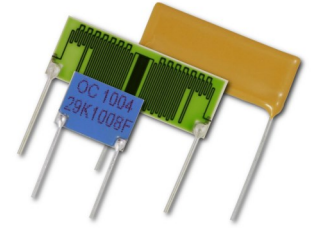


### Advantages

Our patented Micropen® precision printing technology provides superior precision, thick-film resistors.

- Voltage Ratings to 40,000 Volts
- Resistance Values to 4 TΩ
- Ultra High Stability
- Very Low Noise
- Tolerances to 0.1%
- TCR to 25 ppm/°C
- VCR to 0.05 ppm/V
- Custom Configurations



### Electrical Specifications

Case Size Ratings	TCR (±ppm/°C)	Tolerance								
		0.10%	0.25%	0.50%	1%	2%	5%	10%	20%	
39 500mW 2kV	25	1M-100M	1M-100M	1M-100M	1M-100M	1M-100M	1M-100M	1M-100M	1M-100M	1M-100M
	50	100K-100M	100K-100M	100K-1G	100K-1G	100K-1G	100K-1G	100K-1G	100K-1G	100K-1G
	100	100K-100M	100K-100M	100K-10G	100K-10G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G
	200	100K-100M	100K-100M	100K-10G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G
29 500mW 4kV	25	1M-100M	1M-100M	1M-100M	1M-100M	1M-100M	1M-100M	1M-100M	1M-100M	1M-100M
	50	100K-100M	100K-100M	100K-1G	100K-1G	100K-1G	100K-1G	100K-1G	100K-1G	100K-1G
	100	100K-100M	100K-100M	100K-10G	100K-10G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G
	200	100K-100M	100K-100M	100K-10G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G
21 1W 10kV	25	1M-100M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M
	50	100K-100M	100K-500M	100K-10G	100K-10G	100K-10G	100K-10G	100K-10G	100K-10G	100K-10G
	100	100K-100M	100K-500M	100K-10G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G
	200	100K-100M	100K-500M	100K-10G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G
42 2W 20kV	25	1M-100M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M
	50	100K-100M	100K-500M	100K-10G	100K-10G	100K-10G	100K-10G	100K-10G	100K-10G	100K-10G
	100	100K-100M	100K-500M	100K-10G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G
	200	100K-100M	100K-500M	100K-10G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G
43 3W 30kV	25	1M-100M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M
	50	100K-100M	100K-500M	100K-10G	100K-10G	100K-10G	100K-10G	100K-10G	100K-10G	100K-10G
	100	100K-100M	100K-500M	100K-10G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G
	200	100K-100M	100K-500M	100K-10G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G
56 6W 40kV	25	1M-100M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M	1M-500M
	50	100K-100M	100K-500M	100K-10G	100K-10G	100K-10G	100K-10G	100K-10G	100K-10G	100K-10G
	100	100K-100M	100K-500M	100K-10G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G
	200	100K-100M	100K-500M	100K-10G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G	100K-50G
	>200	100K-100M	100K-500M	100K-10G	100K-50G	100K-50G	100K-100G	100K-10G	100K-1T	100K-1T

The continuous maximum applied voltage cannot exceed the maximum power rating and is ohmic value dependent.

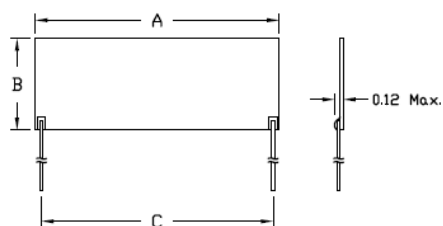
Value range is case size dependent.

For custom sizes and configurations, contact [ohmcraftsales@exxelia.com](mailto:ohmcraftsales@exxelia.com).

### How to Order

<b>HVR</b>	+		+		+		+		+		+	
<b>Type</b>		<b>Lead Style</b>		<b>Case Size</b>		<b>TCR Rating</b>		<b>Total R Value</b>		<b>Tolerance</b>		<b>Coating</b>
Leaded High Voltage Resistor		T Spade Terminal, 100% Tin RoHS		39 29		E ±25ppm/°C H ±50ppm/°C		Resistance value expressed as a four-digit number—where the first three numbers are the significant value, and the fourth number is the number of zeros.		B ±0.1% C ±0.25% D ±0.5% F ±1.0% G ±2.0% J ±5.0% K ±10% L ±20%		2 Bare 3 Powder Coating 4 Single Surface Epoxy
		S Spade Terminal, Sn60Pb40 solder		21 42		K ±100ppm/°C L ±200ppm/°C						
		W Wire, 22AWG 100% Tin RoHS		43 56		M >±200ppm/°C						
		B Wire, 22AWG Sn60Pb40 solder										

## Resistor Dimensions



Wire Leads: 22AWG (0.025"),  
1.3" typical length.

Spade Leads: 0.01" thick, 0.02" wide, 0.325" mini-

Case Size	A (Length)	B (Height)	C (Lead Spacing)	Units
39	0.3 +0.08/-0.03	0.4 ±0.03	0.2	inches
	7.62 +2.03/-0.76	10.16 ±0.76	5.08	mm
29	0.5 +0.08/-0.03	0.375 ±0.03	0.4	inches
	12.7 +2.03/-0.76	9.53 ±0.76	10.16	mm
21	1.0 +0.08/-0.03	0.375 ±0.03	0.9	inches
	25.4 +2.03/-0.76	9.53 ±0.76	22.86	mm
42	2.0 +0.08/-0.03	0.5 ±0.03	1.9	inches
	50.8 +2.03/-0.76	12.7 ±0.76	48.26	mm
43	3.0 +0.08/-0.03	0.5 ±0.03	2.9	inches
	76.2 +2.03/-0.76	12.7 ±0.76	73.66	mm
56	4.0 +0.08/-0.03	0.75 ±0.03	3.9	inches
	101.6 +2.03/-0.76	19.05 ±0.76	99.06	mm

For custom case sizes, contact [ohmcraftsales@exxelia.com](mailto:ohmcraftsales@exxelia.com).

## Typical Performance Characteristics

Test	Maximum ΔR
Short Time Overload	0.1%
Load Life	0.1%
Thermal Shock	0.1%
Shock	0.05%
Vibration	0.05%
Resistance to Soldering Heat	0.05%

Parameter	Typical
Operating Temperature	-55°C to 150°C
TCR	Measured from 25°C to 75°C
Resistance Value	Values > 10M are measured at 100 VDC For custom test voltages consult factory

## Material Construction

<b>Substrate</b>	96% Alumina
<b>Coatings</b>	All resistors are glass encapsulated with optional single side epoxy or powder coating.

## Custom Selections Available Upon Request

Please consult with our knowledgeable sales staff for help specifying custom parts to meet your needs:

E: [ohmcraftsales@exxelia.com](mailto:ohmcraftsales@exxelia.com)

P: 585.624.2610

[www.ohmcraft.com](http://www.ohmcraft.com)

93 Paper Mill St.

Honeoye Falls, NY 14472

## Power Derating Curve

