

## ISA-PLAN® - Präzisionswiderstände / Precision resistors

TECHNISCHE DATEN / TECHNICAL DATA		
Widerstandswerte	Resistance values	5 mOhm - 1 Ohm
Toleranz	Tolerance	1 %, 5 %
Temperaturkoeffizient	Temperature coefficient	< 50 ppm/K (20 °C - 60 °C)
Temperaturbereich	Applicable temperature range	-55 °C bis/to +125 °C
Belastbarkeit	Load capacity	3 W 10 W bei Kühlkörpermontage / with heatsink provided
Innerer Wärmewiderstand zum Aluminium Substrat ( $R_{thi}$ )	Thermal resistance to aluminium substrate ( $R_{thi}$ )	< 4 K/W
Wärmewiderstand zur Umgebung ( $R_{th}$ )	Thermal heat resistance to ambient ( $R_{th}$ )	< 20 K/W
Isolationsspannung	Dielectric withstanding voltage	100 V AC
Induktivität	Inductance	< 10 nH
Stabilität (Nennlast) Abweichung $T_K$ = Kontaktstellentemperatur / Stability (Nominal load) deviation $T_K$ = Terminal temperature		< 0.5 % nach/after 2000 h ( $T_K$ = 65 °C ohne Kühlkörper/Without heatsink) ( $T_K$ = 85 °C mit Kühlkörper/With heatsink)

### MERKMALE / FEATURES

- 3 W / 10 W Dauerleistung bei 65 °C / 85 °C  
3 W / 10 W permanent power at 65 °C / 85 °C
- Dauerströme bis 45 A (5 mOhm)  
Constant current up to 45 A (5 mOhm)
- Baugröße entspricht der Gehäuseform TO-247  
Size complies to case TO-247
- Sehr hohe Pulsbelastbarkeit  
High pulse power rating
- Sehr gute Langzeitstabilität  
Excellent long term stability
- Preisgünstige Alternative zum Typ PBH  
Price effective option for type PBH

