产品技术规格书

SPECIFICATION

产品型号 PART NO:	**KH-10025-A81**
客户料号 CUSTOMER PART NO:	
客户确认 CUSTOMER APPROVED BY:	
确认日期 APPROVED DATE:	

RoHS Compliant Parts

拟制 Prepared by:	审核 Checked by ：	批准 Approved by:

送样日期 Formed On	产品版本 Document Version (V1.1)

目　录

Table of contents

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	胡景皓	罗昌桅	2022.10.14
V1.1	修改第3点外型尺寸L数值以及调整外型	胡景皓	罗昌桅	2022.10.27

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……）。

1. 概述　INTRODUCTION

"金航标"微波多层陶瓷天线 LA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。

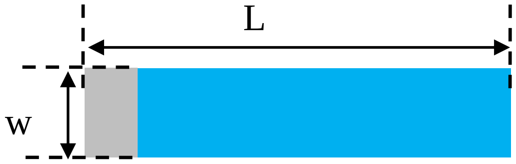
"KH" Microwave Multi-Layer Ceramic Antenna LA series are designed to be used in WLAN、WiFi、Bluetooth、PHS、 Multiple-band Mobile phone antenna, FM, etc and compact size SMD chip design.

2. 型号　KH-10025-A81

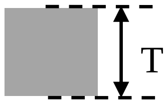
3. 外型尺寸　Dimensions（Unit：mm）

Number	Terminal Name
①	INPUT

(Top View)



(Bottom View)

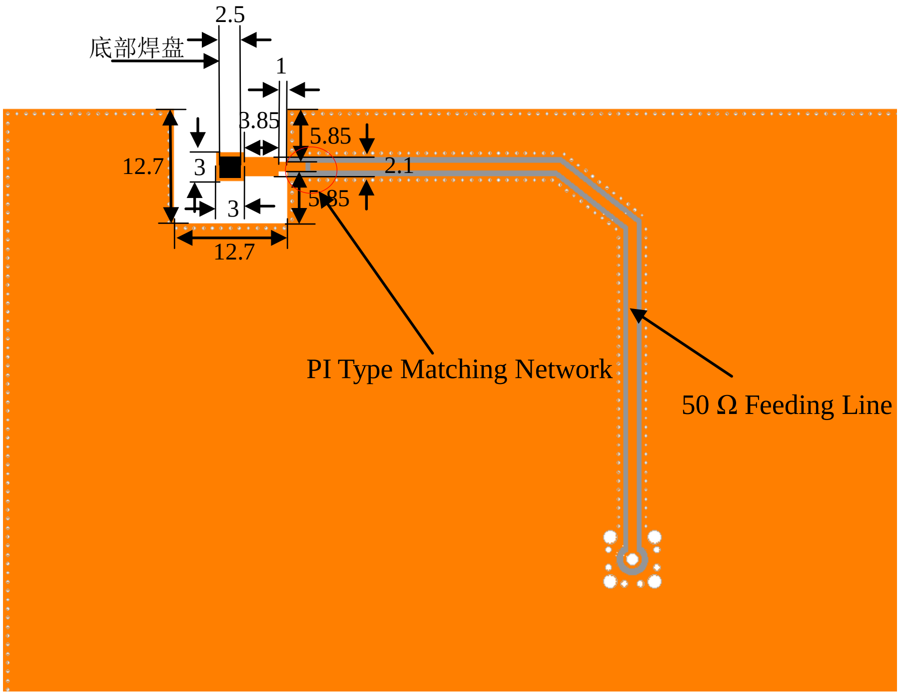


(Side View)

