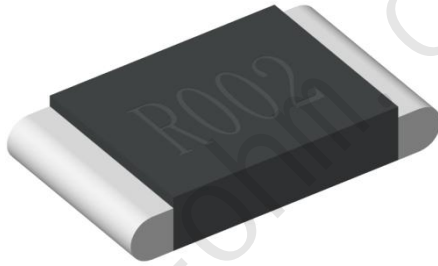


Epoxy SMD Chip E-Beam Welding Alloy Resistor

high power, current sensing , excellent stability, AEC-Q200 compliant

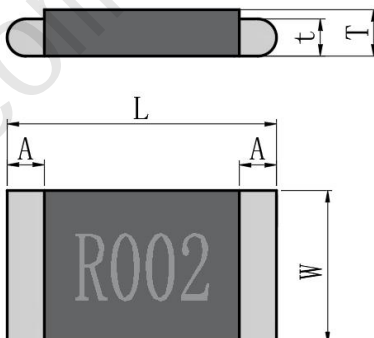


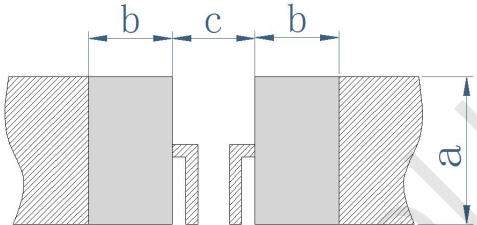
Features:

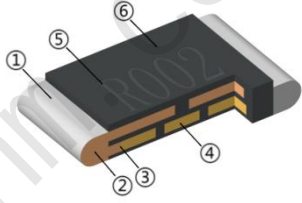
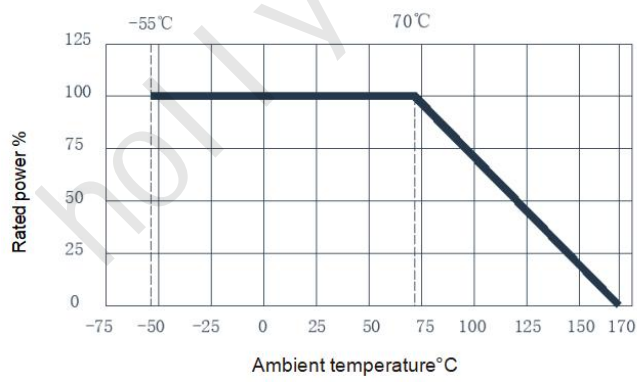
- Electron-beam welding craft, pure copper electrode, Ideal solution for current detection applications
- high reliability and stability ,superb pulse load capability
- Coating with heat-resistant epoxy resin, excellent weather resistance
- Ultra-low thermal EMF
- Ultra-low parasitic inductance, fast response, suitable for high frequency AC current detection
- RoHS compliant
- customization

parameter:	
resistance value	1mΩ~100mΩ
tolerance	±1%(F),±5%(J)
TCR	Min.±50ppm/°C
temperature range	-55°C~ +170°C
inductance	<5nH
thermal EMF (0-100°C)	<1 μV/°C
power (P _{70°C})	12W

Type Designation: WSMP4527MR002FT0 WSMP4527 manganese copper 2mohm 1% package with tape and reel															
W	S	M	P	4	5	2	7	M	R	0	0	2	F	T	0
WSMP high power epoxy SMD chip alloy resistor				Size 4527		material M:manganese copper K: Karma			resistance value R002 = 2mΩ R020=20mΩ			tolerance F=±1% J=±5%		code T0: package with tape and reel B0: without tape and reel Tx: special code(x: 0~9)	

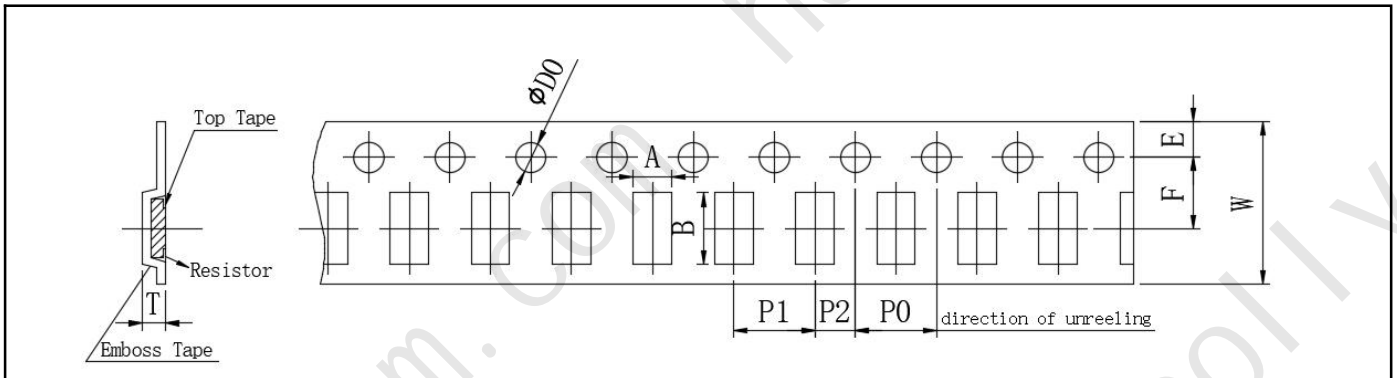
Dimensions(mm):									
									
series	power	resistance value	tolerance	TCR	L (mm)	W (mm)	A (mm)	t (mm)	T (mm)
WSMP4527	12W	1-6mΩ	±1%(F)	±75ppm	11.6±0.5	6.6±0.5	1.6±0.5	1.6±0.1	2±0.2
		7mΩ-100mΩ	±5%(J)	±50ppm					

