

Metallized Polypropylene Film Capacitors

金属化聚丙烯膜电容器



■采用标准

GB10190(IEC384-16)

■结构

介质：聚丙烯膜

电极：金属真空蒸发层

封装：阻燃粉末环氧树脂，符合 UL94 V-0

引脚：铜包钢镀锡（CP 线）或铜线

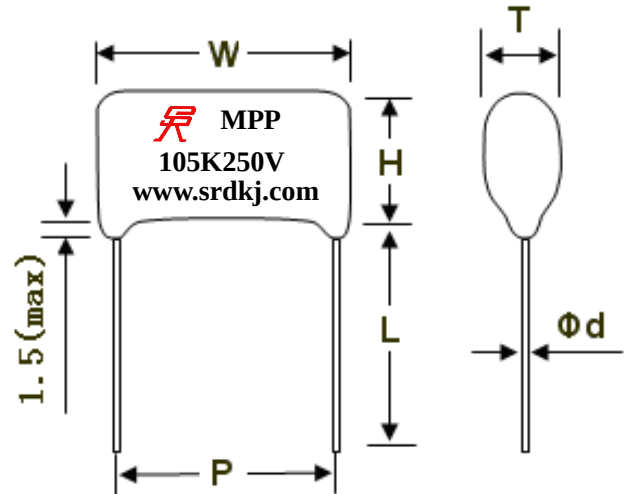
■典型应用

高频、直流、交流及脉冲大电流场合

如：灯具、电源等

■特点

体积小，有良好自愈性能。高频损耗小，温升低
高冲击强度。高频交流条件下有良好的耐电压性能



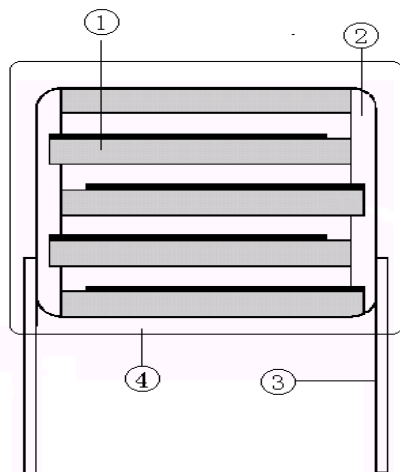
■符合 ROHS 标准

脚距 mm	7.5	10	15	20	22.5	27.5	31.5
引线直径 mm	0.5	0.5/0.6	0.6/0.8	0.8			
dv/dt(V/μs)	300	500	300	300	100		

■技术参数

气候条件	-40—+85（105）℃/56d	
额定电压	100V、250VDC、400VDC、450VDC、630VDC、1000VDC	
容量误差	J—±5% K—±10% M—±20%	
容量范围	0.0015 μF—4.7 μF	
耐电压	端子与端子：1.6UR 5S 端子与外壳：2000VAC 5S	无击穿或飞狐
损耗角	≤0.0010 1KHZ	20℃；1V 测试电压
绝缘电阻 或时间常数	CR≤0.33 μF IR≥25000MΩ CR>0.33 μF IR≥7500S(MΩ·μF)	UR≤500V, 充电电压 100V UR>500V, 充电电压 500V 20℃；充电 1min 测试后测得
稳态湿热	温度：40±2℃ 湿度：93%RH 持续时间：56 天	无可见损伤，标志清晰 IR：≥额定值的 50% 电容量：ΔC/C≤5% 损耗角（1KHZ）：增加≤0.0020
耐久性试验	+85（105）℃，连续 10000 小时 施加电压：1.25×额定电压	绝缘电阻 IR：≥额定值的 50% 电容量：ΔC/C≤10%