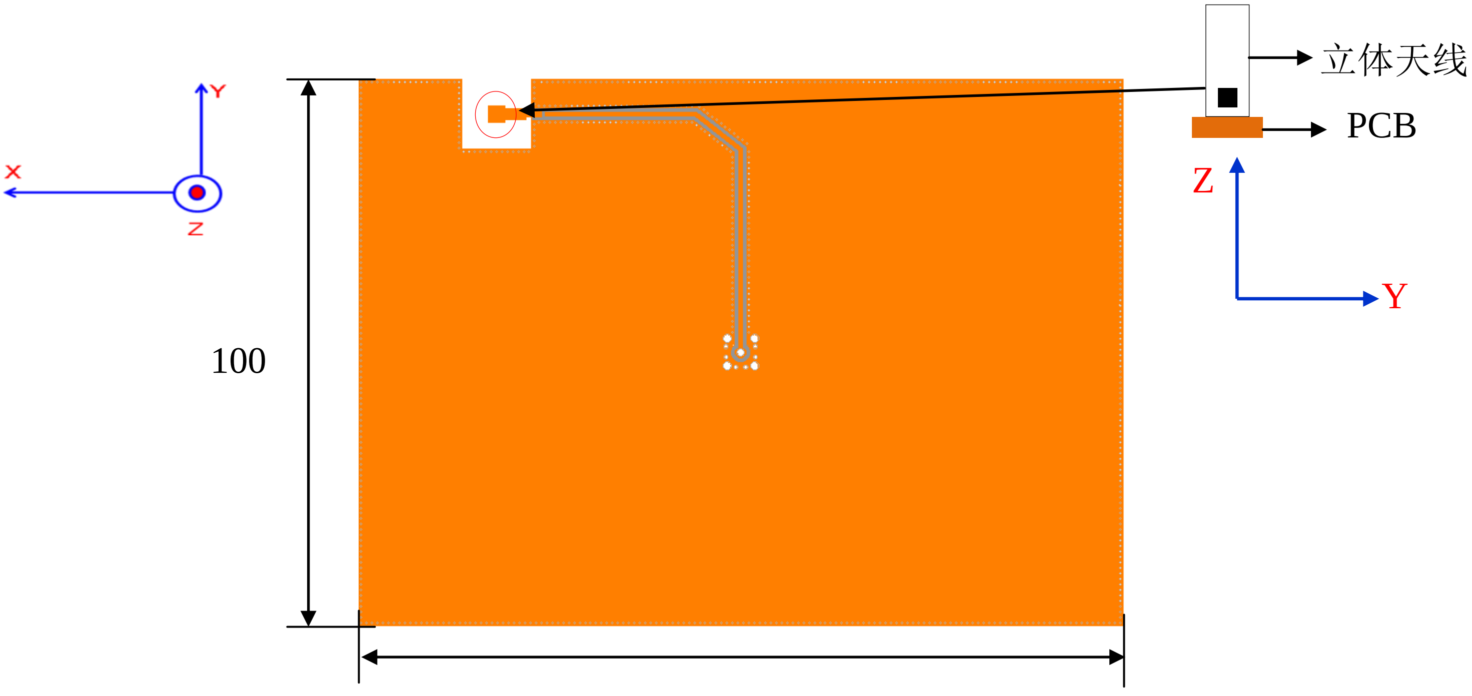
(Side View)

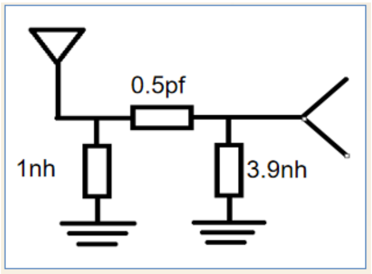
Symbols	L	W	T	A
Dimensions	10+/-0.2	2.5+/-0.2	2.5+/-0.1	0.5+/-0.1

