

# CARBON FILM RESISTORS, 1/8 to 3 WATT

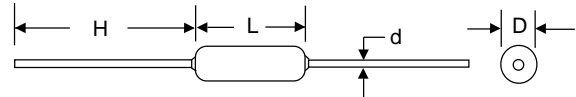
## CF SERIES



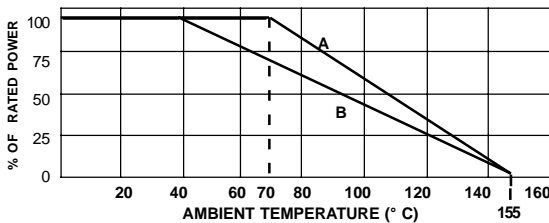
- Industry's lowest cost and widest selection!
- **Delivery from stock in bulk or tape/reel**
- Excellent long-term stability, exceeds MIL-R-11
- Mini 1/4W, 1/2W, 1W models
- Standard tolerance:  $\pm 5\%$  up to 10M ( $\pm 2\%$ ,  $\pm 10\%$  avail.)
- Flameproof coating available (Series CFF)
- Available on axial or vertical Tape & Reel
- Available with axial or vertical cut & formed leads
- High voltage and pulse version available (see Series CFZ)

### Widest range in the industry!

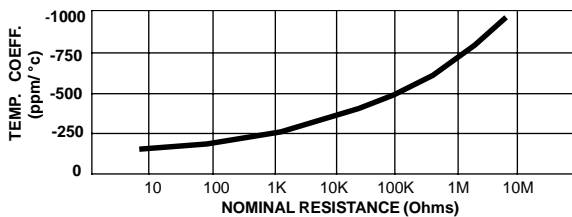
RCD Series CF resistors are designed for general purpose applications. Multilayer coating and color band markings are resistant to industrial solvents and humidity. New miniature sizes enable significant space savings due to optimization of thermally conductive materials. CF22 is 1/4W in 1/8W size and is designed for mounting spans as small as 0.200" [5mm]. CF50A is 1/2W in 1/4W size, CF100S is 1W in 1/2W size. Manufactured in Far East.



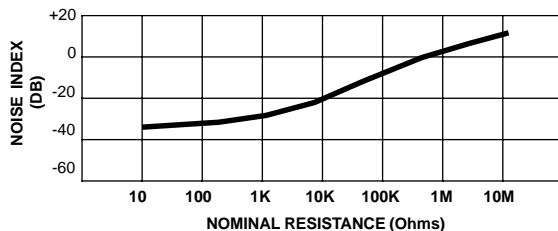
**DERATING:** W and V to be derated per graph A when ambient temp exceeds 70°C (40°C for CF100S & CF300 per graph B).



### TEMPERATURE COEFFICIENT (Typ.)



### CURRENT NOISE (Typ.)



### TYPICAL PERFORMANCE

Load Life 1000 hours	$\pm 1\%$ std, $\pm 2\%$ mini
Shelf Life at 25°C (1 year)	$\pm 1.0\%$
Effect of Solder	$\pm 0.3\%$
CF (standard) Moisture Resis:	$\pm 2\%$ <100K, $\pm 3\%$ >100K
CFF (flameproof) Moisture Resis:	$\pm 3\%$ <100K, $\pm 5\%$ >100K
Short-Time Overload	$\pm 0.5\%$ std, $\pm 1\%$ mini
Shock and Vibration	$\pm 0.2\%$
Terminal Strength	$\pm 0.2\%$
Temperature Cycling	$\pm 0.5\%$
Insulation Resistance	10,000 Megohms Min
Voltage Coefficient	10 PPM/Volt
Dielectric Strength	500V (300V CF12 & CF22)

### DIMENSIONS

Inch [mm]

	TYPE	L $\pm .032$ [.8]	D $\pm .020$ [.5]	d $\pm .003$ [.08]	H(MIN)*
Mini 1/4W	CF12	.145 [3.7]	.062 [1.5]	.020 [.5]	1.0 [25]
	CF22	.134 [3.4]	.067 [1.7]	.020 [.5]	1.0 [25]
	CF25	.250 [6.4]	.090 [2.3]	.024 [.6]	1.0 [25]
Mini 1/2W	CF50S	.354 [9.0]	.125 [3.2]	.025 [.63]	1.0 [25]
	CF50A	.250 [6.4]	.090 [2.3]	.024 [.6]	1.0 [25]
Mini 1W	CF100S	.354 [9.0]	.148 [3.7]	.028 [.7]	1.0 [25]
	CF100	.470 $\pm .05$	.180 $\pm .032$	.031 [.8]	1.0 [25]
	CF200S	.63 $\pm .08$	.210 $\pm .05$	.031 [.8]	1.06 [27]
	CF300	.71 $\pm .08$	.250 $\pm .05$	.031 [.8]	1.25 [32]

\* Lead length is for bulk packaged parts, taped parts may be shorter. Non-standard lengths and cut & formed leads available

### SPECIFICATIONS

TYPE	Wattage	Max. Working Voltage*	Max. Overload Voltage	Resistance Range	
				$\pm 2\%$ (G)	$\pm 5\%$ (J)
CF12	1/8W	200V	400V	10 $\Omega$ -220K	1 $\Omega$ -10M
CF22	1/4W	250V	500V	10 $\Omega$ -1M	1 $\Omega$ -10M**
CF25					
CF50A	1/2W	350V	700V	10 $\Omega$ -1M	1 $\Omega$ -10M
CF50S					
CF100S	1W	400V	800V	10 $\Omega$ -1M	1 $\Omega$ -10M
CF100	1W	500V	1000V	10 $\Omega$ -1M	1 $\Omega$ -10M
CF200S	2W	600V	1100V	10 $\Omega$ -1M	1 $\Omega$ -10M
CF300	3W	650V	1200V	10 $\Omega$ -1M	1 $\Omega$ -10M

\*Max working voltage determined by  $E = \sqrt{PR}$ . E not to exceed value listed in column above.

\*\* CF25 available up to 100 Meg $\Omega$  in 10% tolerance.

### P/N DESIGNATION:

**CF50S - 102 - J T**

RCD Type: CF (std) or CFF (flameproof)

**3-Digit Resis. Code:** 2 signif. digits & multiplier (1R0=1 $\Omega$ , 101=100 $\Omega$ , 102=1K $\Omega$ , 104=100K $\Omega$ , etc.)

**Tolerance:** G= 2%, J= 5%(std up to 10M), K=10% (std over 10M)

**Packaging:** B=Bulk, T=Tape&Reel, A=Ammo Pack (Tape & Box), TAV = Avisert T&R, TPN = Panasert T&R, C=cut reel