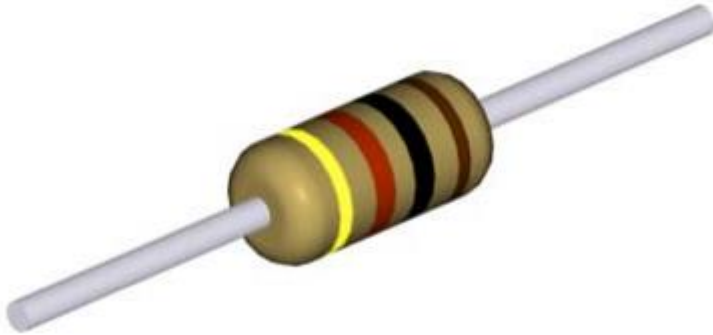


**Professionally approved products.**

## **Datasheet**

**RS Series Axial Carbon Resistor 10k $\Omega$   $\pm$ 5% 0.5W -500  
→ +350ppm/ $^{\circ}$ C**

RS Stock number [707-8300](#)



### ■ **Features**

- The most economic industrial investment
- Standard tolerance:  $\pm$ 5%
- Excellent long term stability
- Termination: Standard solder-plated copper lead

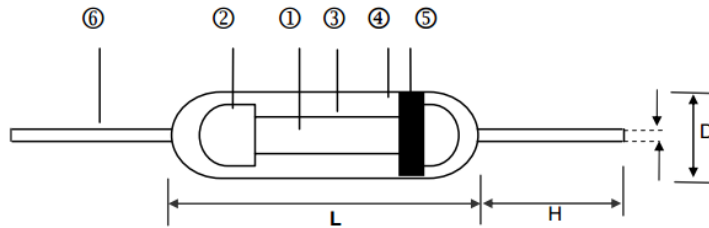
### ■ **Applications**

- Automotive
- Telecommunication
- Medical Equipment

# Professionally approved products.

## Datasheet

### Construction



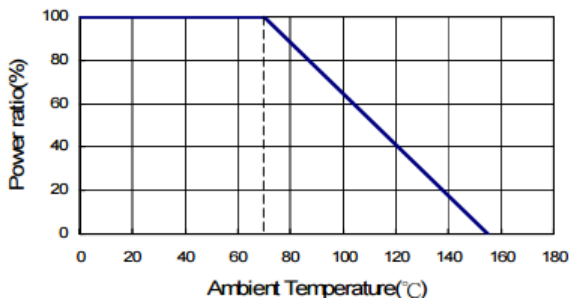
① Ceramic Rod	④ Non-flame Paint With Sol Vent-proof
② Tinned Iron Caps	⑤ Colour Code
③ Carbon Film	⑥ Lead Wire

### Dimensions

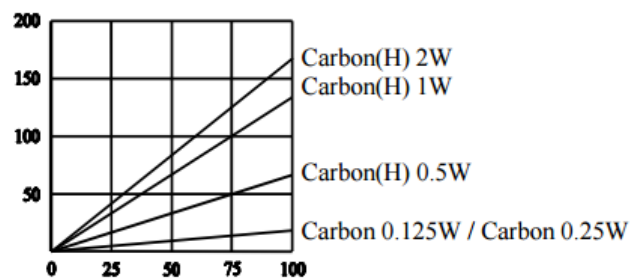
Unit: mm

Type	L	D	H	d	Weight (g) (1000pcs)
Carbon 0.125W	3.3+0.4/-0.2	1.8±0.3	29.3±2.0	0.452.3±0.03	92
Carbon 0.25W	6.3±0.5	2.3±0.3	28±2.0	0.55±0.03	155
Carbon 0.5W (H)	6.3±0.5	2.3±0.3	28±2.0	0.55±0.03	155
Carbon 1W (H)	9.0±0.5	3.2±0.5	26±2.0	0.65±0.03	352
Carbon 2W (H)	11.5±1.0	4.5±0.5	35±2.0	0.78±0.03	775

