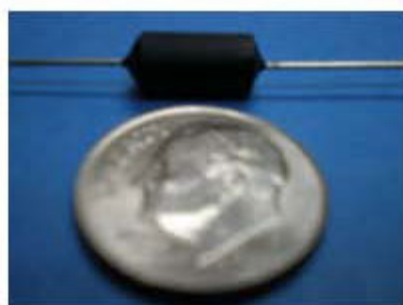
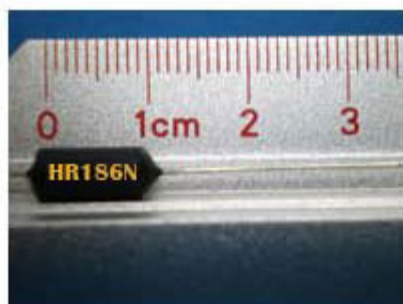




HR186N .2W Wire Wound Axial Lead Ultra Precision Resistor

TYPE HR



Electrical & Physical Specifications:

- A-Length:** 9.53mm (.375")
- B-Diameter:** 4.75mm (.187")
- Lead Dimensions:** .025" D X 1.500" L
- Max Watts @ 1% Tol:** .2
- Max Volts @ 1% Tol:** 150
- Temperature Range:** -65°C. to +125°C.
- Resistance Range (Ω):** .1 to 150K

HR Series Engineering Attributes:

RESISTANCE & TOLERANCES

You can select any Ohmic value or decimal part of an Ohm with tolerances to $\pm 0.05\%$. 10 Ω minimum resistance for $\pm 0.01\%$ tolerance. See figure #2 shown below.

TCR CHARACTERISTIC

Standard:

100 Ω & higher values: 0 ± 5 ppm/ $^{\circ}$ C.

For values below 100 Ω : 0 ± 15 ppm/ $^{\circ}$ C.

Special:

100 Ω & higher: 0 ± 1 ppm/ $^{\circ}$ C. matching to 0 ± 5 ppm/ $^{\circ}$ C.

Please specify temperature span of operation. The TCR is calculated between +25 $^{\circ}$ C. & +100 $^{\circ}$ 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 $^{\circ}$ C. Derated to zero power @ +145 $^{\circ}$ C., See figure #1 shown below.

STABILITY

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

REDUCTION OF THERMAL EMF USING COPPER TERMINALS:

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

INDUCTANCE

Non-inductive balanced reverse pi windings are standard for the HR series with the exception of the HR103.

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, Ω value & tolerance, physical size permitting.

Type HR Derating Table*

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

For $\pm \frac{1}{2}\%$ resistance tolerance apply up to 75% of rated power to +125 Degrees Celsius. derated to zero @ +140 Degrees Celsius.

For $\pm \frac{1}{4}\%$ resistance tolerance apply up to 50% of rated power to +125 Degrees Celsius. derated to zero @ +135 Degrees Celsius.

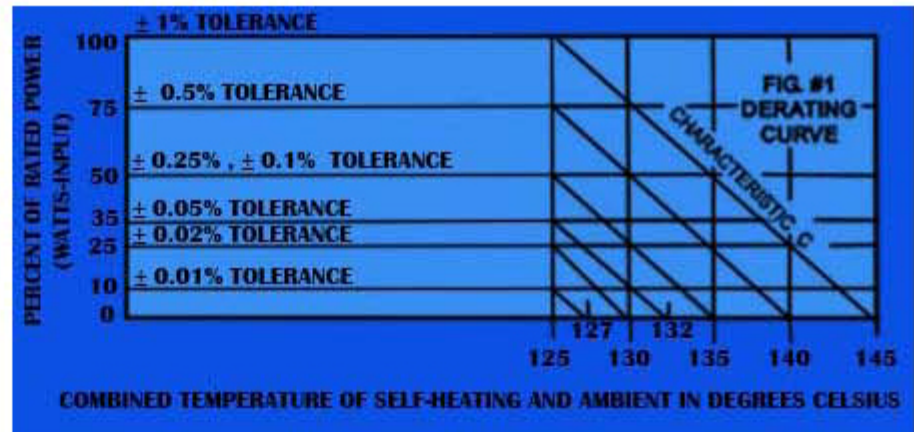
For $\pm 0.1\%$ resistance tolerance apply up to 50% of rated power to +125 Degrees Celsius. derated

to zero @ +135 Degrees Celsius.

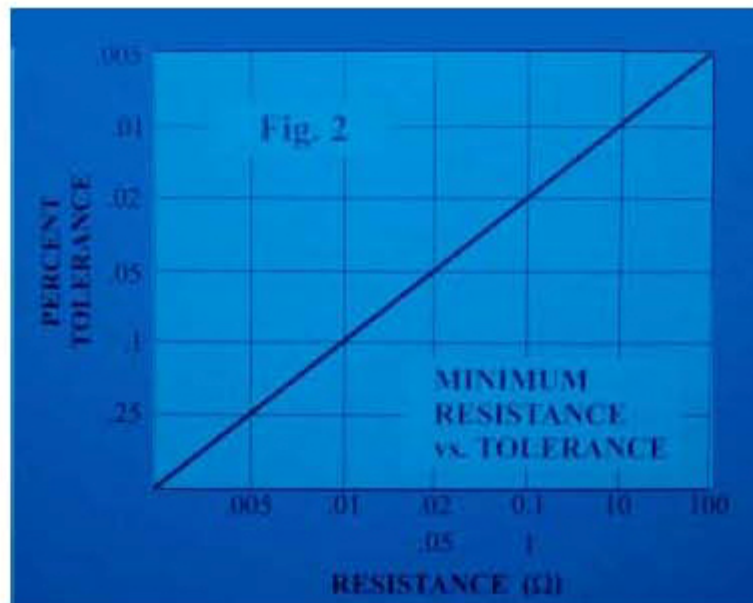
For $\pm 0.05\%$ resistance tolerance apply up to 35% of rated power to +125 Degrees Celsius. derated to zero @ +132 Degrees Celsius.

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

Detailed Images



Derating Information



Minimum Resistance vs. Tolerance

Details

SKU	HR186N
Type	Axial
Length	9.53mm (.375")
Lead Dimensions	.025" dia. X 1.500" long
Diameter	4.75mm (.187")
TCR Char.	0±5ppm (Std.) to 0±1ppm /°C.
Temperature	-65°C. to +125°C.
Resistance	.1Ω to 150KΩ
Tolerance	±.01% (std.) Ranging from ±1% to ±.005%
Stability	to ±.001% per year
Max Watts	.2
Max Volts	150
Lead Free	Yes