

产品技术规格书

SPECIFICATION

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|--------------------------------|
| 产品型号 PART NO : GL2012H2450-D06 |
| 客户料号 CUSTOMER PART NO : |
| 客户确认 CUSTOMER APPROVED BY : |
| 确认日期 APPROVED DATE : |

RoHS Compliant Parts

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| 拟制 Prepared by : | 审核 Checked by : | 批准 Approved by : |
| 送样日期 Formed On | 产品版本 Document Version (V1.5) | |

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Specification

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 | 孙超 | 陆德龙 | 2015.2.30 |
| V1.1 | 更改产品尺寸公差值 | 罗昌桅 | 卢冠宇 | 2017.05.24 |
| V1.2 | 修正可靠性试验说明内容 8.1~8.4 | 潘枫 | 卢冠宇 | 2017.11.07 |
| V1.3 | 修改焊盘尺寸图 | 潘枫 | 卢冠宇 | 2017.11.23 |
| V1.4 | 修正可靠性项目 9.4 内容 更新回流焊温度曲线图表 修正 11.3 产品储存条件为 MSL:1 | 潘枫 | 卢冠宇 | 2018.06.13 |
| V1.5 | 修正 11.2 载盘宽度 | 潘枫 | 卢冠宇 | 2018.12.28 |
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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.....）。 | | | | |

Specification

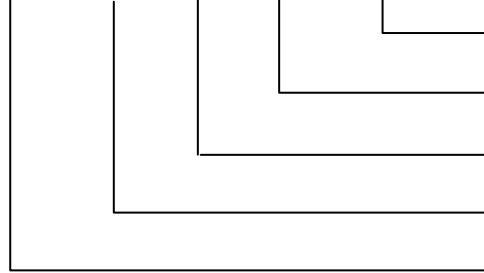
1 概述 INTRODUCTION

"佳利"微波多层陶瓷天线 GL 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、Multi-band Mobile phone antenna, FM, etc and compact size SMD chip design.

2 型号 Part Number

GL 2012 H 2450 - D06



产品名称·编号 D06 /Product Name:D06

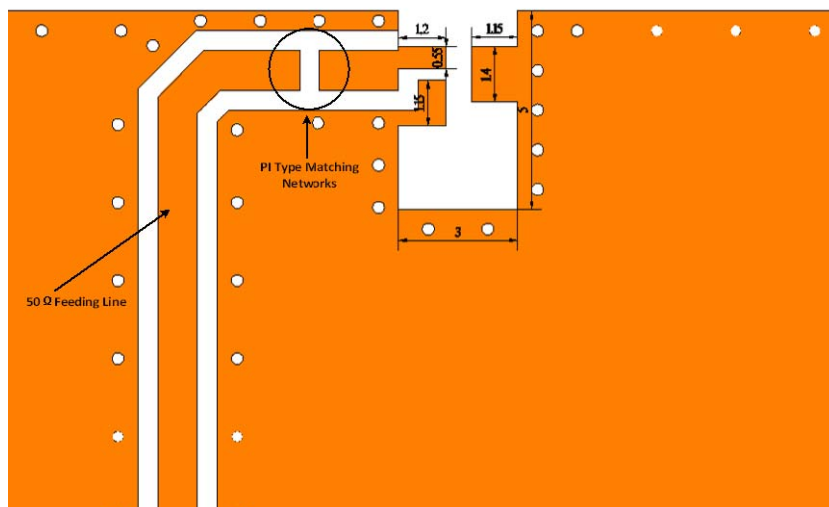
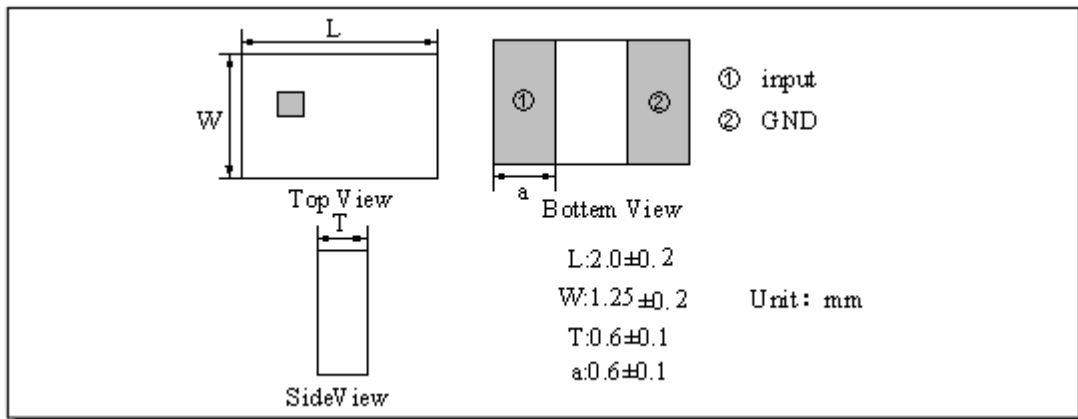
天线频率/ Antenna Frequency: 2450 MHz

