

Metallized Polyester Capacitors

Class
207.07
Type
MMWA

WRAPPED METALLIZED POLYESTER, TUBULAR STYLE

The type MMWA metallized polyester dielectric capacitor features extremely small sizes and is ideally suited for application in miniature, transistorized circuits and compact, miniaturized military, industrial, and commercial equipment.

The metallized polyester film dielectric section is tightly wound and is encased in a tough film wrapper. The MMWA has epoxy end seals bonded to the wrapper and leads. It is protected from damage due to aqueous cleaning solutions.

Type MMWA capacitor has excellent resistance to humidity and moisture as well as excellent capacitance stability over the operating temperature range. The unit is designed for an operating range of -55°C to $+85^{\circ}\text{C}$ at full rated voltage. It may be operated to a maximum temperature of $+125^{\circ}\text{C}$ with voltage derated to 50% of the $+85^{\circ}\text{C}$ value.

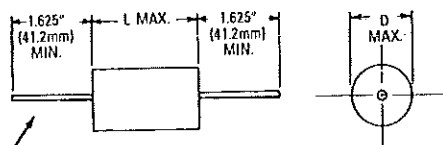


AC OPERATION, VOLTS RMS

AC operation must be limited such that the product of RMS AC volts and amps does not exceed 15 per square inch of case surface.

DCVV	60 Hz	400 Hz	1 KHz	15 KHz
50	35	35	15	10
100	65	65	35	20
200	125	105	65	35
400	200	165	110	60
600*	250	210	150	90

*All Values below 0.1 UF.



TINNED COPPER CLAD STEEL LEADS

STANDARD RATINGS

CAP μF	1MMWA- Part No.	MAXIMUM D x L		LEADS AWG
		Inches	(mm)	
50 VDC				
.1	05P1	.220 x .562	5.59 x 14.27	24
.12	05P12	.235 x .562	5.97 x 14.27	24
.15	05P15	.210 x .687	5.33 x 17.45	24
.18	05P18	.225 x .687	5.71 x 17.45	24
.22	05P22	.240 x .687	6.10 x 17.45	24
.27	05P27	.260 x .687	6.60 x 17.45	22
.33	05P33	.280 x .687	7.11 x 17.45	22
.39	05P39	.300 x .687	7.62 x 17.45	22
.47	05P47	.320 x .687	8.13 x 17.45	22
.56	05P56	.345 x .687	8.76 x 17.45	22
.68	05P68	.290 x 1.000	7.37 x 25.40	22
.82	05P82	.310 x 1.000	7.87 x 25.40	22
1.0	05W1	.335 x 1.000	8.51 x 25.40	22
1.5	05W1P5	.355 x 1.250	9.02 x 31.75	22
2.0	05W2	.400 x 1.250	10.16 x 31.75	22
3.0	05W3	.475 x 1.250	12.06 x 31.75	22
4.0	05W4	.505 x 1.375	12.83 x 34.92	20
5.0	05W5	.525 x 1.500	13.33 x 38.10	20
6.0	05W6	.585 x 1.500	14.86 x 38.10	20
7.0	05W7	.625 x 1.500	15.87 x 38.10	20
8.0	05W8	.665 x 1.500	16.89 x 38.10	18
9.0	05W9	.700 x 1.500	17.78 x 38.10	18
10.0	05W10	.670 x 1.750	17.02 x 44.45	18
100 VDC				
.01	1S1	.170 x .562	4.32 x 14.27	24
.012	1S12	.180 x .562	4.57 x 14.27	24
.015	1S15	.180 x .562	4.57 x 14.27	24
.018	1S18	.180 x .562	4.57 x 14.27	24
.022	1S22	.185 x .562	4.70 x 14.27	24

CAP μF	1MMWA- Part No.	MAXIMUM D x L		LEADS AWG
		Inches	(mm)	
100 VDC (Continued)				
.027	1S27	.185 x .562	4.70 x 14.27	24
.033	1S33	.190 x .562	4.83 x 14.27	24
.039	1S39	.200 x .562	5.08 x 14.27	24
.047	1S47	.200 x .562	5.08 x 14.27	24
.056	1S56	.200 x .562	5.08 x 14.27	24
.068	1S68	.200 x .562	5.08 x 14.27	24
.082	1S82	.205 x .562	5.21 x 14.27	24
.1	1P1	.220 x .562	5.59 x 14.27	24
.12	1P12	.235 x .562	5.97 x 14.27	24
.15	1P15	.210 x .687	5.33 x 17.45	24
.18	1P18	.225 x .687	5.71 x 17.45	24
.22	1P22	.240 x .687	6.10 x 17.45	24
.27	1P27	.260 x .687	6.60 x 17.45	22
.33	1P33	.280 x .687	7.11 x 17.45	22
.39	1P39	.300 x .687	7.62 x 17.45	22
.47	1P47	.320 x .687	8.13 x 17.45	22
.56	1P56	.345 x .687	8.76 x 17.45	22
.68	1P68	.290 x 1.000	7.37 x 25.40	22
.82	1P82	.310 x 1.000	7.87 x 25.40	22
1.0	1W1	.335 x 1.000	8.51 x 25.40	22
1.5	W1P5	.355 x 1.250	9.02 x 31.75	22
2.0	1W2	.400 x 1.250	10.16 x 31.75	22
3.0	1W3	.475 x 1.250	12.06 x 31.75	22
4.0	1W4	.505 x 1.375	12.83 x 34.92	20
5.0	1W5	.525 x 1.500	13.33 x 38.10	20
6.0	1W6	.585 x 1.500	14.86 x 38.10	20
7.0	1W7	.625 x 1.500	15.87 x 38.10	20
8.0	1W8	.665 x 1.500	16.89 x 38.10	18
9.0	1W9	.700 x 1.500	17.78 x 38.10	18
10.0	1W10	.670 x 1.750	17.02 x 44.45	18

