

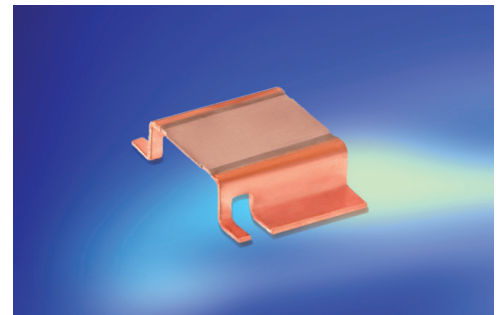
## ISA-WELD® - SMD Präzisionswiderstände / SMD precision resistors

TECHNISCHE DATEN / TECHNICAL DATA		
Widerstandswerte	Resistance values	0.2, 0.3, 0.5, 0.7, 1, 2, 3 mOhm
Toleranz	Tolerance	1 %, 5 %
Temperaturkoeffizient	Temperature coefficient	< 20 ppm/K (20 °C - 60 °C)*
Temperaturbereich	Applicable temperature range	-55 °C bis/to +170 °C
Belastbarkeit	Load capacity	bis/up to 5 W *
Innerer Widerstand ( $R_{thi}$ )	Internal heat resistance ( $R_{thi}$ )	ab/from 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 ( $T_K$ = 100 °C) < 1.0 % nach/after 2000 h ( $T_K$ = 130 °C)

\* siehe Tabelle Seite 3 / see table on page 3

### MERKMALE / FEATURES

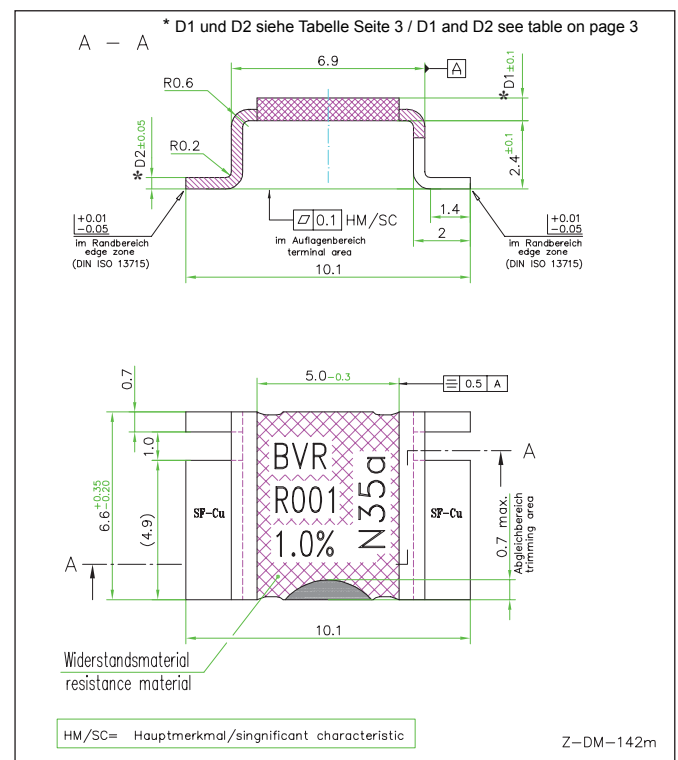
- 5 W Dauerleistung\*  
5 W permanent power\*
- Dauerströme bis 160 A (0,2 mOhm)  
Continuous current load up to 160 A (0.2 mOhm)
- Massive Kupferanschlüsse  
Heavy copper connectors
- Sehr gute Langzeitstabilität  
Excellent long-term stability
- Ideal geeignet für die Montage auf DCB Keramik /  
IMS Substrat  
Ideally suited for mounting on DCB / IMS substrate
- Geeignet für Löttemperaturen bis 350 °C / 30 sek  
Max. solder temperature up to 350 °C / 30 sec
- AEC-Q200 qualifiziert  
AEC-Q200 qualification



