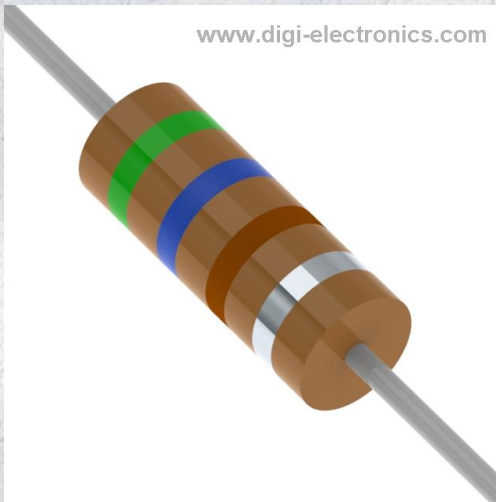


RC1KB560R Datasheet



<https://www.DiGi-Electronics.com>

| | |
|------------------------------|--|
| DiGi Electronics Part Number | RC1KB560R-DG |
| Manufacturer | Stackpole Electronics Inc |
| Manufacturer Product Number | RC1KB560R |
| Description | RES 560 OHM 10% 1W AXIAL |
| Detailed Description | 560 Ohms \pm 10% 1W Through Hole Resistor Axial Non-Inductive, Pulse Withstanding Carbon Composition |

This model RC1KB560R is available at DiGi Electronics.

DiGi Electronics offers a global database of semiconductor and electronic component datasheets.

We welcome your inquiries regarding pricing, lead time, or other product-related questions.

 [Request a Quote](#)

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Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

RC1KB560R

Series:

RC

Resistance:

560 Ohms

Power (Watts):

1W

Features:

Non-Inductive, Pulse Withstanding

Operating Temperature:

-55°C ~ 125°C

Supplier Device Package:

Axial

Height - Seated (Max):

-

Failure Rate:

-

Manufacturer:

Stackpole Electronics Inc

Product Status:

Obsolete

Tolerance:

±10%

Composition:

Carbon Composition

Temperature Coefficient:

-

Package / Case:

Axial

Size / Dimension:

0.224" Dia x 0.563" L (5.70mm x 14.30mm)

Number of Terminations:

2

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8533.10.0060

Moisture Sensitivity Level (MSL):

Not Applicable

ECCN:

EAR99

RC Series

Carbon Composition Resistor

Stackpole Electronics, Inc.
Resistive Product Solutions

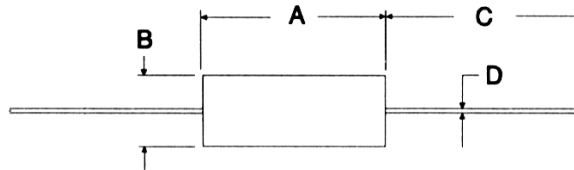
- Features:
- Non-inductive design
 - Molded body for package uniformity
 - Ideal for pulse-load handling characteristics
 - 1W now available
 - RoHS compliant / lead-free



Electrical Specifications

| Type / Code | Power Rating (Watts) @ 70°C | Maximum Continuous Working Voltage (1) | Maximum Pulse Voltage | Dielectric Withstanding Voltage | Ohmic Range (Ω) and Tolerance | |
|-------------|-----------------------------|--|-----------------------|---------------------------------|--|----------|
| | | | | | 5% | 10% |
| RC14 | 0.25W | 250V | 400V | 500V | 2.2 - 5.6M | 1 - 5.6M |
| RC12 | 0.5W | 350V | 700V | 700V | 1 - 22M | 1 - 22M |
| RC1 | 1W | 500V | 1,000V | 1,000V | - | 2.2 - 1M |

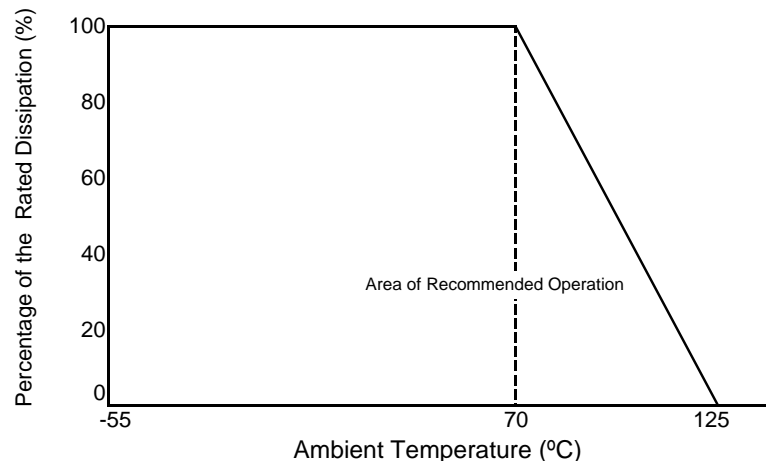
(1) Lesser of \sqrt{PR} or maximum working voltage.