†Order by complete type number; e.g. MMWA05P1K.
STANDARD CAPACITANCE TOLERANCE: $\pm 10\%$. Add "K" to part number, e.g. MMWA05P1K.

For $\pm 5\%$ tolerance add "J" to part number.
For $\pm 2\%$ tolerance add "G" to part number.
For $\pm 1\%$ tolerance add "F" to part number.

WRAPPED METALLIZED POLYESTER, TUBULAR STYLE

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STANDARD RATINGS (Continued)

CAP μF	1MMWA- Part No.	MAXIMUM D x L		LEADS AWG
		Inches	(mm)	
200 VDC				
.01	2S1	.170 x .562	4.32 x 14.27	24
.012	2S12	.180 x .562	4.57 x 14.27	24
.015	2S15	.180 x .562	4.57 x 14.27	24
.018	2S18	.180 x .562	4.57 x 14.27	24
.022	2S22	.185 x .562	4.70 x 14.27	24
.027	2S27	.185 x .562	4.70 x 14.27	24
.033	2S33	.190 x .562	4.83 x 14.27	24
.039	2S39	.200 x .562	5.08 x 14.27	24
.047	2S47	.210 x .562	5.33 x 14.27	24
.056	2S56	.220 x .562	5.59 x 14.27	24
.068	2S68	.200 x .687	5.08 x 17.45	24
.082	2S82	.215 x .687	5.46 x 17.45	24
.1	2P1	.240 x .687	6.10 x 17.45	24
.12	2P12	.250 x .687	6.35 x 17.45	24
.15	2P15	.270 x .687	6.86 x 17.45	22
.18	2P18	.290 x .687	7.37 x 17.45	22
.22	2P22	.310 x .687	7.87 x 17.45	22
.27	2P27	.335 x .687	8.51 x 17.45	22
.33	2P33	.365 x .687	9.27 x 17.45	22
.39	2P39	.295 x 1.000	7.49 x 25.40	22
.47	2P47	.320 x 1.000	8.13 x 25.40	22
.56	2P56	.340 x 1.000	8.64 x 25.40	22
.68	2P68	.365 x 1.000	9.27 x 25.40	22
.82	2P82	.395 x 1.000	10.03 x 25.40	22
1.0	2W1	.430 x 1.062	10.92 x 26.97	22
1.5	2W1P5	.465 x 1.250	11.81 x 31.75	22
2.0	2W2	.525 x 1.250	13.33 x 31.75	20
3.0	2W3	.555 x 1.500	14.10 x 38.10	20
3.5	2W3P5	.610 x 1.500	15.49 x 38.10	20
4.0	2W4	.590 x 1.750	14.98 x 44.45	20
5.0	2W5	.650 x 1.750	16.51 x 44.45	18
6.0	2W6	.705 x 1.750	17.91 x 44.45	18
400 VDC				
.01	4S1	.170 x .562	4.32 x 14.27	24
.012	4S12	.180 x .562	4.57 x 14.27	24
.015	4S15	.195 x .562	4.95 x 14.27	24
.018	4S18	.205 x .562	5.21 x 14.27	24
.022	4S22	.220 x .562	5.59 x 14.27	24
.027	4S27	.205 x .687	5.21 x 17.45	24
.033	4S33	.220 x .687	5.59 x 17.45	24
.039	4S39	.230 x .687	5.84 x 17.45	24
.047	4S47	.245 x .687	6.22 x 17.45	24
.056	4S56	.260 x .687	6.60 x 17.45	22
.068	4S68	.280 x .687	7.11 x 17.45	22
.082	4S82	.305 x .687	7.75 x 17.45	22
.1	4P1	.320 x .687	8.13 x 17.45	22
.12	4P12	.345 x .687	8.76 x 17.45	22
.15	4P15	.290 x 1.000	7.37 x 25.40	22
.18	4P18	.310 x 1.000	7.87 x 25.40	22
.22	4P22	.335 x 1.000	8.51 x 25.40	22
.27	4P27	.330 x 1.187	8.38 x 30.15	22
.33	4P33	.360 x 1.187	9.14 x 30.15	22
.39	4P39	.385 x 1.187	9.78 x 30.15	22
.47	4P47	.415 x 1.187	10.54 x 30.15	22
.56	4P56	.400 x 1.500	10.16 x 38.10	22
.68	4P68	.435 x 1.500	11.05 x 38.10	22
.82	4P82	.475 x 1.500	12.06 x 38.10	22
1.0	4W1	.470 x 1.750	11.94 x 44.45	22
1.5	4W1P5	.570 x 1.750	14.48 x 44.45	20
2.0	4W2	.650 x 1.750	16.51 x 44.45	18
3.0	4W3	.695 x 2.125	17.65 x 53.97	18