产品设计结构 H 型/Via Design Series

产品尺寸/Size : 2.0×1.25×0.6

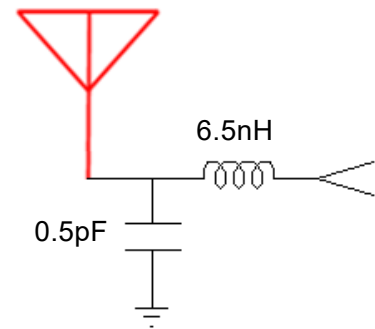
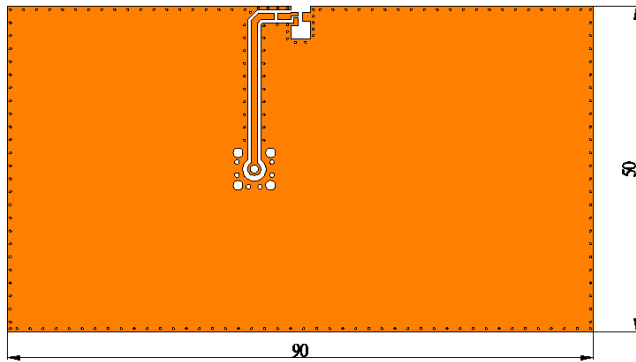
多层结构天线/Multi-layer Antenna

3 外型尺寸及焊盘尺寸 Dimensions (Unit : mm)



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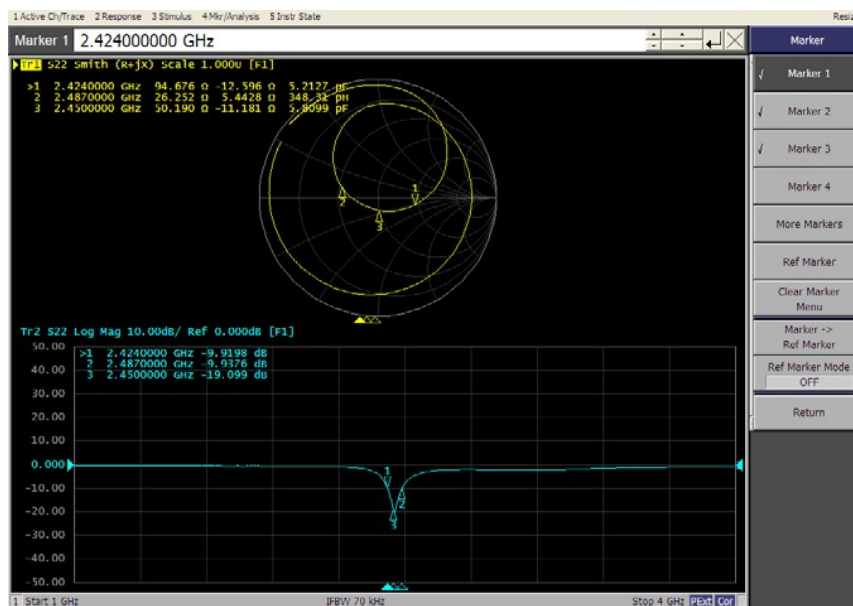
4 测试板和匹配电路 Evaluation Board and Matching Circuits



