

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

| | |
|--------------------------------|---|
| Coating | Conformal silicone-ceramic. |
| Core | Ceramic. |
| Terminals | Solder-coated copper clad axial. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu |
| Derating | Linearly from 100% @ +25°C to 0% @ +275°C. |
| Tolerance | ±5% (J type), ±1% (F type) (other tolerances available). |
| Power rating | Based on 25°C free air rating |
| Overload | Under 5 watts: 5 times rated wattage for 5 seconds. 5 watts and over: 10 times rated wattage for 5 seconds. |
| Temperature coefficient | 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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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 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ = Standard values | | | | | | | | | | | |
| 50 | 50R | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 1,500 | 1K5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✦ = Non-standard values subject to minimum handling charge per item | | | | | | | | | | | |
| 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.

