

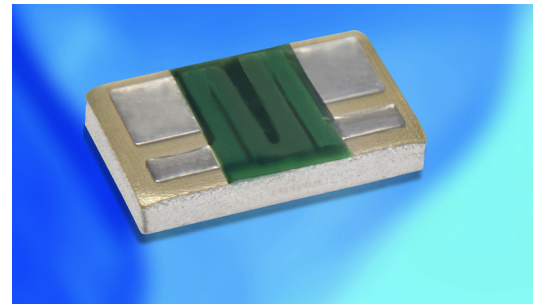
ISA-PLAN® - SMD Präzisionswiderstände / SMD precision resistors

| TECHNISCHE DATEN / TECHNICAL DATA | | |
|--|--|---|
| Widerstandswerte | Resistance values | 2 mOhm - 500 mOhm * |
| Toleranz | Tolerance | 1 %, 5 % |
| Temperaturkoeffizient | Temperature coefficient | < 30 ppm/K (20 °C bis/to 60 °C) |
| Temperaturbereich | Applicable temperature range | -55 °C bis/to +140 °C |
| Belastbarkeit | Load capacity | 3 W |
| Innerer Widerstand (R_{thi}) | Internal heat resistance (R_{thi}) | < 10 K/W |
| Isolationsspannung | Dielectric withstanding voltage | 100 VAC |
| Induktivität | Inductance | < 10 nH |
| Stabilität (Nennlast) Abweichung $T_K =$ Kontaktstellentemperatur / Stability (Nominal load) deviation $T_K =$ Terminal temperature | | < 0.5 % nach/after 2000 h ($T_K = 95 °C$) < 1 % nach/after 2000 h ($T_K = 110 °C$) |

* Weitere Werte auf Anfrage / Other values on request

MERKMALE / FEATURES

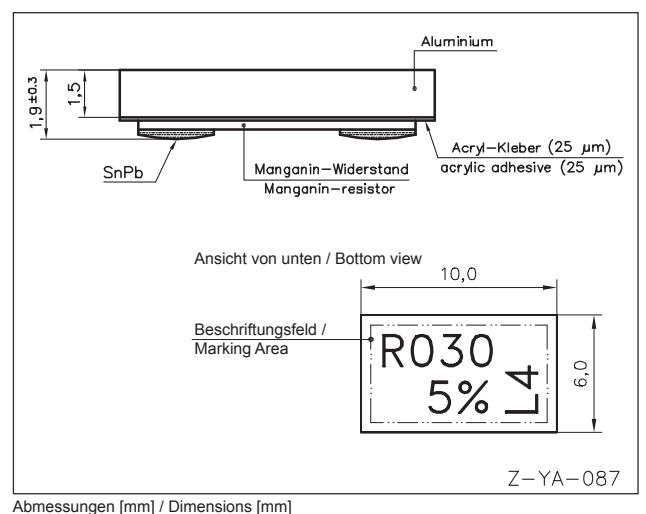
- 3 W Dauerleistung bei 110 °C
3 W permanent power at 110 °C
- Dauerströme bis 39 A (2 mOhm)
Constant current up to 39 A (2 mOhm)
- Sehr gute Langzeitstabilität
Excellent long term stability
- Kontakte sind in SnPb ausgeführt
Terminals of the part are performed with SnPb
- Flip-chip Montage
Flip-chip assembly



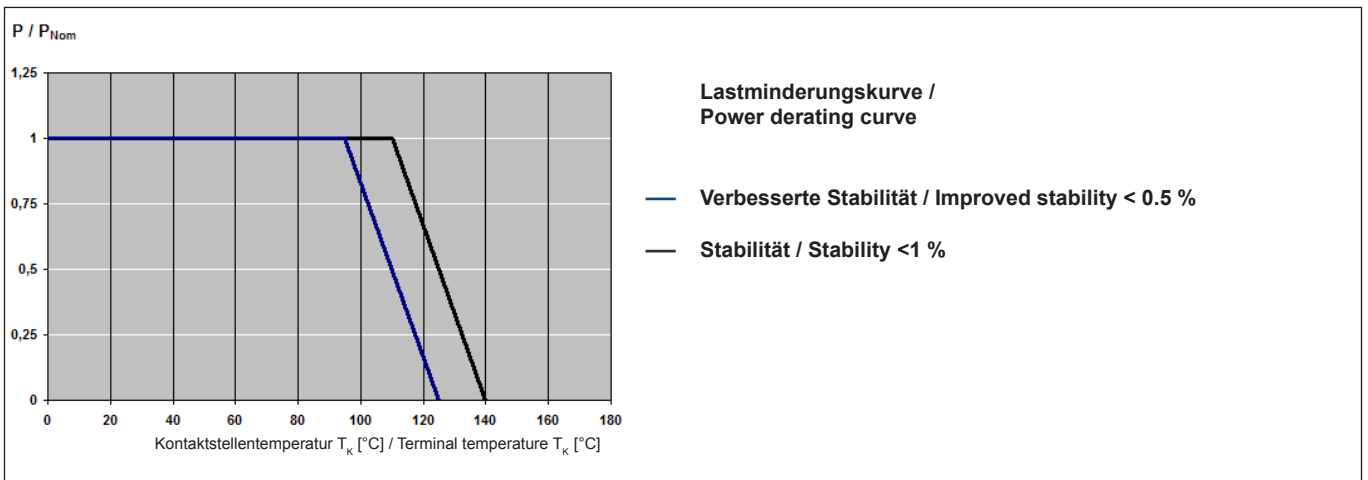
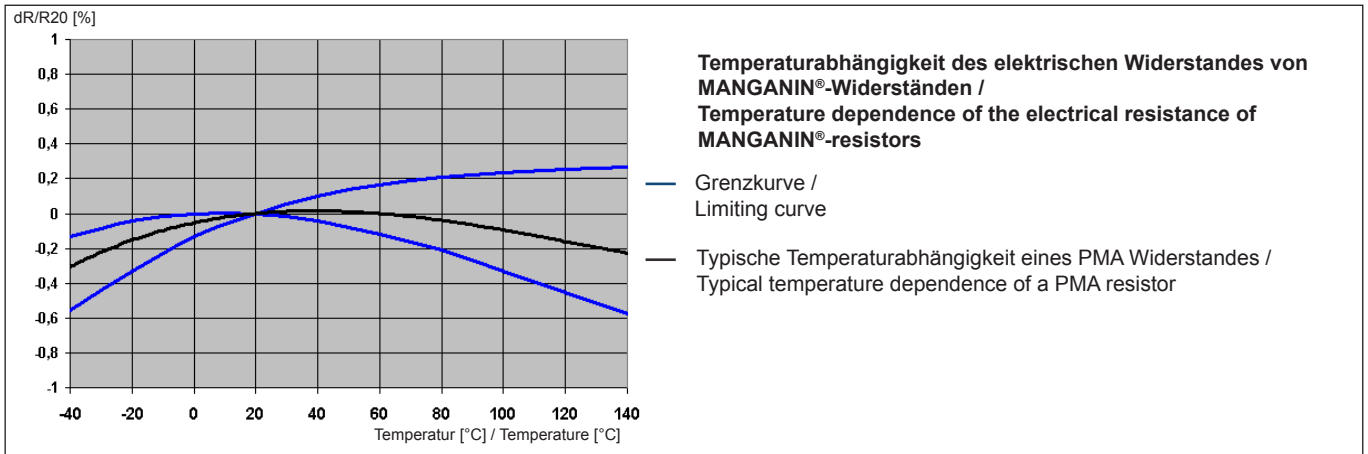
Bauform / Size 3924

APPLIKATIONEN / APPLICATION

- Messwiderstand für Leistungshybride
Current sensor for power hybrid applications
- Leistungsmodule
Power modules
- Schaltnetzteile
Switch mode power supplies