■结构图



- ① 金属化聚丙烯薄膜
- ② 喷金层
- ③ 引脚
- ④ 阻燃粉末环氧树脂

Permissible Pulse Current VS Frequency Tables

容许脉冲电流值 VS 频率对照表

MPP

100 VDC

F(KHz)	15.75	21.0	31.0	37.0	48.0	56.0	64.0	78.0	82.0	96.0
Cap(uF)	I p-p(Amp)									
0.10	2.2	2.4	2.8	3.0	3.3	3.5	3.6	3.8	3.9	4.1
0.12	2.5	2.8	3.2	3.4	3.7	3.9	4.0	4.2	4.3	4.5
0.15	2.8	3.1	3.5	3.8	4.1	4.3	4.4	4.6	4.7	4.9
0.18	3.1	3.4	3.8	4.1	4.5	4.7	4.8	5.0	5.1	5.3
0.20	3.3	3.6	4.0	4.3	4.7	4.9	5.0	5.2	5.3	5.6
0.22	3.5	3.8	4.3	4.6	5.0	5.2	5.3	5.5	5.6	5.9
0.24	3.7	4.0	4.5	4.9	5.3	5.5	5.6	5.8	5.9	6.2
0.27	4.0	4.3	4.8	5.2	5.6	5.8	5.9	6.1	6.2	6.5
0.30	4.2	4.5	5.0	5.4	5.8	6.0	6.2	6.4	6.5	6.8
0.33	4.4	4.7	5.2	5.6	6.0	6.2	6.4	6.7	6.8	7.1
0.36	4.6	4.9	5.5	5.9	6.3	6.5	6.7	7.0	7.1	7.4
0.39	4.8	5.1	5.7	6.1	6.5	6.8	7.0	7.3	7.4	7.7
0.43	5.0	5.4	6.0	6.4	6.8	7.1	7.3	7.6	7.7	8.0
0.47	5.3	5.7	6.3	6.7	7.1	7.4	7.6	7.9	8.0	8.3
0.51	5.5	5.9	6.6	7.0	7.4	7.7	7.9	8.2	8.3	8.6
0.56	5.7	6.1	6.9	7.3	7.7	8.0	8.2	8.5	8.6	8.9
0.62	6.0	6.4	7.2	7.6	8.0	8.3	8.5	8.8	8.9	9.2
0.68	6.2	6.6	7.5	7.9	8.3	8.6	8.8	9.1	9.2	9.5
0.75	6.5	6.9	7.8	8.2	8.6	8.9	9.1	9.4	9.5	9.8
0.82	6.8	7.2	8.1	8.5	8.9	9.2	9.4	9.7	9.8	10.1
0.91	7.1	7.5	8.4	8.8	9.2	9.5	9.7	10.0	10.1	10.4
1.0	7.3	7.8	8.7	9.1	9.5	9.8	10.0	10.3	10.4	10.7
1.2	7.7	8.2	9.1	9.5	10.0	10.4	10.6	11.0	11.1	11.4
1.5	8.1	8.7	9.6	10.0	10.6	11.0	11.3	11.8	11.9	12.2
1.8	8.6	9.3	10.2	10.6	11.3	11.7	12.0	12.5	12.6	13.1
2.2	9.2	9.9	10.9	11.3	12.0	12.4	12.8	13.4	13.5	14.0
3.3	11.0	11.8	12.9	13.4	14.2	14.7	15.2	15.9	16.0	16.6

