

METAL FILM RESISTORS

How To Order:

Series: MF Part No.

<u>MF</u>	<u>12</u>	<u>F</u>	<u>2K3</u>	<u>I</u>	<u>C</u>
Series Metal Film Resistor	Wattage MF12=1/8W MF25=1/4W MF50=1/2W MF100=1W MF200=2W	Tolerance F=1% J=5% D=0.5% C=0.25% B=0.1%	Value 1R=1 ohm 2.3R=2R3 1K=1000 ohm 2.3K=2K3 2.3M=2M3	Packing T=Taped B=Bulk	N=±15ppm C=±25ppm D=±50ppm

(S1 means special spec. Standard goods is without it.)

Description: METAL FILM RESISTOR 1/8W 1% 2K3

Note:

MF12=1/8W, MF25=1/4W, MF50=1/2W, MF100=1W, MF200=2W

The normal packing of METAL FILM RESISTOR is Tape / Box.

The normal tolerance of METAL FILM RESISTOR is 1%.

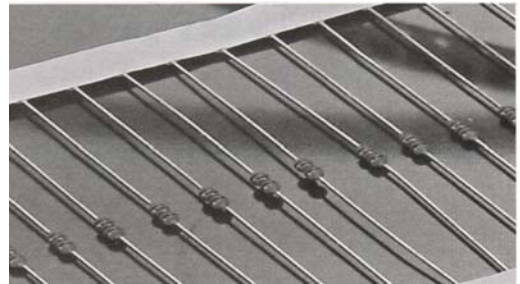
The standard value for 1% is 10 ohm to 1 Meg and TCR is 100ppm.

TCR:	Type	+50ppm	+25ppm	+15ppm
	Code	D	C	N

METAL FILM RESISTORS

MF Series

1 / 6 W, 1 / 8 W, 1 / 4 W, 1 / 2 W, 1 W, 2 W
MF-12, MF-25, MF-50, MF-100, MF-200



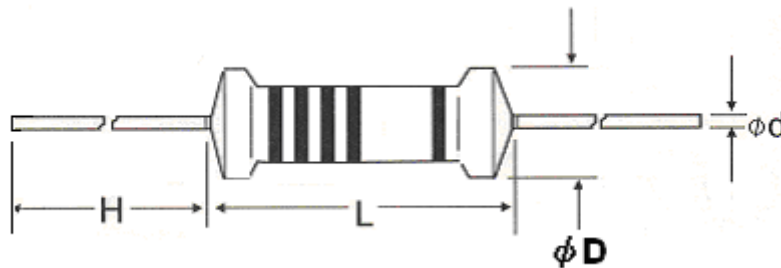
INTRODUCTION

The MF series Metal Film Resistors are manufactured using vacuum sputtering system to deposit multiple layers of mixed metals and passive materials onto a carefully treated high grade ceramic substrate, the resistor are coated with layers of light-blue lacquer.

FEATURES

- MIL-R-1059F.
- MF-12, MF-25, MF-50, MF-100, MF-200 (RN-50, RN-55, RN-60, RN-65, RN-70)
- Resistance Tolerance:
 $\pm 0.1\%$, $\pm 0.25\%$, $\pm 0.5\%$, $\pm 1\%$, $\pm 5\%$.
- T.C.R.:
 $\pm 15\text{ppm}$, $\pm 25\text{ppm}$, $\pm 50\text{ppm}$,

DIMENSIONS:



STYLE	DIMENSION (mm)				POWER RATING (Watt)	VALUE RANGE
	L	ØD	H	Ød		
MF-12	3.3±0.4	1.8±0.3	28±2	0.5±0.05	1/6W : 1/8W	10Ω~1M
MF-25	6.3±0.5	2.3±0.3	28±2	0.6±0.05	1/4W	10Ω~1M
MF-50	9±0.5	3.2±0.5	26±2	0.6±0.05	1/2W	10Ω~1M
MF-100	11.5±1.0	4.5±0.5	35±2	0.8±0.05	1W	10Ω~1M
MF-200	15.5±1.0	5.0±0.5	33±2	0.8±0.05	2W	10Ω~1M

