

## FEATURES

- Economical
- Applications include commercial, industrial and communications equipment
- Stability under high temperature conditions
- All-welded construction
- RoHS compliant; add "E" suffix to part number to specify.

## SPECIFICATIONS

### Material

**Coating:** Conformal silicone-ceramic.

**Core:** Ceramic.

**Terminals:** Solder-coated copper clad axial. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu

### Derating

Linearly from  
100% @ +25°C to  
0% @ +275°C.

### Electrical

**Tolerance:** ±5% (J type), ±1% (F type) (other tolerances available).

**Power rating:** Based on 25°C free air rating (other wattages available).

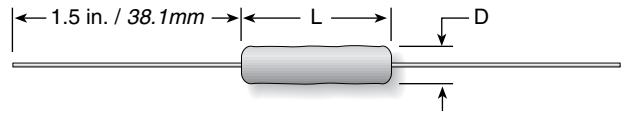
**Overload:** Under 5 watts: 5 times rated wattage for 5 seconds. 5 watts and over: 10 times rated wattage for 5 seconds.

**Temperature coefficient:** Under 1Ω: ±90 ppm/°C  
1Ω to 9.99Ω: ±50 ppm/°C  
10Ω and over: ±20 ppm/°C



# 40 Series

## Ohmicone® Silicone-Ceramic Conformal Axial Term. Wirewound, 1% and 5% Tol. Std.



| Series | Wattage | Ohms      | Dimensions (in. / mm) |              | Voltage | Lead ga. |
|--------|---------|-----------|-----------------------|--------------|---------|----------|
|        |         |           | Length                | Diam.        |         |          |
| 41     | 1.0     | 0.10-6K   | 0.437 / 11.1          | 0.125 / 3.2  | 150     | 24       |
| 42     | 2.0     | 0.10-8K   | 0.406 / 10.3          | 0.219 / 5.6  | 100     | 20       |
| 43     | 3.0     | 0.10-20K  | 0.593 / 15.1          | 0.219 / 5.6  | 200     | 20       |
| 45     | 5.0     | 0.10-70K  | 0.937 / 23.8          | 0.343 / 8.7  | 460     | 18       |
| 47     | 7.0     | 0.10-80K  | 1.280 / 32.5          | 0.343 / 8.7  | 670     | 18       |
| 40     | 10.0    | 0.10-150K | 1.900 / 48.3          | 0.406 / 10.3 | 1000    | 18       |

Non-Inductive versions available. Insert "N" before tolerance code. Example: 42NJ27R

Ohmite 40 Series resistors are the most economical conformal silicone-ceramic coated resistors offered. These all-welded units are characterized by their low temperature coefficients and resistance to thermal shock, making them ideal for a wide range of electrical and electronic applications.

Units with 1% and 5% tolerances are identical in construction and electrical specifications. Durable but economical 40 Series resistors exceed industry requirements for quality.

## ORDERING INFO

40 Series  
Ohmicone®  
Silicone Ceramic  
Conformal Axial  
Term. Wirewound

Non-Inductive  
Winding  
Optional (blank  
= std. winding)

RoHS  
Compliant

**41NJR10E**

| Wattage | Tolerance | Resistance Value |
|---------|-----------|------------------|
| 1 = 1W  | F = 1%    | R10 = 0.10Ω      |
| 2       | J = 5%    | 1R0 = 1.0Ω       |
| 3       |           | 10R = 10.0Ω      |
| 5       |           | 250 = 250Ω       |
| 7       |           | 1K0 = 1,000Ω     |
| 0 = 10W |           | 4K5 = 4,500Ω     |
|         |           | 50K = 50,000Ω    |

