

Metal Series Resistors

Product Name : MINIATURE SIZE METAL FILM FIXED RESISTORS

Description

INTRODUCTION:

- Miniature size for saving PCB assembly.
- Manufactured by high vacuum sputtering deposit metal film on high aluminum content ceramic rods.
- Superior electrical performance and cost comparable to conventional sizes.
- Standard tolerance: $\pm 0.1\%$ $\pm 0.25\%$ $\pm 0.5\%$ $\pm 1\%$

DIMENSIONS:



GENERAL SPECIFICATIONS:

SMALL STYLE	SMALL STYLE	POWER RATING (W)	DIMENSION (mm)				MAX WORKING VOLTAGE	MAX OVERLOAD
			L	D	H (MIN)	d		
MF-25S	1/4WS	0.25W	3.7±0.4	1.8±0.2	27	0.46±0.02	250	300
MF-50S	1/2WS	0.5W	6.8±0.5	2.5±0.2	27	0.53±0.03	350	500
MF-100S	1WS	1W	9.0±1.0	3.5±0.5	25	0.68±0.02	500	700
MF-200S	2WS	2W	12±1.0	4.5±0.5	33	0.80±0.03	500	1000
MF-300S	3WS	3W	16±1.0	5.5±0.5	33	0.80±0.03	600	1000
MF-500S	5WS	5W	17±1.0	6.0±0.5	30	0.80±0.03	700	1000
	FM-0204	0.4W	3.7±0.4	1.8±0.2	27	0.46±0.02	250	350
	FM-0207	0.6W	6.8±0.5	2.5±0.2	27	0.53±0.03	350	500

RESISTANCE RANGE:

SMALL STYLE	SMALL STYLE	TOLERANCE	TC ±25PPM/°C	TC ±100PPM/°C TC ±50PPM/°C
MF-25S	1/4WS	±1% ±0.5% ±0.25% ±0.1%	10Ω~1MΩ 100Ω~1MΩ 51.1Ω~470KΩ 51.1Ω~470KΩ	1Ω~10MΩ 51.1Ω~470KΩ
MF-50S	1/2WS	±1% ±0.5% ±0.25% ±0.1%	0.1Ω~10MΩ 0.1Ω~10MΩ 10Ω~470kΩ 10Ω~470KΩ	0.1Ω~10MΩ 0.1Ω~10MΩ
MF-100S	1WS	±1% ±0.5% ±0.25% ±0.1%	0.1Ω~10MΩ 0.1Ω~10MΩ 10Ω~470kΩ 10Ω~470KΩ	0.1Ω~10MΩ 0.1Ω~10MΩ
MF-200S	2WS	±1% ±0.5% ±0.25% ±0.1%	0.1Ω~10MΩ 0.1Ω~10MΩ 1Ω~470kΩ 10Ω~470KΩ	0.1Ω~10MΩ 0.1Ω~10MΩ
MF-300S	3WS	±1% ±0.5% ±0.25% ±0.1%	0.1Ω~10MΩ 0.1Ω~10MΩ 1Ω~470kΩ 10Ω~470KΩ	0.1Ω~10MΩ 0.1Ω~10MΩ
MF-500S	5WS	±1% ±0.5% ±0.25% ±0.1%	0.1Ω~10MΩ 0.1Ω~10MΩ 1Ω~470kΩ 10Ω~470KΩ	0.1Ω~10MΩ 0.1Ω~10MΩ

CHARACTERISTICS:

Requirements	Characteristics	Remarks
Temperature Coefficient	±50 PPM	10-6/K Mil-STD-202 Metro 304
Thermal Resistance	140 K/W	
Life Stability At 70°C 1000Hr Max. Resistance Change	0.5%	K Most Umax. 1.5 hr ON 0.5 hr OFF
Dielectric Withstanding Voltage	300 Vr. m.s. for MF0204 500 Vr. m.s. for MF- 0207	
Insulation Resistance	>103MΩ	1000VDC
Damp Heat Steady State	±0.5%	56 Days At 40°C and 93% Relative humidity at a voltage of 0.1 times rated voltage. Max 16 Volts.
Short time Overload	ΔR±0.25%	2.5 times rated voltage, at most 2 times limiting element voltage (U Max)
Moisture Resistance	±0.5%	
Resistance to Soldering Heat	±0.25%	350±5°C to 6mm distance from the resistance body in 3 sec.
Temperature Cycling	±0.5%	-65°C to 155°C
Low temperature operation	±0.25%	High frequency, 10-500Hz
Vibration	±0.25%	- 65°C
Current Noise	Up to 1MΩ 0.5μ V/V	- 5dB
Solderability	>95% Coverage	Dipping in 235°C solder bath for 2.5 sec.
Resistance to Solvents	No failure to top coating and color code	

DERATING CURVE:

