

# Series SGP / OGP

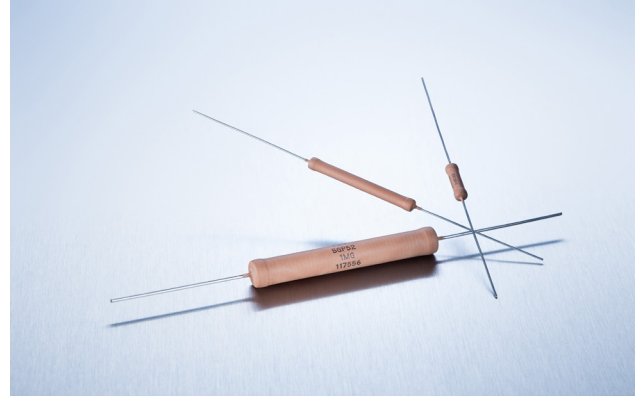
TC of  $\pm 80$  ppm/ $^{\circ}\text{C}$  combined with precision tolerances, wide ohmic range / U.S. Patent-No. 4,859,981

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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

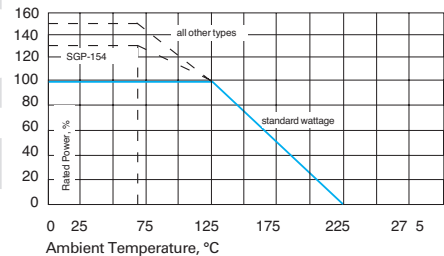
- up to 48 kV operating voltage
- Non-Inductive design
- ROHS compliant
- Voltages up to 60% higher than the values listed – "S"-Version



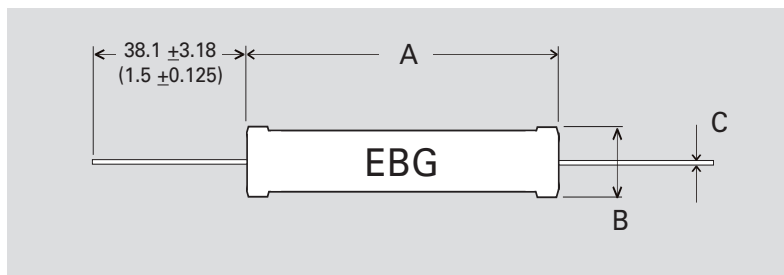
## Technical Specifications

<b>Resistance value</b>	100 $\Omega$ $\leq$ 10 G $\Omega$ (see model specifications page 2)
<b>Resistance tolerance</b>	$\pm 1$ % to $\pm 10$ % standard down to $\pm 0.1$ % on special request for limited ohmic values
<b>Temperature coefficient</b>	$\pm 80$ ppm/ $^{\circ}\text{C}$ (at $+85^{\circ}\text{C}$ ref. to $+25^{\circ}\text{C}$ ) down to $\pm 25$ ppm/ $^{\circ}\text{C}$ or lower on special request for limited ohmic values and model no.
<b>Max. operating temperature</b>	$+ 225^{\circ}\text{C}$
<b>Voltage coefficient</b>	(typical) see diagram page 3
<b>Dielectric strength</b>	1,000 V DC max. ( $25^{\circ}\text{C}$ , 75 % relative humidity)
<b>Insulation resistance</b>	10 G $\Omega$ min. at 1,000 V DC
<b>Overload / overvoltage</b>	5x rated power at $125^{\circ}\text{C}$ (referenced to specified power at $+125^{\circ}\text{C}$ ), with applied voltage not to exceed 1.5x maximum continuous operating voltage for 5 sec. $\Delta R$ 0.5 % max.
<b>Load life</b>	1,000 hours at $125^{\circ}\text{C}$ and rated power, components with 1 % tol. $\Delta R$ 0.2 % max., extended range ("S") $\Delta R$ = 0.5 % max.
<b>Load life stability</b>	typical $\pm 0.02$ % per 1,000 hours
<b>Moisture resistance</b>	MILStd-202, method 106, $\Delta R$ 0.4 % max.
<b>Thermal shock</b>	MILStd-202, method 107, Cond. C, $\Delta R$ 0.25 % max.
<b>Encapsulation</b>	<b>standard: silicone coating</b> other coating options (like 2xpolyimide, glass) available on request
<b>Other terminals available</b>	screw end caps (6/32", M4, custom), golden leads with diameter 0,8 mm available for SGP series (ask for details)
<b>Lead material</b>	OFHC copper, tin-plated
<b>Weight</b>	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 an order

