	0.040 (1.0)			
18.0	460M18694	2.21 (56.1)	1.53 (38.9)	0.040 (1.0)			
20.0	460M20694	2.21 (56.1)	1.61 (40.9)	0.040 (1.0)			

[1] Please refer to Ordering/Part Number page for specific part numbering details.

Maximum dV/dt Ratings (Volts/µsec)

Refer to the tabulated data below for the maximum allowable pulse rise time (dV/dt) based on voltage rating and length/diameter dimensions. In addition, further detailed notes regarding pulse applications may be found on page 13.

63 VDC

L MAX Dimension

Diameter Range	0.61	0.79	0.99	1.25	1.50	1.74	2.21
< 0.28	7	6	5				
0.28-0.39	15	9	6	5	4		
0.40-0.49		13	8	6	5		
0.50-0.75			9	7	6		
> 0.75				7	6		

100 VDC

L MAX Dimension

Diameter Range	0.61	0.79	0.99	1.25	1.50	1.74	2.21
< 0.28	7	6	5	4			
0.28-0.39	17	11	7	5			
0.40-0.49		13	9	7	6		
0.50-0.75			12	8	6	5	4
> 0.75					6	5	4

250 VDC

L MAX Dimension

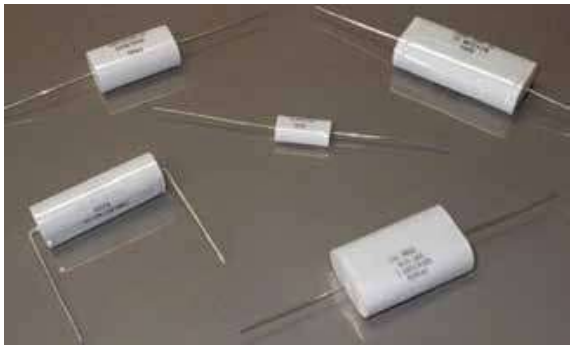
Diameter Range	0.61	0.79	0.99	1.25	1.50	1.74	2.21
< 0.28	15	9	8	8			
0.28-0.39	23	14	9	9			
0.40-0.49		19	13	10	8		
0.50-0.75			14	11	8	7	
> 0.75				11	8	7	5

400 VDC

L MAX Dimension

Diameter Range	0.61	0.79	0.99	1.25	1.50	1.74	2.21
< 0.28	28	16	13				
0.28-0.39	43	25	16	14	11	9	
0.40-0.49		34	22	18		10	
0.50-0.75			23	18	14		8
> 0.75				18	14	11	8

Type 461M
Axial Lead
Pressed/Oval Profile
Metallized Polyester
Film Capacitors



Specifications

Capacitance Range:
0.027 to 100.0 µF

Capacitance Tolerance:
+5% and +10%, standard
(other tolerances available
upon request)

Voltage Ratings:
63 to 400 VDC

Operating Temperature:
Units may be operated at full-rated voltage from -55ºC to +85ºC.

Voltage De-rating above +85ºC:
Units may be operated up to a maximum of 125ºC provided the voltage is de-rated linearly to 50% of rated voltage of +125ºC.

Dissipation Factor:
1.0% maximum @ 1 KHz, +25ºC

Insulation Resistance:

At +25ºC:	10,000 MΩ for C ≤ 1.0 µF
	10,000 MΩ-µF for C > 1.0 µF
At +85ºC:	1,000 MΩ for C ≤ 1.0 µF
	1,000 MΩ-µF for C > 1.0 µF

Encapsulation:
Wrapped with flame retardant polyester tape (meets UL510 specifications) and potted with flame retardant epoxy (meets UL94V-0 specifications).

Lead Wire:
Tinned copper-clad steel for wire sizes:
0.020 (0.5) diameter (#24 AWG)
0.025 (0.6) diameter (#22 AWG)
0.032 (0.8) diameter (#20 AWG)

Tinned copper for wire sizes:
0.040 (1.0) diameter (#18 AWG)

Dielectric/Construction:
Metallized polyester film, single section design. Non-inductively wound.

In addition to the information provided here, CDE also offers complete design and manufacturing of specific capacitance values, custom form factors, special lead terminations, etc.

Dimensions are in inches, millimeters are in parenthesis.

General Specifications

The 461M series is designed and manufactured for use in many demanding applications. They are non-inductively wound using the most reliable metallized polyester film available today. A wide range of capacitance values, voltage ratings, lead terminations and sizes offer the designer an array of options to best meet the form, fit and function requirements specified.

Operating Temperature Range:

Standard operating temperature range is –55°C to +85°C. Units may be operated at the full rated voltage within this temperature range.

The 461M series may be operated up to a maximum temperature of +125°C, however the voltage must be linearly de-rated to 50% of the full rated voltage at +125°C.

Dielectric Withstanding Voltage:

Units shall withstand a DC potential of 150% of rated voltage applied between terminals for not more than 2 minutes.

Lead Bend Test:

After 3 consecutive 180° bends. No damage.

Lead Pull Test:

5 pounds (2.3 Kg) for one minute on lead axis. No damage.

Humidity Testing:

Units subjected to 95% relative humidity for 250 hours with no voltage applied at +40°C. After 4 hours of drying, minimum product of insulation resistance and capacitance shall be 5,000 MΩ-µF, but need not exceed 5,000 MΩ.

DC Voltage Life Test:

500 hours at +85°C at 125% of rated voltage. After test; capacitance shall not have changed by more than ±10% of initial value, insulation resistance shall not have decreased by more than 50% of initial value and dissipation factor shall not have increased to more than 1.25%. In addition, there shall be no open or short circuits, and no sign of visible damage.

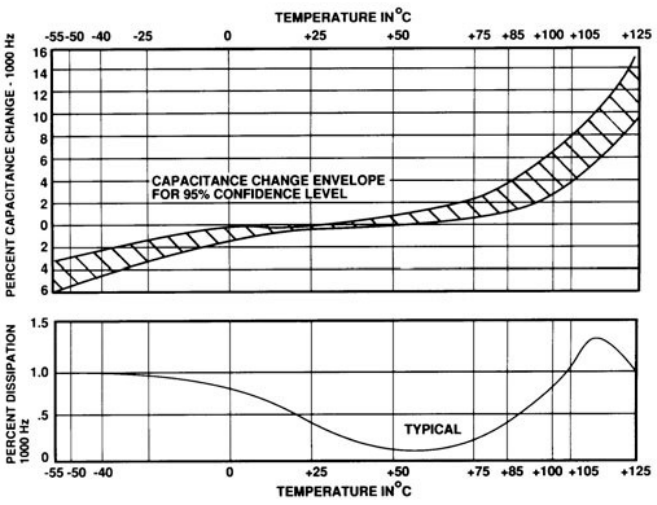
Dielectric Material/Construction:

The 461M series is manufactured using metallized polyester film as the dielectric. The capacitor element is non-inductively wound in a single section design.

Metallized polyester film utilizes a base film of polyester with a thin layer of aluminum vacuum deposited directly on the film as the electrode.

Metallized film exhibits a characteristic called “self-healing” or “self-clearing”, which is the ability to remove a fault or short circuit in the dielectric film by vaporizing (from high current density) the metallization near the defect. The metallization is so thin that negligible film damage occurs during the clearing process. The vaporized metal oxidizes over time, aiding in the isolation of a fault area.

Typical Temperature Characteristics:



Ordering/Part Number Information

461M 106 9 2 C – XXX

A suffix may be added to denote special construction, marking, packaging, test requirements, etc.

Compact design indicator. A letter "C" is added to indicate a compact size form factor. Refer to table of part numbers for specific sizes.

DC Voltage Rating. R6 = 63 VDC 4 = 400 VDC
1 = 100 VDC
2 = 250 VDC

Capacitance Tolerance. 9 = ±10%; 5 = ±5%

Capacitance. Expressed in Picofarads. The first two digits are the significant figures, the third is the number of zeros following (i.e. 106 = 10,000,000 pF = 10.0 µF).

CDE Type Number. Identifies basic capacitor design.

Standard Marking Format

Sample Marking on unit

CDE 461M(C)
106K 250V
0824

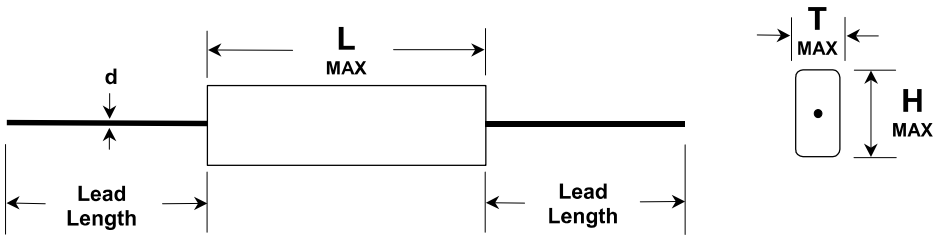
Description

CDE	-	CDE Identification
461M	-	Type Number. 460MC indicates compact design.
250V	-	DC Voltage Rating
106K	-	Capacitance and Tolerance Code
0824	-	Weekly Date Code (i.e. 24th week of 2008)

Tolerance codes per EIA standards

J	±5%
K	±10%

Dimension Outline



Lead Length Table

L MAX dimension	Lead Length (Typical)
0.61 (15.5)	2.00 (50.8)
0.79 (20.1)	1.90 (48.3)
0.99 (25.1)	1.80 (45.7)
1.25 (31.8)	1.65 (41.9)
1.50 (38.1)	1.50 (38.1)
1.74 (44.2)	1.40 (35.6)
2.21 (56.1)	1.25 (31.8)

In all cases a MINIMUM lead length of 1.25 (31.8) will be met.

Lead Wire Size and Additional Termination Options

Standard lead wire sizes used in manufacturing range from 0.020 (0.5) diameter (#24 AWG) to 0.040 (1.0) diameter (#18 AWG). We can also provide a variety of other wire sizes and material (i.e. heavier gauges, insulated wire, tinned copper in smaller gauges, etc.). If the wire size or material listed on our standard items doesn't meet your requirements please contact us. We can accommodate your needs. We can also provide lug/tab terminations upon request. Please contact us with your specific requirements.

Type 461M Sizes and Ratings - 63 VDC

Cap (µF)	Base Part #	Standard Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec	Compact Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec
0.22	461M2249R6	0.61 (15.5)	0.14 (3.6)	0.24 (6.1)	0.020 (0.5)	14					
0.25	461M2549R6	0.61 (15.5)	0.15 (3.8)	0.25 (6.4)	0.020 (0.5)	14					
0.27	461M2749R6	0.61 (15.5)	0.16 (4.1)	0.26 (6.6)	0.020 (0.5)	14					
0.33	461M3349R6	0.61 (15.5)	0.18 (4.6)	0.27 (6.9)	0.020 (0.5)	14					
0.39	461M3949R6	0.79 (20.1)	0.14 (3.6)	0.24 (6.1)	0.020 (0.5)	8	0.61 (15.5)	0.19 (4.8)	0.29 (7.4)	0.020 (0.5)	14
0.43	461M4349R6	0.79 (20.1)	0.15 (3.8)	0.25 (6.4)	0.020 (0.5)	8	0.61 (15.5)	0.20 (5.1)	0.30 (7.6)	0.020 (0.5)	14
0.47	461M4749R6	0.79 (20.1)	0.16 (4.1)	0.26 (6.6)	0.020 (0.5)	8	0.61 (15.5)	0.21 (5.3)	0.31 (7.9)	0.020 (0.5)	16
0.5	461M5049R6	0.79 (20.1)	0.17 (4.3)	0.26 (6.6)	0.020 (0.5)	8	0.61 (15.5)	0.22 (5.6)	0.32 (8.1)	0.020 (0.5)	19
0.56	461M5649R6	0.79 (20.1)	0.18 (4.6)	0.27 (6.9)	0.020 (0.5)	8	0.61 (15.5)	0.24 (6.1)	0.33 (8.4)	0.020 (0.5)	22
0.6	461M6049R6	0.79 (20.1)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	8	0.61 (15.5)	0.24 (6.1)	0.34 (8.6)	0.020 (0.5)	23
0.68	461M6849R6	0.79 (20.1)	0.20 (5.1)	0.29 (7.4)	0.020 (0.5)	8	0.61 (15.5)	0.26 (6.6)	0.36 (9.1)	0.020 (0.5)	26
0.75	461M7549R6	0.79 (20.1)	0.21 (5.3)	0.30 (7.6)	0.020 (0.5)	8	0.61 (15.5)	0.28 (7.1)	0.37 (9.4)	0.020 (0.5)	28
0.82	461M8249R6	0.99 (25.1)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	6	0.79 (20.1)	0.21 (5.3)	0.33 (8.4)	0.020 (0.5)	10
0.9	461M9049R6	0.99 (25.1)	0.19 (4.8)	0.28 (7.1)	0.020 (0.5)	6	0.79 (20.1)	0.22 (5.6)	0.34 (8.6)	0.020 (0.5)	12
1.0	461M1059R6	0.99 (25.1)	0.19 (4.8)	0.31 (7.9)	0.020 (0.5)	6	0.79 (20.1)	0.23 (5.8)	0.35 (8.9)	0.020 (0.5)	13
1.2	461M1259R6	0.99 (25.1)	0.21 (5.3)	0.33 (8.4)	0.020 (0.5)	7	0.79 (20.1)	0.24 (6.1)	0.39 (9.9)	0.025 (0.6)	15
1.5	461M1559R6	0.99 (25.1)	0.22 (5.6)	0.37 (9.4)	0.020 (0.5)	9	0.79 (20.1)	0.27 (6.9)	0.43 (10.9)	0.025 (0.6)	26
1.8	461M1859R6	0.99 (25.1)	0.24 (6.1)	0.40 (10.2)	0.020 (0.5)	11	0.79 (20.1)	0.30 (7.6)	0.46 (11.7)	0.025 (0.6)	26
2.0	461M2059R6	0.99 (25.1)	0.25 (6.4)	0.43 (10.9)	0.020 (0.5)	17	0.79 (20.1)	0.31 (7.9)	0.49 (12.4)	0.025 (0.6)	26
2.2	461M2259R6	0.99 (25.1)	0.26 (6.6)	0.45 (11.4)	0.025 (0.6)	18	0.79 (20.1)	0.33 (8.4)	0.51 (13.0)	0.025 (0.6)	26
2.5	461M2559R6	1.25 (31.8)	0.26 (6.6)	0.39 (9.9)	0.025 (0.6)	8	0.99 (25.1)	0.28 (7.1)	0.47 (11.9)	0.025 (0.6)	18
2.7	461M2759R6	1.25 (31.8)	0.26 (6.6)	0.41 (10.4)	0.025 (0.6)	9	0.99 (25.1)	0.29 (7.4)	0.48 (12.2)	0.025 (0.6)	18
3.0	461M3059R6	1.25 (31.8)	0.26 (6.6)	0.45 (11.4)	0.025 (0.6)	13	0.99 (25.1)	0.31 (7.9)	0.50 (12.7)	0.025 (0.6)	18
3.3	461M3359R6	1.25 (31.8)	0.28 (7.1)	0.46 (11.7)	0.025 (0.6)	13	0.99 (25.1)	0.33 (8.4)	0.52 (13.2)	0.025 (0.6)	18
3.6	461M3659R6	1.25 (31.8)	0.29 (7.4)	0.48 (12.2)	0.025 (0.6)	13	0.99 (25.1)	0.35 (8.9)	0.53 (13.5)	0.032 (0.8)	18
3.9	461M3959R6	1.25 (31.8)	0.31 (7.9)	0.49 (12.4)	0.025 (0.6)	13	0.99 (25.1)	0.36 (9.1)	0.55 (14.0)	0.032 (0.8)	18
4.7	461M4759R6	1.25 (31.8)	0.34 (8.6)	0.53 (13.5)	0.025 (0.6)	13	0.99 (25.1)	0.38 (9.7)	0.62 (15.7)	0.032 (0.8)	18
5.0	461M5059R6	1.25 (31.8)	0.35 (8.9)	0.55 (14.0)	0.032 (0.8)	13	0.99 (25.1)	0.39 (9.9)	0.64 (16.3)	0.032 (0.8)	18
5.6	461M5659R6	1.25 (31.8)	0.38 (9.7)	0.56 (14.2)	0.032 (0.8)	14	0.99 (25.1)	0.42 (10.7)	0.67 (17.0)	0.032 (0.8)	18
6.0	461M6059R6	1.25 (31.8)	0.39 (9.9)	0.58 (14.7)	0.032 (0.8)	14	0.99 (25.1)	0.44 (11.2)	0.68 (17.3)	0.032 (0.8)	18
6.8	461M6859R6	1.50 (38.1)	0.37 (9.4)	0.55 (14.0)	0.032 (0.8)	11	1.25 (31.8)	0.39 (9.9)	0.64 (16.3)	0.032 (0.8)	14
7.0	461M7059R6	1.50 (38.1)	0.37 (9.4)	0.56 (14.2)	0.032 (0.8)	11	1.25 (31.8)	0.40 (10.2)	0.65 (16.5)	0.032 (0.8)	14
7.5	461M7559R6	1.50 (38.1)	0.36 (9.1)	0.61 (15.5)	0.032 (0.8)	11	1.25 (31.8)	0.42 (10.7)	0.67 (17.0)	0.032 (0.8)	14
8.0	461M8059R6	1.50 (38.1)	0.37 (9.4)	0.62 (15.7)	0.032 (0.8)	11	1.25 (31.8)	0.43 (10.9)	0.68 (17.3)	0.032 (0.8)	14
9.0	461M9059R6	1.50 (38.1)	0.40 (10.2)	0.65 (16.5)	0.032 (0.8)	11	1.25 (31.8)	0.47 (11.9)	0.71 (18.0)	0.032 (0.8)	14
10.0	461M1069R6	1.50 (38.1)	0.43 (10.9)	0.68 (17.3)	0.032 (0.8)	11	1.25 (31.8)	0.50 (12.7)	0.74 (18.8)	0.032 (0.8)	14
12.0	461M1269R6	1.74 (44.2)	0.42 (10.7)	0.67 (17.0)	0.032 (0.8)	9	1.50 (38.1)	0.48 (12.2)	0.73 (18.5)	0.032 (0.8)	11
15.0	461M1569R6	1.74 (44.2)	0.43 (10.9)	0.80 (20.3)	0.032 (0.8)	9	1.50 (38.1)	0.52 (13.2)	0.83 (21.1)	0.032 (0.8)	11
18.0	461M1869R6	1.74 (44.2)	0.48 (12.2)	0.85 (21.6)	0.032 (0.8)	9	1.50 (38.1)	0.58 (14.7)	0.89 (22.6)	0.032 (0.8)	11
20.0	461M2069R6	1.74 (44.2)	0.52 (13.2)	0.89 (22.6)	0.032 (0.8)	9	1.50 (38.1)	0.62 (15.7)	0.92 (23.4)	0.032 (0.8)	11
25.0	461M2569R6	1.74 (44.2)	0.59 (15.0)	0.96 (24.4)	0.032 (0.8)	9	1.50 (38.1)	0.67 (17.0)	1.04 (26.4)	0.040 (1.0)	11
30.0	461M3069R6	1.74 (44.2)	0.66 (16.8)	1.03 (26.2)	0.040 (1.0)	9	1.50 (38.1)	0.75 (19.1)	1.12 (28.4)	0.040 (1.0)	11
35.0	461M3569R6	1.74 (44.2)	0.73 (18.5)	1.10 (27.9)	0.040 (1.0)	9	1.50 (38.1)	0.82 (20.8)	1.19 (30.2)	0.040 (1.0)	11
40.0	461M4069R6	1.74 (44.2)	0.79 (20.1)	1.16 (29.5)	0.040 (1.0)	9	1.50 (38.1)	0.89 (22.6)	1.26 (32.0)	0.040 (1.0)	11
45.0	461M4569R6	1.74 (44.2)	0.85 (21.6)	1.22 (31.0)	0.040 (1.0)	9	1.50 (38.1)	0.95 (24.1)	1.32 (33.5)	0.040 (1.0)	11
50.0	461M5069R6	1.74 (44.2)	0.90 (22.9)	1.27 (32.3)	0.040 (1.0)	9	1.50 (38.1)	1.01 (25.7)	1.38 (35.1)	0.040 (1.0)	11
55.0	461M5569R6	1.74 (44.2)	0.95 (24.1)	1.32 (33.5)	0.040 (1.0)	9	1.50 (38.1)	1.07 (27.2)	1.44 (36.6)	0.040 (1.0)	11
60.0	461M6069R6	1.74 (44.2)	1.00 (25.4)	1.37 (34.8)	0.040 (1.0)	9	1.50 (38.1)	1.13 (28.7)	1.50 (38.1)	0.040 (1.0)	11
65.0	461M6569R6	1.74 (44.2)	1.05 (26.7)	1.42 (36.1)	0.040 (1.0)	9	1.50 (38.1)	1.18 (30.0)	1.55 (39.4)	0.040 (1.0)	11
70.0	461M7069R6	1.74 (44.2)	1.10 (27.9)	1.47 (37.3)	0.040 (1.0)	9	1.50 (38.1)	1.23 (31.2)	1.60 (40.6)	0.040 (1.0)	11
75.0	461M7569R6	1.74 (44.2)	1.14 (29.0)	1.51 (38.4)	0.040 (1.0)	9	1.50 (38.1)	1.28 (32.5)	1.65 (41.9)	0.040 (1.0)	11
80.0	461M8069R6	1.74 (44.2)	1.18 (30.0)	1.55 (39.4)	0.040 (1.0)	9	1.50 (38.1)	1.33 (33.8)	1.70 (43.2)	0.040 (1.0)	11
85.0	461M8569R6	1.74 (44.2)	1.23 (31.2)	1.60 (40.6)	0.040 (1.0)	9	1.50 (38.1)	1.37 (34.8)	1.74 (44.2)	0.040 (1.0)	11
90.0	461M9069R6	1.74 (44.2)	1.27 (32.3)	1.64 (41.7)	0.040 (1.0)	9					
95.0	461M9569R6	1.74 (44.2)	1.31 (33.3)	1.68 (42.7)	0.040 (1.0)	9					
100.0	461M1079R6	1.74 (44.2)	1.34 (34.0)	1.72 (43.7)	0.040 (1.0)	9					

[1] Please refer to Ordering/Part Number page for specific part numbering details.

Type 461M Sizes and Ratings - 100 VDC

Cap (µF)	Base Part #	Standard Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec	Compact Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec
0.22	461M22491	0.61 (15.5)	0.16 (4.1)	0.26 (6.6)	0.020 (0.5)	16					
0.25	461M25491	0.61 (15.5)	0.18 (4.6)	0.27 (6.9)	0.020 (0.5)	16					
0.27	461M27491	0.61 (15.5)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	16					
0.33	461M33491	0.79 (20.1)	0.15 (3.8)	0.25 (6.4)	0.020 (0.5)	9	0.61 (15.5)	0.20 (5.1)	0.30 (7.6)	0.020 (0.5)	16
0.39	461M39491	0.79 (20.1)	0.17 (4.3)	0.27 (6.9)	0.020 (0.5)	9	0.61 (15.5)	0.22 (5.6)	0.32 (8.1)	0.020 (0.5)	21
0.43	461M43491	0.79 (20.1)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	9	0.61 (15.5)	0.24 (6.1)	0.34 (8.6)	0.020 (0.5)	24
0.47	461M47491	0.79 (20.1)	0.19 (4.8)	0.29 (7.4)	0.020 (0.5)	9	0.61 (15.5)	0.25 (6.4)	0.35 (8.9)	0.020 (0.5)	27
0.5	461M50491	0.79 (20.1)	0.19 (4.8)	0.29 (7.4)	0.020 (0.5)	9	0.61 (15.5)	0.26 (6.6)	0.35 (8.9)	0.020 (0.5)	28
0.56	461M56491	0.79 (20.1)	0.20 (5.1)	0.30 (7.6)	0.020 (0.5)	9	0.61 (15.5)	0.27 (6.9)	0.37 (9.4)	0.020 (0.5)	31
0.6	461M60491	0.79 (20.1)	0.20 (5.1)	0.32 (8.1)	0.020 (0.5)	10	0.61 (15.5)	0.28 (7.1)	0.38 (9.7)	0.020 (0.5)	32
0.68	461M68491	0.79 (20.1)	0.22 (5.6)	0.34 (8.6)	0.020 (0.5)	13	0.61 (15.5)	0.29 (7.4)	0.41 (10.4)	0.020 (0.5)	34
0.75	461M75491	0.99 (25.1)	0.18 (4.6)	0.31 (7.9)	0.020 (0.5)	6	0.79 (20.1)	0.23 (5.8)	0.35 (8.9)	0.020 (0.5)	15
0.82	461M82491	0.99 (25.1)	0.19 (4.8)	0.32 (8.1)	0.020 (0.5)	6	0.79 (20.1)	0.24 (6.1)	0.36 (9.1)	0.020 (0.5)	16
0.9	461M90491	0.99 (25.1)	0.20 (5.1)	0.33 (8.4)	0.020 (0.5)	8	0.79 (20.1)	0.25 (6.4)	0.38 (9.7)	0.020 (0.5)	17
1.0	461M10591	0.99 (25.1)	0.22 (5.6)	0.34 (8.6)	0.020 (0.5)	9	0.79 (20.1)	0.25 (6.4)	0.41 (10.4)	0.020 (0.5)	18
1.2	461M12591	0.99 (25.1)	0.24 (6.1)	0.36 (9.1)	0.020 (0.5)	11	0.79 (20.1)	0.28 (7.1)	0.44 (11.2)	0.025 (0.6)	29
1.5	461M15591	0.99 (25.1)	0.26 (6.6)	0.41 (10.4)	0.025 (0.6)	13	0.79 (20.1)	0.32 (8.1)	0.47 (11.9)	0.025 (0.6)	29
1.8	461M18591	0.99 (25.1)	0.29 (7.4)	0.44 (11.2)	0.025 (0.6)	20	0.79 (25.1)	0.34 (8.6)	0.52 (13.2)	0.025 (0.6)	30
2.0	461M20591	1.25 (31.8)	0.26 (6.6)	0.41 (10.4)	0.025 (0.6)	15	0.99 (25.1)	0.29 (7.4)	0.47 (11.9)	0.025 (0.6)	20
2.2	461M22591	1.25 (31.8)	0.26 (6.6)	0.44 (11.2)	0.025 (06)	15	0.99 (25.1)	0.31 (7.9)	0.49 (12.4)	0.025 (0.6)	20
2.5	461M25591	1.25 (31.8)	0.28 (7.1)	0.46 (11.7)	0.025 (0.6)	15	0.99 (25.1)	0.33 (8.4)	0.52 (13.2)	0.025 (0.6)	20
2.7	461M27591	1.25 (31.8)	0.29 (7.4)	0.48 (12.2)	0.025 (0.6)	15	0.99 (25.1)	0.27 (6.9)	0.53 (13.5)	0.025 (0.6)	20
3.0	461M30591	1.25 (31.8)	0.31 (7.9)	0.49 (12.4)	0.025 (0.6)	15	0.99 (25.1)	0.36 (9.1)	0.55 (14.0)	0.032 (0.8)	20
3.3	461M33591	1.25 (31.8)	0.33 (8.4)	0.51 (13.0)	0.025 (0.6)	15	0.99 (25.1)	0.39 (9.9)	0.57 (14.5)	0.032 (0.8)	21
3.6	461M36591	1.25 (31.8)	0.34 (8.6)	0.53 (13.5)	0.025 (0.6)	15	0.99 (25.1)	0.41 (10.4)	0.59 (15.0)	0.032 (0.8)	21
3.9	461M39591	1.25 (31.8)	0.33 (8.4)	0.58 (14.7)	0.025 (0.6)	15	0.99 (25.1)	0.40 (10.2)	0.64 (16.3)	0.032 (0.8)	21
4.7	461M47591	1.50 (38.1)	0.32 (8.1)	0.57 (14.5)	0.025 (0.6)	12	1.25 (31.8)	0.37 (9.4)	0.62 (15.7)	0.032 (0.8)	15
5.0	461M50591	1.50 (38.1)	0.33 (8.4)	0.58 (14.7)	0.025 (0.6)	12	1.25 (31.8)	0.39 (9.9)	0.63 (16.0)	0.032 (0.8)	15
5.6	461M56591	1.50 (38.1)	0.36 (9.1)	0.60 (15.2)	0.032 (0.8)	12	1.25 (31.8)	0.41 (10.4)	0.66 (16.8)	0.032 (0.8)	15
6.0	461M60591	1.50 (38.1)	0.37 (9.4)	0.62 (15.7)	0.032 (0.8)	12	1.25 (31.8)	0.43 (10.9)	0.68 (17.3)	0.032 (0.8)	15
6.8	461M68591	1.50 (38.1)	0.40 (10.2)	0.65 (16.5)	0.032 (0.8)	12	1.25 (31.8)	0.46 (11.7)	0.71 (18.0)	0.032 (0.8)	15
7.0	461M70591	1.50 (38.1)	0.41 (10.4)	0.66 (16.8)	0.032 (0.8)	12	1.25 (31.8)	0.47 (11.9)	0.72 (18.3)	0.032 (0.8)	15
7.5	461M75591	1.50 (38.1)	0.43 (10.9)	0.67 (17.0)	0.032 (0.8)	12	1.25 (31.8)	0.49 (12.4)	0.74 (18.8)	0.032 (0.8)	15
8.0	461M80591	1.50 (38.1)	0.44 (11.2)	0.69 (17.5)	0.032 (0.8)	12	1.25 (31.8)	0.48 (12.2)	0.79 (20.1)	0.032 (0.8)	16
9.0	461M90591	1.50 (38.1)	0.48 (12.2)	0.72 (18.3)	0.032 (0.8)	12	1.25 (31.8)	0.52 (13.2)	0.83 (21.1)	0.032 (0.8)	16
10.0	461M10691	1.74 (44.2)	0.42 (10.7)	0.73 (18.5)	0.032 (0.8)	10	1.50 (38.1)	0.48 (12.2)	0.79 (20.1)	0.032 (0.8)	12
12.0	461M12691	2.21 (56.1)	0.39 (9.9)	0.70 (17.8)	0.032 (0.8)	7	1.50 (38.1)	0.53 (13.5)	0.84 (21.3)	0.032 (0.8)	12
15.0	461M15691	2.21 (56.1)	0.42 (10.7)	0.80 (20.3)	0.032 (0.8)	7	1.50 (38.1)	0.61 (15.5)	0.92 (23.4)	0.032 (0.8)	12
18.0	461M18691	2.21 (56.1)	0.47 (11.9)	0.85 (21.6)	0.032 (0.8)	7	1.50 (38.1)	0.65 (16.5)	1.02 (25.9)	0.040 (1.0)	12
20.0	461M20691	2.21 (56.1)	0.51 (13.0)	0.88 (22.4)	0.032 (0.8)	7	1.50 (38.1)	0.69 (17.5)	1.06 (26.9)	0.040 (1.0)	12
22.0	461M22691	2.21 (56.1)	0.54 (13.7)	0.91 (23.1)	0.032 (0.8)	7	1.74 (44.2)	0.65 (16.5)	1.02 (25.9)	0.040 (1.0)	10
25.0	461M25691	2.21 (56.1)	0.58 (14.7)	0.95 (24.1)	0.032 (0.8)	7	1.74 (44.2)	0.70 (17.8)	1.07 (27.2)	0.040 (1.0)	10
30.0	461M30691	2.21 (56.1)	0.65 (16.5)	1.02 (25.9)	0.040 (1.0)	7	1.74 (44.2)	0.79 (20.1)	1.16 (29.5)	0.040 (1.0)	10
35.0	461M35691	2.21 (56.1)	0.72 (18.3)	1.09 (27.7)	0.040 (1.0)	7	1.74 (44.2)	0.86 (21.8)	1.23 (31.2)	0.040 (1.0)	10
40.0	461M40691	2.21 (56.1)	0.78 (19.8)	1.15 (29.2)	0.040 (1.0)	7	1.74 (44.2)	0.93 (23.6)	1.30 (33.0)	0.040 (1.0)	10
45.0	461M45691	2.21 (56.1)	0.83 (21.1)	1.20 (30.5)	0.040 (1.0)	7	1.74 (44.2)	1.00 (25.4)	1.37 (34.8)	0.040 (1.0)	10
50.0	461M50691	2.21 (56.1)	0.89 (22.6)	1.26 (32.0)	0.040 (1.0)	7	1.74 (44.2)	1.06 (26.9)	1.43 (36.3)	0.040 (1.0)	10
55.0	461M55691	2.21 (56.1)	0.94 (23.9)	1.31 (33.3)	0.040 (1.0)	7	1.74 (44.2)	1.12 (28.4)	1.49 (37.8)	0.040 (1.0)	10
60.0	461M60691	2.21 (56.1)	0.99 (25.1)	1.36 (34.5)	0.040 (1.0)	7	1.74 (44.2)	1.18 (30.0)	1.55 (39.4)	0.040 (1.0)	10
65.0	461M65691	2.21 (56.1)	1.03 (26.2)	1.40 (35.6)	0.040 (1.0)	7	1.74 (44.2)	1.23 (31.2)	1.60 (40.6)	0.040 (1.0)	10
70.0	461M70691	2.21 (56.1)	1.08 (27.4)	1.45 (36.8)	0.040 (1.0)	7	1.74 (44.2)	1.29 (32.8)	1.66 (42.2)	0.040 (1.0)	10
75.0	461M75691	2.21 (56.1)	1.12 (28.4)	1.49 (37.8)	0.040 (1.0)	7	1.74 (44.2)	1.34 (34.0)	1.71 (43.4)	0.040 (1.0)	10
80.0	461M80691	2.21 (56.1)	1.16 (29.5)	1.54 (39.1)	0.040 (1.0)	7	1.74 (44.2)	1.39 (35.3)	1.76 (44.7)	0.040 (1.0)	10
85.0	461M85691	2.21 (56.1)	1.21 (30.7)	1.58 (40.1)	0.040 (1.0)	7					
90.0	461M90691	2.21 (56.1)	1.24 (31.5)	1.62 (41.1)	0.040 (1.0)	7					
100.0	461M10791	2.21 (56.1)	1.32 (33.5)	1.69 (42.9)	0.040 (1.0)	7					

[1] Please refer to Ordering/Part Number page for specific part numbering details.

Type 461M Sizes and Ratings - 250 VDC

Cap (µF)	Base Part #	Standard Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec	Compact Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec
0.1	461M10492	0.61 (15.5)	0.16 (4.1)	0.26 (6.6)	0.020 (0.5)	22					
0.12	461M12492	0.61 (15.5)	0.17 (4.3)	0.27 (6.9)	0.020 (0.5)	22					
0.15	461M15492	0.79 (20.1)	0.15 (3.8)	0.25 (6.4)	0.020 (0.5)	13	0.61 (15.5)	0.20 (5.1)	0.30 (7.6)	0.020 (0.5)	22
0.18	461M18492	0.79 (20.1)	0.16 (4.1)	0.26 (6.6)	0.020 (0.5)	13	0.61 (15.5)	0.22 (5.6)	0.32 (8.1)	0.020 (0.5)	28
0.22	461M22492	0.79 (20.1)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	13	0.61 (15.5)	0.24 (6.1)	0.34 (8.6)	0.020 (0.5)	36
0.25	461M25492	0.79 (20.1)	0.18 (4.6)	0.31 (7.9)	0.020 (0.5)	13	0.61 (15.5)	0.26 (6.6)	0.36 (9.1)	0.020 (0.5)	41
0.27	461M27492	0.79 (20.1)	0.19 (4.8)	0.32 (8.1)	0.020 (0.5)	13	0.61 (15.5)	0.27 (6.9)	0.37 (9.4)	0.020 (0.5)	44
0.33	461M33492	0.99 (25.1)	0.17 (4.3)	0.30 (7.6)	0.020 (0.5)	9	0.79 (20.1)	0.21 (5.3)	0.34 (8.6)	0.020 (0.5)	18
0.39	461M39492	0.99 (25.1)	0.19 (4.8)	0.32 (8.1)	0.020 (0.5)	9	0.79 (20.1)	0.24 (6.1)	0.36 (9.1)	0.020 (0.5)	22
0.43	461M43492	0.99 (25.1)	0.20 (5.1)	0.33 (8.4)	0.020 (0.5)	10	0.79 (20.1)	0.25 (6.4)	0.37 (9.4)	0.020 (0.5)	24
0.47	461M47492	0.99 (25.1)	0.21 (5.3)	0.34 (8.6)	0.020 (0.5)	12	0.79 (20.1)	0.25 (6.4)	0.40 (10.2)	0.020 (0.5)	26
0.5	461M50492	0.99 (25.1)	0.22 (5.6)	0.34 (8.6)	0.020 (0.5)	13	0.79 (20.1)	0.26 (6.6)	0.41 (10.4)	0.025 (0.6)	27
0.56	461M56492	0.99 (25.1)	0.23 (5.8)	0.36 (9.1)	0.020 (0.5)	15	0.79 (20.1)	0.27 (6.9)	0.43 (10.9)	0.025 (0.6)	41
0.6	461M60492	0.99 (25.1)	0.24 (6.1)	0.37 (9.4)	0.020 (0.5)	16	0.79 (20.1)	0.28 (7.1)	0.44 (11.2)	0.025 (0.6)	42
0.68	461M68492	0.99 (25.1)	0.26 (6.6)	0.38 (9.7)	0.025 (0.6)	18	0.79 (20.1)	0.30 (7.6)	0.46 (11.7)	0.025 (0.6)	42
0.75	461M75492	0.99 (25.1)	0.27 (6.9)	0.40 (10.2)	0.025 (0.6)	19	0.79 (20.1)	0.32 (8.1)	0.48 (12.2)	0.025 (0.6)	42
0.82	461M82492	1.25 (31.8)	0.26 (6.6)	0.36 (9.1)	0.025 (0.6)	12	0.99 (25.1)	0.27 (6.9)	0.43 (10.9)	0.025 (0.6)	28
0.9	461M90492	1.25 (31.8)	0.26 (6.6)	0.38 (9.7)	0.025 (0.6)	13	0.99 (25.1)	0.29 (7.4)	0.44 (11.2)	0.025 (0.6)	29
1.0	461M10592	1.25 (31.8)	0.27 (6.9)	0.40 (10.2)	0.025 (0.6)	14	0.99 (25.1)	0.31 (7.9)	0.46 (11.7)	0.025 (0.6)	29
1.2	461M12592	1.25 (31.8)	0.30 (7.6)	0.43 (10.9)	0.025 (0.6)	21	0.99 (25.1)	0.33 (8.4)	0.51 (13.0)	0.025 (0.6)	29
1.5	461M15592	1.25 (31.8)	0.31 (7.9)	0.50 (12.7)	0.025 (0.6)	22	0.99 (25.1)	0.37 (9.4)	0.56 (14.2)	0.032 (0.8)	29
1.8	461M18592	1.25 (31.8)	0.35 (8.9)	0.53 (13.5)	0.025 (0.6)	22	0.99 (25.1)	0.38 (9.7)	0.63 (16.0)	0.032 (0.8)	29
2.0	461M20592	1.50 (38.1)	0.32 (8.1)	0.51 (13.0)	0.025 (0.6)	17	1.25 (31.8)	0.34 (8.6)	0.59 (15.0)	0.025 (0.6)	22
2.2	461M22592	1.50 (38.1)	0.34 (8.6)	0.53 (13.5)	0.025 (0.6)	17	1.25 (31.8)	0.36 (9.1)	0.61 (15.5)	0.032 (0.8)	22
2.5	461M25592	1.50 (38.1)	0.37 (9.4)	0.55 (14.0)	0.032 (0.8)	17	1.25 (31.8)	0.39 (9.9)	0.64 (16.3)	0.032 (0.8)	22
2.7	461M27592	1.50 (38.1)	0.35 (8.9)	0.60 (15.2)	0.032 (0.8)	17	1.25 (31.8)	0.41 (10.4)	0.66 (16.8)	0.032 (0.8)	22
3.0	461M30592	1.50 (38.1)	0.38 (9.7)	0.62 (15.7)	0.032 (0.8)	17	1.25 (31.8)	0.44 (11.2)	0.68 (17.3)	0.032 (0.8)	22
3.3	461M33592	1.50 (38.1)	0.40 (10.2)	0.65 (16.5)	0.032 (0.8)	17	1.25 (31.8)	0.46 (11.7)	0.71 (18.0)	0.032 (0.8)	22
3.6	461M36592	1.50 (38.1)	0.42 (10.7)	0.67 (17.0)	0.032 (0.8)	17	1.25 (31.8)	0.49 (12.4)	0.73 (18.5)	0.032 (0.8)	22
3.9	461M39592	1.50 (38.1)	0.44 (11.2)	0.69 (17.5)	0.032 (0.8)	17	1.25 (31.8)	0.51 (13.0)	0.76 (19.3)	0.032 (0.8)	22
4.7	461M47592	1.74 (44.2)	0.44 (11.2)	0.69 (17.5)	0.032 (0.8)	14	1.50 (38.1)	0.49 (12.4)	0.74 (18.8)	0.032 (0.8)	17
5.0	461M50592	1.74 (44.2)	0.46 (11.7)	0.70 (17.8)	0.032 (0.8)	14	1.50 (38.1)	0.48 (12.2)	0.79 (20.1)	0.032 (0.8)	17
5.6	461M56592	1.74 (44.2)	0.49 (12.4)	0.74 (18.8)	0.032 (0.8)	14	1.50 (38.1)	0.52 (13.2)	0.83 (21.1)	0.032 (0.8)	17
6.0	461M60592	1.74 (44.2)	0.51 (13.0)	0.76 (19.3)	0.032 (0.8)	14	1.50 (38.1)	0.54 (13.7)	0.85 (21.6)	0.032 (0.8)	17
6.8	461M68592	1.74 (44.2)	0.55 (14.0)	0.79 (20.1)	0.032 (0.8)	14	1.50 (38.1)	0.58 (14.7)	0.89 (22.6)	0.032 (0.8)	17
7.0	461M70592	1.74 (44.2)	0.56 (14.2)	0.80 (20.3)	0.032 (0.8)	14	1.50 (38.1)	0.59 (15.0)	0.90 (22.9)	0.032 (0.8)	17
7.5	461M75592	1.74 (44.2)	0.58 (14.7)	0.83 (21.1)	0.032 (0.8)	14	1.50 (38.1)	0.62 (15.7)	0.93 (23.6)	0.032 (0.8)	17
8.0	461M80592	1.74 (44.2)	0.60 (15.2)	0.85 (21.6)	0.032 (0.8)	14	1.50 (38.1)	0.64 (16.3)	0.95 (24.1)	0.040 (1.0)	17
9.0	461M90592	1.74 (44.2)	0.61 (15.5)	0.92 (23.4)	0.032 (0.8)	14	1.50 (38.1)	0.69 (17.5)	1.00 (25.4)	0.040 (1.0)	17
10.0	461M10692	2.21 (56.1)	0.54 (13.7)	0.85 (21.6)	0.032 (0.8)	10	1.74 (44.2)	0.65 (16.5)	0.96 (24.4)	0.040 (1.0)	14
12.0	461M12692	2.21 (56.1)	0.60 (15.2)	0.91 (23.1)	0.032 (0.8)	11	1.74 (44.2)	0.69 (17.5)	1.07 (27.2)	0.040 (1.0)	14
15.0	461M15692	2.21 (56.1)	0.69 (17.5)	1.00 (25.4)	0.040 (1.0)	11	1.74 (44.2)	0.79 (20.1)	1.17 (29.7)	0.040 (1.0)	14
18.0	461M18692	2.21 (56.1)	0.74 (18.8)	1.11 (28.2)	0.040 (1.0)	11	1.74 (44.2)	0.88 (22.4)	1.26 (32.0)	0.040 (1.0)	14
20.0	461M20692	2.21 (56.1)	0.79 (20.1)	1.16 (29.5)	0.040 (1.0)	11	1.74 (44.2)	0.94 (23.9)	1.31 (33.3)	0.040 (1.0)	14
22.0	461M22692	2.21 (56.1)	0.83 (21.1)	1.20 (30.5)	0.040 (1.0)	11	1.74 (44.2)	1.00 (25.4)	1.37 (34.8)	0.040 (1.0)	14
25.0	461M25692	2.21 (56.1)	0.90 (22.9)	1.27 (32.3)	0.040 (1.0)	11	1.74 (44.2)	1.07 (27.2)	1.44 (36.6)	0.040 (1.0)	14
30.0	461M30692	2.21 (56.1)	1.00 (25.4)	1.37 (34.8)	0.040 (1.0)	11	1.74 (44.2)	1.19 (30.2)	1.56 (39.6)	0.040 (1.0)	14
35.0	461M35692	2.21 (56.1)	1.09 (27.7)	1.46 (37.1)	0.040 (1.0)	11	1.74 (44.2)	1.30 (33.0)	1.67 (42.4)	0.040 (1.0)	14
40.0	461M40692	2.21 (56.1)	1.18 (30.0)	1.55 (39.4)	0.040 (1.0)	11	1.74 (44.2)	1.40 (35.6)	1.77 (45.0)	0.040 (1.0)	14
45.0	461M45692	2.21 (56.1)	1.26 (32.0)	1.63 (41.4)	0.040 (1.0)	11					
50.0	461M50692	2.21 (56.1)	1.34 (34.0)	1.71 (43.4)	0.040 (1.0)	11					
55.0	461M55692	2.21 (56.1)	1.41 (35.8)	1.78 (45.2)	0.040 (1.0)	11					

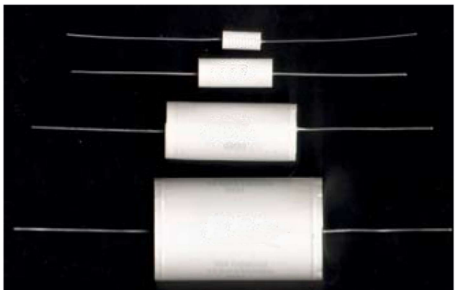
[1] Please refer to Ordering/Part Number page for specific part numbering details.

Type 461M Sizes and Ratings - 400 VDC

Cap (µF)	Base Part #	Standard Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec	Compact Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec
0.027	461M27394	0.61 (15.5)	0.14 (3.6)	0.24 (6.1)	0.020 (0.5)	42					
0.033	461M33394	0.61 (15.5)	0.16 (4.1)	0.26 (6.6)	0.020 (0.5)	42					
0.036	461M36394	0.61 (15.5)	0.17 (4.3)	0.27 (6.9)	0.020 (0.5)	42					
0.039	461M39394	0.61 (15.5)	0.17 (4.3)	0.27 (6.9)	0.020 (0.5)	42					
0.043	461M43394	0.61 (15.5)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	42					
0.047	461M47394	0.61 (15.5)	0.19 (4.8)	0.29 (7.4)	0.020 (0.5)	42					
0.05	461M50394	0.61 (15.5)	0.20 (5.1)	0.30 (7.6)	0.020 (0.5)	42					
0.056	461M56394	0.79 (20.1)	0.15 (3.8)	0.25 (6.4)	0.020 (0.5)	23	0.61 (15.5)	0.21 (5.3)	0.31 (7.9)	0.020 (0.5)	49
0.062	461M62394	0.79 (20.1)	0.16 (4.1)	0.26 (6.6)	0.020 (0.5)	23	0.61 (15.5)	0.22 (5.6)	0.32 (8.1)	0.020 (0.5)	57
0.068	461M68394	0.79 (20.1)	0.17 (4.3)	0.27 (6.9)	0.020 (0.5)	23	0.61 (15.5)	0.23 (5.8)	0.33 (8.4)	0.020 (0.5)	65
0.075	461M75394	0.79 (20.1)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	23	0.61 (15.5)	0.25 (6.4)	0.35 (8.9)	0.020 (0.5)	72
0.082	461M82394	0.79 (20.1)	0.19 (4.8)	0.29 (7.4)	0.020 (0.5)	23	0.61 (15.5)	0.26 (6.6)	0.36 (9.1)	0.020 (0.5)	78
0.1	461M10494	0.99 (25.1)	0.16 (4.1)	0.28 (7.1)	0.020 (0.5)	16	0.79 (20.1)	0.20 (5.1)	0.32 (8.1)	0.020 (0.5)	25
0.12	461M12494	0.99 (25.1)	0.17 (4.3)	0.30 (7.6)	0.020 (0.5)	16	0.79 (20.1)	0.22 (5.6)	0.34 (8.6)	0.020 (0.5)	34
0.15	461M15494	0.99 (25.1)	0.20 (5.1)	0.32 (8.1)	0.020 (0.5)	16	0.79 (20.1)	0.25 (6.4)	0.37 (9.4)	0.020 (0.5)	42
0.18	461M18494	0.99 (25.1)	0.22 (5.6)	0.34 (8.6)	0.020 (0.5)	22	0.79 (20.1)	0.26 (6.6)	0.41 (10.4)	0.025 (0.6)	48
0.22	461M22494	0.99 (25.1)	0.24 (6.1)	0.37 (9.4)	0.020 (0.5)	28	0.79 (20.1)	0.29 (7.4)	0.45 (11.4)	0.025 (0.6)	73
0.25	461M25494	0.99 (25.1)	0.23 (5.8)	0.42 (10.7)	0.020 (0.5)	30	0.79 (20.1)	0.31 (7.9)	0.47 (11.9)	0.025 (0.6)	74
0.27	461M27494	1.25 (31.8)	0.20 (5.1)	0.39 (9.9)	0.020 (0.5)	18	0.99 (25.1)	0.26 (6.6)	0.41 (10.4)	0.025 (0.6)	32
0.33	461M33494	1.25 (31.8)	0.23 (5.8)	0.42 (10.7)	0.020 (0.5)	21	0.99 (25.1)	0.28 (7.1)	0.46 (11.7)	0.025 (0.6)	49
0.39	461M39494	1.25 (31.8)	0.25 (6.4)	0.44 (11.2)	0.020 (0.5)	35	0.99 (25.1)	0.30 (7.6)	0.49 (12.4)	0.025 (0.6)	49
0.43	461M43494	1.25 (31.8)	0.27 (6.9)	0.45 (11.4)	0.025 (0.6)	36	0.99 (25.1)	0.32 (8.1)	0.51 (13.0)	0.025 (0.6)	49
0.47	461M47494	1.50 (38.1)	0.26 (6.6)	0.42 (10.7)	0.025 (0.6)	18	0.99 (25.1)	0.34 (8.6)	0.53 (13.5)	0.025 (0.6)	50
0.5	461M50494	1.50 (38.1)	0.26 (6.6)	0.44 (11.2)	0.025 (0.6)	27	0.99 (25.1)	0.35 (8.9)	0.54 (13.7)	0.032 (0.8)	50
0.56	461M56494	1.50 (38.1)	0.27 (6.9)	0.46 (11.7)	0.025 (0.6)	28	0.99 (25.1)	0.38 (9.7)	0.56 (14.2)	0.032 (0.8)	50
0.6	461M60494	1.50 (38.1)	0.28 (7.1)	0.47 (11.9)	0.025 (0.6)	28	0.99 (25.1)	0.39 (9.9)	0.58 (14.7)	0.032 (0.8)	50
0.68	461M68494	1.74 (44.2)	0.27 (6.9)	0.46 (11.7)	0.025 (0.6)	22	1.25 (31.8)	0.35 (8.9)	0.54 (13.7)	0.032 (0.8)	36
0.75	461M75494	1.74 (44.2)	0.29 (7.4)	0.47 (11.9)	0.025 (0.6)	23	1.25 (31.8)	0.37 (9.4)	0.56 (14.2)	0.032 (0.8)	37
0.82	461M82494	1.74 (44.2)	0.30 (7.6)	0.49 (12.4)	0.025 (0.6)	23	1.25 (31.8)	0.36 (9.1)	0.61 (15.5)	0.032 (0.8)	37
0.9	461M90494	1.74 (44.2)	0.32 (8.1)	0.51 (13.0)	0.025 (0.6)	23	1.25 (31.8)	0.38 (9.7)	0.63 (16.0)	0.032 (0.8)	37
1.0	461M10594	1.74 (44.2)	0.34 (8.6)	0.52 (13.2)	0.025 (0.6)	23	1.25 (31.8)	0.41 (10.4)	0.66 (16.8)	0.032 (0.8)	37
1.2	461M12594	1.74 (44.2)	0.38 (9.7)	0.56 (14.2)	0.032 (0.8)	23	1.25 (31.8)	0.46 (11.7)	0.70 (17.8)	0.032 (0.8)	37
1.5	461M15594	1.74 (44.2)	0.40 (10.2)	0.65 (16.5)	0.032 (0.8)	23	1.25 (31.8)	0.49 (12.4)	0.80 (20.3)	0.032 (0.8)	37
1.8	461M18594	1.74 (44.2)	0.44 (11.2)	0.69 (17.5)	0.032 (0.8)	23	1.25 (31.8)	0.55 (14.0)	0.86 (21.8)	0.032 (0.8)	37
2.0	461M20594	1.74 (44.2)	0.47 (11.9)	0.72 (18.3)	0.032 (0.8)	23	1.50 (38.1)	0.50 (12.7)	0.81 (20.6)	0.032 (0.8)	29
2.2	461M22594	1.74 (44.2)	0.50 (12.7)	0.75 (19.1)	0.032 (0.8)	23	1.50 (38.1)	0.53 (13.5)	0.84 (21.3)	0.032 (0.8)	29
2.5	461M25594	1.74 (44.2)	0.51 (13.0)	0.82 (20.8)	0.032 (0.8)	23	1.50 (38.1)	0.58 (14.7)	0.88 (22.4)	0.032 (0.8)	29
2.7	461M27594	1.74 (44.2)	0.53 (13.5)	0.84 (21.3)	0.032 (0.8)	24	1.50 (38.1)	0.60 (15.2)	0.91 (23.1)	0.032 (0.8)	29
3.0	461M30594	2.21 (56.1)	0.44 (11.2)	0.81 (20.6)	0.032 (0.8)	17	1.74 (44.2)	0.54 (13.7)	0.91 (23.1)	0.032 (0.8)	24
3.3	461M33594	2.21 (56.1)	0.47 (11.9)	0.84 (21.3)	0.032 (0.8)	17	1.74 (44.2)	0.57 (14.5)	0.94 (23.9)	0.032 (0.8)	24
3.6	461M36594	2.21 (56.1)	0.50 (12.7)	0.87 (22.1)	0.032 (0.8)	17	1.74 (44.2)	0.60 (15.2)	0.97 (24.6)	0.032 (0.8)	24
3.9	461M39594	2.21 (56.1)	0.52 (13.2)	0.89 (22.6)	0.032 (0.8)	17	1.74 (44.2)	0.63 (16.0)	1.00 (25.4)	0.040 (1.0)	24
4.7	461M47594	2.21 (56.1)	0.59 (15.0)	0.96 (24.4)	0.032 (0.8)	17	1.74 (44.2)	0.71 (18.0)	1.08 (27.4)	0.040 (1.0)	24
5.0	461M50594	2.21 (56.1)	0.61 (15.5)	0.98 (24.9)	0.032 (0.8)	17	1.74 (44.2)	0.74 (18.8)	1.11 (28.2)	0.040 (1.0)	24
5.6	461M56594	2.21 (56.1)	0.65 (16.5)	1.02 (25.9)	0.040 (1.0)	17	1.74 (44.2)	0.79 (20.1)	1.16 (29.5)	0.040 (1.0)	24
6.0	461M60594	2.21 (56.1)	0.68 (17.3)	1.05 (26.7)	0.040 (1.0)	17	1.74 (44.2)	0.82 (20.8)	1.19 (30.2)	0.040 (1.0)	24
6.8	461M68594	2.21 (56.1)	0.73 (18.5)	1.10 (27.9)	0.040 (1.0)	17	1.74 (44.2)	0.88 (22.4)	1.26 (32.0)	0.040 (1.0)	24
7.0	461M70594	2.21 (56.1)	0.75 (19.1)	1.12 (28.4)	0.040 (1.0)	17	1.74 (44.2)	0.90 (22.9)	1.27 (32.3)	0.040 (1.0)	24
7.5	461M75594	2.21 (56.1)	0.78 (19.8)	1.15 (29.2)	0.040 (1.0)	17	1.74 (44.2)	0.94 (23.9)	1.31 (33.3)	0.040 (1.0)	24
8.0	461M80594	2.21 (56.1)	0.81 (20.6)	1.18 (30.0)	0.040 (1.0)	17	1.74 (44.2)	0.97 (24.6)	1.34 (34.0)	0.040 (1.0)	24
9.0	461M90594	2.21 (56.1)	0.87 (22.1)	1.24 (31.5)	0.040 (1.0)	17	1.74 (44.2)	1.04 (26.4)	1.41 (35.8)	0.040 (1.0)	24
10.0	461M10694	2.21 (56.1)	0.92 (23.4)	1.29 (32.8)	0.040 (1.0)	17	1.74 (44.2)	1.11 (28.2)	1.48 (37.6)	0.040 (1.0)	24
12.0	461M12694	2.21 (56.1)	1.03 (26.2)	1.40 (35.6)	0.040 (1.0)	17	1.74 (44.2)	1.23 (31.2)	1.60 (40.6)	0.040 (1.0)	24
15.0	461M15694	2.21 (56.1)	1.17 (29.7)	1.54 (39.1)	0.040 (1.0)	17	1.74 (44.2)	1.39 (35.3)	1.77 (45.0)	0.040 (1.0)	24
18.0	461M18694	2.21 (56.1)	1.29 (32.8)	1.66 (42.2)	0.040 (1.0)	17					
20.0	461M20694	2.21 (56.1)	1.37 (34.8)	1.74 (44.2)	0.040 (1.0)	17					

[1] Please refer to Ordering/Part Number page for specific part numbering details.

Type 704M
Axial Lead
Round Profile
Metallized Polypropylene
Film Capacitors



Specifications

Capacitance Range:
1.0 to 20.0 µF
(additional values available upon request)

Capacitance Tolerance:
±5% and ±10%, standard
(tighter tolerances available upon request)

Voltage Rating:
200 VDC/140 VAC

Operating Temperature
Units may be operated at full rated voltage from -55°C to +85°C.

Voltage De-rating above +85°C:
Units may be operated up to a maximum of +105°C provided the voltage is de-rated linearly to 50% of the +85°C rating.

Lead Wire (d):
Tinned Copper.
0.032 (0.8) diameter (#20 AWG)

Dissipation Factor:
0.1% Maximum @ 1 KHz, +25°C.

Insulation Resistance (measured at 100 VDC):
At +25°C: 200,000 MΩ-µF
At +85°C: 10,000 MΩ-µF
(These are minimum ratings, call us if you have a more demanding requirement)

Encapsulation:
Wrapped with flame retardant polyester tape (meets UL510 specifications) and potted with flame retardant epoxy (meets UL94V-0 specifications).

Dielectric/Construction:
Metallized Polypropylene film, single section design. Non-Inductively wound.

High End Audio Applications:
Amplifiers, Preamps, Crossover Networks. Polypropylene's low dissipation factor, ESR and dielectric absorption, along with long term capacitance stability over time make the 704M series ideal for high quality audio applications.

In addition to the information provided here CDE also offers complete design and manufacturing of specific capacitance values, custom form factors, special lead terminations, etc.

Dimensions are in inches, millimeters in parentheses

Type 704M

Metallized Polypropylene Film Capacitors

Ordering/Part Number Information

704M 106 5 2 – XXX

A suffix may be added to denote special construction, packaging, marking, etc.

DC Voltage Rating. 2 = 200 VDC

Capacitance Tolerance. 9 = ±10%; 5 = ±5%; 3 = ±3%; 2 = ±2%; 1 = ±1%

Capacitance. Expressed in Picofarads. The first two digits are the significant figures, the third is the number of zeros following (i.e. 106 = 10,000,000 pF = 10.0 µF).

CDE Type Number. Identifies basic capacitor design.

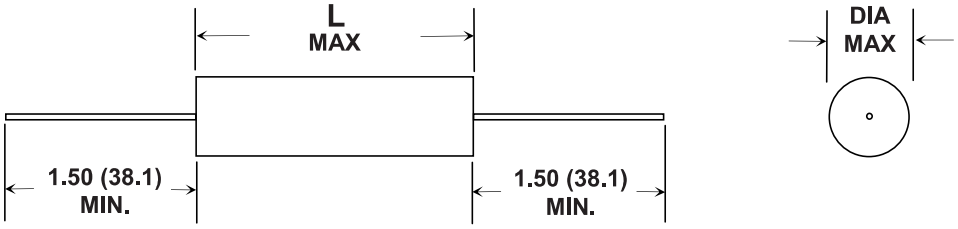
Standard Marking Format

Sample Marki on unit	Description		
CDE 704M 106J 200V 0510	CDE -	CDE Identification	
	704M -	Type Number.	
	200V -	DC Voltage Rating	
	106J -	Capacitance and Tolerance Code	
	0510 -	Weekly Date Code (i.e. 10th week of 2005)	

Tolerance codes per EIA standards

F	±1%
G	±2%
H	±3%
J	±5%
K	±10%

Dimension Outline



Lead Wire Size and Additional Termination Options

Standard lead wire size is 0.032 (0.8) diameter (#20 AWG), Solid tinned copper wire. We can also provide a variety of other wire sizes and material (i.e. heavier gauges, insulated wire, tinned copper-clad steel, smaller gauges, etc.). If the wire size or material doesn't meet your requirements please contact us. We can accommodate your needs.

Dimensions are in inches, millimeters in parentheses

CDE reserves the right to amenddesign data

Type 704M Sizes and Ratings – 200 VDC/140 VAC

Cap (µF)	Base Part # [1]	L MAX	DIA MAX	dV/dt [2] V/µsec	*ESR-mΩ @100KHz
1.0	704M10552	1.50 (38.1)	0.37 (9.4)	7	30.9
1.2	704M12552	1.50 (38.1)	0.40 (10.2)	8	25.9
1.5	704M15552	1.50 (38.1)	0.44 (11.2)	11	20.9
1.8	704M18552	1.50 (38.1)	0.48 (12.2)	11	17.5
2.0	704M20552	1.50 (38.1)	0.50 (12.7)	11	15.9
2.2	704M22552	1.50 (38.1)	0.52 (13.2)	11	14.5
2.5	704M25552	1.50 (38.1)	0.55 (14.0)	11	12.9
2.7	704M27552	1.50 (38.1)	0.57 (14.5)	11	12.1
3.0	704M30552	1.50 (38.1)	0.60 (15.2)	11	11.0
3.3	704M33552	1.50 (38.1)	0.63 (16.0)	11	10.1
3.6	704M36552	1.50 (38.1)	0.65 (16.5)	11	9.4
3.9	704M39552	1.50 (38.1)	0.68 (17.3)	11	8.8
4.0	704M40552	1.50 (38.1)	0.69 (17.5)	11	8.6
4.7	704M47552	1.50 (38.1)	0.74 (18.8)	11	7.5
5.0	704M50552	1.50 (38.1)	0.76 (19.3)	11	7.2
5.6	704M56552	1.50 (38.1)	0.80 (20.3)	12	6.6
6.0	704M60552	1.50 (38.1)	0.83 (21.1)	12	6.3
6.8	704M68552	1.50 (38.1)	0.88 (22.4)	12	5.7
7.0	704M70552	1.50 (38.1)	0.89 (22.6)	12	5.6
7.5	704M75552	1.50 (38.1)	0.92 (23.4)	12	5.4
8.0	704M80552	1.50 (38.1)	0.95 (24.1)	12	5.2
9.0	704M90552	1.50 (38.1)	1.01 (25.7)	12	4.8
10.0	704M10652	1.50 (38.1)	1.06 (26.9)	12	4.6
11.0	704M11652	1.50 (38.1)	1.11 (28.2)	12	4.4
12.0	704M12652	1.50 (38.1)	1.16 (29.5)	12	4.2
13.0	704M13652	1.50 (38.1)	1.20 (30.5)	12	4.1
14.0	704M14652	1.50 (38.1)	1.24 (31.5)	12	4.0
15.0	704M15652	1.50 (38.1)	1.29 (32.8)	12	3.9
16.0	704M16652	1.50 (38.1)	1.33 (33.8)	12	3.8
17.0	704M17652	1.50 (38.1)	1.37 (34.8)	12	3.8
18.0	704M18652	1.50 (38.1)	1.41 (35.8)	12	3.7
19.0	704M19652	1.50 (38.1)	1.44 (36.6)	12	3.7
20.0	704M20652	1.50 (38.1)	1.48 (37.6)	12	3.7

[1] Please refer to Ordering/Part Number page for specific part numbering details.

[2] Please contact us for additional details regarding current carrying capability.

* ESR ratings listed are Maximum. Please contact us for additional ESR data.

Dimensions are in inches, millimeters in parentheses *CDE reserves the right to amend design data*

Type 704M

Metallized Polypropylene Film Capacitors

General Specifications

The 704M series is designed and manufactured for use in demanding audio applications where the highest quality, most reliable film capacitor is required. They are non-inductively wound using the most reliable metallized polypropylene film available.

Operating Temperature Range:

Standard operating temperature range is –55°C to +85°C. Units may be operated at the full rated voltage within this temperature range.

The 704M series may be operated up to a maximum temperature of +105°C, however the voltage must be linearly de-rated to 50% of the full rated voltage at +105°C.

Dielectric Withstanding Voltage:

Units shall withstand a DC potential of 200% of rated voltage applied between terminals for not more than 2 minutes.

Lead Bend Test:

After 3 consecutive 180° bends. No damage.

Lead Pull Test:

5 pounds (2.3 Kg) for one minute on lead axis. No damage.

Humidity Testing:

Units subjected to 95% relative humidity for 250 hours with no voltage applied at +40°C. After 4 hours of drying, minimum product of insulation resistance and capacitance shall be 40,000 MΩ-µF, but need not exceed 80,000 MΩ at +25°C.

DC Voltage Life Test:

1000 hours at +85°C at 150% of rated voltage. After test; capacitance shall not have changed by more than ±2% of initial value, insulation resistance shall not have decreased by more than 50% of initial value and dissipation factor shall not have increased to more than 0.1%. In addition, there shall be no open or short circuits, and no sign of visible damage.

AC Voltage Life Test:

Minimum of 1000 hours at +85°C at 60 Hz. AC test voltage applied at 110% of rated AC voltage. After test; capacitance shall not have changed by more than ±5% of initial value, insulation resistance shall not have decreased by more than 50% of initial value and dissipation factor shall not have changed by more than 0.03%. In addition, there shall be no open or short circuits, and no sign of visible damage. All measurements made at 1 KHz.

Dielectric Material/Construction:

The 704M series is manufactured using metallized polypropylene film as the dielectric. The capacitor element is non-inductively wound in a single section design.

Metallized polypropylene film utilizes a base film of polypropylene with a thin layer of aluminum vacuum deposited directly on the film as the electrode.

Metallized film exhibits a characteristic called “self-healing” or “self-clearing”, which is the ability to remove a fault or short circuit in the dielectric film by vaporizing (from high current density) the metallization near the defect. The metallization is so thin that negligible film damage occurs during the clearing process. The vaporized metal oxidizes over time, aiding in the isolation of a fault area.

Additional Testing Notes:

Since it is not possible to list every detail of testing we perform we strongly encourage you to contact us with any specific question or requirement you may have. Thank you.

Dimensions are in inches, millimeters in parentheses

Type 730P, Metallized Polypropylene Film Capacitors

High Frequency, Wrap and Fill



The 730P series is designed and manufactured for use in many demanding power applications. They are non-inductively wound using the most reliable metallized polypropylene film available. A wide range of capacitance values, voltage ratings, lead terminations and sizes offer the designer an array of options to best meet the form, fit and function requirements specified.

