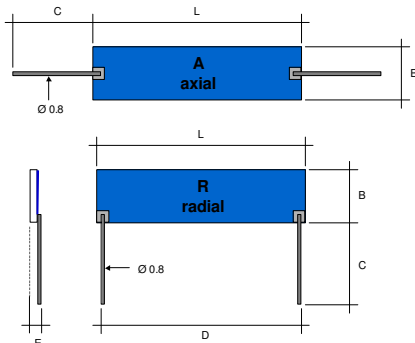




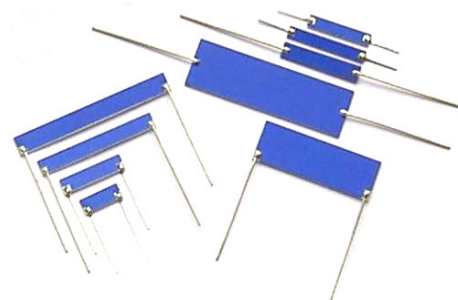
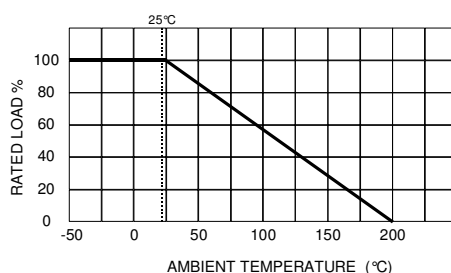
High Voltage Resistors Series 90, 100 and 200 Precision, Non-Inductive, Low TC

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			