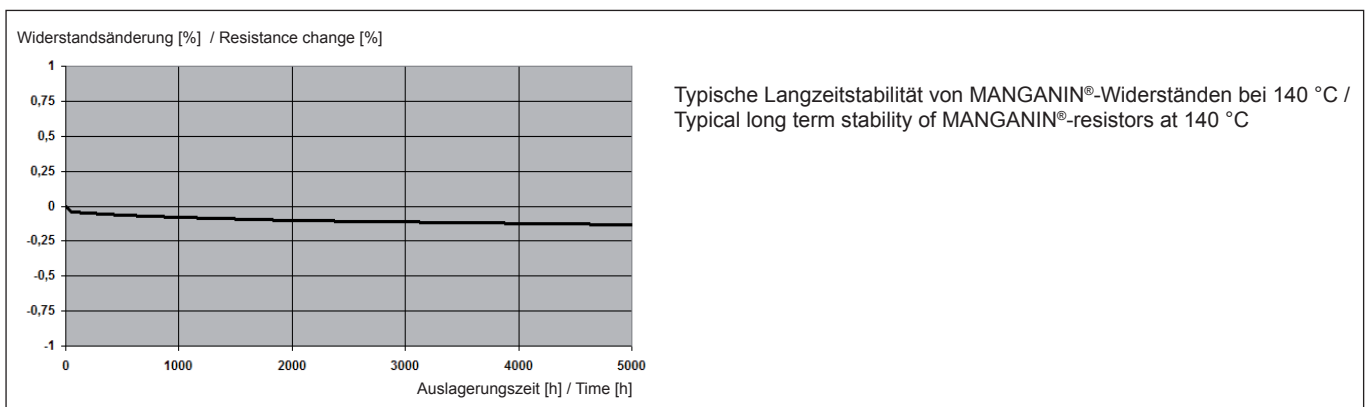
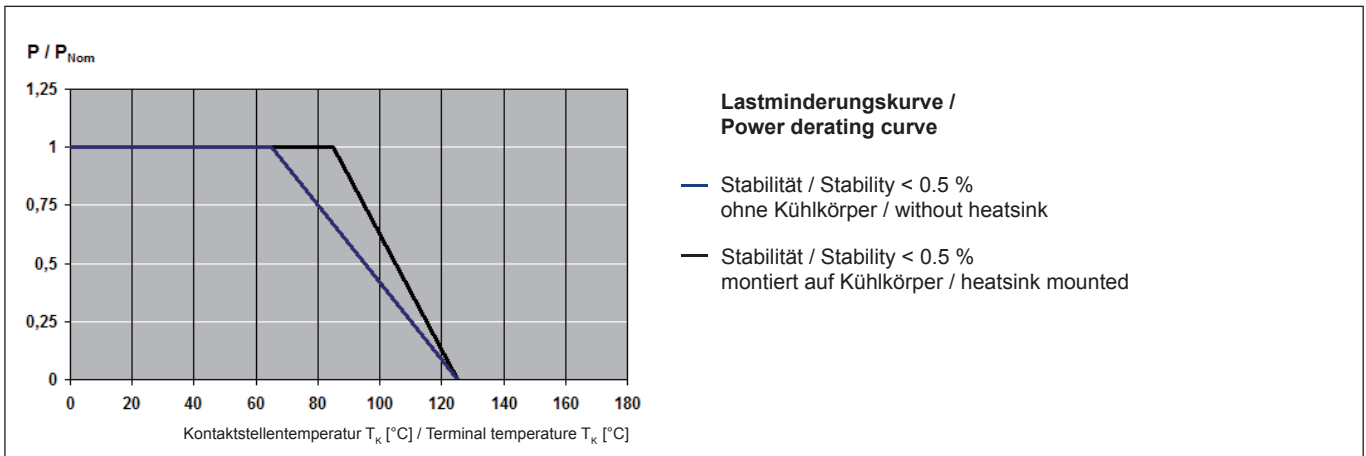
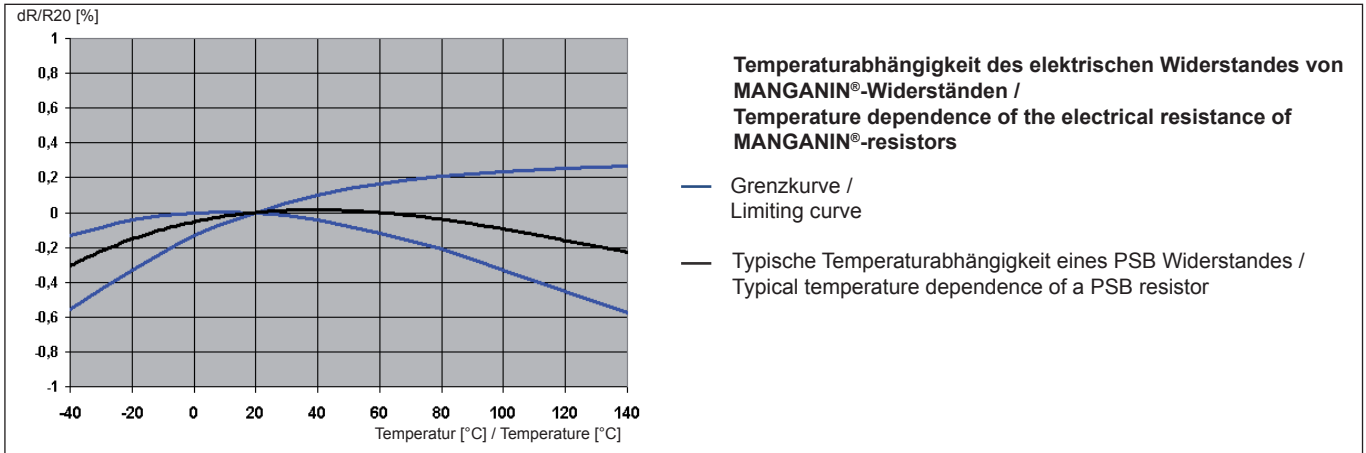


**Bauform ähnlich TO-247 /  
Similar to size TO-247**

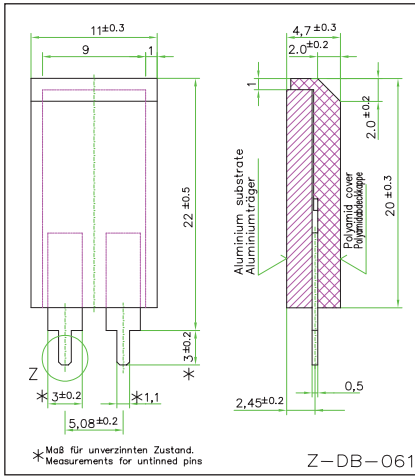
### APPLIKATIONEN / APPLICATION

- Leistungsmodule  
Power modules
- Frequenzumrichter  
Frequency converters
- Schaltnetzteile  
Switch mode power supplies

