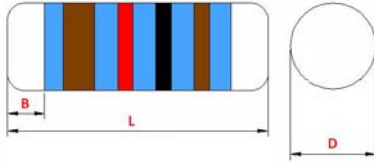


# METAL FILM MELF PRECISION RESISTORS

## (MM SERIES)

### Features

- Cylindrical SMD Style Metal Film Resistors
- Conformal Multi-layer Coating Against Humidity.
- Excellent Solderability Termination, Specially plated Electrodes



### Dimensional Specifications

Type	Body Length (L)	Body Diameter (D)	(B) min
MM-0102	2.0±0.1	1.10	0.4
MM-0016	3.5±0.2	1.55	0.5
MM-0204	3.5±0.2	1.55	0.5
MM-0207	5.9±0.2	2.4	0.5
MM-0052	5.9±0.2	2.4	0.5
MM-01SS	5.9±0.2	2.4	0.5
MM-0309	8.5±0.2	3.4	0.5
MM-0100	8.5±0.2	3.4	0.5
MM-02SS	8.5±0.2	3.4	0.5

### Performance Specifications

Requirements	Characteristics	Test Method (JIS-C5202)
Temp. Coefficient (PPM / °C)	±100, ±50, ±25, ±15 PPM / °C	JIS-C(5202-5.2)
Short Time Overload	±(0.5%+0.05Ω)	JIS-C(5202-5.5)
Intermittent	±(1.0%+0.05Ω)	JIS-C(5202-5.8)
Resistance to Soldering heat	±(0.5%+0.05Ω)	JIS-C(5202-6.4)
Solderability	95% Coverage min	JIS-C(5202-6.5)
Moisture Resistance	±(2%+0.1Ω)	JIS-C(5202-7.9)
Load Life	±(2%+0.1Ω)	JIS-C(5202-7.10)



## 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
MM-0102	1/8W	150V	300V	10Ω	560KΩ	±5%, 1%	E-24
MM-0016	1/6W	200V	400V	10Ω	1MΩ	±5%, 1%, 0.5%	E-24/E-192
				10Ω	332KΩ	±0.25%	
				43Ω	100KΩ	±0.1%	
MM-0204	1/4W	200V	400V	10Ω	332KΩ	±5%, 1%, 0.5%	E-24/E-192
				10Ω	332KΩ	±0.25%	
				100Ω	100KΩ	±0.1%	
MM-0207	1/3W	250V	500V	10Ω	1MΩ	±5%, 1%, 0.5%	E-24/E-192
				10Ω	332KΩ	±0.25%	
				100Ω	100KΩ	±0.1%	
MM-0052	1/2W	250V	500V	10Ω	1MΩ	±5%, 1%, 0.5%	E-24/E-192
				10Ω	332KΩ	±0.25%	
				100Ω	100KΩ	±0.1%	
MM-0309	1/2W	350V	700V	10Ω	1MΩ	±5%, 1%, 0.5%	E-24/E-192
				10Ω	1MΩ	±0.25%	
				100Ω	510KΩ	±0.1%	
MM-01SS	1WSS	350V	700V	10Ω	1MΩ	±5%, 1%, 0.5%	E-24/E-192
				10Ω	332KΩ	±0.25%	
				100Ω	100KΩ	±0.1%	
MM-0100	1WS	350V	700V	10Ω	1MΩ	±5%, 1%, 0.5%	E-24/E-192
				10Ω	1MΩ	±0.25%	
				100Ω	100KΩ	±0.1%	
MM-02SS	2WSS	350V	700V	10Ω	1MΩ	±5%, 1%, 0.5%	E-24/E-192
				10Ω	1MΩ	±0.25%	
				100Ω	100KΩ	±0.1%	

Lower or higher resistances beyond above list are available on request.

### Resistance and standard TCR

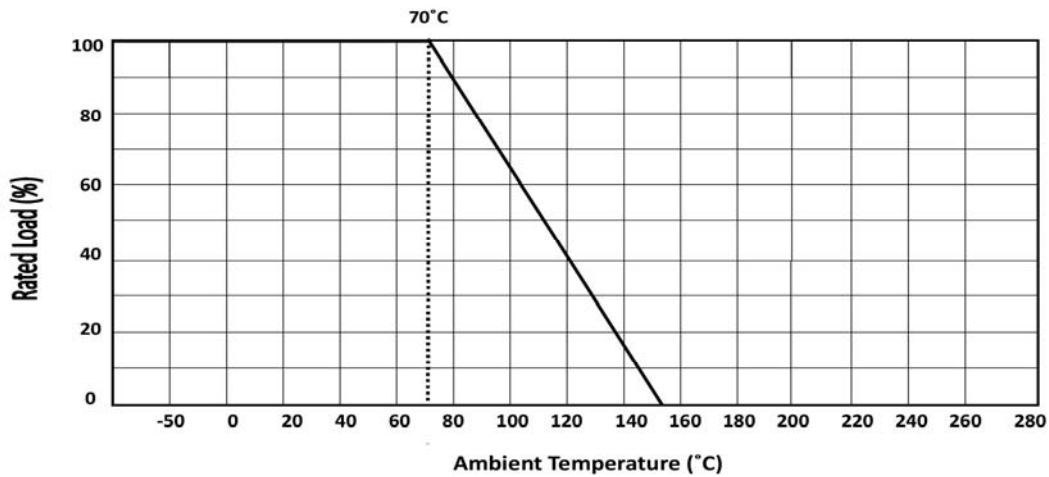
Tolerance	±5%	±1%	±0.5%	±0.1%	±0.1%	
Resistance Range	1Ω - 10MΩ	10Ω - 1MΩ	10Ω - 1MΩ	100Ω - 560KΩ	100Ω - 100KΩ	E-24
TCR	±200 ppm	±100 ppm ±50 ppm	±50 ppm	±25 ppm	±15 ppm	E-96

\*0.1Ω - 0.91Ω are available for 5% tolerance upon request

\*1Ω - 9.76Ω and 1M - 10M are available for 1% tolerance upon request



## Power Derating Curve



## Parts Number System

MM — 0207		1002	F	R
Metal film		Resistance	Tolerance	Packaging Codes
Melf resistors	Size and Wattage	4-digit codes 1002=10K ohm	F=1%	2000pcs/Reel for MM-0207 MM-0052 MM-01SS 2500pcs/Reel for MM-0309 MM-0100 MM-02SS 3000pcs/Reel for MM-0102,MM-0016, MM- R-tape reeled B-Bulk pack

T.C.R K=100ppm, C=50ppm, E=25ppm

