

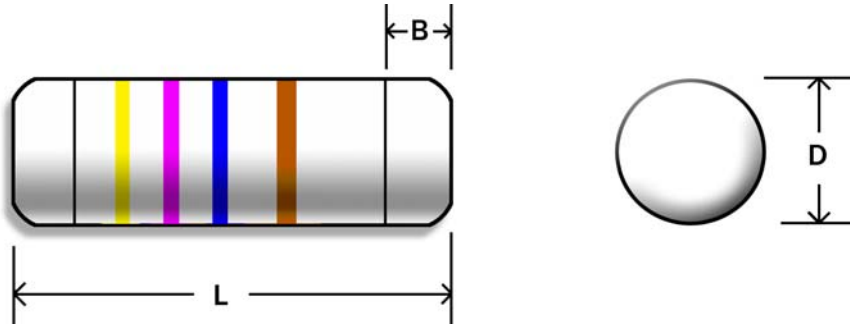
MMP- Metal Film MELF Precision Resistor

Specifications Per

- IEC 115-1 115-2
- CECC 40101
- DIN 44061

Features

- SMD enabled structure
- Conformal Multi-layer Coating Against Humidity
- Excellent Solderability Termination



Dimensions

Type	Body Length (L)	Body Diameter (D)	Soldering spot (B)	Net Weight Per 1000 pcs
MMP16	3.45mm±0.1mm	1.35±0.1mm	0.6mm Min.	17 grams
MMP204	3.45mm±0.1mm	1.35±0.1mm	0.6mm Min.	17 grams
MMP207	5.9mm±0.2mm	2.2±0.1mm	1.0mm Min.	66 grams
MMP52	5.9mm±0.2mm	2.2±0.1mm	1.0mm Min.	66 grams

General Specifications

Type	Power Rating (at 70°C)	Max. Working Voltage	Max. Overload Voltage	Resistance Range Min.	Resistance Range Max.	Resistance Tolerance	Standard Resistance Value
MMP16	1/6W	200V	400V	10Ω	1MΩ	±0.5%	E-24/E-192
				22Ω	510KΩ	±0.25%	
				43Ω	500KΩ	±0.1%	
MMP204	1/4W	200V	400V	10Ω	1MΩ	±0.5%	E-24/E-192
				22Ω	510KΩ	±0.25%	
				43Ω	500KΩ	±0.1%	
MMP207	1/3W	300V	500V	10Ω	1MΩ	±0.5%	E-24/E-192
				15Ω	1MΩ	±0.25%	
				33Ω	510KΩ	±0.1%	
MMP52	1/2W	300V	500V	10Ω	1MΩ	±0.5%	E-24/E-192
				15Ω	1MΩ	±0.25%	
				33Ω	510KΩ	±0.1%	

For zero-ohm jumper, please see ZMM series. For 1m~100mohm, please see CSM series. Special sizes, values, and specifications not listed available on special order.

May. 26, 2000

MMP- Metal Film MELF Precision Resistor

Technical Summary:

Characteristics	Limits	
Dielectric Withstanding Voltage, VAC or DC	MMP16, MMP204: 300 MMP207, MMP52: 500	
Temperature Coefficient, PPM / °C	±5, ±10, ±15, ±25, ±50, ±100, ±200	
Operating Temperature Range, °C	-55 ~ +125	
Power Derating	<70°C:100%, Linearly down to 0% @+125°C	
Film Temperature	MMP16, MMP204	MMP207, MMP52
	125°C	125°C
Insulation Resistance, MΩ	>10 ⁴	
Voltage Coefficient, PPM / V	<25	

Performance Specifications

Test Characteristics	Test Conditions	Limits
Short Time Overload	IEC 60115-1 4.13 2 seconds 2.5x rated voltage (not over max. overload voltage)	±0.02%
Load Life In Humidity	IEC 60115-1 4.24 56 days at 40°C and 93% relative humidity	±0.2%
Load Life	IEC 60115-1 4.25.1 Rated load 1.5 hours ON, 0.5 hours OFF, at 70°C	±0.1%
Resistance To Soldering Heat	IEC 60115-1 4.18 10 seconds at 260°C solder bath temperature	±0.05%
Solderability	MIL-STD-202 Method 208 Solder area covered after 230±5°C/5±0.5 seconds w/ flux applied	95% Min.
Vibration	MIL-STD-202 Method 204 Six hours in each parallel and axial direction w/ a simple harmonic motion having an amplitude of 1.52mm and 10 to 20,000 Hz.	±0.1%
Thermal Endurance	IEC 60115-1 4.25.3 1000 hours at 125°C without load	±0.1%
Thermal Shock	IEC 60115-1 4.19 -55°C 30minutes, +125°C 30minutes, 5 cycles	±0.02%

Ordering Information

Type	Tolerance	Temperature Coefficient	Resistance Value	Packaging	Special Request (Optional)
MMP204 MMP207	D (0.5%) C (0.25%) B (0.1%)	TK50 TK100	10K	B TR	LV (Low value)

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