

High-Voltage Resistors

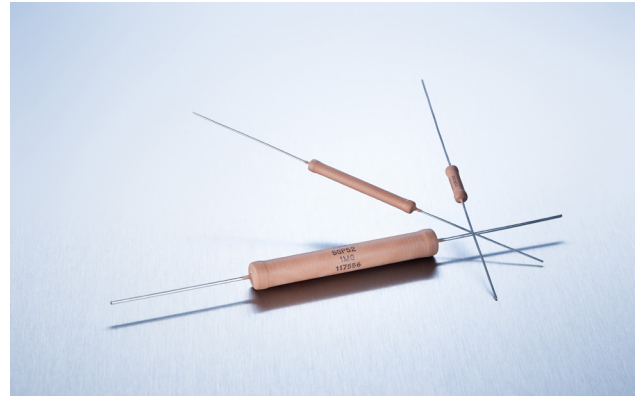
Series SGP/OGP

TC of 80 ppm/°C combined with precision tolerances, wide ohmic range / U.S. Patent-No. 4,859,981

The series employs our special METOXFILM, which demonstrates excellent stability and a wide resistance range. Power and voltage ratings are for continuous operation and have all been pretested for steady-state performance as well as momentary overload conditions.

Features

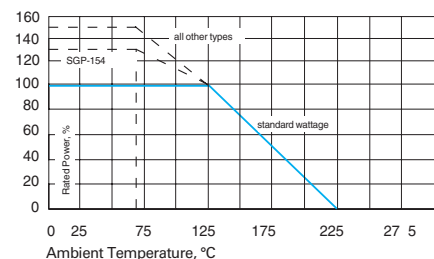
- up to 48 kV operating voltage
- Non-Inductive design
- ROHS compliant
- Voltages up to 60% higher than the values listed – “S”-Version



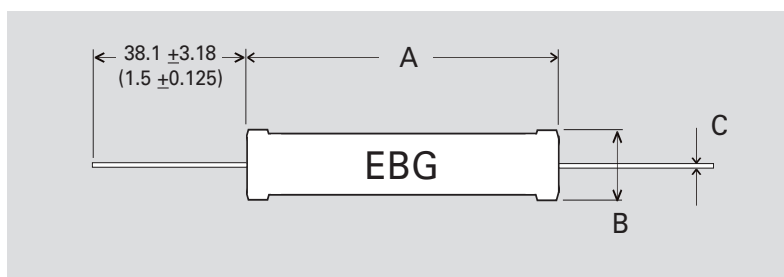
Technical Specifications

Resistance value	100 Ω ≤ 10 GΩ (see model specifications page 2)
Resistance tolerance	±1 % to ±10 % standard (>1 GΩ: ±2 % to ±10 %) down to ±0.1 % on special request for limited ohmic values
Temperature coefficient	±80 ppm/°C (at +85°C ref. to +25°C) down to ±25 ppm/°C or lower on special request for limited ohmic values and model no.
Max. operating temperature	+ 225 °C
Voltage coefficient	(typical) see diagram page 3
Dielectric strength	1,000 V DC
Insulation resistance	10 GΩ min. at 1,000 V DC
Overload / overvoltage	5x rated power 125°C with applied voltage not to exceed 1.5x maximum continuous operating voltage for 5 sec. ΔR 0.5 % max.
Load life	1,000 hours at 125°C and rated power, components with 1 % tol. ΔR 0.2 % max., extended range (“S”) ΔR = 0.5 % max.
Load life stability	typical ±0.02 % per 1,000 hours
Moisture resistance	MIL-Std-202, method 106, ΔR 0.4 % max
Thermal shock	MIL-Std-202, method 107, Cond. C, ΔR 0.25 % max.
Encapsulation	standard: silicone coating other coating options (like 2xpolyimide, glass) available on request
Other terminals available	golden leads or screw end caps (6/32”, M4, custom) ask for details
Lead material	OFHC copper, tin-plated
Weight	depending on model no. (ask for details)

EBG’s Non-Inductive design offers an outstanding advantage over other techniques. The design incorporates a unique method of DIGITAL TRIMMING to value. Other less desirable methods include an “analog” method of abrading and removing the resistive material, which frequently results in a weak section. EBG’s patented process avoids this potential problem.



