

# 产品技术规格书

## SPECIFICATION

产品型号 PART NO: **LTA312450**

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

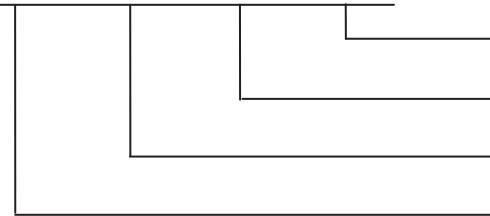
## 1. 概述 INTRODUCTION

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。

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

LTA 31 2450 - P3M



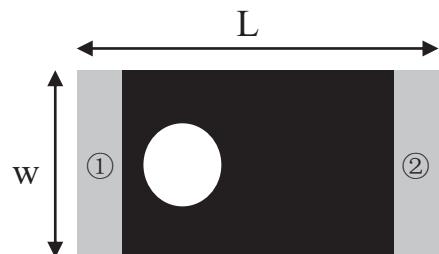
产品名称，编号 P3M / Product Name: P3M

天线频率/ Antenna Frequency: 2450 MHz

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)



Number	Terminal Name
①	INPUT
②	NC

( Top View )



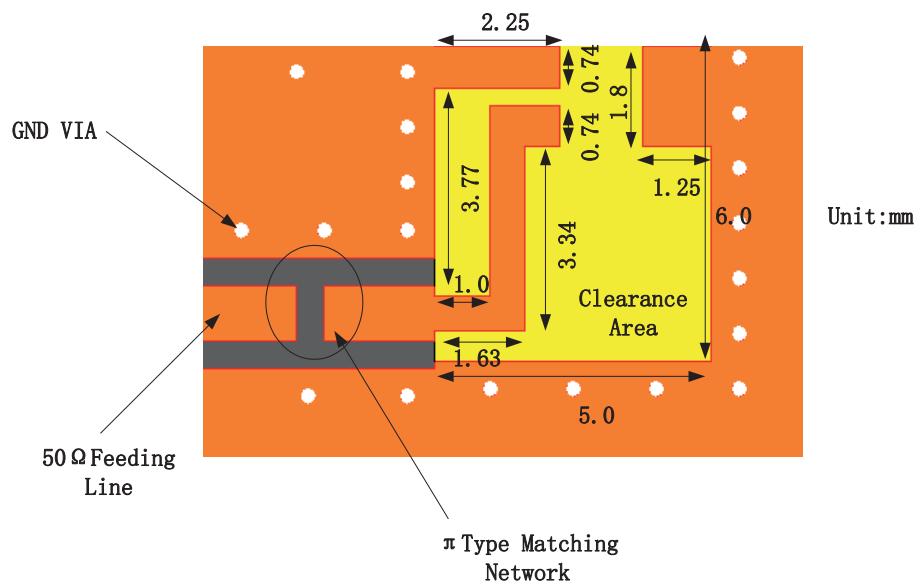
( Side View )

( Bottom View )

