

MA series

■ 特性 Features

- SMD 贴片 SMD Type
- 105°C 2000~10000Hrs



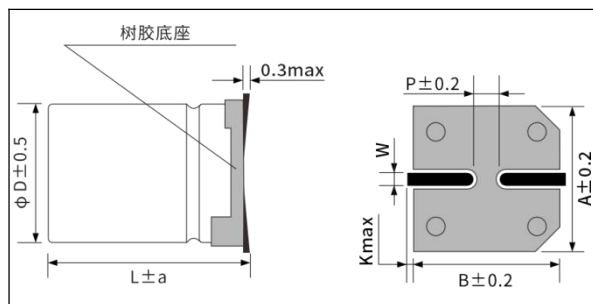
■ 仕様 Specification

项目 Item	条件 Condition	性能 Performance
使用温度范 Operating Temperature Range	-	-55°C~+105°C
额定电压范围 Rated Voltage Range	-	2.5-100V
额定静电容量范 Rated Capacitance Range	-	10~4700μF
额定静电容量容许差 Capacitance Tolerance	120Hz, 20°C	±20%
漏电流 Leakage current	施加额定电压 2 分钟后 After applying rated voltage for 2 minutes	$I \leq 0.2CV$ 或 $500\mu A$ (以较大值为准) $I \leq 0.2CV$ or $500\mu A$ (whichever is greater)
损失角正切值 Dissipation Factor	120Hz, 20°C	不超过指定的值 Not exceeding the specified value
耐久性 Endurance	在 105°C 环境下, 施加额定工作电压并叠加纹波电流, 恢复到 20°C 后, 电容器应满足如下要求 Under 105°C, apply rated voltage and superimpose ripple current, then return to 20°C, The capacitors shall meet the following requirements.	
	静电容量变化率 Capacitance Change	初始值的 ±20% 以内 Within ±20% of initial value
	漏电流 Leakage Current	初始值以内 Within initial value
	等效串联电阻 ESR	初始标准值的 150% 以下 ≤150% of initial standard value
	损失角正切值 Dissipation Factor(tan δ)	初始标准值的 150% 以下 ≤150% of initial standard value
耐湿性 Moisture Resistance	存放在 60°C, 湿度 90~95%, 1000H Stored at 60°C, RH90~95%, 1000H	
	静电容量变化率 Capacitance Change	初始值的 ±20% 以内 Within ±20% of initial value
	漏电流 Leakage Current	初始值以内 Within initial value
	等效串联电阻 ESR	初始标准值的 150% 以下 ≤150% of initial standard value
	损失角正切值 Dissipation Factor(tan δ)	初始标准值的 150% 以下 ≤150% of initial standard value

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■ 尺寸图 Dimensions

(Unit:mm)

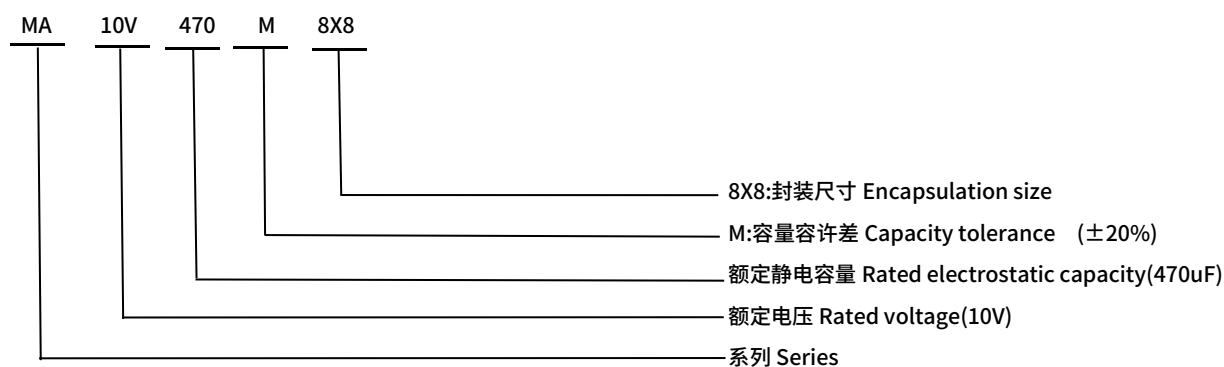


ϕD	A	B	W	P	K	a
6.3	6.6	6.6	0.5~0.9	1.8	0.35 ± 0.2	0.5
8	8.3	8.3	0.8~1.1	3.7	0.5 ± 0.2	0.3
10	10.3	10.3	0.8~1.1	3.9	0.5 ± 0.2	0.3