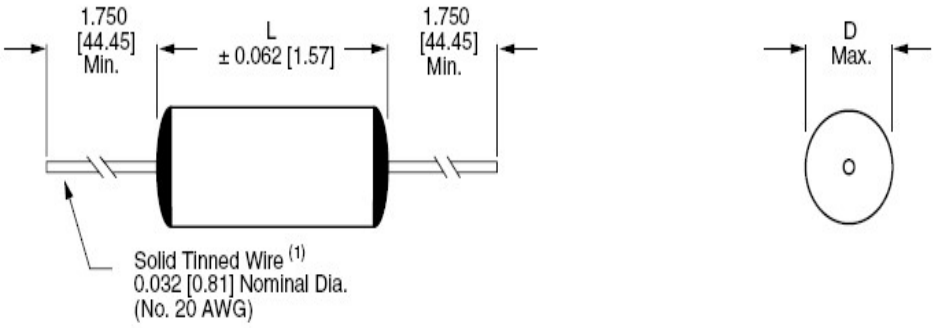
Highlights

- Excellent AC performance
- Low power dissipation
- Low dielectric absorption
- Close tolerance
- High stability
- Compliant to RoHS directive 2002/95/EC

Specifications

Capacitance Range	0.022 to 10.0 µF
Capacitance Tolerance	±20% , ±10%, ±5%
Rated Voltage	100 to 630 Vdc (70 V_{RMS} to 275 V_{RMS}, 60 to 400 Hz)
Operating Temperature Range	–55 °C to 85 °C
Voltage Derating	At +105 °C, 50%of +85 °C rating
ESR	20 kHz to 100 kHz
Dissipation Factor	0.1% maximum - Measure all units at 1000 Hz, at +25 °C
Insulation Resistance	Measured at 100 WVDC after a 2 min charge: At +25 °C: 200 000 MΩ/µF or 400 000 MΩ minimum At +85 °C: 10 000 MΩ/µF or 20 000 MΩ minimum At +105 °C: 1000 MΩ/µF or 2000 MΩ minimum
DC Voltage Test	200% of rated voltage for 2 minutes
AC Voltage Test	130% of rated RMS voltage at 60 Hz for 15 seconds
Vibration Test (Condition B)	No mechanical damage, short, open or intermittent circuits
DC Life Test	150% of rated voltage for 1000 h at +85 °C. No open or short circuits. No visible damage. Maximum Δ CAP ±1.0% Minimum IR = 50% of initial limit Maximum DF = 0.12%
Humidity Test	95% relative humidity at +40 °C for 250 h. No visible damage. Maximum Δ CAP ±1.0% Minimum IR = 20% of initial limit Maximum DF = 0.12%
AC Life Test	110% of rated RMS voltage at 60 Hz for 1000 h at +85 °C Maximum Δ CAP ±5% Minimum IR = 50% of initial limit Maximum DF = 0.12%
Physical Characteristics	Lead Pull: 5 lb (2.3 g) for one min. No physical damage. Lead Bend: After three complete consecutive bend. No damage.
RoHS Compliant	

Dimensions



Type 730P, Metallized Polypropylene Film Capacitors

High Frequency, Wrap and Fill

Part Numbering System

730P	106	X	5	2	XXX
CDE Type Number	Capacitance in µF **10 µF**		Tolerance **5** = ±5% **9** = ±10%	Voltage **1** = 100 Vdc **2** = 250 Vdc **4** = 400 Vdc **6** = 630 Vdc	Special Construction

Ratings

CAPACITANCE (µF)	Catalog Part Number	Case Size D Inches [MM]	Case Size L Inches [MM]	ESR (mΩ) 20 Khz to 100 Khz	Maximum Ripple Current (Arms) at 20 Khz Case Temperature (2) at +25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C
				100VDC							
0.22	730P224X9100	0.275 [7.0]	0.75 [19.0]	-	2.3	2.3	2.3	2.3	2.3	1.8	1.0
0.27	730P274X9100	0.298 [7.6]	0.75 [19.0]	-	2.6	2.6	2.6	2.6	2.4	1.9	1.1
0.33	730P334X9100	0.324 [8.2]	0.75 [19.0]	-	2.8	2.8	2.8	2.8	2.6	2.2	1.2
0.39	730P394X9100	0.347 [8.8]	0.75 [19.0]	-	3.1	3.1	3.1	3.1	2.9	2.3	1.3
0.47	730P474X9100	0.376 [9.6]	0.75 [19.0]	37	3.7	3.4	3.1	2.8	2.5	2.0	1.4
0.56	730P564X9100	0.321 [8.2]	1.00 [25.4]	35	3.9	3.6	3.3	2.9	2.6	2.1	1.5
0.68	730P684X9100	0.348 [8.8]	1.00 [25.4]	33	4.1	3.8	3.5	3.1	2.8	2.2	1.6
0.82	730P824X9100	0.377 [9.6]	1.00 [25.4]	31	4.3	4.0	3.6	3.2	2.9	2.3	1.7
1.0	730P105X9100	0.421 [10.7]	1.00 [25.4]	26	5.5	5.1	4.7	4.2	3.6	2.8	2.6
1.2	730P125X9100	0.454 [11.5]	1.00 [25.4]	24	5.7	5.3	4.9	4.4	3.8	3.0	2.8
1.5	730P155X9100	0.500 [12.7]	1.00 [25.4]	20	6.1	5.5	5.1	4.6	4.0	3.2	3.1
1.8	730P185X9100	0.541 [13.7]	1.00 [25.4]	19	6.3	5.7	5.3	4.8	4.1	3.4	3.0
2.0	730P205X9100	0.486 [12.3]	1.25 [31.8]	18	6.5	6.0	5.5	4.9	4.2	3.5	3.2
2.2	730P225X9100	0.507 [12.9]	1.25 [31.8]	18	6.8	6.3	5.7	5.1	4.4	3.6	3.3
2.7	730P275X9100	0.554 [14.1]	1.25 [31.8]	17	7.1	6.5	6.0	5.3	4.6	3.7	3.4
3.0	730P305X9100	0.581 [14.8]	1.25 [31.8]	16	7.3	6.7	6.2	5.5	4.8	3.9	3.5
3.3	730P335X9100	0.606 [15.4]	1.25 [31.8]	16	7.4	6.8	6.4	5.6	4.9	4.0	3.6
3.9	730P395X9100	0.654 [16.6]	1.25 [31.8]	15	7.6	6.9	6.6	5.8	5.1	4.1	3.7
4.0	730P405X9100	0.537 [13.6]	1.75 [44.5]	15	7.8	7.0	6.7	5.9	5.2	4.2	3.8
4.7	730P475X9100	0.577 [14.7]	1.75 [44.5]	15	8.1	7.4	6.8	6.0	5.3	4.3	3.9
5.0	730P505X9100	0.593 [15.1]	1.75 [44.5]	14	8.3	7.6	7.0	6.2	5.4	4.4	4.0
5.6	730P565X9100	0.624 [15.8]	1.75 [44.5]	14	8.4	7.7	7.1	6.4	5.5	4.5	4.1
6.0	730P605X9100	0.644 [16.4]	1.75 [44.5]	14	8.5	7.8	7.2	6.5	5.6	4.6	4.2
6.8	730P685X9100	0.682 [17.3]	1.75 [44.5]	13	8.5	8.0	7.4	6.7	5.7	4.7	4.3
8.0	730P805X9100	0.735 [18.7]	1.75 [44.5]	13	8.6	8.3	7.7	6.8	6.0	4.8	4.4
8.2	730P825X9100	0.743 [18.9]	1.75 [44.5]	13	8.8	8.6	8.0	7.0	6.1	4.9	4.5
10.0	730P106X9100	0.815 [20.7]	1.75 [44.5]	12	9.0	9.0	8.5	7.6	6.6	5.4	4.9

Notes

Other capacitance values and voltage ratings are available upon request

(1) Part Numbers listed are for a capacitance tolerance of ± 10 %. To specifiy ± 20 % tolerance, change the "X9" in the Part Number to "X0"; for ± 5 %, from "X9" to "X5".

(2) The peak current pulse capability ot these capacitors is 10 A/µF. The maximum rate voltage change is 10 V/µs.

Type 730P, Metallized Polypropylene Film Capacitors

High Frequency, Wrap and Fill

CAPACITANCE (µF)	Catalog Part Number	Case Size D Inches [MM]	Case Size L Inches [MM]	ESR (mΩ) 20 Khz to 100 Khz	Maximum Ripple Current (Arms) at 20 Khz Case Temperature [2] at +25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C
				250VDC							
0.1	730P104X9250	0.279 [7.1]	0.75 [19.0]	-	1.5	1.5	1.5	1.5	1.5	1.5	0.9
0.12	730P124X9250	0.300 [7.6]	0.75 [19.0]	-	1.9	1.9	1.9	1.9	1.9	1.7	1.1
0.15	730P154X9250	0.327 [8.3]	0.75 [19.0]	-	2.3	2.3	2.3	2.3	2.3	1.9	1.1
0.18	730P184X9250	0.353 [9.0]	0.75 [19.0]	-	2.7	2.7	2.7	2.7	2.5	2.0	1.2
0.22	730P224X9250	0.306 [7.8]	1.00 [25.4]	-	1.9	1.9	1.9	1.9	1.9	1.9	1.3
0.27	730P274X9250	0.333 [8.5]	1.00 [25.4]	-	2.4	2.4	2.4	2.4	2.4	2.2	1.4
0.33	730P334X9250	0.362 [9.2]	1.00 [25.4]	-	2.9	2.9	2.9	2.9	2.9	2.3	1.5
0.39	730P394X9250	0.389 [9.9]	1.00 [25.4]	-	3.4	3.4	3.4	3.2	2.9	2.3	1.6
0.47	730P474X9250	0.422 [10.7]	1.00 [25.4]	35	3.8	3.7	3.6	3.4	2.9	2.4	1.7
0.56	730P564X9250	0.464 [11.8]	1.00 [25.4]	33	3.9	3.8	3.7	3.5	3.1	2.5	1.8
0.68	730P684X9250	0.425 [10.8]	1.25 [31.8]	32	4.0	3.9	3.8	3.7	3.2	2.6	1.9
0.82	730P824X9250	0.471 [12.0]	1.25 [31.8]	31	4.2	4.1	4.0	3.9	3.4	2.8	2.0
1.0	730P105X9250	0.513 [13.0]	1.25 [31.8]	28	4.4	4.4	4.4	4.4	4.3	3.5	3.2
1.2	730P125X9250	0.554 [14.1]	1.25 [31.8]	27	4.7	4.6	4.5	5.0	4.5	3.7	3.3
1.5	730P155X9250	0.613 [15.6]	1.25 [31.8]	26	5.1	5.0	4.9	5.4	4.7	3.9	3.5
1.8	730P185X9250	0.667 [17.0]	1.25 [31.8]	25	5.9	5.8	5.7	5.7	5.0	4.1	3.7
2.0	730P205X9250	0.700 [17.8]	1.25 [31.8]	21	7.2	7.2	6.8	6.0	5.2	4.3	3.9
2.2	730P225X9250	0.610 [15.5]	1.75 [44.5]	20	8.4	7.5	7.0	6.3	5.4	4.5	4.1
2.7	730P275X9250	0.669 [17.0]	1.75 [44.5]	19	8.6	7.8	7.3	6.6	5.7	4.7	4.3
3.0	730P305X9250	0.703 [17.9]	1.75 [44.5]	18	9.0	8.3	7.6	6.8	5.9	4.8	4.4
3.3	730P335X9250	0.734 [18.6]	1.75 [44.5]	18	9.0	8.4	7.8	7.0	6.0	4.9	4.5
3.9	730P395X9250	0.794 [20.2]	1.75 [44.5]	17	9.0	8.5	8.0	7.2	6.2	5.0	4.6
4.0	730P405X9250	0.803 [20.4]	1.75 [44.5]	16	9.0	8.6	8.2	7.4	6.3	5.1	4.7
4.7	730P475X9250	0.866 [22.0]	1.75 [44.5]	16	9.0	8.8	8.5	7.7	6.6	5.3	4.9
5.0	730P505X9250	0.892 [22.7]	1.75 [44.5]	15	9.0	9.0	8.8	7.9	6.8	5.6	5.1
5.6	730P565X9250	0.941 [23.9]	1.75 [44.5]	15	9.0	9.0	8.9	8.0	7.0	5.8	5.3
6.0	730P605X9250	0.972 [24.7]	1.75 [44.5]	15	9.0	9.0	9.0	8.2	7.2	5.9	5.5
6.8	730P685X9250	0.882 [22.4]	2.25 [57.2]	15	9.0	9.0	9.0	8.4	7.4	6.0	5.6
8.0	730P805X9250	0.953 [24.2]	2.25 [57.2]	14	9.0	9.0	9.0	8.7	7.8	6.3	5.8
8.2	730P825X9250	0.964 [24.5]	2.25 [57.2]	14	9.0	9.0	9.0	8.8	7.9	6.4	5.9
10.0	730P106X9250	1.060 [26.9]	2.25 [57.2]	13	9.0	9.0	9.0	8.9	8.3	6.8	6.2
				400VDC							
0.047	730P473X9400	0.258 [6.6]	0.75 [19.0]	-	1.0	1.0	1.0	1.0	1.0	1.0	0.9
0.056	730P563X9400	0.275 [7.0]	0.75 [19.0]	-	1.1	1.1	1.1	1.1	1.1	1.1	0.9
0.068	730P683X9400	0.297 [7.5]	0.75 [19.0]	-	1.4	1.4	1.4	1.4	1.4	1.4	1.0

Notes

Other capacitance values and voltage ratings are available upon request

(1) Part Numbers listed are for a capacitance tolerance of ± 10 %. To specifiy ± 20 % tolerance, change the "X9" in the Part Number to "X0"; for ± 5 %, from "X9" to "X5".

(2) The peak current pulse capability ot these capacitors is 10 A/µF. The maximum rate voltage change is 10 V/µs.

Type 730P, Metallized Polypropylene Film Capacitors

High Frequency, Wrap and Fill

CAPACITANCE (µF)	Catalog Part Number	Case Size D Inches [MM]	Case Size L Inches [MM]	ESR (mΩ) 20 Khz to 100 Khz	Maximum Ripple Current (Arms) at 20 Khz Case Temperature [2] at +25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C
400VDC											
0.082	730P823X9400	0.320 [8.1]	0.75 [19.0]	-	1.7	1.7	1.7	1.7	1.7	1.6	1.1
0.10	730P104X9400	0.348 [8.8]	0.75 [19.0]	-	2.0	2.0	2.0	2.0	2.0	1.9	1.3
0.12	730P124X9400	0.299 [7.6]	1.00 [25.4]	-	1.4	1.4	1.4	1.4	1.4	1.4	1.4
0.15	730P154X9400	0.328 [8.3]	1.00 [25.4]	-	1.7	1.7	1.7	1.7	1.7	1.7	1.6
0.18	730P184X9400	0.353 [9.0]	1.00 [25.4]	-	2.1	2.1	2.1	2.1	2.1	2.1	1.7
0.22	730P224X9400	0.385 [9.8]	1.00 [25.4]	-	2.6	2.6	2.6	2.6	2.6	2.5	1.8
0.27	730P274X9400	0.421 [10.7]	1.00 [25.4]	-	3.1	3.1	3.1	3.1	3.1	2.7	1.9
0.33	730P334X9400	0.469 [11.9]	1.00 [25.4]	-	3.8	3.8	3.8	3.8	3.5	2.9	2.0
0.39	730P394X9400	0.503 [12.8]	1.00 [25.4]	-	4.1	4.1	4.1	4.1	3.7	3.1	2.1
0.47	730P474X9400	0.545 [13.8]	1.00 [25.4]	32.0	5.7	5.5	5.0	4.4	3.8	3.2	2.2
0.56	730P564X9400	0.506 [12.9]	1.25 [31.8]	31.0	5.7	5.7	5.3	4.4	4.1	3.3	2.3
0.68	730P684X9400	0.551 [14.0]	1.25 [31.8]	30.0	5.7	5.7	5.5	4.8	4.3	3.5	2.4
0.82	730P824X9400	0.599 [15.2]	1.25 [31.8]	28.0	5.7	5.7	5.6	5.3	4.5	3.7	2.6
1.0	730P105X9400	0.655 [16.6]	1.25 [31.8]	27.0	5.7	5.7	5.7	5.7	5.7	4.7	4.3
1.2	730P125X9400	0.712 [18.1]	1.25 [31.8]	26.0	6.3	6.2	6.0	5.9	5.8	4.9	4.5
1.5	730P155X9400	0.658 [16.7]	1.75 [44.5]	25.0	7.0	6.9	6.7	6.6	6.5	5.2	4.7
1.8	730P185X9400	0.716 [18.2]	1.75 [44.5]	23.0	8.0	7.9	7.8	7.7	6.8	5.5	5.0
2.0	730P205X9400	0.752 [19.1]	1.75 [44.5]	21.0	9.0	9.0	9.0	8.0	7.0	5.7	5.2
2.2	730P225X9400	0.786 [20.0]	1.75 [44.5]	20.0	9.0	9.0	9.0	8.3	7.4	5.9	5.4
2.7	730P275X9400	0.865 [22.0]	1.75 [44.5]	19.0	9.0	9.0	9.0	8.6	7.6	6.0	5.6
3.0	730P305X9400	0.909 [23.1]	1.75 [44.5]	17.0	9.0	9.0	9.0	9.0	7.9	6.4	5.9
3.3	730P335X9400	0.951 [24.2]	1.75 [44.5]	16.0	9.0	9.0	9.0	9.0	8.1	6.6	6.3
3.9	730P395X9400	1.031 [26.2]	1.75 [44.5]	15.0	9.0	9.0	9.0	9.0	8.3	6.8	6.5
630VDC											
0.022	730P223X9630	0.283 [7.2]	0.75 [19.0]	-	0.8	0.8	0.8	0.8	0.8	0.8	0.8
0.027	730P273X9630	0.307 [7.8]	0.75 [19.0]	-	1.0	1.0	1.0	1.0	1.0	1.0	0.9
0.033	730P333X9630	0.334 [8.5]	0.75 [19.0]	-	1.2	1.2	1.2	1.2	1.2	1.2	1.0
0.039	730P393X9630	0.358 [9.1]	0.75 [19.0]	-	1.4	1.4	1.4	1.4	1.4	1.4	1.0
0.047	730P473X9630	0.388 [9.9]	0.75 [19.0]	-	1.7	1.7	1.7	1.7	1.7	1.6	1.1
0.056	730P563X9630	0.418 [10.6]	0.75 [19.0]	-	2.1	2.1	2.1	2.1	2.1	1.7	1.2
0.068	730P683X9630	0.346 [8.8]	1.00 [25.4]	-	1.3	1.3	1.3	1.3	1.3	1.3	1.3
0.082	730P823X9630	0.374 [9.5]	1.00 [25.4]	-	1.6	1.6	1.6	1.6	1.6	1.6	1.6
0.10	730P104X9630	0.408 [10.4]	1.00 [25.4]	-	1.9	1.9	1.9	1.9	1.9	1.9	1.6
0.12	730P124X9630	0.443 [11.3]	1.00 [25.4]	-	2.3	2.3	2.3	2.3	2.3	2.3	1.8
0.15	730P154X9630	0.496 [12.6]	1.00 [25.4]	-	2.9	2.9	2.9	2.9	2.9	2.9	1.9
0.18	730P184X9630	0.538 [13.7]	1.00 [25.4]	-	3.5	3.5	3.5	3.5	3.5	2.7	1.9

Notes

Other capacitance values and voltage ratings are available on request

(1) Part Numbers listed are for a capacitance tolerance of ± 10 %. To specifiy ± 20 % tolerance, change the "X9" in the Part Number to "X0"; for ± 5 %, from "X9" to "X5".

(2) The peak current pulse capability ot these capacitors is 10 A/µF. The maximum rate voltage change is 10 V/µs.

Type 730P, Metallized Polypropylene Film Capacitors

High Frequency, Wrap and Fill

CAPACITANCE (µF)	Catalog Part Number	Case Size D Inches [MM]	Case Size L Inches [MM]	ESR (mΩ) 20 Khz to 100 Khz	Maximum Ripple Current (Arms) at 20 Khz Case Temperature (2) at +25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C
				630VDC							
0.22	730P224X9630	0.496 [12.6]	1.25 [31.8]	-	2.8	2.8	2.8	2.8	2.8	2.8	2.3
0.27	730P274X9630	0.542 [13.8]	1.25 [31.8]	-	3.5	3.5	3.5	3.5	3.5	3.3	2.3
0.33	730P334X9630	0.593 [15.1]	1.25 [31.8]	-	4.3	4.3	4.3	4.3	4.3	3.5	2.4
0.39	730P394X9630	0.639 [16.2]	1.25 [31.8]	-	5.0	5.0	5.0	5.0	4.6	3.7	2.5
0.47	730P474X9630	0.696 [17.7]	1.25 [31.8]	28.0	6.8	6.3	5.8	5.2	4.5	3.6	2.6
0.56	730P564X9630	0.608 [15.4]	1.75 [44.5]	26.0	7.4	6.9	6.3	5.6	4.8	4.0	2.8
0.68	730P684X9630	0.664 [16.9]	1.75 [44.5]	25.0	7.8	7.2	6.6	5.9	5.1	4.2	2.9
0.82	730P824X9630	0.724 [18.4]	1.75 [44.5]	22.0	8.1	7.5	6.9	6.2	5.3	4.3	3.1
1.0	730P105X9630	0.794 [20.2]	1.75 [44.5]	18.0	8.6	7.9	7.3	6.5	5.6	4.6	3.6

Notes

Other capacitance values and voltage ratings are available on request

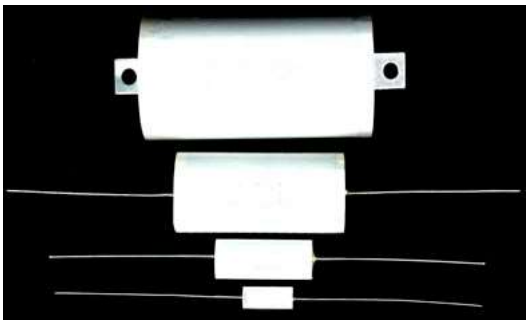
(1) Part Numbers listed are for a capacitance tolerance of ± 10 %. To specifiy ± 20 % tolerance, change the "X9" in the Part Number to "X0";

for ± 5 %, from "X9" to "X5".

(2) The peak current pulse capability ot these capacitors is 10 A/µF. The maximum rate voltage change is 10 V/µs.

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Type 760M
Axial Lead
Round Profile
Metallized Polypropylene
Film Capacitors



Specifications

Capacitance Range:
0.01 to 60.0 µF

Capacitance Tolerance:
±5% and ±10%, standard
(tolerances as close as ±1% available)

Voltage Rating:
160 to 630 VDC
100 to 250 VAC

Operating Temperature
Units may be operated at full rated voltage from -55°C to +85°C.

Voltage De-rating above +85°C:
Units may be operated up to a maximum of +105°C provided the voltage is de-rated linearly to 50% of the +85°C rating.

Dissipation Factor:
Varies with capacitance and frequency, please contact us for specific details associated with your application environment.

Insulation Resistance (measured at 100 VDC):

At +25°C:	400,000 MΩ for C ≤ 0.5 µF
	200,000 MΩ-µF for C > 0.5 µF
At +85°C:	20,000 MΩ for C ≤ 0.5 µF
	10,000 MΩ-µF for C > 0.5 µF

These are minimum ratings, call us if you have a more demanding requirement.

Encapsulation:
Wrapped with flame retardant polyester tape (meets UL510 specifications) and potted with flame retardant epoxy (meets UL94V-0 specifications).

Lead Wire:
Tinned Copper-Clad Steel for wire sizes:
0.020 (0.5) diameter (#24 AWG)

Tinned Copper for wire sizes:
0.025 (0.6) diameter (#22 AWG)
0.032 (0.8) diameter (#20 AWG)
0.040 (1.0) diameter (#18 AWG)

Dielectric/Construction:
Metallized Polypropylene film, single section design. Non-Inductively wound.

In addition to the information provided here CDE also offers complete design and manufacturing of specific capacitance values, custom form factors, special lead terminations, etc.

Dimensions are in inches, millimeters in parentheses
CDE reserves the right to amend design data

General Specifications

The 760M series is designed and manufactured for use in many demanding power applications. They are non-inductively wound using the most reliable metallized polypropylene film available. A wide range of capacitance values, voltage ratings, lead terminations and sizes offer the designer an array of options to best meet the form, fit and function requirements specified.

Operating Temperature Range:
Standard operating temperature range is –55°C to +85°C. Units may be operated at the full rated voltage within this temperature range.

The 760M series may be operated up to a maximum temperature of +105°C, however the voltage must be linearly de-rated to 50% of the full rated voltage at +105°C.

Dielectric Withstanding Voltage:
Units shall withstand a DC potential of 200% of rated voltage applied between terminals for not more than 2 minutes.

Lead Bend Test:
After 3 consecutive 180° bends. No damage.

Lead Pull Test:
5 pounds (2.3 Kg) for one minute on lead axis. No damage.

Humidity Testing:
Units subjected to 95% relative humidity for 250 hours with no voltage applied at +40°C. After 4 hours of drying, minimum product of insulation resistance and capacitance shall be 40,000 MΩ-µF, but need not exceed 80,000 MΩ at +25°C.

DC Voltage Life Test:
1000 hours at +85°C at 150% of rated voltage. After test; capacitance shall not have changed by more than ±2% of initial value, insulation resistance shall not have decreased by more than 50% of initial value and dissipation factor shall not have increased to more than 0.12%. In addition, there shall be no open or short circuits, and no sign of visible damage.

AC Voltage Life Test:
Minimum of 1000 hours at +85°C at 60 Hz. AC test voltage applied at 110% of rated AC voltage. After test; capacitance shall not have changed by more than ±5% of initial value, insulation resistance shall not have decreased by more than 50% of initial value and dissipation factor shall not have changed by more than 0.03%. In addition, there shall be no open or short circuits, and no sign of visible damage. All measurements made at 1 KHz.

Dielectric Material/Construction:
The 760M series is manufactured using metallized polypropylene film as the dielectric. The capacitor element is non-inductively wound in a single section design.

Metallized polypropylene film utilizes a base film of polypropylene with a thin layer of aluminum vacuum deposited directly on the film as the electrode.

Metallized film exhibits a characteristic called “self-healing” or “self-clearing”, which is the ability to remove a fault or short circuit in the dielectric film by vaporizing (from high current density) the metallization near the defect. The metallization is so thin that negligible film damage occurs during the clearing process. The vaporized metal oxidizes over time, aiding in the isolation of a fault area.

Additional Testing Notes:
Since it is not possible to list every detail of testing we perform we strongly encourage you to contact us with any specific question or requirement you may have. Thank you.

Dimensions are in inches, millimeters in parentheses
CDE reserves the right to amend design data

Ordering/Part Number Information

760M 106 5 2 C – XXX

A suffix may be added to denote special construction, packaging, marking, etc. **To specify unit with tinned copper lug terminations add –LUG in this position. Example: 760M10652-LUG.**

Compact design indicator. A letter "C" is added to indicate a compact size form factor. Refer to table of part numbers for specific sizes.

DC Voltage Rating. 1 = 160 VDC 4 = 400 VDC
2 = 250 VDC 6 = 630 VDC

Capacitance Tolerance. 9 = ±10%; 5 = ±5%; 3 = ±3%
2 = ±2%; 1 = ±1%

Capacitance. Expressed in Picofarads. The first two digits are the significant figures, the third is the number of zeros following (i.e. 106 = 10,000,000 pF = 10.0 µF).

CDE Type Number. Identifies basic capacitor design.

Standard Marking Format

Sample Marking on unit

CDE760M(C)
106J 250V
0130

Description

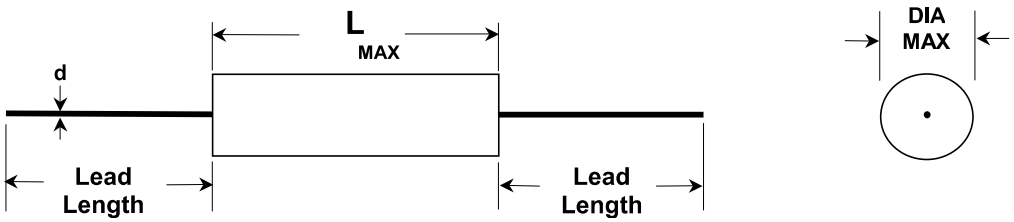
CDE	-	CDE Identification
760M	-	Type Number. 760MC indicates compact design.
250V	-	DC Voltage Rating
106J	-	Capacitance and Tolerance Code
0130	-	Weekly Date Code (i.e. 30th week of 2001)

Tolerance codes per EIA standards

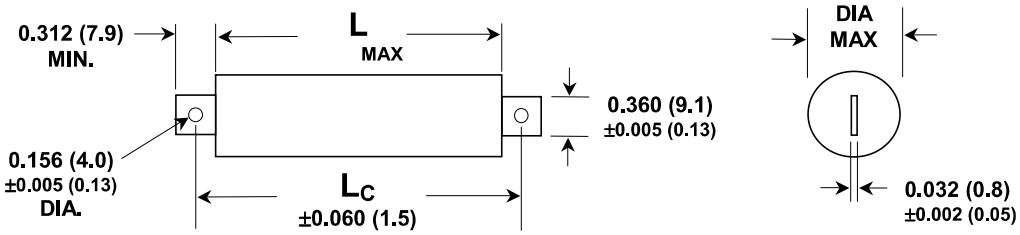
F	±1%
G	±2%
H	±3%
J	±5%
K	±10%

Dimensions are in inches, millimeters in parentheses
CDE reserves the right to amend design data

Dimension Outline



Wire Lead Termination (see lead length table below)



L_C = L MAX + 0.48 (12.2)

Tinned Solid Copper Lug Termination*

***Please note:** Lug terminations are available on units 0.65 (16.5) or greater in Diameter. Please refer to Sizes and Ratings information for available values. If you have a specific requirement other than what you find shown here please contact us.

Lead Length Table

L MAX dimension	Lead Length (Typical)
0.61 (15.5)	2.00 (50.8)
0.79 (20.1)	1.90 (48.3)
0.99 (25.1)	1.80 (45.7)
1.25 (31.8)	1.65 (41.9)
1.74 (44.2)	1.40 (35.6)
2.21 (56.1)	1.25 (31.8)

In all cases a MINIMUM lead length of 1.25 (31.8) will be met.

Lead Wire Size and Additional Termination Options

Standard lead wire sizes utilized in manufacturing range from 0.020 (0.5) diameter [#24 AWG] to 0.040 (1.0) diameter [#18 AWG]. We can also provide a variety of other wire sizes and material (i.e. heavier gauges, insulated wire, etc.). If the wire size or material listed on our standard items doesn't meet your specific requirements please contact us.

Dimensions are in inches, millimeters in parentheses
CDE reserves the right to amend design data

Type 760M Sizes and Ratings – 160 VDC/100 VAC

Cap (µF)	Base Part #[1]	Standard Dimensions/Ratings[1] L MAX	DIA MAX	Wire (d)	dV/dt V/µsec	*ESR-mΩ @100KHz	Compact Dimensions/Ratings[1] L MAX	DIA MAX	Wire (d)	dV/dt V/µsec	*ESR-mΩ @100KHz
0.1	760M10451	0.61 (15.5)	0.21 (5.3)	0.020 (0.5)	12	29.1					
0.12	760M12451	0.61 (15.5)	0.22 (5.6)	0.020 (0.5)	12	24.8					
0.15	760M15451	0.61 (15.5)	0.24 (6.1)	0.020 (0.5)	12	20.5					
0.18	760M18451	0.61 (15.5)	0.26 (6.6)	0.020 (0.5)	12	17.7					
0.22	760M22451	0.79 (20.1)	0.23 (5.8)	0.020 (0.5)	7	32.8	0.61 (15.5)	0.28 (7.1)	0.025 (0.6)	14	15.3
0.25	760M25451	0.79 (20.1)	0.24 (6.1)	0.020 (0.5)	7	29.3	0.61 (15.5)	0.30 (7.6)	0.025 (0.6)	17	14.0
0.27	760M27451	0.79 (20.1)	0.25 (6.4)	0.020 (0.5)	7	27.4	0.61 (15.5)	0.31 (7.9)	0.025 (0.6)	18	13.3
0.30	760M30451	0.79 (20.1)	0.26 (6.6)	0.025 (0.6)	7	25.0	0.61 (15.5)	0.32 (8.1)	0.025 (0.6)	20	12.5
0.33	760M33451	0.79 (20.1)	0.27 (6.9)	0.025 (0.6)	7	20.8	0.61 (15.5)	0.34 (8.6)	0.025 (0.6)	22	11.8
0.39	760M39451	0.79 (20.1)	0.29 (7.4)	0.025 (0.6)	9	17.7	0.61 (15.5)	0.36 (9.1)	0.025 (0.6)	24	10.8
0.43	760M43451	0.99 (25.1)	0.26 (6.6)	0.025 (0.6)	5	31.7	0.79 (20.1)	0.30 (7.6)	0.025 (0.6)	10	16.2
0.47	760M47451	0.99 (25.1)	0.27 (6.9)	0.025 (0.6)	5	29.0	0.79 (20.1)	0.31 (7.9)	0.025 (0.6)	11	14.9
0.5	760M50451	0.99 (25.1)	0.27 (6.9)	0.025 (0.6)	5	27.3	0.79 (20.1)	0.32 (8.1)	0.025 (0.6)	12	14.1
0.56	760M56451	0.99 (25.1)	0.29 (7.4)	0.025 (0.6)	6	24.5	0.79 (20.1)	0.34 (8.6)	0.025 (0.6)	13	12.7
0.6	760M60451	0.99 (25.1)	0.30 (7.6)	0.025 (0.6)	7	22.9	0.79 (20.1)	0.35 (8.9)	0.025 (0.6)	14	11.9
0.62	760M62451	0.99 (25.1)	0.30 (7.6)	0.025 (0.6)	7	22.2	0.79 (20.1)	0.35 (8.9)	0.025 (0.6)	14	11.5
0.68	760M68451	0.99 (25.1)	0.31 (7.9)	0.025 (0.6)	8	20.4	0.79 (20.1)	0.37 (9.4)	0.025 (0.6)	15	10.6
0.75	760M75451	0.99 (25.1)	0.32 (8.1)	0.025 (0.6)	8	18.5	0.79 (20.1)	0.38 (9.7)	0.025 (0.6)	15	9.8
0.82	760M82451	0.99 (25.1)	0.34 (8.6)	0.025 (0.6)	9	17.1	0.79 (20.1)	0.40 (10.2)	0.025 (0.6)	16	9.0
0.9	760M90451	0.99 (25.1)	0.35 (8.9)	0.025 (0.6)	9	15.6	0.79 (20.1)	0.42 (10.7)	0.025 (0.6)	17	8.3
1.0	760M10551	0.99 (25.1)	0.37 (9.4)	0.025 (0.6)	10	14.2	0.79 (20.1)	0.44 (11.2)	0.025 (0.6)	22	7.7
1.2	760M12551	0.99 (25.1)	0.40 (10.2)	0.032 (0.8)	11	12.0	0.79 (20.1)	0.47 (11.9)	0.025 (0.6)	22	6.6
1.5	760M15551	0.99 (25.1)	0.44 (11.2)	0.032 (0.8)	15	9.9	0.79 (20.1)	0.53 (13.5)	0.025 (0.6)	23	5.6
1.8	760M18551	1.25 (31.8)	0.42 (10.7)	0.032 (0.8)	9	14.0	0.99 (25.1)	0.48 (12.2)	0.032 (0.8)	15	8.5
2.0	760M20551	1.25 (31.8)	0.44 (11.2)	0.032 (0.8)	11	12.4	0.99 (25.1)	0.51 (13.0)	0.032 (0.8)	15	7.8
2.2	760M22551	1.25 (31.8)	0.46 (11.7)	0.032 (0.8)	11	11.3	0.99 (25.1)	0.53 (13.5)	0.032 (0.8)	16	6.8
2.5	760M25551	1.25 (31.8)	0.49 (12.4)	0.032 (0.8)	11	10.0	0.99 (25.1)	0.56 (14.2)	0.032 (0.8)	16	6.2
2.7	760M27551	1.25 (31.8)	0.51 (13.0)	0.032 (0.8)	12	9.4	0.99 (25.1)	0.58 (14.7)	0.032 (0.8)	16	5.8
3.0	760M30551	1.25 (31.8)	0.53 (13.5)	0.032 (0.8)	12	8.6	0.99 (25.1)	0.61 (15.5)	0.032 (0.8)	16	5.3
3.3	760M33551	1.25 (31.8)	0.56 (14.2)	0.032 (0.8)	12	7.9	0.99 (25.1)	0.64 (16.3)	0.032 (0.8)	16	5.0
3.6	760M36551	1.74 (44.2)	0.48 (12.2)	0.032 (0.8)	7	16.1	1.25 (31.8)	0.58 (14.7)	0.032 (0.8)	12	7.4
3.9	760M39551	1.74 (44.2)	0.50 (12.7)	0.032 (0.8)	7	15.0	1.25 (31.8)	0.60 (15.2)	0.032 (0.8)	12	6.9
4.7	760M47551	1.74 (44.2)	0.54 (13.7)	0.032 (0.8)	7	12.6	1.25 (31.8)	0.66 (16.8)	0.032 (0.8)	12	5.9
5.0	760M50551	1.74 (44.2)	0.56 (14.2)	0.032 (0.8)	7	11.9	1.25 (31.8)	0.68 (17.3)	0.032 (0.8)	12	5.7
5.6	760M56551	1.74 (44.2)	0.59 (15.0)	0.032 (0.8)	7	10.8	1.25 (31.8)	0.72 (18.3)	0.032 (0.8)	12	5.2
6.0	760M60551	1.74 (44.2)	0.61 (15.5)	0.032 (0.8)	7	10.1	1.25 (31.8)	0.74 (18.8)	0.032 (0.8)	12	5.0
6.8	760M68551	1.74 (44.2)	0.64 (16.3)	0.032 (0.8)	7	9.1	1.25 (31.8)	0.79 (20.1)	0.032 (0.8)	12	4.6
7.0	760M70551	1.74 (44.2)	0.65 (16.5)	0.032 (0.8)	8	8.9	1.25 (31.8)	0.80 (20.3)	0.032 (0.8)	12	4.5
7.5	760M75551	1.74 (44.2)	0.67 (17.0)	0.032 (0.8)	8	8.4	1.25 (31.8)	0.83 (21.1)	0.032 (0.8)	12	4.3
8.0	760M80551	1.74 (44.2)	0.69 (17.5)	0.032 (0.8)	8	8.0	1.25 (31.8)	0.85 (21.6)	0.032 (0.8)	12	4.2
9.0	760M90551	2.21 (56.1)	0.63 (16.0)	0.032 (0.8)	6	12.2	1.74 (44.2)	0.73 (18.5)	0.040 (1.0)	8	7.2
10.0	760M10651	2.21 (56.1)	0.67 (17.0)	0.032 (0.8)	6	11.1	1.74 (44.2)	0.77 (19.6)	0.040 (1.0)	8	6.7
12.0	760M12651	2.21 (56.1)	0.73 (18.5)	0.032 (0.8)	6	9.5	1.74 (44.2)	0.84 (21.3)	0.040 (1.0)	8	5.8
15.0	760M15651	2.21 (56.1)	0.81 (20.6)	0.040 (1.0)	6	7.5	1.74 (44.2)	0.93 (23.6)	0.040 (1.0)	8	4.5
18.0	760M18651	2.21 (56.1)	0.88 (22.4)	0.040 (1.0)	6	6.4	1.74 (44.2)	1.02 (25.9)	0.040 (1.0)	8	4.0
20.0	760M20651	2.21 (56.1)	0.93 (23.6)	0.040 (1.0)	6	5.9	1.74 (44.2)	1.07 (27.2)	0.040 (1.0)	8	3.7
22.0	760M22651	2.21 (56.1)	0.97 (24.6)	0.040 (1.0)	6	5.5	1.74 (44.2)	1.13 (28.7)	0.040 (1.0)	8	3.5
25.0	760M25651	2.21 (56.1)	1.03 (26.2)	0.040 (1.0)	6	5.0	1.74 (44.2)	1.20 (30.5)	0.040 (1.0)	8	3.3
30.0	760M30651	2.21 (56.1)	1.13 (28.7)	0.040 (1.0)	6	4.4	1.74 (44.2)	1.31 (33.3)	0.040 (1.0)	8	3.0
35.0	760M35651	2.21 (56.1)	1.22 (31.0)	0.040 (1.0)	6	4.0	1.74 (44.2)	1.41 (35.8)	0.040 (1.0)	8	2.9
40.0	760M40651	2.21 (56.1)	1.30 (33.0)	0.040 (1.0)	6	3.7	1.74 (44.2)	1.51 (38.4)	0.040 (1.0)	8	2.7
45.0	760M45651	2.21 (56.1)	1.37 (34.8)	0.040 (1.0)	6	3.5	1.74 (44.2)	1.60 (40.6)	0.040 (1.0)	8	2.7
50.0	760M50651	2.21 (56.1)	1.45 (36.8)	0.040 (1.0)	6	3.3					
55.0	760M55651	2.21 (56.1)	1.52 (38.6)	0.040 (1.0)	6	3.2					
60.0	760M60651	2.21 (56.1)	1.58 (40.1)	0.040 (1.0)	6	3.1					

* ESR ratings listed are Maximum. Please contact us for additional ESR data.

[1] Please refer to Ordering/Part Number page for specific part numbering details.

Dimensions are in inches, millimeters in parentheses

CDE reserves the right to amend design data

Type 760M Sizes and Ratings – 250 VDC/175 VAC

Cap (µF)	Base Part #[1]	Standard Dimensions/Ratings[1] L MAX	DIA MAX	Wire (d)	dV/dt V/µsec	*ESR-mΩ @100KHz	Compact Dimensions/Ratings[1] L MAX	DIA MAX	Wire (d)	dV/dt V/µsec	*ESR-mΩ @100KHz
0.047	760M47352	0.61 (15.5)	0.21 (5.3)	0.020 (0.5)	18	42.9					
0.05	760M50352	0.61 (15.5)	0.22 (5.6)	0.020 (0.5)	18	40.5					
0.056	760M56352	0.61 (15.5)	0.22 (5.6)	0.020 (0.5)	18	36.5					
0.062	760M62352	0.61 (15.5)	0.23 (5.8)	0.020 (0.5)	18	33.3					
0.068	760M68352	0.62 (15.5)	0.24 (6.1)	0.020 (0.5)	18	30.7					
0.075	760M75352	0.62 (15.5)	0.25 (6.40	0.020 (0.5)	18	28.2					
0.082	760M82352	0.79 (20.1)	0.21 (5.3)	0.020 (0.5)	10	58.0	0.61 (15.5)	0.26 (6.6)	0.025 (0.6)	18	26.1
0.1	760M10452	0.79 (20.1)	0.23 (5.8)	0.020 (0.5)	10	48.1	0.61 (15.5)	0.28 (7.1)	0.025 (0.6)	21	22.2
0.12	760M12452	0.79 (20.1)	0.25 (6.4)	0.020 (0.5)	10	40.7	0.61 (15.5)	0.31 (7.9)	0.025 (0.6)	27	19.3
0.15	760M15452	0.79 (20.1)	0.27 (6.9)	0.025 (0.6)	10	31.0	0.61 (15.5)	0.34 (7.1)	0.025 (0.6)	33	16.4
0.18	760M18452	0.99 (25.1)	0.25 (6.4)	0.020 (0.5)	7	50.7	0.79 (20.1)	0.29 (7.4)	0.025 (0.6)	14	26.0
0.22	760M22452	0.99 (25.1)	0.27 (6.9)	0.025 (0.6)	7	41.6	0.79 (20.1)	0.32 (8.1)	0.025 (0.6)	17	21.5
0.25	760M25452	0.99 (25.1)	0.29 (7.4)	0.025 (0.6)	9	36.8	0.79 (20.1)	0.34 (8.6)	0.025 (0.6)	19	19.0
0.27	760M27452	0.99 (25.1)	0.30 (7.6)	0.025 (0.6)	10	34.1	0.79 (20.1)	0.35 (8.9)	0.025 (0.6)	20	17.7
0.30	760M30452	0.99 (25.1)	0.31 (7.9)	0.025 (0.6)	11	30.8	0.79 (20.1)	0.36 (9.1)	0.025 (0.6)	22	16.0
0.33	760M33452	0.99 (25.1)	0.32 (8.1)	0.025 (0.6)	12	28.1	0.79 (20.1)	0.38 (9.7)	0.025 (0.6)	23	14.7
0.39	760M39452	0.99 (25.1)	0.35 (8.9)	0.025 (0.6)	14	23.9	0.79 (20.1)	0.41 (10.4)	0.025 (0.6)	25	12.6
0.43	760M43452	0.99 (25.1)	0.36 (9.1)	0.025 (0.6)	15	21.8	0.79 (20.1)	0.43 (10.9)	0.025 (0.6)	33	11.6
0.47	760M47452	0.99 (25.1)	0.38 (9.7)	0.025 (0.6)	16	20.1	0.79 (20.1)	0.45 (11.4)	0.025 (0.6)	33	10.7
0.5	760M50452	0.99 (25.1)	0.39 (9.9)	0.032 (0.8)	16	18.9	0.79 (20.1)	0.46 (11.7)	0.025 (0.6)	34	10.2
0.56	760M56452	1.25 (31.8)	0.36 (9.1)	0.025 (0.6)	11	29.0	0.99 (25.1)	0.41 (10.4)	0.032 (0.8)	17	17.0
0.6	760M60452	1.25 (31.8)	0.37 (9.4)	0.025 (0.6)	11	27.1	0.99 (25.1)	0.42 (10.7)	0.032 (0.8)	17	16.0
0.62	760M62452	1.25 (31.8)	0.37 (9.4)	0.025 (0.6)	11	26.3	0.99 (25.1)	0.43 (10.9)	0.032 (0.8)	23	15.5
0.68	760M68452	1.25 (31.8)	0.39 (9.9)	0.032 (0.8)	12	24.1	0.99 (25.1)	0.45 (11.4)	0.032 (0.8)	23	14.3
0.75	760M75452	1.25 (31.8)	0.41 (10.4)	0.032 (0.8)	13	22.0	0.99 (25.1)	0.47 (11.9)	0.032 (0.8)	23	13.1
0.82	760M82452	1.25 (31.8)	0.42 (10.7)	0.032 (0.8)	17	20.2	0.99 (25.1)	0.49 (12.4)	0.032 (0.8)	23	12.1
0.9	760M90452	1.25 (31.8)	0.44 (11.2)	0.032 (0.8)	17	18.2	0.99 (25.1)	0.51 (13.0)	0.032 (0.8)	23	11.2
1.0	760M10552	1.25 (31.8)	0.47 (11.9)	0.032 (0.8)	17	16.4	0.99 (25.1)	0.53 (11.2)	0.032 (0.8)	23	9.8
1.2	760M12552	1.25 (31.8)	0.51 (13.0)	0.032 (0.8)	17	13.9	0.99 (25.1)	0.58 (14.7)	0.032 (0.8)	23	8.4
1.5	760M15552	1.25 (31.8)	0.56 (14.2)	0.032 (0.8)	17	11.3	0.99 (25.1)	0.65 (16.5)	0.032 (0.8)	24	7.0
1.8	760M18552	1.74 (44.2)	0.51 (13.0)	0.032 (0.8)	11	21.4	1.25 (31.8)	0.61 (15.5)	0.032 (0.8)	17	9.6
2.0	760M20552	1.74 (44.2)	0.53 (13.5)	0.032 (0.8)	11	19.4	1.25 (31.8)	0.65 (16.5)	0.032 (0.8)	18	8.8
2.2	760M22552	1.74 (44.2)	0.55 (14.0)	0.032 (0.8)	11	17.7	1.25 (31.8)	0.68 (17.3)	0.032 (0.8)	18	8.1
2.5	760M25552	1.74 (44.2)	0.59 (15.0)	0.032 (0.8)	11	15.7	1.25 (31.8)	0.72 (18.3)	0.032 (0.8)	18	7.3
2.7	760M27552	1.74 (44.2)	0.61 (15.5)	0.032 (0.8)	11	14.7	1.25 (31.8)	0.75 (19.1)	0.032 (0.8)	18	6.9
3.0	760M30552	1.74 (44.2)	0.64 (16.3)	0.032 (0.8)	11	13.3	1.25 (31.8)	0.78 (19.8)	0.032 (0.8)	18	6.4
3.3	760M33552	1.74 (44.2)	0.67 (17.0)	0.032 (0.8)	11	12.2	1.25 (31.8)	0.82 (20.8)	0.032 (0.8)	18	6.0
3.6	760M36552	1.74 (44.2)	0.70 (17.8)	0.032 (0.8)	11	11.3	1.25 (31.8)	0.86 (21.8)	0.032 (0.8)	18	5.6
3.9	760M39552	1.74 (44.2)	0.72 (18.3)	0.032 (0.8)	11	10.6	1.25 (31.8)	0.89 (22.6)	0.032 (0.8)	18	5.3
4.7	760M47552	2.21 (56.1)	0.68 (17.3)	0.032 (0.8)	8	15.4	1.74 (44.2)	0.79 (20.1)	0.040 (1.0)	11	9.1
5.0	760M50552	2.21 (56.1)	0.70 (17.8)	0.032 (0.8)	8	14.6	1.74 (44.2)	0.81 (20.6)	0.040 (1.0)	11	8.6
5.6	760M56552	2.21 (56.1)	0.74 (18.8)	0.032 (0.8)	8	13.2	1.74 (44.2)	0.86 (21.8)	0.040 (1.0)	11	7.9
6.0	760M60552	2.21 (56.1)	0.77 (19.6)	0.040 (1.0)	8	12.0	1.74 (44.2)	0.89 (22.6)	0.040 (1.0)	11	7.0
6.8	760M68552	2.21 (56.1)	0.81 (20.6)	0.040 (1.0)	8	10.7	1.74 (44.2)	0.94 (23.9)	0.040 (1.0)	11	6.3
7.0	760M70552	2.21 (56.1)	0.83 (21.1)	0.040 (1.0)	8	10.4	1.74 (44.2)	0.96 (24.4)	0.040 (1.0)	11	6.2
7.5	760M75552	2.21 (56.1)	0.85 (21.6)	0.040 (1.0)	8	9.8	1.74 (44.2)	0.99 (25.1)	0.040 (1.0)	11	5.8
8.0	760M80552	2.21 (56.1)	0.88 (22.4)	0.040 (1.0)	8	9.3	1.74 (44.2)	1.02 (25.9)	0.040 (1.0)	11	5.6
9.0	760M90552	2.21 (56.1)	0.93 (23.6)	0.040 (1.0)	8	8.4	1.74 (44.2)	1.08 (27.4)	0.040 (1.0)	11	5.1
10.0	760M10652	2.21 (56.1)	0.98 (24.9)	0.040 (1.0)	8	7.7	1.74 (44.2)	1.14 (29.0)	0.040 (1.0)	11	4.7
12.0	760M12652	2.21 (56.1)	1.07 (27.2)	0.040 (1.0)	8	6.6	1.74 (44.2)	1.24 (31.5)	0.040 (1.0)	11	4.2
15.0	760M15652	2.21 (56.1)	1.19 (30.2)	0.040 (1.0)	8	5.6	1.74 (44.2)	1.39 (35.3)	0.040 (1.0)	11	3.7
18.0	760M18652	2.21 (56.1)	1.31 (33.3)	0.040 (1.0)	8	4.9	1.74 (44.2)	1.52 (38.6)	0.040 (1.0)	11	3.4
20.0	760M20652	2.21 (56.1)	1.37 (34.8)	0.040 (1.0)	8	4.6	1.74 (44.2)	1.60 (40.6)	0.040 (1.0)	11	3.3
22.0	760M22652	2.21 (56.1)	1.44 (36.6)	0.040 (1.0)	8	4.4					
25.0	760M25652	2.21 (56.1)	1.53 (38.9)	0.040 (1.0)	8	4.1					

[1] Please refer to Ordering/Part Number page for specific part numbering details.

* ESR ratings listed are Maximum. Please contact us for additional ESR data.

Dimensions are in inches, millimeters in parentheses

Type 760M Sizes and Ratings – 400 VDC/220 VAC

Cap (µF)	Base Part #[1]	Standard Dimensions/Ratings[1] L MAX	DIA MAX	Wire (d)	dV/dt V/µsec	*ESR-mΩ @100KHz	Compact Dimensions/Ratings[1] L MAX	DIA MAX	Wire (d)	dV/dt V/µsec	*ESR-mΩ @100KHz
0.027	760M27354	0.61 (15.5)	0.22 (5.6)	0.020 (0.5)	27	50.6					
0.033	760M33354	0.61 (15.5)	0.24 (6.1)	0.020 (0.5)	27	42.0					
0.039	760M39354	0.61 (15.5)	0.26 (6.6)	0.020 (0.5)	27	36.2					
0.043	760M43354	0.61 (15.5)	0.27 (6.9)	0.020 (0.5)	27	33.2					
0.047	760M47354	0.79 (20.1)	0.22 (5.6)	0.020 (0.5)	15	69.9	0.61 (15.5)	0.28 (7.1)	0.020 (0.5)	31	30.7
0.05	760M50354	0.79 (20.1)	0.23 (5.8)	0.020 (0.5)	15	65.9	0.61 (15.5)	0.29 (7.4)	0.020 (0.5)	35	29.1
0.056	760M56354	0.79 (20.1)	0.24 (6.1)	0.020 (0.5)	15	59.3	0.61 (15.5)	0.30 (7.6)	0.020 (0.5)	40	26.5
0.062	760M62354	0.79 (20.1)	0.25 (6.4)	0.020 (0.5)	15	53.9	0.61 (15.5)	0.32 (8.1)	0.020 (0.5)	45	24.4
0.068	760M68354	0.79 (20.1)	0.26 (6.6)	0.020 (0.5)	15	49.5	0.61 (15.5)	0.33 (8.4)	0.020 (0.5)	48	22.7
0.075	760M75354	0.99 (25.1)	0.23 (5.8)	0.025 (0.6)	10	86.1	0.79 (20.1)	0.27 (6.9)	0.025 (0.6)	15	42.9
0.082	760M82354	0.99 (25.1)	0.23 (5.8)	0.025 (0.6)	10	78.8	0.79 (20.1)	0.28 (7.1)	0.025 (0.6)	16	39.3
0.1	760M10454	0.99 (25.1)	0.25 (6.4)	0.025 (0.6)	10	64.8	0.79 (20.1)	0.30 (7.6)	0.025 (0.6)	22	32.4
0.12	760M12454	0.99 (25.1)	0.27 (6.9)	0.025 (0.6)	10	54.1	0.79 (20.1)	0.32 (8.1)	0.025 (0.6)	26	27.2
0.15	760M15454	0.99 (25.1)	0.30 (7.6)	0.025 (0.6)	14	43.5	0.79 (20.1)	0.36 (9.1)	0.025 (0.6)	30	22.0
0.18	760M18454	0.99 (25.1)	0.32 (8.1)	0.025 (0.6)	17	36.4	0.79 (20.1)	0.39 (9.9)	0.025 (0.6)	34	18.5
0.22	760M22454	0.99 (25.1)	0.35 (8.9)	0.025 (0.6)	20	30.0	0.79 (20.1)	0.43 (10.9)	0.025 (0.6)	48	15.4
0.25	760M25454	0.99 (25.1)	0.38 (9.7)	0.025 (0.6)	22	26.5	0.79 (20.1)	0.45 (11.4)	0.025 (0.6)	48	13.7
0.27	760M27454	0.99 (25.1)	0.39 (9.9)	0.025 (0.6)	22	24.7	0.79 (20.1)	0.47 (11.9)	0.025 (0.6)	48	12.8
0.30	760M30454	1.25 (31.8)	0.35 (8.9)	0.025 (0.6)	15	38.8	0.99 (25.1)	0.41 (10.4)	0.025 (0.6)	23	22.3
0.33	760M33454	1.25 (31.8)	0.37 (9.4)	0.025 (0.6)	15	35.4	0.99 (25.1)	0.43 (10.9)	0.025 (0.6)	32	20.4
0.39	760M39454	1.25 (31.8)	0.40 (10.2)	0.025 (0.6)	17	30.2	0.99 (25.1)	0.46 (11.7)	0.025 (0.6)	32	17.5
0.43	760M43454	1.25 (31.8)	0.42 (10.7)	0.025 (0.6)	17	27.5	0.99 (25.1)	0.48 (12.2)	0.025 (0.6)	32	16.0
0.47	760M47454	1.25 (31.8)	0.43 (10.9)	0.025 (0.6)	23	25.3	0.99 (25.1)	0.50 (12.7)	0.025 (0.6)	32	14.8
0.5	760M50454	1.25 (31.8)	0.45 (11.4)	0.032 (0.8)	23	23.5	0.99 (25.1)	0.52 (13.2)	0.032 (0.8)	32	13.6
0.56	760M56454	1.25 (31.8)	0.47 (11.9)	0.032 (0.8)	23	21.1	0.99 (25.1)	0.54 (13.7)	0.032 (0.8)	32	12.3
0.6	760M60454	1.25 (31.8)	0.49 (12.4)	0.032 (0.8)	24	19.7	0.99 (25.1)	0.56 (14.2)	0.032 (0.8)	32	11.5
0.62	760M62454	1.25 (31.8)	0.49 (12.4)	0.032 (0.8)	24	19.1	0.99 (25.1)	0.57 (14.5)	0.032 (0.8)	32	11.2
0.68	760M68454	1.25 (31.8)	0.51 (13.0)	0.032 (0.8)	24	17.5	0.99 (25.1)	0.60 (15.2)	0.032 (0.8)	33	10.3
0.75	760M75454	1.25 (31.8)	0.54 (13.7)	0.032 (0.8)	24	16.0	0.99 (25.1)	0.62 (15.7)	0.032 (0.8)	33	9.5
0.82	760M82454	1.25 (31.8)	0.56 (14.2)	0.032 (0.8)	24	14.7	0.99 (25.1)	0.65 (16.5)	0.032 (0.8)	33	8.8
0.9	760M90454	1.74 (44.2)	0.48 (12.2)	0.032 (0.8)	15	31.2	1.25 (31.8)	0.59 (15.0)	0.032 (0.8)	24	13.5
1.0	760M10554	1.74 (44.2)	0.50 (12.7)	0.032 (0.8)	15	28.2	1.25 (31.8)	0.62 (15.7)	0.032 (0.8)	24	12.3
1.2	760M12554	1.74 (44.2)	0.55 (14.0)	0.032 (0.8)	15	23.7	1.25 (31.8)	0.67 (17.0)	0.032 (0.8)	24	10.5
1.5	760M15554	1.74 (44.2)	0.61 (15.5)	0.032 (0.8)	15	19.2	1.25 (31.8)	0.75 (19.1)	0.032 (0.8)	24	8.7
1.8	760M18554	1.74 (44.2)	0.66 (16.8)	0.032 (0.8)	15	16.2	1.25 (31.8)	0.82 (20.8)	0.032 (0.8)	24	7.5
2.0	760M20554	2.21 (56.1)	0.60 (15.2)	0.032 (0.8)	11	26.1	1.74 (44.2)	0.70 (17.8)	0.032 (0.8)	15	14.7
2.2	760M22554	2.21 (56.1)	0.63 (16.0)	0.032 (0.8)	11	23.9	1.74 (44.2)	0.73 (18.5)	0.032 (0.8)	15	13.5
2.5	760M25554	2.21 (56.1)	0.67 (17.0)	0.032 (0.8)	11	21.2	1.74 (44.2)	0.77 (19.6)	0.032 (0.8)	15	12.1
2.7	760M27554	2.21 (56.1)	0.69 (17.5)	0.032 (0.8)	11	19.7	1.74 (44.2)	0.80 (20.3)	0.032 (0.8)	15	11.3
3.0	760M30554	2.21 (56.1)	0.73 (18.5)	0.032 (0.8)	11	17.9	1.74 (44.2)	0.84 (21.3)	0.032 (0.8)	15	10.4
3.3	760M33554	2.21 (56.1)	0.76 (19.3)	0.040 (1.0)	11	16.0	1.74 (44.2)	0.88 (22.4)	0.040 (1.0)	15	9.1
3.6	760M36554	2.21 (56.1)	0.79 (20.1)	0.040 (1.0)	11	14.7	1.74 (44.2)	0.92 (23.4)	0.040 (1.0)	15	8.4
3.9	760M39554	2.21 (56.1)	0.82 (20.8)	0.040 (1.0)	11	13.7	1.74 (44.2)	0.96 (24.4)	0.040 (1.0)	15	7.9
4.7	760M47554	2.21 (56.1)	0.90 (22.9)	0.040 (1.0)	11	11.6	1.74 (44.2)	1.05 (26.7)	0.040 (1.0)	15	6.8
5.0	760M50554	2.21 (56.1)	0.93 (23.6)	0.040 (1.0)	11	10.9	1.74 (44.2)	1.08 (27.4)	0.040 (1.0)	15	6.5
5.6	760M56554	2.21 (56.1)	0.98 (24.9)	0.040 (1.0)	11	9.9	1.74 (44.2)	1.14 (29.0)	0.040 (1.0)	15	5.9
6.0	760M60554	2.21 (56.1)	1.01 (25.7)	0.040 (1.0)	11	9.3	1.74 (44.2)	1.18 (30.0)	0.040 (1.0)	15	5.6
6.8	760M68554	2.21 (56.1)	1.07 (27.2)	0.040 (1.0)	11	8.4	1.74 (44.2)	1.25 (31.8)	0.040 (1.0)	15	5.2
7.0	760M70554	2.21 (56.1)	1.09 (27.7)	0.040 (1.0)	11	8.2	1.74 (44.2)	1.27 (32.3)	0.040 (1.0)	15	5.1
7.5	760M75554	2.21 (56.1)	1.13 (28.7)	0.040 (1.0)	11	7.7	1.74 (44.2)	1.31 (33.3)	0.040 (1.0)	15	4.8
8.0	760M80554	2.21 (56.1)	1.16 (29.5)	0.040 (1.0)	11	7.4	1.74 (44.2)	1.36 (34.5)	0.040 (1.0)	15	4.6
9.0	760M90554	2.21 (56.1)	1.23 (31.2)	0.040 (1.0)	11	6.7	1.74 (44.2)	1.44 (36.6)	0.040 (1.0)	15	4.3
10.0	760M10654	2.21 (56.1)	1.30 (33.0)	0.040 (1.0)	11	6.2	1.74 (44.2)	1.51 (38.4)	0.040 (1.0)	15	4.1
12.0	760M12654	2.21 (56.1)	1.36 (34.5)	0.040 (1.0)	11	5.5					
15.0	760M15654	2.21 (56.1)	1.58 (40.1)	0.040 (1.0)	11	4.8					

[1] Please refer to Ordering/Part Number page for specific part numbering details.

* ESR ratings listed are Maximum. Please contact us for additional ESR data.

Dimensions are in inches, millimeters in parentheses

CDE reserves the right to amend design data

Type 760M

Metallized Polypropylene Film Capacitors

Type 760M Sizes and Ratings – 630 VDC/250 VAC

Cap (µF)	Base Part #[1]	Standard Dimensions/Ratings[1] L MAX	DIA MAX	Wire (d)	dV/dt V/µsec	*ESR-mΩ @100KHz	Compact Dimensions/Ratings[1] L MAX	DIA MAX	Wire (d)	dV/dt V/µsec	*ESR-mΩ @100KHz
0.01	760M10356	0.61 (15.5)	0.23 (5.8)	0.020 (0.5)	50	85.9					
0.012	760M12356	0.61 (15.5)	0.24 (6.1)	0.020 (0.5)	50	72.2					
0.015	760M15356	0.61 (15.5)	0.27 (6.9)	0.020 (0.5)	50	58.6					
0.018	760M18356	0.79 (20.1)	0.22 (5.6)	0.020 (0.5)	25	112.0	0.61 (15.5)	0.29 (7.4)	0.020 (0.5)	62	49.5
0.022	760M22356	0.79 (20.1)	0.23 (5.8)	0.020 (0.5)	25	92.3	0.61 (15.5)	0.31 (7.9)	0.020 (0.5)	80	41.4
0.027	760M27356	0.79 (20.1)	0.25 (6.4)	0.020 (0.5)	25	75.9	0.61 (15.5)	0.34 (8.6)	0.020 (0.5)	95	34.7
0.033	760M33356	0.99 (25.1)	0.23 (5.8)	0.025 (0.6)	16	122.2	0.79 (20.1)	0.28 (7.1)	0.025 (0.6)	27	60.4
0.039	760M39356	0.99 (25.1)	0.25 (6.4)	0.025 (0.6)	16	103.5	0.79 (20.1)	0.30 (7.6)	0.025 (0.6)	35	51.3
0.043	760M43356	0.99 (25.1)	0.26 (6.6)	0.025 (0.6)	16	94.0	0.79 (20.1)	0.31 (7.9)	0.025 (0.6)	39	46.6
0.047	760M47356	0.99 (25.1)	0.27 (6.9)	0.025 (0.6)	16	86.1	0.79 (20.1)	0.32 (8.1)	0.025 (0.6)	42	42.7
0.05	760M50356	0.99 (25.1)	0.27 (6.9)	0.025 (0.6)	16	80.9	0.79 (20.1)	0.33 (8.4)	0.025 (0.6)	45	40.2
0.056	760M56356	0.99 (25.1)	0.29 (7.4)	0.025 (0.6)	20	72.4	0.79 (20.1)	0.35 (8.9)	0.025 (0.6)	49	36.0
0.062	760M62356	0.99 (25.1)	0.30 (7.6)	0.025 (0.6)	23	65.5	0.79 (20.1)	0.36 (9.1)	0.025 (0.6)	52	32.7
0.068	760M68356	0.99 (25.1)	0.31 (7.9)	0.025 (0.6)	25	59.8	0.79 (20.1)	0.38 (9.7)	0.025 (0.6)	54	29.9
0.075	760M75356	0.99 (25.1)	0.32 (8.1)	0.025 (0.6)	28	54.3	0.79 (20.1)	0.40 (10.2)	0.025 (0.6)	57	27.2
0.082	760M82356	0.99 (25.1)	0.33 (8.4)	0.025 (0.6)	30	49.7	0.79 (20.1)	0.41 (10.4)	0.025 (0.6)	59	25.0
0.1	760M10456	0.99 (25.1)	0.37 (9.4)	0.025 (0.6)	34	41.0	0.79 (20.1)	0.45 (11.4)	0.025 (0.6)	80	20.8
0.12	760M12456	1.25 (31.8)	0.35 (8.9)	0.025 (0.6)	22	60.8	0.99 (25.1)	0.40 (10.2)	0.025 (0.8)	37	34.4
0.15	760M15456	1.25 (31.8)	0.38 (9.7)	0.025 (0.6)	25	48.9	0.99 (25.1)	0.44 (11.2)	0.025 (0.8)	51	27.8
0.18	760M18456	1.25 (31.8)	0.41 (10.4)	0.025 (0.6)	27	41.0	0.99 (25.1)	0.48 (12.2)	0.025 (0.8)	52	23.4
0.22	760M22456	1.25 (31.8)	0.45 (11.4)	0.032 (0.8)	37	33.4	0.99 (25.1)	0.53 (13.5)	0.032 (0.8)	52	19.0
0.25	760M25456	1.25 (31.8)	0.48 (12.2)	0.032 (0.8)	37	29.5	0.99 (25.1)	0.56 (14.2)	0.032 (0.8)	52	16.9
0.27	760M27456	1.25 (31.8)	0.50 (12.7)	0.032 (0.8)	37	27.4	0.99 (25.1)	0.58 (14.7)	0.032 (0.8)	52	15.7
0.30	760M30456	1.25 (31.8)	0.53 (13.5)	0.032 (0.8)	37	24.8	0.99 (25.1)	0.61 (15.5)	0.032 (0.8)	52	14.3
0.33	760M33456	1.25 (31.8)	0.55 (14.0)	0.032 (0.8)	37	22.6	0.99 (25.1)	0.64 (16.3)	0.032 (0.8)	53	13.1
0.39	760M39456	1.74 (44.2)	0.48 (12.2)	0.032 (0.8)	23	45.8	1.25 (31.8)	0.59 (15.0)	0.032 (0.8)	38	19.3
0.43	760M43456	1.74 (44.2)	0.50 (12.7)	0.032 (0.8)	23	41.7	1.25 (31.8)	0.62 (15.7)	0.032 (0.8)	38	17.7
0.47	760M47456	1.74 (44.2)	0.52 (13.2)	0.032 (0.8)	23	38.2	1.25 (31.8)	0.65 (16.5)	0.032 (0.8)	38	16.3
0.5	760M50456	1.74 (44.2)	0.54 (13.7)	0.032 (0.8)	23	36.0	1.25 (31.8)	0.67 (17.0)	0.032 (0.8)	38	15.4
0.56	760M56456	1.74 (44.2)	0.57 (14.5)	0.032 (0.8)	23	32.3	1.25 (31.8)	0.71 (18.0)	0.032 (0.8)	38	13.9
0.6	760M60456	1.74 (44.2)	0.59 (15.0)	0.032 (0.8)	23	30.2	1.25 (31.8)	0.73 (18.5)	0.032 (0.8)	38	13.1
0.62	760M62456	1.74 (44.2)	0.60 (15.2)	0.032 (0.8)	23	29.2	1.25 (31.8)	0.74 (18.8)	0.032 (0.8)	38	12.7
0.68	760M68456	1.74 (44.2)	0.62 (15.7)	0.032 (0.8)	23	26.8	1.25 (31.8)	0.78 (19.8)	0.032 (0.8)	38	11.7
0.75	760M75456	1.74 (44.2)	0.65 (16.5)	0.032 (0.8)	23	24.4	1.25 (31.8)	0.81 (20.6)	0.032 (0.8)	38	10.8
0.82	760M82456	2.21 (56.1)	0.58 (14.7)	0.032 (0.8)	17	40.7	1.74 (44.2)	0.68 (17.3)	0.032 (0.8)	23	22.4
0.9	760M90456	2.21 (56.1)	0.61 (15.5)	0.032 (0.8)	17	37.2	1.74 (44.2)	0.71 (18.0)	0.032 (0.8)	23	20.6
1.0	760M10556	2.21 (56.1)	0.64 (16.3)	0.032 (0.8)	17	33.6	1.74 (44.2)	0.75 (19.1)	0.032 (0.8)	23	18.7
1.2	760M12556	2.21 (56.1)	0.70 (17.8)	0.032 (0.8)	17	28.3	1.74 (44.2)	0.81 (20.6)	0.032 (0.8)	24	15.8
1.5	760M15556	2.21 (56.1)	0.78 (19.8)	0.040 (1.0)	17	22.5	1.74 (44.2)	0.91 (23.1)	0.040 (1.0)	24	12.5
1.8	760M18556	2.21 (56.1)	0.85 (21.6)	0.040 (1.0)	17	18.9	1.74 (44.2)	0.99 (25.1)	0.040 (1.0)	24	10.7
2.0	760M20556	2.21 (56.1)	0.89 (22.6)	0.040 (1.0)	17	17.2	1.74 (44.2)	1.04 (26.4)	0.040 (1.0)	24	9.7
2.2	760M22556	2.21 (56.1)	0.93 (23.6)	0.040 (1.0)	17	15.7	1.74 (44.2)	1.09 (27.7)	0.040 (1.0)	24	9.0
2.5	760M25556	2.21 (56.1)	0.99 (25.1)	0.040 (1.0)	17	14.0	1.74 (44.2)	1.16 (29.5)	0.040 (1.0)	24	8.1
2.7	760M27556	2.21 (56.1)	1.03 (26.2)	0.040 (1.0)	17	13.0	1.74 (44.2)	1.20 (30.5)	0.040 (1.0)	24	7.6
3.0	760M30556	2.21 (56.1)	1.08 (27.4)	0.040 (1.0)	17	11.9	1.74 (44.2)	1.27 (32.3)	0.040 (1.0)	24	7.0
3.3	760M33556	2.21 (56.1)	1.13 (28.7)	0.040 (1.0)	17	10.9	1.74 (44.2)	1.33 (33.8)	0.040 (1.0)	24	6.5
3.6	760M36556	2.21 (56.1)	1.18 (30.0)	0.040 (1.0)	17	10.1	1.74 (44.2)	1.39 (35.3)	0.040 (1.0)	24	6.1
3.9	760M39556	2.21 (56.1)	1.23 (31.2)	0.040 (1.0)	17	9.5	1.74 (44.2)	1.44 (36.6)	0.040 (1.0)	24	5.8
4.7	760M47556	2.21 (56.1)	1.35 (34.3)	0.040 (1.0)	17	8.2	1.74 (44.2)	1.58 (40.1)	0.040 (1.0)	24	5.2
5.0	760M50556	2.21 (56.1)	1.39 (35.3)	0.040 (1.0)	17	7.8	1.74 (44.2)	1.63 (41.4)	0.040 (1.0)	24	5.0
5.6	760M56556	2.21 (56.1)	1.47 (37.3)	0.040 (1.0)	17	7.2					
6.0	760M60556	2.21 (56.1)	1.52 (38.6)	0.040 (1.0)	17	6.8					
6.8	760M68556	2.21 (56.1)	1.62 (41.1)	0.040 (1.0)	17	6.3					
7.0	760M70556	2.21 (56.1)	1.64 (41.7)	0.040 (1.0)	17	6.1					

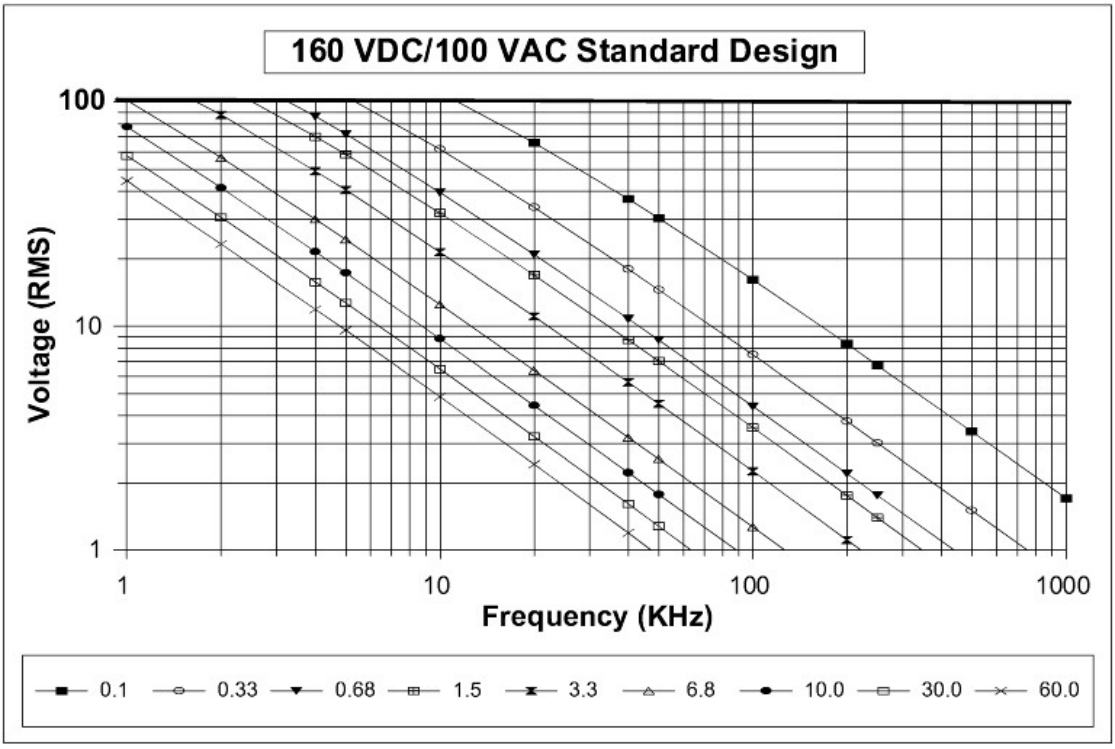
[1] Please refer to Ordering/Part Number page for specific part numbering details.

