

OC Series

Ceramic Composition 10% Tolerance



The OC Series of fixed ceramic resistors are ideal for circuitry associated with surges, high peak power or high energy. They offer enhanced performance in high voltage power supplies, R-C snubber circuits, and inrush limiters. The OC resistors can often replace carbon composition resistors which can be difficult to source.

FEATURES

- Replaces 1 and 2 watt carbon composition resistors
- Excellent alternative to the Ohmite OX/OY series
- Meets high energy density demands
- High peak power
- 10% Tolerance



SERIES SPECIFICATIONS

| Series | Resistance range | Avg Power (w) @ 70°C | Peak Energy (j) | Rated Peak Volt (v) | Weight (g) |
|--------|------------------|----------------------|-----------------|---------------------|------------|
| OC1 | 6.0 - 1,760 | 1.2 | 140 | 950 | 1.0 |
| | 1,761 - 146,000 | 1.0 | 40 | 775 | 1.2 |
| OC2 | 8.0 - 2,400 | 1.7 | 200 | 1,100 | 1.2 |
| | 2,401 - 200,000 | 1.0 | 80 | 900 | 1.7 |
| OC3 | 12 - 5,000 | 2.5 | 275 | 2,500 | 1.9 |
| | 5,001 - 300,000 | 2.0 | 140 | 2,000 | 2.2 |

CHARACTERISTICS

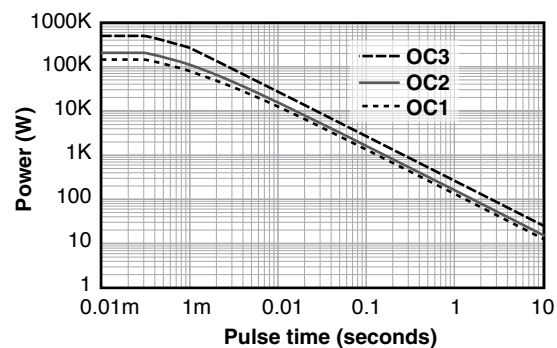
| | | | |
|--------------------------------------|---|------------|------------|
| Terminals | Pb-free solder-coated axial | | |
| Coating | Silicone ceramic | | |
| Derating | Linear from 100% @ +70°C to 0% @ +230°C | | |
| Operating Temp. Range | -55 °C to +230°C | | |
| Tolerance | ±10% standard | | |
| Power Rating | Based on 70°C free air rating | | |
| Temperature Coefficient | 0 to - 800 ppm/°C | | |
| | OC1 | OC2 | OC3 |
| Max Working Voltage | 370V | 450V | 600V |
| Dielectric Strength | 300V | 700V | 700V |
| Max Overload Voltage | 740V | 900V | 1200V |
| Max Pulse Voltage¹ | 14KV | 20KV | 20KV |

¹See figures

| Test Condition | Maximum ΔR |
|--|--------------|
| Life Test 1000 hours at rated power | ±5% |
| Short Time Overload 2x rated V, 5 sec ON @ 70°C | ±(2% +0.05Ω) |
| Thermal Shock MIL-STD-202, Method 107 | ±3% |
| Moisture Resistance MIL-STD-202 Method 103 | ±5% |

Pulse Limiting Power

One pulse



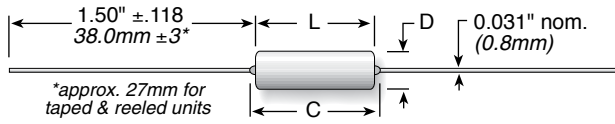
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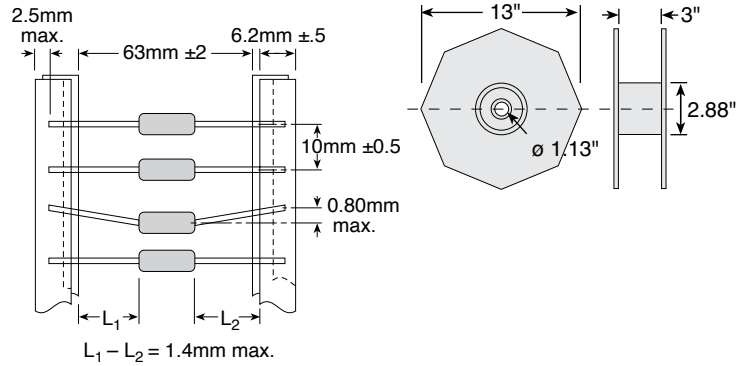
DIMENSIONS

in./mm



| Series | Diameter D ±0.039 | Length L ±0.039 | Length C REF | Qty. per reel |
|--------|----------------------|--------------------|-----------------|------------------|
| OC1 | 0.31 / 7.9 | 0.65 / 16.5 | 0.75 / 19.0 | 250 |
| OC2 | 0.31 / 7.9 | 0.75 / 19.1 | 0.89 / 22.6 | 250 |
| OC3 | 0.31 / 7.9 | 1.13 / 28.6 | 1.26 / 32.1 | 250 |

