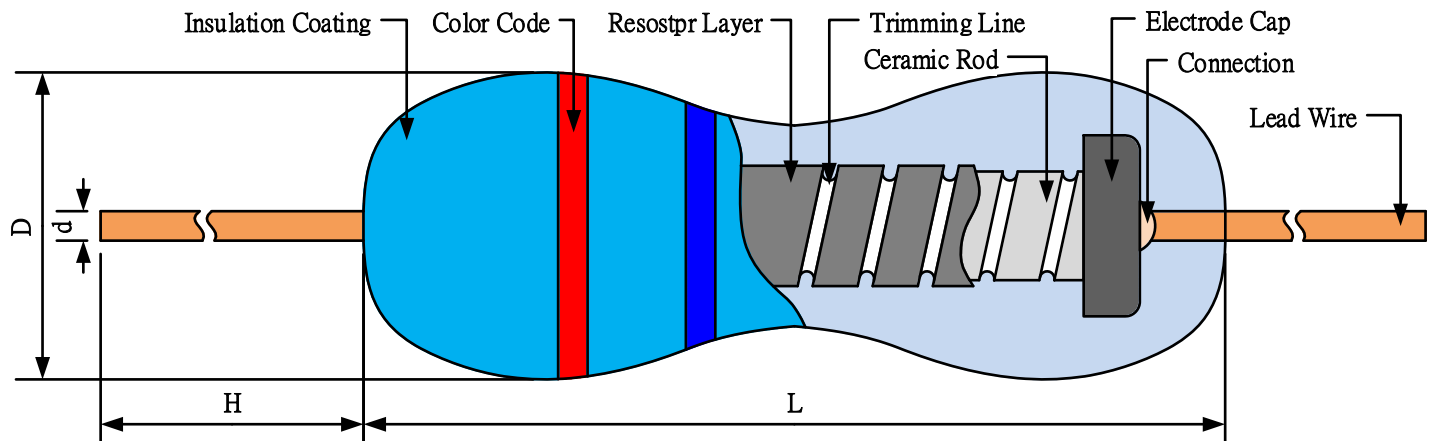


● **PRODUCT FEATURES :**

1. LOW NOISE
2. LOW T.C.R.200ppm, 100ppm, 50ppm, 25ppm, 15ppm,10ppm,5ppm.
3. HIGH PRECISION 1%, 0.5%, 0.25%, 0.1%,0.05%

● **POWER 、 RATINGS 、 DIMENSIONS**

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

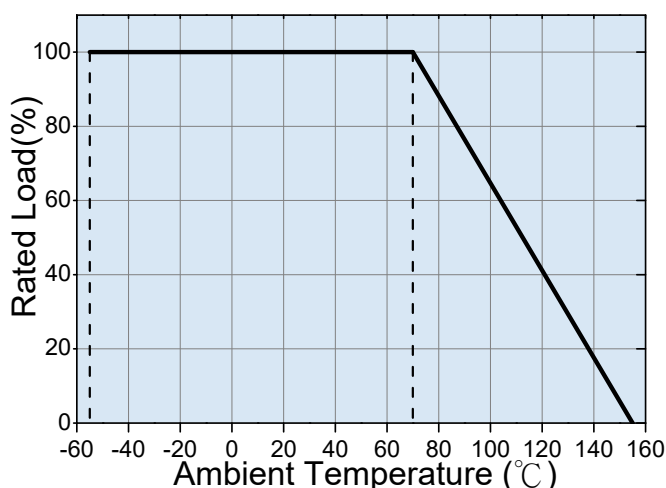


TYPE	Dimension(mm)				Max Working Voltage	Max. Overload Voltage	Dielectric Withstanding voltage.
	D	L	H	d			
MF 1/8W	1.8±0.3	3.3 +0.4	29±2.0	0.45±0.03	150V	300V	300V
MF 1/6W		-0.2			150V	300V	
MF 1/4WS		3.3 +0.7			200V	400V	
MF 0.4W(0204)		-0.2			200V	400V	
MF 1/4W	2.3±0.3	6.3±0.5	28±2.0	0.55±0.03	250V	500V	500V
MF 1/2WS					300V	500V	
MF0.6W(0207)					350V	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	

