

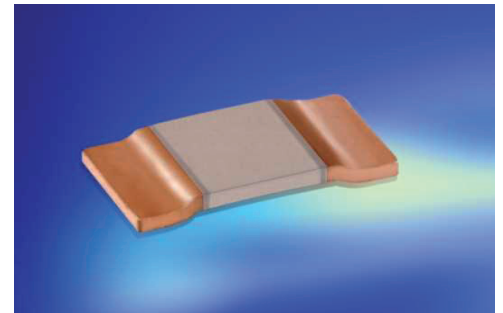
ISA-WELD® - SMD Präzisionswiderstände / SMD precision resistors

TECHNISCHE DATEN / TECHNICAL DATA		
Widerstandswerte	Resistance values	0.2, 0.3, 0.5, 1, 1.5, 2, 2.5, 2.8, 3, 4, 5 mOhm
Toleranz	Tolerance	1 %, 5 %
Temperaturkoeffizient	Temperature coefficient	ab/from 50 ppm/K (20 °C - 60 °C) *
Temperaturbereich	Applicable temperature range	-55 °C bis/to +170 °C
Belastbarkeit	Load capacity	5 W *
Innerer Wärmewiderstand (R_{thi})	Internal heat resistance (R_{thi})	ab/from 3 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 = 90 °C) < 1.0 % nach/after 2000 h (T_K = 120 °C)

* siehe Tabelle Seite 3 / see table on page 3

MERKMALE / FEATURES

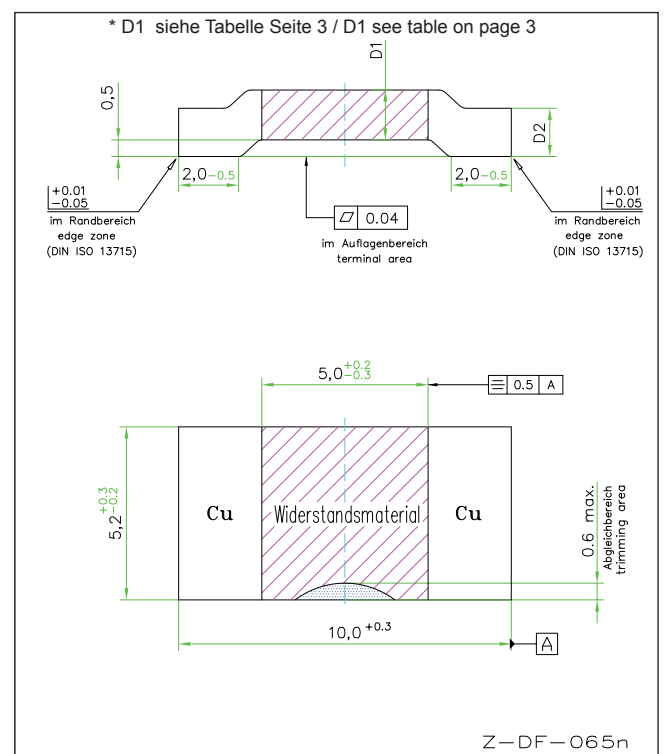
- 5 W Dauerleistung*
5 W permanent power*
- Dauerströme bis 160 A (0,2 mOhm)
Continuous current load up to 160 A (0.2 mOhm)
- Massive Kupferanschlüsse
Heavy copper connectors
- Sehr gute Langzeitstabilität
Excellent long-term stability
- Ideal geeignet für die Montage auf DCB Keramik / IMS Substrat
Ideal 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-Q200 qualifiziert
AEC-Q200 qualification



Bauform / Size 3920

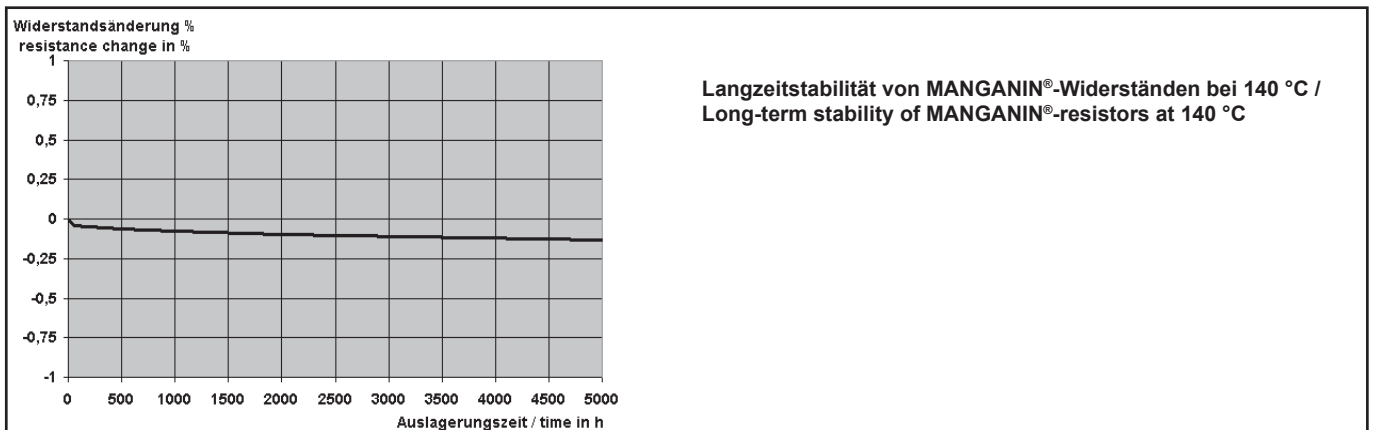
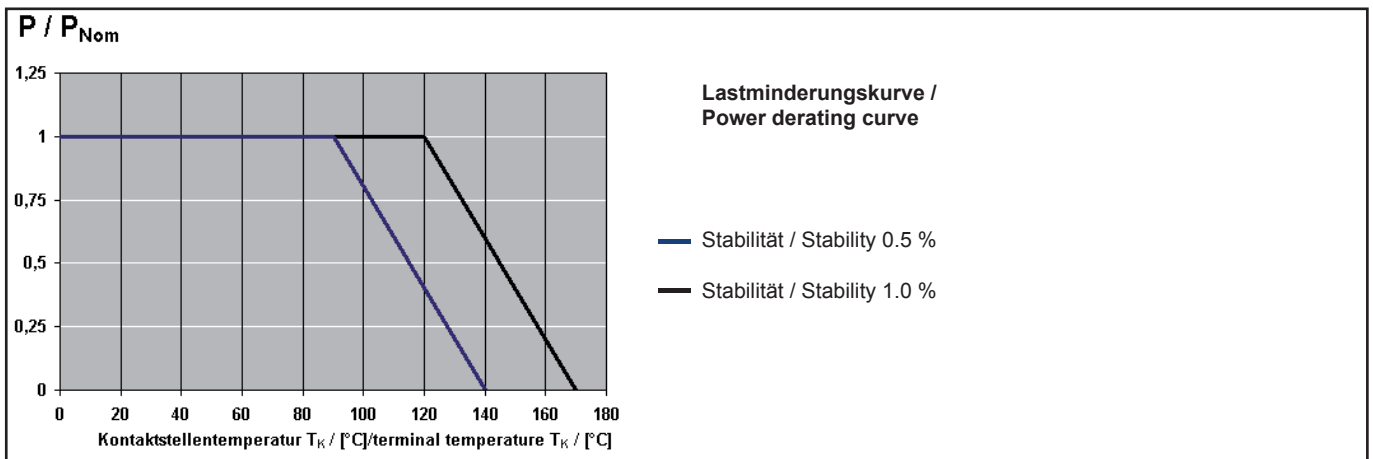
