Metallized Polypropylene Film Capacitor

MPP-R

Non-inductive construction using metallized Polypropylene film with flame retardant epoxy resin coating

■ Features

- Self-healing property
- Excellent electrical characteristics
- Low loss
- Coated with flame-retardant(UL94 V-0) epoxy resin.
- Moisture resistance 85 °C, 85 % RH
- RoHS directive compliant
- High humidity.

■ Applications

- Lighting
- High frequency and high current circuits (TVs, Monitors, Power Supplies, etc.)

■ Specifications

Reference Standard		IEC 60384-16(For-DC Type)	
Climatic Category		40 / 105 / 21	
Rated Temperature		105℃ +85℃~+105℃ decreasing factor 1.0% / ℃ for V_R(dc)	
Operation Temperature Range		-40℃~+105℃	
Rated Voltage	**DC-Type**	400V, 630V	
Capacitance Range		0.01μF~2.4μF	
Capacitance Tolerance		J : ±5% K : ±10% M : ±20% ※Standard : J : ±5%, Other Tolerance Grade : available on request.	
Voltage Proof	**DC-Type**	1.75U_R(dc) / 3sec	
Dissipation Factor		≤0.1%(at 1kHz 20℃)	
Rated Voltage	**DC-Type**	U_R(dc)〈500V	≥30,000MΩ C_R ≤1μF 100Vdc 60sec20℃
			≥10,000Ω·F C_R〉1μF 100Vdc 60sec 20℃
		U_R(dc)≥500V	≥30,000MΩ C_R ≤1μF 100Vdc 60sec 20 ℃
			≥10,000Ω·F C_R〉1μF 100Vdc 60sec 20℃
	AC-Type		≥30,000MΩ C_R ≤1μF 100Vdc 60sec 20 ℃
			≥10,000Ω·F C_R〉1μF 100Vdc 60sec 20℃

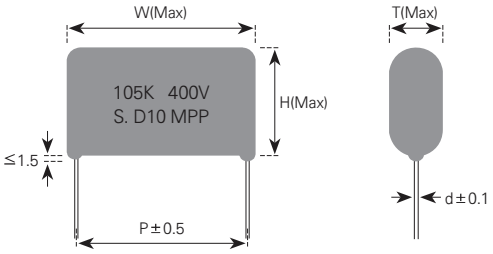
■ Part Number System

MPP	400V	223	J	10	S	5	R
Part-1	Part-2	Part-3	Part-4	Part-5	Part-6	Part-7	Part-8

Part-1 : Series Code(Series Name)-MPP
Part-2 : Rated Voltage(DC : 400V~630V)
Part-3 : Rated Capacitance Value(0.01μF~2.4μF / 103~245)
Part-4 : Capacitance Tolerance(G : ±2% H : ±3% J : ±5% K : ±10% M : ±20%)
Part-5 : Lead Spacing(7.5mm / 10mm / 15mm / 22.5mm / 27.5mm)
Part-6 : Forming-Type and Packing Code(Refer to 1.8.1.)
Part-7 : Size Number(1~4 : Min-Type / 5 : Standard-Type / 6~9 : Large-Type)
Part-8 : Internal Use

CODE	STYLE
B	Bending Forming
C	Straight Cutting
D	D-Type Forming
L	B-Type long Forming
M	C-Type long Forming
S	Straight
X	B-Type Forming
Y	C-Type Forming
Z	Z-Type Forming
T	A-Type Tapping
U	B-Type Tapping
V	C-Type Tapping

