

## 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).

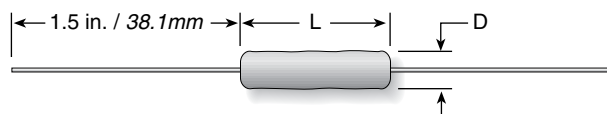
**Power rating:** Based on 25°C free air rating (other wattages available).

**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



## 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          | 0.218 / 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 |    |                                                                                  |                                  |   |   |              |    |   |   |   |   |    |
|-----------------------|----------------------------------|--------------|---|---|----|--------------|---|---|---|-----------------------|-------------|----------------------------------|---|---|---|--------------|---|---|---|-----------------------|----|----------------------------------------------------------------------------------|----------------------------------|---|---|--------------|----|---|---|---|---|----|
|                       |                                  | 1% Tolerance |   |   |    | 5% Tolerance |   |   |   |                       |             | 1% Tolerance                     |   |   |   | 5% Tolerance |   |   |   |                       |    | 1% Tolerance                                                                     |                                  |   |   | 5% Tolerance |    |   |   |   |   |    |
| Ohmic value           | Part No.<br>Prefix ►<br>Suffix ▼ | 1            | 3 | 5 | 10 | 1            | 2 | 3 | 5 | 10                    | Ohmic value | Part No.<br>Prefix ►<br>Suffix ▼ | 1 | 3 | 5 | 10           | 1 | 2 | 3 | 5                     | 10 | Ohmic value                                                                      | 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                            | ✓ |   |   |              |   | ✓ | ✱ | ✓                     | ✓  |                                                                                  |                                  |   |   |              |    |   |   |   |   |    |

✓ = Standard values

✱ = Non-standard values subject to minimum handling charge per item

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