

◇ Dimension Lists (mm) Diagram

MPP

Metallized Polypropylene Film Capacitor



Product image

Type	Cap (μF)	Rated Voltage	Capacitance Tolerance	Dimensions (mm)					
				W±0.5	H±0.5	T±0.5	P±0.5	Lmin	Φd
400VDC									
MPP-2N2R10/400	0.0022	400V	K	12	7.7	4.4	10	23	0.6
MPP-10NR10/400	0.01	400V	K	12	9.2	4.3	10	23	0.6
MPP-22NR10/400	0.022	400V	K	12	8	3.9	10	23	0.6
MPP-100NR10/400	0.1	400V	K	12	10.3	5.3	10	23	0.6
MPP-100NR15/400	0.1	400V	K	17	12.6	6.1	15	23	0.8
MPP-150NR10/400	0.15	400V	K	12	11.4	6.5	10	23	0.6
MPP-180NR15/400	0.18	400V	K	17	12.1	5.6	15	23	0.8
MPP-220NR10/400	0.22	400V	K	12	11.4	6.4	10	23	0.6
MPP-220NR15/400	0.22	400V	K	17	12.8	6.3	15	23	0.8
MPP-470NR15/400	0.47	400V	K	17	13.1	6.6	15	23	0.8
MPP-560NR15/400	0.56	400V	K	17	13.4	6.9	15	23	0.8
MPP-680NR15/400	0.68	400V	K	17	14.3	7.8	15	23	0.8
MPP-820NR15/400	0.82	400V	K	17	14.7	8.2	15	23	0.8
MPP-1UR15/400	1	400V	K	17	16.2	9.8	15	23	0.8
MPP-1UR20/400	1	400V	K	22	16.7	10.2	20	23	0.8
MPP-1U2R20/400	1.2	400V	K	22	18.7	10.7	20	23	0.8
MPP-2U2R20/400	1.5	400V	K	22	19.8	11.7	20	23	0.8
MPP-1U5R20/400	2.2	400V	K	22	12	20	20	23	0.8
MPP-2U7R27/400	2.7	400V	K	29	23	14	27.5	23	0.8

MPP-3U3R25/400	3.3	400V	K	27	20.3	12.2	25	23	0.8
MPP-3U9R25/400	3.9	400V	K	27	23	14	25	23	0.8
MPP-4U7R25/400	4.7	400V	K	27	23	14	25	23	0.8
MPP-4U7R31/400	4.7	400V	K	33	22.2	14.2	31	23	0.8
MPP-5U6R31/400	5.6	400V	K	33	13.4	21.5	31	23	0.8
MPP-6U8R31/400	6.8	400V	K	33	23.1	15	31	23	0.8
MPP-8U2R31/400	8.2	400V	K	33	24.8	16.7	31	23	0.8
630VDC									
MPP-1NR10/630	0.001	630V	K	12	6.9	3.5	10	23	0.6
MPP-1N5R10/630	0.0015	630V	K	12	8	3.9	10	23	0.6
MPP-2N2R10/630	0.0022	630V	K	12	7.7	4.4	10	23	0.8
MPP-3N3R10/630	0.0033	630V	K	12	10	5.1	10	23	0.6
MPP-3N9R10/630	0.0039	630V	K	12	10.4	5.5	10	23	0.6
MPP-4N7R10/630	0.0047	630V	K	12	10.1	5.1	10	23	0.6
MPP-5N6R10/630	0.0056	630V	K	12	9.7	4.8	10	23	0.6
MPP-8N2R10/630	0.0082	630V	K	12	8.7	3.8	10	23	0.6
MPP-10NR10/630	0.01	630V	K	12	9.2	4.3	10	23	0.6
MPP-12NR10/630	0.012	630V	K	12	9.6	4.7	10	23	0.6
MPP-15NR10/630	0.015	630V	K	12	10.2	5.3	10	23	0.6
MPP-18NR10/630	0.018	630V	K	12	10.8	5.9	10	23	0.6
MPP-22NR10/630	0.022	630V	K	12	8.5	3.9	10	23	0.6
MPP-22NR15/630	0.022	630V	K	17	10	5.1	15	23	0.8
MPP-27NR10/630	0.027	630V	K	12	9.5	4.1	10	23	0.6
MPP-33NR10/630	0.033	630V	K	12	9.5	4.6	10	23	0.6
MPP-33NR15/630	0.033	630V	K	17	10.3	5.3	15	23	0.8
MPP-39NR10/630	0.039	630V	K	12	9.9	5	10	23	0.6
MPP-47NR10/630	0.047	630V	K	11.3	11.5	5.5	10	23	0.6
MPP-47NR15/630	0.047	630V	K	17	10.2	5.3	15	23	0.8
MPP-56NR10/630	0.056	630V	K	11	6	10	10	23	0.6
MPP-68NR10/630	0.068	630V	K	11	11	7	10	23	0.6
MPP-82NR10/630	0.082	630V	K	12	11.6	6.7	10	23	0.6

