

# COMMERCIAL 1/10 to 1/2 WATT CARBON FILM MELF RESISTORS

## MCF SERIES

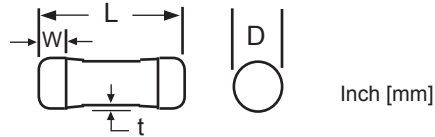


- Economy-grade pricing!
- Wide resistance range (up to 22MegΩ available)
- Standard tolerance: ±5% (±2% available)
- Series ZCF zero-ohm jumpers available, .02Ω maximum.  
Type ZCF10 is rated at 2A, ZCF12 at 3A, and ZCF25 at 5A.  
ZCF Series marked with a single black band.

### OPTIONS

- Option Z - high pulse voltage to 3KV
- Option 37 - Group A screening per Mil-R-39008

**Low cost, carbon film MELFs! Pulse voltage to 3KV!**  
Quality levels are unsurpassed due to stringent process controls. Automated Far East production results in low prices. RCD offers the industry's widest range of sizes and options including zero ohm jumpers and high pulse voltage versions.

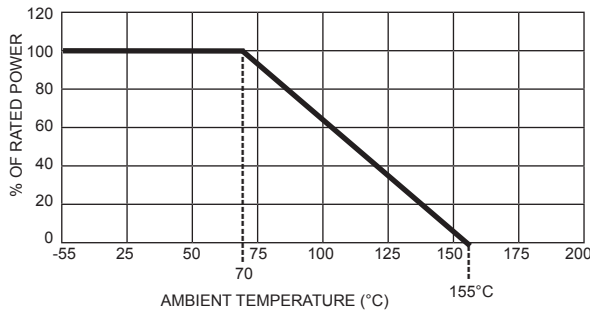


### SPECIFICATIONS

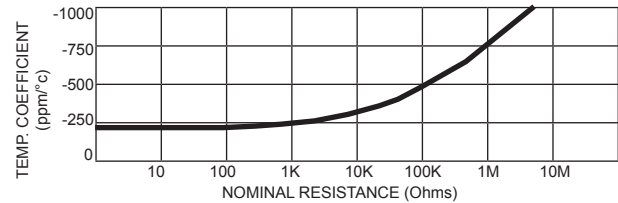
RCD Type	Wattage at 70°C	Series MCF Voltage Rating			Series MCFZ Voltage Rating			L ±.008 [.2]	D ±.008 [.2]	W (Min.)	t (Max.)
		Voltage Rating <sup>1</sup>	Max. Pulse Voltage <sup>2</sup>	Resis. Range <sup>3</sup>	Voltage Rating <sup>1</sup>	Max. Pulse Voltage <sup>2</sup>	Resis. Range <sup>3</sup>				
MCF10	.10	100V	200V	1Ω - 1MΩ	n/a	n/a	1KΩ - 1MΩ	.079 [2.0]	.044 [1.12]	.012 [.3]	.006 [.15]
MCF12	.125	200V	400V	1Ω - 1MΩ	250V	2KV	1KΩ - 1MΩ	.135 [3.4]	.057 [1.45]	.012 [.3]	.006 [.15]
MCF22	.25	250V	400V	1Ω - 1MΩ	n/a	n/a	1KΩ - 1MΩ	.135 [3.4]	.057 [1.45]	.012 [.3]	.006 [.15]
MCF25	.25	250V	600V	1Ω - 2.2MΩ	300V	3KV	1KΩ - 2.2M	.232 [5.9]	.085 [2.15]	.020 [.5]	.008 [.2]
MCF25S	.50	250V	600V	1Ω - 2.2MΩ	n/a	n/a	1KΩ - 2.2M	.232 [5.9]	.085 [2.15]	.020 [.5]	.008 [.2]

<sup>1</sup> Maximum working voltage determined by  $E = \sqrt{PR}$ , E should not exceed value listed in column above. Dielectric strength is rated the same as the maximum working voltage.  
<sup>2</sup> Peak pulse voltage is highly dependent on pulse waveform and resistance value. Voltage levels given indicate maximum levels for the series. These levels are not attainable for all values and pulse waveforms. Consult factory for application assistance.  
<sup>3</sup> Consult factory for resistance values outside of standard range (0.1Ω to 22 Meg available).

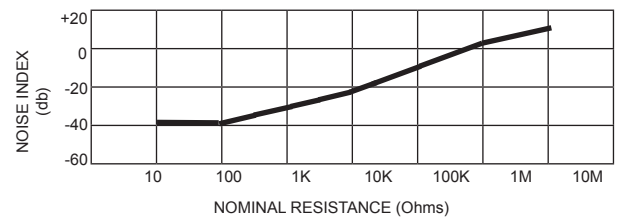
### DERATING



### TEMPERATURE COEFFICIENT (Typ.)



### CURRENT NOISE (Typ.)



### PERFORMANCE CHARACTERISTICS

Operating Temperature Range	-55 to +155°C
Solderability (5 sec. @ 230°C)	95% coverage
Insulation Resistance (Dry)	10,000 MegΩ
Short-Time Overload (5 sec. @ 2.5x power not to exceed 2x voltage rating)	0.5%* + .05Ω
Resistance to Solder Heat (260°C, 5 sec.)	0.5% + .05Ω
Temperature Cycling (-50°C + 120°C)	1.0% + .05Ω
Moisture Resis. (MIL-Std-202, Method 106)	5.0% + .05Ω
Load Life (1000 hours rated power)	2.5%* + .05Ω

\* Multiply by 2 for MCF22 and MCF25S Series.

### P/N DESIGNATION:

**MCF25 - 102 - J T W**

RCD Type \_\_\_\_\_

**3-Digit Resis. Code:** 2 signif. digits & multiplier  
 1R0=1Ω, 100=100Ω, 101=100Ω, 102=1KΩ,  
 103=10K, 104=1M, 105=10M, etc.

**Tolerance:** J = 5% (standard), K = 10%, G = 2%

**Packaging:** B = Bulk, T = Tape & Reel

**Termination:** W = Lead-free (std), Q = Tin/Lead (leave blank if either is acceptable)