



**THE DATASHEET OF  
OC2K270E**



# OC Series

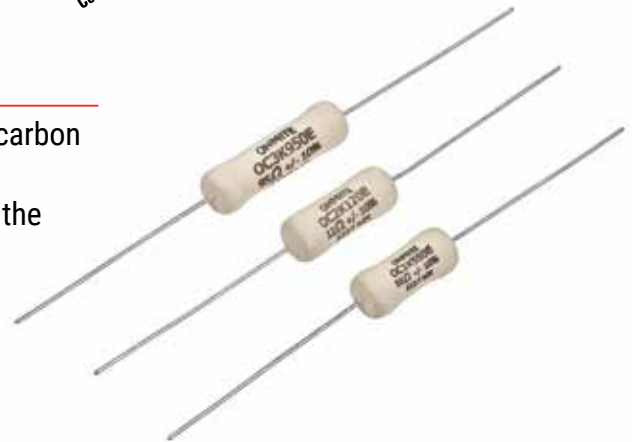
## Ceramic Composition 10% Tolerance



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

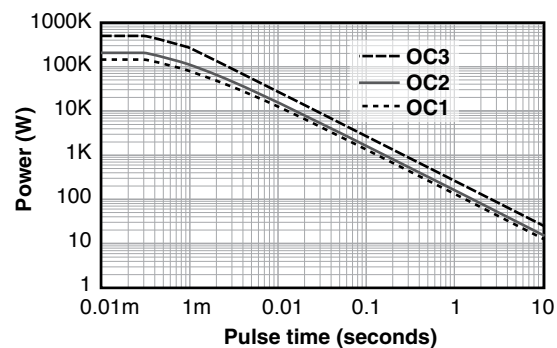
|                                      |   |            |            |
|--------------------------------------|---|------------|------------|
| <b>Terminals</b>                     | Pb-free solder-coated axial             |            |            |
| <b>Coating</b>                       | Silicone ceramic                        |            |            |
| <b>Derating</b>                      | Linear from 100% @ +70°C to 0% @ +230°C |            |            |
| <b>Operating Temp. Range</b>         | -55 °C to +230°C                        |            |            |
| <b>Tolerance</b>                     | ±10% standard                           |            |            |
| <b>Power Rating</b>                  | Based on 70°C free air rating           |            |            |
| <b>Temperature Coefficient</b>       | 0 to - 800 ppm/°C                       |            |            |
|                                      | <b>OC1</b>                              | <b>OC2</b> | <b>OC3</b> |
| <b>Max Working Voltage</b>           | 370V                                    | 450V       | 600V       |
| <b>Dielectric Strength</b>           | 300V                                    | 700V       | 700V       |
| <b>Max Overload Voltage</b>          | 740V                                    | 900V       | 1200V      |
| <b>Max Pulse Voltage<sup>1</sup></b> | 14KV                                    | 20KV       | 20KV       |

<sup>1</sup>See figures

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

### Pulse Limiting Power

One pulse



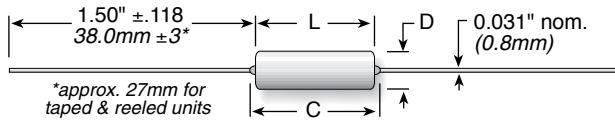
(continued)

# OC Series

Ceramic Composition  
10% Tolerance

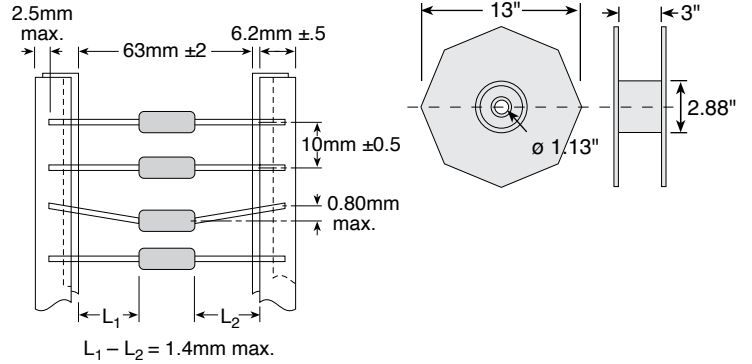
## DIMENSIONS

in./mm



| Series | Diameter D<br>±0.039 | Length L<br>±0.039 | Length C<br>REF | Qty. per<br>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              |

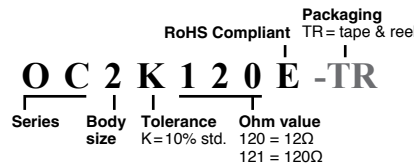
## Tape and Reel Dimensions



## ORDERING INFORMATION

### Standard part numbers for OC Series

| Ohmic value | Part No.<br>Prefix ▶<br>Suffix ▼ | Size<br>OC1-1<br>OC2-2<br>OC3-3 | Ohmic value | Part No.<br>Prefix ▶<br>Suffix ▼ | Size<br>OC1-1<br>OC2-2<br>OC3-3 | Ohmic value | Part No.<br>Prefix ▶<br>Suffix ▼ | Size<br>OC1-1<br>OC2-2<br>OC3-3 | Ohmic value | Part No.<br>Prefix ▶<br>Suffix ▼ | Size<br>OC1-1<br>OC2-2<br>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                          | ✓ ✓ ✓                           |



## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View OC2K270E](#) on WIN SOURCE

 [Ohmite](#) Information

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management