MPP-100NR10/630	0.1	630V	K	12	12.4	7.5	10	23	0.6
MPP-100NR15/630	0.1	630V	K	17	12	6.1	15	23	0.8
MPP-120NR10/630	0.12	630V	K	17	13.3	6.8	15	23	0.8
MPP-150NR15/630	0.15	630V	K	17	14.3	7.8	15	23	0.8
MPP-220NR15/630	0.22	630V	K	17	13.9	7.5	15	23	0.8
MPP-220NR20/630	0.22	630V	K	22	13.5	5.5	20	23	0.8
MPP-270NR15/630	0.27	630V	K	16.5	9	15	15	23	0.8
MPP-330NR15/630	0.33	630V	K	17	15.9	9.5	15	23	0.8
MPP-330NR20/630	0.33	630V	K	22	15.2	8.7	20	23	0.8
MPP-390NR15/630	0.39	630V	K	17	16.9	10.4	15	23	0.8
MPP-470NR20/630	0.47	630V	K	22	17.2	10.7	20	23	0.8
MPP-470NR27/630	0.47	630V	K	29	16	10	27.5	23	0.8
MPP-560NR20/630	0.56	630V	K	22	19.3	11.1	20	23	0.8
MPP-680NR20/630	0.68	630V	K	22	20.6	12.5	20	23	0.8
MPP-820NR20/630	0.82	630V	K	22	22	14	20	23	0.8
MPP-820NR27/630	0.82	630V	K	29	17.8	9.8	27.5	23	0.8
MPP-1UR20/630	1	630V	K	22	23.7	15.7	20	23	0.8
MPP-1UR27/630	1	630V	K	29	19	11	27.5	23	0.8
MPP-1U5R27/630	1.5	630V	K	29	22	13.9	27.5	23	0.8
MPP-1U5R31/630	1.5	630V	K	34	15.5	24	31	23	0.8
MPP-1U8R27/630	1.8	630V	K	29	23.1	15	27.5	23	0.8
MPP-2U2R27/630	2.2	630V	K	29	24.9	16.9	27.5	23	0.8
10000VDC									
MPP-1NR10/1000	0.001	1000V	K	12	6.9	3.5	10	23	0.6
MPP-2N2R10/1000	0.0022	1000V	K	12	7.7	4.4	10	23	0.6
MPP-3N3R10/1000	0.0033	1000V	K	12	10	5.1	10	23	0.6
MPP-4N7R10/1000	0.0047	1000V	K	12	8	3.9	10	23	0.6
MPP-10NR10/1000	0.01	1000V	K	12	9.2	4.3	10	23	0.6
MPP-15NR10/1000	0.015	1000V	K	12	10.2	5.3	10	23	0.6
MPP-22NR15/1000	0.022	1000V	K	17	10.8	5.8	15	23	0.8
MPP-27NR15/1000	0.027	1000V	K	17	11.4	6.5	15	23	0.6

[illegible]

Metallized Polypropylene Film Capacitor Type : MPP

Are non-inductively wound with metallized polypropylene film as dielectric/electrode with copper-clad steel leads and epoxy resin coating.

