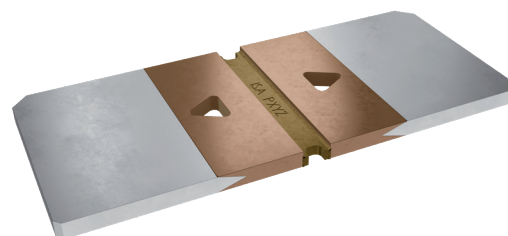


BAN-AL (8436 metric)

ISA-WELD® PRECISION RESISTOR



FEATURES

- Up to 30 W permanent power (25 $\mu\Omega$)
- Continuous current load up to 1095 A (25 $\mu\Omega$)
- High pulse power rating
- Shunt with weldable Aluminium terminals
- Tensile strength >50 MPa
- AEC-Q200 qualified



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

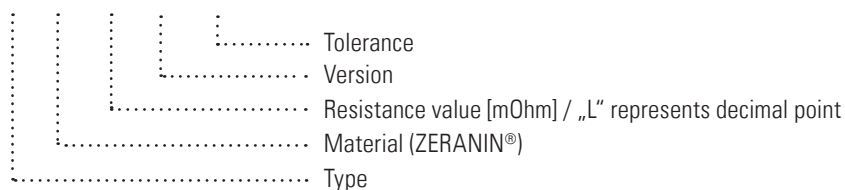
Resistance values	$\mu\Omega$	25
Resistance tolerance (manufactured)	%	± 5
Temperature coefficient (20-60 °C)*	ppm/K	$0 \pm 20^{**}$
Applicable temperature range	°C	-40 to +170
Power rating (nominal load, P_{nom})	W	up to 30
Internal heat resistance (R_{thi})	K/W	1
Thermal EMF (30-60 °C)	$\mu V/K$	<1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

*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.

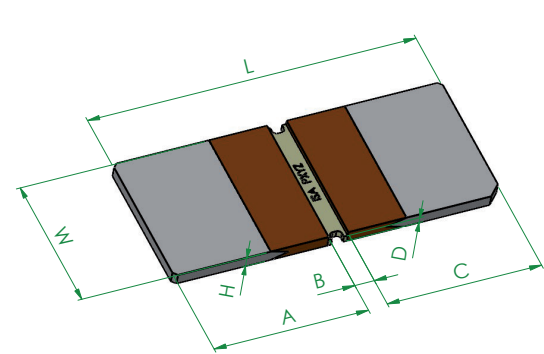
Ordering code example

BAN - Z - L025 - AL01 - 5.0

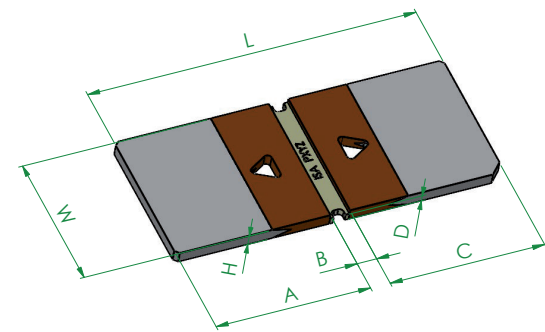


Mechanical dimensions [mm]

BAN-Z-L025-AL01-5.0



BAN-Z-L025-AL02-5.0

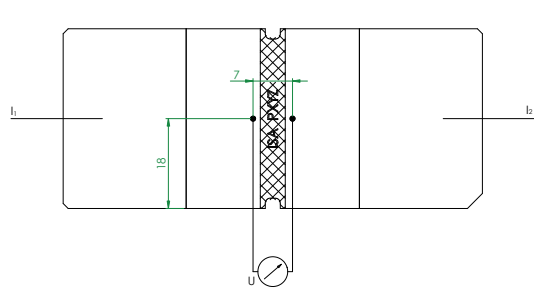


Type / Ordering code	A	B	C	D	H	L	W	weight
BAN-Z-L025-AL01-5.0	39.5	5	39.5	1.8	3	84	36	43 g
BAN-Z-L025-AL02-5.0								41 g

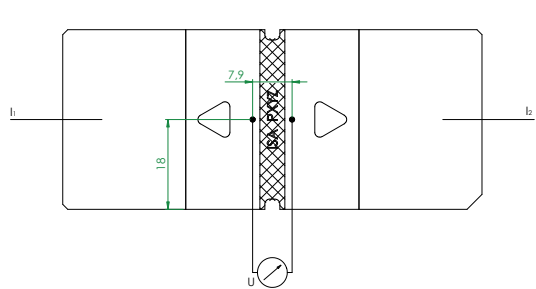
Note: Further versions available on request.

