

CARBON FILM RESISTORS

CF SERIES 1/8 - 3 Watt



RESISTOR

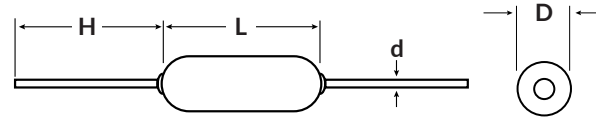


FEATURES

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

Widest range in the industry!

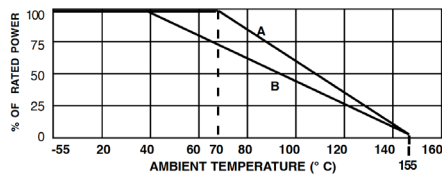
RCD Series CF resistors are designed for general purpose applications. Multilayer coating and color band marking are resistant to industrial solvents and humidity. Standard terminal is RoHS-compliant tinned-copper or copperclad. New miniature sizes enable significant space savings due to optimization of thermally conductive materials. CF22 is 1/4W in 1/8W size and is designed for mounting spans as small as 0.20 [5.0]. CF50A is 1/2W in 1/4W size, CF100S is 1W in 1/2W size.



RCD TYPE	WATTAGE RATING (W)	MAX WORKING VOLTAGE ¹ (V)	MAX OVERLOAD VOLTAGE (V)	RESISTANCE RANGE			DIMENSIONS In [mm]			H MIN *	REEL SIZE
				G $\pm 2\%$	J $\pm 5\%$	L ± 0.032 [0.80]	D ± 0.020 [0.50]	d ± 0.004 [0.10]			
Mini 1/4W	CF12	1/8	200	400	10 Ω - 220K	1 Ω - 10M	0.145 [3.7]	0.062 [1.5]	0.020 [0.50]	1.0 [25]	5000
	CF22	1/4	250	500	10 Ω - 1M	1 Ω - 10M	0.134 [3.4]	0.067 [1.7]	0.020 [0.50]	1.0 [25]	5000
	CF25	1/4	250	500	10 Ω - 1M	1 Ω - 22M ²	0.250 [6.4]	0.090 [2.3]	0.022 [0.55]	1.0 [25]	5000
Mini 1/2W	CF50S	1/2	350	700	10 Ω - 1M	1 Ω - 10M	0.354 [9.0]	0.125 [3.2]	0.024 [0.60]	1.0 [25]	4000
	CF50A	1/2	350	700	10 Ω - 1M	1 Ω - 10M	0.250 [6.4]	0.090 [2.3]	0.022 [0.55]	1.0 [25]	5000
Mini 1W	CF100S	1	400	800	10 Ω - 1M	1 Ω - 10M	0.354 [9.0]	0.148 [3.7]	0.026 [0.65]	1.0 [25]	2500
	CF100	1	500	1000	10 Ω - 1M	1 Ω - 10M	0.470 \pm 0.050 [11.9 \pm 1.3]	0.180 \pm 0.032 [4.6 \pm 8.0]	0.030 [0.75]	1.0 [25]	2000
	CF200S	2	600	1100	10 Ω - 1M	1 Ω - 10M	0.630 \pm 0.080 [16.0 \pm 2.0]	0.210 \pm 0.050 [5.3 \pm 1.3]	0.030 [0.75]	1.0 [25]	1000
	CF300	3	650	1200	10 Ω - 1M	1 Ω - 10M	0.710 \pm 0.080 [18.0 \pm 2.0]	0.250 \pm 0.050 [6.4 \pm 1.3]	0.030 [0.75]	1.0 [25]	1000

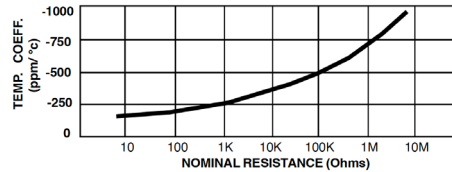
* Lead length for bulk packaged parts, taped parts may be shorter. (Non-standard lengths and cut & formed leads available)
¹ Max working voltage determined by $E = \sqrt{PR}$, E not to exceed value listed in column above.
² CF25 available up to 100 M Ω in $\pm 10\%$ tolerance.

DERATING

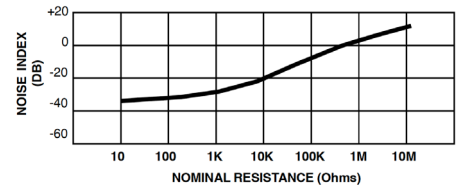


W and V to be derated per graph A when ambient temperature exceeds 70°C (40°C for CF100S & CF300 per graph B).

TEMPERATURE COEFFICIENT (TYP)



CURRENT NOISE (TYP)



TYPICAL PERFORMANCE

Load Life (1000 hours)	$\pm 1\%$ (standard), $\pm 2\%$ mini
Shelf Life @ 25°C (1 year)	$\pm 1\%$
Effect of Solder	$\pm 0.30\%$
Moisture Resistance	Standard $\pm 2\%$ <100K, $\pm 3\%$ >100K Flameproof $\pm 3\%$ <100K $\pm 5\%$ >100K
Short-Time Overload	$\pm 0.50\%$ (standard), $\pm 1\%$ mini
Shock & Vibration	$\pm 0.20\%$
Terminal Strength	$\pm 0.20\%$
Temperature Cycling	$\pm 0.50\%$
Insulation Resistance (M Ω MIN)	10,000
Voltage Coefficient (PPM/Volt)	10
Dielectric Strength (V)	Standard 500
	CF12 & CF22 300

PART NUMBER DERIVATION

CF50S - 102 - J T W

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

Resistance Code: 2 signif. digits & mult.
 ex: 1R0 = 1 Ω , 100 = 10 Ω , 101 = 100 Ω , 102 = 1K Ω
 103 = 10K, 104 = 100K, 105 = 1M, 106 = 10M, 107 = 100M, etc.

Tolerance: G = $\pm 2\%$, J = $\pm 5\%$ (standard up to 10M), K = $\pm 10\%$ (standard $\geq 10M$)

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

Termination: W = RoHS, Q = Sn/Pb
 (leave blank if both are acceptable)