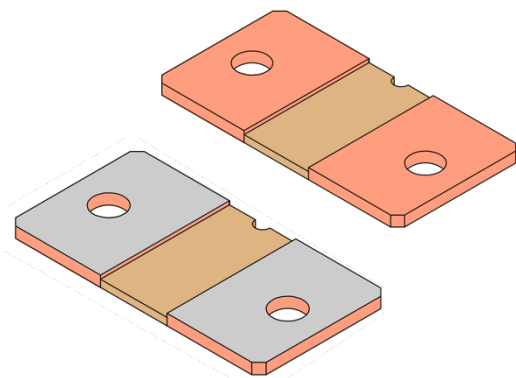




## SBZ 7036 Series

Low Ohmic EB Welded Precision Resistor



## Features

- High Conductivity Copper Terminals
- Excellent Long Term Stability
- RoHS and REACH Compliant
- AEC-Q200 Compliant
- Customised versions available on request
- Tinned Terminals** available on request

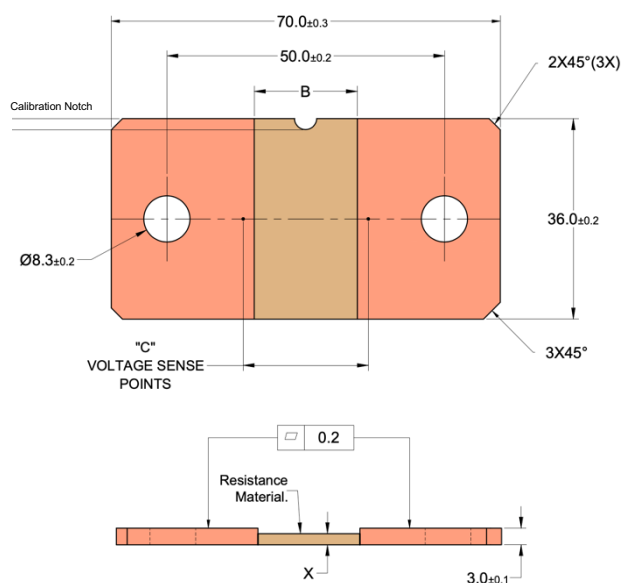
## Applications

- Current Sensing for BMS (Battery Management Systems) in Hybrid and Electric automotive applications.
- Current Sensing for bus bars
- Current Sensing for welding equipment



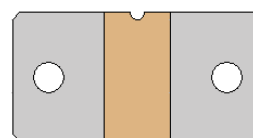
## Technical Data

Resistance Value	0.025   0.035   0.050   0.100	(mΩ)
Tolerance (R)	5% ,10% (+/- 10% for 0.025mΩ)	(%)
TCR - Temperature Coefficient of Resistance Alloy (20-60°C)	< ± 10 (Copper Manganese Alloys)	(ppm/K)
TCR (20-60°C)	< ± 150 for 0.025, 0.035, 0.05 mΩ	(ppm/K)
	< ± 75 for 0.1 mΩ	
Applicable Temperature Range	- 55 to +170	°C
Power Rating	36	W
Inductance	< 3	nH
Thermal EMF	< 1	μV/°C
Stability Deviation	< 0.5 after 2000 Hours, T <sub>t</sub> * = 110°C	%
* T <sub>t</sub> = Terminal Temperature	< 1.0 after 2000 Hours, T <sub>t</sub> * = 140°C	%



