

## ISA-PLAN® - Präzisionswiderstände / Precision resistors

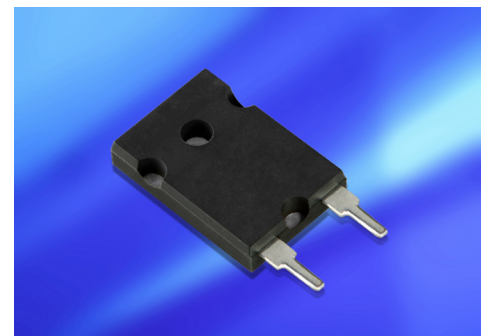
TECHNISCHE DATEN / TECHNICAL DATA		
Widerstandswerte	Resistance values	2 mOhm - 100 Ohm*
Toleranz	Tolerance	0.5**, 1 %, 5 %
Temperaturkoeffizient	Temperature coefficient	< 50 ppm/K (20 °C bis/to 60 °C)
Temperaturbereich	Applicable temperature range	-55 °C bis/to +125 °C
Belastbarkeit	Load capacity	3 W 10 W Kühlkörpermontage / on a heatsink
Innerer Wärmewiderstand zum Aluminiumsubstrat ( $R_{th}$ )	Internal thermal heat resistance to aluminium substrate ( $R_{th}$ )	< 4 K/W
Wärmewiderstand zur Umgebung ( $R_{th}$ )	Thermal heat resistance to ambient ( $R_{th}$ )	< 20 K/W
Isolationsspannung	Dielectric withstanding voltage	500 V AC
Induktivität (1 Ohm)	Inductance (1 Ohm)	< 40 nH
Stabilität (Nennlast) Abweichung $T_K =$ Kontaktstellentemperatur/ Stability (Nominal load) deviation $T_K =$ Terminal temperature		< 0.5 % nach/after 2000 h ( $T_K = 70 °C$ )

\* Standard Widerstandswerte (E12) zusätzliche Werte 2 und 5 / Standard resistance values according to E12, additional values of 2 and 5

\*\* Toleranz 0,5 % für Werte  $\geq 10$  mOhm / Tolerance 0.5 % for values  $\geq 10$  mOhm

### MERKMALE / FEATURES

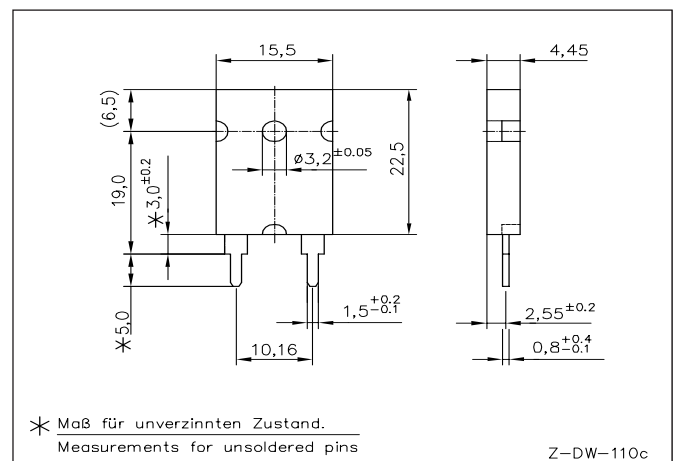
- Bis 10 W  
Up to 10 W
- Dauerströme bis 70 A (2 mOhm)  
Constant current up to 70 A (2 mOhm)
- Baugröße ähnlich TO 247  
Size similar to TO 247
- Sehr hohe Pulsbelastbarkeit  
High pulse power rating
- Sehr gute Langzeitstabilität  
Excellent long term stability
- Niedrige Induktivität  
Low inductance



