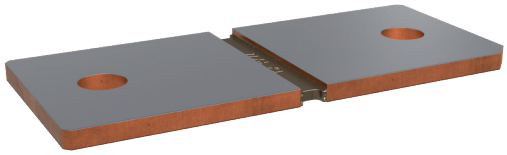
ISABELLENHÜTTE

BAN (8436 metric)

ISA-WELD® PRECISION RESISTOR



FEATURES

- Up to 36 W permanent power (25 µOhm)
- Continuous current load up to 1200 A (25 µOhm)
- High pulse power rating
- Available with nickel-tin-plating
- AEC-Q200 qualified
- Shunt with tinned terminals

RoHS

APPLICATIONS

- Current sensor for EBM (Electronic Battery Management) in motorcars, trucks, hybrid and high voltage electric vehicles
- Current sensing in bus bars
- Current sensing in welding equipments

Technical data

Resistance values	**µOhm**	25
Resistance tolerance (manufactured)	**%**	5
Temperature coefficient (20-60 °C)*	**ppm/K**	0 ± 20**
Applicable temperature range	**°C**	-40 to +170
Power rating (nominal load, P_{nom})	**W**	up to 36
Internal heat resistance (R_{thi})	**K/W**	0.8
Thermal EMF	**µV/K**	<1 (ZERANIN®30)
Maximum resistance drift at P_{nom} after 2,000 h of continuous operation at maximum temperature T_{max}	**%**	<0.5 ($T_{max.}$ = 140 °C) <1.0 ($T_{max.}$ = 170 °C)

*The temperature coefficient is given for the temperature range from 20 to 60 °C, as the R(T) curve corresponds to a non-linear function.

**See table Electrical Specification on page 3.

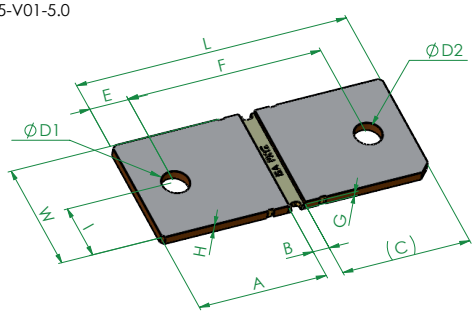
Ordering code example

BAN - Z - L025 - V01- 5.0

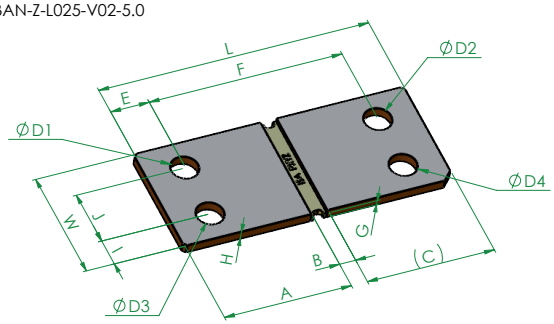
- Tolerance
- Version
- Resistance value [mOhm] / „L“ represents decimal point
- Material (ZERANIN®)
- Type

Mechanical dimensions [mm]

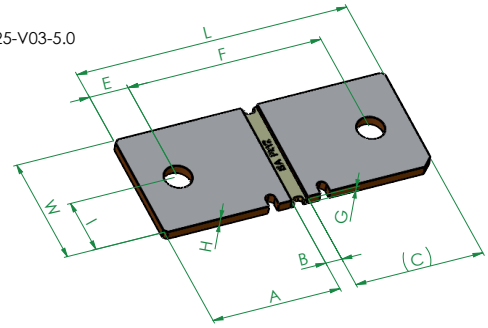
BAN-Z-L025-V01-5.0



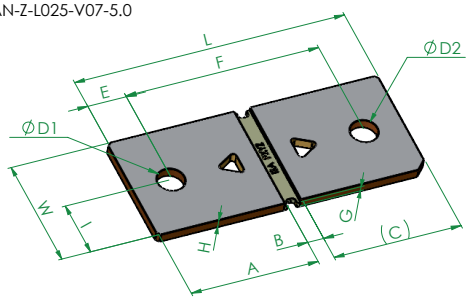
BAN-Z-L025-V02-5.0



BAN-Z-L025-V03-5.0



BAN-Z-L025-V07-5.0

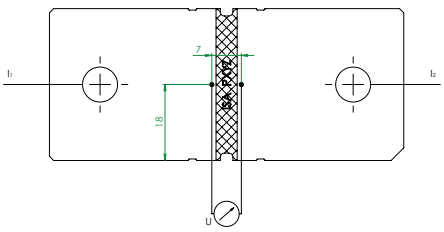


type	A	B	C	D1	D2	D3	D4	E	F	G	H	I	J	L	W
BAN-Z-L025-V01-5.0	39,5	5	39,5	8,3	8,3			12	60	1,8	3	18		84	36
BAN-Z-L025-V02-5.0	39,5	5	39,5	8,3	8,3	8,3	8,3	12	60	1,8	3	9	18	84	36
BAN-Z-L025-V03-5.0	39,5	5	39,5	8,3	8,3			12	60	1,8	3	18		84	36
BAN-Z-L025-V07-5.0	39,5	5	39,5	8,3	8,3			12	60	1,8	3	18		84	36

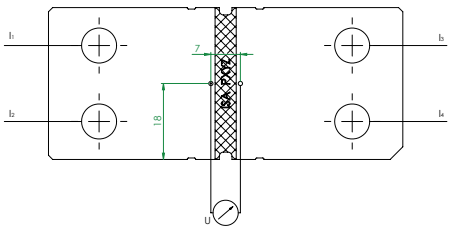
weight	recommended tightening torque
76 g	15-25 Nm (attention: choose same value for all screw holes)

Connection diagram

BAN-Z-L025-V01-5.0



BAN-Z-L025-V02-5.0



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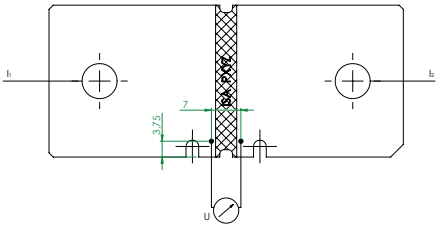

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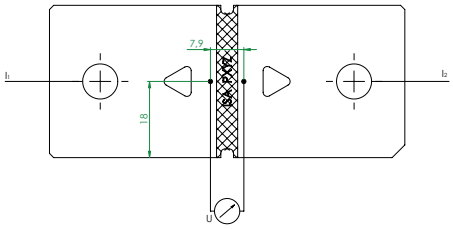
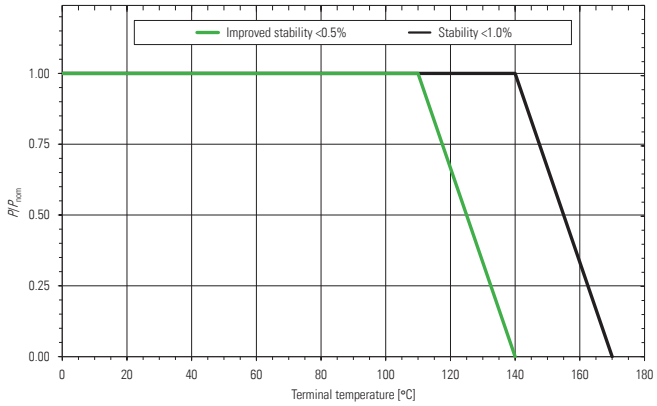


Electrical specification

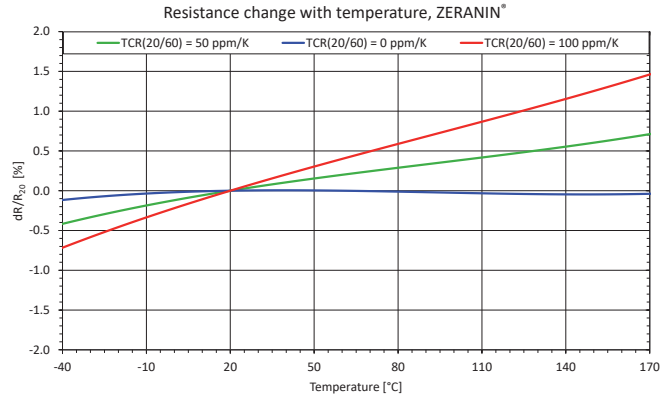
Type	Value [µOhm]	R_{thi} [K/W]	TCR [ppm/K]*	$P_{140\,°C}$ [W]	Plating	Partial Plating
BAN-Z-L025-V01-5.0 BAN-Z-L025-V02-5.0	25	0.8	50 ± 50**	36	Ni+Sn	–
BAN-Z-L025-V03-5.0	25	0.8	0 ± 50	36	Ni+Sn	–
BAN-Z-L025-V07-5.0	25	0.8	0 ± 20	36	–	Ni+Sn

* Boundary condition: Overlap area with connected busbars is 20 mm x W and straight current flow over the busbars.
** Measured from the copper edge.