## STANDARD PART NUMBERS FOR 40 SERIES

| Wattage and Tolerance |                        |              |   | Wattage and Tolerance |    |             |                        | Wattage and Tolerance |   |              |   |             |                        |              |   |              |   |
|-----------------------|------------------------|--------------|---|-----------------------|----|-------------|------------------------|-----------------------|---|--------------|---|-------------|------------------------|--------------|---|--------------|---|
| Ohmic value           | Part No. Prefix Suffix | 1% Tolerance |   | 5% Tolerance          |    | Ohmic value | Part No. Prefix Suffix | 1% Tolerance          |   | 5% Tolerance |   | Ohmic value | Part No. Prefix Suffix | 1% Tolerance |   | 5% Tolerance |   |
|                       |                        | 1            | 3 | 5                     | 10 |             |                        | 1                     | 2 | 3            | 5 |             |                        | 10           | 1 | 2            | 3 |
| 0.1                   | R10                    | ✓            | ✓ | ✓                     | ✓  | 68          | 68R                    | ✓                     | ✓ | ✓            | ✓ | 2,200       | 2K2                    | ✓            | ✓ | ✓            | ✓ |
| 0.15                  | R15                    | ✓            | ✓ | ✓                     | ✓  | 75          | 75R                    | ✓                     | ✓ | ✓            | ✓ | 2,500       | 2K5                    | ✓            | ✓ | ✓            | ✓ |
| 0.2                   | R20                    | ✓            | ✓ | ✓                     | ✓  | 82          | 82R                    | ✗                     | ✓ | ✓            | ✓ | 2,700       | 2K7                    | ✓            | ✓ | ✓            | ✗ |
| 0.25                  | R25                    | ✓            | ✓ | ✓                     | ✓  | 100         | 100                    | ✓                     | ✓ | ✓            | ✓ | 3,000       | 3K0                    | ✓            | ✓ | ✓            | ✓ |
| 0.3                   | R30                    | ✓            | ✓ | ✓                     | ✓  | 120         | 120                    | ✗                     | ✓ | ✓            | ✓ | 3,300       | 3K3                    | ✗            | ✗ | ✗            | ✗ |
| 0.33                  | R33                    | ✓            | ✓ | ✓                     | ✓  | 125         | 125                    | ✓                     | ✗ | ✗            | ✓ | 3,500       | 3K5                    | ✓            | ✓ | ✗            | ✗ |
| 0.4                   | R40                    | ✓            | ✓ | ✓                     | ✓  | 150         | 150                    | ✓                     | ✓ | ✗            | ✓ | 3,900       | 3K9                    | ✓            | ✓ | ✓            | ✓ |
| 0.5                   | R50                    | ✓            | ✓ | ✓                     | ✓  | 180         | 180                    | ✓                     | ✓ | ✗            | ✓ | 4,000       | 4K0                    | ✓            | ✗ | ✗            | ✗ |
| 0.75                  | R75                    | ✓            | ✗ | ✓                     | ✓  | 200         | 200                    | ✓                     | ✓ | ✓            | ✓ | 4,500       | 4K5                    | ✗            | ✗ | ✓            | ✗ |
| 1                     | 1R0                    | ✓            | ✓ | ✓                     | ✓  | 220         | 220                    | ✓                     | ✓ | ✗            | ✓ | 4,700       | 4K7                    | ✓            | ✓ | ✗            | ✗ |
| 1.5                   | 1R5                    | ✓            | ✓ | ✓                     | ✓  | 225         | 225                    | ✗                     | ✗ | ✗            | ✗ | 5,000       | 5K0                    | ✓            | ✓ | ✓            | ✓ |
| 2                     | 2R0                    | ✓            | ✓ | ✓                     | ✓  | 250         | 250                    | ✓                     | ✓ | ✓            | ✓ | 6,000       | 6K0                    | ✗            | ✓ | ✗            | ✗ |
| 2.2                   | 2R2                    | ✓            | ✓ | ✓                     | ✓  | 270         | 270                    | ✓                     | ✓ | ✗            | ✓ | 6,800       | 6K8                    | ✓            | ✓ | ✓            | ✗ |
| 3                     | 3R0                    | ✓            | ✓ | ✓                     | ✗  | 300         | 300                    | ✓                     | ✓ | ✗            | ✓ | 7,000       | 7K0                    | ✓            | ✓ | ✗            | ✗ |
| 4                     | 4R0                    | ✓            | ✓ | ✓                     | ✓  | 330         | 330                    | ✓                     | ✓ | ✗            | ✓ | 7,500       | 7K5                    | ✓            | ✓ | ✓            | ✗ |
