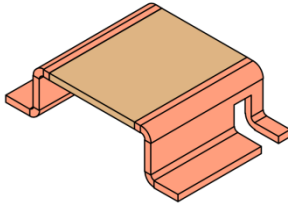




SBC -4026Series

Low Ohmic EB Welded SMD Precision Resistor



Features

- 3-Watts Permanent Power (0.3 to 2 mΩ)
- Constant Current up to 160 amps (0.2mΩ)
- Four Terminal Configuration
- Excellent Long Term Stability
- Max. Solder Temperature up to 350°C / 30Sec
- RoHS and REACH Certified
- AEC-Q200 Qualified

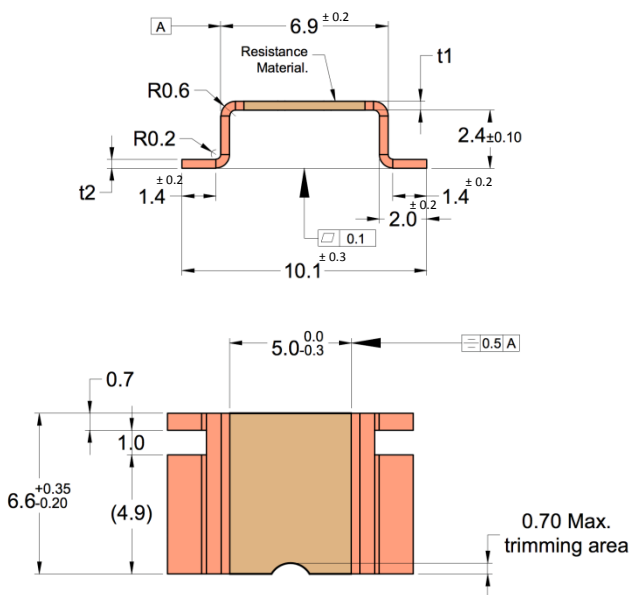
Applications

- Current Sensing/ Feedback
- Automotive Applications
- Power Modules
- Frequency Convertors



Technical Data		
Resistance Values	0.2, 0.3, 0.5, 0.7, 1, 2, 3, 4, 5	(mΩ)
Tolerance	1, 5	(%)
TCR - Temperature Coefficient (Resistive Alloy)	<±10 (Copper Manganese Alloys), < -25 (Aluchrom Alloy) <+/-20 (Nickel Chromium Alloy)	(ppm/K)
Applicable Temperature Range	-55 to +170	°C
Load Capacity	See Table 2	-
Inductance	< 3	nH
Stability Deviation	< 0.5 after 2000 Hours, $T_i^* = 110^\circ\text{C}$	%
* T_i = Terminal Temperature	< 1.0 after 2000 Hours, $T_i^* = 140^\circ\text{C}$	%

Table 1



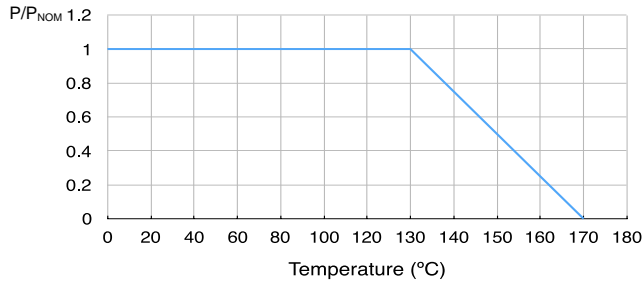
Dimensions are in mm, See table 2 for thickness.



