1. 概述 INTRODUCTION

微波多层陶瓷天线ANT系列产品设计用于WLAN、WiFi、蓝牙、PHS，手机多频天线, FM 等小体积SMD 片式设计。

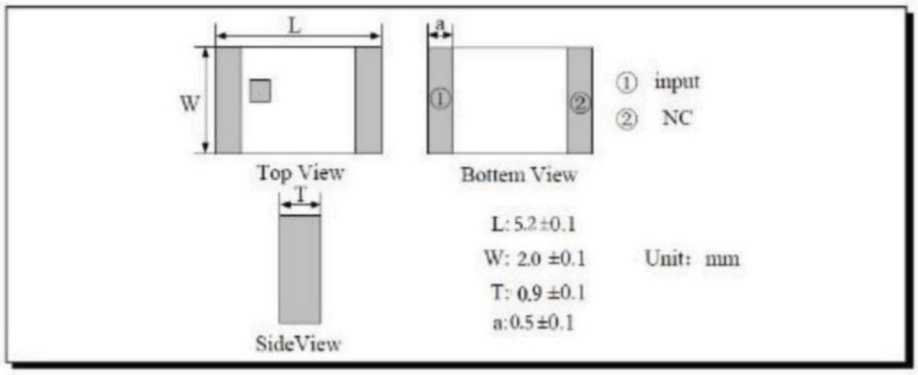
Microwave Multi-Layer Ceramic Antenna ANT series are designed to be used in WLAN、WiFi、Bluetooth、PHS、 Multiple-band Mobile phone antenna, FM, etc and compact size SMD chip design.

