

## Series SGT Low TC • US Patent-Nr. 4,859,981

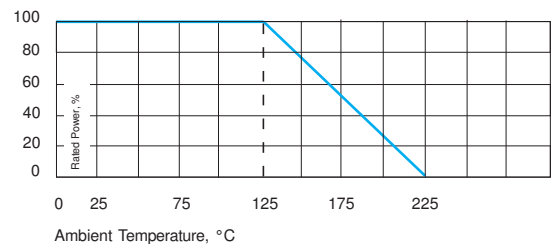
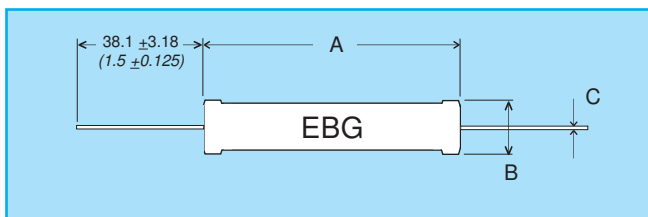
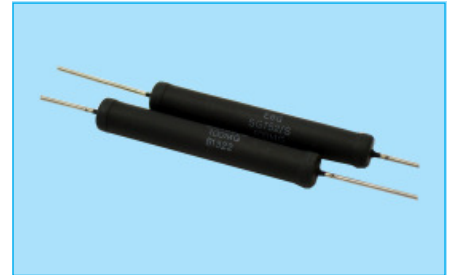
TC of 25ppm/°C combined with Precision Tolerances (0.1%-1%), Ohmic Range (100KΩ-1GΩ)

EBG is producing these models in order to meet the most stringent requirements regarding temperature coefficient in connection with high stability performance at high operating voltages. The low temperature coefficient minimizes the selfdrift generated through the warm-up due to power dissipation. The series SGT are produced with EBG's patented Non-Inductive Design. Typical applications are Medical Systems like X-Ray, Nucleus spin tomographs as well as Power Supplies or instruments. The features of the Type SGT Low TC Precision High Voltage Resistors are:

- Resistance Range from 100KΩ to 1GΩ
- Resistance Tolerance from ±0.1% to ±1.0%
- Temperature Coefficient: 25ppm/°C from -15°C to +85°C.
- Load Life Stability of 0.25% per 1,000 hours at +125°C.
- Patented NON-INDUCTIVE DESIGN
- Max. Cont. Operating Temp. of +225°C.
- Voltages up to 60% higher than the table values may be obtained in special order by adding "S" to the model designation.

### Specifications:

- Resistance Tolerance: Standard: ±1% to ±10% (tolerances down to ±0.1% on special request) \*\*
- Temperature Coefficient: ±25ppm/°C referenced to 25°C, ΔR taken at -15°C and +85°C.
- Voltage Coefficient: max. -0.2ppm/V as to MIL-Std-202, Method 309, 10 KV DC max.
- Dielectric Strength: 1,000VDC
- Insulation Resistance: 10 GΩ min.
- Overload/Overvoltage: 5 times rated power with applied voltage not to exceed 1.5 times max. continuous operating voltage for 5 seconds. ΔR 0.20% max.
- Load Life: 1,000 hours at rated voltage not exceeding rated power, typical ΔR (2s)=0.1%, max. ΔR=0.25%
- 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: O.F.H.C. Copper, tin plated

