

# Type WMC Polyester Film/Foil Capacitors

## Axial Lead, Miniature Size for Automatic Insertion



Type WMC axial-lead 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

### Specifications



Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

<b>Capacitance Range:</b>	.001 $\mu$ F to .47 $\mu$ F
<b>Voltage Range:</b>	80 to 400 Vdc
<b>Capacitance Tolerance:</b>	$\pm$ 10% standard, $\pm$ 5% optional
<b>Temperature Range:</b>	-55 to +125 $^{\circ}$ C <small>(Full-rated voltage at 85 <math>^{\circ}</math>C--Derate linearly to 50%-rated voltage at 125 <math>^{\circ}</math>C)</small>
<b>Dielectric Strength:</b>	250% of rated voltage for 1 minute
<b>Dissipation Factor:</b>	.75% Max. (25 $^{\circ}$ C, 1 kHz)
<b>Insulation Resistance:</b>	30,000 M $\Omega$ x $\mu$ F, 100,000 M $\Omega$ Min.
<b>Life Test:</b>	250 hours at 85 $^{\circ}$ 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				
	$\leq .437$	.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 ( $\mu$ F)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)
<b>80 Vdc</b>				
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 ( $\mu$ F)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)
<b>80 Vdc</b>				
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)

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Cap ( $\mu$ F)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)
<b>80 Vdc</b>				
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)
<b>200/250 Vdc</b>				
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 ( $\mu$ F)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)
<b>200/250 Vdc</b>				
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)
<b>400 Vdc</b>				
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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