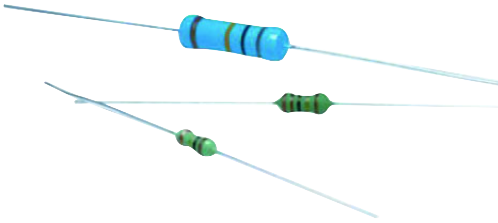


Precision Metal Film Resistors



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

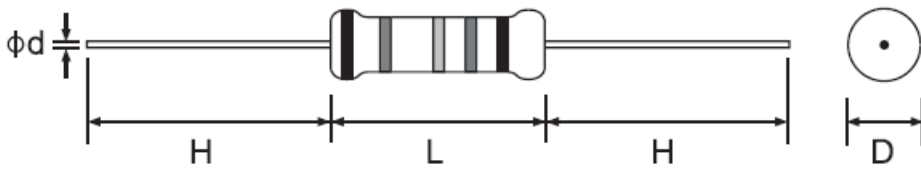
Performance Specifications

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	
Normal Size								
MCMF0W8	MF 12	1/8 W (0.125 W)	1.85	6.8	0.45	28	52	5,000
MCMF0W4	MF 25	1/4 W (0.25 W)	2.5	3.5	0.54	28	52	5,000
MCMF0W2	MF 50	1/2 W (0.5 W)	3.6	10	0.54	28	52	1,000
MCMF01W	MF 100	1 W	5	12	0.7	25	52	1,000
MCMF02W	MF 200	2 W	5.5	16	0.7	28	64	1,000
MCMF034	MF 300	3 W	6.5	17.5	0.75	28	64	500
Small Size								
MCMF0S4	MF 25-S	1/4 W (0.25 W)	1.85	3.5	0.45	28	52	5,000
MCMFF04	MF 40-SS	0.4 W	1.9	3.7	0.45	28	52	5,000
MCMF0S2	MF50-S	1/2 W (0.5W)	3	9	0.54	28	52	2,000
MCMF0M7	MF 75-S	0.75 W	3.5	10	0.54	28	52	5,000
MCMF01S	MF 100-S	1 W	3.5	10	0.54	28	52	1,000
MCMF02S	MF 200-S	2 W	5	12	0.7	28	52	1,000
MCMF03S	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)

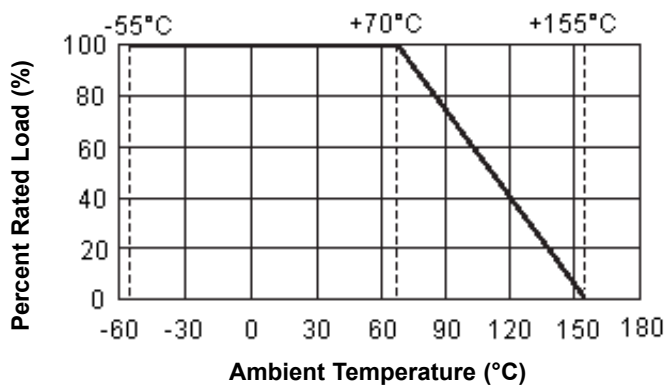
Precision Metal Film Resistors



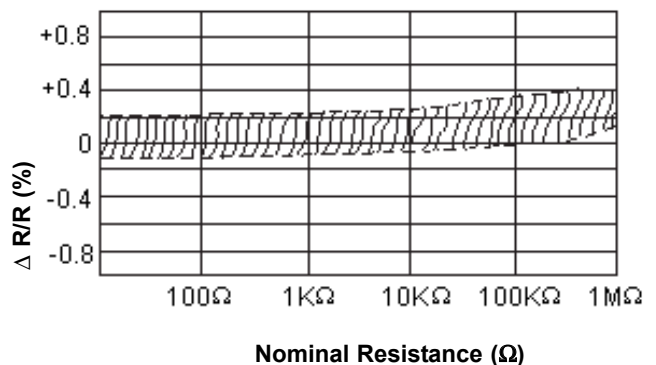
General Specifications

Part Number	Style	Maximum Working Voltage	Maximum Overload Voltage	Dielectric Withstanding Voltage	Tolerance	Resistance Range	TCR	Special Order		
								Tolerance	Resistance Range	TCR
MC 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
MC MF0S4	MF 25-S				±2%	10 Ω to 1 M Ω	±100 PPM/°C	±0.5%	51.1 Ω to 511 KΩ	±25 PPM/°C
MC MFF04	MF 40-SS	200 V	400 V	200 V	±5%	1 Ω to 1 M Ω	±200 PPM/°C			
MC MF0W4	MF25	250 V	500 V	500 V	±1%	10 Ω to 1 M Ω	±50 PPM/°C	±0.1%	100 Ω to 100 KΩ	±15 PPM/°C
MC MF0W2	MF50	350 V	700 V	700 V	-	-	-	±0.1%	100 Ω to 300 KΩ 51.1 Ω to 511 KΩ	±15 PPM/°C ±25 PPM/°C
MC MF0S2	MF 50-S				-	-	-			
MC MF01W	MF 100	500 V	1,000 V	1,000 V	±5%	51.1 Ω to 1 MΩ 51.1 Ω to 1 MΩ 10 Ω to 1 M Ω	±50 PPM/°C ±100 PPM/°C ±200 PPM/°C	-	-	-
MC MF02W	MF 200							-	-	-
MC MF03W	MF 300							-	-	-

Derating Curve



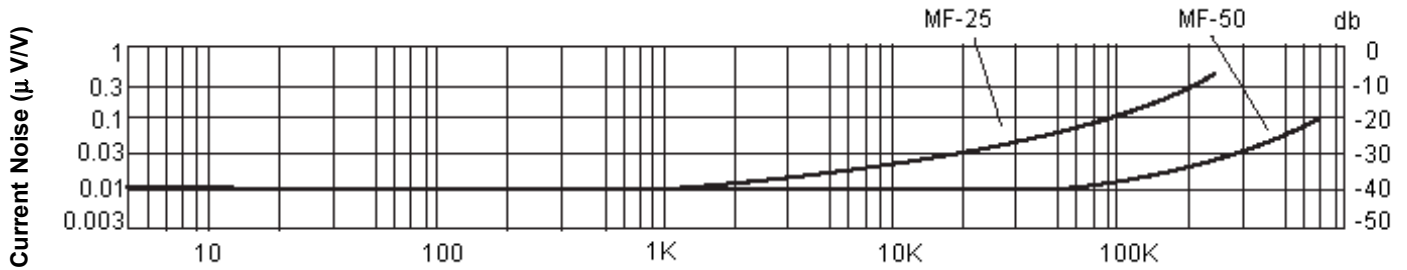
Load Life



Precision Metal Film Resistors



Current Noise Level



Part Number Table

Description	Part Number
Precision Metal Film Resistor	MCMF0W4BB1002A50

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