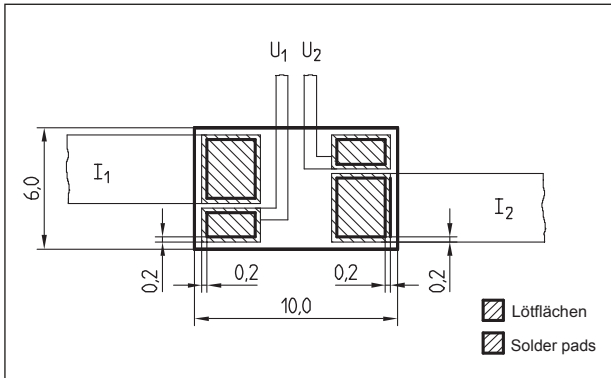


TK, Lastminderung und Langzeitstabilität / TCR, power derating and long term stability

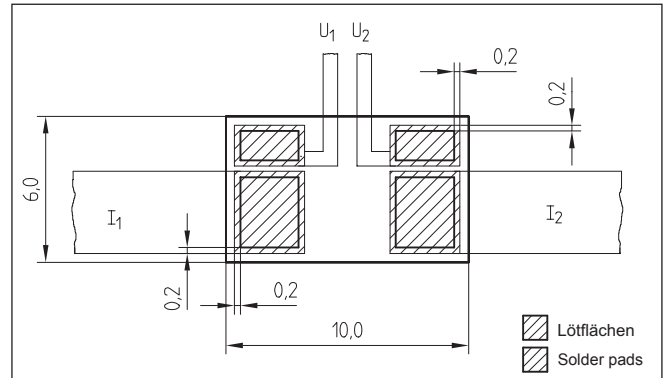


Vorschlag für Leiterplatten Layout / Proposal for pcb-layout

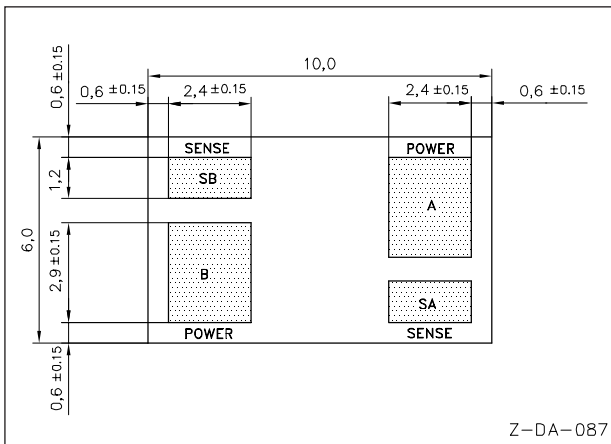
Version A



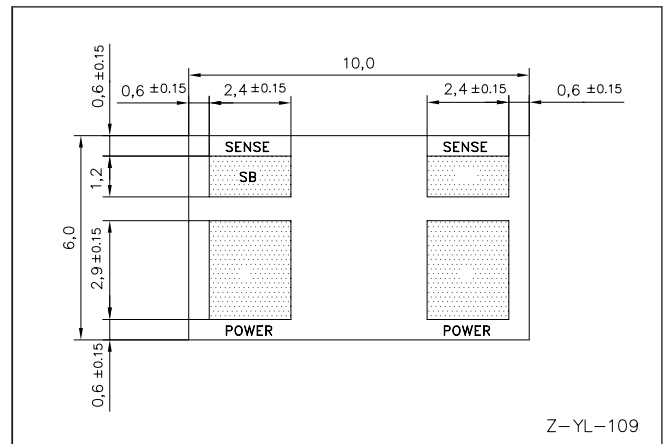
Version C



Bemaßung / Dimensioning



Z-DA-087



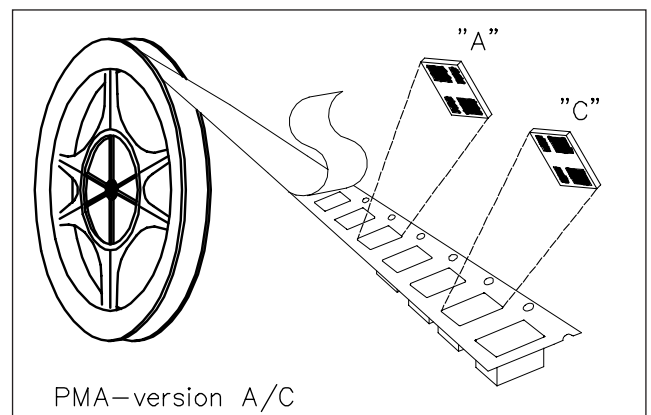
Z-YL-109

Alle Abmessungen in [mm] / All dimensions in [mm]

| GURTINFORMATIONEN / TAPE & REEL INFORMATION | |
|---|----------------|
| Norm / Specification | DIN EN 60286-3 |
| Gurtbreite / Tape width | 16 mm |
| Anzahl Bauteile / Parts per reel | 3000 |