5 电气性能 Electrical Characteristics

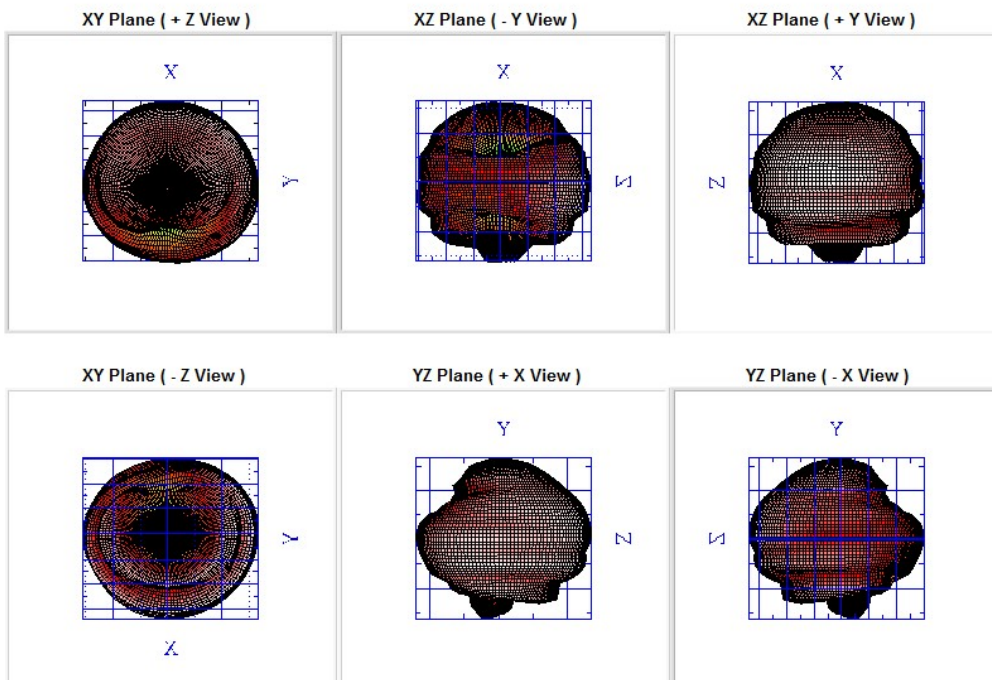
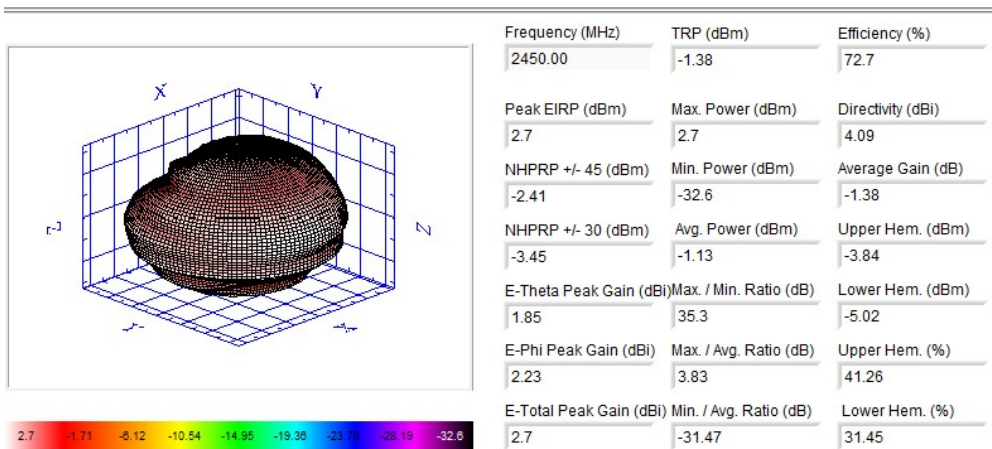
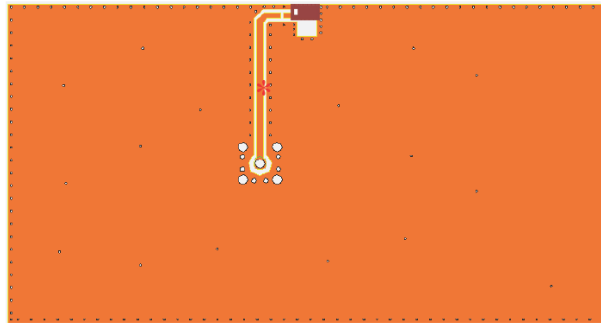
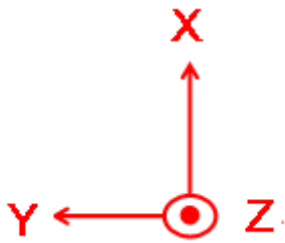
| No. | Item (项目) | Specifications (特性) |
|-----|------------------------------------------------------|---------------------|
| 5.1 | Working Central Frequency 中心工作频率 (After matching) | 2450 MHz |
| 5.2 | Band Width 通带宽度 | 65MHz typ. |
| 5.3 | Peak Gain 峰值增益 | 2.7 dBi |
| 5.4 | V.S.W.R (in BW) 驻波比 | ≤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 Ω |

