

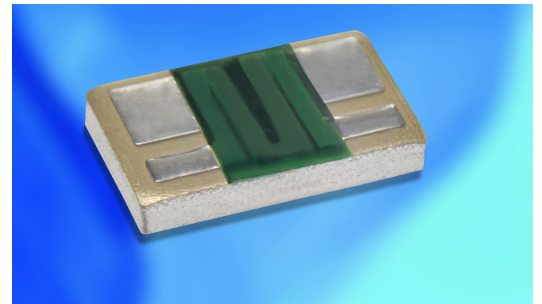
## ISA-PLAN® - SMD Präzisionswiderstände / SMD precision resistors

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 Wärmewiderstand ( $R_{thi}$ )	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

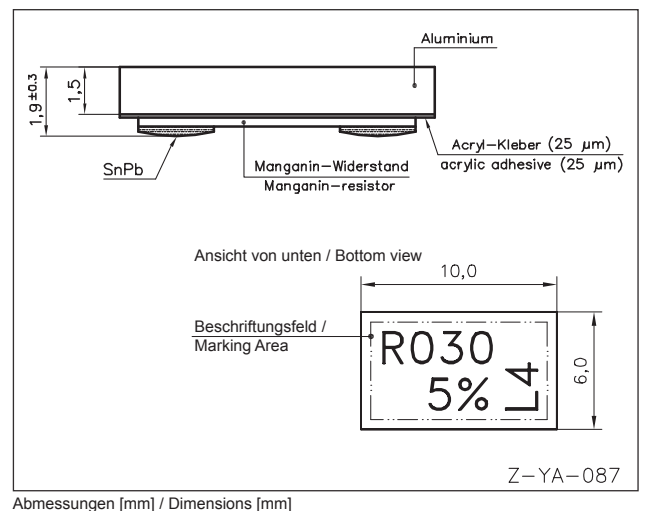
- 3 W Dauerleistung bei 110 °C  
3 W permanent power at 110 °C
- Dauerströme bis 39 A (2 mOhm)  
Constant current up to 39 A (2 mOhm)
- Sehr gute Langzeitstabilität  
Excellent long term stability
- Kontakte sind in SnPb ausgeführt  
Terminals of the part are performed with SnPb
- Flip-chip Montage 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