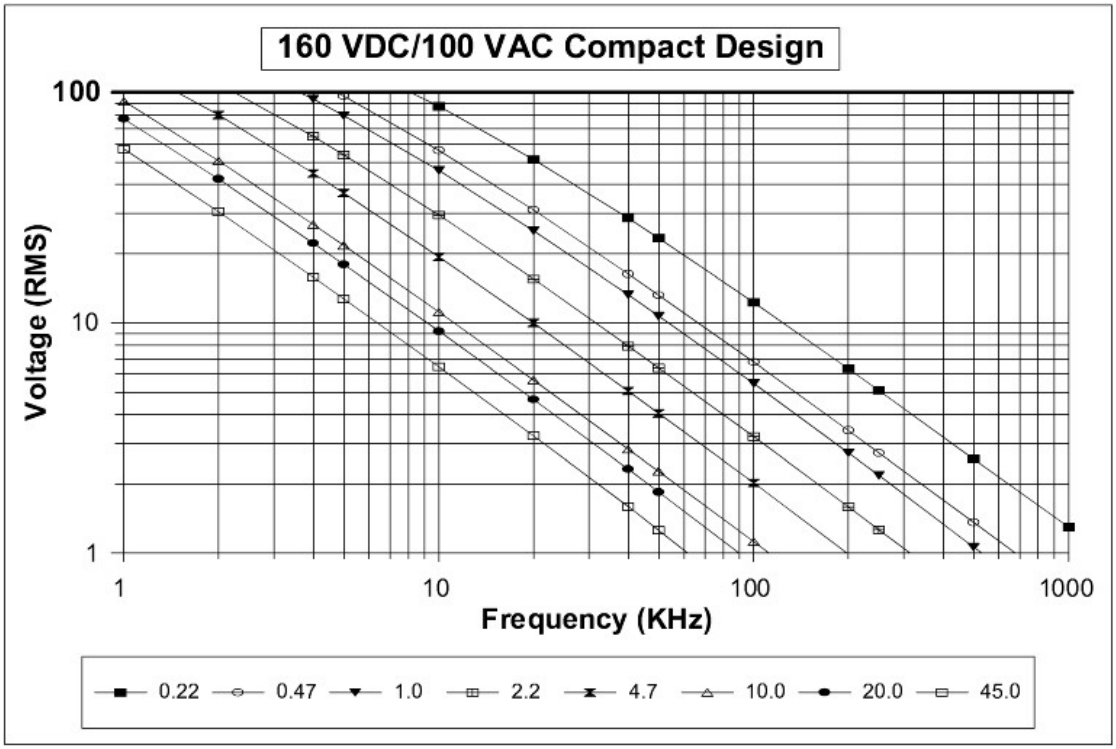
* ESR ratings listed are Maximum. Please contact us for additional ESR data.

Dimensions are in inches, millimeters in parentheses

CDE reserves the right to amend design data

RMS Voltage vs. Frequency @ +85°C, in still air*



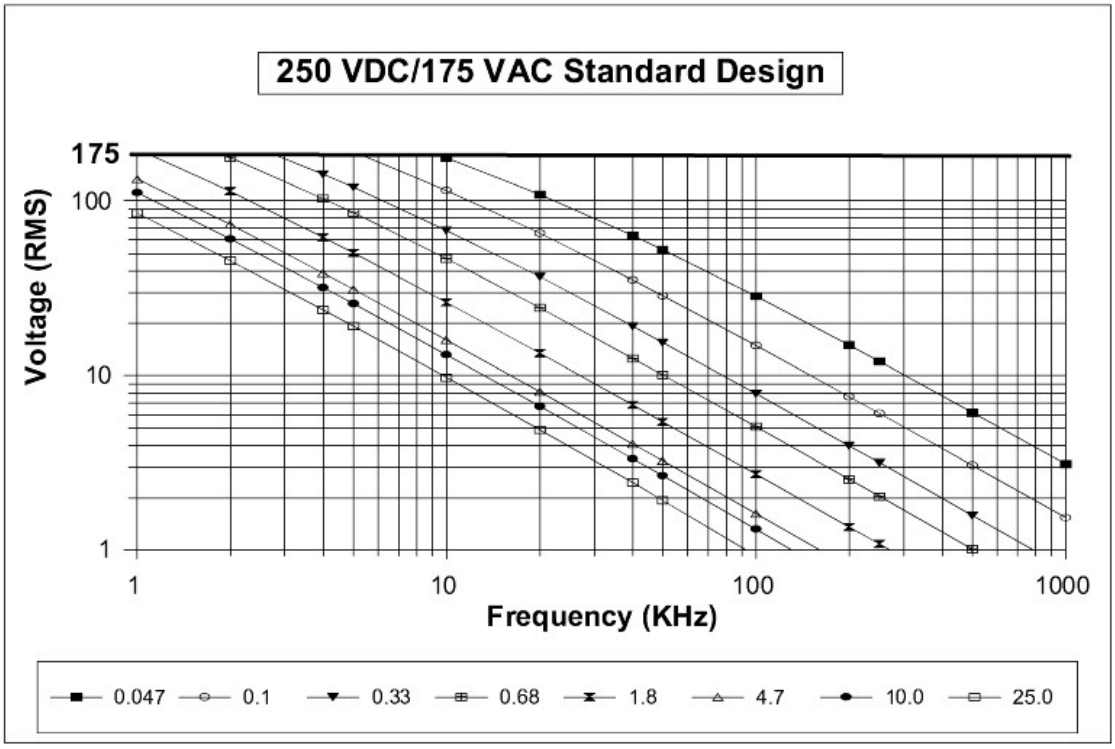


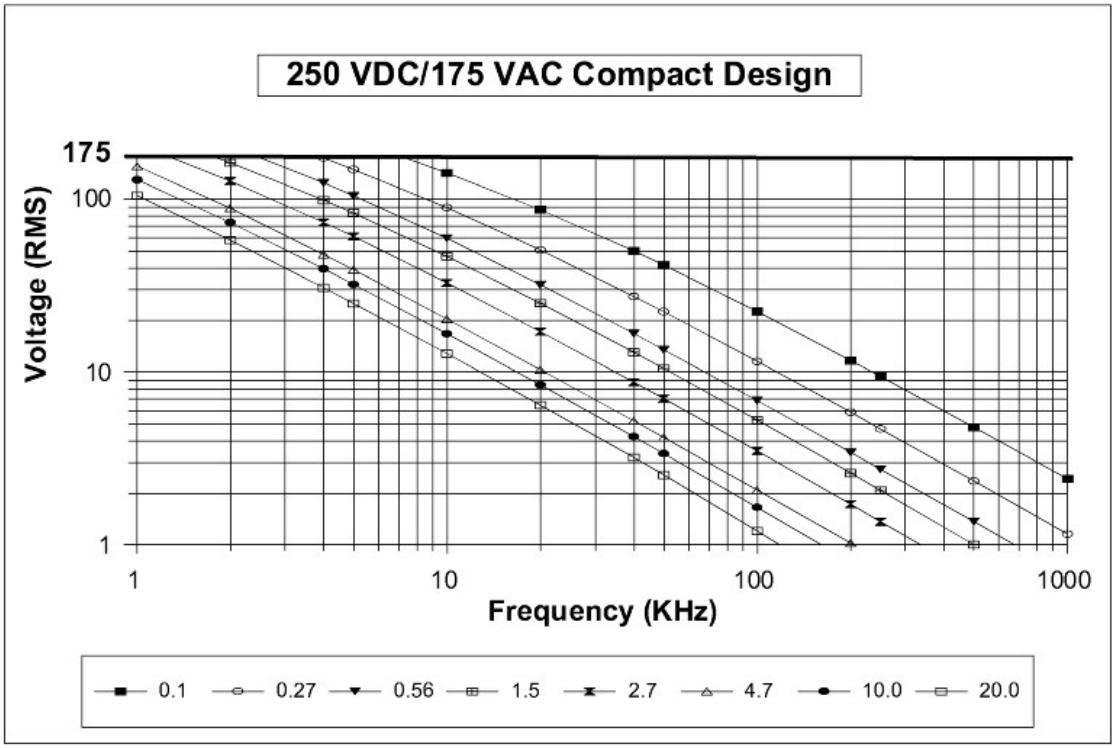
* For additional information regarding these performance curves and their interpretation please refer to our Thermal Managemant application note.

Dimensions are in inches, millimeters in parentheses

CDE reserves the right to amend design data

RMS Voltage vs. Frequency @ +85°C, in still air*



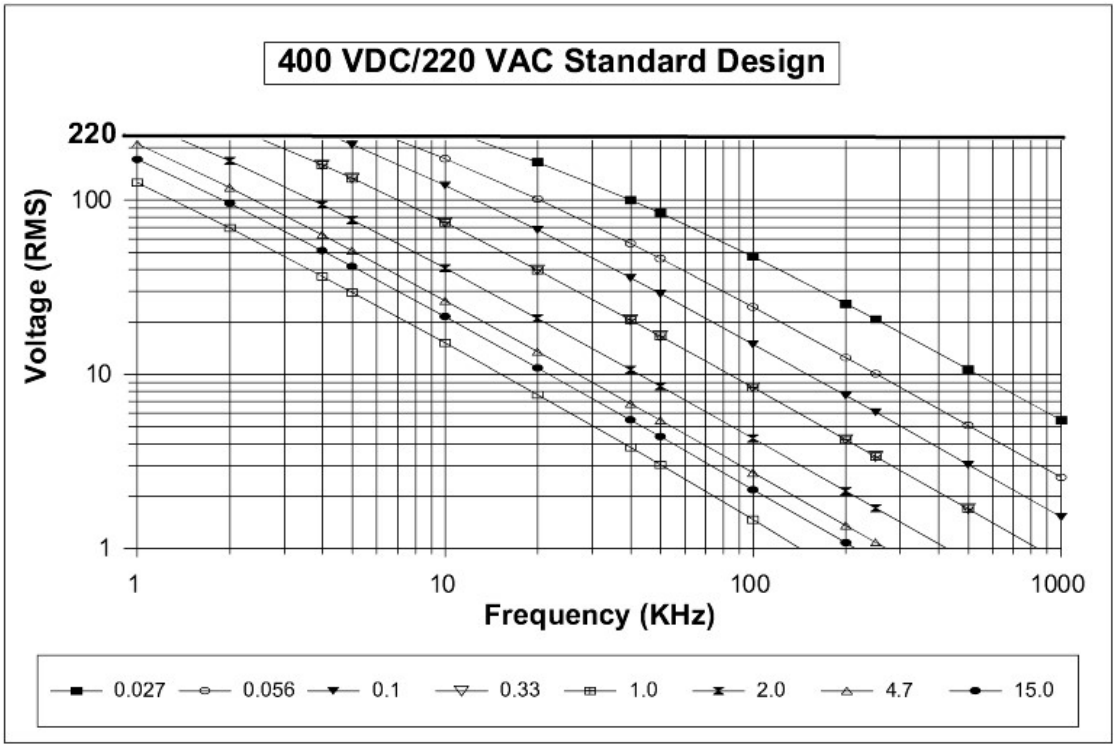


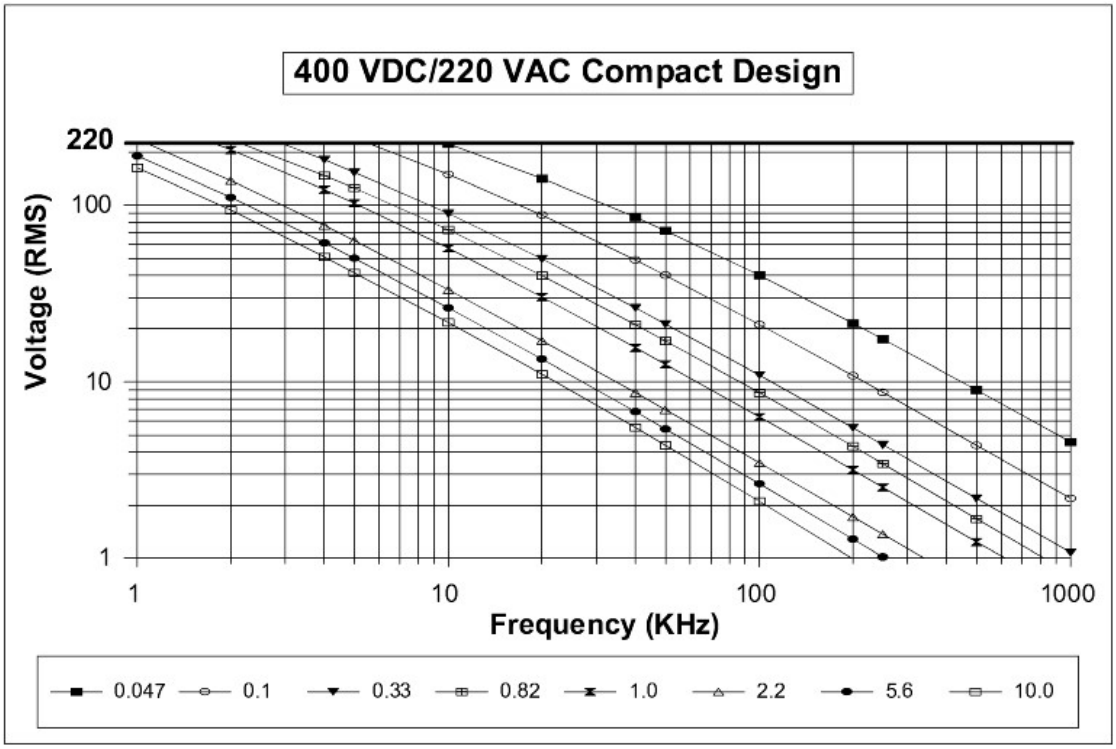
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RMS Voltage vs. Frequency @ +85°C, in still air*

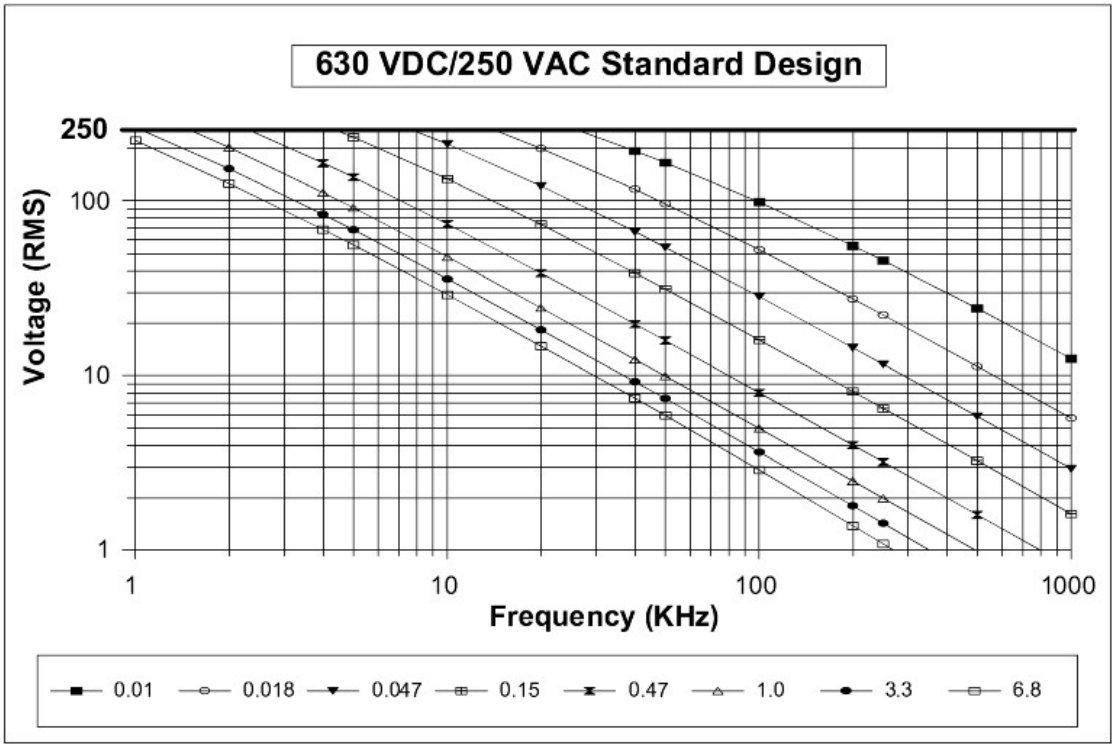


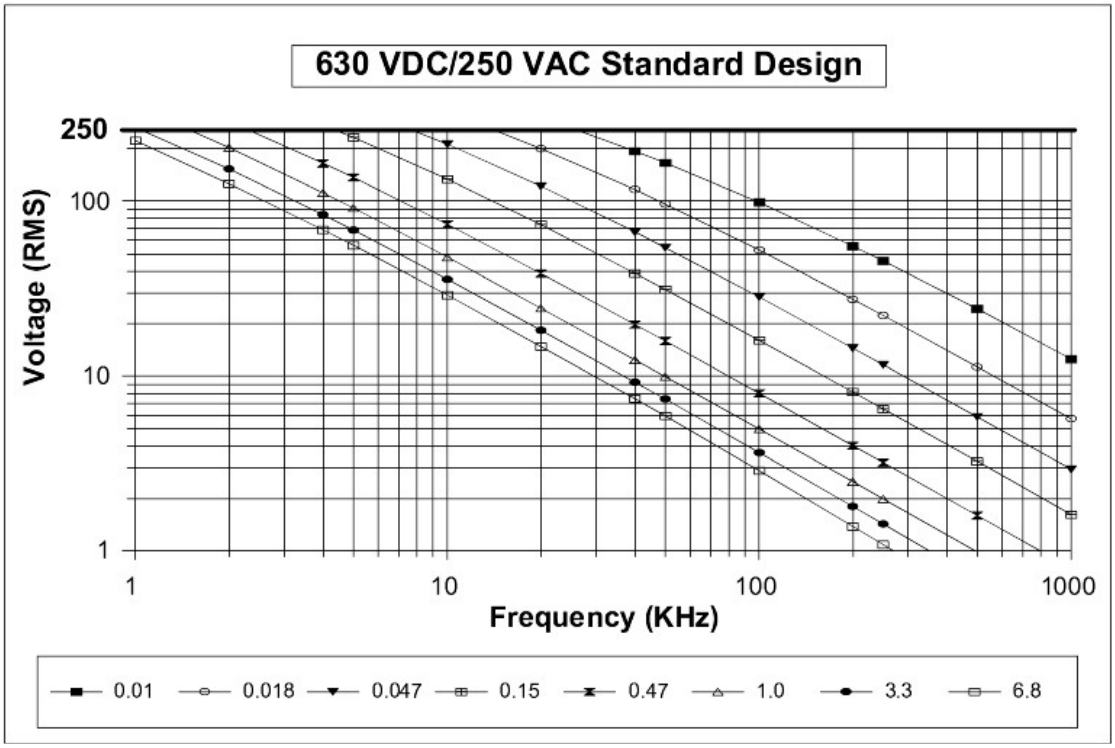


* For additional information regarding these performance curves and their interpretation please refer to our Thermal Managemant application note.

Dimensions are in inches, millimeters in parentheses
CDE reserves the rig ht to amend design data

RMS Voltage vs. Frequency @ +85°C, in still air*

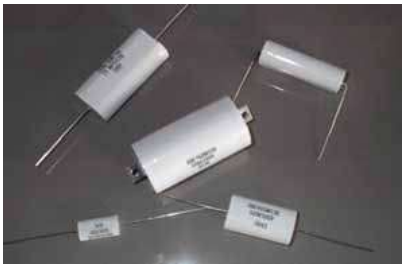




* For additional information regarding these performance curves and their interpretation please refer to our Thermal Managemant application note.

Dimensions are in inches, millimeters in parentheses
CDE reserves the right to amend design data

Type 761M
Axial Lead
Pressed/Oval Profile
Metallized Polypropylene
Film Capacitors



Specifications

Capacitance Range:
0.012 to 65.0 µF

Capacitance Tolerance:
±5% and ±10%, standard
(tolerances as close as ±3% available)

Voltage Rating:
160 to 630 VDC
100 to 250 VAC

Operating Temperature
Units may be operated at full rated voltage from -55°C to +85°C.

Voltage De-rating above +85°C:
Units may be operated up to a maximum of +105°C provided the voltage is de-rated linearly to 50% of the +85°C rating.

***Dissipation Factor:**
Varies with capacitance and frequency, please contact us for specific details.

Insulation Resistance (measured at 100 VDC):

At +25°C:	400,000 MΩ for C ≤ 0.5 µF
	200,000 MΩ-µF for C > 0.5 µF
At +85°C:	20,000 MΩ for C ≤ 0.5 µF
	10,000 MΩ-µF for C > 0.5 µF

These are minimum ratings, call us if you have a more demanding requirement.

Encapsulation:
Wrapped with flame retardant polyester tape (meets UL510 specifications) and potted with flame retardant epoxy (meets UL94V-0 specifications).

Lead Wire:
Tinned Copper-Clad Steel for wire sizes:
0.020 (0.5) diameter (#24 AWG)

Tinned Copper for wire sizes:
0.025 (0.6) diameter (#22 AWG)
0.032 (0.8) diameter (#20 AWG)
0.040 (1.0) diameter (#18 AWG)

Dielectric/Construction:
Metallized Polypropylene film, single section design. Non-Inductively wound.

* Although polypropylene film capacitors have a very low dissipation factor, as noted above it is dependent upon capacitance and operating frequency. Please refer to the application notes on pages 14 and 15 for additional details on thermal management issues. In addition we encourage you to contact us to further discuss your specific application.

Dimensions are in inches, millimeters in parentheses
CDE reserves the right to amend design data

Type 761M

Metallized Polypropylene Film Capacitors

The 761M series is designed and manufactured for use in many demanding power applications. They are non-inductively wound using the most reliable metallized polypropylene film available. A wide range of capacitance values, voltage ratings, lead terminations and sizes offer the designer an array of options to best meet the form, fit and function requirements specified.

Operating Temperature Range:

Standard operating temperature range is –55°C to +85°C. Units may be operated at the full rated voltage within this temperature range.

The 761M series may be operated up to a maximum temperature of +105°C, however the voltage must be linearly de-rated to 50% of the full rated voltage at +105°C.

Dielectric Withstanding Voltage:

Units shall withstand a DC potential of 200% of rated voltage applied between terminals for not more than 2 minutes.

Lead Bend Test:

After 3 consecutive 180° bends. No damage.

Lead Pull Test:

5 pounds (2.3 Kg) for one minute on lead axis. No damage.

Humidity Testing:

Units subjected to 95% relative humidity for 250 hours with no voltage applied at +40°C. After 4 hours of drying, minimum product of insulation resistance and capacitance shall be 40,000 MΩ-μF, but need not exceed 80,000 MΩ at +25°C.

DC Voltage Life Test:

1000 hours at +85°C at 150% of rated voltage. After test; capacitance shall not have changed by more than ±2% of initial value, insulation resistance shall not have decreased by more than 50% of initial value and dissipation factor shall not have increased to more than 0.12%. In addition, there shall be no open or short circuits, and no sign of visible damage.

AC Voltage Life Test:

Minimum of 1000 hours at +85°C at 60 Hz. AC test voltage applied at 110% of rated AC voltage. After test; capacitance shall not have changed by more than ±5% of initial value, insulation resistance shall not have decreased by more than 50% of initial value and dissipation factor shall not have changed by more than 0.03%. In addition, there shall be no open or short circuits, and no sign of visible damage. All measurements made at 1 KHz.

Dielectric Material/Construction:

The 761M series is manufactured using metallized polypropylene film as the dielectric. The capacitor element is non-inductively wound in a single section design.

Metallized polypropylene film utilizes a base film of polypropylene with a thin layer of aluminum vacuum deposited directly on the film as the electrode.

Metallized film exhibits a characteristic called “self-healing” or “self-clearing”, which is the ability to remove a fault or short circuit in the dielectric film by vaporizing (from high current density) the metallization near the defect. The metallization is so thin that negligible film damage occurs during the clearing process. The vaporized metal oxidizes over time, aiding in the isolation of a fault area.

Additional Testing Notes:

Since it is not possible to list every detail of testing we perform we strongly encourage you to contact us with any specific question or requirement you may have. Thank you.

CDE reserves the right to amend design data

Ordering/Part Number Information

761M 106 5 2 C – XXX

A suffix may be added to denote special construction, packaging, marking, etc. **To specify unit with tinned copper lug terminations add –LUG in this position. Example: 761M10652-LUG.**

Compact design indicator. A letter "C" is added to indicate a compact size form factor. Refer to table of part numbers for specific sizes.

DC Voltage Rating. 1 = 160 VDC 4 = 400 VDC
2 = 250 VDC 6 = 630 VDC

Capacitance Tolerance. 9 = ±10%; 5 = ±5%; 3 = ±3%

Capacitance. Expressed in Picofarads. The first two digits are the significant figures, the third is the number of zeros following (i.e. 106 = 10,000,000 pF = 10.0 µF).

CDE Type Number. Identifies basic capacitor design.

Standard Marking Format

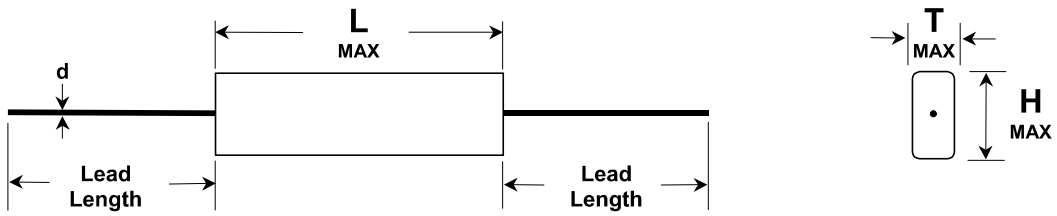
Sample Marking on unit	Description	
CDE 761M(C)	CDE	CDE Identification
106J 250V	761M	Type Number. 761MC indicates compact design.
0145	250V	DC Voltage Rating
	106J	Capacitance and Tolerance Code
	0145	Weekly Date Code (i.e. 45th week of 2001)

Tolerance codes per EIA standards

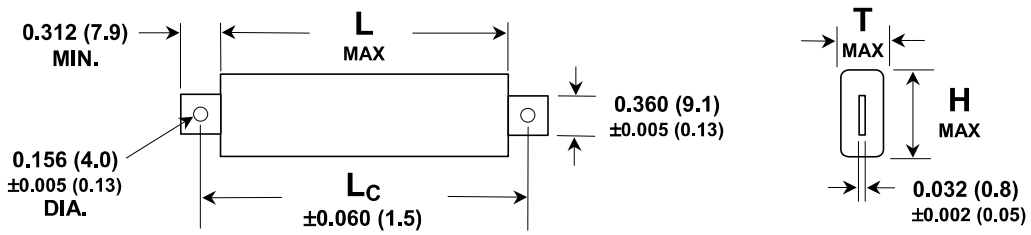
H	±3%
J	±5%
K	±10%

Dimensions are in inches, millimeters in parentheses
CDE reserves the right to amend design data

Dimension Outline



Wire Lead Termination (see lead length table below)



L_C = L MAX + 0.48 (12.2)

Tinned Solid Copper Lug Termination*

***Please note:** Lug terminations are available on units 0.55 (14.0) or greater in Thickness. Please refer to Sizes and Ratings information for available values. If you have a specific requirement other than what you find shown here please contact us.

Lead Length Table

L MAX dimension	Lead Length (Typical)
0.61 (15.5)	2.00 (50.8)
0.79 (20.1)	1.90 (48.3)
0.99 (25.1)	1.80 (45.7)
1.25 (31.8)	1.65 (41.9)
1.74 (44.2)	1.40 (35.6)
2.21 (56.1)	1.25 (31.8)

In all cases a MINIMUM lead length of 1.25 (31.8) will be met.

Lead Wire Size and Additional Termination Options

Standard lead wire sizes utilized in manufacturing range from 0.020 (0.5) diameter [#24 AWG] to 0.040 (1.0) diameter [#18 AWG]. We can also provide a variety of other wire sizes and material (i.e. heavier gauges, insulated wire, etc.). If the wire size or material listed on our standard items doesn't meet your specific requirements please contact us.

Dimensions are in inches, millimeters in parentheses
CDE reserves the right to amend design data

Type 761M Sizes and Ratings – 160 VDC/100 VAC

Cap (µF)	Base Part #	Standard Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec	[2]ESR-mΩ @100KHz	Compact Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec	[2]ESR-mΩ @100KHz
0.15	761M15451	0.61 (15.5)	0.17 (4.3)	0.27 (6.9)	0.020 (0.5)	6	20.9						
0.18	761M18451	0.61 (15.5)	0.19 (4.8)	0.29 (7.4)	0.020 (0.5)	6	18.1						
0.2	761M20451	0.61 (15.5)	0.20 (5.1)	0.30 (7.6)	0.020 (0.5)	6	16.7						
0.22	761M22451	0.79 (20.1)	0.16 (4.1)	0.26 (6.6)	0.020 (0.5)	3	33.1	0.61 (15.5)	0.21 (0.5)	0.31 (7.9)	0.020 (0.5)	9	15.6
0.25	761M25451	0.79 (20.1)	0.17 (4.3)	0.27 (6.9)	0.020 (0.5)	3	29.6	0.61 (15.5)	0.23 (5.8)	0.33 (8.4)	0.020 (0.5)	12	14.3
0.27	761M27451	0.79 (20.1)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	3	27.7	0.61 (15.5)	0.24 (6.1)	0.34 (8.6)	0.020 (0.5)	15	13.6
0.3	761M30451	0.79 (20.1)	0.18 (4.6)	0.30 (7.6)	0.020 (0.5)	3	25.5	0.61 (15.5)	0.25 (6.4)	0.35 (8.9)	0.020 (0.5)	17	12.8
0.33	761M33451	0.79 (20.1)	0.19 (4.8)	0.31 (7.9)	0.020 (0.5)	3	23.6	0.61 (15.5)	0.27 (6.9)	0.37 (9.4)	0.020 (0.5)	19	12.1
0.39	761M39451	0.79 (20.1)	0.19 (4.8)	0.37 (9.4)	0.020 (0.5)	6	21.2	0.61 (15.5)	0.26 (6.6)	0.44 (11.2)	0.020 (0.5)	32	11.7
0.43	761M43451	0.99 (25.1)	0.18 (4.6)	0.31 (7.9)	0.020 (0.5)	2	34.4	0.79 (20.1)	0.22 (5.6)	0.34 (8.6)	0.025 (0.6)	8	16.3
0.47	761M47451	0.99 (25.1)	0.18 (4.6)	0.33 (8.4)	0.020 (0.5)	2	32.1	0.79 (20.1)	0.22 (5.6)	0.37 (9.4)	0.025 (0.6)	9	15.0
0.5	761M50451	0.99 (25.1)	0.19 (4.8)	0.34 (8.6)	0.020 (0.5)	3	30.5	0.79 (20.1)	0.23 (5.8)	0.38 (9.7)	0.025 (0.6)	10	14.2
0.56	761M56451	0.99 (25.1)	0.20 (5.1)	0.35 (8.9)	0.025 (0.6)	4	24.7	0.79 (20.1)	0.24 (6.1)	0.40 (10.2)	0.025 (0.6)	11	12.8
0.6	761M60451	0.99 (25.1)	0.21 (5.3)	0.36 (9.1)	0.025 (0.6)	5	23.1	0.79 (20.1)	0.25 (6.4)	0.41 (10.4)	0.025 (0.6)	12	12.0
0.68	761M68451	0.99 (25.1)	0.22 (5.6)	0.38 (9.7)	0.025 (0.6)	6	20.5	0.79 (20.1)	0.27 (6.9)	0.43 (10.9)	0.032 (0.8)	19	10.4
0.75	761M75451	0.99 (25.1)	0.24 (6.1)	0.39 (9.9)	0.025 (0.6)	7	18.7	0.79 (20.1)	0.29 (7.4)	0.44 (11.2)	0.032 (0.8)	19	9.5
0.82	761M82451	0.99 (25.1)	0.25 (6.4)	0.40 (10.2)	0.025 (0.6)	8	17.2	0.79 (20.1)	0.30 (7.6)	0.46 (11.7)	0.032 (0.8)	20	8.8
0.9	761M90451	0.99 (25.1)	0.25 (6.4)	0.43 (10.9)	0.025 (0.6)	13	15.8	0.79 (20.1)	0.32 (8.1)	0.48 (12.2)	0.032 (0.8)	20	8.1
1.0	761M10551	0.99 (25.1)	0.27 (6.9)	0.45 (11.4)	0.032 (0.8)	13	14.0	0.79 (20.1)	0.34 (8.6)	0.50 (12.7)	0.032 (0.8)	20	7.4
1.2	761M12551	1.25 (31.8)	0.25 (6.4)	0.43 (10.9)	0.025 (0.6)	9	20.6	0.99 (25.1)	0.30 (7.6)	0.48 (12.2)	0.032 (0.8)	14	11.8
1.5	761M15551	1.25 (31.8)	0.28 (7.1)	0.47 (11.9)	0.032 (0.8)	10	16.3	0.99 (25.1)	0.34 (8.6)	0.52 (13.2)	0.032 (0.8)	14	9.7
1.8	761M18551	1.25 (31.8)	0.29 (7.4)	0.54 (13.7)	0.032 (0.8)	10	13.8	0.99 (25.1)	0.35 (8.9)	0.59 (15.0)	0.032 (0.8)	14	8.3
2.0	761M20551	1.25 (31.8)	0.31 (7.9)	0.56 (14.2)	0.032 (0.8)	10	12.5	0.99 (25.1)	0.37 (9.4)	0.62 (15.7)	0.032 (0.8)	15	7.6
2.2	761M22551	1.25 (31.8)	0.33 (8.4)	0.57 (14.5)	0.032 (0.8)	11	11.5	0.99 (25.1)	0.39 (9.9)	0.64 (16.3)	0.032 (0.8)	15	7.0
2.5	761M25551	1.25 (31.8)	0.35 (8.9)	0.60 (15.2)	0.032 (0.8)	11	10.3	0.99 (25.1)	0.42 (10.7)	0.67 (17.0)	0.032 (0.8)	15	6.3
2.7	761M27551	1.74 (44.2)	0.28 (7.1)	0.53 (13.5)	0.032 (0.8)	7	21.4	1.25 (31.8)	0.37 (9.4)	0.62 (15.7)	0.032 (0.8)	11	9.6
3.0	761M30551	1.74 (44.2)	0.30 (7.6)	0.55 (14.0)	0.032 (0.8)	7	19.3	1.25 (31.8)	0.39 (9.9)	0.64 (16.3)	0.032 (0.8)	11	8.8
3.3	761M33551	1.74 (44.2)	0.32 (8.1)	0.57 (14.5)	0.032 (0.8)	7	17.7	1.25 (31.8)	0.42 (10.7)	0.67 (17.0)	0.032 (0.8)	11	8.1
3.6	761M36551	1.74 (44.2)	0.34 (8.6)	0.59 (15.0)	0.032 (0.8)	7	16.3	1.25 (31.8)	0.44 (11.2)	0.69 (17.5)	0.032 (0.8)	11	7.5
3.9	761M39551	1.74 (44.2)	0.35 (8.9)	0.60 (15.2)	0.032 (0.8)	7	15.1	1.25 (31.8)	0.46 (11.7)	0.71 (18.0)	0.032 (0.8)	11	7.0
4.7	761M47551	1.74 (44.2)	0.40 (10.2)	0.64 (16.3)	0.032 (0.8)	7	12.8	1.25 (31.8)	0.52 (13.2)	0.76 (19.3)	0.032 (0.8)	11	6.1
5.0	761M50551	1.74 (44.2)	0.41 (10.4)	0.66 (16.8)	0.032 (0.8)	7	12.1	1.25 (31.8)	0.53 (13.5)	0.78 (19.8)	0.032 (0.8)	11	5.8
5.6	761M56551	2.21 (56.1)	0.34 (8.6)	0.65 (16.5)	0.032 (0.8)	5	19.1	1.74 (44.2)	0.39 (9.9)	0.76 (19.3)	0.032 (0.8)	7	11.0
6.0	761M60551	2.21 (56.1)	0.36 (9.1)	0.67 (17.0)	0.032 (0.8)	5	17.9	1.74 (44.2)	0.41 (10.4)	0.78 (19.8)	0.032 (0.8)	7	10.4
6.8	761M68551	2.21 (56.1)	0.39 (9.9)	0.69 (17.5)	0.032 (0.8)	5	15.9	1.74 (44.2)	0.44 (11.2)	0.81 (20.6)	0.032 (0.8)	7	9.4
7.0	761M70551	2.21 (56.1)	0.39 (9.9)	0.70 (17.8)	0.032 (0.8)	5	15.5	1.74 (44.2)	0.45 (11.4)	0.82 (20.8)	0.032 (0.8)	7	9.1
7.5	761M75551	2.21 (56.1)	0.41 (10.4)	0.72 (18.3)	0.032 (0.8)	5	14.6	1.74 (44.2)	0.47 (11.9)	0.84 (21.3)	0.032 (0.8)	7	8.6
8.0	761M80551	2.21 (56.1)	0.43 (10.9)	0.74 (18.8)	0.032 (0.8)	5	13.8	1.74 (44.2)	0.49 (12.4)	0.86 (21.8)	0.032 (0.8)	7	8.2
9.0	761M90551	2.21 (56.1)	0.46 (11.7)	0.77 (19.6)	0.032 (0.8)	5	12.4	1.74 (44.2)	0.52 (13.2)	0.90 (22.9)	0.032 (0.8)	7	7.5
10.0	761M10651	2.21 (56.1)	0.49 (12.4)	0.80 (20.3)	0.032 (0.8)	5	11.3	1.74 (44.2)	0.56 (14.2)	0.93 (23.6)	0.032 (0.8)	7	6.9
12.0	761M12651	2.21 (56.1)	0.55 (14.0)	0.86 (21.8)	0.040 (1.0)	5	9.2	1.74 (44.2)	0.63 (16.0)	1.00 (25.4)	0.040 (1.0)	7	5.5
15.0	761M15651	2.21 (56.1)	0.60 (15.2)	0.97 (24.6)	0.040 (1.0)	5	7.6	1.74 (44.2)	0.72 (18.3)	1.09 (27.7)	0.040 (1.0)	7	4.7
18.0	761M18651	2.21 (56.1)	0.67 (17.0)	1.04 (26.4)	0.040 (1.0)	5	6.6	1.74 (44.2)	0.80 (20.3)	1.17 (29.7)	0.040 (1.0)	7	4.1
20.0	761M20651	2.21 (56.1)	0.71 (18.0)	1.08 (27.4)	0.040 (1.0)	5	6.0	1.74 (44.2)	0.85 (21.6)	1.22 (31.0)	0.040 (1.0)	8	3.9
22.0	761M22651	2.21 (56.1)	0.75 (19.1)	1.12 (28.4)	0.040 (1.0)	6	5.6	1.74 (44.2)	0.90 (22.9)	1.27 (32.3)	0.040 (1.0)	8	3.7
25.0	761M25651	2.21 (56.1)	0.81 (20.6)	1.18 (30.0)	0.040 (1.0)	6	5.1	1.74 (44.2)	0.97 (24.6)	1.34 (34.0)	0.040 (1.0)	8	3.4
30.0	761M30651	2.21 (56.1)	0.90 (22.9)	1.28 (32.5)	0.040 (1.0)	6	4.5	1.74 (44.2)	1.08 (27.4)	1.45 (36.8)	0.040 (1.0)	8	3.2
35.0	761M35651	2.21 (56.1)	0.99 (25.1)	1.36 (34.5)	0.040 (1.0)	6	4.1	1.74 (44.2)	1.18 (30.0)	1.55 (39.4)	0.040 (1.0)	8	3.0
40.0	761M40651	2.21 (56.1)	1.07 (27.2)	1.44 (36.6)	0.040 (1.0)	6	3.8	1.74 (44.2)	1.27 (32.3)	1.65 (41.9)	0.040 (1.0)	8	2.9
45.0	761M45651	2.21 (56.1)	1.14 (29.0)	1.52 (38.6)	0.040 (1.0)	6	3.6	1.74 (44.2)	1.36 (34.5)	1.73 (43.9)	0.040 (1.0)	8	2.8
50.0	761M50651	2.21 (56.1)	1.22 (31.0)	1.59 (40.4)	0.040 (1.0)	6	3.5						
55.0	761M55651	2.21 (56.1)	1.28 (32.5)	1.65 (41.9)	0.040 (1.0)	6	3.3						
60.0	761M60651	2.21 (56.1)	1.35 (34.3)	1.72 (43.7)	0.040 (1.0)	6	3.2						
65.0	761M65651	2.21 (56.1)	1.41 (35.8)	1.78 (45.2)	0.040 (1.0)	6	3.2						

[1] Please refer to Ordering/Part Number page for specific part numbering details.

[2] ESR ratings listed are Maximum. Please contact us for additional ESR data.

Dimensions are in inches, millimeters in parentheses

CDE reserves the right to amend design data

Type 761M

Metallized Polypropylene Film Capacitors

Type 761M Sizes and Ratings – 250 VDC/175 VAC

Cap (µF)	Base Part #	Standard Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec	[2]ESR-mΩ @100KHz	Compact Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec	[2]ESR-mΩ @100KHz
0.068	761M68352	0.61 (15.5)	0.17 (4.3)	0.27 (6.9)	0.020 (0.5)	9	31.0						
0.075	761M75352	0.61 (15.5)	0.18 (4.6)	0.27 (6.9)	0.020 (0.5)	9	28.5						
0.082	761M82352	0.61 (15.5)	0.19 (4.8)	0.29 (7.4)	0.020 (0.5)	9	26.5						
0.1	761M10452	0.79 (20.1)	0.16 (4.1)	0.26 (6.6)	0.020 (0.5)	5	48.5	0.61 (15.5)	0.21 (5.3)	0.31 (7.9)	0.020 (0.5)	13	22.5
0.12	761M12452	0.79 (20.1)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	5	41.0	0.61 (15.5)	0.24 (6.1)	0.34 (8.6)	0.020 (0.5)	21	19.6
0.15	761M15452	0.79 (20.1)	0.20 (5.1)	0.30 (7.6)	0.025 (0.6)	5	31.1	0.61 (15.5)	0.27 (6.9)	0.37 (9.4)	0.020 (0.5)	29	16.7
0.18	761M18452	0.79 (20.1)	0.21 (5.3)	0.34 (8.6)	0.025 (0.6)	9	26.1	0.61 (15.5)	0.26 (6.6)	0.45 (11.4)	0.020 (0.5)	48	15.5
0.2	761M20452	0.99 (25.1)	0.20 (5.1)	0.30 (7.6)	0.025 (0.6)	4	45.8	0.79 (20.1)	0.23 (5.8)	0.33 (8.4)	0.025 (0.6)	12	23.6
0.22	761M22452	0.99 (25.1)	0.20 (5.1)	0.32 (8.1)	0.025 (0.6)	4	41.8	0.79 (20.1)	0.24 (6.1)	0.36 (9.1)	0.025 (0.6)	14	21.6
0.25	761M25452	0.99 (25.1)	0.21 (5.3)	0.34 (8.6)	0.025 (0.6)	7	36.9	0.79 (20.1)	0.26 (6.6)	0.38 (9.7)	0.032 (0.8)	17	18.8
0.27	761M27452	0.99 (25.1)	0.22 (5.6)	0.35 (8.9)	0.025 (0.6)	8	34.2	0.79 (20.1)	0.27 (6.9)	0.39 (9.9)	0.032 (0.8)	18	17.5
0.3	761M30452	0.99 (25.1)	0.24 (6.1)	0.36 (9.1)	0.025 (0.6)	10	30.9	0.79 (20.1)	0.28 (7.1)	0.41 (10.4)	0.032 (0.8)	20	15.8
0.33	761M33452	0.99 (25.1)	0.25 (6.4)	0.37 (9.4)	0.025 (0.6)	11	28.2	0.79 (20.1)	0.30 (7.6)	0.42 (10.7)	0.032 (0.8)	21	14.4
0.39	761M39452	0.99 (25.1)	0.26 (6.6)	0.41 (10.4)	0.032 (0.8)	13	23.7	0.79 (20.1)	0.31 (7.9)	0.47 (11.9)	0.032 (0.8)	30	12.4
0.43	761M43452	0.99 (25.1)	0.27 (6.9)	0.43 (10.9)	0.032 (0.8)	20	21.6	0.79 (20.1)	0.33 (8.4)	0.49 (12.4)	0.032 (0.8)	30	11.3
0.47	761M47452	0.99 (25.1)	0.29 (7.4)	0.44 (11.2)	0.032 (0.8)	20	19.8	0.79 (20.1)	0.35 (8.9)	0.50 (12.7)	0.032 (0.8)	31	10.4
0.5	761M50452	1.25 (31.8)	0.27 (6.9)	0.39 (9.9)	0.032 (0.8)	9	32.1	0.99 (25.1)	0.30 (7.6)	0.45 (11.4)	0.032 (0.8)	20	18.7
0.56	761M56452	1.25 (31.8)	0.27 (6.9)	0.42 (10.7)	0.032 (0.8)	10	28.8	0.99 (25.1)	0.32 (8.1)	0.47 (11.9)	0.032 (0.8)	21	16.8
0.6	761M60452	1.25 (31.8)	0.28 (7.1)	0.43 (10.9)	0.032 (0.8)	15	26.9	0.99 (25.1)	0.33 (8.4)	0.49 (12.4)	0.032 (0.8)	21	15.7
0.68	761M68452	1.25 (31.8)	0.29 (7.4)	0.47 (11.9)	0.032 (0.8)	15	23.9	0.99 (25.1)	0.34 (8.6)	0.53 (13.5)	0.032 (0.8)	21	14.0
0.75	761M75452	1.25 (31.8)	0.30 (7.6)	0.49 (12.4)	0.032 (0.8)	15	21.7	0.99 (25.1)	0.36 (9.1)	0.55 (14.0)	0.032 (0.8)	21	12.8
0.82	761M82452	1.25 (31.8)	0.32 (8.1)	0.51 (13.0)	0.032 (0.8)	16	20.0	0.99 (25.1)	0.38 (9.7)	0.57 (14.5)	0.032 (0.8)	22	11.8
0.9	761M90452	1.25 (31.8)	0.34 (8.6)	0.52 (13.2)	0.032 (0.8)	16	18.3	0.99 (25.1)	0.40 (10.2)	0.59 (15.0)	0.032 (0.8)	22	10.9
1.0	761M10552	1.25 (31.8)	0.33 (8.4)	0.58 (14.7)	0.032 (0.8)	16	16.6	0.99 (25.1)	0.43 (10.9)	0.61 (15.5)	0.032 (0.8)	22	9.9
1.2	761M12552	1.74 (44.2)	0.28 (7.1)	0.53 (13.5)	0.032 (0.8)	10	31.8	1.25 (31.8)	0.37 (9.4)	0.62 (15.7)	0.032 (0.8)	16	14.0
1.5	761M15552	1.74 (44.2)	0.33 (8.4)	0.57 (14.5)	0.032 (0.8)	10	25.6	1.25 (31.8)	0.42 (10.7)	0.67 (17.0)	0.032 (0.8)	17	11.5
1.8	761M18552	1.74 (44.2)	0.36 (9.1)	0.61 (15.5)	0.032 (0.8)	10	21.6	1.25 (31.8)	0.47 (11.9)	0.72 (18.3)	0.032 (0.8)	17	9.8
2.0	761M20552	1.74 (44.2)	0.39 (9.9)	0.63 (16.0)	0.032 (0.8)	11	19.5	1.25 (31.8)	0.50 (12.7)	0.75 (19.1)	0.032 (0.8)	17	9.0
2.2	761M22552	2.21 (56.1)	0.34 (8.6)	0.59 (15.0)	0.032 (0.8)	8	31.7	1.74 (44.2)	0.36 (9.1)	0.73 (18.5)	0.032 (0.8)	11	18.0
2.5	761M25552	2.21 (56.1)	0.37 (9.4)	0.62 (15.7)	0.032 (0.8)	8	28.0	1.74 (44.2)	0.39 (9.9)	0.76 (19.3)	0.032 (0.8)	11	16.0
2.7	761M27552	2.21 (56.1)	0.39 (9.9)	0.63 (16.0)	0.032 (0.8)	8	26.0	1.74 (44.2)	0.41 (10.4)	0.78 (19.8)	0.032 (0.8)	11	14.9
3.0	761M30552	2.21 (56.1)	0.38 (9.7)	0.69 (17.5)	0.032 (0.8)	8	23.6	1.74 (44.2)	0.44 (11.2)	0.81 (20.6)	0.032 (0.8)	11	13.6
3.3	761M33552	2.21 (56.1)	0.41 (10.4)	0.72 (18.3)	0.032 (0.8)	8	21.6	1.74 (44.2)	0.47 (11.9)	0.84 (21.3)	0.032 (0.8)	11	12.5
3.6	761M36552	2.21 (56.1)	0.43 (10.9)	0.74 (18.8)	0.032 (0.8)	8	19.9	1.74 (44.2)	0.49 (12.4)	0.86 (21.8)	0.032 (0.8)	11	11.6
3.9	761M39552	2.21 (56.1)	0.45 (11.4)	0.76 (19.3)	0.032 (0.8)	8	18.5	1.74 (44.2)	0.52 (13.2)	0.89 (22.6)	0.032 (0.8)	11	10.8
4.7	761M47552	2.21 (56.1)	0.51 (13.0)	0.82 (20.8)	0.040 (1.0)	8	15.2	1.74 (44.2)	0.58 (14.7)	0.95 (24.1)	0.040 (1.0)	11	8.8
5.0	761M50552	2.21 (56.1)	0.53 (13.5)	0.84 (21.3)	0.040 (1.0)	8	14.3	1.74 (44.2)	0.60 (15.2)	0.97 (24.6)	0.040 (1.0)	11	8.3
5.6	761M56552	2.21 (56.1)	0.56 (14.2)	0.87 (22.1)	0.040 (1.0)	8	12.9	1.74 (44.2)	0.65 (16.5)	1.02 (25.9)	0.040 (1.0)	11	7.6
6.0	761M60552	2.21 (56.1)	0.59 (15.0)	0.90 (22.9)	0.040 (1.0)	8	12.1	1.74 (44.2)	0.67 (17.0)	1.04 (26.4)	0.040 (1.0)	11	7.1
6.8	761M68552	2.21 (56.1)	0.60 (15.2)	0.97 (24.6)	0.040 (1.0)	8	10.8	1.74 (44.2)	0.73 (18.5)	1.10 (27.9)	0.040 (1.0)	11	6.5
7.0	761M70552	2.21 (56.1)	0.61 (15.5)	0.99 (25.1)	0.040 (1.0)	8	10.6	1.74 (44.2)	0.74 (18.8)	1.11 (28.2)	0.040 (1.0)	11	6.3
7.5	761M75552	2.21 (56.1)	0.64 (16.3)	1.01 (25.7)	0.040 (1.0)	8	10.0	1.74 (44.2)	0.71 (18.0)	1.21 (30.7)	0.040 (1.0)	11	6.0
8.0	761M80552	2.21 (56.1)	0.67 (17.0)	1.04 (26.4)	0.040 (1.0)	8	9.4	1.74 (44.2)	0.74 (18.8)	1.24 (31.5)	0.040 (1.0)	11	5.8
9.0	761M90552	2.21 (56.1)	0.72 (18.3)	1.09 (27.7)	0.040 (1.0)	8	8.5	1.74 (44.2)	0.80 (20.3)	1.29 (32.8)	0.040 (1.0)	11	5.3
10.0	761M10652	2.21 (56.1)	0.76 (19.3)	1.13 (28.7)	0.040 (1.0)	8	7.8	1.74 (44.2)	0.85 (21.6)	1.35 (34.3)	0.040 (1.0)	11	4.9
12.0	761M12652	2.21 (56.1)	0.85 (21.6)	1.22 (31.0)	0.040 (1.0)	8	6.7	1.74 (44.2)	0.95 (24.1)	1.45 (36.8)	0.040 (1.0)	11	4.4
15.0	761M15652	2.21 (56.1)	0.97 (24.6)	1.34 (34.0)	0.040 (1.0)	8	5.7	1.74 (44.2)	1.09 (27.7)	1.59 (40.4)	0.040 (1.0)	11	3.9
18.0	761M18652	2.21 (56.1)	1.08 (27.4)	1.45 (36.8)	0.040 (1.0)	8	5.1	1.74 (44.2)	1.22 (31.0)	1.71 (43.4)	0.040 (1.0)	11	3.6
20.0	761M20652	2.21 (56.1)	1.14 (29.0)	1.52 (38.6)	0.040 (1.0)	8	4.8	1.74 (44.2)	1.30 (33.0)	1.79 (45.5)	0.040 (1.0)	11	3.5
22.0	761M22652	2.21 (56.1)	1.21 (30.7)	1.58 (40.1)	0.040 (1.0)	8	4.5						
25.0	761M25652	2.21 (56.1)	1.30 (33.0.)	1.67 (42.4)	0.040 (1.0)	8	4.2						

[1] Please refer to Ordering/Part Number page for specific part numbering details.

[2] ESR ratings listed are Maximum. Please contact us for additional ESR data.

Dimensions are in inches, millimeters in parentheses

CDE reserves the right to amend design data

Type 761M Sizes and Ratings – 400 VDC/220 VAC

Cap	Base	Standard Dimensions/Ratings[1]				dV/dt	[2]ESR-mΩ	Compact Dimensions/Ratings[1]				dV/dt	[2]ESR-mΩ
(µF)	Part #	L MAX	T MAX	H MAX	Wire (d)	V/µsec	@100KHz	L MAX	T MAX	H MAX	Wire (d)	V/µsec	@100KHz
0.033	761M33354	0.61 (15.5)	0.17 (4.3)	0.27 (6.9)	0.020 (0.5)	14	42.3						
0.036	761M36354	0.61 (15.5)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	14	39.1						
0.039	761M39354	0.61 (15.5)	0.19 (4.8)	0.29 (7.4)	0.020 (0.5)	14	36.5						
0.043	761M43354	0.61 (15.5)	0.20 (5.1)	0.30 (7.6)	0.020 (0.5)	14	33.5						
0.047	761M47354	0.79 (20.1)	0.15 (3.8)	0.25 (6.4)	0.020 (0.5)	8	70.3	0.61 (15.5)	0.21 (5.3)	0.31 (7.9)	0.020 (0.5)	16	31.0
0.05	761M50354	0.79 (20.1)	0.16 (4.1)	0.25 (6.4)	0.020 (0.5)	8	66.3	0.61 (15.5)	0.22 (5.6)	0.31 (7.9)	0.020 (0.5)	21	29.4
0.056	761M56354	0.79 (20.1)	0.16 (4.1)	0.26 (6.6)	0.020 (0.5)	8	59.6	0.61 (15.5)	0.23 (5.8)	0.33 (8.4)	0.020 (0.5)	29	26.8
0.062	761M62354	0.79 (20.1)	0.17 (4.3)	0.27 (6.9)	0.020 (0.5)	8	54.2	0.61 (15.5)	0.24 (6.1)	0.34 (8.6)	0.020 (0.5)	35	24.7
0.068	761M68354	0.79 (20.1)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	8	49.8	0.61 (15.5)	0.26 (6.6)	0.35 (8.9)	0.020 (0.5)	40	23.0
0.075	761M75354	0.99 (25.1)	0.17 (4.3)	0.26 (6.6)	0.020 (0.5)	5	88.5	0.79 (20.1)	0.19 (4.8)	0.29 (7.4)	0.025 (0.6)	8	43.0
0.082	761M82354	0.99 (25.1)	0.16 (4.1)	0.29 (7.4)	0.020 (0.5)	5	81.4	0.79 (20.1)	0.19 (4.8)	0.32 (8.1)	0.025 (0.6)	8	39.4
0.1	761M10454	0.99 (25.1)	0.18 (4.6)	0.31 (7.9)	0.020 (0.5)	5	67.6	0.79 (20.1)	0.22 (5.6)	0.34 (8.6)	0.025 (0.6)	15	32.5
0.12	761M12454	0.99 (25.1)	0.20 (5.1)	0.32 (8.1)	0.025 (0.6)	7	54.3	0.79 (20.1)	0.24 (6.1)	0.37 (9.4)	0.025 (0.6)	21	27.3
0.15	761M15454	0.99 (25.1)	0.21 (5.3)	0.37 (9.4)	0.025 (0.6)	12	43.6	0.79 (20.1)	0.27 (6.9)	0.40 (10.2)	0.032 (0.8)	27	21.7
0.18	761M18454	0.99 (25.1)	0.24 (6.1)	0.39 (9.9)	0.025 (0.6)	15	36.6	0.79 (20.1)	0.28 (7.1)	0.46 (11.7)	0.032 (0.8)	42	18.3
0.2	761M20454	0.99 (25.1)	0.25 (6.4)	0.41 (10.4)	0.025 (0.6)	17	33.0	0.79 (20.1)	0.30 (7.6)	0.48 (12.2)	0.032 (0.8)	43	16.6
0.22	761M22454	0.99 (25.1)	0.25 (6.4)	0.44 (11.2)	0.025 (0.6)	27	30.2	0.79 (20.1)	0.31 (7.9)	0.50 (12.7)	0.032 (0.8)	43	15.1
0.25	761M25454	1.25 (31.8)	0.23 (5.8)	0.41 (10.4)	0.025 (0.6)	11	46.6	0.99 (25.1)	0.27 (6.9)	0.46 (11.7)	0.032 (0.8)	28	26.3
0.27	761M27454	1.25 (31.8)	0.24 (6.1)	0.42 (10.7)	0.025 (0.6)	12	43.2	0.99 (25.1)	0.26 (6.6)	0.51 (13.0)	0.032 (0.8)	28	24.5
0.3	761M30454	1.25 (31.8)	0.25 (6.4)	0.44 (11.2)	0.025 (0.6)	20	39.0	0.99 (25.1)	0.28 (7.1)	0.53 (13.5)	0.032 (0.8)	28	22.2
0.33	761M33454	1.25 (31.8)	0.27 (6.9)	0.45 (11.4)	0.032 (0.8)	20	35.2	0.99 (25.1)	0.29 (7.4)	0.54 (13.7)	0.032 (0.8)	29	20.2
0.39	761M39454	1.25 (31.8)	0.27 (6.9)	0.52 (13.2)	0.032 (0.8)	21	30.0	0.99 (25.1)	0.33 (8.4)	0.57 (14.5)	0.032 (0.8)	30	17.3
0.43	761M43454	1.25 (31.8)	0.29 (7.4)	0.53 (13.5)	0.032 (0.8)	21	27.3	0.99 (25.1)	0.35 (8.9)	0.59 (15.0)	0.032 (0.8)	30	15.8
0.47	761M47454	1.25 (31.8)	0.30 (7.6)	0.55 (14.0)	0.032 (0.8)	21	25.1	0.99 (25.1)	0.37 (9.4)	0.61 (15.5)	0.032 (0.8)	30	14.5
0.5	761M50454	1.25 (31.8)	0.31 (7.9)	0.56 (14.2)	0.032 (0.8)	21	23.6	0.99 (25.1)	0.38 (9.7)	0.63 (16.0)	0.032 (0.8)	30	13.7
0.56	761M56454	1.25 (31.8)	0.34 (8.6)	0.58 (14.7)	0.032 (0.8)	22	21.2	0.99 (25.1)	0.41 (10.4)	0.65 (16.5)	0.032 (0.8)	31	12.4
0.6	761M60454	1.74 (44.2)	0.27 (6.9)	0.52 (13.2)	0.032 (0.8)	13	46.5	1.25 (31.8)	0.35 (8.9)	0.60 (15.2)	0.032 (0.8)	22	19.9
0.68	761M68454	1.74 (44.2)	0.29 (7.4)	0.54 (13.7)	0.032 (0.8)	13	41.1	1.25 (31.8)	0.38 (9.7)	0.63 (16.0)	0.032 (0.8)	22	17.7
0.75	761M75454	1.74 (44.2)	0.31 (7.9)	0.55 (14.0)	0.032 (0.8)	13	37.4	1.25 (31.8)	0.40 (10.2)	0.65 (16.5)	0.032 (0.8)	22	16.1
0.82	761M82454	1.74 (44.2)	0.32 (8.1)	0.57 (14.5)	0.032 (0.8)	14	34.3	1.25 (31.8)	0.42 (10.7)	0.67 (17.0)	0.032 (0.8)	23	14.9
0.9	761M90454	1.74 (44.2)	0.34 (8.6)	0.59 (15.0)	0.032 (0.8)	14	31.3	1.25 (31.8)	0.45 (11.4)	0.69 (17.5)	0.032 (0.8)	23	13.7
1.0	761M10554	1.74 (44.2)	0.36 (9.1)	0.61 (15.5)	0.032 (0.8)	14	28.3	1.25 (31.8)	0.48 (12.2)	0.72 (18.3)	0.032 (0.8)	23	12.5
1.2	761M12554	2.21 (56.1)	0.34 (8.6)	0.58 (14.7)	0.032 (0.8)	10	43.0	1.74 (44.2)	0.38 (9.7)	0.69 (17.5)	0.032 (0.8)	14	23.9
1.5	761M15554	2.21 (56.1)	0.38 (9.7)	0.63 (16.0)	0.032 (0.8)	10	34.6	1.74 (44.2)	0.44 (11.2)	0.74 (18.8)	0.032 (0.8)	14	19.4
1.8	761M18554	2.21 (56.1)	0.43 (10.9)	0.68 (17.3)	0.032 (0.8)	10	29.1	1.74 (44.2)	0.49 (12.4)	0.80 (20.3)	0.032 (0.8)	15	16.4
2.0	761M20554	2.21 (56.1)	0.46 (11.7)	0.70 (17.8)	0.032 (0.8)	11	26.3	1.74 (44.2)	0.52 (13.2)	0.83 (21.1)	0.032 (0.8)	15	14.9
2.2	761M22554	2.21 (56.1)	0.45 (11.4)	0.76 (19.3)	0.032 (0.8)	11	24.1	1.74 (44.2)	0.55 (14.0)	0.86 (21.8)	0.032 (0.8)	15	13.7
2.5	761M25554	2.21 (56.1)	0.49 (12.4)	0.80 (20.3)	0.032 (0.8)	11	21.4	1.74 (44.2)	0.59 (15.0)	0.90 (22.9)	0.032 (0.8)	15	12.3
2.7	761M27554	2.21 (56.1)	0.51 (13.0)	0.82 (20.8)	0.040 (1.0)	11	19.5	1.74 (44.2)	0.62 (15.7)	0.93 (23.6)	0.040 (1.0)	15	11.0
3.0	761M30554	2.21 (56.1)	0.55 (14.0)	0.86 (21.8)	0.040 (1.0)	11	17.6	1.74 (44.2)	0.63 (16.0)	1.00 (25.4)	0.040 (1.0)	15	10.0
3.3	761M33554	2.21 (56.1)	0.58 (14.7)	0.89 (22.6)	0.040 (1.0)	11	16.1	1.74 (44.2)	0.67 (17.0)	1.04 (26.4)	0.040 (1.0)	15	9.2
3.6	761M36554	2.21 (56.1)	0.61 (15.5)	0.92 (23.4)	0.040 (1.0)	11	14.9	1.74 (44.2)	0.70 (17.8)	1.08 (27.4)	0.040 (1.0)	15	8.6
3.9	761M39554	2.21 (56.1)	0.64 (16.3)	0.95 (24.1)	0.040 (1.0)	11	13.8	1.74 (44.2)	0.74 (18.8)	1.11 (28.2)	0.040 (1.0)	15	8.0
4.7	761M47554	2.21 (56.1)	0.68 (17.3)	1.06 (26.9)	0.040 (1.0)	11	11.7	1.74 (44.2)	0.83 (21.1)	1.20 (30.5)	0.040 (1.0)	15	6.9
5.0	761M50554	2.21 (56.1)	0.71 (18.0)	1.08 (27.4)	0.040 (1.0)	11	11.1	1.74 (44.2)	0.86 (21.8)	1.23 (31.2)	0.040 (1.0)	15	6.6
5.6	761M56554	2.21 (56.1)	0.76 (19.3)	1.13 (28.7)	0.040 (1.0)	11	10.0	1.74 (44.2)	0.92 (23.4)	1.29 (32.8)	0.040 (1.0)	15	6.1
6.0	761M60554	2.21 (56.1)	0.79 (20.1)	1.16 (29.5)	0.040 (1.0)	11	9.5	1.74 (44.2)	0.89 (22.6)	1.39 (35.3)	0.040 (1.0)	15	5.8
6.8	761M68554	2.21 (56.1)	0.85 (21.6)	1.22 (31.0)	0.040 (1.0)	11	8.5	1.74 (44.2)	0.96 (24.4)	1.46 (37.1)	0.040 (1.0)	15	5.3
7.0	761M70554	2.21 (56.1)	0.87 (22.1)	1.24 (31.5)	0.040 (1.0)	11	8.3	1.74 (44.2)	0.98 (24.9)	1.48 (37.6)	0.040 (1.0)	15	5.2
7.5	761M75554	2.21 (56.1)	0.90 (22.9)	1.28 (32.5)	0.040 (1.0)	11	7.9	1.74 (44.2)	1.02 (25.9)	1.52 (38.6)	0.040 (1.0)	15	5.0
8.0	761M80554	2.21 (56.1)	0.94 (23.9)	1.31 (33.3)	0.040 (1.0)	11	7.5	1.74 (44.2)	1.06 (26.9)	1.56 (39.6)	0.040 (1.0)	15	4.8
9.0	761M90554	2.21 (56.1)	1.01 (25.7)	1.38 (35.1)	0.040 (1.0)	11	6.9	1.74 (44.2)	1.14 (29.0)	1.64 (41.7)	0.040 (1.0)	15	4.5
10.0	761M10654	2.21 (56.1)	1.07 (27.2)	1.44 (36.6)	0.040 (1.0)	11	6.3	1.74 (44.2)	1.21 (30.7)	1.71 (43.4)	0.040 (1.0)	15	4.3
12.0	761M12654	2.21 (56.1)	1.19 (30.2)	1.56 (39.6)	0.040 (1.0)	11	5.6						
15.0	761M15654	2.21 (56.1)	1.35 (34.3)	1.72 (43.7)	0.040 (1.0)	11	4.9						

[1] Please refer to Ordering/Part Number page for specific part numbering details.

[2] ESR ratings listed are Maximum. Please contact us for additional ESR data.

