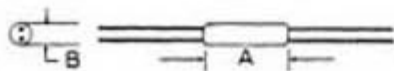


SM155-4 1.25 Watt Wire Wound 4 Terminal Resistor

SM155-4



Electrical & Physical Specifications:

A-Length:	13.21mm (.520")
B-Diameter:	5.08mm (.200")
Lead Dimensions:	.0285" dia. X 1.400" long (min.)
Min Res. @ Max Power:	.015Ω @ 1.25W
Min Res. @ Derated Power:	.001Ω @ .1W
Temperature Range:	-55°C to +275°C



SM-4 Series Engineering Attributes:

RESISTANCE & TOLERANCE

Standard: Any Ohmic value or decimal part of an Ohm desired from .015Ω to 100Ω with tolerances to ±.005%

Special: From .001Ω to .015Ω with tolerances to ±.1%
Refer to Fig. 6 for min. resistance vs. tolerance ratios.

TCR CHARACTERISTICS

Standard: 0±15 PPM/°C.

Special: 0±10 PPM/°C.

Please specify temperature span of operation.

STABILITY VS. TIME

To ±.001%/year @ +25°C. (No Load)

PROTECTIVE COATING SEAL

Solvent resistant coat with indelible marking

POWER RATING

The standard minimum resistance at full power is based upon ±1% resistance tolerance @ +25°C. Derating is required for lower values, closer tolerances, and higher temperatures. Please refer to the Derating Table shown here & Fig. 5 below.

*Type SM-4 Derating Table:

For ±1% Res. tol. apply up to 100% of rated power at +25°C. derated to zero at +275°C.
 For ±0.5% Res. tol. apply up to 80% of rated power at +25°C. derated to zero at +225°C.
 For ±0.25% Res. tol. apply up to 60% of rated power at +25°C. derated to zero at +175°C.
 For ±0.1% Res. tol. apply up to 40% of rated power at +25°C. derated to zero at +125°C.
 For ±0.05% Res. tol. apply up to 20% of rated power at +25°C. derated to zero at +75°C.

* Percent of Rated Power vs. Combined Temp. of Self-Heating and Ambient in Degrees Celsius

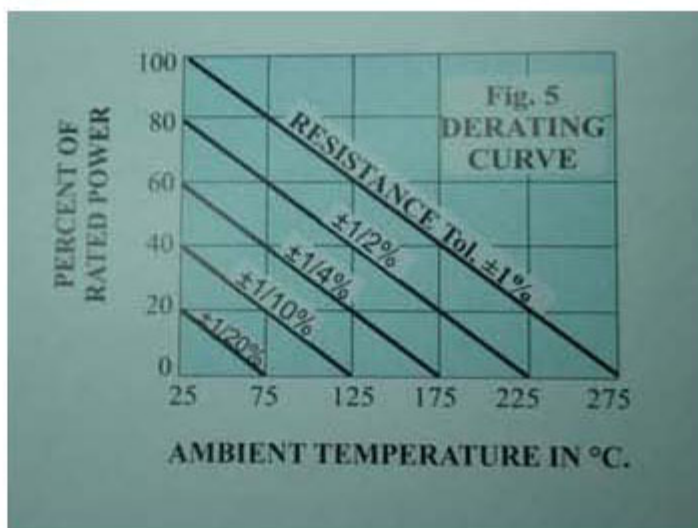
TWO (2) TERMINAL VS. FOUR (4) TERMINAL (Kelvin)

Two terminal resistors are generally used for high Ohmic values, where the effects of lead-out resistance and contact resistance are minimal. Allow approximately $\pm 0.001\%$ of an Ohm per inch, for the lead-out resistance on two terminal designs. However, on low values where lead resistance can be a part of a very accurate measurement, the adder may be eliminated by using a 4-terminal device, because 4 terminal circuits will only be indicate the voltage drop across the resistor.

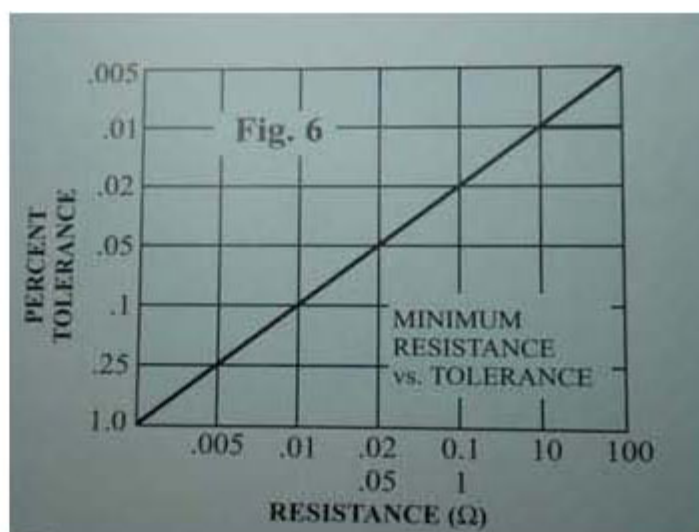
FOUR TERMINALS

PRC's type SM-4 has four solderable hot-tinned copper leads. Lead identification is academic because of its single joint construction. To observe uniformity, while observing the PRC marking on the body of the resistor, select the 2 leads closest to the top for sense leads & use the remaining two for current leads.

Detailed Images



Derating Information



Minimum Resistance vs. Tolerance

Details

SKU	SM155-4
Type	4-Terminal Axial
Length	13.21mm (.520")
Lead Dimensions	.0285" dia. X 1.400" long (min.)
Diameter	5.08mm (.200")
TCR Char.	0 \pm 15ppm/ $^{\circ}$ C (between +25 $^{\circ}$ C. and +100 $^{\circ}$ C.)
Temperature	-65 $^{\circ}$ C. to +275 $^{\circ}$ C.
Resistance	.001 Ω to 100 Ω
Tolerance	to $\pm 0.005\%$
Max Amps	10
Stability	to $\pm 0.001\%$ per year at +25 $^{\circ}$ C
Max Watts	1.25
Amps	10
Special Resistance	.001 Ω @ .1W to .015 Ω @ 1.25W
Lead Free	Yes