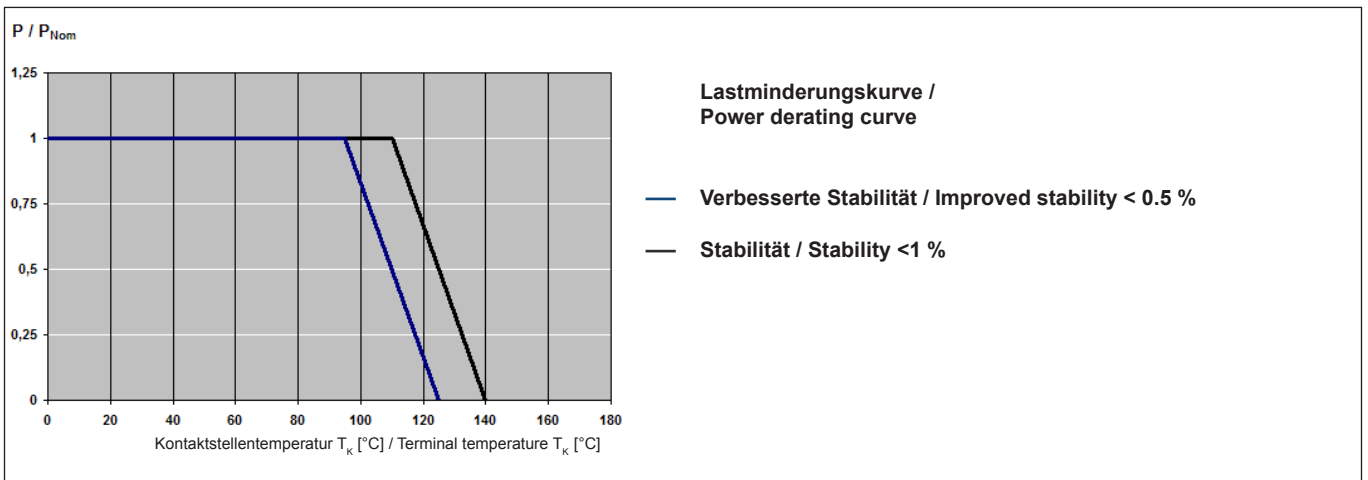
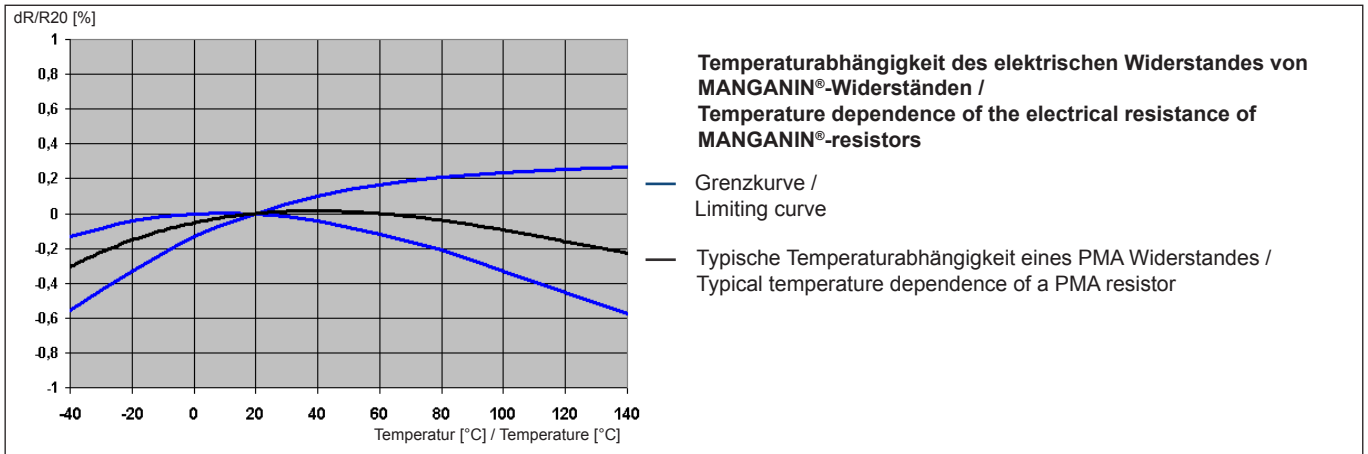
Bauform / Size 3924