Mechanical Specifications

| Type / Code | A Body Length | B Body Diameter | C Lead Length (Bulk) | D Lead Diameter | Unit |
|-------------|---|------------------------------|-------------------------------|---|--------------|
| RC14 | 0.248 ± 0.028 6.30 ± 0.70 | 0.094 ± 0.004 2.40 ± 0.10 | 1.181 ± 0.118 30.00 ± 3.00 | 0.024 ± 0.002 0.60 ± 0.05 | inches mm |
| RC12 | 0.374 + 0.031 / -0.028 9.50 + 0.80 / -0.70 | 0.142 ± 0.008 3.60 ± 0.20 | 1.102 ± 0.118 28.00 ± 3.00 | 0.028 + 0.003 / -0.002 0.70 + 0.07 / -0.05 | inches mm |
| RC1 | 0.563 ± 0.028 14.30 ± 0.70 | 0.224 ± 0.012 5.70 ± 0.30 | 1.024 ± 0.118 26.00 ± 3.00 | 0.035 ± 0.002 0.90 ± 0.05 | inches mm |

Power Derating Curve:



RC Series

Carbon Composition Resistor

Stackpole Electronics, Inc.
Resistive Product Solutions

| Resistance Temperature Characteristics | | | |
|--|------------|-----------|---|
| Resistance Range | -55°C | +105°C | Maximum % resistance change from room temperature (+25°C) value |
| Under 1K | +2 to +5 | -4 to -2 | |
| 1K to 9.1K | +5 to +9 | -5 to -3 | |
| 10K to 91K | +8 to +11 | -7 to -5 | |
| 100K to 910K | +10 to +14 | -9 to -7 | |
| 1M to 10M | +13 to +20 | -14 to -9 | |

| Performance Characteristics (JISC 5201 - 1:1998) | | |
|--|---|--|
| Test | Test Results | Test Method |
| Voltage Proof | No breakdown or flashover | V-block method RC 1/4 100 VAC, 60 seconds RC 1/2 500 VAC, 60 seconds |
| Overload | $\pm 2\% + 0.05\Omega$ No visible damage, legible markings | 2.5 times the rated voltage or twice the limiting element voltage, whichever is less. Severe, 5 seconds. |
| Termination Strength | Tensile: $\pm 2\% + 0.05\Omega$. No visible damage Bending: $\pm 2\% + 0.05\Omega$. No visible damage Torsion: $\pm 2\% + 0.05\Omega$. No visible damage | 10N for 5 - 10 seconds 5N, twice 180°C, two rotations |
| Solderability | In accordance with Clause 4.17.4.5 | 235°C, 5 seconds |
| Resistance to Soldering Heat | $\pm 3\% + 0.05\Omega$ No visible damage, legible markings | After immersion into flux, the immersion into solder shall be carried out 4mm from the body at 350°C for 3.5 seconds |
| Temperature Shock | $\pm 2\% + 0.05\Omega$ No visible damage. | 5 cycles between -55°C to 125°C |
| Climatic Sequence | $\pm 10\% + 0.5\Omega$ | Dry/Damp heat: 12 + 12 hour cycle, first cycle Cold/Damp heat: 12 + 12 hour cycle, remaining cycle D.C. load |
| Damp Test, Steady State | $\pm 10\% + 0.5\Omega$ Insulation resistance: $R \geq 100M$ ohm. No visible damage, legible markings | 40°C 95% relative humidity for 56 days, test a, b and c of Clause 4.24.2.1 |
| Endurance @ 70°C | $\pm 10\% + 0.5\Omega$ Insulation resistance: $R \geq 1G$ ohm. No visible damage. | Rated voltage, 1.5 hours ON, 0.5 hours OFF at 70°C, 1,000 hours |
| Endurance @ 125°C | $\pm 10\% + 0.5\Omega$ Insulation resistance: $R \geq 1G$ ohm. No visible damage. | 125°C, no load, 1,000 hours |

Operating Temperature Range: -55°C to +125°C

| Reliability Test – Load Life in Moisture | | | | | | | |
|--|---------------------|--------------------------|---------------------------|---------------|----------------------|--|---------------------|
| Criteria (%) | Load Ratio P/Pn (%) | Total Testing Time (Hrs) | Number of Fractures (pcs) | Failure Ratio | | Average Lifetime (60% reliability level) (Hrs) | |
| | | | | λ | λ_{CL} (60%) | | |
| $\Delta R/R$ | ± 5 | 0 | 2.984×10^6 | 6 | 0.201 | 0.244 | 4.098×10^5 |
| | | 20 | 2.990×10^6 | 4 | 0.134 | 0.176 | 5.682×10^5 |
| | | 60 | 2.997×10^6 | 2 | 0.067 | 0.104 | 9.615×10^5 |
| | | 100 | 2.992×10^6 | 3 | 0.1 | 0.139 | 7.194×10^5 |
| | | Total | 1.196×10^7 | 15 | 0.125 | 0.138 | 7.209×10^5 |
| | ± 10 | Total | 1.2×10^7 | 0 | 0.0055 | 0.0077 | 1.299×10^7 |

