

产 品 技 术 规 格 书

SPECIFICATION

产品型号 PART NO: LA31P2450-G8M

客户料号 CUSTOMER PART NO:

客户确认 CUSTOMER APPROVED BY:

确认日期 APPROVED DATE:

拟制 Prepared by:	审核 Checked by :	批准 Approved by:
送样日期 Formed On	产品版本 Document Version (V1.0)	

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版本号 Version	更改记录 Rejigger	拟制 Prepared	批准 Approve	日期 Date
V1.0	首次发行	潘枫	卢冠宇	2019/07/12

备注：

1、更改产品电性能指标时，版本号需更换（V1.0 换为 V2.0、V3.0……）；

2、更改产品测试方法（包括可靠性测试条件），或更改使用条件时，当前版本号加系列（V1.0 换为 V1.1、V1.2……）。

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1. 概述 INTRODUCTION

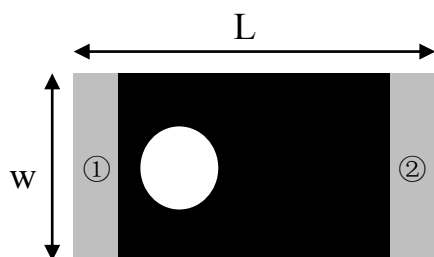
"佳利"微波多层陶瓷天线 LA 系列产品设计用于 WLAN、Wi-Fi、蓝牙、PHS，手机多频天线, FM 等小体积 SMD 片式设计。

"GLEAD" Microwave Multi-Layer Ceramic Antenna LA series are designed to be used in WLAN、Wi-Fi、Bluetooth、PHS、 Multiple-band Mobile phone antenna, FM, etc and compact size SMD chip design.

2. 型号 Part Number

LA	31	P	2450 - G8M	
				产品名称, 编号 G8M / Product Name: G8M
				天线频率/ Antenna Frequency: 2450 MHz
				产品设计结构 P 型 / Printing Design Series
				产品尺寸/Size: 3.2×1.6×0.5
				多层结构天线 / Multi-layer Antenna

3. 外型尺寸 Dimensions (Unit: mm)



(Top View)

Number	Terminal Name
①	INPUT
②	NC



(Bottom View)

