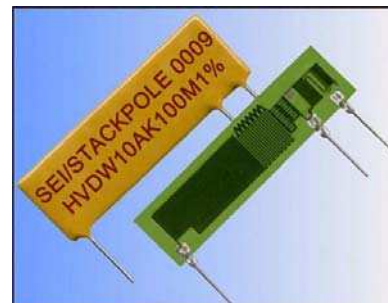


- Features:
- Ohmic values to 2,000G
  - Voltage ratings to 40,000 volts
  - Ultra-high stability
  - Tight tolerances to 0.1%
  - Very low noise
  - Low TCR to 10 ppm/°C
  - Low VCR to 0.05 ppm/volt
  - Absolute tolerance typically ±15%
  - Resistance ratio =  $(R1+R2)/R2$  where  $R1 > R2$
  - The resistance value = the total resistance value of the part (R1+R2)
  - Custom solutions available
  - RoHS compliant / lead-free



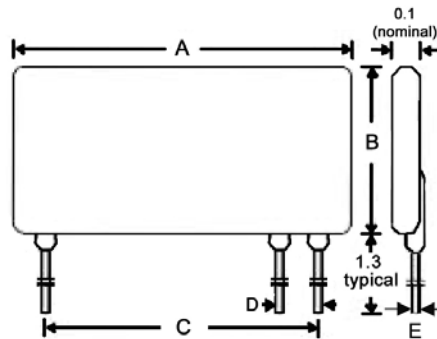
Utilizing fine film resistor deposition technology, Stackpole now offers a new level of stability and performance in leaded resistor dividers. Competing product technologies have constraints due to their dependence on certain limiting composite materials. Traditional thick film products have restricted performance characteristics, while thin film offerings are confined within certain ohmic value ranges.

In addition to improving on these limitations, the fine film deposition demonstrates new characteristics, such as a longer high-aspect ratio trace of lower resistivity film.

These fine film resistor dividers provide unique design efficiency, versatility and linearity, through the combination of long line, high aspect ratio and higher conductivity film.

Electrical Specifications								
Case Size	Power Rating (Watts) @ 25°C	Maximum Voltage Rating (kv)	Resistance Temperature Coefficient	Ohmic Range (Ω) and Ratio Tolerance				
				0.10%	0.25%	0.50%	1%	2%, 5%, 10%, 20%
HVD...04	0.5W	4KV	±25ppm/°C ±50ppm/°C ±100ppm/°C ±200ppm/°C	1M - 100M 100K - 100M 100K - 100M 100K - 100M	1M - 100M 100K - 100M 100K - 100M 100K - 100M	1M - 100M 100K - 1G 100K - 10G 100M - 10G	1M - 100M 100K - 1G 100K - 10G 100M - 50G	1M - 100M 100K - 1G 100K - 50G 100M - 50G
HVD...05	1W	5KV	±25ppm/°C ±50ppm/°C ±100ppm/°C ±200ppm/°C	1M - 100M 100K - 100M 100K - 100M 100K - 100M	1M - 100M 100K - 100M 100K - 100M 100K - 100M	1M - 100M 100K - 1G 100K - 10G 100M - 10G	1M - 100M 100K - 1G 100K - 10G 100M - 50G	1M - 100M 100K - 1G 100K - 50G 100M - 50G
HVD...10	1W	10KV	±25ppm/°C ±50ppm/°C ±100ppm/°C ±200ppm/°C	1M - 100M 100K - 100M 100K - 100M 100K - 100M	1M - 500M 100K - 500M 100K - 500M 100K - 100M	1M - 500M 100K - 10G 100K - 10G 100M - 10G	1M - 500M 100K - 10G 100K - 50G 100M - 50G	1M - 500M 100K - 10G 100K - 50G 100M - 50G
HVD...20	2W	20KV	±25ppm/°C ±50ppm/°C ±100ppm/°C ±200ppm/°C	1M - 100M 100K - 100M 100K - 100M 100K - 100M	1M - 500M 100K - 500M 100K - 500M 100K - 100M	1M - 500M 100K - 10G 100K - 10G 100M - 10G	1M - 500M 100K - 10G 100K - 50G 100M - 50G	1M - 500M 100K - 10G 100K - 50G 100M - 50G
HVD...30	3W	30KV	±25ppm/°C ±50ppm/°C ±100ppm/°C ±200ppm/°C	1M - 100M 100K - 100M 100K - 100M 100K - 100M	1M - 500M 100K - 500M 100K - 500M 100K - 100M	1M - 500M 100K - 10G 100K - 10G 100M - 10G	1M - 500M 100K - 10G 100K - 50G 100M - 50G	1M - 500M 100K - 10G 100K - 50G 100M - 50G
HVD...40	6W	40KV	±25ppm/°C ±50ppm/°C ±100ppm/°C ±200ppm/°C	1M - 100M 100K - 100M 100K - 100M 100K - 100M	1M - 500M 100K - 500M 100K - 500M 100K - 100M	1M - 500M 100K - 10G 100K - 10G 100M - 10G	1M - 500M 100K - 10G 100K - 50G 100M - 50G	1M - 500M 100K - 10G 100K - 50G 100M - 50G

Performance Characteristics	
Test	Maximum $\Delta R$
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 (consult factory for custom test voltages)



Mechanical Specifications						
Case Size	A	B	C	D	E	Unit
04	0.5 +0.08/-0.03 12.7 + 2.032/-0.762	0.375 ± 0.03 9.525 ± 0.762	0.4 10.16	0.2 5.08	0.025 0.644	inches mm
05	1 + 0.08/-0.03 25.4 + 2.032/-0.762	0.375 ± 0.03 9.525 ± 0.762	0.9 22.86	0.2 5.08	0.025 0.644	inches mm
10	1.5 + 0.08/-0.03 38.1 + 2.032/-0.762	0.5 ± 0.03 12.7 ± 0.762	1.3 33.02	0.2 5.08	0.025 0.644	inches mm
20	2 + 0.08/-0.03 50.8 + 2.032/-0.762	0.75 ± 0.03 19.05 ± 0.762	1.9 48.26	0.2 5.08	0.025 0.644	inches mm
30	3 + 0.08/-0.03 76.2 + 2.032/-0.762	0.75 ± 0.03 19.05 ± 0.762	2.9 73.66	0.2 5.08	0.025 0.644	inches mm
40	4 + 0.08/-0.03 101.6 + 2.032/-0.762	0.75 ± 0.03 19.05 ± 0.762	3.9 99.06	0.2 5.08	0.025 0.644	inches mm

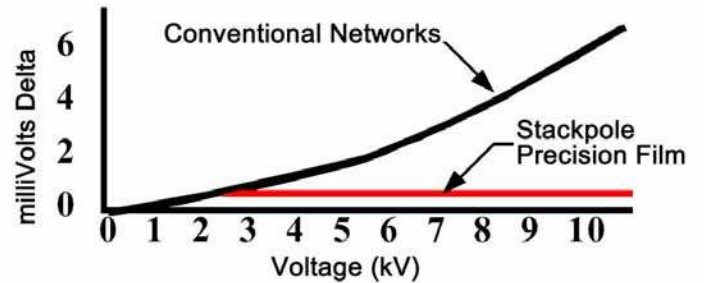
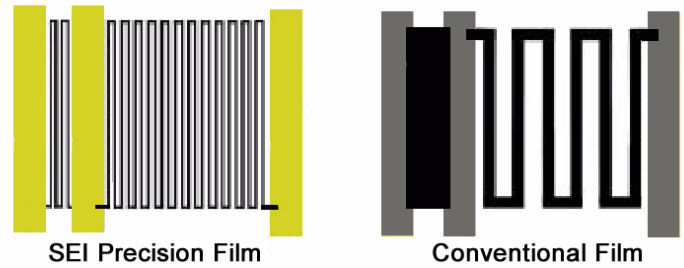
**Design Flexibility:**

The HVD series can accommodate virtually any divider ratio due to the long serpentine pattern in the fine film manufacturing, combined with the utilization of low ohms/square thick film inks. Please contact SEI with custom design needs.

**Excellent VCR Tracking:**

The VCR is virtually flat over a wide range of values.

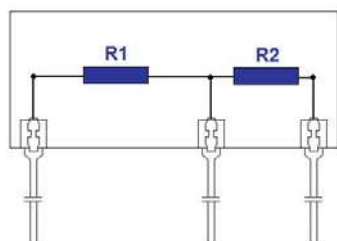
**Divider Design**



**How to Order**

1	2	3	4	5	6	7	8	9	10	11	12	13	
<b>H</b>	<b>V</b>	<b>D</b>	<b>W</b>	<b>0</b>	<b>4</b>	<b>A</b>	<b>E</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>B</b>	
<b>Product Series</b>		<b>Lead Style</b>		<b>Size</b>	<b>Power</b>	<b>Ratio(3)</b>		<b>Absolute TCR (1)</b>		<b>Total R Value (2)</b>		<b>Ratio Tolerance</b>	
HVD High Voltage Plate Resistor Divider		S Spade	W Wire	04 05 10 20 30 40	0.5W 1W 1W 2W 3W 6W	A B C	1,000:1 100:1 Other	Code E C D L	TCR ± 25ppm/°C ± 50ppm/°C ± 100ppm/°C ± 200ppm/°C	2005		B C D F G J K M	± 0.1% ± 0.25% ± 0.5% ± 1% ± 2% ± 5% ± 10% ± 20%

- Note (1): TCR tracking typically < 25% of the absolute TCR to a minimum of 10ppm/°C
- Note (2): Express value as a four digit number, the first three numbers are the significant value and the fourth number is the number of zeros
- Note (3): Resistance ratio = (R1+R2)/R2 where R1>R2
- Note (4): The resistance value = the total resistance value of the part (R1+R2)



Ratio = (R1 + R2) / R2

**Legacy Part Number (before January 3, 2011):**

<b>SEI Type</b>	<b>Lead Style</b>	<b>Case Size</b>	<b>Ratio(3)</b>	<b>Absolute TCR(1)</b>	<b>Total R Value(2)</b>	<b>Ratio Tolerance</b>
<b>HVD</b>	<b>W</b>	<b>04</b>	<b>A</b>	<b>E</b>	<b>2005</b>	<b>B</b>
	<b>Lead Style</b>	<b>Case Size</b>	<b>Ratio</b>	<b>Absolute TCR</b>		<b>Ratio Tolerance</b>
	S Spade W Wire	04 05 10 20 30 40	A 1,000:1 B 100:1 C Other	E ±25ppm/°C H ±50ppm/°C K ±100ppm/°C L ±200ppm/°C		B ±0.1% C ±0.25% D ±0.5% F ±1% G ±2% J ±5% K ±10% M ±20%