

# 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                                     |
| <b>Operating temp. range</b>   | -55°C to 275°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

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

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

40 Series  
Ohmicone®  
Silicone Ceramic  
Conformal Axial  
Term. Wirewound

Non-Inductive  
Winding  
optional  
(blank= std.  
winding)

RoHS  
Compliant

**41NJR10E-T** — Tape & reel  
optional  
pc/reel:

Wattage  
1 = 1W  
2  
3  
5  
7  
0 = 10W

Tolerance  
F = 1%  
J = 5%

Resistance  
R10 = 0.10Ω  
1R0 = 1.0Ω  
10R = 10.0Ω  
250 = 250Ω  
1K0 = 1,000Ω  
4K5 = 4,500Ω  
50K = 50,000Ω

41: 5000  
42: 1250  
43: 1250  
45: 1000  
47: 500  
40: 500

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

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