Bauform ähnlich TO 247 /  
Size similar to TO247

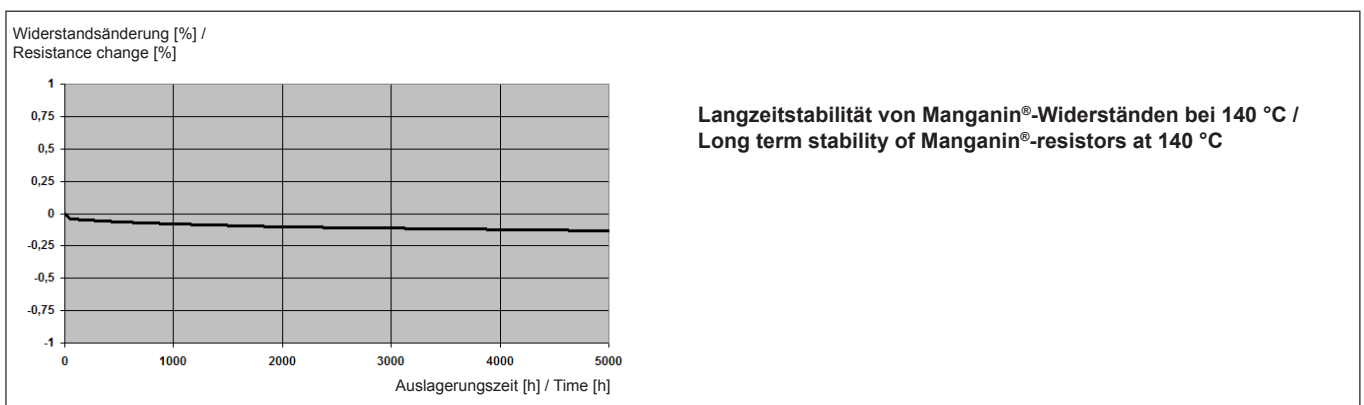
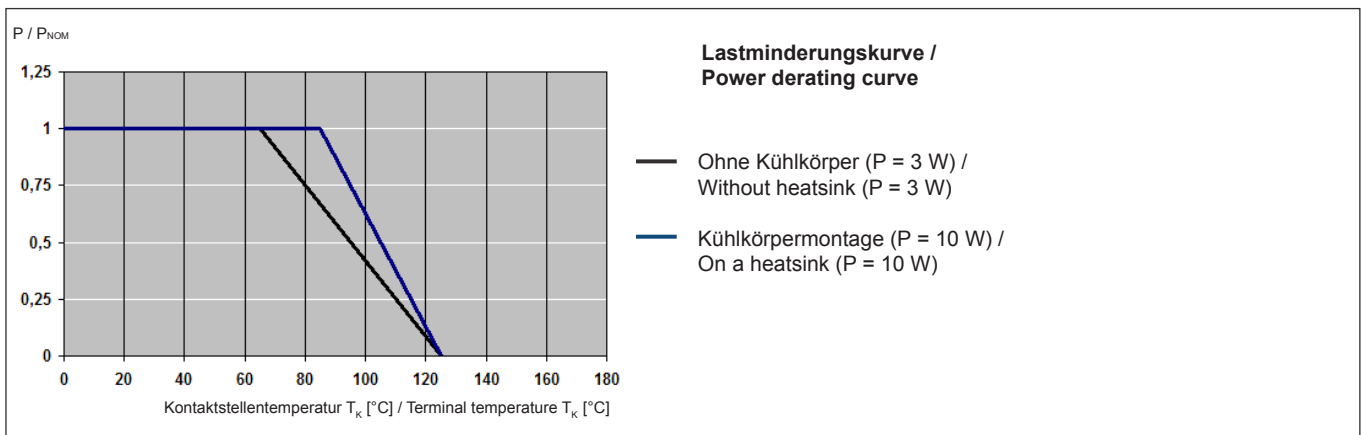
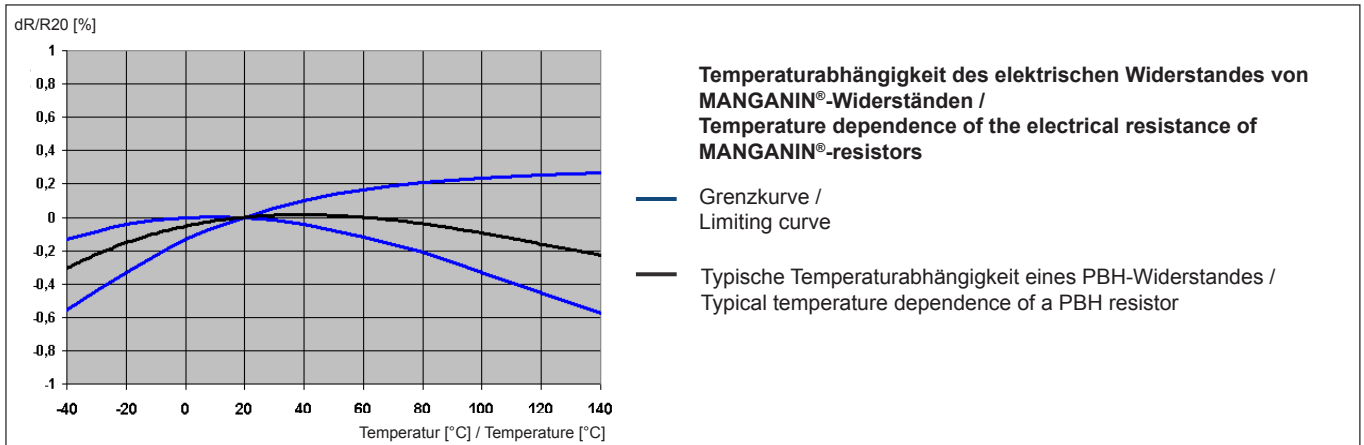
### APPLIKATIONEN / APPLICATION