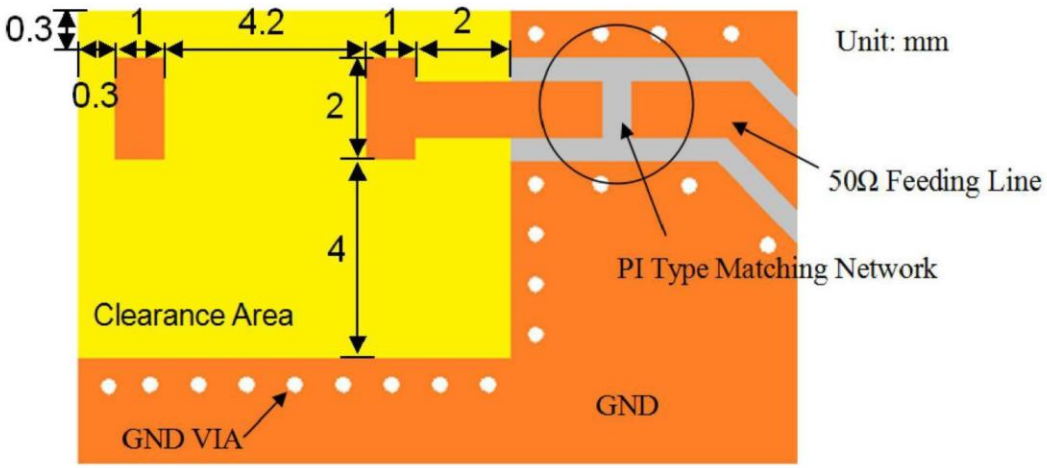
2. 型号 Part Number

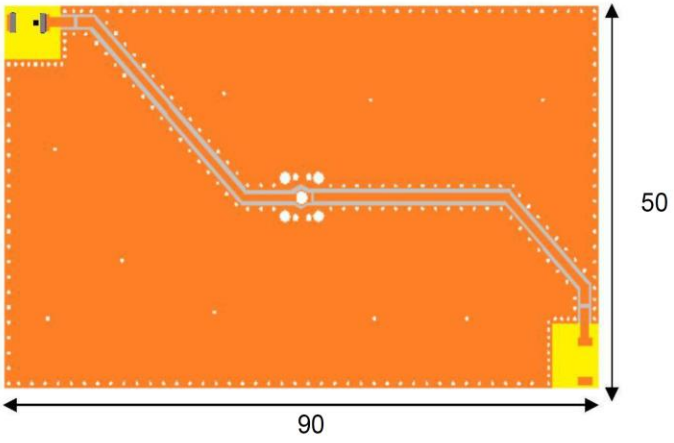
ANT 52 H 2450 – A36/S

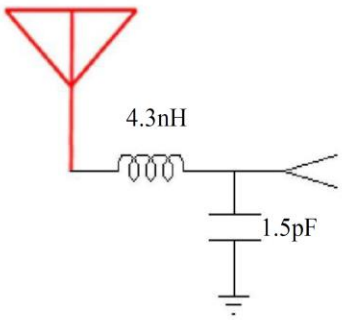
- A36/S：产品名称，编号 A36/Proudct Name: A36/S
- 2450：天线频率/ Antenna Frequency: 2450 MHz
- H：产品设计结构 H 型/Via Design Series
- 52：产品尺寸/Size：5.2×2.0×0.9
- ANT：多层结构天线/Multi-layer Antenna

3. 外型尺寸及测试板焊盘尺寸 Dimensions（Unit：mm）




0.3
1
4.2
1
2
0.3
2
4
Unit: mm
50Ω Feeding Line
PI Type Matching Network
Clearance Area
GND
GND VIA

