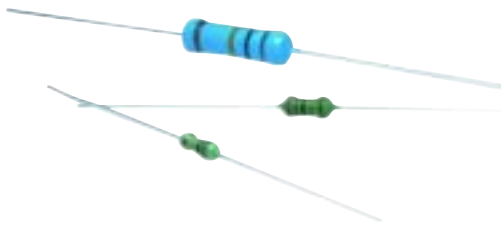


# Precision Metal Film Resistors



## Features:

- EIA standard colour coding
- Low noise and voltage coefficient
- Low temperature coefficient range
- Wide precision range in small package
- Too low or too high ohmic value can be supplied on case to case basis
- Nichrome resistor element provides stable performance in various environment
- Multiple epoxy coating on vacuum deposited metal film provides superior moisture protection

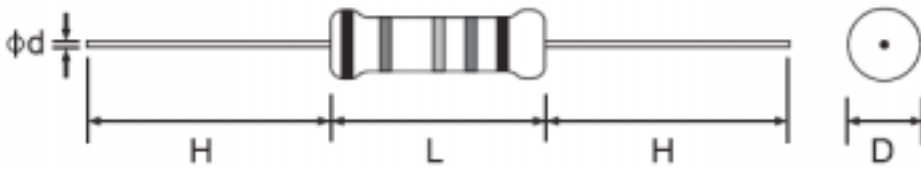
## Performance Specifications

Temperature Coefficient	: Within the maximum temperature coefficient specified
Short Time Overload	: $\pm (0.5\% + 0.05 \Omega)$ Maximum, with no evidence of mechanical damage
Insulation Resistance	: Minimum 10,000 Mega Ohms
Dielectric Withstanding Voltage	: No evidence of flashover, mechanical damage, arcing or insulation breakdown
Pulse Overload	: $\pm(1.0\% + 0.05 \Omega)$ Maximum, with no evidence of mechanical damage
Terminal Strength	: No evidence of mechanical damage
Resistance to Soldering Heat	: $\pm(1.0\% + 0.05 \Omega)$ Maximum, with no evidence of mechanical damage
Solderability	: Minimum 95% coverage
Resistance to Solvent	: No deterioration of protective coating and markings
Temperature Cycling	: $\pm (1\% + 0.05 \Omega)$ Maximum, with no evidence of mechanical damage
Humidity (Steady state)	: $\pm (2\% + 0.05 \Omega)$ Maximum, with no evidence of mechanical damage
Load Life in Humidity	: Normal type $\pm (1.5\% + 0.05 \Omega)$ Maximum
Load Life	: Normal type $\pm (1.5\% + 0.05 \Omega)$ Maximum

## Part Number Explanation:

MCMF	0	W4	B	B	1002	A 5 0
Type	Feature	Wattage	Tolerance	PPM Requirement	Resistance	Internal Reference
Metal Film	0 = Standard F = Non-Flame	W8 = 1/8W W4 = 1/4W 1W = 1W 2W = 2W 3W = 3W Small Size S2 = 1/2W-S Extra Small Size 04 = 0.4W-SS	B = $\pm 0.1\%$ C = $\pm 0.25\%$ D = $\pm 0.5\%$ F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$	B = 15 ppm C = 25 ppm F = 50 ppm G = 100 ppm J = 200 ppm	1st to 3rd digits are significant figures of the resistance and the 4th digit indicates the number of zeros.  R = Decimal Point 1331 = 1.33 kohms 49R9 = 49.9 ohms	

# Precision Metal Film Resistors



Dimensions : Millimetres

Part Number	Style	Power Rating at 70°C	Dimension (mm)					Standard Packing Quantity
			D Maximum	L Maximum	d ±0.05	H ±3	PT	
<b>Normal Size</b>								
MF0W8	MF 12	1/8 W (0.125 W)	1.85	6.8	0.45	28	52	5,000
MF0W4	MF 25	1/4 W (0.25 W)	2.5	3.5	0.54	28	52	5,000
MF0W2	MF 50	1/2 W (0.5 W)	3.6	10	0.54	28	52	1,000
MF01W	MF 100	1 W	5	12	0.7	25	52	1,000
MF02W	MF 200	2 W	5.5	16	0.7	28	64	1,000
MF034	MF 300	3 W	6.5	17.5	0.75	28	64	500
<b>Small Size</b>								
MF0S4	MF 25-S	1/4 W (0.25 W)	1.85	3.5	0.45	28	52	5,000
MFF04	MF 40-SS	0.4 W	1.9	3.7	0.45	28	52	5,000
MFFU2	MF 50-SS	1/2 W (0.5 W)	2.5	6.8	0.54 <sup>(2)</sup>	28	52	5,000
MF0S2	MF50-S	1/2 W (0.5W)	3	9	0.54	28	52	2,000
MF006	MF 60-S	0.6 W	2.5	6.8	0.54 <sup>(2)</sup>	28	52	5,000
MF0M7	MF 75-S	0.75 W	3.5	10	0.54	28	52	5,000
MF01S	MF 100-S	1 W	3.5	10	0.54	28	52	1,000
MF02S	MF 200-S	2 W	5	12	0.7	28	52	1,000
MF03S	MF 300-S	3 W	5.5	16	0.7	28	64	1,000

## Notes:

- Extra small size types (-SS) are Non flame coating (Dark Green Colour)
- <sup>(2)</sup> Lead diameter of MF0W4, MF006 & MFFU2 can be provided in 0.5, 0.54 and 0.6 mm

