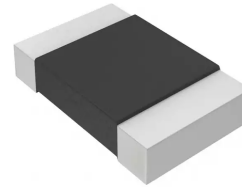
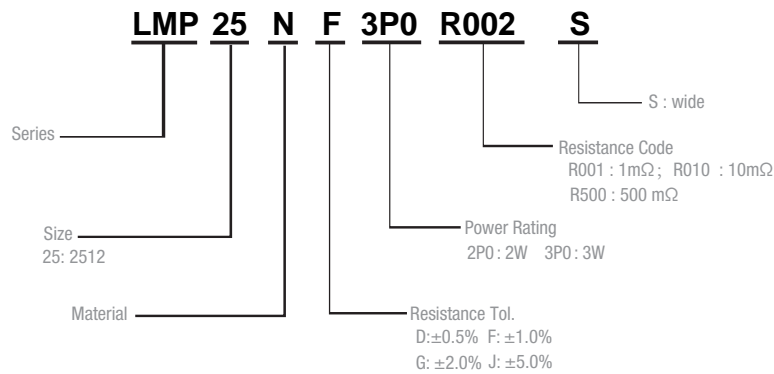


Description

- Proprietary processing technique produces extremely low resistance values
- Very low inductance
- Low thermal EMF
- Metallic Material



Part Numbering System



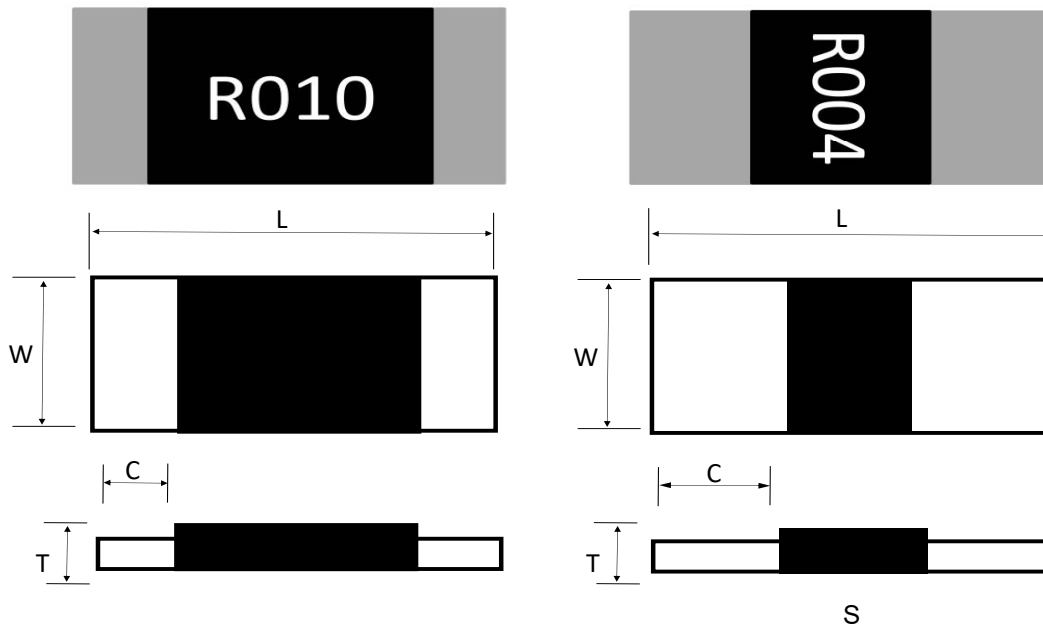
Parameter	Standard
Power Rating	1mΩ~100mΩ : 3W 1mΩ~500mΩ : 2W
Resistance Value	1~500mΩ
Operating Temperature Range	-55 to +170°C
Component Temperature Coefficient (TCR)	± 50 ppm/°C
Maximum Working Voltage (V)	$(P \times R)^{1/2}$
Rating current (A)	$(P / R)^{1/2}$

P=Power Rating; R=Resistance Value

Standard Electrical Specifications

Type	Rating Power at 70°C	T.C.R. (ppm/°C)	Resistance Range(mΩ) ±0.5% (D) ±1.0% (F) ±2.0% (G) ±5.0% (J)	Material	Electrode	Operating Temperature(°C)
LMP25	2W	50	101-500	Alloy	R101-R500	-55~+170°C
	2W&3W	50	1-4		R001-R004: (S)	
			2-100		R002-R100	