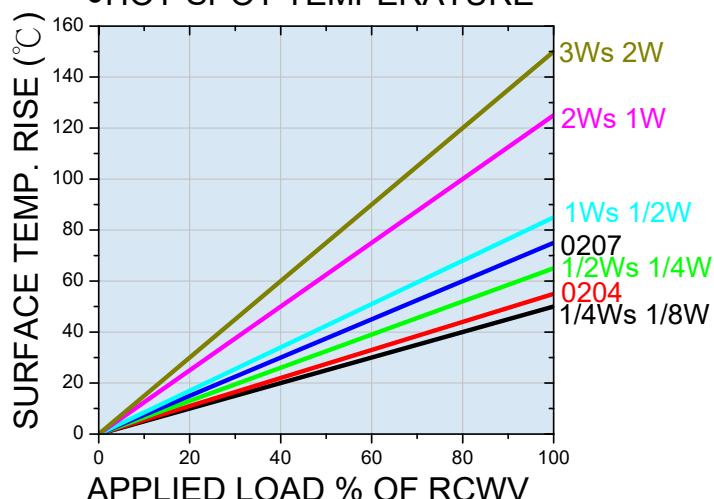
◇ Value Range for standard resistance , below or over this resistance on request.

Value Range. ±1%	0.1 Ω~1Ω	1M1~10M	E24 series
Value Range. ±1%、±0.5%	1 Ω~1MΩ		E24、E96 series
Value Range. ±0.25%、±0.1%、±0.05%	10Ω~100KΩ		E24、E192 series
Operating Temp. Range	-55°C to +155°C		

●POWER GRAPH



●HOT-SPOT TEMPERATURE



● ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD	APPRAISE $\Delta R_{\pm}(\%+0.05\Omega)$	
Short Time Overload	2.5 times RCWV for 5 seconds	0.25	
Temperature Coefficient(T.C.R.)	Resistance value at room (+25°C) Temperature and room Temperature(+125°C)	By Type	
Voltage Proof	In V-Block for 60 seconds	By Type	
Pulse Overload	4 times RCWV for 10000cycles (1sec.on , 25secs.off)	0.75	
Insulation Resistance	In V-Block	> 10000MΩ	
Load Life	70°C at RCWV for 1000hrs. (1.5hrs. on , 0.5hrs.off)	1.5	
Load Life In Humidity	40±2°C 90~95%RH at RCWV for 1000hrs.(1.5hrs. on , 0.5hrs.off)	1.5	
Temperature Cycling.	-55°C/125°C with 5 cycles. (30min for both low and high Temperature , transfer time less 30s)	0.75	
Solder Ability	260±5°C for 2±0.5 seconds	95% min. coverage	
Resistance to Soldering Heat	The solder iron heated to 260°C ±5°C and applied to the termination for a duration of 10±1 seconds.	1/8W 1/6W 1/4Ws 0.4W	0.75
		1/4W 1/2Ws 0.6W 1/2W 1Ws	0.5
		1W 2Ws 2W 3Ws	0.25
Resistance to Solvent	IPA for 5±0.5 Min. with ultrasonic	No abnormality in coatings and markings.	
Terminal Strength	Direct load for 10 sec. In the direction off the terminal leads.	Tensile: ≥ 2.5kg	

Reference Standards: IEC 60115-1

Storage Temperature: 25±3°C; Humidity < 80%RH

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

● Resistor body color

⊙ Standard : Epoxy Coating

1. Normal size----- Blue

2. Small size----- Blue

● 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	A	± 0.05%	B	200ppm	TB	Taping Box
		0204	0.4W	10R	10Ω	B	± 0.1%		100ppm	TR	Taping Reel
		1/4W	1/2WS	100R	100Ω	C	± 0.25%	E	50ppm	BU	Bulk
		0207	0.6W	1K2	1K2Ω	D	± 0.5%	G	25ppm	F	F-TYPE
		1WS	1W	1M	1MΩ	F	± 1%	H	15ppm	M	M-TYPE
		2WS	2W	22M	22MΩ	J	± 5%	K	10ppm	PN	PANA
		3WS						L	5ppm		