

## 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).

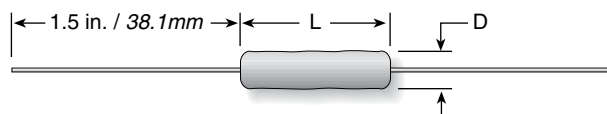
**Power rating:** Based on 25°C free air rating (other wattages available).

**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



## Ohmicon® 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          | 0.218 / 5.5  | 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 | 1.642 / 41.7          | 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           |       | 1% Tolerance                     |   |   |   |    | 5% Tolerance |   |   |   |                       | Ohmic value |   | 1% Tolerance                     |   |   |   |    | 5% Tolerance |   |   |                                                                                  |       | Ohmic value |  | 1% Tolerance                     |   |   |   |    | 5% Tolerance |   |   |   |    |
|                       |       | Part No.<br>Prefix ➤<br>Suffix ▼ | 1 | 3 | 5 | 10 | 1            | 2 | 3 | 5 | 10                    |             |   | Part No.<br>Prefix ➤<br>Suffix ▼ | 1 | 3 | 5 | 10 | 1            | 2 | 3 | 5                                                                                | 10    |             |  | Part No.<br>Prefix ➤<br>Suffix ▼ | 1 | 3 | 5 | 10 | 1            | 2 | 3 | 5 | 10 |
| 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       | ✓ | ✱                                |   |   |   | ✓  |              | ✱ |   | ✓ = Standard values                                                              |       |             |  |                                  |   |   |   |    |              |   |   |   |    |
| 50                    | — 50R | ✓                                |   |   |   |    | ✓            |   | ✓ |   | 1,500                 | — 1K5       | ✓ |                                  |   |   |   | ✓  |              | ✱ |   | ✱ = Non-standard values subject to mini-<br>mum handling charge per item         |       |             |  |                                  |   |   |   |    |              |   |   |   |    |
| 56                    | — 56R | ✓                                |   |   | ✱ | ✓  | ✓            |   | ✓ |   | 1,800                 | — 1K8       | ✓ | ✱                                |   |   |   | ✓  |              | ✱ |   | Check product availability at <a href="http://www.ohmite.com">www.ohmite.com</a> |       |             |  |                                  |   |   |   |    |              |   |   |   |    |
| 62                    | — 62R | ✓                                |   |   |   |    | ✓            |   | ✱ |   | 2,000                 | — 2K0       | ✓ |                                  |   |   |   | ✓  |              | ✱ |   |                                                                                  |       |             |  |                                  |   |   |   |    |              |   |   |   |    |

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