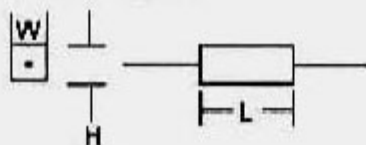


## HVA1 .2W Ultra Precision Wire Wound Rectangular Body Axial Lead Resistor

### TYPE HVA



### Electrical & Physical Specifications:

<b>H-Height:</b>	3.30mm (.130")
<b>L-Length:</b>	9.14mm (.360")
<b>W-Width:</b>	3.18mm (.125")
<b>Lead dimensions:</b>	.02" x 1" long min

### HVA Series Engineering Attributes:

#### RESISTANCE & TOLERANCES

You can select any Ohmic value or decimal part of an Ohm with tolerances to  $\pm 0.005\%$ . 10 $\Omega$  minimum resistance for  $\pm 0.01\%$  tolerance. See figure #2 shown below.

#### TCR CHARACTERISTIC

##### Standard:

100 $\Omega$  & higher values:  $0 \pm 5$  ppm/ $^{\circ}\text{C}$ .

For values below 100 $\Omega$ :  $0 \pm 15$  ppm/ $^{\circ}\text{C}$ .

##### Special:

100 $\Omega$  & higher:  $0 \pm 1$  ppm/ $^{\circ}\text{C}$ , matching to  $0 \pm 5$  ppm/ $^{\circ}\text{C}$ .

Please specify temperature span of operation. The TCR is calculated between +25 $^{\circ}\text{C}$ . & +100 $^{\circ}\text{C}$ .

#### POWER VS. AMBIENT TEMPERATURE

All Ultra Precision Resistors are designed for full load based upon  $\pm 1\%$  resistance tolerance providing the ambient temperature (+) plus the rise in temperature due to self-heating, does not exceed +125 $^{\circ}\text{C}$ . Derated to zero power @ +145 $^{\circ}\text{C}$ ., See figure #1 shown below.

#### STABILITY

To  $\pm 0.001\%/yr.$  @ +25 $^{\circ}\text{C}$ . with no Load.

#### REDUCTION OF THERMAL EMF USING COPPER TERMINALS:

Less than  $\pm 3$  microvolts/ $^{\circ}\text{C}$ . emitted.

#### INDUCTANCE

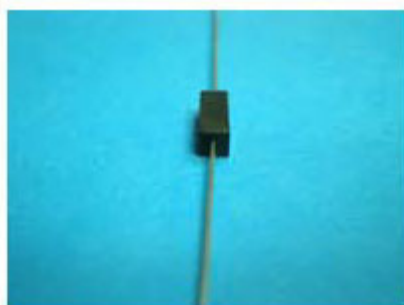
Standard parts in this series are inductively wound. Non-inductive balanced reverse pi windings are available, simply add suffix letter "N" to the part # when placing your order.

#### PROTECTIVE SEAL

Features a stress free base coat as well as an epoxy casing that is resistant to solder heat & solvents.

#### MARKING

PRC stamp, part type & name,  $\Omega$  value & tolerance, physical size permitting.



### Type HVA Derating Table\*

For  $\pm 1\%$  resistance tolerance apply up to 100% of rated power to +125 Degrees Celsius, derated to zero power @ +145 Degrees Celsius.

For  $\pm 1/2\%$  (0.5%) resistance tolerance apply up to 75% of rated power to +125 Degrees Celsius, derated to zero power @ +140 Degrees Celsius.

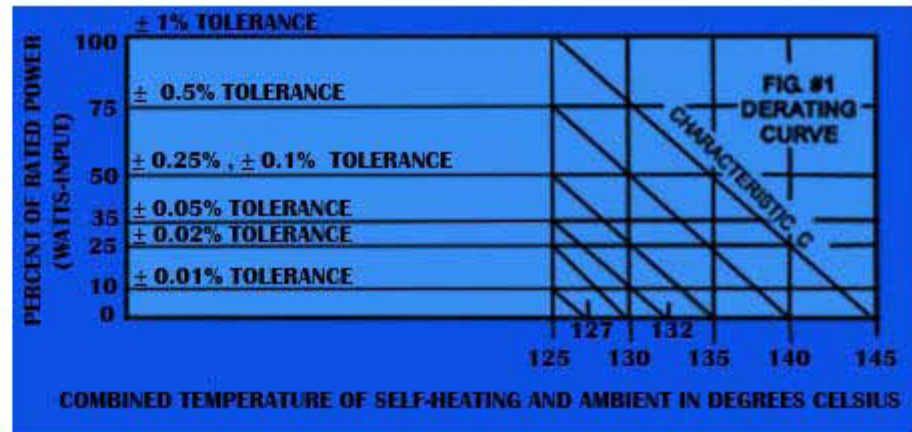
For  $\pm 1/4\%$  (0.25%) resistance tolerance apply up to 50% of rated power to +125 Degrees Celsius, derated to zero power @ +135 Degrees Celsius.

For  $\pm 1/10\%$  (0.1%) resistance tolerance apply up to 50% of rated power to +125 Degrees Celsius, derated to zero power @ +135 Degrees Celsius.

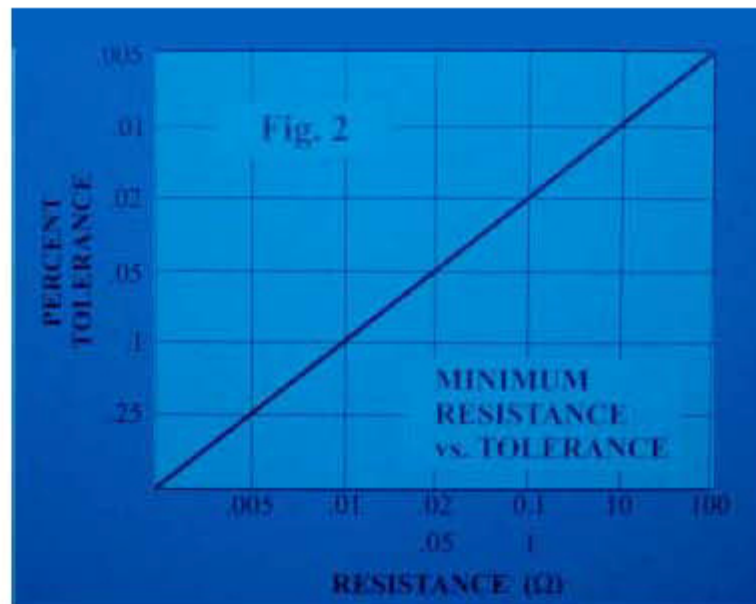
For  $\pm 1/20\%$  (0.05%) resistance tolerance apply up to 35% of rated power to +125 Degrees Celsius, derated to zero power @ +132 Degrees Celsius.

\* Percent of Rated Power vs. Combined Temp. of Self-Heating and Ambient (in °C.).

## Detailed Images



Derating Information



Minimum Resistance vs. Tolerance

## Details

SKU	HVA1
Type	Rect. Axial
Length	9.14mm (.360")
Width	3.18mm (.125")
Lead Dimensions	.02" x 1" long min
Height	3.30mm (.130")
TCR Char.	0 $\pm$ 5ppm (Std.) ... to 0 $\pm$ 1ppm /°C.
Temperature	-65°C. to +125°C.
Resistance	.1 $\Omega$ to 75K $\Omega$
Tolerance	$\pm$ .01% (std.) ... from $\pm$ 1% to $\pm$ .005%
Stability	to $\pm$ .001% per year
Max Watts	.2
Max Volts	100
Lead Free	Yes