

**ISA-WELD® - SMD Präzisionswiderstände / SMD precision resistors**

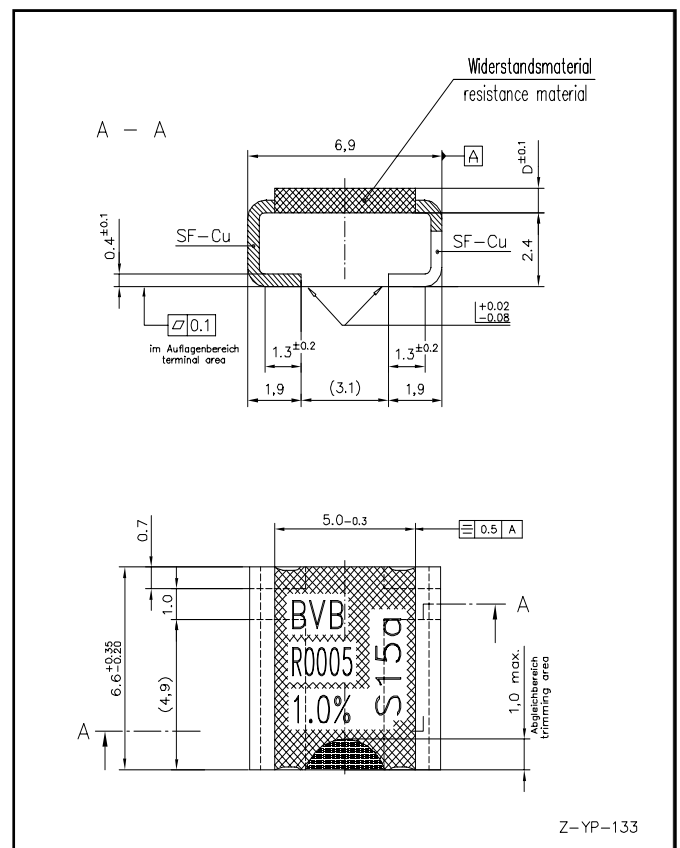
| TECHNISCHE DATEN / TECHNICAL DATA  |  |  |
|--|--|--|
| Widerstandswerte (mOhm)  | Resistance values (mOhm)   | 0.5, 1, 2, 3, 5 mOhm                               |
| Toleranz   | Tolerance  | 1, 2, 5 %  |
| Temperaturkoeffizient  | Temperature coefficient (tcr)  | ab < 20 ppm/K ( 20 °C to 60 °C )                   |
| Temperaturbereich  | Applicable temperature range   | -55 °C to +170 °C                                  |
| Belastbarkeit  | Load capacity  | 5 W  |
| Innerer Wärmewiderstand (R <sub>thi</sub> )                                | Internal heat resistance (R <sub>thi</sub> )                             | ab < 8 K/W   |
| Induktivität   | Inductance   | < 3 nH   |
| Stabilität (Nennlast) Abweichung T <sub>K</sub> = Kontaktstellentemperatur | Stability (nominal load) deviation T <sub>K</sub> = Terminal temperature | < 0.5 % nach/after 2000 h (T <sub>K</sub> = 105°C) |
|  |  | < 1.0 % nach/after 2000 h (T <sub>K</sub> = 140°C) |

**MERKMALE / FEATURES**

- 5 Watt Dauerleistung
- 5 Watt permanent power
- Dauerströme bis 100 A ( 0.5 mOhm )
- Constant current up to 100 Amps ( 0.5 mOhm )
- Vierleiter Widerstand
- Four terminal-configuration
- Sehr gute Langzeitstabilität
- Excellent long term stability
- Ideal geeignet für die Montage auf DCB Keramik/ IMS Substrat
- Ideal suited for mounting on DBC / IMS substrate
- Hoher Temperaturbereich -55 bis +170 °C durch spezielle Bauform
- High application temperature range - 55 to +170 °C due to special design
- Geeignet für Löttemperaturen bis 350 °C / 30 sek
- Max. solder temperature up to 350 °C / 30 sec



