PULSE WITHSTANDING

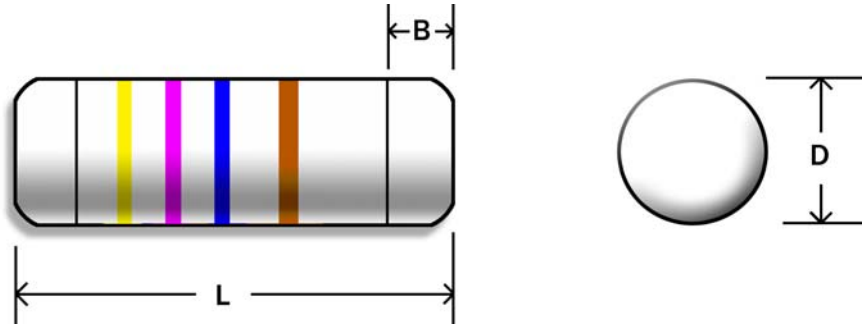
MM- Metal Film MELF Resistor

Specifications Per

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

Features

- SMD enabled structure
- Enhanced Pulse Withstanding Capability
- Excellent Solderability Termination
- 5% is 3-band coded, 1% and under is 4-band coded



Dimensions

Type	Body Length (L)	Body Diameter (D)	Soldering spot (B)	Net Weight Per 1000 pcs
MM16P	3.45mm±0.1mm	1.35±0.1mm	0.6mm Min.	17 grams
MM204P	3.45mm±0.1mm	1.35±0.1mm	0.6mm Min.	17 grams
MM207P	5.9mm±0.2mm	2.2±0.1mm	1.0mm Min.	66 grams
MM52P	5.9mm±0.2mm	2.2±0.1mm	1.0mm Min.	66 grams

General Specifications

Type	Power Rating (at 70℃)	Max. Working Voltage	Max. Overload Voltage	Resistance Range Min.	Resistance Range Max.	Resistance Tolerance	Standard Resistance Value
MM16P	1/6W	200V	400V	0 & 0.1Ω	100KΩ	±1%	E-24/E-96
						±2%, 5%	E-24
MM204P	1/4W	200V	400V	0 & 0.1Ω	100KΩ	±1%	E-24/E-96
						±2%, 5%	E-24
MM207P	1/3W	300V	500V	0 & 0.1Ω	330KΩ	±1%	E-24/E-96
						±2%, 5%	E-24
MM52P	1/2W	300V	500V	0 & 0.1Ω	330KΩ	±1%	E-24/E-96
						±2%, 5%	E-24

For zero-ohm jumper, please see ZMM series. For 1m~100mΩ please see CSM series. Special sizes and specifications available on request.