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

#### 4. 测试电路和匹配电路

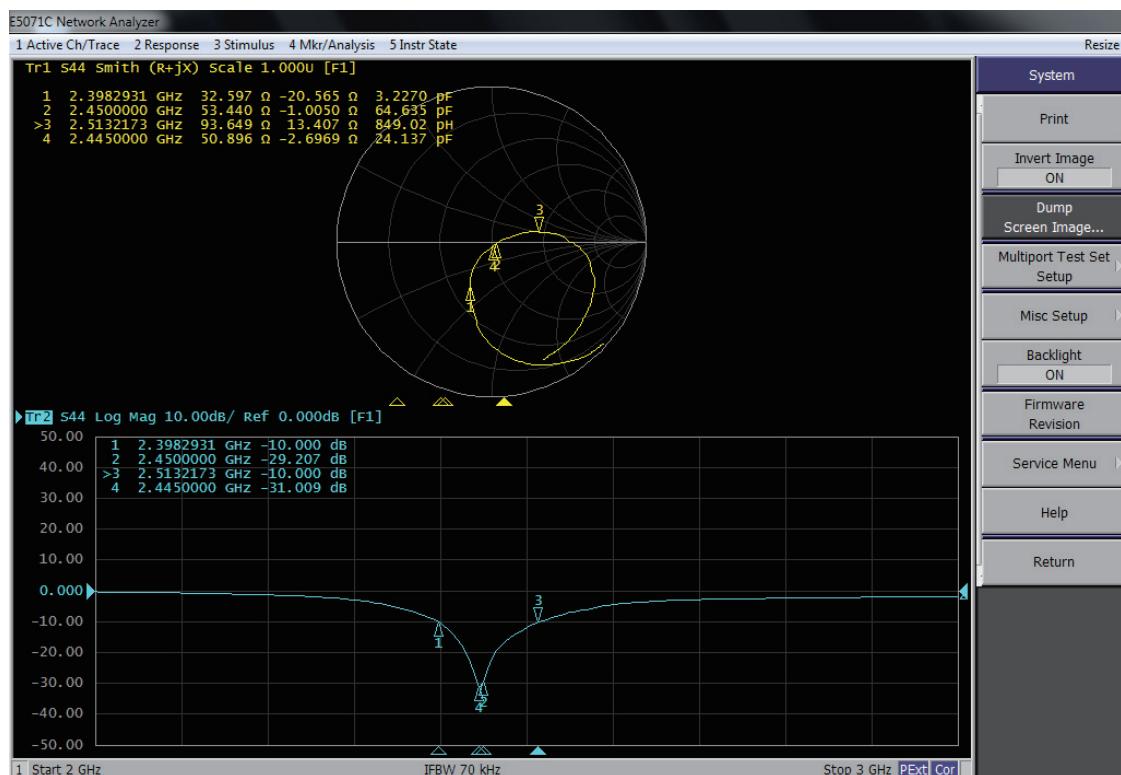
#### Evaluation Board and Matching Circuits



## 5. 电气性能 Electrical Characteristics

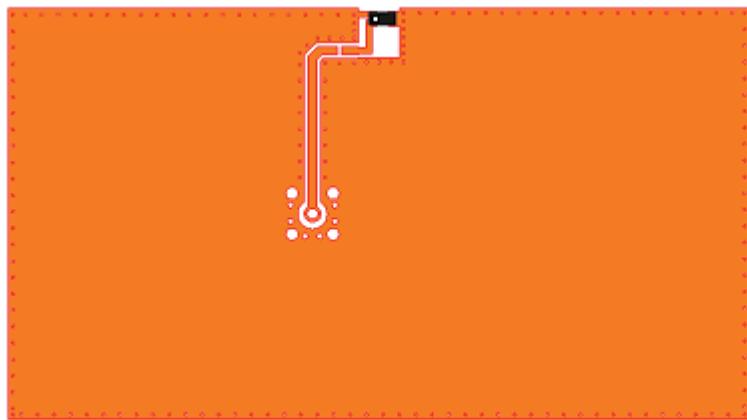
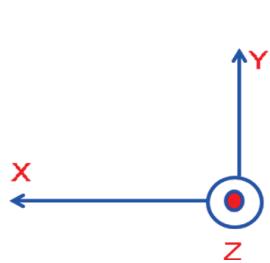
No.	Item (项目)	Specifications (特性)
5.1	Central Frequency 中心频率	2450MHz
5.2	Band Width 通带宽度	100 MHz typ.
5.3	Peak Gain 峰值增益	3 dBi
5.4	Return Loss 回波损耗	≤2.0
5.5	Polarization 极化方式	Linear 线性
5.6	Azimuth Beam width 方位角	Omni-directional 全向
5.7	Impedance 阻抗	50 欧姆