◇ Outline Drawing :

	Forming Lead Shapes																							
	<table><tr><td>I</td><td>II</td><td>III</td><td>IV</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td colspan="2">P ≥ F</td><td colspan="2">P < F</td></tr><tr><td>0mm ≤ P-F ≤ 3mm</td><td>3mm < P-F ≤ 8mm</td><td>3mm < F-P ≤ 5mm</td><td>0mm < F-P ≤ 3mm</td></tr><tr><td colspan="4">F ± 1.0mm; A ≤ 5.0mm; B=4.5 ± 0.5mm</td></tr></table>				I	II	III	IV					P ≥ F		P < F		0mm ≤ P-F ≤ 3mm	3mm < P-F ≤ 8mm	3mm < F-P ≤ 5mm	0mm < F-P ≤ 3mm	F ± 1.0mm; A ≤ 5.0mm; B=4.5 ± 0.5mm			
	I	II	III	IV																				
	P ≥ F		P < F																					
0mm ≤ P-F ≤ 3mm	3mm < P-F ≤ 8mm	3mm < F-P ≤ 5mm	0mm < F-P ≤ 3mm																					
F ± 1.0mm; A ≤ 5.0mm; B=4.5 ± 0.5mm																								

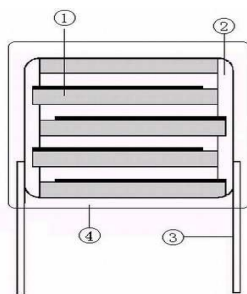
◇ Features :

- Low dissipation factor high insulation resistance.
- High stability of capacitance and DF versus temperature and frequency.
- Low loss at high frequency/Small inherent temperature rise.

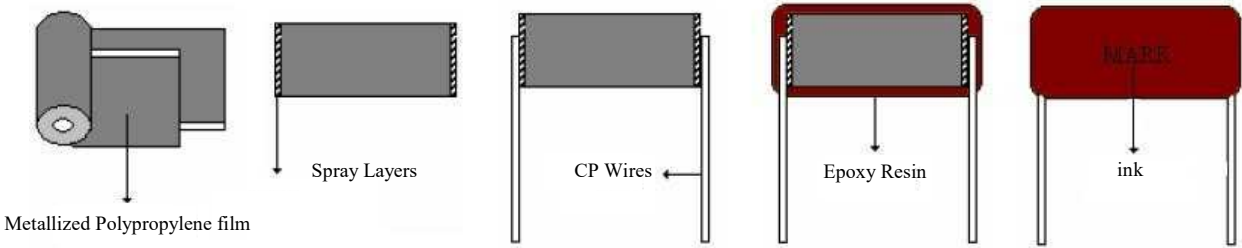
◇ Typical Applications :

- Widely used in high frequency、DC、AC and pulse circuits.
- Suitable for the situation where applies high frequency and high current pulse.
- Large-screen displays and TV S correct circuit design
- Electronic devices, differential motor, electric tools, lighting, air conditioner, refrigerator, washing machine and household appliances and power system.

◇ structure chart :



- ① Metallized Polypropylene film
- ② Spray Layers
- ③ CP Wires
- ④ Epoxy Resin



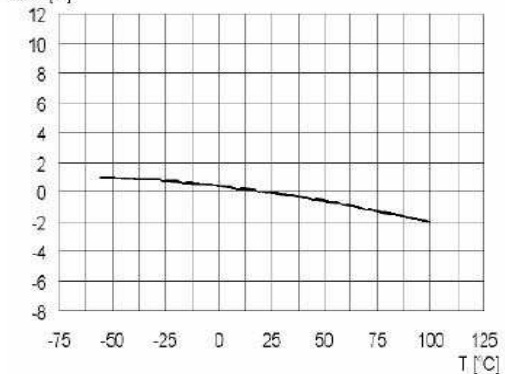
◇ Specification :

Reference Standards:	GB10190-88(China)IEC384-1 (International Electric Committee) GB384-16 (International Electric Committee)		
Rated Voltage(U_R):	100VDC; 250VDC; 400VDC; 630VDC; 1000VDC		
Operation Temperature Range:	-40℃ - +85℃		
Capacitance Range:	MPP; 0.001 μ F – 3.3 μ F		
Capacitance Tolerance Range:	J(±5%); K(±10%); M (±20%)		
Dielectric:	Polypropylene Film		
Dissipation Factor Tan δ :	$C \leq 1\mu F$ $C > 1\mu F$ $\leq 0.1\%$ $\leq 0.1\%$ (10KHZ) (1KHZ)		
Insulation Resistance: Between Terminals:	100VDC, Min $C \leq 0.33\mu F$ $> 0.33\mu F$ $\geq 50000M \Omega$ $\geq 15000 M \Omega \cdot S$		
Withstand Voltage:	$2U_R(10S)$		
Life. Test Conditions:	$85 \pm 2^{\circ}C$, 1.25U_R, 1,000Hours Capacitance Drift: $\leq \pm 3\%$ Of the initial value Dissipation Factor $\leq 50\%$ (1KHz)		