Dimensions are in inches, millimeters in parentheses

CDE reserves the right to amend design data

Type 761M

Metallized Polypropylene Film Capacitors

Type 761M Sizes and Ratings – 630 VDC/250 VAC

Cap (µF)	Base Part #	Standard Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec	[2]ESR-mΩ @100KHz	Compact Dimensions/Ratings[1] L MAX	T MAX	H MAX	Wire (d)	dV/dt V/µsec	[2]ESR-mΩ @100KHz
0.012	761M12356	0.61 (15.5)	0.17 (4.3)	0.27 (6.9)	0.020 (0.5)	25	72.5						
0.015	761M15356	0.61 (15.5)	0.19 (4.8)	0.29 (7.4)	0.020 (0.5)	25	58.8						
0.018	761M18356	0.61 (15.5)	0.21 (5.3)	0.31 (7.9)	0.020 (0.5)	32	49.8						
0.02	761M20356	0.79 (20.1)	0.15 (3.8)	0.25 (6.4)	0.020 (0.5)	13	101.4	0.61 (15.5)	0.22 (5.6)	0.32 (8.1)	0.020 (0.5)	46	45.3
0.022	761M22356	0.79 (20.1)	0.16 (4.1)	0.26 (6.6)	0.020 (0.5)	13	92.6	0.61 (15.5)	0.23 (5.8)	0.33 (8.4)	0.020 (0.5)	58	41.6
0.025	761M25356	0.79 (20.1)	0.17 (4.3)	0.27 (6.6)	0.020 (0.5)	13	81.9	0.61 (15.5)	0.25 (6.4)	0.35 (8.9)	0.020 (0.5)	71	37.2
0.027	761M27356	0.79 (20.1)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	13	76.1	0.61 (15.5)	0.26 (6.6)	0.36 (9.1)	0.020 (0.5)	79	34.9
0.03	761M30356	0.99 (25.1)	0.15 (3.8)	0.28 (7.1)	0.020 (0.5)	8	136.9	0.79 (20.1)	0.18 (4.6)	0.31 (7.9)	0.020 (0.5)	13	69.1
0.033	761M33356	0.99 (25.1)	0.16 (4.1)	0.29 (7.4)	0.020 (0.5)	8	124.8	0.79 (20.1)	0.19 (4.8)	0.32 (8.1)	0.025 (0.6)	13	60.5
0.036	761M36356	0.99 (25.1)	0.17 (4.3)	0.29 (7.4)	0.020 (0.5)	8	114.8	0.79 (20.1)	0.20 (5.1)	0.33 (8.4)	0.025 (0.6)	17	55.6
0.039	761M39356	0.99 (25.1)	0.18 (4.6)	0.30 (7.6)	0.020 (0.5)	8	106.3	0.79 (20.1)	0.21 (5.3)	0.34 (8.6)	0.025 (0.6)	22	51.4
0.043	761M43356	0.99 (25.1)	0.19 (4.8)	0.31 (7.9)	0.020 (0.5)	8	96.8	0.79 (20.1)	0.22 (5.6)	0.35 (8.9)	0.025 (0.6)	28	46.7
0.047	761M47356	0.99 (25.1)	0.18 (4.6)	0.34 (8.6)	0.020 (0.5)	8	89.2	0.79 (20.1)	0.21 (5.3)	0.40 (10.2)	0.025 (0.6)	34	42.9
0.05	761M50356	0.99 (25.1)	0.19 (4.8)	0.34 (8.6)	0.020 (0.5)	11	84.1	0.79 (20.1)	0.22 (5.6)	0.41 (10.4)	0.025 (0.6)	37	40.4
0.056	761M56356	0.99 (25.1)	0.20 (5.1)	0.36 (9.1)	0.025 (0.6)	15	72.5	0.79 (20.1)	0.24 (6.1)	0.42 (10.7)	0.025 (0.6)	42	36.2
0.062	761M62356	0.99 (25.1)	0.20 (5.1)	0.39 (9.9)	0.025 (0.6)	18	65.7	0.79 (20.1)	0.25 (6.4)	0.44 (11.2)	0.025 (0.6)	67	32.8
0.068	761M68356	0.99 (25.1)	0.21 (5.3)	0.40 (10.2)	0.025 (0.6)	21	60.0	0.79 (20.1)	0.27 (6.9)	0.45 (11.4)	0.032 (0.8)	68	29.7
0.075	761M75356	0.99 (25.1)	0.23 (5.8)	0.41 (10.4)	0.025 (0.6)	24	54.5	0.79 (20.1)	0.28 (7.1)	0.47 (11.9)	0.032 (0.8)	70	27.0
0.082	761M82356	0.99 (25.1)	0.24 (6.1)	0.42 (10.7)	0.025 (0.6)	27	49.9	0.79 (20.1)	0.30 (7.6)	0.48 (12.2)	0.032 (0.8)	71	24.8
0.10	761M10456	0.99 (25.1)	0.27 (6.9)	0.45 (11.4)	0.032 (0.8)	44	40.8	0.79 (20.1)	0.34 (8.6)	0.52 (13.2)	0.032 (0.8)	73	20.5
0.12	761M12456	1.25 (31.8)	0.25 (6.4)	0.43 (10.9)	0.025 (0.6)	30	61.0	0.99 (25.1)	0.27 (6.9)	0.52 (13.2)	0.032 (0.8)	45	34.2
0.15	761M15456	1.25 (31.8)	0.26 (6.6)	0.50 (12.7)	0.032 (0.8)	32	48.8	0.99 (25.1)	0.31 (7.9)	0.56 (14.2)	0.032 (0.8)	47	27.6
0.18	761M18456	1.25 (31.8)	0.29 (7.4)	0.53 (13.5)	0.032 (0.8)	33	40.8	0.99 (25.1)	0.35 (8.9)	0.60 (15.2)	0.032 (0.8)	48	23.2
0.2	761M20456	1.25 (31.8)	0.30 (7.6)	0.55 (14.0)	0.032 (0.8)	34	36.8	0.99 (25.1)	0.37 (9.4)	0.62 (15.7)	0.032 (0.8)	49	21.0
0.22	761M22456	1.25 (31.8)	0.32 (8.1)	0.57 (14.5)	0.032 (0.8)	34	33.6	0.99 (25.1)	0.39 (9.9)	0.64 (16.3)	0.032 (0.8)	49	19.2
0.25	761M25456	1.74 (44.2)	0.27 (6.9)	0.51 (13.0)	0.032 (0.8)	20	71.2	1.25 (31.8)	0.33 (8.4)	0.64 (16.3)	0.032 (0.8)	35	29.7
0.27	761M27456	1.74 (44.2)	0.28 (7.1)	0.52 (13.2)	0.032 (0.8)	20	66.0	1.25 (31.8)	0.34 (8.6)	0.65 (16.5)	0.032 (0.8)	35	27.6
0.3	761M30456	1.74 (44.2)	0.30 (7.6)	0.54 (13.7)	0.032 (0.8)	21	59.5	1.25 (31.8)	0.37 (9.4)	0.68 (17.3)	0.032 (0.8)	35	25.0
0.33	761M33456	1.74 (44.2)	0.31 (7.9)	0.56 (14.2)	0.032 (0.8)	21	54.1	1.25 (31.8)	0.39 (9.9)	0.70 (17.8)	0.032 (0.8)	36	22.8
0.39	761M39456	1.74 (44.2)	0.35 (8.9)	0.59 (15.0)	0.032 (0.8)	21	46.0	1.25 (31.8)	0.43 (10.9)	0.74 (18.8)	0.032 (0.8)	36	19.5
0.43	761M43456	1.74 (44.2)	0.34 (8.6)	0.65 (16.5)	0.032 (0.8)	22	41.9	1.25 (31.8)	0.46 (11.7)	0.77 (19.6)	0.032 (0.8)	36	17.9
0.47	761M47456	1.74 (44.2)	0.36 (9.1)	0.67 (17.0)	0.032 (0.8)	22	38.4	1.25 (31.8)	0.48 (12.2)	0.79 (20.1)	0.032 (0.8)	36	16.5
0.5	761M50456	1.74 (44.2)	0.37 (9.4)	0.68 (17.3)	0.032 (0.8)	22	36.2	1.25 (31.8)	0.50 (12.7)	0.81 (20.6)	0.032 (0.8)	37	15.6
0.56	761M56456	1.74 (44.2)	0.40 (10.2)	0.71 (18.0)	0.032 (0.8)	22	32.5	1.25 (31.8)	0.54 (13.7)	0.84 (21.3)	0.032 (0.8)	37	14.1
0.6	761M60456	2.21 (56.1)	0.34 (8.6)	0.65 (16.5)	0.032 (0.8)	16	55.5	1.74 (44.2)	0.39 (9.9)	0.76 (19.3)	0.032 (0.8)	22	30.4
0.68	761M68456	2.21 (56.1)	0.37 (9.4)	0.68 (17.3)	0.032 (0.8)	16	49.1	1.74 (44.2)	0.42 (10.7)	0.80 (20.3)	0.032 (0.8)	22	27.0
0.75	761M75456	2.21 (56.1)	0.39 (9.9)	0.70 (17.8)	0.032 (0.8)	16	44.6	1.74 (44.2)	0.45 (11.4)	0.82 (20.8)	0.032 (0.8)	23	24.7
0.82	761M82456	2.21 (56.1)	0.41 (10.4)	0.72 (18.3)	0.032 (0.8)	16	40.9	1.74 (44.2)	0.48 (12.2)	0.85 (21.6)	0.032 (0.8)	23	22.7
0.9	761M90456	2.21 (56.1)	0.44 (11.2)	0.75 (19.1)	0.032 (0.8)	16	37.4	1.74 (44.2)	0.51 (13.0)	0.88 (22.4)	0.032 (0.8)	23	20.8
1.0	761M10556	2.21 (56.1)	0.44 (11.2)	0.81 (20.6)	0.032 (0.8)	16	33.9	1.74 (44.2)	0.54 (13.7)	0.91 (23.1)	0.032 (0.8)	23	18.9
1.2	761M12556	2.21 (56.1)	0.50 (12.7)	0.87 (22.1)	0.040 (1.0)	16	28.0	1.74 (44.2)	0.60 (15.2)	0.98 (24.9)	0.040 (1.0)	23	15.5
1.5	761M15556	2.21 (56.1)	0.57 (14.5)	0.94 (23.9)	0.040 (1.0)	17	22.6	1.74 (44.2)	0.69 (17.5)	1.06 (26.9)	0.040 (1.0)	23	12.7
1.8	761M18556	2.21 (56.1)	0.64 (16.3)	1.01 (25.7)	0.040 (1.0)	17	19.1	1.74 (44.2)	0.71 (18.0)	1.21 (30.7)	0.040 (1.0)	23	10.9
2.0	761M20556	2.21 (56.1)	0.68 (17.3)	1.05 (26.7)	0.040 (1.0)	17	17.3	1.74 (44.2)	0.76 (19.3)	1.26 (32.0)	0.040 (1.0)	23	9.9
2.2	761M22556	2.21 (56.1)	0.72 (18.3)	1.09 (27.7)	0.040 (1.0)	17	15.8	1.74 (44.2)	0.81 (20.6)	1.30 (33.0)	0.040 (1.0)	23	9.2
2.5	761M25556	2.21 (56.1)	0.77 (19.6)	1.15 (29.2)	0.040 (1.0)	17	14.1	1.74 (44.2)	0.88 (22.4)	1.37 (34.8)	0.040 (1.0)	23	8.3
2.7	761M27556	2.21 (56.1)	0.81 (20.6)	1.18 (30.0)	0.040 (1.0)	17	13.2	1.74 (44.2)	0.92 (23.4)	1.41 (35.8)	0.040 (1.0)	23	7.8
3.0	761M30556	2.21 (56.1)	0.86 (21.8)	1.23 (31.2)	0.040 (1.0)	17	12.0	1.74 (44.2)	0.98 (24.9)	1.47 (37.3)	0.040 (1.0)	24	7.2
3.3	761M33556	2.21 (56.1)	0.91 (23.1)	1.28 (32.5)	0.040 (1.0)	17	11.1	1.74 (44.2)	1.04 (26.4)	1.53 (38.9)	0.040 (1.0)	24	6.7
3.6	761M36556	2.21 (56.1)	0.96 (24.4)	1.33 (33.8)	0.040 (1.0)	17	10.3	1.74 (44.2)	1.09 (27.7)	1.59 (40.4)	0.040 (1.0)	24	6.3
3.9	761M39556	2.21 (56.1)	1.01 (25.7)	1.38 (35.1)	0.040 (1.0)	17	9.6	1.74 (44.2)	1.15 (29.2)	1.64 (41.7)	0.040 (1.0)	24	6.0
4.7	761M47556	2.21 (56.1)	1.12 (28.4)	1.49 (37.8)	0.040 (1.0)	17	8.3	1.74 (44.2)	1.28 (32.5)	1.77 (45.0)	0.040 (1.0)	24	5.3
5.0	761M50556	2.21 (56.1)	1.16 (29.5)	1.53 (38.9)	0.040 (1.0)	17	7.9						
5.6	761M56556	2.21 (56.1)	1.24 (31.5)	1.61 (40.9)	0.040 (1.0)	17	7.3						
6.0	761M60556	2.21 (56.1)	1.29 (32.8)	1.66 (42.2)	0.040 (1.0)	17	6.9						
6.8	761M68556	2.21 (56.1)	1.38 (35.1)	1.75 (44.5)	0.040 (1.0)	17	6.4						
7.0	761M70556	2.21 (56.1)	1.40 (35.6)	1.78 (45.2)	0.040 (1.0)	17	6.3						

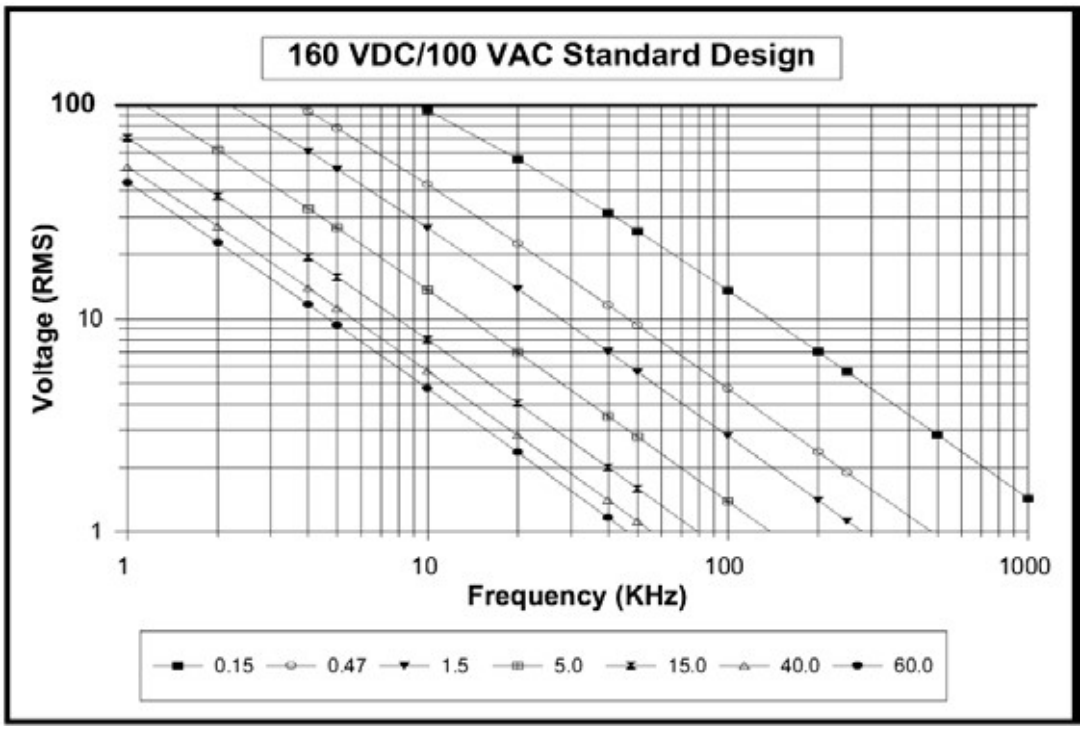
[1] Please refer to Ordering/Part Number page for specific part numbering details.

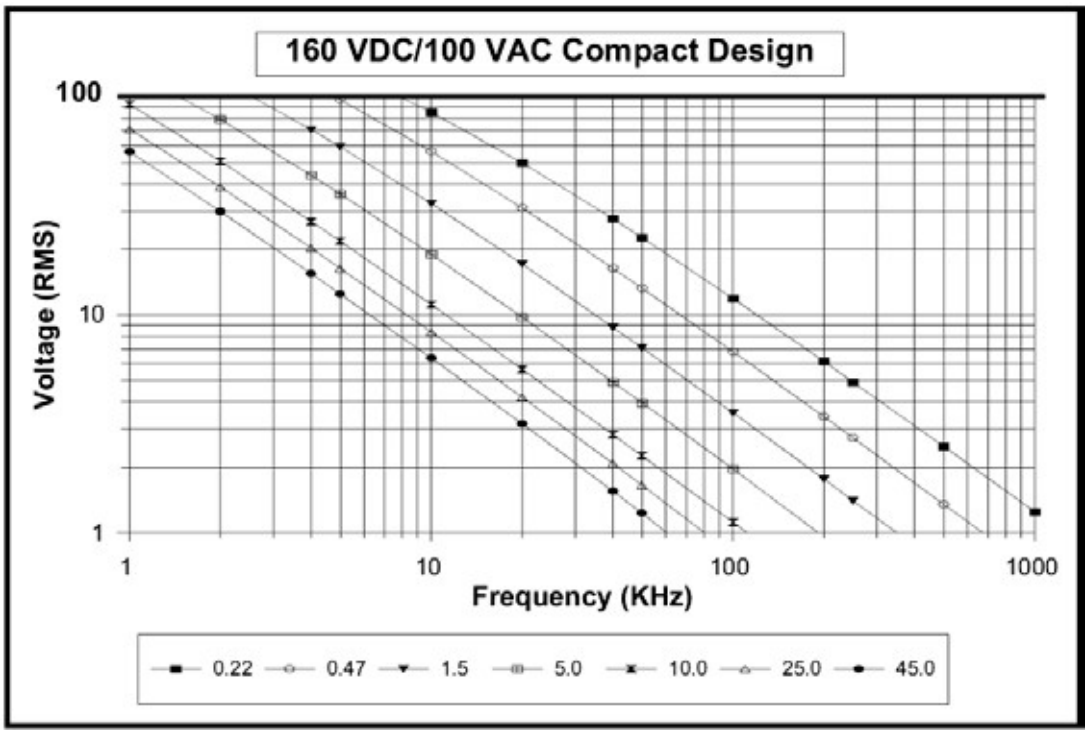
[2] ESR ratings listed are Maximum. Please contact us for additional ESR data.

Dimensions are in inches, millimeters in parentheses

CDE reserves the right to amend design data

RMS Voltage vs. Frequency @ +85°C, in still air*



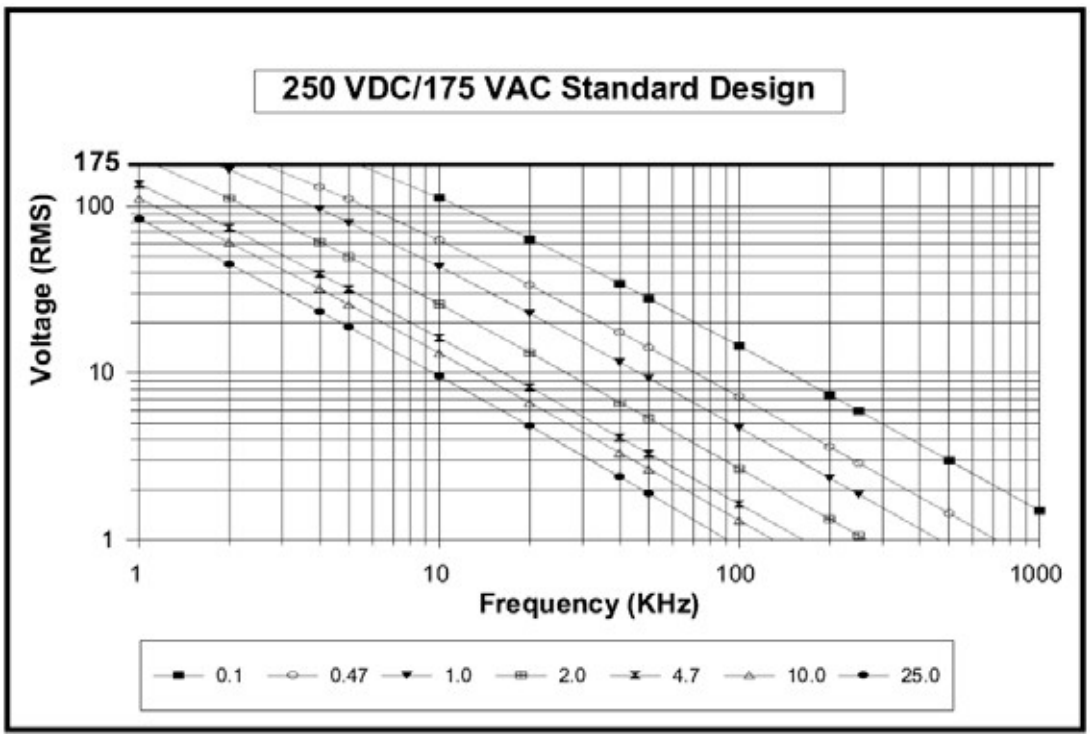


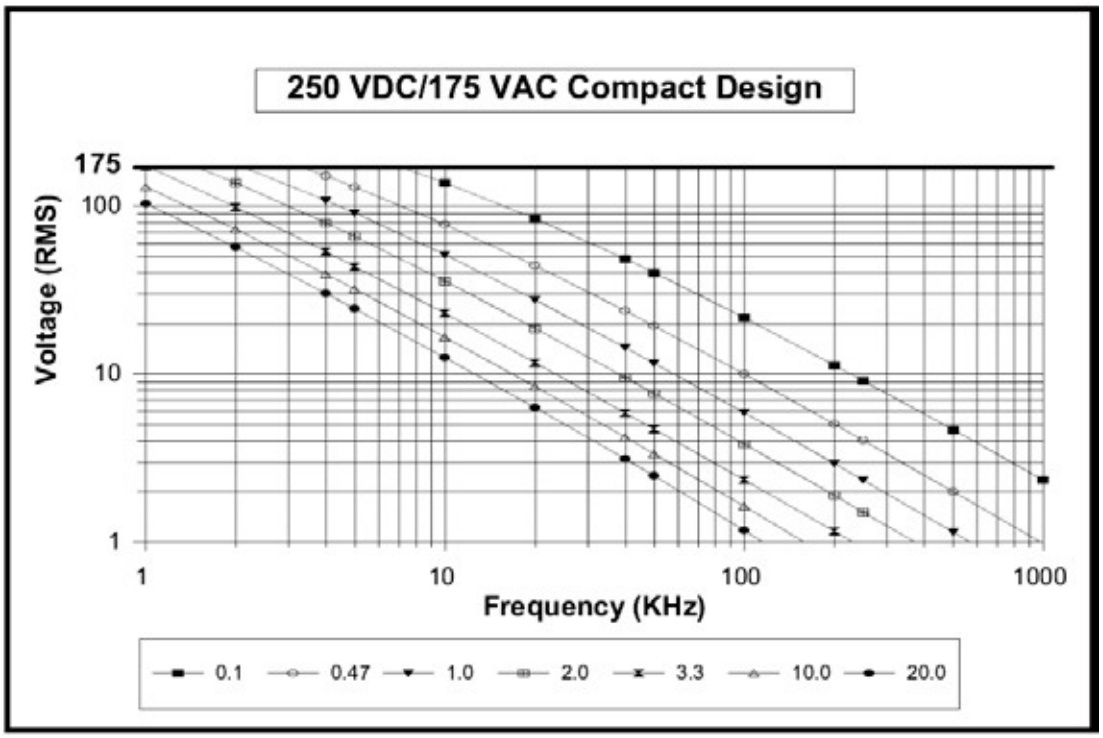
* For additional information regarding these performance curves and their interpretation please refer to our Thermal Managemant application note.

Dimensions are in inches, millimeters in parentheses

CDE reserves the right to amend design data

RMS Voltage vs. Frequency @ +85°C, in still air*

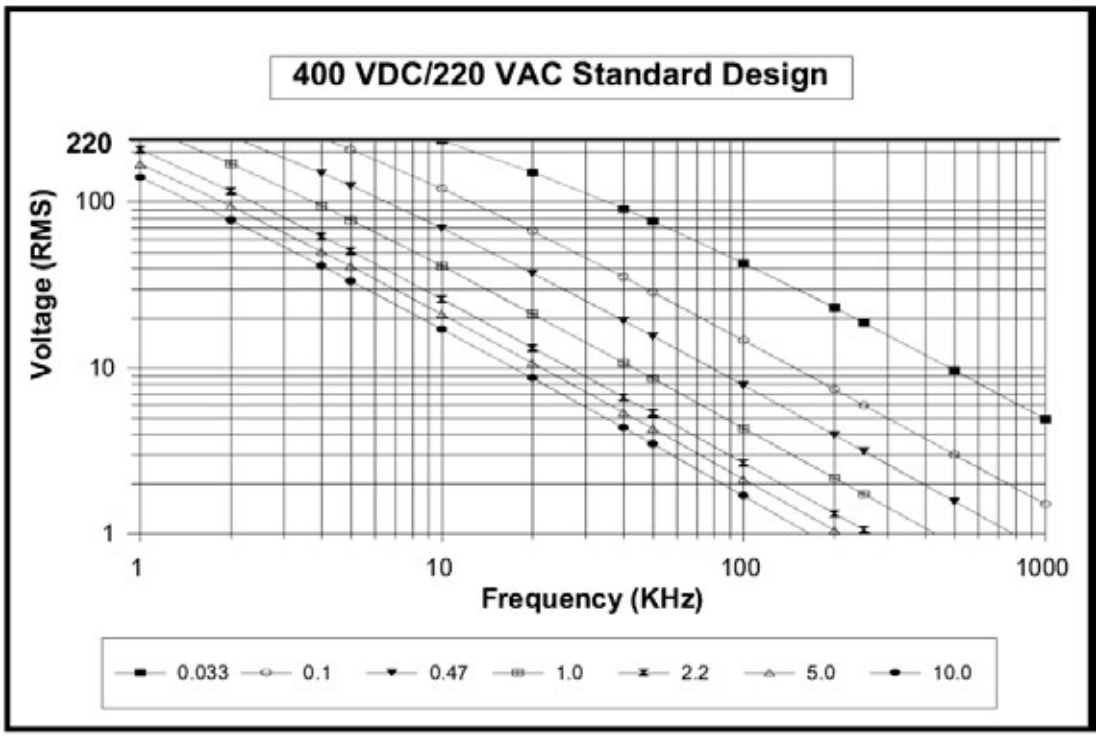


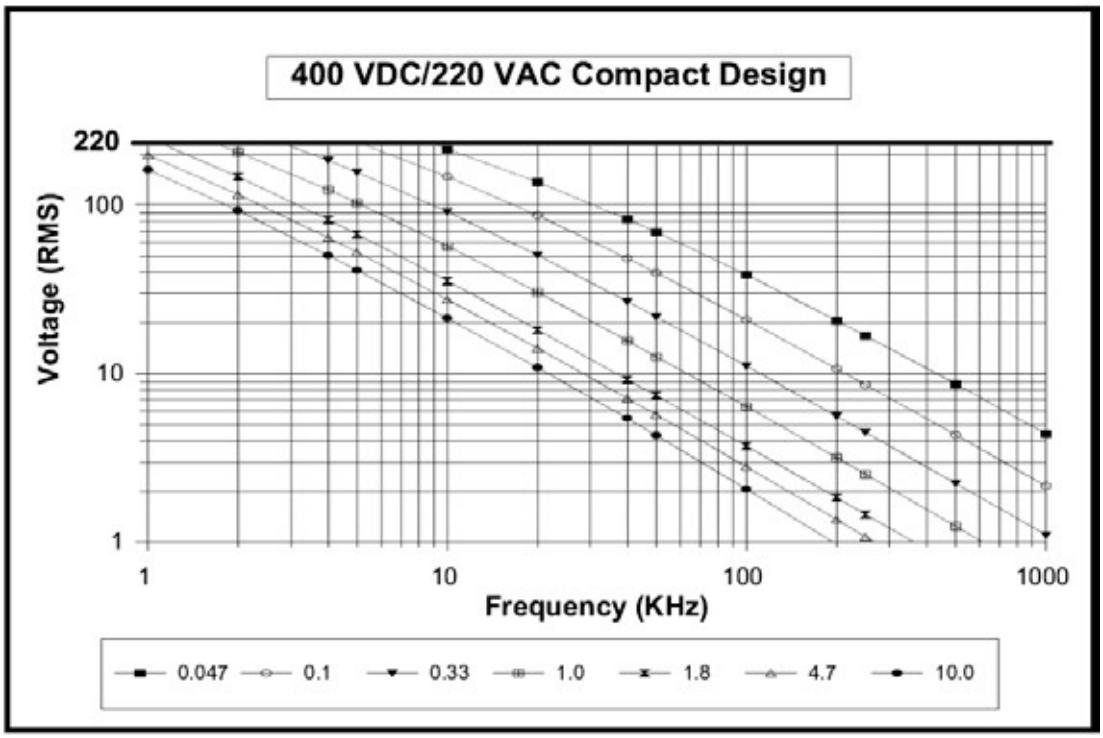


* For additional information regarding these performance curves and their interpretation please refer to our Thermal Managemant application note.

Dimensions are in inches, millimeters in parentheses
CDE reserves the right to amend design data

RMS Voltage vs. Frequency @ +85°C, in still air*

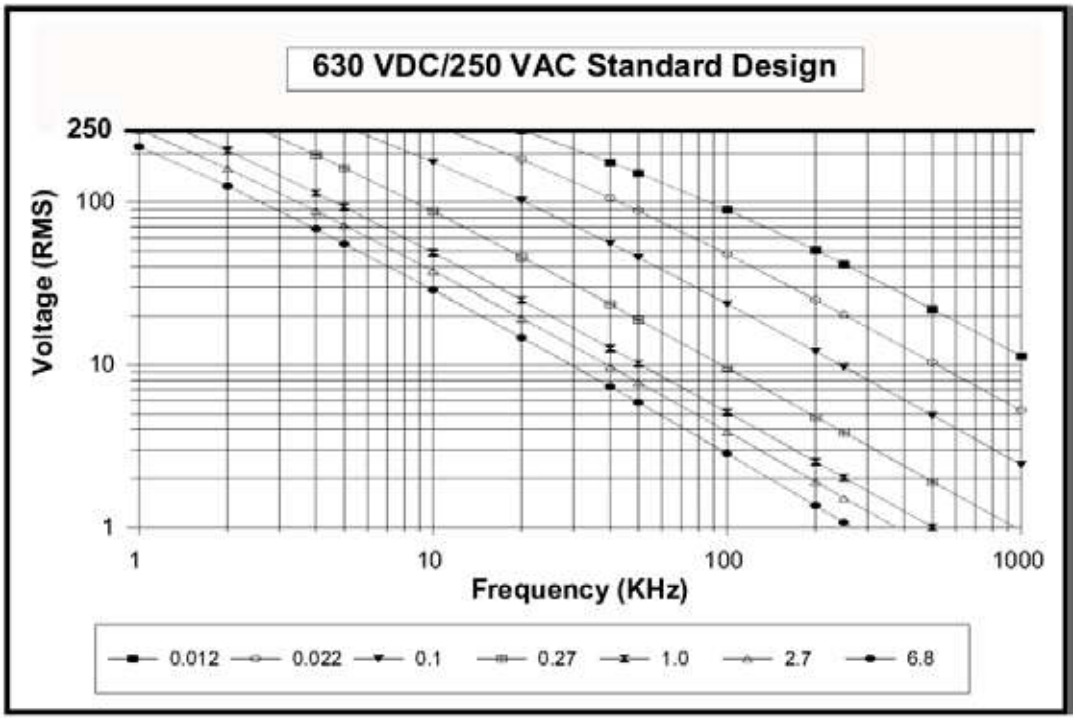


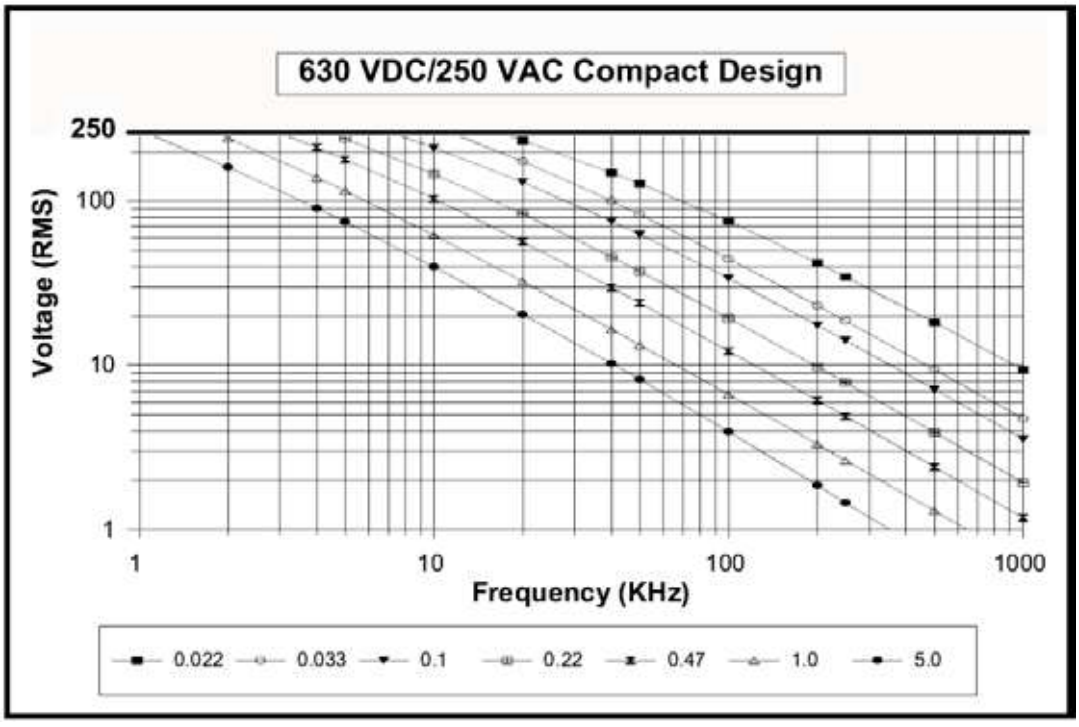


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Dimensions are in inches, millimeters in parentheses
CDE reserves the right to amend design data

RMS Voltage vs. Frequency @ +85°C, in still air*





* For additional information regarding these performance curves and their interpretation please refer to our Thermal Managemant application note.

Dimensions are in inches, millimeters in parentheses
CDE reserves the right to amend design data

Type 930C, Metallized Polypropylene Capacitors for DC Filtering

Low Dissipation, High Voltage/High Frequency Switching Power Supplies



Type 930C metallized polypropylene capacitors are designed for general purpose filtering applications. Their stability and low loss characteristics make them an excelllent choice for blocking, filtering, bypassing, coupling and decoupling applications. This Series is UL recognized for construction only under UL File Number E128034(N).

Highlights

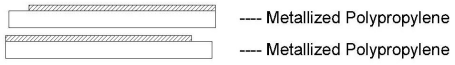
- Low dissipation factor
- Self healing
- UL recognized

Specifications

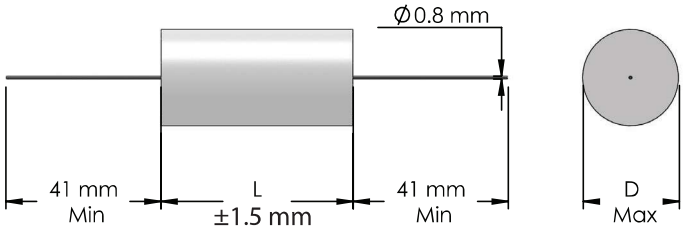
Capacitance Range	0.22 to 10.0 µF
Capacitance Tolerance	±10 % (K) Standard; ±5% (J) Optional
Rated Voltage	100 to 630 Vdc (70 to 250 Vac, 60 Hz)
Operating Temperature Range	–55 °C to 105 °C* *Full rated voltage at 85 °C - derated linearly to 50% rated at 105 °C
Maximum rms Current	Check tables for values
Insulation Resistance	200,000 MΩ x µF
Test Voltage between Terminals @ 25 °C	200% rated DC voltage for 60 s
Test Voltage between Terminals & Case @ 25 °C	3 kVac @ 50/60 Hz for 60 s
Life Test	1,000 h @ 85 °C, 150% rated DC voltage
Life Expectancy	60,000 h @ rated Vdc, 70 °C 30,000 h @ rated Vac, 70 °C
RoHS Compliant	

Dimensions

Construction Diagram



Construction Details	
Case Material	UL510 Polyester Tape Wrap
Resin Material	UL94V-0 Epoxy Fill
Terminal Material	Tin Plated Copper



CDE Cornell Dubilier • 1605 E. Rodney French Blvd. • New Bedford, MA 02744 • Phone: (508)996-8561 • Fax: (508)996-3830

Type 930C, Metallized Polypropylene Capacitors for DC Filtering

Low Dissipation, High Voltage/High Frequency Switching Power Supplies

Part Numbering System

930	C	1	P	22	K	–F
Series	Termination Code	Voltage Code	Capacitance Decimal Point	Capacitance Significant Figures (µF)	Tolerance Code	RoHS Compliant Indicator
930	C = Tinned Copper Wire	1 = 100 Vdc 2 = 250 Vdc 4 = 400 Vdc 6 = 630 Vdc	S = 0.0 P = 0. W = No decimal point		K = ±10% J = ±5%	

Ratings

NOTE: Other ratings, sizes and performance specifications are available. Contact us.

Cap. (µF)	Catalog Part Number	D mm	L mm	ESR 20-100 kHz (mΩ)	dV/dt (V/µs)	Max. Ripple Current (A) 20 kHz Case Temperature 25 °C	35 °C	45 °C	55 °C	65 °C	75 °C	85 °C
100 Vdc (70 Vac)												
.22	930C1P22K–F	7.0	19.0	---	25	2.3	2.3	2.3	2.3	2.3	1.8	1.0
.27	930C1P27K–F	7.6	19.0	---	25	2.6	2.6	2.6	2.6	2.4	1.9	1.1
.33	930C1P33K–F	8.2	19.0	---	25	2.8	2.8	2.8	2.8	2.6	2.2	1.2
.39	930C1P39K–F	8.8	19.0	---	25	3.1	3.1	3.1	3.1	2.9	2.3	1.3
.47	930C1P47K–F	9.5	19.0	37	25	3.7	3.4	3.1	2.8	2.5	2.0	1.4
.56	930C1P56K–F	8.2	25.4	35	14	3.9	3.6	3.3	2.9	2.6	2.1	1.5
.68	930C1P68K–F	8.8	25.4	33	14	4.1	3.8	3.5	3.1	2.8	2.2	1.6
.82	930C1P82K–F	9.6	25.4	31	14	4.3	4.0	3.6	3.2	2.9	2.3	1.7
1.00	930C1W1K–F	10.7	25.4	26	14	5.5	5.1	4.7	4.2	3.6	2.8	2.6
1.20	930C1W1P2K–F	11.5	25.4	24	14	5.7	5.3	4.9	4.4	3.8	3.0	2.8
1.50	930C1W1P5K–F	12.7	25.4	20	14	6.1	5.5	5.1	4.6	4.0	3.2	3.1
1.80	930C1W1P8K–F	13.7	25.4	19	14	6.3	5.7	5.3	4.8	4.1	3.4	3.0
2.00	930C1W2K–F	12.3	31.7	18	10	6.5	6.0	5.5	4.9	4.2	3.5	3.2
2.20	930C1W2P2K–F	12.9	31.7	18	10	6.8	6.3	5.7	2.1	4.4	3.6	3.3
2.70	930C1W2P7K–F	14.1	31.7	17	10	7.1	6.5	6.0	5.3	4.6	3.7	3.4
3.00	930C1W3K–F	14.8	31.7	16	10	7.3	6.7	6.2	5.5	4.8	3.9	3.5
3.30	930C1W3P3K–F	15.4	31.7	16	10	7.4	6.8	6.4	5.6	4.9	4.0	3.6
3.90	930C1W3P9K–F	16.6	31.7	15	10	7.6	6.9	6.6	5.8	5.1	4.1	3.7
4.00	930C1W4K–F	13.6	44.4	15	6	7.8	7.0	6.7	5.9	5.2	4.2	3.8
4.70	930C1W4P7K–F	14.7	44.4	15	6	8.1	7.4	6.8	6.0	5.3	4.3	3.9
5.00	930C1W5K–F	15.1	44.4	14	6	8.3	7.6	7.0	6.2	5.4	4.4	4.0
5.60	930C1W5P6K–F	15.8	44.4	14	6	8.4	7.7	7.1	6.4	5.5	4.5	4.1
6.00	930C1W6K–F	16.4	44.4	14	6	8.5	7.8	7.2	6.5	5.6	4.6	4.2
6.80	930C1W6P8K–F	17.3	44.4	13	6	8.5	8.0	7.4	6.7	5.7	4.7	4.3
8.00	930C1W8K–F	18.7	44.4	13	6	8.6	8.3	7.7	6.8	6.0	4.8	4.4
8.20	930C1W8P2K–F	18.9	44.4	13	6	8.8	8.6	8.0	7.0	6.1	4.9	4.5
10.00	930C1W10K–F	20.7	44.4	12	6	9.0	9.0	8.5	7.6	6.6	5.4	4.9
250 Vdc (175 Vac)												
.10	930C2P1K–F	8.0	19.0	---	37	1.5	1.5	1.5	1.5	1.5	1.5	.09
.12	930C2P12K–F	8.0	19.0	---	37	1.9	1.9	1.9	1.9	1.9	1.7	1.0
.15	930C2P15K–F	8.5	19.0	---	37	2.3	2.3	2.3	2.3	2.3	1.9	1.1
.18	930C2P18K–F	9.0	19.0	---	37	2.7	2.7	2.7	2.7	2.5	2.0	1.2

Type 930C, Metallized Polypropylene Capacitors for DC Filtering

Low Dissipation, High Voltage/High Frequency Switching Power Supplies

Cap. (µF)	Catalog Part Number	D mm	L mm	ESR 20-100 kHz (mΩ)	dV/dt (V/µs)	Max. Ripple Current (A) 20 kHz Case Temperature 25 °C	35 °C	45 °C	55 °C	65 °C	75 °C	85 °C
250 Vdc (175 Vac)												
.22	930C2P22K–F	8.5	25.4	---	21	1.9	1.9	1.9	1.9	1.9	1.9	1.3
.27	930C2P27K–F	8.5	25.4	---	21	2.4	2.4	2.4	2.4	2.4	2.2	1.4
.33	930C2P33K–F	9.2	25.4	---	21	2.9	2.9	2.9	2.9	2.9	2.3	1.5
.39	930C2P39K–F	9.9	25.4	---	21	3.4	3.4	3.4	3.2	2.9	2.3	1.6
.47	930C2P47K–F	10.7	25.4	35	21	3.8	3.7	3.6	3.4	2.9	2.4	1.7
.56	930C2P56K–F	11.8	25.4	33	21	3.9	3.8	3.7	3.5	3.1	2.5	1.8
.68	930C2P68K–F	12.0	31.7	32	15	4.0	3.9	3.8	3.7	3.2	2.6	1.9
.82	930C2P82K–F	12.0	31.7	31	15	4.2	4.1	4.0	3.9	3.4	2.8	2.0
1.00	930C2W1K–F	13.0	32.0	28	15	4.4	4.4	4.4	4.4	4.3	3.5	3.2
1.20	930C2W1P2K–F	14.1	32.0	27	15	4.7	4.6	4.5	5.0	4.5	3.7	3.3
1.50	930C2W1P5K–F	15.6	32.0	26	15	5.1	5.0	4.9	4.4	4.7	3.9	3.5
1.80	930C2W1P8K–F	16.9	31.7	25	15	5.9	5.8	5.7	5.7	5.0	4.1	3.7
2.00	930C2W2K–F	17.8	31.7	21	15	7.2	7.2	6.8	6.0	5.2	4.3	3.9
2.20	930C2W2P2K–F	16.5	44.4	20	9.0	8.4	7.5	7.0	6.3	5.4	4.5	4.1
2.70	930C2W2P7K–F	17.0	44.4	19	9.0	8.6	7.8	7.3	6.6	5.7	4.7	4.3
3.00	930C2W3K–F	17.8	44.4	18	9.0	9.0	8.3	7.6	6.8	5.9	4.8	4.4
3.30	930C2W3P3K–F	18.6	44.4	18	9.0	9.0	8.4	7.8	7.0	6.0	4.9	4.5
3.90	930C2W3P9K–F	20.2	44.4	17	9.0	9.0	8.5	8.0	7.2	6.2	5	4.6
4.00	930C2W4K–F	20.4	44.4	16	9.0	9.0	8.5	8.2	7.4	6.3	5.1	4.7
4.70	930C2W4P7K–F	22.0	44.4	16	9.0	9.0	8.8	8.5	7.7	6.6	5.3	4.9
5.00	930C2W5K–F	22.6	44.4	15	9.0	9.0	9.0	8.8	7.9	6.8	5.6	5.1
5.60	930C2W5P6K–F	23.9	44.4	15	9.0	9.0	9.0	8.9	8.0	7.0	5.8	5.3
6.00	930C2W6K–F	24.7	44.4	15	9.0	9.0	9.0	9.0	8.2	7.2	5.9	5.5
6.80	930C2W6P8K–F	22.4	57.1	15	9.0	9.0	9.0	9.0	8.4	7.4	6.0	5.6
8.00	930C2W8K–F	24.2	57.1	14	9.0	9.0	9.0	9.0	8.7	7.8	6.3	5.8
8.20	930C2W8P2K–F	24.5	57.1	14	9.0	9.0	9.0	9.0	8.8	7.9	6.4	5.9
10.00	930C2W10K–F	26.9	57.1	13	9.0	9.0	9.0	9.0	9.0	8.3	6.8	6.2
400 Vdc (250 Vac)												
.047	930C4S47K–F	8.0	19.0	---	49	1.0	1.0	1.0	1.0	1.0	1.0	0.9
.056	930C4S56K–F	8.0	19.0	---	49	1.1	1.1	1.1	1.1	1.1	1.1	0.9
.068	930C4S68K–F	8.0	19.0	---	49	1.4	1.4	1.4	1.4	1.4	1.4	1.0
.082	930C4S82K–F	8.1	19.0	---	49	1.7	1.7	1.7	1.7	1.7	1.6	1.1
.10	930C4P1K–F	8.8	19.0	---	49	2.0	2.0	2.0	2.0	2.0	1.9	1.3
.12	930C4P12K–F	7.6	25.4	---	28	1.4	1.4	1.4	1.4	1.4	1.4	1.4
.15	930C4P15K–F	8.5	25.4	---	28	1.7	1.7	1.7	1.7	1.7	1.7	1.6
.18	930C4P18K–F	9.0	25.4	---	28	2.1	2.1	2.1	2.1	2.1	2.1	1.7
.22	930C4P22K–F	9.8	25.4	---	28	2.6	2.6	2.6	2.6	2.6	2.5	1.8
.27	930C4P27K–F	10.7	25.4	---	28	3.1	3.1	3.1	3.1	3.1	2.7	1.9
.33	930C4P33K–F	11.9	25.4	---	28	3.8	3.8	3.8	3.8	3.5	2.9	2.0
.39	930C4P39K–F	12.8	25.4	---	28	4.1	4.1	4.1	4.1	3.7	3.1	2.1
.47	930C4P47K–F	12.0	32.0	32	20	5.7	5.5	5.0	4.4	3.8	3.2	2.2
.56	930C4P56K–F	12.8	32.0	31	20	5.7	5.7	5.3	4.4	4.1	3.3	2.3

Type 930C, Metallized Polypropylene Capacitors for DC Filtering

Low Dissipation, High Voltage/High Frequency Switching Power Supplies

Cap. (µF)	Catalog Part Number	D mm	L mm	ESR 20-100 kHz (mΩ)	dV/dt (V/µs)	Max. Ripple Current (A) 20 kHz Case Temperature 25 °C	35 °C	45 °C	55 °C	65 °C	75 °C	85 °C
400 Vdc (250 Vac)												
.68	930C4P68K–F	14.0	32.0	30	20	5.7	5.7	5.5	4.8	4.3	3.5	2.4
.82	930C4P82K–F	15.2	32.0	28	20	5.7	5.7	5.6	5.3	4.5	3.7	2.6
1.00	930C4W1K–F	16.6	32.0	27	20	5.7	5.7	5.7	5.7	5.7	4.7	4.3
1.20	930C4W1P2K–F	18.1	32.0	26	20	6.3	6.2	6.0	5.9	5.8	4.9	4.5
1.50	930C4W1P5K–F	18.0	44.4	25	13	7.0	6.9	6.7	6.6	6.5	5.2	4.7
1.80	930C4W1P8K–F	18.2	44.4	23	13	8.0	7.9	7.8	7.7	6.8	5.5	5.0
2.00	930C4W2K–F	19.1	44.4	21	13	9.0	9.0	9.0	8.0	7.0	5.7	5.2
2.20	930C4W2P2K–F	21.0	44.4	20	13	9.0	9.0	9.0	8.3	7.4	5.9	5.4
2.70	930C4W2P7K–F	22.0	44.4	19	13	9.0	9.0	9.0	8.6	7.6	6.0	5.6
3.00	930C4W3K–F	23.1	44.4	17	13	9.0	9.0	9.0	9.0	7.9	6.4	5.9
3.30	930C4W3P3K–F	24.1	44.4	16	13	9.0	9.0	9.0	9.0	8.1	6.6	6.3
3.90	930C4W3P9K–F	26.2	44.4	15	13	9.0	9.0	9.0	9.0	8.3	6.8	6.5
630 Vdc (250 Vac)												
.022	930C6S22K–F	8.0	19.0	---	74	0.8	0.8	0.8	0.8	0.8	0.8	0.8
.027	930C6S27K–F	8.0	19.0	---	74	1.0	1.0	1.0	1.0	1.0	1.0	0.9
.033	930C6S33K–F	8.5	19.0	---	74	1.2	1.2	1.2	1.2	1.2	1.2	1.0
.039	930C6S39K–F	9.1	19.0	---	74	1.4	1.4	1.4	1.4	1.4	1.4	1.0
.047	930C6S47K–F	9.9	19.0	---	74	1.7	1.7	1.7	1.7	1.7	1.6	1.1
.056	930C6S56K–F	10.6	19.0	---	74	2.1	2.1	2.1	2.1	2.1	1.7	1.2
.068	930C6S68K–F	9.0	25.4	---	43	1.3	1.3	1.3	1.3	1.3	1.3	1.3
.082	930C6S82K–F	9.5	25.4	---	43	1.6	1.6	1.6	1.6	1.6	1.6	1.4
.10	930C6P1K–F	11.0	25.4	---	43	1.9	1.9	1.9	1.9	1.9	1.9	1.6
.12	930C6P12K–F	11.2	25.4	---	43	2.3	2.3	2.3	2.3	2.3	2.3	1.8
.15	930C6P15K–F	13.0	32.0	---	30	2.9	2.9	2.9	2.9	2.9	2.6	1.9
.18	930C6P18K–F	13.7	32.0	---	30	3.5	3.5	3.5	3.5	3.5	2.7	1.9
.22	930C6P22K–F	12.6	32.0	---	30	2.8	2.8	2.8	2.8	2.8	2.8	2.3
.27	930C6P27K–F	13.8	32.0	---	30	3.5	3.5	3.5	3.5	3.5	3.3	2.3
.33	930C6P33K–F	15.1	32.0	---	30	4.3	4.3	4.3	4.3	4.3	3.5	2.4
.39	930C6P39K–F	16.2	32.0	---	30	5.0	5.0	5.0	5.0	4.6	3.7	2.5
.47	930C6P47K–F	17.7	37.0	28	20	6.8	6.3	5.8	5.2	4.5	3.6	2.6
.56	930C6P56K–F	15.4	44.4	26	19	7.4	6.9	6.3	5.6	4.8	4.0	2.8
.68	930C6P68K–F	18.0	44.4	25	19	7.8	7.2	6.6	5.9	5.1	4.2	2.9
.82	930C6P82K–F	18.4	44.4	22	19	8.1	7.5	6.9	6.2	5.3	4.3	3.1
1.00	930C6W1K–F	20.2	47.0	18	19	8.6	7.9	7.3	6.5	5.6	4.6	3.6

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Type 936C Axial Leaded Metallized Polypropylene Capacitor

High Current Flat Axial Leaded Capacitors



Type 936C flat axial leaded meltallized polypropylene capacitors are designed for 20 to 100 kHz switching power supply input filtering, DC blocking and output filter applications where high current, high capacitance and low ESR values are important. Dry sections are sealed with flame retandant outer wrap and epoxy end seals for moisture resistance.

Highlights

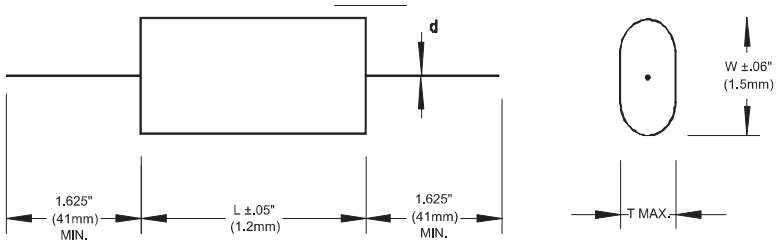
- Low ESR
- High current
- Flame retardant outer wrap and end seals

RoHS Compliant

Specifications

Capacitance Range:	0.47 to 10.0 µF
Voltage Range:	400 to 600 Vdc (250 to 330 Vac)
Capacitance Tolerance:	±10% Standard, ±5% Optional
Operating Temperature Range:	–55 ºC to 105 ºC with full rated voltage at 85 ºC, derate lineraly to 50% of rated voltage at 105 ºC
Dielectric Strength:	200% of rated voltage for 1 minute
Dissipation Factor:	0.10% Max (25 ºC, 1 kHz)
Insulation Resistance:	200,000 MΩ x µF
Life Test:	2,000 hours at 85 ºC at 125% rated voltage

Outline Drawing



Ratings

Cap. (µF)	Catalog Part Number	T Maximum Inches (mm)	W ±.06" (1.5) Inches (mm)	L ±.05" (1.2) Inches (mm)	d Inches (mm)	ESR (milliohms) 100 KHz	IRMS A @ 70°C 100 KHz
400 Vdc (250 Vac)							
.47	936C4P47K-F	0.280 (7.1)	0.470 (11.9)	1.250 (31.75)	0.032 (0.8)	21	4
.68	936C4P68K-F	0.300 (7.6)	0.530 (13.5)	1.250 (31.75)	0.032 (0.8)	13	6
1.0	936C4W1K-F	0.390 (9.9)	0.590 (15.0)	1.250 (31.75)	0.032 (0.8)	11	9
1.5	936C4W1P5K-F	0.480 (12.2)	0.690 (17.5)	1.250 (31.75)	0.032 (0.8)	9	10
2.0	936C4W2K-F	0.480 (12.2)	0.690 (17.5)	1.250 (31.75)	0.032 (0.8)	9	10
2.2	936C4W2P2K-F	0.560 (14.2)	0.830 (21.1)	1.250 (31.75)	0.032 (0.8)	8	11
3.3	936C4W3P3K-F	0.690 (17.5)	0.930 (23.6)	1.250 (31.75)	0.032 (0.8)	7	15
4.7	936C4W4P7K-F	0.640 (16.3)	0.880 (22.4)	1.750 (44.45)	0.040 (1.0)	7	17
6.8	936C4W6P8K-F	0.670 (17.0)	0.900 (22.9)	2.250 (57.15)	0.040 (1.0)	7	17
10.0	936C4W10K-F	0.700 (17.8)	1.050 (26.7)	2.250 (57.15)	0.040 (1.0)	7	17
600 Vdc (330 Vac)							
0.47	936C6P47K-F	0.460 (11.7)	0.690 (17.5)	1.250 (31.75)	0.032 (0.8)	13	4
0.68	936C6P68K-F	0.550 (14.0)	0.790 (20.1)	1.250 (31.75)	0.032 (0.8)	10	6
1.0	936C6W1K-F	0.670 (17.0)	0.910 (23.1)	1.250 (31.75)	0.032 (0.8)	8	9
1.5	936C6W1P5K-F	0.730 (18.5)	0.970 (24.6)	1.500 (38.10)	0.032 (0.8)	7	11
2.2	936C6W2P2K-F	0.640 (16.3)	0.880 (22.4)	2.250 (57.15)	0.040 (1.0)	10	13

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Type 935C, Polypropylene Capacitors for High Frequency Filtering

High Current Capacitors for Switching Power Supplies



Type 935 metallized polypropylene capacitors are designed for filtering applications in switching power supplies that operate in the 20-100 kHz range. Their low ESR, high current and high capacitance gives them an advantage over general purpose types. This series is UL recognized for construction only under UL File Number E128034(N).

Highlights

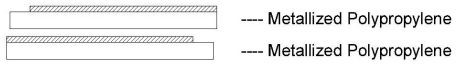
- Low ESR
- High current
- High capacitance
- Self healing
- UL recognized
- Available with lugs

Specifications

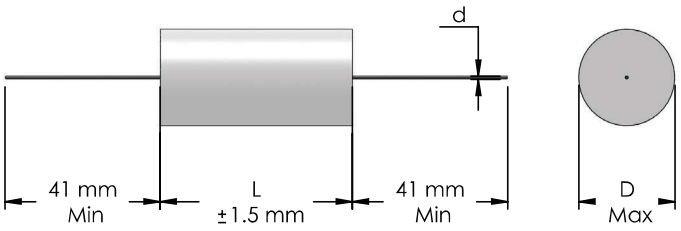
Capacitance Range	1.0 to 30.0 µF
Capacitance Tolerance	±10 % (K) Standard; ±5% (J) Optional
Rated Voltage	100 to 400 Vdc (70 to 250 Vac, 60 Hz)
Operating Temperature Range	–55 °C to 105 °C* *Full rated voltage at 85 °C - derated linearly to 50% rated at 105 °C
Maximum rms Current	Check tables for values
Insulation Resistance	200,000 MΩ x µF
Test Voltage between Terminals @ 25 °C	200% rated DC voltage for 60 s
Test Voltage between Terminals & Case @ 25 °C	3 kVac @ 50/60 Hz for 60 s
Life Test	1,000 h @ 85 °C, 150% rated DC voltage
Life Expectancy	60,000 h @ rated Vdc, 70 °C 30,000 h @ rated Vac, 70 °C
RoHS Compliant	

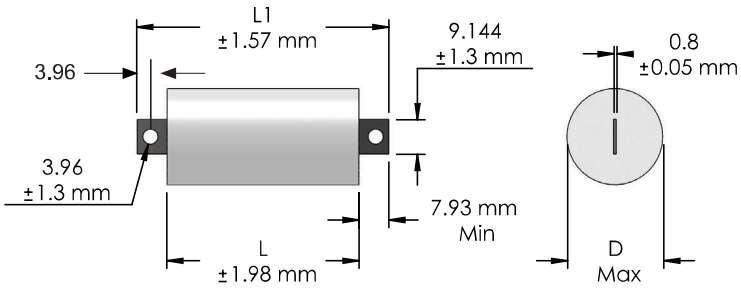
Dimensions

Construction Diagram



Construction Details	
Case Material	UL510 Polyester Tape Wrap
Resin Material	UL94V-0 Epoxy Fill
Terminal Material	Tin Plated Copper





Type 935C, Metallized Polypropylene Capacitors for High Frequency Filtering

High Current Capacitors for Switching Power Supplies

Part Numbering System

935	C	1	P	22	K	–F
Series	Termination Code	Voltage Code	Capacitance Decimal Point	Capacitance Significant Figures (µF)	Tolerance Code	RoHS Compliant Indicator
935	C = Tinned Copper Wire H = Copper Lugs	1 = 100 Vdc 2 = 200 Vdc 4 = 400 Vdc	W = No decimal point		K = ±10% J = ± 5%	

Ratings

Wire Leads

NOTE: Other ratings, sizes and performance specifications are available. Contact us.

Cap. (µF)	Catalog Part Number	D mm	L mm	d mm	Max. ESR 20-100 kHz (mΩ)	dV/dt (V/µs)	Max. Ripple Current Amps RMS 20-100 kHz Case Temperature 25 °C	35 °C	45 °C	55 °C	65 °C	75 °C	85 °C
100 Vdc (70 Vac)													
1	935C1W1K-F	11.9 ± 1.6	19.0	0.8	15	25	9.2	8.5	7.8	7.0	6.0	4.9	4.5
2	935C1W2K-F	13.6 ± 1.6	23.8	0.8	12	16	10.8	10.0	9.1	8.2	7.0	5.8	5.3
3	935C1W3K-F	15.8 ± 2.4	23.8	1.0	11	16	12.1	11.2	10.3	9.2	8.0	6.5	5.9
5	935C1W5K-F	16.3 ± 2.4	31.7	1.0	10	10	13.8	12.7	11.6	10.4	9.0	7.4	6.7
10	935C1W10K-F	20.4 ± 2.4	38.1	1.0	9	8	15.0	15.0	14.2	12.7	11.0	9.0	8.2
20	935C1W20K-F	22.2 ± 3.2	57.1	1.0	8	5	15.0	15.0	15.0	15.0	13.6	11.1	10.0
30	935C1W30K-F	27.3 ± 3.2	57.1	1.0	6	5	15.0	15.0	15.0	15.0	15.0	12.4	11.4
200 Vdc (140 Vac)													
1	935C2W1K-F	11.4 ± 1.6	31.7	0.8	20	15	7.3	7.3	7.3	7.3	7.2	5.9	5.4
2	935C2W2K-F	15.4 ± 2.4	31.7	0.8	15	15	12.0	12.0	11.3	10.1	8.7	7.1	6.5
3	935C2W3K-F	16.6 ± 2.4	38.1	1.0	13	12	15.0	13.8	12.6	11.3	9.8	8.0	7.3
5	935C2W5K-F	19.5 ± 2.4	44.4	1.0	11	9	15.0	15.0	14.7	13.1	11.4	9.3	8.5
10	935C2W10K-F	23.0 ± 3.2	57.1	1.0	9	7	15.0	15.0	15.0	15.0	13.8	11.3	10.3
20	935C2W20K-F	33.4 ± 3.2	57.1	1.0	6	7	15.0	15.0	15.0	15.0	15.0	14.1	12.8
400 Vdc (250 Vac)													
1	935C4W1K-F	15.7 ± 2.4	38.1	0.8	19	19	9.5	9.5	9.5	9.5	9.5	7.8	7.1
2	935C4W2K-F	20.4 ± 2.4	44.4	1.0	15	16	15.0	15.0	15.0	13.4	11.6	9.5	8.7
3	935C4W3K-F	24.4 ± 3.2	44.4	1.0	12	16	15.0	15.0	15.0	15.0	13.1	10.7	9.8
5	935C4W5K-F	27.1 ± 3.2	57.1	1.0	10	11	15.0	15.0	15.0	15.0	15.0	12.5	11.4
10	935C4W10K-F	39.2 ± 3.2	57.1	1.0	6	11	15.0	15.0	15.0	15.0	15.0	15.0	14.1

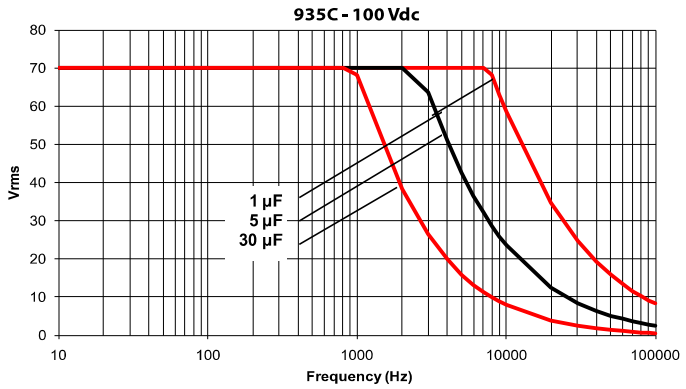
Lug Leads

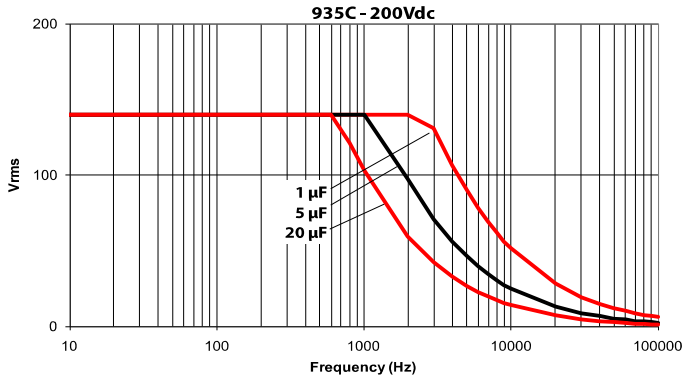
NOTE: Other ratings, sizes and performance specifications are available. Contact us.

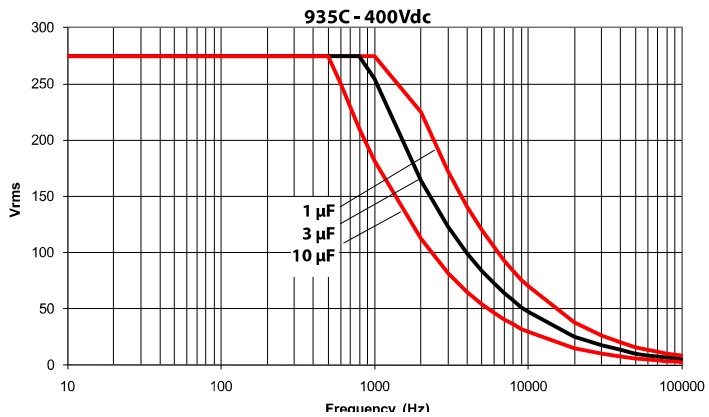
Cap. (µF)	Catalog Part Number	D mm	L mm	L1 mm	Max. ESR 20-100 kHz (mΩ)	dV/dt (V/µs)	Max. Ripple Current Amps RMS 20-100 kHz Case Temperature 25 °C	35 °C	45 °C	55 °C	65 °C	75 °C	85 °C
100 Vdc (70 Vac)													
1	935H1W1K-F	11.9 ± 1.6	19.0	41.6	15	25	10.3	9.5	8.7	7.8	6.7	5.5	5.0
2	935H1W2K-F	13.6 ± 1.6	23.8	46.4	12	16	12.0	11.0	10.0	8.9	7.8	6.3	5.8
3	935H1W3K-F	15.8 ± 2.4	23.8	46.4	11	16	13.3	12.3	11.2	10.0	8.7	7.1	6.5
5	935H1W5K-F	16.3 ± 2.4	31.7	53.3	10	10	14.8	13.7	12.5	11.2	9.7	7.9	7.2
10	935H1W10K-F	20.4 ± 2.4	38.1	57.2	9	8	17.8	16.5	15.0	13.5	11.7	9.5	8.7
20	935H1W20K-F	22.2 ± 3.2	57.1	77.6	8	5	21.6	20.0	18.3	16.4	14.2	11.6	10.6
30	935H1W30K-F	27.3 ± 3.2	57.1	77.6	6	5	24.3	22.5	20.5	18.4	15.9	13.0	11.9
200 Vdc (140 Vac)													
1	935H2W1K-F	11.4 ± 1.6	31.7	53.3	20	15	7.3	7.3	7.3	7.3	7.3	6.4	5.8
2	935H2W2K-F	15.4 ± 2.4	31.7	53.3	15	15	14.3	13.3	12.1	10.8	9.4	7.7	7.0
3	935H2W3K-F	16.6 ± 2.4	38.1	57.2	13	12	15.9	14.7	13.5	12.0	10.4	8.5	7.8
5	935H2W5K-F	19.5 ± 2.4	44.4	65.3	11	9	18.3	17.0	15.5	13.9	12.0	9.8	8.9
10	935H2W10K-F	23.0 ± 3.2	57.1	77.6	9	7	22.4	20.7	18.9	16.9	14.6	12.0	10.9
20	935H2W20K-F	33.4 ± 3.2	57.1	77.6	6	7	27.4	25.4	23.2	20.7	17.9	14.7	13.4
400 Vdc (250 Vac)													
1	935H4W1K-F	15.7 ± 2.4	38.1	57.2	19	19	9.5	9.5	9.5	9.5	9.5	8.3	7.5
2	935H4W2K-F	20.4 ± 2.4	44.4	65.3	15	16	15.0	15.0	15.0	14.2	12.3	10.0	9.1
3	935H4W3K-F	24.4 ± 3.2	44.4	65.3	12	16	21.1	19.5	17.8	15.9	13.8	11.3	10.3
5	935H4W5K-F	27.1 ± 3.2	57.1	77.6	10	11	24.4	22.6	20.6	18.5	16.0	13.1	11.9
10	935H4W10K-F	39.2 ± 3.2	57.1	77.6	6	11	30.0	27.8	25.4	22.7	19.7	16.1	14.7

RMS Voltage vs Frequency @ 25 °C

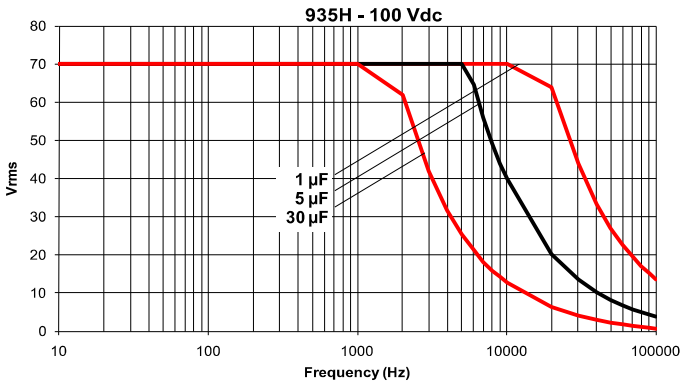
Wire Leads

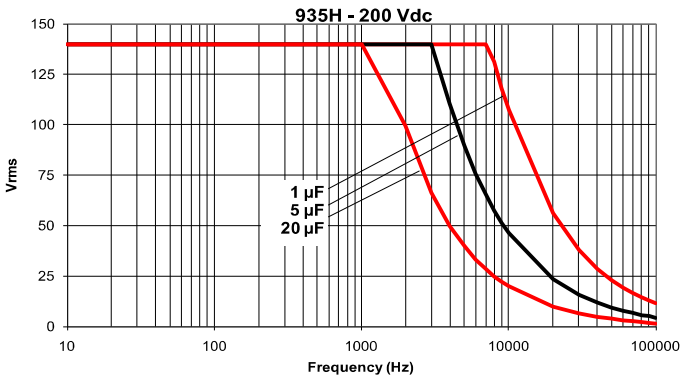


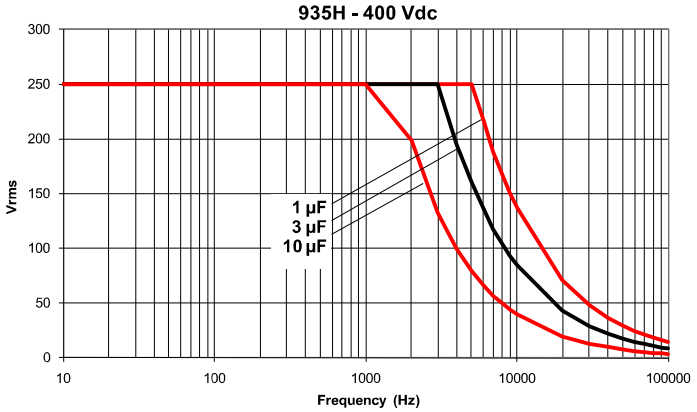




Lug Leads







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Type 936C Axial Leaded Metallized Polypropylene Capacitor

High Current Flat Axial Leaded Capacitors



Type 936C flat axial leaded meltallized polypropylene capacitors are designed for 20 to 100 kHz switching power supply input filtering, DC blocking and output filter applications where high current, high capacitance and low ESR values are important. Dry sections are sealed with flame retandant outer wrap and epoxy end seals for moisture resistance.

Highlights

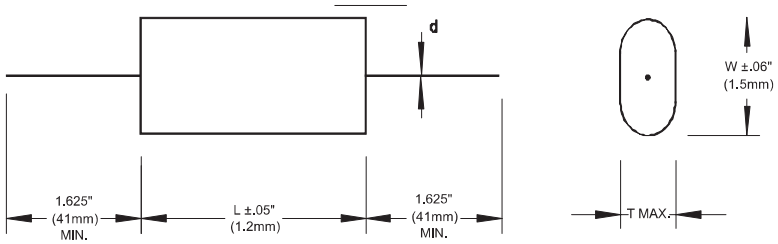
- Low ESR
- High current
- Flame retardant outer wrap and end seals

RoHS Compliant

Specifications

Capacitance Range:	0.47 to 10.0 µF
Voltage Range:	400 to 600 Vdc (250 to 330 Vac)
Capacitance Tolerance:	±10% Standard, ±5% Optional
Operating Temperature Range:	–55 ºC to 105 ºC with full rated voltage at 85 ºC, derate lineraly to 50% of rated voltage at 105 ºC
Dielectric Strength:	200% of rated voltage for 1 minute
Dissipation Factor:	0.10% Max (25 ºC, 1 kHz)
Insulation Resistance:	200,000 MΩ x µF
Life Test:	2,000 hours at 85 ºC at 125% rated voltage

Outline Drawing



Ratings

Cap. (µF)	Catalog Part Number	T Maximum Inches (mm)	W ±.06" (1.5) Inches (mm)	L ±.05" (1.2) Inches (mm)	d Inches (mm)	ESR (milliohms) 100 KHz	IRMS A @ 70°C 100 KHz
400 Vdc (250 Vac)							
.47	936C4P47K-F	0.280 (7.1)	0.470 (11.9)	1.250 (31.75)	0.032 (0.8)	21	4
.68	936C4P68K-F	0.300 (7.6)	0.530 (13.5)	1.250 (31.75)	0.032 (0.8)	13	6
1.0	936C4W1K-F	0.390 (9.9)	0.590 (15.0)	1.250 (31.75)	0.032 (0.8)	11	9
1.5	936C4W1P5K-F	0.480 (12.2)	0.690 (17.5)	1.250 (31.75)	0.032 (0.8)	9	10
2.0	936C4W2K-F	0.480 (12.2)	0.690 (17.5)	1.250 (31.75)	0.032 (0.8)	9	10
2.2	936C4W2P2K-F	0.560 (14.2)	0.830 (21.1)	1.250 (31.75)	0.032 (0.8)	8	11
3.3	936C4W3P3K-F	0.690 (17.5)	0.930 (23.6)	1.250 (31.75)	0.032 (0.8)	7	15
4.7	936C4W4P7K-F	0.640 (16.3)	0.880 (22.4)	1.750 (44.45)	0.040 (1.0)	7	17
6.8	936C4W6P8K-F	0.670 (17.0)	0.900 (22.9)	2.250 (57.15)	0.040 (1.0)	7	17
10.0	936C4W10K-F	0.700 (17.8)	1.050 (26.7)	2.250 (57.15)	0.040 (1.0)	7	17
600 Vdc (330 Vac)							
0.47	936C6P47K-F	0.460 (11.7)	0.690 (17.5)	1.250 (31.75)	0.032 (0.8)	13	4
0.68	936C6P68K-F	0.550 (14.0)	0.790 (20.1)	1.250 (31.75)	0.032 (0.8)	10	6
1.0	936C6W1K-F	0.670 (17.0)	0.910 (23.1)	1.250 (31.75)	0.032 (0.8)	8	9
1.5	936C6W1P5K-F	0.730 (18.5)	0.970 (24.6)	1.500 (38.10)	0.032 (0.8)	7	11
2.2	936C6W2P2K-F	0.640 (16.3)	0.880 (22.4)	2.250 (57.15)	0.040 (1.0)	10	13

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Type 946 High dV/dt, Round Polypropylene Film Capacitors

Double Metallized - Axial Leads



Type 946 is a round, axial leaded metallized polypropylene capacitor with double metallized electrodes for both self healing properties and high peak current carrying capability (dV/dt). The series features low ESR characteristics, excellent high frequency and high voltage capabilities.

