Hochspannungswiderstand Typ SGP / OGP
Datenblatt

Series SGP/OGP • US Patent-Nr. 4,859,981

TC of 80ppm/°C combined with Precision Tolerances (0.1%-10%) and wide Ohmic Range (100Ω-10GΩ)

EBG offers the SGP series to meet the requirements of high resistance values combined with very high voltage requirements, while utilizing EBG's patented non-inductive design complete with in-process digital trimming to exact value.

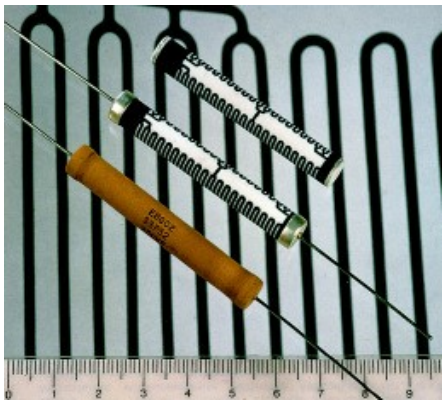
This series employs our special METOXFILM which demonstrates excellent stability while covering resistance ranges from 100Ω to 10GΩ, -all at high operating temperatures to 225°C. The power ratings and voltage ratings are for continuous opera-tion, and have all been pre-tested to these requirements for steady state performance, as well as momentary overload conditions.

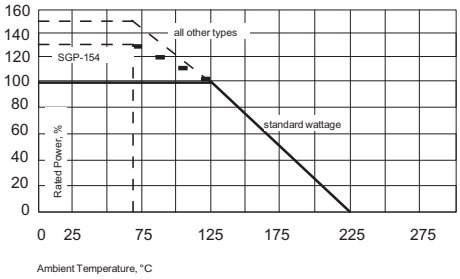
A summary of the features of the SGP series are:

- Resistance values up to 10GΩ
- Resistance tolerance from ± 0.1% to ± 10%
- Temperature Coefficient: 80ppm/°C
- Maximum continuous Operating Voltage to 48,000 V
- Life Stability: Typical ±0.02% per 1,000 hours
- Maximum operating temp. up to +225°C

Specifications:

- Resistance Tolerance: Standard: ±1% to ±10% (±2% to ±10% above 1Gohms) (tolerances down to ±0,1% on special request)
- Temperature Coefficient: Standard ±80ppm/°C from -15°C to +105°C, referenced to +25°C
- Voltage Coefficient: see diagram
- Dielectric Strength: 1,000VDC
- Insulation Resistance: 10GΩ, min.
- Overload/Overvoltage: 5 times rated power125°C with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds. Overload/Overvoltage, ΔR 0.5% max.
- Load Life: 1,000 hours at 125°C and rated power, components with 1% Tol. ΔR 0.5% max., extented range ("S") ΔR=0.8% max.
- 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: Silicone Conformal
- Lead Material: O.F.H.C. Copper tin plated.





** Our resistors are designed for operation in air and not agressive atmospheres. For special applications (i.e. oil, casting, moulding, SF_6, etc.) please contact your nearest EBG representative.

Voltages up to 60% higher than the table values may be obtained in special order by adding "S" to the model designation.

EBG's special patented (USPatent-Nr. 4,859,981) non-inductive construction 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, frequently resulting in a weak section. EBG's patented process avoids this potential problem.

Model No.	Wattage 25°C	Wattage 75°C	Wattage 125°C	Max. Cont. Oper.V (kV)	Max. KV "S" **	Resistance F(=1%) Min. ohmic values	Max.	s-Resistance Max. (2% Tol.)	Dimensions in millimeter Dimensions in inches A ± 0.50 ± 0.02	B ±0.50 ±0.02	C ± 0.05 ±0.002
OGP 13	1.0	1.0	0.60	1.5	2.4	100	50M	500M	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	100M	1G	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	150M	2G	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	250M	3G	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	300M	5G	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	2G	—	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	250M	1G	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	300M	1G	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	400M	1.5G	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	500M	1.5G	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	750M	2.5G	52.10 2.051	8.20 0.323	1.00 0.040
SGP 78	11	11	7.50	15.0	24.0	900	1G	4G	77.70 3.059	8.20 0.323	1.00 0.040
SGP 103	12	12	8.00	20.0	32.0	1K2	1G	2G	102.90 4.051	8.20 0.323	1.00 0.040
SGP 124	15	15	10.00	25.0	40.0	1K5	1G	8G	123.70 4.870	8.20 0.323	1.00 0.040
SGP 148	30	30	20.00	45.0	—	10K	3G	10G	148.0 5.83	16.0 0.63	– –
SGP 154	20	20	15.00	30.0	48.0	2K0	2G	10G	153.70 6.051	8.20 0.323	1.00 0.040