

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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产品规格书版本更改记录

Version rejigger track record

| 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 |
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| 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……）。 | | | | |

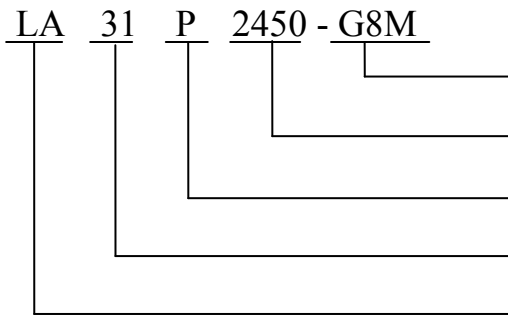
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1. 概述 INTRODUCTION

"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



产品名称, 编号 G8M / Product Name: G8M

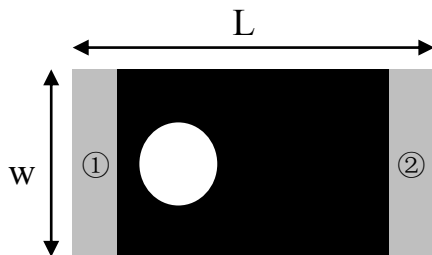
天线频率/ Antenna Frequency: 2450 MHz

产品设计结构 P 型 / Printing Design Series

产品尺寸/Size: 3.2×1.6×0.5

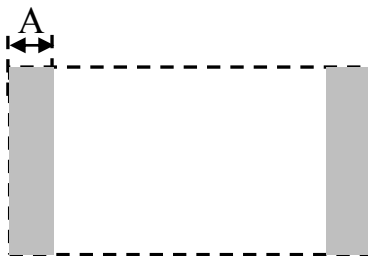
多层结构天线 / Multi-layer Antenna

3. 外型尺寸 Dimensions (Unit: mm)



(Top View)

| Number | Terminal Name |
|--------|---------------|
| ① | INPUT |
| ② | NC |



(Bottom View)

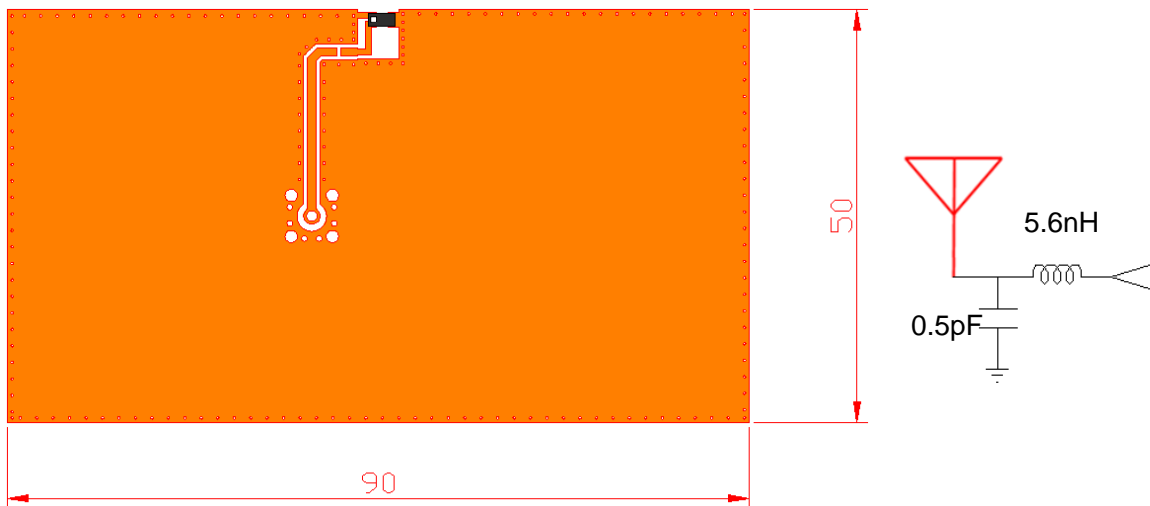
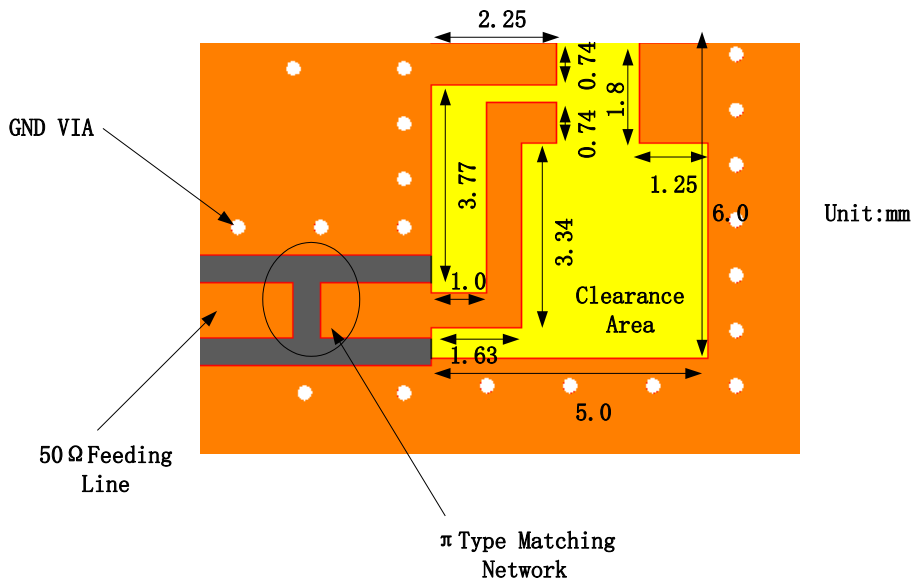


