

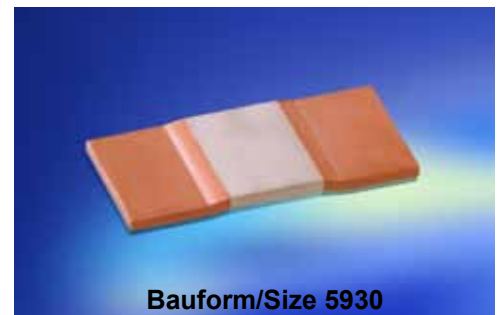
**ISA-WELD® - SMD Präzisionswiderstände / SMD precision resistors**

TECHNISCHE DATEN / TECHNICAL DATA		
Widerstandswerte (mOhm)	Resistance values (mOhm)	0.2, 0.3, 0.5, 0.6, 1 mOhm
Toleranz	Tolerance	1 %, 2 %, 5 %
Temperaturkoeffizient*	Temperature coefficient (tcr)*	< 50 ppm/K (20 °C to 60 °C)*
Temperaturbereich	Applicable temperature range	-55 °C to +170 °C
Belastbarkeit	Load capacity	7 W
Innerer Wärmewiderstand (R <sub>thi</sub> )	Internal heat resistance (R <sub>thi</sub> )	< 10 K/W
Induktivität	Inductance	< 3 nH
Stabilität (Nennlast) Abweichung T <sub>K</sub> <sup>κ</sup> = Kontaktstellentemperatur Stability (nominal load) deviation T <sub>K</sub> <sup>κ</sup> = Terminal temperature		< 0.5 % nach/after 2000 h (T <sub>K</sub> <sup>κ</sup> = 70 °C) < 1.0 % nach/after 2000 h (T <sub>K</sub> <sup>κ</sup> = 100 °C)

\* <50 ppmK for AluChrom <100 ppm for Manganin®

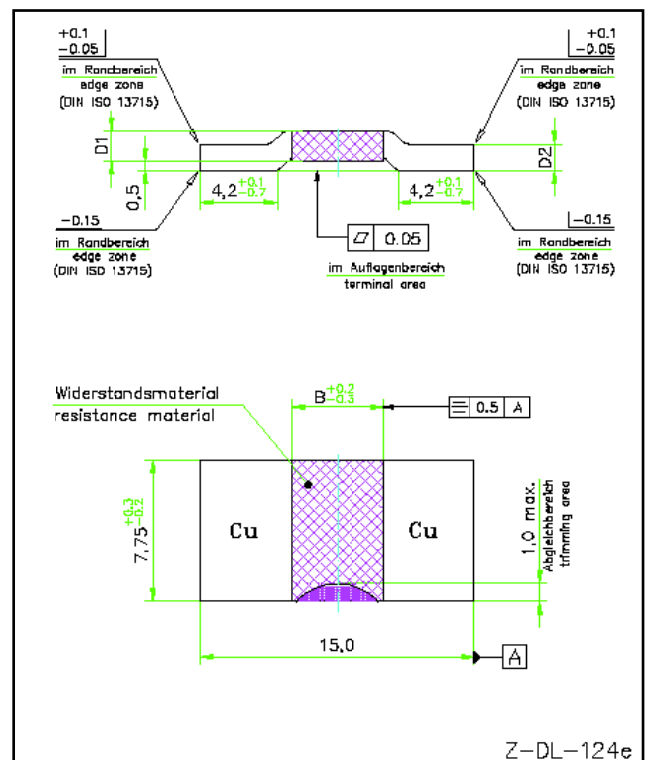
**MERKMALE / FEATURES**

- 7 Watt Dauerleistung
- 7 Watt permanent power
- Dauerströme bis 180 A (0.2 mOhm)
- Continuous current load up to 180 Amps
- (0.2 mOhm)
- Massive Kupferanschlüsse
- Heavy copper connectors
- Sehr gute Langzeitstabilität
- Excellent long term stability
- Ideal geeignet für die Montage auf DCB Keramik/ IMS Substrat
- Ideal suited for mounting on DBC / IMS substrate
- Geeignet für Löttemperaturen bis 350 °C / 30 sek
- Max. solder temperature up to 350 °C / 30 sec
- AEC-Q 200 konform
- AEC-Q 200 conform