### APPLIKATIONEN / APPLICATION

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

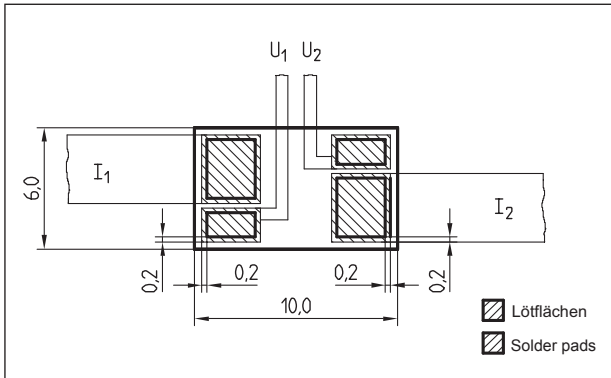


## TK, Lastminderung und Langzeitstabilität / TCR, power derating and long term stability

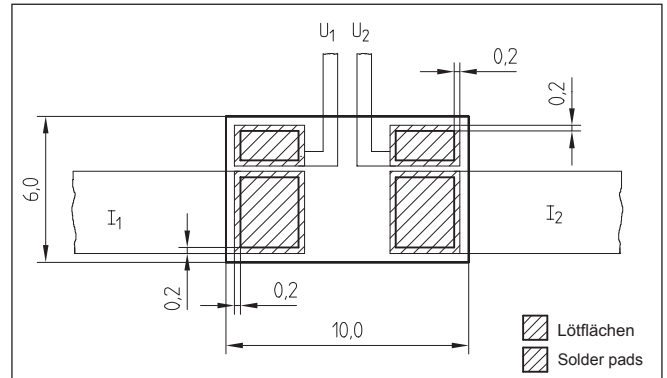


## Vorschlag für Leiterplatten Layout / Proposal for pcb-layout

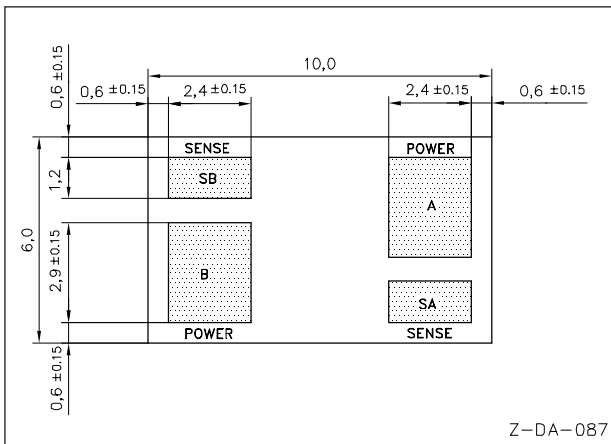
Version A



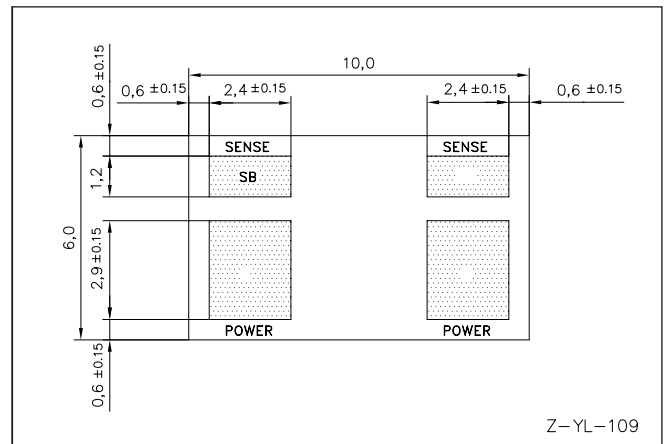
Version C



## Bemaßung / Dimensioning



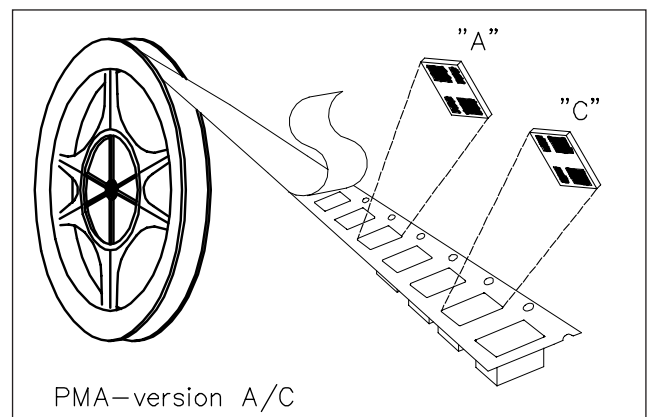
Alle Abmessungen in [mm] / All dimensions in [mm]