## 6. 特性曲线 Characteristic curve

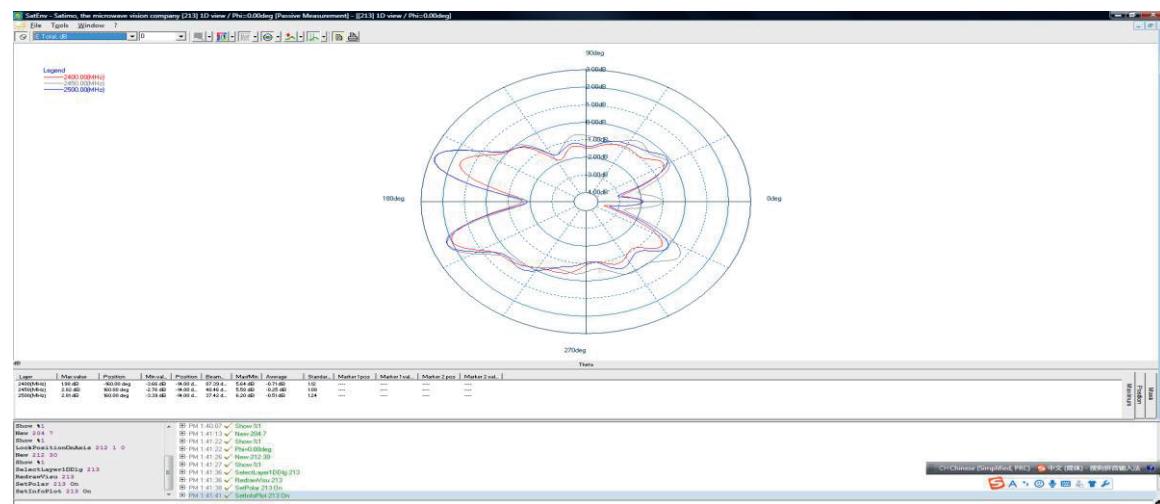


## 7. 方向图 Radiation Pattern

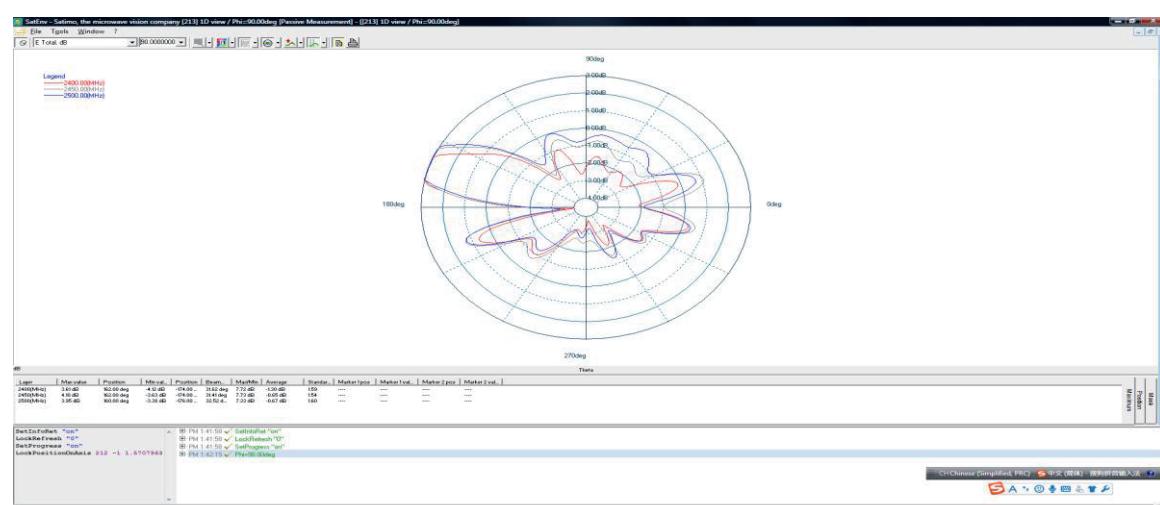
coordinates:



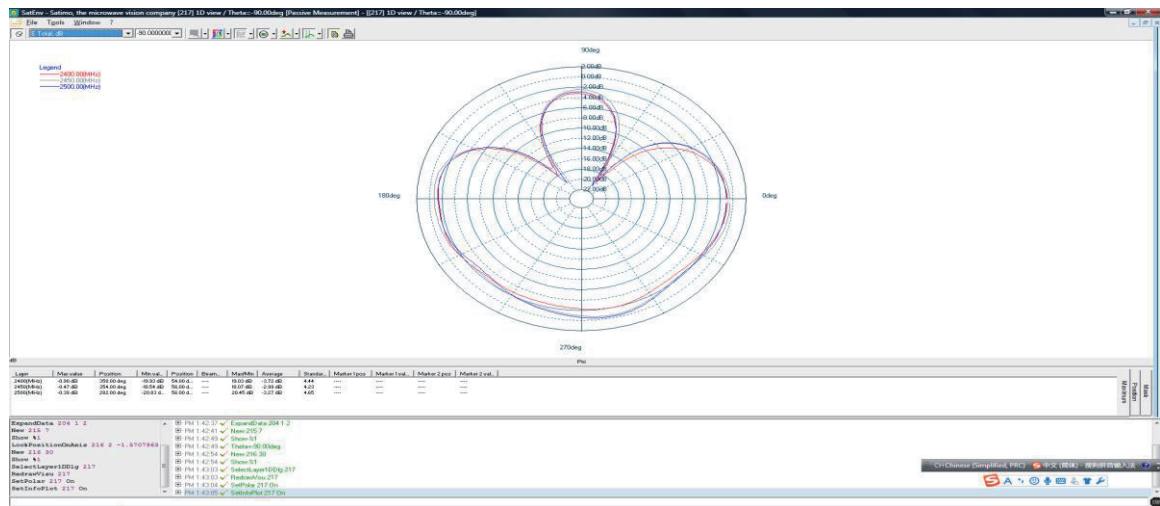
X-Z Plane



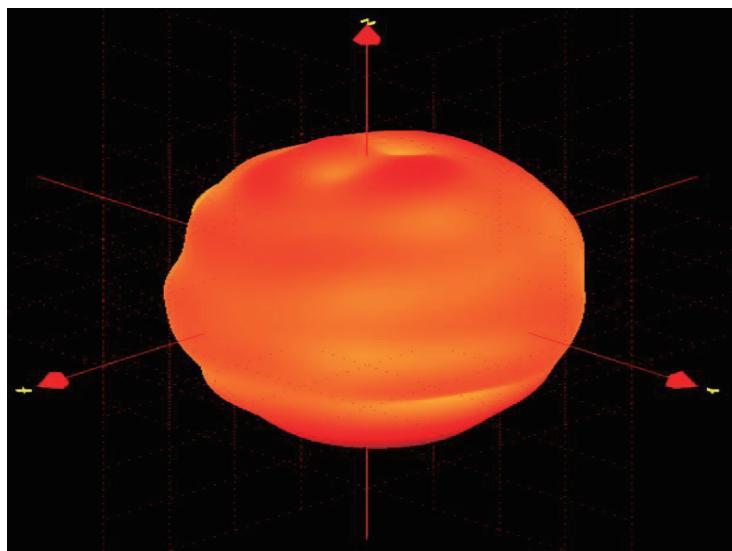
X-Y Plane



## Y-Z Plane



## 3D Radiation Pattern



Frequency (MHz)	2400	2450	2500
Avg. Gain (dBi)	-1.91	-1.30	-1.48
Peck Gain (dBi)	1.76	3	2.53
Efficiency (%)	72.1	78.2	71.8

## 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。

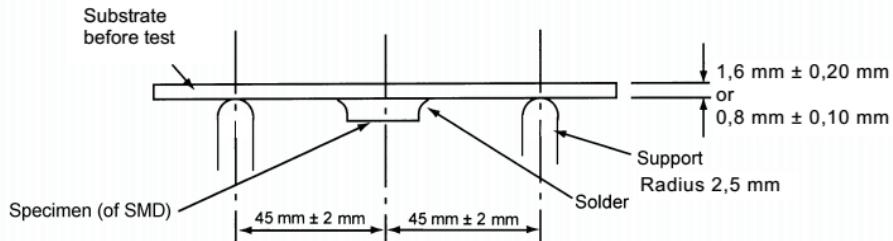
The device should be satisfied after preheating at 120°C~150°C for 120 seconds and dipping in soldering Sn at 255°C+10°C for 5±0.5 seconds, or electric iron 300°C-10°C for 3±0.5 seconds, without damage.