| BESTELLBEZEICHNUNG / ORDERING CODE | | | |
|------------------------------------|--------|------------------------------------|----------------------|
| PMA-A-R010-1.0 | | | |
| Typ / Type | Layout | Widerstandswert / Resistance value | Toleranz / Tolerance |
| PMA | A / C | 10 mOhm | 1.0 % |

| HINWEIS / NOTE | |
|--|--|
| Bauteil ist nicht ROHS-konform / Component is not ROHS-compliant | |



Gewährleistung

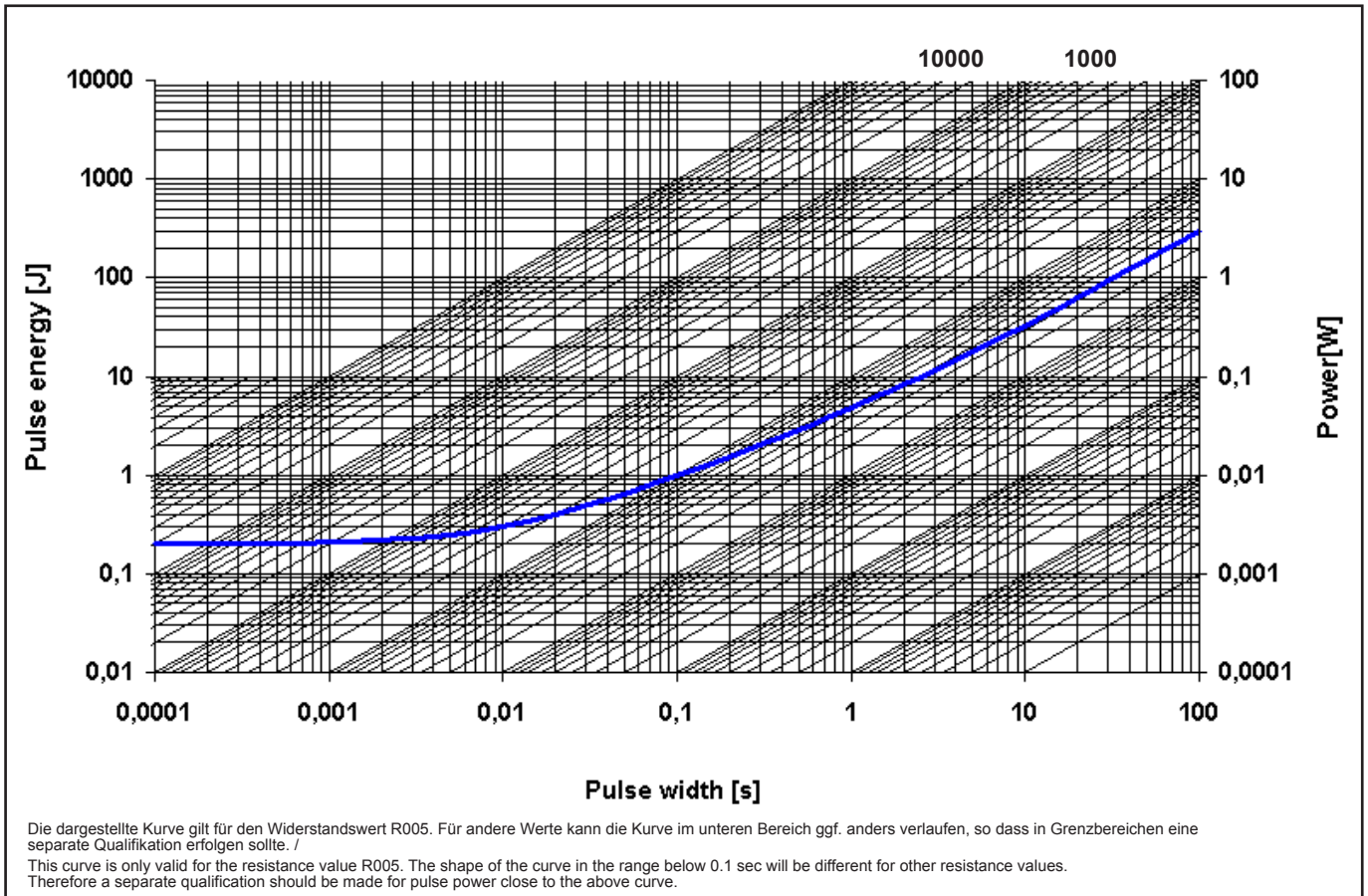
Alle Angaben über Eignung, Verarbeitung und Anwendung unserer Produkte, technische Beratung und sonstige Angaben erfolgen nach bestem Wissen, befreien den Käufer jedoch nicht von eigenen Prüfungen und Versuchen.

