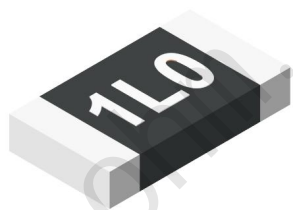


### Epoxy SMD Chip E-Beam Welding Alloy Resistor

current sensing ,high power,ultra-low TCR, AEC-Q200 compliant



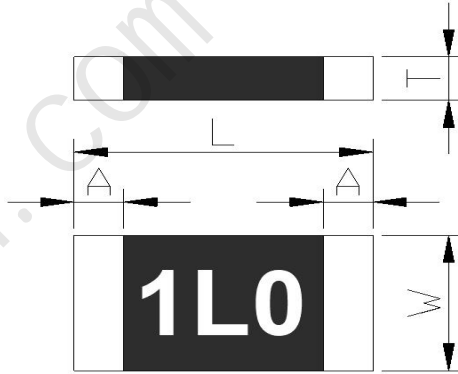
**Features:**

- Electron-beam welding craft , pure copper electrode , Ideal solution for current detection applications.
- full metal structure , high reliability and stability ,superb pulse load capability
- Ultra-low thermal EMF and parasitic inductance
- high frequency AC current sensing
- RoHS compliant
- customization

parameter:	
resistance value	1~5mΩ
tolerance	±1%(F),±5%(J)
TCR	±150ppm/°C
temperature range	-55°C ~+170°C
inductance	<5nH
thermal EMF (0-100°C)	<3 μV/°C
power	1W

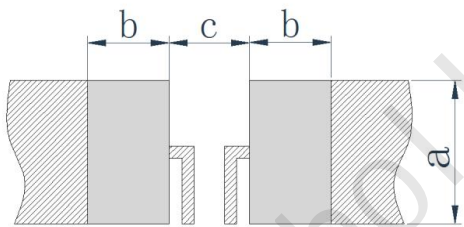
Type Designation: WSM0805M1L0FT0		WSM0805 Manganese copper1mohm 1% package with tape and reel													
W	S	M	0	8	0	5	M	1	L	0	F	T	0		
WSM epoxy SMD chip alloy resistor			size 0805			material M:Manganese copper K: Karma			resistance value 1L0=1mΩ 1L5=1.5mΩ			tolerance F=±1% J=±5%		code T0: package with tape and reel B0: without tape and reel	

**Dimensions(mm):**



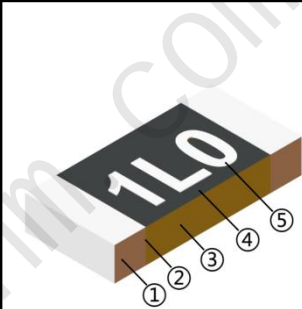
series	resistance value	material	TCR	L (mm)	W (mm)	T (mm)	A (mm)
WSM0805	1-4mΩ	M	±175ppm	2.03±0.25	1.27±0.25	0.4±0.15	0.3±0.15
	5mΩ	K	±150ppm				

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



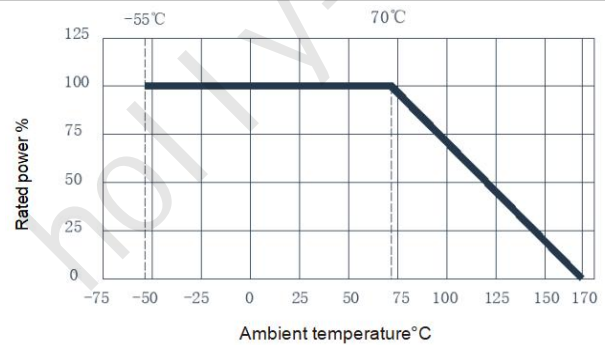
series	resistance value	a (mm)	b (mm)	c (mm)
WSM0805	1-5mΩ	1.3	1.02	0.5

**construction:**



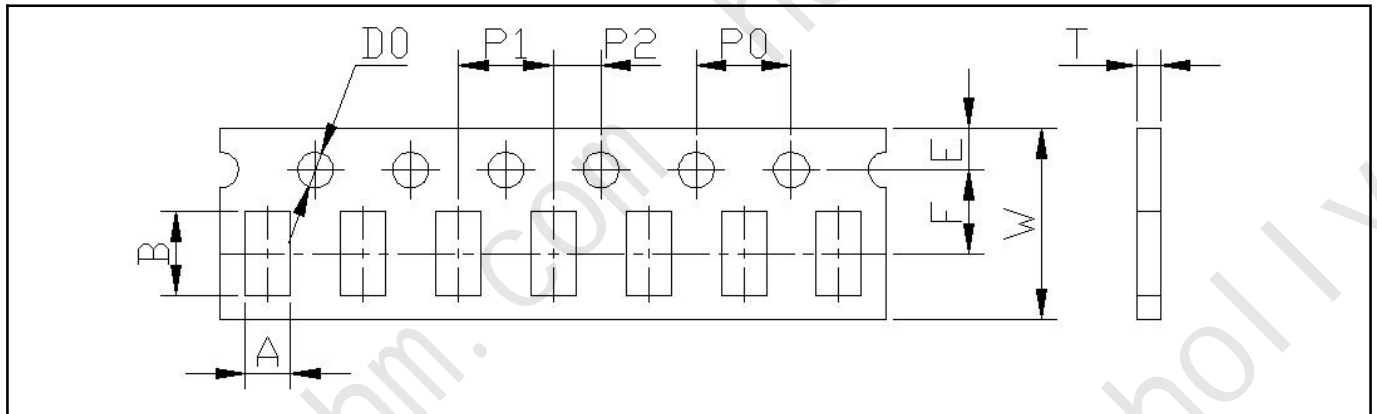
- 1.Ni and Sn plating on the surface of red copper
- 2.electron-beam welding
- 3..Manganese copper, Karma
- 4.insulating Protective coating
- 5.mark

