

METAL FILM RESISTORS

金屬皮膜電阻

INTRODUCTION

MF series is a group of metal film resistors applying high Aluminum content base material vacuum sputtered by Ni-Cr alloy and excellent heat-and wet-proof special resin for protective coating. Those resistors are manufactured through integrated automatic production system and then have good stable and uniform property. Furthermore, they show excellent performance regardless open in air.

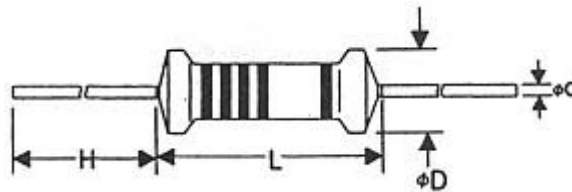
於真空中以濺射方式在瓷棒上均勻的鍍上一層特殊金屬膜，另瓷棒兩端再加鍍貴金屬以確保低雜音，低溫度係數。溫度係數有 $\pm 200\text{ppm} \sim \pm 10\text{ppm}$ ，阻值容許誤差值有 $\pm 5\% \sim \pm 0.1\%$ ，特別精密者可承製 $\pm 0.1\%$ 以下，廣泛應用於高級音響、電算機、電腦、測試儀器、儀表、自動控制、國防及太空設備等。

FEATURES

- High stability.
- Low noise, Low temperature coefficient.
- Precision characteristics.
- Variety of packaging-bulk, and taped, cut and formed supplied.

特性

- 高安定性。
- 低雜音，低溫度係數。
- 精密特性。
- 有各式包裝-散裝、帶狀，並供應各種成型、剪腳。



SPECIFICATION

DIMENSION

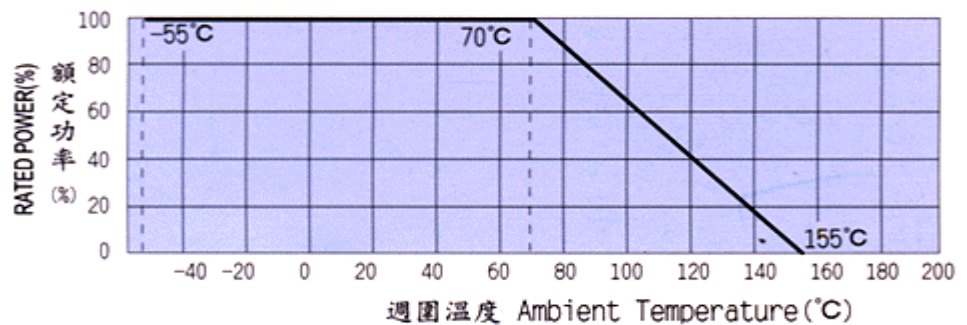
TYPE		MAXIMUM WORKING VOLTAGE	MAXIMUM OVERLOAD VOLTAGE	RESISTANCE RANGE		TYPE		DIMENSION(mm)			
MF	MFS			$\pm 1\%$ (F)	$\pm 0.5\%$ (D)	MF	MFS	L ± 1	D ± 0.5	H ± 3	d
1/8W	---	200V	400V	10R~1M	10R~1M	1/8W	1/4W	3.0	1.5	28	0.43 \pm 0.05
1/4W	1/4W	250V	500V	10R~1M	10R~1M	1/4W	1/2W	5.5	2.0	28	0.50 \pm 0.05
1/2W	1/2W	350V	700V	10R~1M	10R~1M	1/2W	1W	8.5	3.0	30	0.56 \pm 0.05
1W	1W	400V	800V	10R~1M	10R~1M	1W	2W	11	4.0	30	0.68 \pm 0.10
2W	2W	500V	1000V	10R~1M	10R~1M	2W	3W	15	4.5	30	0.75 \pm 0.10
3W	3W	750V	1200V	10R~1M	10R~1M	3W	5W	17	5.5	33	0.75 \pm 0.10

Special type on request (EX : Flame Proof Type & Low ppm)

CHARACTERISTICS

CHARACTERISTIC	SPECIFICATION	TEST METHOD
DC RESISTANCE	Within specified tolerance	
TEMPERATURE COEFFICIENT	As buyer requested ±10ppm/°C±50ppm/°C ±10ppm/°C±50ppm/°C	Resistance value at Temperature and room Temperature+100°C
DIELECTRIC STRENGTH	No flashover or damage	JIS-C5202 5.7 In V-Block for 60 seconds
INSULATION RESISTANCE	At least 1,000MΩ	JIS-C5202 5.6 In V-Block
CURRENT NOISE TEST	Below 10KΩ below 0.05μ V/V 10KΩ~below 0.1μ V/V Below 1M7 below 0.2μ V/V	
VIBRATION	R with in ±(0.25%+0.05Ω)	
TERMINAL STRENGTH	Lead is not break or loose	
RESISTANCE TO SOLDERING HEAT	R with in ±(0.25%+0.05Ω)	
SOLDERABILITY	At least 95% coverage	JIS-C5202 6.5 260±5°C for 2±5 seconds
THERMAL SHOCK	R with in ±(0.5%+0.05Ω)	
SHORT TIME OVERLOAD	R with in ±(0.05%+0.05Ω)	JIS-C-5202 5.5 2.5times RCWV for 5 seconds
HUMIDITY	△ R with in ±(1%+0.05Ω) No mechanical damage	
LOW TEMPERATURE OPERATION	R with in ±(0.5%+0.05Ω)	
LOAD LIFE	R with in ±(1%+0.05Ω)	JIS-C5202 7.9 40±2°C 90~95% RH at RCWV for 1000hrs. (1.5hrs.on · 0.5hrs.off)
RESISTANCE TO SOLVENT	Color bands legible No mechanical damage	Direct load for 10 sec. In the direction off the terminal leads.

DERATING CURVE



ORDERING INFORMATION

MF	08	10K0	E	I
Series : Metal Film Resistor	Wattage : MF08=1/8W MF04=1/4W MF02=1/2W MF1W=1W	Value : 0E50=0.5R 2E30=2.3R 12K1=12.1K 1M00=1M	Tolerance : F=1% D=0.5% C=0.25% B=0.1%	Packing : T=Tapping B=Bulk M=Forming