MPP

250 VDC

F(KHz)	15.75	21.0	31.0	37.0	48.0	56.0	64.0	78.0	82.0	96.0
Cap(uF)	I p-p(Amp)									
0.10	3.5	3.9	4.6	5.0	5.7	5.9	6.1	6.4	6.5	6.8
0.12	3.8	4.3	5.1	5.5	6.2	6.4	6.6	6.9	7.0	7.3
0.15	4.2	4.8	5.7	6.1	6.8	7.0	7.2	7.5	7.6	7.9
0.18	4.5	5.2	6.2	6.6	7.3	7.5	7.8	8.2	8.3	8.6
0.20	4.8	5.5	6.5	6.9	7.6	7.8	8.1	8.5	8.6	8.9
0.22	5.1	5.8	6.8	7.2	7.9	8.1	8.4	8.8	8.9	9.2
0.24	5.4	6.1	7.1	7.5	8.2	8.4	8.7	9.1	9.2	9.5
0.27	5.7	6.4	7.5	7.9	8.6	8.8	9.1	9.5	9.6	9.9
0.30	6.0	6.7	7.8	8.2	8.9	9.1	9.4	9.8	9.9	10.2
0.33	6.3	7.0	8.1	8.5	9.2	9.4	9.7	10.1	10.2	10.5
0.36	6.6	7.3	8.4	8.8	9.5	9.7	10.0	10.4	10.5	10.8
0.39	6.9	7.6	8.7	9.1	9.8	10.0	10.4	10.8	10.9	11.2
0.43	7.2	7.9	9.0	9.5	10.2	10.4	10.8	11.2	11.3	11.6
0.47	7.5	8.2	9.3	9.8	10.6	10.8	11.2	11.6	11.7	12.0
0.51	7.8	8.5	9.6	10.1	10.9	11.2	11.5	11.9	12.0	12.3
0.56	8.1	8.8	9.9	10.4	11.2	11.5	11.8	12.3	12.4	12.7
0.62	8.4	9.1	10.2	10.7	11.5	11.8	12.1	12.6	12.7	13.0
0.68	8.7	9.4	10.5	11.0	11.8	12.1	12.4	12.9	13.0	13.3
0.75	9.0	9.7	10.8	11.3	12.1	12.4	12.7	13.2	13.3	13.6
0.82	9.3	10.0	11.1	11.6	12.4	12.7	13.1	13.6	13.7	14.0
0.91	9.6	10.3	11.5	12.0	12.7	13.1	13.5	14.0	14.1	14.4
1.0	9.9	10.6	11.8	12.3	13.0	13.4	13.9	14.4	14.5	14.8
1.2	10.3	11.0	12.3	12.8	13.5	13.9	14.5	15.0	15.1	15.4
1.5	10.7	11.6	12.9	13.4	14.1	14.5	15.1	15.7	15.8	16.1
1.8	11.4	12.2	13.5	14.0	14.8	15.2	15.8	16.5	16.6	16.9
2.2	11.8	12.8	14.1	14.7	15.6	16.0	16.6	17.4	17.5	17.8
3.3	13.6	14.6	16.0	16.7	17.7	18.3	18.9	19.8	20.0	20.3

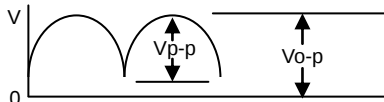
■ 测试条件

环境温度: +85°C ±5°C

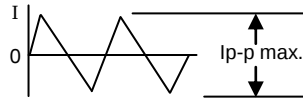
相对湿度: 65% — 95%

上升温度 (ΔT): 8°C max.

■ 电压波形



■ 电流波形



MPP

400 VDC

F(KHz)	15.75	21.0	31.0	37.0	48.0	56.0	64.0	78.0	82.0	96.0
Cap(uF)	I p-p(Amp)									
0.010	0.9	1.0	1.3	1.4	1.6	1.7	1.8	1.9	2.0	2.2
0.012	1.1	1.3	1.6	1.7	1.9	2.0	2.1	2.2	2.3	2.5
0.015	1.3	1.5	1.9	2.0	2.2	2.3	2.4	2.5	2.6	2.8
0.018	1.5	1.7	2.2	2.3	2.5	2.6	2.8	2.9	3.0	3.2
0.022	1.7	2.0	2.5	2.6	2.8	2.9	3.1	3.2	3.3	3.6
0.027	2.0	2.3	2.8	2.9	3.1	3.2	3.4	3.5	3.6	3.9
0.033	2.3	2.6	3.1	3.2	3.4	3.5	3.7	3.9	4.0	4.3
0.039	2.6	2.9	3.4	3.5	3.7	3.9	4.1	4.3	4.4	4.7
0.047	2.9	3.2	3.7	3.8	4.1	4.3	4.5	4.7	4.8	5.1
0.056	3.2	3.5	4.0	4.2	4.5	4.7	4.9	5.2	5.3	5.6
0.060	3.6	3.9	4.5	4.7	5.0	5.2	5.4	5.7	5.8	6.1
0.082	4.0	4.3	5.0	5.2	5.5	5.7	5.9	6.2	6.3	6.6
0.10	4.5	4.8	5.5	5.7	6.0	6.2	6.5	6.8	6.9	7.3
0.12	5.0	5.4	6.1	6.3	6.6	6.8	7.1	7.4	7.5	7.8
0.15	5.5	5.9	6.7	6.9	7.2	7.4	7.7	8.0	8.1	8.5
0.18	6.0	6.5	7.3	7.5	7.8	8.0	8.3	8.7	8.8	9.2
0.22	6.6	7.1	7.9	8.1	8.5	8.7	9.0	9.4	9.5	9.9
0.27	7.2	7.7	8.5	8.8	9.2	9.4	9.7	10.1	10.2	10.6
0.33	7.8	8.3	9.2	9.5	9.9	10.1	10.4	10.8	10.9	11.3
0.39	8.4	8.9	9.8	10.1	10.6	10.8	11.1	11.5	11.7	12.1
0.47	9.0	9.6	10.5	10.8	11.3	11.5	11.9	12.3	12.5	12.9
0.56	9.6	10.2	11.2	11.5	12.0	12.3	12.7	13.1	13.3	13.7
0.68	10.3	10.9	11.9	12.2	12.7	13.1	13.5	13.9	14.1	14.5
0.82	11.0	11.6	12.6	13.0	13.5	13.9	14.3	14.8	15.0	15.4
1.0	11.7	12.4	13.4	13.8	14.4	14.8	15.2	15.7	15.9	16.4