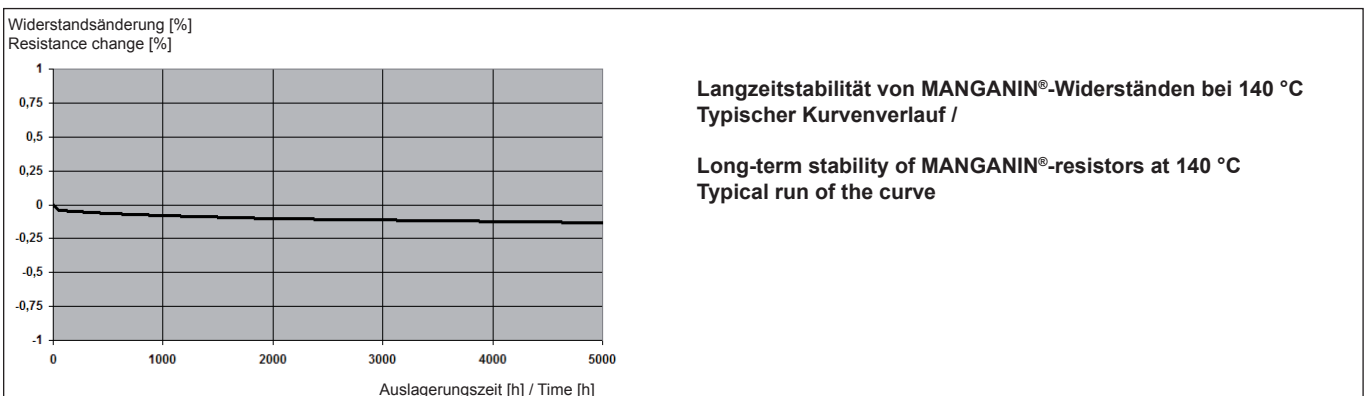
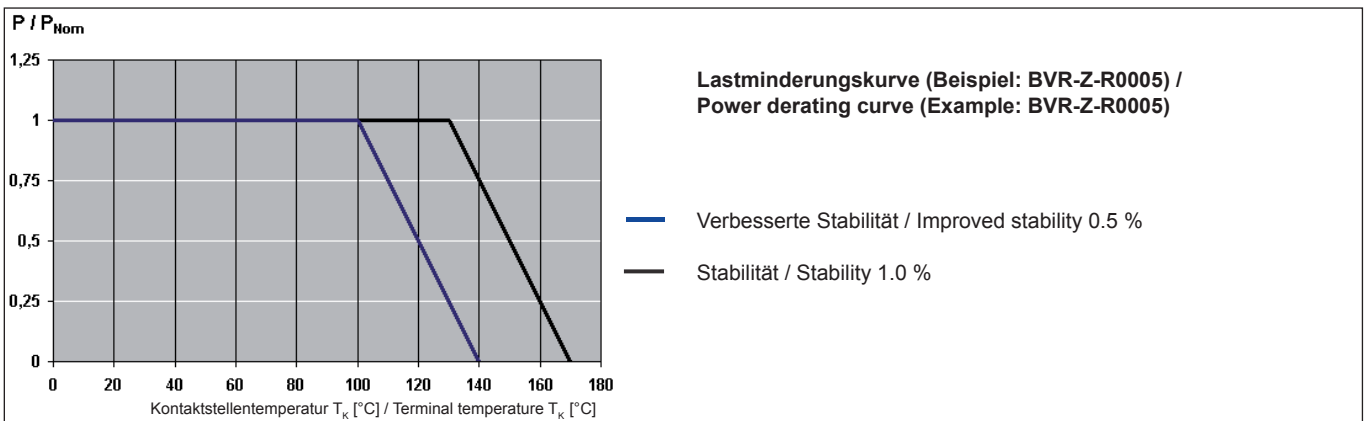
