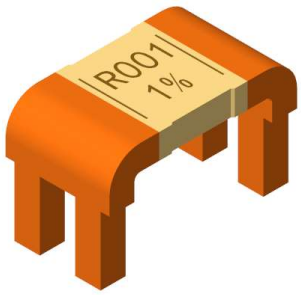
PRECISION SHUNT RESISTOR SHoKB....series

4-Terminal Package ,E-Beam Welded Alloy resistor, DIP, Excellent long-term stability, AEC-Q200 Testing Qualified



FEATURES:

- E-beam welded alloy resistors, with 4-terminals, pure copper electrodes - the perfect solution for current sensing applications.
- Excellent reliability and stability, Anti-pulse capability , 0.5% tolerance of R value .
- Special welding process, whole metal construction,.
- Low resistance (to 0.2mOhm). Surface treatment for moisture resistance.
- Very low parasitic inductance less than 3nH. for higher Hz current sensing.
- AEC-Q200 qualified.
- RoHS compliant.

Electrical characteristics:	
Resistance value mOhm	0.2~5 mOhm
TOLERANCE %	±0.5%(D), ±1%(F), ±5%(J)
TEMPERATURE COEFFICIENT ppm	Min.±25 ppm
TEMPERATURE RANGE ℃	-55℃ +175℃
INDUCTOR nH	<3
Thermal EMF (0-100°C) μV/K	<1
Rated power $P_{70℃}$ W	Max. 12W

SELECTION EXP.: SHoKB-3820-M-R001-1.0 **SHoKB3820M1mohm1%**

S	Ho	K	B	3	8	2	0	M	R	0	0	1	1.0	T	0

- SHoKB E-Beam Welded Metal Strip 4-Terminal series
- size 3820
- Materials F: Ferrochrome aluminum K: Kama M: Manganin
- Resistance value 0m20=0.2mΩ R001 = 1mΩ
- Tolerance 0.5=±0.5% 1.0=±1% 5.0=±5%
- Code T0: Braided Standards B0: Bulk Tx: Special Code(x: 0~9)

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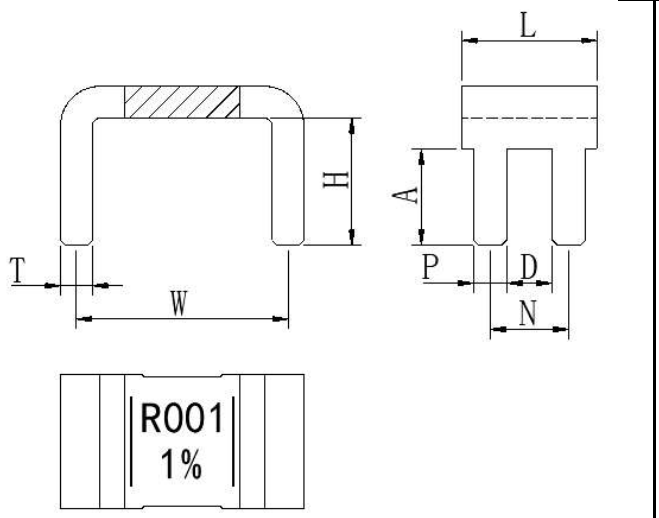
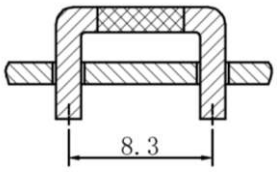
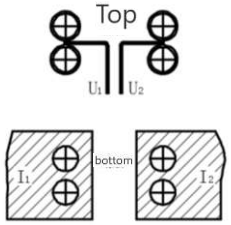
STANDARD ELECTRICAL SPECIFICATIONS:



DIMENSIONS in inches (millimeters) :





MODEL	Resistance value	Tolerance	L(mm)	W(mm)	H(mm)	N(mm)	P(mm)	A(mm)	D(mm)
SHoKB 3820	0.2mΩ~5mΩ	±1% (F) ±5% (J)	5.3±0.3	8.3±0.3	5.0±0.2	3.1±0.2	1.3±0.1	3.8±0.3	1.8±0.1

Resistance Value Table:

Resistance value	Materials	T/mm	TCR(ppm)	$P_{70°C}$	Resistance value	Materials	T/mm	TCR(ppm)	$P_{70°C}$
0.2mΩ	M	1.7±0.1	±175	12	2mΩ	F	0.62±0.1	±25	6
0.3mΩ	M	1.28±0.1	±150	10	3mΩ	F	0.42±0.1	±25	5
0.4mΩ	M	1.0±0.1	±100	9	4mΩ	F	0.35±0.1	±25	4
0.5mΩ	M	0.8±0.1	±100	9	5mΩ	F	0.28±0.1	±25	3
0.7mΩ	M	0.55±0.1	±100	8	1mΩ	K	1.16±0.1	±75	8
0.8mΩ	M	0.48±0.1	±100	8	2mΩ	K	0.65±0.1	±75	6
1mΩ	M	0.4±0.1	±100	7	3mΩ	K	0.43±0.1	±75	5
1mΩ	F	1.25±0.1	±25	8	4mΩ	K	0.32±0.1	±75	4
1.5mΩ	F	0.94±0.1	±25	7	5mΩ	K	0.28±0.1	±75	3

Note: Ferrochrome aluminum material with an effect on the frequency conversion current, so please be careful in product selection.

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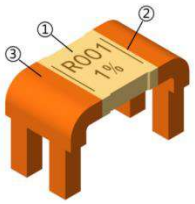
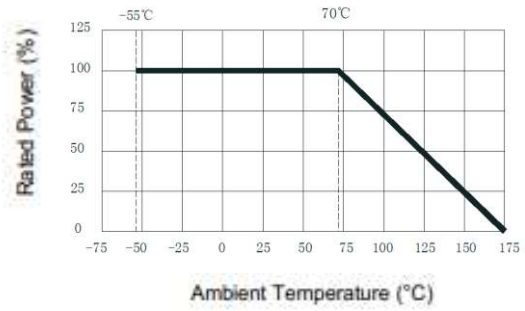
MATERIAL SPECIFICATIONS :

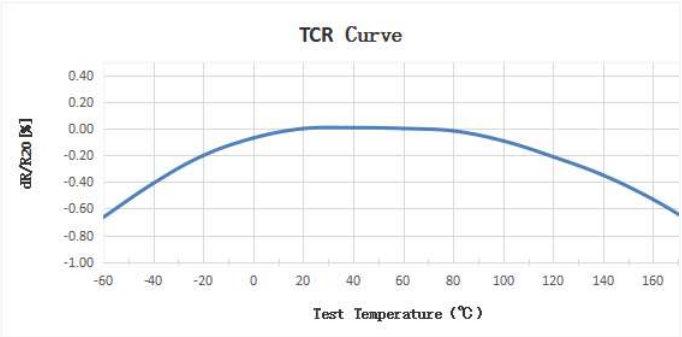


1. Resistor material: low temperature bleached manganese copper, ferrochrome aluminum, kama.
2. Electron beam welding structure.
3. Purple copper terminals.

DERATING CURVE :



Temperature Coefficient Curve:



Pulse Power Curves:

PERFORMANCE INDEX :

ITEMS	STANDARD	TEST METHOD
TCR	Within the specified value	IEC60115-1-4.8， Measuring points -55°C and +130°C, reference point +20 C
weldability	No visible damage, weldable area 95% Minimum	IEC60115-14.17，245°C Tin slot, hold for 3 sec
Short-time overload	No visible damage, ▵R±0.5% Maximum	IEC60115-14.13，5 times rated Wattage, 5 sec
Resistance to solder heat	No visible damage, ▵R±0.5% Maximum	IEC60115-14.18，270°C tin bath, hold for 10 sec
High temperature and humidity	No visible damage, ▵R±1.0% Maximum	AEC-Q200 Test 7/MIL-STD-202 method 103 temperature 85 ℃, humidity 85% of the conditions applied 10% of the rated power (current) or component limit current (whichever is less), for 1000 hours.
High temperature storage	No visible damage, ▵R±1.0% Maximum	IEC60115-14.25.3，1000 hour @125°C，Without load
Low temperature load	No visible damage, ▵R±0.5% Maximum	IEC60115-14.36，-55°C,No load for one hour, rated voltage load for 45 min, no load for 15 min
Temperature cycling	No visible damage, ▵R±0.5% Maximum	IEC60115-14.19，-55°C@30 min ~ room temperature @ <5 min ~ +155°C @ 30 min; 500 cycles
Load life	No visible damage, ▵R±1.0% Maximum	IEC 60115-1, 4.25.1, 1000 hours, 70°C ± 2°C, rated current or component limit current (whichever is less) 1.5 hours on / 0.5 hours off.

Packaging Requirements:

Packaging method:

1. Bulk Packing: bag, carton packing.

Storage conditions:

2. The packaged shunt should be stored in the room with ambient temperature: 25℃±5℃, relative humidity: <75%, no corrosive gas and well ventilated.

Environmental protection requirements:

3. comply with the requirements of ROHS 2.0 (2015/865/EU) directive, prohibit the use of controlled environmentally managed substances.