

# Metal Film Resistors - MFR-FMF Series

RoHS Compliant Product

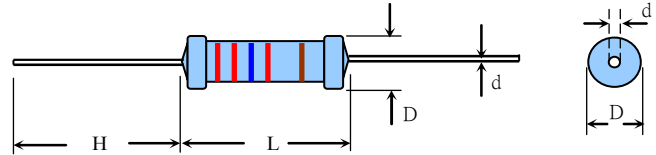
## FEATURES

- Power Rating: 1/8W to 3W at 70°C
- Superior electrical performance
- Standard T.C.: ±50ppm for 10Ω~1MΩ (15/25ppm available)
- ±100ppm for 1R - 9R9, 1M1 - 10M
- Standard Tolerance: ±1% (available 0.1% - 5%)
- Standard Value: 10R-1Meg in E24/E96 series
- Body Color: Light blue (MFR300 is Grey color)
- Color band marking
- Flameproof coating available (As FMF-S type)
- Operating Temperature : -55°C ~+155°C

## MATERIAL

- Element: Vacuum-deposited Ni-Cr Alloy
- Core: High purity ceramic Al<sub>2</sub>O<sub>3</sub>
- Termination: Standard solder-plated cooper lead
- Coating: Epoxy (FMF is grey silicone)

## DIMENSION



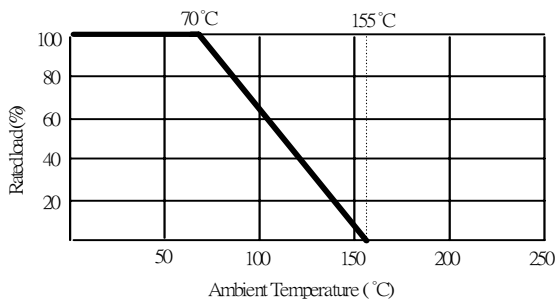
## GENERAL SPECIFICATION

TYPE	DIMENSION (mm)				POWER	MAXIMUM WORKING VOLTAGE*	MAXIMUM OVERLOAD VOLTAGE**	RESISTANCE RANGE ±1%
	L	D	H	d ± 0.05				
MFR125	3.2±0.2	1.5±0.2	28 ±1.0	0.45	1/8W	200V	400V	10Ω~1MΩ
MFR025S	3.2±0.2	1.5±0.2	28 ±1.0	0.45	1/4W	250V	500V	10Ω~1MΩ
MFR025	6.0±0.5	2.3±0.3	28 ±1.0	0.55	1/4W	250V	500V	10Ω~1MΩ
MFR050S	6.0±0.5	2.3±0.3	28 ±1.0	0.55	1/2W	350V	700V	10Ω~1MΩ
MF050	9.0±0.5	3.2±0.5	28 ±1.0	0.65	1/2W	350V	700V	10Ω~1MΩ
MFR060S	6.0±0.5	2.3±0.3	28 ±1.0	0.55	0.6W	350V	700V	10Ω~1MΩ
MFR100S	9.0±0.5	3.2±0.5	28 ±1.0	0.65	1W	500V	1000V	10Ω~1MΩ
MFR100	11±1.0	4.0±0.5	35 ±3.0	0.75	1W	500V	1000V	10Ω~1MΩ
MFR200S	11±1.0	4.0±0.5	35 ±3.0	0.75	2W	500V	1000V	10Ω~1MΩ
MFR200	15±1.0	5.0±0.5	35 ±3.0	0.75	2W	500V	1000V	10Ω~1MΩ
MFR300S	15±1.0	5.0±0.5	35 ±3.0	0.75	3W	500V	1000V	10Ω~1MΩ
MFR300	17±1.0	6.0±0.5	35 ±3.0	0.75	3W	500V	1000V	10Ω~1MΩ

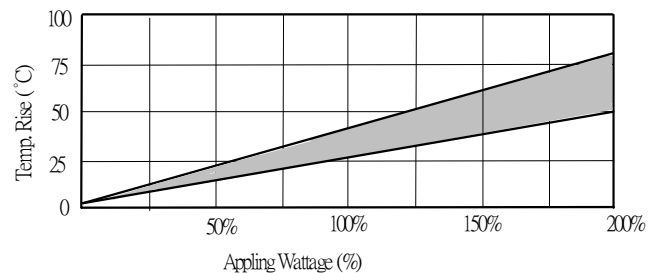
\* Maximum Working Voltage determined by  $E = \sqrt{P \times R}$ , where E should not exceed value listed in column above.

\*\* Maximum Overload Voltage equals to 2.5xE, but should not exceed value listed in column above

## DERATING CURVE



## TEMPERATURE RISE



## CHARACTERISTIC

Temperature Coefficient	±50ppm (15ppm, 25ppm available)
Insulation Resistance	10,000MΩ Min.
Load Life (1000 hours)	<±0.5%
Shorttime Overload	±0.25% Max.
Temperature Cycling	±0.25% Max.
Moisture Resistance	±0.5% Max.
Shock & Vibration	±0.25% Max.
Effect of Soldering	±0.1% Max.

\* Total maximum resistance change is  $\Delta R + 0.01R$

## HOW TO ORDER :

<b>MFR125</b>	<b>F</b>	<b>TB</b>	<b>=</b>	<b>10R</b>
↓	↓	↓	↓	↓
Type/Power	Tol.	Package	ppm	Resistance
MFR125	B=±0.1%	B=Bulk	= Based on spec.	10R = 10Ω
MFR025	C=±0.25%	TB=Tape/box	D=25ppm	1K2 = 1.2KΩ
MFR050	D=±0.5%	TR=Tape/reel	C=15ppm	1M = 1MΩ
MFR100	F=±1%	Lead forming		
MFR200	G=±2%	M		
MFR300	J=±5%	F		

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