

# 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      |              |     |              |    |   |     |   |   |   |    |   |
|-------------|----------------------------|--------------|---|--------------|----|-------------|----------------------------|--------------|---|--------------|---|-------------|----------------------------|--------------|-----|--------------|----|---|-----|---|---|---|----|---|
|             | Part No. Prefix > Suffix > | 1% Tolerance |   | 5% Tolerance |    |             | Part No. Prefix > Suffix > | 1% Tolerance |   | 5% Tolerance |   |             | Part No. Prefix > Suffix > | 1% Tolerance |     | 5% Tolerance |    |   |     |   |   |   |    |   |
|             |                            | 41F          | 3 | 5            | 10 |             |                            | 41J          | 2 | 3            | 5 | 10          |                            | 41F          | 3   | 5            | 10 |   | 41J | 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           | R10                        | ✓            | ✓ | ✓            | ✓  | ✓           | 220                        | 220          | ✓ | ✓            | ✓ | ✓           | ✓                          | 4,700        | 4K7 | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 1.5         | R15                        | ✓            | ✓ | ✓            | ✓  | ✓           | 225                        | 225          | ✱ | ✱            | ✓ | ✓           | ✓                          | 5,000        | 5K0 | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 2           | R20                        | ✓            | ✓ | ✓            | ✓  | ✓           | 250                        | 250          | ✓ | ✓            | ✓ | ✓           | ✓                          | 6,000        | 6K0 | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 2.2         | R22                        | ✓            | ✓ | ✓            | ✓  | ✓           | 270                        | 270          | ✓ | ✓            | ✓ | ✓           | ✓                          | 6,800        | 6K8 | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 3           | R30                        | ✓            | ✓ | ✓            | ✱  | ✓           | 300                        | 300          | ✓ | ✓            | ✓ | ✓           | ✓                          | 7,000        | 7K0 | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 4           | R40                        | ✓            | ✓ | ✓            | ✓  | ✓           | 330                        | 330          | ✓ | ✓            | ✓ | ✓           | ✓                          | 7,500        | 7K5 | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 5           | R50                        | ✓            | ✓ | ✓            | ✓  | ✓           | 350                        | 350          | ✱ | ✓            | ✓ | ✓           | ✓                          | 8,000        | 8K0 | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 7.5         | R75                        | ✓            | ✓ | ✓            | ✓  | ✓           | 390                        | 390          | ✱ | ✓            | ✓ | ✓           | ✓                          | 9,000        | 9K0 | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 10          | R10                        | ✓            | ✓ | ✓            | ✓  | ✓           | 400                        | 400          | ✓ | ✓            | ✓ | ✓           | ✓                          | 10,000       | 10K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 12          | R12                        | ✓            | ✓ | ✓            | ✓  | ✓           | 450                        | 450          | ✱ | ✓            | ✓ | ✓           | ✓                          | 12,000       | 12K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 15          | R15                        | ✓            | ✓ | ✓            | ✓  | ✓           | 470                        | 470          | ✓ | ✓            | ✓ | ✓           | ✓                          | 13,000       | 13K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 18          | R18                        | ✱            | ✓ | ✓            | ✓  | ✓           | 500                        | 500          | ✓ | ✓            | ✓ | ✓           | ✓                          | 15,000       | 15K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 20          | R20                        | ✓            | ✓ | ✓            | ✓  | ✓           | 560                        | 560          | ✓ | ✓            | ✓ | ✓           | ✓                          | 17,000       | 17K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 22          | R22                        | ✓            | ✓ | ✓            | ✓  | ✓           | 600                        | 600          | ✓ | ✓            | ✓ | ✓           | ✓                          | 20,000       | 20K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 25          | R25                        | ✓            | ✓ | ✓            | ✓  | ✓           | 680                        | 680          | ✓ | ✓            | ✓ | ✓           | ✓                          | 22,000       | 22K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 27          | R27                        | ✓            | ✓ | ✓            | ✓  | ✓           | 750                        | 750          | ✓ | ✓            | ✓ | ✓           | ✓                          | 25,000       | 25K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 30          | R30                        | ✓            | ✓ | ✓            | ✓  | ✓           | 800                        | 800          | ✓ | ✓            | ✓ | ✓           | ✓                          | 30,000       | 30K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 33          | R33                        | ✓            | ✓ | ✓            | ✓  | ✓           | 820                        | 820          | ✓ | ✓            | ✓ | ✓           | ✓                          | 33,000       | 33K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 35          | R35                        | ✓            | ✓ | ✓            | ✓  | ✓           | 900                        | 900          | ✓ | ✓            | ✓ | ✓           | ✓                          | 35,000       | 35K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 39          | R39                        | ✓            | ✓ | ✓            | ✓  | ✓           | 1,000                      | 1K0          | ✓ | ✓            | ✓ | ✓           | ✓                          | 40,000       | 40K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 40          | R40                        | ✓            | ✓ | ✓            | ✓  | ✓           | 1,100                      | 1K1          | ✓ | ✓            | ✓ | ✓           | ✓                          | 50,000       | 50K | ✓            | ✓  | ✓ | ✓   | ✓ | ✓ | ✓ | ✓  | ✓ |
| 47          | R47                        | ✓            | ✓ | ✓            | ✓  | ✓           | 1,200                      | 1K2          | ✓ | ✓            | ✓ | ✓           | ✓                          |              |     |              |    |   |     |   |   |   |    |   |
| 50          | R50                        | ✓            | ✓ | ✓            | ✓  | ✓           | 1,500                      | 1K5          | ✓ | ✓            | ✓ | ✓           | ✓                          |              |     |              |    |   |     |   |   |   |    |   |
| 56          | R56                        | ✓            | ✓ | ✓            | ✓  | ✓           | 1,800                      | 1K8          | ✓ | ✓            | ✓ | ✓           | ✓                          |              |     |              |    |   |     |   |   |   |    |   |
| 62          | R62                        | ✓            | ✓ | ✓            | ✓  | ✓           | 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