MPP

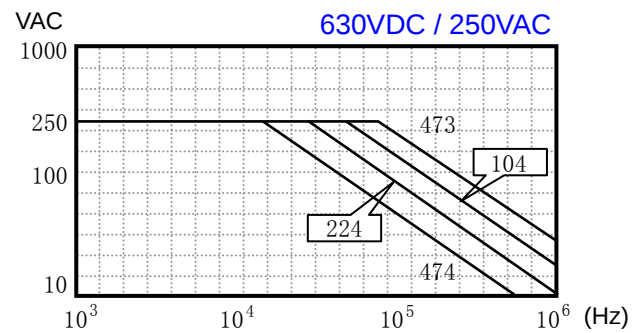
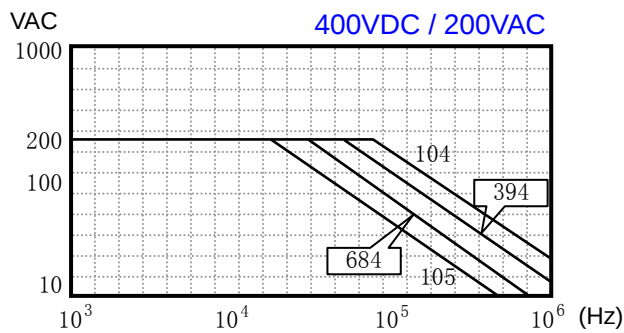
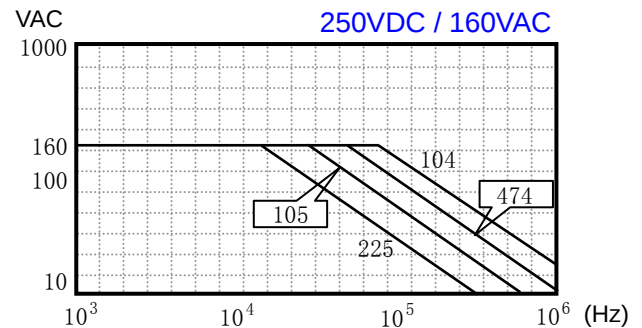
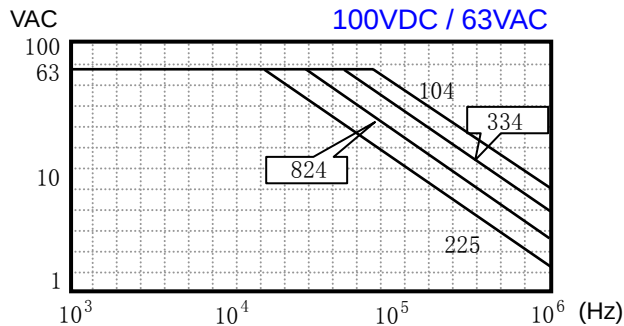
630 VDC

