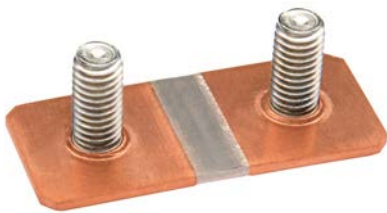




BVM-F



Features

- 5 W power rating
- Continuous current load up to 200 A (0.1 mOhm)
- Heavy copper connectors
- Excellent long-term stability
- Low inductance value
- Mounting: reflow soldering, welding on copper or screwed on cable or bus bar
- Max. solder temperature up to 350 °C / 30 sec or 250 °C / 10 min
- RoHS 2011/65/EU compliant
- AEC-Q200 qualification in preparation



Applications

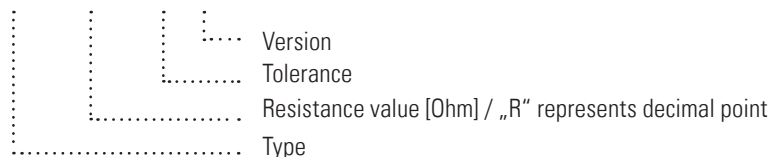
- kWh-meters, energy metering
- Battery current sensing
- High current sensing in automotive applications
- High current measurement in welding machines

Technical data

Resistance values	mOhm	0.1 / 0.5
Tolerance	%	5
Temperature coefficient (20-60 °C)	ppm/K	<50
Applicable temperature range	°C	-55 to +170
Power rating P_{90°C}	W	5
Power rating P_{70°C}	W	7
Internal heat resistance (R _{thi})	K/W	<10
Inductance	nH	<3
Stability (at rated power) deviation after 2000h, T _K = Terminal temperature		<0.5% (T_K=90 °C)
Packaging		1,000 pcs. sealed in plastic bags and filled with dry Nitrogen

