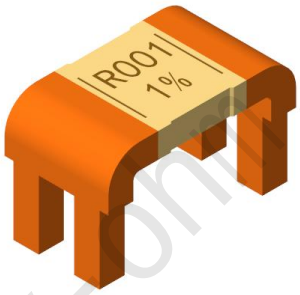
https://holly-ohm.com plug-in precision alloy resistor

Kelvin detect precision alloy resistors

4-terminal plug-in,current sensing ,excellent stability, AEC-Q200 compliant



Features:

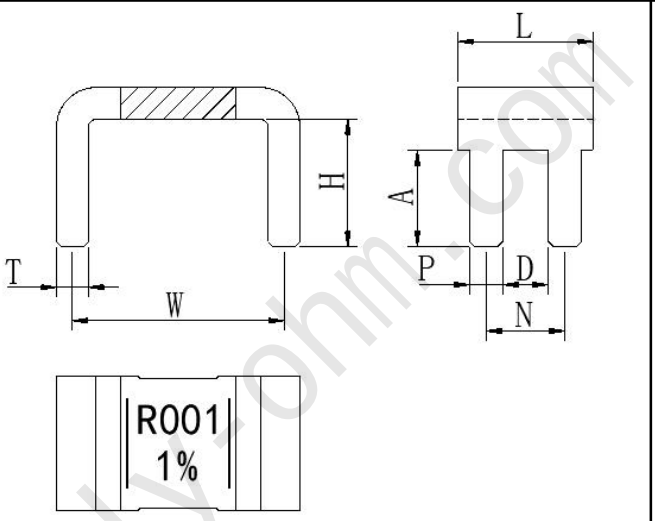
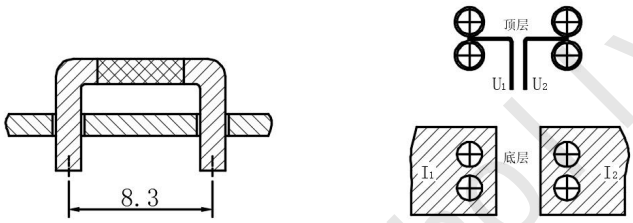
- E-beam welding craft, pure copper electrode, Ideal solution for current detection applications
- high reliability and stability ,superb pulse load capability, support±0.5%resistance tolerance.
- All-metal structure, surface pickling and passivation treatment, vulcanization resistance, strong weather resistance
- Ultra-low parasitic inductance, fast response, suitable for high frequency AC current detection
- RoHS compliant
- customization

parameter:	
resistance value	0.2～5 mOhm
tolerance	±0.5%(D), ±1%(F), ±5%(J)
TCR	Min. 25 ppm/℃
temperature range	-55℃ ~+170℃
inductance	<3nH
thermal EMF (0-100°C)	<1μV/ ℃
power ($P_{70℃}$)	Max. 12W

Type Designation:WSKB3820ML200FT0 WSKB3820 manganese copper 0.2mohm 1% package with tape and reel

W	S	K	B	3	8	2	0	M	L	2	0	0	F	T	0

- WSKB E-beam alloy resistor
- Size 3820
- material M: manganese copper F:Fe-Cr-Al K: Karma
- resistance value L200 =0.2mΩ R001=1mΩ
- Tolerance D=±0.5% F=±1% J=±5%
- code T0: package with tape and reel B0: without tape and reel Tx: special code(x: 0~9)

Dimensions(mm):	Recommended pad and size(mm):
	

series	resistance value	tolerance	L(mm)	W(mm)	H(mm)	N(mm)	P(mm)	A(mm)	D(mm)
WSKB 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

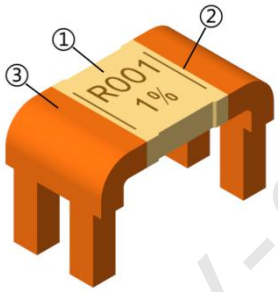
notice: word code marking as Laser engraving.In the word code" L "or " m" indicate mΩ and also show the position of decimal point, for example: 0m20=0.2mΩ, 1m50=1.5mΩ, "R" indicate Ω and also show the position of decimal point,for example: R001=1mΩ

attached list:

resistance value	material	T/mm	TCR(ppm)	$P_{70℃}$ (W)	resistance value	material	T/mm	TCR(ppm)	$P_{70℃}$ (W)
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

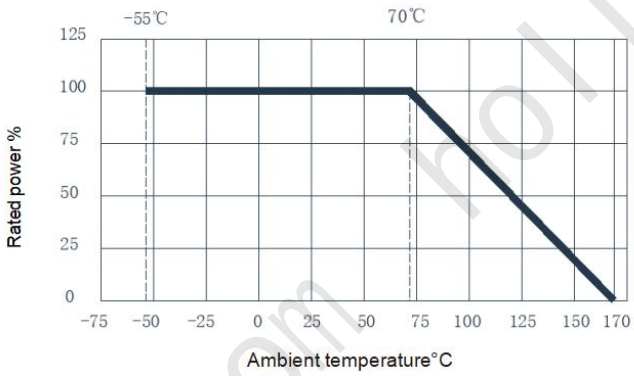
Fe-Cr-Al material has magnetic properties, which has an impact on the variable frequency current. Please be careful when selecting products.

construction:

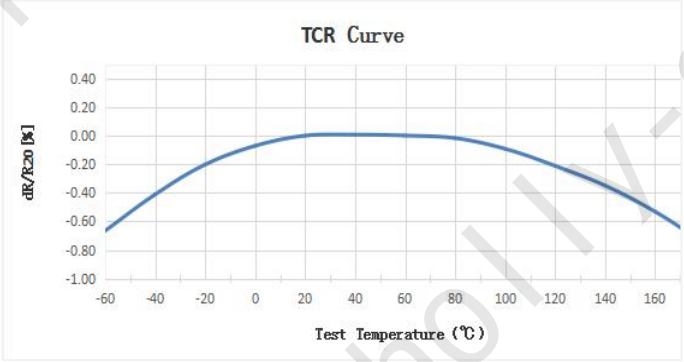


1. resistor material: low TCR manganese copper,Fe-Cr-Al,Karma.
2. Electron-beam welding
3. red copper terminal

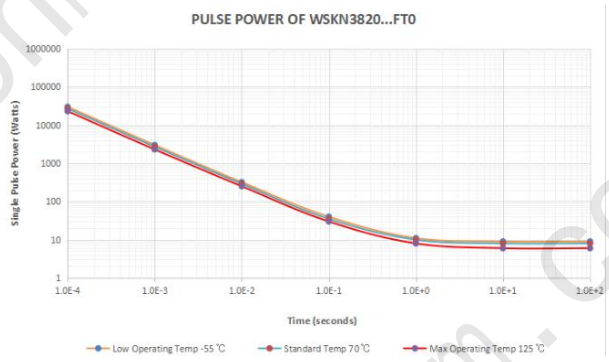
Derating Curve:



TCR Curve:



Anti-pulse curve:

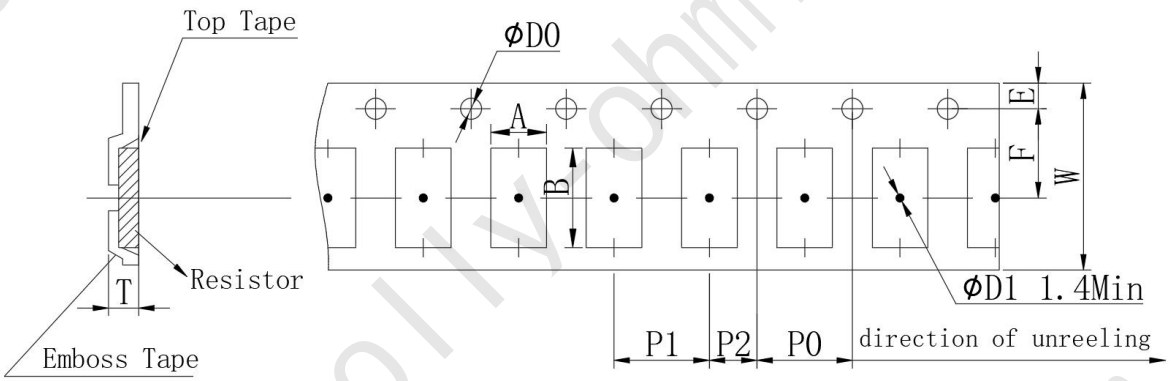


performance indicators:

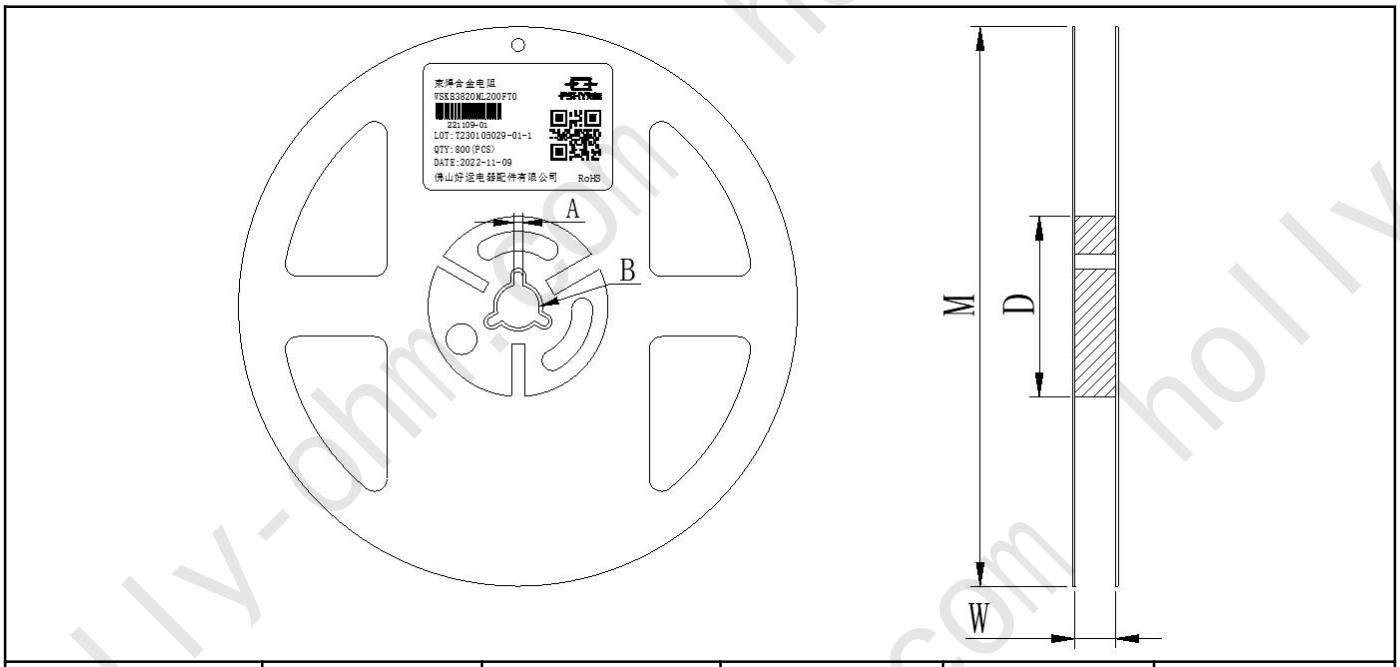
Test Item	standard	Test method
TCR	Within specified TCR	IEC60115-1 4.8，measured point 20°C～+130°C，reference point +20°C
Solderability	No visible damage 95%covered Minimum	IEC60115-1 4.17，245°C tin bath，3s
Short-time overload	No visible damage △R±1% Maximum	IEC60115-1 4.13，five times rated power，5s
Resistance to soldering heat	No visible damage △R±0.5% Maximum	IEC60115-1 4.18，260°C tin bath，maintaining10s
High temp. & high humidity	No visible damage△R±1% Maximum	Applying 10% of the rated power (current) or the maximum current of the component (whichever is lower) for a duration of 1000 hours in a temperature of 85°C and a humidity of 85% according to MIL-STD-202

		method 103
High temperature storage	No visible damage ▵R±0.5%Maximum	IEC60115-1 4.25.3， 1000hours@170°C， without loading current and voltage
Low temperature load	No visible damage ▵R±0.5%Maximum	IEC60115-1 4.36，cooled from room temperature to -55°C ,no load for 1.5 hours,applying rated power,continuously flowing for 45 minutes,cool for 15 minutes，then recover to room temperature for testing again.
temperature cycle	No visible damage ▵R±1% Maximum	IEC60115-1 4.19，-55°C@30mins～+155°C@30mins；1000 cycles
load life	No visible damage ▵R±1.0% Maximum	IEC 60115-1 4.25.1， 1000hrs.， 70 ℃ ± 2 ℃， rated current, or the maximum current rating of the component (whichever is lower) is applied for 1.5 hours/0.5 hour interruption

Packing specifications and size (mm):



Type	A	B	W	E	F	P0	P1	P2	ΦD0	T	Quantity
WSKB3820	4.9	10.5	24	1.75	11.5	4	12	2	1.5	7	800



Reel Type	W	M	A	B	D
13"reel for25mm tape	25±0.5	Φ330±2.0	2.0±0.5	Φ13.5±0.5	Φ99.0±1.0

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version update record

Version NO.	update record	person in charge	Issue date
A0	Updated specification version	Sheguang Zhu	13Apr2023
A1	Added TCR curve and anti-pulse curve,updated package with tape and reel	Qingke Zeng	27July2023

A2	Updated performance parameter	Qingke Zeng	24Oct2023