

# MMR

## Small Size Epoxy Dipped Radial Lead Metallized Polyester Film Capacitors



- Bypass
- Coupling
- Filtering
- Blocking

<b>Operating Temperature Range</b>		<b>-40°C to +105°C</b>			
<b>Capacitance Tolerance</b>		<b>±10% at 1kHz, 20°C</b>			
<b>Rated Voltage</b>	<b>VDC</b>	<b>100</b>	<b>250</b>	<b>400</b>	<b>630</b>
	<b>VAC</b>	63	150	200	220
<b>For T &gt; +85°C the applied voltage must be decreased by 1.25% per °C</b>					
<b>Dissipation Factor (max) at 20°C</b>	<b>Freq. (kHz)</b>	<b>Dissipation factor</b>			
	1	1.0%			
	10	1.5%			
<b>Insulation Resistance @20°C(&lt;70% RH) for 1 minute at 100VDC</b>	<b>Capacitance</b>	<b>Insulation Resistance</b>			
	≤0.33 μF	9,000 MΩ			
	>0.33 μF	3,000 MΩ x μF			
<b>Load Life Test</b>	<b>2,000 hours at 125% of rated VDC and at 85°C</b>				
	Capacitance Change	≤5% change from initial value.			
	Dissipation Factor	≤0.005 at 1kHz and 25°C			
	Insulation Resistance	≥50% of minimum specification			
<b>Damp Heat Test</b>	<b>1000 hours at +40°C±2°C with 93% ±2% relative humidity</b>				
	Capacitance Change	≤5% change from initial value.			
	Dissipation Factor	≤0.005 at 1kHz and 25°C			
	Insulation Resistance	≥50% of minimum specification			
<b>Self-inductance</b>	≤1 nH/mm along the capacitor pitch and lead wire length.				
<b>Dielectric Strength</b>	160% of rated WVDC for 2 seconds at 20°C between the leads.				
<b>Capacitance Drift Factor</b>	≤1.0% up to 40°C after 2 years				
<b>Temperature Coefficient</b>	+400 ppm/°C, ± 200ppm/°C				
<b>Dielectric</b>	Polyester				
<b>Electrodes</b>	Vacuum deposited metal layers				
<b>Construction</b>	Extended metallized carrier film				
<b>Leads</b>	Tinned copper wire				
<b>Coating</b>	Flame retardant epoxy sealed resin (UL 94V-0)				

## STANDARD PART LISTING

Capacitance (μF)	WVDC	IC <sup>®</sup> PART NUMBER	dv/dt (v/μ sec.)	Dimensions L x H x T (mm)
0.01	250	103MMR250K	80	10.5x7.5x4.5
0.01	400	103MMR400K	190	10.5x7.5x4.5
0.01	630	103MMR630K	200	13x8x5
0.015	250	153MMR250K	80	10.5x7.5x4.5
0.015	400	153MMR400K	190	10.5x8x4.5
0.015	630	153MMR630K	200	13x9x5.5
0.022	250	223MMR250K	80	10.5x7.5x4.5
0.022	400	223MMR400K	190	10.5x8.5x5
0.022	630	223MMR630K	200	13x11.5x6
0.033	250	333MMR250K	80	10.5x7.5x4.5
0.033	400	333MMR400K	190	10.5x9.5x6
0.033	630	333MMR630K	200	13x12.5x7
0.047	250	473MMR250K	80	10.5x8x4.5
0.047	400	473MMR400K	160	13x9x5
0.047	630	473MMR630K	200	13x15x7.5
0.068	250	683MMR250K	80	10.5x8.5x5
0.068	400	683MMR400K	160	13x11x5.5
0.068	630	683MMR630K	90	18.5x11.5x6
0.1	250	104MMR250K	80	10.5x10x6

