

# 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 foil 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 transient.

## Specifications

**Voltage Range:** 50-1,000 Vdc (35-480 Vac, 60Hz)

**Capacitance Range:** .01-10  $\mu$ F

**Capacitance Tolerance:**  $\pm$ 10% (K) standard  
 $\pm$ 5% (J) optional

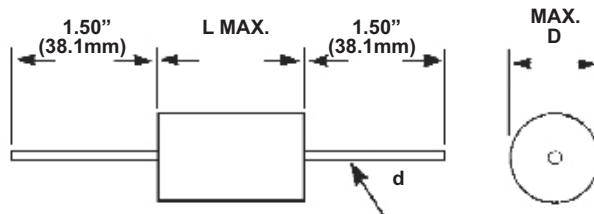
**Operating Temperature Range:** -55°C to 125°C\*  
\*Full-rated voltage at 85°C—Derate linearly to 50%-rated voltage at 125°C

**Dielectric Strength:** 200% (1 minute)

**Dissipation Factor:** .75% Max. (25°C, 1 kHz)

**Insulation Resistance:** 10,000 M $\Omega$  x  $\mu$ F  
30,000 M $\Omega$  Min.

**Life Test:** 500 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. ( $\mu$ F)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)	dV/dt V/ $\mu$ s
<b>50 Vdc (35 Vac)</b>					
0.100	MMWA05P1K	0.220 (5.6)	0.562 (14.3)	0.020 (0.5)	36
0.150	MMWA05P15K	0.210 (5.3)	0.687 (17.4)	0.020 (0.5)	20
0.220	MMWA05P22K	0.240 (6.1)	0.687 (17.4)	0.020 (0.5)	20
0.330	MMWA05P33K	0.280 (7.1)	0.687 (17.4)	0.024 (0.6)	20
0.470	MMWA05P47K	0.320 (8.1)	0.687 (17.4)	0.024 (0.6)	20
0.680	MMWA05P68K	0.290 (7.4)	1.000 (25.4)	0.024 (0.6)	9
1.000	MMWA05W1K	0.335 (8.5)	1.000 (25.4)	0.024 (0.6)	9
1.500	MMWA05W1P5K	0.355 (9.0)	1.250 (31.7)	0.024 (0.6)	9
2.000	MMWA05W2K	0.400 (10.2)	1.250 (31.7)	0.024 (0.6)	9
3.000	MMWA05W3K	0.475 (12.1)	1.250 (31.7)	0.024 (0.6)	9
4.000	MMWA05W4K	0.505 (12.8)	1.375 (34.9)	0.024 (0.6)	5
5.000	MMWA05W5K	0.525 (13.3)	1.500 (38.1)	0.024 (0.6)	4
6.000	MMWA05W6K	0.585 (14.9)	1.500 (38.1)	0.032 (0.8)	4
7.000	MMWA05W7K	0.625 (15.9)	1.500 (38.1)	0.032 (0.8)	4
8.000	MMWA05W8K	0.669 (17.0)	1.500 (38.1)	0.040 (1.0)	4
9.000	MMWA05W9K	0.700 (17.8)	1.500 (38.1)	0.040 (1.0)	4
10.000	MMWA05W10K	0.670 (17.0)	1.750 (44.4)	0.040 (1.0)	4

Cap. ( $\mu$ F)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)	dV/dt V/ $\mu$ s
<b>100 Vdc (65 Vac)</b>					
0.010	MMWA1S1K	0.197 (5.0)	0.562 (14.3)	0.020 (0.5)	36
0.015	MMWA1S15K	0.197 (5.0)	0.562 (14.3)	0.020 (0.5)	36
0.022	MMWA1S22K	0.197 (5.0)	0.562 (14.3)	0.020 (0.5)	36
0.033	MMWA1S33K	0.197 (5.0)	0.562 (14.3)	0.020 (0.5)	36
0.047	MMWA1S47K	0.217 (5.5)	0.562 (14.3)	0.020 (0.5)	36
0.068	MMWA1S68K	0.217 (5.5)	0.562 (14.3)	0.020 (0.5)	36
0.100	MMWA1P1K	0.236 (6.0)	0.562 (14.3)	0.020 (0.5)	36
0.150	MMWA1P15K	0.236 (6.0)	0.687 (17.4)	0.020 (0.5)	20
0.220	MMWA1P22K	0.256 (6.5)	0.687 (17.4)	0.020 (0.5)	20
0.330	MMWA1P33K	0.295 (7.5)	0.687 (17.4)	0.024 (0.6)	20
0.470	MMWA1P47K	0.320 (8.1)	0.687 (17.4)	0.024 (0.6)	20
0.680	MMWA1P68K	0.320 (8.1)	1.000 (25.4)	0.024 (0.6)	9
1.000	MMWA1W1K	0.374 (9.5)	1.000 (25.4)	0.024 (0.6)	9
1.500	MMWA1W1P5K	0.374 (9.5)	1.250 (31.7)	0.024 (0.6)	9
2.000	MMWA1W2K	0.400 (10.2)	1.250 (31.7)	0.024 (0.6)	9
3.000	MMWA1W3K	0.475 (12.1)	1.250 (31.7)	0.024 (0.6)	9
4.000	MMWA1W4K	0.505 (12.8)	1.375 (34.9)	0.032 (0.8)	5

