

ISA-PLAN® - Präzisionswiderstände / Precision resistors

TECHNISCHE DATEN / TECHNICAL DATA		
Widerstandswerte	Resistance values	3, 5, 10, 100 mOhm 1, 10 Ohm
Toleranz	Tolerance	0.05 %, 0.1 %, 0.5 %, 1 %
Temperaturkoeffizient	Temperature coefficient	< 5/10 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)
Wärmewiderstand zur Umgebung (R _{th})	Thermal resistance to ambient (R _{th})	< 15 K/W
Innerer Wärmewiderstand zum Aluminium Substrat (R _{thi})	Thermal resistance to aluminium substrat (R _{thi})	< 3 K/W
Isolationsspannung	Dielectric withstanding voltage	500 V AC
Induktivität	Inductance	< 5 nH (R=10mOhm)
Stabilität (Nennlast) Abweichung T _K = Kontaktstellentemperatur Stability (Nominal load) deviation T _K = Terminal temperature		< 0.1 % nach/after 1000 h (T _K = 60 °C) < 0.2 % nach/after 6000 h (T _K = 105 °C)

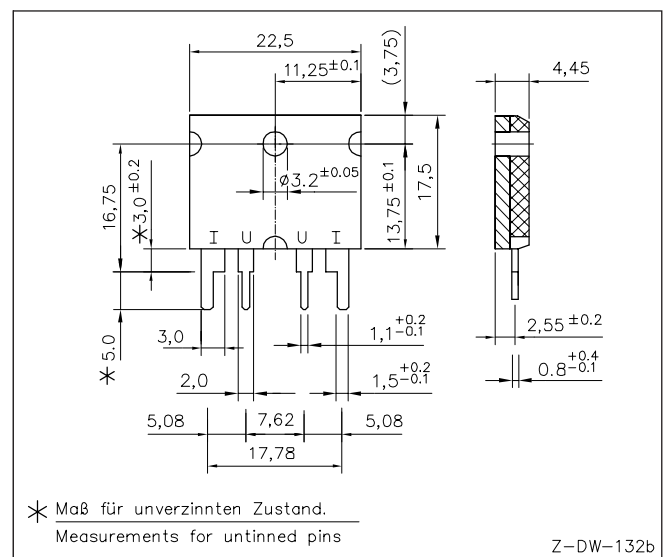
MERKMALE / FEATURES

- Bis 10 W
Up to 10 W
- 4-Leiter-Anschluss
4-terminal-connection
- Hohe Pulsbelastbarkeit 1 J für 10 ms
Pulse power rating 1 J for 10 ms
- Sehr gute Langzeitstabilität
Excellent long term stability
- Extrem niedriger TK
Extremely low TC-value