Highlights

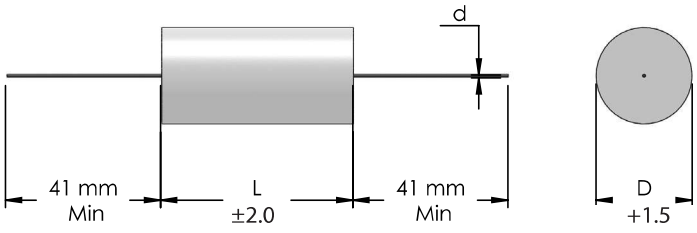
- Low ESR
- High dV/dt
- High Frequency
- High Voltage

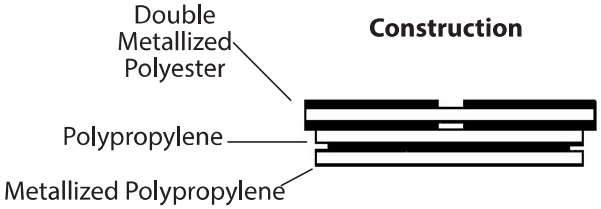
Specifications

Capacitance Range	0.01 to 2.5 µF
Capacitance Tolerance	±5% Standard Tolerance
Rated Voltage	850 to 3000 Vdc (450 to 500 Vac, 60 Hz)
Operating Temperature Range with Ripple	–55 °C to 105 °C* *Full rated voltage at 85 °C - derated linearly to 50% rated at 105 °C
Maximum rms Current	Check tables for values
Insulation Resistance	> 100,000 MΩ x µF
Test Voltage between Terminals @ 25 °C	160% rated DC voltage for 60 s
Test Voltage between Terminals & Case @ 25 °C	3 kVac @ 50/60 Hz for 60 s
Life Test	2,000 h @ 85 °C, 125 % rated DC voltage
Life Expectancy	60,000 h @ rated Vdc, 70 °C 30,000 h @ rated Vac, 70 °C
Regulatory Information	

Dimensions

Construction Details	
Case Material	UL510 Polyester Tape Wrap
Resin Material	UL94V-0 Epoxy Fill
Terminal Material	Tin Plated Copper





Type 946 High dV/dt, Round Polypropylene Film Capacitors

Double Metallized - Axial Leads

Part Numbering System

946	C	6		P	22	K	–F
Series	Termination Code	Voltage Code		Capacitance Decimal Point	Capacitance Significant Figures (µF)	Tolerance Code	RoHS Compliant Indicator
946	C =Tinned Copper Wire	6 = 600 Vdc	16 = 1600 Vdc	S = 0.0		K = ±10%	
	F = Insulated Stranded Wire	8 = 850 Vdc	20 = 2000 Vdc	P = 0.		J = ±5%	
	H = Tinned Lugs	10 = 1000 Vdc	30 = 3000 Vdc	W = No decimal			
		12 = 1200 Vdc		point			

Ratings

Cap. (µF)	Catalog Part Number	D +1.5 mm	L ±2.0 mm	d mm	Typical ESR @100 KHz mΩ	dV/dt (V/µs)	I peak (A)	I_{RMS} 70 °C 100 kHz (A)
850 Vdc (450 Vac)								
0.15	946C8P15J–F	10.0	31.0	1.0	8.5	300	45	5
0.22	946C8P22J–F	12.0	31.0	1.0	6.6	300	66	7
0.33	946C8P33J–F	14.5	31.0	1.0	4.6	300	100	9
0.47	946C8P47J–F	17.0	31.0	1.0	3.5	300	140	9
0.68	946C8P68J–F	20.5	31.0	1.0	2.7	300	200	9
1.00	946C8W1J–F	20.5	42.0	1.0	3.1	200	200	9
1.50	946C8W1P5J–F	24.5	42.0	1.2	2.3	200	300	11
2.00	946C8W2J–F	28.5	42.0	1.2	2.0	200	400	11
2.20	946C8W2P2J–F	30.0	42.0	1.2	1.9	200	440	11
2.50	946C8W2P5J–F	31.5	42.0	1.2	1.9	200	500	11
1200 Vdc (500 Vac)								
0.10	946C12P1J–F	14.0	31.0	1.0	8.7	1100	110	7
0.15	946C12P15J–F	17.0	31.0	1.0	6.1	1100	165	9
0.22	946C12P22J–F	20.5	31.0	1.0	4.5	1100	240	9
0.33	946C12P33J–F	19.5	42.0	1.0	4.7	650	215	9
0.47	946C12P47J–F	23.0	42.0	1.2	3.6	650	305	9
0.68	946C12P68J–F	27.5	42.0	1.2	2.7	650	440	11
1.00	946C12W1J–F	33.5	42.0	1.2	2.3	650	650	11
1.20	946C12W1P2J–F	29.0	55.0	1.2	2.8	400	480	11
2000 Vdc (500 Vac)								
0.022	946C20S22J–F	10.5	31.0	1.0	32	1750	39	3
0.033	946C20S33J–F	12.5	31.0	1.0	21	1750	58	4
0.047	946C20S47J–F	14.5	31.0	1.0	15	1750	80	5
0.068	946C20S68J–F	17.0	31.0	1.0	11	1750	120	7
0.100	946C20P1J–F	20.5	31.0	1.0	7.6	1750	175	9
0.150	946C20P15J–F	19.5	42.0	1.0	7.4	1000	150	9
0.220	946C20P22J–F	23.5	42.0	1.2	5.4	1000	220	9
0.330	946C20P33J–F	28.5	42.0	1.2	3.9	1000	330	11
0.470	946C20P47J–F	33.5	42.0	1.2	3.1	1000	470	11
0.560	946C20P56J–F	29.0	55.0	1.2	3.9	650	365	11

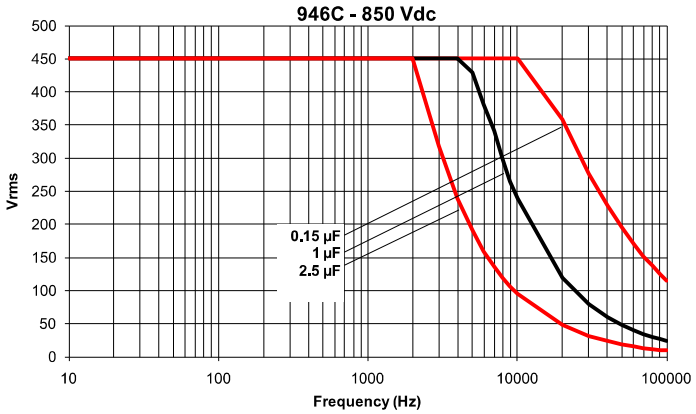
Type 946 High dV/dt, Round Polypropylene Film Capacitors

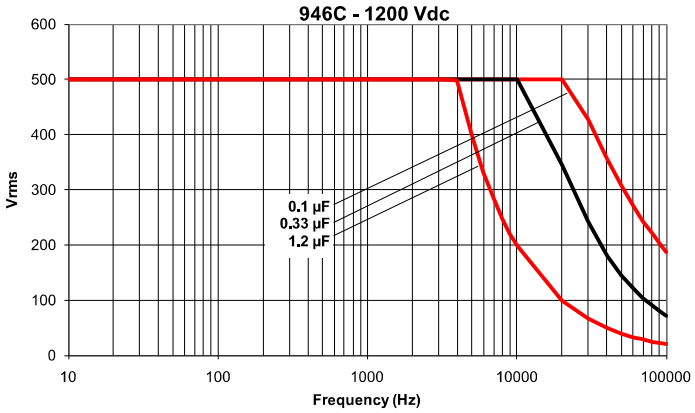
Double Metallized - Axial Leads

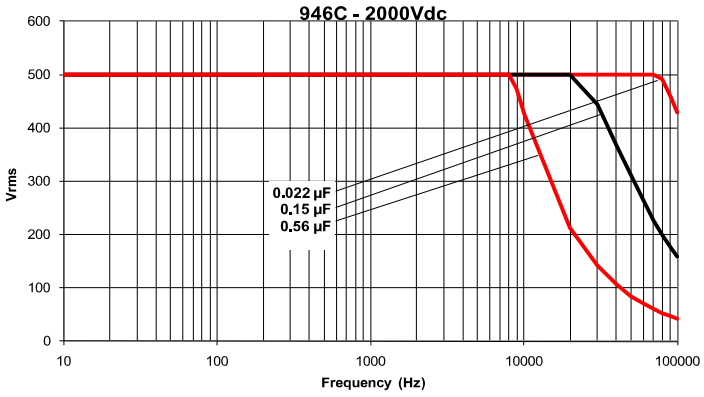
Cap. (µF)	Catalog Part Number	D +1.5 mm	L ±2.0 mm	d mm	Typical ESR @100 KHz mΩ	dV/dt (V/µs)	I peak (A)	I_{RMS} 70 °C 100 kHz (A)
			3000 Vdc (500 Vac)					
0.010	946C30S1J–F	12.0	31.0	1.0	62	2750	28	2
0.015	946C30S15J–F	14.0	31.0	1.0	41	2750	41	3
0.022	946C30S22J–F	16.5	31.0	1.0	28	2750	60	4
0.033	946C30S33J–F	20.0	31.0	1.0	19	2750	90	5
0.047	946C30S47J–F	18.5	42.0	1.0	18	1600	75	6
0.068	946C30S68J–F	22.0	42.0	1.0	13	1600	110	8
0.100	946C30P1J–F	26.0	42.0	1.2	8.8	1600	160	11
0.150	946C30P15J–F	32.0	42.0	1.2	6.2	1600	240	11

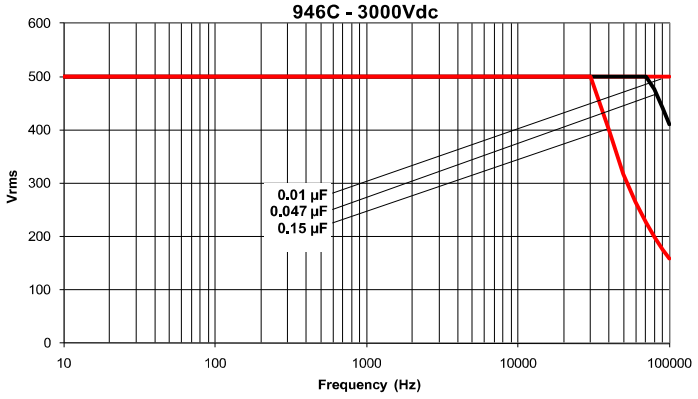
Typical Performance Curves

RMS Voltage vs Frequency @ 25 °C









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Type 950 Metallized Polypropylene Film Capacitors

AC Rated, Round, Axial Leaded

Motor Run, HID Lighting



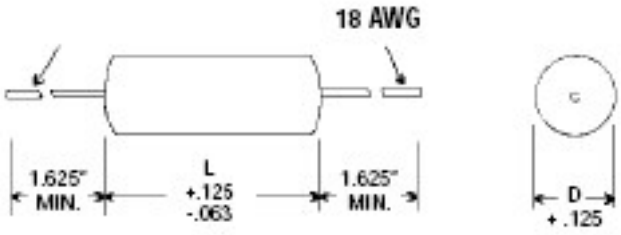
Type 950 axial-leaded, metallized polypropylene capacitors with high capacitance values are ideal for high intensity discharge lighting and motor run applications. Flame retardant outer wrap and epoxy end seals provide moisture resistance. Type 950 features operating temperatures to 90°C without derating and very low ESR characteristics. This non-protected film capacitor has Underwriters Laboratories, Inc. recognition for construction only under U.L. File Number E128034(N).

Specifications

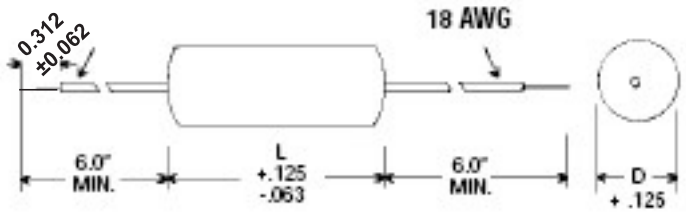
RoHS Compliant

Capacitance Range:	5 µF to 150 µF
Voltage Range:	250 Vac, 50/60 Hz
Capacitance Tolerance:	±10% (K) standard ±6% (H) optional
Operating Temperature Range:	–55 ºC to +90 ºC
Dielectric Strenght:	160% rated voltage for 1 minute
Dissipation Factor (DF):	.15% Max. @ 120 Hz
Insulation Resistance (IR):	100,000 MΩ x µF
Life Test:	1,000 hours at 90 ºC at 125% rated voltage

SOLID LEADS #18 AWG (.040 DIA.)



FLEXIBLE LEADS #18 AWG (.040 DIA.)



Type 950 Metallized Polypropylene Film Capacitors

Ratings

RoHS Compliant

Cap. (µF)	Catalog Part Number Solid Leads	Catalog Part Number Flexible Leads	D (inches)(mm)	L (inches)(mm)	dV/dt (V/µs)
		250 Vac			
5.0	950CQW5K-F	950FQW5K-F	0.906(23.0)	1.752(44.5)	9
7.0	950CQW7K-F	950FQW7K-F	1.035(26.3)	1.755(44.5)	9
8.0	950CQW8K-F	950FQW8K-F	1.094(27.8)	1.752(44.5)	9
10.0	950CQW10K-F	950FQW10K-F	0.996(25.3)	2.500(63.5)	6
12.0	950CQW12K-F	950FQW12K-F	1.075(27.3)	2.500(63.5)	6
13.0	950CQW13K-F	950FQW13K-F	1.110(28.2)	2.500(63.5)	6
14.0	950CQW14K-F	950FQW14K-F	1.146(29.1)	2.500(63.5)	6
15.0	950CQW15K-F	950FQW15K-F	1.181(30.0)	2.500(63.5)	6
16.0	950CQW16K-F	950FQW16K-F	1.213(30.8)	2.500(63.5)	6
17.0	950CQW17K-F	950FQW17K-F	1.248(31.7)	2.500(63.5)	6
17.5	950CQW17P5K-F	950FQW17P5K-F	1.264(32.1)	2.500(63.5)	6
20.0	950CQW20K-F	950FQW20K-F	1.339(34.0)	2.500(63.5)	6
22.5	950CQW22P5K-F	950FQW22P5K-F	1.413(35.9)	2.500(63.5)	6
24.0	950CQW24K-F	950FQW24K-F	1.457(37.0)	2.500(63.5)	6
26.0	950CQW26K-F	950FQW26K-F	1.508(38.3)	2.500(63.5)	6
28.0	950CQW28K-F	950FQW28K-F	1.559(39.6)	2.500(63.5)	6
30.0	950CQW30K-F	950FQW30K-F	1.610(40.9)	2.500(63.5)	6
32.0	950CQW32K-F	950FQW32K-F	1.575(40.0)	2.894(73.5)	6
34.0	950CQW34K-F	950FQW34K-F	1.614(41.0)	2.894(73.5)	6
35.0	950CQW35K-F	950FQW35K-F	1.654(42.0)	2.894(73.5)	6
36.0	950CQW36K-F	950FQW36K-F	1.693(43.0)	2.894(73.5)	6
40.0	950CQW40K-F	950FQW40K-F	1.713(43.5)	2.894(73.5)	6
42.0	950CQW42K-F	950FQW42K-F	1.752(44.5)	2.894(73.5)	6
45.0	950CQW45K-F	950FQW45K-F	1.811(46.0)	2.894(73.5)	6
48.0	950CQW48K-F	950FQW48K-F	1.850(47.0)	2.894(73.5)	6
50.0	950CQW50K-F	950FQW50K-F	1.890(48.0)	2.894(73.5)	6

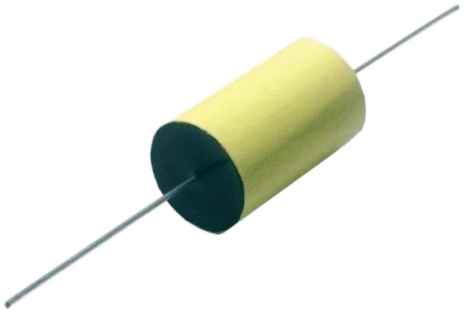
Cap. (µF)	Catalog Part Number Solid Leads	Catalog Part Number Flexible Leads	D (inches)(mm)	L (inches)(mm)	dV/dt (V/µs)
		250 Vac			
52.0	950CQW52K-F	950FQW52K-F	1.969(50.0)	2.894(73.5)	6
55.0	950CQW55K-F	950FQW55K-F	2.008(51.0)	2.894(73.5)	6
56.0	950CQW56K-F	950FQW56K-F	2.028(51.5)	2.894(73.5)	6
60.0	950CQW60K-F	950FQW60K-F	1.890(48.0)	3.386(86.0)	5
65.0	950CQW65K-F	950FQW65K-F	1.929(49.0)	3.386(86.0)	5
68.0	950CQW68K-F	950FQW68K-F	2.008(51.0)	3.386(86.0)	5
70.0	950CQW70K-F	950FQW70K-F	2.047(52.0)	3.386(86.0)	5
72.0	950CQW72K-F	950FQW72K-F	2.087(53.0)	3.386(86.0)	5
75.0	950CQW75K-F	950FQW75K-F	2.126(54.0)	3.386(86.0)	5
78.0	950CQW78K-F	950FQW78K-F	2.146(54.5)	3.386(86.0)	5
80.0	950CQW80K-F	950FQW80K-F	2.165(55.0)	3.386(86.0)	5
82.0	950CQW82K-F	950FQW82K-F	2.185(55.5)	3.386(86.0)	5
85.0	950CQW85K-F	950FQW85K-F	2.224(56.5)	3.386(86.0)	5
90.0	950CQW90K-F	950FQW90K-F	1.969(50.0)	4.409(112.0)	4
92.0	950CQW92K-F	950FQW92K-F	2.008(51.0)	4.409(112.0)	4
95.0	950CQW95K-F	950FQW95K-F	2.047(52.0)	4.409(112.0)	4
100.0	950CQW100K-F	950FQW100K-F	2.087(53.0)	4.409(112.0)	4
105.0	950CQW105K-F	950FQW105K-F	2.126(54.0)	4.409(112.0)	4
110.0	950CQW110K-F	950FQW110K-F	2.185(55.5)	4.409(112.0)	4
115.0	950CQW115K-F	950FQW115K-F	2.224(56.5)	4.409(112.0)	4
120.0	950CQW120K-F	950FQW120K-F	2.283(58.0)	4.409(112.0)	4
125.0	950CQW125K-F	950FQW125K-F	2.323(59.0)	4.409(112.0)	4
130.0	950CQW130K-F	950FQW130K-F	2.362(60.0)	4.409(112.0)	4
135.0	950CQW135K-F	950FQW135K-F	2.362(60.0)	4.409(112.0)	4
140.0	950CQW140K-F	950FQW140K-F	2.362(60.0)	4.409(112.0)	4
145.0	950CQW145K-F	950FQW145K-F	2.362(60.0)	4.409(112.0)	4
150.0	950CQW150K-F	950FQW150K-F	2.402(61.0)	4.409(112.0)	4

Other capacitance values, sizes and performance specifications are available. Contact us.

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Type 951C, Metallized Polypropylene Film Capacitors

AC Rated, Round Axial Leaded, UL 810 Fail Safe, Rated 10,000 AFC



Type 951C, axial leaded metallized polypropylene capacitors are designed for UPS systems and other AC output filtering applications. With integrated fused metallization pattern, this product features UL 810 recognition for fail-safe operation at temperatures up to 85 °C.

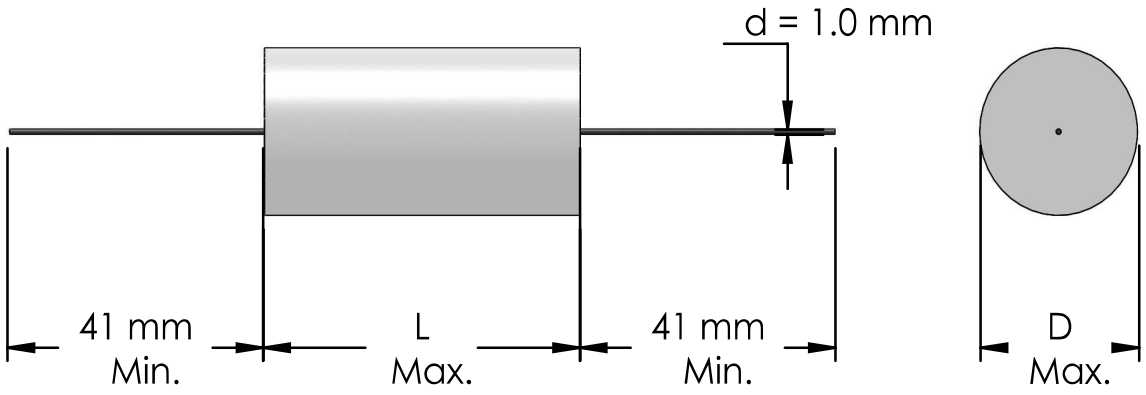
Highlights

- Fuse protection
- UL 810 recognized
- Low dissipation factor
- Self healing

Specifications

Capacitance Range	0.825 µF to 40 µF
Capacitance Tolerance	±10 % (±5% optional)
Rated Voltage	160 Vac, 250 Vac and 275 Vac
Operating Temperature Range	–40 °C to 85 °C
IEC Climatic Category	40/85/56 (test conditions 40 °C, 85 % RH, rated voltage, 1000 hours)
Service Life Objective	10,000 h at rated voltage and 85 °C
Protection	UL 810 file number E71645
RoHS Compliant	

Dimensions



Type 951C, Metallized Polypropylene Film Capacitors

AC Rated, Round Axial Leaded, UL 810 Fail Safe, Rated 10,000 AFC

Part Numbering System

951	C	X	W	2P7	K	SF-	–F
Series	Termination Code C = Solid Lead Wires	Voltage Rating I = 160 Vac Q = 250 Vac X = 275 Vac	Capacitance Decimal Point Designator P = 0. W = No Decimal Point	Capacitance Rating in µF 2 = 2 µF 2P7 = 2.7 µF 15 = 15 µF	Tolerance Code K = ±10% J = ±5%	Metallization Type SF= Segmented Fused	RoHS Compliant Indicator

Ratings

Part Number	Cap 1 kHz (µF)	Typ. ESR 10 kHz (mΩ)	Typ, ESL (nH)	I peak (A)	dV/dT (V/µs)	Rth (°C/W)	Irms 10 kHz 85°C (A)	D (mm)	L (mm)
160 VAC									
951CIW2P7K-SF-F	2.7	25	22	151	56	6.2	2.6	15.3	35.0
951CIW4P7K-SF-F	4.7	24	22	263	56	4.9	2.8	18.8	35.0
951CIW10K-SF-F	10.0	22	34	320	32	3.1	3.6	20.4	50.0
951CIW15K-SF-F	15.0	14	34	480	32	2.6	4.5	24.1	50.0
951CIW20K-SF-F	20.0	14	34	640	32	2.2	5.3	27.3	50.0
951CIW30K-SF-F	30.0	13	41	749	25	1.7	6.2	29.2	60.0
951CIW40K-SF-F	40.0	13	41	998	25	1.5	6.7	33.1	60.0
250 VAC									
951CQW2K-SF-F	2.0	18	22	172	86	4.9	3.3	18.8	35.0
951CQW2P7K-SF-F	2.7	15	22	232	86	3.8	3.8	21.2	35.0
951CQW4P7K-SF-F	4.7	15	22	404	86	3.8	4.3	26.7	35.0
951CQW10K-SF-F	10.0	21	41	360	36	2.0	4.6	26.1	60.0
951CQW15K-SF-F	15.0	15	41	540	36	1.6	6.0	32.5	60.0
951CQW20K-SF-F	20.0	14	41	720	36	1.4	6.7	37.5	60.0
951CQW30K-SF-F	30.0	13	41	1080	36	1.1	7.5	44.0	60.0
951CQW40K-SF-F	40.0	12	41	1440	36	1.0	8.5	52.0	60.0
275 VAC									
951CXP825K-SF-F	0.825	30	22	96	116	5.0	2.3	15.3	35.0
951CXW2K-SF-F	2.0	19	22	232	116	3.4	3.6	23.8	35.0
951CXW2P7K-SF-F	2.7	16	22	313	116	3.0	4.3	27.1	35.0
951CXW4P7K-SF-F	4.7	12	22	545	116	2.3	5.8	34.7	35.0
951CXW10K-SF-F	10.0	15	41	520	52	1.4	6.2	34.0	60.0
951CXW21P5K-SF-F	21.5	10	41	1118	52	1.0	9.0	48.7	60.0

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CDE

Axial Leaded Film Capacitors

METALLIZED POLYESTER AND POLYPROPYLENE FOR MULTIPLE APPLICATIONS

RoHS COMPLIANT

Intelligent Capacitor Solutions





Cornell Dubilier can address all your capacitor needs. Our lines of rugged, reliable axial leaded film capacitors are available as standard items in many configurations to address a wide range of applications.

CDE maintains manufacturing facilities in China and India to enable quick turn-around for shipping and delivery worldwide. All capacitors are built using Lean Six Sigma manufacturing practices and undergo rigorous quality assurance testing. If you have specialized needs, our flexible manufacturing processes allow us to quickly provide custom configurations.

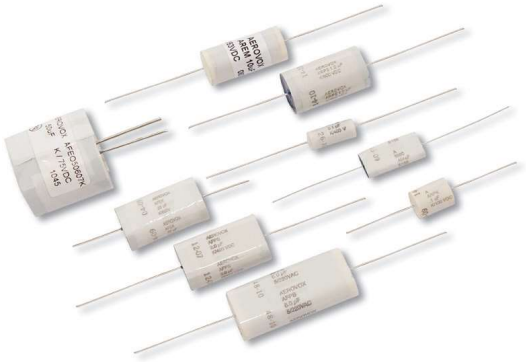


CDE provides intelligent capacitor solutions.



Axial Leaded Film Capacitors

METALLIZED POLYESTER AND POLYPROPYLENE FOR MULTIPLE APPLICATIONS



Applications

- Blocking, coupling and filtering (Types AREM and AFEO)
- UPS (Uninterruptible Power Supplies)
- Switching power supply (Type ARPM)
- Pulsing requiring high dV/dt ratings with low DF and ESR (Type ARPM)
- High current AC (Types ARPS and AFPS)

With their wide range of configurations and types, CDE's axial leaded film capacitors are suitable for many different applications. They are available round or flat, and in AC and DC voltage ratings. Wrap and fill capacitors are available in custom packages. All axial leaded film capacitors are UL 94 VO and IEC 695-2-2 certified and RoHS compliant.

AREM Round and AFEO Flat Axial Metallized Polyester

Types AREM and AFEO are axial leaded metallized polyester capacitors for general purpose use in blocking, coupling and filtering applications.

Highlights

- High CV for small size
- Bulk or T&R for AREM; bulk only for AFEO

ARPS Round and AFPS Flat Axial Metallized Polypropylene Capacitors

Types ARPS and AFPS are designed for high current AC applications.

Highlights

- High Current
- Low ESR
- Low DF

ARPM Axial Metallized Polypropylene Capacitors

Type ARPM is a stable metallized polypropylene capacitor that is ideal for pulsing applications that require a high dV/dt rating with low DF and ESR. ARPM fits well into switching power supply applications.

Highlights

- High dV/dt
- Low ESR
- Low DF

"W" Wrap & Fill

Type W is a tape wrapped axial leaded dry capacitor designed for use in a variety of permanent split-phase capacitor motor applications widely used in ventilating fans, appliances and refrigeration. The AC capacitors provide starting direction by shifting the current in the windings so that the motor simulates the operation of a two-phase motor.

CDE CORNELL DUBILIER
ENERGIZING IDEAS

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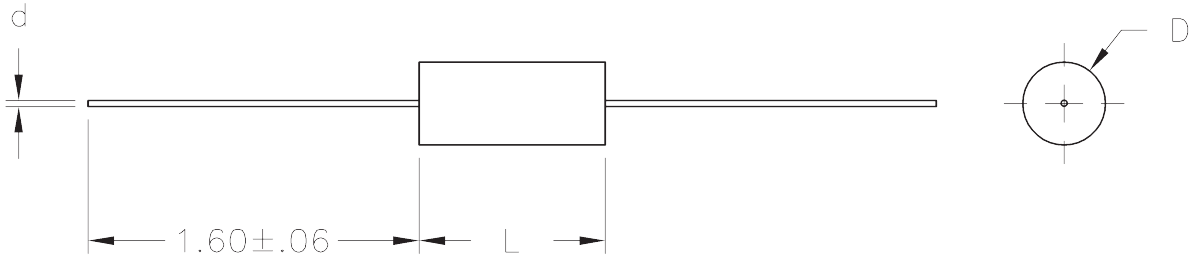
sales1@cde.com
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Specifications

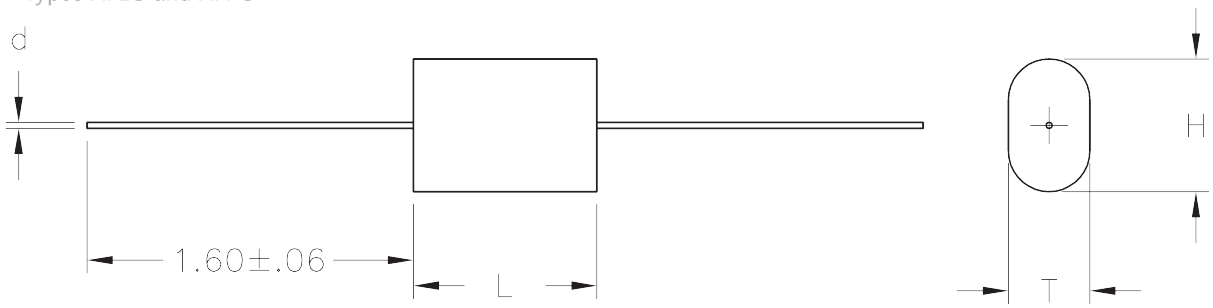
Capacitance Range:	.001 µF to 20.0 µF (Types AREM and AFEO) .0033 µF to 10.0 µF (Type ARPM) 0.47 µF to 20.0 µF (Types ARPS and AFPS)
Capacitance Tolerance:	±10% (K) Standard ±5% (J) Special ±2% (G) Special
Voltage Range:	63 VDC (40 VAC) to 630 VDC (220 VAC) (Types AREM and AFEO) 150 VDC (90 VAC) to 630 VDC (280 VAC) (Type ARPM) 300 VDC (220 VAC) to 600 VDC (300VAC) (Types ARPS and AFPS)
Dissipation Factor:	≤0.8% @ 1 kHz (Types AREM and AFEO) ≤0.1% @ 1 kHz (Types ARPM, ARPS, and AFPS)
Operating Temperature Range:	-55°C to +125°C. Full rated voltage @ 85°C, derating linearly to 50% rated voltage at 125°C (Types AREM and AFEO) -55°C to +105°C. Full rated voltage @ 85°C, derating 1.25%/°C from 85°C to 105°C (Types ARPM, ARPS and AFPS)
Dielectric Absorption:	0.30% typical (Types AREM and AFEO) 0.05% typical (Types ARPM, ARPS and AFPS)

Outline Drawings

Types ARPS, ARPM and AREM



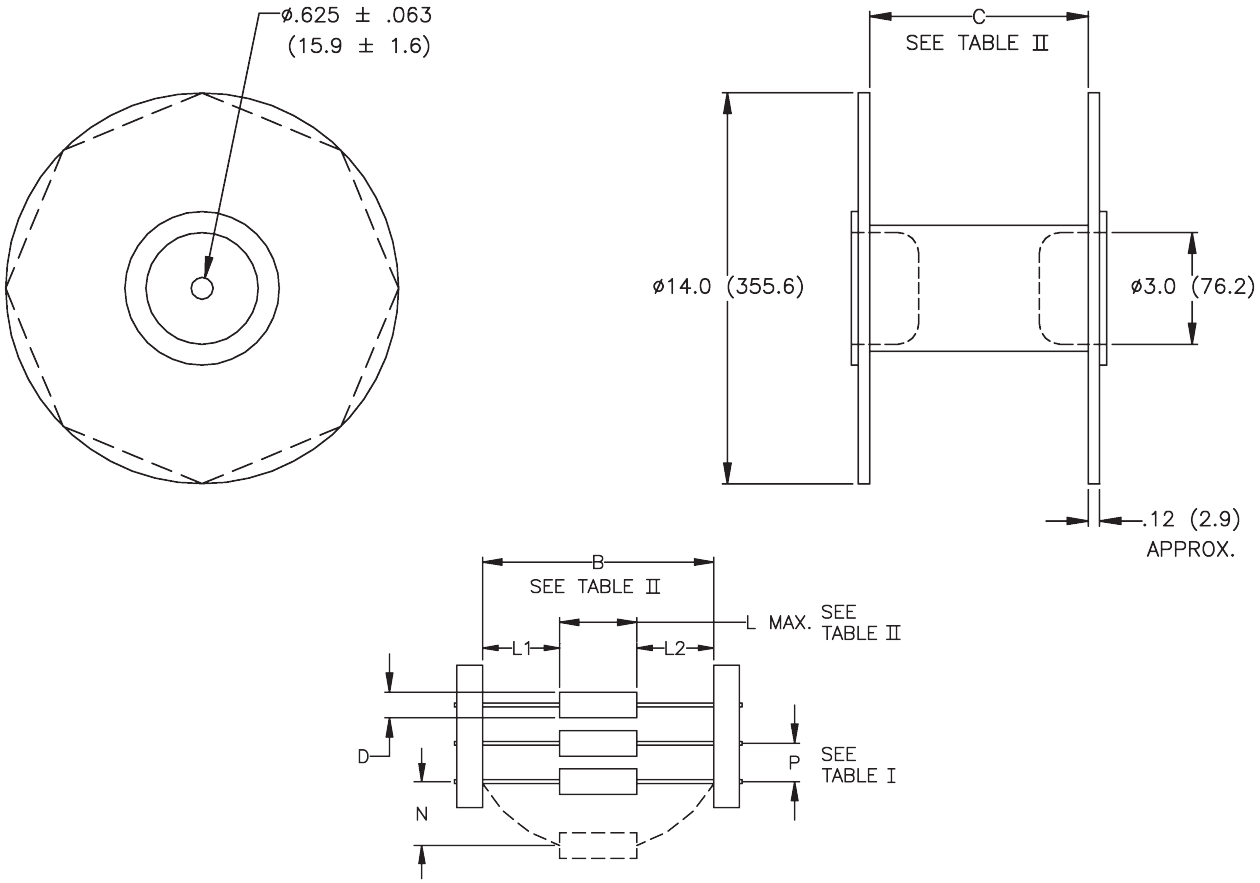
Types AFEO and AFPS



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www.CDE.com

Axial Leaded Tape & Reel Specification

According to EIA-296-E



|L1−L2| < .063 (1.6)

N < .047 (1.2)

Table I

D Inches (mm)	P Inches (mm)
≤.20 (5.0)	.20 (5.0) ± .02 (.50)
.20 (5.0) – 37 (9.5)	.40 (10.0) ± .02 (.50)
.38 (9.6) – .58 (14.7)	.60 (15.0) ± .02 (.50)

Table II

L Max Inches (mm)	Code*	B Inches (mm)	C Inches (mm)
≤.43 (11.0)	R1	2.06 (52.4) ± .06 (1.5)	2.95 (75)
.43 (11.0) < L ≤ .81 (20.5)	R2	2.50 (63.6) ± .06 (1.5)	3.39 (86)
>.81 (20.5)	R3	2.87 (73) ± .06 (1.5)	3.74 (95)

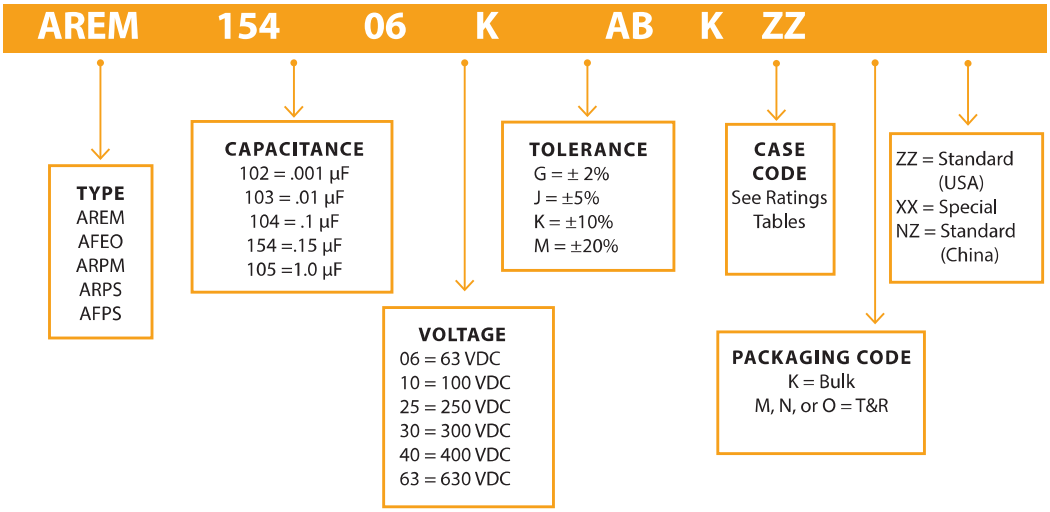
** According to EIA-296-E*

Table III

Component Diameter D Inches (mm)	Components per Reel
D ≤ .20 (5.0)	3000
.20 (5.0) < D ≤ .26 (6.5)	1200
.26 (6.5) < D ≤ .28 (7.0)	1100
.28 (7.0) < D ≤ .30 (7.5)	1000
.30 (7.5) < D ≤ .33 (8.5)	800
.33 (8.5) < D ≤ .41 (10.5)	500
.41 (10.5) < D ≤ .51 (13.0)	300
.51 (13.0) < D ≤ .58 (14.7)	250

Part Numbering System
Round and Flat Axials

CDE's part numbering system is a descriptive part number made up of several different components such as voltage rating, capacitance, etc. The descriptors are explained here using AREM15406KABKZZ as a representative part number:



Type AFEO Flat Axial Metallized Polyester

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
100 VDC (63 VAC)				
5.0	AFEO50510KKRKZZ	.42 x .75 x .1.25 (10.7 x 19.1 x 31.8)	KR	.032 (.8)
250 VDC (160 VAC)				
1.0	AFEO10525KILKZZ	.30 x .55 x .94 (7.6 x 14.0 x 23.9)	IL	.032 (.8)
5.0	AFEO50525KPPKZZ	.49 x .98 x 1.25 (12.4 x 24.9 x 31.8)	PP	.032 (.8)
10.0	AFEO10625KXUKZZ	.55 x 1.05 x 1.76 (14.0 x 26.7 x 44.7)	XU	.032 (.8)
20.0	AFEO20625K2XKZZ	.73 x 1.25 x 2.26 (18.5 x 31.8 x 57.4)	2X	.032 (.8)
400 VDC (200 VAC)				
.047	AFEO47340KADKZZ	.20 x .35 x .56 (5.1 x 8.9 x 14.2)	AD	.025 (.6)
.22	AFEO22440KFLKZZ	.32 x .60 x .94 (8.1 x 15.2 x 23.9)	FL	.032 (.8)
1.0	AFEO10540KMRKZZ	.45 x.75 x 1.25 (11.4 x 19.1 x 31.8)	MR	.032 (.8)
3.0	AFEO30540KXUKZZ	.80 x 1.15 x 1.76 (16.2 x 27.4 x 57.4)	XU	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

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www.CDE.com

Type AREM Round Axial Metallized Polyester

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
63 VDC (40 VAC)				
1.0	AREM10506KGIKZZ	.315 x .807 (8 x 20.5)	GI	.032(.8)
100 VDC (63 VAC)				
1.5	AREM15510KKOKZZ	.394 x 1.10 (10 x 28)	KO	.032 (.8)
10.0	AREM10610K2PKZZ	.729 x 1.30 (18.5 x 33)	2P	.040 (1.02)
250 VDC (160 VAC)				
.10	AREM10425KDEKZZ	.256 x .650 (6 x 16.5)	DE	.025 (.6)
2.2	AREM22525KPOKZZ	.512 x 1.10 (13 x 28)	PO	.032 (.8)
15.0	AREM15625K4UKZZ	.965 x 1.81 (24.5 x 46)	4U	.040 (1.02)
400 VDC (200 VAC)				
1.0	AREM10540KRPKZZ	.531 x 1.30 (13 x 33)	RP	.032 (.8)
630 VDC (280 VAC)				
1.0	AREM10563KRPKZZ	.709 x 1.81 (18 x 46)	1U	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

Type ARPS Round Axial Metallized Polypropylene

For new design see type 730P

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	CURRENT (A)	WIRE DIAMETER (AWG)
300 VDC (220 VAC)					
1.0	ARPS10530KROKZZ	.50 x 1.05 (12.7 x 26.7)	RO	0.7	20
3.0	ARPS30530K1PKZZ	.71 x 1.25 (18.0 x 31.8)	1P	2.0	20
5.0	ARPS50530K2UKZZ	.74 x 1.75 (18.8 x 44.5)	2U	3.3	20
10.0	ARPS10630K4UKZZ	1.00 x 1.75 (25.4 x 44.5)	4U	6.6	20

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	ESR MAX 20 –100 kHz (mΩ)	CURRENT (A)	WIRE DIAMETER (AWG)
400 VDC (250 VAC)						
1.0	ARPS10540KCAKZZ	.50 x 1.25 (12.7 x 31.8)	CA	11	9	20
5.0	ARPS50540K3UKZZ	.86 x 1.75 (21.8 x 44.5)	3U	7	17	18
10.0	ARPS10640K9XKZZ	1.00 x 2.25 (25.4 x 57.2)	9X	7	18	18

Inquire regarding custom ratings, sizes, and configurations.

See Type 730P for New Designs

Type ARPM Round Axial Metallized Polypropylene

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
150 VDC (90 VAC)				
.22	ARPM22415KDFKZZ	.256 x .718 (6.5 x 18.3)	DF	.025 (.6)
.33	ARPM33415KFFKZZ	.295 x .718 (7.5 x 18.3)	FF	.032 (.8)
1.0	ARPM10515KKKKZZ	.394 x .938 (10.0 x 23.8)	KK	.032 (.8)
3.0	ARPM30515KKKKZZ	.650 x .938 (16.5 x 23.8)	KK	.032 (.8)
250 VDC (200 VAC)				
.22	ARPM22425KGKKZZ	.315 x .938 (8.0 x 24.0)	GK	.032 (.8)
.33	ARPM33425KIKKZZ	.354 x .938 (9.0 x 24.0)	IK	.032 (.8)
.47	ARPM47425KLKKZZ	.413 x .938 (10.5 x 24.0)	LK	.032 (.8)
.68	ARPM68425KPKKZZ	.492 x .938 (12.5 x 24.0)	PK	.032 (.8)
3.0	ARPM30525KYUKZZ	.669 x 1.75 (17.0 x 44.5)	YU	.032 (.8)
10.0	ARPM10625K9XKZZ	1.00 x 2.25 (25.4 x 57.0)	9X	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

Type ARPM Round Axial Metallized Polypropylene (cont.)

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
400 VDC (250 VAC)				
.047	ARPM47340KDFKZZ	.256 x .718 (6.5 x 18.3)	DF	.032 (.8)
.10	ARPM10440KHFKZZ	.335 x .718 (8.5 x 18.3)	HF	.032 (.8)
.47	ARPM47440KSKKZZ	.511 x .938 (14.0 x 24.0)	SK	.032 (.8)
2.0	ARPM20540K1UKZZ	.709 x 1.75 (18.0 x 44.5)	1U	.032 (.8)
5.0	ARPM50540K8UKZZ	1.25 x 1.75 (31.8 x 44.5)	8U	.032 (.8)
630 VDC (280 VAC)				
.10	ARPM10363KCCKZZ	.236 x .562 (6.0 x 14.3)	CC	.025 (.6)

Inquire regarding custom ratings, sizes, and configurations.

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AFPS Flat Axial Metallized Polypropylene

For new design see type 761M

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	CURRENT (A)	WIRE DIAMETER (AWG)
300 VDC (220 VAC)					
3.0	AFPS30530KRPKZZ	.50 x .87 x 1.25 (12.7 x 22.1 x 31.8)	RP	2.0	20
10.0	AFPS10630KWWKZZ	.64 x 1.15 x 2.10 (16.3 x 29.2 x 53.3)	WW	6.6	20
12.0	AFPS12630K1WKZZ	.72 x 1.22 x 2.10 (18.3 x 40.0 x 53.3)	1W	8.0	20

Inquire regarding custom ratings, sizes, and configurations.

See Type 761M for New Designs

AFPS Flat Axial Metallized Polypropylene (cont.)

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	ESR MAX 20 –100 kHz (mΩ)	CURRENT (A)	WIRE DIAMETER (AWG)
400 VDC (250 VAC)						
2.0	AFPS20540K2PKZZ	.50 x .82 x 1.25 (12.7 x 20.8 x 31.8)	2P	9	10	20
3.3	AFPS33540KGBKZZ	.69 x .93 x 1.25 (17.5 x 23.6 x 31.8)	GB	7	15	20
4.7	AFPS47540KADKZZ	.64 x .95 x 1.75 (16.3 x 24.1 x 44.50	AD	7	17	18
5.0	AFPS50540KFDKZZ	.67 x 1.00 x 1.75 (17.0 x 25.4 x 44.5)	FD	7	17	18
10.0	AFPS10640KBEKZZ	.75 x 1.28 x 2.25 (19.1 x 32.5 x 57.2)	BE	7	18	18
600 VDC (300 VAC)						
1.0	AFPS10560KHBKZZ	.60 x .80 x 1.25 (15.2 x 20.3 x 31.8)	HB	8	9	20
5.0	AFPS50560KDEKZZ	.95 x 1.25 x 2.25 (24.1 x 31.8 x 57.2)	DE	7	18	18

Inquire regarding custom ratings, sizes, and configurations.

About CDE

CDE is a leading manufacturer of capacitors for industrial, medical and specialized applications, with world-class design, manufacturing and testing facilities in New Bedford, MA. Global manufacturing facilities in China and India enable quick turn-around for shipping and delivery worldwide.

CDE capacitors are among the world's most reliable components. Our extensive custom design and development capabilities coupled with broad, standardized product offerings allow us to provide intelligent capacitor solutions that meet or exceed customers' application requirements.

Our aim is to be the best and most sought after provider of capacitor solutions for specialty markets in the world by achieving the highest level of customer satisfaction with extraordinary emphasis on the creation of value and speed to market.

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CDE

Axial Leaded Film Capacitors

METALLIZED POLYESTER AND POLYPROPYLENE FOR MULTIPLE APPLICATIONS

RoHS COMPLIANT

Intelligent Capacitor Solutions





Cornell Dubilier can address all your capacitor needs. Our lines of rugged, reliable axial leaded film capacitors are available as standard items in many configurations to address a wide range of applications.

CDE maintains manufacturing facilities in China and India to enable quick turn-around for shipping and delivery worldwide. All capacitors are built using Lean Six Sigma manufacturing practices and undergo rigorous quality assurance testing. If you have specialized needs, our flexible manufacturing processes allow us to quickly provide custom configurations.

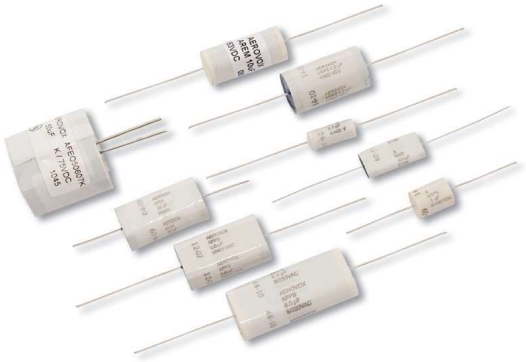


CDE provides intelligent capacitor solutions.



Axial Leaded Film Capacitors

METALLIZED POLYESTER AND POLYPROPYLENE FOR MULTIPLE APPLICATIONS



Applications

- Blocking, coupling and filtering (Types AREM and AFEO)
- UPS (Uninterruptible Power Supplies)
- Switching power supply (Type ARPM)
- Pulsing requiring high dV/dt ratings with low DF and ESR (Type ARPM)
- High current AC (Types ARPS and AFPS)

With their wide range of configurations and types, CDE's axial leaded film capacitors are suitable for many different applications. They are available round or flat, and in AC and DC voltage ratings. Wrap and fill capacitors are available in custom packages. All axial leaded film capacitors are UL 94 VO and IEC 695-2-2 certified and RoHS compliant.

AREM Round and AFEO Flat Axial Metallized Polyester

Types AREM and AFEO are axial leaded metallized polyester capacitors for general purpose use in blocking, coupling and filtering applications.

Highlights

- High CV for small size
- Bulk or T&R for AREM; bulk only for AFEO

ARPS Round and AFPS Flat Axial Metallized Polypropylene Capacitors

Types ARPS and AFPS are designed for high current AC applications.

Highlights

- High Current
- Low ESR
- Low DF

ARPM Axial Metallized Polypropylene Capacitors

Type ARPM is a stable metallized polypropylene capacitor that is ideal for pulsing applications that require a high dV/dt rating with low DF and ESR. ARPM fits well into switching power supply applications.

Highlights

- High dV/dt
- Low ESR
- Low DF

"W" Wrap & Fill

Type W is a tape wrapped axial leaded dry capacitor designed for use in a variety of permanent split-phase capacitor motor applications widely used in ventilating fans, appliances and refrigeration. The AC capacitors provide starting direction by shifting the current in the windings so that the motor simulates the operation of a two-phase motor.

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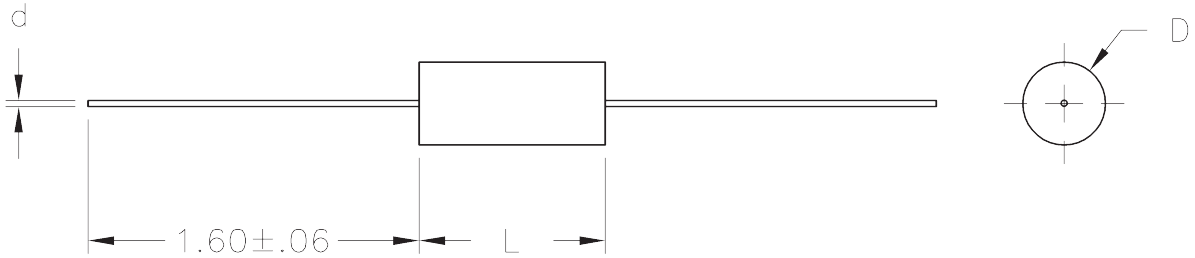
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Specifications

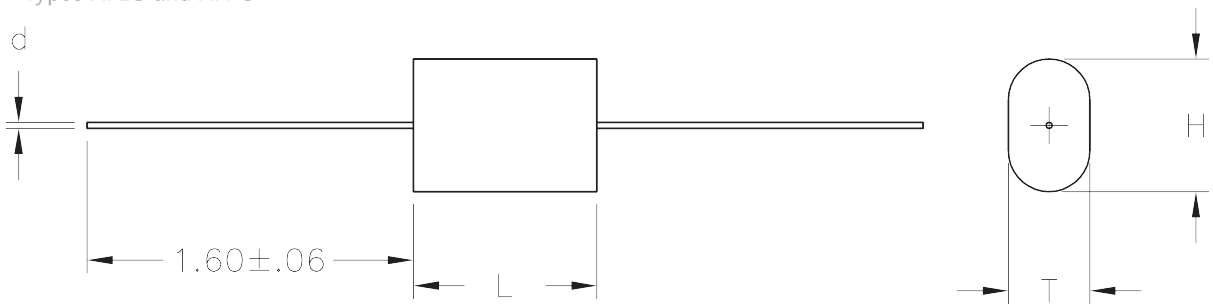
Capacitance Range:	.001 µF to 20.0 µF (Types AREM and AFEO) .0033 µF to 10.0 µF (Type ARPM) 0.47 µF to 20.0 µF (Types ARPS and AFPS)
Capacitance Tolerance:	±10% (K) Standard ±5% (J) Special ±2% (G) Special
Voltage Range:	63 VDC (40 VAC) to 630 VDC (220 VAC) (Types AREM and AFEO) 150 VDC (90 VAC) to 630 VDC (280 VAC) (Type ARPM) 300 VDC (220 VAC) to 600 VDC (300VAC) (Types ARPS and AFPS)
Dissipation Factor:	≤0.8% @ 1 kHz (Types AREM and AFEO) ≤0.1% @ 1 kHz (Types ARPM, ARPS, and AFPS)
Operating Temperature Range:	-55°C to +125°C. Full rated voltage @ 85°C, derating linearly to 50% rated voltage at 125°C (Types AREM and AFEO) -55°C to +105°C. Full rated voltage @ 85°C, derating 1.25%/°C from 85°C to 105°C (Types ARPM, ARPS and AFPS)
Dielectric Absorption:	0.30% typical (Types AREM and AFEO) 0.05% typical (Types ARPM, ARPS and AFPS)

Outline Drawings

Types ARPS, ARPM and AREM



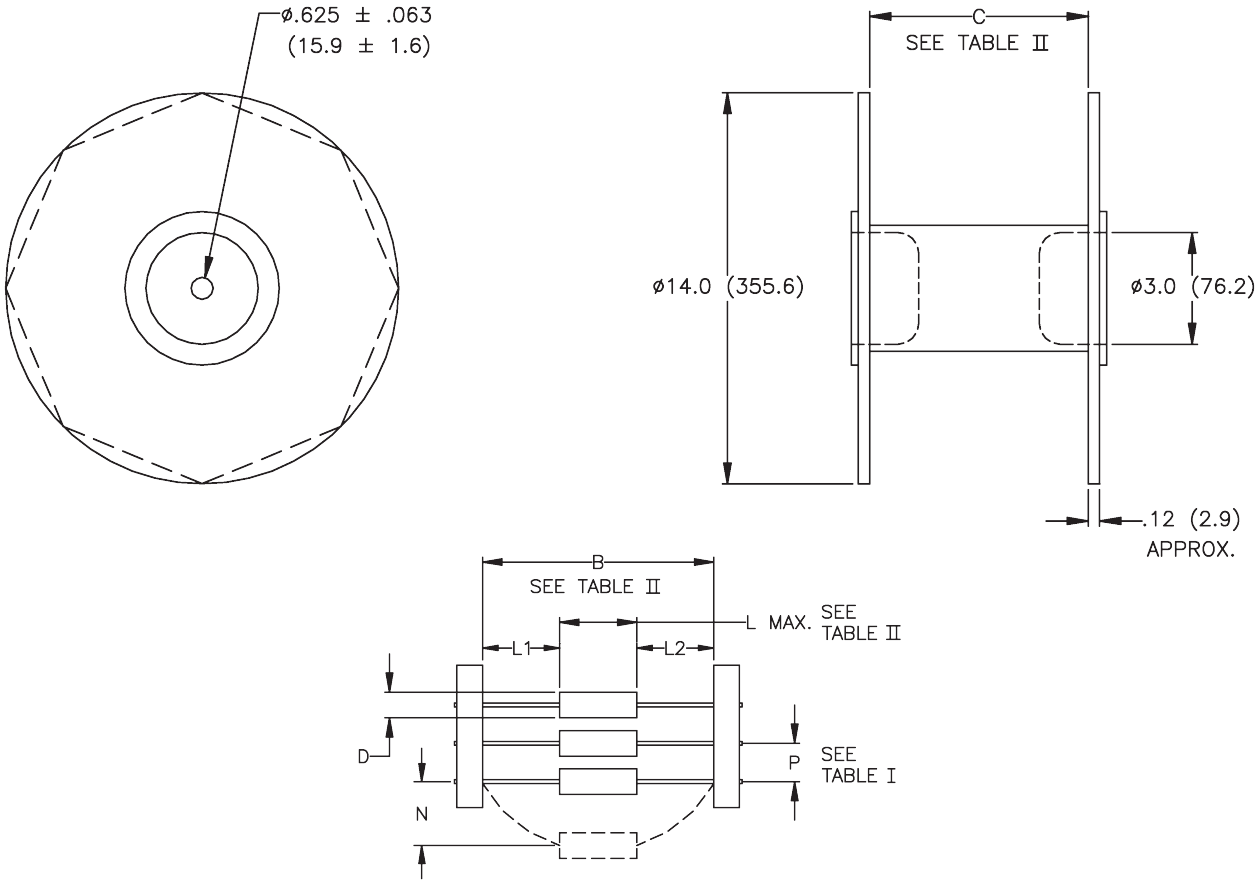
Types AFEO and AFPS



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Axial Leaded Tape & Reel Specification

According to EIA-296-E



|L1–L2| < .063 (1.6)

N < .047 (1.2)

Table I

D Inches (mm)	P Inches (mm)
≤.20 (5.0)	.20 (5.0) ± .02 (.50)
.20 (5.0) – 37 (9.5)	.40 (10.0) ± .02 (.50)
.38 (9.6) – .58 (14.7)	.60 (15.0) ± .02 (.50)

Table II

L Max Inches (mm)	Code*	B Inches (mm)	C Inches (mm)
≤.43 (11.0)	R1	2.06 (52.4) ± .06 (1.5)	2.95 (75)
.43 (11.0) < L ≤ .81 (20.5)	R2	2.50 (63.6) ± .06 (1.5)	3.39 (86)
>.81 (20.5)	R3	2.87 (73) ± .06 (1.5)	3.74 (95)

** According to EIA-296-E*

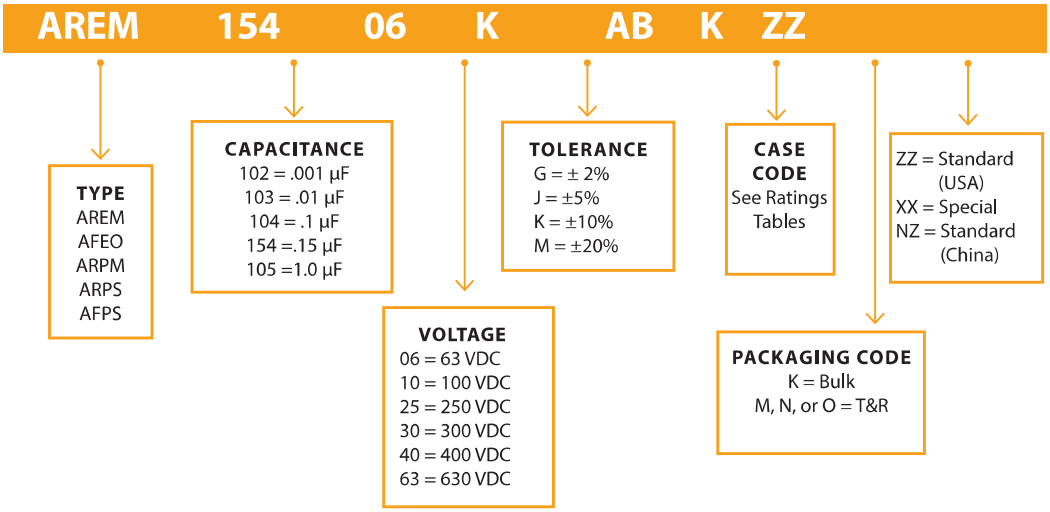
Table III

Component Diameter D Inches (mm)	Components per Reel
D ≤ .20 (5.0)	3000
.20 (5.0) < D ≤ .26 (6.5)	1200
.26 (6.5) < D ≤ .28 (7.0)	1100
.28 (7.0) < D ≤ .30 (7.5)	1000
.30 (7.5) < D ≤ .33 (8.5)	800
.33 (8.5) < D ≤ .41 (10.5)	500
.41 (10.5) < D ≤ .51 (13.0)	300
.51 (13.0) < D ≤ .58 (14.7)	250

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Part Numbering System
Round and Flat Axials

CDE's part numbering system is a descriptive part number made up of several different components such as voltage rating, capacitance, etc. The descriptors are explained here using AREM15406KABKZZ as a representative part number:



Type AFEO Flat Axial Metallized Polyester

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
100 VDC (63 VAC)				
5.0	AFEO50510KKRKZZ	.42 x .75 x .1.25 (10.7 x 19.1 x 31.8)	KR	.032 (.8)
250 VDC (160 VAC)				
1.0	AFEO10525KILKZZ	.30 x .55 x .94 (7.6 x 14.0 x 23.9)	IL	.032 (.8)
5.0	AFEO50525KPPKZZ	.49 x .98 x 1.25 (12.4 x 24.9 x 31.8)	PP	.032 (.8)
10.0	AFEO10625KXUKZZ	.55 x 1.05 x 1.76 (14.0 x 26.7 x 44.7)	XU	.032 (.8)
20.0	AFEO20625K2XKZZ	.73 x 1.25 x 2.26 (18.5 x 31.8 x 57.4)	2X	.032 (.8)
400 VDC (200 VAC)				
.047	AFEO47340KADKZZ	.20 x .35 x .56 (5.1 x 8.9 x 14.2)	AD	.025 (.6)
.22	AFEO22440KFLKZZ	.32 x .60 x .94 (8.1 x 15.2 x 23.9)	FL	.032 (.8)
1.0	AFEO10540KMRKZZ	.45 x.75 x 1.25 (11.4 x 19.1 x 31.8)	MR	.032 (.8)
3.0	AFEO30540KXUKZZ	.80 x 1.15 x 1.76 (16.2 x 27.4 x 57.4)	XU	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

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Type AREM Round Axial Metallized Polyester

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
63 VDC (40 VAC)				
1.0	AREM10506KGIKZZ	.315 x .807 (8 x 20.5)	GI	.032(.8)
100 VDC (63 VAC)				
1.5	AREM15510KKOKZZ	.394 x 1.10 (10 x 28)	KO	.032 (.8)
10.0	AREM10610K2PKZZ	.729 x 1.30 (18.5 x 33)	2P	.040 (1.02)
250 VDC (160 VAC)				
.10	AREM10425KDEKZZ	.256 x .650 (6 x 16.5)	DE	.025 (.6)
2.2	AREM22525KPOKZZ	.512 x 1.10 (13 x 28)	PO	.032 (.8)
15.0	AREM15625K4UKZZ	.965 x 1.81 (24.5 x 46)	4U	.040 (1.02)
400 VDC (200 VAC)				
1.0	AREM10540KRPKZZ	.531 x 1.30 (13 x 33)	RP	.032 (.8)
630 VDC (280 VAC)				
1.0	AREM10563KRPKZZ	.709 x 1.81 (18 x 46)	1U	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

Type ARPS Round Axial Metallized Polypropylene

For new design see type 730P

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	CURRENT (A)	WIRE DIAMETER (AWG)
300 VDC (220 VAC)					
1.0	ARPS10530KROKZZ	.50 x 1.05 (12.7 x 26.7)	RO	0.7	20
3.0	ARPS30530K1PKZZ	.71 x 1.25 (18.0 x 31.8)	1P	2.0	20
5.0	ARPS50530K2UKZZ	.74 x 1.75 (18.8 x 44.5)	2U	3.3	20
10.0	ARPS10630K4UKZZ	1.00 x 1.75 (25.4 x 44.5)	4U	6.6	20

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	ESR MAX 20 –100 kHz (mΩ)	CURRENT (A)	WIRE DIAMETER (AWG)
400 VDC (250 VAC)						
1.0	ARPS10540KCAKZZ	.50 x 1.25 (12.7 x 31.8)	CA	11	9	20
5.0	ARPS50540K3UKZZ	.86 x 1.75 (21.8 x 44.5)	3U	7	17	18
10.0	ARPS10640K9XKZZ	1.00 x 2.25 (25.4 x 57.2)	9X	7	18	18

Inquire regarding custom ratings, sizes, and configurations.

See Type 730P for New Designs

Type ARPM Round Axial Metallized Polypropylene

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
150 VDC (90 VAC)				
.22	ARPM22415KDFKZZ	.256 x .718 (6.5 x 18.3)	DF	.025 (.6)
.33	ARPM33415KFFKZZ	.295 x .718 (7.5 x 18.3)	FF	.032 (.8)
1.0	ARPM10515KKKKZZ	.394 x .938 (10.0 x 23.8)	KK	.032 (.8)
3.0	ARPM30515KKKKZZ	.650 x .938 (16.5 x 23.8)	KK	.032 (.8)
250 VDC (200 VAC)				
.22	ARPM22425KGKKZZ	.315 x .938 (8.0 x 24.0)	GK	.032 (.8)
.33	ARPM33425KIKKZZ	.354 x .938 (9.0 x 24.0)	IK	.032 (.8)
.47	ARPM47425KLKKZZ	.413 x .938 (10.5 x 24.0)	LK	.032 (.8)
.68	ARPM68425KPKKZZ	.492 x .938 (12.5 x 24.0)	PK	.032 (.8)
3.0	ARPM30525KYUKZZ	.669 x 1.75 (17.0 x 44.5)	YU	.032 (.8)
10.0	ARPM10625K9XKZZ	1.00 x 2.25 (25.4 x 57.0)	9X	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

Type ARPM Round Axial Metallized Polypropylene (cont.)

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
400 VDC (250 VAC)				
.047	ARPM47340KDFKZZ	.256 x .718 (6.5 x 18.3)	DF	.032 (.8)
.10	ARPM10440KHFKZZ	.335 x .718 (8.5 x 18.3)	HF	.032 (.8)
.47	ARPM47440KSKKZZ	.511 x .938 (14.0 x 24.0)	SK	.032 (.8)
2.0	ARPM20540K1UKZZ	.709 x 1.75 (18.0 x 44.5)	1U	.032 (.8)
5.0	ARPM50540K8UKZZ	1.25 x 1.75 (31.8 x 44.5)	8U	.032 (.8)
630 VDC (280 VAC)				
.10	ARPM10363KCCKZZ	.236 x .562 (6.0 x 14.3)	CC	.025 (.6)

Inquire regarding custom ratings, sizes, and configurations.

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AFPS Flat Axial Metallized Polypropylene

For new design see type 761M

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	CURRENT (A)	WIRE DIAMETER (AWG)
300 VDC (220 VAC)					
3.0	AFPS30530KRPKZZ	.50 x .87 x 1.25 (12.7 x 22.1 x 31.8)	RP	2.0	20
10.0	AFPS10630KWWKZZ	.64 x 1.15 x 2.10 (16.3 x 29.2 x 53.3)	WW	6.6	20
12.0	AFPS12630K1WKZZ	.72 x 1.22 x 2.10 (18.3 x 40.0 x 53.3)	1W	8.0	20

Inquire regarding custom ratings, sizes, and configurations.

See Type 761M for New Designs

AFPS Flat Axial Metallized Polypropylene (cont.)

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	ESR MAX 20 –100 kHz (mΩ)	CURRENT (A)	WIRE DIAMETER (AWG)
400 VDC (250 VAC)						
2.0	AFPS20540K2PKZZ	.50 x .82 x 1.25 (12.7 x 20.8 x 31.8)	2P	9	10	20
3.3	AFPS33540KGBKZZ	.69 x .93 x 1.25 (17.5 x 23.6 x 31.8)	GB	7	15	20
4.7	AFPS47540KADKZZ	.64 x .95 x 1.75 (16.3 x 24.1 x 44.50	AD	7	17	18
5.0	AFPS50540KFDKZZ	.67 x 1.00 x 1.75 (17.0 x 25.4 x 44.5)	FD	7	17	18
10.0	AFPS10640KBEKZZ	.75 x 1.28 x 2.25 (19.1 x 32.5 x 57.2)	BE	7	18	18
600 VDC (300 VAC)						
1.0	AFPS10560KHBKZZ	.60 x .80 x 1.25 (15.2 x 20.3 x 31.8)	HB	8	9	20
5.0	AFPS50560KDEKZZ	.95 x 1.25 x 2.25 (24.1 x 31.8 x 57.2)	DE	7	18	18

Inquire regarding custom ratings, sizes, and configurations.

About CDE

CDE is a leading manufacturer of capacitors for industrial, medical and specialized applications, with world-class design, manufacturing and testing facilities in New Bedford, MA. Global manufacturing facilities in China and India enable quick turn-around for shipping and delivery worldwide.

CDE capacitors are among the world's most reliable components. Our extensive custom design and development capabilities coupled with broad, standardized product offerings allow us to provide intelligent capacitor solutions that meet or exceed customers' application requirements.

Our aim is to be the best and most sought after provider of capacitor solutions for specialty markets in the world by achieving the highest level of customer satisfaction with extraordinary emphasis on the creation of value and speed to market.

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CDE

Axial Leaded Film Capacitors

METALLIZED POLYESTER AND POLYPROPYLENE FOR MULTIPLE APPLICATIONS

RoHS COMPLIANT

Intelligent Capacitor Solutions





Cornell Dubilier can address all your capacitor needs. Our lines of rugged, reliable axial leaded film capacitors are available as standard items in many configurations to address a wide range of applications.

CDE maintains manufacturing facilities in China and India to enable quick turn-around for shipping and delivery worldwide. All capacitors are built using Lean Six Sigma manufacturing practices and undergo rigorous quality assurance testing. If you have specialized needs, our flexible manufacturing processes allow us to quickly provide custom configurations.

