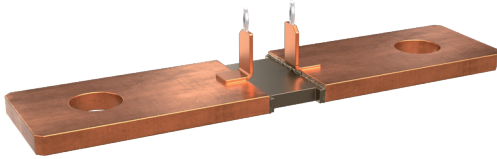




ISA-WELD® // PRECISION RESISTORS



BAV // SIZE 8420 (METRIC)



Features

- Up to 36 W permanent power
- Continuous current load up to 350 A (0.1 mOhm)
- High pulse power rating
- Max. fastening torque 10 Nm
- Further versions with various dimensions upon request
- AEC-Q200 qualification in preparation
- Shunt with laser welded pressfit sense connections



Applications

- Current sensor for EBM (Electronic Battery Management) in motorcars, trucks, forklifts, hybrid and electric vehicles
- Current sensing in bus bars
- Current sensing in welding equipments
- Other applications are possible

Technical data

Resistance values	mOhm	0.035 / 0.05 / 0.1 *
Tolerance	%	5 / 10 **
Temperature coefficient (20-60 °C)	ppm/K	from 50
Applicable temperature range	°C	-40 to +170
Power rating	W	36
Internal heat resistance (R_{thi})	K/W	see table on page 2
Thermal EMF (30-60 °C)	µV/K	1 (MANGANIN®) / 1 (ZERANIN®30)
Inductance	nH	<3
Stability (Nominal load) deviation after 2,000 h		<0.5 % ($T_K = 110 °C$)
T_K = Terminal temperature		<1.0 % ($T_K = 140 °C$)

*further values on request

**details on page 2

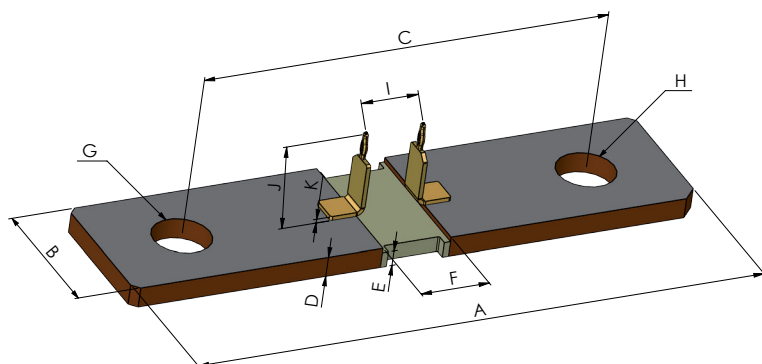
Packaging Information

Delivery in plastic trays

27 pcs. per tray



Mechanical dimensions [mm]



type	A	B	C	D	E	F	G	H	I	J
BAV-Z-R000035-V01-10.0	84	20	60	3	2,3	5	Ø8.3	Ø8.3	3,6	11,75
BAV-Z-R000035-V02-10.0	84	20	60	3	2,3	5	Ø8.3	Ø8.3	3,6	9,9
BAV-Z-R000035-V03-10.0	84	20	60	3	2,3	5	Ø8.3	Ø8.3	3,6	8,05
BAV-M-R00005-V01-5.0	84	20	60	3	2,3	5,2	Ø8.3	Ø8.3	3,6	11,75
BAV-M-R00005-V02-5.0	84	20	60	3	2,3	5,2	Ø8.3	Ø8.3	3,6	9,9
BAV-M-R00005-V03-5.0	84	20	60	3	2,3	5,2	Ø8.3	Ø8.3	3,6	8,05
BAV-M-R0001-V01-5.0	84	20	60	3	2,3	10,1	Ø8.3	Ø8.3	8,5	11,75
BAV-M-R0001-V02-5.0	84	20	60	3	2,3	10,1	Ø8.3	Ø8.3	8,5	9,9
BAV-M-R0001-V03-5.0	84	20	60	3	2,3	10,1	Ø8.3	Ø8.3	8,5	8,05

