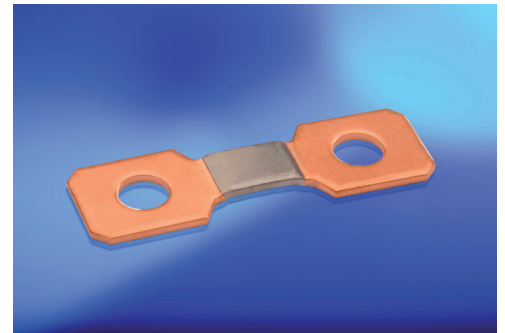


## ISA-WELD® - Präzisionswiderstände für die Energiemessung ISA-WELD® - Precision resistors for energy metering

TECHNISCHE DATEN / TECHNICAL DATA		
Widerstandswerte	Resistance values	0.2, 0.5 mOhm
Toleranz	Tolerance	5 %
Temperaturkoeffizient	Temperature coefficient	< 50 ppm/K (20 °C - 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
Induktivität	Inductance	< 3 nH
Stabilität (Nennlast) Abweichung $T_K$ = Kontaktstellentemperatur Stability (Nominal load) deviation $T_K$ = Terminal temperature		< 0.5 % nach/after 2000 h ( $T_K = 110$ °C)

### MERKMALE / FEATURES

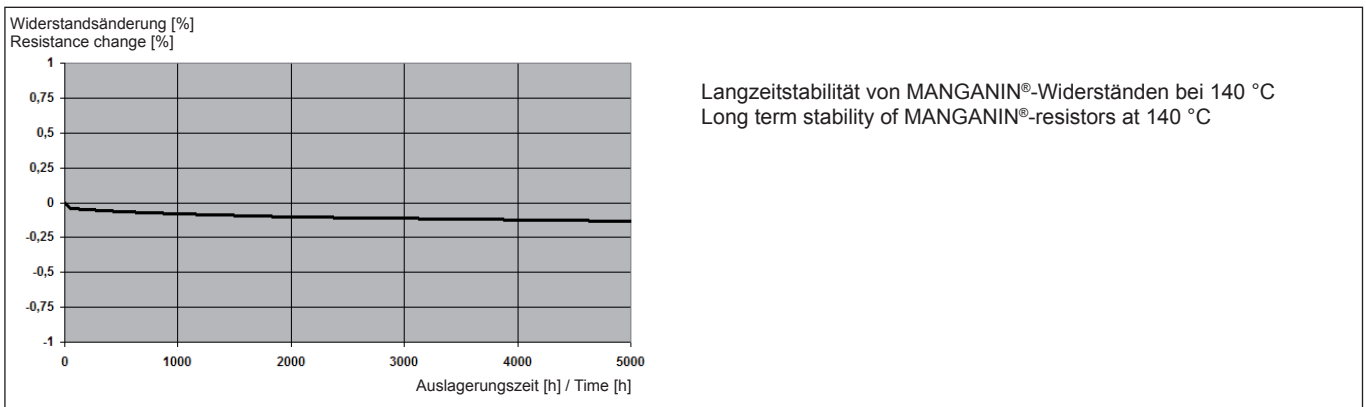