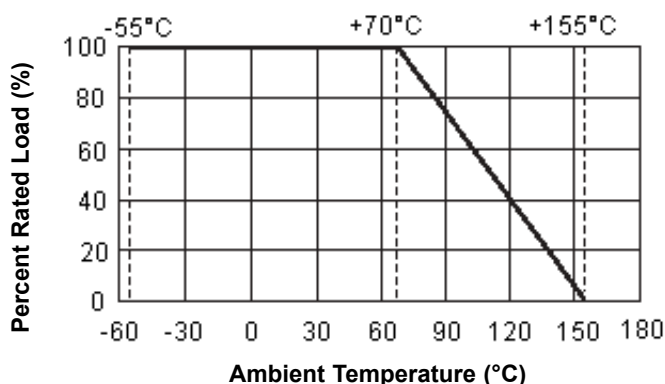
# Precision Metal Film Resistors



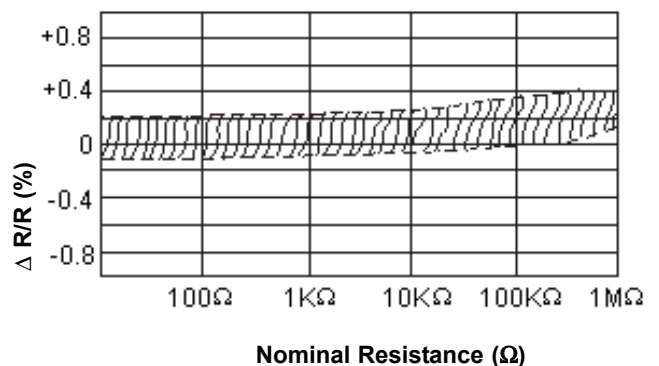
## General Specifications

Part Number	Style	Maximum Working Voltage	Maximum Overload Voltage	Dielectric Withstanding Voltage	Tolerance	Resistance Range	TCR	Special Order		
								Tolerance	Resistance Range	TCR
MF12	MF12	200 V	400 V	400 V	±1%	10 Ω to 1 M Ω	±50 PPM/°C	±0.25%	51.1 Ω to 200 KΩ	±15 PPM/°C
MF0S4	MF 25-S				±2%	10 Ω to 1 M Ω	±100 PPM/°C			
MFF04	MF 40-SS	200 V	400 V	200 V	±5%	1 Ω to 1 M Ω	±200 PPM/°C	±0.5%	51.1 Ω to 511 KΩ	±50 PPM/°C
MF0W4	MF 25	250 V	500 V	500 V	±1%	10 Ω to 1 M Ω	±50 PPM/°C			±0.1%
MF006	MF 60-S				±2%	10 Ω to 1 M Ω	±100 PPM/°C	±0.25%	51.1 Ω to 330 KΩ	±25 PPM/°C
MFFU2	MF 50-SS	250 V	500 V	250 V	±5%	1 Ω to 1 M Ω	±200 PPM/°C	±0.5%	10 Ω to 1 M Ω	±50 PPM/°C
MF0W2	MF 50	350 V	700 V	700 V	±1% ±2% ±5%	10 Ω to 1 M Ω	±50 PPM/°C	±0.1% ±0.25% ±0.5%	100 Ω to 300 KΩ 51.1 Ω to 511 KΩ 10 Ω to 1 M Ω	±15 PPM/°C ±25 PPM/°C ±50 PPM/°C
MF0S2	MF 50-S					10 Ω to 1 M Ω	±100 PPM/°C			
MF0m7	MF 75-S					Ω	±200 PPM/°C			
MF01S	MF 100-S					1 Ω to 1 M Ω				
MF02S	MF 200-S									
MF03S	MF 300-S	500 V	1,000 V	1,000 V	±1% ±2% ±5%	51.1 Ω to 1 MΩ	±50 PPM/°C	±0.1% ±0.25% ±0.5%	100 Ω to 300 KΩ 51.1 Ω to 511 KΩ 51.1 Ω to 1 MΩ	±15 PPM/°C ±25 PPM/°C ±50 PPM/°C
MF01W	MF 100					51.1 Ω to 1 MΩ	±100 PPM/°C			
MF02W	MF 200					10 Ω to 1 M Ω	±200 PPM/°C			
MF03W	MF 300									

Derating Curve



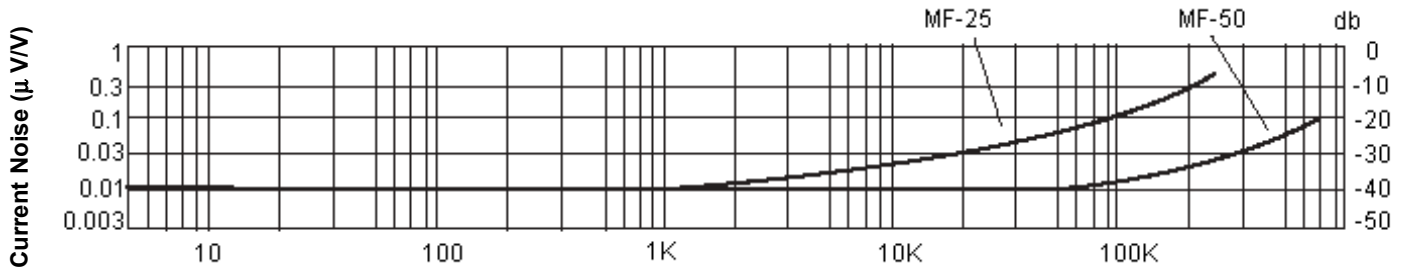
Load Life



# Precision Metal Film Resistors



## Current Noise Level



## Part Number Table

Description	Part Number
Precision Metal Film Resistor	MCMF0W4BB1002A50

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