■ 纹波电流速查表 Ripple Current Quick Reference Table:

频率 Frequency	$120\text{Hz} \leq \text{Fre.} < 1\text{KHz}$	$1\text{KHz} \leq \text{Fre.} < 10\text{KHz}$	$10\text{KHz} \leq \text{Fre.} < 100\text{KHz}$	$100\text{KHz} \leq \text{Fre.} < 300\text{KHz}$
纹波修正系数 Coefficient	0.05	0.3	0.7	1.0

■ 品号编码体系 Part Number Coding System (Example: 10V 470 μ F)



注释: 型号中 R 表示小数点, 如 4R7 表示 4.7 μ F

Note: "R" in the model number denotes a decimal point (e.g., 4R7 = 4.7 μ F)

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■ 电气特性 Electrical characteristics

额定电压 Rated Voltage(V)	额定静电容量 Rated Capacitance(μF)	损失角正切值 tan δ (120Hz,20℃)	等效串联电阻 ESR (mΩ,100KHz)	额定纹波电流 Rated Ripple Current (mA,105℃,100KHz)	铝壳尺寸 Case Size Φ DXL(mm)	品号 Part Number
6.3	330	12	25	2650	6.3X5	MA6.3V330M6X5
6.3	470	12	25	2650	6.3X7	MA6.3V470M6X7
10	220	12	28	2560	6.3X5	MA10V220M6X5
10	220	6	28	2900	6.3X7.7	MA10V220M6X8
10	470	6	20	3100	6.3X7.7	MA10V470M6X8
10	470	12	18	4100	8X8	MA10V470M8X8
10	560	12	18	4100	8X8	MA10V560M8X8
10	100	8	28	4100	6.3X6	MA10V100M6X6
10	680	12	18	4100	8X8	MA10V680M8X8
10	1000	12	14	4900	10X12.5	MA10V1000M10X12
10	1500	12	14	4900	10X12.5	MA10V1500M10X12
16	100	12	28	2100	6.3X5.7	MA16V100M6X6
16	100	10	21	2900	6.3X7.7	MA16V100M6X8
16	220	8	21	2900	6.3X7.7	MA16V220M6X8
16	270	12	21	2420	8X8	MA16V270M8X8
16	330	12	21	2420	8X8	MA16V330M8X8
16	470	12	21	4100	8X8	MA16V470M8X8
16	470	8	18	4100	8X10	MA16V470M8X10
16	680	12	14	4500	10X12.5	MA16V680M10X12
16	820	12	14	4500	10X12.5	MA16V820M10X12
20	120	8	30	2650	6.3X5	MA20V120M6X5
25	100	10	30	2650	6.3X6	MA25V100M6X6
25	100	12	30	2690	6.3X7.7	MA25V100M6X8
25	220	10	28	2900	6X7.7	MA25V220M6X8
25	220	12	25	2900	8X8	MA25V220M8X8
25	330	12	25	3500	8X8	MA25V330M8X8
25	470	12	25	3100	8X8	MA25V470M8X8
25	470	10	25	4100	8X10	MA25V470M8X10
35	47	10	35	2650	6.3X5.7	MA35V47M6X6
35	100	10	30	2900	6.3X7.7	MA35V100M6X8

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额定电压 Rated Voltage(V)	额定静电容量 Rated Capacitance(μ F)	损失角正切值 $\tan \delta$ (120Hz,20°C)	等效串联电阻 ESR (m Ω ,100KHz)	额定纹波电流 Rated Ripple Current (mA,105°C,100KHz)	铝壳尺寸 Case Size Φ DXL(mm)	品号 Part Number
35	220	10	28	2900	8X8.5	MA35V220M8X8
35	220	10	16	3100	8X11.5	MA35V220M8X11
35	330	10	25	3500	10X10	MA35V330M10X10
35	470	10	16	3800	10X12.5	MA35V470M10X12
35	680	10	18	3900	10X13.5	MA35V680M10X13
50	22	10	40	2650	6.3X6	MA50V22M6X6
50	22	12	35	2420	8X8	MA50V22M8X8
50	33	12	35	2600	6.3X7.7	MA50V33M6X8
50	100	10	25	3100	8X11.5	MA50V100M8X11
50	220	10	30	3100	10X10	MA50V220M10X10
63	150	10	20	3100	10X11.5	MA63V150M10X11
80	22	12	35	2420	8X8	MA80V22M8X8