**Bauform/Size 2725**

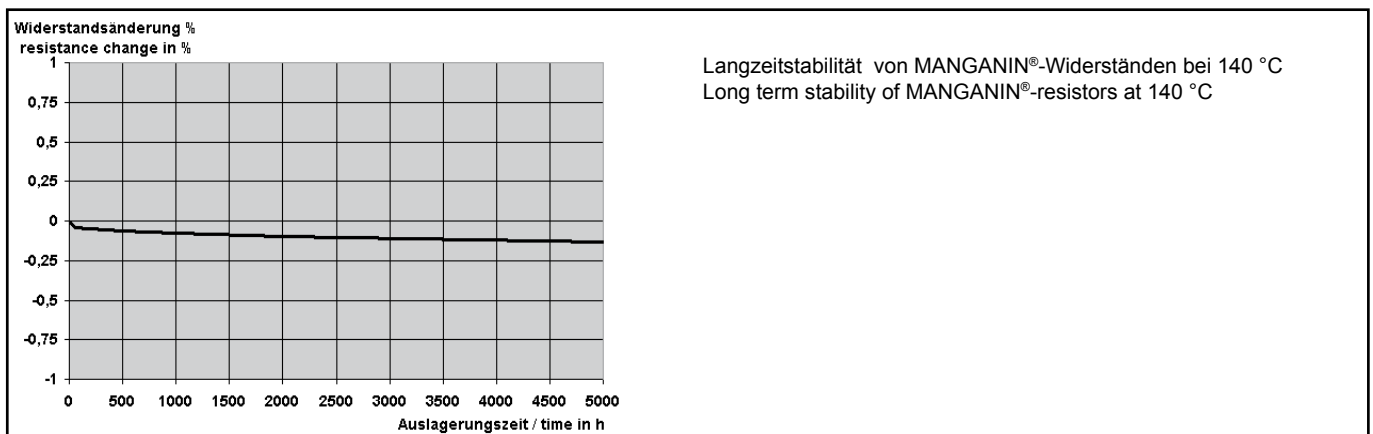
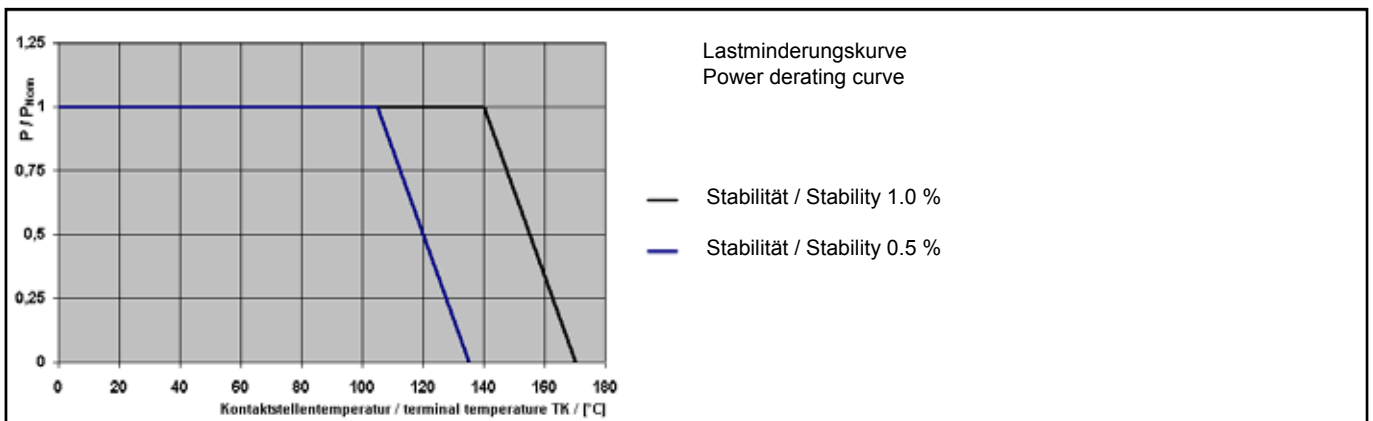
