

# 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

### SERIES SPECIFICATIONS

Series	Watts max.*	Resistance range	Joules max.**	Max. working volts
OX	1	3.3Ω-100K	50	300
OY	2	3.3Ω-1M	80	400

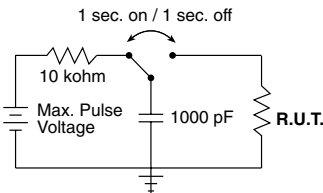
\* at 70°C. \*\*For a single impulse.

### CHARACTERISTICS

<b>Terminals</b>	Pb-free solder-coated axial	
<b>Coating</b>	Silicone ceramic	
<b>Derating</b>	Linear from 100% @ +70°C to 0% @ +200°C	
<b>Operating Temp. Range</b>	-40°C to +220°C	
<b>Tolerance</b>	±10% standard	
<b>Power Rating</b>	Based on 70°C free air rating	
<b>Temperature Coefficient</b>	-1300 ±300ppm/°C.	

	OX	OY
<b>Max Working Voltage</b>	300V	400V
<b>Dielectric Strength</b>	500V	700V
<b>Max Overload Voltage</b>	600V	800V
<b>Max Pulse Voltage<sup>1</sup></b>	14KV	20KV
<b>Pulse Tolerance, 100 pulses</b>	1240V @ 52μF, 40J/ 35 sec.	1640V @ 52μF, 70J/35 sec.

<sup>1</sup>See figures



14KV and 20KV values used in circuit as shown; full voltage not applied directly to resistor.

Test Condition	Maximum ΔR
<b>Life Test</b> MIL-STD-202, Method 108	±5%
<b>Short Time Overload</b> 2x rated V, 5 sec ON @ 70°C	±(2% +0.05Ω)
<b>Resistance to Pulse<sup>1</sup></b> 20,000 cycles. See circuit for test conditions	±5%
<b>Thermal Shock</b> MIL-STD-202, Method 107	±(2% ±0.05Ω)
<b>Moisture Resistance</b> 1000 hrs @ 40°C, 90 - 95% RH	±5%

### Resistance to Pulse



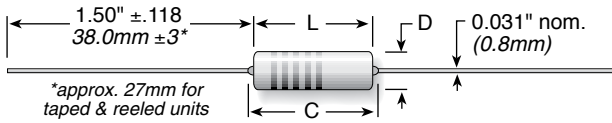
(continued)

# OX/OY Series

Ceramic Composition  
10% Tolerance

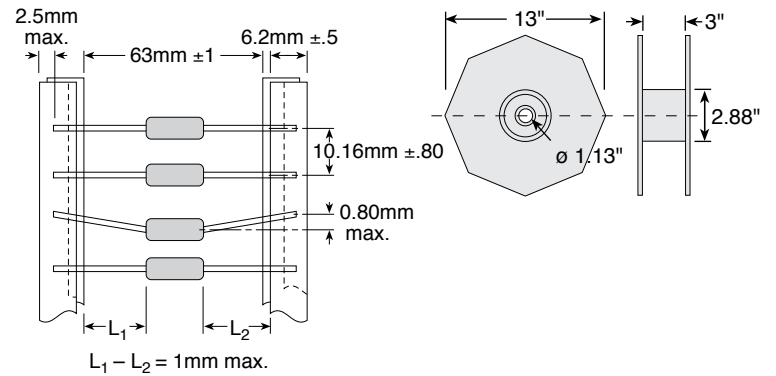
## DIMENSIONS

in./mm



Series	Length L ±.039 (±1.0)	Length C max.	Diameter D ±.039 (±1.0)	Qty. per reel
OX	0.65 / 16.5	0.748 / 19.0	0.217 / 5.5	1000
OY	0.748 / 19.0	0.886 / 22.5	0.276 / 7.0	500

## Tape and Reel Dimensions



## ORDERING INFORMATION

### Standard part numbers for OX/OY Series

Ohmic value	Part No.		Ohmic value	Part No.		Ohmic value	Part No.		Ohmic value	Part No.		Ohmic value	Part No.	
	Prefix	Suffix		Prefix	Suffix		Prefix	Suffix		Prefix	Suffix		Prefix	Suffix
3.3	OX	-33GKE	27	OX	-270KE	220	OX	-221KE	1800	OX	-182KE	15000	OX	-153KE
3.9	OX	-39GKE	33	OX	-330KE	270	OX	-271KE	2200	OX	-222KE	18000	OX	-183KE
4.7	OX	-47GKE	39	OX	-390KE	330	OX	-331KE	2700	OX	-272KE	22000	OX	-223KE
5.6	OX	-56GKE	47	OX	-470KE	390	OX	-391KE	3300	OX	-332KE	27000	OX	-273KE
6.8	OX	-68GKE	56	OX	-560KE	470	OX	-471KE	3900	OX	-392KE	33000	OX	-333KE
8.2	OX	-82GKE	68	OX	-680KE	560	OX	-561KE	4700	OX	-472KE	39000	OX	-393KE
10	OX	-100KE	82	OX	-820KE	680	OX	-681KE	5600	OX	-562KE	47000	OX	-473KE
12	OX	-120KE	100	OX	-101KE	820	OX	-821KE	6800	OX	-682KE	56000	OX	-563KE
15	OX	-150KE	120	OX	-121KE	1000	OX	-102KE	8200	OX	-822KE	68000	OX	-683KE
18	OX	-180KE	150	OX	-151KE	1200	OX	-122KE	10000	OX	-103KE	82000	OX	-823KE
22	OX	-220KE	180	OX	-181KE	1500	OX	-152KE	12000	OX	-123KE	100000	OX	-104KE
												1 MEG	OX	-105KE

RoHS Compliant  
Packaging  
TR = tape & reel  
B = bulk

**OX82GKE-TR**

Size  
OX = 1W  
OY = 2W  
Ohm Value  
Example:  
33G = 3.3 Ohms  
330 = 33 Ohms  
331 = 330 Ohms  
Tolerance  
K = 10% Standard