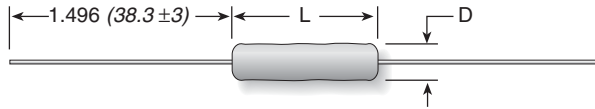


OX/OY Series

**Ceramic Composition
10% Tolerance**

The OX/OY 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 OX/OY resistors can often replace carbon composition resistors which can be difficult to source.



FEATURES

- Replaces 1 and 2 watt carbon composition resistors
- Meets high energy density demands
- High peak power
- 10% Tolerance

SPECIFICATIONS

Material

Terminals: Solder-coated axial leads

Coating: UL-94 V0 approved silicone

Derating: Linear from 100% @ +70°C to 0% @ +200°C

Electrical

Tolerance: ±10% standard

Power Rating: Based on 70°C free air rating.

Temperature Coefficient: -1300± 300ppm/°C.

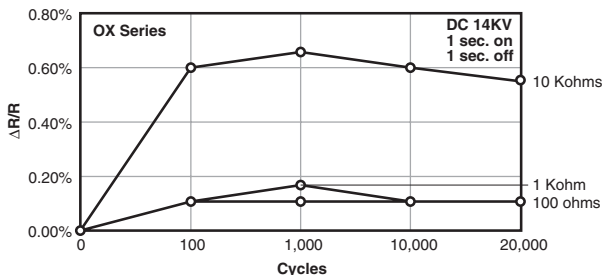
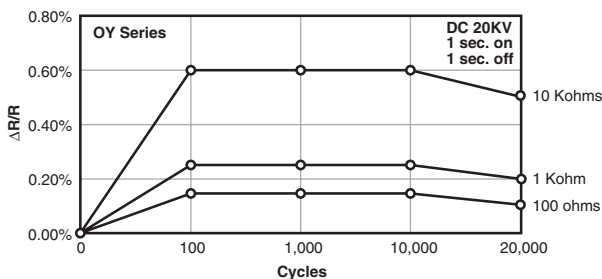
| Series | Watts max.* | Resistance | | Length L max. | Dimensions (in. / mm) | | Lead diameter | Joules max.** | Max Working volts |
|--------|-------------|------------|------|---------------|-----------------------|-------------|---------------|---------------|-------------------|
| | | min. | max. | | Diameter D | Diameter | | | |
| OX | 1 | 3.3 | 100K | 0.67 / 17.0 | 0.217 ±.05/5.5±1 | 0.031 / 0.8 | 50 | 300 | |
| OY | 2 | 3.3 | 1M | 0.89 / 22.6 | 0.276 ±.05/7.0±1 | 0.031 / 0.8 | 80 | 400 | |

* at 70°C. **For a single impulse.

STOCK PART NUMBERS FOR STANDARD RESISTANCE VALUES

| Ohms | Part Number | | Ohms | Part Number | | Ohms | Part Number | | Ohms | Part Number | |
|------|-------------|--------|-------|-------------|--------|--------|-------------|--------|---------|-------------|--------|
| | 1 Watt | 2 Watt | | 1 Watt | 2 Watt | | 1 Watt | 2 Watt | | 1 Watt | 2 Watt |
| 3.3 | OX33GK | OY33GK | 82 | OX820K | OY820K | 2,200 | OX222K | OY222K | 56,000 | OX563K | OY563K |
| 3.9 | OX39GK | OY39GK | 100 | OX101K | OY101K | 2,700 | OX272K | OY272K | 68,000 | OX683K | OY683K |
| 4.7 | OX47GK | OY47GK | 120 | OX121K | OY121K | 3,300 | OX332K | OY332K | 82,000 | OX823K | OY823K |
| 5.6 | OX56GK | OY56GK | 150 | OX151K | OY151K | 3,900 | OX392K | OY392K | 100,000 | OX104K | OY104K |
| 6.8 | OX68GK | OY68GK | 180 | OX181K | OY181K | 4,700 | OX472K | OY472K | 120,000 | — | OY124K |
| 8.2 | OX82GK | OY82GK | 220 | OX221K | OY221K | 5,600 | OX562K | OY562K | 150,000 | — | OY154K |
| 10 | OX100K | OY100K | 270 | OX271K | OY271K | 6,800 | OX682K | OY682K | 180,000 | — | OY184K |
| 12 | OX120K | OY120K | 330 | OX331K | OY331K | 8,200 | OX822K | OY822K | 220,000 | — | OY224K |
| 15 | OX150K | OY150K | 390 | OX391K | OY391K | 10,000 | OX103K | OY103K | 270,000 | — | OX274K |
| 18 | OX180K | OY180K | 470 | OX471K | OY471K | 12,000 | OX123K | OY123K | 330,000 | — | OY334K |
| 22 | OX220K | OY220K | 560 | OX561K | OY561K | 15,000 | OX153K | OY153K | 390,000 | — | OY394K |
| 27 | OX270K | OY270K | 680 | OX681K | OY681K | 18,000 | OX183K | OY183K | 470,000 | — | OY474K |
| 33 | OX330K | OY330K | 820 | OX821K | OY821K | 22,000 | OX223K | OY223K | 560,000 | — | OY564K |
| 39 | OX390K | OY390K | 1,000 | OX102K | OY102K | 27,000 | OX273K | OY273K | 680,000 | — | OY684K |
| 47 | OX470K | OY470K | 1,200 | OX122K | OY122K | 33,000 | OX333K | OY333K | 820,000 | — | OY824K |
| 56 | OX560K | OY560K | 1,500 | OX152K | OY152K | 39,000 | OX393K | OY393K | 1 MEG | — | OY105K |
| 68 | OX680K | OY680K | 1,800 | OX182K | OY182K | 47,000 | OX473K | OY473K | | | |

RESISTANCE TO PULSE



PERFORMANCE CHARACTERISTICS

| Test | OX | OY |
|--|------------------------------|---------------------------|
| Max Working Voltage | 300V | 400V |
| Dielectric Strength | 500V | 700V |
| Max Overload Voltage | 600V | 800V |
| Max Pulse Voltage ¹ | 14KV | 20KV |
| Pulse Tolerance, 100 pulses | 1240V @ 52μF, 40J/ 35 sec. | 1640V @ 52μF, 70J/35 sec. |
| Test | Condition | Maximum ΔR |
| Life Test | MIL-STD-202, Method 108 | ±5% |
| Short Time Overload | 2x rated V, 5 sec ON @ 70°C | ±(2% + 0.05ohm) |
| Resistance to Pulse ¹ 20,000 cycles | 1 sec ON, 1 sec OFF | ±5% |
| Thermal Shock | MIL-STD-202, Method 107 | ±(2% ± 0.05 ohm) |
| Moisture Resistance | 1000 hrs @ 40°C, 90 - 95% RH | ±5% |

¹Related text, see figures left