# Type MMWA Polyester Film Capacitors

Cap. ( $\mu$ F)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)	dV/dt V/ $\mu$ s
5.000	MMWA1W5K	0.525 (13.3)	1.500 (38.1)	0.032 (0.8)	4
6.000	MMWA1W6K	0.585 (14.9)	1.500 (38.1)	0.032 (0.8)	4
7.000	MMWA1W7K	0.625 (15.9)	1.500 (38.1)	0.032 (0.8)	4
8.000	MMWA1W8K	0.669 (17.0)	1.500 (38.1)	0.040 (1.0)	4
9.000	MMWA1W9K	0.700 (17.8)	1.500 (38.1)	0.040 (1.0)	4
10.000	MMWA1W10K	0.768 (19.5)	1.750 (44.4)	0.040 (1.0)	3
<b>200/250 Vdc (125 Vac)</b>					
0.010	MMWA2S1K	0.197 (5.0)	0.562 (14.3)	0.020 (0.5)	52
0.015	MMWA2S15K	0.197 (5.0)	0.562 (14.3)	0.020 (0.5)	52
0.022	MMWA2S22K	0.197 (5.0)	0.562 (14.3)	0.020 (0.5)	52
0.033	MMWA2S33K	0.197 (5.0)	0.562 (14.3)	0.020 (0.5)	52
0.047	MMWA2S47K	0.217 (5.5)	0.562 (14.3)	0.020 (0.5)	52
0.068	MMWA2S68K	0.200 (5.1)	0.687 (17.4)	0.020 (0.5)	29
0.100	MMWA2P1K	0.240 (6.1)	0.687 (17.4)	0.020 (0.5)	29
0.150	MMWA2P15K	0.276 (7.0)	0.687 (17.4)	0.024 (0.6)	29
0.220	MMWA2P22K	0.310 (7.9)	0.687 (17.4)	0.024 (0.6)	29
0.330	MMWA2P33K	0.365 (9.3)	0.728 (18.5)	0.024 (0.6)	29
0.470	MMWA2P47K	0.374 (9.5)	1.000 (25.4)	0.024 (0.6)	14
0.680	MMWA2P68K	0.365 (9.3)	1.000 (25.4)	0.024 (0.6)	14
1.000	MMWA2W1K	0.430 (10.9)	1.062 (27.0)	0.024 (0.6)	14
1.500	MMWA2W1P5K	0.465 (11.8)	1.250 (31.7)	0.024 (0.6)	14
2.000	MMWA2W2K	0.525 (13.3)	1.250 (31.7)	0.032 (0.8)	14
3.000	MMWA2W3K	0.555 (14.1)	1.500 (38.1)	0.032 (0.8)	6
3.500	MMWA2W3P5K	0.610 (15.5)	1.500 (38.1)	0.032 (0.8)	6
4.000	MMWA2W4K	0.590 (15.0)	1.750 (44.4)	0.032 (0.8)	5
5.000	MMWA2W5K	0.669 (17.0)	1.750 (44.4)	0.040 (1.0)	5
6.000	MMWA2W6K	0.705 (17.9)	1.750 (44.4)	0.040 (1.0)	5
<b>400 Vdc (200 Vac)</b>					
0.010	MMWA4S1K	0.217 (5.5)	0.562 (14.3)	0.020 (0.5)	82
0.015	MMWA4S15K	0.217 (5.5)	0.562 (14.3)	0.020 (0.5)	82
0.022	MMWA4S22K	0.236 (6.0)	0.562 (14.3)	0.020 (0.5)	82
0.033	MMWA4S33K	0.220 (5.6)	0.687 (17.4)	0.020 (0.5)	46
0.047	MMWA4S47K	0.276 (7.0)	0.687 (17.4)	0.020 (0.5)	46
0.068	MMWA4S68K	0.280 (7.1)	0.687 (17.4)	0.024 (0.6)	46
0.100	MMWA4P1K	0.320 (8.1)	0.687 (17.4)	0.024 (0.6)	46
0.150	MMWA4P15K	0.290 (7.4)	1.000 (25.4)	0.024 (0.6)	22
0.220	MMWA4P22K	0.335 (8.5)	1.000 (25.4)	0.024 (0.6)	22
0.330	MMWA4P33K	0.394 (10.0)	1.187 (30.1)	0.024 (0.6)	22
0.470	MMWA4P47K	0.433 (11.0)	1.187 (30.1)	0.024 (0.6)	22