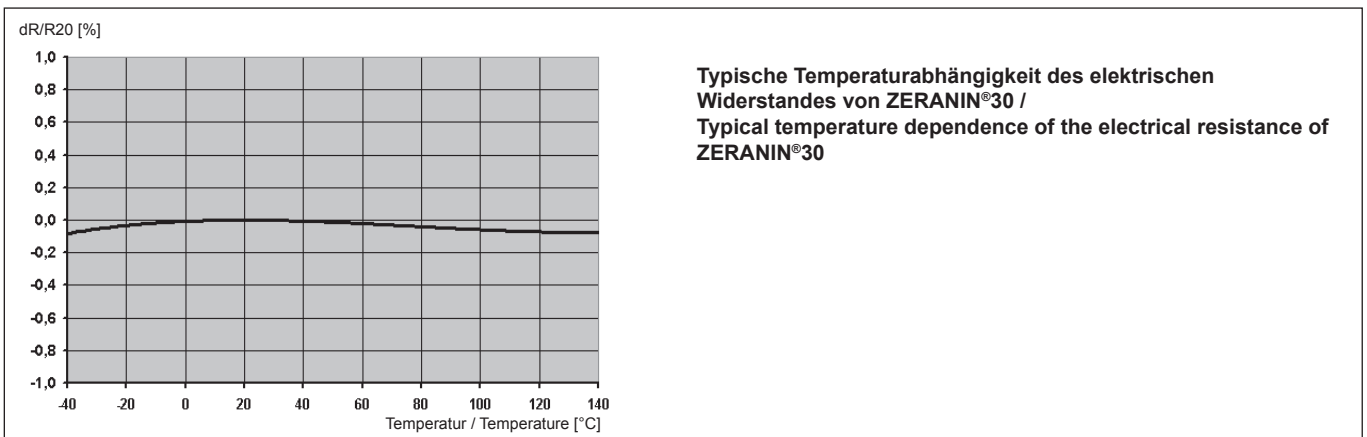
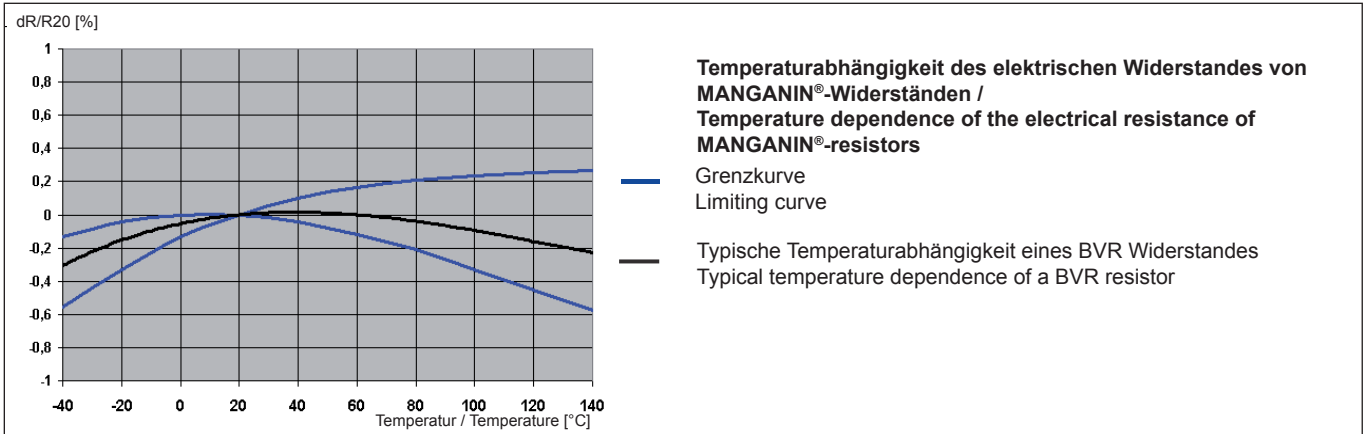
Bauform / Size 4026