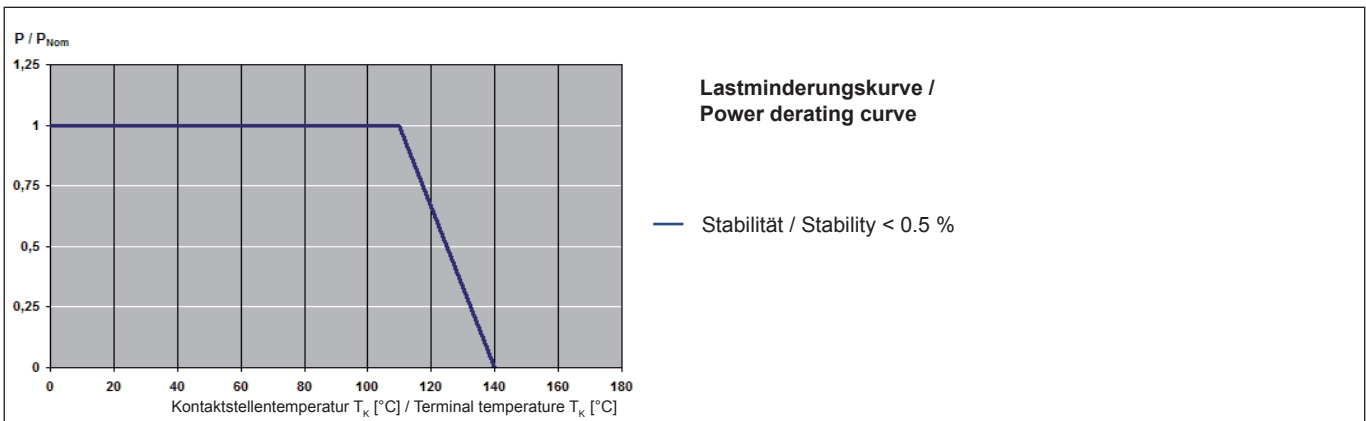
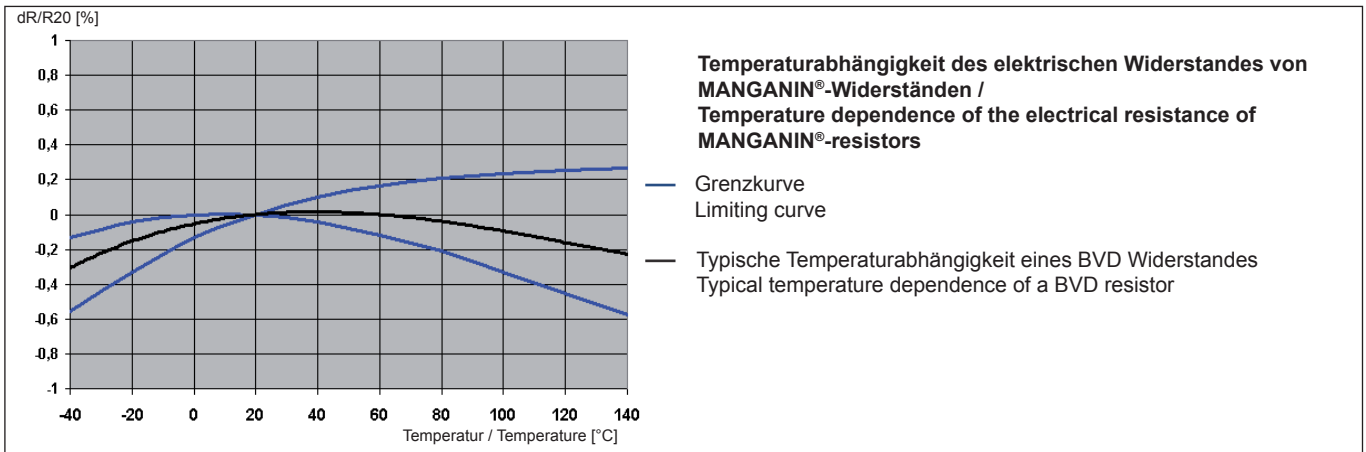
- 3 W Dauerleistung  
3 W permanent power
- Dauerströme bis 75 A (0,5 mOhm)  
Continuous current load up to 75 A (0.5 mOhm)
- Sehr gute Langzeitstabilität  
Excellent long term stability
- Massive Kupferanschlüsse  
Heavy copper connectors
- Niedrige Induktivität  
Low inductance value
- Bauteilmontage: Reflowlöten oder -schweißen  
Mounting: Reflow-soldering or welding on copper
- Geeignet für Löttemperaturen bis 350 °C / 30 sek oder 250 °C / 10 min  
Max. solder temperature up to 350 °C / 30 sec or 250 °C / 10 min