METAL FILM RESISTORS

■ ELECTRICAL CHARACTERISTICS

Style	MF-12	MF-25	MF-50	MF-100	MF-200	—
Power Rating 70°C	1/6;1/8W	1/4W	1/2W	1W	2W	
Operating Temp. Range	-55°C ~±155°C					
Max. Working Voltage	200V	250V	350V	500V	500V	—
Max. Overload Voltage	400V	500V	700V	1000V	1000V	—
Dielectric Withstanding Voltage (AC)	300V	500V	700V	1000V	1000V	—
Max. Intermittence Overload Voltage	250V	300V	500V	1000V	1000V	—
Value Range ±0.5%, ±1%	10Ω~1MΩ					
Value Range ±0.25%, ±0.1%	100Ω~100KΩ					
Temp. Coefficient (by Type)	±15ppm, ±25ppm, ±50ppm, ±100ppm					

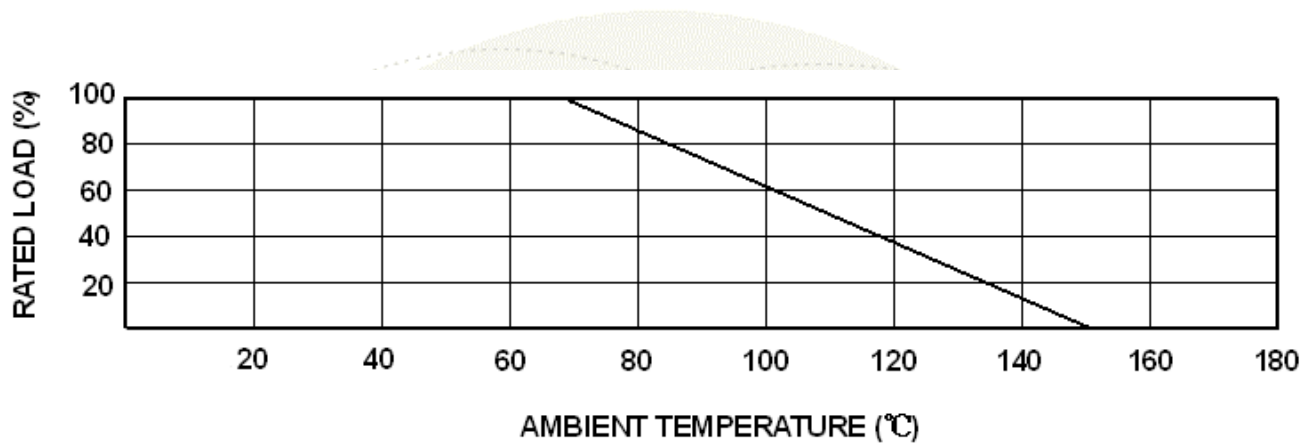
■ ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD	APPRAISE
SHORT TIME OVERLOAD	JIS-C-5202 5.5 2.5 times RCWV for 5 seconds	±(0.25%+0.05Ω)
TEMPERATURE COEFFICIENT(T.C.R.)	Resistance value at room Temperature and room Temperature+100°C	By Type
DIELECTRIC WITHSTANDING VOLTAGE	JIS-C5202 5.7 In V-Block for 60 seconds	By Type
PULSE OVERLOAD	JIS-C5202 5.8 4 times RCWV for10000cycles(1sec.on , 25secs.off)	±(0.75%+0.05Ω)
INSULATION RESISTANCE	JIS-C5202 5.6 In V-Block	> 10000MΩ
LOAD LIFE	JIS-C5202 7.10 70°C at RCWV for1000hrs.(1.5hrs. on , 0.5hrs.off)	±(1.5%+0.05Ω)
LOAD LIFE IN HUMIDITY	JIS-C5202 7.9 40±2°C 90~95%RH at RCWV for1000hrs. (1.5hrs. on , 0.5hrs.off)	±(1.5%+0.05Ω)
SOLDER ABILITY	JIS-C5202 6.5 235±5°C for 2±0.5 seconds	95% min. coverage
RESISTANCE TO SOLVENT	JIS-C5202 6.9 Trichroethane 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: ≥2.5kg

Rated continuous Working Voltage (RCWV)= $\sqrt{\text{power rating} \times \text{resistance value}}$

MF Series

■ FIG.1 DERATING CURVE



■ FIG.2 HOT-SPOT TEMPERATURE