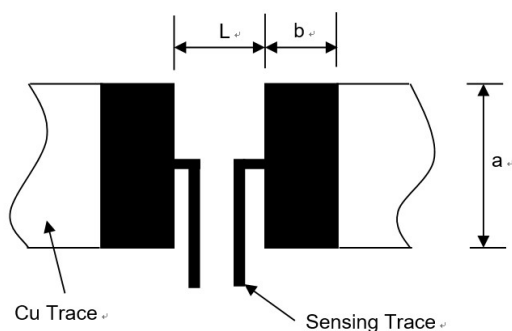
Construction



Unit: Millimeters

Type	Power	L	W	C	T
LMP25	2W&3W	6.4±0.2	3.2±0.2	0.95±0.25	0.9±0.2
				2.1±0.25 (S)	

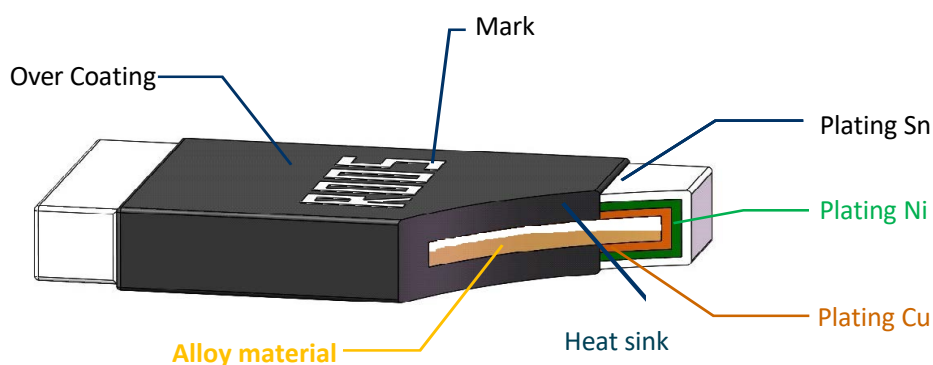
Recommended land pattern



Unit: Millimeters

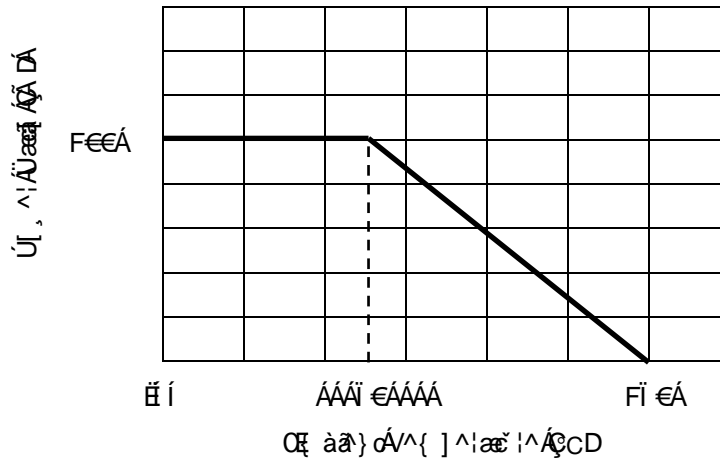
Resistance Range (Ω)	a	b	L
0.001-0.004(S)	4.0±0.1	3.1±0.1	1.3±0.1
0.002~0.500	4.0±0.1	2.1±0.1	4.1±0.1

