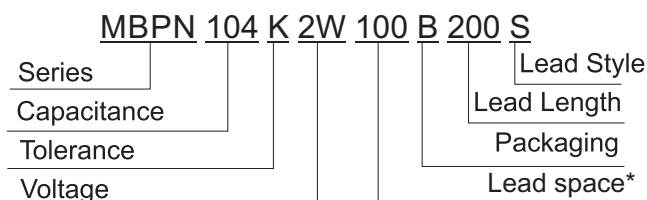


INTRODUCTION

MBPN Series are constructed specifically for Power Factor Correction (PFC) applications. Film was selected and metalization applied specifically for PFC application requirements.

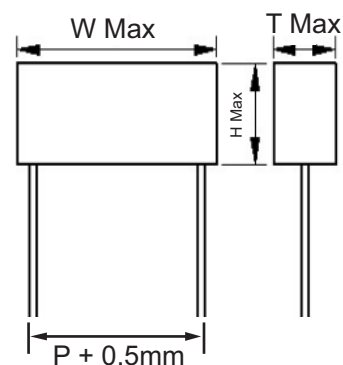
PART NUMBER EXAMPLE



* Leadspace is straight lead non-formed original leadspace.

FEATURES

- Self-healing property
- Excellent dv/dt
- RoHS Compliance
- Ultra-miniature Size
- Ideal for Power Factor correction applications
- UL 94V-0 rated case



SPECIFICATIONS

Items	Performance																				
Operating Voltage Range	450Vdc, 520Vdc, 630Vdc																				
Rated Temperature	-55 °C ~ +110°C (Voltage derates 125% per °C over 85°C)																				
Capacitance Range	0.022 μF ~ 8.2 μF																				
Capacitance Tolerance	±5% (J), ±10% (K), ±20% (M)																				
Dissipation Factor	0.1% (max.) at 1KHz 0.2% (max.) at 10KHz																				
Insulation Resistance Terminal to Terminal	Voltage Charge: 100Vdc x 1min (at 20°C ± 5°C) ≥ 15,000MΩ for C ≤ 0.33μF ≥ 50,000MΩ x μF for C > 0.33μF																				
Withstand Voltage	Terminal to Terminal: (at 20°C ± 5°C) 1.6 x VR applied for 2sec. (cut off current 10mA)																				
Rated Voltage Pulse Slope dV/dt (V/μs)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #f2f2f2;">VR \ P</th> <th style="background-color: #f2f2f2;">10mm</th> <th style="background-color: #f2f2f2;">15mm</th> <th style="background-color: #f2f2f2;">22.5mm</th> <th style="background-color: #f2f2f2;">27.5mm</th> </tr> </thead> <tbody> <tr> <td style="background-color: #f2f2f2;">450Vdc</td> <td>300</td> <td>200</td> <td>100</td> <td>80</td> </tr> <tr> <td style="background-color: #f2f2f2;">520Vdc</td> <td>350</td> <td>220</td> <td>150</td> <td>100</td> </tr> <tr> <td style="background-color: #f2f2f2;">630Vdc</td> <td>400</td> <td>300</td> <td>180</td> <td>120</td> </tr> </tbody> </table>	VR \ P	10mm	15mm	22.5mm	27.5mm	450Vdc	300	200	100	80	520Vdc	350	220	150	100	630Vdc	400	300	180	120
VR \ P	10mm	15mm	22.5mm	27.5mm																	
450Vdc	300	200	100	80																	
520Vdc	350	220	150	100																	
630Vdc	400	300	180	120																	

PERFORMANCE

Item	Test Methods	Requirements
Resistance to Soldering Heat IEC 60068-2-20	Solder Bath: 260°C ± 5°C Immersion Time: 10sec ± 1sec	Capacitance Change ΔC/C : ≤ 1% DF Change Δ tan δ : 0.1% at 1KHz IR : ≥ limit value
Resistance to Vibration IEC 60068-2-6	Frequency Range: 10Hz to 55Hz Amplitude: 1.5mm Duration: 6 hours	There shall be no Visible Damage, No Intermittent Contact, No Open or Short Circuit
Damp Heat, Steady State IEC 60068-2-3	Temperature: 40°C ± 2°C Relative Humidity: 90% to 95% Duration: 1,000 hours	Capacitance Change ΔC/C : ≤ 3% DF Change Δ tan δ : 0.1% at 1KHz IR : ≥ 50% limit value
Electrical Endurance IEC 60384-16	Temperature: 85°C + 2°C Voltage Applied: 1.25 x Vr(DC) Duration: 1,000 hours	Capacitance Change ΔC/C : ≤ 3% DF Change Δ tan δ : 0.1% at 1KHz IR : ≥ 50% limit value

■ DIMENSIONS (mm)

450Vdc (2W)