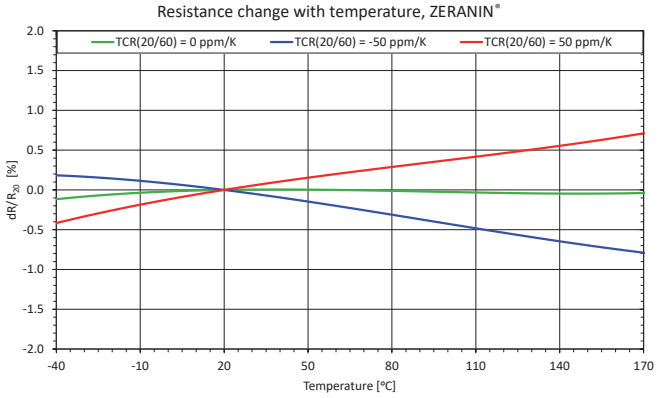
Power derating curve



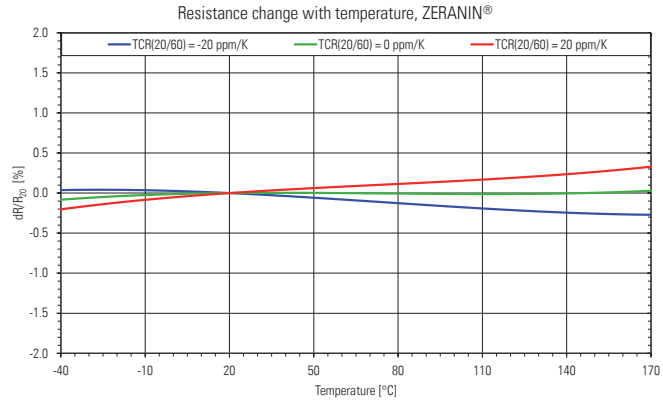
Temperature dependence of the electrical resistance Type V01 // V02



Temperature dependence of the electrical resistance Type V03



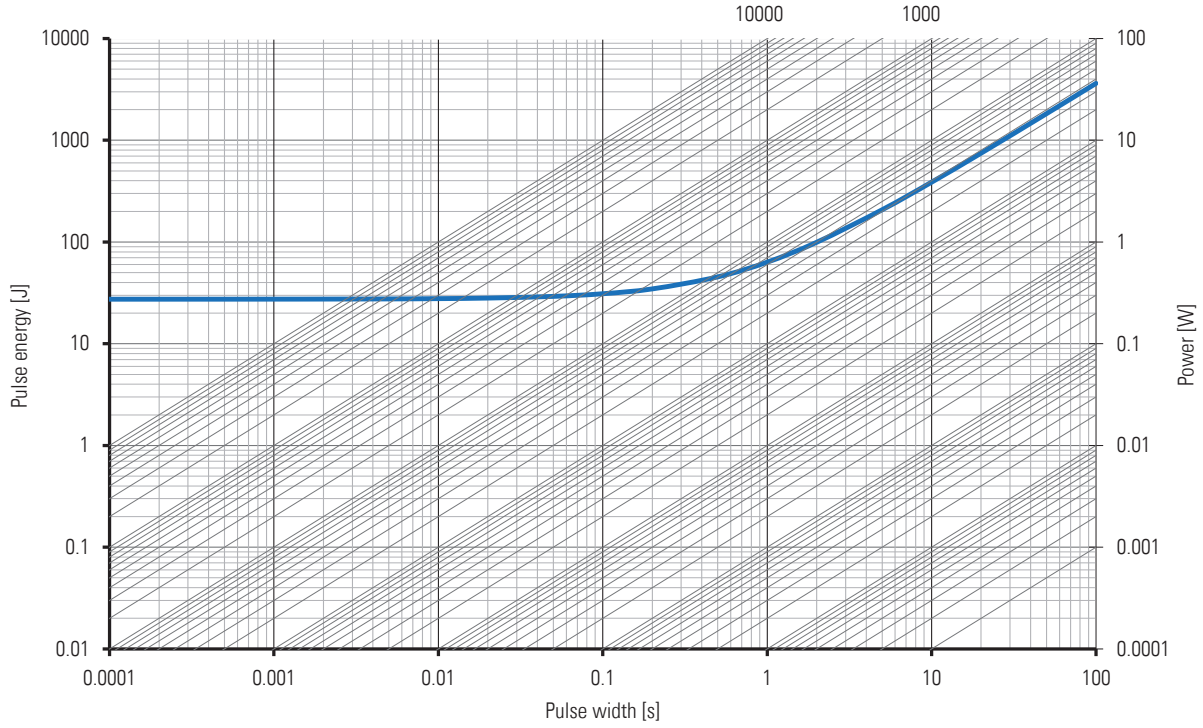
Temperature dependence of the electrical resistance Type V07



Maximum pulse energy respectively pulse power for permanent operation

BAN-Z-L025

Maximum pulse energy / power for continuous operation (T_K = 140 °C)



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