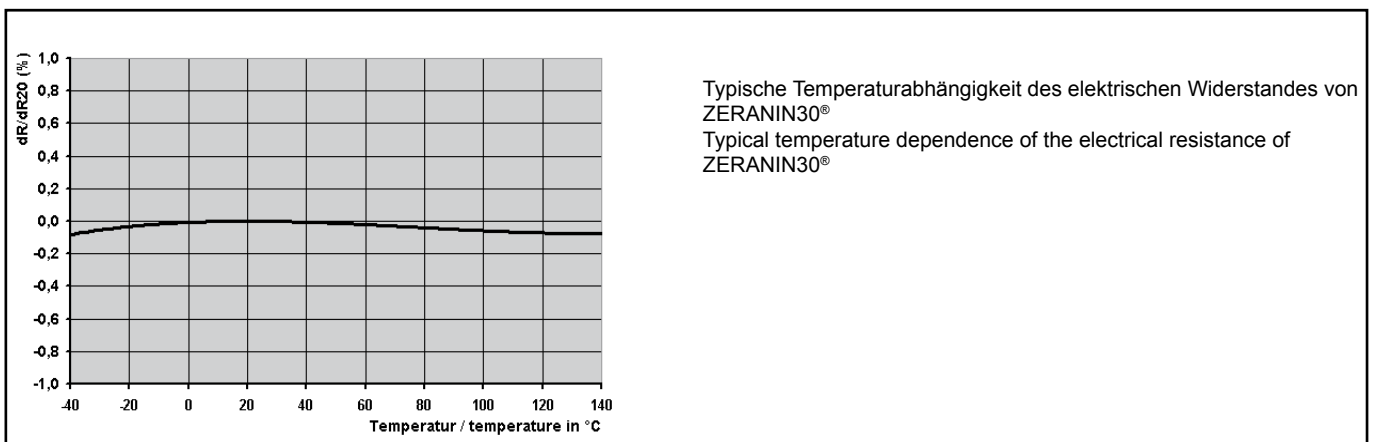
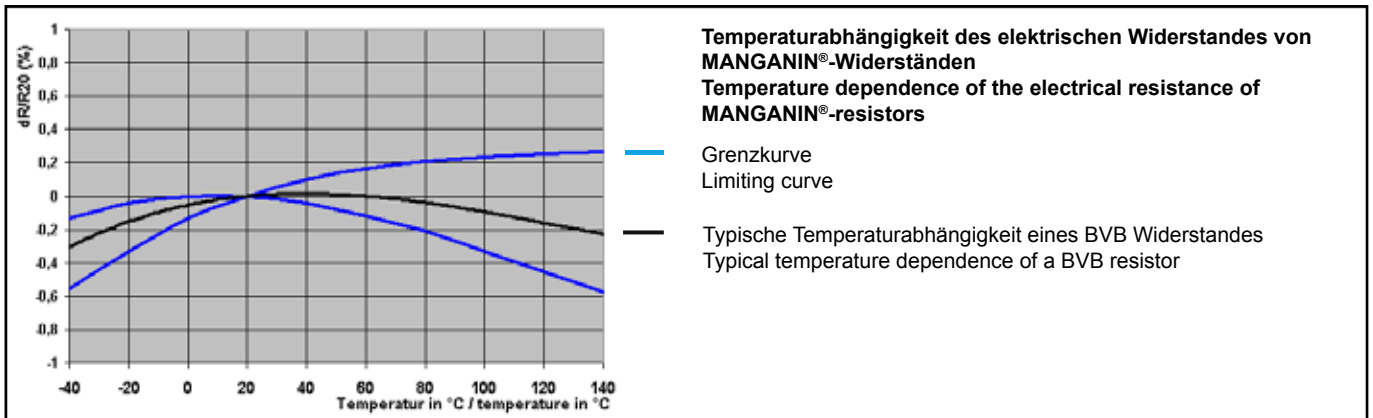