APPLIKATIONEN / APPLICATION

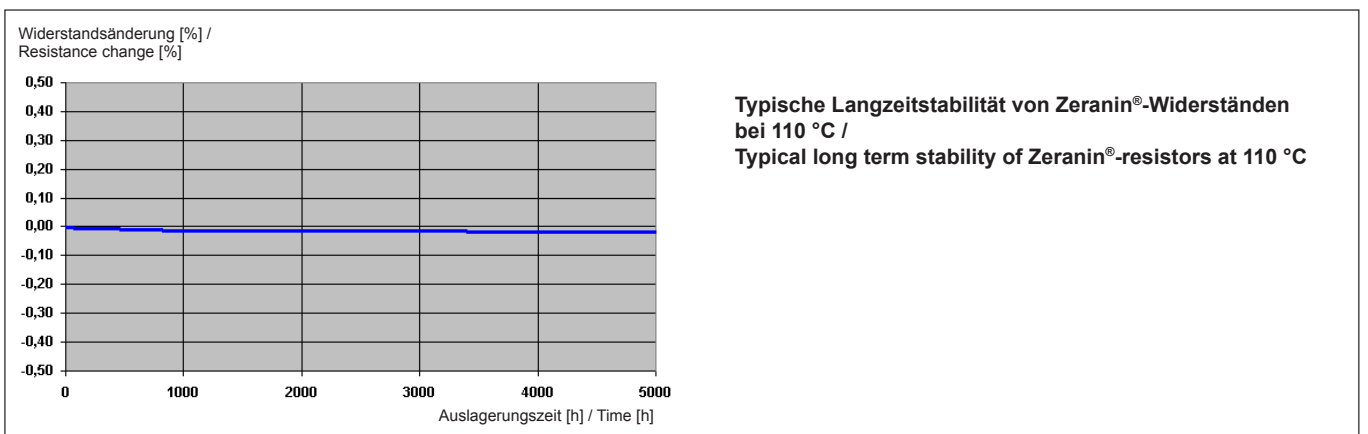
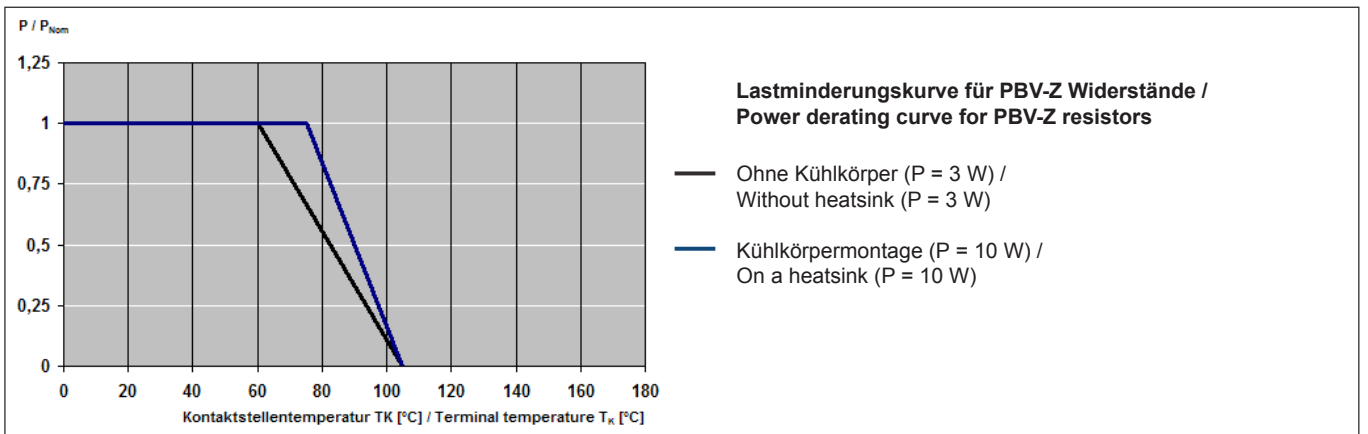
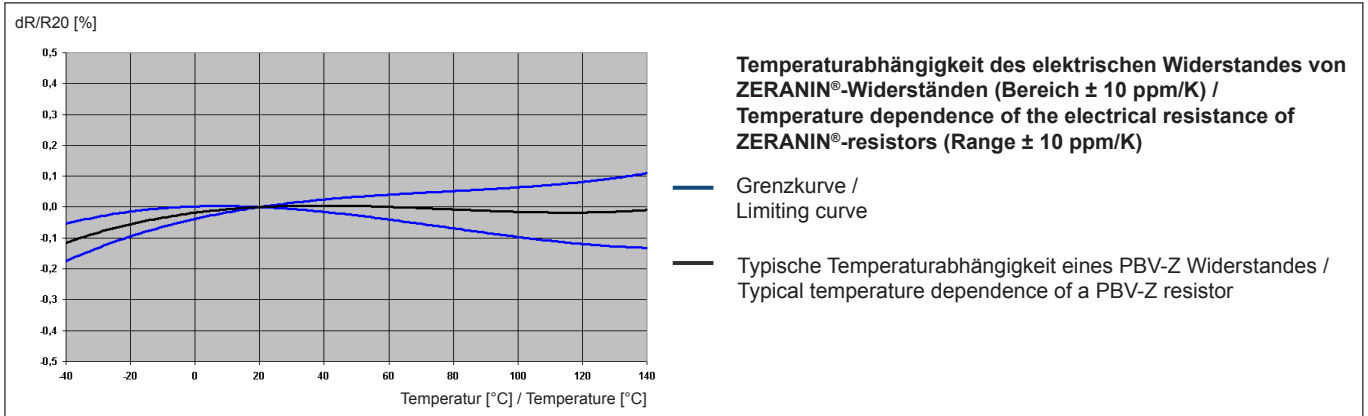
- Referenzwiderstände
Reference resistors
- Stromquellen
Current sensors
- Strommessgeräte
Current measuring equipment



