

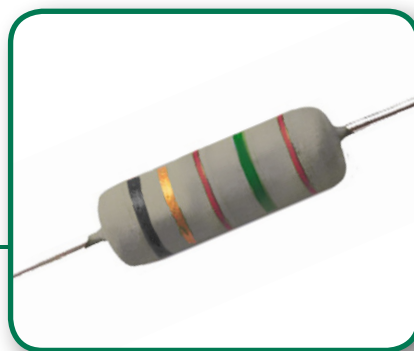
MF SERIES

METAL FILM FIXED RESISTORS

RoHS

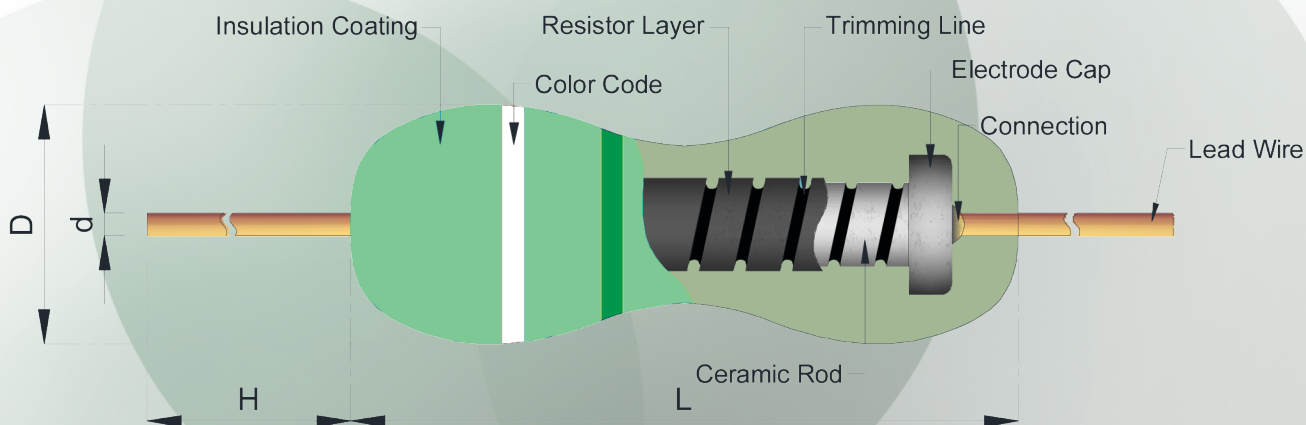
FEATURES

- Low noise
- Low T.C.R. 200ppm, 100ppm, 50ppm, 25ppm, 15ppm
- High precision 1%, 0.5%, 0.25%, 0.1%



POWER RATINGS DIMENSIONS

- Standard Type: 1/8W ~2W
- Miniature Type: 1/4Ws~3Ws



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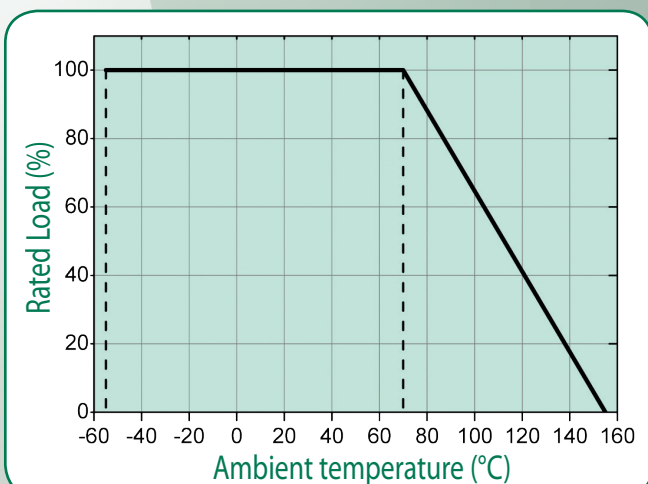
RoHS

TYPE	DIMENSIONS (mm)				Max Working Voltage	Max Overload Voltage	Dielectric Withstanding Voltage
	D	L	H	d			
MF 1/8W	1.8±0.3	3.3 +0.4	29±2.0	0.45±0.03	150V	300V	300V
MF 1/6W		-0.2			150V	300V	
MF 1/4WS		3.3 +0.7			200V	400V	
MF 0.4W(0204)		-0.2			200V	400V	
MF 1/4W	2.3±0.3	6.3±0.5	28±2.0	0.55±0.03	250V	500V	400V
MF 1/2WS					300V	500V	
MF0.6W(0207)					300V	500V	
MF 1/2W	3.2±0.5	9.0±0.5	26±2.0	0.65±0.03	350V	500V	500V
MF 1WS					400V	600V	
MF 1W	4.5±0.5	11.5±1.0	35±2.0	0.78±0.03	500V	700V	700V
MF2WS					500V	700V	
MF2W	5.0±0.5	15.5±1.0	32±2.0	0.78±0.03	500V	1000V	1000V
MF3WS					500V	1000V	

