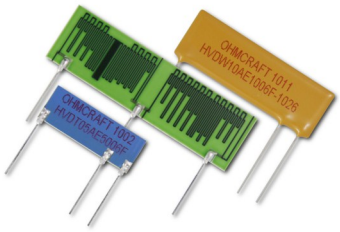
ohmcraft

HVD Series
High Voltage Leaded Dividers

Advantages

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



- **Voltage Ratings to 40,000 Volts**
- **Resistance Values to 2,000 Gigohms**
- **Ratio Tolerances to 0.1%**
- **TCR to 25 ppm/°C**
- **TCR Tracking to 5 ppm/°C**
- **VCR to 0.05 ppm/V**
- **Very Low Noise**
- **Ultra High Stability**
- **Custom Configurations**

Electrical Specifications

Case Size Ratings	TCR (±ppm/°C)	Ratio Tolerance 0.10%	0.25%	0.50%	1%	2%	5%	10%	20%
04 500mW 4kV	25	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
	100	100K-100M	100K-100M	100K-10G	100K-10G	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
	>200	100K-100M	100K-100M	100M-10G	100M-50G	100M-50G	100M-50G	100M-100G	100M-1T
05 1W 5kV	25	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
	100	100K-100M	100K-100M	100K-10G	100K-10G	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
	>200	100K-100M	100K-100M	100M-10G	100M-50G	100M-50G	100M-50G	100M-100G	100M-1T
10 1W 10kV	25	1M-100M	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
	100	100K-100M	100K-500M	100K-10G	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
	>200	100K-100M	100K-500M	100M-10G	100M-50G	100M-50G	100M-100G	100M-1T	100M-1T
20 2W 20kV	25	1M-100M	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
	100	100K-100M	100K-500M	100K-10G	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
	>200	100K-100M	100K-500M	100M-10G	100M-50G	100M-50G	100M-100G	100M-1T	100M-1T
30 3W 30kV	25	1M-100M	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
	100	100K-100M	100K-500M	100K-10G	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
	>200	100K-100M	100K-500M	100M-10G	100M-50G	100M-50G	100M-100G	100M-1T	100M-1T
40 6W 40kV	25	1M-100M	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
	100	100K-100M	100K-500M	100K-10G	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
	>200	100K-100M	100K-500M	100M-10G	100M-50G	100M-50G	100M-100G	100M-1T	100M-1T

Tolerance and value are case size dependent. For values under 100K, please consult factory.
Ratio = (R1+R2)/R2
TCR tracking is typically <25% of the absolute TCR to a minimum of 10ppm/°C.
Absolute tolerance is 15% unless otherwise specified.

How to Order

HVD + [ ] + [ ] + [ ] + [ ] + [ ] + [ ] + [ ] + [ ]

Type

Leaded High Voltage Divider

Lead Style

T Spade Terminal, 100% Tin RoHS
S Spade Terminal, Sn60Pb40 solder
W Wire, 100% Tin RoHS

Case Size

04
05
10
20
30
40

Ratio

A 1000:1
B 100:1
C Other

Absolute TCR

E ±25ppm/°C
H ±50ppm/°C
K ±100ppm/°C
L ±200ppm/°C
M >±200ppm/°C

R Total Value

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.

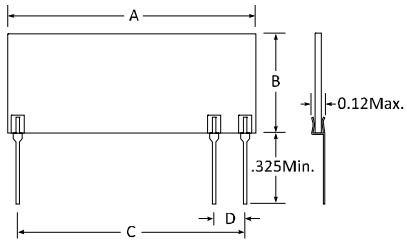
Ratio Tolerance

B ±0.1%
C ±0.25%
D ±0.5%
F ±1.0%
G ±2.0%
J ±5.0%
K ±10%
L ±20%

Coating

2 Bare
3 Powder Coating
4 Epoxy

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 (Nominal)	D (Nominal)	Units
04	0.5 +0.08/-0.03 12.7 +2.03/-0.76	0.375 ±0.03 9.53 ±0.76	0.4 10.16	0.2 5.08	inches mm
05	1.0 +0.08/-0.03 25.4 +2.03/-0.76	0.375 ±0.03 9.53 ±0.76	0.9 22.86	0.2 5.08	inches mm
10	1.5 +0.08/-0.03 38.1 +2.03/-0.76	0.5 ±0.03 12.7 ±0.76	1.3 33.02	0.2 5.08	inches mm
20	2.0 +0.08/-0.03 50.8 +2.03/-0.76	0.75 ±0.03 19.05 ±0.76	1.9 48.26	0.2 5.08	inches mm
30	3.0 +0.08/-0.03 76.2 +2.03/-0.76	0.75 ±0.03 19.05 ±0.76	2.9 73.66	0.2 5.08	inches mm
40	4.0 +0.08/-0.03 101.6 +2.03/-0.76	0.75 ±0.03 19.05 ±0.76	3.9 99.06	0.2 5.08	inches 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%

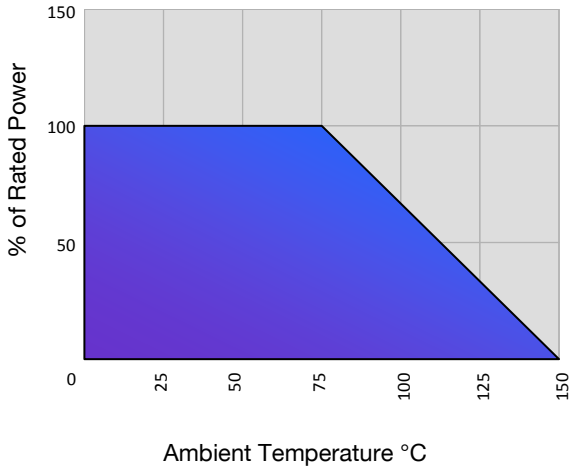
Parameter	Typical
Operating Temperature	-55°C to 150°C
TCR	measured from 25°C to 75°C
Resistance Value	Measured at 100V for custom test voltages consult factory

Material Construction

Substrate 96% Alumina

Coatings All resistors are glass encapsulated with optional single side epoxy or powder coating.

Power Derating Curve



Custom Selections Available Upon Request

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

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