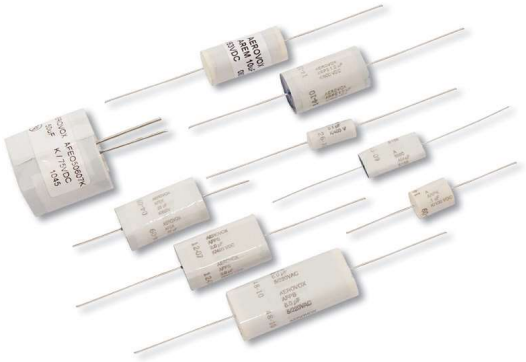


CDE provides intelligent capacitor solutions.



Axial Leaded Film Capacitors

METALLIZED POLYESTER AND POLYPROPYLENE FOR MULTIPLE APPLICATIONS



Applications

- Blocking, coupling and filtering (Types AREM and AFEO)
- UPS (Uninterruptible Power Supplies)
- Switching power supply (Type ARPM)
- Pulsing requiring high dV/dt ratings with low DF and ESR (Type ARPM)
- High current AC (Types ARPS and AFPS)

With their wide range of configurations and types, CDE's axial leaded film capacitors are suitable for many different applications. They are available round or flat, and in AC and DC voltage ratings. Wrap and fill capacitors are available in custom packages. All axial leaded film capacitors are UL 94 VO and IEC 695-2-2 certified and RoHS compliant.

AREM Round and AFEO Flat Axial Metallized Polyester

Types AREM and AFEO are axial leaded metallized polyester capacitors for general purpose use in blocking, coupling and filtering applications.

Highlights

- High CV for small size
- Bulk or T&R for AREM; bulk only for AFEO

ARPS Round and AFPS Flat Axial Metallized Polypropylene Capacitors

Types ARPS and AFPS are designed for high current AC applications.

Highlights

- High Current
- Low ESR
- Low DF

ARPM Axial Metallized Polypropylene Capacitors

Type ARPM is a stable metallized polypropylene capacitor that is ideal for pulsing applications that require a high dV/dt rating with low DF and ESR. ARPM fits well into switching power supply applications.

Highlights

- High dV/dt
- Low ESR
- Low DF

"W" Wrap & Fill

Type W is a tape wrapped axial leaded dry capacitor designed for use in a variety of permanent split-phase capacitor motor applications widely used in ventilating fans, appliances and refrigeration. The AC capacitors provide starting direction by shifting the current in the windings so that the motor simulates the operation of a two-phase motor.

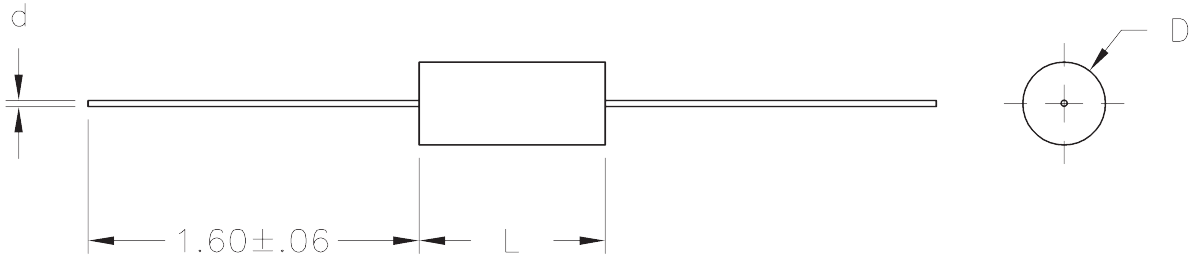
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Specifications

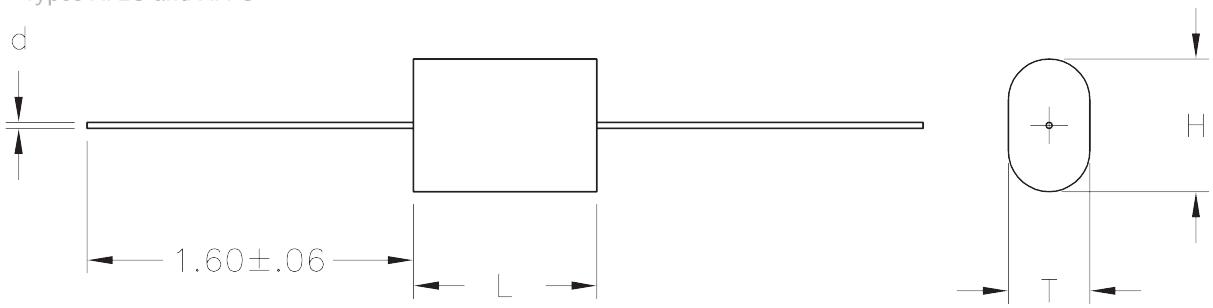
Capacitance Range:	.001 µF to 20.0 µF (Types AREM and AFEO) .0033 µF to 10.0 µF (Type ARPM) 0.47 µF to 20.0 µF (Types ARPS and AFPS)
Capacitance Tolerance:	±10% (K) Standard ±5% (J) Special ±2% (G) Special
Voltage Range:	63 VDC (40 VAC) to 630 VDC (220 VAC) (Types AREM and AFEO) 150 VDC (90 VAC) to 630 VDC (280 VAC) (Type ARPM) 300 VDC (220 VAC) to 600 VDC (300VAC) (Types ARPS and AFPS)
Dissipation Factor:	≤0.8% @ 1 kHz (Types AREM and AFEO) ≤0.1% @ 1 kHz (Types ARPM, ARPS, and AFPS)
Operating Temperature Range:	-55°C to +125°C. Full rated voltage @ 85°C, derating linearly to 50% rated voltage at 125°C (Types AREM and AFEO) -55°C to +105°C. Full rated voltage @ 85°C, derating 1.25%/°C from 85°C to 105°C (Types ARPM, ARPS and AFPS)
Dielectric Absorption:	0.30% typical (Types AREM and AFEO) 0.05% typical (Types ARPM, ARPS and AFPS)

Outline Drawings

Types ARPS, ARPM and AREM



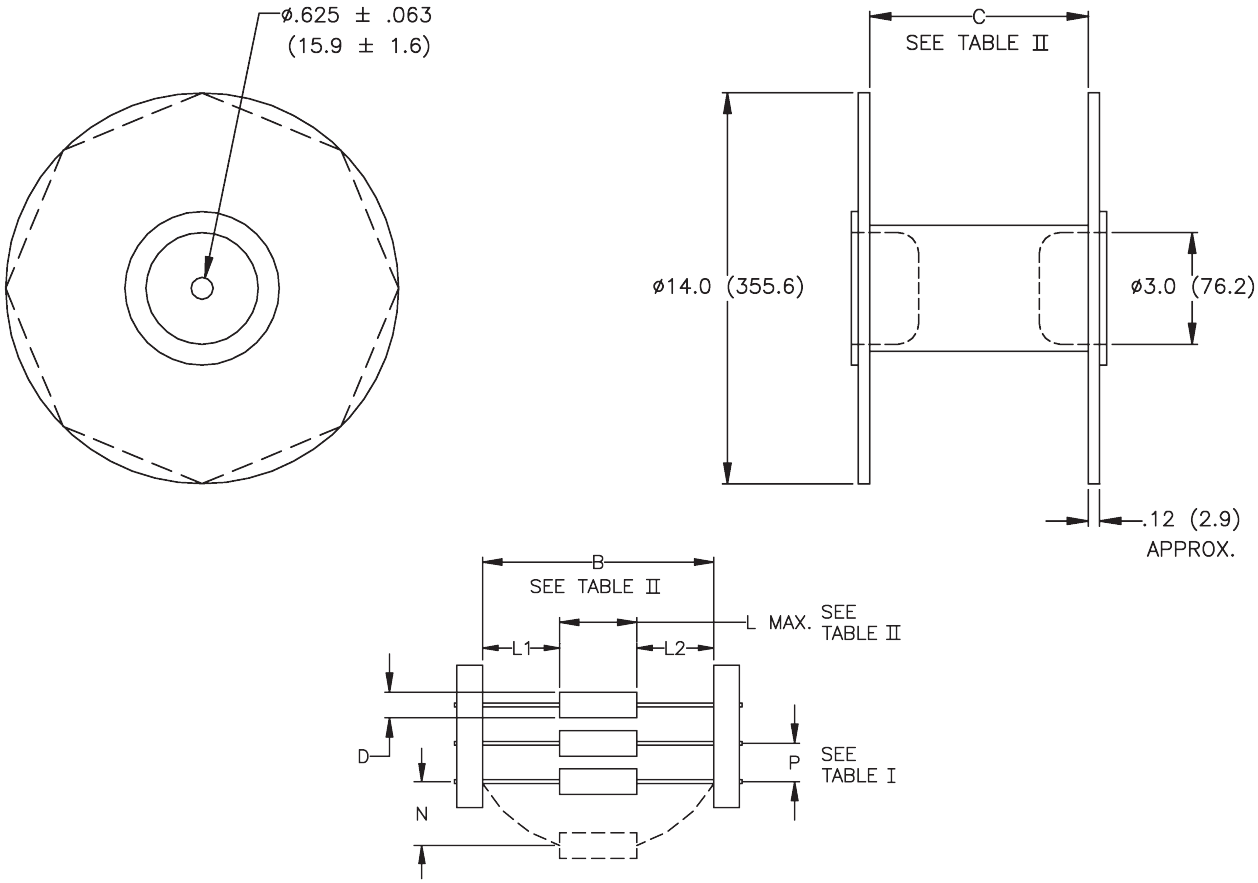
Types AFEO and AFPS



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Axial Leaded Tape & Reel Specification

According to EIA-296-E



|L1–L2| < .063 (1.6)

N < .047 (1.2)

Table I

D Inches (mm)	P Inches (mm)
≤.20 (5.0)	.20 (5.0) ± .02 (.50)
.20 (5.0) – 37 (9.5)	.40 (10.0) ± .02 (.50)
.38 (9.6) – .58 (14.7)	.60 (15.0) ± .02 (.50)

Table II

L Max Inches (mm)	Code*	B Inches (mm)	C Inches (mm)
≤.43 (11.0)	R1	2.06 (52.4) ± .06 (1.5)	2.95 (75)
.43 (11.0) < L ≤ .81 (20.5)	R2	2.50 (63.6) ± .06 (1.5)	3.39 (86)
>.81 (20.5)	R3	2.87 (73) ± .06 (1.5)	3.74 (95)

** According to EIA-296-E*

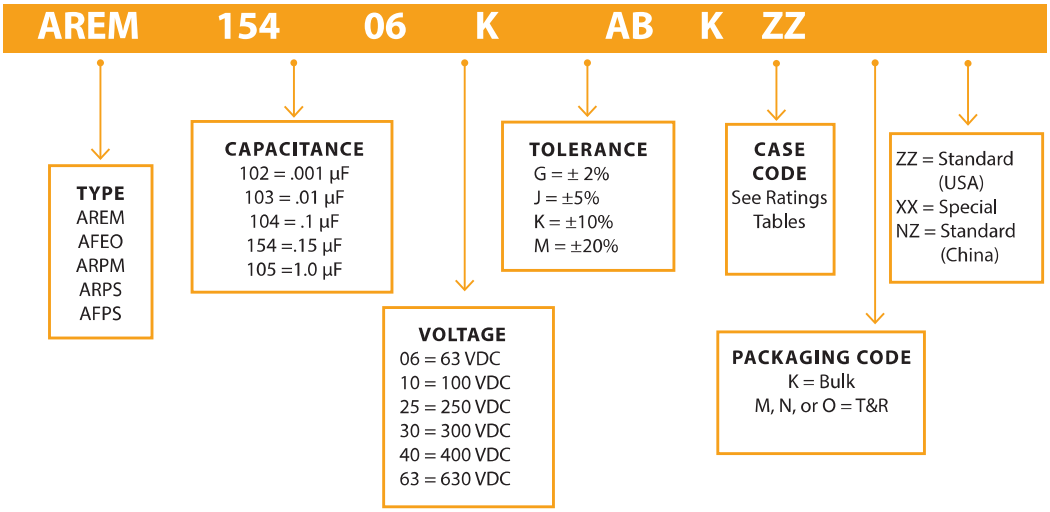
Table III

Component Diameter D Inches (mm)	Components per Reel
D ≤ .20 (5.0)	3000
.20 (5.0) < D ≤ .26 (6.5)	1200
.26 (6.5) < D ≤ .28 (7.0)	1100
.28 (7.0) < D ≤ .30 (7.5)	1000
.30 (7.5) < D ≤ .33 (8.5)	800
.33 (8.5) < D ≤ .41 (10.5)	500
.41 (10.5) < D ≤ .51 (13.0)	300
.51 (13.0) < D ≤ .58 (14.7)	250

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Part Numbering System
Round and Flat Axials

CDE's part numbering system is a descriptive part number made up of several different components such as voltage rating, capacitance, etc. The descriptors are explained here using AREM15406KABKZZ as a representative part number:



Type AFEO Flat Axial Metallized Polyester

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
100 VDC (63 VAC)				
5.0	AFEO50510KKRKZZ	.42 x .75 x .1.25 (10.7 x 19.1 x 31.8)	KR	.032 (.8)
250 VDC (160 VAC)				
1.0	AFEO10525KILKZZ	.30 x .55 x .94 (7.6 x 14.0 x 23.9)	IL	.032 (.8)
5.0	AFEO50525KPPKZZ	.49 x .98 x 1.25 (12.4 x 24.9 x 31.8)	PP	.032 (.8)
10.0	AFEO10625KXUKZZ	.55 x 1.05 x 1.76 (14.0 x 26.7 x 44.7)	XU	.032 (.8)
20.0	AFEO20625K2XKZZ	.73 x 1.25 x 2.26 (18.5 x 31.8 x 57.4)	2X	.032 (.8)
400 VDC (200 VAC)				
.047	AFEO47340KADKZZ	.20 x .35 x .56 (5.1 x 8.9 x 14.2)	AD	.025 (.6)
.22	AFEO22440KFLKZZ	.32 x .60 x .94 (8.1 x 15.2 x 23.9)	FL	.032 (.8)
1.0	AFEO10540KMRKZZ	.45 x.75 x 1.25 (11.4 x 19.1 x 31.8)	MR	.032 (.8)
3.0	AFEO30540KXUKZZ	.80 x 1.15 x 1.76 (16.2 x 27.4 x 57.4)	XU	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

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Type AREM Round Axial Metallized Polyester

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
63 VDC (40 VAC)				
1.0	AREM10506KGIKZZ	.315 x .807 (8 x 20.5)	GI	.032(.8)
100 VDC (63 VAC)				
1.5	AREM15510KKOKZZ	.394 x 1.10 (10 x 28)	KO	.032 (.8)
10.0	AREM10610K2PKZZ	.729 x 1.30 (18.5 x 33)	2P	.040 (1.02)
250 VDC (160 VAC)				
.10	AREM10425KDEKZZ	.256 x .650 (6 x 16.5)	DE	.025 (.6)
2.2	AREM22525KPOKZZ	.512 x 1.10 (13 x 28)	PO	.032 (.8)
15.0	AREM15625K4UKZZ	.965 x 1.81 (24.5 x 46)	4U	.040 (1.02)
400 VDC (200 VAC)				
1.0	AREM10540KRPKZZ	.531 x 1.30 (13 x 33)	RP	.032 (.8)
630 VDC (280 VAC)				
1.0	AREM10563KRPKZZ	.709 x 1.81 (18 x 46)	1U	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

Type ARPS Round Axial Metallized Polypropylene

For new design see type 730P

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	CURRENT (A)	WIRE DIAMETER (AWG)
300 VDC (220 VAC)					
1.0	ARPS10530KROKZZ	.50 x 1.05 (12.7 x 26.7)	RO	0.7	20
3.0	ARPS30530K1PKZZ	.71 x 1.25 (18.0 x 31.8)	1P	2.0	20
5.0	ARPS50530K2UKZZ	.74 x 1.75 (18.8 x 44.5)	2U	3.3	20
10.0	ARPS10630K4UKZZ	1.00 x 1.75 (25.4 x 44.5)	4U	6.6	20

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	ESR MAX 20 –100 kHz (mΩ)	CURRENT (A)	WIRE DIAMETER (AWG)
400 VDC (250 VAC)						
1.0	ARPS10540KCAKZZ	.50 x 1.25 (12.7 x 31.8)	CA	11	9	20
5.0	ARPS50540K3UKZZ	.86 x 1.75 (21.8 x 44.5)	3U	7	17	18
10.0	ARPS10640K9XKZZ	1.00 x 2.25 (25.4 x 57.2)	9X	7	18	18

Inquire regarding custom ratings, sizes, and configurations.

See Type 730P for New Designs

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Type ARPM Round Axial Metallized Polypropylene

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
150 VDC (90 VAC)				
.22	ARPM22415KDFKZZ	.256 x .718 (6.5 x 18.3)	DF	.025 (.6)
.33	ARPM33415KFFKZZ	.295 x .718 (7.5 x 18.3)	FF	.032 (.8)
1.0	ARPM10515KKKKZZ	.394 x .938 (10.0 x 23.8)	KK	.032 (.8)
3.0	ARPM30515KKKKZZ	.650 x .938 (16.5 x 23.8)	KK	.032 (.8)
250 VDC (200 VAC)				
.22	ARPM22425KGKKZZ	.315 x .938 (8.0 x 24.0)	GK	.032 (.8)
.33	ARPM33425KIKKZZ	.354 x .938 (9.0 x 24.0)	IK	.032 (.8)
.47	ARPM47425KLKKZZ	.413 x .938 (10.5 x 24.0)	LK	.032 (.8)
.68	ARPM68425KPKKZZ	.492 x .938 (12.5 x 24.0)	PK	.032 (.8)
3.0	ARPM30525KYUKZZ	.669 x 1.75 (17.0 x 44.5)	YU	.032 (.8)
10.0	ARPM10625K9XKZZ	1.00 x 2.25 (25.4 x 57.0)	9X	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

Type ARPM Round Axial Metallized Polypropylene (cont.)

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
400 VDC (250 VAC)				
.047	ARPM47340KDFKZZ	.256 x .718 (6.5 x 18.3)	DF	.032 (.8)
.10	ARPM10440KHFKZZ	.335 x .718 (8.5 x 18.3)	HF	.032 (.8)
.47	ARPM47440KSKKZZ	.511 x .938 (14.0 x 24.0)	SK	.032 (.8)
2.0	ARPM20540K1UKZZ	.709 x 1.75 (18.0 x 44.5)	1U	.032 (.8)
5.0	ARPM50540K8UKZZ	1.25 x 1.75 (31.8 x 44.5)	8U	.032 (.8)
630 VDC (280 VAC)				
.10	ARPM10363KCCKZZ	.236 x .562 (6.0 x 14.3)	CC	.025 (.6)

Inquire regarding custom ratings, sizes, and configurations.

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AFPS Flat Axial Metallized Polypropylene

For new design see type 761M

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	CURRENT (A)	WIRE DIAMETER (AWG)
300 VDC (220 VAC)					
3.0	AFPS30530KRPKZZ	.50 x .87 x 1.25 (12.7 x 22.1 x 31.8)	RP	2.0	20
10.0	AFPS10630KWWKZZ	.64 x 1.15 x 2.10 (16.3 x 29.2 x 53.3)	WW	6.6	20
12.0	AFPS12630K1WKZZ	.72 x 1.22 x 2.10 (18.3 x 40.0 x 53.3)	1W	8.0	20

Inquire regarding custom ratings, sizes, and configurations.

See Type 761M for New Designs

AFPS Flat Axial Metallized Polypropylene (cont.)

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	ESR MAX 20 –100 kHz (mΩ)	CURRENT (A)	WIRE DIAMETER (AWG)
400 VDC (250 VAC)						
2.0	AFPS20540K2PKZZ	.50 x .82 x 1.25 (12.7 x 20.8 x 31.8)	2P	9	10	20
3.3	AFPS33540KGBKZZ	.69 x .93 x 1.25 (17.5 x 23.6 x 31.8)	GB	7	15	20
4.7	AFPS47540KADKZZ	.64 x .95 x 1.75 (16.3 x 24.1 x 44.50	AD	7	17	18
5.0	AFPS50540KFDKZZ	.67 x 1.00 x 1.75 (17.0 x 25.4 x 44.5)	FD	7	17	18
10.0	AFPS10640KBEKZZ	.75 x 1.28 x 2.25 (19.1 x 32.5 x 57.2)	BE	7	18	18
600 VDC (300 VAC)						
1.0	AFPS10560KHBKZZ	.60 x .80 x 1.25 (15.2 x 20.3 x 31.8)	HB	8	9	20
5.0	AFPS50560KDEKZZ	.95 x 1.25 x 2.25 (24.1 x 31.8 x 57.2)	DE	7	18	18

Inquire regarding custom ratings, sizes, and configurations.

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MAR

Axial Leaded Polypropylene Film

with Aluminum Foil Electrodes



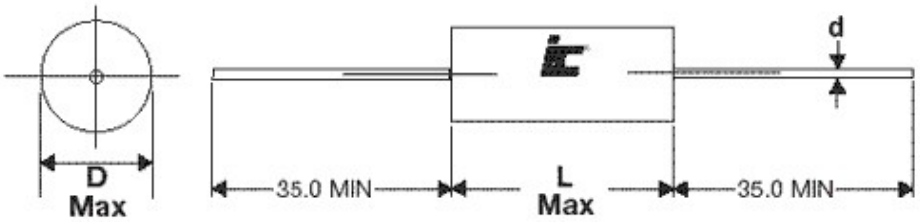
FEATURES	Small Size – Good dvdt – Medium Current
APPLICATIONS	General Purpose AC/DC – AC/DC Motor Controls – Switching Power Supplies

Operating Temperature Range		**-40°C to +85°C**					
Capacitance Tolerance		±10% at 1 kHz, 25°C ±5% optional					
Peak, AC voltage (50/60 Hz)	**WVDC**	**370**	**500**	**600**	**700**	**800**	
	SVDC	470	625	750	875	1050	
	VAC	160	275/320	320/400	400/440	400/500	
Dissipation Factor (MAX) Tan δ at 1 kHz and 25°C	**C≤2.5uF**	**2.5<C≤20uF**	**C>20uF**				
	.0007	.0012	.0016				
Insulation Resistance @25°C (<70% RH)for 1 minute at 100VDC applied	15000 MΩxuF						
Self Inductance	<1 nano-Henry per mm of body length and lead length						
Dielectric Strength	**Terminal to Terminal**	**Terminal to Case**					
	200% of VDC or VAC applied for 10 Seconds and 25°C	3kVAC (50/60 Hz) applied for 60 Seconds and 25°C					
Damp Heat	**56 days with no voltage applied at +40C and 93%(+2%) relative humidity**						
	Capacitance Change	<±2% of initially measured value					
	Dissipation Factor	≤.001 at 1 kHz for C>0.1uF					
	Insulation Resistance	>50% of minimum specified value					

Reliability											
WVDC	**370**		**500**		**600**		**700**		**800**	
VAC	160	200	275	320	320	400	400	440	400	500
Hours	10000	1000	10000	1000	10000	3000	10000	1000	10000	1000

Failure quota	500/10^9 component hours
Construction	metallized film
Coating	Flame Retardant Polyester tape wrap (UL510)with epoxy end fill(UL94V0)
Lead terminations	Lead free tinned copper leads

Special Order Options



WVDC	370			500			600			700			800		
uF	C≤5	5<C<10	C>10	C≤3.3	3.3<C<6.8	C>6.8	C<2.5	2.5<C≤5	C>4	C≤1.5	1.5,C<4	C>4	C<1.2	1.2<C<4	C>4
d	.8	1.0	1.2	.8	1.0	1.2	.8	1.0	1.2	.8	1.0	1.2	.8	1.0	1.2

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Axial Lead

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
370	1	105MARA04KG	50	2.5	23	11x29
370	1.5	155MARA04KG	50	3	18.5	13x29
370	2	205MARA04KG	50	4	15.5	15x29
370	2	205MARA04KJ	40	3.5	17.5	12.5x34
370	2.2	225MARA04KG	50	4	14.5	15x29
370	2.2	225MARA04KJ	40	3.5	16.5	13x34
370	2.5	255MARA04KG	50	4.5	13.4	16x29
370	2.5	255MARA04KJ	40	4	15.2	14x34
370	3	305MARA04KG	50	5	12.2	17x29
370	3	305MARA04KJ	40	4.5	13.7	15x34
370	3.3	335MARA04KJ	40	4.5	13	15.5x34
370	4	405MARA04KJ	40	5.5	11.7	17x34
370	4.7	475MARA04KJ	40	6	10.7	18x34
370	5	505MARA04KJ	40	6	10.2	18.5x34
370	6.8	685MARA04KJ	40	7.5	8.5	21x34
370	10	106MARA04KJ	40	10	6	24x32
370	10	106MARA04KN	25	9.5	7	21.5x46
370	15	156MARA04KN	25	10.5	5.7	25.5x46
370	20	206MARA04KN	25	13.5	5	29x46
370	22	226MARA04KN	25	14	4.7	30.5x46
370	25	256MARA04KN	25	14	4.4	32x46
370	30	306MARA04KR	20	14	4.5	31x55
370	30	306MARA04KS	15	14	5.3	29.5x59
370	33	336MARA04KR	20	14	4.3	32.5x55
370	33	336MARA04KS	15	14	5	31x59
370	40	406MARA04KR	20	14	3.9	36x55
370	40	406MARA04KS	15	14	4.5	33.5x59
370	50	506MARA04KR	20	14	3.5	40x55
370	50	506MARA04KS	15	14	3.9	37x59
370	60	606MARA04KS	15	14	3.5	40x59
500	0.68	684MARA03KG	60	2.5	25	11x29
500	1	105MARA03KG	60	3	20	12.5x29
500	1	105MARA03KJ	45	2.5	22.5	11.5x34
500	1.5	155MARA03KG	60	4	16	15x29
500	1.5	155MARA03KJ	50	3.5	18.2	13.5x34
500	2	205MARA03KG	60	4.5	13.7	16.5x29
500	2	205MARA03KJ	50	4	15.1	15x34
500	2.2	225MARA03KG	60	5	13	17.5x29
500	2.2	225MARA03KJ	50	4.5	14.2	15.5x34
500	2.5	255MARA03KJ	50	5	13.2	17x34
500	3	305MARA03KJ	50	5.5	11.9	18.5x34
500	3.3	335MARA03KJ	50	6	11.3	19x34
500	4	405MARA03KJ	50	7	10.2	21x34
500	4	405MARA03KN	35	6	12.3	17.5x46
500	4.7	475MARA03KJ	50	7.5	9.4	22.5x34
500	4.7	475MARA03KN	35	7	11.1	19x46
500	5	505MARA03KJ	50	7.5	9.1	23x34
500	5	505MARA03KN	35	7	10.5	19.5x46
500	6.8	685MARA03KN	35	8.5	8.7	22x46
500	10	106MARA03KN	35	11	6.7	26x46
500	10	106MARA03KR	25	10.5	7.4	23.5x55
500	12	126MARA03KN	35	12	6.1	28x46
500	12	126MARA03KR	25	11.5	6.7	25x55
500	15	156MARA03KN	35	13.5	5.4	31x46
500	15	156MARA03KR	25	13	6	28x55
500	15	156MARA03KS	20	12.5	6.8	26.5x59
500	20	206MARA03KR	25	14	5.1	31.5x55
500	20	206MARA03KS	20	14	5.8	30x59

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
500	22	226MARA03KR	25	14	4.8	33x55
500	22	226MARA03KS	20	14	5.4	31x59
500	25	256MARA03KR	25	14	4.5	25x55
500	25	256MARA03KS	20	14	5	33x59
500	30	306MARA03KR	25	14	4.1	38x55
500	30	306MARA03KS	20	14	4.5	36x59
500	33	336MARA03KR	25	14	3.9	39.5x55
500	33	336MARA03KS	20	14	4.3	37.5x59
500	35	356MARA03KR	25	14	3.8	41x55
500	35	356MARA03KS	20	14	4.2	38.5x59
500	40	406MARA03KS	20	14	3.9	41x59
600	0.47	474MARA02KG	90	2.5	24	11x29
600	0.68	684MARA02KG	90	3	19.5	13x29
600	0.68	684MARA02KJ	70	3	21.5	12x34
600	1	105MARA02KG	90	4	15.5	15x29
600	1	105MARA02KJ	70	3.5	17.5	13x34
600	1.5	155MARA02KG	90	5	12.3	17.5x29
600	1.5	155MARA02KJ	70	4.5	14	15.5x34
600	2	205MARA02KJ	70	5.5	11.9	17.5x34
600	2.2	225MARA02KJ	70	6	11.3	18.5x34
600	2.5	255MARA02KJ	70	6	10.5	19x34
600	3	305MARA02KJ	70	7	9.4	21x34
600	3.3	335MARA02KJ	70	7.5	8.9	22x34
600	3.3	335MARA02KN	50	7	10.1	19x46
600	4	405MARA02KJ	70	8.5	7.9	24x32
600	4	405MARA02KN	50	8	9.1	20.5x46
600	4.7	475MARA02KN	50	9	7.7	22x46
600	5	505MARA02KN	50	9	7.5	22.5x46
600	6.8	685MARA02KN	50	11	6.4	26x46
600	10	106MARA02KN	50	13.5	5.4	31x46
600	10	106MARA02KR	35	13.5	6.3	27x55
600	10	106MARA02KS	25	11.5	7.1	26x59
600	12	126MARA02KR	35	14	5.7	29.5x55
600	12	126MARA02KS	25	13	6.5	29x59
600	15	156MARA02KR	35	14	5	33x55
600	15	156MARA02KS	25	14	5.6	31x59
600	20	206MARA02KR	35	14	4.3	37x55
600	20	206MARA02KS	25	14	4.7	35x59
600	22	226MARA02KR	35	14	4.1	39x55
600	22	226MARA02KS	25	14	4.5	37x59
600	25	256MARA02KR	35	14	3.8	41.5x55
600	25	256MARA02KS	25	14	4.2	39x59
700	0.33	334MARA06KG	105	2.5	25	11.5x29
700	0.47	474MARA06KG	105	3	20.5	13x29
700	0.68	684MARA06KG	105	4	16.8	15x29
700	0.68	684MARA06KJ	85	3.5	18.8	13.5x34
700	1	105MARA06KJ	85	4.5	15.4	15.5x34
700	1.5	155MARA06KJ	85	5.5	12.5	18.5x34
700	2	205MARA06KJ	85	6.5	10.6	21x34
700	2	205MARA06KN	60	6	12.5	18x46
700	2.2	225MARA06KJ	85	7	10.1	22x34
700	2.2	225MARA06KN	60	6.5	11.9	19x46
700	2.5	255MARA06KJ	85	7.5	9.4	23x34
700	2.5	255MARA06KN	60	7	11.1	20x46
700	3	305MARA06KN	60	7.5	10.1	21.5x46
700	3.3	335MARA06KN	60	8	9.6	22.5x46
700	4	405MARA06KN	60	9	8.7	24.5x46
700	4.7	475MARA06KN	60	10.5	7.8	26.5x46

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MAR

Axial Lead

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
700	5	505MARA06KN	60	10.5	7.3	27x46
700	5	505MARA06KR	45	9.5	8.6	23.5x55
700	5	505MARA06KS	35	9.5	9.5	22.5x59
700	6.8	685MARA06KN	60	12.5	6.3	30.5x46
700	6.8	685MARA06KR	45	11.5	7.4	27x55
700	6.8	685MARA06KS	35	11	8.2	25.5x59
700	10	106MARA06KR	45	14	6.1	32x55
700	10	106MARA06KS	35	13.5	6.8	30x59
700	12	126MARA06KR	45	14	5.5	35x55
700	12	126MARA06KS	35	14	6.1	33x59
700	15	156MARA06KR	45	14	4.9	36.5x55
700	15	156MARA06KS	35	14	5.4	26.5x59
700	18	186MARA06KR	45	14	4.5	41.5x55
700	18	186MARA06KS	35	14	4.9	39.5x59
700	20	206MARA06KS	35	14	4.7	41.5x59
800	0.22	224MARA01KG	120	2	29	11x29
800	0.33	334MARA01KG	120	2.5	23.5	11.5x29
800	0.47	474MARA01KG	120	3.5	19	14.5x29
800	0.47	474MARA01KJ	100	3	22.5	12.5x34
800	0.68	684MARA01KG	120	4	15.8	16.5x29
800	0.68	684MARA01KJ	100	4	18	14x34
800	1	105MARA01KJ	100	5	14.8	17.5x34
800	1.2	125MARA01KJ	100	5.5	13.4	19x34
800	1.5	155MARA01KJ	100	6	11.5	20x34

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
800	2	205MARA01KJ	100	7.5	9.8	23.5x34
800	2	205MARA01KN	65	7	11.5	20x46
800	2.2	225MARA01KJ	100	7.5	9.3	24.5x34
800	2.2	225MARA01KN	65	7.5	10.7	21x46
800	2.5	255MARA01KN	65	8	10	22x46
800	3	305MARA01KN	65	9	9	24x46
800	3.3	335MARA01KN	65	9.5	8.5	25x46
800	4	405MARA01KN	65	10.5	7.5	27x46
800	4	405MARA01KR	50	10	8.8	24x55
800	4	405MARA01KS	40	9.5	9.7	22.5x59
800	4.7	475MARA01KN	65	12	6.6	29x46
800	4.7	475MARA01KR	50	11	7.7	26.5x55
800	4.7	475MARA01KS	40	10.5	8.6	24.5x59
800	5	505MARA01KN	65	12.5	6.3	29.5x46
800	5	505MARA01KR	50	11.5	7.4	27x55
800	5	505MARA01KS	40	11	8.3	25x59
800	6.8	685MARA01KR	50	13	6.5	30x55
800	6.8	685MARA01KS	40	12.5	7.3	28.5x59
800	10	106MARA01KR	50	14	5.4	35x55
800	10	106MARA01KS	40	14	6.1	33.5x59
800	12.5	126MARA01KR	50	14	4.9	40.5x55
800	12.5	126MARA01KS	40	14	5.5	37.5x59
800	15	156MARA01KS	40	14	5.1	41x59

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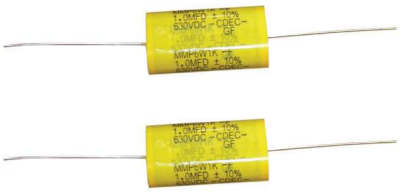
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Type MMP Polyester Film Capacitors

Metallized Oval, Axial Leads

Low Profile Circuit Cards

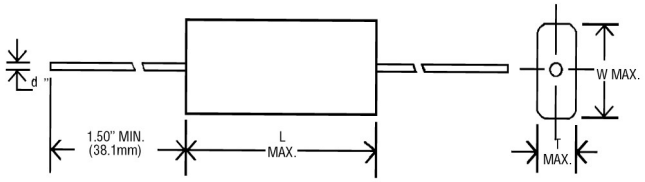


Type MMP axial-leaded, metallized polyester capacitors are ideal when height is at a premium. Non-inductive winding and self-healing capabilities provide stability and long life.

RoHS Compliant

Specifications

Voltage Range: 100 to 630 Vdc
Capacitance Range: .01 to 10 µF
Capacitance Tolerance: ±10% (K) standard
±5% (J) optional
Operating Temperature Range: –55 °C to 125 °C*
*Full-rated voltage at 85 °C–Derate linearly to 50%-rated voltage at 125 °C
Dielectric Strength: 175% (1 minute)
Dissipation Factor: 1% Max. (25 °C, 1 kHz)
Insulation Resistance: 5,000 MΩ x µF
10,000 MΩ Min.
Life Test: 1,000 Hours at 85 °C at 125% Rated Voltage



Ratings and Dimensions

Cap.	Catalog	T		W		L		d		dV/dt
(µF)	Number	Inches	(mm)	Inches	(mm)	Inches	(mm)	Inches	(mm)	V/µs
100 Vdc										
0.15	MMP1P15K-F	0.197	(5.0)	0.354	(9.0)	0.670	(17.0)	0.024	(0.6)	20
0.22	MMP1P22K-F	0.236	(6.0)	0.394	(10.0)	0.670	(17.0)	0.024	(0.6)	20
0.33	MMP1P33K-F	0.236	(6.0)	0.433	(11.0)	0.670	(17.0)	0.024	(0.6)	20
0.47	MMP1P47K-F	0.236	(6.0)	0.394	(10.0)	0.906	(23.0)	0.024	(0.6)	12
0.68	MMP1P68K-F	0.256	(6.5)	0.433	(11.0)	0.906	(23.0)	0.024	(0.6)	12
1.00	MMP1W1K-F	0.276	(7.0)	0.492	(12.5)	0.906	(23.0)	0.032	(0.8)	12
1.50	MMP1W1P5K-F	0.276	(7.0)	0.492	(12.5)	1.063	(27.0)	0.032	(0.8)	8
2.20	MMP1W2P2K-F	0.354	(9.0)	0.630	(16.0)	1.063	(27.0)	0.032	(0.8)	8
3.30	MMP1W3P3K-F	0.433	(11.0)	0.729	(18.5)	1.063	(27.0)	0.032	(0.8)	8
4.70	MMP1W4P7K-F	0.354	(9.0)	0.729	(18.5)	1.378	(35.0)	0.032	(0.8)	6
6.80	MMP1W6P8K-F	0.512	(13.0)	0.906	(23.0)	1.378	(35.0)	0.032	(0.8)	6
10.00	MMP1W10K-F	0.630	(16.0)	1.044	(26.5)	1.378	(35.0)	0.032	(0.8)	6
250 Vdc										
0.10	MMP2P1K-F	0.217	(5.5)	0.335	(8.5)	0.670	(17.0)	0.024	(0.6)	28
0.15	MMP2P15K-F	0.217	(5.5)	0.374	(9.5)	0.670	(17.0)	0.024	(0.6)	28
0.22	MMP2P22K-F	0.197	(5.0)	0.354	(9.0)	0.906	(23.0)	0.024	(0.6)	17
0.33	MMP2P33K-F	0.217	(5.5)	0.414	(10.5)	0.906	(23.0)	0.024	(0.6)	17
0.47	MMP2P47K-F	0.276	(7.0)	0.433	(11.0)	0.985	(25.0)	0.032	(0.8)	12

Type MMP Polyester Film Capacitors

Cap.	Catalog	T		W		L		d		dV/dt
(µF)	Number	Inches	(mm)	Inches	(mm)	Inches	(mm)	Inches	(mm)	V/µs
				250 Vdc						
0.680	MMP2P68K-F	0.256	(6.5)	0.492	(12.5)	1.103	(28.0)	0.032	(0.8)	10
1.000	MMP2W1K-F	0.295	(7.5)	0.532	(13.5)	1.103	(28.0)	0.032	(0.8)	10
1.500	MMP2W1P5K-F	0.335	(8.5)	0.591	(15.0)	1.260	(32.0)	0.032	(0.8)	10
2.200	MMP2W2P2K-F	0.394	(10.0)	0.709	(18.0)	1.378	(35.0)	0.032	(0.8)	8
3.300	MMP2W3P3K-F	0.492	(12.5)	0.866	(22.0)	1.457	(37.0)	0.032	(0.8)	8
4.700	MMP2W4P7K-F	0.630	(16.0)	0.985	(25.0)	1.694	(43.0)	0.032	(0.8)	6
6.800	MMP2W6P8K-F	0.748	(19.0)	1.063	(27.0)	1.575	(40.0)	0.032	(0.8)	8
10.000	MMP2W10K-F	0.630	(16.0)	1.063	(27.0)	1.930	(49.0)	0.032	(0.8)	6
				400 Vdc						
0.022	MMP4S22K-F	0.197	(5.0)	0.354	(9.0)	0.670	(17.0)	0.024	(0.6)	45
0.033	MMP4S33K-F	0.236	(6.0)	0.394	(10.0)	0.670	(17.0)	0.024	(0.6)	45
0.047	MMP4S47K-F	0.236	(6.0)	0.394	(10.0)	0.670	(17.0)	0.024	(0.6)	45
0.068	MMP4S68K-F	0.256	(6.5)	0.394	(10.0)	0.670	(17.0)	0.024	(0.6)	45
0.100	MMP4P1K-F	0.256	(6.5)	0.433	(11.0)	0.748	(19.0)	0.024	(0.6)	27
0.150	MMP4P15K-F	0.256	(6.5)	0.453	(11.5)	0.866	(22.0)	0.024	(0.6)	27
0.220	MMP4P22K-F	0.295	(7.5)	0.532	(13.5)	0.985	(25.0)	0.024	(0.6)	15
0.330	MMP4P33K-F	0.315	(8.0)	0.571	(14.5)	1.063	(27.0)	0.032	(0.8)	15
0.470	MMP4P47K-F	0.354	(9.0)	0.610	(15.5)	1.063	(27.0)	0.032	(0.8)	15
0.680	MMP4P68K-F	0.354	(9.0)	0.630	(16.0)	1.378	(35.0)	0.032	(0.8)	14
1.000	MMP4W1K-F	0.414	(10.5)	0.729	(18.5)	1.378	(35.0)	0.032	(0.8)	14
1.500	MMP4W1P5K-F	0.492	(12.5)	0.827	(21.0)	1.378	(35.0)	0.032	(0.8)	14
2.200	MMP4W2P2K-F	0.551	(14.0)	0.906	(23.0)	1.575	(40.0)	0.032	(0.8)	12
3.300	MMP4W3P3K-F	0.670	(17.0)	1.024	(26.0)	1.575	(40.0)	0.032	(0.8)	12
4.700	MMP4W4P7K-F	0.827	(21.0)	1.182	(30.0)	1.575	(40.0)	0.032	(0.8)	12
				630 Vdc						
0.010	MMP6S1K-F	0.197	(5.0)	0.354	(9.0)	0.670	(17.0)	0.024	(0.6)	72
0.015	MMP6S15K-F	0.236	(6.0)	0.394	(10.0)	0.670	(17.0)	0.024	(0.6)	72
0.022	MMP6S22K-F	0.236	(6.0)	0.394	(10.0)	0.670	(17.0)	0.024	(0.6)	72
0.033	MMP6S33K-F	0.236	(6.0)	0.394	(10.0)	0.670	(17.0)	0.024	(0.6)	72
0.047	MMP6S47K-F	0.236	(6.0)	0.394	(10.0)	0.906	(23.0)	0.024	(0.6)	43
0.068	MMP6S68K-F	0.276	(7.0)	0.433	(11.0)	0.906	(23.0)	0.024	(0.6)	43
0.100	MMP6P1K-F	0.315	(8.0)	0.512	(13.0)	0.906	(23.0)	0.032	(0.8)	43
0.150	MMP6P15K-F	0.394	(10.0)	0.591	(15.0)	0.906	(23.0)	0.032	(0.8)	43
0.220	MMP6P22K-F	0.354	(9.0)	0.591	(15.0)	1.063	(27.0)	0.032	(0.8)	28
0.330	MMP6P33K-F	0.394	(10.0)	0.670	(17.0)	1.063	(27.0)	0.032	(0.8)	28
0.470	MMP6P47K-F	0.473	(12.0)	0.689	(17.5)	1.378	(35.0)	0.032	(0.8)	21
0.680	MMP6P68K-F	0.433	(11.0)	0.748	(19.0)	1.378	(35.0)	0.032	(0.8)	21
1.000	MMP6W1K-F	0.512	(13.0)	0.866	(22.0)	1.536	(39.0)	0.032	(0.8)	21
1.500	MMP6W1P5K-F	0.670	(17.0)	1.063	(27.0)	1.536	(39.0)	0.032	(0.8)	21
2.200	MMP6W2P2K-F	0.748	(19.0)	1.103	(28.0)	1.930	(49.0)	0.032	(0.8)	12

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Type MMWA, Polyester Film Capacitors

Metallized Axial Leads



High Capacitance, High Voltage

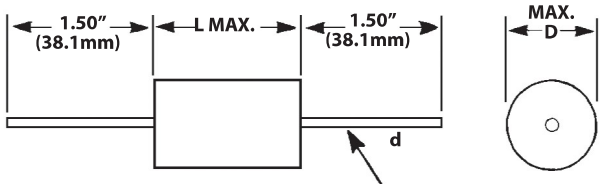
Type MMWA axial-leaded, metallized polyester film capacitors incorporate compact, non-inductive extended windings with epoxy end seals to offer excellent moisture resistance and capacitance stability over the operating temperature range. Metallized polyester provides self-healing characteristics that help prevent permanent shorting due to high voltage transients.

RoHS Compliant

Specifications

Voltage Range: 50-1,000 Vdc
Capacitance Range: .01-10 µF
Capacitance Tolerance: ±10% (K) standard
±5% (J) optional
Operating Temperature Range: -55°C to 125°C*
*Full-rated voltage at 85°C–Derate linearly to 50%-rated voltage at 125°C

Dielectric Strength: 200% (1 minute)
Dissipation Factor: .75% Max. (25°C, 1 kHz)
Insulation Resistance: 10,000 MΩ x µF
30,000 M Ω Min.
Life Test: 1000 Hours at 85°C at 125% Rated Voltage



TINNED COPPER-CLAD STEEL LEADS

NOTE: Other capacitance values, sizes and performance specifications are available. Contact us.

Ratings and Dimensions — Normally Stocked

Cap. (µF)	Catalog Part Number	D Inches	D (mm)	L Inches	L (mm)	d Inches	d (mm)	dV/dt V/µs
50 Vd								
0.100	MMWA05P1K-F	0.220	(5.6)	0.562	(14.3)	0.020	(0.5)	36
0.150	MMWA05P15K-F	0.210	(5.3)	0.687	(17.4)	0.020	(0.5)	20
0.220	MMWA05P22K-F	0.240	(6.1)	0.687	(17.4)	0.020	(0.5)	20
0.330	MMWA05P33K-F	0.280	(7.1)	0.687	(17.4)	0.024	(0.6)	20
0.470	MMWA05P47K-F	0.320	(8.1)	0.687	(17.4)	0.024	(0.6)	20
0.680	MMWA05P68K-F	0.290	(7.4)	1.000	(25.4)	0.024	(0.6)	9
1.000	MMWA05W1K-F	0.335	(8.5)	1.000	(25.4)	0.024	(0.6)	9
1.500	MMWA05W1P5K-F	0.355	(9.0)	1.250	(31.7)	0.024	(0.6)	9
2.000	MMWA05W2K-F	0.400	(10.2)	1.250	(31.7)	0.024	(0.6)	9
3.000	MMWA05W3K-F	0.475	(12.1)	1.250	(31.7)	0.024	(0.6)	9
4.000	MMWA05W4K-F	0.505	(12.8)	1.375	(34.9)	0.024	(0.6)	5
5.000	MMWA05W5K-F	0.525	(13.3)	1.500	(38.1)	0.024	(0.6)	4
6.000	MMWA05W6K-F	0.585	(14.9)	1.500	(38.1)	0.032	(0.8)	4
7.000	MMWA05W7K-F	0.625	(15.9)	1.500	(38.1)	0.032	(0.8)	4
8.000	MMWA05W8K-F	0.669	(17.0)	1.500	(38.1)	0.040	(1.0)	4
9.000	MMWA05W9K-F	0.700	(17.8)	1.500	(38.1)	0.040	(1.0)	4
10.000	MMWA05W10K-F	0.670	(17.0)	1.750	(44.4)	0.040	(1.0)	4

Cap. (µF)	Catalog Part Number	D Inches	D (mm)	L Inches	L (mm)	d Inches	d (mm)	dV/dt V/µs
100 Vdc								
0.010	MMWA1S1K-F	0.197	(5.0)	0.562	(14.3)	0.020	(0.5)	36
0.015	MMWA1S15K-F	0.197	(5.0)	0.562	(14.3)	0.020	(0.5)	36
0.022	MMWA1S22K-F	0.197	(5.0)	0.562	(14.3)	0.020	(0.5)	36
0.033	MMWA1S33K-F	0.197	(5.0)	0.562	(14.3)	0.020	(0.5)	36
0.047	MMWA1S47K-F	0.217	(5.5)	0.562	(14.3)	0.020	(0.5)	36
0.068	MMWA1S68K-F	0.217	(5.5)	0.562	(14.3)	0.020	(0.5)	36
0.100	MMWA1P1K-F	0.236	(6.0)	0.562	(14.3)	0.020	(0.5)	36
0.150	MMWA1P15K-F	0.236	(6.0)	0.687	(17.4)	0.020	(0.5)	20
0.220	MMWA1P22K-F	0.256	(6.5)	0.687	(17.4)	0.020	(0.5)	20
0.330	MMWA1P33K-F	0.295	(7.5)	0.687	(17.4)	0.024	(0.6)	20
0.470	MMWA1P47K-F	0.320	(8.1)	0.687	(17.4)	0.024	(0.6)	20
0.680	MMWA1P68K-F	0.320	(8.1)	1.000	(25.4)	0.024	(0.6)	9
1.000	MMWA1W1K-F	0.374	(9.5)	1.000	(25.4)	0.024	(0.6)	9
1.500	MMWA1W1P5K-F	0.374	(9.5)	1.250	(31.7)	0.024	(0.6)	9
2.000	MMWA1W2K-F	0.400	(10.2)	1.250	(31.7)	0.024	(0.6)	9
3.000	MMWA1W3K-F	0.475	(12.1)	1.250	(31.7)	0.024	(0.6)	9
4.000	MMWA1W4K-F	0.505	(12.8)	1.375	(34.9)	0.032	(0.8)	5

Cap.	Catalog	D		L		d		dV/dt
(µF)	Part Number	Inches	(mm)	Inches	(mm)	Inches	(mm)	V/µs
5.000	MMWA1W5K-F	0.525	(13.3)	1.500	(38.1)	0.032	(0.8)	4
6.000	MMWA1W6K-F	0.585	(14.9)	1.500	(38.1)	0.032	(0.8)	4
7.000	MMWA1W7K-F	0.625	(15.9)	1.500	(38.1)	0.032	(0.8)	4
8.000	MMWA1W8K-F	0.669	(17.0)	1.500	(38.1)	0.040	(1.0)	4
9.000	MMWA1W9K-F	0.700	(17.8)	1.500	(38.1)	0.040	(1.0)	4
10.000	MMWA1W10K-F	0.768	(19.5)	1.750	(44.4)	0.040	(1.0)	3
		200/250 Vdc						
0.010	MMWA2S1K-F	0.197	(5.0)	0.562	(14.3)	0.020	(0.5)	52
0.015	MMWA2S15K-F	0.197	(5.0)	0.562	(14.3)	0.020	(0.5)	52
0.022	MMWA2S22K-F	0.197	(5.0)	0.562	(14.3)	0.020	(0.5)	52
0.033	MMWA2S33K-F	0.197	(5.0)	0.562	(14.3)	0.020	(0.5)	52
0.047	MMWA2S47K-F	0.217	(5.5)	0.562	(14.3)	0.020	(0.5)	52
0.068	MMWA2S68K-F	0.200	(5.1)	0.687	(17.4)	0.020	(0.5)	29
0.100	MMWA2P1K-F	0.240	(6.1)	0.687	(17.4)	0.020	(0.5)	29
0.150	MMWA2P15K-F	0.276	(7.0)	0.687	(17.4)	0.024	(0.6)	29
0.220	MMWA2P22K-F	0.310	(7.9)	0.687	(17.4)	0.024	(0.6)	29
0.330	MMWA2P33K-F	0.365	(9.3)	0.728	(18.5)	0.024	(0.6)	29
0.470	MMWA2P47K-F	0.374	(9.5)	1.000	(25.4)	0.024	(0.6)	14
0.680	MMWA2P68K-F	0.365	(9.3)	1.000	(25.4)	0.024	(0.6)	14
1.000	MMWA2W1K-F	0.430	(10.9)	1.062	(27.0)	0.024	(0.6)	14
1.500	MMWA2W1P5K-F	0.465	(11.8)	1.250	(31.7)	0.024	(0.6)	14
2.000	MMWA2W2K-F	0.525	(13.3)	1.250	(31.7)	0.032	(0.8)	14
3.000	MMWA2W3K-F	0.555	(14.1)	1.500	(38.1)	0.032	(0.8)	6
3.500	MMWA2W3P5K-F	0.610	(15.5)	1.500	(38.1)	0.032	(0.8)	6
4.000	MMWA2W4K-F	0.590	(15.0)	1.750	(44.4)	0.032	(0.8)	5
5.000	MMWA2W5K-F	0.669	(17.0)	1.750	(44.4)	0.040	(1.0)	5
6.000	MMWA2W6K-F	0.705	(17.9)	1.750	(44.4)	0.040	(1.0)	5
		400 Vdc						
0.010	MMWA4S1K-F	0.217	(5.5)	0.562	(14.3)	0.020	(0.5)	82
0.015	MMWA4S15K-F	0.217	(5.5)	0.562	(14.3)	0.020	(0.5)	82
0.022	MMWA4S22K-F	0.236	(6.0)	0.562	(14.3)	0.020	(0.5)	82
0.033	MMWA4S33K-F	0.220	(5.6)	0.687	(17.4)	0.020	(0.5)	46
0.047	MMWA4S47K-F	0.276	(7.0)	0.687	(17.4)	0.020	(0.5)	46
0.068	MMWA4S68K-F	0.280	(7.1)	0.687	(17.4)	0.024	(0.6)	46
0.100	MMWA4P1K-F	0.320	(8.1)	0.687	(17.4)	0.024	(0.6)	46
0.150	MMWA4P15K-F	0.290	(7.4)	1.000	(25.4)	0.024	(0.6)	22
0.220	MMWA4P22K-F	0.335	(8.5)	1.000	(25.4)	0.024	(0.6)	22
0.330	MMWA4P33K-F	0.394	(10.0)	1.187	(30.1)	0.024	(0.6)	22
0.470	MMWA4P47K-F	0.433	(11.0)	1.187	(30.1)	0.024	(0.6)	22

Cap.	Catalog	D		L		d		dV/dt
(µF)	Part Number	Inches	(mm)	Inches	(mm)	Inches	(mm)	V/µs
0.680	MMWA4P68K-F	0.433	(11.0)	1.500	(38.1)	0.024	(0.6)	10
1.000	MMWA4W1K-F	0.470	(11.9)	1.750	(44.4)	0.024	(0.6)	8
1.500	MMWA4W1P5K-F	0.570	(14.5)	1.750	(44.4)	0.032	(0.8)	8
2.000	MMWA4W2K-F	0.669	(17.0)	1.750	(44.4)	0.040	(1.0)	8
3.000	MMWA4W3K-F	0.695	(17.6)	2.125	(54.0)	0.040	(1.0)	6
3.500	MMWA4W3P5K-F	0.745	(18.9)	2.125	(54.0)	0.040	(1.0)	6
4.000	MMWA4W4K-F	0.790	(20.1)	2.125	(54.0)	0.040	(1.0)	6
5.000	MMWA4W5K-F	0.870	(22.1)	2.125	(54.0)	0.040	(1.0)	6
		600/630 Vdc						
0.010	MMWA6S1K-F	0.217	(5.5)	0.687	(17.4)	0.020	(0.5)	69
0.015	MMWA6S15K-F	0.236	(6.0)	0.687	(17.4)	0.020	(0.5)	69
0.022	MMWA6S22K-F	0.276	(7.0)	0.750	(19.0)	0.020	(0.5)	69
0.033	MMWA6S33K-F	0.270	(6.9)	0.750	(19.0)	0.024	(0.6)	69
0.047	MMWA6S47K-F	0.305	(7.7)	0.750	(19.0)	0.024	(0.6)	69
0.068	MMWA6S68K-F	0.335	(8.5)	1.000	(25.4)	0.024	(0.6)	32
0.100	MMWA6P1K-F	0.374	(9.5)	1.000	(25.4)	0.024	(0.6)	32
0.150	MMWA6P15K-F	0.413	(10.5)	1.187	(30.1)	0.024	(0.6)	32
0.220	MMWA6P22K-F	0.430	(10.9)	1.250	(31.7)	0.024	(0.6)	32
0.330	MMWA6P33K-F	0.480	(12.2)	1.250	(31.7)	0.024	(0.6)	32
0.470	MMWA6P47K-F	0.470	(11.9)	1.750	(44.4)	0.024	(0.6)	12
0.680	MMWA6P68K-F	0.570	(14.5)	1.750	(44.4)	0.032	(0.8)	12
1.000	MMWA6W1K-F	0.685	(17.4)	1.750	(44.4)	0.040	(1.0)	12
2.000	MMWA6W2K-F	0.805	(20.4)	2.250	(57.1)	0.040	(1.0)	10
3.000	MMWA6W3K-F	0.945	(24.0)	2.250	(57.1)	0.040	(1.0)	10
		1000 Vdc						
0.010	MMWA10S1K-F	0.240	(6.1)	0.875	(22.2)	0.020	(0.5)	220
0.015	MMWA10S15K-F	0.275	(7.0)	0.875	(22.2)	0.024	(0.6)	220
0.022	MMWA10S22K-F	0.320	(8.1)	0.875	(22.2)	0.024	(0.6)	220
0.033	MMWA10S33K-F	0.380	(9.6)	0.875	(22.2)	0.024	(0.6)	220
0.047	MMWA10S47K-F	0.335	(8.5)	1.062	(27.0)	0.024	(0.6)	120
0.068	MMWA10S68K-F	0.410	(10.4)	1.125	(28.6)	0.024	(0.6)	120
0.100	MMWA10P1K-F	0.485	(12.3)	1.125	(28.6)	0.024	(0.6)	120
0.150	MMWA10P15K-F	0.595	(15.1)	1.125	(28.6)	0.032	(0.8)	120
0.220	MMWA10P22K-F	0.605	(15.4)	1.312	(33.3)	0.032	(0.8)	85
0.330	MMWA10P33K-F	0.640	(16.3)	1.500	(38.1)	0.032	(0.8)	50
0.470	MMWA10P47K-F	0.750	(19.0)	1.500	(38.1)	0.040	(1.0)	50
0.680	MMWA10P68K-F	0.810	(20.6)	1.750	(44.4)	0.040	(1.0)	45
1.000	MMWA10W1K-F	0.880	(22.3)	1.937	(49.2)	0.040	(1.0)	40

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MPW

Metallized Polypropylene Film Capacitors

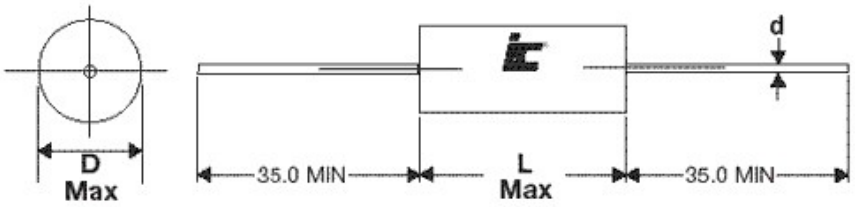
Axial Leaded



FEATURES	Low ESR - High AC/Ripple Current - Stable with frequency and temperature
APPLICATIONS	Switching Power Supplies – General Purpose – AC Applications (Not across the Line)

Operating Temperature Range	**-55°C to +105°C**					
Capacitance Tolerance	±10% at 1 kHz, 25°C ±5% optional					
AC Voltage	**WVDC**	**160**	**250**	**400**	**630**	
	VAC	90	200	220	250	
	For T>+85°C , The voltage must be decreased by 1.5% per °C					
Dissipation Factor (MAX) 1 kHz, 25°C	**0.001**					
Insulation Resistance @25°C (<70% RH)for 1 minute at 100VDC applied	**Capacitance**	**Insulation Resistance**				
	≤0.33µF	30000 MΩ				
	>0.33µF	10000 MΩxµF				
Load Life	**2000 Hours, +85C with 125% of rated voltage**					
	Capacitance Change	≤3% of initially measured value				
	Dissipation Factor	≤0.001 at 1kHz and 25°C				
	Insulation Resistance	≥50% of maximum specified value				
Damp Heat test	**56 days at40°C with 90 to 95%RH, +40°C and no voltage applied**					
	Capacitance Change	≤5% of initially measured value				
	Dissipation Factor	≤0.005 at 1kHz and 25°C				
	Insulation Resistance	≥50% of maximum specified value				
Self Inductance	<1 nano-Henry per mm of body length and lead length					
Capacitance Drift Factor	<0.5% after 2 years at 40°C					
Capacitance Temperature Coefficient	-200 ppm/°C, ±100ppm/°C					
Dielectric Strength	**Terminal to Terminal**					
	200% of rated VDC or VAC applied for 10 Seconds and 25°C					
Dielectric	Polypropylene					
Construction	Metallized film					
Coating	Flame Retardant Polyester tape wrap (UL 510) with epoxy resin end fills(UL94V0)					
Leads	Lead free tinned copper leads					

Special Order Options



Lead Diameter	
D	d
≤8	0.6
>8	0.8

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MPW

Metallized Polypropylene Axial Lead

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Dims DxL (mm)	d (MM)
160	0.022	223MPW160K	22	5.5x11.5	0.6
160	0.033	333MPW160K	22	5.5x11.5	0.6
160	0.047	473MPW160K	22	5.5x11.5	0.6
160	0.068	683MPW160K	22	6.5x14.5	0.6
160	0.1	104MPW160K	22	6.5x14.5	0.6
160	0.15	154MPW160K	22	7.5x14.5	0.6
160	0.22	224MPW160K	22	8x14.5	0.6
160	0.33	334MPW160K	18	8.5x20.5	0.8
160	0.47	474MPW160K	18	9.5x20.5	0.8
160	0.68	684MPW160K	11	10x29	0.8
160	1	105MPW160K	11	11x29	0.8
160	1.5	155MPW160K	11	13x29	0.8
160	2.2	225MPW160K	8	13.5x34	0.8
160	3.3	335MPW160K	8	16x34	0.8
160	4.7	475MPW160K	8	18x34	0.8
160	6.8	685MPW160K	8	18.5x46.5	0.8
160	10	106MPW160K	8	22.5x46.5	1
250	0.015	153MPW250K	12	5.5x14.5	0.6
250	0.022	223MPW250K	12	7x14	0.6
250	0.033	333MPW250K	12	6.5x14.5	0.6
250	0.047	473MPW250K	12	6.5x14.5	0.6
250	0.068	683MPW250K	12	7.5x14.5	0.6
250	0.1	104MPW250K	12	8.5x14.5	0.8
250	0.15	154MPW250K	8	8x20.5	0.6
250	0.22	224MPW250K	8	9.5x20.5	0.8
250	0.33	334MPW250K	5	10x29	0.8
250	0.47	474MPW250K	5	11x29	0.8
250	0.68	684MPW250K	5	12.5x29	0.8
250	1	105MPW250K	3	13x34	0.8
250	1.5	155MPW250K	8	16x34	0.8
250	2.2	225MPW250K	3	19x34	0.8
250	3.3	335MPW250K	2	17x47	0.8
250	4.7	475MPW250K	2	22.5x47	1
400	0.0015	152MPW400K	15	6.5x14.5	0.6
400	0.0022	222MPW400K	15	5.5x11.5	0.6
400	0.0033	332MPW400K	15	6.5x14.5	0.6
400	0.0047	472MPW400K	15	6.5x14.5	0.6
400	0.0068	682MPW400K	15	5.5x11.5	0.6

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Dims DxL (mm)	d (MM)
400	0.0082	822MPW400K	15	6.5x14.5	0.6
400	0.01	103MPW400K	15	6x14.5	0.6
400	0.015	153MPW400K	15	6.5x14.5	0.6
400	0.022	223MPW400K	15	7x14.5	0.6
400	0.033	333MPW400K	15	7.5x14.5	0.6
400	0.047	473MPW400K	15	8.5x14.5	0.8
400	0.068	683MPW400K	12	8.5x20.5	0.8
400	0.1	104MPW400K	12	8.5x20.5	0.8
400	0.15	154MPW400K	7	9.5x29	0.8
400	0.22	224MPW400K	7	10.5x29	0.8
400	0.33	334MPW400K	7	12.5x29	0.8
400	0.47	474MPW400K	7	14x29	0.8
400	0.68	684MPW400K	5	15x34	0.8
400	1	105MPW400K	5	17.5x34	0.8
400	1.5	155MPW400K	5	20.5x34	1
400	2.2	225MPW400K	3	24x46	1
400	3.3	335MPW400K	3	26x44	1
400	4.7	475MPW400K	3	28.5x47	1
630	0.001	102MPW630K	22	6.5x14.5	0.6
630	0.0015	152MPW630K	22	6.5x14.5	0.6
630	0.0022	222MPW630K	22	6.5x14.5	0.6
630	0.0033	332MPW630K	22	6.5x14.5	0.6
630	0.0047	472MPW630K	22	6x14.5	0.6
630	0.0068	682MPW630K	22	6x14.5	0.6
630	0.0082	822MPW630K	22	6x14.5	0.6
630	0.01	103MPW630K	22	6.5x14.5	0.6
630	0.015	153MPW630K	22	7.5x14.5	0.6
630	0.022	223MPW630K	22	8.5x14.5	0.8
630	0.033	333MPW630K	16	8.5x20.5	0.8
630	0.047	473MPW630K	16	9x20.5	0.8
630	0.068	683MPW630K	12	9x29	0.8
630	0.1	104MPW630K	12	10.5x29	0.8
630	0.15	154MPW630K	12	12x29	0.8
630	0.22	224MPW630K	7	12.5x34	0.8
630	0.33	334MPW630K	7	15.5x34	0.8
630	0.47	474MPW630K	7	18x34	0.8
630	0.68	684MPW630K	7	22x34	1

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MWR

Metallized Polyester Film Capacitors

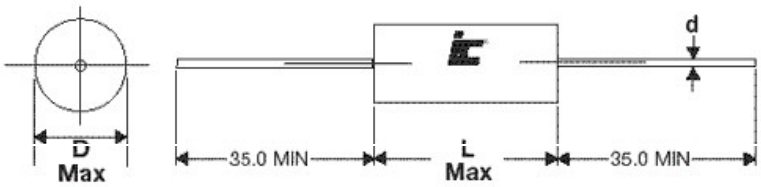
Axial Leaded, General Purpose



FEATURES	Small Size – Low ESR - General Purpose
APPLICATIONS	General Purpose – Bypass – Coupling – Blocking

Operating Temperature Range	**-40°C to +105°C**								
Capacitance Tolerance	±10% at 1 kHz, 25°C +5% optional								
Peak, AC voltage (50/60 Hz)	**WVDC**	**50**	**63**	**100**	**250**	**400**	**630**	**1000**	**1500**
	VAC	30	40	63	160	200	220	250	300
	For T>+85°C , The voltage must be decreased by 1.25% per °C								
Dissipation Factor (MAX) 25°C	**Frequency (kHz)**	**C≤0.1uF**		**0.1uF<C≤1.0uF**		**C>1.0uF**			
	1	0.80%		1.00%		1.00%			
	10	1.50%		1.50%		-			
	100	2.50%		-		-			
Insulation Resistance @25°C (<70% RH)for 1 minute at 100VDC applied	**WVDC**	**Capacitance**		**Insulation Resistance**					
	≤100WVDC	**≤0.33µF**		15000 MΩ					
	>100WVDC	**≤0.33µF**		30000 MΩxµF					
	≤100WVDC	**>0.33µF**		15000 MΩxµF					
	>100WVDC	**>0.33µF**		10000 MΩxµF					
Load Life	**2000 Hours, +85C with 125% of rated voltage**								
	Capacitance Change	≤5% of initially measured value							
	Dissipation Factor	≤0.005 at 1kHz and 25°C for C≤1uF ≤0.005 at 1kHz and 25°C For C>1uF							
	Insulation Resistance	≥50% of maximum specified value							
Damp Heat test	**56 days at40°C with 93%RH(+/-2%), +40°C and no voltage applied**								
	Capacitance Change	≤5% of initially measured value							
	Dissipation Factor	≤0.005 at 1kHz and 25°C							
	Insulation Resistance	≥50% of maximum specified value							
Self Inductance	<1 nano-Henry per mm of body length and lead length								
Capacitance Drift Factor	<1.0% after 2 years at 40°C								
Capacitance Temperature Coefficient	+400 ppm/°C, ±200ppm/°C								
Dielectric Strength	**Terminal to Terminal**								
	160% of VDC applied for 2 Seconds and 25°C								
Dielectric	Polyester								
Construction	Metallized film Internal series connected (≥1000WVDC)								
Coating	Flame Retardant Polyester tape wrap (UL 510) with epoxy resin end fills(UL94V0)								
Leads	Lead free tinned copper leads								

Special Order Options



Lead Diameter	
D	d
≤9	0.6
9<D≤20	0.8
>20	1.0

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MWR

Metallized Polyester Axial Lead

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Dims DxL (mm)	d (MM)
50	0.22	224MWR050K	9	6x11.5	0.6
50	0.33	334MWR050K	9	6x11.5	0.6
50	0.47	474MWR050K	9	6x11.5	0.6
50	0.68	684MWR050K	9	6x11.5	0.6
50	1	105MWR050K	9	7.5x11.5	0.6
50	1.5	155MWR050K	9	8x14.5	0.6
50	2.2	225MWR050K	9	9x14.5	0.8
50	3.3	335MWR050K	6	10x20.5	0.8
50	4.7	475MWR050K	6	10.5x20.5	0.8
50	6.8	685MWR050K	6	11.5x20.5	0.8
50	10	106MWR050K	6	13.5x20.5	0.8
63	0.15	154MWR063K	11	5.5x14	0.6
63	0.68	684MWR063K	7	6.5x19	0.6
63	1	105MWR063K	7	8x20.5	0.6
63	1.5	155MWR063K	7	9.5x20.5	0.8
63	2.2	225MWR063K	5	10.5x29	0.8
63	3.3	335MWR063K	5	11x29	0.8
63	4.7	475MWR063K	5	12.5x29	0.8
63	10	106MWR063K	4	14x34	0.8
100	0.068	683MWR100K	6	5.5x11.5	0.6
100	0.1	104MWR100K	6	6x11.5	0.6
100	0.15	154MWR100K	6	6x14	0.6
100	0.22	224MWR100K	6	6.5x14	0.6
100	0.33	334MWR100K	6	7.5x14	0.6
100	0.47	474MWR100K	6	7x15.5	0.6
100	0.68	684MWR100K	3	8x19	0.6
100	1	105MWR100K	3	9.5x19	0.8
100	1.5	155MWR100K	2	9x27	0.8
100	2.2	225MWR100K	2	12x29	0.8
100	3.3	335MWR100K	2	13x29	0.8
100	4.7	475MWR100K	4	12.5x34	0.8
100	6.8	685MWR100K	2	17x34	0.8
100	10	106MWR100K	2	18x34	0.8
100	15	156MWR100K	2	21x34	1
100	22	226MWR100K	2	22x46	1
250	0.022	223MWR250K	10	5.5x11.5	0.6
250	0.033	333MWR250K	10	6x11.5	0.6
250	0.039	393MWR250K	10	6x11.5	0.6
250	0.047	473MWR250K	10	5.5x14	0.6
250	0.068	683MWR250K	10	6.5x14.5	0.6
250	0.1	104MWR250K	10	6x14	0.6
250	0.15	154MWR250K	10	7x14	0.6
250	0.22	224MWR250K	7	7x19	0.6
250	0.33	334MWR250K	7	8x19	0.6
250	0.47	474MWR250K	7	9.5x19	0.8
250	0.68	684MWR250K	4	9.5x27	0.8
250	1	105MWR250K	4	10.5x27	0.8
250	1.5	155MWR250K	4	12.5x29	0.8
250	2.2	225MWR250K	2	13.5x34	0.8
250	3.3	335MWR250K	2	16x34	0.8
250	4.7	475MWR250K	2	19.5x34	0.8
250	6.8	685MWR250K	5	23x34	1
250	10	106MWR250K	2	24.5x46.5	1
400	0.01	103MWR400K	14	5x11.5	0.6
400	0.015	153MWR400K	14	5.5x14.5	0.6
400	0.022	223MWR400K	14	5.5x14	0.6
400	0.033	333MWR400K	6	6x14	0.6
400	0.039	393MWR400K	14	7x15.5	0.6