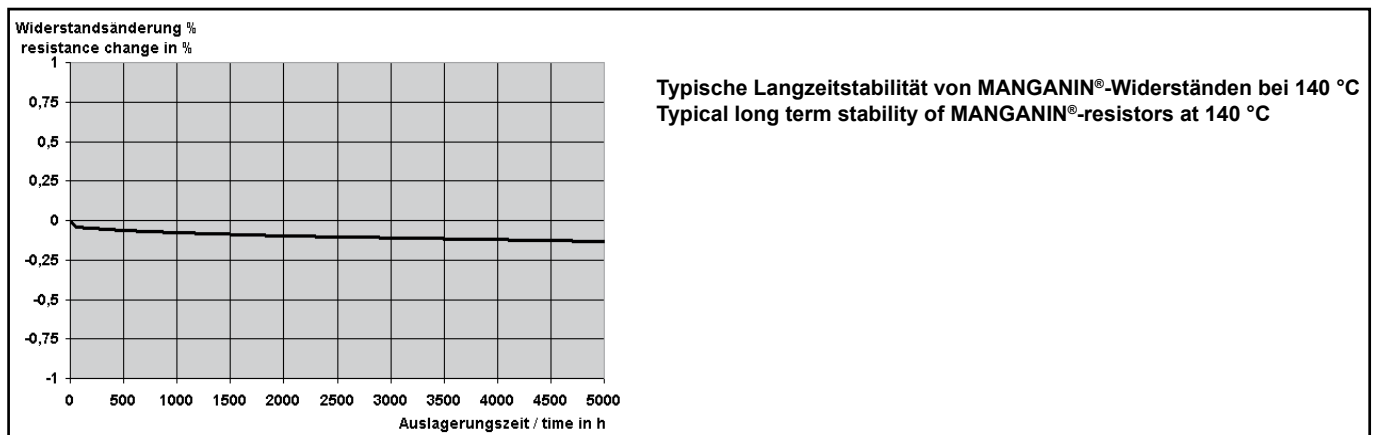
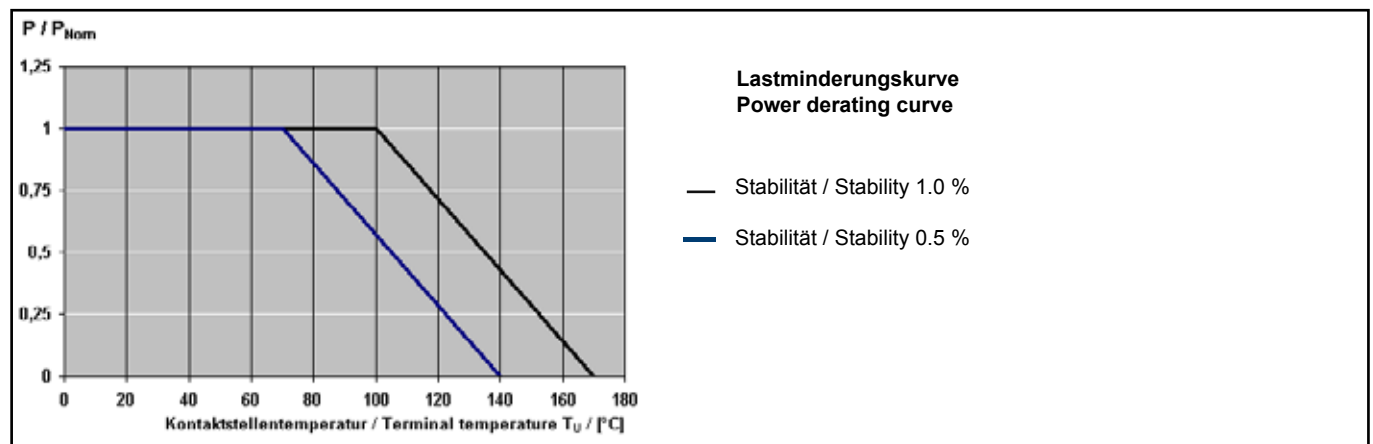
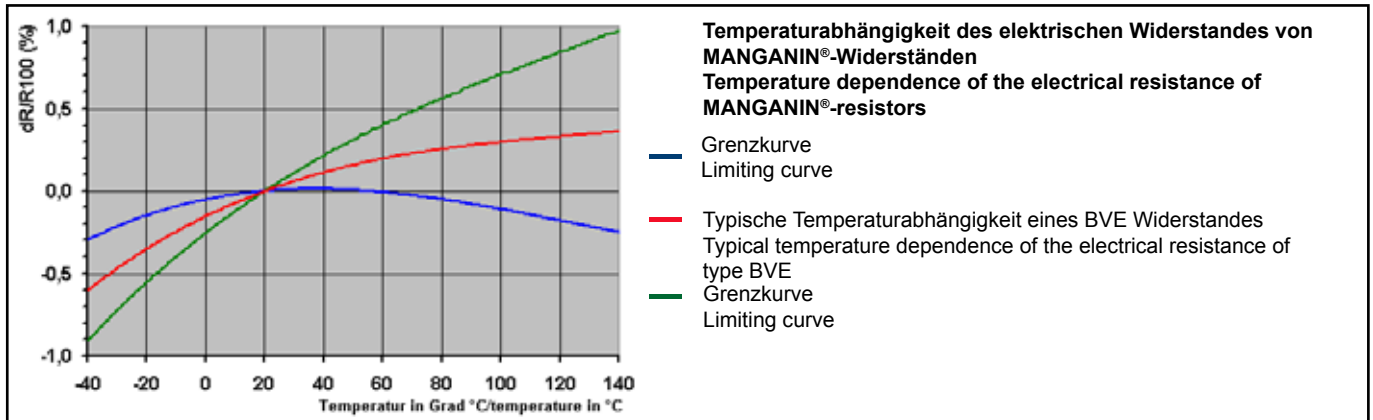
**APPLIKATIONEN / APPLICATION**

