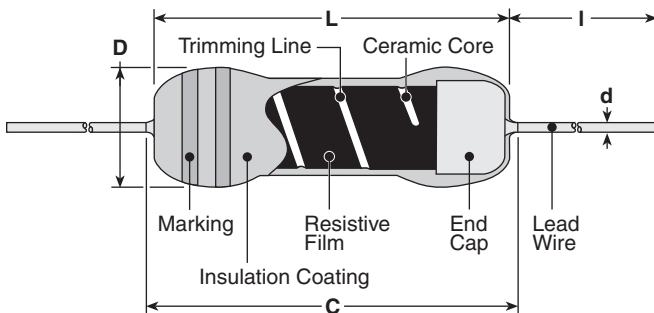


### features

- Flameproof coating is available (specify "CFP")
- Reduced body size (specify "CFS/CFPS")
- Suitable for automatic machine insertion
- Marking: Beige body color with color-coded bands on CF  
Green body color with color-coded bands on CFP  
Ivory body color with color-coded bands on CFS1/4
- Products with lead-free terminations meet EU RoHS and China RoHS requirements

### dimensions and construction



Type	Dimensions inches (mm)				
	L	C (max.)	D	d (nom.)	I
CFS1/4 CFPS1/4	.126±.008 (3.2±0.2)	.134 (3.4)	.067±.008 (1.7±0.2)	.018 (0.45)	0.008 Min. (20.0 Min.)
CF1/4 CFP1/4	.240±0.2 (6.1±0.5)	.280 (7.1)	.092±.012 (2.3±0.3)	.024 (0.6)	
CF1/2 CFP1/2	.335±0.2 (8.5±0.5)	.374 (9.5)	.118±.012 (3.0±0.3)	.028 (0.7)	
CFS1/2 CFPS1/2	.248±.02 (6.3±0.5)	.280 (7.1)	.112±.012 (2.85±0.3)	.024 (0.6)	

### ordering information

New Part #	CF	1/4	C	T52	R	103	J
Type	CF CFP	Power Rating S1/4: 0.25W 1/4: 0.25W 1/2: 0.5W S1/2: 0.5W	Termination Material C: SnCu	Taping and Forming Axial: T26, T52, L52 Radial: VT, MT, MHT, VTP, VTE U Forming: U, UCL M Forming: M5, M10, M12.5 L Forming: L10, L12.5	Packaging A: Ammo R: Reel	Nominal Resistance 2 significant figures + 1 multiplier "R" indicates decimal on value <10Ω	Tolerance G: ±2% J: ±5%

For further information on packaging, please refer to Appendix C.

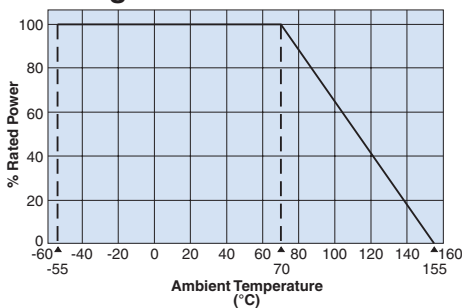
## applications and ratings

Part Designation	Power Rating @ 70°C	Minimum Dielectric Withstanding Voltage	T.C.R. (ppm/°C)				Resistance Range E-24 (G±2%)	Resistance Range E-24 (J±5%)	Absolute Maximum Working Voltage	Absolute Maximum Overload Voltage				
			+350 to -450	0 to -700	0 to -1000	0 to -1300								
CFS1/4	0.25W	300V	2.2Ω - 47kΩ	51kΩ - 100kΩ	110kΩ - 330kΩ	360kΩ - 1MΩ	10Ω - 330kΩ	2.2Ω - 1MΩ	250V	500V				
CFPS1/4							10Ω - 100kΩ	2.2Ω - 1MΩ						
CF1/4		500V	2.2Ω - 100kΩ	110kΩ - 330kΩ	360kΩ - 1MΩ	1.1MΩ - 5.1MΩ	10Ω - 1MΩ	2.2Ω - 5.1MΩ	300V	600V				
CFP1/4	2.2Ω - 1MΩ													
CF1/2*	0.50W	700V	2.2Ω - 100kΩ	110kΩ - 1MΩ	1.1MΩ - 2.2MΩ	2.4MΩ - 5.1MΩ	10Ω - 1MΩ	2.2Ω - 5.1MΩ	400V	800V				
CFP1/2*								2.2Ω - 1MΩ						
CFS1/2								2.2Ω - 91kΩ	100kΩ - 1MΩ	1.1MΩ - 2.2MΩ	2.4MΩ - 5.1MΩ	2.2Ω - 5.1MΩ	350V	700V
CFPS1/2														

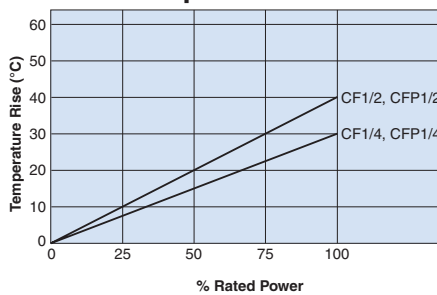
\* Not recommended for new designs.

## environmental applications

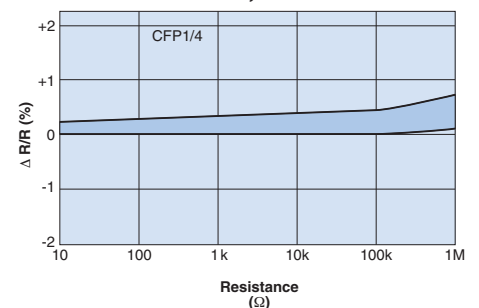
### Derating Curve



### Surface Temperature Rise



### Load Life @ 70°C, 1000 Hr



## Performance Characteristics

Parameter	Requirement Δ R ±(% + 0.05Ω)		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	Measuring points are at 10mm ±1mm from the end cap.
T.C.R.	Within specified T.C.R.	—	Room temperature +100°C
Overload (Short time)	±1%	±0.5%	Rated voltage x 2.5 or max. overload voltage for 5 seconds, whichever is lower
Resistance to Solder Heat	±1%	±0.5%	260°C ±5°C, 10 seconds ± 1 second
Terminal Strength	No lead-coming off and loose terminals	—	Twist 360°C, 5 times
Rapid Change of Temperature	±1%	±0.5%	-55°C (30 minutes), +125°C (30 minutes), 5 cycles
Moisture Resistance	±5%	±2.5%	40°C ± 2°C, 90 - 95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	±3%	±1.5%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle