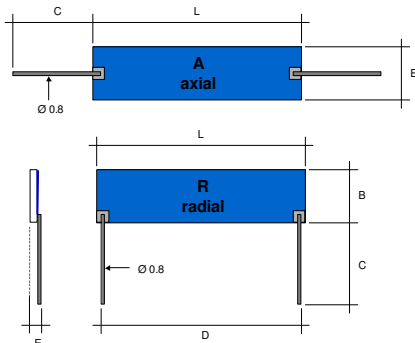


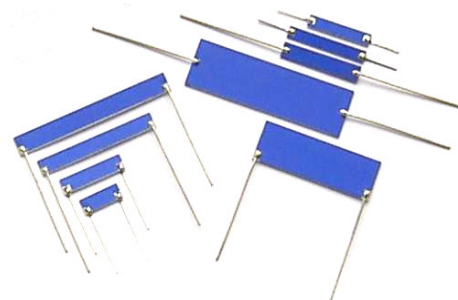
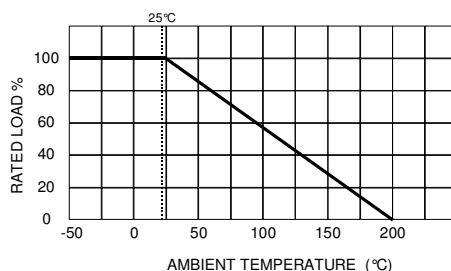
High Voltage Resistors Series 90, 100 and 200 Precision, Non-Inductive, Low TC

High Voltage Resistors Series 90, 100 and 200 combine proprietary non-inductive resistance system and design to achieve low temperature coefficient, low voltage coefficients, high stability and increased high operating voltages.

Precision High Voltage Resistors Series 90, 100 and 200 are designed to meet the demanding requirements of TWT power supplies, electron microscopes, X-ray systems, high resolution CRT displays and geophysical instruments. SMD Chip versions available on request.



Derating Curve



| Model | Wattage | Max. Continuous Oper. Voltage | Dimensions in millimeters ± 0.50 [Dimensions in inches ± 0.02] | | | | |
|-------|---------|-------------------------------|---|--------------|--------------|--------------|-------------|
| | | | L | B | C (max.) | D | E (max.) |
| 90.1 | 0.80 | 7'000 | 20.32 [0.80] | 3.81 [0.15] | 10.00 [0.40] | 17.78 [0.70] | 2.00 [0.08] |
| 90.2 | 1.00 | 11'000 | 25.40 [1.00] | 3.81 [0.15] | 10.00 [0.40] | 22.86 [0.90] | 2.00 [0.08] |
| 90.3 | 1.50 | 20'000 | 38.10 [1.50] | 3.81 [0.15] | 10.00 [0.40] | 35.56 [1.40] | 2.00 [0.08] |
| 90.4 | 2.00 | 30'000 | 50.80 [2.00] | 5.08 [0.20] | 10.00 [0.40] | 48.26 [1.90] | 2.00 [0.08] |
| 100.1 | 1.00 | 7'000 | 20.32 [0.80] | 5.08 [0.20] | 35.00 [1.40] | 17.78 [0.70] | 2.50 [0.10] |
| 100.2 | 1.30 | 11'000 | 25.40 [1.00] | 5.08 [0.20] | 35.00 [1.40] | 22.86 [0.90] | 2.50 [0.10] |
| 100.3 | 2.00 | 20'000 | 38.10 [1.50] | 5.08 [0.20] | 35.00 [1.40] | 35.56 [1.40] | 2.50 [0.10] |
| 100.4 | 3.00 | 30'000 | 50.80 [2.00] | 6.35 [0.25] | 35.00 [1.40] | 48.26 [1.90] | 2.50 [0.10] |
| 200.1 | 1.00 | 5'000 | 12.70 [0.50] | 5.08 [0.20] | 10.00 [0.40] | 10.16 [0.40] | 2.00 [0.08] |
| 200.2 | 2.00 | 11'000 | 25.40 [1.00] | 7.62 [0.30] | 35.00 [1.40] | 22.86 [0.90] | 2.50 [0.10] |
| 200.3 | 3.00 | 20'000 | 38.10 [1.50] | 12.70 [0.50] | 35.00 [1.40] | 35.56 [1.40] | 2.50 [0.10] |
| 200.4 | 4.50 | 30'000 | 50.80 [2.00] | 15.24 [0.60] | 35.00 [1.40] | 48.26 [1.90] | 2.50 [0.10] |
| 200.5 | 6.50 | 45'000 | 76.20 [3.00] | 15.24 [0.60] | 35.00 [1.40] | 73.66 [2.90] | 3.00 [0.12] |
| 200.7 | 9.00 | 60'000 | 101.60 [4.00] | 15.24 [0.60] | 35.00 [1.40] | 99.06 [3.90] | 3.00 [0.12] |

