

Melf Carbon Film Resistors

MCF Type

Normal & Miniature Style [MCF Series]



FEATURES

- Industry's Lowest Cost
- Delivery From Stock in Taped and Reel, Bulk
- Exceptional Long-Term Stability
- Exceeds Carbon Comp MIL-R-111 Performance
- Power Rating: 1/8W, 1/4W, 1/2W, 1W
- Resistance Tolerance: $\pm 2\%$, $\pm 5\%$

DERATING CURVE

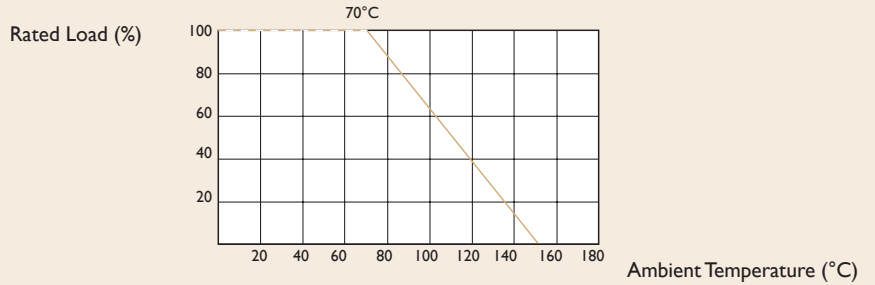
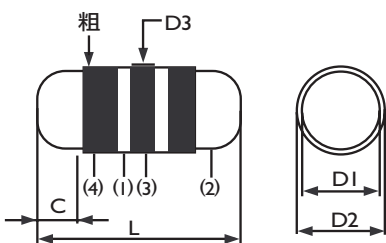


TABLE I TEMPERATURE COEFFICIENT

STYLE	Max. Value of Temp. Coefficient ppm/°C		
	under 100K Ω	100K Ω ~1M Ω	1M Ω ~10M Ω
MCF100, MCF200, MCF2WS	± 350	-500	-1500
MCF-12, MCF-25, MCF-50	+350	-700	-1500
MCF25S, MCF50S, MCF1WS	-500		

DIMENSIONS



STYLE		DIMENSION			
Normal	Miniature	L	D1	D2 max	C min
MCF-12	MCF25S/MCF204	3.5 \pm 0.2	1.4 \pm 0.15	1.55	0.5
MCF-25	MCF50S/MCF207	5.9 \pm 0.2	2.2 \pm 0.15	2.4	0.5
MCF-50	MCF1WS	8.5 \pm 0.2	3.2 \pm 0.20	3.4	0.5

Unit: mm



Note :

ELECTRICAL CHARACTERISTICS

STYLE	MCF-12	MCF25S	MCF204	MCF-25	MCF50S	MCF207	MCF-50	MCF1WS
Power Rating at 70°C	1/6W	1/4W	0.4W	1/4W	1/2W	0.6W	1/2W	1W
Maximum Working Voltage	150V	200V	200V	250V	300V	300V	350V	350V
Maximum Overload Voltage	300V	400V	400V	500V	600V	600V	700V	700V
Open Temp. Range	-55°C to +155°C							
Standard Value Range	1Ω~10MΩ							
Temperature Coefficient	See table I							

* Standard resistance is 1Ω~10MΩ, below or over this resistance on request

ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD		APPRAISE
Short Time Overload	JIS-C-5202 5.5	2.5Times RCWV for 5 Seconds	±(0.75%+0.05Ω)
Dielectric Withstanding Voltage	JIS-C-5202 5.7	in V-Block for 60 Seconds	by Type
Temperature Coefficient of Resistance	JIS-C-5202 5.2	-55°C to +155°C	by Type
Insulation Resistance	JIS-C-5202 5.6	in V-Block	>1000MΩ
Solderability	JIS-C-5202 6.5	235±5°C for 5±0.5 Seconds	95% Min.Coverage
Resistance to Solvent	JIS-C-5202 6.9	IPA for 1 Min. with Ultrasonic	No Deterioration of Coatings and Markigs
Terminal Strength	Direct Load for 10 Sec. in the Direction of The Terminal Leads		≥2.5kg(24.5N)
Pulse Overload	JIS-C-5202 5.8	4 Times RCWV 10000 Cycles(1 Sec. on, 25 Sec. of)	±(1%+0.05Ω)
Load Life in Humidity	JIS-C-5202 7.9	40±2°C, 90~95% RH at RcWV for 1000 Hrs. (1.5 Hrs. on, 0.5 Hrs. off)	±(3%+0.05Ω)
Load Life	JIS-C-5202 7.10	70°C at RCWV for 1000 Hrs.(1.5 Hrs. on, 0.5 Hrs. off)	±(3%+0.05Ω)
Temperature Cycling	JIS-C-5202 7.4	-55°C→Room Temp.→+155°C→Room Temp. for 5 Cycles	±(1%+0.05Ω)
Resistance to Soldering Heat	JIS-C-5202 6.4	350°C±10°C for 3±0.5 Seconds	±(1%+0.05Ω)

* Rated Continuous Working Voltage (RCWV)= $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$