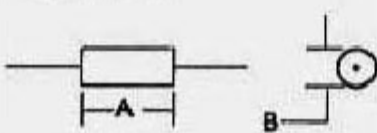


HR3114N .5W Wire Wound Axial Lead Ultra Precision Resistor

TYPE HR



Electrical & Physical Specifications:

A-Length:	20.62mm (.812")
B-Diameter:	7.92mm (.312")
Lead Dimensions:	.032" D X 1.500" L
Max Watts @ 1% Tol:	.5
Max Volts @ 1% Tol:	300
Temperature Range:	-65°C. to +125°C.
Resistance Range (Ω):	.1 to 1.5MΩ (MEG)

HR Series Engineering Attributes:

RESISTANCE & TOLERANCES

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

TCR CHARACTERISTIC

Standard:

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

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

Special:

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

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

STABILITY

To $\pm 0.001\%/yr.$ @ +25°C. with no Load.

REDUCTION OF THERMAL EMF USING COPPER TERMINALS:

Less than ± 3 microvolts/ $^\circ\text{C}$. 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 $\pm 1/2\%$ resistance tolerance apply up to 75% of rated power to +125 Degrees Celsius. derated to zero @ +140 Degrees Celsius.

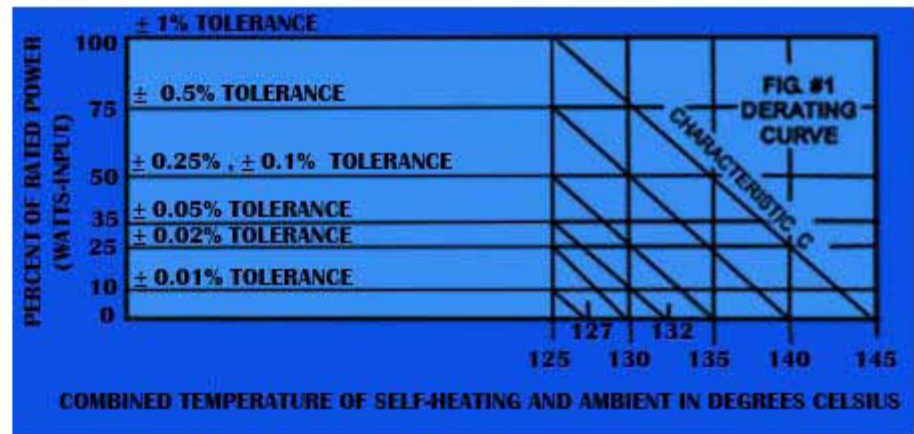
For $\pm 1/4\%$ resistance tolerance apply up to 50% of rated power to +125 Degrees Celsius. derated to zero @ +135 Degrees Celsius.

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

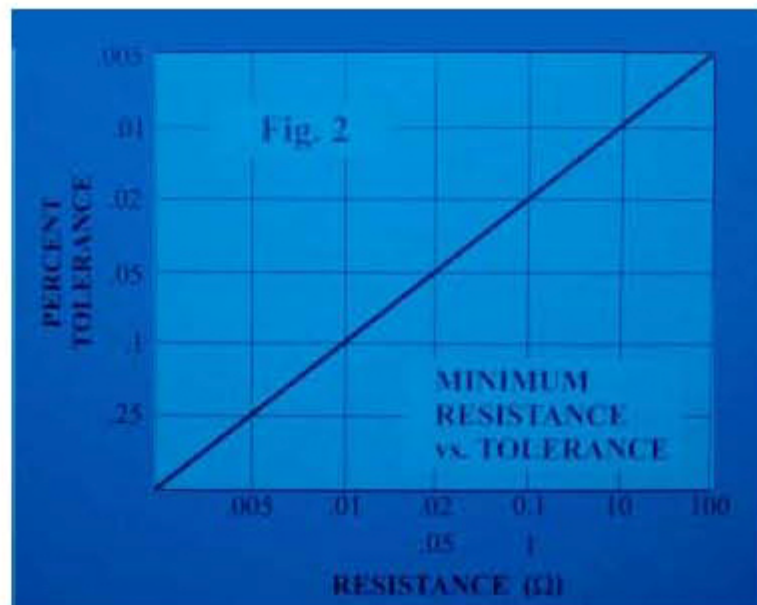
For $\pm 0.05\%$ resistance tolerance apply up to 35% of rated power to +125 Degrees Celsius. derated to zero @ +132 Degrees Celsius.

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

Detailed Images



Derating Information



Minimum Resistance vs. Tolerance

Details

SKU	HR3114N
Type	Axial
Length	20.62mm (.812")
Lead Dimensions	.032" dia. X 1.5" long
Diameter	7.92mm (.312")
TCR Char.	0 \pm 5ppm (Std.) to 0 \pm 1ppm /°C.
Temperature	-65°C. to +125°C.
Resistance	.1 Ω to 1.5M Ω
Tolerance	\pm .01% (std.) Ranging from \pm 1% to \pm .005%
Stability	to \pm .001% per year
Max Watts	.5
Max Volts	300
Lead Free	Yes