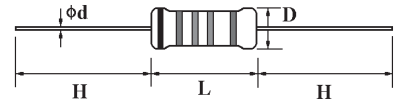
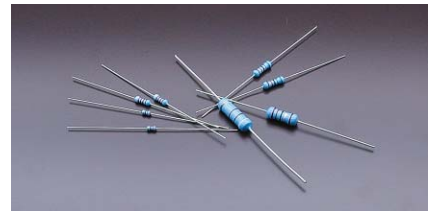


# Precision Metal Film Fixed Resistors:

## Feature:

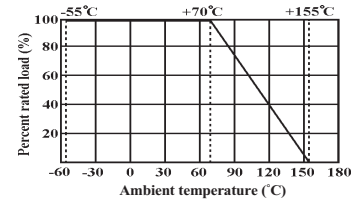
- EIA standard color coding
- Flame retardant type available
- Low noise & voltage coefficient
- Low temperature coefficient range
- Multiple epoxy coating on vacuum-deposited metal film provides superior moisture protection
- Nichrome resistor element provides stable performance in various environments



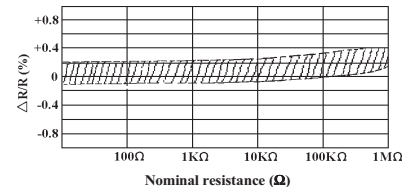
Part No.	Type	Power Rating At 70°C	Dimension (mm)			
			D Max.	L Max.	d <sup>+0.02</sup> <sub>-0.05</sub>	H ±3
<b>Normal Size</b>						
MFR0W8	MF-12	1/8W	1.85	3.5	0.5	28
MFR0W4	MF-25	1/4W	2.5	6.8	0.6	28
MFR0W2	MF-50	1/2W	3.5	10	0.6	28
MFR01W	MF-100	1W	5	12	0.7	28
MFR02W	MF-200	2W	5.5	16	0.8	28
MFR03W	MF-300	3W	6.5	17.5	0.8	28
<b>Small Size &amp; Extra Small Size</b>						
MFR0S4	MF-25-S	1/4W	1.85	3.5	0.5	28
MFR004	MF-40-SS	0.4W	1.9	3.7	0.5	28
MFR0U2	MF-50-SS	1/2W	2.5	6.8	0.6	28
MFR0S2	MF-50-S	1/2W	3	9	0.6	28
MFR006	MF-60-S	0.6W	2.5	6.8	0.6	28

*Standard Non-Flammable coating for Small size types (except MF-50-S).*

## Derating Curve:



## Load Life:



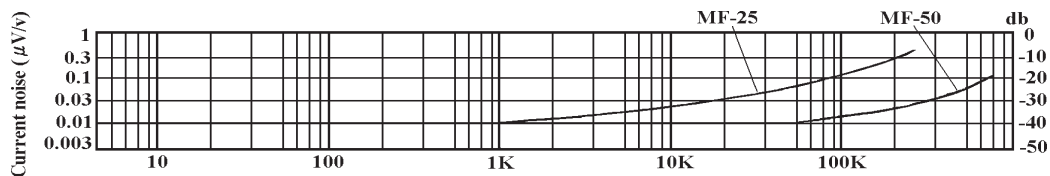
Part No.	Type	Dielectric With-standing V.	Max. Working V.	Max. Overload V.	Standard Order			Special Order		
					Tol.	T.C.R.	Value Range	Tol.	T.C.R.	Value Range
MFR0W8	MF-12	400V	200V	400V	±1%	± 50	10Ω-1MΩ	± 0.25%	± 15	51.1Ω ~ 200KΩ
MFR0S4	MF-25-S	200V	200V	400V	±2%	± 100	10Ω-1MΩ	± 0.5%	± 25	51.1Ω ~ 511KΩ
MFR004	MF-40-SS				±5%	± 200	1Ω-1MΩ	± 0.5%	± 50	51.1Ω ~ 511KΩ
MFR0W4	MF-25	500V	250V	500V	±1%	± 50	10Ω-1MΩ	± 0.1%	± 15	100Ω ~ 100KΩ
MFR0U2	MF-50-SS	250V			±2%	± 100	10Ω-1MΩ	± 0.25%	± 25	51.1Ω ~ 330KΩ
MFR006	MF-60-S	250V			±5%	± 200	1Ω-1MΩ	± 0.5%	± 50	10Ω ~ 1MΩ
MFR0S2	MF-50-S	700V	350V	700V	±1%	± 50	10Ω-1MΩ	± 0.1%	± 15	100Ω ~ 330KΩ
MFR0W2	MF-50				±2%	± 100	10Ω-1MΩ	± 0.25%	± 25	51.1Ω ~ 511KΩ
					±5%	± 200	1Ω-1MΩ	± 0.5%	± 50	10Ω ~ 1MΩ
MFR01W	MF-100	1000V	500V	1000V	±1%	± 50	51.1Ω-1MΩ	± 0.1%	± 15	100Ω ~ 330KΩ
MFR02W	MF-200				±2%	± 100	51.1Ω-1MΩ	± 0.25%	± 25	51.1Ω ~ 511KΩ
MFR03W	MF-300				±5%	± 200	10Ω-1MΩ	± 0.5%	± 50	51.1Ω ~ 1MΩ