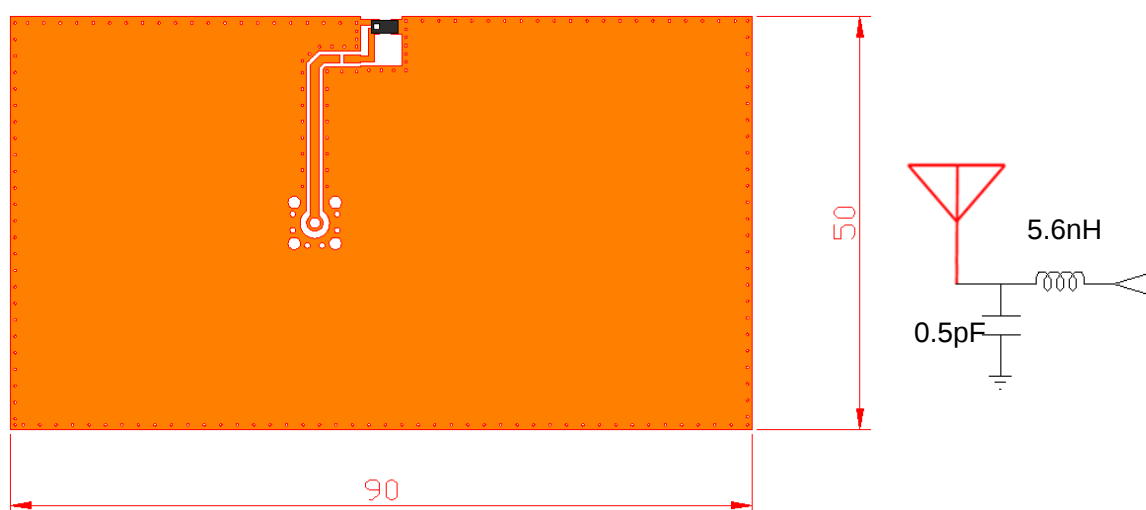
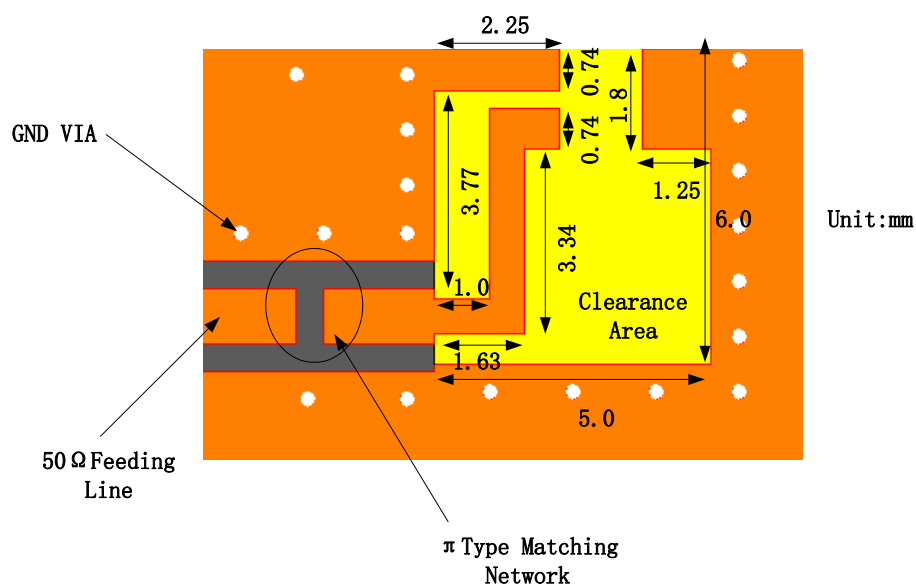


(Side View)

Symbols	L	W	T	A
Dimensions	3.2+/-0.2	1.6+/-0.2	0.5+/-0.1	0.4+/-0.1

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4. 测试电路和匹配电路 Evaluation Board and Matching Circuits