| 5                     | 5R0                    | ✓            | ✓ | ✓                     | ✓  | 350         | 350                    | ✗                     | ✗ | ✗            | ✗ | 8,000       | 8K0                    | ✓            | ✗ | ✗            | ✗ |
| 7.5                   | 7R5                    | ✓            | ✓ | ✓                     | ✓  | 390         | 390                    | ✗                     | ✓ | ✗            | ✗ | 9,000       | 9K0                    | ✗            | ✓ | ✗            | ✗ |
| 10                    | 10R                    | ✓            | ✓ | ✓                     | ✓  | 400         | 400                    | ✓                     | ✓ | ✓            | ✓ | 10,000      | 10K                    | ✓            | ✓ | ✓            | ✓ |
| 12                    | 12R                    | ✗            | ✓ | ✗                     | ✓  | 450         | 450                    | ✗                     | ✓ | ✗            | ✗ | 12,000      | 12K                    | ✗            | ✓ | ✗            | ✗ |
| 15                    | 15R                    | ✓            | ✓ | ✓                     | ✗  | 470         | 470                    | ✓                     | ✓ | ✗            | ✓ | 13,000      | 13K                    | ✓            | ✓ | ✗            | ✗ |
| 18                    | 18R                    | ✗            | ✓ | ✗                     | ✓  | 500         | 500                    | ✓                     | ✓ | ✓            | ✓ | 15,000      | 15K                    | ✓            | ✓ | ✗            | ✗ |
| 20                    | 20R                    | ✓            | ✓ | ✓                     | ✓  | 560         | 560                    | ✓                     | ✓ | ✗            | ✓ | 17,000      | 17K                    | ✓            | ✓ | ✗            | ✗ |
| 22                    | 22R                    | ✓            | ✓ | ✓                     | ✗  | 600         | 600                    | ✓                     | ✓ | ✓            | ✓ | 20,000      | 20K                    | ✓            | ✓ | ✓            | ✓ |
| 25                    | 25R                    | ✓            | ✓ | ✓                     | ✗  | 680         | 680                    | ✓                     | ✓ | ✗            | ✓ | 22,000      | 22K                    | ✓            | ✓ | ✓            | ✓ |
| 27                    | 27R                    | ✗            | ✓ | ✗                     | ✓  | 750         | 750                    | ✓                     | ✓ | ✓            | ✓ | 25,000      | 25K                    | ✓            | ✓ | ✓            | ✓ |
| 30                    | 30R                    | ✓            | ✓ | ✓                     | ✓  | 800         | 800                    | ✓                     | ✓ | ✓            | ✓ | 30,000      | 30K                    | ✓            | ✓ | ✗            | ✗ |
| 33                    | 33R                    | ✓            | ✓ | ✓                     | ✓  | 820         | 820                    | ✓                     | ✓ | ✗            | ✓ | 33,000      | 33K                    | ✓            | ✓ | ✗            | ✗ |
| 35                    | 35R                    | ✓            | ✓ | ✓                     | ✓  | 900         | 900                    | ✓                     | ✓ | ✗            | ✓ | 35,000      | 35K                    | ✓            | ✓ | ✗            | ✗ |
| 39                    | 39R                    | ✓            | ✓ | ✓                     | ✗  | 1,000       | 1K0                    | ✓                     | ✓ | ✓            | ✓ | 40,000      | 40K                    | ✓            | ✓ | ✓            | ✓ |
| 40                    | 40R                    | ✓            | ✓ | ✓                     | ✓  | 1,100       | 1K1                    | ✗                     | ✗ | ✗            | ✓ | 50,000      | 50K                    | ✓            | ✓ | ✓            | ✓ |
| 47                    | 47R                    | ✓            | ✓ | ✓                     | ✓  | 1,200       | 1K2                    | ✓                     | ✗ | ✓            | ✓ | ✓           | ✓                      | ✓            | ✓ | ✓            | ✓ |
| 50                    | 50R                    | ✓            | ✓ | ✓                     | ✓  | 1,500       | 1K5                    | ✓                     | ✓ | ✓            | ✓ | ✓           | ✓                      | ✓            | ✓ | ✓            | ✓ |
| 56                    | 56R                    | ✓            | ✓ | ✓                     | ✓  | 1,800       | 1K8                    | ✓                     | ✓ | ✓            | ✓ | ✓           | ✓                      | ✓            | ✓ | ✓            | ✓ |
| 62                    | 62R                    | ✓            | ✓ | ✓                     | ✓  | 2,000       | 2K0                    | ✓                     | ✓ | ✓            | ✓ | ✓           | ✓                      | ✓            | ✓ | ✓            | ✓ |

✓ = Standard values  
✗ = Non-standard values subject to minimum handling charge per item

Shaded values involve very fine resistance wire and should not be used in critical applications without burn-in and/or thermal cycling.

Check product availability at [www.ohmite.com](http://www.ohmite.com)