

# 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 |    |   |   |   |              |    |                            |   |   |   |    |   |   |   |   |    |
|----------------------------|-----------------------|---|---|----|---|--------------|---|---|----|----------------------------|-------------|-----------------------|---|----|---|---|--------------|---|----|----------------------------|-------------|-------------|-----------------------|----|---|---|---|--------------|----|----------------------------|---|---|---|----|---|---|---|---|----|
|                            | 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 | 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