Unit:mm



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

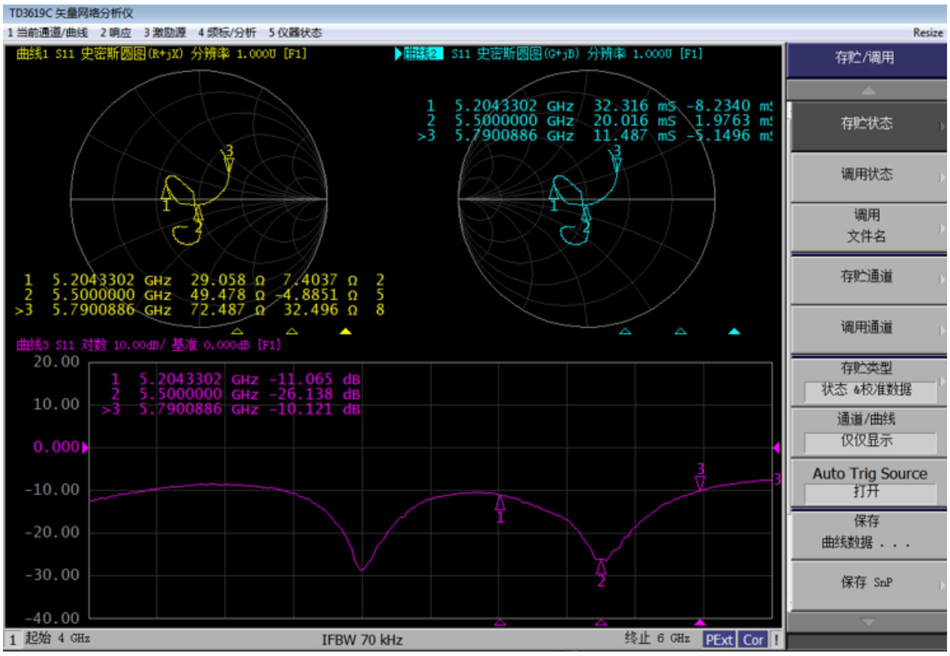




5. 电气性能　Electrical Characteristics

No.	Item （项目）	Specifications （特性）
5.1	(带匹配电路测试)After Matching	5500MHz
5.2	Band Width　通带宽度	100MHz Typ.
5.3	Peak Gain　峰值增益	3.2 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



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曲线1 S11 史密斯圆图(R+jX) 分辨率 1.000U [F1]
 1   5.2043302 GHz  29.058 Ω   7.4037 Ω  2
 2   5.5000000 GHz  49.478 Ω  -4.8851 Ω  5
>3   5.7900886 GHz  72.487 Ω  32.496 Ω   8

曲线2 S11 史密斯圆图(G+jB) 分辨率 1.000U [F1]
 1   5.2043302 GHz  32.316 mS  -8.2340 m
 2   5.5000000 GHz  20.016 mS   1.9763 m
>3   5.7900886 GHz  11.487 mS  -5.1496 m

曲线3 S11 对数 10.00dB/ 基准 0.000dB [F1]
 1   5.2043302 GHz -11.065 dB
 2   5.5000000 GHz -26.138 dB
>3   5.7900886 GHz -10.121 dB

1 起始 4 GHz        IFBW 70 kHz        终止 6 GHz
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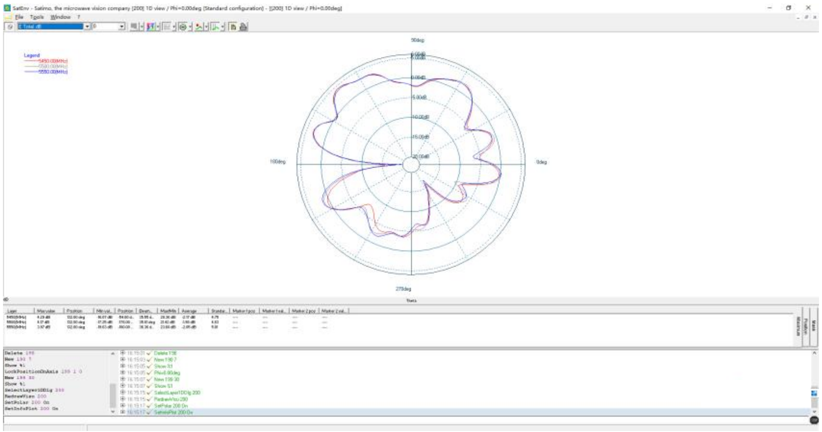
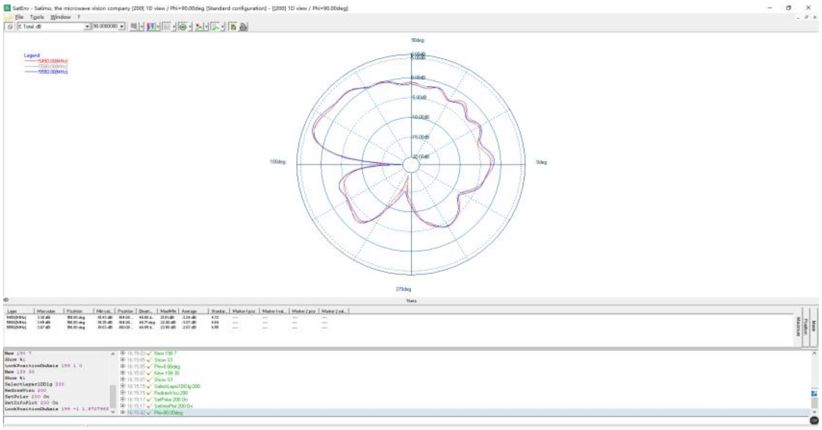
7.方向图 **3D Radiation Pattern**