Capacitance (μF)	WVDC	IC <sup>®</sup> PART NUMBER	dv/dt (v/μ sec.)	Dimensions L x H x T (mm)
0.1	400	104MMR400K	160	13x12x6.5
0.1	630	104MMR630K	90	18.5x13x7
0.15	250	154MMR250K	80	10.5x11x7
0.15	400	154MMR400K	65	18.5x11.5x5.5
0.15	630	154MMR630K	90	18.5x15.5x8
0.22	250	224MMR250K	110	13x11x5
0.22	400	224MMR400K	65	18.5x13.5x6
0.22	630	224MMR630K	90	18.5x16.5x9
0.33	250	334MMR250K	110	13x12x6.5
0.33	400	334MMR400K	65	18.5x15x7.5
0.33	630	334MMR630K	35	26x17x8.5
0.47	250	474MMR250K	45	18.5x13x5.5
0.47	400	474MMR400K	65	18.5x17.5x8.5
0.47	630	474MMR630K	35	26x19x10
0.68	250	684MMR250K	45	18.5x13.5x6
0.68	400	684MMR400K	30	26x17x8
0.68	630	684MMR630K	35	26x21.5x12.5
1	100	105MMR100K	30	13x14x6.5
1	250	105MMR250K	45	18.5x15x8.5

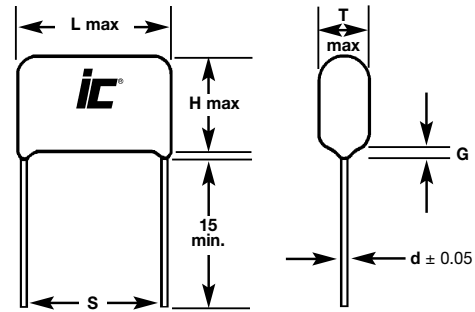
Capacitance (μF)	WVDC	IC <sup>®</sup> PART NUMBER	dv/dt (v/μ sec.)	Dimensions L x H x T (mm)
1	400	105MMR400K	30	26x18.5x10
1	630	105MMR630K	30	31x22x13.5
1.5	100	155MMR100K	20	18.5x13.5x6
1.5	250	155MMR250K	45	18.5x16.5x9.5
1.5	400	155MMR400K	25	31x19.5x11
1.5	630	155MMR630K	30	31x26.5x16
2.2	100	225MMR100K	20	18.5x15x7
2.2	250	225MMR250K	20	26x17x8.5
2.2	400	225MMR400K	25	31x23.5x13
2.2	630	225MMR630K	30	31x30.5x20
3.3	100	335MMR100K	20	18.5x16.5x8.5
3.3	250	335MMR250K	20	26x19x10.5
4.7	100	475MMR100K	10	26x17x7.5
4.7	250	475MMR250K	20	26x22x12
6.8	100	685MMR100K	10	26x18.5x9
6.8	250	685MMR250K	15	31x23.5x13
10	100	106MMR100K	10	26x21x11.5
10	250	106MMR250K	15	31x26.5x16.5

## PHYSICAL DIMENSIONS

WVDC (VAC) μF	100 (63)	250 (150)	400 (200)	630 (220)
0.01	→	10.5x7.5x4.5	10.5x7.5x4.5	13x8x5
0.015	→	10.5x7.5x4.5	10.5x8x4.5	13x9x5.5
0.022	→	10.5x7.5x4.5	10.5x8.5x5	13x11.5x6
0.033	→	10.5x7.5x4.5	10.5x9.5x6	13x12.5x7
0.047	→	10.5x8x4.5	13x9x5	13x15x7.5
0.068	→	10.5x8.5x5	13x11x5.5	18.5x11.5x6
0.1	→	10.5x10x6	13x12x6.5	18.5x13x7
0.15	→	10.5x11x7	18.5x11.5x5.5	18.5x15.5x8
0.22	→	13x11x5	18.5x13.5x6	18.5x16.5x9
0.33	→	13x12x6.5	18.5x15x7.5	26x17x8.5
0.47	→	18.5x13x5.5	18.5x17.5x8.5	26x19x10
0.68	→	18.5x13.5x6	26x17x8	26x21.5x12.5
1	→	13x14x6.5	18.5x15x8.5	26x18.5x10
1.5	→	18.5x13.5x6	18.5x16.5x9.5	31x22x13.5
2.2	→	18.5x15x7	26x17x8.5	31x26.5x16
3.3	→	18.5x16.5x8.5	26x19x10.5	31x30.5x20
4.7	→	26x17x7.5	26x22x12	
6.8	→	26x18.5x9	31x23.5x13	
10	→	26x21x11.5	31x26.5x16.5	

Convert to inches, divide by 25.4

LxHxT(mm)



### Lead Spacing (S ± 1.0mm)

L	10.5	12	18.5	26	31
S	7.5	10.0	15.0	22.5	27.5
G	1.5	1.5	1.5	1.5	1.5