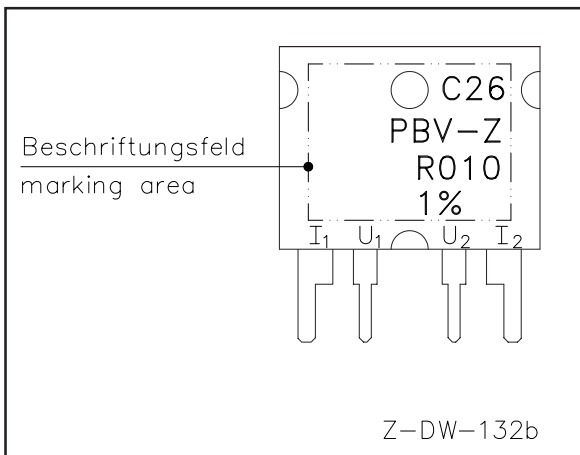
Abmessungen [mm] / Dimensions [mm]



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



Beschriftung / Marking



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 25

Montagehinweis / Assembly instruction

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

1 Nm

RoHS 2002/95/EG konform seit 01.01.2005

Ausführliche Informationen erhalten Sie auf unserer Homepage:
www.isabellenhuette.de

RoHS 2002/95/EC compliance since 01.01.2005

For more information please visit our website:
www.isabellenhuette.de

BESTELLBEZEICHNUNG / ORDERING CODE

PBV-Z-R010-F1-0.5-TK5

Typ / Type	Material	Widerstandswert / Resistance value	Anschlüsse / Terminal	Toleranz / Tolerance	Temperaturkoeffizient / Temperature coefficient
PBV	ZERANIN®30	10 mOhm	F1	0.5 %	±10 ppm/K