CAP μF	1MMWA- Part No.	MAXIMUM D x L		LEADS AWG
		Inches	(mm)	
400 VDC (Continued)				
3.5	4W3P5	.745 x 2.125	18.92 x 53.97	18
4.0	4W4	.790 x 2.125	20.07 x 53.97	18
5.0	4W5	.870 x 2.125	22.10 x 53.97	18
600 VDC				
.01	6S1	.185 x .687	4.70 x 17.45	24
.012	6S12	.195 x .687	4.95 x 17.45	24
.015	6S15	.210 x .687	5.33 x 17.45	24
.018	6S18	.220 x .750	5.59 x 19.05	24
.022	6S22	.235 x .750	5.97 x 19.05	24
.027	6S27	.260 x .750	6.60 x 19.05	22
.033	6S33	.270 x .750	6.86 x 19.05	22
.039	6S39	.285 x .750	7.24 x 19.05	22
.047	6S47	.305 x .750	7.75 x 19.05	22
.056	6S56	.325 x .750	8.25 x 19.05	22
.068	6S68	.295 x 1.000	7.49 x 25.40	22
.082	6S82	.310 x 1.000	7.87 x 25.40	22
.1	6P1	.340 x 1.000	8.64 x 25.40	22
.12	6P12	.365 x 1.000	9.27 x 25.40	22
.15	6P15	.380 x 1.187	9.14 x 30.15	22
.18	6P18	.385 x 1.187	9.78 x 30.15	22
.22	6P22	.430 x 1.250	10.92 x 31.75	22
.27	6P27	.455 x 1.250	11.56 x 31.75	22
.33	6P33	.480 x 1.250	12.19 x 31.75	22
.39	6P39	.535 x 1.250	13.59 x 31.75	20
.47	6P47	.470 x 1.750	11.94 x 44.45	22
.56	6P56	.510 x 1.750	12.95 x 44.45	20
.68	6P68	.570 x 1.750	14.48 x 44.45	20
.82	6P82	.620 x 1.750	15.75 x 44.45	20
1.0	6W1	.685 x 1.750	17.40 x 44.45	18
2.0	6W2	.805 x 2.250	20.45 x 57.15	18
3.0	6W3	.945 x 2.250	24.00 x 57.15	18
1000 VDC				
.01	10S1	.240 x .875	6.10 x 22.22	24
.012	10S12	.255 x .875	6.48 x 22.22	22
.015	10S15	.275 x .875	6.98 x 22.22	22
.018	10S18	.295 x .875	7.49 x 22.22	22
.022	10S22	.320 x .875	8.13 x 22.22	22
.027	10S27	.350 x .875	8.89 x 22.22	22
.033	10S33	.380 x .875	9.65 x 22.22	22
.039	10S39	.330 x 1.062	8.38 x 26.97	22
.047	10S47	.335 x 1.062	8.51 x 26.97	22
.056	10S56	.380 x 1.062	9.65 x 26.97	22
.068	10S68	.410 x 1.125	10.41 x 28.57	22
.082	10S82	.445 x 1.125	11.30 x 28.57	22
.1	10P1	.485 x 1.125	12.32 x 28.57	22
.12	10P12	.525 x 1.125	13.33 x 28.57	20
.15	10P15	.595 x 1.125	15.11 x 28.57	20
.18	10P18	.555 x 1.312	14.10 x 33.32	20
.22	10P22	.605 x 1.312	15.37 x 33.32	20
.27	10P27	.660 x 1.312	16.76 x 33.32	18
.33	10P33	.640 x 1.500	16.26 x 38.10	18
.39	10P39	.690 x 1.500	17.53 x 38.10	18
.47	10P47	.750 x 1.500	19.05 x 38.10	18
.56	10P56	.740 x 1.750	18.80 x 44.45	18
.68	10P68	.810 x 1.750	20.57 x 44.45	18
.82	10P82	.805 x 1.937	20.45 x 49.20	18
1.0	10W1	.880 x 1.937	22.35 x 49.20	18

†Order by complete type number; e.g., MMWA05P1K.
STANDARD CAPACITANCE TOLERANCE: ±10%. Add "K" to part number,
e.g., MMWA05P1K.
For ±5% tolerance add "J" to part number.
For ±2% tolerance add "G" to part number.
For ±1% tolerance add "F" to part number.