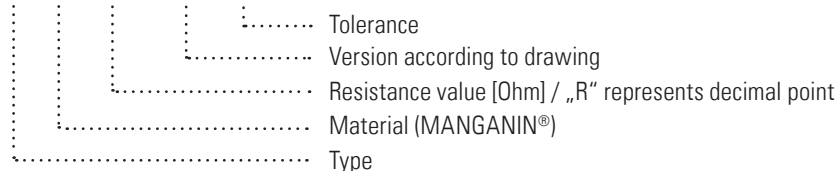
Type	Value [mΩ]	R_{thi} [K/W]	TCR [ppm/K]	$P_{70^\circ C}$	$P_{140^\circ C}$	Notes
BAV-Z-R000035-V01-10.0*	0.035	1.0	125 ± 50	36 W	30 W	D-samples available
BAV-M-R00005-V01-5.0	0.05	1.5	50 ± 50	36 W	20 W	D-samples available
BAV-M-R0001-V01-5.0*	0.1	2.0	0 ± 50	36 W	15 W	D-samples available

Abbreviation type: M=MANGANIN®, Z=ZERANIN®30

*values upon request

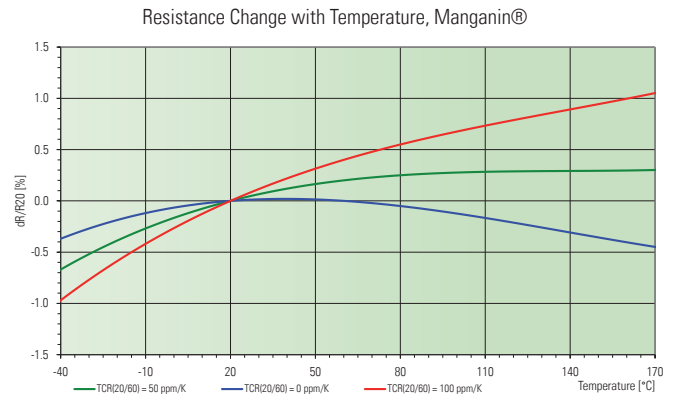
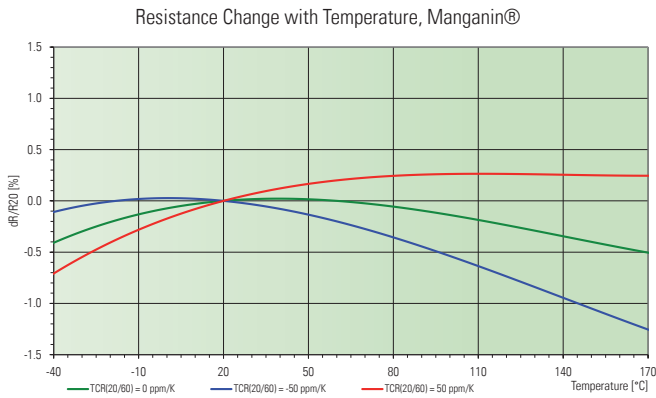
Ordering code example