### Derating Curve



### Hop-Spot Temperature



# Professionally approved products.

## Datasheet

### ■Electrical Specifications

Type \ Item	Power Rating at 70°C	Operating Temp. Range	Max. Working Voltage	Max. Overload Voltage	Dielectric Withstanding Voltage	Resistance Range
						±5%
Carbon	0.125W	-55 ~ +155°C	150V	300V	300V	0.1Ω - 22MΩ
Carbon	0.25W		250V	500V	500V	1Ω - 10MΩ
Carbon(H)	0.5W		300V	500V	500V	0.1Ω - 22MΩ
Carbon(H)	1W		400V	800V	800V	1Ω - 10MΩ
Carbon(H)	2W		500V	1000V	1000V	0.1Ω - 10MΩ

### ■Environmental Characteristics

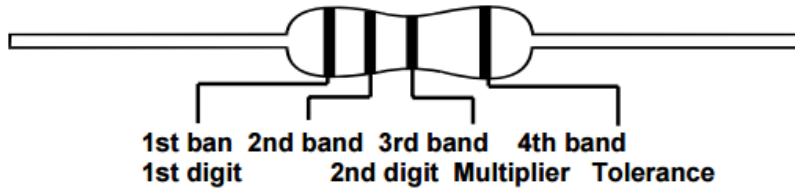
Item	Requirement	Test Method
Short Time Overload	±(0.75%+0.05Ω)	<b>JIS-C-5201-1 5.5</b> RCWV*2.5 or Max. overload voltage for 5 seconds
Insulation Resistance	> 1000MΩ	<b>JIS-C-5201-1 5.6</b> Apply 100V <sub>DC</sub> for 1 minute
Endurance	±(3%+0.05Ω)	<b>JIS-C-5201-1 7.10</b> 70±2°C, Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Damp Heat with Load	□100KΩ±3% □100KΩ±5%	<b>JIS-C-5201-1 7.9</b> 40±2°C, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Solderability	90% min. Coverage	<b>JIS-C-5201-1 6.5</b> 245±5°C for 3 seconds
Dielectric Withstanding Voltage	By Type	<b>JIS-C-5201-1 5.7</b> Apply Max. Overload Voltage for 1 minute
Temperature Coefficient	< 100KΩ +350ppm~-500ppm 100KΩ~1MΩ -0ppm~-700ppm > 1 MΩ -0ppm~-1500ppm	Resistance value at room temperature and room Temperature+100°C
Pulse Overload	±(1%+0.05Ω)	<b>JIS-C-5201-1 5.8</b> 4 times RCWV for 10000 cycles with 1 second "ON" and 25 seconds "OFF"
Resistance To Solvent	No deterioration of coatings and markings	<b>JIS-C-5201-1 6.9</b> Trichroethane for 1 min. with ultrasonic
Terminal Strength	Tensile: □2.5 kg	Direct Load for 10 seconds In the direction off the terminal leads

■ Rated Continuous Working Voltage(RCWV) =  $\sqrt{P \cdot R}$

■ Storage Temperature: 25±3°C; Humidity < 80%RH

# Professionally approved products. Datasheet

## ■ Marking & Resistance Tolerance



±5%	E-24	1.0	1.1	1.2	1.3	1.5	1.6	1.8	2.0	2.2	2.4	2.7	3.0	3.3	3.6	3.9	4.3	4.7	5.1	5.6	6.2	6.8	7.5	8.2	9.1
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Color	Digit	Multiplier	Tolerance	
Without	-	-	-	-
Silver	-	10 <sup>-2</sup>	-	-
Gold	-	10 <sup>-1</sup>	±5.0%	J
Black	0	10 <sup>0</sup>	-	-
Brown	1	10 <sup>1</sup>	-	-
Red	2	10 <sup>2</sup>	-	-
Orange	3	10 <sup>3</sup>	-	-
Yellow	4	10 <sup>4</sup>	-	-
Green	5	10 <sup>5</sup>	-	-
Blue	6	10 <sup>6</sup>	-	-
Violet	7	10 <sup>7</sup>	-	-
Grey	8	10 <sup>8</sup>	-	-
White	9	10 <sup>9</sup>	-	-