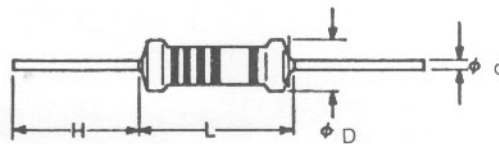


# FLAME PROOF TYPE

FPM series is a group of nonflammable, high performance metal film fixed resistors. By applying selected flame-overload burning-resisting resin on our regular metal film fixed resistors, those resistors improve the safeness of various kinds of electronic devices and instruments and having excellent electrical performance.

## DIMENSIONS



## General Specification

Style	Power Rating (W)		Dimensions				Max Working Voltage		Max Overload Voltage	
	70°C	125°C	L	D	d	H (MIN)	70°C	125°C	70°C	125°C
FPM-12	0.125W	0.05W	$3.7 \pm 0.4$	$1.5 \pm 0.2$	$0.45 \pm 0.03$	25	200	150	400	300
FPM-25	0.25W	0.1W	$6.5 \pm 0.5$	$2.3 \pm 0.2$	$0.50 \pm 0.05$	25	250	200	500	400
FPM-50	0.5W	0.125W	$9 \pm 1$	$3.5 \pm 0.5$	$0.55 \pm 0.05$	25	350	250	700	500
FPM-100	1.0W	0.25W	$12.0 \pm 1$	$4.5 \pm 0.5$	$0.75 \pm 0.05$	25	500	300	1000	600
FPM-200	2.0W	0.5W	$16.0 \pm 1$	$5.5 \pm 0.5$	$0.75 \pm 0.05$	25	500	350	1000	700

## CHARACTERISTICS

REQUIREMENTS	CHARACTERISTICS	TEST METHOD
Non-Combustibility	Flame Resistance Not burns continuously for more than 5 seconds. Overload Burning Resistance Not fume under the overload of less than 5 times of rated power. The volume of fumes emitted under the overload of more than 5 times of rated power is less than that of stilled fumes emitted by one cigarette. During the test the height of fumes does not over 3mm and the burning does not continue for more than 3 seconds	MIL-STD-202 Method 111 JIS C 5202 7. 12 EIAJ-RC 2658 5. 1

Characteristic	Specification	Test Method
		(All resistance measurements should be performed after stabilization or conditioning periods)
<b>Dc Resistance</b>	Within specified tolerance	MIL-STD-202 Method 303
<b>Temperature Coefficient</b>	As buyer requested $\pm 25\text{PPM}^{\circ}\text{C} \pm 100\text{PPM}^{\circ}\text{C}$ $\pm 50\text{PPM}^{\circ}\text{C} \pm 200\text{PPM}^{\circ}\text{C}$	MIL-STD-202 Method 304
<b>Dielectric Strength</b>	No flashover or damage	MIL-STD-202 Method 301 1/8W 300V 1 minute 1/4W 500V 1 minute 1/2W 700V 1 minute 1,2W 750V 1 minute
<b>Insulation Resistance</b>	At least 1,000M $\Omega$	MIL-STD-202 Method 302 100V 1 minute
<b>Current Noise Test</b>	below 10K $\Omega$ below 0.05 $\mu\text{V/V}$ 10K $\Omega$ ~ below 0.1 $\mu\text{V/V}$ below 1M $\Omega$ below 0.2 $\mu\text{V/V}$	MIL-STD-202 Method 308
<b>Terminal Strength</b>	lead is not break or loose	MIL-STD-202 Method 211
<b>Resistance to Soldering Heat</b>	$\Delta R$ within $\pm(0.25\% + 0.05\Omega)$	MIL-STD-202 Method 210 350°C, 3 $\pm$ 0.05 sec.
<b>Solderability</b>	At least 95% coverage	MIL-STD-202 Method 218 235°C, 5 sec.
<b>Thermal Shock</b>	$\Delta R$ within $\pm(0.5\% + 0.05\Omega)$	MIL-STD-202 Method 107 - 55°C, 3 + 155°C 5 cycles
<b>Short Time Overload</b>	$\Delta R$ within $\pm(0.5\% + 0.05\Omega)$	MIL-R-10509 Para 4,6,6 2.5 times rated working voltage, 5 seconds
<b>Humidity</b>	$\Delta R$ within $\pm(1\% + 0.05\Omega)$ No mechanical damage	MIL-STD-202 Method 103 40°C, RH95% 1000 hours
<b>Low Temperature Operation</b>	$\Delta R$ within $\pm(0.5\% + 0.05\Omega)$	MIL-R-10509 Para 4,6,5 rated working voltage, at -65°C 45 minutes.
<b>Load Life</b>	$\Delta R$ within $\pm(1\% + 0.05\Omega)$	MIL-STD-202 Method 108 Rated working voltage 1 1/2 hours on. 1/2 hours off for total 1000 hours
<b>Resistance to Solvent</b>	Color bands legible No mechanical damage	MIL-STD-202 Method 215

## Current Noise