## Tinned Variant

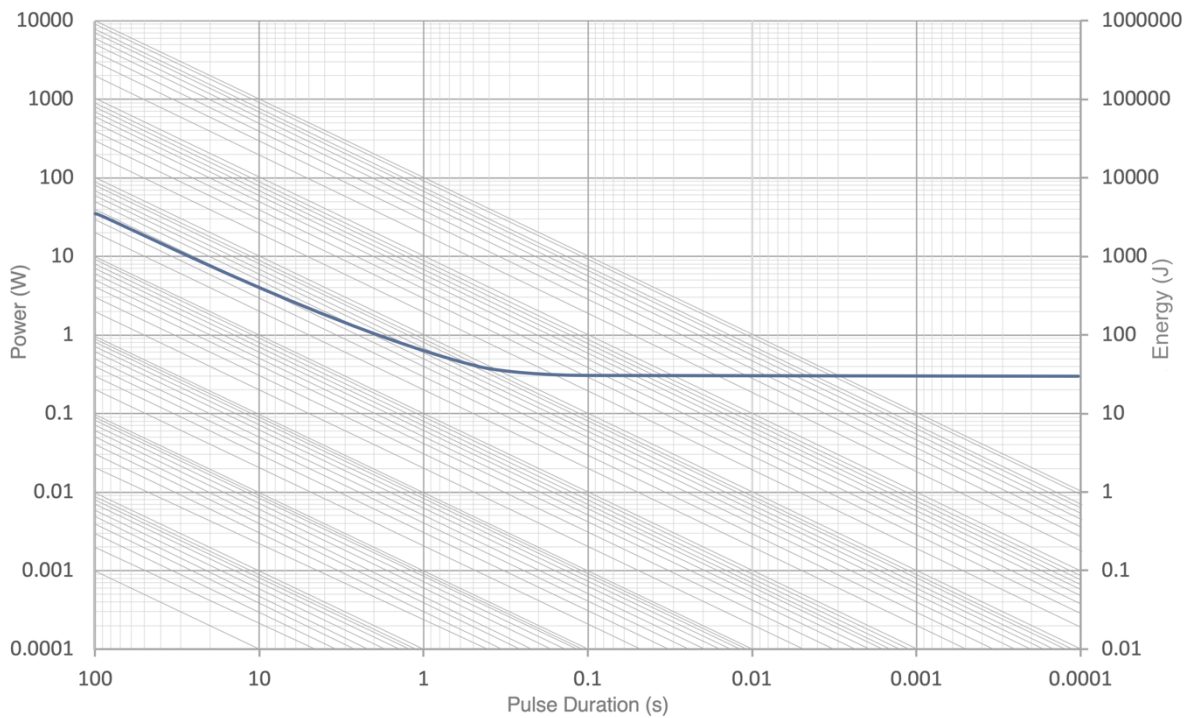
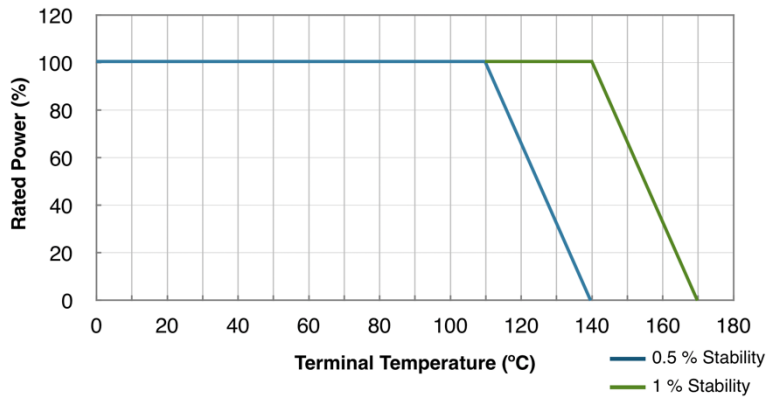
- RoHS Compliant Plating
- Sn : 2.5 to 8 μm
- Ni : 0.5 to 4 μm Inter-liner
- Base Material: C102 - CuOF Half-Hard
- Available **without Ni inter-liner** on request





# SBZ 7036 Series

Low Ohmic EB Welded Precision Resistor

**Power Derating Curve R: 0.1mΩ****Maximum Pulse Energy Curve**

## Packaging Options

Bulk Packaging	Tray Packaging
Vacuum sealed in plastic bags with dry nitrogen	15 Shunts per tray



## SBZ 7036 Series

Low Ohmic EB Welded Precision Resistor

SBZ 7036					
Part Code	Resistance Value (mΩ)	Dimension X +/-0.20 (mm)	Dimension B +/-0.50 (mm)	Dimension C +/-0.20 (mm)	Resistance Alloy
SBZ-7036-CM2-R000025	0.025	2.20	4.50	7.70	Copper Manganese Alloy
SBZ-7036-CM2-R000035	0.035	2.20	6.20	9.40	Copper Manganese Alloy
SBZ-7036-CM2-R00005	0.05	2.20	9.00	12.20	Copper Manganese Alloy
SBZ-7036-CM2-R0001	0.10	2.00	16.50	19.70	Copper Manganese Alloy

## Performance:

Type of Test	Reference STD	Test Specifications	Acceptance Criteria
High Temperature Exposure	MIL-STD-202 Method 108	1000 hrs. @ T=170°C.Unpowered.	ΔR +/-1%
Temperature Cycling	JESD22 Method JA-104	-55°C to 150°C, 1000 Cycles, 30 minutes at each extreme	ΔR +/-0.5%
Biased Humidity	MIL-STD-202 Method 103	85°C & 85RH with 10% operating power, 1000 hrs.	ΔR +/-0.5%
Operational Life	MIL-STD-202 Method 108	125°C at rated power, 1000 hrs.	ΔR +/-1%
External Visual	MIL-STD-883 Method 2009	Visual inspection	Visual
Physical Dimension	JESD22 Method JB-100	Dimensional inspection as per internal specifications	Shall confirm within tolerance limits
Resistance to Solvents	MIL-STD-202 Method 215	Clean with Aqueous Chemical	Marking shall be legible (if applicable)
Mechanical Shock	MIL-STD-202 Method 213	100g for 6ms, Half Sine	ΔR +/-0.2%
Vibration	MIL-STD-202 Method 204	5g for 20 minutes, 12 cycles each of 3 orientations.10-2000Hz	ΔR +/-0.2%
Resistance to Soldering Heat	MIL-STD-202 Method 210	Solder Temp. 260°C, Time 10 seconds	ΔR +/-0.5%
Solderability	J-STD-002E	As per IPC J-STD-002E	>95% Coverage in 10x Magnification
Electrical Characterization	User Specification	Resistance as defined	Shall confirm within tolerance limits
Short Time Over Load	--	5x Rated Power for 5 seconds	ΔR +/-1%
Low Temperature Storage	--	-65°C for 24 hrs.	ΔR +/-0.2%



## SBZ 7036 Series

Low Ohmic EB Welded Precision Resistor

**Example of Ordering Code: SBZ-7036-CM2-R0001-5-U-BK**

(Example: 0.1mΩ SBZ 7036, un-plated terminals, shipped in bulk packing)