■ Dimensions



400Vdc

Cap. (μF)	Dimensions(mm) W (max.)	H (max.)	T (max.)	Pitch - d	PART NUMBER
0.022	12.5	8.6	5.8	10-0.6	MPP 400V 223J 10S 5R
0.024	12.5	8.8	6	10-0.6	MPP 400V 243J 10S 5R
0.027	12.5	9	6.2	10-0.6	MPP 400V 273J 10S 5R
0.03	12.5	9.3	6.4	10-0.6	MPP 400V 303J 10S 5R
0.033	12.5	9.5	6.7	10-0.6	MPP 400V 333J 10S 5R
0.036	12.5	8.4	5.7	10-0.6	MPP 400V 363J 10S 5R
0.039	12.5	8.6	5.8	10-0.6	MPP 400V 393J 10S 5R
0.043	12.5	8.8	6	10-0.6	MPP 400V 433J 10S 5R
0.047	12.5	9	6.2	10-0.6	MPP 400V 473J 10S 5R
0.051	12.5	9.2	6.4	10-0.6	MPP 400V 513J 10S 5R
0.056	12.5	9.4	6.6	10-0.6	MPP 400V 563J 10S 5R
0.062	13	9.6	6.8	10-0.8	MPP 400V 623J 10S 5R
0.068	13	9.9	7	10-0.8	MPP 400V 683J 10S 5R
0.075	13	10.1	7.3	10-0.8	MPP 400V 753J 10S 5R
0.082	13	10.4	7.5	10-0.8	MPP 400V 823J 10S 5R
0.091	13	10.7	7.8	10-0.8	MPP 400V 913J 10S 5R
0.1	15.5	11	6.5	12.5-0.8	MPP 400V 104J 12.5S 5R
0.11	15.5	11.3	6.8	12.5-0.8	MPP 400V 114J 12.5S 5R
0.12	15.5	11.5	7	12.5-0.8	MPP 400V 124J 12.5S 5R
0.13	15.5	11.8	7.2	12.5-0.8	MPP 400V 134J 12.5S 5R
0.15	15.5	12.2	7.6	12.5-0.8	MPP 400V 154J 12.5S 5R
0.16	15.5	12.4	7.8	12.5-0.8	MPP 400V 164J 12.5S 5R
0.18	15.5	12.8	8.2	12.5-0.8	MPP 400V 184J 12.5S 5R
0.2	15.5	13.3	8.6	12.5-0.8	MPP 400V 204J 12.5S 5R
0.22	15.5	13.6	9	12.5-0.8	MPP 400V 224J 12.5S 5R
0.24	18	13	8.3	15-0.8	MPP 400V 244J 15S 5R
0.27	18	13.4	8.8	15-0.8	MPP 400V 274J 15S 5R
0.3	18	13.9	9.2	15-0.8	MPP 400V 304J 15S 5R
0.33	18	14.3	9.6	15-0.8	MPP 400V 334J 15S 5R
0.36	18	14.7	9.9	15-0.8	MPP 400V 364J 15S 5R
0.39	18	15.1	10.3	15-0.8	MPP 400V 394J 15S 5R
0.43	18	15.6	10.7	15-0.8	MPP 400V 434J 15S 5R
0.47	18	16.1	11.2	15-0.8	MPP 400V 474J 15S 5R
0.51	20.5	16.8	10.3	17.5-0.8	MPP 400V 514J 17.5S 5R
0.56	20.5	17.3	10.7	17.5-0.8	MPP 400V 564J 17.5S 5R
0.62	20.5	17.9	11.3	17.5-0.8	MPP 400V 624J 17.5S 5R
0.68	20.5	18.5	11.8	17.5-0.8	MPP 400V 684J 17.5S 5R
0.75	20.5	19.1	12.3	17.5-0.8	MPP 400V 754J 15S 5R
0.82	23	18.5	11.8	20-0.8	MPP 400V 824J 20S 5R
0.91	23	19.2	12.4	20-0.8	MPP 400V 914J 20S 5R
1.0	23	19.8	13	20-0.8	MPP 400V 105J 20S 5R
1.1	23	20.5	13.6	20-0.8	MPP 400V 115J 20S 5R
1.2	28	19.1	12.3	25-0.8	MPP 400V 125J 25S 5R
1.3	28	19.6	12.8	25-0.8	MPP 400V 135J 25S 5R
1.5	28	20.7	13.7	25-0.8	MPP 400V 155J 25S 5R
1.6	28	21.2	14.2	25-0.8	MPP 400V 165J 25S 5R
1.8	28	22.2	15.2	25-0.8	MPP 400V 185J 25S 5R
2.0	28	23.1	16	25-0.8	MPP 400V 205J 25S 5R
2.2	28	24	16.8	25-0.8	MPP 400V 225J 25S 5R
2.4	28	24.8	17.5	25-0.8	MPP 400V 245J 25S 5R

