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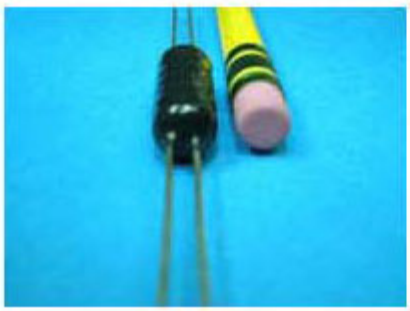
SM2212-4 4 Watt Wire Wound 4-Terminal Resistor

SM2212-4

Electrical & Physical Specifications:

A-Length:	26.04mm (1.025")
B-Diameter:	7.11mm (.280")
Lead Dimensions:	.028" dia. X 1.400" long (min.)
Min Res. @ Max Power:	.028Ω @ 4W
Min Res. @ Derated Power:	.001Ω @ .14W
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.

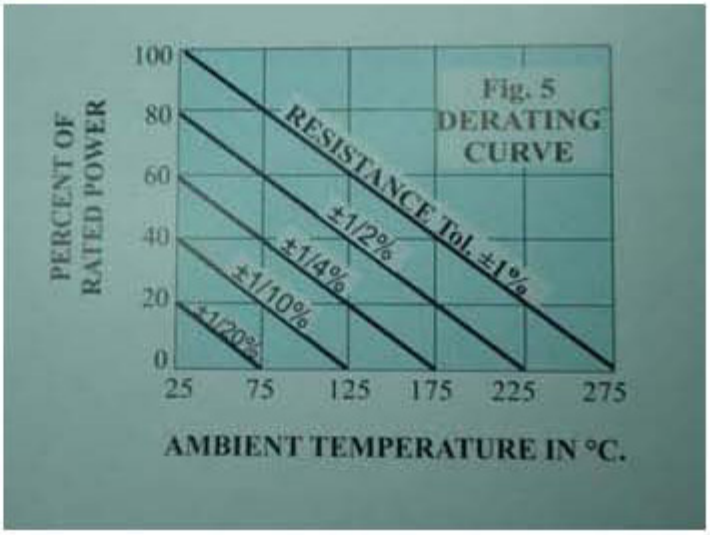
TWO (2) TERMINAL VS. FOUR (4) TERMINAL (Kelvin)

Two terminal resistors are generally used for high Ohmic values, where the effects of lead-out resistance and contact resistance are minimal. Allow approximately ±.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.

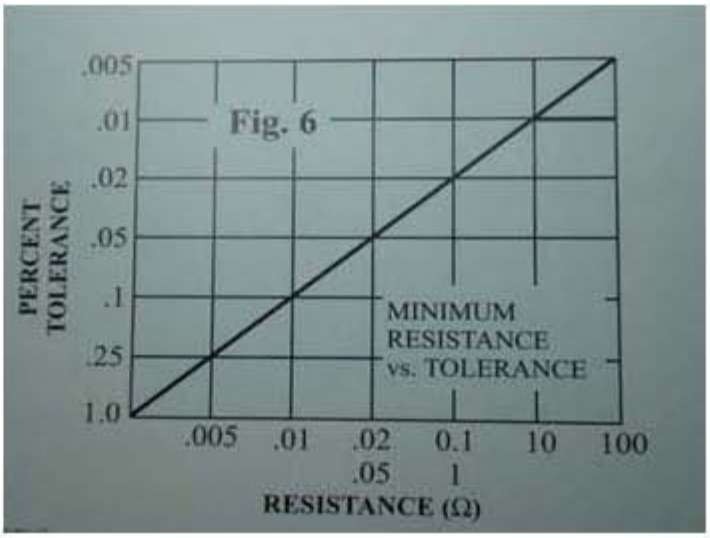
FOUR TERMINALS

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 e top for sense leads & use the remaining two for current leads.

Detailed Images



Derating Information



Minimum Resistance vs. Tolerance

Details

SKU	SM2212-4
Type	4-Terminal Axial
Length	26.04mm (1.025")
Lead Dimensions	.028" dia. X 1.400" long (min.)
Diameter	7.11mm (.280")
TCR Char.	0±15ppm/°C (between +25°C. and +100°C.)
Temperature	-65°C. to +275°C.
Resistance	.001Ω to 100Ω
Tolerance	to ±.005%
Max Amps	12
Stability	to ±.001% per year at +25°C
Max Watts	4
Amps	12
Special Resistance	.001Ω @ .14W to .028Ω @ 4W
Lead Free	Yes