Connection diagram

BAN-Z-L025-AL01-5.0



BAN-Z-L025-AL02-5.0

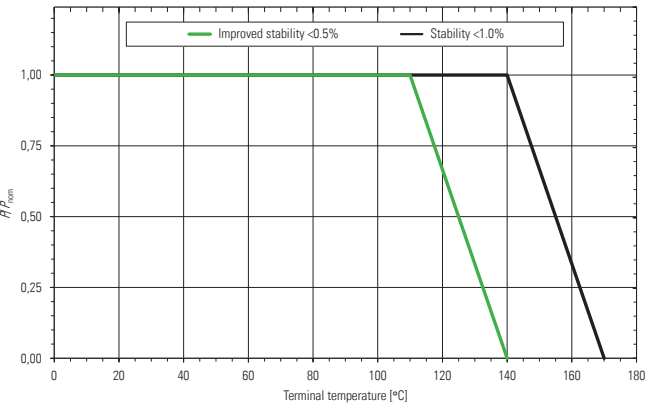


Electrical specification

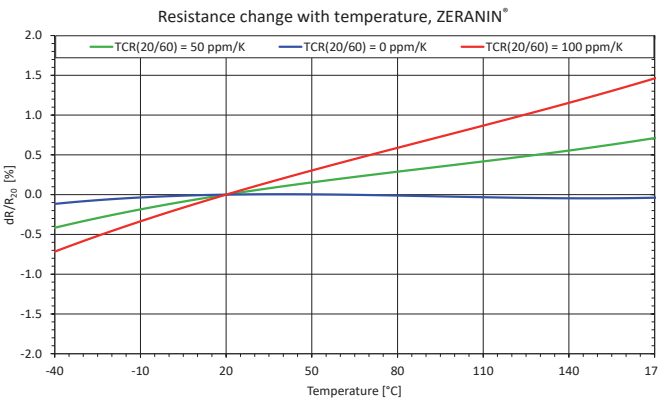
Type	Value [μOhm]	R_{thi} [K/W]	TCR [ppm/K]*	$P_{140^{\circ}C}$ [W]	Plating
BAN-Z-L025-AL01-5.0	25	1	50 ± 50**	30	-
BAN-Z-L025-AL02-5.0	25	1	0 ± 20	30	-

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

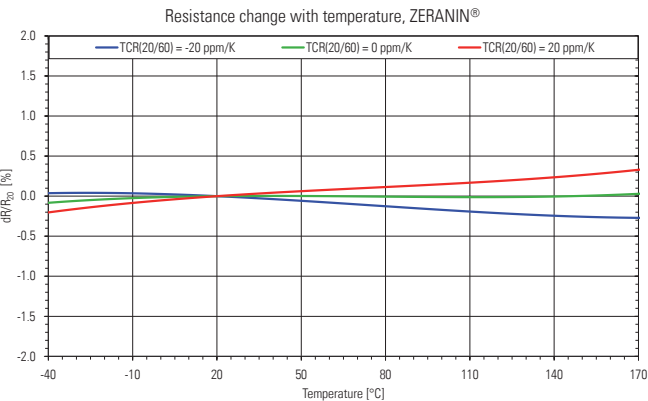
Power derating curve

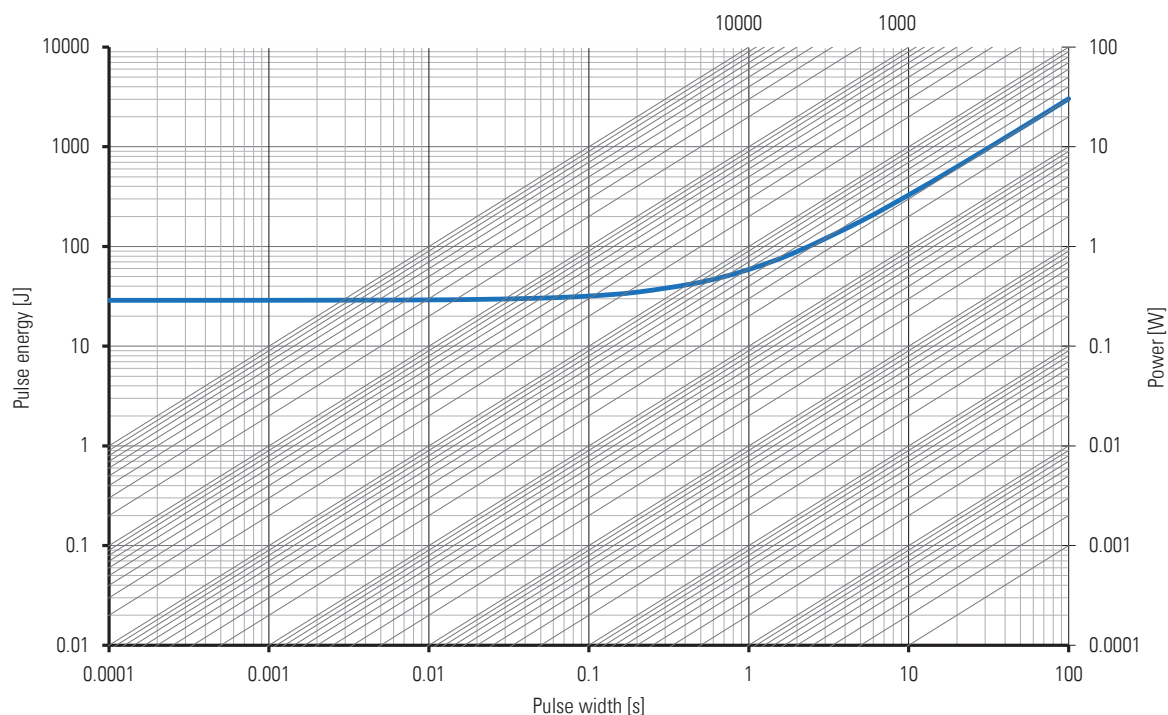


Temperature dependence of the electrical resistance
Type AL01



Temperature dependence of the electrical resistance
Type AL02



Maximum pulse energy respectively pulse power for permanent operation ($T_K = 140\text{ °C}$)


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