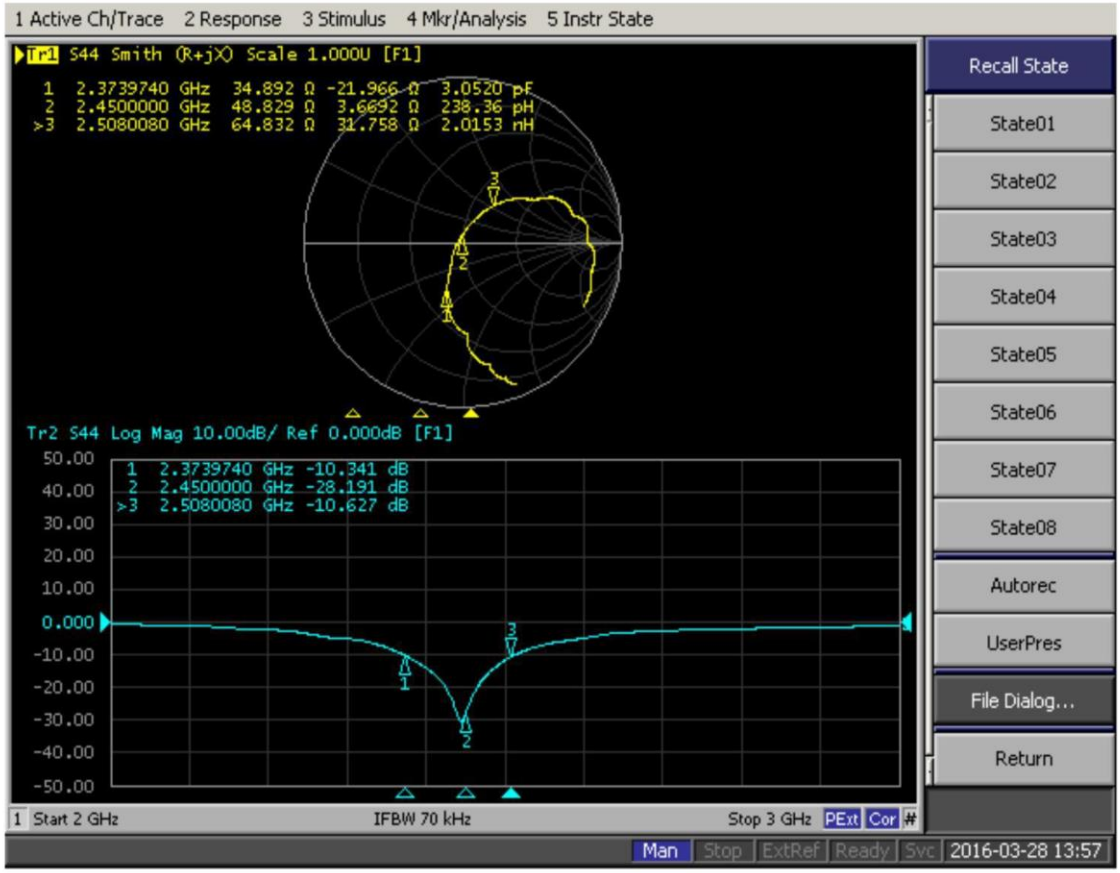

50
90


4.3nH
1.5pF

5. 电气性能 Electrical Characteristics

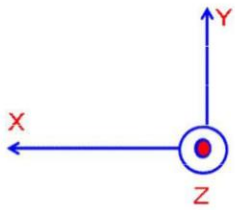
No.	Item （项目）	Specifications （特性）
5.1	Working Central Frequency 中心工作频率	2450 MHz
5.2	Band Width 通带宽度	100MHz typ.
5.3	Peak Gain 峰值增益	4.25 dBi
5.4	V.S.W.R 驻波比	≤2.0
5.5	Polarization 极化方式	Linear 线性
5.6	Azimuth Beam width 方位角	Omni-directional 全向
5.7	Impedance 阻抗	50 Ω

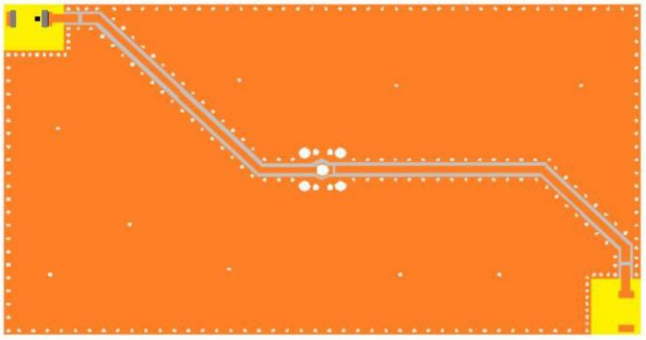
6. 特性曲线 Characteristic curve



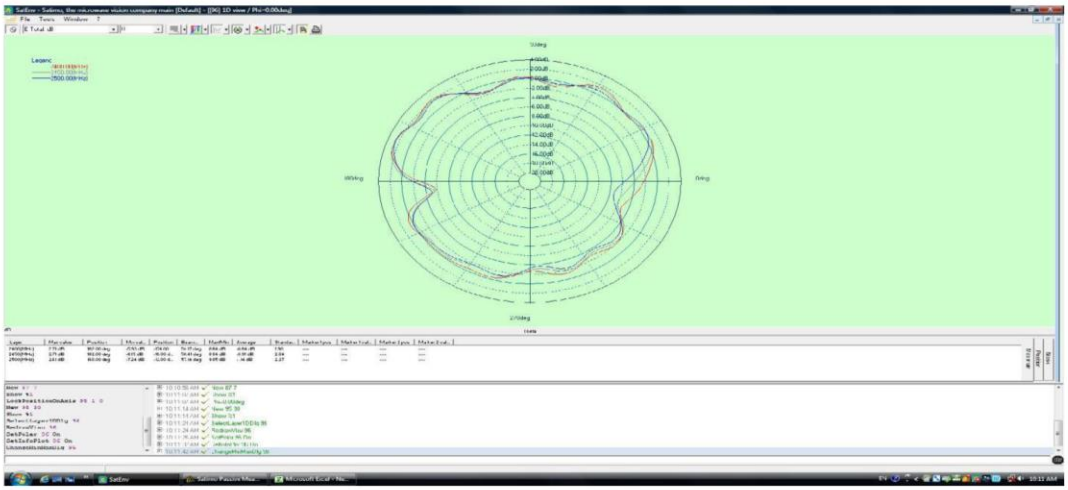
7. 方向图及效率 Radiation Pattern & Efficiency