RC Series

Carbon Composition Resistor

Stackpole Electronics, Inc.
Resistive Product Solutions

Technical Guide:

1. Storage Conditions:

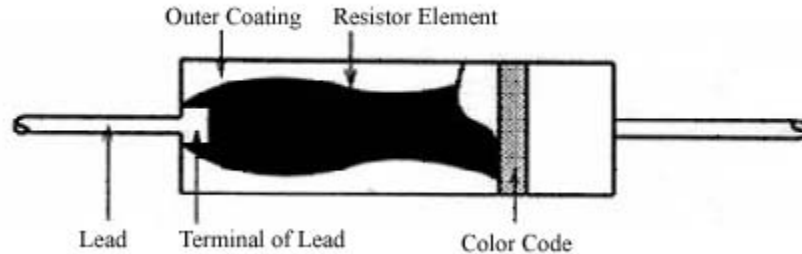
Temperature: 5 to 35°C (40 to 95°F)
 Humidity: 25 – 60% relative humidity
 Term: One year in poly-bag with desiccant. If parts are removed from the poly-bag, they should be used immediately or resealed in the bag.
 Environment: Clean, dry environment, free of corrosive gases

2. Application precautions:

Lead forming: Forming is recommended at least 2mm of farther from the base of the lead
 Soldering: Soldering is recommended at least 4mm or farther from the base of the lead

3. Washing:

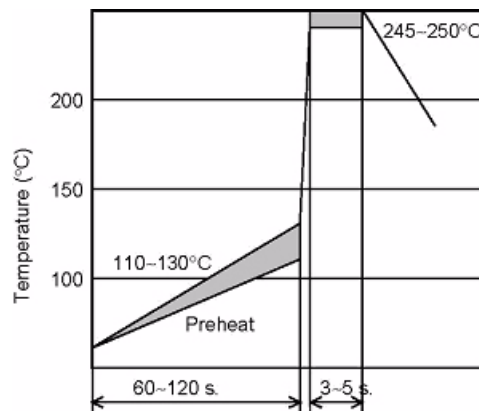
Carbon composition resistors are highly hygroscopic and changes in resistance value can occur if too much moisture is absorbed. For this reason it is recommended not to use water or water-soluble solvents to clean these components. Alcohol or hydrocarbon solvents are recommended for rinsing.



4. Soldering Recommendations:

Note: The conditions shown below are for reference. Please perform a mounting evaluation to assure compatibility.

a. Flow soldering (recommended profile for Sn and Sn/Pb solders)



b. Soldering iron (recommended for Sn and Sn/Pb solders)

Temperature of soldering tip: 300°C, duration: 10 sec. max.
 Temperature of soldering tip: 350°C, duration: 3 sec. max.

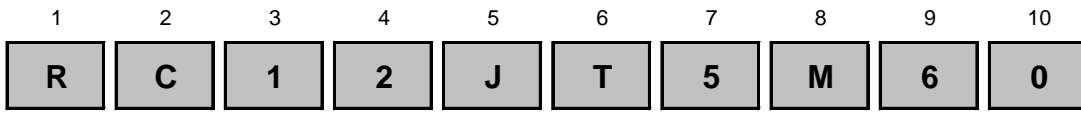
Other:

- Evaluate and confirm the compatibility of your assembly process with this product.
- Refer to the catalog, the product news, and the specifications for details on the RC series resistors.
- If you have any questions, please contact our sales staff.

RC Series
Carbon Composition Resistor

Stackpole Electronics, Inc.
Resistive Product Solutions

How to Order



| Product Series | |
|----------------|-------------|
| RC | Carbon Comp |

| Size | Power Rating |
|------|--------------|
| 14 | 0.25W |
| 12 | 0.5W |
| 1 | 1W |

| Tolerance | | |
|-----------|-----|-------|
| Code | Tol | Value |
| J | 5% | E24 |
| K | 10% | |

| Packaging | | | |
|-----------|---------------|-----------|----------|
| Code | Description | Size | Quantity |
| T | Tape and Reel | 14, 12 | 5,000 |
| B | Bulk | All Sizes | 1,000 |

| Resistance Value |
|---|
| Four characters with the multiplier used as the decimal holder. |
| 1 ohm = 1R00 |
| 10 Kohm = 10K0 |
| 1 Mohm = 1M00 |

OUR CERTIFICATE

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