(Side View)

| 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

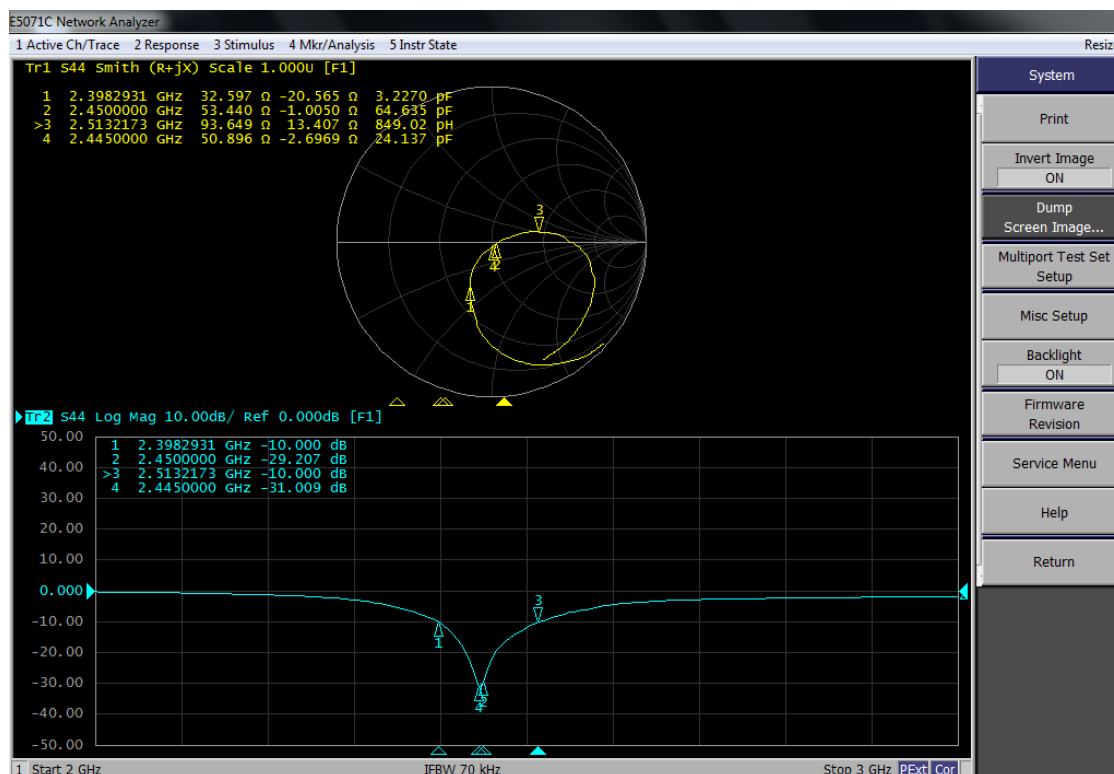


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5. 电气性能 Electrical Characteristics

| 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 |

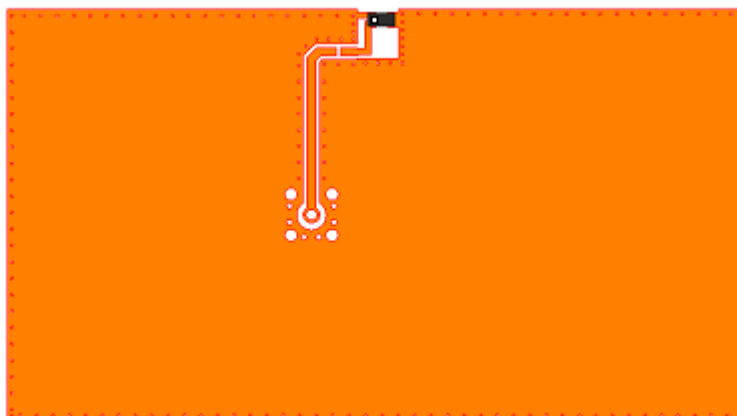
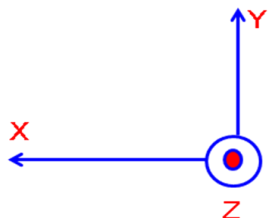
6. 特性曲线 Characteristic curve



