

# MP890 DOUBLE METALLIZED POLYPROPYLENE



## HIGH PEAK CURRENT CARRYING CAPABILITY (dV/dt) 600-3000VDC

### DESCRIPTION:

MP890 flat oval, axial film capacitors use polypropylene film and dual metallized electrodes for both self-healing properties and high peak current carrying capability (dV/dt). This series features low ESR characteristics, and excellent high frequency and high voltage capabilities.

### APPLICATIONS:

Suitable for high current, high frequency and high pulse applications.  
 Snubber circuits  
 High dV/dt

Consult factory for: Humidity resistance, Dry heat resistance, Cold resistance, Vibration resistance, Solderability, Load life test date.

### SPECIFICATIONS:

Voltage range: 600~3000VDC  
 (VAC ratings: see data sheet)  
 Capacitance Range: 0.01~4.7µf  
 Capacitance Tolerance: ±10%  
 Operating Temperature Range: -55°C to 105°C  
 Linear derate by 50% above 85°  
 Withstand Voltage: 160% of the rated voltage for 60 sec.  
 Dielectric Strength: 175% of the rated voltage for 1-5 sec.  
 Dissipation Factor: 0.1% max at 1 KHz 25°C  
 Insulation Resistance: I.R. ≥ 30,000MΩ (C ≤ 0.33µf)  
 I.R. ≥ 10,000MΩ (C > 0.33µf)  
 I.p.k. and I<sub>RMS</sub> are rated @ 60°C  
 dV/dt, ESR: See dimensional tables  
 Temperature Coefficient: -200ppm ± 100ppm

DOUBLE METALLIZED POLYPROPYLENE

Cap.	L Inches (mm)	D Inches (mm)	H Inches (mm)	d Inches (mm)	Typical ESR milliohms	Typical ESL nH	dV/dt V/us	I <sub>peak</sub> A	I <sub>RMS</sub> A
<b>600VDC (275VAC)</b>									
0.10	1.339 (34.0)	.223 (5.7)	.470 (11.9)	.032 (.8)	28	17	196	20	2.8
0.15	1.339 (34.0)	.266 (6.8)	.513 (13.0)	.040 (1.0)	13	18	196	29	4.4
0.22	1.339 (34.0)	.318 (8.1)	.565 (14.3)	.040 (1.0)	12	19	196	43	4.9
0.33	1.339 (34.0)	.387 (9.8)	.634 (16.1)	.040 (1.0)	9	19	196	65	6.1
0.47	1.339 (34.0)	.462 (11.7)	.709 (18.0)	.040 (1.0)	7	20	196	92	7.6
0.68	1.339 (34.0)	.558 (14.2)	.805 (20.4)	.040 (1.0)	6	21	196	134	8.9
1.00	1.339 (34.0)	.680 (17.3)	.927 (23.5)	.040 (1.0)	6	23	196	196	9.9
1.50	1.339 (34.0)	.837 (21.3)	1.084 (27.5)	.047 (1.2)	5	24	196	295	12.1
2.00	1.811 (46.0)	.717 (18.2)	1.088 (27.6)	.047 (1.2)	5	28	128	255	13.1
3.30	2.126 (54.0)	.886 (22.5)	1.253 (31.8)	.047 (1.2)	4	34	105	346	17.3
4.70	2.126 (54.0)	1.125 (28.6)	1.311 (33.3)	.047 (1.2)	4	36	105	492	18.7
<b>850VDC (450VAC)</b>									
0.15	1.339 (34.0)	.378 (9.6)	.625 (15.9)	.040 (1.0)	8	19	713	107	6.4
0.22	1.339 (34.0)	.458 (11.6)	.705 (17.9)	.040 (1.0)	8	20	713	157	7.0
0.33	1.339 (34.0)	.562 (14.3)	.810 (20.6)	.040 (1.0)	7	21	713	235	8.3
0.47	1.339 (34.0)	.674 (17.1)	.922 (23.4)	.040 (1.0)	5	22	713	335	10.8
0.68	1.339 (34.0)	.815 (20.7)	1.063 (27.0)	.047 (1.2)	4	24	713	485	13.3
1.00	1.811 (46.0)	.679 (17.2)	1.050 (26.7)	.047 (1.2)	5	28	400	400	12.7
1.50	1.811 (46.0)	.847 (21.5)	1.218 (30.9)	.047 (1.2)	4	30	400	600	15.8
2.00	1.811 (46.0)	.990 (25.1)	1.361 (34.6)	.047 (1.2)	3	31	400	800	19.8
2.20	1.811 (46.0)	1.042 (26.5)	1.413 (35.9)	.047 (1.2)	3	32	400	880	20.4
2.50	1.811 (46.0)	1.117 (28.4)	1.488 (37.8)	.047 (1.2)	3	33	400	1000	21.2