BAV - M - R00005 - V01 - 5.0

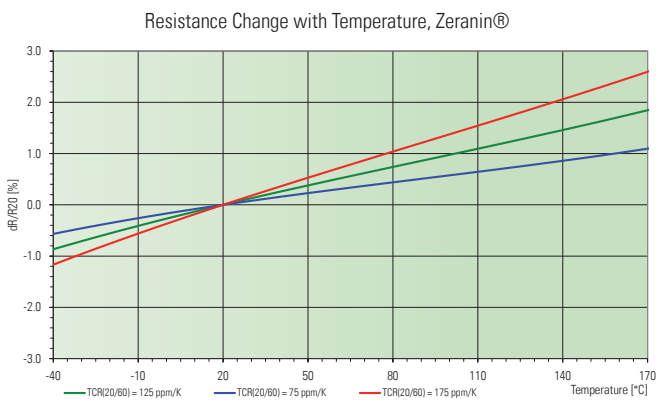




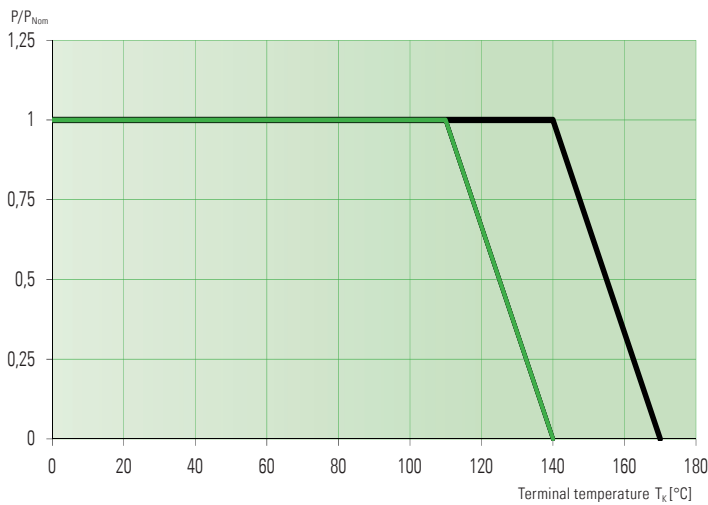
Temperature dependence of the electrical resistance of MANGANIN® resistors



Temperature dependence of the electrical resistance of ZERANIN® resistors



Power derating curve BAV-M-R0001-V01-5.0



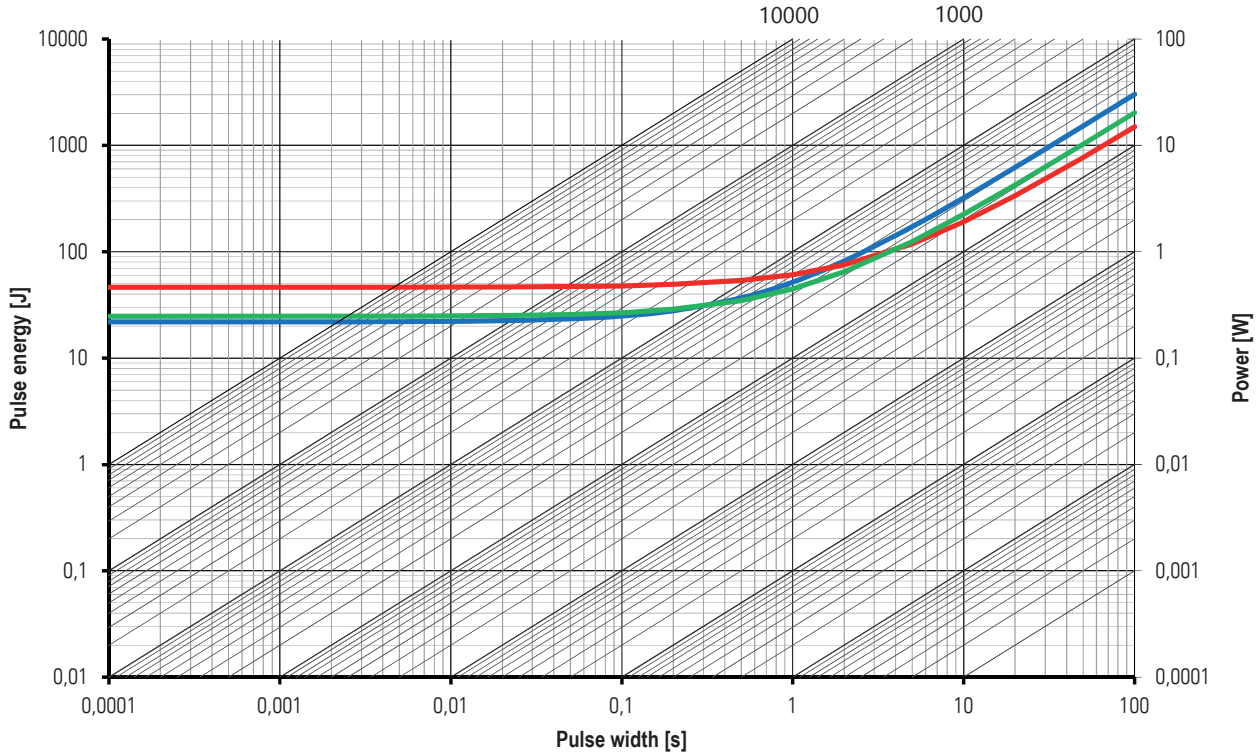
- Stability < 1.0 %
- Improved stability < 0.5 %



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

BAV-Z-R00035, BAV-M-R00005, BAV-M-R0001

Maximum pulse energy / power continuous operation ($T_K = 140^\circ\text{C}$)



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