Ordering code

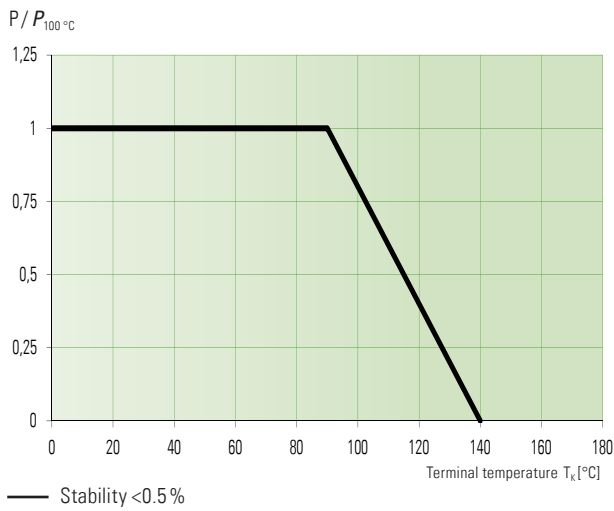
BVM-F - R0001 - 5.0 - A



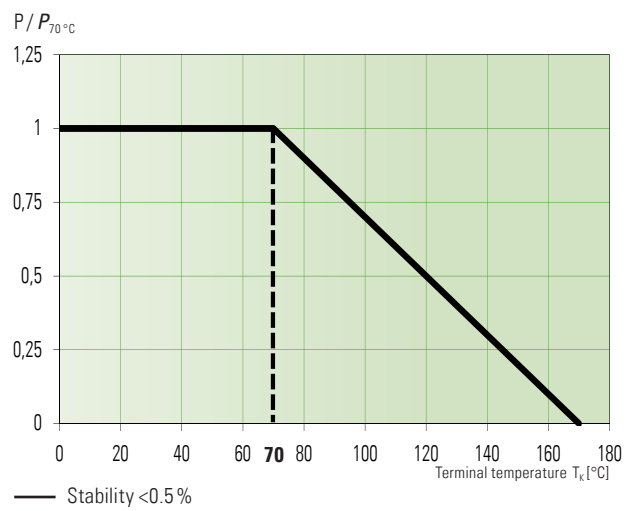


BVM-F

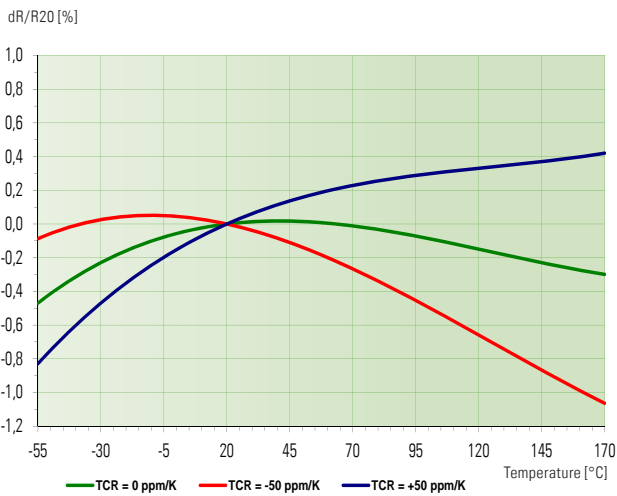
Power derating curve at 90 °C



Power derating curve at 70 °C



Temperature dependence of the electrical resistance of MANGANIN® resistors



Specification of version A and B

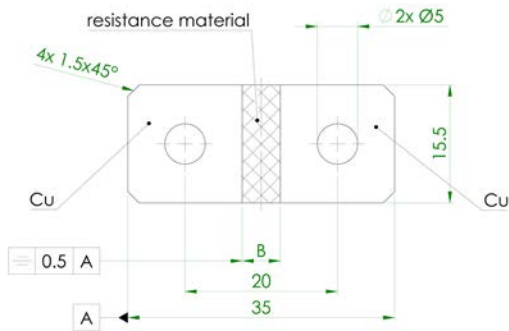
Parameters	Test conditions	Specified values
Temperature Cycling	2000 cycles (-55 °C to +150 °C)	±0.5%
Low Temperature Storage and Operation	-65 °C for 24 h	±0.1%
Resistance to Soldering Heat	260 °C for 10 sec / 8h steam aging	n.a.
Moisture Resistance	MIL-STD-202 method 106	±0.1%
Mechanical Shock	100 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 rated power	±0.5%, T _K = 90 °C
High Temperature Exposure	2000 h / 170 °C	±1.0%
Bias Humidity	+85 °C, 85 r.F., 1000 h	±0.5%



BVM-F

Mechanical dimensions [mm]