F(KHz)	15.75	21.0	31.0	37.0	48.0	56.0	64.0	78.0	82.0	96.0
Cap(uF)	I p-p(Amp)									
0.010	1.1	1.3	1.6	1.8	2.0	2.2	2.3	2.4	2.5	2.7
0.012	1.3	1.5	1.9	2.1	2.3	2.5	2.6	2.7	2.8	3.0
0.015	1.5	1.8	2.2	2.4	2.6	2.8	2.9	3.0	3.1	3.3
0.018	1.8	2.1	2.5	2.7	2.9	3.1	3.2	3.4	3.5	3.7
0.022	2.1	2.4	2.8	3.0	3.3	3.5	3.6	3.8	3.8	4.1
0.027	2.4	2.7	3.1	3.4	3.7	3.9	4.0	4.2	4.3	4.5
0.033	2.7	3.0	3.5	3.8	4.1	4.4	4.5	4.7	4.8	5.0
0.039	3.1	3.4	3.9	4.2	4.6	4.9	5.0	5.2	5.3	5.5
0.047	3.5	3.8	4.4	4.7	5.1	5.4	5.5	5.7	5.8	6.0
0.056	3.9	4.3	4.9	5.2	5.6	5.9	6.0	6.2	6.3	6.5
0.060	4.4	4.8	5.4	5.7	6.2	6.5	6.6	6.8	6.9	7.1
0.082	4.9	5.3	6.0	6.3	6.8	7.1	7.2	7.5	7.6	7.8
0.10	5.5	5.9	6.6	6.9	7.4	7.7	7.8	8.1	8.2	8.4
0.12	6.1	6.5	7.2	7.5	8.0	8.3	8.4	8.7	8.8	9.0
0.15	6.7	7.1	7.9	8.2	8.8	9.1	9.2	9.5	9.6	9.8
0.18	7.3	7.8	8.6	9.0	9.6	9.9	10.0	10.3	10.4	10.7
0.20	7.6	8.1	9.0	9.4	10.0	10.3	10.4	10.8	10.9	11.2
0.22	7.9	8.5	9.4	9.8	10.4	10.7	10.9	11.3	11.4	11.7
0.24	8.2	8.9	9.8	10.2	10.8	11.2	11.4	11.8	11.9	12.2
0.27	8.6	9.3	10.2	10.6	11.2	11.7	11.9	12.3	12.4	12.7
0.30	9.0	9.7	10.6	11.0	11.7	12.2	12.4	12.8	12.9	13.2
0.33	9.4	10.1	11.0	11.4	12.2	12.7	12.9	13.3	13.4	13.7
0.36	9.8	10.5	11.4	11.9	12.7	13.2	13.4	13.8	13.9	14.2
0.39	10.2	10.9	11.9	12.4	13.2	13.7	13.9	14.3	14.4	14.7
0.43	10.6	11.3	12.4	12.9	13.7	14.2	14.4	14.8	14.9	15.2
0.47	11.0	11.7	12.9	13.4	14.2	14.7	14.9	15.3	15.4	15.7

Permissible AC Voltage VS Frequency Curves

CBB21(MPP)