Characteristics

| | |
|--------------------------|---|
| Resistance Values | from 1KΩ to as high as 100GΩ on all models (to 1TΩ on request) |
| Tolerances | 0.05%, 0.1%, 0.25%, 0.5%, 1%, 2%, 5%, 10% (0.05% available to 10G, 0.25% to 100G, other on request) |
| Temperature Coefficients | 5, 10, 15, 25, 50 and 100 ppm/°C (10 ppm/°C available to 10G, 25 ppm/°C to 100G, other on request) |
| Operating Temperature | -55 .. +200 °C (extended temperature range to 350°C available) |
| Insulation Resistance | > 10'000 MΩ 500 Volt 25 °C 75% relative humidity |
| Dielectric Strength | > 1'000 Volt 25 °C 75% relative humidity |
| Thermal Shock | Δ R/R < 0.1% typ., 0.20% max. MIL Std. 202, method 107 Cond. C IEC 68 - 2 - 14 |
| Overload | Δ R/R < 0.1% typ., 0.25% max. 1,5 x Pnom, 5 sec (do not exceed max. voltage) |
| Moisture Resistance | Δ R/R < 0.1% typ., 0.25% max. MIL Std. 202, method 106 IEC 68 - 2 - 3 |
| Load Life | Δ R/R < 0.1% typ., 0.25% max. 1000 hours at rated power IEC 115 - 1 |
| Encapsulation | Screen Printed Silicone Core Material Al ₂ O ₃ (96%) |
| Lead Material | Tinned Copper / SMD versions available Resistor Material Ruthenium Oxide |

Voltage Coefficients of Resistance

| Type | Resistance Range | VCR (- ppm/V)* | Type | Resistance Range | VCR (- ppm/V)* | Type | Resistance Range | VCR (- ppm/V)* |
|-------|------------------|----------------|-------|------------------|----------------|---|------------------|----------------|
| 90.1 | 1K .. 100M | < 0.80 | 100.2 | 1K .. 250M | < 0.70 | 200.3 | 1K .. 1G | < 0.20 |
| | 100M .. 1G | < 1.50 | | 250M .. 3.5G | < 1.80 | | 1G .. 10G | < 0.40 |
| 90.2 | 1K .. 150M | < 0.65 | 100.3 | 1K .. 400M | < 0.45 | 200.4 | 1K .. 1G | < 0.10 |
| | 150M .. 1.5G | < 1.20 | | 400M .. 5G | < 1.20 | | 1G .. 20G | < 0.30 |
| 90.3 | 1K .. 300M | < 0.50 | 100.4 | 1K .. 600M | < 0.35 | 200.5 | 1K .. 1.5G | < 0.07 |
| | 300M .. 4G | < 0.90 | | 600M .. 10G | < 0.70 | | 1.5G .. 30G | < 0.20 |
| 90.4 | 1K .. 500M | < 0.35 | 200.1 | 1K .. 250M | < 2.00 | 200.7 | 1K .. 2G | < 0.05 |
| | 500M .. 7G | < 0.80 | | 250M .. 3G | < 3.70 | | 2G .. 40G | < 0.15 |
| 100.1 | 1K .. 200M | < 0.90 | 200.2 | 1K .. 500M | < 0.35 | * typical values, contact factory for details | | |
| | 200M .. 2.5G | < 2.50 | | 500M .. 7G | < 0.90 | | | |