

GENERAL PURPOSE CARBON FILM RESISTORS

ISO-9001
Registered



CF SERIES

- High stability performance
- Uniformity of all electrical parameters
- Ideal for commercial/industrial applications
- Auto sequencing/insertion compatible



PERFORMANCE CHARACTERISTICS (TESTED PER MIL-STD-202):

ELECTRICAL	CF 1/8	CF 1/4	CF 1/2
Power Rating (watts) @ 70°C	1/8	1/4	1/2
Derated to 0 Load at	155°C	155°C	155°C
Maximum Working Voltage	200V	250V	350V
Operating Temperature Range	-55°C to +155°C	-55°C to +155°C	-55°C to +155°C
Resistance Range (±5%)	1.0Ω - 22 meg	1.0Ω - 22 meg	1.0Ω - 22 meg
(±2%)	10Ω - 1 meg	10Ω - 4.7 meg	10Ω - 4.7 meg

ENVIRONMENTAL			
Moisture Resistance	<100K±(3%+0.05Ω) >100K±(5%+0.05Ω)	<100K±(3%+0.05Ω) >100K±(5%+0.05Ω)	<100K±(3%+0.05Ω) >100K±(5%+0.05Ω)
Thermal Shock	±0.5%	±0.5%	±0.5%
Load Life @ 70°C - 1000 hours	<100K±(2%+0.05Ω) >100K±(3%+0.05Ω)	<100K±(2%+0.05Ω) >100K±(3%+0.05Ω)	<100K±(2%+0.05Ω) >100K±(3%+0.05Ω)
Shock and Vibration	±0.2%	±0.2%	±0.2%
Resistance to Soldering Heat	±0.5%	±0.5%	±0.5%
Terminal Strength	±0.5%	±0.5%	±0.5%
Dielectric Withstand Voltage	300 volts RMS min.	500 volts RMS min.	700 volts RMS min.
Maximum Pulse Voltage	400V	600V	700V
Insulation Resistance	10,000 meg min.	10,000 meg min.	10,000 meg min.
Voltage Coefficient	-10 ppm/Vmax.	-10 ppm/Vmax.	-10 ppm/Vmax.
Short Time Overload	±0.75%	±0.75%	±0.75%

DIMENSIONS (Inches and (mm)):

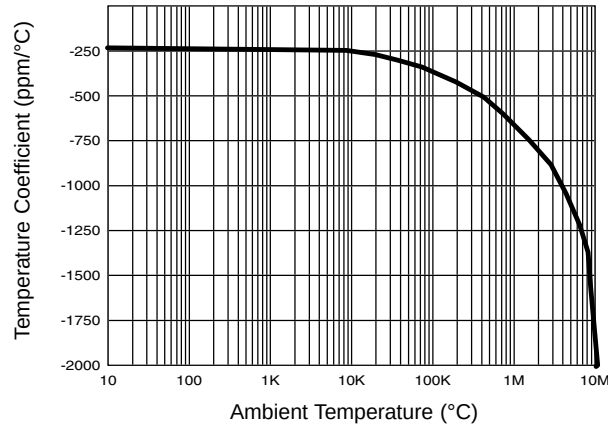
Dimension	CF 1/8	CF 1/4	CF 1/2
A	1.10±.08 (28.0±2.0)	1.10±.08 (28.0±2.0)	1.10±.08 (28.0±2.0)
B	0.13 + .01/-0.00 (3.2+0.2/-0.0)	0.24±.01 (6.0±0.3)	0.33±.02 (8.5±0.5)
C	0.018±.001 (0.45±0.02)	0.022±.001 (0.55±0.03)	0.026±.002 (0.65±0.05)
D	0.07±.01 (1.8±0.15)	0.09±.01 (2.3±0.2)	0.11±.01 (2.8±0.3)