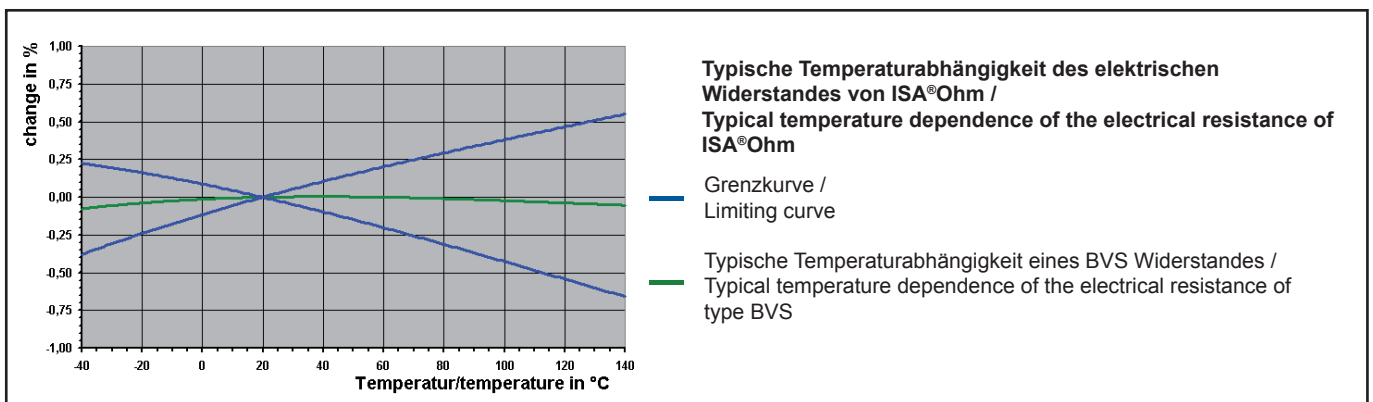
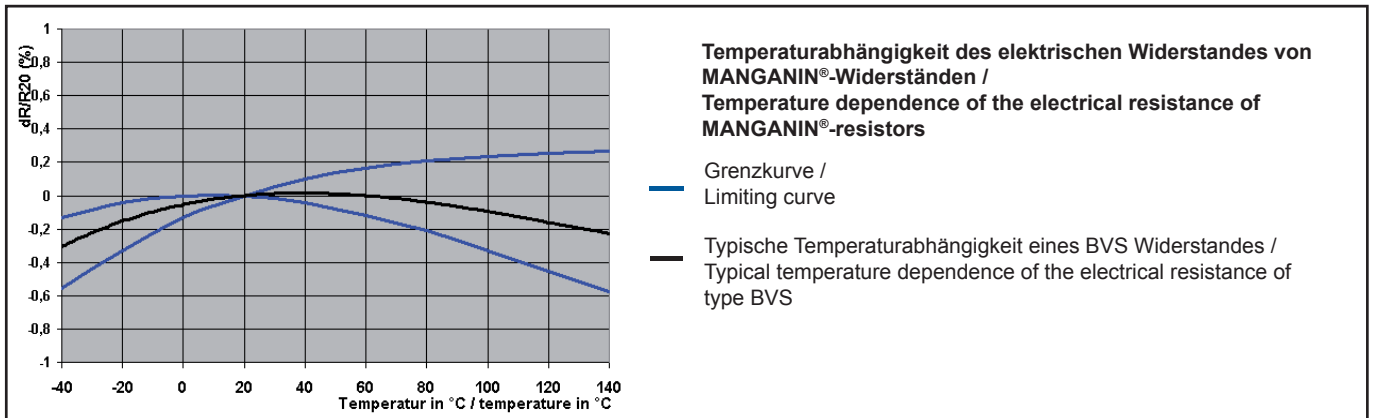
APPLIKATIONEN / APPLICATION