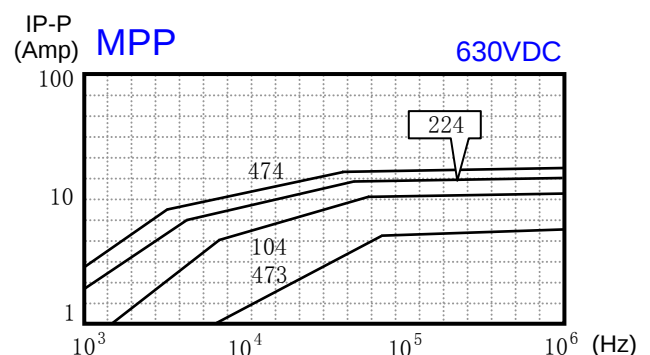
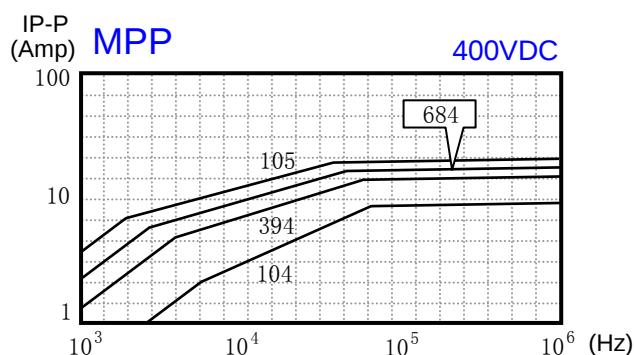
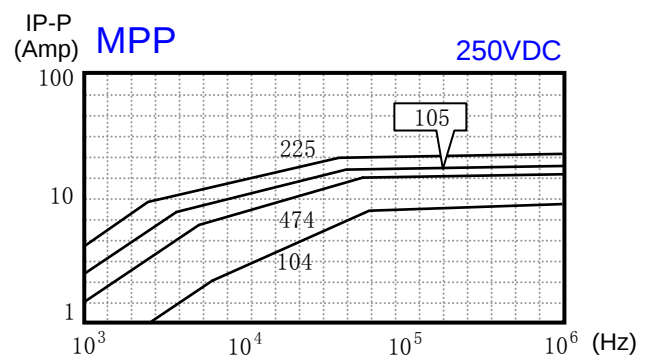
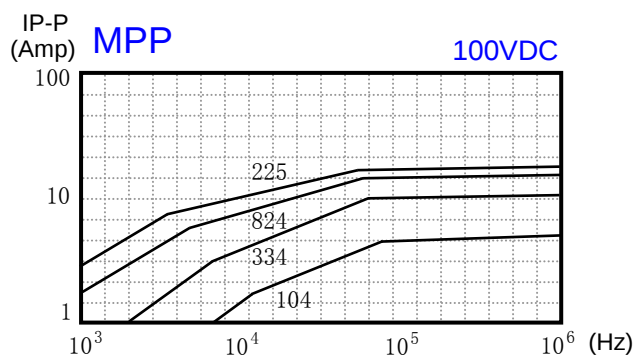
容许交流电压 VS 频率曲线图



Permissible Pulse Current VS Frequency Curves

CBB21(MPP)

容许脉冲电流 VS 频率曲线图



■CBB21(MPP)电容器规格尺寸表

容量 μF	成品料号	额定电压	Wmax	Tmax	Hmax	P ± 1.0
0.047	MPP473J5100508YG	450V	10	6	9.5	7.5
0.033	MPP333J5100508YG	450V	10	6	9	7.5
0.0033	MPP332J6100307 YG	630V	10	5	8	7.5
0.01	MPP103K2100407 YG	250V	10	5	8	7.5
0.033	MPP333J6100407YG	630V	10	6	9	7.5
0.0047	MPP472J6100407 YG	630V	10	5.5	8.8	7.5
0.01	MPP103J4100407 YG	400V	10	5	8	7.5
0.068	MPP683J5100609YG	450V	10	6	9.5	7.5
0.1	MPP104J5100609YG	450V	10	6	9.5	7.5
0.022	MPP223J5100609YG	450V	10	6	10	7.5
0.022	MPP223K2100609YG	250V	10	6	10	7.5
0.1	MPP104J4100609YG	400V	10	6	9.5	7.5
0.1	MPP104K4100609YG	400V	10	6	9.5	7.5
0.047	MPP473J6100408YG	630V	10	6	9	7.5
0.018	MPP183J4100509YG	400V	10	6	9.5	7.5
0.1	MPP104J6100611YG	630V	10	6	11	7.5
0.15	MPP154K2100611YG	250V	10	6	11	7.5
0.15	MPP154J5100611YG	450V	10	6	11	7.5
0.1	MPP104J4100510YG	400V	10	5.5	10	7.5
0.1	MPP104J2100510YG	250V	10	5.5	10	7.5
0.1	MPP104K2100510YG	250V	10	5.5	10	7.5
0.068	MPP683J4100510YG	400V	10	6	10.5	7.5
0.047	MPP473K6100510YG	630V	10	6	10	7.5
0.047	MPP473K5100510YG	450V	10	6	10	7.5
0.047	MPP473K4100510YG	400V	10	6	10	7.5
0.047	MPP473J5100510YG	450V	10	6	10	7.5
0.1	MPP104J5100510YG	450V	10	5.5	10	7.5
3.3	MPP335K4291220YG	400V	28	12	19	25
4.7	MPP475J2291523YG	250V	28	14	22.5	25
2.2	MPP225J4290918YG	400V	28	9	18	25
2.2	MPP225K2290918YG	250V	28	9	18	25