May. 26, 2000

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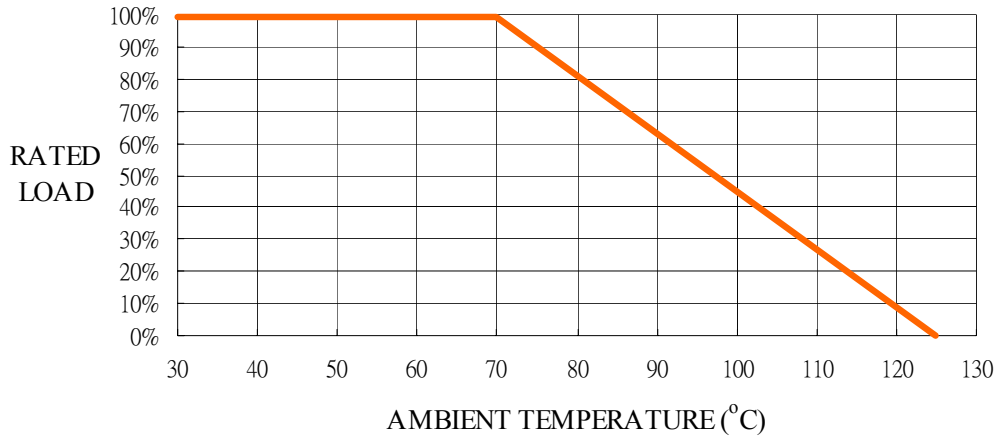
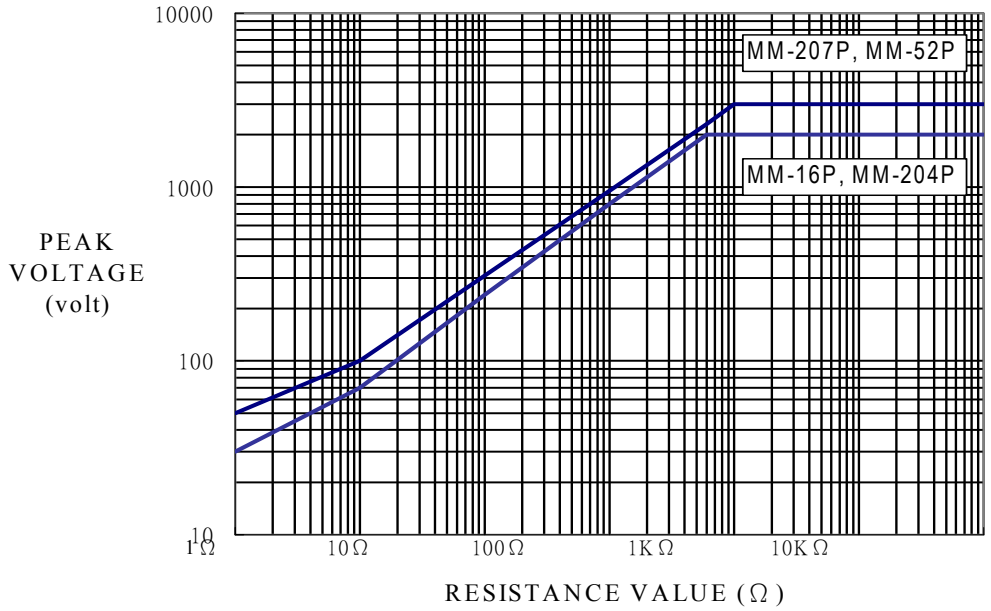
POWER DERATING CURVE



1.2/50us PEAK PULSE

50 pulses at 12-sec interval for 0.5% permanent change



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PULSE WITHSTANDING

MM- Metal Film MELF Resistor

Technical Summary:

Characteristics	Limits			
Dielectric Withstanding Voltage, VAC or DC	MM16P, MM204P: 200 MM207P, MM52P: 500			
Temperature Coefficient, PPM /℃	±1%, 2%	±50		
	±5%	±100		
Operating Temperature Range, ℃	-55 ~ +125			
Film Temperature, ℃	MM16P	MM204P	MM207P	MM52P
	125	125	125	140
Insulation Resistance, MΩ	$>10^4$			

Performance Specifications

Tests Characteristics	Test Conditions	Limits
Short Time Overload	IEC 60115-1 4.13 5 seconds 2.5x rated voltage (not over max. overload voltage)	±(0.5%+0.05R)
Load Life In Humidity	IEC 60115-1 4.24 56 days at 40°C and 93% relative humidity	±(1.5%+0.05R)
Load Life 1,000 hours	IEC 60115-1 4.25.1 Rated load 1.5 hours ON, 0.5 hours OFF, at 70°C	±(1.5%+0.05R)
Resistance To Soldering Heat	IEC 60115-1 4.18 10 seconds at 260°C solder bath temperature	±(0.5%+0.05R)
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.	±(1%+0.1R)
Terminal Endurance	IEC 60115-1 4.25.3 1000 hours at 125°C without load	±(0.5%+0.05R)
Thermal Shock	IEC 60115-1 4.19 -55°C 30minutes, +125°C 30minutes, 5 cycles	±(0.5%+0.05R)

Ordering Information

Type	Tolerance	Temperature Coefficient	Resistance Value	Packaging	Special Request (Optional)
MM204P MM207P	F (1%) G (2%) J (5%)	TK100	10K	B TR	LV (Low value)

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