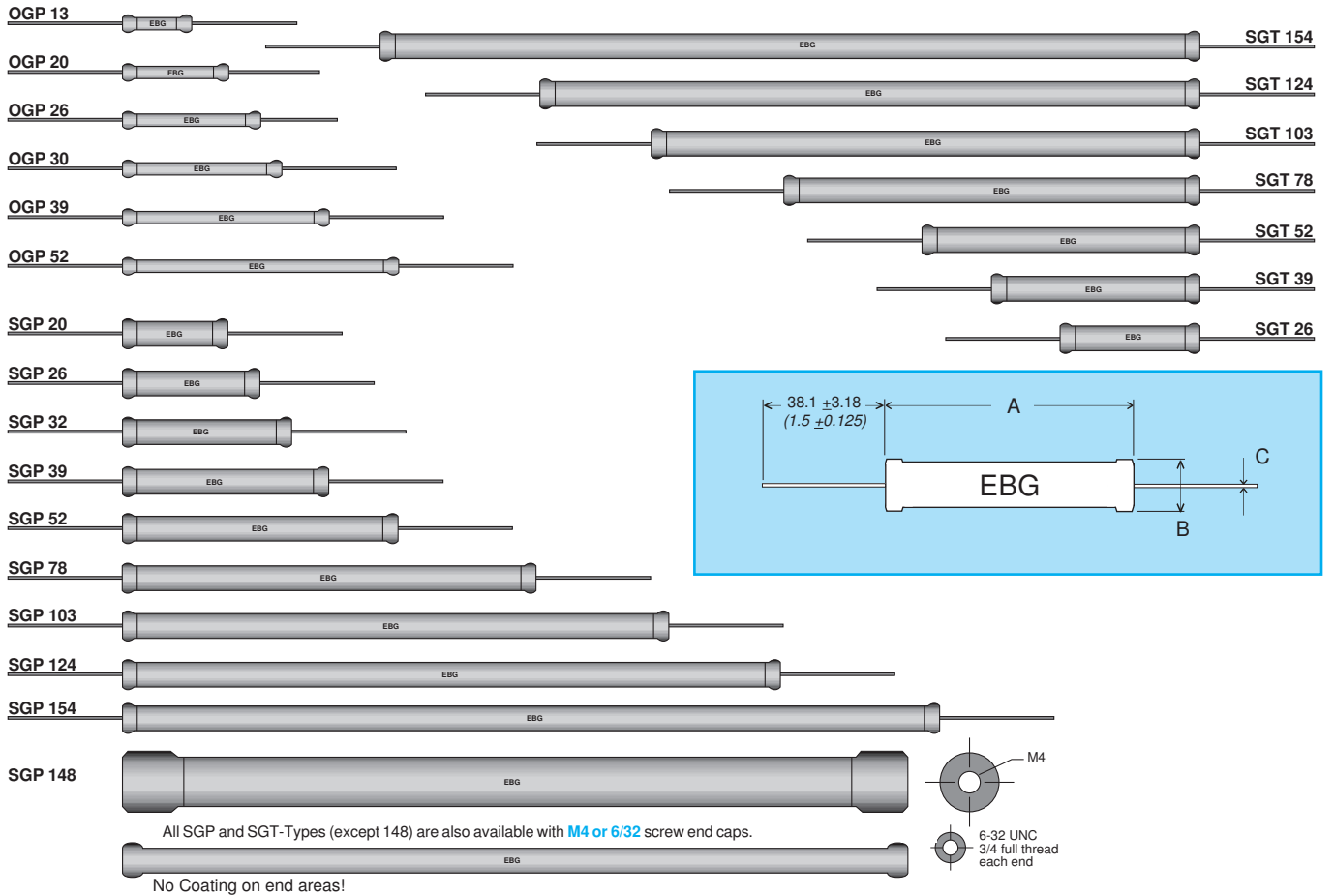


| Model No. | Wattage | Max. Cont. Oper. Volt. | MIN Ω | MIN "S" Ω | Max. (1% Tol.) Ω | Dimensions in millimeters |               |                |
|-----------|---------|------------------------|-------|-----------|------------------|---------------------------|---------------|----------------|
|           |         |                        |       |           |                  | A ±0.50 ±0.02             | B ±0.50 ±0.02 | C ±0.05 ±0.002 |
| SGT 26    | 1.0     | 4,000                  | 100K  | 40M       | 250M             | 26.90<br>1.059            | 8.20<br>0.323 | 1.00<br>0.040  |
| SGT 32    | 1.25    | 5,000                  | 120K  | 50M       | 300M             | 33.00<br>1.300            | 8.20<br>0.323 | 1.00<br>0.040  |
| SGT 39    | 1.5     | 6,000                  | 150K  | 60M       | 400M             | 39.50<br>1.555            | 8.20<br>0.323 | 1.00<br>0.040  |
| SGT 52    | 2.0     | 10,000                 | 200K  | 80M       | 500M             | 52.10<br>2.051            | 8.20<br>0.323 | 1.00<br>0.040  |
| SGT 78    | 3.0     | 15,000                 | 300K  | 120M      | 700M             | 77.70<br>3.059            | 8.20<br>0.323 | 1.00<br>0.040  |
| SGT 103   | 4.0     | 20,000                 | 400K  | 160M      | 1G               | 102.90<br>4.051           | 8.20<br>0.323 | 1.00<br>0.040  |
| SGT 124   | 5.0     | 25,000                 | 500K  | 190M      | 1G               | 123.70<br>4.870           | 8.20<br>0.323 | 1.00<br>0.040  |
| SGT 154   | 6.0     | 30,000                 | 600K  | 250M      | 1G               | 153.70<br>6.051           | 8.20<br>0.323 | 1.00<br>0.040  |

