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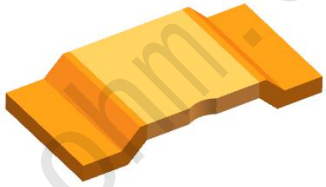
High power SMD Chip E-beam Welding Alloy Resistor

Bare Chip E-Beam Welding Alloy Resistor

Current sensing,SMD,High power,Excellent stability，AEC-Q200



Features:

- Electron-beam welding craf， pure copper electrode，Ideal solution for current detection applications.
- high reliability and stability ,superb pulse load capability
- full metal structure，pickling and passivating on the surface of metal， excellent weather resistance
- Ultra-low thermal EMF and parasitic inductance
- suitable for high frequency AC current detection
- AEC-Q200 qualified
- RoHS compliant
- customization

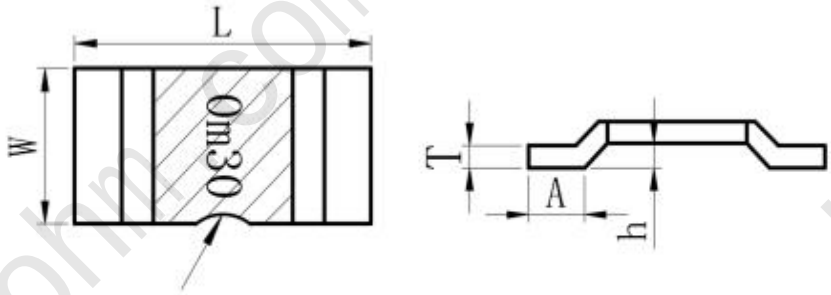
parameter:	
resistance value	0.3mΩ~5mΩ
tolerance	±1%(F),±5%(J)
TCR	±75ppm/℃
temperature range	-55℃ +170℃
inductance	<3nH
thermal EMF (0-100°C)	<1 μV/°C
power ($P_{70℃}$)	Max.6W

Type Designation:WSNP2512ML300FT0 WSNP2512 Manganese Copper 0.3mohm1%package with tape and reel

W	S	N	P	2	5	1	2	M	L	3	0	0	F	T	0

WSNP	size	material	resistance value	Tolerance	code
High power Bare chip E-beam welding alloy resistor	2512	K：Karma M:Manganese Copper	L300=0.3mΩ R001 = 1mΩ	F=±1% J=±5%	T0：package with tape and reel B0：without tape and reel Tx: special code(x：0~9)

Dimensions(mm):

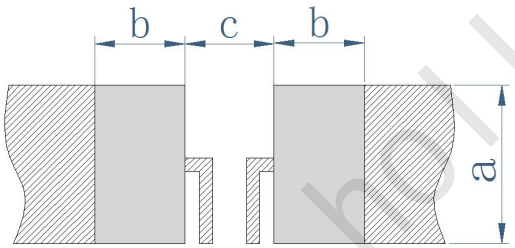


Notice:side arc for resistance value refinement

series	resistance value	tolerance	L(mm)	W(mm)	A(mm)	H(mm)
WSNP2512	0.3mΩ~5mΩ	±1% ±5%	6.4±0.2	3.2±0.25	1.2±0.2	0.5±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.

Recommended pad and size(mm):



series	resistance value	a(mm)	b(mm)	c(mm)
WSNP2512	0.3mΩ~5mΩ	3.6	1.8	3.8

construction:

Derating Curve:

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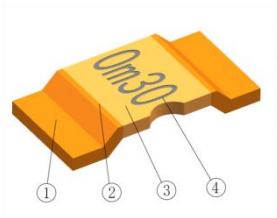
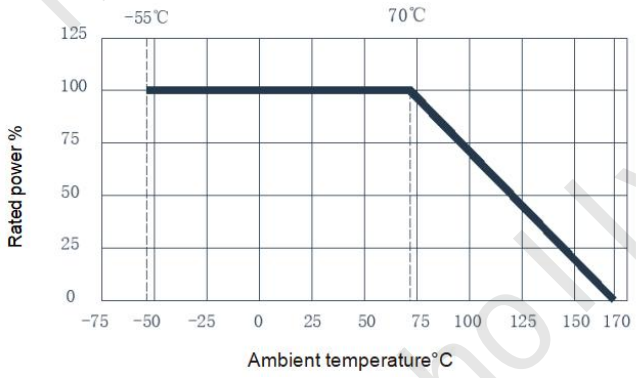


1.pure red copper terminal
2.electron-beam welding
3.Manganese copper /Karma/Fe-Cr-Al
4.laser marking



Attached list:

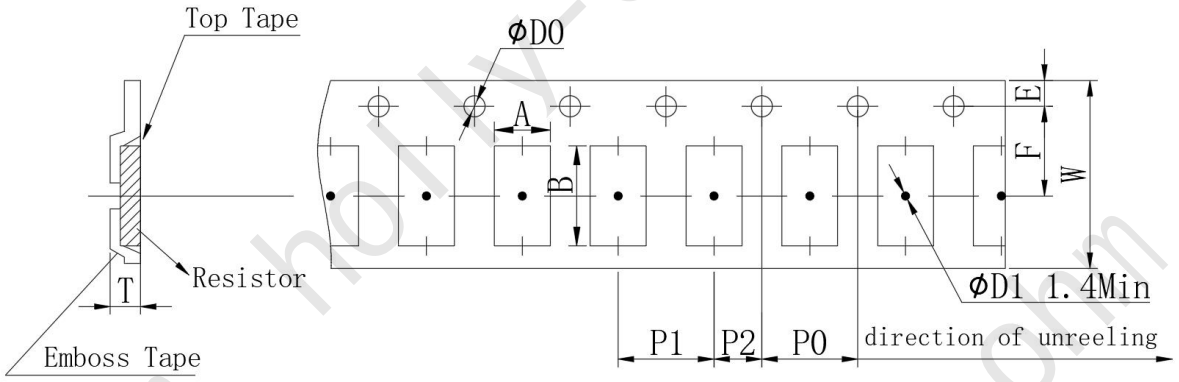
resistance value mΩ	material	T/mm	TCR(ppm)	W $P_{70℃}$	resistance value mΩ	material	T/mm	TCR(ppm)	W $P_{70℃}$
0.3mΩ	M	0.95±0.1	±150	6	1mΩ	M	0.42±0.1	±100	6
0.35mΩ	M	0.8±0.1	±150	6	2mΩ	K	0.65±0.1	±75	5
0.4mΩ	M	0.88±0.1	±150	6	2.5mΩ	K	0.5±0.1	±75	4
0.5mΩ	M	0.85±0.1	±150	6	3mΩ	K	0.43±0.1	±75	4
0.7mΩ	M	0.6±0.1	±100	6	4mΩ	K	0.32±0.1	±75	3
0.75mΩ	M	0.56±0.1	±100	6	5mΩ	K	0.28±0.1	±75	2.5

Performance:

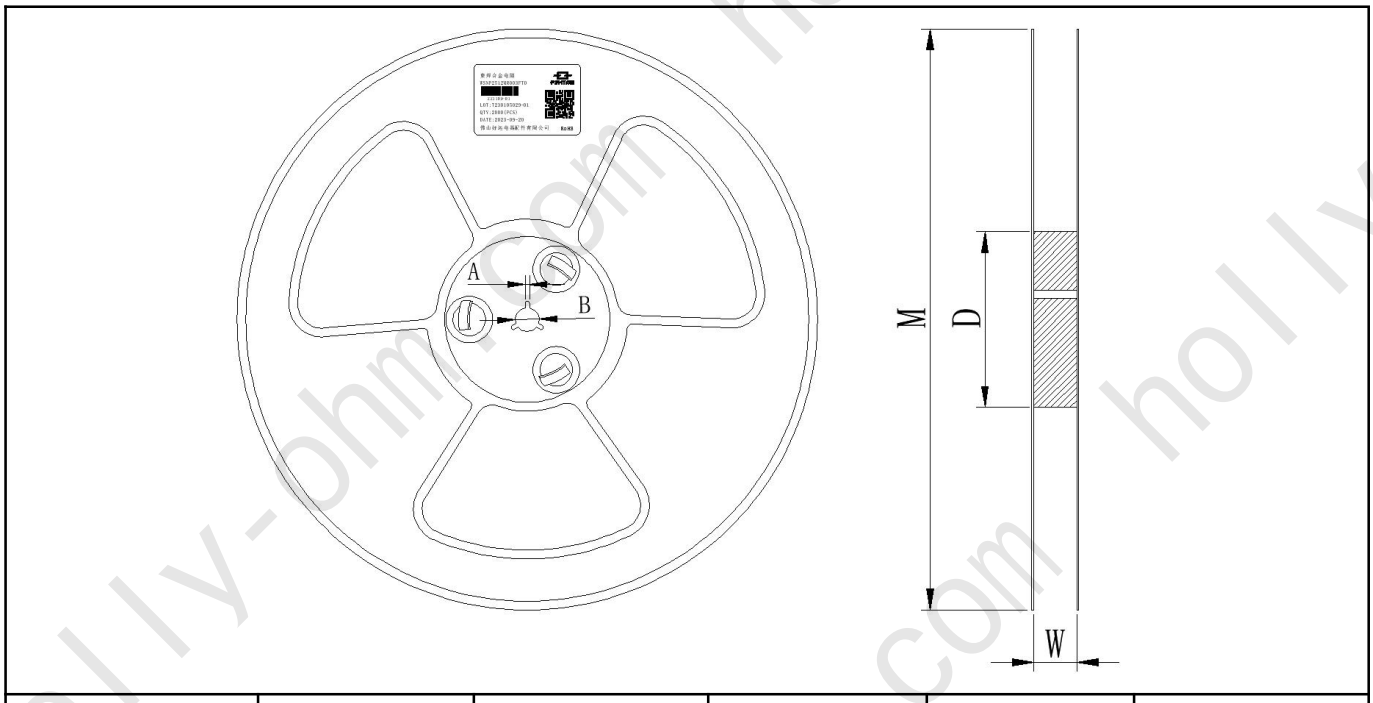
Test Item	standard	Test method
TCR	Within specified TCR	IEC60115-1 4.8，measured point 20°C～+130°C，reference point +20°C
Solderability	No visible damage Minimum 95%covered	IEC60115-1 4.17，245°C tin bath，3s
Short-time overload	No visible damage △R±1% Maximum	IEC60115-1 4.13，five times rated power，5s
Resistance to soldering heat	No visible damage △R±0.5% Maximum	IEC60115-1 4.18，260°C tin bath，10s

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±1% 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±1.0% Maximum	IEC60115-1 4.19，-55°C@30mins～+155°C@30mins；1000 cycles
load life	No visible damage △R±1% 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
WSNP2512	3.5	6.8	16	1.75	7.5	4	8	2	1.5	1.8	4000



Reel Type	W	M	A	B	D
13"reel for16mm tape	17±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	new version release	Sheguang Zhu	18Jan2022
A1	Update performance metrics	Qingke Zeng	7Oct2023