R.V.		450Vdc (2W)					
(μ F)	Code	W	H	T	P	d \emptyset	dV/dt
0.068	683	13.0	9	4	10	0.6	300
0.082	823	13.0	9	4	10	0.6	300
0.100	104	17.5	10	5	15	0.6	200
0.120	124	17.5	11	5	15	0.6	200
0.150	154	17.5	11	5	15	0.6	200
0.180	184	17.5	11	5	15	0.6	200
0.220	224	13.0	13	6	10	0.6	220
		17.5	11	5	15	0.6	200
0.270	274	17.5	12	6	15	0.6	200
0.330	334	17.5	12	6	15	0.6	200
0.390	394	17.5	14	8	15	0.6	200
0.470	474	17.5	14	8	15	0.6	200
0.560	564	17.5	14	8	15	0.6	200
0.680	684	17.5	16	10	15	0.8	200

R.V.		450Vdc (2W)					
(μ F)	Code	W	H	T	P	d \emptyset	dV/dt
0.820	824	17.5	16	10	15	0.8	200
1.000	105	26.5	17	9	22.5	0.8	100
1.200	125	26.5	19	10	22.5	0.8	100
1.500	155	26.5	19	10	22.5	0.8	100
1.800	185	26.5	22	12	22.5	0.8	100
2.200	225	32.0	20	11	27.5	0.8	80
2.700	275	32.0	22	13	27.5	0.8	80
3.300	335	32.0	22	13	27.5	0.8	80
3.900	395	32.0	25	15	27.5	0.8	80
4.700	475	32.0	33	18	27.5	0.8	80
5.600	565	32.0	33	18	27.5	0.8	80
6.800	685	32.0	33	18	27.5	0.8	80
8.200	825	32.0	33	18	27.5	0.8	80

520Vdc (2Y)

R.V.		520Vdc (2Y)					
(μ F)	Code	W	H	T	P	d \emptyset	dV/dt
0.047	473	13.0	9	4	10	0.6	350
0.056	563	13.0	9	4	10	0.6	350
0.068	683	13.0	9	4	10	0.6	350
0.082	823	13.0	11	5	10	0.6	350
0.100	104	17.5	11	5	15	0.6	220
0.120	124	17.5	11	5	15	0.6	220
0.150	154	13.0	12	6	10	0.6	220
		17.5	11	5	15		
0.180	184	17.5	11	5	15	0.6	220
0.220	224	17.5	12	6	15	0.6	220
0.270	274	17.5	12	6	15	0.6	220
0.330	334	17.5	14	8	15	0.6	220
0.390	394	17.5	14	8	15	0.6	220
0.470	474	17.5	15	9	15	0.8	220
0.560	564	17.5	16	10	15	0.8	220

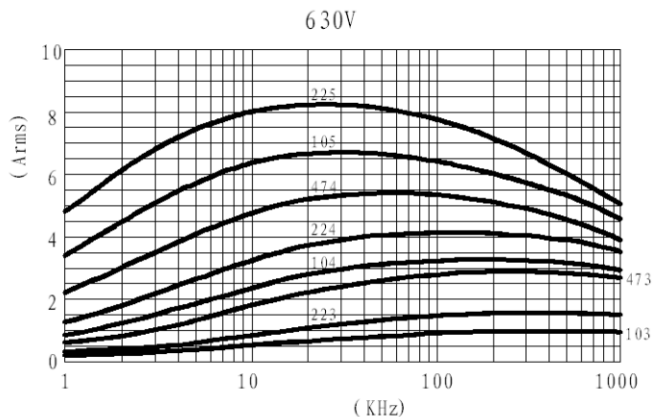
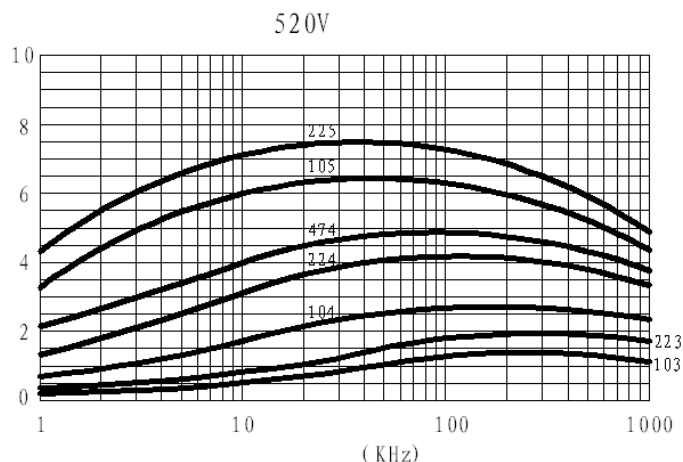
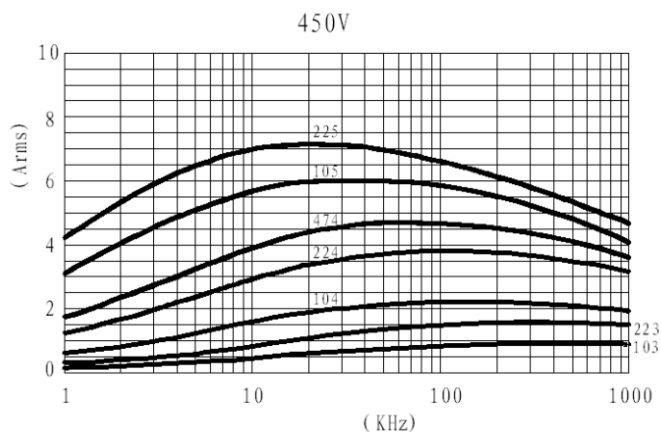
R.V.		520Vdc (2Y)					
(μ F)	Code	W	H	T	P	d \emptyset	dV/dt
0.680	684	17.5	16	10	15	0.8	220
0.820	824	26.5	17	9	22.5	0.8	150
1.000	105	26.5	19	10	22.5	0.8	150
1.200	125	26.5	19	10	22.5	0.8	150
1.500	155	26.5	22	12	22.5	0.8	150
1.800	185	26.5	22	12	22.5	0.8	150
2.200	225	32.0	22	13	27.5	0.8	100
2.700	275	32.0	25	15	27.5	0.8	100
3.300	335	32.0	28	14	27.5	0.8	100
3.900	395	32.0	28	14	27.5	0.8	100
4.700	475	32.0	33	18	27.5	0.8	100
5.600	565	32.0	33	18	27.5	0.8	100
6.800	685	32.0	33	18	27.5	0.8	100