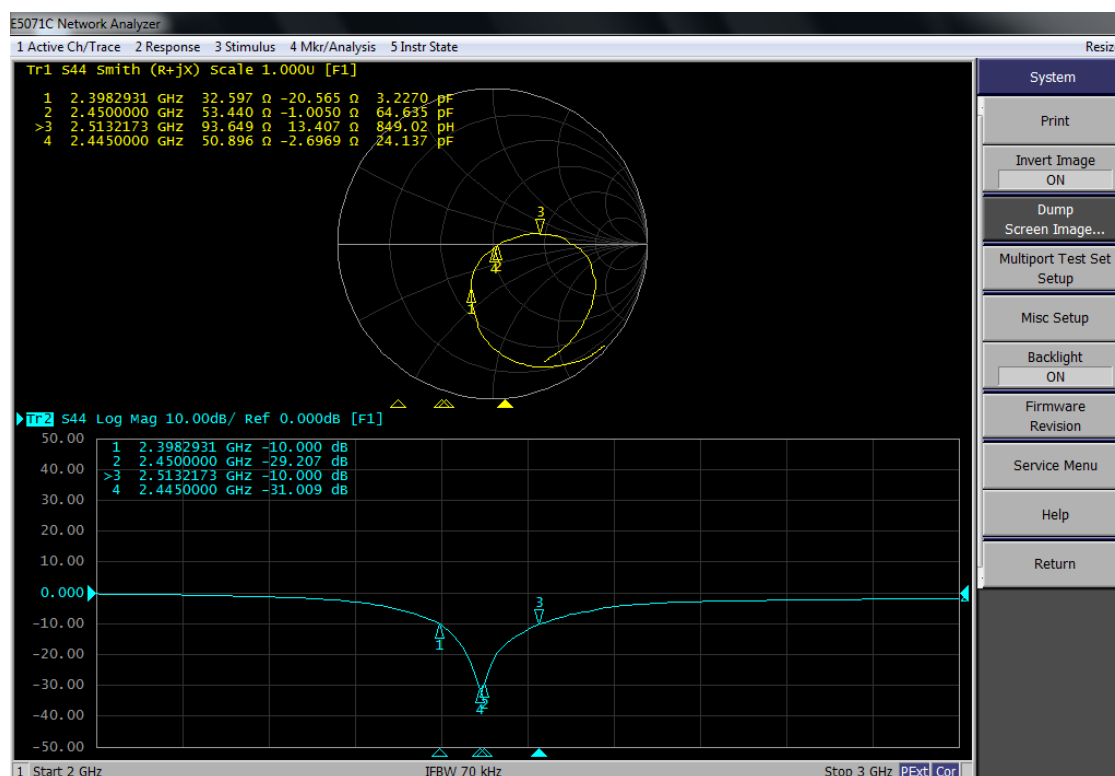


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5. 电气性能 Electrical Characteristics

No.	Item (项目)	Specifications (特性)
5.1	Frequency Range 频率范围	2400~2500MHz
5.2	Band Width 通带宽度	100 MHz typ.
5.3	Peak Gain 峰值增益	5.54 dBi
5.4	Return Loss 回波损耗	≤ 2.0
5.5	Polarization 极化方式	Linear 线性
5.6	Azimuth Beam width 方位角	Omni-directional 全向
5.7	Impedance 阻抗	50 欧姆

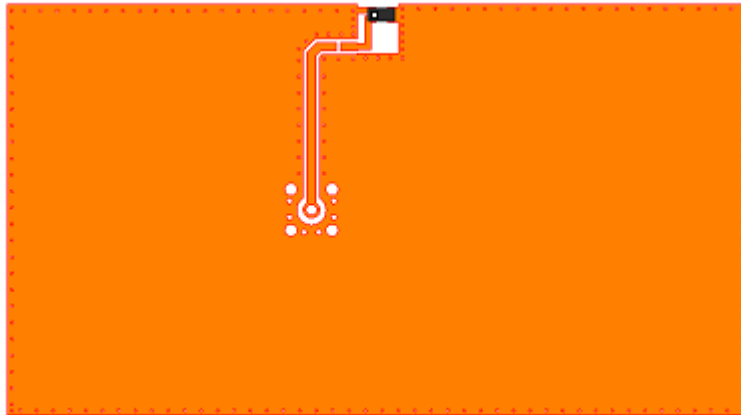
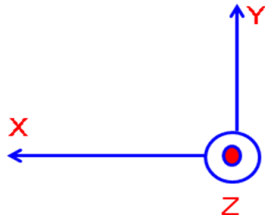
6. 特性曲线 Characteristic curve



