

## MA 5mmL标准品 (CD11M型)

● 5mm高度, 微型体积。

Be 5mm in height and mini-size.

● 适用于照相机, 汽车音响, 随身听等装置。

Suitable for camera, car audio, mini-audio sets, etc.



### Specifications

项目 Item	特性 Characteristics							
工作温度范围 Operating temperature range	-40°C~+85°C							
额定电压范围 Rated voltage range	4V~50V DC							
静电容量范围 Nominal capacitance range	0.1μF~470μF							
静电容量误差 Capacitance tolerance	±20% (120Hz·20°C)							
漏电流 (20°C) leakage current(20°C)	I≤0.01CV or 3μA(whichever is greater) after 2 minute							
	I: Leakage current C: Normal capacitance V: Rated voltage							
损耗角正切 Dissipation factor (120Hz·20°C)	Rated voltage(V)	4	6.3	10	16	25	35	50
	tgδ(MAX)	0.35	0.24	0.20	0.16	0.14	0.12	0.10
低温特性 Low temperature characteristics (Impedance ratio max. at 120Hz)	Rated voltage(v)	4	6.3	10	16	25	35	50
	Z-25°C/Z+20°C	7	4	3	2	2	2	2
	Z-40°C/Z+20°C	15	8	6	4	4	3	3
高温负荷特性 Load Life	After applying rated voltage for 1000 hours at 85°C then resumed 16 hours:							
	Capacitance change	Within ±20% of the initial measured value						
	tgδ	≤200% of the initial specified value						
	Leakage current	≤initial specified value						
高温贮存特性 Shelf Life	After storage for 1000 hours at 85°C then resumed 16 hours:							
	Capacitance change	Within ±20% of the initial measured value						
	tgδ	≤200% of the initial specified value						
	Leakage current	≤initial specified value						

### Diagram of Dimensions(mm)

	φ D	3	4	5	6.3	8
	F ± 0.5	1.0	1.5	2.0	2.5	3.5
	φ d ± 0.05	0.40	0.45			
	α	1.0				

### Multiplier for Ripple Current vs. Frequency:

CAP(μF)\Hz	50(60)	120	1K	≥10K
CAP < 100	0.80	1.00	1.30	1.50
CAP ≥ 100	0.80	1.00	1.15	1.20

### Multiplier for Ripple Current vs. Temperature:

Temperature °C	~55	60	70	85
Factor	1.65	1.50	1.30	1.00

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## ■ Standard Ratings

WV(Coad)		4V (0G)		6.3V (0J)		10V (1A)		16V (1C)	
C(uf)	Coad	φD×L	R. C.	φD×L	R. C.	φD×L	R. C.	φD×L	R. C.
0.1	0R1								
0.22	R22								
0.33	R33								
0.47	R47								
1	010								
2.2	2R2								
3.3	3R3								
4.7	4R7							3×5	13
10	100			3×5	15	4×5	17	4×5	23
22	220	3×5	19	4×5	28	4×5	33	4×5	37
33	330	4×5	28	4×5	37	5×5	41	5×5	49
47	470	4×5	33	5×5	45	6.3×5	52	6.3×5	58
100	101	5×5	56	6.3×5	70	8×5	80	8×5	92
220	221	6.3×5	96	8×5	110	8×5	135		
330	331	8×5	145	8×5	170				
470	471	8×5	185						

WV(Coad)		25V (1E)		35V (1V)		50V (1H)			
C(uf)	Coad	φD×L	R. C.	φD×L	R. C.	φD×L	R. C.		
0.1	0R1					3(4)×5	1.0		
0.22	R22					3(4)×5	2.0		
0.33	R33					3(4)×5	2.8		
0.47	R47					3(4)×5	4.0		
1	010					3(4)×5	8.4		
2.2	2R2			3×5	8.4	4×5	13		
3.3	3R3	3×5	10	4×5	14	4×5	17		
4.7	4R7	4×5	16	4×5	18	5×5	20		
10	100	5×5	27	5×5	29	6.3×5	33		
22	220	6.3×5	42	6.3×5	46	8×5	52		
33	330	6.3×5	52	8×5	62	8×5	71		
47	470	8×5	70	8×5	80				
100	101	8×5	110						

Permit ripple current : (mArms, 85°C, 120HZ)

Case size: φD×L (mm)