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Dims DxL (mm)	d (MM)
400	0.047	473MWR400K	6	7x14	0.6
400	0.068	683MWR400K	10	7.5x20.5	0.6
400	0.1	104MWR400K	10	7.5x19	0.6
400	0.15	154MWR400K	10	8.5x19	0.6
400	0.22	224MWR400K	6	8.5x27	0.8
400	0.33	334MWR400K	6	10x27	0.8
400	0.47	474MWR400K	6	12.5x27	0.8
400	0.68	684MWR400K	4	12.5x34	0.8
400	1	105MWR400K	4	14.5x34	0.8
400	1.5	155MWR400K	4	17.5x34	0.8
400	2.2	225MWR400K	2	20.5x34	0.8
400	3.3	335MWR400K	2	22.5x47	1
630	0.001	102MWR630K	60	5.5x11.5	0.6
630	0.0015	152MWR630K	60	5.5x11.5	0.6
630	0.0022	222MWR630K	60	5.5x11.5	0.6
630	0.0033	332MWR630K	60	5.5x11.5	0.6
630	0.0039	392MWR630K	60	5.5x11.5	0.6
630	0.0047	472MWR630K	60	5.5x11.5	0.6
630	0.0068	682MWR630K	60	5.5x11.5	0.6
630	0.01	103MWR630K	20	6x14	0.6
630	0.015	153MWR630K	20	6.5x14.5	0.6
630	0.022	223MWR630K	20	8x14	0.6
630	0.033	333MWR630K	15	8x20.5	0.6
630	0.039	393MWR630K	15	8x20.5	0.6
630	0.047	473MWR630K	15	7.5x19	0.6
630	0.068	683MWR630K	15	9x20.5	0.8
630	0.1	104MWR630K	10	9x27	0.8
630	0.15	154MWR630K	10	10.5x29	0.8
630	0.22	224MWR630K	10	12.5x27	0.8
630	0.33	334MWR630K	6	13.5x34	0.8
630	0.47	474MWR630K	6	15x34	0.8
630	0.68	684MWR630K	6	18.5x34	0.8
630	1	105MWR630K	6	22x34	1
630	1.5	155MWR630K	6	26.5x34	1
1000	0.01	103MWR102K	80	7x14.5	0.6
1000	0.015	153MWR102K	80	8x14.5	0.6
1000	0.022	223MWR102K	40	9.5x20.5	0.8
1000	0.033	333MWR102K	40	10.5x20.5	0.8
1000	0.047	473MWR102K	33	11x29	0.8
1000	0.068	683MWR102K	33	12.5x29	0.8
1000	0.1	104MWR102K	33	12x29	0.8
1000	0.15	154MWR102K	20	13x34	0.8
1000	0.22	224MWR102K	20	14.5x34	0.8
1000	0.33	334MWR102K	20	17x34	0.8
1000	0.47	474MWR102K	20	19.5x34	0.8
1500	0.001	102MWR152KB	90	5.5x14.5	0.6
1500	0.0015	152MWR152KB	90	5.5x14.5	0.6
1500	0.0022	222MWR152KB	90	6x14.5	0.6
1500	0.0033	332MWR152KB	90	6.5x14.5	0.6
1500	0.0047	472MWR152KB	90	7x14.5	0.6
1500	0.0068	682MWR152KB	90	8x14.5	0.6
1500	0.01	103MWR152KB	90	8.5x14.5	0.8
1500	0.015	153MWR152KD	50	8.5x20.5	0.8
1500	0.022	223MWR152KD	50	9.5x20.5	0.8
1500	0.033	333MWR152KD	50	11x20.5	0.8
1500	0.047	473MWR152KG	40	11x29	0.8
1500	0.068	683MWR152KG	40	12.5x29	0.8
1500	0.1	104MWR152KJ	25	13x34	0.8

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MWR

Metallized Polyester Axial Lead

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Dims DxL (mm)	d (MM)
1500	0.15	154MWR152KJ	25	15x34	0.8
1500	0.22	224MWR152KJ	25	17.5x34	0.8
1500	0.33	334MWR152KJ	25	20.5x34	1
1500	0.47	474MWR152KJ	25	24x34	1

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Dims DxL (mm)	d (MM)
1500	0.68	684MWR152KN	25	24.5x46.5	1
1500	1	105MWR152KN	25	28.5x46.5	1
1500	1.5	155MWR152KN	25	34x46.5	1

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PHC

Metallized Polypropylene Film Capacitors

Axial Leaded for Switching Circuits

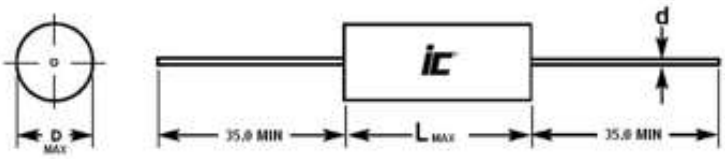


FEATURES — Metallized Polypropylene – High Capacitance – Low ESR

APPLICATIONS — Switching Power Supplies – UPS – DC Link – Motor Speed Controls – Solar Heaters – Power Converters

Operating Temperature Range		**-40°C to +100°C** Above +85°C applied voltage must be de-rated by 1.5%/°C						
Capacitance Tolerance		±10% at 1 kHz, 25°C ±5% optional						
Surge Voltage	**VDC**	**250**	**330**	**400**	**600**	**700**	**850**	
	Non-repetitive SVDC	400	400	600	800	1000	1200	
AC voltage	**VDC**	**250**	**330**	**400**	**600**	**700**	**850**	
	VAC	160	220	250	330	400	500	
Dissipation Factor (MAX) Tan δ at 1 kHz and 25°C		**C≤ 5uF**		**5uF<C≤2 5uF**		**C>75uF**		
		.06%		.1%		.15%		
Insulation Resistance After 1 minute of 100VDC applied between the terminals at 25°C		30000 MΩxuF "Not to exceed 3GΩ"						
Self Inductance		<1 nano-Henry per mm of lead spacing						
Long term stability		Capacitance variation <1% MAX after 2 years						
Dielectric Strength		**Terminal to Terminal**				**Terminal to case**		
		160% of VDC VDC applied for 10 Seconds and 25°C or 200% of VDC applied for 2 Seconds and 25°C				3KVAC at 50/60 Hz applied between the terminals and case for 60 Seconds and 25°C		
Life Expectancy		≥100000 with VDC ≥30000 with VAC						
Failure quota		300/billion component hours						
Damp Heat Test		**Test Condition**			**Performance requirements**			
		Temperature= +40°C ±2°C			**Max Capacitance change**	≤ 2% of initially measured valued		
		Relative Humidity=93 ±2%			**DF Change**	≤ 200% of initially specified valued		
		Test length= 56 days			**Insulation resistance**	≥ 50% of minimum specified value		
Resistance to soldering Heat **Solder bath temperature: +260°C +/- 5°C** **Exposure time: 10 seconds +/- 1 second**		**Max Capacitance change**			≤1% of initially measured value			
		DF Change			≤ .1% at 1kHz			
		Insulation resistance			≥50% of minimum specified value			
Construction		Metallized Polypropylene film						
Electrodes		Vacuum deposited Metal layers						
Coating		Flame retardant tape wrap (UL510) with epoxy end fill (UL94V-0)						
Lead terminations		Lead free tinned copper leads						

Special Order Options



L MAX	29	34	34	46	46	55	59
D	≤17.5	≤18	>18	≤25	>25	all	all
d ±0.05	0.8	0.8	1.0	1.0	1.2	1.2	1.2

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PHC

High Frequency Metallized Polypropylene Axial Lead

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
250	1	105PHC250K	50	4.5	7.6	11x29
250	1.5	155PHC250K	50	5.5	6.1	13x29
250	2	205PHC250K	50	6	4.9	14.5x29
250	2	205PHC250KG	40	6	5.1	12.5x34
250	2.2	225PHC250KG	50	6.5	5	15x29
250	2.2	225PHC250K	40	6	5.7	13x34
250	2.5	255PHC250KG	50	7	4.8	15.5x29
250	2.5	255PHC250K	40	7	5.4	14x55
250	3	305PHC250KG	50	7.5	4.4	17x29
250	3	305PHC250K	40	7	4.8	15x34
250	3.3	335PHC250K	40	8	4.4	15.5x34
250	4	405PHC250K	40	9	3.8	17x34
250	4.7	475PHC250KJ	40	10	3.5	18x34
250	5	505PHC250K	40	10	3.4	18.5x34
250	6.8	685PHC250K	40	10.5	3.1	21x34
250	10	106PHC250K	40	10.5	2.5	24x34
250	10	106PHC250KN	25	10.5	3.3	21.5x46
250	15	156PHC250K	25	14	2.7	25.5x46
250	20	206PHC250K	25	14	5	29x46
250	22	226PHC250KN	25	14	4.7	30.5x46
250	25	256PHC250K	25	14	4.4	32x46
250	30	306PHC250K	20	14	4.5	31x55
250	30	306PHC250KS	15	14	5.3	29.5x59
250	33	336PHC250KR	20	14	4.3	32.5x55
250	33	336PHC250KS	15	14	5	31x59
250	40	406PHC250K	20	14	3.9	36x55
250	40	406PHC250KS	15	14	4.5	33.5x59
250	50	506PHC250K	20	14	3.5	40x55
250	50	506PHC250KS	15	14	3.9	37x59
250	60	606PHC250KS	15	14	3.5	40x59
330	0.68	684PHC330KG	60	4.5	9.1	11x29
330	1	105PHC330KG	60	5.5	6.9	12.5x29
330	1.5	155PHC330KG	60	6.5	5.5	15x29
330	1.5	155PHC330KJ	45	6	6.3	13.5x34
330	2	205PHC330KG	60	7.5	4.7	16.5x29
330	2	205PHC330KJ	45	7	5.7	15x34
330	2.2	225PHC330KG	60	8	4.3	17.5x29
330	2.2	225PHC330KJ	45	7.5	5.3	15.5x34
330	2.5	255PHC330KJ	45	8	5	16.5x34
330	3	305PHC330KJ	45	9	4.4	18.5x34
330	3.3	335PHC330KJ	45	9	4.3	19x34
330	4	405PHC330KJ	45	10.5	3.8	20.5x34
330	4.7	475PHC330KJ	45	10.5	3.3	22x34
330	4.7	475PHC330KN	30	10.5	4.2	19x46
330	5	505PHC330KJ	45	10.5	3.2	22.5x34
330	5	505PHC330KN	30	10.5	4.1	19.5x46
330	6.8	685PHC330KN	30	10.5	3.6	22x46
330	10	106PHC330KN	30	11	6.7	26x46
330	15	156PHC330KN	30	13	5.4	31x46
330	15	156PHC330KR	25	12.5	6	28x55
330	15	156PHC330KS	20	12	6.8	26.5x59
330	20	206PHC330KR	25	14	5.1	31.5x55
330	20	206PHC330KS	20	13.5	5.8	30x59
330	22	226PHC330KR	25	14	4.8	33x55
330	22	226PHC330KS	20	14	5.4	31x59
330	25	256PHC330KR	25	14	4.5	35x55
330	25	256PHC330KS	20	14	5	33x59
330	30	306PHC330KR	25	14	4.1	38x55

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
330	30	306PHC330KS	20	14	4.5	36x59
330	33	336PHC330KR	25	14	3.9	39.5x55
330	33	336PHC330KS	20	14	4.3	37.5x59
330	35	356PHC330KR	25	14	3.8	41x55
330	35	356PHC330KS	20	14	4.2	38.5x59
330	40	406PHC330KS	20	14	3.9	41x59
400	0.47	474PHC400K	75	4	8.6	11x29
400	0.68	684PHC400KG	75	5.5	7.1	13x29
400	0.68	684PHC400K	55	5	8.9	12x34
400	1	105PHC400KG	75	6.5	5.8	15x29
400	1	105PHC400K	55	6	6.7	13x34
400	1.5	155PHC400KG	75	7.5	4.7	17.5x29
400	1.5	155PHC400K	55	7	5.6	15.5x34
400	2	205PHC400K	55	9	4.6	17.5x34
400	2.2	225PHC400K	55	9	4.4	18.5x34
400	2.5	255PHC400K	55	9.5	4.2	19x34
400	3	305PHC400K	55	10.5	3.8	21x34
400	3.3	335PHC400K	55	10.5	3.7	22x34
400	3.3	335PHC400KN	40	10.5	4.3	19x46
400	4	405PHC400KJ	55	10.5	3.3	24x34
400	4	405PHC400K	40	10.5	3.8	20.5x46
400	4.7	475PHC400K	40	9.5	7.6	22x46
400	5	505PHC400K	40	10	7.4	22.5x46
400	6.8	685PHC400K	40	11	6.4	26x46
400	10	106PHC400KN	40	13	5.4	31x46
400	10	106PHC400K	30	12	6.3	27x55
400	10	106PHC400KS	25	11	7.1	26x59
400	15	156PHC400K	30	14	5	33x55
400	15	156PHC400KS	25	14	5.6	31x59
400	20	206PHC400K	30	14	4.3	37x55
400	20	206PHC400KS	25	14	4.7	35x59
400	22	226PHC400KR	30	14	4.1	39x55
400	22	226PHC400KS	25	14	4.5	37x59
400	25	256PHC400K	30	14	3.8	41.5x55
400	25	256PHC400KS	25	14	4.2	39x59
600	0.33	334PHC600KG	95	4	9.5	12x29
600	0.47	474PHC600KG	95	5	8.3	13.5x29
600	0.47	474PHC600K	75	5	9.4	12.5x34
600	0.68	684PHC600KG	95	6	6.8	16x29
600	0.68	684PHC600K	75	6	7.8	14x34
600	1	105PHC600K	75	8	6.1	17.5x34
600	1.5	155PHC600K	75	9	4.9	20x34
600	2	205PHC600KJ	75	10.5	4.1	23x34
600	2	205PHC600K	55	10	5.3	20x46
600	2.2	225PHC600KJ	75	10.5	3.8	24x34
600	2.2	225PHC600K	55	10	4.8	21x46
600	2.5	255PHC600K	55	10.5	4.4	22x46
600	3	305PHC600K	55	10.5	4.2	24x46
600	3.3	335PHC600K	55	10.5	3.8	25x46
600	4	405PHC600K	55	13.5	3.6	27x46
600	4.7	475PHC600K	55	12	6.4	29x46
600	4.7	475PHC600KR	50	11.5	7.7	26.5x55
600	4.7	475PHC600KS	40	11	8.6	24.5x59
600	5	505PHC600KN	55	12.5	6.3	29.5x46
600	5	505PHC600K	50	12	7.4	27x55
600	5	505PHC600KS	40	11.5	8.3	25x59
600	6.8	685PHC600K	50	12.5	6.5	30x55
600	6.8	685PHC600KS	40	12	7.3	28.5x59

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PHC

High Frequency Metallized Polypropylene Axial Lead

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
600	10	106PHC600K	50	14	5.4	35x55
600	10	106PHC600KS	40	14	6.1	33.5x59
600	12.5	126PHC600K	50	14	4.9	40.5x55
600	12.5	126PHC600KS	40	14	5.5	37.5x59
600	15	156PHC600KS	40	14	5.1	41x59
700	0.22	224PHC700KG	135	4	10.7	12.5x29
700	0.22	224PHC700KJ	105	3.5	11.6	11.5x34
700	0.33	334PHC700KG	135	5	8.5	15x29
700	0.33	334PHC700KJ	105	5	9.4	13.5x34
700	0.47	474PHC700KG	135	6.5	6.9	17x29
700	0.47	474PHC700K	105	6.5	7.7	15.5x34
700	0.68	684PHC700K	105	8	6	17.5x34
700	1	105PHC700K	105	10	4.5	21.5x34
700	1	105PHC700KN	70	9	6.6	18x46
700	1.2	125PHC700K	105	10.5	3.9	24x34
700	1.2	125PHC700KN	70	9	6.3	20x46
700	1.5	155PHC700K	70	10.5	5.6	21.5x46
700	2	205PHC700K	70	12	4.8	24.5x46
700	2.2	225PHC700K	70	12.5	4.5	25.5x46
700	2.5	255PHC700K	70	13.5	4	27x46
700	3	305PHC700K	70	12	6.1	29x46
700	3.3	335PHC700K	70	12	5.9	30.5x46
700	4	405PHC700K	70	13.5	5.4	33.5x46
700	4	405PHC700KR	60	12.5	6.7	29x55
700	4	405PHC700KS	45	12	7.7	27.5x59
700	4.7	475PHC700K	60	13	6.1	31x55
700	4.7	475PHC700KS	45	12	7	29.5x59
700	5	505PHC700K	60	13.5	5.8	32x55
700	5	505PHC700KS	45	12.5	6.6	30.5x59
700	6.8	685PHC700K	60	14	5.1	37x55
700	6.8	685PHC700KS	45	14	5.8	35x59
700	8.2	825PHC700K	60	14	4.6	41x55
700	8.2	825PHC700KS	45	14	5.3	38x59

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
700	10	106PHC700KS	45	14	4.9	41.5x59
850	0.1	104PHC850KG	375	3.5	12.9	11.5x29
850	0.15	154PHC850KG	375	4.5	9.8	13x29
850	0.15	154PHC850K	300	4.5	10.8	12x34
850	0.22	224PHC850KG	375	5.5	7.7	15x29
850	0.22	224PHC850K	300	5.5	8.4	13.5x34
850	0.33	334PHC850KG	375	7	5.9	17.5x29
850	0.33	334PHC850K	300	7	6.6	16x34
850	0.47	474PHC850K	300	9	5.4	18.5x34
850	0.68	684PHC850K	300	10	4.3	21.5x34
850	0.68	684PHC850KN	200	9	5.4	18x46
850	1	105PHC850KJ	300	13	3.2	26x34
850	1	105PHC850K	200	10.5	4.3	21.5x46
850	1.5	155PHC850K	200	14	3.5	25.5x46
850	2	205PHC850K	200	14	2.9	29x46
850	2.2	225PHC850K	200	14	2.9	30x46
850	2.2	225PHC850KR	125	14	3.8	26.5x55
850	2.2	225PHC850KS	110	14	4.3	25x59
850	2.5	255PHC850K	200	14	2.7	32x46
850	2.5	255PHC850KR	125	14	3.6	28x55
850	2.5	255PHC850KS	110	14	4.1	26.5x59
850	3	305PHC850K	200	14	2.4	34.5x46
850	3	305PHC850KR	125	14	3.2	30.5x55
850	3	305PHC850KS	110	14	3.6	29x59
850	3.3	335PHC850K	125	14	3.1	32x55
850	3.3	335PHC850KS	110	14	3.5	30x59
850	4	405PHC850K	125	14	2.8	35x55
850	4	405PHC850KS	110	14	3.1	33x59
850	4.7	475PHC850K	125	14	2.5	37x55
850	4.7	475PHC850KS	110	14	2.8	35.5x59
850	5	505PHC850K	125	14	2.4	38x55
850	5	505PHC850KS	110	14	2.7	36.5x59
850	6.8	685PHC850KS	110	14	2.3	41.5x59

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PPA

Polypropylene Film Capacitors

For Snubber, IGBT & Power Semiconductor Power Circuits



FEATURES

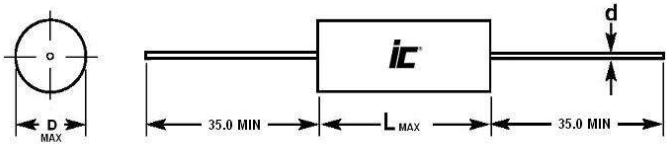
High dvdt – Good Pulse Current –
Stable with Temperature and Frequency

APPLICATIONS

Inverters/Converters – Power Semiconductor Circuits –
Induction Heating – Switching Power Supplies

Operating Temperature Range	**-55°C to +85°C**								
Capacitance Tolerance	±10% at 1 kHz, 25°C ±5% optional								
Surge Voltage(SVDC)	**WVDC**	**700**	**850**	**1000**	**1200**	**1500**	**2000**	**2500**	**3000**
	SVDC	1000	1200	1400	1600	2000	2400	3000	3500
AC voltage (50/60 Hz)	**WVDC**	**700**	**850**	**1000**	**1200**	**1500**	**2000**	**2500**	**3000**
	VAC	420	450	480	500	575	630	700	750
Dissipation Factor (MAX) 25°C	**Frequency (kHz)**	**C≤0.047uF**		**0.047>C≥1uF**		**C>1uF**			
	1	0.06%		0.05%		0.06%			
Insulation Resistance @25°C (<70% RH)for 1 minute at 100VDC applied	30000 MΩxμF (not to exceed 30GΩ)								
Self Inductance	<1 nano-Henry per mm of lead spacing								
Capacitance Drift Factor	<0.5% after 2 years at 40°C								
Life Expectancy	30000 hours @VAC, 70°C 100000 hours @VDC, 70°C								
	Capacitance Change	≤3% of initially measured value							
Failure Quota	300/ billion component hours								
Damp Heat test	**56 days at 40°C with 90 to 95%RH, +40°C and no voltage applied**								
	Capacitance Change	≤2% of initially measured value							
	Dissipation Factor	≤0.001 at 1kHz and 25°C							
	Insulation Resistance	≥50% of maximum specified value							
Self Inductance	<1 nano-Henry per mm of body length and lead length								
Capacitance Drift Factor	<1.0% after 2 years at 40°C								
Capacitance Temperature Coefficient	-200 ppm/°C, ±100ppm/°C								
Dielectric Strength	**Terminal to Terminal**			**Terminal to case**					
	160% of rated VDC or 200% VDC applied for 2 Seconds and 25°C			3kVAC, 50/60Hz applied between the leads and case for 60 seconds					
Dielectric	Polypropylene								
Construction	Double Metallized film with internal series connections								
Coating	Flame Retardant polyester tape wrap (UL 501) with epoxy resin end fill(UL94V0)								
Leads	Lead free tinned copper leads								

Special Order Options



L MAX	29	34	34	46	46	55	59
D	≤17.5	≤18	>18	≤25	>25	all	all
d±0.05	0.8	0.8	1.0	1.0	1.2	1.2	1.2

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PPA

High Voltage, High dvdt Axial Lead

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
700	0.1	104PPA700KG	950	3.5	13	12x29
700	0.15	154PPA700KG	950	4.5	9.4	13.5x29
700	0.22	224PPA700KG	950	6	7.1	15.5x29
700	0.22	224PPA700KJ	700	5.5	8	13.5x34
700	0.33	334PPA700KG	950	7	5.4	17.5x29
700	0.33	334PPA700K	700	7	6	15.5x34
700	0.47	474PPA700K	700	8	4.7	18x34
700	0.68	684PPA700KD22	700	10.5	3.9	21.5x34
700	0.68	684PPA700K	475	10	4.4	18x46
700	1	105PPA700KD26	700	12.5	3.2	26x34
700	1	105PPA700K	475	10.5	3.9	21x46
700	1.5	155PPA700K	475	14	3.3	25.5x46
700	2	205PPA700KN	475	14	3	29x46
700	2.2	225PPA700K	475	14	2.9	30x46
700	2.2	225PPA700KD27	350	14	3.8	27x55
700	2.2	225PPA700KS	300	14	4.2	25.5x59
700	2.5	255PPA700KN	475	14	2.8	32x46
700	2.5	255PPA700KR	350	14	3.5	29x55
700	2.5	255PPA700KS	300	14	3.9	27.5x59
700	3	305PPA700KN	475	14	2.6	35x46
700	3	305PPA700KR	350	14	3.2	31x55
700	3	305PPA700KS	300	14	3.6	29.5x59
700	3.3	335PPA700K	475	14	2.5	36x46
700	3.3	335PPA700KD32	350	14	3.1	32x55
700	3.3	335PPA700KS	300	14	3.5	30.5x59
700	4	405PPA700KR	350	14	2.8	34.5x59
700	4	405PPA700KS	300	14	3.1	33x59
700	4.7	475PPA700K	350	14	2.6	37.5x55
700	4.7	475PPA700KS	300	14	2.9	35.5x59
700	5.6	565PPA700K	350	14	2.3	41x55
700	5.6	565PPA700KS	300	14	2.6	38.5x59
700	6.8	685PPA700KS	300	14	2.4	42x59
850	0.068	683PPA850KG	1200	3.5	13.9	11.5x29
850	0.1	104PPA850K	1200	4.5	10.4	13x29
850	0.1	104PPA850KD11	900	4	11.5	11x34
850	0.15	154PPA850KD15	1200	5.5	7.6	15x29
850	0.15	154PPA850K	900	5	8.6	13x34
850	0.22	224PPA850KG	1200	7	6.1	17.5x29
850	0.22	224PPA850K	900	6.5	6.6	15x34
850	0.33	334PPA850K	900	8.5	4.8	18x34
850	0.47	474PPA850K	900	10.5	4	21.5x34
850	0.47	474PPA850KD18	600	9.5	5	18x46
850	0.68	684PPA850KD26	900	10.5	3.2	25.5x34
850	0.68	684PPA850K	600	10.5	4.1	21x46
850	1	105PPA850K	600	14	3.3	25x46
850	1.5	155PPA850K	600	14	2.8	29.5x46
850	2	205PPA850KD34	600	14	2.4	33.5x46
850	2	205PPA850K	425	14	3	29x55
850	2	205PPA850KS	275	14	3.4	28x59
850	2.2	225PPA850KD35	600	14	2.3	35x46
850	2.2	225PPA850K	425	14	2.8	30.5x55
850	2.2	225PPA850KS	375	14	3.2	29.5x59
850	2.5	255PPA850KN	600	14	2.6	36.5x46
850	2.5	255PPA850K	425	14	2.2	32x55
850	2.5	255PPA850KS	375	14	2.5	31x59
850	3	305PPA850KR	425	14	2.5	36x55
850	3	305PPA850KS	375	14	2.8	34x59
850	3.3	335PPA850K	425	14	2.4	37x55

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
850	3.3	335PPA850KS	375	14	2.7	35x59
850	4	405PPA850KR	425	14	2.3	40.5x55
850	4	405PPA850KS	375	14	2.6	38.5x59
850	4.7	475PPA850KS	375	14	2.4	41.5x59
1000	0.068	683PPA102KG	1400	3.5	13.6	12.5x29
1000	0.1	104PPA102KG	1400	4.5	10.2	14.5x29
1000	0.1	104PPA102KJ	1050	4.5	11	12.5x34
1000	0.15	154PPA102KG	1400	6	7.3	17x29
1000	0.15	154PPA102K	1050	6	8.2	14.5x34
1000	0.22	224PPA102K	1050	7.5	5.9	17.5x34
1000	0.33	334PPA102K	1050	9.5	4.5	20.5x34
1000	0.33	334PPA102KD17	680	9	5.9	17x46
1000	0.47	474PPA102K	1050	10.5	3.8	24x34
1000	0.47	474PPA102KD20	680	10.5	4.7	20x46
1000	0.68	684PPA102K	680	10.5	4	23.5x46
1000	1	105PPA102K	680	14	3.2	28x46
1000	1.5	155PPA102KD34	680	14	2.6	33.5x46
1000	1.5	155PPA102K	475	14	3.2	29.5x55
1000	1.5	155PPA102KS	425	14	3.6	28x59
1000	2	205PPA102KR	475	14	2.9	33.5x55
1000	2	205PPA102KS	425	14	3.2	31.5x59
1000	2.2	225PPA102K	475	14	2.7	35x55
1000	2.2	225PPA102KS	425	14	3	33x59
1000	3	305PPA102KR	475	14	2.4	40.5x55
1000	3	305PPA102KS	425	14	2.6	38x59
1000	3.3	335PPA102KS	425	14	2.5	40x59
1200	0.047	473PPA122K	1600	3	17	12x29
1200	0.047	473PPA122KD11	1200	3	19	10.5x34
1200	0.068	683PPA122K	1600	4	12.8	13.5x29
1200	0.068	683PPA122KD12	1200	3.5	14.3	12x34
1200	0.1	104PPA122KG	1600	5	9.7	16x29
1200	0.1	104PPA122K	1200	5	10.7	14x34
1200	0.15	154PPA122K	1200	6.5	7.7	17x34
1200	0.15	154PPA122KD14	780	6	10	14x46
1200	0.22	224PPA122K	1200	9	5.4	19.5x34
1200	0.22	224PPA122KD16	780	9	7.6	16x46
1200	0.33	334PPA122KD23	1200	10.5	4.5	23x34
1200	0.33	334PPA122K	780	9.5	5.4	19x46
1200	0.47	474PPA122K	780	10.5	4.8	22x46
1200	0.68	684PPA122K	780	13.5	3.9	26.5x46
1200	1	105PPA122K	780	14	3.4	32x46
1200	1	105PPA122KR	550	14	4	27x55
1200	1	105PPA122KS	350	14	4.5	25.5x59
1200	1.2	125PPA122KD35	780	14	3	34.5x46
1200	1.2	125PPA122K	550	14	3.4	29.5x55
1200	1.2	125PPA122KS	500	14	3.8	28x59
1200	1.5	155PPA122KD37	780	14	2.7	37x46
1200	1.5	155PPA122K	550	14	3	33x55
1200	1.5	155PPA122KS	500	14	3.4	31x59
1200	2	205PPA122KR	550	14	2.6	37.5x55
1200	2	205PPA122K	400	12	2.6	39x55
1200	2	205PPA122KS	500	14	2.9	35.5x59
1200	2.2	225PPA122K	550	14	2.5	39x55
1200	2.2	225PPA122KS	500	14	2.8	37x59
1200	2.5	255PPA122KR	550	14	2.3	41x55
1200	2.5	255PPA122KS	500	14	2.6	39x59
1200	3	305PPA122KS	500	14	2.4	42x59
1500	0.033	333PPA152KG	2000	3	22	12.5x29

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PPA

High Voltage, High dvdt Axial Lead

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
1500	0.047	473PPA152KG	2000	3.5	16.5	14x29
1500	0.068	683PPA152KG	2000	4.5	12.4	16x29
1500	0.068	683PPA152K	1500	4	13.8	13.5x34
1500	0.1	104PPA152K	1500	5.5	9.6	16x34
1500	0.15	154PPA152K	1500	7	7.2	19.5x34
1500	0.22	224PPA152K	1500	9.5	5.3	23x34
1500	0.22	224PPA152KD19	980	9	7	19x46
1500	0.33	334PPA152K	980	10.5	5.3	23x46
1500	0.47	474PPA152K	980	13.5	4.3	27x46
1500	0.68	684PPA152K	980	14	3.7	31.5x46
1500	1	105PPA152KD37	980	14	3.2	37x46
1500	1	105PPA152K	675	14	3.7	31.5x55
1500	1	105PPA152KS	625	14	4.2	30.5x59
1500	1.2	125PPA152K	675	14	3.4	35.5x55
1500	1.2	125PPA152KS	625	14	3.7	33.5x59
1500	1.5	155PPA152K	675	14	2.9	40x55
1500	1.5	155PPA152KS	625	14	3.2	37x59
1500	2	205PPA152KS	625	14	2.8	42x59
2000	0.015	153PPA202KG	2750	2	37.5	11x29
2000	0.022	223PPA202KG	2750	2.5	27.5	12.5x29
2000	0.022	223PPA202K	2000	2.5	33.5	11x34
2000	0.033	333PPA202KG	2750	3.5	20.7	14.5x29
2000	0.033	333PPA202K	2000	3.5	23.8	13x34
2000	0.047	473PPA202KG	2750	4.5	15	16.5x29
2000	0.047	473PPA202K	2000	4.5	16.8	13x34
2000	0.068	683PPA202K	2000	5.5	11.8	17x34
2000	0.1	104PPA202K	2000	7.5	8.4	20x34
2000	0.15	154PPA202KD24	2000	9	6.6	24x34
2000	0.15	154PPA202K	1250	9	8.3	19.5x46
2000	0.22	224PPA202K	1250	10	6	23x46
2000	0.33	334PPA202K	1250	12.5	4.7	27.5x46
2000	0.47	474PPA202K	1250	14	3.9	32.5x46
2000	0.47	474PPA202KR	875	13	5.4	27x55
2000	0.47	474PPA202KS	800	12.5	6	26x59
2000	0.56	564PPA202KD35	1250	14	3.6	35x46
2000	0.56	564PPA202K	875	14	4.5	29.5x55
2000	0.56	564PPA202KS	800	14	5	28.5x59
2000	0.68	684PPA202K	875	14	4	32x55
2000	0.68	684PPA202KS	800	14	4.5	31x59
2000	1	105PPA202K	875	14	3.3	39x55
2000	1	105PPA202KS	800	14	3.7	37x59
2000	1.2	125PPA202KS	800	14	3.4	40.5x59
2500	0.01	103PPA252KG	3900	1.5	52	11.5x29

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
2500	0.015	153PPA252KG	2650	2.5	37	13.5x29
2500	0.022	223PPA252KG	3900	3	27	15.5x29
2500	0.022	223PPA252KJ	2600	2.5	31	13x34
2500	0.033	333PPA252KG	3900	4	20	18x29
2500	0.033	333PPA252K	2600	4	23	15x34
2500	0.047	473PPA252K	2600	5	16.5	17x34
2500	0.068	683PPA252K	2600	6.5	11.5	20.5x34
2500	0.1	104PPA252K	2600	8.5	8	24.5x34
2500	0.1	104PPA252KD20	1650	8	11.5	19.5x46
2500	0.15	154PPA252K	1650	9	8	23.5x46
2500	0.22	224PPA252K	1650	11.5	5.9	27.5x46
2500	0.33	334PPA252K	1650	14	4.5	33.5x46
2500	0.33	334PPA252KD29	1050	13.5	5.4	28.5x55
2500	0.33	334PPA252KS	925	13	6	27.5x59
2500	0.47	474PPA252K	1050	14	4.4	33.5x55
2500	0.47	474PPA252KS	925	14	4.9	32x59
2500	0.56	564PPA252K	1050	14	4	36.5x55
2500	0.56	564PPA252KS	925	14	4.5	34.5x59
2500	0.68	684PPA252K	1050	14	3.7	40x55
2500	0.68	684PPA252KS	925	14	4.1	38x59
2500	0.82	824PPA252KS	925	14	3.8	41.5x59
3000	0.0047	472PPA302KG	5250	1	88	11x29
3000	0.0068	682PPA302KG	5250	1.5	65	12.5x29
3000	0.0068	682PPA302K	3500	1.5	77	10.5x34
3000	0.01	103PPA302KG	5250	2	46	14.5x29
3000	0.01	103PPA302K	3500	2	54.5	12x34
3000	0.015	153PPA302KG	5250	3	33.5	16.5x29
3000	0.015	153PPA302K	3500	3	38.5	14x34
3000	0.022	223PPA302K	3500	4	27	16x34
3000	0.033	333PPA302K	3500	5	19	19x34
3000	0.047	473PPA302KD23	3500	6.5	14	22.5x34
3000	0.047	473PPA302K	2000	6	17.8	18x46
3000	0.068	683PPA302K	2000	8	12.8	21x46
3000	0.1	104PPA302K	2000	11	9.4	25x46
3000	0.15	154PPA302K	2000	12	6.8	30x46
3000	0.22	224PPA302K	2000	14	5.2	36x46
3000	0.22	224PPA302KD31	1450	14	5.9	30.5x55
3000	0.22	224PPA302KS	1275	14	6.5	29x59
3000	0.33	334PPA302K	1450	14	4.9	37x55
3000	0.33	334PPA302KS	1275	14	5.4	35x59
3000	0.39	394PPA302K	1450	14	4.4	40x55
3000	0.39	394PPA302KS	1275	14	4.9	37.5x59
3000	0.47	474PPA302KS	1275	14	4.5	41x59

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PPS

Metallized Polypropylene Film Capacitors

For Snubber, IGBT & Power Semiconductor Power Circuits

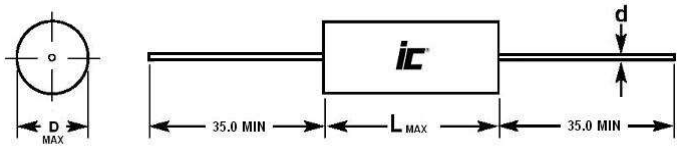


FEATURES — High dvdt – Good Pulse Current – Stable with Temperature and Frequency

APPLICATIONS — Inverters/Converters – Power Semiconductor Circuits – Induction Heating – Switching Power Supplies

Operating Temperature Range	**-40°C to +85°C**								
Capacitance Tolerance	±10% at 1 kHz, 25°C ±5% optional								
Surge Voltage(SVDC)	**WVDC**	**700**	**850**	**1000**	**1200**	**1500**	**2000**	**2500**	**3000**
	SVDC	1100	1300	1550	1750	2200	2600	3300	4000
AC voltage (50/60 Hz)	**WVDC**	**700**	**850**	**1000**	**1200**	**1500**	**2000**	**2500**	**3000**
	VAC	420	500	525	550	600	650	700	750
Dissipation Factor (MAX) 25°C	**Frequency (kHz)**	**C≤0.1uF**	**C>1uF**						
	1	0.05%	0.07%						
Insulation Resistance @25°C (<70% RH)for 1 minute at 100VDC applied	30000 MΩxμF (not to exceed 30GΩ)								
Self Inductance	<1 nano-Henry per mm of lead spacing								
Capacitance Drift Factor	<0.5% after 2 years at 40°C								
Life Expectancy	30000 hours @VAC, 70°C 100000 hours @VDC, 70°C								
	Capacitance Change	≤3% of initially measured value							
Failure Quota	300/ billion component hours								
Damp Heat test	**56 days at 40°C with 90 to 95%RH, +40°C and no voltage applied**								
	Capacitance Change	≤2% of initially measured value							
	Dissipation Factor	≤0.0001 at 1kHz and 25°C							
	Insulation Resistance	≥50% of maximum specified value							
Self Inductance	<1 nano-Henry per mm of body length and lead length								
Capacitance Drift Factor	<1.0% after 2 years at 40°C								
Capacitance Temperature Coefficient	-200 ppm/°C, ±100ppm/°C								
Dielectric Strength	**Terminal to Terminal**			**Terminal to case**					
	160% of rated VDC or 200% VDC applied for 2 Seconds and 25°C			3kVAC, 50/60Hz applied between the leads and case for 60 seconds					
Dielectric	Polypropylene								
Construction	Metallized film with internal series connections								
Coating	Flame Retardant polyester tape wrap (UL 501) with epoxy resin end fill(UL94V0)								
Leads	Lead free tinned copper leads								

Special Order Options



L MAX	29	34	34	46	46	55	59
D	≤17.5	≤18	>18	≤25	>25	all	all
d ±0.05	0.8	0.8	1.0	1.0	1.2	1.2	1.2

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PPS

High Voltage, high dvdt Axial Lead

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
700	0.15	154PPS700KG	235	3.5	11	11.5x29
700	0.22	224PPS700KG	235	4.5	8.7	13x29
700	0.33	334PPS700KG	235	5.5	6.7	15x29
700	0.33	334PPS700KJ	185	5.5	7.4	13x34
700	0.47	474PPS700KG	235	7	5.3	17.5x29
700	0.47	474PPS700K	185	6.5	5.9	15x34
700	0.68	684PPS700K	185	8	4.9	17.5x34
700	1	105PPS700K	185	10	4.1	21x34
700	1	105PPS700KD17	130	10	4.8	17.5x46
700	1.5	155PPS700K	185	10.5	3.5	25x34
700	1.5	155PPS700KD21	130	10.5	4.3	21x46
700	2	205PPS700KN	130	10.5	4	24x46
700	2.2	225PPS700K	130	10.5	3.9	25x46
700	2.5	255PPS700K	130	14	3.5	26.5x46
700	3	305PPS700KN	130	14	3.3	29x46
700	3.3	335PPS700K	130	14	3.1	30x46
700	3.3	335PPS700KD26	110	14	3.9	26.5x55
700	3.3	335PPS700KS	90	13.5	4.4	25x59
700	4	405PPS700K	130	14	2.8	32.5x46
700	4	405PPS700KD28	110	14	3.6	28.5x55
700	4	405PPS700KS	90	14	4.1	27x59
700	4.7	475PPS700K	110	14	3.3	31x55
700	4.7	475PPS700KS	90	14	3.7	29x59
700	5	505PPS700K	110	14	3.2	32x55
700	5	505PPS700KS	90	14	3.6	30x59
700	6.8	685PPS700K	110	14	2.7	37x55
700	6.8	685PPS700KS	90	14	3.1	34.5x59
700	8.2	825PPS700K	110	14	2.4	40.5x55
700	8.2	825PPS700KS	90	14	2.7	38x59
700	10	106PPS700KS	90	14	2.5	41.5x59
850	0.1	104PPS850KG	375	3.5	12.9	11.5x29
850	0.15	154PPS850KG	375	4.5	9.8	13x29
850	0.15	154PPS850K	300	4.5	10.8	12x34
850	0.22	224PPS850KG	375	5.5	7.7	15x29
850	0.22	224PPS850K	300	5.5	8.4	13.5x34
850	0.33	334PPS850KG	375	7	5.9	17.5x29
850	0.33	334PPS850K	300	7	6.6	16x34
850	0.47	474PPS850K	300	9	5.4	18.5x34
850	0.68	684PPS850K	300	10	4.3	21.5x34
850	0.68	684PPS850KD18	200	9	5.4	18x46
850	1	105PPS850K	300	13	3.3	26x34
850	1	105PPS850KD21	200	10.5	4.3	21.5x46
850	1.5	155PPS850K	200	14	3.5	25.5x46
850	2	205PPS850K	200	14	2.9	29x46
850	2.2	225PPS850K	200	14	2.9	30x46
850	2.2	225PPS850KR	125	14	3.8	26.5x55
850	2.2	225PPS850KS	110	14	4.3	25x59
850	2.5	255PPS850K	200	14	2.7	32x46
850	2.5	255PPS850KD28	125	12	3.6	28x55
850	2.5	255PPS850KS	110	14	4.1	26.5x59
850	3	305PPS850K	200	14	2.4	34.5x46
850	3	305PPS850KD30	125	14	3.2	30.5x55
850	3	305PPS850KS	110	14	3.6	29x59
850	3.3	335PPS850K	125	14	3.1	32x55
850	3.3	335PPS850KS	110	14	3.5	30x59
850	4	405PPS850K	125	14	2.8	35x55
850	4	405PPS850KS	110	14	3.1	33x59
850	4.7	475PPS850K	125	14	2.5	37x55

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
850	4.7	475PPS850KS	110	14	2.8	35.5x59
850	5	505PPS850K	125	14	2.4	38x55
850	5	505PPS850KS	110	14	2.7	36.5x59
850	5.6	565PPS850K	125	12	2.2	40.5x55
850	6.8	685PPS850KS	110	14	2.3	41.5x59
1000	0.068	683PPS102KG	425	3	16.7	11.5x29
1000	0.1	104PPS102KG	425	3.5	12.4	13x29
1000	0.15	154PPS102KG	425	5	9.3	15x29
1000	0.15	154PPS102KJ	340	4.5	10.3	13x34
1000	0.22	224PPS102KG	425	6.5	7	17x29
1000	0.22	224PPS102K	340	5.5	7.7	15x34
1000	0.33	334PPS102K	340	7.5	5.8	17.5x34
1000	0.47	474PPS102K	340	9.5	4.6	21x34
1000	0.47	474PPS102KD17	225	9	5.8	17.5x46
1000	0.68	684PPS102K	340	10.5	3.8	24.5x34
1000	0.68	684PPS102KD201	225	10.5	4.9	20.5x46
1000	1	05PPS102K	225	13	3.9	24.5x46
1000	1.5	155PPS102K	225	14	3.1	29.5x46
1000	1.5	155PPS102KD25	165	14	4.1	25.5x55
1000	1.5	155PPS102KS	135	13	4.7	24.5x59
1000	2	205PPS102K	225	14	2.6	33x46
1000	2	205PPS102KD29	165	14	3.5	29x55
1000	2	205PPS102KS	135	14	3.9	27.5x59
1000	2.2	225PPS102K	165	14	3.4	30.5x55
1000	2.2	225PPS102KS	135	14	3.8	28.5x59
1000	2.5	255PPS102K	165	14	3.1	33x55
1000	2.5	255PPS102KS	135	14	3.5	31x59
1000	3	305PPS102KR	165	14	2.8	35.5x55
1000	3	305PPS102KS	135	14	3.1	33x59
1000	3.3	335PPS102K	165	14	2.7	36.5x55
1000	3.3	335PPS102KS	135	14	3	34.5x59
1000	4	405PPS102K	165	14	2.4	40x55
1000	4	405PPS102KS	135	14	2.7	38x59
1000	4.7	475PPS102KS	135	14	2.4	40.5x59
1200	0.047	473PPS122KG	480	2.5	20.5	11x29
1200	0.068	683PPS122KG	480	3	15.8	12.5x29
1200	0.1	104PPS122KG	480	4.5	12	14.5x29
1200	0.1	104PPS122KJ	390	4	13.5	12.5x34
1200	0.15	154PPS122KG	485	5.5	8.8	17x29
1200	0.15	154PPS122K	390	5	9.8	14.5x34
1200	0.22	224PPS122K	390	6.5	7.1	17x34
1200	0.33	334PPS122K	390	8.5	5.3	20.5x34
1200	0.33	334PPS122KD17	255	8	6.7	17x46
1200	0.47	474PPS122K	390	10.5	3.7	23.5x34
1200	0.47	474PPS122KD20	255	9.5	5.6	20x46
1200	0.68	684PPS122K	255	10.5	4.9	23x46
1200	1	105PPS122K	255	13.5	4.1	27.5x46
1200	1.2	125PPS122K	255	14	3.7	30x46
1200	1.5	155PPS122K	255	14	3.2	33.5x46
1200	1.5	155PPS122KD29	190	14	3.7	29x55
1200	1.5	155PPS122KS	150	14	4.2	27x59
1200	2	205PPS122K	190	14	3.2	33x55
1200	2	205PPS122KS	150	14	3.6	31x59
1200	2.2	225PPS122K	190	14	3	34.5x55
1200	2.2	225PPS122KS	150	14	3.4	32.5x59
1200	2.5	255PPS122K	190	14	2.7	36.5x55
1200	2.5	255PPS122KS	150	14	3	34.5x59
1200	3	305PPS122K	190	14	2.4	40x55

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High Voltage, high dvdt Axial Lead

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
1200	3	305PPS122KS	150	14	2.7	37.5x59
1200	3.3	335PPS122K	190	14	2.3	41.5x55
1200	3.3	335PPS122KS	150	14	2.6	39x59
1500	0.01	103PPS252KG	1050	1.5	58	11.5x29
1500	0.033	333PPS152KG	610	2.5	26	11.5x29
1500	0.047	473PPS152KG	610	3	19.5	13x29
1500	0.068	683PPS152KG	610	3.5	14.5	14.5x29
1500	0.068	683PPS152KJ	490	3.5	16.1	12.5x34
1500	0.1	104PPS152KG	610	5	10.9	17.5x29
1500	0.1	104PPS152K	490	4.5	12	14.5x34
1500	0.15	154PPS152K	490	6	8.7	17.5x34
1500	0.22	224PPS152K	490	8	6.5	20.5x34
1500	0.22	224PPS152KD17	320	7.5	8.5	17x46
1500	0.33	334PPS152K	490	10	4.8	24.5x34
1500	0.33	334PPS152KD20	320	9	6.4	20.5x46
1500	0.47	474PPS152K	320	11.5	5.1	24x46
1500	0.68	684PPS152K	320	13.5	4.4	28x46
1500	1	105PPS152K	320	14	3.3	33.5x46
1500	1	105PPS152KD29	235	14	4.5	29x55
1500	1	105PPS152KS	175	13.5	5.1	28x59
1500	1.2	125PPS152K	235	14	4	31.5x55
1500	1.2	125PPS152KS	175	14	4.5	28x59
1500	1.5	155PPS152K	235	14	3.5	35.5x55
1500	1.5	155PPS152KS	175	14	3.9	33.5x59
1500	2	205PPS152K	235	14	3	40.5x55
1500	2	205PPS152KS	175	14	3.3	38x59
1500	2.2	225PPS152KR	235	14	2.9	41.5x55
1500	2.2	225PPS152KS	175	14	3.2	40x59
2000	0.022	223PPS202KG	810	2.5	33	12x29
2000	0.033	333PPS202K	635	3	24.5	13x34
2000	0.047	473PPS202KG	810	3.5	18.5	15.5x29
2000	0.047	473PPS202K	650	3	20.5	13x34
2000	0.068	683PPS202KG	810	4.5	13.8	17.5x29
2000	0.068	683PPS202K	650	4	15	15x34
2000	0.1	104PPS202K	650	5.5	11.6	17.5x34
2000	0.15	154PPS202K	650	7.5	8.2	21.5x34
2000	0.15	154PPS202KD17	410	6.5	10	17.5x46
2000	0.22	224PPS202K	650	9.5	5.7	25.5x34
2000	0.22	224PPS202KD21	410	9	7.2	21x46
2000	0.33	334PPS202K	410	11.5	5.5	25x46
2000	0.47	474PPS202K	410	13.5	4.5	29x46
2000	0.68	684PPS202K	410	14	3.7	34.5x46
2000	0.68	684PPS202KD30	300	14	4.7	30x55
2000	0.68	684PPS202KR	300	14	4.7	30x55
2000	0.68	684PPS202KS	225	14	5.4	28.5x59
2000	1	105PPS202K	300	14	3.8	35.5x55

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Maximum RMS Ripple Current (A) 100 kHz, +70°C	Typical ESR (mΩ) 100 kHz, +25°C	Dims DxL (mm)
2000	1	105PPS202KS	225	14	4.3	33.5x59
2000	1.3	135PPS202K	300	14	3.3	40.5x55
2000	1.3	135PPS202KS	225	14	3.7	38x59
2000	1.5	155PPS202KS	225	14	3.5	40.5x59
2500	0.015	153PPS252KG	1050	2	42	13x29
2500	0.022	223PPS252KG	1050	2.5	30.5	15x29
2500	0.033	333PPS252KG	1050	3.5	22.5	17.5x29
2500	0.033	333PPS252K	870	3	26	13.5x34
2500	0.047	473PPS252K	870	4	19.1	15.5x34
2500	0.068	683PPS252K	870	5	14.5	18x34
2500	0.1	104PPS252K	870	7	11	22x34
2500	0.1	104PPS252KD17	550	6	14.2	17.5x46
2500	0.15	154PPS252K	870	8.5	7.6	26x34
2500	0.15	154PPS252KD21	550	7.5	9.3	21.5x46
2500	0.22	224PPS252K	550	10	6.8	25x46
2500	0.33	334PPS252K	550	13	5.2	30x46
2500	0.33	334PPS252KD26	375	12	6.3	26x55
2500	0.33	334PPS252KS	280	11	7.3	25x59
2500	0.47	474PPS252K	550	14	4.2	35.5x46
2500	0.47	474PPS252KD30	375	14	5.1	30.5x55
2500	0.47	474PPS252KS	280	13.5	5.8	29.5x59
2500	0.68	684PPS252K	375	14	4.2	36.5x55
2500	0.68	684PPS252KS	280	14	4.8	35x59
2500	0.82	824PPS252K	375	14	3.7	40x55
2500	0.82	824PPS252KS	280	14	4.2	38.5x59
2500	1	105PPS252KS	280	14	3.9	42x59
3000	0.0068	682PPS302KG	1500	1	75	12x29
3000	0.01	103PPS302KG	1500	1.5	56	14x29
3000	0.01	103PPS302K	1200	1.5	68	11.5x34
3000	0.015	153PPS302KG	1500	2.5	39	16x29
3000	0.015	153PPS302K	1200	2	43	14x34
3000	0.022	223PPS302K	1200	3	31.5	15.5x34
3000	0.033	333PPS302K	1200	4	22	18x34
3000	0.047	473PPS302K	1200	5	16	21x34
3000	0.068	683PPS302K	1200	7	12	25x34
3000	0.068	683PPS302KD20	750	6	15	20x46
3000	0.1	104PPS302K	750	7.5	11	23.5x46
3000	0.15	154PPS302K	750	10	8	28.5x46
3000	0.22	224PPS302K	750	13	6	34x46
3000	0.22	224PPS302KS	370	11	7.7	27.5x55
3000	0.22	224PPS302KD29	500	12	6.8	29x55
3000	0.33	334PPS302K	500	14	5.5	34x55
3000	0.33	334PPS302KS	370	14	6.2	32.5x59
3000	0.47	474PPS302K	500	14	4.9	41x55
3000	0.47	474PPS302KS	370	14	5.5	39x59
3000	0.56	564PPS302KS	370	14	5.1	42x59

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PWS

Polypropylene Film Capacitors

Axial Leaded with Aluminum Foil Electrodes

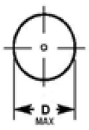


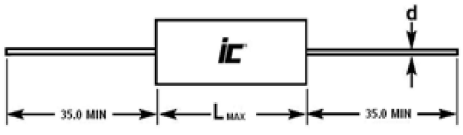
FEATURES	Low ESR - High Current – High Pulse Current Ratings
APPLICATIONS	Power Semiconductor Circuits – SCR Commutation – Deflection Circuits – Switching Power Supplies

Operating Temperature Range	**-55°C to +105°C**					
Capacitance Tolerance	±10% at 1 kHz, 25°C ±5% optional					
AC voltage (50/60 Hz)	**WVDC**	**630**	**1000**	**1500**	**2000**	
	VAC	300	400	450	500	
	For T>+85°C, The voltage (DC/AC) must be decreased by 1.5% per °C					
Dissipation Factor (MAX) 25°C	**Frequency (kHz)**	**C≤0.001uF**	**.001<C≤0.1uF**	**C>0.1uF**		
	10	-	0.05%	0.1%		
	100	.01%	-	-		
Insulation Resistance @25°C (<70% RH) for 1 minute at 100VDC applied	**Capacitance**	**Insulation Resistance**				
	≤0.1µF	100000 MΩ				
	>0.1µF	30000 MΩxµF				
Self Inductance	<1 nano-Henry per mm of lead spacing					
Capacitance Drift Factor	<0.5% after 2 years at 40°C					
Load Life	**1000 Hours, +85C with 150% of rated voltage**					
	Capacitance Change	≤1% of initially measured value				
	Dissipation Factor	≤0.0005 at 10kHz and 25°C for C≤0.1uF ≤0.001 at 1kHz and 25°C for C>0.1uF				
	Insulation Resistance	≥50% of maximum specified value				
Reliability (0.5xRated Voltage, 40°C) 1 FIT=1 failure/1 billion component hours	1 Fit					
	Capacitance Change	≤10% of initially measured value				
	Dissipation Factor	≤200% of initially specified value				
	Insulation Resistance	≥50% of maximum specified value				
Damp Heat test	**56 days at40°C with 90 to 95%RH, +40°C and no voltage applied**					
	Capacitance Change	≤5% of initially measured value				
	Dissipation Factor	≤0.005 at 1kHz and 25°C				
	Insulation Resistance	≥50% of maximum specified value				
Self Inductance	<1 nano-Henry per mm of body length lead length					
Capacitance Drift Factor	<0.5% after 2 years at 40°C					
Capacitance Temperature Coefficient	-200 ppm/°C, ±100ppm/°C					
Dielectric Strength	**Terminal to Terminal**					
	200% of rated VDC applied for 2 Seconds and 25°C					
Dielectric	Polypropylene					
Construction	Aluminum foil with internal series connection and metalized film					
Coating	Flame Retardant polyester tape wrap (UL 510) with epoxy resin end fill (UL94V0)					
Leads	Lead free tinned copper leads					

Special Order Options

WVDC	630		1000		1500		2000	
Capacitance	C≤.22	C>0.22	C≤.1	C>0.1	C≤.047	C>0.047	C≤.033	C>0.033
d ±0.05	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0





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PWS

Axial Lead Metallized Film with Foil Electrodes, Polypropylene Capacitors

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Dims DxL (mm)
630	0.015	153PWS630KD	4300	8.5x20.5
630	0.022	223PWS630KD	4300	9.5x20.5
630	0.033	333PWS630KD	4300	11.5x20.5
630	0.033	333PWS630KG	2600	9.5x29
630	0.068	683PWS630KG	2600	12x29
630	0.1	104PWS630KG	2600	14x29
630	0.15	154PWS630KG	2600	17x29
630	0.15	154PWS630KJ	1800	14.5x34
630	0.22	224PWS630KJ	1800	17x34
630	0.33	334PWS630KJ	1800	20x34
630	0.47	474PWS630KJ	1800	24x34
630	0.56	564PWS630KJ	1800	27x34
1000	0.0033	332PWS102KD	14000	8.5x20.5
1000	0.0047	472PWS102KD	14000	7x19
1000	0.0068	682PWS102KD	14000	12x21
1000	0.0068	682PWS102KG	5000	8.5x29
1000	0.01	103PWS102KG	5000	9x29
1000	0.015	153PWS102KG	5000	10.5x29
1000	0.022	223PWS102K	5000	12x29
1000	0.033	333PWS102KG	5000	14x29
1000	0.047	473PWS102KG	5000	17x29
1000	0.047	473PWS102KJ	3700	14.5x34
1000	0.068	683PWS102KJ	3700	17x34
1000	0.1	104PWS102KJ	3700	19.5x34
1000	0.15	154PWS102KJ	3700	23.5x34
1000	0.22	224PWS102KJ	3700	28x34

WVDC	Capacitance (µF)	IC PART NUMBER	dv/dt (v/µ sec.)	Dims DxL (mm)
1500	0.0022	222PWS152KD	17000	9x20.5
1500	0.0033	332PWS152KD	17000	10x20.5
1500	0.0047	472PWS152KD	17000	12x20.5
1500	0.0047	472PWS152KG	6000	9x29
1500	0.0068	682PWS152KG	6000	9.5x29
1500	0.01	103PWS152KG	6000	10.5x29
1500	0.015	153PWS152KG	6000	12.5x29
1500	0.022	223PWS152KG	6000	14.5x29
1500	0.033	333PWS152KG	6000	18x29
1500	0.033	333PWS152KJ	4500	15x34
1500	0.047	473PWS152KJ	4500	17.5x34
1500	0.068	683PWS152KJ	4500	20.5x34
1500	0.1	104PWS152KJ	4500	24x34
1500	0.12	124PWS152KJ	4500	27x34
2000	0.001	102PWS202KD	27000	9x20.5
2000	0.0015	152PWS202KD	27000	10x20.5
2000	0.0022	222PWS202KD	27000	12x20.5
2000	0.0033	332PWS202KG	9800	9.5x29
2000	0.0047	472PWS202KG	9800	10.5x29
2000	0.0068	682PWS202KG	9800	12x29
2000	0.01	103PWS202KG	9800	14x29
2000	0.015	153PWS202KG	9800	16.5x29
2000	0.022	223PWS202KJ	7000	16.5x34
2000	0.033	333PWS202KJ	7000	20x34
2000	0.047	473PWS202KJ	7000	22.5x34
2000	0.068	683PWS202KJ	7000	27x34

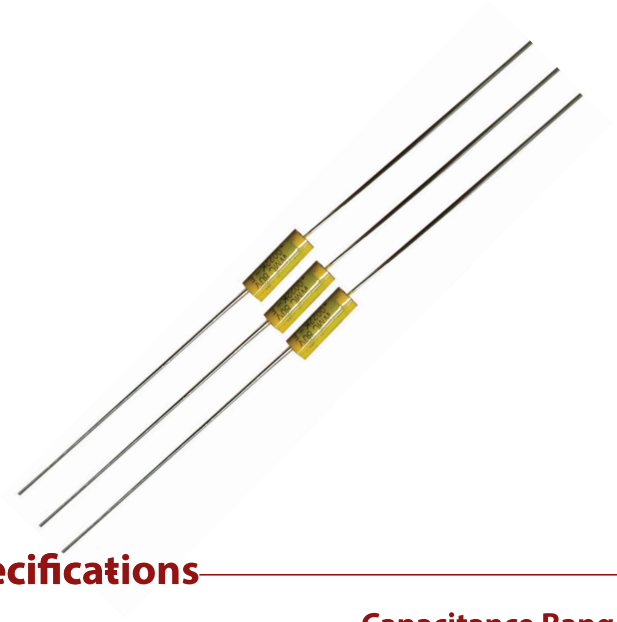
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Type WMC Polyester Film/Foil Capacitors

Axial Lead, Miniature Size for Automatic Insertion



Type WMC axial-leaded polyester film/foil capacitors are ideal for automatic insertion in printed circuit boards. It is an ultraminiature version of Type WMF and the sections of these non-inductive capacitors are constructed with extended foil, polyester film, with tinned copper-clad steel leads.

Highlights

- Miniature Size
- Available on tape and reel
- Film/foil construction, non-inductive design
- High dV/dt ratings
- Good for high pulse applications

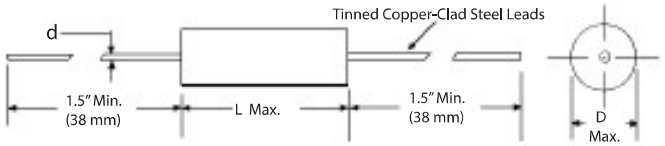
RoHS Compliant

Specifications

Capacitance Range: .001 µF to .47 µF
Voltage Range: 80 to 400 Vdc
Capacitance Tolerance: ±10% standard, ±5% optional
Temperature Range: –55 to +125 °C
(Full-rated voltage at 85 °C–Derate linearly to 50%-rated voltage at 125 °C)

Dielectric Strength: 250% of rated voltage for 1 minute
Dissipation Factor: .75% Max. (25 °C, 1 kHz)
Insulation Resistance: 30,000 MΩ x µF, 100,000 MΩ Min.
Life Test: 250 hours at 85 °C at 125% rated voltage

Outline Drawing



Lead Diameters:
No. 24 AWG to .282" (6.35mm) diameter
No. 22 AWG .283" (6.38mm) diameter and up

NOTE: Other capacitance values, sizes and performance specifications are available. Contact us.

Pulse Ratings

Pulse Capability					
Rated Voltage	Body Length				
	≤.437	.531-.593	.656-.718	0.906	1.218
	dV/dt — volts per microsecond, maximum				
80	5000	2100	1500	900	690
200	10800	5000	3000	1700	1260
400	30700	14500	9600	3600	2600

Ratings

Cap (µF)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)
80 Vdc				
0.0010	WMC08D1K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0012	WMC08D12K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0015	WMC08D15K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0018	WMC08D18K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0022	WMC08D22K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0027	WMC08D27K-F	.185 (4.7)	.406 (10.3)	.020 (.5)

Cap (µF)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)
80 Vdc				
0.0033	WMC08D33K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0039	WMC08D39K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0047	WMC08D47K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0056	WMC08D56K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0068	WMC08D68K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0082	WMC08D82K-F	.185 (4.7)	.406 (10.3)	.020 (.5)

Type WMC Polyester Film/Foil Capacitors

Cap (µF)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)
		80 Vdc		
0.010	WMC08S1K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.012	WMC08S12K-F	.185 (4.7)	.468 (11.9)	.020 (.5)
0.015	WMC08S15K-F	.185 (4.7)	.468 (11.9)	.020 (.5)
0.018	WMC08S18K-F	.185 (4.7)	.531 (13.5)	.020 (.5)
0.022	WMC08S22K-F	.185 (4.7)	.531 (13.5)	.020 (.5)
0.027	WMC08S27K-F	.229 (5.8)	.468 (11.9)	.020 (.5)
0.033	WMC08S33K-F	.229 (5.8)	.468 (11.9)	.020 (.5)
0.039	WMC08S39K-F	.229 (5.8)	.593 (15.1)	.020 (.5)
0.047	WMC08S47K-F	.229 (5.8)	.593 (15.1)	.020 (.5)
0.056	WMC08S56K-F	.250 (6.3)	.593 (15.1)	.020 (.5)
0.068	WMC08S68K-F	.250 (6.3)	.593 (15.1)	.020 (.5)
0.082	WMC08S82K-F	.343 (8.7)	.531 (13.5)	.024 (.6)
0.10	WMC08P1K-F	.343 (8.7)	.531 (13.5)	.024 (.6)
0.12	WMC08P12K-F	.343 (8.7)	.656 (16.7)	.024 (.6)
0.15	WMC08P15K-F	.343 (8.7)	.656 (16.7)	.024 (.6)
0.18	WMC08P18K-F	.382 (9.7)	.656 (16.7)	.024 (.6)
0.22	WMC08P22K-F	.382 (9.7)	.656 (16.7)	.024 (.6)
0.27	WMC08P27K-F	.382 (9.7)	.905 (23.0)	.024 (.6)
0.33	WMC08P33K-F	.382 (9.7)	.905 (23.0)	.024 (.6)
0.39	WMC08P39K-F	.382 (9.7)	1.218 (30.9)	.024 (.6)
0.47	WMC08P47K-F	.382 (9.7)	1.218 (30.9)	.024 (.6)
		200/250 Vdc		
0.0010	WMC2D1K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0012	WMC2D12K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0015	WMC2D15K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0018	WMC2D18K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0022	WMC2D22K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0027	WMC2D27K-F	.185 (4.7)	.406 (10.3)	.020 (.5)
0.0033	WMC2D33K-F	.185 (4.7)	.468 (11.9)	.020 (.5)
0.0039	WMC2D39K-F	.185 (4.7)	.468 (11.9)	.020 (.5)
0.0047	WMC2D47K-F	.185 (4.7)	.468 (11.9)	.020 (.5)
0.0056	WMC2D56K-F	.185 (4.7)	.468 (11.9)	.020 (.5)
0.0068	WMC2D68K-F	.185 (4.7)	.468 (11.9)	.020 (.5)
0.0082	WMC2D82K-F	.185 (4.7)	.531 (13.5)	.020 (.5)
0.010	WMC2S1K-F	.185 (4.7)	.531 (13.5)	.020 (.5)
0.012	WMC2S12K-F	.229 (5.8)	.468 (11.9)	.020 (.5)
0.015	WMC2S15K-F	.229 (5.8)	.468 (11.9)	.020 (.5)
0.018	WMC2S18K-F	.229 (5.8)	.656 (16.7)	.020 (.5)

Cap (µF)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)
		200/250 Vdc		
0.022	WMC2S22K-F	.229 (5.8)	.656 (16.7)	.020 (.5)
0.027	WMC2S27K-F	.250 (6.3)	.656 (16.7)	.020 (.5)
0.033	WMC2S33K-F	.250 (6.3)	.656 (16.7)	.020 (.5)
0.039	WMC2S39K-F	.343 (8.7)	.531 (13.5)	.024 (.6)
0.047	WMC2S47K-F	.343 (8.7)	.531 (13.5)	.024 (.6)
0.056	WMC2S56K-F	.343 (8.7)	.656 (16.7)	.024 (.6)
0.068	WMC2S68K-F	.343 (8.7)	.656 (16.7)	.024 (.6)
0.082	WMC2S82K-F	.382 (9.7)	.656 (16.7)	.024 (.6)
0.10	WMC2P1K-F	.382 (9.7)	.656 (16.7)	.024 (.6)
0.12	WMC2P12K-F	.382 (9.7)	.906 (23.0)	.024 (.6)
0.15	WMC2P15K-F	.382 (9.7)	.906 (23.0)	.024 (.6)
0.18	WMC2P18K-F	.382 (9.7)	1.218 (30.9)	.024 (.6)
0.22	WMC2P22K-F	.382 (9.7)	1.218 (30.9)	.024 (.6)
		400 Vdc		
0.0010	WMC4D1K-F	.185 (4.7)	.468 (11.9)	.020 (.5)
0.0012	WMC4D12K-F	.185 (4.7)	.468 (11.9)	.020 (.5)
0.0015	WMC4D15K-F	.185 (4.7)	.468 (11.9)	.020 (.5)
0.0018	WMC4D18K-F	.185 (4.7)	.531 (13.5)	.020 (.5)
0.0022	WMC4D22K-F	.185 (4.7)	.531 (13.5)	.020 (.5)
0.0027	WMC4D27K-F	.229 (5.8)	.531 (13.5)	.020 (.5)
0.0033	WMC4D33K-F	.229 (5.8)	.531 (13.5)	.020 (.5)
0.0039	WMC4D39K-F	.229 (5.8)	.531 (13.5)	.020 (.5)
0.0047	WMC4D47K-F	.229 (5.8)	.531 (13.5)	.020 (.5)
0.0056	WMC4D56K-F	.250 (6.3)	.656 (16.7)	.020 (.5)
0.0068	WMC4D68K-F	.250 (6.3)	.656 (16.7)	.020 (.5)
0.0082	WMC4D82K-F	.250 (6.3)	.656 (16.7)	.020 (.5)
0.010	WMC4S1K-F	.250 (6.3)	.656 (16.7)	.020 (.5)
0.012	WMC4S12K-F	.343 (8.7)	.593 (15.1)	.024 (.6)
0.015	WMC4S15K-F	.343 (8.7)	.593 (15.1)	.024 (.6)
0.018	WMC4S18K-F	.343 (8.7)	.718 (18.2)	.024 (.6)
0.022	WMC4S22K-F	.343 (8.7)	.718 (18.2)	.024 (.6)
0.027	WMC4S27K-F	.382 (9.7)	.718 (18.2)	.024 (.6)
0.033	WMC4S33K-F	.382 (9.7)	.718 (18.2)	.024 (.6)
0.039	WMC4S39K-F	.382 (9.7)	.906 (23.0)	.024 (.6)
0.047	WMC4S47K-F	.382 (9.7)	.906 (23.0)	.024 (.6)
0.056	WMC4S56K-F	.382 (9.7)	1.218 (30.9)	.024 (.6)
0.068	WMC4S68K-F	.382 (9.7)	1.218 (30.9)	.024 (.6)

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Type WMF Polyester Film Capacitors

Film/Foil, Axial Leads - Commercial, Industrial Applications



Type WMF axial-leaded, polyester film/foil capacitors, available in a wide range of capacitance and voltage ratings, offer excellent moisture resistance capability with extended foil, non-inductive wound sections, epoxy sealed ends and a sealed outer wrapper. Like the Type DMT, Type WMF is an ideal choice for most applications, especially those with high peak currents.