GURTIINFORMATIONEN / 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

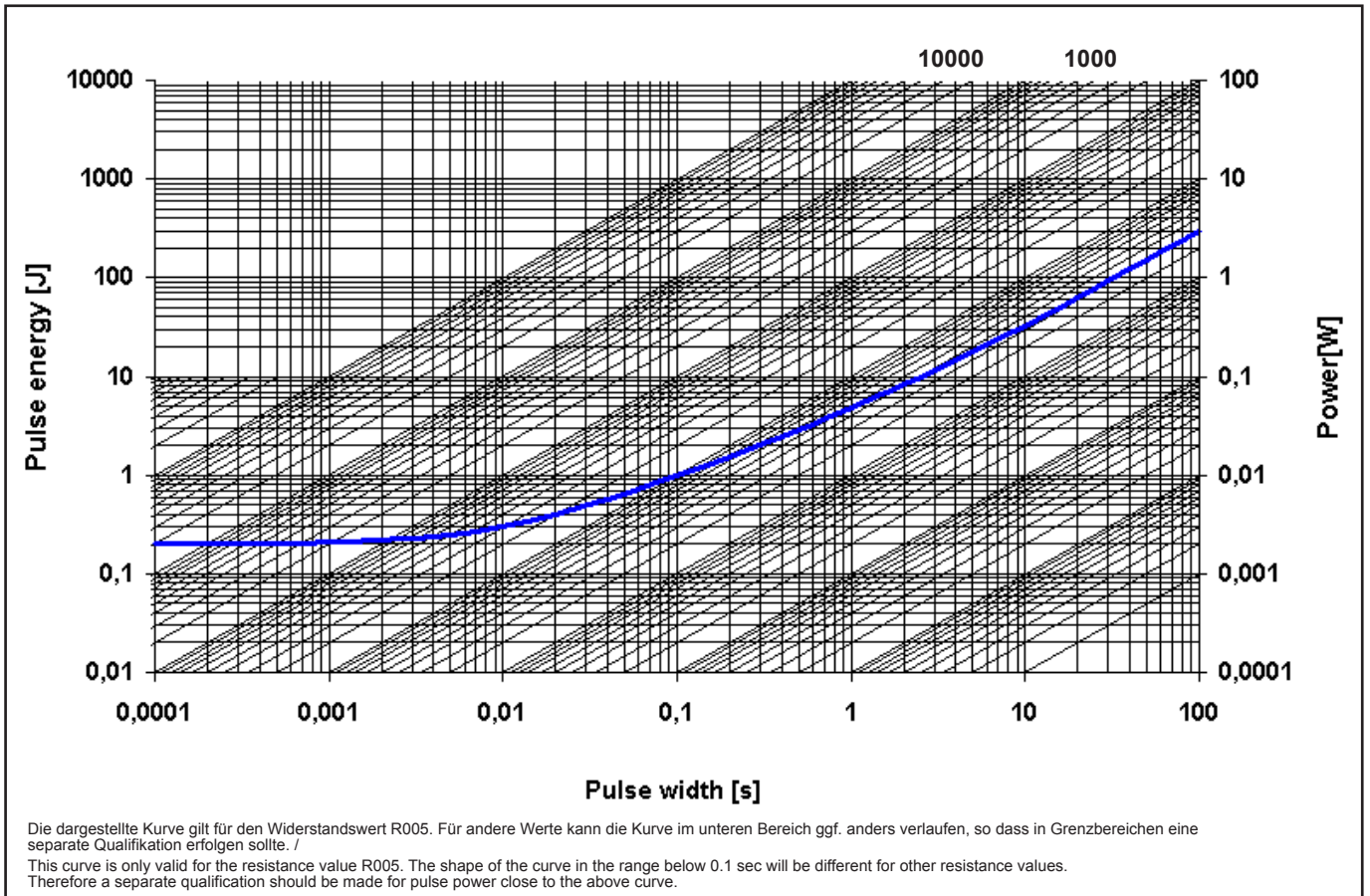
Alle Angaben über Eignung, Verarbeitung und Anwendung unserer Produkte, technische Beratung und sonstige Angaben erfolgen nach bestem Wissen, befreien den Käufer jedoch nicht von eigenen Prüfungen und Versuchen.

### 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