

# OW/OX/OY Series

Ceramic Composition 10% Tolerance



The OW/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 OW/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
- Non-Inductive



## SERIES SPECIFICATIONS

Series	Watts max.*	Resistance range	Joules max.**	Max. working volts
OW	0.5	4.7Ω-100K	30	200
OX	1	3.3Ω-100K	50	300
OY	2	3.3Ω-1M	80	400

\* at 70°C. \*\*For a single impulse.

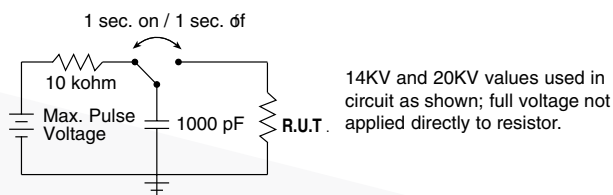
## CHARACTERISTICS

<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.

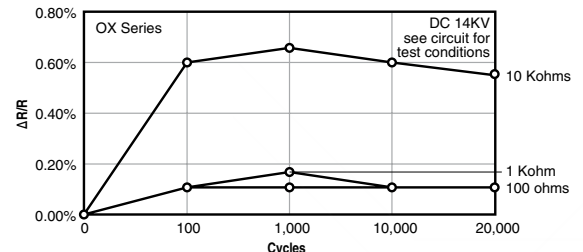
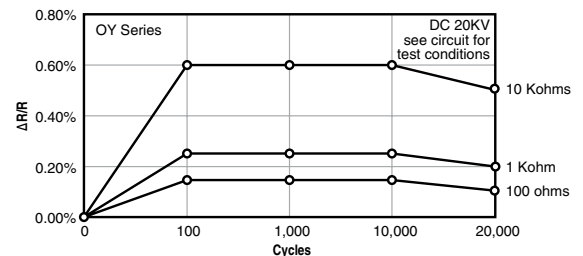
Test	Condition	Maximum ΔR
<b>Life Test</b>	MIL-STD-202, Method 108	±5%
<b>Short Time Overload</b>	2x rated V, 5 sec ON @ 70°C	±(2% +0.05Ω)
<b>Resistance to Pulse<sup>1</sup></b>	20,000 cycles. See circuit for test conditions	±5%
<b>Thermal Shock</b>	MIL-STD-202, Method 107	±(2% ±0.05Ω)
<b>Moisture Resistance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

	OW	OX	OY
<b>Max Working Voltage</b>	200V	300V	400V
<b>Dielectric Strength</b>	500V	500V	700V
<b>Max Overload Voltage</b>	400V	600V	800V
<b>Max Pulse Voltage<sup>1</sup></b>	10KV	14KV	20KV
<b>Pulse Tolerance, 100 pulses</b>	—	1240V @ 52μF, 40J/ 35 sec.	1640V @ 52μF, 70J/35 sec.

<sup>1</sup>See figures



## Resistance to Pulse



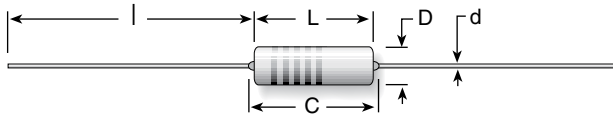
(continued)

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Ceramic Composition 10% Tolerance

## DIMENSIONS

mm/(in)