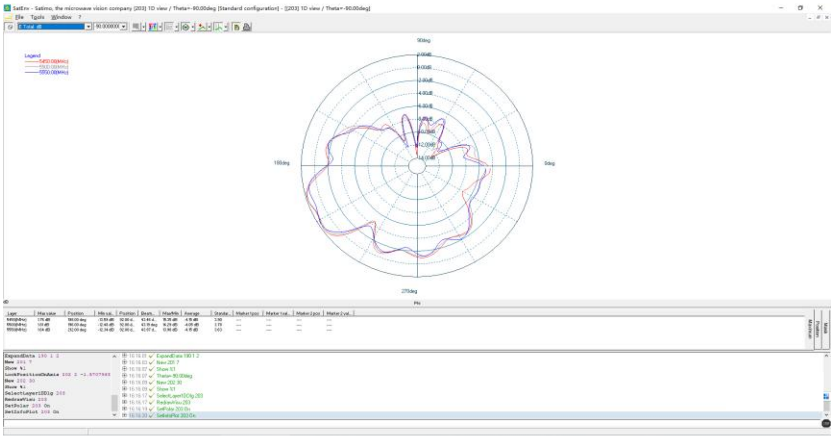
X-Z

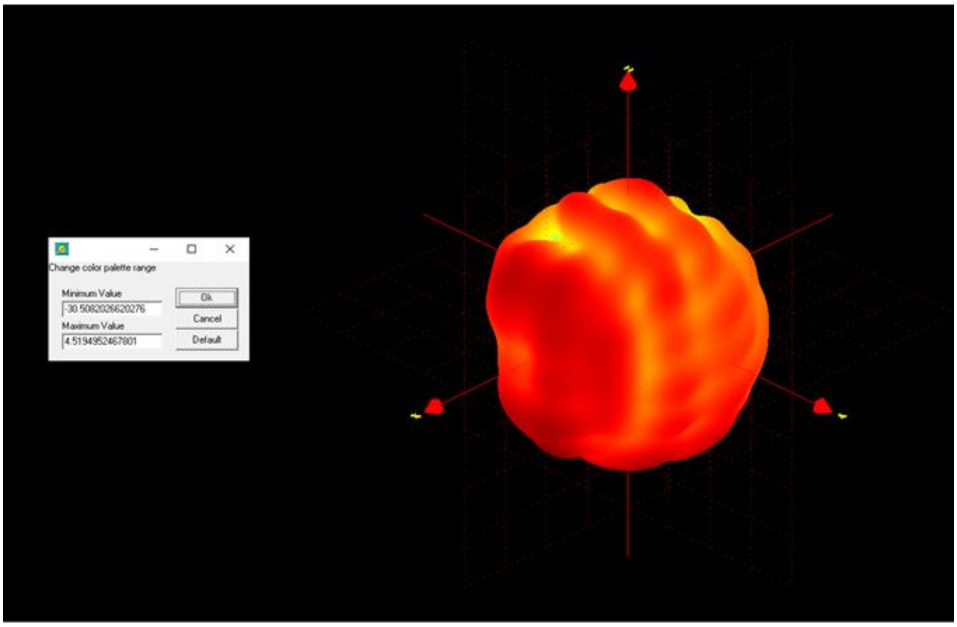


Y-Z



X-Y





Change color palette range

Minimum Value: -30.5082026620276

Maximum Value: 4.5194952467801

Frequency (MHz)	5450	5500	5550
Peak Gain (dBi)	3.1	3.1	3.2
Avg.Gain(dBi)	-3.2	-3.0	-3.1
Efficiency (%)	63	63.3	62

8. 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℃

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.

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.