coordinates：

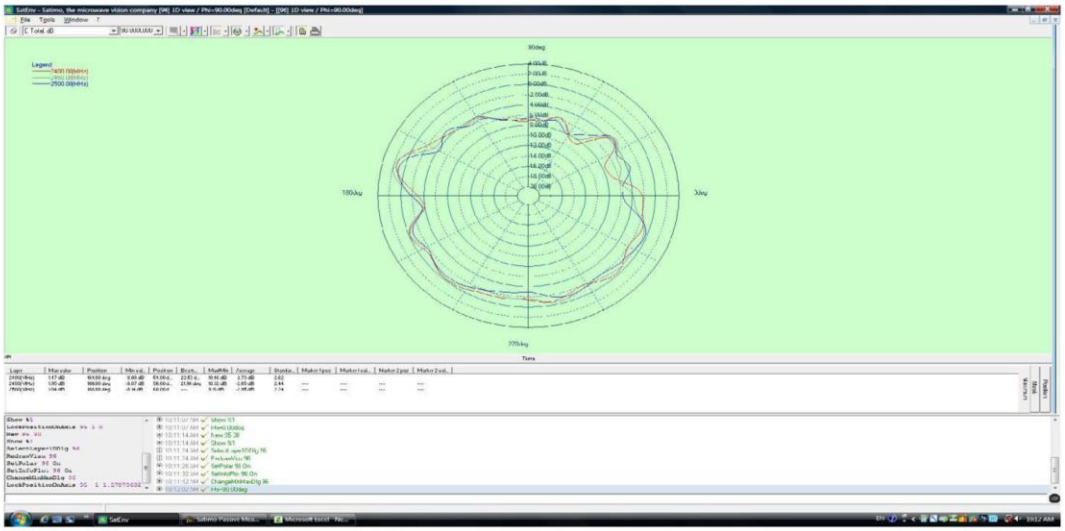




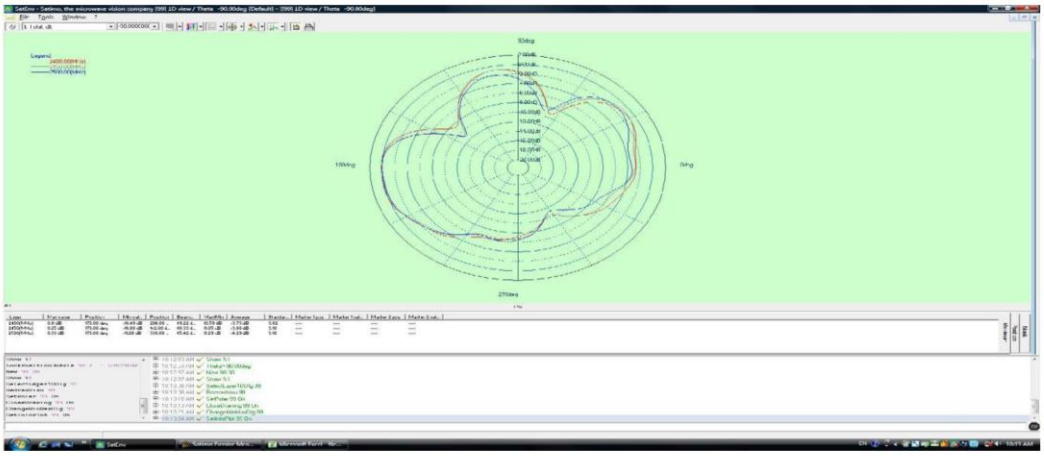
X-Z Plane Plane



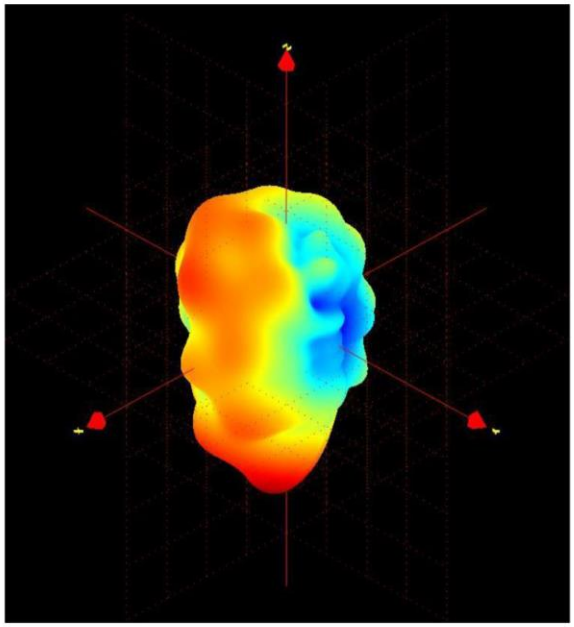
Y-Z Plane



X-Y Plane



3D Radiation Pattern



Frequency (MHz)	2400	2450	2500
Avg. Gain (dBi)	-0.64	-0.91	-1.14
Peck Gain (dBi)	3.97	4.25	4.03
Efficiency (%)	71.2	72.5	70.8

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±5℃

相对湿度范围 Relative Humidity range 55~75%RH

工作温度 Operating Temperature range -40℃~+85℃

贮藏温度 Storage Temperature range -40℃~+85℃

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9.1~9.4 规定。

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 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9.1~9.4 规定。

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 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℃的温度预热120 秒后，在255℃+10℃的焊锡浸5±0.5 秒，或300℃-10℃的电烙铁焊接3±0.5 秒，焊接面无损伤。

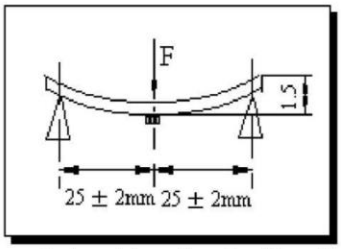
The device should be satisfied after preheating at 120℃~150℃ for 120 seconds and dipping in soldering Sn at 255℃+10℃ for 5±0.5 seconds，or electric iron 300℃-10℃ for 3±0.5 seconds，without damnify.