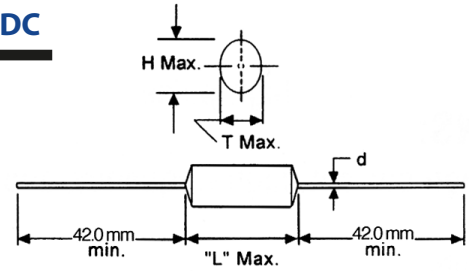
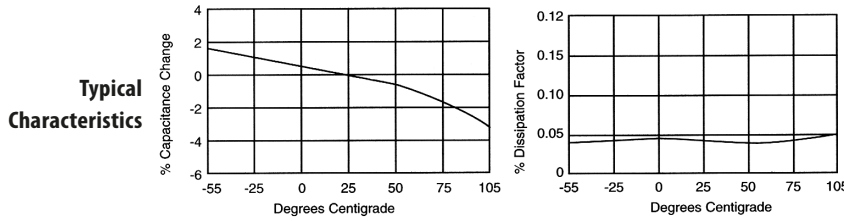
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# MP890 DOUBLE METALLIZED POLYPROPYLENE

## HIGH PEAK CURRENT CARRYING CAPABILITY (dV/dt) 600-3000VDC



Cap.	L Inches (mm)	D Inches (mm)	H Inches (mm)	d Inches (mm)	Typical ESR milliohms	Typical ESL nH	dV/dt V/us	I peak A	I RMS A
<b>1000VDC (500VAC)</b>									
.150	1.339 (34.0)	.441 (11.2)	.688 (17.5)	.040 (1.0)	7	20	856	128	7.4
.220	1.339 (34.0)	.535 (13.6)	.782 (19.9)	.040 (1.0)	7	21	856	188	8.1
.330	1.339 (34.0)	.658 (16.7)	.906 (23.0)	.040 (1.0)	6	22	856	283	9.7
.470	1.339 (34.0)	.790 (20.1)	1.037 (26.3)	.047 (1.2)	5	24	856	402	11.7
.680	1.339 (34.0)	.955 (24.2)	1.203 (30.5)	.047 (1.2)	5	26	856	582	13.0
1.000	1.811 (46.0)	.803 (20.4)	1.174 (29.8)	.047 (1.2)	5	24	480	480	13.8
1.500	1.811 (46.0)	1.001 (25.4)	1.372 (34.8)	.047 (1.2)	4	31	480	720	17.3
2.000	1.811 (46.0)	1.169 (29.7)	1.540 (39.1)	.047 (1.2)	3	33	480	960	21.7
<b>1200VDC (500VAC)</b>									
.100	1.339 (34.0)	.462 (11.7)	.709 (18.0)	.040 (1.0)	9	20	1142	114	6.7
.150	1.339 (34.0)	.568 (14.4)	.815 (20.7)	.040 (1.0)	7	21	1142	171	8.3
.220	1.339 (34.0)	.691 (17.5)	.938 (23.8)	.040 (1.0)	7	23	1142	251	9.2
.330	1.811 (46.0)	.575 (14.6)	.946 (24.0)	.040 (1.0)	7	21	640	211	10.0
.470	1.811 (46.0)	.698 (17.7)	1.069 (27.1)	.047 (1.2)	7	28	640	301	10.9
.680	1.811 (46.0)	.854 (21.7)	1.225 (31.1)	.047 (1.2)	6	30	640	435	13.0
1.000	1.811 (46.0)	1.053 (26.7)	1.423 (36.1)	.047 (1.2)	5	32	640	640	15.9
1.500	2.126 (54.0)	1.088 (27.6)	1.582 (40.2)	.047 (1.2)	4	36	502	754	19.7
<b>1600VDC (630VAC)</b>									
.100	1.339 (34.0)	.565 (14.3)	.813 (20.6)	.040 (1.0)	7	21	1427	143	8.3
.150	1.339 (34.0)	.696 (17.7)	.943 (23.9)	.040 (1.0)	5	23	1427	214	11.0
.220	1.339 (34.0)	.848 (21.5)	1.095 (27.8)	.047 (1.2)	7	24	1427	314	10.3
