

# 40 Series



## Ohmicone® Silicone-Ceramic Conformal Axial Terminal Wirewound 1% and 5% Tolerance Standard



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.

### 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.

### SERIES SPECIFICATIONS

| Series | Wattage | Ohms      | Voltage |
|--------|---------|-----------|---------|
| 41     | 1.0     | 0.10-6K   | 150     |
| 42     | 2.0     | 0.10-8K   | 100     |
| 43     | 3.0     | 0.10-20K  | 200     |
| 45     | 5.0     | 0.10-70K  | 460     |
| 47     | 7.0     | 0.10-80K  | 670     |
| 40     | 10.0    | 0.10-150K | 1000    |

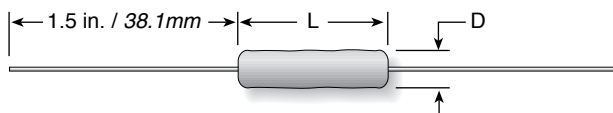
Non-Inductive versions available. Insert "N" before tolerance code.  
Example: 42NJ27R

### CHARACTERISTICS

|                                |   |
|--------------------------------|---|
| <b>Coating</b>                 | Conformal silicone-ceramic.   |
| <b>Core</b>                    | Ceramic.  |
| <b>Terminals</b>               | Solder-coated copper clad axial. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu                        |
| <b>Derating</b>                | Linearly from 100% @ +25°C to 0% @ +275°C.  |
| <b>Tolerance</b>               | ±5% (J type), ±1% (F type) (other tolerances available).  |
| <b>Power rating</b>            | Based on 25°C free air rating   |
| <b>Overload</b>                | Under 5 watts: 5 times rated wattage for 5 seconds. 5 watts and over: 10 times rated wattage for 5 seconds. |
| <b>Temperature coefficient</b> | Under 1Ω: ±90 ppm/°C; 1Ω to 9.99Ω: ±50 ppm/°C; 10Ω and over: ±20 ppm/°C                                     |

### DIMENSIONS

(in./mm max.)



| Series | Wattage | Length       | Diam.        | Lead ga. |
|--------|---------|--------------|--------------|----------|
| 41     | 1.0     | 0.437 / 11.1 | 0.125 / 3.2  | 24       |
| 42     | 2.0     | 0.406 / 10.3 | 0.219 / 5.6  | 20       |
| 43     | 3.0     | 0.593 / 15.1 | 0.219 / 5.6  | 20       |
| 45     | 5.0     | 0.937 / 23.8 | 0.343 / 8.7  | 18       |
| 47     | 7.0     | 1.280 / 32.5 | 0.343 / 8.7  | 18       |
| 40     | 10.0    | 1.900 / 48.3 | 0.406 / 10.3 | 18       |

(continued)

# 40 Series

## Ohmicone® Silicone-Ceramic Conformal Axial Terminal Wirewound 1% and 5% Tolerance Standard

### ORDERING INFORMATION

#### Standard part numbers

| Ohmic value | Wattage and Tolerance      |   |   |   |    |              |   |   |   |    | Ohmic value | Wattage and Tolerance      |   |   |   |    |              |   |   |   |    | Ohmic value | Wattage and Tolerance      |   |   |   |    |              |   |   |   |    |
|-------------|----------------------------|---|---|---|----|--------------|---|---|---|----|-------------|----------------------------|---|---|---|----|--------------|---|---|---|----|-------------|----------------------------|---|---|---|----|--------------|---|---|---|----|
|             | 1% Tolerance               |   |   |   |    | 5% Tolerance |   |   |   |    |             | 1% Tolerance               |   |   |   |    | 5% Tolerance |   |   |   |    |             | 1% Tolerance               |   |   |   |    | 5% Tolerance |   |   |   |    |
|             | Part No. Prefix > Suffix > | 1 | 3 | 5 | 10 | 1            | 2 | 3 | 5 | 10 |             | Part No. Prefix > Suffix > | 1 | 3 | 5 | 10 | 1            | 2 | 3 | 5 | 10 |             | Part No. Prefix > 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                        | ✓ | ✓ | ✓ | ✓  | ✓            | ✓ | ✓ | ✓ | ✓  |             |                            |   |   |   |    |              |   |   |   |    |
| 50          | 50R                        | ✓ | ✓ | ✓ | ✓  | ✓            | ✓ | ✓ | ✓ | ✓  | 1,500       | 1K5                        | ✓ | ✓ | ✓ | ✓  | ✓            | ✓ | ✓ | ✓ | ✓  |             |                            |   |   |   |    |              |   |   |   |    |
| 56          | 56R                        | ✓ | ✓ | ✓ | ✓  | ✓            | ✓ | ✓ | ✓ | ✓  | 1,800       | 1K8                        | ✓ | ✓ | ✓ | ✓  | ✓            | ✓ | ✓ | ✓ | ✓  |             |                            |   |   |   |    |              |   |   |   |    |
| 62          | 62R                        | ✓ | ✓ | ✓ | ✓  | ✓            | ✓ | ✓ | ✓ | ✓  | 2,000       | 2K0                        | ✓ | ✓ | ✓ | ✓  | ✓            | ✓ | ✓ | ✓ | ✓  |             |                            |   |   |   |    |              |   |   |   |    |

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

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

