CF/CFM Series

Carbon Film Resistor

Stackpole Electronics, Inc.

Resistive Product Solutions

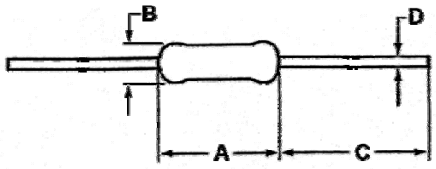
Features:

- General purpose resistor ideal for commercial/industrial applications
- Flame retardant coatings standard
- Flameproof version available as CFF
- Panasert available on selected sizes; contact factory
- Auto sequencing/insertion compatible
- CFM (mini) ideal choice when size constraints apply
- Cut and formed product is available on select sizes; contact factory
- Standard lead wire for CF/CFM is copper plated steel, with 100% tin over plate
- 100% tin plate on copper wire is available as type CFQ/CFQM
- RoHS compliant / lead-free

Electrical Specifications

Type / Code	Power Rating (Watts) @ 70ºC	Maximum Working Voltage (1)	Maximum Overload Voltage	Dielectric Withstanding Voltage	Ohmic Range (Ω) and Tolerance	
					2%	5%
CF 1/8	0.125W	250V	500V	350V	10 - 1M	1 - 22M
CF 1/4	0.25W	350V	600V	350V	1 - 1M	1 - 22M
CF 1/2	0.5W	350V	700V	600V	10 - 1M	1 - 10M
CF 1	1W	500V	1,000V	600V	1 - 1M	1 - 10M
CF 2	2W	500V	1,000V	600V	10 - 1M	1 - 10M
CFM 1/4	0.25W	250V	500V	350V	10 - 1M	1 - 10M
CFM 1/2	0.5W	350V	600V	350V	10 - 1M	1 - 10M
CFM 1	1W	600V	1,000V	600V	10 - 1M	1 - 10M

(1) Lesser of √PR or maximum working voltage.



Mechanical Specifications

Type / Code	A Body Length	B Body Diameter	C Lead Length(Bulk)	D Lead Diameter	Units
CF 1/8	0.13 ± 0.01 3.3 ± 0.3	0.07 ± 0.01 1.7 ± 0.3	1.10 ± 0.12 28.0 ± 3.0	0.018 ± 0.003 0.45 ± 0.08	inches mm
CF 1/4	0.26 ± 0.02 6.5 ± 0.05	0.09 ± 0.01 2.3 ± 0.3	1.10 ± 0.12 28.0 ± 3.0	0.022 ± 0.003 0.55 ± 0.08	inches mm
CF 1/2	0.33 ± 0.04 8.5 ± 1.0	0.11 ± 0.02 2.7 ± 0.5	1.18 ± 0.12 30.0 ± 3.0	0.022 ± 0.002 0.56 ± 0.05	inches mm
CF 1	0.43 ± 0.04 11.0 ± 1.0	0.18 ± 0.02 4.5 ± 0.5	1.18 ± 0.12 30.0 ± 3.0	0.028 ± 0.004 0.70 ± 0.1	inches mm
CF 2	0.59 ± 0.04 15.0 ± 1.0	0.20 ± 0.02 5.0 ± 0.5	1.18 ± 0.12 30.0 ± 3.0	0.031 ± 0.004 0.8 ± 0.1	inches mm
CFM 1/4	0.13 ± 0.01 3.3 ± 0.3	0.07 ± 0.01 1.7 ± 0.3	1.10 ± 0.12 28.0 ± 3.0	0.018 ± 0.003 0.45 ± 0.08	inches mm
CFM 1/2	0.26 ± 0.04 6.5 ± 1.0	0.09 ± 0.01 2.3 ± 0.3	1.10 ± 0.12 28.0 ± 3.0	0.022 ± 0.003 0.55 ± 0.08	inches mm
CFM 1	0.35 ± 0.02 9.0 ± 0.5	0.14 ± 0.02 3.5 ± 0.5	1.10 ± 0.12 28.0 ± 3.0	0.024 ± 0.002 0.6 ± 0.05	inches mm

Performance Characteristics		
Test	Standard / Method	Test Results
Short Time Overload	EIA-RS-172-B 3.2.6	± 0.5%
Resistance to Solder Heat	MIL-STD 202 Method 210	± 0.5%
Dielectric Withstanding Voltage	JIS C 5202 5.6	± 0.5%
Load Life	MIL-STD 202 Method 108	± 1%
Terminal Strength	MIL-STD 202 Method 211	± 0.2%
Moisture Resistance	MIL-STD 202 Method 106	± 0.5%

Operating Temperature Range: -55°C to +155°C

How to Order

SEI Type	Code	Nominal Resistance	Tolerance	Packaging
CF	1/2	100K	5%	R

Code	Description
CF	Standard
CFF	Flameproof
CFM	Mini
PCF	Panasert CF 1/4
PCFM	Panasert CF 1/2
CFQ	Tin plating on copper wire
CFQM	Tin plating (mini)
PCFQ	Tin plating on copper wire Panasert

Code	Wattage
1/8	0.125W
1/4	0.25W
1/2	0.5W
1	1W
2	2W

Tolerance
2%
5%

Code →	A	R	T
SEI Types	Bulk	Tape & Reel	Tape & Box (Ammo Box)
CF 1/8, CFM 1/4, CF 1/4, CFM 1/2	1,000	5,000	5,000
CF 1/2	1,000	5,000	2,000
CFM 1	1,000	5,000	5,000
CF 1	1,000	2,000	1,000
CF 2	1,000	1,000	1,000
PCF 1/4, PCFM 1/2	N/A	5,000	2,000

New part number format starting January 3rd, 2011:

How to Order

1	2	3	4	5	6	7	8	9	10
C	F	1	2	J	T	1	0	0	K

Product Series	
CF	Standard
CFF	Flameproof
CFM	Mini
PCF	Panasert CF14
PCFM	Panasert CF12
CFQ	Tin plating on copper wire
CFQM	Tin plating (mini)
PCFQ	Tin plating on copper wire Panasert

Size	Power Rating
18	0.125W
14	0.25W
12	0.5W
1	1W
2	2W

Tolerance	
Code	Tol
G	2%
J	5%

Code	Description	Size	Quantity
B	bulk	CF18, CFM14, CF14, CFM12 CF12, CFM1, CF1, CF2	1,000
T	tape and reel	CF18, CFM14, CF14, CFM12, CF12, CFM1, PCF14, PCFM12	5,000
		CF1	2,000
		CF2	1,000
A	ammo	CF18, CFM14, CF14, CFM12, CFM1	5,000
		CF12, PCF14, PCFM12	2,000
		CF1, CF2	1,000

Resistance Value
Four characters with the multiplier used as the decimal holder.
10 ohm = 10R0 10.2 Kohm = 10K2 1 Mohm = 1M00