**APPLIKATIONEN / APPLICATION**

- Messwiderstand für Leistungshybride
- Current sensor for power hybrid applications
- Hochstromanwendungen in der Automobiltechnik
- High current applications for the automotive market
- Frequenzumrichter
- Frequency converters
- Leistungsmodule
- Power modules

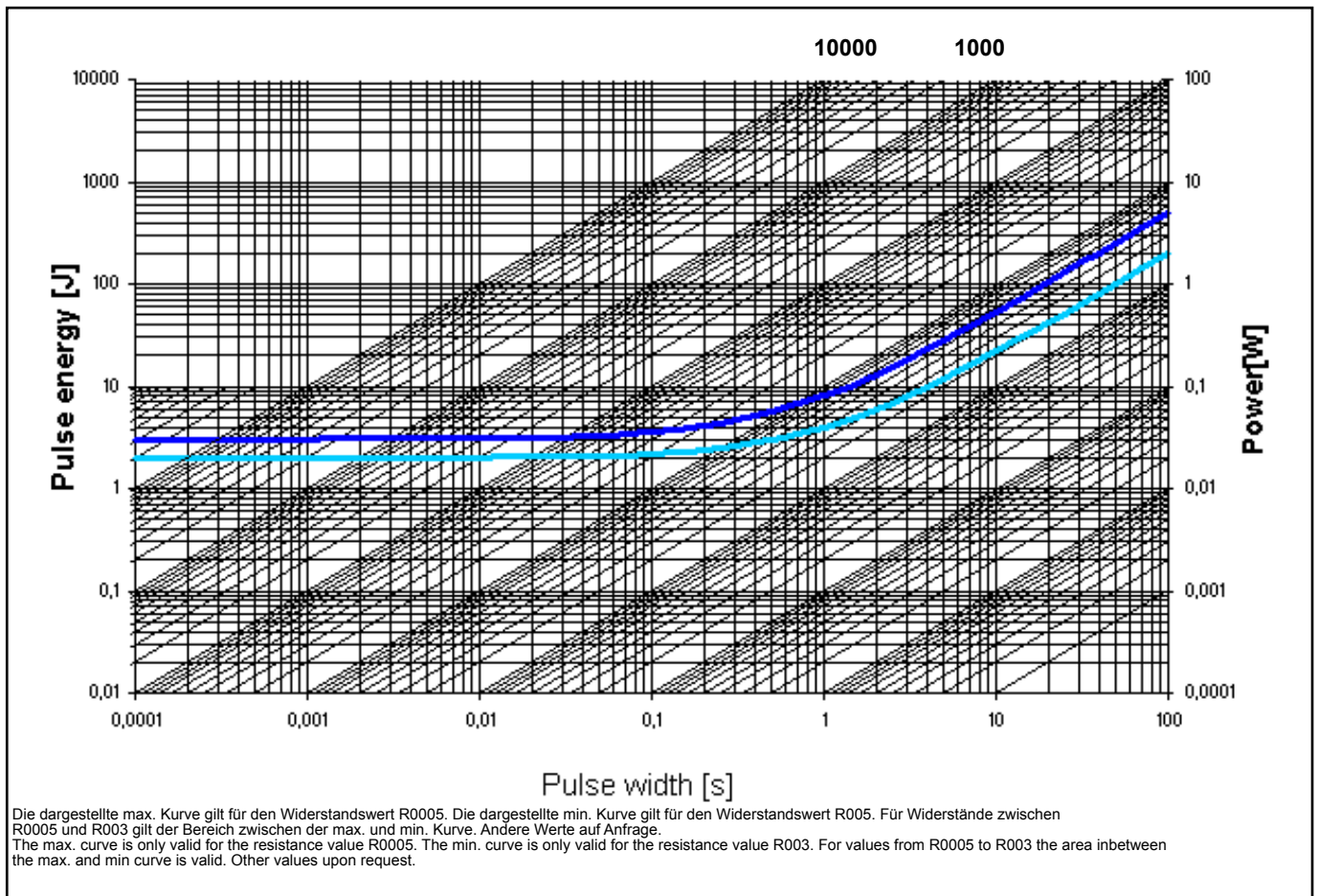


TK, Lastminderung und Langzeitstabilität / TCR, power derating and long term stability





## Grenzkurve für maximale Pulsenergie bzw. Pulsleistung für Dauerbetrieb Maximum puls energy resp. pulse power for continuous operation



| Specification                                |  |                                 |                 |
|--|--|---------------------------------|-----------------|
| Parameters                                   | Test Conditions                        | Specification                   | Typical data    |
| Maximum Temperature for full power operation | 140 °C                                 | 140 °C                          | 140 °C          |
| Working Temperature                          | -55 to 170 °C                          | -55 to 170 °C                   | -55 to 170 °C   |
| Thermal Shock                                | MIL-STD-202 method 107-B1              | 0.1 %                           | 0.1 %           |
| Overload                                     | MIL-R-26E (5 times rated power, 5 sec) | 0.2 %                           | 0.1 %           |
| Solderability                                | MIL-STD-202 method 208                 | > 95 % coverage                 | > 95 % coverage |
| Resistance to Solvents                       | MIL-STD-202 method 215, 2.1a, 2.1d     | no damage                       | no damage       |
| Low Temperature Storage and Operation        | MIL-STD-26E                            | 0.1 %                           | 0.03 %          |
| Resistance to Soldering Heat                 | MIL-STD-202 method 210                 | 0.1 %                           | 0.02 %          |
| Moisture Resistance                          | MIL-STD-202 method 106                 | 0.1 %                           | 0.01 %          |
| Shock  | MIL-STD-202 method 213-A               | 0.2 %                           | 0.1 %           |
| Vibration, High Frequency                    | MIL-STD-202 method 204-B               | 0.2 %                           | 0.05 %          |
| Life   | MIL-STD-26E                            | 0.2 %                           | 0.1 %           |
| Storage Life at Elevated Temperature         | MIL-STD-202 method 108-F               | 0.3 %                           | 0.2 %           |
| High Temperature Exposure                    | 140 °C, 2000 h                         | 0.5%                            | 0.2 %           |
| Current Noise                                | MIL-STD-202 method 308                 | 0.01 %                          | 0.001 %         |
| Voltage Coefficient (%/V)                    | MIL-STD-202 method 309                 | linearity error less than 120dB |                 |
| Resistance Temperature Characteristic        | MIL-STD-202 method 304 (20-60°C)       | from <20 ppm/K                  | from <20 ppm/K  |
| Thermal EMF                                  | 0 - 100 °C                             | 2 µV/ °K max.                   | 2 µV/ °K        |
| Frequency Characteristic                     | inductivity                            | < 3 nH                          | < 3 nH          |