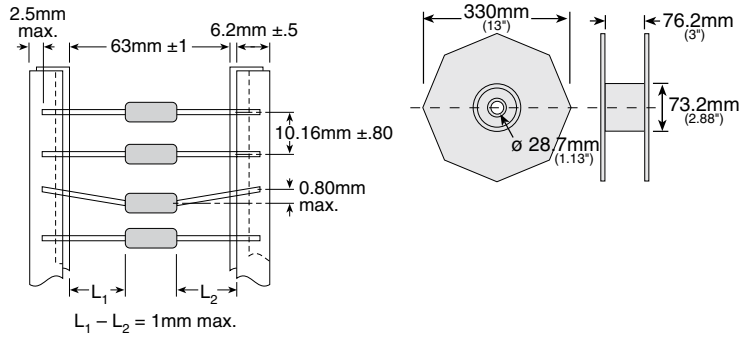


Series	Length L ±1.0 (±.039)	Length C max.	Diameter D ±1.0 (±.039)	Length /* ±.118 (±3)	Diam. d (nom.)	Qty. per reel
<b>OW</b>	9/(0.354)	11.1/(0.437)	3.5/(0.138)**	30/(1.18)	0.7/(0.028)	2000
<b>OX</b>	16.5/(0.65)	19.0/(0.748)	5.5/(0.217)	38/(1.5)	0.8/(0.031)	1000
<b>OY</b>	19.0/(0.748)	22.5/(0.886)	7.0/(0.276)	38/(1.5)	0.8/(0.031)	500

\*Approx. 27mm for taped & reeled units; lead length changes depending on taping type

\*\*±0.5mm (0.0197)

## Tape and Reel Dimensions



## ORDERING INFORMATION

### Standard part numbers for OW/OX/OY Series

Ohmic value	Wattage			Ohmic value	Wattage			Ohmic value	Wattage			Ohmic value	Wattage			Ohmic value	Wattage					
	Part No. Prefix > Suffix v	OW - 0.5	OX - 1		OY - 2	Part No. Prefix > Suffix v	OW - 0.5		OX - 1	OY - 2	Part No. Prefix > Suffix v		OW - 0.5	OX - 1	OY - 2		Part No. Prefix > Suffix v	OW - 0.5	OX - 1	OY - 2	Part No. Prefix > Suffix v	OW - 0.5
3.3	33GKE	✓	✓	27	270KE	✓	✓	220	221KE	✓	✓	1800	182KE	✓	✓	15000	153KE	✓	✓	120K	124KE	✓
3.9	39GKE	✓	✓	33	330KE	✓	✓	270	271KE	✓	✓	2200	222KE	✓	✓	18000	183KE	✓	✓	150K	154KE	✓
4.7	47GKE	✓	✓	39	390KE	✓	✓	330	331KE	✓	✓	2700	272KE	✓	✓	22000	223KE	✓	✓	180K	184KE	✓
5.6	56GKE	✓	✓	47	470KE	✓	✓	390	391KE	✓	✓	3300	332KE	✓	✓	27000	273KE	✓	✓	220K	224KE	✓
6.8	68GKE	✓	✓	56	560KE	✓	✓	470	471KE	✓	✓	3900	392KE	✓	✓	33000	333KE	✓	✓	270K	274KE	✓
8.2	82GKE	✓	✓	68	680KE	✓	✓	560	561KE	✓	✓	4700	472KE	✓	✓	39000	393KE	✓	✓	330K	334KE	✓
10	100KE	✓	✓	82	820KE	✓	✓	680	681KE	✓	✓	5600	562KE	✓	✓	47000	473KE	✓	✓	390K	394KE	✓
12	120KE	✓	✓	100	101KE	✓	✓	820	821KE	✓	✓	6800	682KE	✓	✓	56000	563KE	✓	✓	470K	474KE	✓
15	150KE	✓	✓	120	121KE	✓	✓	1000	102KE	✓	✓	8200	822KE	✓	✓	68000	683KE	✓	✓	560K	564KE	✓
18	180KE	✓	✓	150	151KE	✓	✓	1200	122KE	✓	✓	10000	103KE	✓	✓	82000	823KE	✓	✓	680K	684KE	✓
22	220KE	✓	✓	180	181KE	✓	✓	1500	152KE	✓	✓	12000	123KE	✓	✓	100K	104KE	✓	✓	820K	824KE	✓
																				1M	105KE	✓

Packaging  
TR = tape & reel  
B = bulk

RoHS Compliant

**O X 8 2 G K E -TR**

Size: OW=0.5W, OX=1W, OY=2W  
Ohm Value: Example: 33G = 3.3 Ohms, 330 = 33 Ohms, 331 = 330 Ohms  
Tolerance: K= 10% Standard