Recommended pad and size(mm):					
	series	resistance value	a(mm)	b(mm)	c(mm)
	WSMP4527	1mΩ~100mΩ	8.7	3.4	8

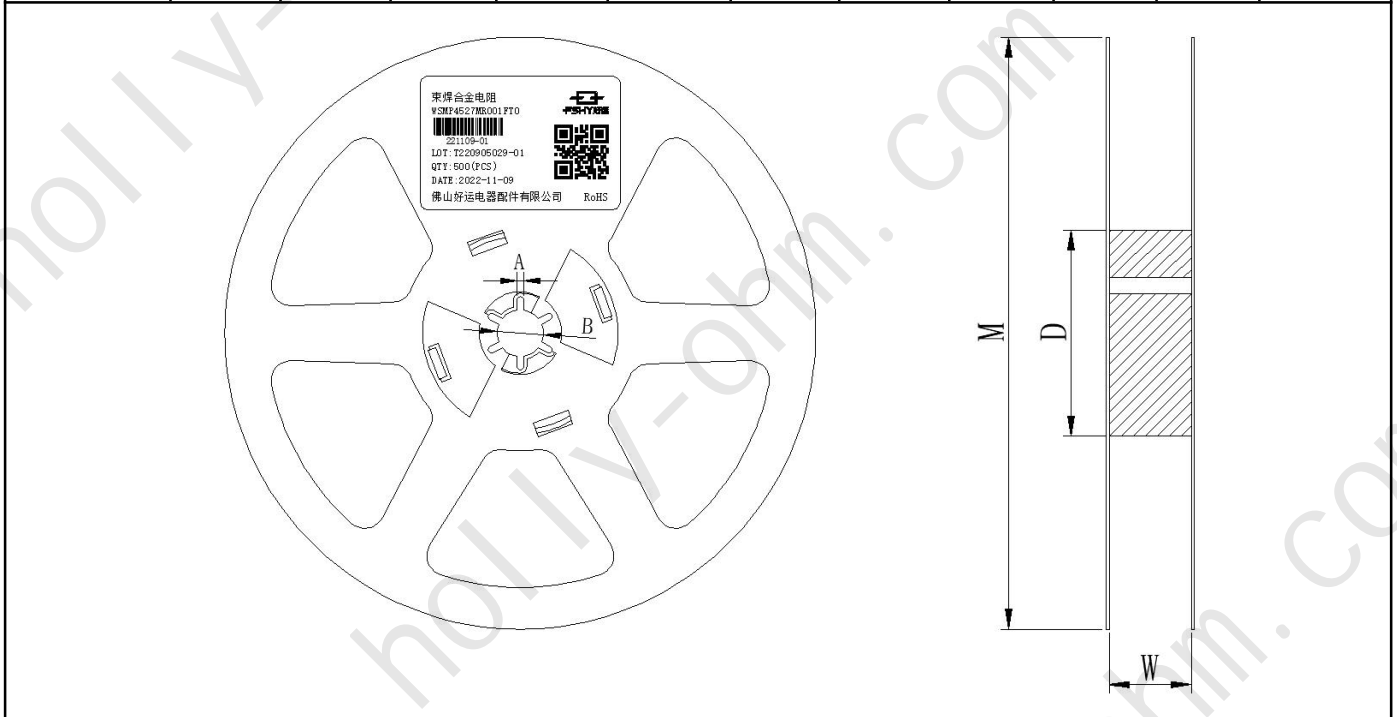
construction:	Derating Curve:
 <ol style="list-style-type: none"> 1.Ni and Sn plating on the surface of red copper 2.pure red copper terminal 3.electron-beam welding 4.Manganese copper/Karma 5.laser marking 6.epoxy resin 	

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 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, maintaining 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±0.5% 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 (mm):



Type	A	B	W	E	F	P0	P1	P2	ΦD0	T	Quantity
4527	7.4	11.8	24	1.75	11.5	4	12	2	1.5	2.3	500



Reel Type	W	M	A	B	D
7" reel for 24mm tape	25±0.5	Φ178±2.0	2.0±0.5	Φ13.5±0.5	Φ60.0±1.0

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version update record

Version NO.	update record	person in charge	Issue date
A0	Updated specification version	Sheguang Zhu	18Jan2022
A1	Updated performance metrics	Qingke Zeng	24Oct2023