WIREWOUND AND FILM TECHNOLOGIES DIVISION

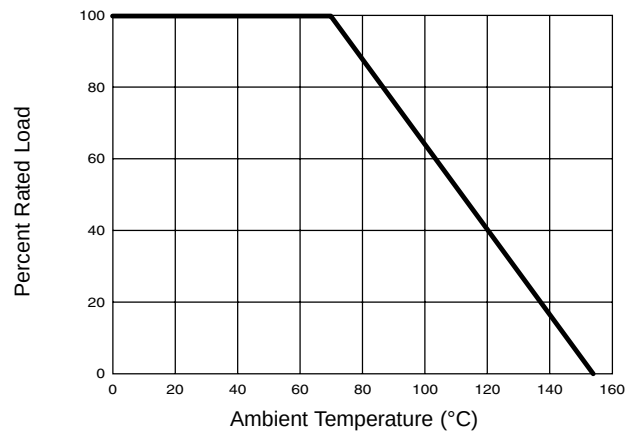
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CF PERFORMANCE CURVES:

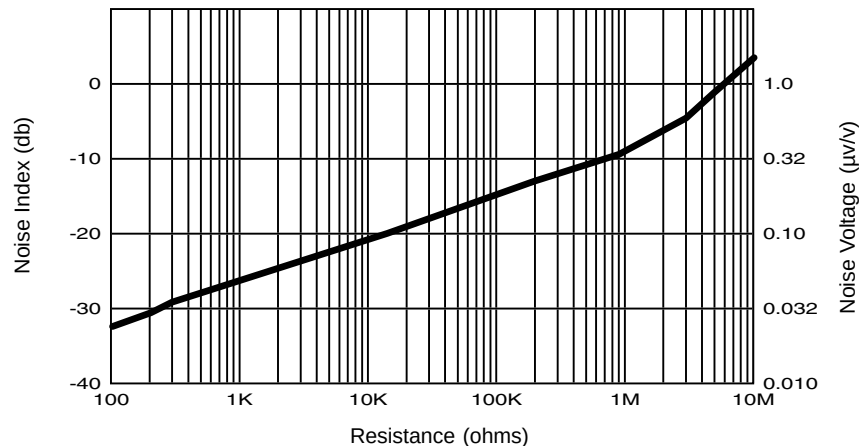
Temperature Coefficient (Typical)



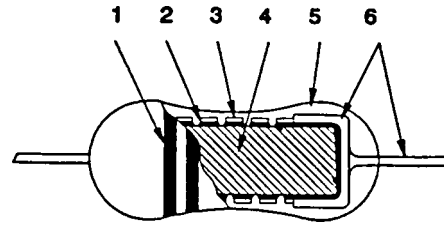
Derating Curve (Typical)



Current Noise (Typical)



CF CONSTRUCTION:



1. COLOR BANDS.

The resistors are permanently color banded for resistance value and tolerance in accordance with EIA specifications.

2. HELIXING.

The units are helixed to a predetermined base to final value ratio to obtain the best TCR, noise and stability characteristics.

3. FILM.

Carbon-film resistors have a homogeneous film of pure carbon deposited by a pyrolytic process at carefully controlled temperatures.

4. SUBSTRATES.

The substrates are of a proprietary non alkaline ceramic, prepared and processed under exacting conditions to guarantee the utmost in uniformity and surface characteristics.

5. INSULATION.

The resistors are coated with multiple layers of a baked-on fire-retardant synthetic resin which provides the units with a high degree of mechanical and electrical protection in the most adverse operating conditions.

6. TERMINATIONS.

Positive contact is provided to the resistance element by precision-made end caps. The lead wires are attached by using proprietary welding techniques.

HOW TO ORDER:

Sample Part No.:

CF-1/4 102 J

IRC Type — CF-1/4

Size — 1/4

Resistance Value — 102
2 digit range and 1 digit multiplier

Tolerance — J
G = 2%, J = 5%

Packaging
Bulk or Tape and Reel