Tape and Reel Dimensions



ORDERING INFORMATION

Standard part numbers for OC Series

| Ohmic value | Part No. Prefix ▶ Suffix ▼ | Size OC1-1 OC2-2 OC3-3 | Ohmic value | Part No. Prefix ▶ Suffix ▼ | Size OC1-1 OC2-2 OC3-3 | Ohmic value | Part No. Prefix ▶ Suffix ▼ | Size OC1-1 OC2-2 OC3-3 | Ohmic value | Part No. Prefix ▶ Suffix ▼ | Size OC1-1 OC2-2 OC3-3 |
|-------------|----------------------------------|---------------------------------|-------------|----------------------------------|---------------------------------|-------------|----------------------------------|---------------------------------|-------------|----------------------------------|---------------------------------|
| 6.8 | --K6R8E | ✓ | 100 | --K101E | ✓ ✓ ✓ | 1500 | --K152E | ✓ ✓ ✓ | 22000 | --K223E | ✓ ✓ ✓ |
| 8.2 | --K8R2E | ✓ ✓ | 120 | --K121E | ✓ ✓ ✓ | 1800 | --K182E | ✓ ✓ ✓ | 27000 | --K273E | ✓ ✓ ✓ |
| 10 | --K100E | ✓ ✓ | 150 | --K151E | ✓ ✓ ✓ | 2200 | --K222E | ✓ ✓ ✓ | 33000 | --K333E | ✓ ✓ ✓ |
| 12 | --K120E | ✓ ✓ ✓ | 180 | --K181E | ✓ ✓ ✓ | 2700 | --K272E | ✓ ✓ ✓ | 39000 | --K393E | ✓ ✓ ✓ |
| 15 | --K150E | ✓ ✓ ✓ | 220 | --K221E | ✓ ✓ ✓ | 3300 | --K332E | ✓ ✓ ✓ | 47000 | --K473E | ✓ ✓ ✓ |
| 18 | --K180E | ✓ ✓ ✓ | 270 | --K271E | ✓ ✓ ✓ | 3900 | --K392E | ✓ ✓ ✓ | 56000 | --K563E | ✓ ✓ ✓ |
| 22 | --K220E | ✓ ✓ ✓ | 330 | --K331E | ✓ ✓ ✓ | 4700 | --K472E | ✓ ✓ ✓ | 68000 | --K683E | ✓ ✓ ✓ |
| 27 | --K270E | ✓ ✓ ✓ | 390 | --K391E | ✓ ✓ ✓ | 5600 | --K562E | ✓ ✓ ✓ | 82000 | --K823E | ✓ ✓ ✓ |
| 33 | --K330E | ✓ ✓ ✓ | 470 | --K471E | ✓ ✓ ✓ | 6800 | --K682E | ✓ ✓ ✓ | 100000 | --K104E | ✓ ✓ ✓ |
| 39 | --K390E | ✓ ✓ ✓ | 560 | --K561E | ✓ ✓ ✓ | 8200 | --K822E | ✓ ✓ ✓ | 120000 | --K124E | ✓ ✓ ✓ |
| 47 | --K470E | ✓ ✓ ✓ | 680 | --K681E | ✓ ✓ ✓ | 10000 | --K103E | ✓ ✓ ✓ | 150000 | --K154E | ✓ ✓ ✓ |
| 56 | --K560E | ✓ ✓ ✓ | 820 | --K821E | ✓ ✓ ✓ | 12000 | --K123E | ✓ ✓ ✓ | 180000 | --K184E | ✓ ✓ |
| 68 | --K680E | ✓ ✓ ✓ | 1000 | --K102E | ✓ ✓ ✓ | 15000 | --K153E | ✓ ✓ ✓ | 220000 | --K224E | ✓ |
| 82 | --K820E | ✓ ✓ ✓ | 1200 | --K122E | ✓ ✓ ✓ | 18000 | --K183E | ✓ ✓ ✓ | 270000 | --K274E | ✓ |