Product structure diagram

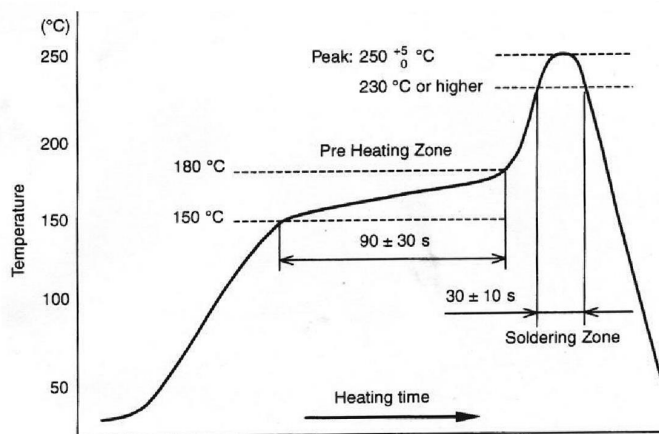


Power Derating Curve

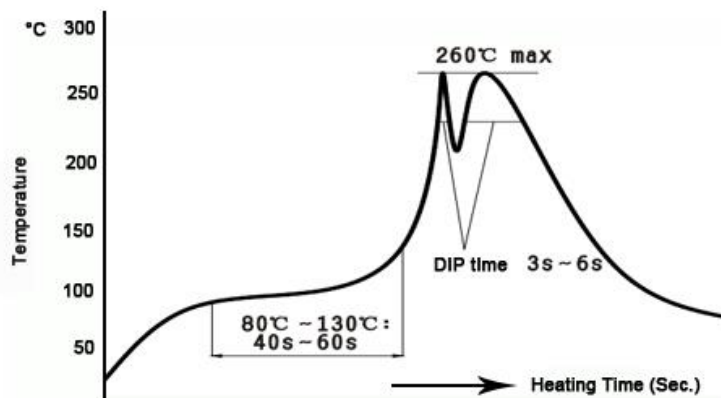
The power derating curve shows the relationship between power dissipation and temperature. The power is constant at the rated power until the temperature reaches the maximum junction temperature, after which it derates linearly to zero at the maximum ambient temperature.



