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

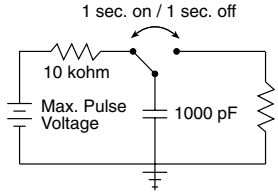
* at 70°C. **For a single impulse.

CHARACTERITICS

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.

	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.

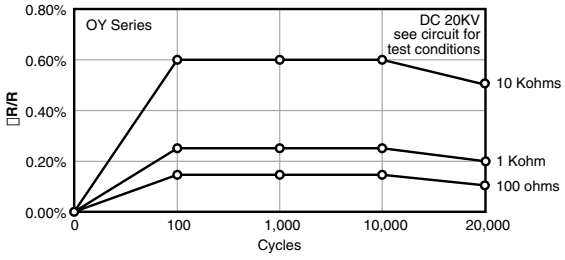
[1]See figures

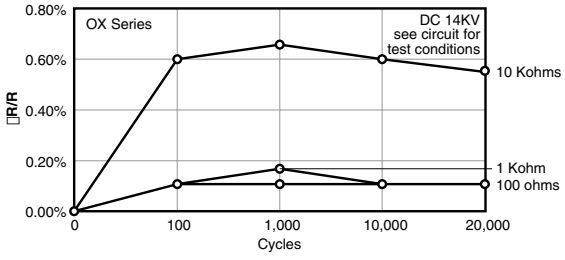


14KV and 20KV values used in circuit as shown; full voltage not applied directly to resistor.

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%

Resistance to Pulse





(continued)

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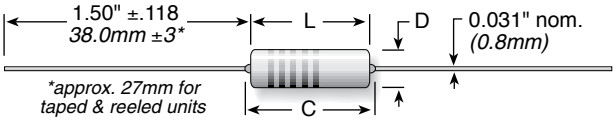
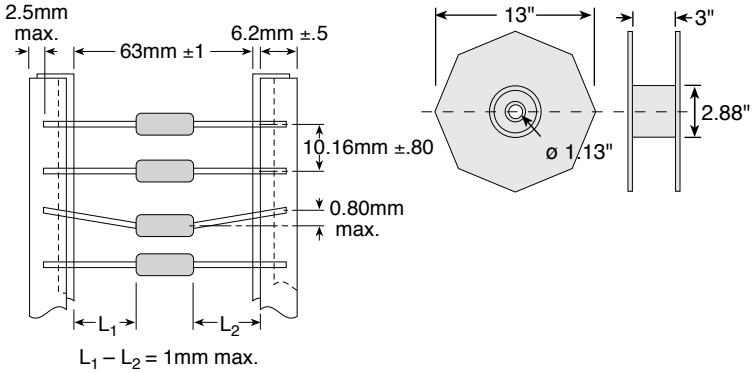
DIMENSIONS

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



$L_1 - L_2 = 1mm$ max.

ORDERING INFORMATION

Standard part numbers for OX/OY Series

Ohmic value	Part No. Prefix ➤ Suffix ▼	Wattage 1 OX–	Wattage 2 OY–
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	✔	✔
100000	—104KE	✔	✔
120000	—124KE		✔
150000	—154KE		✔
180000	—184KE		✔
220000	—224KE		✔
270000	—274KE		✔
330000	—334KE		✔
390000	—394KE		✔
470000	—474KE		✔
560000	—564KE		✔
680000	—684KE		✔
820000	—824KE		✔
1 MEG	—105KE		✔

Packaging
TR = tape & reel
B = bulk

RoHS Compliant

O X 8 2 G K E -TR

Size
OX = 1W
OY = 2W

Ohm Value
Example:
33G = 3.3 Ohms
330 = 33 Ohms
331 = 330 Ohms

Tolerance
K = 10% Standard