Melf Metal Film Resistors

MMP Type

High Power Style [MMP Series]

FEATURES

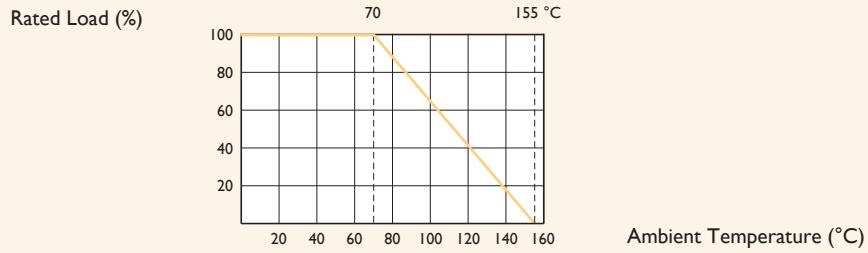
Power Rating	1W, 2W
Resistance Tolerance	±1%, ±2%, ±5%
T.C.R.	±50ppm/°C, ±100ppm/°C, ±200ppm/°C

INTRODUCTION

The MMP Series Melf Metal Film High Powe Resistors are manufactured using vacuum sputtering system to deposit multiple layers of mixed metals alloy and passivative materials onto a carefully treated high grade ceramic substrate. After a helical groove has been cut in the resistive layer, SMD enabled structure and high power in small packages. The resistors are coated with layers of blue color lacquer.

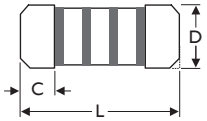
DERATING CURVE

For resistors operated in ambient temperatures above 70°C, power rating must be derated in accordance with the curve below.



DIMENSIONS

Unit: mm



STYLE	DIMENSION		
Ultra Miniature	**L**	**D**	**C Min.**
MMP100	5.9±0.2	2.2±0.1	0.5
MMP200	8.5±0.2	3.0±0.2	0.5

Note:

ELECTRICAL CHARACTERISTICS

STYLE	MMP100	MMP200
Power Rating at 70°C	1W	2W
Maximum Working Voltage	350V	
Maximum Overload Voltage	700V	
Dielectric Withstanding Voltage	500V	
Resistance Range	1 Ω - 1M Ω & 0 Ω for E24 & E96 series value	
Operating Temp. Range	-55°C to +155°C	
Temperature Coefficient	±50ppm/°C, ±100ppm/°C, ±200ppm/°C	

Note: Special value is available on request

ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD		APPRAISE
Short Time Overload	JIS-C-5202 5.5	2.5 times RCWV for 5 Sec.	±0.5%+0.05 Ω
Dielectric Withstanding Voltage	JIS-C-5202 5.7	in V-Block for 60 Sec.	By type
Temperature Coefficient	JIS-C-5202 5.2	-55°C to +155°C	By type
Insulation Resistance	JIS-C-5202 5.6	in V-Block	>10,000M Ω
Solderability	JIS-C-5202 6.5	260±5°C for 5±0.5 Sec.	95% Min. coverage
Resistance to Solvent	JIS-C-5202 6.9	IPA for 1 Min. with ultrasonic	No deterioration of coatings and markings
Pulse Overload	JIS-C-5202 5.8	4 times RCWV 10,000 cycles (1 Sec. on, 25 Sec. off)	±1.0%+0.05 Ω
Load Life in Humidity	JIS-C-5202 7.9	40±2°C, 90-95% RH at RCWV for 1,000 Hr. (1.5 Hr. on, 0.5 Hr. off)	±2%+0.1 Ω
Load Life	JIS-C-5202 7.10	70°C at RCWV for 1,000 Hr. (1.5 Hr. on, 0.5 Hr. off)	±2%+0.1 Ω
Temperature Cycling	JIS-C-5202 7.4	-55°C ⇨ Room Temp. ⇨ +155°C ⇨ Room Temp. (5 cycles)	±0.75%+0.05 Ω
Resistance to Soldering Heat	JIS-C-5202 6.4	350±10°C for 3±0.5 Sec.	±0.5%+0.05 Ω

Note: Rated Continuous Working Voltage (RCWV) = $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$