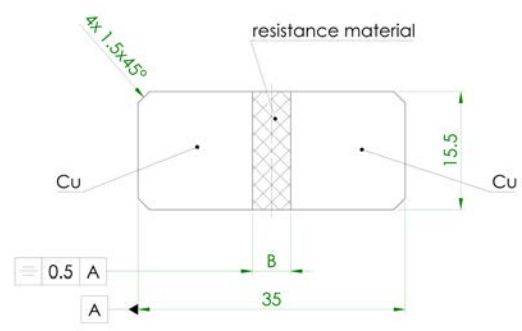
Version A



t= 1.0mm - 1.5mm

Z-YF-167

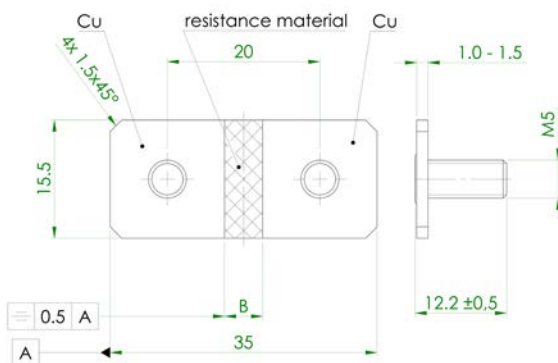
Version B



t= 1.0mm - 1.5mm

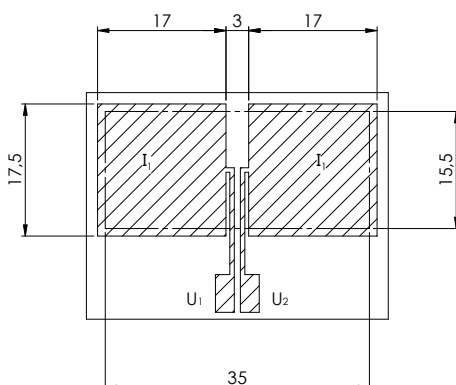
Z-YF-168

Version D



Z-YF-169

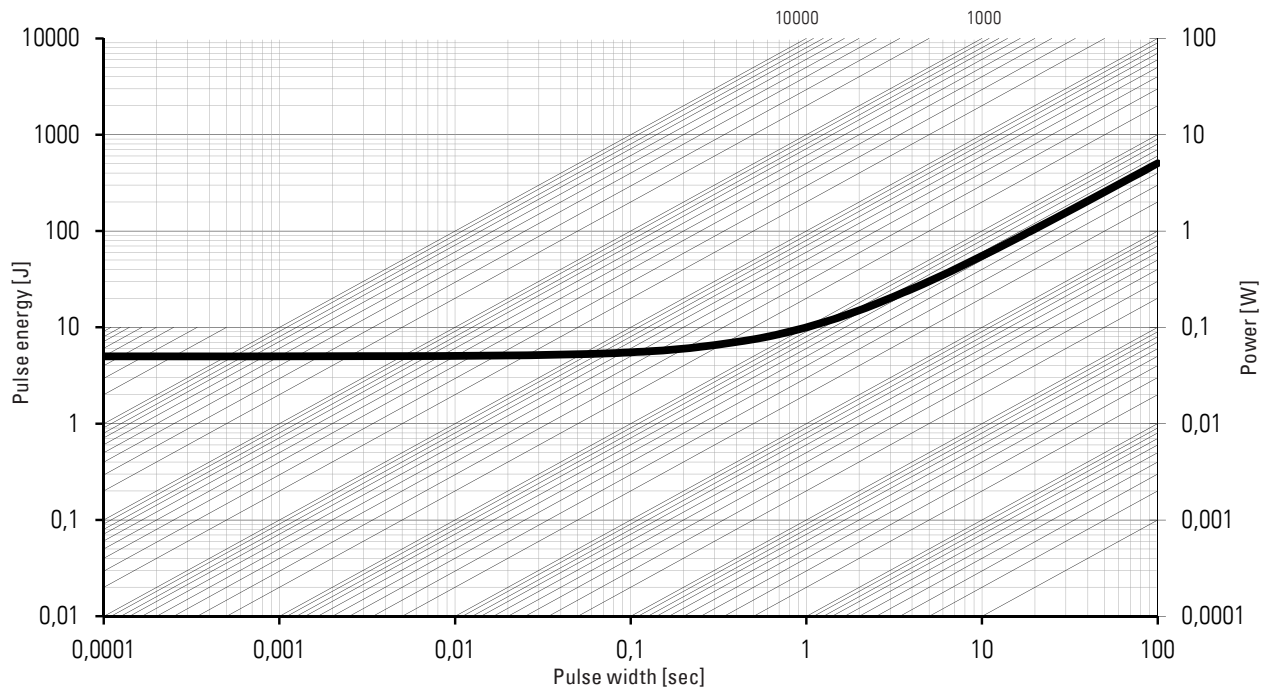
Pcb-layout proposal (Reflow-soldering) [mm]





BVM-F

Maximum pulse energy respectively pulse power for permanent operation



This curve is only valid for the resistance value R0003. The progression of the curve in the lower range could be different for other resistance values. Therefore a separate qualification should be made in thresholds.

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