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

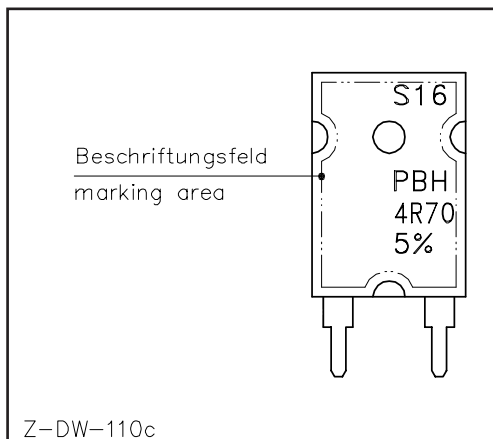


Abmessungen [mm] / Dimensions [mm]

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



Beschriftung / Marking



**Montagehinweis / Assembly instruction**

Max. zulässiges Anzugsmoment für Schrauben M3 /  
Max. allowed torque for screws M3

1 Nm

**Lötprofil Vorschlag / Recommended solder profile**

Reflow-, IR-löten / Reflow-, IR-soldering

Temperatur / Temperature [°C]	260	255	217
Zeit / Time [s]	Peak	40	90

**VERPACKUNGSMITTELINFORMATIONEN /  
PACKAGING INFORMATION**

Stangenmagazin / Tube	
Anzahl Bauteile / Parts per tube	35

**BESTELLBEZEICHNUNG / ORDERING CODE**

**PBH-R100-F1-1.0**

Typ / Type	Widerstandswert / Resistance value	Anschlüsse / Terminal	Toleranz / Tolerance
PBH	100 mOhm	F1	1.0 %

**RoHS 2002/95/EG konform seit 01.01.2005**

Ausführliche Informationen erhalten Sie auf unserer Homepage:  
[www.isabellenhuette.de](http://www.isabellenhuette.de)

**RoHS 2002/95/EC compliance since 01.01.2005**

For more information please visit our website:  
[www.isabellenhuette.de](http://www.isabellenhuette.de)