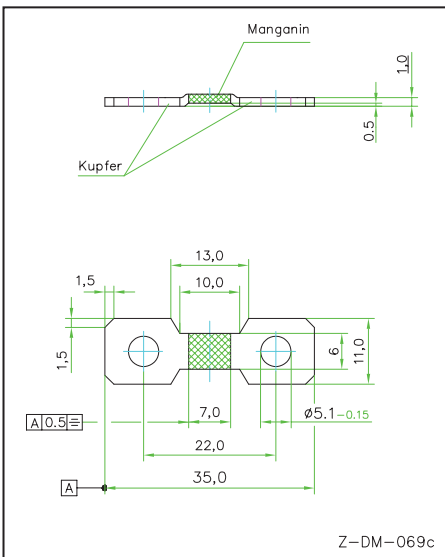


### APPLIKATIONEN / APPLICATIONS

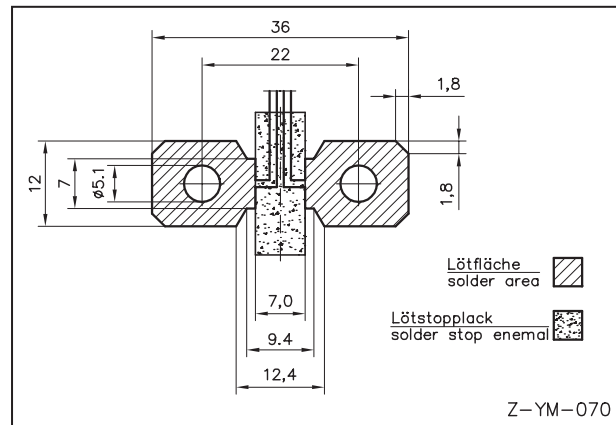
- Einsatz in Elektrizitätszählern (kWh-Zähler)  
Energy metering, kWh-meters
- Batteriestrommessung in Kfz und Elektrofahrzeugen  
Battery current sensing
- Hochstromanwendungen in der Automobiltechnik  
High current sensing in automotive applications
- Strommessung in Batterieladegeräten  
Current measurement in battery chargers

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

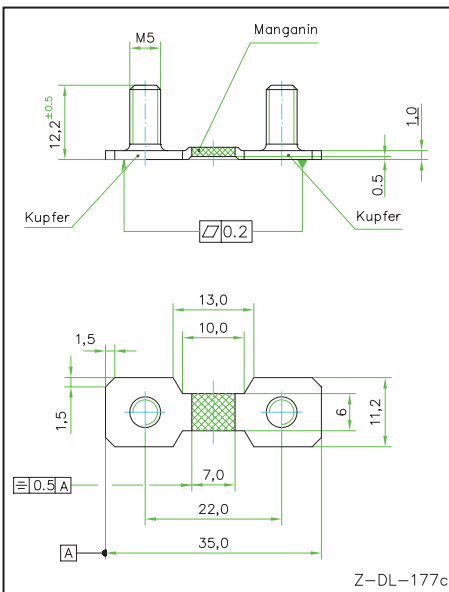




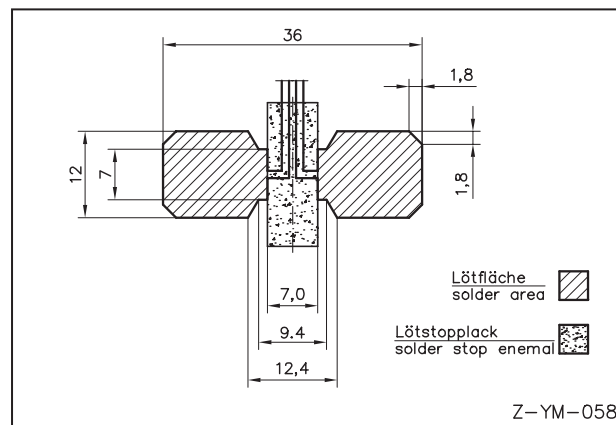
Abmessungen BVD-A (mm) Ausführung A  
Dimensions BVD-A (mm) version A



Layoutvorschlag für einen Vierleiteranschluss der Ausführung A  
Proposal for pcb-layout with four terminal configuration for version A



Abmessungen BVD-A (mm) Ausführung D  
Dimensions BVD-A (mm) version D



Layoutvorschlag für einen Vierleiteranschluss der Ausführung D  
Proposal for pcb-layout with four terminal configuration for version D

BESTELLBEZEICHNUNG / ORDERING CODE			
BVD-A-R0005-5.0-D			
Typ / Type	Widerstandswert / Resistance value	Toleranz / Tolerance	Ausführung / Version
BVD-A	0.5 mOhm	5 %	D