### APPLIKATIONEN / APPLICATION

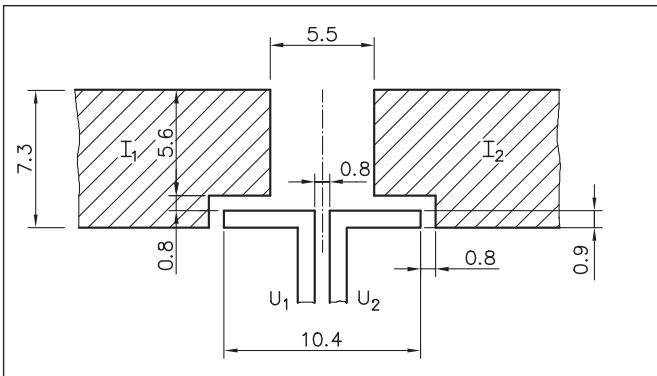
- Messwiderstand für Leistungshybride  
Current sensor for power hybrid applications
- Hochstromanwendungen in der Automobiltechnik  
High current applications for the automotive market
- Frequenzrichter  
Frequency converters
- Leistungsmodule  
Power modules



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



## Vorschlag für Leiterplatten Layout (Reflowlötén) Proposal for pcb-layout (Reflow-soldering)



### Lötprofil Vorschlag / Recommended solder profile

Reflow-, IR-lötén / Reflow-, IR-soldering

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

RoHS 2011/65/EU konform.

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

RoHS 2011/65/EU compliance.

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

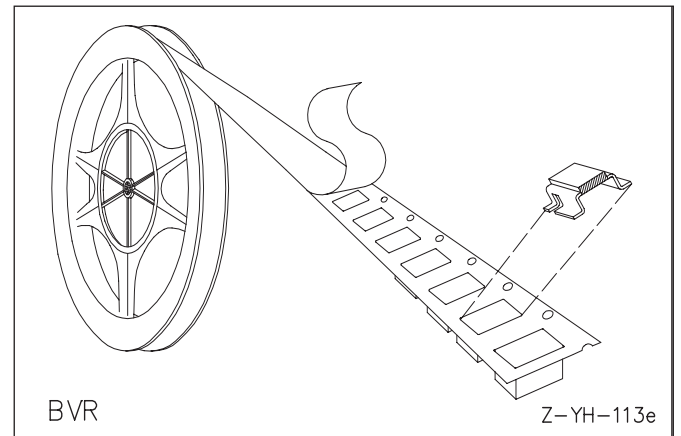
### GURTINFORMATIONEN / TAPE & REEL INFORMATION

Norm / Specification	DIN EN 60286-3
Gurtbreite / Tape width	24 mm
Anzahl Bauteile / Parts per reel	1400

### BESTELLBEZEICHNUNG / ORDERING CODE

**BVR-Z-R0005-1.0**

Typ / Type	Material	Widerstandswert / Resistance value	Toleranz / Tolerance
BVR	ZERANIN®30	0.5 mOhm	1.0 %



Typ / Type	Wert / Value [mΩ]	Dicke D1 / Thickness D1 [mm]	Dicke D2 / Thickness D 2 [mm]	R <sub>thi</sub> [K/W]	TK / TC [ppm/K]	P [W]
BVR-Z-R0002	0.2	1.20	0.40	4	< 20	5
BVR-Z-R0003	0.3	0.85	0.40	5	< 20	5
BVR-Z-R0005	0.5	0.42	0.40	8	< 20	5
BVR-M-R0007	0.7	0.44	0.40	12	< 20	4
BVR-M-R001	1	0.35	0.40	14	< 50	4
BVR-I-R001	1	1.10	0.66	9	< 50	5
BVR-I-R002	2	0.55	0.40	14	< 50	4
BVR-I-R003	3	0.36	0.40	21	< 50	3