Specification

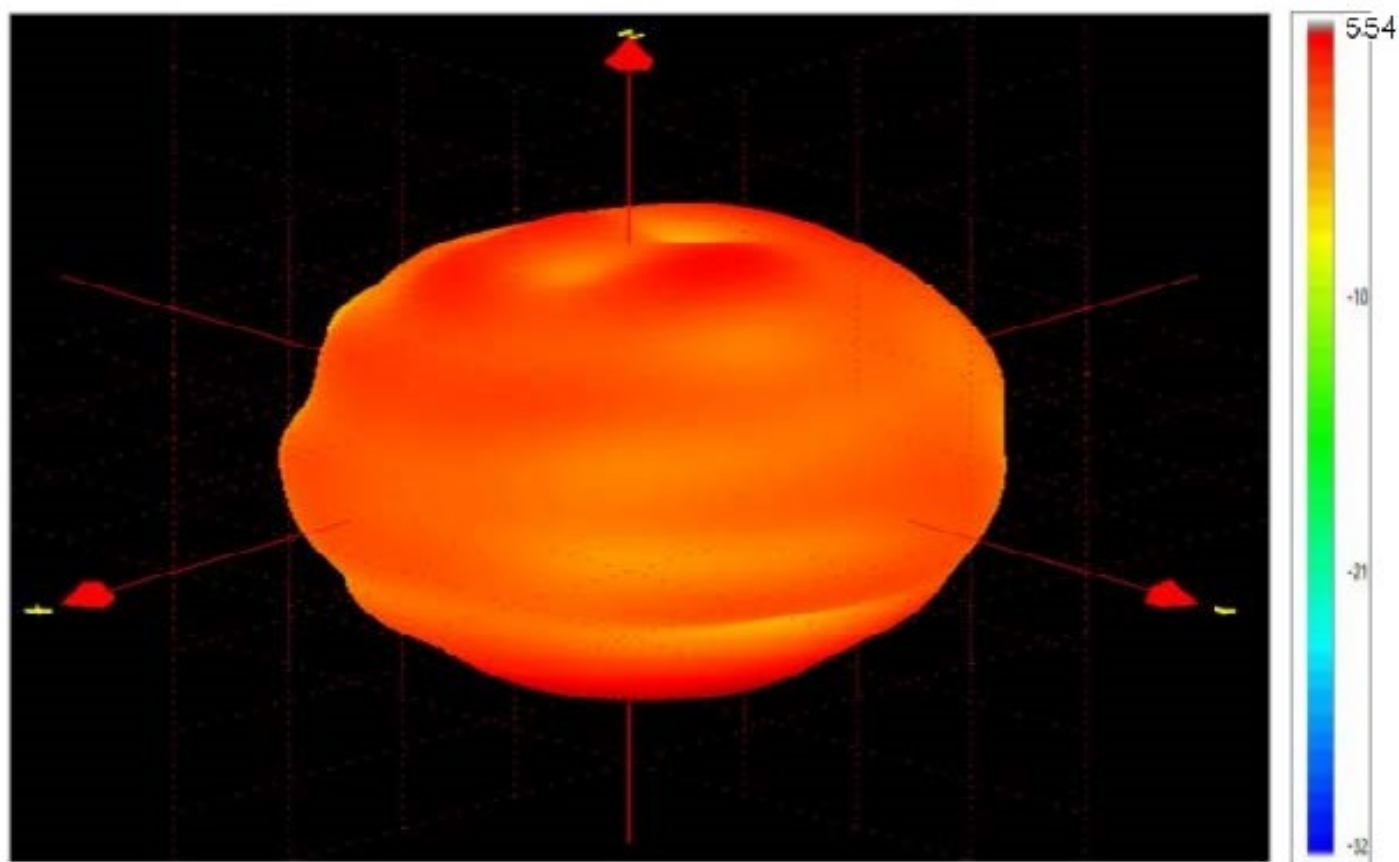
7. 方向图

coordinates:



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3D Radiation Pattern (2450MHz)



Frequency(MHz)	2450
Peak Gain(dBi)	5.54
Efficiency(%)	78.2

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8 可靠性试验 Dependability Test

基准条件: 温度范围	Temperature range	$25 \pm 5^{\circ}\text{C}$
相对湿度范围	Relative Humidity range	55~75%RH
工作温度	Operating Temperature range	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
贮藏温度	Storage Temperature range	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

8.1 耐振动 Vibration Resist

在振动频率为 10~55Hz 振幅为 1.5mm 沿 X.Y.Z 方向各振动 2 小时后测试需符合电气性能指标。

The device should fulfill the electrical specification after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X, Y and Z directions.

8.2 耐跌落冲击 Drop Shock

在 100cm 高度处按 X, Y, Z 三个面分别自由跌落在木制地板上共 3 次后, 要求无机械损伤。

The device should have no mechanical damage after dropping onto the hard wooden board from the height of 100cm for 3 times each facet of the 3 dimensions of the device.