- Messwiderstand für Leistungshybride
- Current sensor for power hybrid applications
- Für Schweißmontage an Stromschienen
- For welding on bus bars
- Hochstromanwendungen in der Automobiltechnik
- High current applications for the automotive market
- Frequenzumrichter
- Frequency converters
- Leistungsmodulare
- Power modules

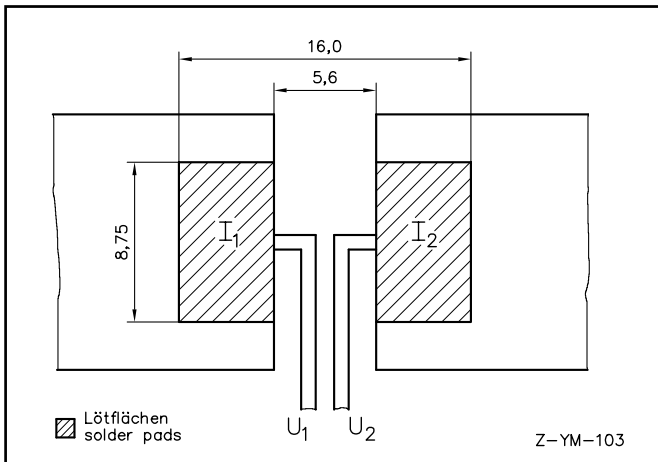




TK, Lastminderung und Langzeitstabilität / TCR, power derating and long term stability



**Vorschlag für Leiterplatten Layout (Reflowlöten)**  
**Proposal for pcb-layout (reflow soldering)**



Typ	Wert	Material	Dicke (D1)
Type	Value	Material	Thickness (D1)
BVE-M-R0002	0.2 mOhm	MANGANIN®	1.42 mm
BVE-M-R0003	0.3 mOhm	MANGANIN®	0.94 mm
BVE-M-R0005	0.5 mOhm	MANGANIN®	0.56 mm
BVE-M-R0006	0.6 mOhm	MANGANIN®	0.48 mm
BVE-A-R0005	0.5 mOhm	Aluchrom	1.63 mm
BVE-A-R001	1.0 mOhm	Aluchrom	0.91 mm

**Lötprofil Vorschlag / Recommended solder profile**

Reflow-, IR-löten

Reflow, infrared soldering

Temperatur	260 °C	255 °C	217 °C
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Zeit (s)	Peak	40	90
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RoHS 2002/95/EG konform seit Produktstart.

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

RoHS 2002/95/EC compliance since product launch.

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

**GURTINFORMATIONEN /**  
**TAPE & REEL INFORMATION**

Norm / Specification	DIN EN 60286-3
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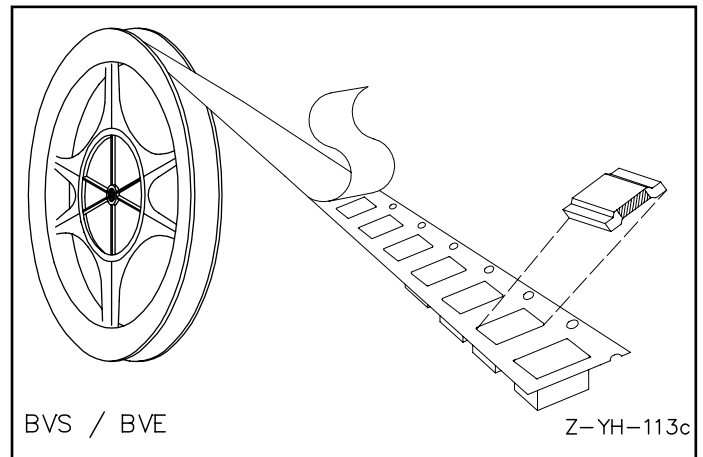
Gurtbreite / Tape width	24 mm
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Anzahl Bauteile/Parts per reel	2000 Stk. / pcs
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**BESTELLBEZEICHNUNG / ORDERING CODE**

