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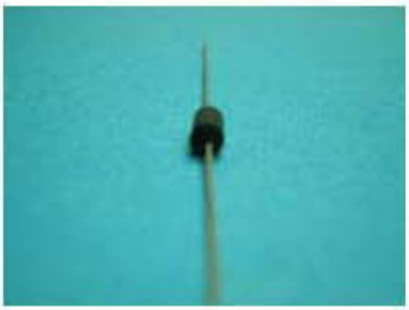
HR103 .1W Wire Wound Axial Lead Ultra Precision Resistor

Electrical & Physical Specifications:

A-Length:	5.08mm (.200")
B-Diameter:	2.54mm (.100")
Lead Dimensions:	.020" D X 1.500" L
Max Watts @ 1% Tol:	.1
Max Volts @ 1% Tol:	50
Temperature Range:	-65°C. to +125°C.
Resistance Range (Ω):	1.0 to 20K



HR Series Engineering Attributes:

RESISTANCE & TOLERANCES

You can select any Ohmic value or decimal part of an Ohm with tolerances to ±.005%. 10Ω minimum resistance for ±.01% tolerance. See figure #2 shown below.

TCR CHARACTERISTIC

Standard:

100Ω & higher values: **0±5 ppm/°C.**

For values below 100Ω: **0±15ppm/°C.**

Special:

100Ω & higher: **0±1 ppm/°C.** matching to **0±.5 ppm/°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 ±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 ±.001%/yr. @ +25°C. with no Load.

REDUCTION OF THERMAL EMF USING COPPER TERMINALS:

Less than ±3 microvolts/°C. emitted.

INDUCTANCE

This part is inductively wound; 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 ±1% resistance tolerance apply up to 100% of rated power to +125 Degrees Celsius. derated to zero @ +145 Degrees Celsius.

For ±½% resistance tolerance apply up to 75% of rated power to +125 Degrees Celsius. derated to zero @ +140 Degrees Celsius.

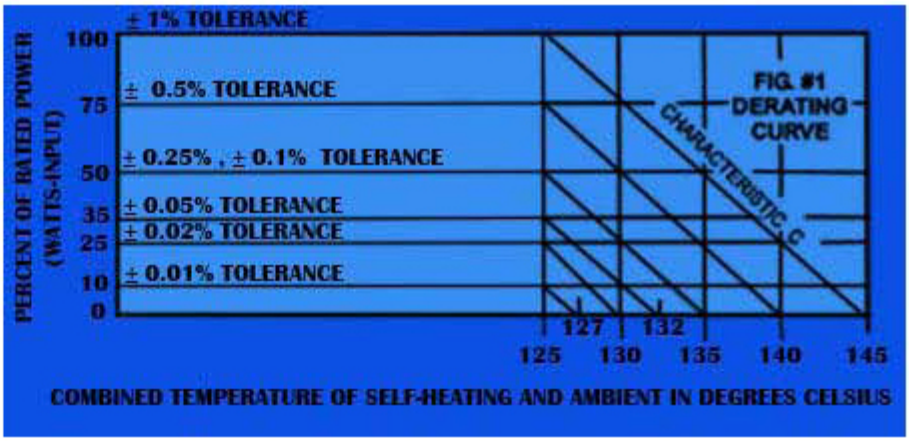
For ±¼% resistance tolerance apply up to 50% of rated power to +125 Degrees Celsius. derated to zero @ +135 Degrees Celsius.

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

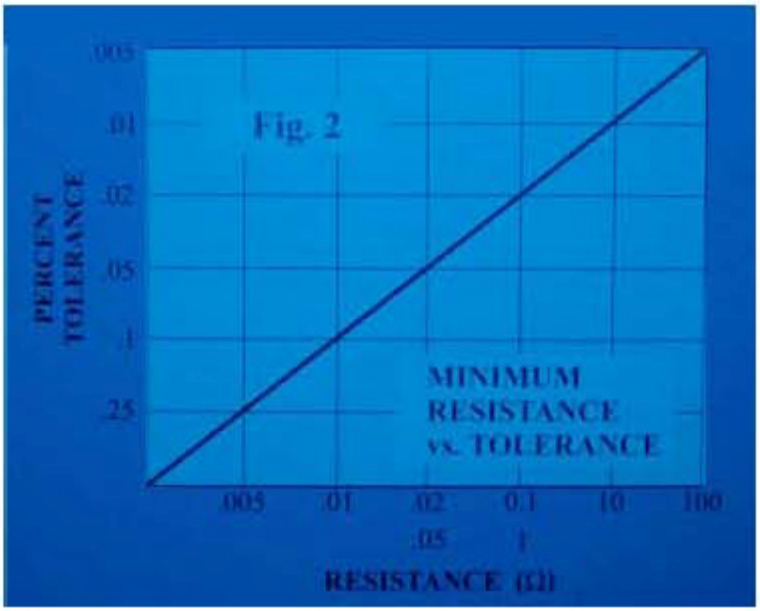
For ±0.05% resistance tolerance apply up to 35% of rated power to +125 Degrees Celsius. derated to zero @ +132 Degrees Celsius.

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

Detailed Images



Derating Information



Minimum Resistance vs. Tolerance

Details

SKU	HR103
Type	Axial
Length	5.08mm (.200")
Lead Dimensions	.020" dia. X 1.500" long
Diameter	2.54mm (.100")
TCR Char.	0±5ppm (Std.) to 0±1ppm /°C.
Temperature	-65°C. to +125°C
Resistance	1Ω to 20KΩ
Tolerance	±.01% (std.) Ranging from ±1% to ±.005%
Stability	to ±.001% per year
Max Watts	.1
Max Volts	50
Lead Free	Yes