### Gewährleistung

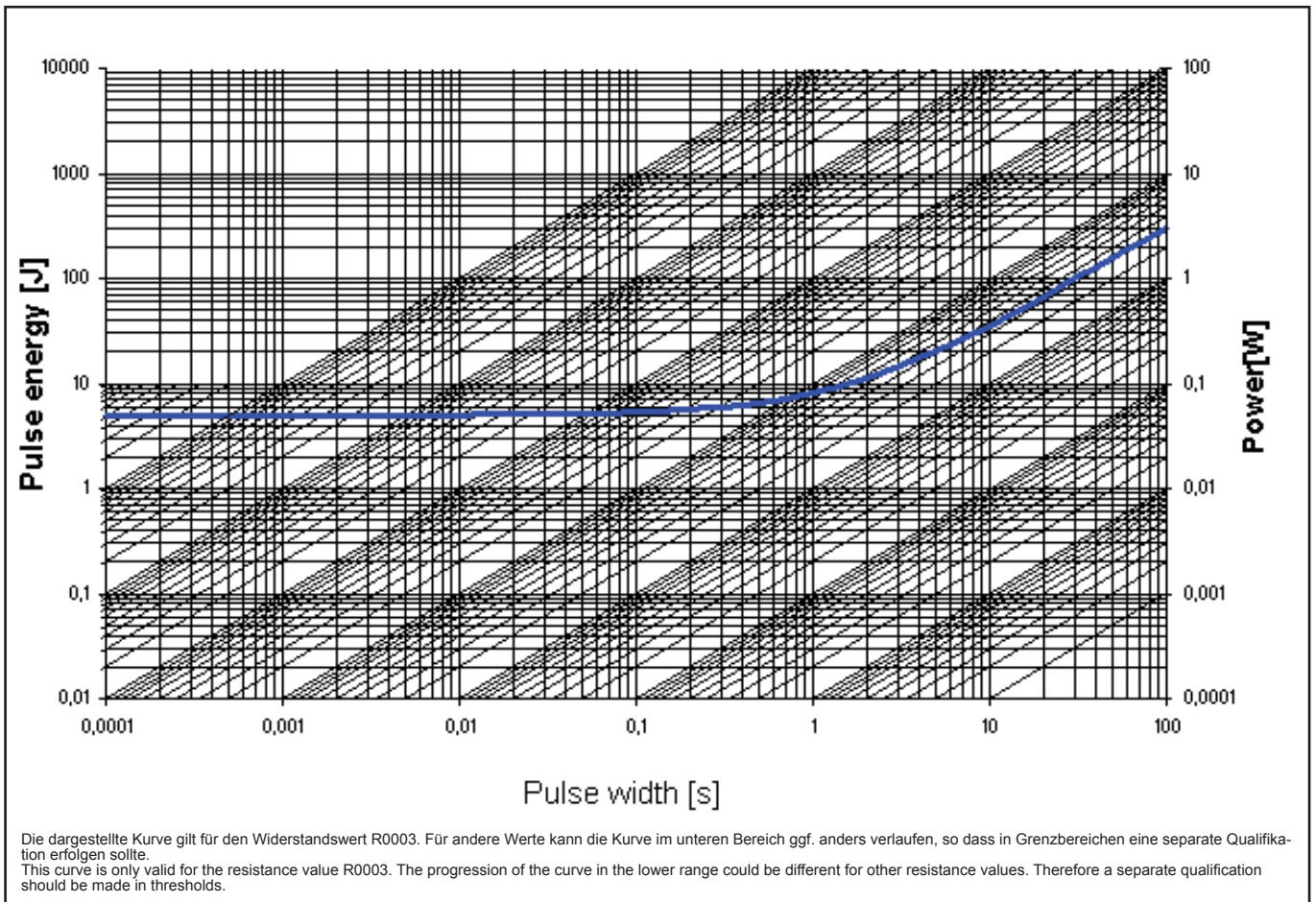
Alle Angaben über Eignung, Verarbeitung und Anwendung unserer Produkte, technische Beratung und sonstige Angaben erfolgen nach bestem Wissen, befreien den Käufer jedoch nicht von eigenen Prüfungen und Versuchen.

### 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	140 °C	140 °C	140 °C
Working Temperature	-55 to 170 °C	-55 to 140 °C	-55 to 140 °C
Thermal Shock	MIL-STD-202 method 107-B1	0.1 %	0.05 %
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 %
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 %	0.1 %
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	< 50 ppm/K
Thermal EMF	0 - 100 °C	2 µV/ K max.	2 µV/ K
Frequency Characteristic	inductivity	< 3 nH	< 3 nH