9.4 结合力试验 Tensile Strength of Terminal

在产品电极端子上或表面上应能承受1kg垂直拉力10±1秒。

The device should not be broken after tensile force of 1.0kg is slowly applied to pull a lead pin of the fixed device in the lead axis direction for 10±1 seconds.

9.5 耐弯曲试验 Bending Resist Test



将产品按图焊在1.6±0.2mm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 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 .

在温度为60±2℃，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，符合表9.1~9.4 规定。

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to the temperature 60±2℃and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condlition.

9.7 高温特性 High Temperature Endurance

在温度为85±5℃的恒温箱中放置96±2 小时，在常温中恢复1~2 小时后测试。符合表9.1~9.4 规定。

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to temperature 85±5℃for 96±2 hours and 1~2 hours recovery time under normal temperature.

9.8 低温特性

在温度为-40℃±5℃低温箱中放置96±2 小时后恢复1~2 小时测试符合表9.1~9.4 规定。

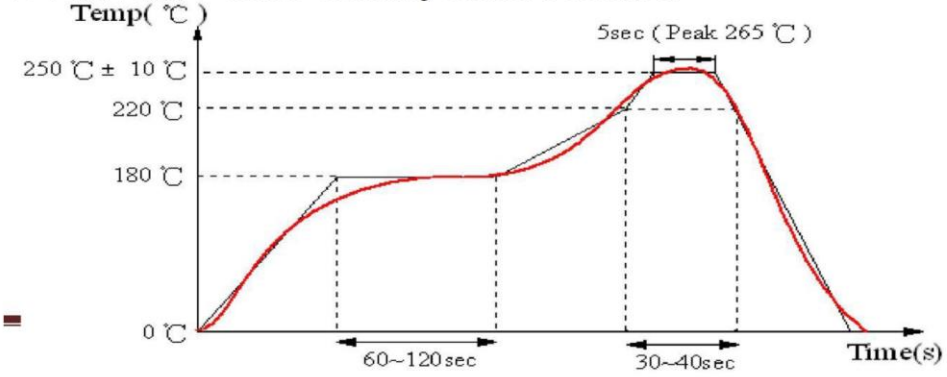
The device should also satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to the temperature -40℃±5℃ for 96±2 hours and to 2 hours recovery time under normal temperature.