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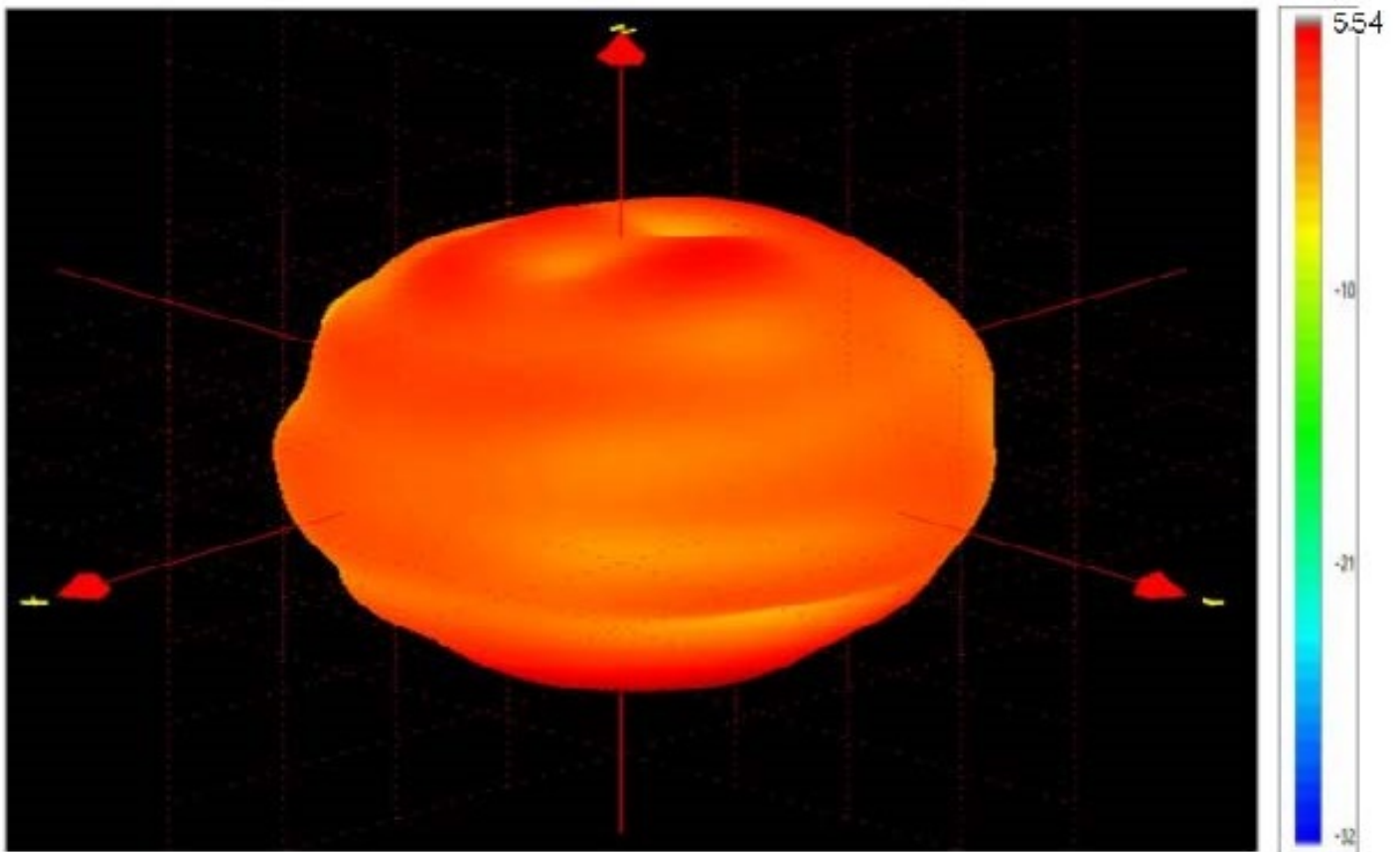
7. 方向图

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±5°C |
| 相对湿度范围 | Relative Humidity range | 55~75%RH |
| 工作温度 | Operating Temperature range | -40°C~+85°C |
| 贮藏温度 | Storage Temperature range | -40°C~+85°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。

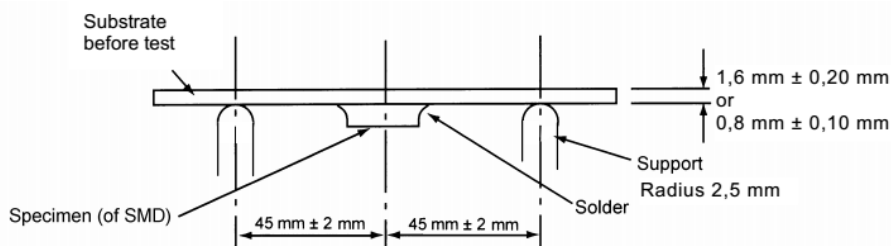
The device should be satisfied after preheating at 120°C~150°C for 120 seconds and dipping in soldering Sn at 255°C+10°C for 5±0.5 seconds, or electric iron 300°C-10°C for 3±0.5 seconds, without damage.