◇ Polypropylene film capacitor characteristic curve :

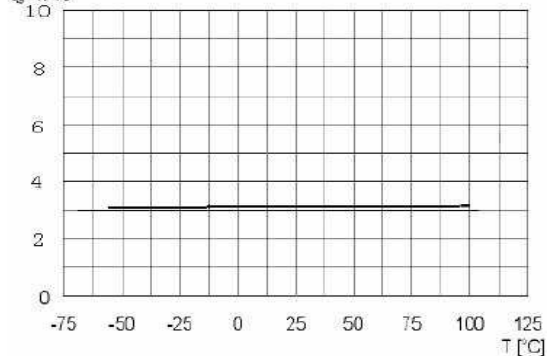
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$\Delta C/C [\%]$



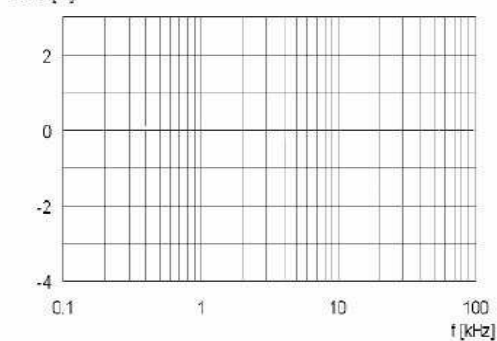
C-T

$\text{tg} \delta \times 10^{-3}$



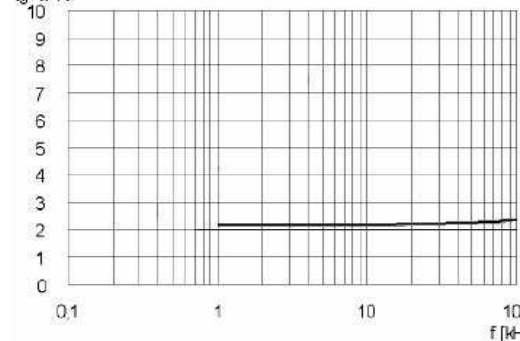
$\text{tg} \delta - T$

$\Delta C/C [\%]$



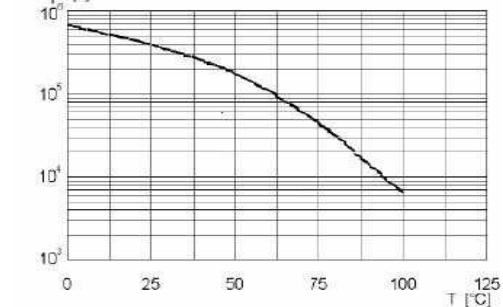
C-f

$\text{tg} \delta \times 10^{-3}$



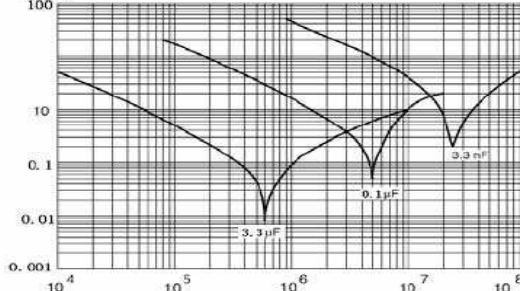
$\text{tg} \delta - f$

$\text{M}\Omega \times \mu\text{F} [\text{s}]$

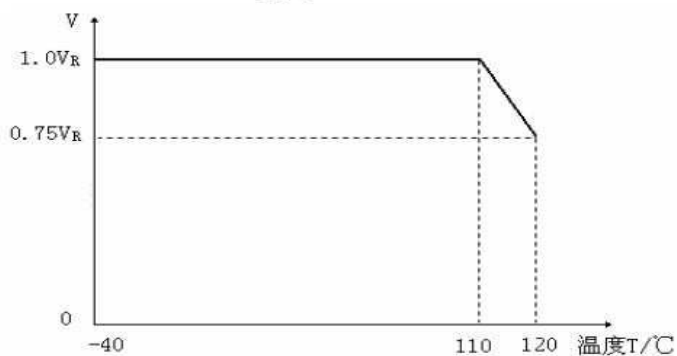


R-T

$Z (\Omega)$



Z-f



T-V