9.9 温度循环 Temperature Cycle Test

在-40℃温度中保持30 分钟，再在+85℃温度中保持30 分钟，共循环5 次后在常温中恢复1~2 小时后测试符合表9.1~9.4 规定。

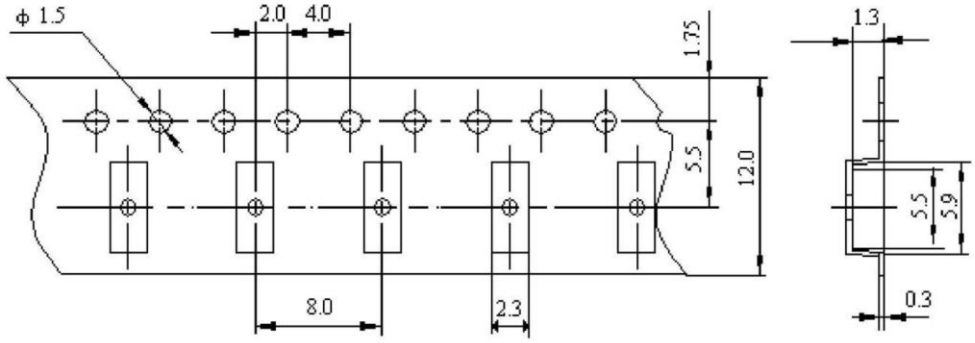
The device should also satisfy the electrical characteractics specified in paragraph 9.1~9.4 after exposed to the low temperature -40℃ and high temperature +85℃ for 30±2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

10 回流焊温度 Reflow Soldering Standard Condition



11包装尺寸(5220) Packaging and Dimensions

11.1 Plastic Tape

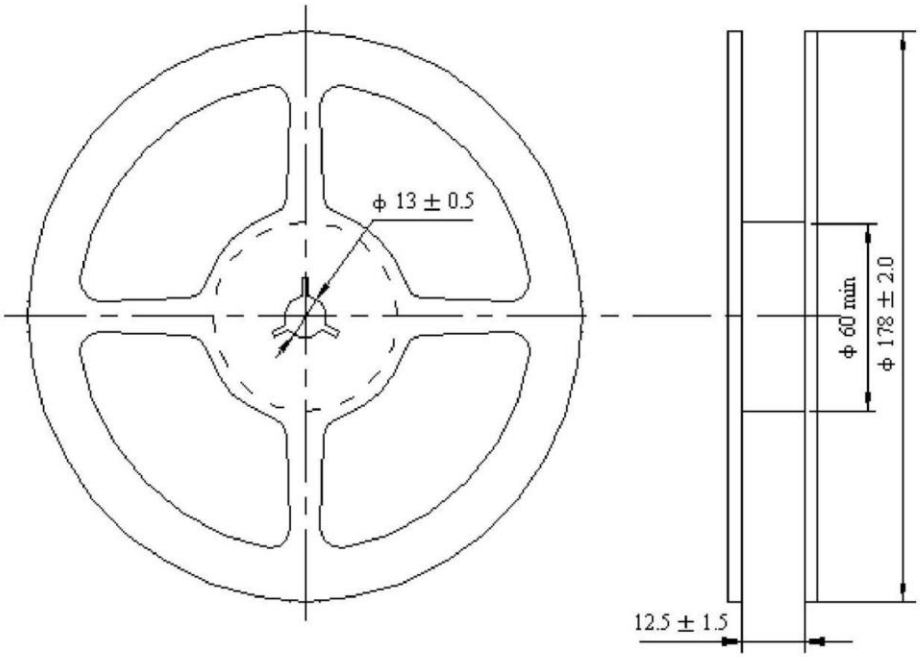


包装说明： Remarks for Package

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.

11.2 Reel（1000 pcs/Reel）



11.3 储存条件 Storage Period

易氧化产品，产品拆封后请于48小时内用完或重新密封包装！

Oxidizable. material,please repack within 48 hours by re-seal the package treatment after use them!