IR Reflow-Soldering Profile



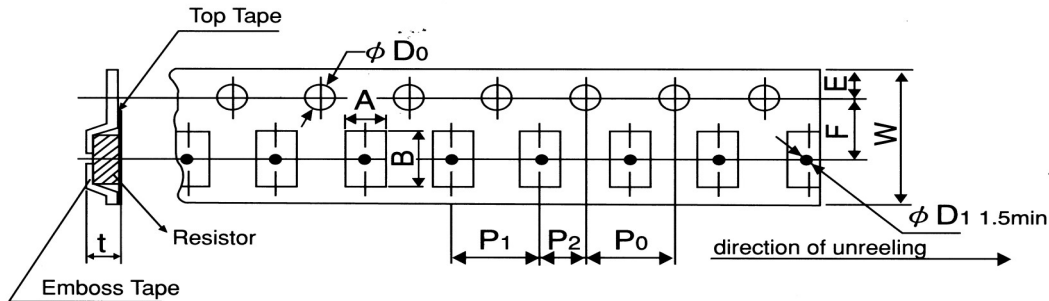
Wave- Soldering Profile



Product Characteristics

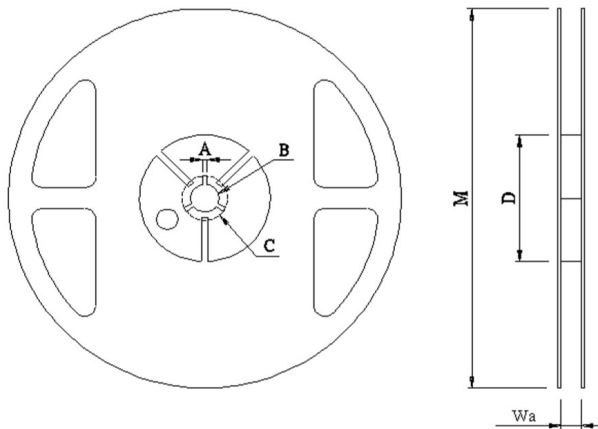
Test Item	Test Conditions	Test Method	Reference
Resistance Change Rate	<p>VOL: 0.1V, 0.5V, 1V, 5V, 10V, 20V, 50V, 100V, 200V, 500V, 1000V</p> <p>ÜK: 1000h, 10000h, 100000h, 1000000h</p> <p>ÜK: 1000h, 10000h, 100000h, 1000000h</p> <p>T1: Room temperature</p> <p>T2: Temperature at 125°C</p>	Refer to Spec	MIL-STD-202 Method 304
Short time Overload	Apply overload for 5 seconds and measure the resistance change rate after standing for 24 hours. 5 times the rated power for 5 seconds	$\leq \pm 0.5\%$	MIL-R-26E
Resistance to Soldering Heat	260°C \pm 5°C time: 10sec \pm 1sec	$\leq \pm 0.5\%$	MIL-STD-202 Method 210
Temperature Cycling	-55°C / +125°C, 30min, 1000 cycles	$\leq \pm 0.5\%$	MIL-STD-202 Method 107G
Low temperature Storage	-55°C \pm 2°C for 1000hours, No power	$\leq \pm 0.5\%$	MIL-STD-26E
High Temperature Storage	170°C for 1000hours, No power	$\leq \pm 1\%$	IEC6011501-4.25
Bias Humidity	+85°C, 85% RH, 5%bias, 1000hours	$\leq \pm 0.5\%$	MIL-STD-202 Method 103
Solderability	245 \pm 5°C, 3 \pm 1sec	At least 95% of surface area of electrode shall be covered with new solder	IEC60115-1-4.17 JIS-C5201-4.17
Operational life	70°C \pm 2°C, 1000 hours, at rated power 1.5 hours "ON", 0.5 hours "OFF"	$\leq \pm 1\%$	MIL-STD-202 Method 108
Resistance to solvent	Soak in 20~25°C isopropyl alcohol solvent 60 \pm 5 seconds, take it out and stand for more than 24 hours, measure the resistance change rate.	$\leq \pm 0.5\%$	JIS-C5201
Insulation Resistance	100V DC for 1 minute	>100M Ω	JIS-C5201
Joint Strength of Solder	Weld into the bending test plate, place on the bending test machine, press the center of the test plate, and measure the resistance change rate under load.	$\leq \pm 0.5\%$	JIS-C5201

Tapping & Package



Type	Pack	A ±0.2	B ±0.2	D0 0.05+/-0	E ±0.1	F ±0.05	P0 ±0.1	P1 ±0.1	P2 ±0.1	W ±0.2	D1 ±0.05	T ±0.15
2512	Emboss	3.60	6.90	1.50	1.75	5.50	4.00	4.00	2.00	12.00	1.50	1.20

Reel Specification



Type	A	B	C	D	M	W
2512	2.00±0.5	13.50±0.5	21.00±0.5	80.00±1.0	178.00±2.0	13.80±0.5

Packaging

Quantity: 4, 000pcs

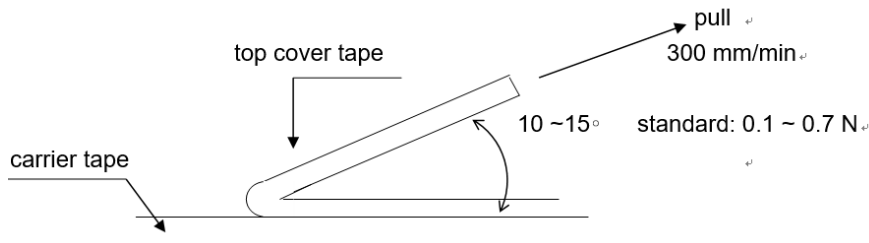
8mm wide tape on 178mm(7 inch)

diameter reel -specification EIA

Standard 481.

Peel strength of upper belt

Stripping speed: 300 mm / min; The peel force is between 0.1N and 0.7n.



Storage conditions & shelf life

It can be stored for 2 years under closed conditions with temperature of 5 ° C ~ 35 ° C and relative humidity of 40 ~ 75

Please avoid the following harsh environment during storage to avoid affecting the product performance and solder connectivity: the places with corrosive gases such as sea breeze, Cl₂, H₂S, NH₃, SO₂ and NO₂ shall be stored without direct sunlight.

Precautions for product use

When measuring the resistance value before welding, a special resistance meter with high precision shall be used. When measuring, a 4-wire probe or fixture must be used. 4. When measuring parts with a wire measuring needle, the 4 measuring needles must indeed contact the parts.

Avoid damaging the protective layer during manual welding or clamping with tweezers.

When the PCB is divided or fixed on the support, be careful to avoid excessive bending causing mechanical stress to the resistor.

It shall be used within the rated power range within the specification, especially when the power exceeds the rated value, which may affect the reliability of the product