

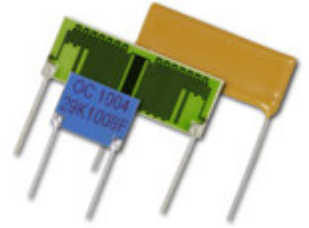
HVR SERIES

High Voltage Leaded Resistors

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
- TCR to 25 ppm/°C
- VCR to 0.05 ppm/V
- Tolerances to 0.1%
- 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-1T	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 us.

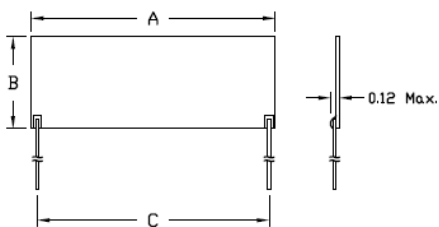
How to Order

Type	Lead Style	Case Size	TCR Rating	Total R Value	Tolerance	Coating
Leaded High Voltage Resistor	T Spade Terminal, 100% Tin RoHS S Spade Terminal, Sn60Pb40 solder W Wire, 22AWG 100% Tin RoHS B Wire, 22AWG Sn60Pb40 solder	39 29 21 42 43 56	E ±25ppm/°C H ±50ppm/°C K ±100ppm/°C L ±200ppm/°C M >±200ppm/°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

High Voltage Leaded Resistors

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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 us.

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

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

Custom Selections Available Upon Request

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

Power Derating Curve