# Precision Metal Film Fixed Resistors:

## Performance Specifications

<b>Temperature coefficient</b>	Within the maximum temperature coefficient specified in page 12.
<b>Short-time overload</b>	$\Delta R/R \leq \pm(0.5\% + 0.05\Omega)$ , with no evidence of mechanical damage.
<b>Dielectric withstanding voltage</b>	No evidence of flashover, mechanical damage, arcing or insulation breakdown.
<b>Pulse overload</b>	$\Delta R/R \leq \pm(1\% + 0.05\Omega)$ , with no evidence of mechanical damage.
<b>Terminal strength</b>	No evidence of mechanical damage.
<b>Resistance to Soldering heat</b>	$\Delta R/R \leq \pm(1\% + 0.05\Omega)$ , with no evidence of mechanical damage.
<b>Solderability</b>	Min. 95% coverage.
<b>Resistance to solvent</b>	No deterioration of protective coating and markings.
<b>Temperature cycling</b>	$\Delta R/R \leq \pm(1\% + 0.05\Omega)$ , with no evidence of mechanical damage.
<b>Load life in humidity</b>	Normal type: $\Delta R/R \pm 1.5\%$ ; Flame retardant type: $\Delta R/R \pm 5\%$ .
<b>Load life</b>	Normal type: $\Delta R/R \pm 1.5\%$ ; Flame retardant type: $\Delta R/R \pm 5\%$ .

## Current Noise Level:



## Ordering Procedure (Example: MFR 1/8W 1% 50PPM 47.5KΩ T/R-5000)

**Special Features:** 0 = Standard product , F = Flame Retardant , I = Non - Inductive

**Product Type:**  
MFR =  
Metal Film Fixed  
Resistors

**Wattage:**  
Normal size:  
W8 = 1/8W  
W4 = 1/4W  
W2 = 1/2W  
1W = 1W  
2W = 2W  
Small size:  
S4 = 1/4W-S  
S2 = 1/2W-S  
O6 = 0.6W-S  
Extra small  
size:  
U2 = 1/2W-SS  
O4 = 0.4W-SS

**Tolerance:**  
B =  $\pm 0.1\%$  15PPM, C =  $\pm 0.25\%$  25PPM, D =  $\pm 0.5\%$  50PPM, F =  $\pm 1\%$  50PPM,  
G =  $\pm 2\%$  100PPM, J =  $\pm 5\%$  200PPM  
For special tolerance - PPM requirement. Please indicate it in the purchase order (P.O.)  
Example :  $\pm 1\%$  15PPM

**Resistance Value:**  
E-24 series (2% & 5% Tol.):  
The 1<sup>st</sup> digit will be "0"; the  
2<sup>nd</sup> & 3<sup>rd</sup> digits are for the  
significant figures of the  
resistance and the 4<sup>th</sup> digit  
indicate the numbers of  
zeros following  
E-96 series (1% Tol.) :  
The 1<sup>st</sup> digit to 3<sup>rd</sup> digit are  
for the significant figures of  
the resistance and the 4<sup>th</sup>  
digit denotes number of  
zero following

**Packing Type:**  
A=Tape/Box, T=Tape/Reel, B=Bulk/Box,  
P=Tape/Box of PT-26 product

**Packing Quantity:**  
1=1,000pcs, 2=2,000pcs, 3=3,000pcs, 4=4,000pcs  
5=5,000pcs, A=500pcs, B=2,500pcs ,  
0=for Bulk/Box packing

**Additional Information:** 0 = NIL

**M F R 0 W 8 F 4 7 5 2 T 5 0**