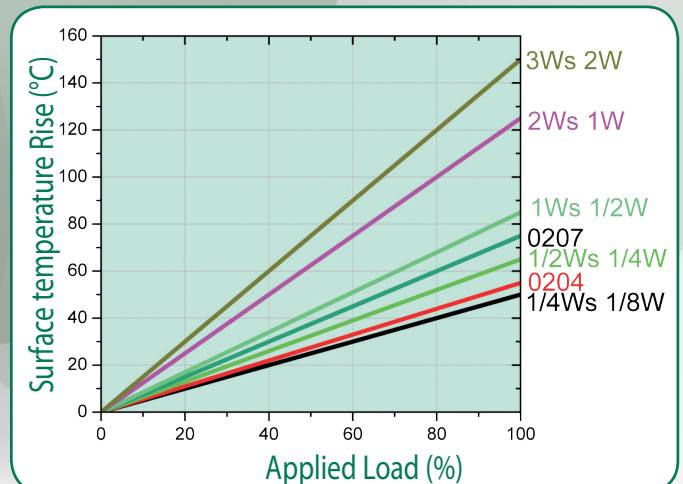
★ Value Range for standard resistance - below or over this resistance on request.

Value Range. ±1% - ±0.5%	1 Ω~1 MΩ	E24 - E96 series
Value Range. ±0.25% - ±0.1%	10Ω~100KΩ	E24 - E192 series
Operating Temp. Range	-55°C to +155°C	

POWER GRAPH



HOT-SPOT TEMPERATURE



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ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD	APPRAISE
SHORT TIME OVERLOAD	2.5 times RCWV for 5 seconds	$\pm(0.25\%+0.05\Omega)$
TEMPERATURE COEFFICIENT (T.C.R.)	Resistance value at room Temperature and room Temperature +70°C	By Type
VOLTAGE PROOF	In V-Block for 60 seconds	By Type
PULSE OVERLOAD	4 times RCWV for 10000 cycles (1sec.on - 25secs.off)	$\pm(0.75\%+0.05\Omega)$
INSULATION RESISTANCE	In V-Block	>10000M Ω
LOAD LIFE	70°C at RCWV for 1000hrs. (1.5hrs. on - 0.5hrs.off)	$\pm(1.5\%+0.05\Omega)$
LOAD LIFE IN HUMIDITY	40 $\pm$ 2°C 90~95%RH at RCWV for 1000hrs. (1.5hrs. on - 0.5hrs.off)	$\pm(1.5\%+0.05\Omega)$
TEMPERATURE CYCLING	-40°C/85°C with 1000 cycles. (20min for both low and high temperature, transfer time less 30s)	$\pm(0.75\%+0.05\Omega)$
SOLDER ABILITY	260 $\pm$ 5°C for 2 $\pm$ 0.5 seconds	95% min. coverage
RESISTANCE TO SOLDERING HEAT	The solder iron heated to 350°C $\pm$ 10°C and applied to the termination for a duration of 4 seconds to 5 seconds.	$\pm(0.25\%+0.05\Omega)$
RESISTANCE TO SOLVENT	Trichloroethane for 1 min with ultrasonic.	No deterioration of coatings and markings
TERMINAL STRENGTH	Direct load for 10 sec. In the direction off the terminal leads.	Tensile: $\geq$ 2.5kg

Reference Standards: IEC 60115-1

Storage Temperature: 25 $\pm$ 3°C; Humidity < 80%RH

★ Rated continuous Working Voltage (RCWV) = $\sqrt{\text{POWER.RATING.} \times \text{RESISTANCE.VALUE}}$

RESISTOR BODY COLOR

Standard: Epoxy Coating

1. Normal sizeBlue

2. Small sizeBlue



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PART NUMBER

MF		1/4W		3K		F				TB	
Type		Power rating		Resistance		Tolerance		T.C.R.		Packaging	
MF	Metal Film	1/8W	1/6W	1R	1Ω	B	(±0.1%)	B	200ppm	TB	Taping Box
		1/4Ws	0204	10R	10Ω	C	(±0.25%)		100ppm	TR	Taping Reel
		1/4W	1/2Ws	100R	100Ω	D	(±0.5%)	E	50ppm	BU	Bulk
		0207	1/2W	1K2	1K2Ω	F	(±1%)	G	25ppm	F	F-TYPE
		1Ws	1W	1M	1MΩ	J	(±5%)	H	15ppm	M	M-TYPE
		2Ws	2W	22M	22MΩ					PANA	PANA
		3Ws									

