

## MRR Series

**+105°C, Long Life, Lead Free Reflow Soldering**

对应无铅焊接, 高电压, +105°C长寿命品



## ◆ FEATURES

- High Voltage(160V-450V)
- Life 6000 hours at +105°C.
- Available for high density mounting
- RoHS Compliant and lead-free.

## ◆ SPECIFICATIONS

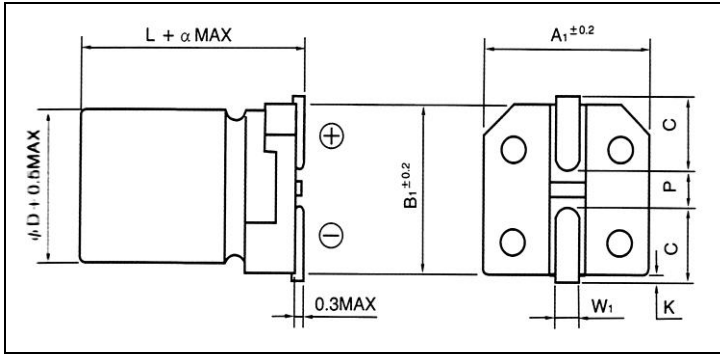
Items	Characteristics						
Category Temperature Range	-40~+105°C						
Rated Voltage Range	160~450V.DC						
Nominal Capacitance Range	1~47μ F						
Capacitance Tolerance	±20%(120Hz,+20°C)						
Leakage Current(MAX, 20°C)	I=0.03CV+40(μA) after 2 minutes with rated working voltage						
Dissipation Factor(MAX) Tanδ (20°C,120Hz)	Rated Voltage(V)	160	200	250	350	400	450
	Tanδ (Max)	0.20	0.20	0.20	0.24	0.24	0.24
When nominal capacitance is over 1000μ F,tanδ shall be added 0.02 to the listed value with Increase of every 1000μ F							
Load Life	After applying rated voltage with max ripple current for 6000 hrs at 105°C,the capacitors shall meet the following requirements						
	Capacitance Change	Within ±20% of the initial value					
	Dissipation Factor	Not more than200% of the specified value					
	Leakage Current	Not more than the specified value					
Low Temperature Stability Impedance Rate(MAX) (120Hz)	Rated Voltage(V )	160	200	250	350	400	450
	Z-25°C/Z+20°C	3	3	3	5	5	5
	Z-40°C/Z+20°C	6	6	6	6	6	6

## ◆ RIPPLE CURRENT MULTIPLIER

- Frequency coefficient

Cap (μ F)	Frequency(Hz)					
	50	120	300	1K	10K	100K
≤8.2	0.65	1.00	1.35	1.75	2.30	2.50
10~82	0.70	1.00	1.25	1.50	1.75	1.80
100~820	0.80	1.00	1.15	1.30	1.40	1.50
≥1000	0.85	1.00	1.03	1.05	1.08	1.08

**◆ CASE SIZE TABLE**



$\phi D$	L	A1	B1	C	W1	P	K	$\alpha$
8	6.5	8.3	8.3	3.4	0.5~0.8	2.2	0.5max	0
8	10.5~	8.3	8.3	2.9	0.8~1.1	3.1	0.5max	0
10	10.5	10.3	10.3	3.2	0.8~1.1	4.5	0.5max	0
10	12.5~	10.3	10.3	3.2	0.8~1.1	4.5	0.7±0.4	0

**◆ STANDARD RATINGS**

Size: $\phi D \times L$ (mm),Ripple Current(mA r.m.s/105°C,120Hz)

$\mu F$ \ wv	160(2C)		200(2D)		250(2C)	
	Size	Ripple	Size	Ripple	Size	Ripple
4.7	8x12	42	8x12	45	8x12	45
6.8	8x12	48	8x12	52	8x12	57
8.2	8x12	59	8x12	62	8x12	70
10	8x12	65	8x12	78	10x13	81
15	8x12	88	10x13	96	10x16	110
22	10x13	110	10x13	128	10x16	130
33	10x16	158	10x16	185		
47	10x20	205	10x20	220		

$\mu F$ \ wv	350(2V)		400(2G)		450(2W)	
	Size	Ripple	Size	Ripple	Size	Ripple
1	8x12	22	8x12	22	8x12	22
2.2	8x12	34	8x12	34	8x12	32
3.3	8x12	40	8x12	40	8x12	43
4.7	8x12	48	8x12	48	10x13	60
6.8	8x14	63	8x14	63	10x13	72
8.2	10x13	80	10x13	80	10x16	85
10	10x16	98	10x16	98	10x16	102
15	10x16	138	10x16	138	10x20	158