### 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 .

## 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 $\pm 2$  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 $\pm 2$  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 $\pm 2$  小时后恢复 1~2 小时, 测试需符合电气性能指标。

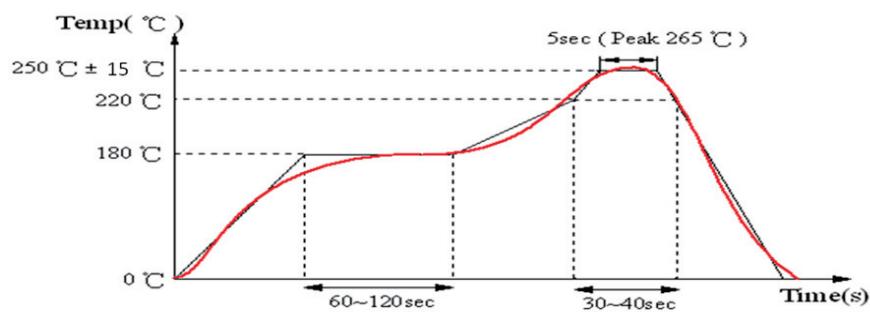
The device should fulfill the electrical specification after exposed to the temperature  $-40^\circ\text{C} \pm 5^\circ\text{C}$  for 96 $\pm 2$  hours and 1~2 hours recovery time under normal temperature.

## 8.9 温度循环 Temperature Cycle Test

在  $-40^\circ\text{C}$  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。

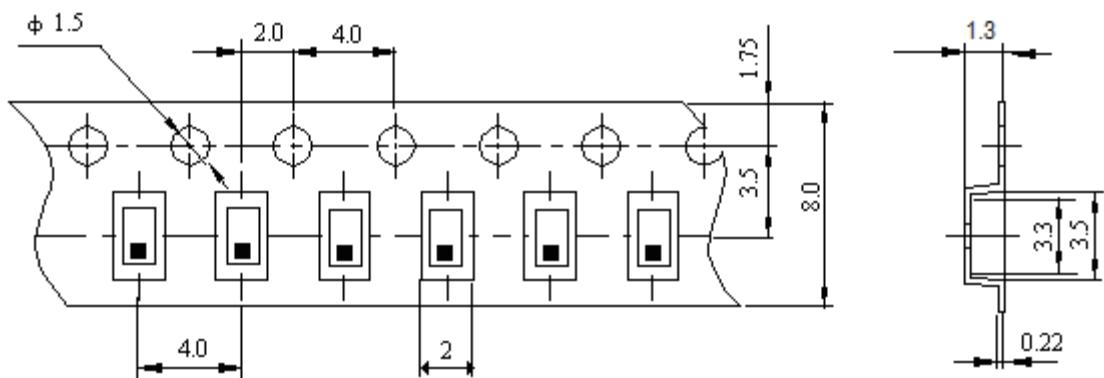
The device should fulfill the electrical specification after exposed to the low temperature  $-40^\circ\text{C}$  and high temperature  $+85^\circ\text{C}$  for  $30 \pm 2$  min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

## 9 回流焊温度 Reflow Soldering Standard Condition



## 10 包装尺寸 (3216) Packaging and Dimensions

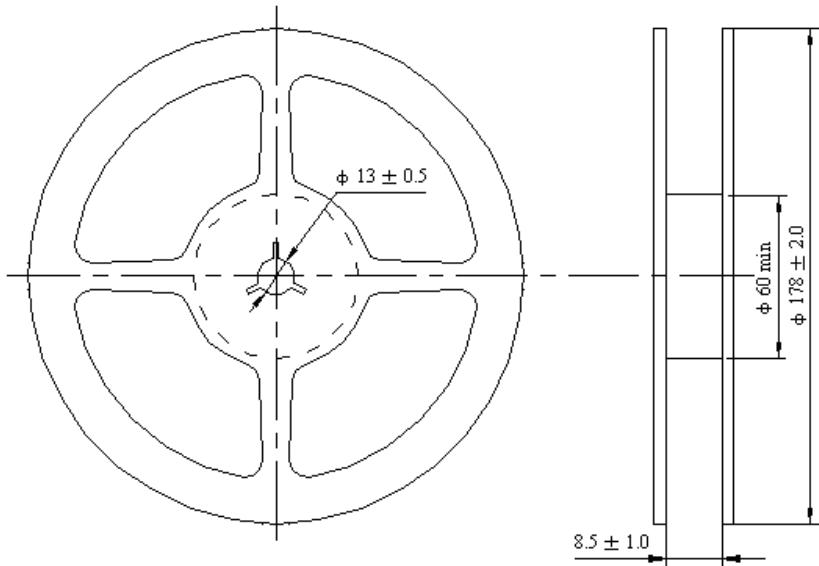
### 10.1 Plastic Tape



### 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