6 特性曲线 Characteristic curve



Specification

7 方向图 Radiation Pattern



Specification

8 可靠性试验后允许误差 Post Dependability Tolerance

经可靠性试验后允许比起始读数偏差见下表

Post Dependability Tolerance (Refer to the table)

| No. | Item (项目) | Post Dependability Tolerance (可靠性试验后允许附加误差) |
|-----|------------------------|------------------------------------------------|
| 8.1 | Central Frequency 中心频率 | ± 5 MHz |
| 8.2 | Band Width 通带宽度 | ± 5 MHz |
| 8.3 | Gain 增益 | ± 0.1 dBi |
| 8.4 | V.S.W.R (in BW) 驻波比 | ± 0.1 |

9 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 | $-40^\circ\text{C} \sim +85^\circ\text{C}$ |

9.1 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 小时后测试符合表 8.1~8.4 规定。

The device should satisfy the electrical characteristics specified in paragraph 8.1~8.4 after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X, Y and Z directions.

9.2 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 次后测试符合表 8.1~8.4 规定。

The device should satisfy the electrical characteristics specified in paragraph 8.1~8.4 after dropping onto the hard wooden board from the height of 100cm for 3 times each facet of the 3 dimensions of the device.

9.3 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.

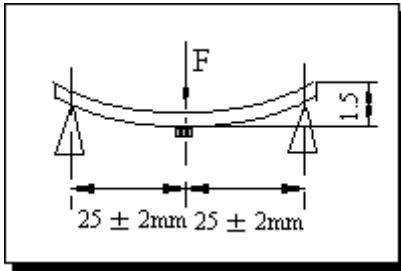
9.4 推力试验 Adhesive Strength of Termination

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.

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9.5 耐弯曲试验 Ben ding Resist Test



将产品按图焊在 $1.6 \pm 0.2\text{mm}$ 的 PCB 板中间，由箭头方向施力： 1mm/S ，弯曲距离： 1.0mm ，保持 $5 \pm 1\text{S}$ ，产品金属层无脱落。

Weld the product to the center part of the PCB with the thickness $1.6 \pm 0.2\text{mm}$ as the illustration shows, and keep exerting force arrow-ward on it at speed of 1mm/S , and hold for $5 \pm 1\text{S}$ at the position of 1.5mm bending distance, so far, any peeling off of the

product metal coating should not be detected.

9.6 耐湿热特性 Mois ture Proof

在温度为 $60 \pm 2^\circ\text{C}$ ，相对湿度 $90 \sim 95\%$ 的恒温湿箱中放置 96 小时，在常温中恢复 $1 \sim 2$ 小时后测试，符合表 8.1~8.4 规定。

The device should satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to the temperature $60 \pm 2^\circ\text{C}$ and the relative humidity $90 \sim 95\%$ RH for 96 hours and $1 \sim 2$ hours recovery time under normal condition.

9.7 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 $1 \sim 2$ 小时后测试。符合表 8.1~8.4 规定。

The device should satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to temperature $85 \pm 5^\circ\text{C}$ for 96 ± 2 hours and $1 \sim 2$ hours recovery time under normal temperature.

9.8 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 $1 \sim 2$ 小时测试符合表 8.1~8.4 规定。

The device should also satisfy the electrical characteristics specified in paragraph 8.1~8.4 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.

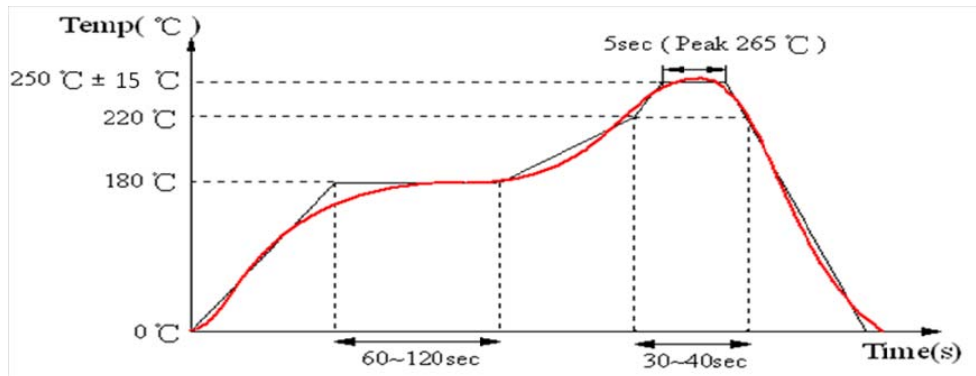
9.9 温度循环 Temperature Cycle Test

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 $1 \sim 2$ 小时后测试符合表 8.1~8.4 规定。

