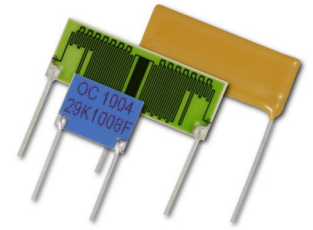


Advantages

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

- Voltage Ratings to 40,000 Volts
- Ultra High Stability
- TCR to 10 ppm/°C
- Resistance Values to 4,000 Gighoms
- Very Low Noise
- 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 | 100M-50G | 100M-50G | 100M-50G | 100M-50G | 100M-50G | 100M-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 | 100M-50G | 100M-50G | 100M-50G | 100M-50G | 100M-50G | 100M-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-100M | 100M-10G | 100M-50G | 100M-50G | 100M-50G | 100M-50G | 100M-50G | 100M-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-100M | 100M-10G | 100M-50G | 100M-50G | 100M-50G | 100M-50G | 100M-50G | 100M-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-100M | 100M-10G | 100M-50G | 100M-50G | 100M-50G | 100M-50G | 100M-50G | 100M-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-100M | 100M-10G | 100M-50G | 100M-50G | 100M-50G | 100M-50G | 100M-50G | 100M-50G |
| | >200 | 100K-100M | 100K-100M | 100M-10G | 100M-50G | 100M-50G | 100M-100G | 100M-10G | 100M-1T | 100M-1T |

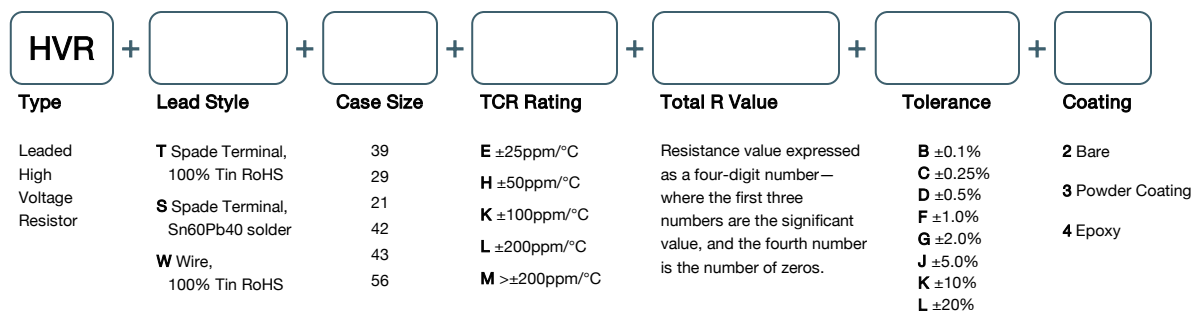
The continuous maximum applied voltage cannot exceed the maximum power rating and is ohmic value dependent.

Value range is case size dependent.

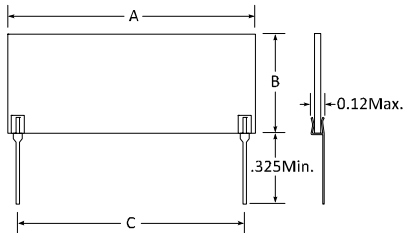
For parts below 100K, consult factory.

For custom case sizes, consult factory.

How to Order



Resistor Dimensions



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

Spade Leads: 0.01" thick, 0.02" wide, 0.325"
minimum length, standoff 0.06" max.

| 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, consult factory.

Typical Performance Characteristics

| Test | Maximum ΔR |
|---------------------------------|------------|
| Short Time Overload | 0.1% |
| Load Life | 0.1% |
| Temperature Cycle | 0.1% |
| Moisture Resistance | 0.1% |
| Shock | 0.05% |
| Vibration | 0.05% |
| Dielectric Withstanding Voltage | 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 | Measured at 100V 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 with our knowledgeable sales staff for help specifying custom parts to meet your needs:

Ph: 585.624.2610
www.ohmcraft.com
93 Paper Mill St.
Honeoye Falls, NY 14472
ocsales@micropen.com

Power Derating Curve

