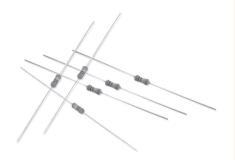


# Flame-Proof Type

High Power Style [FMP Series]



#### **INTRODUCTION**

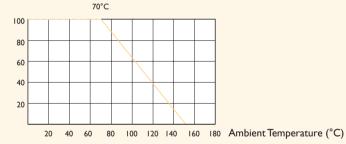
The FMP Series Metal Film Power Flame Proof Resistors are manufactured using vacuum sputtering system to deposit multiple layers of mixed metals alloy and passivative materials onto a carefully treated high grade ceramic substrate. After a helical groove has been cut in the resistive layer, tinned connecting leads of electrolytic copper are welded to the endcaps. The resistors are coated with layers of pink color lacquer.

Power Rating	1/2W, 1W, 2W, 3W
Resistance Tolerance	±1%, ±5%
T.C.R.	±100ppm/°C
Flameproof Multi-layer Coating Meets	UL-94V-0
Flameproof Feature Meets Overload Test	UL-1412

### **DERATING CURVE**

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

#### Rated Load (%)



Unit:mm

### **DIMENSIONS**

→ → Ød  H → ØD	
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STYLE	DIMENSION			
Ultra Miniature	L	øD	н	ød
FMP-50	3.4±0.3	1.9±0.2	28±2.0	0.45±0.05
FMP100	6.3±0.5	2.4±0.2	28±2.0	0.55±0.05
FMP200	9.0±0.5	3.9±0.3	26±2.0	0.55±0.05
FMP300	15.5±1.0	5.0±0.5	33±2.0	0.8±0.05

Note:		

# **ELECTRICAL CHARACTERISTICS**

STYLE	FMP-50	FMP100	FMP200	FMP300
Power Rating at 70 °C	1/2W	IW	2W	3W
Maximum Working Voltage	200V	350V	500V	750V
Maximum Overload Voltage	400V	600V	700V	1000V
Dielectric Withstanding Voltage	300V	500V		750V
Resistance Range	$I$ $\Omega \sim 10$ $M$ $\Omega \approx 0$ $\Omega$ for E24 $\approx$ E96 series value			
Operating Temp. Range	- 55°C to + 155°C			
Temperature Coefficient	±100ppm/°C			

<sup>\*</sup> Below or over this resistance range on request.

# **ENVIRONMENTAL CHARACTERISTICS**

PERFORMANCETEST	TEST METHOD		APPRAISE
Short Time Overload	JIS-C-5202 5.5	2.5 Times RCWV for 5 Seconds	±(0.5%+0.05 Ω)
Dielectric Withstanding Voltage	JIS-C-5202 5.7	in V-Block for 60 Seconds	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	>1000MO
Solderability	JIS-C-5202 6.5	260°C ±5°C for 5 ±0.5 Seconds	95% Min. Coverage
Resistance to Solvent	JIS-C-5202 6.9	IPA for I Min. with Ultrasonic	No deterioration of Coatings and Markings
Terminal Strength	JIS-C-5202 6.1	Direct load for 10 Sec. In the Direction of the Terminal Leads	≥2.5kg (24.5N)
Pulse Overload	JIS-C-5202 5.8	4 Times RCWV 10000 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 Hrs. (1.5 Hrs. on , 0.5 Hrs. off)	±2.0%+0.05 Ω
Load Life	JIS-C-5202 7.10	70°C at RCWV for 1,000 Hrs. (1.5 Hrs. on 0.5 Hrs. off)	±2%+0.05 Ω
Temperature Cycling	JIS-C-5202 7.4	-55°C→Room Temp.→+155°C→Room Temp. for 5 Cycles	±1.0%+0.05 Ω
Resistance to Soldering Heat	JIS-C-5202 6.4	350°C ±10°C for 3±0.5 Seconds	±0.25%+0.05 Ω
Overload Flame Retardant	JIS-C-5202 7.12	4Times RCWV for I Minute	No evidence of flaming or arcing

<sup>\*</sup> Rated Continuous Working Voltage (RCWV)=  $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$