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。

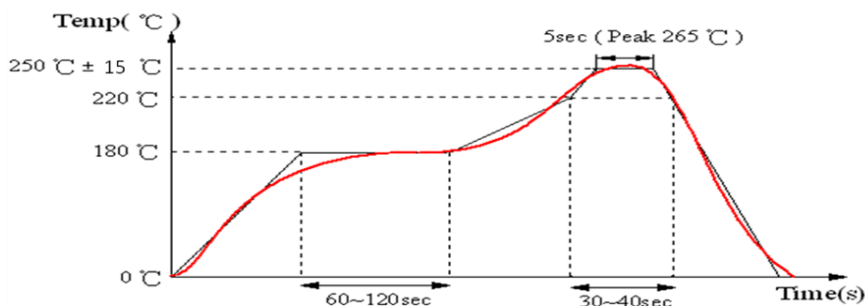
The device should fulfill the electrical specification after exposed to the temperature $-40^\circ\text{C} \pm 5^\circ\text{C}$ for 96 ± 2 hours and to 2 hours recovery time under normal temperature.

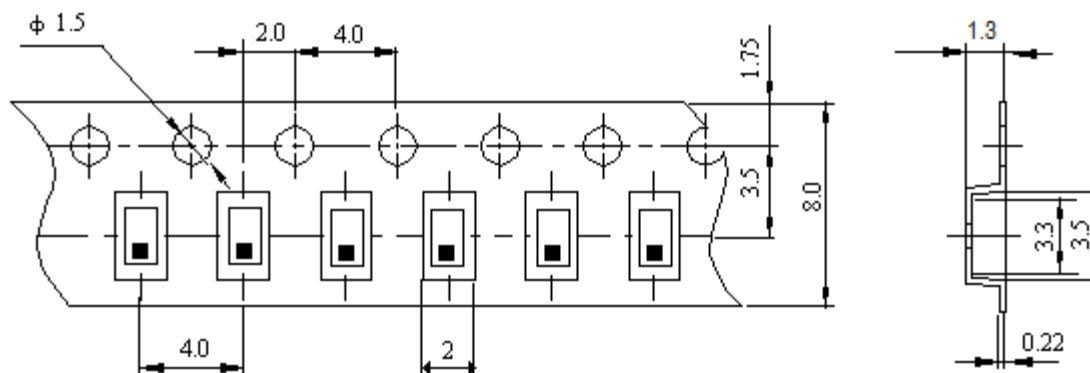
8.9 温度循环 Temperature Cycle Test

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

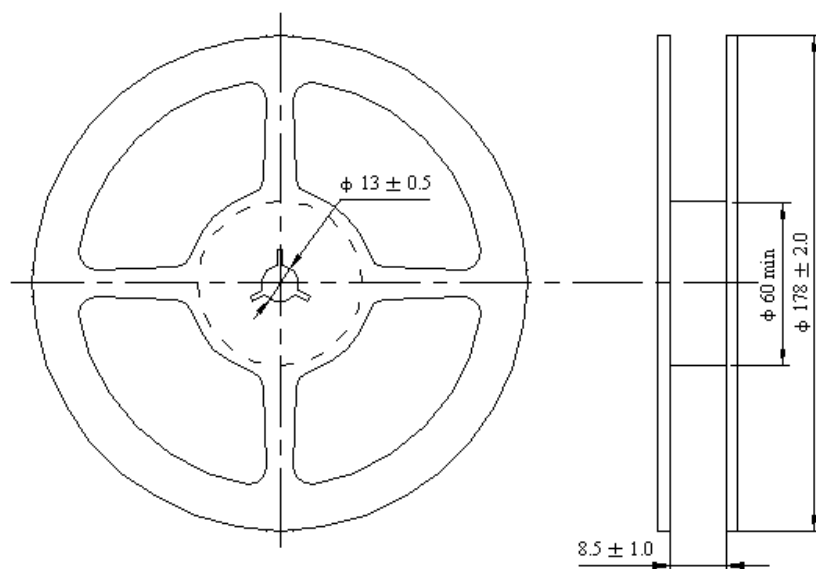


Specification
10 包装尺寸 (3216) Packaging and Dimensions
10.1 Plastic Tape


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