**Gewährleistung**

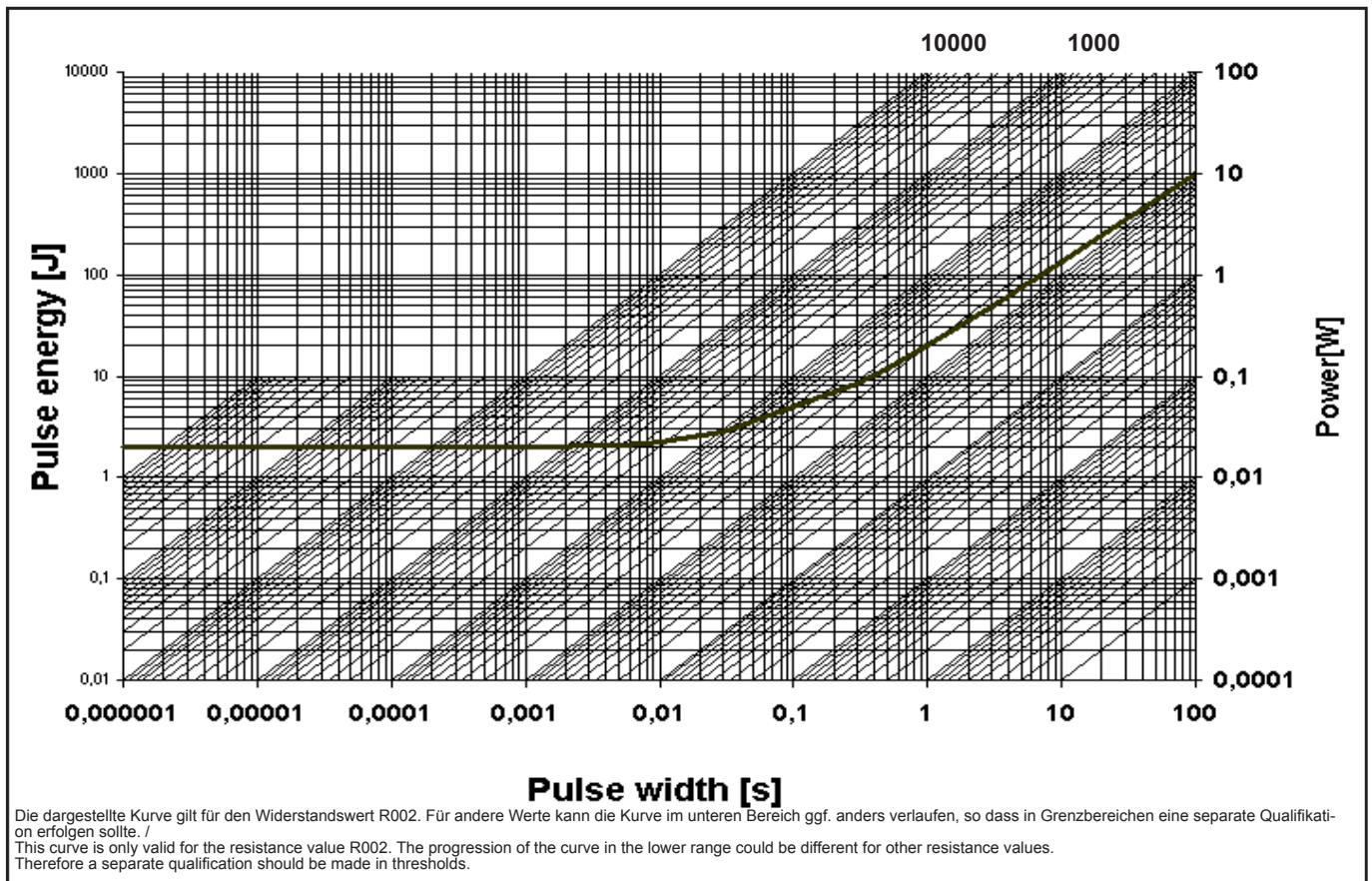
Alle Angaben über Eignung, Verarbeitung und Anwendung unserer Produkte, technische Beratung und sonstige Angaben erfolgen nach bestem Wissen, befreien den Käufer jedoch nicht von eigenen Prüfungen und Versuchen.

**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	70/90 °C	65/85 °C	85 °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 %	0.1 %
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 %
Terminal Strength	MIL-STD-202 method 211	50N, 0.02 %	0.02 %
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	0.2 %	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)	<50 ppm/K	< 30 ppm/K
Thermal EMF	0 - 100 °C	2 µV/K max.	2 µV/K
Frequency Characteristic	inductivity	< 40 nH	< 40 nH