630Vdc

Cap. (μF)	Dimensions(mm) W (max.)	H (max.)	T (max.)	Pitch - d	PART NUMBER
0.01	12.5	8	5.2	10-0.6	MPP 630V 103J 10S 5R
0.011	12.5	8.2	5.4	10-0.6	MPP 630V 113J 10S 5R
0.012	12.5	8.3	5.5	10-0.6	MPP 630V 123J 10S 5R
0.013	12.5	8.5	5.6	10-0.6	MPP 630V 133J 10S 5R
0.015	12.5	8.7	5.9	10-0.6	MPP 630V 153J 10S 5R
0.016	12.5	8.9	6	10-0.6	MPP 630V 163J 10S 5R
0.018	12.5	9.1	6.2	10-0.6	MPP 630V 183J 10S 5R
0.02	12.5	9.3	6.5	10-0.6	MPP 630V 203J 10S 5R
0.022	12.5	9	6.2	10-0.6	MPP 630V 223J 10S 5R
0.024	12.5	9.2	6.4	10-0.6	MPP 630V 243J 10S 5R

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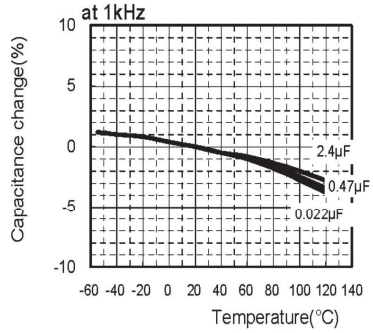
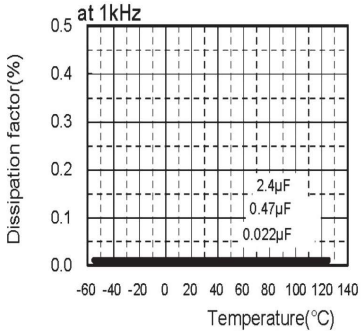
0.027	13	9.5	6.6	10-0.8	MPP 630V 273J 10S 5R
0.03	13	9.7	6.9	10-0.8	MPP 630V 303J 10S 5R
0.033	13	10	7.1	10-0.8	MPP 630V 333J 10S 5R
0.036	13	10.2	7.3	10-0.8	MPP 630V 363J 10S 5R
0.039	13	10.4	7.6	10-0.8	MPP 630V 393J 10S 5R
0.043	13	10.7	7.9	10-0.8	MPP 630V 433J 10S 5R
0.047	15.5	10.8	6.4	12.5-0.8	MPP 630V 473J 12.5S 5R
0.051	15.5	11	6.6	12.5-0.8	MPP 630V 513J 12.5S 5R
0.056	15.5	11.2	6.8	12.5-0.8	MPP 630V 563J 12.5S 5R
0.062	15.5	11.5	7.1	12.5-0.8	MPP 630V 623J 12.5S 5R
0.068	15.5	11.8	7.4	12.5-0.8	MPP 630V 683J 12.5S 5R
0.075	15.5	12.1	7.7	12.5-0.8	MPP 630V 753J 12.5S 5R
0.082	15.5	12.4	8	12.5-0.8	MPP 630V 823J 12.5S 5R
0.091	15.5	12.7	8.3	12.5-0.8	MPP 630V 913J 12.5S 5R
0.1	18	12.1	7.7	15-0.8	MPP 630V 104J 15S 5R
0.11	18	12.4	8	15-0.8	MPP 630V 114J 15S 5R
0.12	18	12.7	8.3	15-0.8	MPP 630V 124J 15S 5R
0.13	18	13	8.5	15-0.8	MPP 630V 134J 15S 5R
0.15	18	13.5	9.1	15-0.8	MPP 630V 154J 15S 5R
0.16	18	13.8	9.3	15-0.8	MPP 630V 164J 15S 5R
0.18	18	14.2	9.8	15-0.8	MPP 630V 184J 15S 5R
0.2	18	14.7	10.3	15-0.8	MPP 630V 204J 15S 5R
0.22	18	15.5	10.8	15-0.8	MPP 630V 224J 15S 5R
0.24	18	15.9	11.2	15-0.8	MPP 630V 244J 15S 5R
0.27	20.5	16.7	10.4	17.5-0.8	MPP 630V 274J 17.5S 5R
0.3	20.5	17.2	10.9	17.5-0.8	MPP 630V 304J 17.5S 5R
0.33	20.5	17.7	11.4	17.5-0.8	MPP 630V 334J 17.5S 5R
0.36	20.5	18.5	11.9	17.5-0.8	MPP 630V 364J 17.5S 5R
0.39	20.5	19	12.4	17.5-0.8	MPP 630V 394J 17.5S 5R
0.43	20.5	19.5	13	17.5-0.8	MPP 630V 434J 17.5S 5R
0.47	20.5	20.1	13.5	17.5-0.8	MPP 630V 474J 17.5S 5R
0.51	28	17.3	11.1	25-0.8	MPP 630V 514J 25S 5R
0.56	28	17.8	11.6	25-0.8	MPP 630V 564J 25S 5R
0.62	28	18.7	12.1	25-0.8	MPP 630V 624J 25S 5R
0.68	28	19.3	12.7	25-0.8	MPP 630V 684J 25S 5R
0.75	28	19.9	13.3	25-0.8	MPP 630V 754J 25S 5R
0.82	28	20.5	13.9	25-0.8	MPP 630V 824J 25S 5R
0.91	28	21.2	14.6	25-0.8	MPP 630V 914J 25S 5R
1.0	28	22.3	15.5	25-0.8	MPP 630V 105J 25S 5R
1.1	28	23	16.3	25-0.8	MPP 630V 115J 25S 5R
1.2	28	23.7	17	25-0.8	MPP 630V 125J 25S 5R
1.3	28	24.4	17.6	25-0.8	MPP 630V 135J 25S 5R