**BVE-M-R0005-1.0**

Typ	Material	Widerstandswert	Toleranz
Type	Material	Resistance value	Tolerance
BVE	MANGANIN®	0.5 mOhm	1.0 %



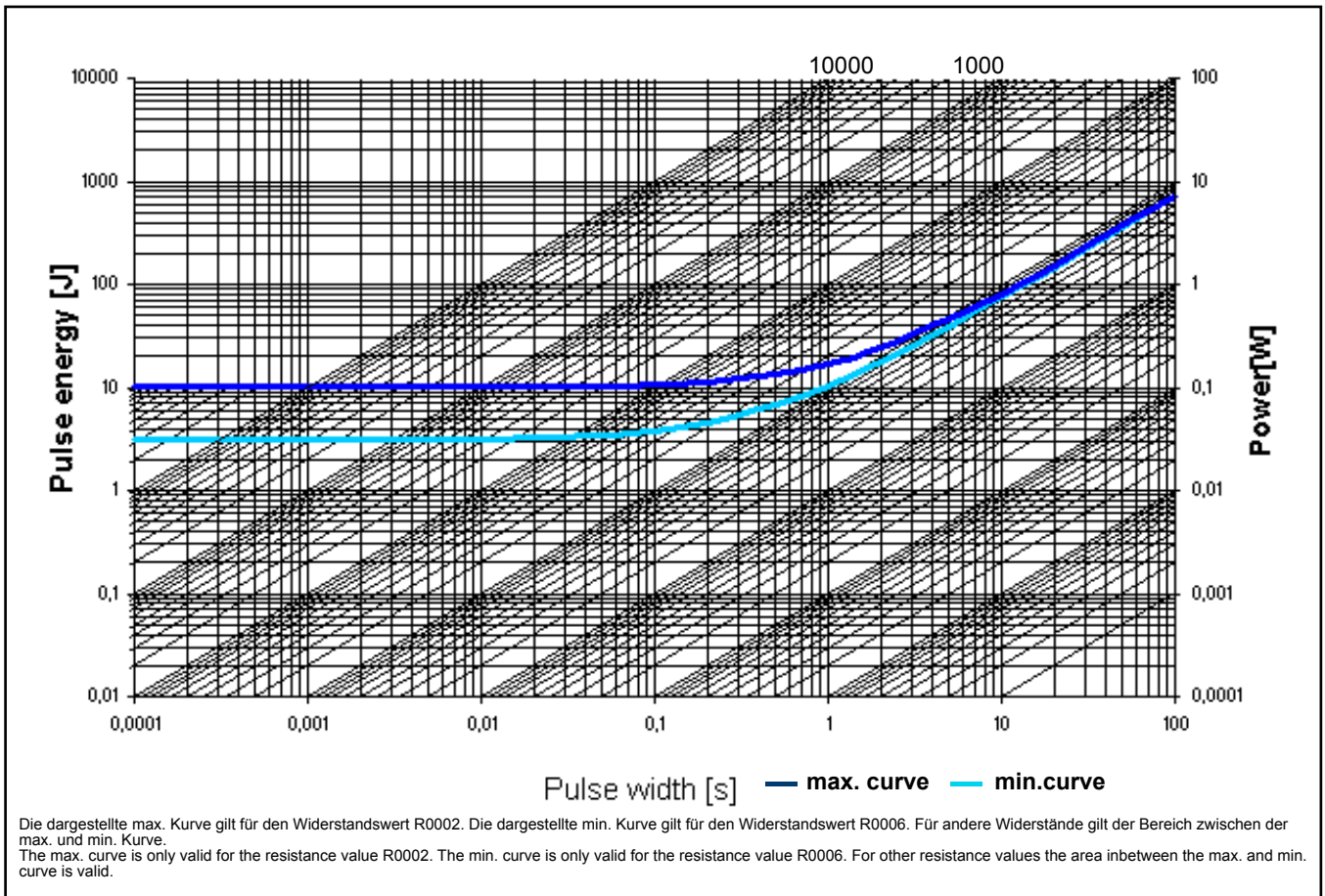
**Gewährleistung**

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 suitable, 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 puls energy resp. pulse power for continous operation**



Spezifikation/Specification			
Parameters	Test Conditions	Specification	Typical data
Maximum Temperature for full power operation	100 °C	100 °C	100 °C
Working Temperature	-55 to 170 °C	-55 to 170 °C	-55 to 170 °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	100 °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 AluChrom/Maganin®	MIL-STD-202 method 304 (20-60 °C)	< 50 ppm/K / 100 ppm/K	< 50 ppm/K / 100 ppm/K
Thermal EMF	0 - 100 °C	2 µV/ K max.	1 µV/ K
Frequency Characteristic	inductivity	< 3 nH	< 3 nH