

# 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)

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## 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.<br>Prefix ▶<br>Suffix ▼ | 1% Tolerance |   |   |   |    | 5% Tolerance |   |   |   |             | Part No.<br>Prefix ▶<br>Suffix ▼ | 1% Tolerance |     |   |   |   | 5% Tolerance |     |   |   |             | Part No.<br>Prefix ▶<br>Suffix ▼ | 1% Tolerance |    |     |   |   | 5% Tolerance |    |     |   |   |   |    |
|             |                                  | 41F          | 1 | 3 | 5 | 10 | 41J          | 2 | 3 | 5 |             |                                  | 10           | 41F | 1 | 3 | 5 | 10           | 41J | 2 | 3 |             |                                  | 5            | 10 | 41F | 1 | 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