Highlights

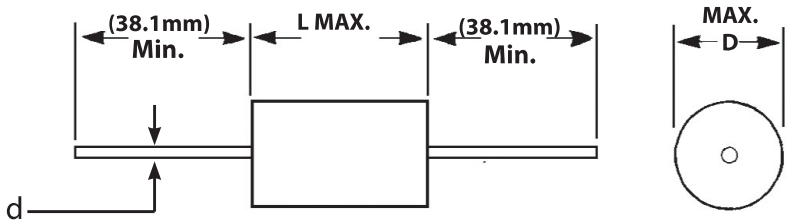
- Very high dV/dt
- Very high peak current
- Low inductance

Specifications

Capacitance Range	.001 to 5 µF
Capacitance Tolerance @ 1 kHz/25 °C	±10% (K) Standard Tolerance, ±5% (J)/±20% (M) (Optional)
Rated Voltage	50 to 630 Vdc
Operating Temperature Range with Ripple	–55 °C to 125 °C* *Full rated voltage at 85 °C - derated linearly to 50% rated at 125 °C
Insulation Resistance	30,000 MΩ x µF, 100,000 MΩ Min.
Dissipation Factor	.75% Max. (25 °C, 1 kHz)
Dielectric Strength	250%
Life Test	500 Hours at 85 °C at 125% Rated Voltage
RoHS Compliant	

Construction Details	
Case Material	UL510 Polyester Tape Wrap
Resin Material	UL94V-0 Epoxy Fill
Terminal Material	Tin Plated Copper - Clad Steel

Dimensions



Type WMF Polyester Film Capacitors

Film/Foil, Axial Leads

Part Numbering System

WMF	6	P	22	K	- F
Series	Voltage Code	Capacitance Decimal Point	Capacitance Significant Figures µF	Tolerance Code	RoHS Compliant Indicator
WMF	05 = 50 Vdc 1 = 100 Vdc 2 = 250 Vdc 4 = 400 Vdc 6 = 630 Vdc	S = 0.0 P = 0. W = No decimal point		K = ±10	

Ratings

NOTE: Other ratings, sizes and performance specifications are available. Contact us.

Cap. µF	Catalog Part Number	D mm	L mm	d mm	dV/dt V/µs
50 Vdc					
0.0820	WMF05S82K-F	7.1	20.6	0.5	1500
0.1000	WMF05P1K-F	7.1	20.6	0.5	1500
0.1200	WMF05P12K-F	7.5	20.6	0.6	1500
0.1500	WMF05P15K-F	8.0	20.6	0.6	1500
0.1800	WMF05P18K-F	8.6	20.6	0.6	1500
0.2200	WMF05P22K-F	9.1	20.6	0.6	1500
0.2700	WMF05P27K-F	10.7	20.6	0.6	1500
0.3300	WMF05P33K-F	10.9	20.6	0.6	1500
0.3900	WMF05P39K-F	10.3	27.0	0.6	920
0.4700	WMF05P47K-F	10.3	27.0	0.6	920
0.5000	WMF05P5K-F	10.8	27.0	0.6	920
0.5600	WMF05P56K-F	12.2	27.0	0.6	920
0.6800	WMF05P68K-F	13.3	27.0	0.6	920
0.8200	WMF05P82K-F	14.4	27.0	0.6	920
1.0000	WMF05W1K-F	14.3	34.9	0.6	660
1.2500	WMF05W1P25K-F	14.6	34.9	0.8	660
1.5000	WMF05W1P5K-F	16.4	34.9	0.8	660
2.0000	WMF05W2K-F	16.8	41.3	0.8	660
3.0000	WMF05W3K-F	20.1	41.3	1.0	660
4.0000	WMF05W4K-F	20.9	46.3	1.0	310
5.0000	WMF05W5K-F	23.2	46.3	1.0	310

Cap. µF	Catalog Part Number	D mm	L mm	d mm	dV/dt V/µs
100 Vdc					
0.0010	WMF1D1K-F	4.8	14.3	0.5	6300
0.0012	WMF1D12K-F	4.8	14.3	0.5	6300
0.0015	WMF1D15K-F	4.8	14.3	0.5	6300
0.0022	WMF1D22K-F	4.8	14.3	0.5	6300
0.0027	WMF1D27K-F	4.8	14.3	0.5	6300
0.0033	WMF1D33K-F	4.8	14.3	0.5	6300
0.0039	WMF1D39K-F	4.8	14.3	0.5	6300
0.0047	WMF1D47K-F	5.0	14.3	0.5	6300
0.0050	WMF1D5K-F	4.8	14.3	0.5	6300
0.0056	WMF1D56K-F	4.8	14.3	0.5	6300
0.0068	WMF1D68K-F	5.1	14.3	0.5	6300
0.0082	WMF1D82K-F	5.1	14.3	0.5	6300
0.0100	WMF1S1K-F	5.1	14.3	0.5	6300
0.0150	WMF1S15K-F	6.2	14.3	0.5	6300
0.0180	WMF1S18K-F	6.6	14.3	0.6	3200
0.0220	WMF1S22K-F	6.0	17.4	0.6	3200
0.0330	WMF1S33K-F	6.5	17.4	0.6	3200
0.0390	WMF1S39K-F	6.1	20.6	0.6	2100
0.0470	WMF1S47K-F	6.5	20.6	0.6	2100
0.0500	WMF1S5K-F	6.6	20.6	0.6	2100
0.0560	WMF1S56K-F	6.7	20.6	0.6	2100

Type WMF Polyester Film Capacitors

Film/Foil, Axial Leads

Cap. µF	Catalog Part Number	D mm	L mm	d mm	dV/dt V/µs
100 Vdc					
0.0680	WMF1S68K-F	7.5	20.6	0.6	2100
0.0820	WMF1S82K-F	7.0	23.8	0.6	1600
0.1000	WMF1P1K-F	8.5	23.8	0.6	1600
0.1200	WMF1P12K-F	8.0	23.8	0.6	1600
0.1500	WMF1P15K-F	8.6	23.8	0.6	1600
0.1800	WMF1P18K-F	8.8	27.0	0.6	1600
0.2200	WMF1P22K-F	9.5	27.0	0.6	1600
0.2700	WMF1P27K-F	9.5	30.1	0.6	1600
0.3300	WMF1P33K-F	10.5	30.1	0.6	1600
0.3900	WMF1P39K-F	10.9	30.1	0.6	1600
0.4700	WMF1P47K-F	12.5	31.7	0.6	840
0.5000	WMF1P5K-F	11.7	31.7	0.6	840
0.5600	WMF1P56K-F	12.3	31.7	0.8	840
0.6800	WMF1P68K-F	14.5	31.7	0.8	840
0.8200	WMF1P82K-F	13.7	35.9	0.8	840
1.0000	WMF1W1K-F	17.0	38.1	1.0	840
1.2500	WMF1W1P25K-F	16.4	38.1	1.0	840
1.5000	WMF1W1P5K-F	18.7	41.3	1.0	840
2.0000	WMF1W2K-F	21.2	41.3	1.0	840
200/250 Vdc					
0.0010	WMF2D1K-F	4.8	14.3	0.5	7500
0.0015	WMF2D15K-F	4.8	14.3	0.5	7500
0.0022	WMF2D22K-F	4.8	14.3	0.5	7500
0.0027	WMF2D27K-F	4.8	14.3	0.5	7500
0.0033	WMF2D33K-F	4.8	14.3	0.5	7500
0.0039	WMF2D39K-F	4.8	14.3	0.5	7500
0.0047	WMF2D47K-F	5.1	14.3	0.5	7500
0.0050	WMF2D5K-F	5.1	14.3	0.5	7500
0.0056	WMF2D56K-F	5.1	14.3	0.5	7500
0.0068	WMF2D68K-F	5.1	14.3	0.5	7500
0.0082	WMF2D82K-F	5.5	14.3	0.5	7500
0.0100	WMF2S1K-F	5.8	14.3	0.5	7500
0.0150	WMF2S15K-F	6.7	14.3	0.6	7500
0.0180	WMF2S18K-F	7.1	14.3	0.6	7500
0.0220	WMF2S22K-F	6.6	17.4	0.6	3700
0.0270	WMF2S27K-F	6.6	17.4	0.6	3700
0.0330	WMF2S33K-F	7.0	20.6	0.6	2500
0.0390	WMF2S39K-F	7.5	20.6	0.6	2500
0.0470	WMF2S47K-F	7.5	20.6	0.6	2500
0.0560	WMF2S56K-F	7.5	20.6	0.6	2500
0.0680	WMF2S68K-F	8.0	20.6	0.6	2500
0.0820	WMF2S82K-F	7.6	23.8	0.6	1900
0.1000	WMF2P1K-F	8.1	23.8	0.6	1900
0.1500	WMF2P15K-F	9.5	23.8	0.6	1900
0.2200	WMF2P22K-F	10.5	30.1	0.6	1900
0.2700	WMF2P27K-F	12.7	30.1	0.6	1900
0.3300	WMF2P33K-F	13.8	32.0	0.6	1500
0.3900	WMF2P39K-F	14.3	33.3	0.8	1500
0.4700	WMF2P47K-F	15.5	33.3	0.8	1500
0.5600	WMF2P56K-F	16.8	33.3	1.0	1500
0.6800	WMF2P68K-F	16.8	41.3	1.0	1500
0.8200	WMF2P82K-F	18.2	41.3	1.0	1500
1.0000	WMF2W1K-F	18.8	44.4	1.0	1500
1.2500	WMF2W1P25K-F	20.7	44.4	1.0	1500
1.5000	WMF2W1P5K-F	20.5	46.0	1.0	650
2.0000	WMF2W2K-F	24.5	47.6	1.0	650
400 Vdc					
0.0010	WMF4D1K-F	4.8	17.4	0.5	14400
0.0015	WMF4D15K-F	4.8	17.4	0.5	14400
0.0018	WMF4D18K-F	4.8	17.4	0.5	14400
0.0022	WMF4D22K-F	4.8	17.4	0.5	14400
0.0027	WMF4D27K-F	5.3	17.4	0.5	14400
0.0033	WMF4D33K-F	5.6	17.4	0.5	14400
0.0039	WMF4D39K-F	5.9	17.4	0.5	14400
0.0047	WMF4D47K-F	6.0	17.4	0.5	14400
0.0056	WMF4D56K-F	6.7	17.4	0.6	14400
0.0068	WMF4D68K-F	7.2	17.4	0.6	14400
0.0082	WMF4D82K-F	7.7	17.4	0.6	14400
0.0100	WMF4S1K-F	8.4	17.4	0.6	14400
0.0150	WMF4S15K-F	9.9	17.4	0.6	14400
0.0180	WMF4S18K-F	8.0	20.6	0.6	14400
0.0220	WMF4S22K-F	8.9	20.6	0.6	7200
0.0270	WMF4S27K-F	9.6	20.6	0.6	7200
0.0330	WMF4S33K-F	9.5	22.2	0.6	6500
0.0390	WMF4S39K-F	10.2	22.2	0.6	6500
0.0470	WMF4S47K-F	11.0	22.2	0.6	6500
0.0560	WMF4S56K-F	9.8	27.0	0.6	3600
0.0680	WMF4S68K-F	10.3	27.0	0.6	3600
0.0820	WMF4S82K-F	10.3	27.0	0.6	3600
0.1000	WMF4P1K-F	12.4	27.0	0.6	3600
0.1500	WMF4P15K-F	13.6	31.7	0.6	2400
0.1800	WMF4P18K-F	13.6	34.9	0.6	2400
0.2200	WMF4P22K-F	15.1	34.9	0.8	2400
0.2700	WMF4P27K-F	15.5	38.1	0.8	2400
0.3300	WMF4P33K-F	15.9	41.3	0.8	2400
0.3900	WMF4P39K-F	15.9	41.3	0.8	2400
0.4700	WMF4P47K-F	18.5	41.3	1.0	2400
0.5600	WMF4P56K-F	19.2	44.4	1.0	2400
0.6800	WMF4P68K-F	20.8	44.4	1.0	2400
0.8200	WMF4P82K-F	22.7	44.4	1.0	2400
1.0000	WMF4W1K-F	22.7	50.8	1.0	1300

Type WMF Polyester Film Capacitors

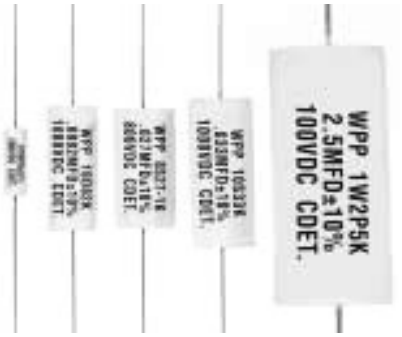
Film/Foil, Axial Leads

Cap. µF	Catalog Part Number	D mm	L mm	d mm	dV/dt V/µs
1.2500	WMF4W1P25K-F	25.1	50.8	1.0	1300
1.5000	WMF4W1P5K-F	25.3	58.7	1.0	1300
600/630 Vdc					
0.0010	WMF6D1K-F	5.0	20.6	0.5	9000
0.0012	WMF6D12K-F	5.1	20.6	0.5	9000
0.0015	WMF6D15K-F	5.1	20.6	0.5	9000
0.0018	WMF6D18K-F	5.1	20.6	0.5	9000
0.0022	WMF6D22K-F	5.5	20.6	0.5	9000
0.0027	WMF6D27K-F	5.5	20.6	0.5	9000
0.0033	WMF6D33K-F	5.8	20.6	0.5	9000
0.0039	WMF6D39K-F	6.1	20.6	0.5	9000
0.0047	WMF6D47K-F	6.6	20.6	0.5	9000
0.0056	WMF6D56K-F	6.9	20.6	0.6	9000
0.0068	WMF6D68K-F	7.4	20.6	0.6	9000
0.0082	WMF6D82K-F	7.4	20.6	0.6	9000
0.0100	WMF6S1K-F	7.4	20.6	0.6	9000
0.0150	WMF6S15K-F	7.5	23.8	0.6	5800
0.0180	WMF6S18K-F	8.0	23.8	0.6	5800
0.0220	WMF6S22K-F	8.5	23.8	0.6	5800
0.0270	WMF6S27K-F	9.3	23.8	0.6	5800
0.0330	WMF6S33K-F	10.0	25.4	0.6	5800
0.0390	WMF6S39K-F	10.0	25.4	0.6	5800
0.0470	WMF6S47K-F	10.9	25.4	0.6	5800
0.0560	WMF6S56K-F	11.7	25.4	0.6	5800
0.0680	WMF6S68K-F	12.7	25.4	0.8	5800
0.0820	WMF6S82K-F	12.9	34.9	0.8	3700
0.1000	WMF6P1K-F	14.7	34.9	0.8	3700
0.1200	WMF6P12K-F	16.0	34.9	0.8	3700
0.1500	WMF6P15K-F	17.4	34.9	1.0	3700
0.1800	WMF6P18K-F	16.9	41.3	1.0	3700
0.2200	WMF6P22K-F	18.3	41.3	1.0	3700
0.2700	WMF6P27K-F	20.1	41.3	1.0	3700
0.3300	WMF6P33K-F	19.0	50.8	1.0	1600
0.3900	WMF6P39K-F	20.7	50.8	1.0	1600
0.4700	WMF6P47K-F	22.5	50.8	1.0	1600
0.5600	WMF6P56K-F	24.2	50.8	1.0	1600
0.6800	WMF6P68K-F	26.2	50.8	1.0	1600
0.8200	WMF6P82K-F	29.5	50.8	1.0	1600
1.0000	WMF6W1K-F	30.1	65.1	1.0	1600

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Type WPP Film/Foil Polypropylene Capacitors

Axial Leaded High Frequency Pulse Capacitors



Type WPP axial-leaded, polypropylene film/foil capacitors incorporate non-inductive extended foil construction with epoxy end seals. Type WPP is rated for continuous-duty operation over the temperature range of –55 °C to 105 °C without voltage derating. Low ESR, low dissipation factor and the inherent stability make Type WPP ideal for tight tolerance, pulse and high frequency applications.

Highlights

- High pulse rating
- High frequency operation
- Low ESR
- Low DF
- Precise values

RoHS Compliant

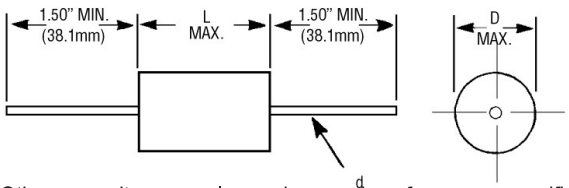
Specifications

Capacitance Range:	.001 to 5.0 µF
Voltage Range:	100 to 1000 Vdc (70 to 250 Vac, 60 Hz)
Capacitance Tolerance:	±10% (K) Standard, ±5% (J) Special Order
Operating Temperature Range:	–55 to 105 °C
Dielectric Strength:	160% rated voltage for 1 minute
Dissipation Factor:	0.1% Max @ 25 °C, 1 kHz
Insulation Resistance:	100,000 MΩ x µF 200,000 MΩ Min.
Life Test:	500 h @ 85 °C at 125% rated voltage

Pulse Capability:

Pulse Capability						
Rated Voltage	Body Length					
	0.625	.750-.875	.937-1.125	1.250-1.312	1.375-1.562	≥1.750
	dv/dt – volts per microsecond, maximum					
100	4200	4000	2900	1900	1600	1100
200	6900	4100	3000	2400	2000	1400
400	19500	10000	3900		2600	2200
600	60000	20000	12000	6700		3000
1000		37000	15000	9200	7400	3400

Outline Drawing



Note: Other capacitances values, sizes and performance specifications are available. Contact CDE.

Ratings

Cap (µF)	Catalog Part Number	D Inches	D (mm)	L Inches	L (mm)	d Inches	d (mm)
100 Vdc (70 Vac)							
0.0010	WPP1D1K–F	0.220	(5.6)	0.625	(15.9)	0.020	(0.5)
0.0015	WPP1D15K–F	0.220	(5.6)	0.625	(15.9)	0.020	(0.5)
0.0022	WPP1D22K–F	0.220	(5.6)	0.625	(15.9)	0.020	(0.5)
0.0033	WPP1D33K–F	0.228	(5.8)	0.625	(15.9)	0.020	(0.5)
0.0047	WPP1D47K–F	0.240	(6.1)	0.625	(15.9)	0.020	(0.5)
0.0068	WPP1D68K–F	0.250	(6.3)	0.625	(15.9)	0.020	(0.5)

Cap (µF)	Catalog Part Number	D Inches	D (mm)	L Inches	L (mm)	d Inches	d (mm)
100 Vdc (70 Vac)							
0.0100	WPP1S1K–F	0.250	(6.3)	0.625	(15.9)	0.020	(0.5)
0.0150	WPP1S15K–F	0.250	(6.3)	0.625	(15.9)	0.020	(0.5)
0.0220	WPP1S22K–F	0.270	(6.9)	0.625	(15.9)	0.020	(0.5)
0.0330	WPP1S33K–F	0.319	(8.1)	0.625	(15.9)	0.024	(0.6)
0.0470	WPP1S47K–F	0.298	(7.6)	0.875	(22.2)	0.024	(0.6)
0.0680	WPP1S68K–F	0.350	(8.9)	0.875	(22.2)	0.024	(0.6)

Type WPP Film/Foil Polypropylene Capacitors

RoHS Compliant

Cap (µF)	Catalog Part Number	D Inches	D (mm)	L Inches	L (mm)	d Inches	d (mm)
100 Vdc (70 Vac)							
0.1000	WPP1P1K–F	0.403	(10.2)	0.906	(23.0)	0.024	(0.6)
0.1500	WPP1P15K–F	0.515	(13.1)	1.063	(27.0)	0.024	(0.6)
0.2200	WPP1P22K–F	0.529	(13.4)	1.260	(32.0)	0.024	(0.6)
0.3300	WPP1P33K–F	0.551	(14.0)	1.250	(31.7)	0.024	(0.6)
0.4700	WPP1P47K–F	0.622	(15.8)	1.250	(31.7)	0.032	(0.8)
0.6800	WPP1P68K–F	0.684	(17.4)	1.375	(34.9)	0.032	(0.8)
1.0000	WPP1W1K–F	0.810	(20.6)	1.375	(34.9)	0.040	(1.0)
1.5000	WPP1W1P5K–F	0.828	(21.0)	1.750	(44.4)	0.040	(1.0)
2.0000	WPP1W2K–F	0.934	(23.7)	1.750	(44.4)	0.040	(1.0)
2.5000	WPP1W2P5K–F	0.948	(24.1)	2.000	(50.8)	0.040	(1.0)
3.0000	WPP1W3K–F	1.030	(26.2)	2.000	(50.8)	0.040	(1.0)
3.3000	WPP1W3P3K–F	0.925	(23.5)	2.520	(64.0)	0.040	(1.0)
3.5000	WPP1W3P5K–F	0.965	(24.5)	2.520	(64.0)	0.040	(1.0)
4.0000	WPP1W4K–F	1.004	(25.5)	2.520	(64.0)	0.040	(1.0)
4.5000	WPP1W4P5K–F	1.063	(27.0)	2.520	(64.0)	0.040	(1.0)
5.0000	WPP1W5K–F	1.102	(28.0)	2.520	(64.0)	0.040	(1.0)
200/250 Vdc (140 Vac)							
0.0010	WPP2D1K–F	0.220	(5.6)	0.625	(15.9)	0.020	(0.5)
0.0015	WPP2D15K–F	0.220	(5.6)	0.625	(15.9)	0.020	(0.5)
0.0022	WPP2D22K–F	0.220	(5.6)	0.625	(15.9)	0.020	(0.5)
0.0033	WPP2D33K–F	0.228	(5.8)	0.625	(15.9)	0.020	(0.5)
0.0047	WPP2D47K–F	0.240	(6.1)	0.625	(15.9)	0.020	(0.5)
0.0068	WPP2D68K–F	0.250	(6.3)	0.625	(15.9)	0.020	(0.5)
0.0100	WPP2S1K–F	0.250	(6.3)	0.625	(15.9)	0.020	(0.5)
0.0150	WPP2S15K–F	0.276	(7.0)	0.625	(15.9)	0.020	(0.5)
0.0220	WPP2S22K–F	0.295	(7.5)	0.625	(15.9)	0.020	(0.5)
0.0330	WPP2S33K–F	0.319	(8.1)	0.625	(15.9)	0.024	(0.6)
0.0470	WPP2S47K–F	0.335	(8.5)	0.875	(22.2)	0.024	(0.6)
0.0680	WPP2S68K–F	0.350	(8.9)	0.906	(23.0)	0.024	(0.6)
0.1000	WPP2P1K–F	0.413	(10.5)	1.125	(28.6)	0.024	(0.6)
0.1500	WPP2P15K–F	0.492	(12.5)	1.312	(33.3)	0.024	(0.6)
0.2200	WPP2P22K–F	0.531	(13.5)	1.312	(33.3)	0.024	(0.6)
0.3300	WPP2P33K–F	0.591	(15.0)	1.750	(44.4)	0.024	(0.6)
0.4700	WPP2P47K–F	0.581	(14.8)	1.750	(44.4)	0.032	(0.8)
0.6800	WPP2P68K–F	0.684	(17.4)	1.750	(44.4)	0.032	(0.8)
1.0000	WPP2W1K–F	0.820	(20.8)	1.750	(44.4)	0.040	(1.0)
1.5000	WPP2W1P5K–F	0.922	(23.4)	2.000	(50.8)	0.040	(1.0)
2.0000	WPP2W2K–F	1.052	(26.7)	2.000	(50.8)	0.040	(1.0)
2.5000	WPP2W2P5K–F	0.965	(24.5)	2.520	(64.0)	0.040	(1.0)
3.0000	WPP2W3K–F	1.043	(26.5)	2.520	(64.0)	0.040	(1.0)
3.5000	WPP2W3P5K–F	1.102	(28.0)	2.520	(64.0)	0.040	(1.0)
400 Vdc (250 Vac)							
0.0010	WPP4D1K–F	0.220	(5.6)	0.625	(15.9)	0.020	(0.5)
0.0015	WPP4D15K–F	0.220	(5.6)	0.625	(15.9)	0.020	(0.5)
0.0022	WPP4D22K–F	0.220	(5.6)	0.625	(15.9)	0.020	(0.5)
0.0033	WPP4D33K–F	0.228	(5.8)	0.625	(15.9)	0.020	(0.5)
0.0047	WPP4D47K–F	0.256	(6.5)	0.750	(19.0)	0.020	(0.5)
0.0068	WPP4D68K–F	0.276	(7.0)	0.750	(19.0)	0.020	(0.5)
0.0100	WPP4S1K–F	0.290	(7.4)	0.750	(19.0)	0.024	(0.6)
0.0150	WPP4S15K–F	0.352	(8.9)	0.750	(19.0)	0.024	(0.6)

Cap (µF)	Catalog Part Number	D Inches	D (mm)	L Inches	L (mm)	d Inches	d (mm)
400 Vdc (250 Vac)							
0.0220	WPP4S22K–F	0.374	(9.5)	0.875	(22.2)	0.024	(0.6)
0.0330	WPP4S33K–F	0.374	(9.5)	1.062	(27.0)	0.024	(0.6)
0.0470	WPP4S47K–F	0.394	(10.0)	1.250	(31.7)	0.024	(0.6)
0.0680	WPP4S68K–F	0.415	(10.5)	1.250	(31.7)	0.024	(0.6)
0.1000	WPP4P1K–F	0.512	(13.0)	1.250	(31.7)	0.024	(0.6)
0.1500	WPP4P15K–F	0.615	(15.6)	1.250	(31.7)	0.032	(0.8)
0.2200	WPP4P22K–F	0.595	(15.1)	1.562	(39.7)	0.032	(0.8)
0.3300	WPP4P33K–F	0.673	(17.1)	1.750	(44.4)	0.032	(0.8)
0.4700	WPP4P47K–F	0.787	(20.0)	1.750	(44.4)	0.040	(1.0)
0.6800	WPP4P68K–F	0.852	(21.6)	2.000	(50.8)	0.040	(1.0)
1.0000	WPP4W1K–F	1.016	(25.8)	2.000	(50.8)	0.040	(1.0)
1.5000	WPP4W1P5K–F	1.043	(26.5)	2.520	(64.0)	0.040	(1.0)
600/630 Vdc (250 Vac)							
0.0010	WPP6D1K–F	0.253	(6.4)	0.625	(15.9)	0.020	(0.5)
0.0015	WPP6D15K–F	0.220	(5.6)	0.750	(19.0)	0.020	(0.5)
0.0022	WPP6D22K–F	0.226	(5.7)	0.750	(19.0)	0.020	(0.5)
0.0033	WPP6D33K–F	0.264	(6.7)	0.750	(19.0)	0.020	(0.5)
0.0047	WPP6D47K–F	0.295	(7.5)	0.812	(20.6)	0.020	(0.5)
0.0068	WPP6D68K–F	0.311	(7.9)	0.812	(20.6)	0.024	(0.6)
0.0100	WPP6S1K–F	0.338	(8.6)	0.937	(23.8)	0.024	(0.6)
0.0150	WPP6S15K–F	0.390	(9.9)	0.937	(23.8)	0.024	(0.6)
0.0220	WPP6S22K–F	0.424	(10.8)	1.062	(27.0)	0.024	(0.6)
0.0330	WPP6S33K–F	0.472	(12.0)	1.260	(32.0)	0.024	(0.6)
0.0470	WPP6S47K–F	0.512	(13.0)	1.260	(32.0)	0.024	(0.6)
0.0680	WPP6S68K–F	0.605	(15.4)	1.260	(32.0)	0.032	(0.8)
0.1000	WPP6P1K–F	0.690	(17.5)	1.125	(28.6)	0.404	(1.0)
0.1500	WPP6P15K–F	0.605	(15.4)	1.750	(44.4)	0.404	(1.0)
0.2200	WPP6P22K–F	0.715	(18.2)	1.750	(44.4)	0.404	(1.0)
0.3300	WPP6P33K–F	0.857	(21.8)	1.750	(44.4)	0.404	(1.0)
0.4700	WPP6P47K–F	0.922	(23.4)	2.000	(50.8)	0.404	(1.0)
0.6800	WPP6P68K–F	1.004	(25.5)	2.520	(64.0)	0.404	(1.0)
0.8200	WPP6P82K–F	1.102	(28.0)	2.520	(64.0)	0.404	(1.0)
1000 Vdc (250 Vac)							
0.0010	WPP10D1K–F	0.295	(7.5)	0.812	(20.6)	.020	(0.5)
0.0015	WPP10D15K–F	0.315	(8.0)	0.812	(20.6)	0.020	(0.5)
0.0022	WPP10D22K–F	0.346	(8.8)	0.812	(20.6)	0.024	(0.6)
0.0033	WPP10D33K–F	0.374	(9.5)	0.812	(20.6)	0.024	(0.6)
0.0047	WPP10D47K–F	0.420	(10.7)	0.812	(20.6)	0.024	(0.6)
0.0068	WPP10D68K–F	0.453	(11.5)	1.000	(25.4)	0.024	(0.6)
0.0100	WPP10S1K–F	0.453	(11.5)	1.125	(28.6)	0.024	(0.6)
0.0150	WPP10S15K–F	0.492	(12.5)	1.125	(28.6)	0.024	(0.6)
0.0220	WPP10S22K–F	0.551	(14.0)	1.125	(28.6)	0.024	(0.6)
0.0330	WPP10S33K–F	0.575	(14.6)	1.457	(37.0)	0.032	(0.8)
0.0470	WPP10S47K–F	0.669	(17.0)	1.457	(37.0)	0.032	(0.8)
0.0680	WPP10S68K–F	0.717	(18.2)	1.375	(34.9)	0.040	(1.0)
0.1000	WPP10P1K–F	0.850	(21.6)	1.375	(34.9)	0.040	(1.0)
0.1500	WPP10P15K–F	1.023	(26.0)	1.375	(34.9)	0.040	(1.0)
0.2200	WPP10P22K–F	0.854	(21.7)	2.125	(54.0)	0.040	(1.0)
0.3300	WPP10P33K–F	1.025	(26.0)	2.125	(54.0)	0.040	(1.0)
0.4700	WPP10P47K–F	1.063	(27.0)	2.520	(64.0)	0.040	(1.0)
0.5000	WPP10P50K–F	1.083	(27.5)	2.520	(64.0)	0.040	(1.0)

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CDE

Axial Leaded Film Capacitors

METALLIZED POLYESTER AND POLYPROPYLENE FOR MULTIPLE APPLICATIONS

RoHS COMPLIANT

Intelligent Capacitor Solutions





Cornell Dubiler can address all your capacitor needs. Our lines of rugged, reliable axial leaded film capacitors are available as standard items in many configurations to address a wide range of applications.

CDE maintains manufacturing facilities in China and India to enable quick turn-around for shipping and delivery worldwide. All capacitors are built using Lean Six Sigma manufacturing practices and undergo rigorous quality assurance testing. If you have specialized needs, our flexible manufacturing processes allow us to quickly provide custom configurations.

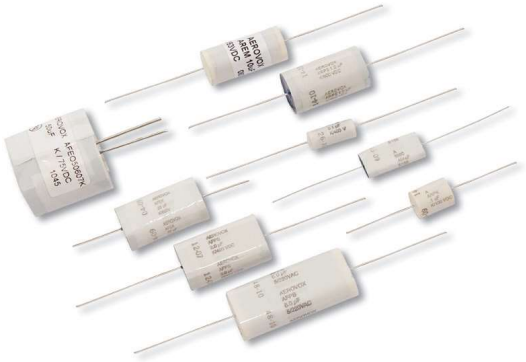


CDE provides intelligent capacitor solutions.



Axial Leaded Film Capacitors

METALLIZED POLYESTER AND POLYPROPYLENE FOR MULTIPLE APPLICATIONS



Applications

- Blocking, coupling and filtering (Types AREM and AFEO)
- UPS (Uninterruptible Power Supplies)
- Switching power supply (Type ARPM)
- Pulsing requiring high dV/dt ratings with low DF and ESR (Type ARPM)
- High current AC (Types ARPS and AFPS)

With their wide range of configurations and types, CDE's axial leaded film capacitors are suitable for many different applications. They are available round or flat, and in AC and DC voltage ratings. Wrap and fill capacitors are available in custom packages. All axial leaded film capacitors are UL 94 VO and IEC 695-2-2 certified and RoHS compliant.

AREM Round and AFEO Flat Axial Metallized Polyester

Types AREM and AFEO are axial leaded metallized polyester capacitors for general purpose use in blocking, coupling and filtering applications.

Highlights

- High CV for small size
- Bulk or T&R for AREM; bulk only for AFEO

ARPS Round and AFPS Flat Axial Metallized Polypropylene Capacitors

Types ARPS and AFPS are designed for high current AC applications.

Highlights

- High Current
- Low ESR
- Low DF

ARPM Axial Metallized Polypropylene Capacitors

Type ARPM is a stable metallized polypropylene capacitor that is ideal for pulsing applications that require a high dV/dt rating with low DF and ESR. ARPM fits well into switching power supply applications.

Highlights

- High dV/dt
- Low ESR
- Low DF

"W" Wrap & Fill

Type W is a tape wrapped axial leaded dry capacitor designed for use in a variety of permanent split-phase capacitor motor applications widely used in ventilating fans, appliances and refrigeration. The AC capacitors provide starting direction by shifting the current in the windings so that the motor simulates the operation of a two-phase motor.

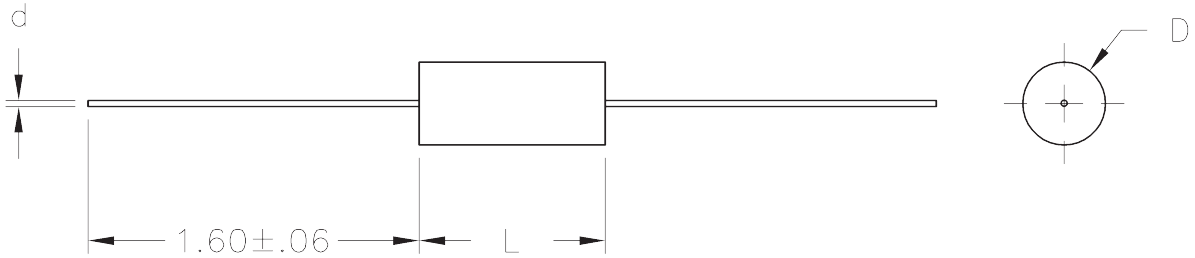
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Specifications

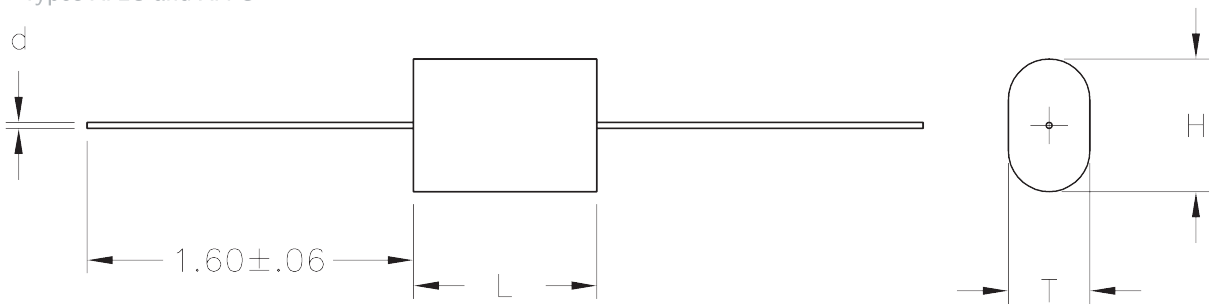
Capacitance Range:	.001 µF to 20.0 µF (Types AREM and AFEO) .0033 µF to 10.0 µF (Type ARPM) 0.47 µF to 20.0 µF (Types ARPS and AFPS)
Capacitance Tolerance:	±10% (K) Standard ±5% (J) Special ±2% (G) Special
Voltage Range:	63 VDC (40 VAC) to 630 VDC (220 VAC) (Types AREM and AFEO) 150 VDC (90 VAC) to 630 VDC (280 VAC) (Type ARPM) 300 VDC (220 VAC) to 600 VDC (300VAC) (Types ARPS and AFPS)
Dissipation Factor:	≤0.8% @ 1 kHz (Types AREM and AFEO) ≤0.1% @ 1 kHz (Types ARPM, ARPS, and AFPS)
Operating Temperature Range:	-55°C to +125°C. Full rated voltage @ 85°C, derating linearly to 50% rated voltage at 125°C (Types AREM and AFEO) -55°C to +105°C. Full rated voltage @ 85°C, derating 1.25%/°C from 85°C to 105°C (Types ARPM, ARPS and AFPS)
Dielectric Absorption:	0.30% typical (Types AREM and AFEO) 0.05% typical (Types ARPM, ARPS and AFPS)

Outline Drawings

Types ARPS, ARPM and AREM



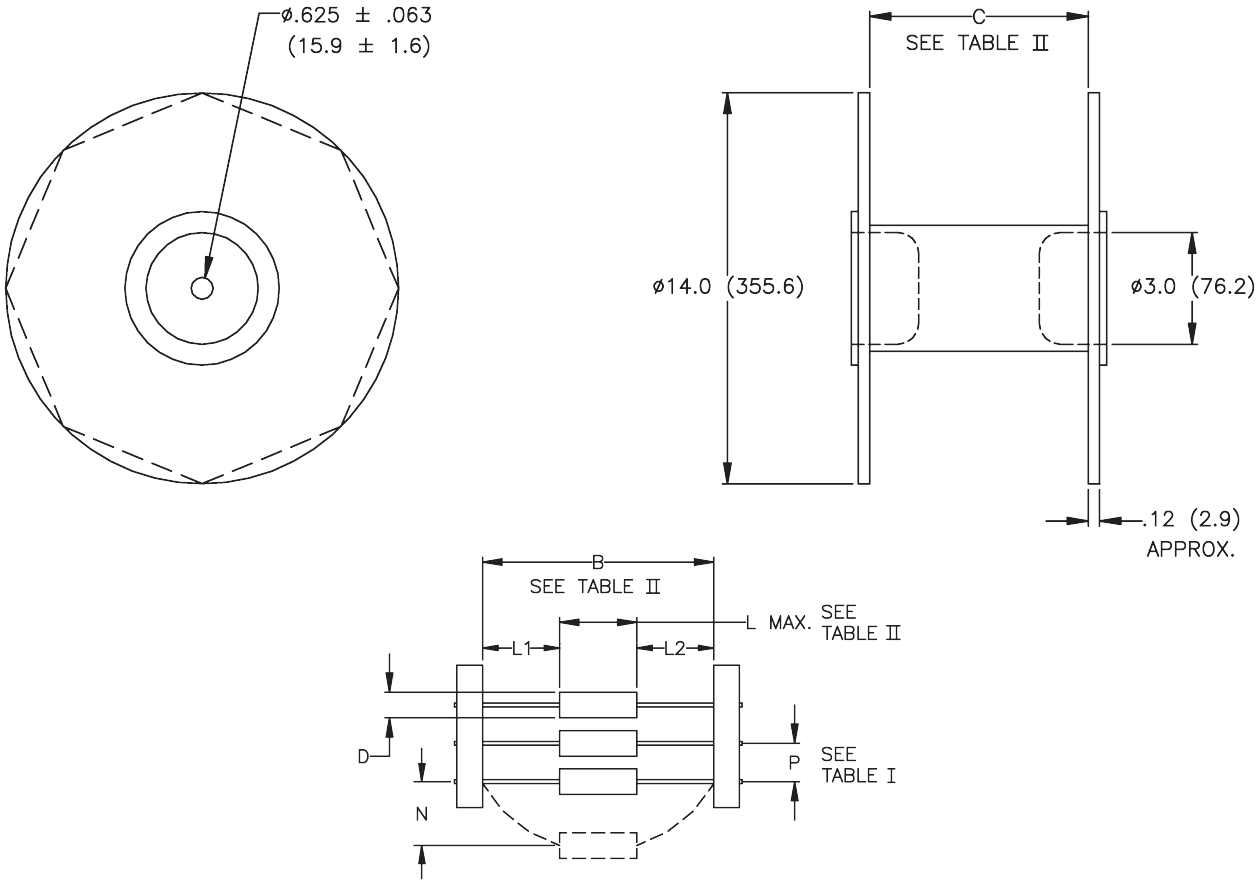
Types AFEO and AFPS



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Axial Leaded Tape & Reel Specification

According to EIA-296-E



|L1–L2| < .063 (1.6)

N < .047 (1.2)

Table I

D Inches (mm)	P Inches (mm)
≤.20 (5.0)	.20 (5.0) ± .02 (.50)
.20 (5.0) – 37 (9.5)	.40 (10.0) ± .02 (.50)
.38 (9.6) – .58 (14.7)	.60 (15.0) ± .02 (.50)

Table II

L Max Inches (mm)	Code*	B Inches (mm)	C Inches (mm)
≤.43 (11.0)	R1	2.06 (52.4) ± .06 (1.5)	2.95 (75)
.43 (11.0) < L ≤ .81 (20.5)	R2	2.50 (63.6) ± .06 (1.5)	3.39 (86)
>.81 (20.5)	R3	2.87 (73) ± .06 (1.5)	3.74 (95)

** According to EIA-296-E*

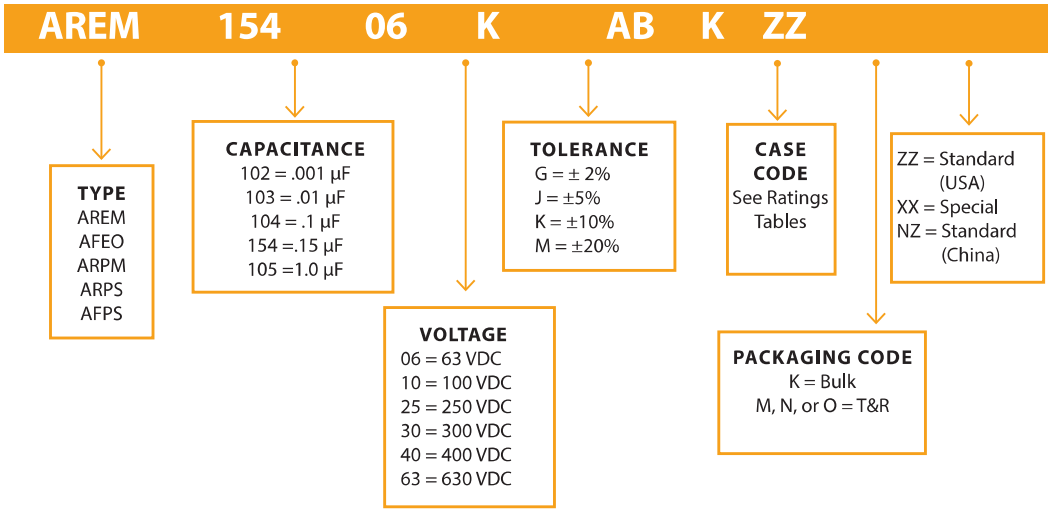
Table III

Component Diameter D Inches (mm)	Components per Reel
D ≤ .20 (5.0)	3000
.20 (5.0) < D ≤ .26 (6.5)	1200
.26 (6.5) < D ≤ .28 (7.0)	1100
.28 (7.0) < D ≤ .30 (7.5)	1000
.30 (7.5) < D ≤ .33 (8.5)	800
.33 (8.5) < D ≤ .41 (10.5)	500
.41 (10.5) < D ≤ .51 (13.0)	300
.51 (13.0) < D ≤ .58 (14.7)	250

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Part Numbering System
Round and Flat Axials

CDE's part numbering system is a descriptive part number made up of several different components such as voltage rating, capacitance, etc. The descriptors are explained here using AREM15406KABKZZ as a representative part number:



Type AFEO Flat Axial Metallized Polyester

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
100 VDC (63 VAC)				
5.0	AFEO50510KKRKZZ	.42 x .75 x .1.25 (10.7 x 19.1 x 31.8)	KR	.032 (.8)
250 VDC (160 VAC)				
1.0	AFEO10525KILKZZ	.30 x .55 x .94 (7.6 x 14.0 x 23.9)	IL	.032 (.8)
5.0	AFEO50525KPPKZZ	.49 x .98 x 1.25 (12.4 x 24.9 x 31.8)	PP	.032 (.8)
10.0	AFEO10625KXUKZZ	.55 x 1.05 x 1.76 (14.0 x 26.7 x 44.7)	XU	.032 (.8)
20.0	AFEO20625K2XKZZ	.73 x 1.25 x 2.26 (18.5 x 31.8 x 57.4)	2X	.032 (.8)
400 VDC (200 VAC)				
.047	AFEO47340KADKZZ	.20 x .35 x .56 (5.1 x 8.9 x 14.2)	AD	.025 (.6)
.22	AFEO22440KFLKZZ	.32 x .60 x .94 (8.1 x 15.2 x 23.9)	FL	.032 (.8)
1.0	AFEO10540KMRKZZ	.45 x.75 x 1.25 (11.4 x 19.1 x 31.8)	MR	.032 (.8)
3.0	AFEO30540KXUKZZ	.80 x 1.15 x 1.76 (16.2 x 27.4 x 57.4)	XU	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

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Type AREM Round Axial Metallized Polyester

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
63 VDC (40 VAC)				
1.0	AREM10506KGIKZZ	.315 x .807 (8 x 20.5)	GI	.032(.8)
100 VDC (63 VAC)				
1.5	AREM15510KKOKZZ	.394 x 1.10 (10 x 28)	KO	.032 (.8)
10.0	AREM10610K2PKZZ	.729 x 1.30 (18.5 x 33)	2P	.040 (1.02)
250 VDC (160 VAC)				
.10	AREM10425KDEKZZ	.256 x .650 (6 x 16.5)	DE	.025 (.6)
2.2	AREM22525KPOKZZ	.512 x 1.10 (13 x 28)	PO	.032 (.8)
15.0	AREM15625K4UKZZ	.965 x 1.81 (24.5 x 46)	4U	.040 (1.02)
400 VDC (200 VAC)				
1.0	AREM10540KRPKZZ	.531 x 1.30 (13 x 33)	RP	.032 (.8)
630 VDC (280 VAC)				
1.0	AREM10563KRPKZZ	.709 x 1.81 (18 x 46)	1U	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

Type ARPS Round Axial Metallized Polypropylene

For new design see type 730P

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	CURRENT (A)	WIRE DIAMETER (AWG)
300 VDC (220 VAC)					
1.0	ARPS10530KROKZZ	.50 x 1.05 (12.7 x 26.7)	RO	0.7	20
3.0	ARPS30530K1PKZZ	.71 x 1.25 (18.0 x 31.8)	1P	2.0	20
5.0	ARPS50530K2UKZZ	.74 x 1.75 (18.8 x 44.5)	2U	3.3	20
10.0	ARPS10630K4UKZZ	1.00 x 1.75 (25.4 x 44.5)	4U	6.6	20

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	ESR MAX 20 –100 kHz (mΩ)	CURRENT (A)	WIRE DIAMETER (AWG)
400 VDC (250 VAC)						
1.0	ARPS10540KCAKZZ	.50 x 1.25 (12.7 x 31.8)	CA	11	9	20
5.0	ARPS50540K3UKZZ	.86 x 1.75 (21.8 x 44.5)	3U	7	17	18
10.0	ARPS10640K9XKZZ	1.00 x 2.25 (25.4 x 57.2)	9X	7	18	18

Inquire regarding custom ratings, sizes, and configurations.

See Type 730P for New Designs

Type ARPM Round Axial Metallized Polypropylene

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
150 VDC (90 VAC)				
.22	ARPM22415KDFKZZ	.256 x .718 (6.5 x 18.3)	DF	.025 (.6)
.33	ARPM33415KFFKZZ	.295 x .718 (7.5 x 18.3)	FF	.032 (.8)
1.0	ARPM10515KKKKZZ	.394 x .938 (10.0 x 23.8)	KK	.032 (.8)
3.0	ARPM30515KKKKZZ	.650 x .938 (16.5 x 23.8)	KK	.032 (.8)
250 VDC (200 VAC)				
.22	ARPM22425KGKKZZ	.315 x .938 (8.0 x 24.0)	GK	.032 (.8)
.33	ARPM33425KIKKZZ	.354 x .938 (9.0 x 24.0)	IK	.032 (.8)
.47	ARPM47425KLKKZZ	.413 x .938 (10.5 x 24.0)	LK	.032 (.8)
.68	ARPM68425KPKKZZ	.492 x .938 (12.5 x 24.0)	PK	.032 (.8)
3.0	ARPM30525KYUKZZ	.669 x 1.75 (17.0 x 44.5)	YU	.032 (.8)
10.0	ARPM10625K9XKZZ	1.00 x 2.25 (25.4 x 57.0)	9X	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

Type ARPM Round Axial Metallized Polypropylene (cont.)

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
400 VDC (250 VAC)				
.047	ARPM47340KDFKZZ	.256 x .718 (6.5 x 18.3)	DF	.032 (.8)
.10	ARPM10440KHFKZZ	.335 x .718 (8.5 x 18.3)	HF	.032 (.8)
.47	ARPM47440KSKKZZ	.511 x .938 (14.0 x 24.0)	SK	.032 (.8)
2.0	ARPM20540K1UKZZ	.709 x 1.75 (18.0 x 44.5)	1U	.032 (.8)
5.0	ARPM50540K8UKZZ	1.25 x 1.75 (31.8 x 44.5)	8U	.032 (.8)
630 VDC (280 VAC)				
.10	ARPM10363KCCKZZ	.236 x .562 (6.0 x 14.3)	CC	.025 (.6)

Inquire regarding custom ratings, sizes, and configurations.

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AFPS Flat Axial Metallized Polypropylene

For new design see type 761M

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	CURRENT (A)	WIRE DIAMETER (AWG)
300 VDC (220 VAC)					
3.0	AFPS30530KRPKZZ	.50 x .87 x 1.25 (12.7 x 22.1 x 31.8)	RP	2.0	20
10.0	AFPS10630KWWKZZ	.64 x 1.15 x 2.10 (16.3 x 29.2 x 53.3)	WW	6.6	20
12.0	AFPS12630K1WKZZ	.72 x 1.22 x 2.10 (18.3 x 40.0 x 53.3)	1W	8.0	20

Inquire regarding custom ratings, sizes, and configurations.

See Type 761M for New Designs

AFPS Flat Axial Metallized Polypropylene (cont.)

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	ESR MAX 20 –100 kHz (mΩ)	CURRENT (A)	WIRE DIAMETER (AWG)
400 VDC (250 VAC)						
2.0	AFPS20540K2PKZZ	.50 x .82 x 1.25 (12.7 x 20.8 x 31.8)	2P	9	10	20
3.3	AFPS33540KGBKZZ	.69 x .93 x 1.25 (17.5 x 23.6 x 31.8)	GB	7	15	20
4.7	AFPS47540KADKZZ	.64 x .95 x 1.75 (16.3 x 24.1 x 44.50	AD	7	17	18
5.0	AFPS50540KFDKZZ	.67 x 1.00 x 1.75 (17.0 x 25.4 x 44.5)	FD	7	17	18
10.0	AFPS10640KBEKZZ	.75 x 1.28 x 2.25 (19.1 x 32.5 x 57.2)	BE	7	18	18
600 VDC (300 VAC)						
1.0	AFPS10560KHBKZZ	.60 x .80 x 1.25 (15.2 x 20.3 x 31.8)	HB	8	9	20
5.0	AFPS50560KDEKZZ	.95 x 1.25 x 2.25 (24.1 x 31.8 x 57.2)	DE	7	18	18

Inquire regarding custom ratings, sizes, and configurations.

About CDE

CDE is a leading manufacturer of capacitors for industrial, medical and specialized applications, with world-class design, manufacturing and testing facilities in New Bedford, MA. Global manufacturing facilities in China and India enable quick turn-around for shipping and delivery worldwide.

CDE capacitors are among the world's most reliable components. Our extensive custom design and development capabilities coupled with broad, standardized product offerings allow us to provide intelligent capacitor solutions that meet or exceed customers' application requirements.

Our aim is to be the best and most sought after provider of capacitor solutions for specialty markets in the world by achieving the highest level of customer satisfaction with extraordinary emphasis on the creation of value and speed to market.

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CDE

Axial Leaded Film Capacitors

METALLIZED POLYESTER AND POLYPROPYLENE FOR MULTIPLE APPLICATIONS

RoHS COMPLIANT

Intelligent Capacitor Solutions





Cornell Dubilier can address all your capacitor needs. Our lines of rugged, reliable axial leaded film capacitors are available as standard items in many configurations to address a wide range of applications.

CDE maintains manufacturing facilities in China and India to enable quick turn-around for shipping and delivery worldwide. All capacitors are built using Lean Six Sigma manufacturing practices and undergo rigorous quality assurance testing. If you have specialized needs, our flexible manufacturing processes allow us to quickly provide custom configurations.

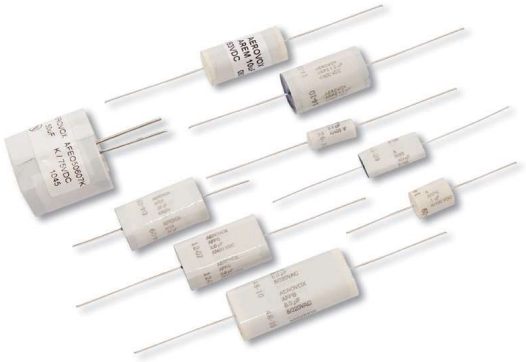


CDE provides intelligent capacitor solutions.



Axial Leaded Film Capacitors

METALLIZED POLYESTER AND POLYPROPYLENE FOR MULTIPLE APPLICATIONS



Applications

- Blocking, coupling and filtering (Types AREM and AFEO)
- UPS (Uninterruptible Power Supplies)
- Switching power supply (Type ARPM)
- Pulsing requiring high dV/dt ratings with low DF and ESR (Type ARPM)
- High current AC (Types ARPS and AFPS)

With their wide range of configurations and types, CDE's axial leaded film capacitors are suitable for many different applications. They are available round or flat, and in AC and DC voltage ratings. Wrap and fill capacitors are available in custom packages. All axial leaded film capacitors are UL 94 VO and IEC 695-2-2 certified and RoHS compliant.

AREM Round and AFEO Flat Axial Metallized Polyester

Types AREM and AFEO are axial leaded metallized polyester capacitors for general purpose use in blocking, coupling and filtering applications.

Highlights

- High CV for small size
- Bulk or T&R for AREM; bulk only for AFEO

ARPS Round and AFPS Flat Axial Metallized Polypropylene Capacitors

Types ARPS and AFPS are designed for high current AC applications.

Highlights

- High Current
- Low ESR
- Low DF

ARPM Axial Metallized Polypropylene Capacitors

Type ARPM is a stable metallized polypropylene capacitor that is ideal for pulsing applications that require a high dV/dt rating with low DF and ESR. ARPM fits well into switching power supply applications.

Highlights

- High dV/dt
- Low ESR
- Low DF

"W" Wrap & Fill

Type W is a tape wrapped axial leaded dry capacitor designed for use in a variety of permanent split-phase capacitor motor applications widely used in ventilating fans, appliances and refrigeration. The AC capacitors provide starting direction by shifting the current in the windings so that the motor simulates the operation of a two-phase motor.

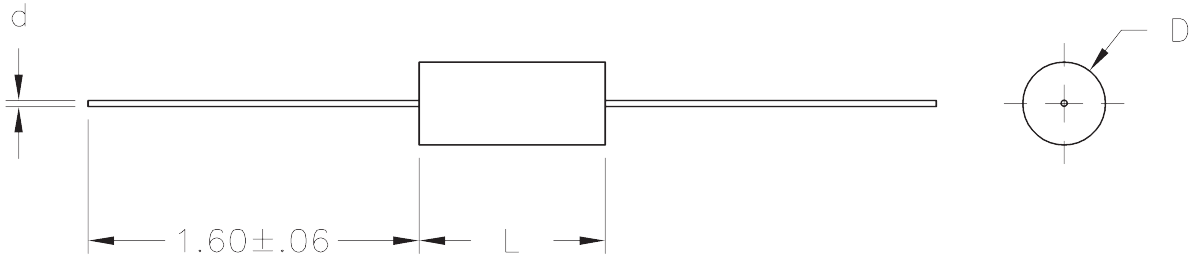
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Specifications

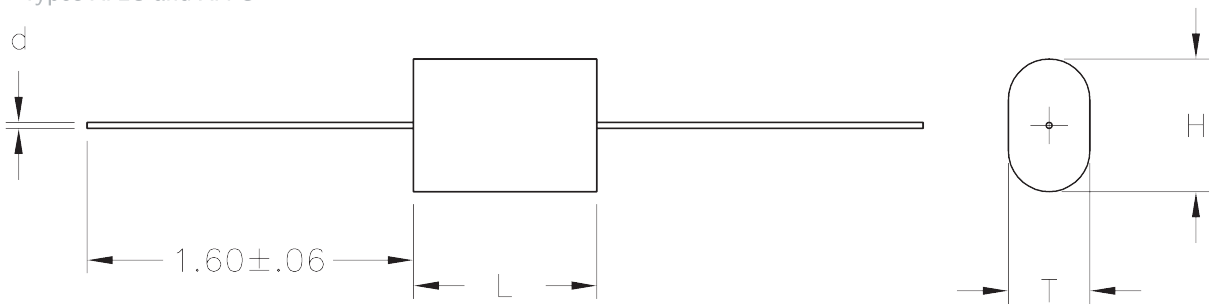
Capacitance Range:	.001 µF to 20.0 µF (Types AREM and AFEO) .0033 µF to 10.0 µF (Type ARPM) 0.47 µF to 20.0 µF (Types ARPS and AFPS)
Capacitance Tolerance:	±10% (K) Standard ±5% (J) Special ±2% (G) Special
Voltage Range:	63 VDC (40 VAC) to 630 VDC (220 VAC) (Types AREM and AFEO) 150 VDC (90 VAC) to 630 VDC (280 VAC) (Type ARPM) 300 VDC (220 VAC) to 600 VDC (300VAC) (Types ARPS and AFPS)
Dissipation Factor:	≤0.8% @ 1 kHz (Types AREM and AFEO) ≤0.1% @ 1 kHz (Types ARPM, ARPS, and AFPS)
Operating Temperature Range:	-55°C to +125°C. Full rated voltage @ 85°C, derating linearly to 50% rated voltage at 125°C (Types AREM and AFEO) -55°C to +105°C. Full rated voltage @ 85°C, derating 1.25%/°C from 85°C to 105°C (Types ARPM, ARPS and AFPS)
Dielectric Absorption:	0.30% typical (Types AREM and AFEO) 0.05% typical (Types ARPM, ARPS and AFPS)

Outline Drawings

Types ARPS, ARPM and AREM



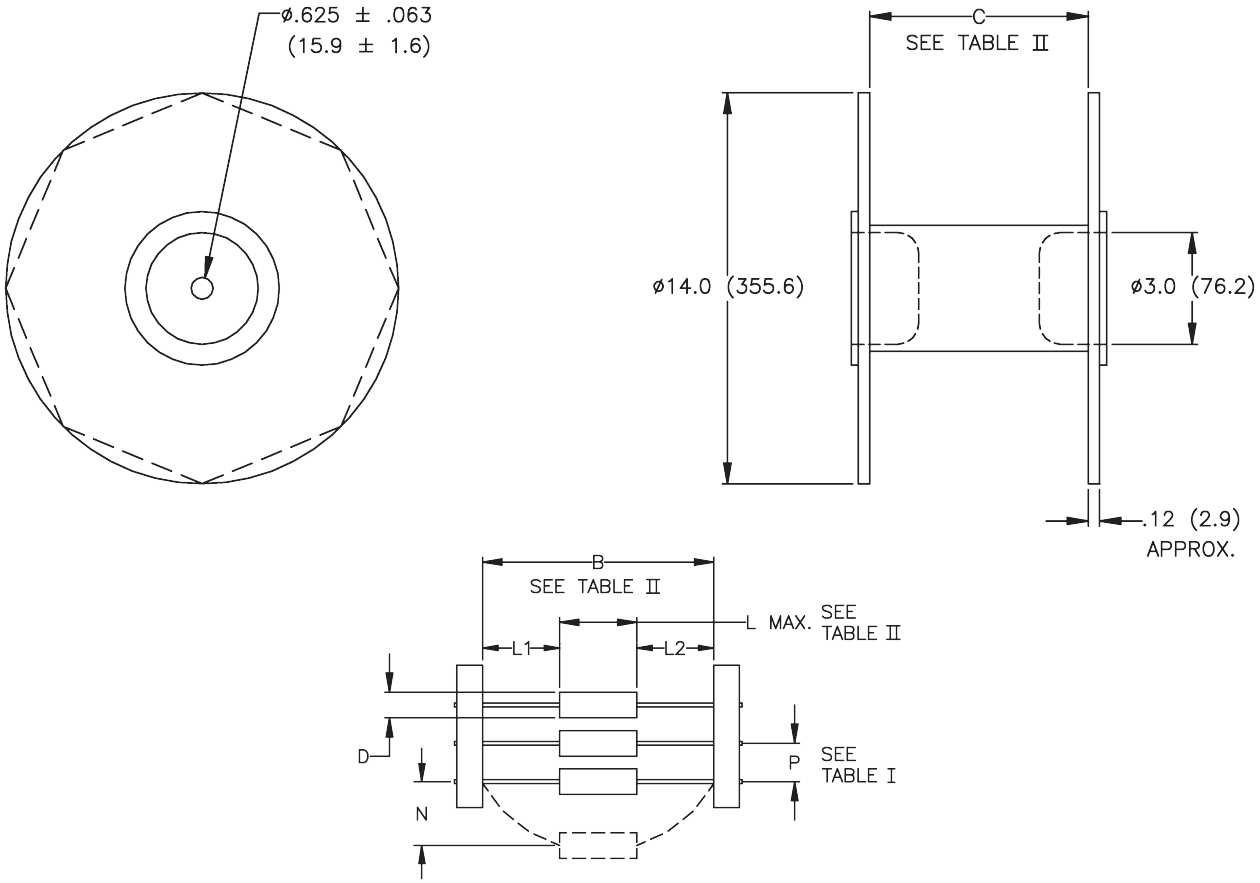
Types AFEO and AFPS



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Axial Leaded Tape & Reel Specification

According to EIA-296-E



|L1–L2| < .063 (1.6)

N < .047 (1.2)

Table I

D Inches (mm)	P Inches (mm)
≤.20 (5.0)	.20 (5.0) ± .02 (.50)
.20 (5.0) – 37 (9.5)	.40 (10.0) ± .02 (.50)
.38 (9.6) – .58 (14.7)	.60 (15.0) ± .02 (.50)

Table II

L Max Inches (mm)	Code*	B Inches (mm)	C Inches (mm)
≤.43 (11.0)	R1	2.06 (52.4) ± .06 (1.5)	2.95 (75)
.43 (11.0) < L ≤ .81 (20.5)	R2	2.50 (63.6) ± .06 (1.5)	3.39 (86)
>.81 (20.5)	R3	2.87 (73) ± .06 (1.5)	3.74 (95)

** According to EIA-296-E*

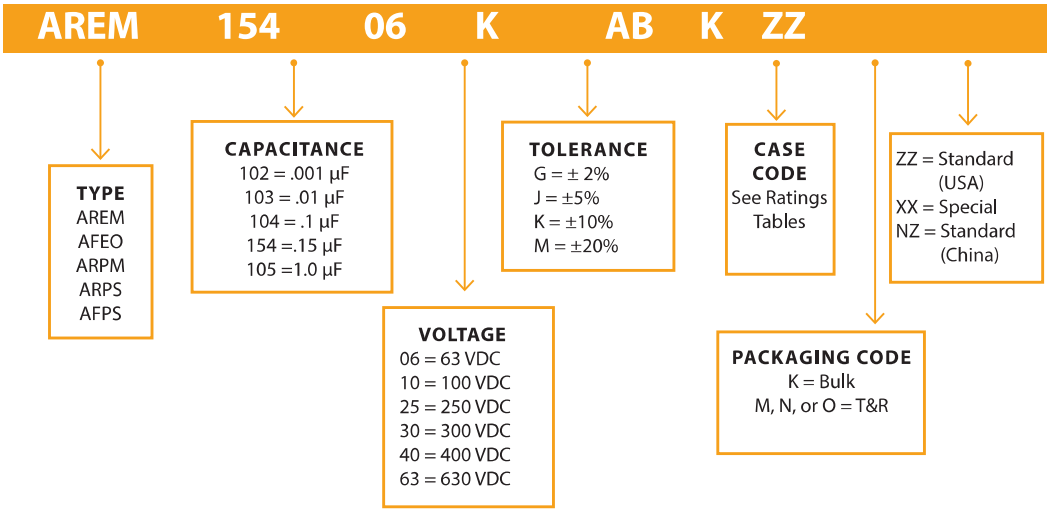
Table III

Component Diameter D Inches (mm)	Components per Reel
D ≤ .20 (5.0)	3000
.20 (5.0) < D ≤ .26 (6.5)	1200
.26 (6.5) < D ≤ .28 (7.0)	1100
.28 (7.0) < D ≤ .30 (7.5)	1000
.30 (7.5) < D ≤ .33 (8.5)	800
.33 (8.5) < D ≤ .41 (10.5)	500
.41 (10.5) < D ≤ .51 (13.0)	300
.51 (13.0) < D ≤ .58 (14.7)	250

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Part Numbering System
Round and Flat Axials

CDE's part numbering system is a descriptive part number made up of several different components such as voltage rating, capacitance, etc. The descriptors are explained here using AREM15406KABKZZ as a representative part number:



Type AFEO Flat Axial Metallized Polyester

CAP (µF)	CDE P/N	DIMENSIONS T x H x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
100 VDC (63 VAC)				
5.0	AFEO50510KKRKZZ	.42 x .75 x .1.25 (10.7 x 19.1 x 31.8)	KR	.032 (.8)
250 VDC (160 VAC)				
1.0	AFEO10525KILKZZ	.30 x .55 x .94 (7.6 x 14.0 x 23.9)	IL	.032 (.8)
5.0	AFEO50525KPPKZZ	.49 x .98 x 1.25 (12.4 x 24.9 x 31.8)	PP	.032 (.8)
10.0	AFEO10625KXUKZZ	.55 x 1.05 x 1.76 (14.0 x 26.7 x 44.7)	XU	.032 (.8)
20.0	AFEO20625K2XKZZ	.73 x 1.25 x 2.26 (18.5 x 31.8 x 57.4)	2X	.032 (.8)
400 VDC (200 VAC)				
.047	AFEO47340KADKZZ	.20 x .35 x .56 (5.1 x 8.9 x 14.2)	AD	.025 (.6)
.22	AFEO22440KFLKZZ	.32 x .60 x .94 (8.1 x 15.2 x 23.9)	FL	.032 (.8)
1.0	AFEO10540KMRKZZ	.45 x.75 x 1.25 (11.4 x 19.1 x 31.8)	MR	.032 (.8)
3.0	AFEO30540KXUKZZ	.80 x 1.15 x 1.76 (16.2 x 27.4 x 57.4)	XU	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

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Type AREM Round Axial Metallized Polyester

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
63 VDC (40 VAC)				
1.0	AREM10506KGIKZZ	.315 x .807 (8 x 20.5)	GI	.032(.8)
100 VDC (63 VAC)				
1.5	AREM15510KKOKZZ	.394 x 1.10 (10 x 28)	KO	.032 (.8)
10.0	AREM10610K2PKZZ	.729 x 1.30 (18.5 x 33)	2P	.040 (1.02)
250 VDC (160 VAC)				
.10	AREM10425KDEKZZ	.256 x .650 (6 x 16.5)	DE	.025 (.6)
2.2	AREM22525KPOKZZ	.512 x 1.10 (13 x 28)	PO	.032 (.8)
15.0	AREM15625K4UKZZ	.965 x 1.81 (24.5 x 46)	4U	.040 (1.02)
400 VDC (200 VAC)				
1.0	AREM10540KRPKZZ	.531 x 1.30 (13 x 33)	RP	.032 (.8)
630 VDC (280 VAC)				
1.0	AREM10563KRPKZZ	.709 x 1.81 (18 x 46)	1U	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

Type ARPS Round Axial Metallized Polypropylene

For new design see type 730P

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	CURRENT (A)	WIRE DIAMETER (AWG)
300 VDC (220 VAC)					
1.0	ARPS10530KROKZZ	.50 x 1.05 (12.7 x 26.7)	RO	0.7	20
3.0	ARPS30530K1PKZZ	.71 x 1.25 (18.0 x 31.8)	1P	2.0	20
5.0	ARPS50530K2UKZZ	.74 x 1.75 (18.8 x 44.5)	2U	3.3	20
10.0	ARPS10630K4UKZZ	1.00 x 1.75 (25.4 x 44.5)	4U	6.6	20

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	ESR MAX 20 –100 kHz (mΩ)	CURRENT (A)	WIRE DIAMETER (AWG)
400 VDC (250 VAC)						
1.0	ARPS10540KCAKZZ	.50 x 1.25 (12.7 x 31.8)	CA	11	9	20
5.0	ARPS50540K3UKZZ	.86 x 1.75 (21.8 x 44.5)	3U	7	17	18
10.0	ARPS10640K9XKZZ	1.00 x 2.25 (25.4 x 57.2)	9X	7	18	18

Inquire regarding custom ratings, sizes, and configurations.

See Type 730P for New Designs

Type ARPM Round Axial Metallized Polypropylene

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
150 VDC (90 VAC)				
.22	ARPM22415KDFKZZ	.256 x .718 (6.5 x 18.3)	DF	.025 (.6)
.33	ARPM33415KFFKZZ	.295 x .718 (7.5 x 18.3)	FF	.032 (.8)
1.0	ARPM10515KKKKZZ	.394 x .938 (10.0 x 23.8)	KK	.032 (.8)
3.0	ARPM30515KKKKZZ	.650 x .938 (16.5 x 23.8)	KK	.032 (.8)
250 VDC (200 VAC)				
.22	ARPM22425KGKKZZ	.315 x .938 (8.0 x 24.0)	GK	.032 (.8)
.33	ARPM33425KIKKZZ	.354 x .938 (9.0 x 24.0)	IK	.032 (.8)
.47	ARPM47425KLKKZZ	.413 x .938 (10.5 x 24.0)	LK	.032 (.8)
.68	ARPM68425KPKKZZ	.492 x .938 (12.5 x 24.0)	PK	.032 (.8)
3.0	ARPM30525KYUKZZ	.669 x 1.75 (17.0 x 44.5)	YU	.032 (.8)
10.0	ARPM10625K9XKZZ	1.00 x 2.25 (25.4 x 57.0)	9X	.032 (.8)

Inquire regarding custom ratings, sizes, and configurations.

Type ARPM Round Axial Metallized Polypropylene (cont.)

CAP (µF)	CDE P/N	DIMENSIONS D x L Inches (mm)	CASE CODE	WIRE DIAMETER Inches (mm)
400 VDC (250 VAC)				
.047	ARPM47340KDFKZZ	.256 x .718 (6.5 x 18.3)	DF	.032 (.8)
.10	ARPM10440KHFKZZ	.335 x .718 (8.5 x 18.3)	HF	.032 (.8)
.47	ARPM47440KSKKZZ	.511 x .938 (14.0 x 24.0)	SK	.032 (.8)
2.0	ARPM20540K1UKZZ	.709 x 1.75 (18.0 x 44.5)	1U	.032 (.8)
5.0	ARPM50540K8UKZZ	1.25 x 1.75 (31.8 x 44.5)	8U	.032 (.8)
630 VDC (280 VAC)				
.10	ARPM10363KCCKZZ	.236 x .562 (6.0 x 14.3)	CC	.025 (.6)

Inquire regarding custom ratings, sizes, and configurations.

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