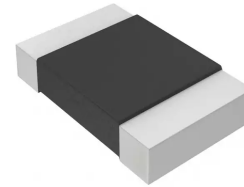
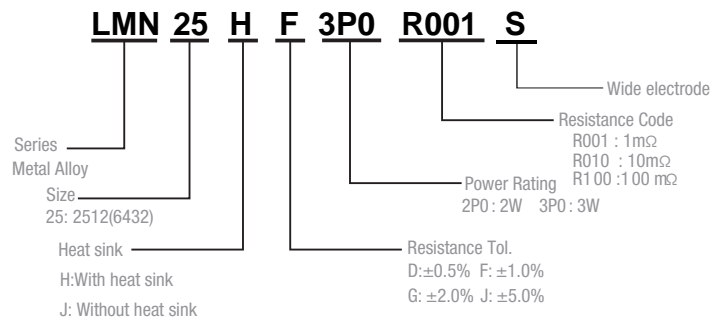


Description

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



Part Numbering System



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

UMJ, ^:AUaa * LAUM^• a ca & Aa^ ^

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) |
|--------|----------------------|-----------------|--|----------|-----------------|---------------------------|
| LMN25J | 2W | 50 | 1-4 | CuMn | R001-R004:Wide | -55~+170°C |
| | | | G1€ | | R00GR100:Narrow | |
| LMP25P | 2W&3W | | 1-4 | | R001-R004:Wide | |
| | | | G100 | | R00GR100:Narrow | |

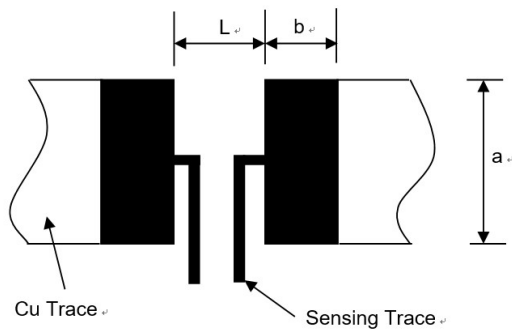
Construction



Unit: Millimeters

| Type | Power | Š | Y | Ô | T |
|-------|-------|---------------|---------------|---|---------------|
| LMN25 | 2W&3W | 6.4 ± 0.2 | 3.2 ± 0.2 | 0.90 ± 0.20 (Narrow) 2.0 ± 0.20 (Wide) | 0.7 ± 0.2 |