Material Typ: Z=ZERANIN®, M=MANGANIN®, I=ISAOHM®

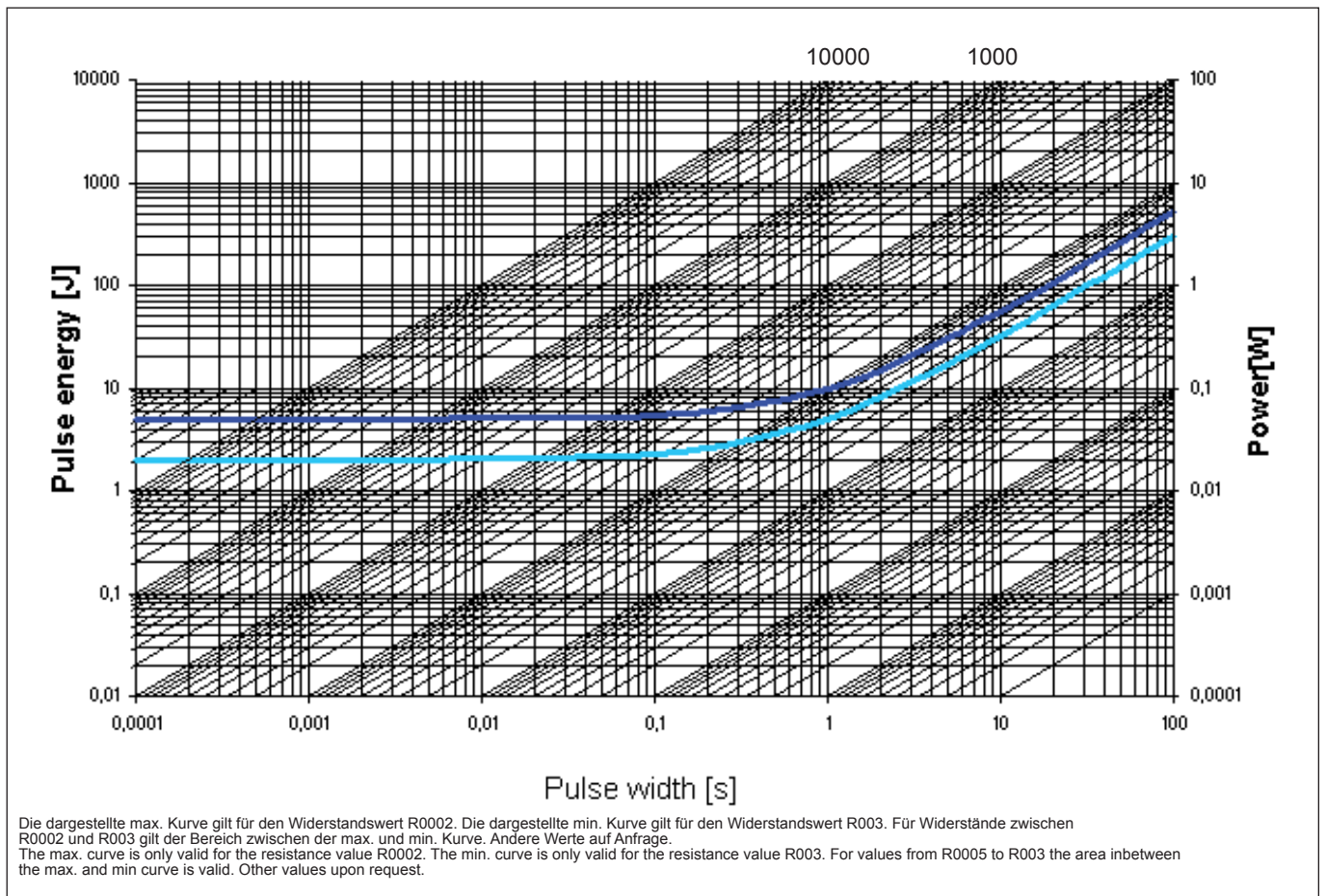
### Gewährleistung

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 permanent operation



### SPECIFICATION

Parameters	Test conditions	Specified values
Temperature Cycling	2000 cycles (-55 °C to +150 °C)	±0.5 %
Low Temperature Storage and Operation	-65 °C for 24 h	±0.1 %
Resistance to Soldering Heat	260 °C for 10 sec / 8h steam aging	n.a.
Moisture Resistance	MIL-STD-202 method 106	±0.1 %
Mechanical Shock	100 g, 6 ms half sine	±0.2 %
Vibration, High Frequency	20 g, 10-2000 Hz	±0.2 %
Operational Life	2000 h, $T_K$ max at nominal load	±1.0 %, $T_K = 130$ °C
High Temperature Exposure	2000 h / 170 °C	±1.0 %
Bias Humidity	+85 °C, 85 r.F., 1000 h	±0.5 %