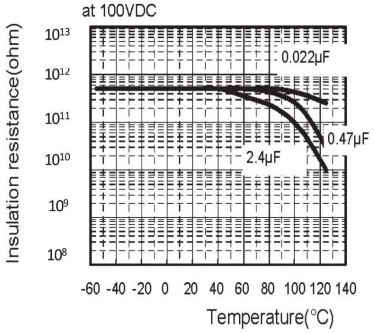
Electrical Characteristics (Typical Data)

400Vdc Series

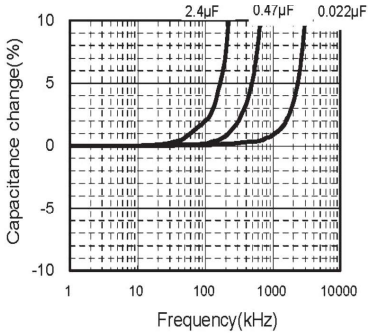
Temperature Characteristics

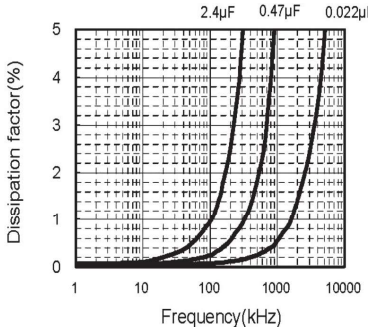


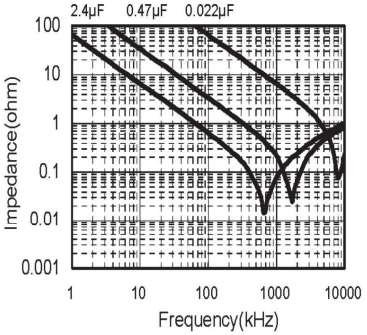




Frequency Characteristics

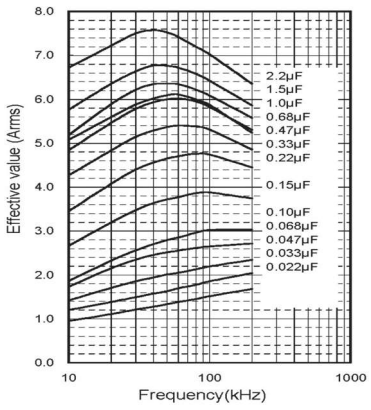






Applicable Specifications

Permissible Current



Pulse Handling Capability(dv/dt)

(Max 1000cycles)

Capacitance Value(uF)	code	dV/dt (V/us)	Current(0-P) (A)	Capacitance Value(uF)	code	dV/dt (V/us)	Current(0-P) (A)
0.022	223	412	9.1	0.27	274	154	41.6
0.027	273	412	11.1	0.33	334	154	50.8
0.033	333	412	13.6	0.39	394	154	60.1
0.039	393	283	11.0	0.47	474	154	72.4
0.047	473	283	13.3	0.56	564	136	76.2
0.056	563	283	15.8	0.68	684	136	92.5
0.068	683	283	19.2	0.82	824	113	92.7
0.082	823	283	23.2	1.00	105	113	113.0
0.10	104	200	20.0	1.20	125	85	102.0
0.12	124	200	24.0	1.50	155	85	127.5
0.15	154	200	30.0	1.80	185	85	153.0
0.18	184	200	36.0	2.20	225	85	187.0
0.22	224	200	44.0	2.40	245	85	204.0