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



Abmessungen [mm] / Dimensions [mm]

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





Typ / Type	Wert [mΩ] / Value [mΩ]	Dicke D1 [mm] / Thickness D1 [mm]	Rthi [K/W] / Rthi [K/W]	TK [ppm/K] / TC [ppm/K]	P [W] / P [W]
BVS-Z-R0002	0.2	1.42	3	<200	5
BVS-M-R0003	0.3	1.42	4.5	<150	5
BVS-M-R0005	0.5	0.84	8	<70	5
BVS-M-R0007	0.7	0.60	11	<60	5
BVS-M-R001	1	0.42	15	<50	4
BVS-A-R0015	1.5	0.91	12	<50	4.5
BVS-A-R002	2	0.66	16	<50	4
BVS-A-R0025	2.5	0.52	20	<50	3.5
BVS-A-R0028	2.8	0.48	21	<50	3
BVS-A-R003	3	(0.43 ±0.05)	22	<50	3
BVS-A-R004	4	(0.31 ±0.05)	30	<50	2.5
BVS-I-R001	1	1.32	8	<50	5
BVS-I-R002	2	0.66	16	<50	4
BVS-I-R003	3	0.44	24	<50	3
BVS-I-R004	4	0.35	32	<50	2.5
BVS-I-R005	5	0.35	50	<50	2
BVS-K-R000		1.00		$I_{max} = 160 A$	

Abkürzung Typ / Abbreviation type A=Aluchrom, M=MANGANIN®, Z=ZERANIN®30, I=ISAOHM®, K=SF-Kupfer verzinkt/tinned

Lötprofil Vorschlag / Recommended solder profile

Reflow-, IR-Löten, Wellenlöten nach Rückfrage
Reflow-, IR-soldering, wave-soldering upon request

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

GURTINFORMATIONEN / TAPE & REEL INFORMATION

Norm / Specification	DIN EN 60286-3
Gurtbreite / Tape width	16 mm
Anzahl Bauteile / Parts per reel	3000

BESTELLBEZEICHNUNG / ORDERING CODE

BVS-M-R0005-1.0

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

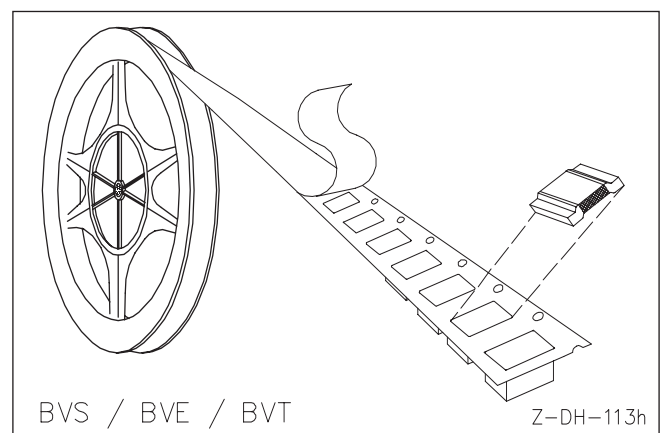
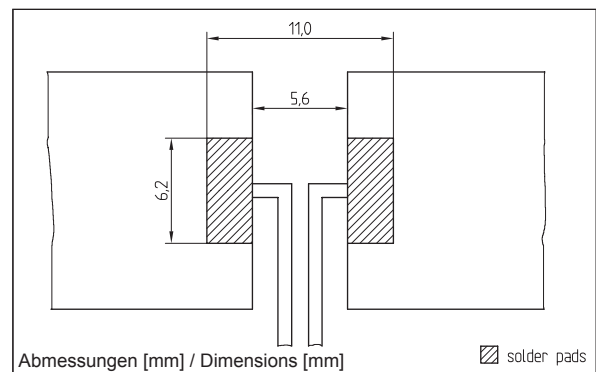
RoHS 2011/65/EU konform.