**Derating Curve:**

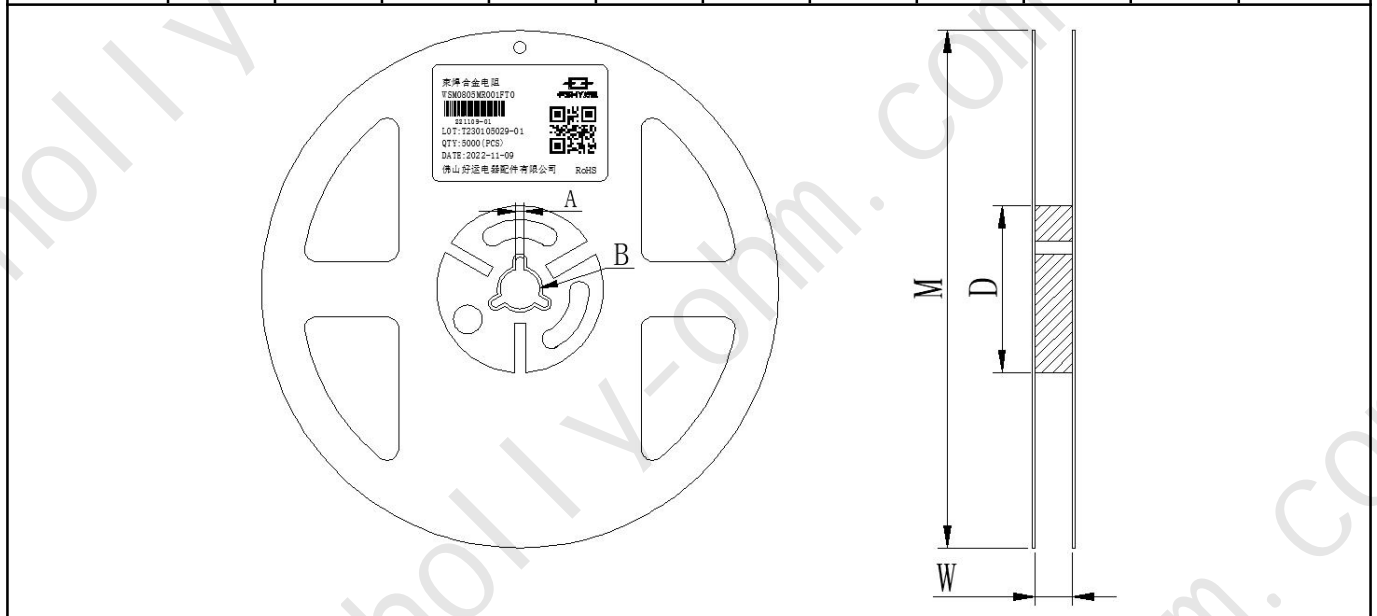


Performance:		
Test Item	standard	Test method
TCR	Within specified TCR	IEC60115-1 4.8, measured point 20°C~ +130°C, reference point +20°C
Solderability	No visible damage minimum 95%covered	IEC60115-1 4.17, 245°C tin bath, 3s
Short-time overload	No visible damage ΔR±1% Maximum	IEC60115-1 4.13, five times rated power, 5s
Resistance to soldering heat	No visible damage ΔR±0.5% Maximum	IEC60115-1 4.18, 260°C tin bath, 10s
Base plate bending test	Within specified value	IEC60115-1 4.33, 2mm, maintaining 60+5s
Flammability	Incomplete combustion, with the shim unignited and the pine wood board not charred	UL-94 V-0 OR V- 1 is acceptable , no need to do electrical test
Insulation resistance	1000MΩ, Minimum	IEC60115-1 4.6, Applying a direct current voltage of 100 V between the electrode and the substrate., maintaining 60s, then test insulation resistance value
Withstand voltage	without breaking down or arc flash	IEC60115-1 4.7, Applying an AC VOLTS which the effective value is the maximum load voltage to the electrode and substrate at a rate of approximately 100 V/s, maintaining it for 60 ± 5 s.
Solvent resistance	signage intact	IEC60115-1 4.29, IPA , temperature of a solvent: 23±5°C, maintaining 5±0.5min
High temp. & high humidity	No visible damage ΔR±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 ΔR±1% Maximum	IEC60115-1 4.25.3, 1000hours@170°C, without loading current and voltage
Low temperature load	No visible damage ΔR±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 ΔR±1% Maximum	IEC60115-1 4.19, -55°C@30mins~ +155°C@30mins; 1000 cycles
load life	No visible damage ΔR±1.0% Maximum	IEC 60115-1 4.25.1, 1000hrs., 70°C±2°C, 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 (Units:mm):**



Type	A	B	W	E	F	P0	P1	P2	ΦD0	T	Quantity
0805 (tape)	1.6	2.3	8	1.75	3.5	4	4	2	1.5	0.8	5000



Reel Type	W	M	A	B	D
7" reel for 8mm tape	9.5±0.5	Φ178±2.0	2.0±0.5	13.0±0.5	Φ60.0±1.0

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version update record

Version NO.	update record	person in charge	Issue date
A0	initial version release	Qingke Zeng	30,Aug,2023