Gewährleistung

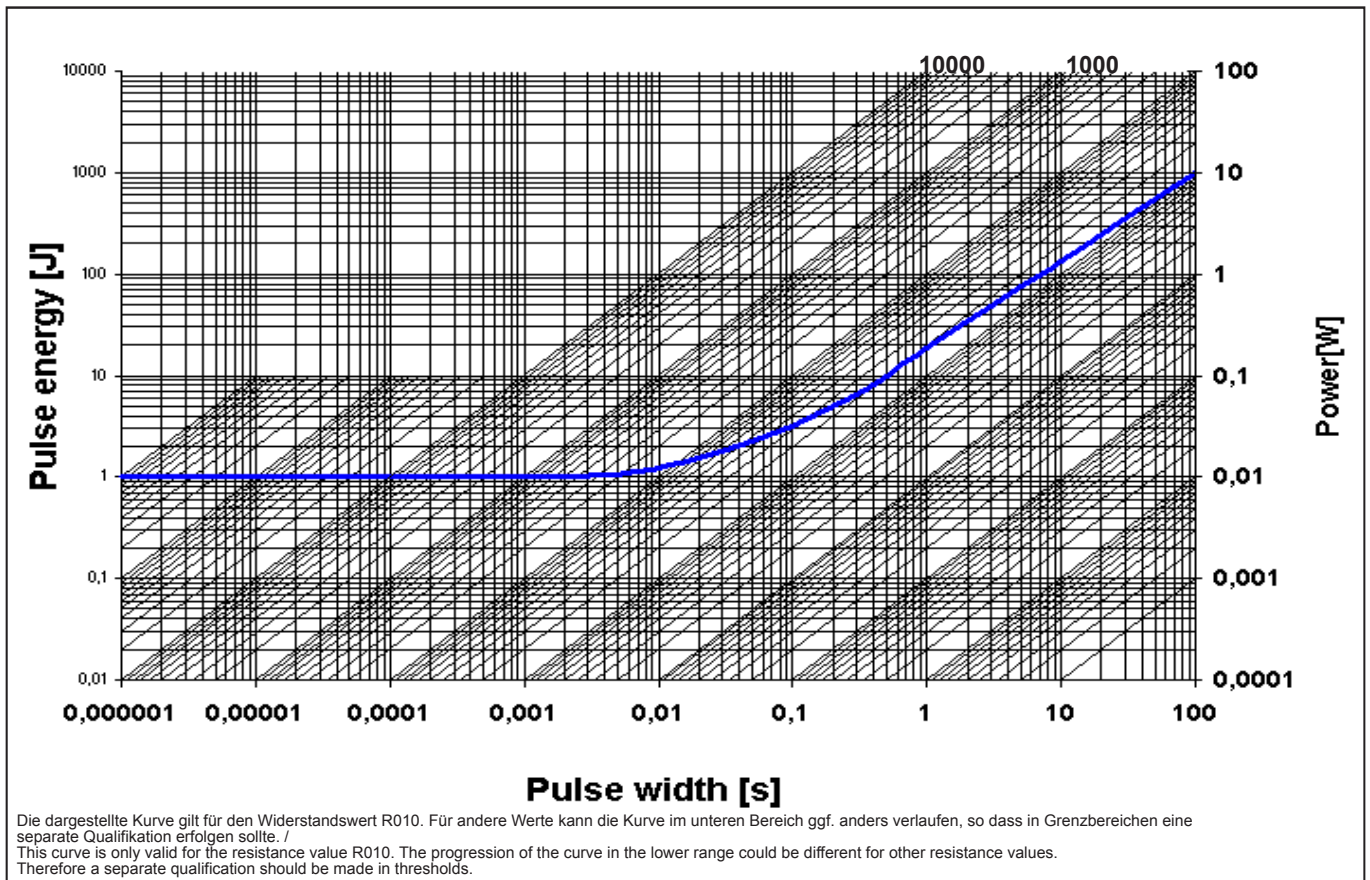
Alle Angaben über Eignung, Verarbeitung und Anwendung unserer Produkte, technische Beratung und sonstige Angaben erfolgen nach bestem Wissen, befreien den Käufer jedoch nicht von eigenen Prüfungen und Versuchen.

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	105 °C	105 °C	105 °C
Working Temperature	-20 to 105 °C	-20 to 105 °C	-20 to 105 °C
Thermal Shock	MIL-STD-202 method 107-B1	0.05 %	0.02 %
Overload	MIL-R-26E (5 times rated power, 5 sec)	0.1 %	0.02 %
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	0.05 %	0.01 %
Terminal Strength	MIL-STD-202 method 211	50N, 0.02 %	0.02 %
Resistance to Soldering Heat	MIL-STD-202 method 210	0.03 %	0.01 %
Moisture Resistance	MIL-STD-202 method 106	0.05 %	0.01 %
Shock	MIL-STD-202 method 213-A	0.1 %	0.03 %
Vibration, High Frequency	MIL-STD-202 method 204-B	0.1 %	0.05 %
Life	MIL-STD-26E	0.1 %	0.05 %
Storage Life at Elevated Temperature	MIL-STD-202 method 108-F	0.1 %	0.05 %
High Temperature Exposure	105 °C, 1000 h	0.1 %	0.05 %
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)	< 5/10/20 ppm/K	< 3/8/13 ppm/K
Thermal EMF	0 - 100 °C	1 µV/K max.	0.05 µV/K
Frequency Characteristic (R = 10 mOhm)	inductivity	< 5 nH	< 5 nH