



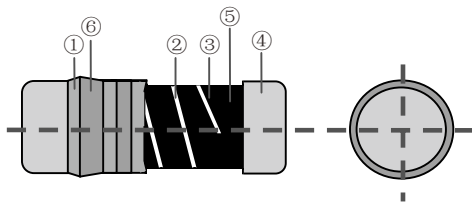
● Features

- 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

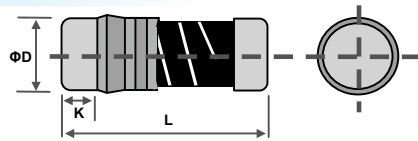
- Automotive
- Telecommunication
- Medical Equipment
- Consumer Product

● 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/°C,±1000PPM/°C

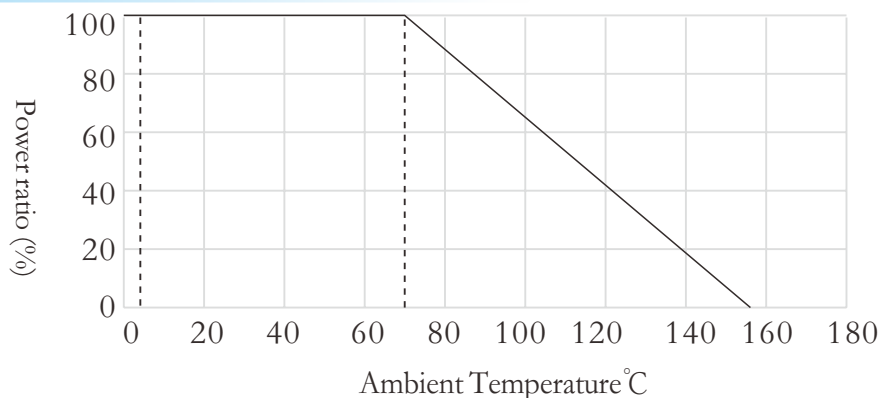
(6)Power Rating:1/4=1/4W、1/8=1/8W、1=1W、1/2=1/2W

(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°C	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range	
					± 2%	± 5%
0204	1/4W	-55~+155°C	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°C	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range	
					± 2%	± 5%
0207	1W	-55~+155°C	350V	700V	1Ω~1MΩ	
0309	2W		350V	700V	1Ω~1MΩ	

Environmental Characteristics

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

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