8.3 耐焊接热 Solder Heat Proof

能承受经 120~150°C 的温度预热 120 秒后, 在 255°C+10°C 的焊锡浸 5±0.5 秒, 或 300°C-10°C 的电烙铁焊接 3±0.5 秒, 焊接面无损伤。

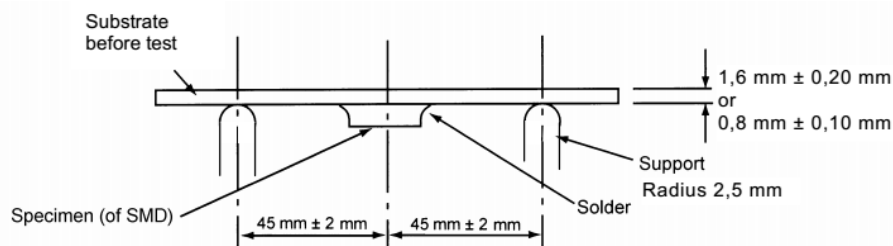
The device should be satisfied after preheating at 120°C~150°C for 120 seconds and dipping in soldering Sn at 255°C+10°C for 5±0.5 seconds, or electric iron 300°C-10°C for 3±0.5 seconds, without damage.

8.4 推力试验 Adhesive Strength of Termination

在产品电极端子上或表面上可承受 5N(≤0603); 10N(>0603) 水平推力 10±1 秒而无明显外观损坏与电极移位。

The device have no remarkable damage or removal of the termination after horizontal force of 5N(≤0603); 10N(>0603) with 10±1 seconds.

8.5 耐弯曲试验 Bending Resist Test



将产品按图焊在 1.6±0.2mm 或 0.8±0.1mm 的 PCB 板中间, 由箭头方向施力: 1mm/S, 弯曲距离: 1.5mm, 保持 5±1S, 产品金属层无脱落。

Weld the product to the center part of the PCB with the thickness 1.6±0.2mm or 0.8±0.1mm as the illustration shows, and keep exerting force arrow-ward on it at speed of 1mm/S, and hold for 5±1S at the position of 1.5mm bending distance, so far, any peeling off of the product metal coating should not be detected.

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8.6 耐湿热特性 Moisture Proof

在温度为 $60 \pm 2^\circ\text{C}$ ，相对湿度 90~95% 的恒温湿箱中放置 96 小时，在常温中恢复 1~2 小时后测试，测试需符合电气性能指标。

The device should fulfill the electrical specification after exposed to the temperature $60 \pm 2^\circ\text{C}$ and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condition.

8.7 高温特性 High Temperature Endurance

在温度为 $85 \pm 5^\circ\text{C}$ 的恒温箱中放置 96 ± 2 小时，在常温中恢复 1~2 小时后测试。测试需符合电气性能指标。

The device should fulfill the electrical specification after exposed to temperature $85 \pm 5^\circ\text{C}$ for 96 ± 2 hours and 1~2 hours recovery time under normal temperature.

8.8 低温特性 Low Temperature Endurance

在温度为 $-40^\circ\text{C} \pm 5^\circ\text{C}$ 低温箱中放置 96 ± 2 小时后恢复 1~2 小时，测试需符合电气性能指标。

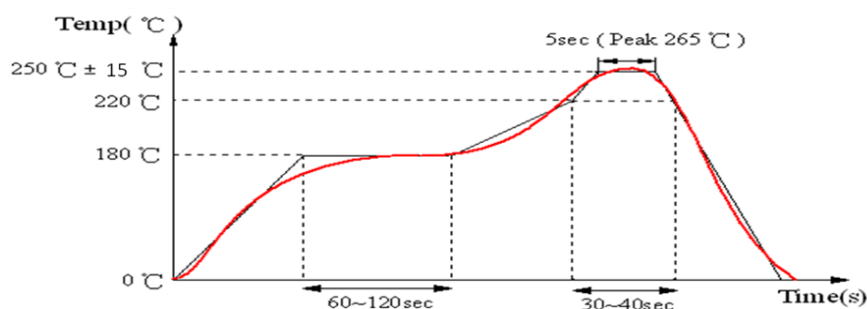
The device should fulfill the electrical specification after exposed to the temperature $-40^\circ\text{C} \pm 5^\circ\text{C}$ for 96 ± 2 hours and to 2 hours recovery time under normal temperature.