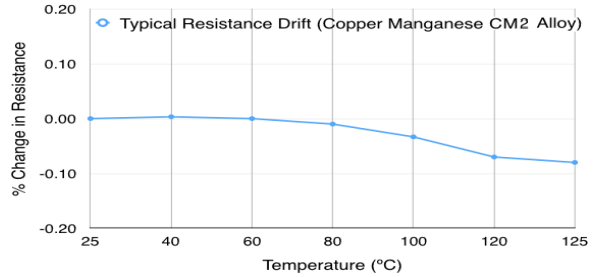
SBC - 4026 Series

Low Ohmic EB Welded SMD Precision Resistor

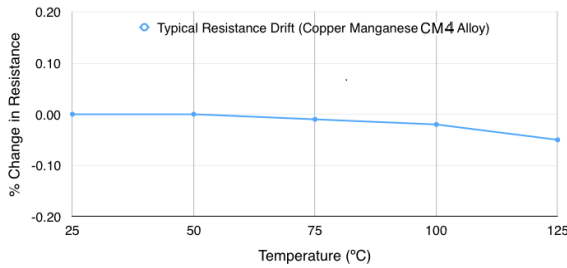
Power Derating Curve



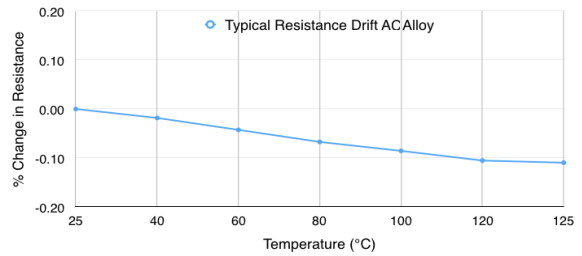
Resistance Change vs Temperature



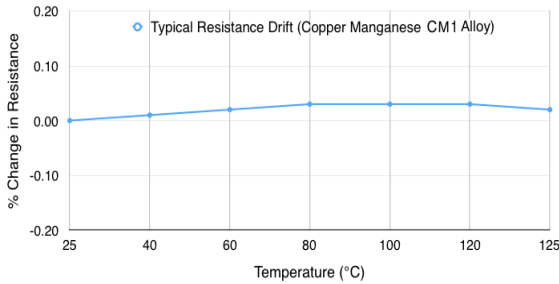
Resistance Change vs Temperature



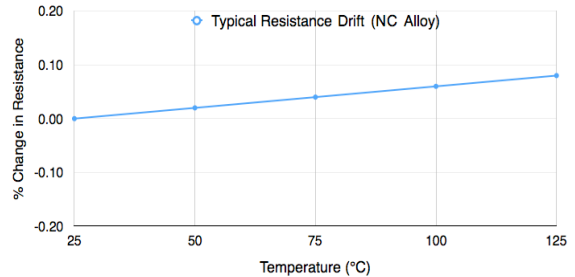
Resistance Change vs Temperature



Resistance Change vs Temperature



Resistance Change vs Temperature



Performance:

Type of Test	Reference STD	Test Specifications	Acceptance Criteria
High Temperature Exposure	MIL-STD-202 Method 108	1000Hrs. @ T=170°C.Unpowered.	ΔR +/-1%
Temperature Cycling	JESD22 Method JA-104	-55°C to 150°C, 1000Cycles, 30Mins at each extreme	ΔR +/-0.5%
Biased Humidity	MIL-STD-202 Method 103	85°C & 85RH with 10% operating power, 1000Hrs	ΔR +/-0.5%
Operational Life	MIL-STD-202 Method 108	125°C at rated power,1000Hrs	ΔR +/-1%
External Visual	MIL-STD-883 Method 2009	Visual inspection	Visual
Physical Dimension	JESD22 Method JB-100	Dimensional inspection as per SBCL Specifications	Shall confirm within tolerance limits
Resistance to Solvents	MIL-STD-202 Method 215	Clean with Aqueous chemical	Marking shall be legible
Mechanical Shock	MIL-STD-202 Method 213	100g for 6ms, Half sine	ΔR +/-0.2%
Vibration	MIL-STD-202 Method 204	5g for 20Mins, 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 10Secs	ΔR +/-0.5%
Solderability	J-STD-002	As per J-STD-002	>95% Coverage in 10x Magnification
Electrical Characterization	User Spec.	Resistance as defined	Shall confirm within tolerance limits
Short Time Over Load	--	5x Rated Power for 5Secs	ΔR +/-1%
Low Temperature Storage	--	-65°C for 24Hrs	ΔR +/-0.2%

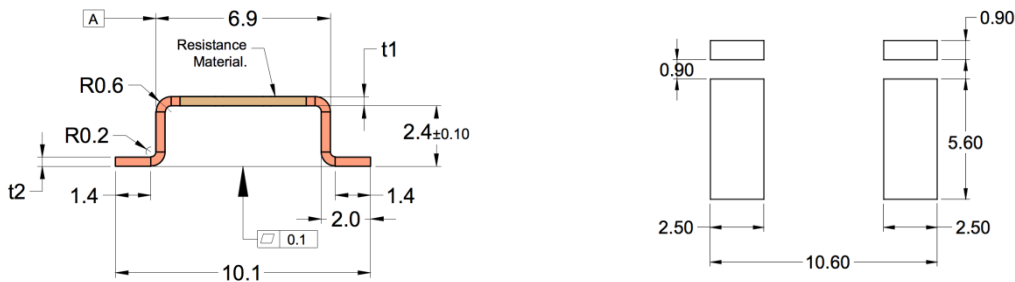


SBC - 4026 Series

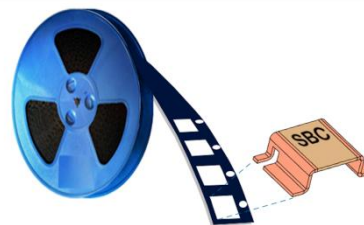
Low Ohmic EB Welded SMD Precision Resistor

Type	Resistance Value (mΩ)	Material	t1 +/-0.1 mm	t2 +/-0.1 mm	TCR (ppm)	P _{70°C} (W)	P _{100°C} (W)	
SBC-CM4-R0002	0.2	Copper Manganese Alloy	1.40	0.40	< 50	12	5	
SBC-CM1-R0003	0.3	Copper Manganese Alloy	0.99	0.40	< 50	10	5	
SBC-CM2-R0005	0.5	Copper Manganese Alloy	0.65	0.40	< 50	9	5	
SBC-CM2-R0007	0.7	Copper Manganese Alloy	0.47	0.40	< 50	8	5	
SBC-CM2-R001	1.0	Copper Manganese Alloy	0.35	0.40	< 50	7	5	
SBC-AC-R002	SBC-NC-R002	Aluchrom Alloy	NiCrAlloy	0.50	0.40	< 50	7	4
SBC-AC-R003	SBC-NC-R003	Aluchrom Alloy	NiCr Alloy	0.34	0.40	< 50	5	3
SBC-AC-R004	SBC-NC-R004	Aluchrom Alloy	NiCr Alloy	0.34	0.40	< 50	4	2
SBC-AC-R005	SBC-NC-R005	Aluchrom Alloy	NiCr Alloy	0.34	0.40	< 50	3	2

Table 2



Reel Information	
Reference Standard	DIN EN 60286-3
Width of Reel	24 mm
Number of parts per Reel	1400 pcs



Example of Ordering Code

SBC-CM2-R0007-1-TR