The device should also satisfy the electrical characteristics specified in paragraph 8.1~8.4 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.

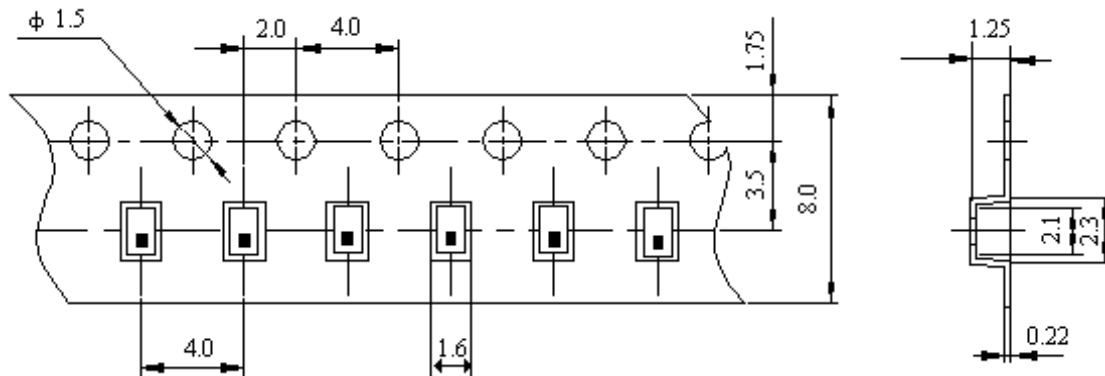
Specification

10 回流焊温度 Reflow Soldering Standard Condition



11 包装尺寸(2012) Packaging and Dimensions

11.1 Plastic Tape



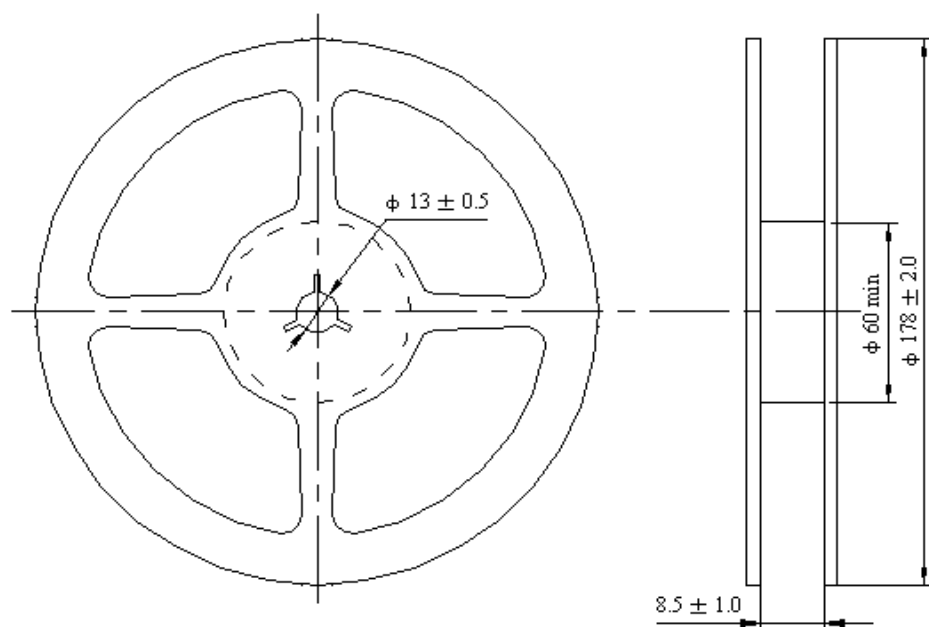
包装说明： Remarks for Package

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.

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11.2 Reel (4000 pcs/Reel)



11.3 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