Cap. ( $\mu$ F)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)	dV/dt V/ $\mu$ s
0.680	MMWA4P68K	0.433 (11.0)	1.500 (38.1)	0.024 (0.6)	10
1.000	MMWA4W1K	0.470 (11.9)	1.750 (44.4)	0.024 (0.6)	8
1.500	MMWA4W1P5K	0.570 (14.5)	1.750 (44.4)	0.032 (0.8)	8
2.000	MMWA4W2K	0.669 (17.0)	1.750 (44.4)	0.040 (1.0)	8
3.000	MMWA4W3K	0.695 (17.6)	2.125 (54.0)	0.040 (1.0)	6
3.500	MMWA4W3P5K	0.745 (18.9)	2.125 (54.0)	0.040 (1.0)	6
4.000	MMWA4W4K	0.790 (20.1)	2.125 (54.0)	0.040 (1.0)	6
5.000	MMWA4W5K	0.870 (22.1)	2.125 (54.0)	0.040 (1.0)	6
<b>600/630 Vdc (250 Vac)</b>					
0.010	MMWA6S1K	0.217 (5.5)	0.687 (17.4)	0.020 (0.5)	69
0.015	MMWA6S15K	0.236 (6.0)	0.687 (17.4)	0.020 (0.5)	69
0.022	MMWA6S22K	0.276 (7.0)	0.750 (19.0)	0.020 (0.5)	69
0.033	MMWA6S33K	0.270 (6.9)	0.750 (19.0)	0.024 (0.6)	69
0.047	MMWA6S47K	0.305 (7.7)	0.750 (19.0)	0.024 (0.6)	69
0.068	MMWA6S68K	0.335 (8.5)	1.000 (25.4)	0.024 (0.6)	32
0.100	MMWA6P1K	0.374 (9.5)	1.000 (25.4)	0.024 (0.6)	32
0.150	MMWA6P15K	0.413 (10.5)	1.187 (30.1)	0.024 (0.6)	32
0.220	MMWA6P22K	0.430 (10.9)	1.250 (31.7)	0.024 (0.6)	32
0.330	MMWA6P33K	0.480 (12.2)	1.250 (31.7)	0.024 (0.6)	32
0.470	MMWA6P47K	0.470 (11.9)	1.750 (44.4)	0.024 (0.6)	12
0.680	MMWA6P68K	0.570 (14.5)	1.750 (44.4)	0.032 (0.8)	12
1.000	MMWA6W1K	0.685 (17.4)	1.750 (44.4)	0.040 (1.0)	12
2.000	MMWA6W2K	0.805 (20.4)	2.250 (57.1)	0.040 (1.0)	10
3.000	MMWA6W3K	0.945 (24.0)	2.250 (57.1)	0.040 (1.0)	10
<b>1000 Vdc (480 Vac)</b>					
0.010	MMWA10S1K	0.240 (6.1)	0.875 (22.2)	0.020 (0.5)	220
0.015	MMWA10S15K	0.275 (7.0)	0.875 (22.2)	0.024 (0.6)	220
0.022	MMWA10S22K	0.320 (8.1)	0.875 (22.2)	0.024 (0.6)	220
0.033	MMWA10S33K	0.380 (9.6)	0.875 (22.2)	0.024 (0.6)	220
0.047	MMWA10S47K	0.335 (8.5)	1.062 (27.0)	0.024 (0.6)	120
0.068	MMWA10S68K	0.410 (10.4)	1.125 (28.6)	0.024 (0.6)	120
0.100	MMWA10P1K	0.485 (12.3)	1.125 (28.6)	0.024 (0.6)	120
0.150	MMWA10P15K	0.595 (15.1)	1.125 (28.6)	0.032 (0.8)	120
0.220	MMWA10P22K	0.605 (15.4)	1.312 (33.3)	0.032 (0.8)	85
0.330	MMWA10P33K	0.640 (16.3)	1.500 (38.1)	0.032 (0.8)	50
0.470	MMWA10P47K	0.750 (19.0)	1.500 (38.1)	0.040 (1.0)	50
0.680	MMWA10P68K	0.810 (20.6)	1.750 (44.4)	0.040 (1.0)	45
1.000	MMWA10W1K	0.880 (22.3)	1.937 (49.2)	0.040 (1.0)	40