CFS Carbon Film Resistor

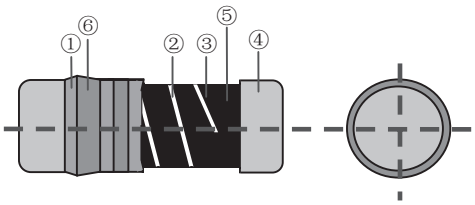
Features

—SMD style carbon resistor
—Free direction for mounting due to cylindrical design
—High solder ability due to specially plated electrodes
—Electrodes strength is higher than flat chip resistors
—Lower current noise than thick film flat chip resistors
—Suitable for reflow, flow and iron soldering

Applications

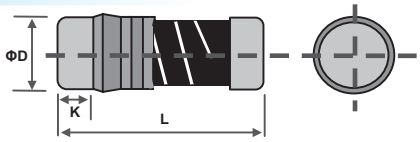
—Automotive
—Telecommunication
—Medical Equipment
—Consumer Product

Construction



①	Insulation Coating	④	Electrode Cap
②	Trimming Line	⑤	Resistor Layer
③	Ceramic Rod	⑥	Marking

Dimensions



Type	L	ΦD mm	K mm	Weight(g) (1000pcs)	Packaging	
					180mm/7"	330mm/13"
CFS0204	3.50±0.20	1.40±0.15	0.5	19	3000EA	—
CFS0207	5.90±0.20	2.20±0.20	0.5	81	2000EA	—
CFS0309	8.50±0.20	3.20±0.20	0.5	95	—	2500EA

Ordering Information

Example:

CFS	0204	J	T	D	1/4	10R0
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Series Name	Dimensions	Resistance Tolerance	Packaging code	TCR	Power Rating	Resistance

(1)Type:CFS Series

(2)Dimensions(ΦDxL): 0204:Φ1.4x3.5mm; 0207:Φ2.2x5.9mm;; 0309:Φ3.2x8.5mm

(3)Resistance Tolerance: J=±5%、G=±2%

(4)Packaging code: T=Taping Reel、B=Bulk

(5)TCR:±500PPM/℃,±1000PPM/℃

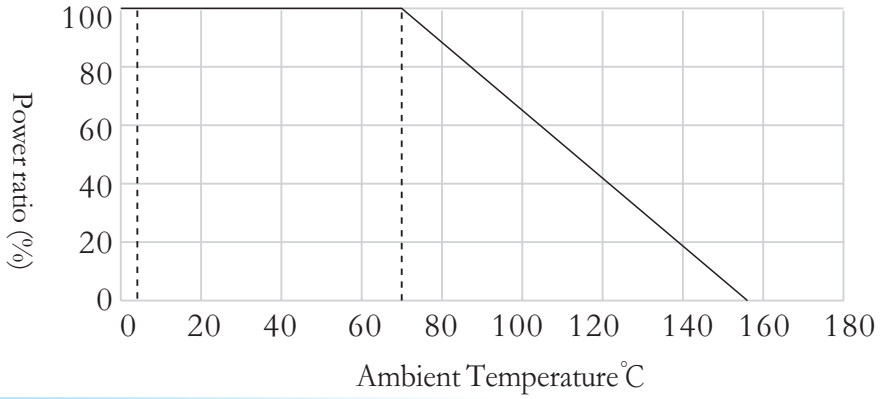
(6)Power Rating:1/4=1/4W、1/8=1/8W、1=1W、1/2=1/2W

(7)Resistance:10R0=10Ω、2200R0=2.2KΩ、R050=0.05Ω、R100=0.1Ω

Reference Standards

IEC 60115-1

Derating Curve



Standard Electrical Specifications

Item / Type	Power Rating at 70℃	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range	
					±2%	±5%
0204	1/4W	-55~+155℃	250V	500V	1Ω~1MΩ	
0207	1/2W		300V	600V	1Ω~1MΩ	
0309	1W		350V	700V	1Ω~1MΩ	

High Power Rating Electrical Specifications

Item / Type	Power Rating at 70℃	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range	
					±2%	±5%
0207	1W	-55~+155℃	350V	700V	1Ω~1MΩ	
0309	2W		350V	700V	1Ω~1MΩ	

Environmental Characteristics

Item	Requirement	Test Method
Short Time Overload	ΔR ± 1%	RCWV*2.5 or Max. overload voltage for 5 seconds
Endurance	ΔR ± 3%	70 ± 2℃,Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Damp Heat with Load	ΔR ± 5%	40 ± 2℃, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Dry Heat	ΔR ± 2%	at +155℃ for 1000 hrs
Solderability	95% min. coverage	245 ± 5℃ for 3 seconds
Resistance to Soldering Heat	ΔR ± 1%	260 ± 5℃ for 10 seconds

- Reference Standards: IEC 60115-1;JIS-C 5201-1
- Storage Temperature: 25 ± 3℃; Humidity < 80%RH