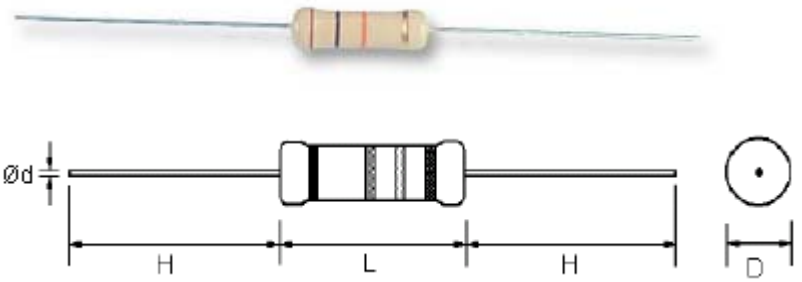
Carbon Film Resistors

MCF 2W Series



Features:

- Automatically insertable
- High quality performance
- Non-flame type available
- Cost effective and commonly used
- Too low or too high values can be supplied on a case to case basis

Performance Specifications:

Temperature Coefficient	: ±350 PPM / °C for ≤ 10 Ω ±450 PPM / °C for 11 Ω - 99 KΩ 0 to -700 PPM / °C for 100 KΩ to 1 MΩ 0 to -1,500 PPM / °C for 1.1 MΩ to 10 MΩ	
Short-Time Overload	: ΔR / R ≤ ±(1% + 0.05 Ω), with no evidence of mechanical damage	
Minimum Insulation Resistance	: 10,000 MΩ	
Dielectric Withstanding Voltage	: No evidence of flashover, mechanical damage, arcing or insulation breakdown	
Terminal Strength	: No evidence of mechanical damage	
Resistance to Soldering Heat	: ΔR / R ≤ ±(1% +0.05 Ω), with no evidence of mechanical damage	
Minimum Solderability	: 95% coverage	
Resistance to Solvent	: No deterioration of protective coating and markings	
Temperature Cycling	: ΔR / R ≤ ±(1% +0.05 Ω), with no evidence of mechanical damage	
Load Life in Humidity	: Normal type	: ΔR / R ±3% for <100 KΩ, ±5% for ≥100 KΩ
	Non-flame type	: ΔR / R ±5% for <100 KΩ, ±10% for ≥100 KΩ
Load Life	: Normal type	: ΔR / R ±2% for <56 KΩ, ±3% for ≥56 KΩ
	Non-flame type	: ΔR / R ±5% for <100 KΩ, ±10% for ≥100 KΩ
Operating Temperature	: -55°C to +155°C	

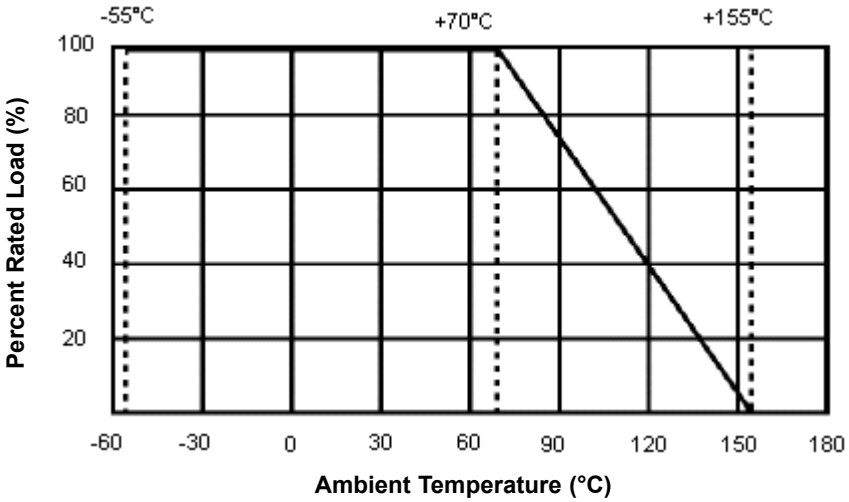
Specification Table

Series	Power Rating at 70ºC (W)	Dimension				Maximum Working Voltage (V)	Maximum Overload Voltage (V)	Dielectric Withstanding Voltage (V)	Resistance Range
		Maximum Diameter (D)	Maximum Length (L)	Height (H ±3)	Lead Diameter (d ±0.05)				
MCF 2W	2	5.5	16	28	0.7	500	1,000	1,000	1 Ω to 10 MΩ

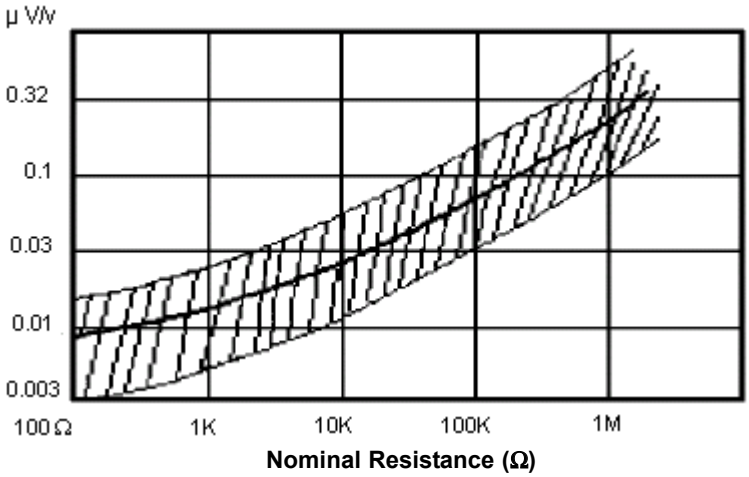
Note : Standard E-24 series values in ±5% tolerance

Dimensions : Millimetres

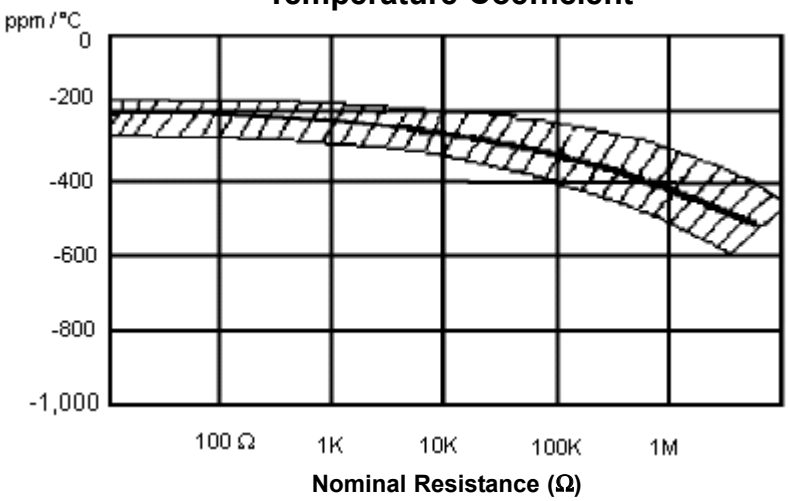
Derating Curve



Current Noise



Temperature Coefficient



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Resistance Preferred Value Range

E6	E12	E24	E96	E6	E12	E24	E96	E6	E12	E24	E96
10	10	10	10				21.5				46.4
			10.2	22	22	22	22.1	47	47	47	47.5
			10.5				22.6				48.7
			10.7				23.2				49.9
		11	11				23.7			51	51.1
			11.3			24	24.3				52.3
			11.5				24.9				53.6
			11.8				25.5				54.9
	12	12	12.1				26.1		56	56	56.2
			12.4				27.7				57.6
			12.7		27	27	27.4				59
		13	13				28				60.4
			13.3				28.7			62	61.9
			13.7				29.4				63.4
			14			30	30.1				64.9
			14.3				30.9				66.5
			14.7				31.6	68	68	68	68.1
15	15	15	15				32.4				69.8
			15.4	33	33	33	33.2				71.5
			15.8				34				73.2
		16	16.2				34.8			75	75
			16.5				35.7				76.8
			16.9			36	36.5				78.7
			17.4				37.4				80.6
			17.8				38.3		82	82	82.5
	18	18	18.2		39	39	39.2				84.5
			18.7				40.2				86.6
			19.1				41.2				88.7
			19.6				42.2			91	90.9
		20	20			43	43.2				93.1
			20.5				44.2				95.3
			21				45.3				97.6

Above values in accordance with IEC Publication 63 (1963) and BS2488

Part Number Table

Resistance Value	Part Number
10R	MCF 2W 10R
100R	MCF 2W 100R
1K	MCF 2W 1K
10K	MCF 2W 10K
100K	MCF 2W 100K
1M	MCF 2W 1M
15R	MCF 2W 15R
150R	MCF 2W 150R

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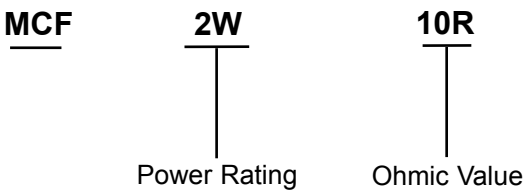
Part Number Table

Resistance Value	Part Number
1K5	MCF 2W 1K5
15K	MCF 2W 15K
150K	MCF 2W 150K
22R	MCF 2W 22R
220R	MCF 2W 220R
2K2	MCF 2W 2K2
22K	MCF 2W 22K
220K	MCF 2W 220K
33R	MCF 2W 33R
330R	MCF 2W 330R
3K3	MCF 2W 3K3
33K	MCF 2W 33K

Resistance Value	Part Number
330K	MCF 2W 330K
47R	MCF 2W 47R
470R	MCF 2W 470R
4K7	MCF 2W 4K7
47K	MCF 2W 47K
470K	MCF 2W 470K
68R	MCF 2W 68R
680R	MCF 2W 680R
6K8	MCF 2W 6K8
68K	MCF 2W 68K
680K	MCF 2W 680K

Part Number Explanation:



Ohmic Value : Where R = Ohms = Ω
K = Kilo ohms = KΩ
M = Megha ohms = MΩ
And replaces the decimal point
eg: 1R5 = 1.5, 4K7 = 4.7 K, 6M8 = 6.8 M

Stocked Values

Tolerance	Wattage (W)	Preferred Value Range	Range Value
5%	0.5	E24	1R - 10M