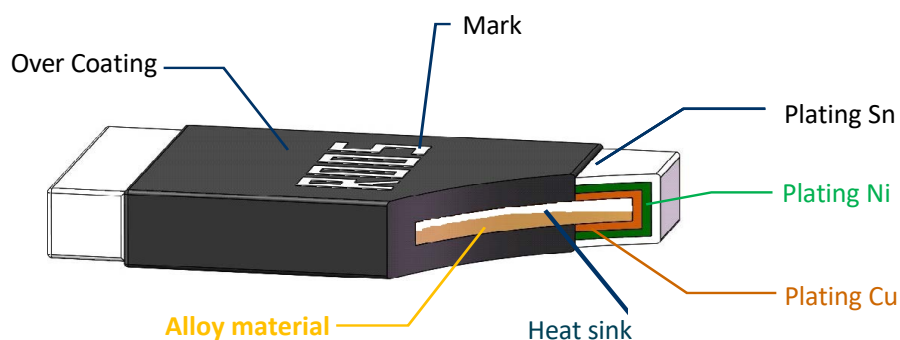
Recommended land pattern



Unit: Millimeters

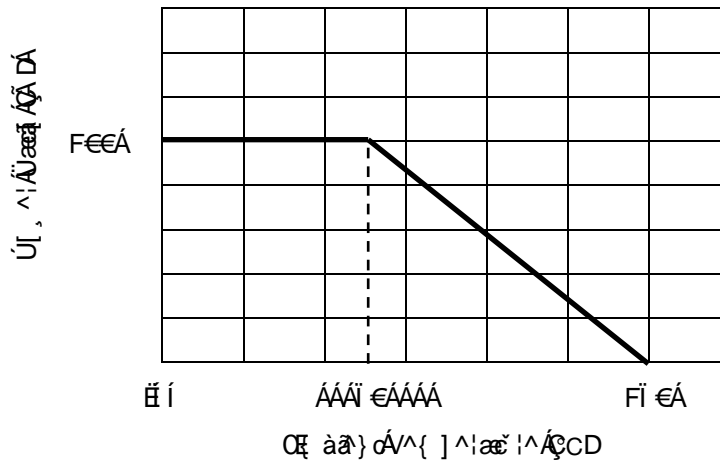
| Š | Y | Ô | Š |
|--------------------------|---------------|---------------|---------------|
| 0.90 ± 0.04 (Wide) | 4.0 ± 0.1 | 3.1 ± 0.1 | 1.3 ± 0.1 |
| 0.90 ± 0.04 (Narrow) | 4.0 ± 0.1 | 2.1 ± 0.1 | 4.1 ± 0.1 |

Product structure diagram

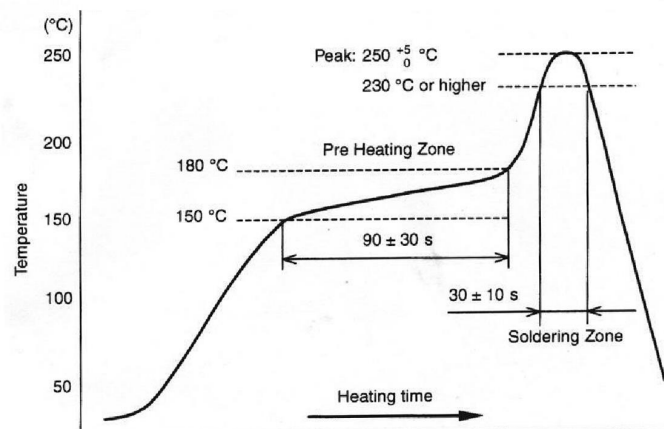


Power Derating Curve

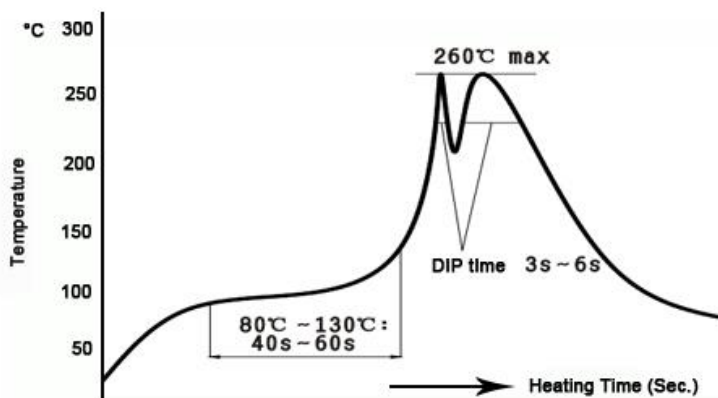
Power derating curve showing the relationship between power dissipation and temperature. The curve starts at a constant power level (F_{CD}) up to a certain temperature (T₁), after which it decreases linearly to zero at the maximum operating temperature (T₂).