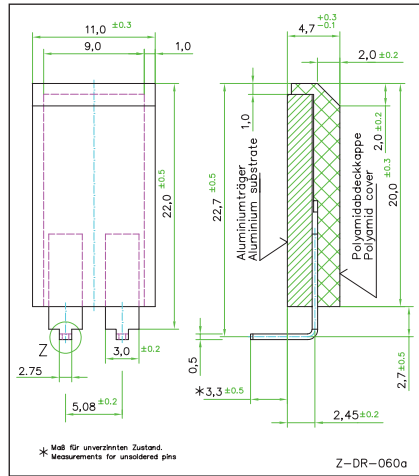
## TK, Lastminderung und Langzeitstabilität / TCR, power derating and long term stability



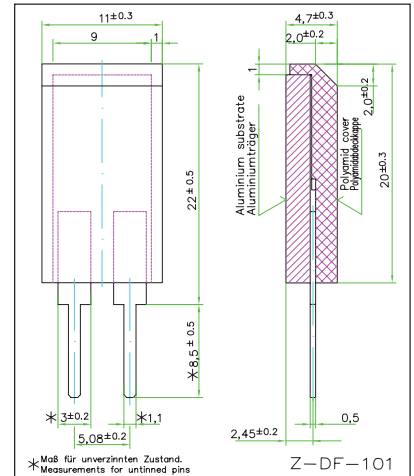
### Standard terminal F1



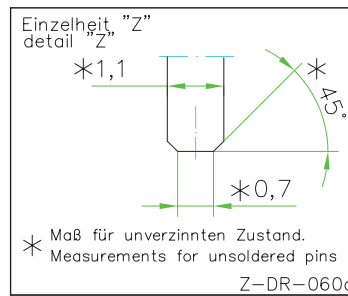
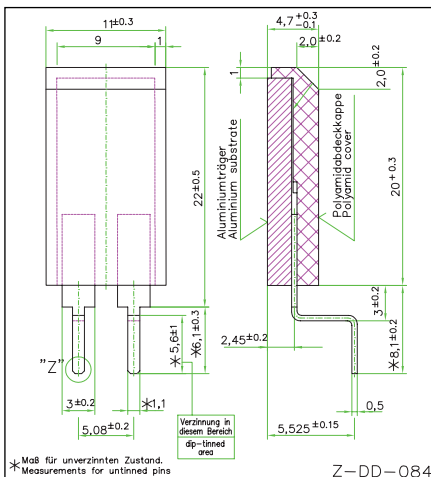
### Special terminal F2



### Special terminal F3



### Special terminal F4



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

Lötprofil Vorschlag / Recommended solder profile			
Wellenlötten / Wave-soldering			
Temperatur / Temperature [°C]	260	255	217
Zeit / Time [s]	peak	40	90
RoHS 2002/95/EG konform seit Produktstart. Ausführliche Informationen erhalten Sie auf unserer Homepage: <a href="http://www.isabellenhuette.de">www.isabellenhuette.de</a> RoHS 2002/95/EC compliance since product launch. For more information please visit our website: <a href="http://www.isabellenhuette.de">www.isabellenhuette.de</a>			

BESTELLBEZEICHNUNG / ORDERING CODE			
PSB-R050-F1-1.0			
Typ / Type	Widerstandswert / Resistance value	Anschlüsse / Terminal	Toleranz / Tolerance
PSB	50 mOhm	F1	1.0 %

VERPACKUNGSMITTEL / PACKAGING INFORMATION	
Stangenmagazin / Tube	
Anzahl Bauteile / Parts per tube	44