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%

# Series SGP / OGP

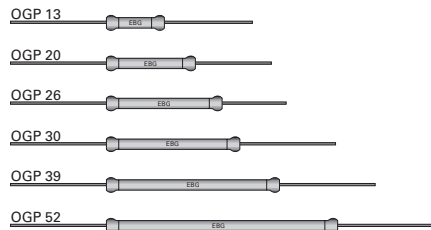


## Model Specifications

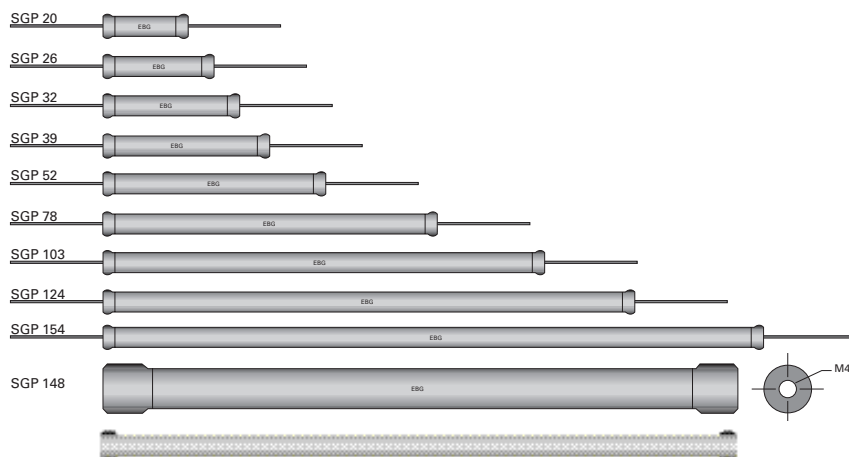
Model no.	Wattage 25°C	Wattage 75°C	Wattage 125°C	Max. kV	Max. kV "S" **	Resistance values		"S"-Version max.	Dimensions in millimeters (inches)		
						Min. Ω	Max. Ω		A ±0.50 ±0.02	B ±0.50 ±0.02	C ±0.50 ±0.02
OGP-13	1.0	1.0	0.60	1.5	2.4	100	50 M	500 M	13.30 (0.524)	4.20 (0.165)	0.60 (0.024)
OGP-20	1.5	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



All SGP and SGT types (except 148) are also available with M4 or 6/32 screw end caps. Attention: total length increases when screw end caps are used!

No coating on end areas!

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

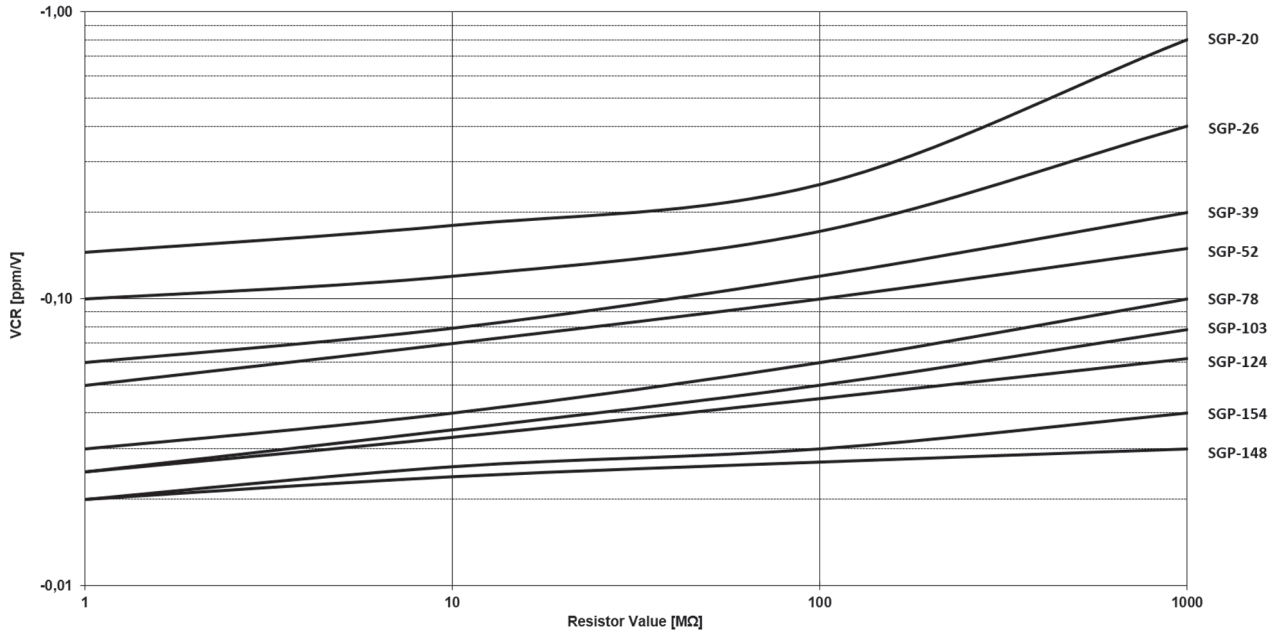
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## Typical Voltage Coefficient for SGP series (in ppm per volt)



**Example:**

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