

Description

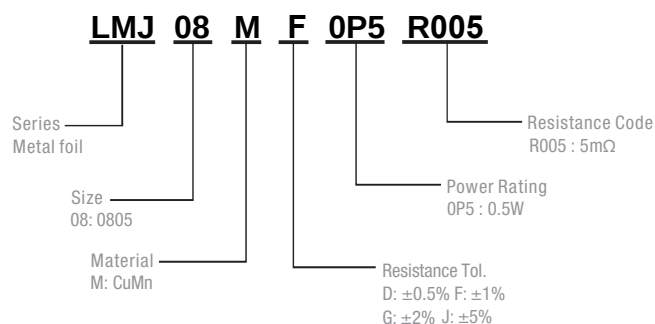
- Thick copper conductor.
- Long-term stability.
- Halogen-free lead free RoHS compliant.
- Stable material.
- Excellent reliability.
- Ultra-low temperature drift (Low TCR).



Applications

- Battery Management System (BMS).
- New energy vehicles、Charging makeup.
- Charger、Smart home.
- Power tools、Large household appliances.
- Consumer electronics、Main board Lithium.
- protection、Clean appliances.

Part Numbering System



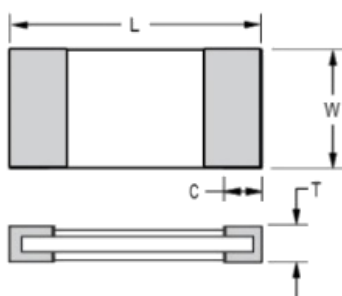
Parameter	Standard
Maximum rated power	0.5W
Resistance Value	3~40mΩ
Operating Temperature Range	-55 to +170°C
Component Temperature Coefficient (TCR)	± 50 ppm/°C
Maximum Working Voltage (V)	$(P \times R)^{1/2}$
Rating Current(A)	$(P / R)^{1/2}$

P=Power Rating; R=Resistance Value

Standard Electrical Specifications

Type	Maximum rated power (W)	T.C.R. (ppm/c)	Resistance Range(mΩ) 0.5% (D) 1.0% (F) 2.0% (G) 5.0% (J)	Material	Operating Temperature(°C)
LMJ08	0.5	±50	3~40mΩ	CuMn	-55~+170°C

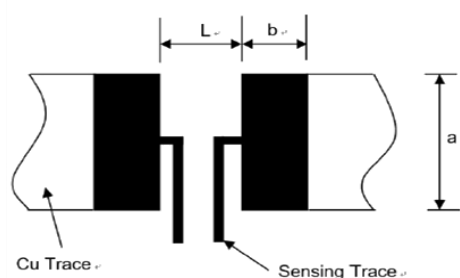
Construction



Unit: Millimeters

Series	L	W	C	T
LMJ08	2.0±0.1	1.25±0.1	0.4±0.2	0.65±0.2

Recommended land pattern

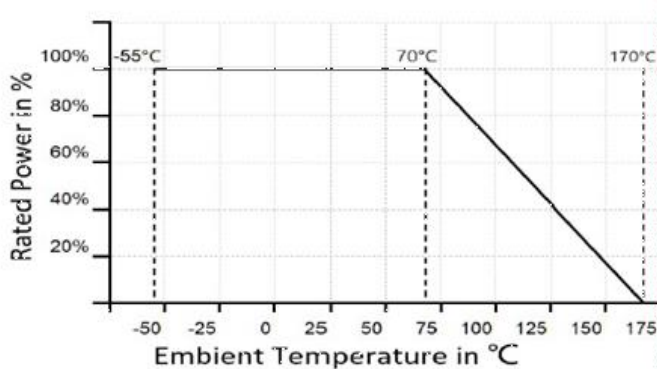


Unit: Millimeters

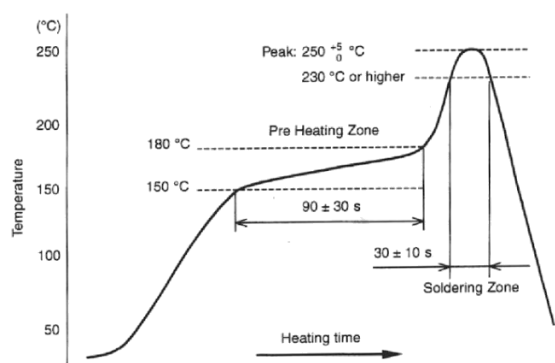
Resistance Range (Ω)	a	b	l
0.003~0.040	1.4±0.1	1.15±0.1	1.2±0.1

Power Derating Curve

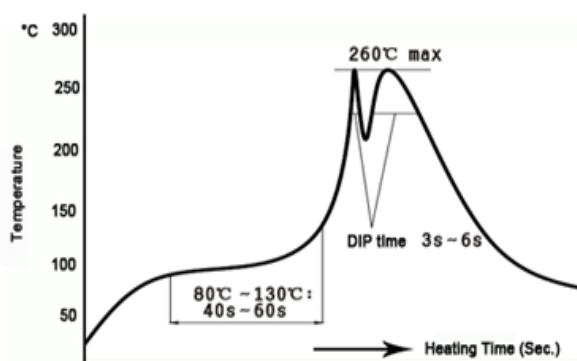
For resistors operated in ambient temperatures 70°C , power rating shall be derated in according with the curve below:



IR Reflow-Soldering Profile



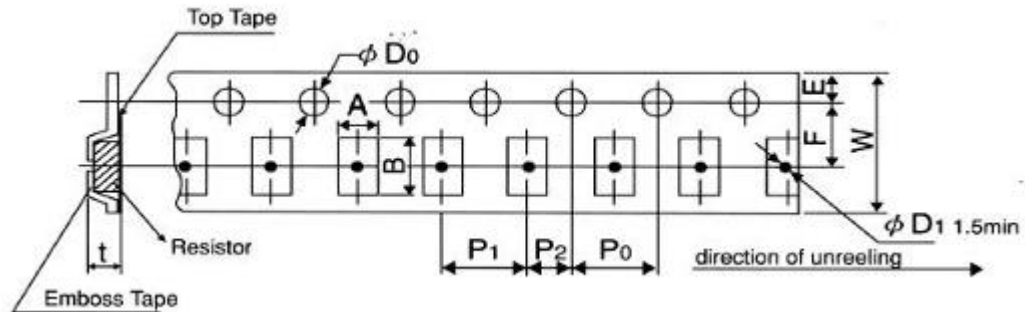
Wave- Soldering Profile



Product Characteristics

Item	Test condition/ Methods	Limited
Temperature coefficient of resistance	$TCR = (R - R_0) / R_0 (T_2 - T_1) \times 10^6$ R0: resistance of room temperature R: resistance of 125℃ ; T1: Room temperature T2: Temperature at 125℃	Refer to Spec
Short time Overload	Apply the overload for 5 seconds, and then measure the resistance change rate after standing for 24 hours.	$\leq \pm 0.5\%$
Temperature Cycling	1000 Cycle (-55℃ to 125℃) , 30 min at each extreme	$\leq \pm 1\%$
Low temperature Storage	-55±2℃ for 1000 hours, measure the resistance change rate after more than 1 hour	$\leq \pm 0.5\%$
High Temperature Storage	1000 hours at 125℃, measure the resistance change rate after more than 24±4 hour	$\leq \pm 1\%$
Biased Humidity	85℃±5℃, 85±5% RH 10% bias, 1000 hours, at rated power 1.5 hours "ON", 0.5 hours "OFF", after standing 24±4 hours to measure the resistance change rate.	$\leq \pm 0.5\%$
Load life	1000 h at 70±2℃, 1.5 h "ON", 0.5 h "OFF"	$\leq \pm 1\%$
Terminal bending	Apply a force of 2.5 kg to the center of the test board to depress it by 2 mm, and maintain the load for 60 seconds.	$\leq \pm 0.5\%$
Resistance to Solder Heat	260℃±5℃, time: 10±1 sec, 1000 hours, measure the resistance change rate after more than 1 hour	$\leq \pm 0.5\%$
Solderability	Soak in the furnace at 245±5℃ for 3±1 sec .Take out and observe the solder area under a magnifying glass.	At least 95% of surface area of electrode shall be covered with new solder
Exposure (Storage)	Refer to MIL-STD-202 Method 108	/
Joint Strength of Solder	◆ Test item (Bendability test) Weld in the bending test plate, place on the bending test machine, press in the center of the test plate, and measure under load.	$\leq \pm 0.5\%$
	◆ Experiment item 2 (Fixation test) Weld the resistance in the rigidity test plate, place it on the end electrode test machine, apply the force in the direction of the force with the test probe with the radius of R0.5, and maintain 10 sec, and measure the resistance change rate under the load.	$\leq \pm 0.5\%$

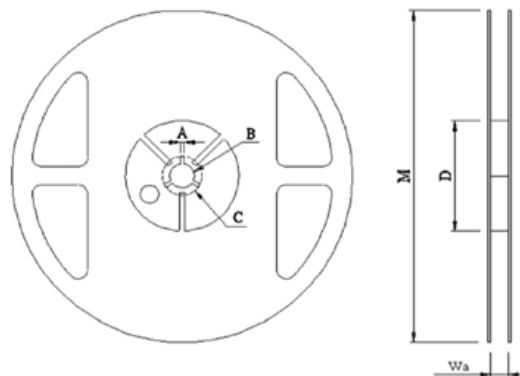
Tapping & Package



Unit: mm

Type	Pack	A ± 0.15	B ± 0.2	D0 $+0.1/-0$	E ± 0.1	F ± 0.05	P0 ± 0.1	P1 ± 0.1	P2 ± 0.1	W ± 0.2	T ± 0.1
0805	Emboss	1.60	2.40	1.50	1.75	3.50	4.00	4.00	2.00	8.00	0.84

Reel Specification



Unit: mm

Type	A	B	C	D	M	W
LMJ08	2.00 ± 0.5	13.5 ± 0.5	21.00 ± 0.5	60.00 ± 1.0	178.00 ± 2.0	9.0 ± 0.5

Packaging

Quantity: 5, 000pcs