

High-Voltage Resistors

Series SGT LowTCR • U.S. Patent-No. 4,859,981

TC of 25 ppm/°C combined with precision tolerances (0.1%–1%), ohmic range (100 KΩ–1 GΩ)

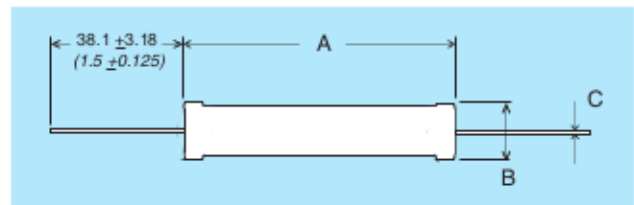
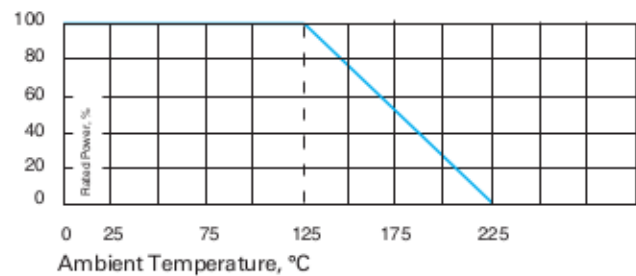
The models in the SGT series meet the most stringent requirements regarding temperature coefficient in connection with high stability performance at high operating voltages. The low temperature coefficient minimizes ohmic value change generated through the warm-up due to power dissipation. The SGT series is produced using EBG's patented Non-Inductive Design. Typical applications are medical systems like X-ray, nuclear spin tomography as well as power supplies or instruments.

General Characteristics

- Resistance range: from 100 KΩ to 1 GΩ
- Resistance tolerance: from ±0.1% to ±1.0%
- Temperature coefficient: 25 ppm/°C from -15°C to +85°C. Better TCR on request
- Load life stability: 0.25% per 1,000 hours at +125°C.
- Patented NON-INDUCTIVE DESIGN
- Max. cont. operating temperature: +225°C.
- Voltages up to 60% higher than the values listed may be specially ordered by adding "S" to the model designation.

Specifications

- Resistance tolerance: standard: ±1% to ±10% (tolerances down to ±0.1% upon special request) **
- Temperature coefficient: ±25 ppm/°C referenced to 25°C, ΔR taken at -15°C and +85°C.
- Voltage coefficient: -0.2 ppm/V max. as to MIL-Std-202, Method 309, 10 kV DC max.
- Dielectric strength: 1,000 V DC
- Insulation resistance: 10 GΩ min.
- Overload/overvoltage: 5 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds. ΔR 0.20% max.
- Load life: 1,000 hours at rated voltage not exceeding rated power, typical ΔR (2 s) = 0.1%, ΔR=0.25% max.
- Moisture resistance: MIL-Std-202, Method 106, ΔR 0.4% max.
- Thermal shock: MIL-Std-202, Method 107, Cond. B, ΔR 0.20% max.
- Encapsulation: silicone conformal
- Lead material: OFHC copper, tin-plated



Model no.	Wattage	Max. cont. oper. Volt	Min. Ω	Min. "S" Ω	Max. (1% Tol.) Ω	Dimensions in millimeters Dimensions in inches		
						A ±0.50 ±0.02	B ±0.50 ±0.02	C ±0.50 ±0.002
SGT 26	1.0	4,000	100K	40M	250M	26.90 1.059	8.20 0.323	1.00 0.040
SGT 32	1.25	5,000	120K	50M	300M	33.00 1.300	8.20 0.323	1.00 0.040
SGT 39	1.5	6,000	150K	60M	400M	39.50 1.555	8.20 0.323	1.00 0.040
SGT 52	2.0	10,000	200K	80M	500M	52.10 2.051	8.20 0.323	1.00 0.040
SGT 78	3.0	15,000	300K	120M	700M	77.70 3.059	8.20 0.323	1.00 0.040
SGT 103	4.0	20,000	400K	160M	1G	102.90 4.051	8.20 0.323	1.00 0.040
SGT 124	5.0	25,000	500K	190M	1G	123.70 4.870	8.20 0.323	1.00 0.040
SGT 154	6.0	30,000	600K	250M	1G	153.70 6.051	8.20 0.323	1.00 0.040

** If you need very close tolerances (±0.1% to ±0.5%), we recommend not to use the full power rating but rather to select the next larger size to achieve ultimate stability.

For details, please contact your nearest EBG representative.