

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



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.

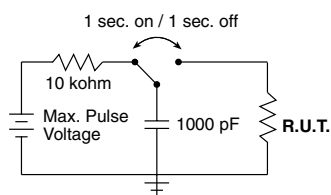
CHARACTERISTICS

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

Test Condition	Maximum ΔR
Life Test MIL-STD-202, Method 108	±5%
Short Time Overload 2x rated V, 5 sec ON @ 70°C	±(2% +0.05Ω)
Resistance to Pulse¹ 20,000 cycles. See circuit for test conditions	±5%
Thermal Shock MIL-STD-202, Method 107	±(2% ±0.05Ω)
Moisture Resistance 1000 hrs @ 40°C, 90 - 95% RH	±5%

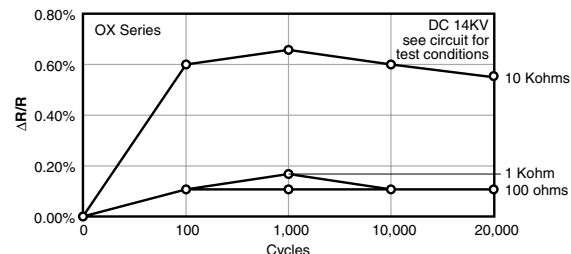
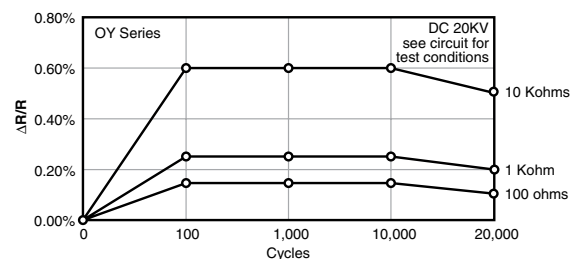
	OW	OX	OY
Max Working Voltage	200V	300V	400V
Dielectric Strength	500V	500V	700V
Max Overload Voltage	400V	600V	800V
Max Pulse Voltage¹	10KV	14KV	20KV
Pulse Tolerance, 100 pulses	—	1240V @ 52μF, 40J/ 35 sec.	1640V @ 52μF, 70J/35 sec.

¹See figures



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

Resistance to Pulse



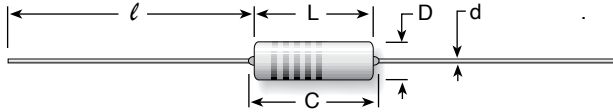
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DIMENSIONS

in./mm

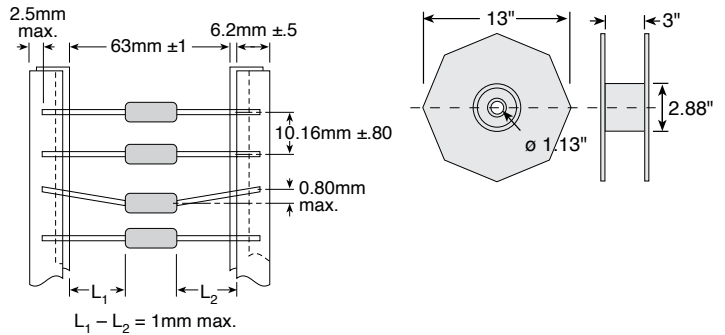


Series	Length L ±.039 (±1.0)	Length C max.	Diameter D ±.039 (±1.0)	Length l* ±.118 (±3)	Diam. d (nom.)	Qty. per reel
OW	0.354 / 9	0.437/11.1	0.138/3.5**	1.18/30	0.028/0.7	2000
OX	0.65/16.5	0.748/19.0	0.217/5.5	1.5/38	0.031/0.8	1000
OY	0.748/19.0	0.886/22.5	0.276/7.0	1.5/38	0.031/0.8	500

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

**±0.02" (0.5mm)

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 ▼	0.5	1		2	Part No. Prefix ▶ Suffix ▼	0.5		1	2	Part No. Prefix ▶ Suffix ▼		0.5	1	2		Part No. Prefix ▶ Suffix ▼	0.5	1	2	Part No. Prefix ▶ Suffix ▼	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	✓	✓	47000	--473KE	✓	✓	39000	--393KE	✓	✓	390K	--394KE	✓
12	--120KE	✓	✓	100	--101KE	✓	✓	820	--821KE	✓	✓	56000	--562KE	✓	✓	47000	--473KE	✓	✓	470K	--474KE	✓
15	--150KE	✓	✓	120	--121KE	✓	✓	1000	--102KE	✓	✓	68000	--682KE	✓	✓	56000	--563KE	✓	✓	470K	--474KE	✓
18	--180KE	✓	✓	150	--151KE	✓	✓	1200	--122KE	✓	✓	82000	--822KE	✓	✓	68000	--683KE	✓	✓	560K	--564KE	✓
22	--220KE	✓	✓	180	--181KE	✓	✓	1500	--152KE	✓	✓	10000	--103KE	✓	✓	82000	--823KE	✓	✓	680K	--684KE	✓
												12000	--123KE	✓	✓	82000	--823KE	✓	✓	820K	--824KE	✓
												100K	--104KE	✓	✓	1M	--105KE	✓	✓			✓