IR Reflow-Soldering Profile



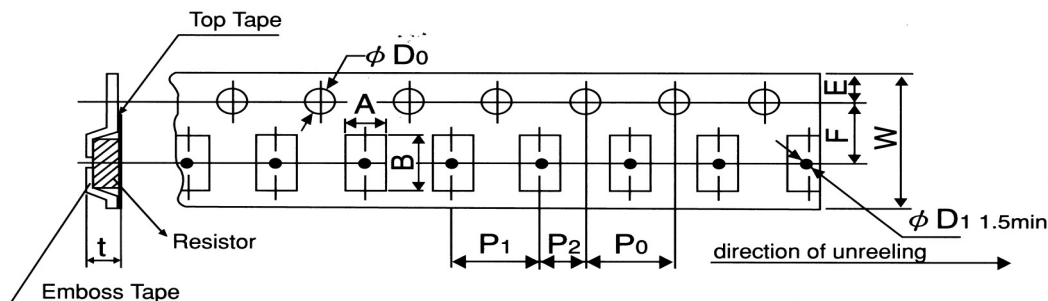
Wave- Soldering Profile



Product Characteristics

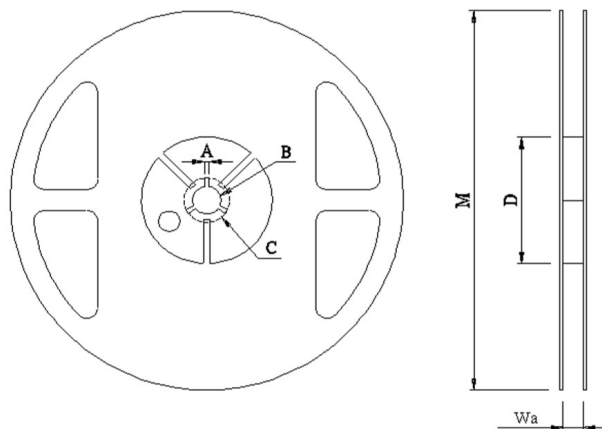
| Q{ | V•c&{ }ãã }DT ^c@ â• | Šă āă | Üæ åæå |
|-------------------------------------|---|--|-----------------------------------|
| V{]^ æ !^ & ^~ã}c [~ ^•ã æ & ^ | VÖÜ MÜËÜDÜQVGEVFDÝ FÉ ÜK ^•ã æ & [~ [[{ c{]^ æ !^ ÜK ^•ã æ & [~FG °C T1: Room temperature T2: Temperature at 125°C | Refer to Spec | MIL-STD-202 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 | ≤±0.5% | MIL-R-26E |
| Resistance to Soldering Heat | 260°C±5°C time: 10sec±1sec | ≤±0.5% | MIL-STD-202 Method 210 |
| Temperature Cycling | -55°C /+125°C, 30min, 1000 cycles | ≤±0.5% | MIL-STD-202 Method107G |
| Low temperature Storage | -55°C±2°C for 1000hours, No power | ≤±0.5% | MIL-STD-26E |
| High Temperature Storage | 170°C for 1000hours, No power | ≤±1% | IEC6011501-4.25 |
| Bias Humidity | +85°C, 85% RH, 5%bias, 1000hours | ≤±0.5% | MIL-STD-202 Method103 |
| Solderability | 245±5°C, 3±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±2°C, 1000 hours, at rated power 1.5 hours "ON", 0.5 hours "OFF" | ≤±1% | MIL-STD-202 Method 108 |
| Resistance to solvent | Soak in 20~25°C isopropyl alcohol solvent 60±5 seconds, take it out and stand for more than 24 hours, measure the resistance change rate. | ≤±0.5% | JIS-C5201 |
| Insulation Resistance | 100V DC for 1 minute | >100MΩ | 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. | ≤±0.5% | JIS-C5201 |

Tapping & Package



| Type | Pack | A ±0.2 | B ±0.2 | D0 +0.5-0 | 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

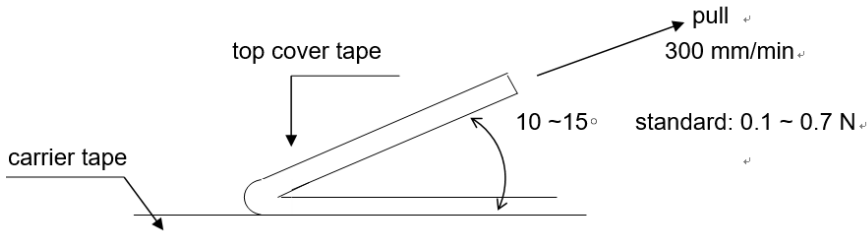
8mm wide tape on 178mm(7 inch)

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

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