### Gewährleistung

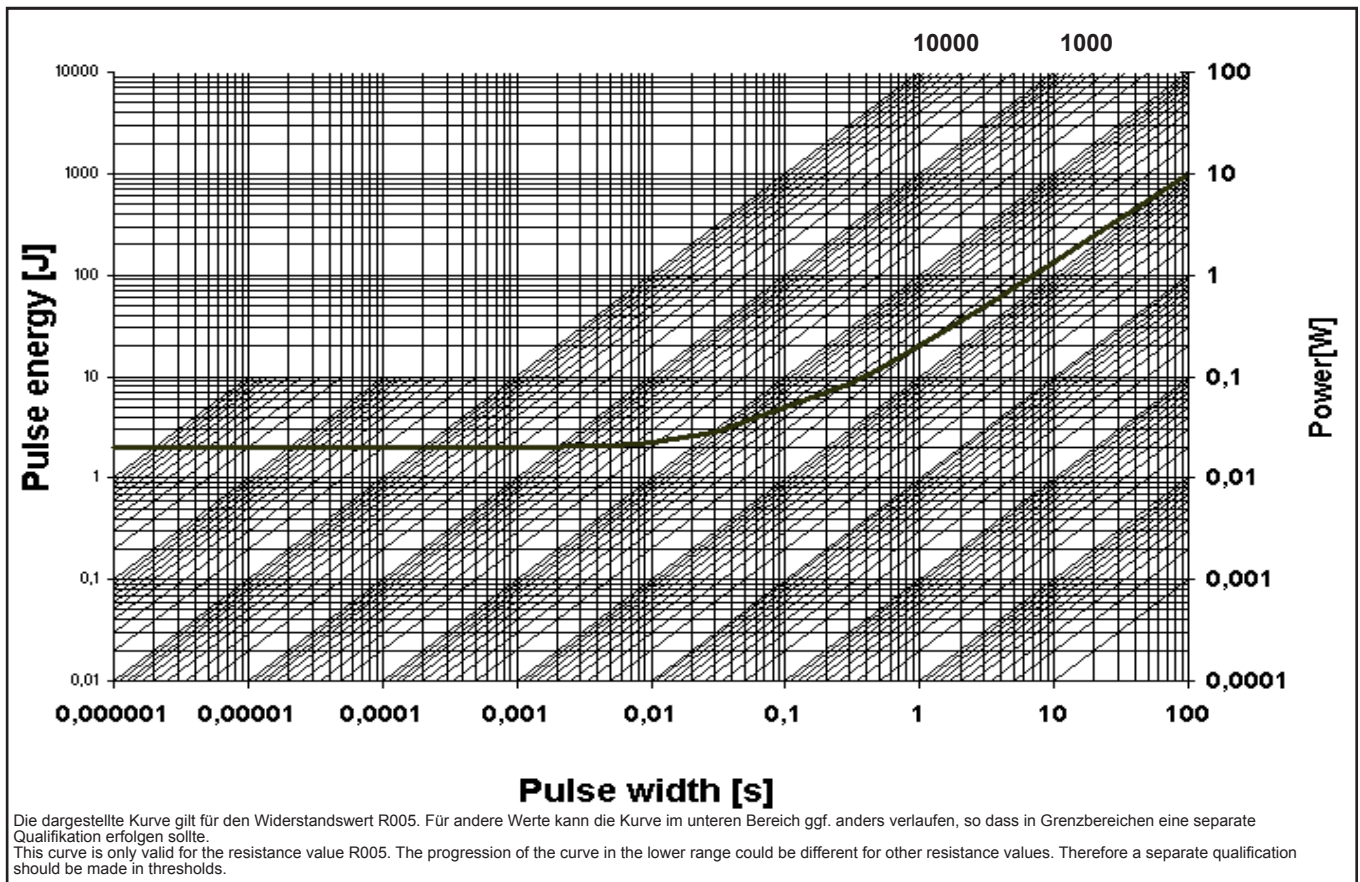
Alle Angaben über Eignung, Verarbeitung und Anwendung unserer Produkte, technische Beratung und sonstige Angaben erfolgen nach bestem Wissen, befreien den Käufer jedoch nicht von eigenen Prüfungen und Versuchen.

### 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	70 °C	70 °C	70 °C
Working Temperature	-55 to 125 °C	-55 to 125 °C	-55 to 125 °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 %	0.2 %
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 %	0.1 %
Resistance to Soldering Heat	MIL-STD-202 method 210	0.1 %	0.1 %
Moisture Resistance	MIL-STD-202 method 106	0.1 %	0.1 %
Shock	MIL-STD-202 method 213-A	0.2 %	0.2 %
Vibration, High Frequency	MIL-STD-202 method 204-B	0.2 %	0.2 %
Life	MIL-STD-26E	0.2 %	0.2 %
Storage Life at Elevated Temperature	MIL-STD-202 method 108-F	0.3 %	0.3 %
High Temperature Exposure	140 °C, 2000 h	0.2%	0.2 %
Current Noise	MIL-STD-202 method 308	0.01 %	0.01 %
Voltage Coefficient (%/V)	MIL-STD-202 method 309	linearity error less than 120dB	
Resistance Temperature Characteristic	MIL-STD-202 method 304 (20-60°C)	<50 ppm/K	<50 ppm/K
Thermal EMF	0 - 100 °C	2 µV/ °C max.	2 µV/ °C max.
Frequency Characteristic	inductivity	< 20 nH	< 20 nH