Dimensions in mm [inches]



How to make a request

Model.no_ Ohmic value_Tolerance

For example:

SGP-103 10M 1% or OGP-20 10M 5%

Example for high voltage:

SGP-154-S 300M 2% or OGP-39-S 100M 1%

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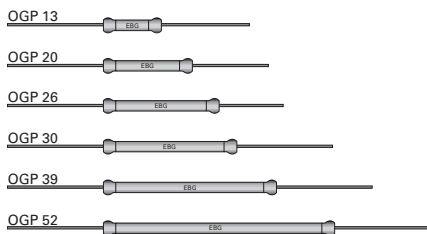
TC of 80 ppm/°C combined with precision tolerances, wide ohmic range / U.S. Patent-No. 4,859,981

Model Specifications

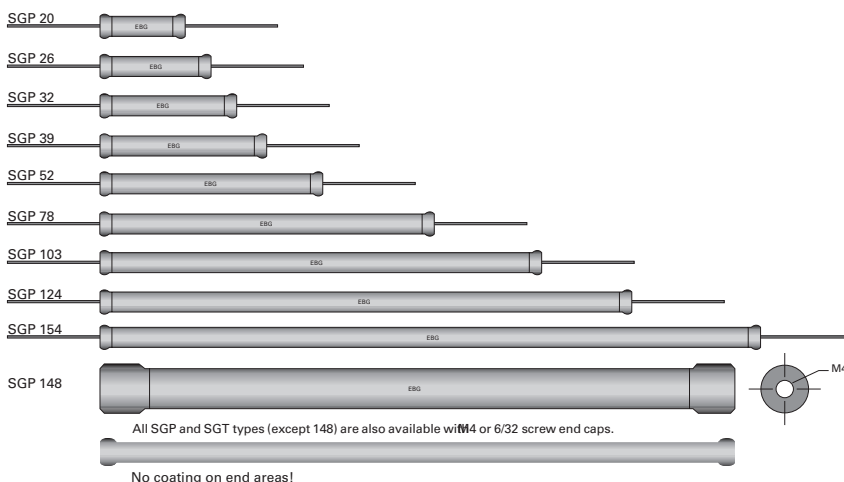
Model no.	Wattage 25°C	Wattage 75°C	Wattage 125°C	Max. kV	Max. kV "S" **	Resistance values		"S"- Version max.	Dimensions in millimeters (inches)		
						Min. Ω	Max. Ω		A ±0.50 ±0.02	B ±0.50 ±0.02	C ±0.50 ±0.02
OGP-13	1.0	1.0	0.60	1.5	2.4	100	50 M	500 M	13.30 (0.524)	4.20 (0.165)	0.60 (0.024)
OGP-20	1.5	1.5	1.00	2.0	3.2	200	100 M	1 G	19.70 (0.776)	4.20 (0.165)	0.60 (0.024)
OGP-26	1.9	1.9	1.25	4.0	6.4	300	150 M	2 G	26.20 (1.031)	4.20 (0.165)	0.60 (0.024)
OGP-30	2.5	2.5	1.50	5.0	8.0	500	250 M	3 G	32.30 (1.272)	4.20 (0.165)	0.60 (0.024)
OGP-39	3.0	3.0	2.00	6.0	9.6	700	300 M	5 G	39.40 (1.551)	4.20 (0.165)	0.60 (0.024)
OGP-52	3.3	3.3	2.50	10.0	12.0	400	2 G	-	49.50 (1.949)	4.20 (0.165)	0.60 (0.024)
SGP-20	2.5	2.5	1.50	3.0	4.8	200	250 M	1 G	20.20 (0.795)	8.20 (0.323)	1.00 (0.040)
SGP-26	3.7	3.7	2.50	4.0	6.4	250	300 M	1 G	26.90 (1.059)	8.20 (0.323)	1.00 (0.040)
SGP-32	4.5	4.5	3.00	5.0	8.0	300	400 M	1.5 G	33.00 (1.3)	8.20 (0.323)	1.00 (0.040)
SGP-39	5.2	5.2	3.50	8.0	12.8	400	500 M	1.5 G	39.50 (1.555)	8.20 (0.323)	1.00 (0.040)
SGP-52	7.5	7.5	5.00	10.0	16.0	500	750 M	2.5 G	52.10 (2.051)	8.20 (0.323)	1.00 (0.040)
SGP-78	11	11	7.50	15.0	24.0	900	1 G	4 G	77.70 (3.059)	8.20 (0.323)	1.00 (0.040)
SGP-103	12	12	8.00	20.0	32.0	1K2	1 G	2 G	102.90 (4.051)	8.20 (0.323)	1.00 (0.040)
SGP-124	15	15	10.00	25.0	40.0	1K5	1 G	8 G	123.70 (4.870)	8.20 (0.323)	1.00 0.040
SGP-148	30	30	20.00	45.0	-	10 K	3 G	10 G	148.00 (5.83)	16.00 (0.63)	-
SGP-154	20	20	15.00	30.0	48.0	2 K	2 G	10 G	153.70 (6.051)	8.20 (0.323)	1.00 (0.040)