8.9 温度循环 Temperature Cycle Test

在 -40°C 温度中保持 30 分钟，再在 $+85^\circ\text{C}$ 温度中保持 30 分钟，共循环 5 次后在常温中恢复 1~2 小时后测试需符合电气性能指标。

The device should fulfill the electrical specification after exposed to the low temperature -40°C and high temperature $+85^\circ\text{C}$ for 30 ± 2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

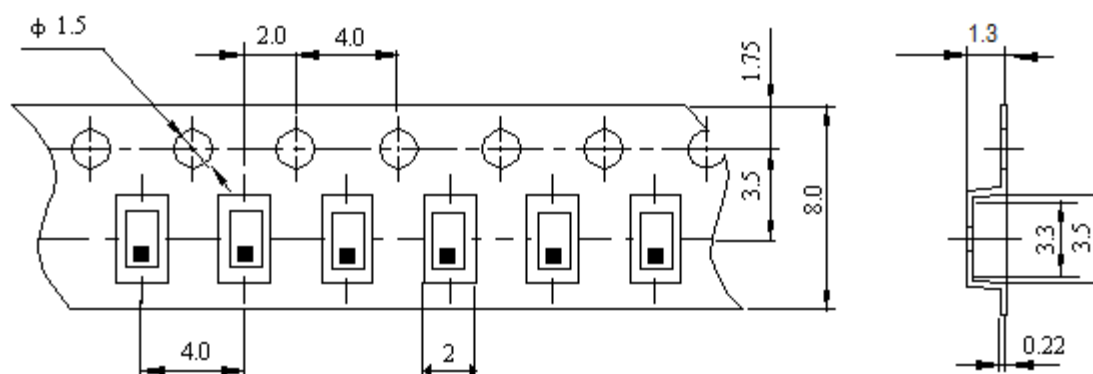
9 回流焊温度 Reflow Soldering Standard Condition



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10 包装尺寸 (3216) Packaging and Dimensions

10.1 Plastic Tape

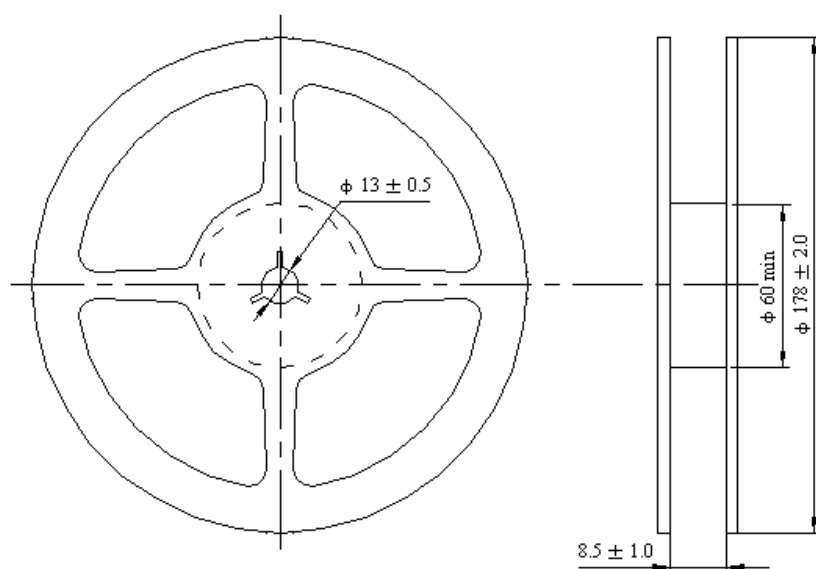


包装说明: Remarks for Package

载带尾部空穴长度 150~200mm, 载带头部空穴长度 250~300mm, 头部的盖带加长 250mm。

Reserve a length of 150~200mm for the trailer of the carrier and 250~300 mm for the leader of the carrier and further 250mm of cover tape at the leading part of the carrier.

10.2 Reel (3000 pcs/Reel)



10.3 储存条件 Storage Period

产品收到后半年内使用完毕。

Product should be used within six months of receipt.

湿敏等级 1 / 储存温度与湿度:

MSL 1 / Storage Temperature Range : <30 degree C, Humidity : <85%RH