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Vorschlag für Leiterplatten Layout (Reflowlöten) / Proposal for pcb-layout (Reflow-soldering)



Gewährleistung

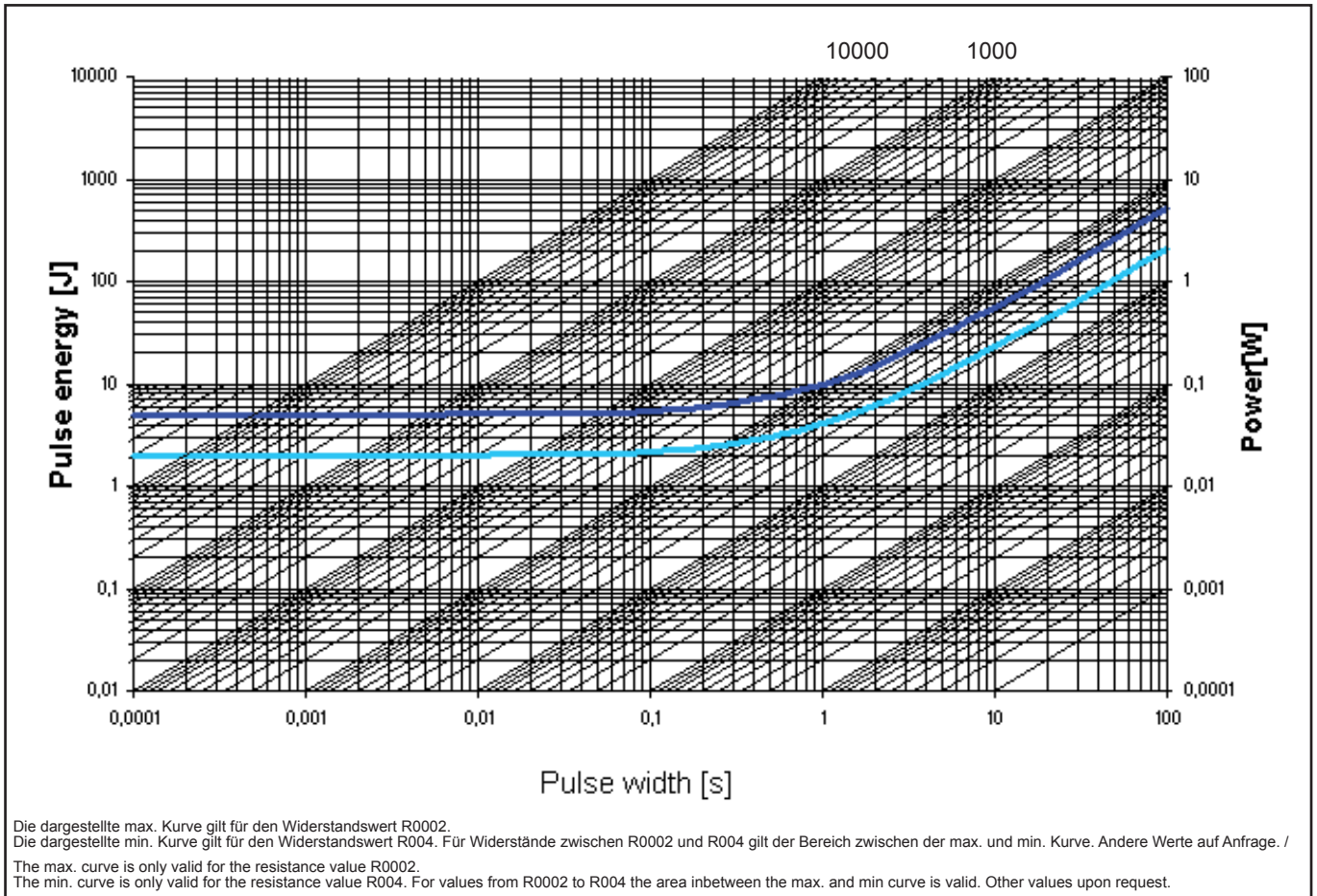
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Warranty

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, TK max at nominal load	±1.0 % (T _K = 120 °C)
High Temperature Exposure	2000 h / 170 °C	±1.0 %
Bias Humidity	+85 °C, 85 r.F., 1000 h	±0.5 %

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