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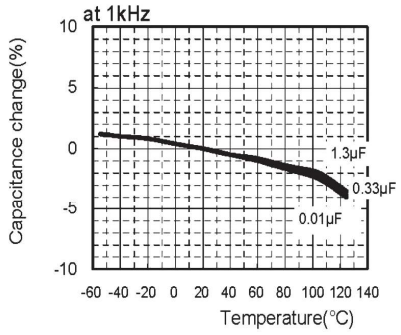
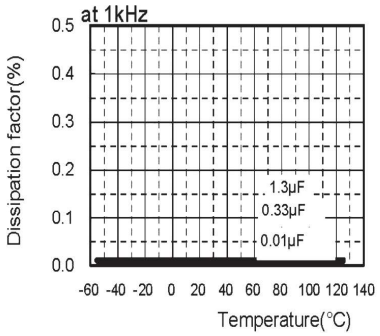
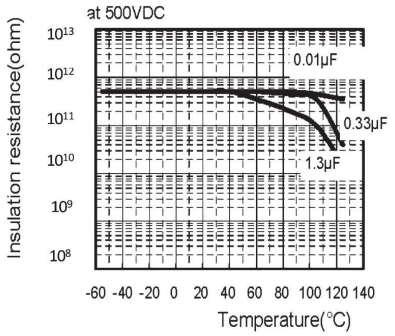
Electrical Characteristics (Typical Data)

630Vdc Series

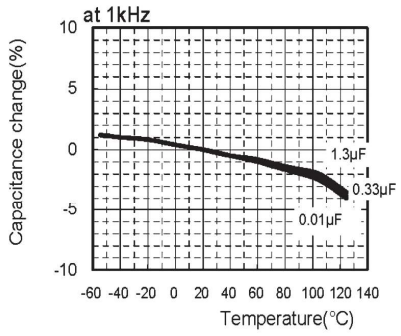
Temperature Characteristics

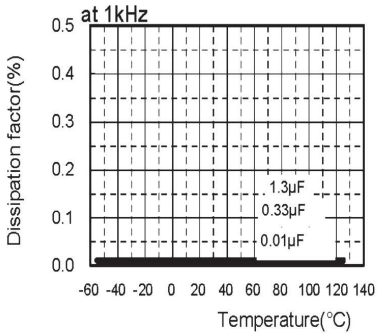


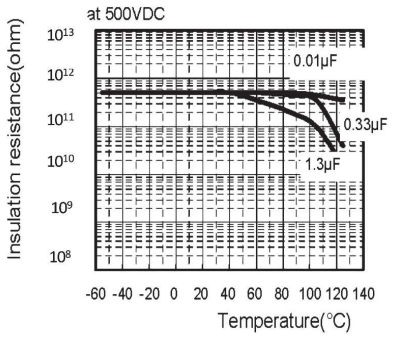




Frequency Characteristics

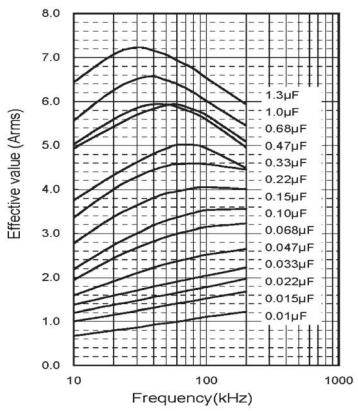






Applicable Specifications

Permissible Current



Pulse Handling Capability(dv/dt)

(Max 1000cycles)

Capacitance Value(uF)	code	dV/dt (V/us)	Current(0-P) (A)	Capacitance Value(uF)	code	dV/dt (V/us)	Current(0-P) (A)
0.01	103	561	5.6	0.12	124	249	29.9
0.012	123	561	6.7	0.15	154	249	37.4
0.015	153	561	8.4	0.18	184	249	44.8
0.018	183	561	10.1	0.22	224	249	54.8
0.022	223	451	9.9	0.27	274	216	58.3
0.027	273	451	12.2	0.33	334	216	71.3
0.033	333	451	14.9	0.39	394	216	84.2
0.039	393	451	17.6	0.47	474	216	101.5
0.047	473	332	15.6	0.56	564	131	73.4
0.056	563	332	18.6	0.68	684	131	89.1
0.068	683	332	22.6	0.82	824	131	107.4
0.082	823	332	27.2	1.00	105	131	131.0
0.10	104	249	24.9	1.20	125	131	157.2