** Our resistors are designed for operation in air and non-aggressive atmosphere. For special applications like oil, casting, molding, SF6, etc., please contact us.

OGP series overview



SGP series overview



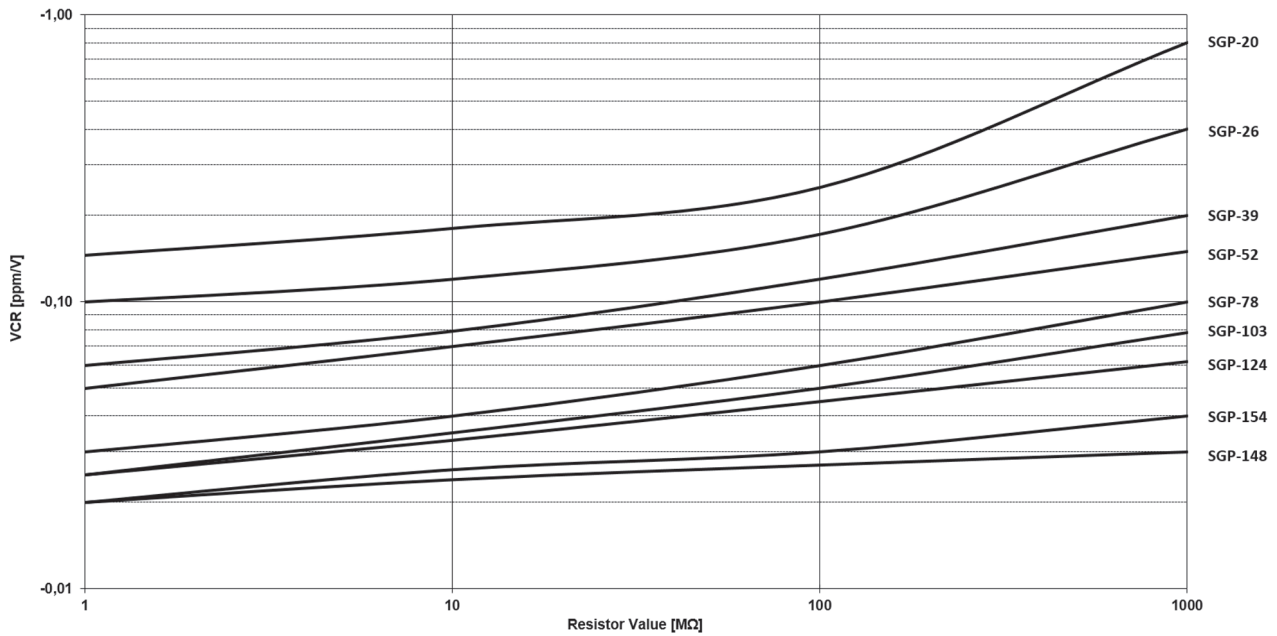
The above spec. sheet features our standard products. For further options please contact our local EBG representative or contact us directly.

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Typical Voltage Coefficient for SGP series for SGP series (in ppm per volt)



Example:

SGP-154 with 100 MΩ has a typical voltage coefficient of -0,03 ppm/V.