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.

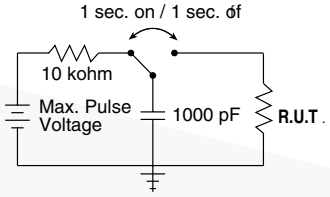
CHARACTERISTICS

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 Pulse[1]	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%

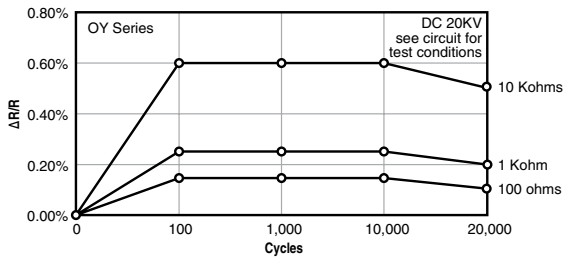
	OW	OX	OY
Max Working Voltage	200V	300V	400V
Dielectric Strength	500V	500V	700V
Max Overload Voltage	400V	600V	800V
Max Pulse Voltage[1]	10KV	14KV	20KV
Pulse Tolerance, 100 pulses	—	1240V @ 52µF, 40J/ 35 sec.	1640V @ 52µF, 70J/35 sec.

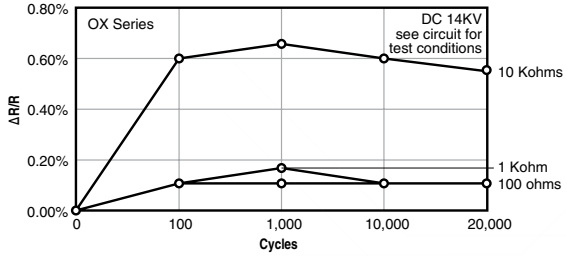
[1]See figures



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

Resistance to Pulse





(continued)

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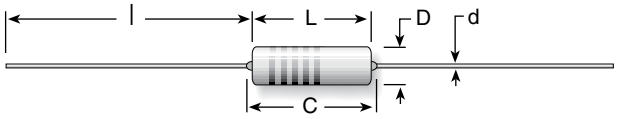
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DIMENSIONS

mm/(in)

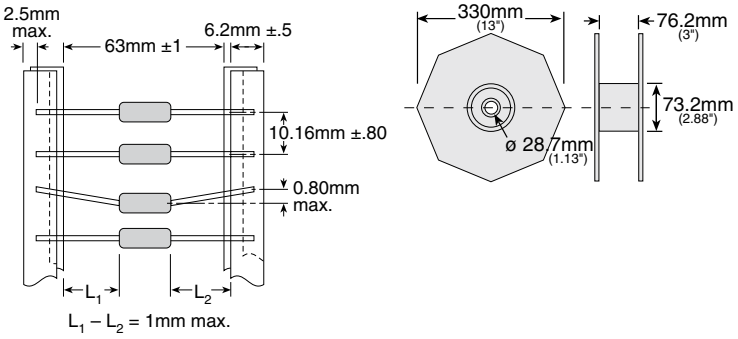


Series	Length L ±1.0 (±.039)	Length C max.	Diameter D ±1.0 (±.039)	Length (* ±.118 (±3)	Diam. d (nom.)	Qty. per reel
OW	9/(0.354)	11.1/(0.437)	3.5/(0.138)**	30/(1.18)	0.7/(0.028)	2000
OX	16.5/(0.65)	19.0/(0.748)	5.5/(0.217)	38/(1.5)	0.8/(0.031)	1000
OY	19.0/(0.748)	22.5/(0.886)	7.0/(0.276)	38/(1.5)	0.8/(0.031)	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	Part No. Prefix ➤ Suffix ▼	Wattage OW – 0.5	OX – 1	OY – 2
3.3	33GKE		✓	✓
3.9	39GKE		✓	✓
4.7	47GKE	✓	✓	✓
5.6	56GKE	✓	✓	✓
6.8	68GKE	✓	✓	✓
8.2	82GKE	✓	✓	✓
10	100KE	✓	✓	✓
12	120KE	✓	✓	✓
15	150KE	✓	✓	✓
18	180KE	✓	✓	✓
22	220KE	✓	✓	✓
27	270KE	✓	✓	✓
33	330KE	✓	✓	✓
39	390KE	✓	✓	✓
47	470KE	✓	✓	✓
56	560KE	✓	✓	✓
68	680KE	✓	✓	✓
82	820KE	✓	✓	✓
100	101KE	✓	✓	✓
120	121KE	✓	✓	✓
150	151KE	✓	✓	✓
180	181KE	✓	✓	✓
220	221KE	✓	✓	✓
270	271KE	✓	✓	✓
330	331KE	✓	✓	✓
390	391KE	✓	✓	✓
470	471KE	✓	✓	✓
560	561KE	✓	✓	✓
680	681KE	✓	✓	✓
820	821KE	✓	✓	✓
1000	102KE	✓	✓	✓
1200	122KE	✓	✓	✓
1500	152KE	✓	✓	✓
1800	182KE	✓	✓	✓
2200	222KE	✓	✓	✓
2700	272KE	✓	✓	✓
3300	332KE	✓	✓	✓
3900	392KE	✓	✓	✓
4700	472KE	✓	✓	✓
5600	562KE	✓	✓	✓
6800	682KE	✓	✓	✓
8200	822KE	✓	✓	✓
10000	103KE	✓	✓	✓
12000	123KE	✓	✓	✓
15000	153KE	✓	✓	✓
18000	183KE	✓	✓	✓
22000	223KE	✓	✓	✓
27000	273KE	✓	✓	✓
33000	333KE	✓	✓	✓
39000	393KE	✓	✓	✓
47000	473KE	✓	✓	✓
56000	563KE	✓	✓	✓
68000	683KE	✓	✓	✓
82000	823KE	✓	✓	✓
100K	104KE	✓	✓	✓
120K	124KE			✓
150K	154KE			✓
180K	184KE			✓
220K	224KE			✓
270K	274KE			✓
330K	334KE			✓
390K	394KE			✓
470K	474KE			✓
560K	564KE			✓
680K	684KE			✓
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

rev 7/23-1

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