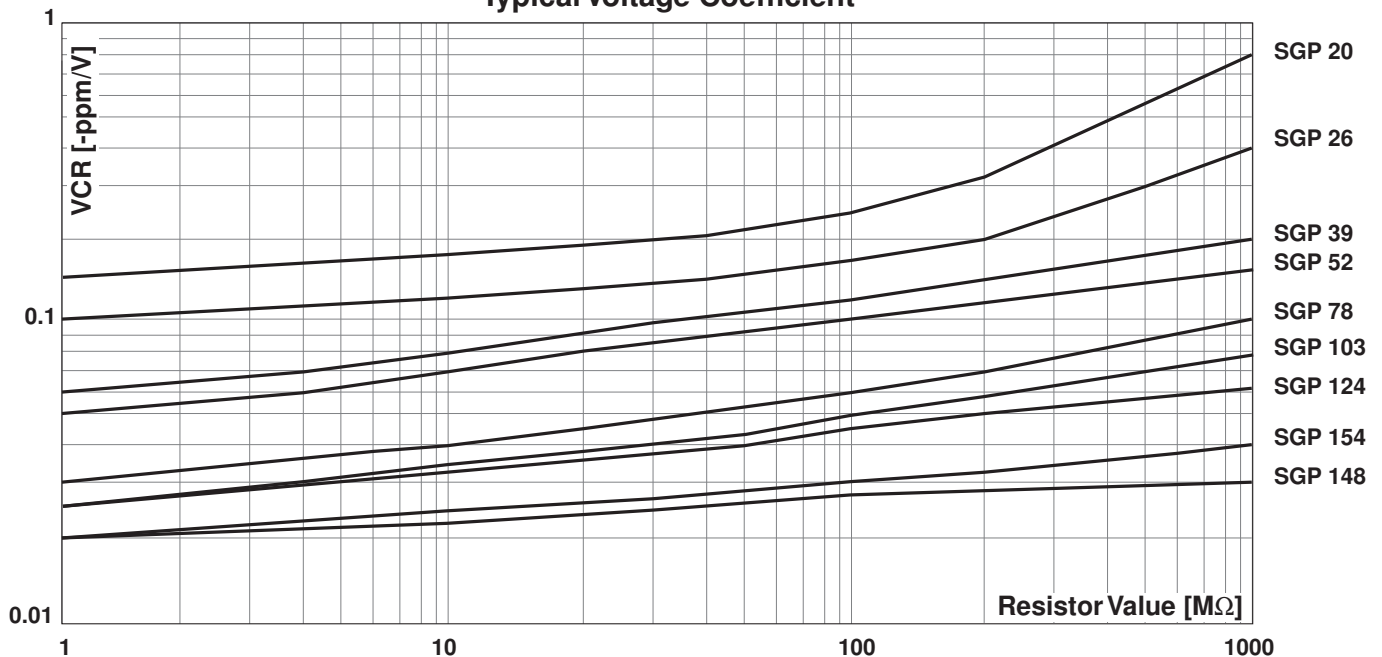
\*\* In case you need very close tolerances (± 0.1% to ±0.5%) we suggest not to use the full power rating but rather choose the next larger size in order to achieve ultimate stability. For details please contact your nearest EBG representative.

In the above spec sheet, you will find our standard product, please contact your local manufacturing representative or call us direct to find out details of other options available regarding this style. Please see our website for the most updated information!

# High Voltage Resistors – Overview



## Typical Voltage Coefficient



In the above spec sheet, you will find our standard product, please contact your local manufacturing representative or call us direct to find out details of other options available regarding this style. Please see our website for the most updated information!