Warranty

All information regarding the suitability, workability and applicability of our products, all technical advice and other information are provided to the best of our knowledge and belief, but shall not discharge the buyer from his own examinations and tests.



**Grenzkurve für maximale Pulsenergie bzw. Pulsleistung für Dauerbetrieb /
Maximum pulse energy respectively pulse power for continuous operation**



| Spezifikation / Specification | | | |
|--|--|---------------------------------|---------------------------------|
| Parameters | Test Conditions | Specification | Typical data |
| Maximum Temperature for full power operation | 110 °C | 110 °C | 110 °C |
| Working Temperature | -55 to 140 °C | -55 to 140 °C | -55 to 140 °C |
| Thermal Shock | MIL-STD-202 method 107-B1 | 0.1 % | |
| Overload | MIL-R-26E (5 times rated power, 5 sec) | 0.2 % | |
| 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 % | |
| Resistance to Soldering Heat | MIL-STD-202 method 210 | 0.1 % | |
| Moisture Resistance | MIL-STD-202 method 106 | 0.1 % | |
| Shock | MIL-STD-202 method 213-A | 0.2 % | |
| Vibration, High Frequency | MIL-STD-202 method 204-B | 0.2 % | |
| Life | MIL-STD-26E | 0.2 % | |
| Storage Life at Elevated Temperature | MIL-STD-202 method 108-F | 0.3 % | |
| High Temperature Exposure | 140 °C, 2000 h | 0.2 % | |
| Current Noise | MIL-STD-202 method 308 | 0.01 % | |
| Voltage Coefficient (%/V) | MIL-STD-202 method 309 | linearity error less than 120dB | linearity error less than 120dB |
| Resistance Temperature Characteristic | MIL-STD-202 method 304 (20-60 °C) | <30 ppm/K | <30 ppm/K |
| Thermal EMF | 0 - 100 °C | 2 µV/ °C max. | 2 µV/ °C max. |
| Frequency Characteristic | inductivity | < 10 nH | < 10 nH |