.330	1.811 (46.0)	.715 (18.2)	1.086 (27.6)	.047 (1.2)	7	23	800	264	11.0
.470	1.811 (46.0)	.867 (22.0)	1.238 (31.4)	.047 (1.2)	6	30	800	376	13.1
.680	1.811 (46.0)	1.059 (26.9)	1.430 (36.3)	.047 (1.2)	6	32	800	544	14.5
1.000	1.811 (46.0)	1.303 (33.1)	1.674 (42.5)	.047 (1.2)	5	35	800	800	17.9
1.500	2.126 (54.0)	1.358 (34.5)	1.852 (47.0)	.047 (1.2)	4	39	628	942	22.2
<b>2000VDC (630VAC)</b>									
.022	1.339 (34.0)	.313 (7.9)	.561 (14.2)	.040 (1.0)	35	18	1712	38	2.8
.033	1.339 (34.0)	.382 (9.7)	.629 (16.0)	.040 (1.0)	20	19	1712	57	4.1
.047	1.339 (34.0)	.456 (11.6)	.703 (17.8)	.040 (1.0)	12	20	1712	80	5.7
.068	1.339 (34.0)	.550 (14.0)	.797 (20.2)	.040 (1.0)	8	21	1712	116	7.7
.100	1.339 (34.0)	.670 (17.0)	.917 (23.3)	.040 (1.0)	7	22	1712	171	9.1
.150	1.811 (46.0)	.557 (14.1)	.928 (23.6)	.040 (1.0)	7	21	960	144	9.8
.220	1.811 (46.0)	.686 (17.4)	1.057 (26.8)	.040 (1.0)	8	28	960	211	10.1
.330	1.811 (46.0)	.856 (21.7)	1.227 (31.2)	.047 (1.2)	8	30	960	317	11.3
.470	1.811 (46.0)	1.037 (26.3)	1.408 (35.8)	.047 (1.2)	6	32	960	451	14.4
.560	2.126 (54.0)	.941 (23.9)	1.436 (36.5)	.047 (1.2)	7	31	754	422	13.9
.680	2.126 (54.0)	1.050 (26.7)	1.545 (39.2)	.047 (1.2)	6	35	754	513	15.8
1.000	2.126 (54.0)	1.303 (33.1)	1.797 (45.6)	.047 (1.2)	5	38	754	754	19.4
<b>3000VDC (750VAC)</b>									
.010	1.339 (34.0)	.308 (7.8)	.555 (14.1)	.040 (1.0)	60	18	2568	26	2.2
.015	1.339 (34.0)	.375 (9.5)	.622 (15.8)	.040 (1.0)	40	19	2568	39	2.9
.022	1.339 (34.0)	.454 (11.5)	.701 (17.8)	.040 (1.0)	25	20	2568	57	4.0
.033	1.339 (34.0)	.558 (14.2)	.805 (20.4)	.040 (1.0)	14	21	2568	85	5.8
.047	1.811 (46.0)	.446 (11.3)	.817 (20.7)	.040 (1.0)	14	20	1440	68	6.3
.068	1.811 (46.0)	.545 (13.8)	.916 (23.3)	.040 (1.0)	12	26	1440	98	7.4
.100	1.811 (46.0)	.673 (17.1)	1.044 (26.5)	.047 (1.2)	10	28	1440	144	9.0
.150	1.811 (46.0)	.839 (21.3)	1.210 (30.7)	.047 (1.2)	8	30	1440	216	11.2