630Vdc (2J)

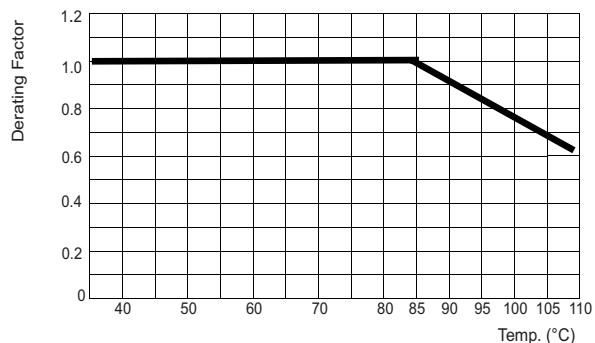
R.V.		630Vdc (2J)					
(μ F)	Code	W	H	T	P	d \emptyset	dv / dt
0.022	223	13.0	9	4	10.0	0.6	400
0.027	273	13.0	9	4	10.0	0.6	400
0.033	333	13.0	9	4	10.0	0.6	400
0.039	393	13.0	9	4	10.0	0.6	400
0.047	473	13.0	11	5	10.0	0.6	400
0.056	563	13.0	11	5	10.0	0.6	400
0.068	683	13.0	11	5	10.0	0.6	400
0.082	823	13.0	12	6	10.0	0.6	400
0.100	104	17.5	11	5	15.0	0.6	300
0.120	124	17.5	11	5	15.0	0.6	300
0.150	154	17.5	12	6	15.0	0.6	300
0.180	184	17.5	12	6	15.0	0.6	300
0.220	224	17.5	14	8	15.0	0.6	300
0.270	274	17.5	14	8	15.0	0.6	300
0.330	334	17.5	15	9	15.0	0.8	300

R.V.		630Vdc (2J)					
(μ F)	Code	W	H	T	P	d \emptyset	dv / dt
0.390	394	17.5	16	10	15.0	0.8	300
0.470	474	17.5	16	10	15.0	0.8	300
0.560	564	26.5	17	9	22.5	0.8	180
0.680	684	26.5	17	9	22.5	0.8	180
0.820	824	26.5	19	10	22.5	0.8	180
1.000	105	26.5	19	10	22.5	0.8	180
1.200	125	26.5	22	12	22.5	0.8	180
1.500	155	26.0	22	11	22.5	0.8	120
		32.0	22	13	27.5		
1.800	185	32.0	22	13	27.5	0.8	120
2.200	225	32.0	25	15	27.5	0.8	120
2.700	275	32.0	28	14	27.5	0.8	120
3.300	335	32.0	33	18	27.5	0.8	120
3.900	395	32.0	33	18	27.5	0.8	120

■ **CURRENT ARMS VS. FREQUENCY (450V, 520V, 630V)**



■ **MAX. DC & AC VOLTAGE VS TEMPERATURE**



■ **PACKAGING CODE**

Method	Bulk	Ammo	Reel
Code	B	A	R

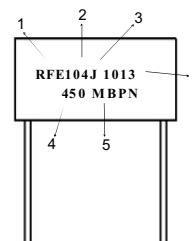
■ **LEAD LENGTH FROM SEATING PLANE**

mm	5	10	15	20	25
Code	050	100	150	200	250

■ **TAPE CODE** (Lead spacing of tape, if taped)

Spacing	10mm	15mm
Packing	A	A
Code	RT3	RT4

■ **MARKING**



1. Name or Symbol
2. Nominal Capacitance in μF
3. Capacitance Tolerance
4. DC, Rating, Voltage
5. Type Name
6. Date Code
Year: 11→ 2011, 12→ 2012, 13→ 2013
Week On: 01~53