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。

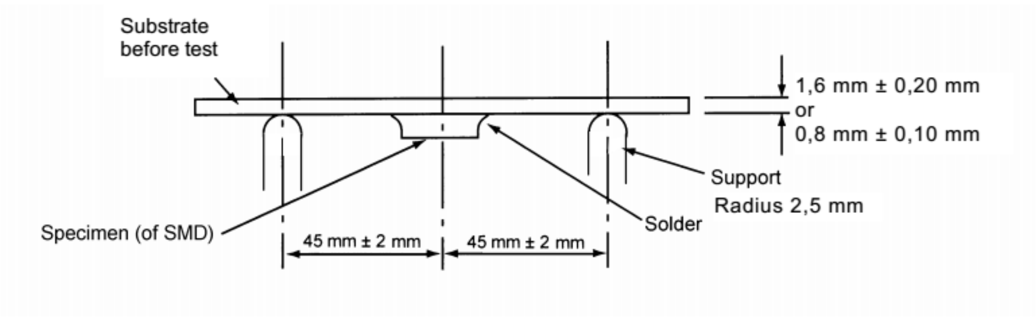
The device should be satisfied after preheating at 120℃~150℃ for 120 seconds and dipping in soldering Sn at 255℃+10℃ for 5±0.5 seconds，or electric iron 300℃-10℃ for 3±0.5 seconds，without damnify.

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±2°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，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±2℃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±5˚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。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±5℃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℃ ±5℃低温箱中放置 96±2 小时后恢复 1~2 小时测试符合表 8.1~8.4 规定。

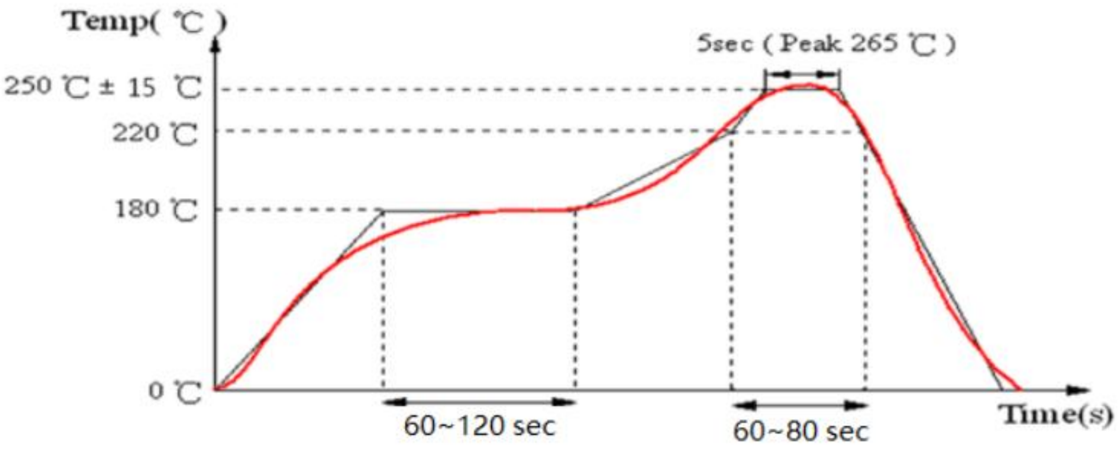
The device should also satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to the temperature -40℃±5℃ for 96±2 hours and to 2 hours recovery time under normal temperature.

8. 9 温度循环 **Temperature Cycle Test**

在-40˚C温度中保持 30 分钟，再在+85˚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℃ and high temperature +85℃ 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**



10. 包装尺寸(1025)　**Packaging and Dimensions**

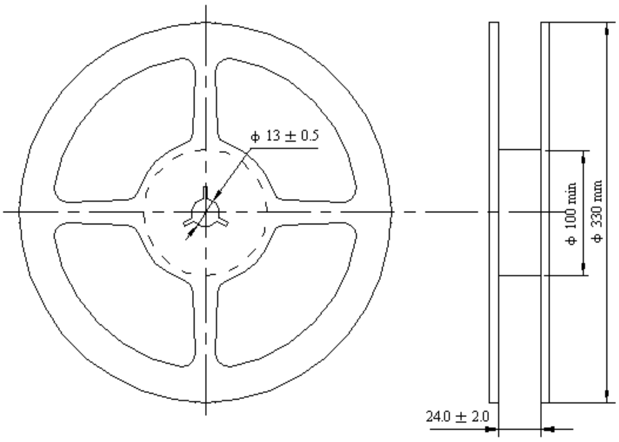
10. 1 Plastic Tape（待更新）

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（XX pcs/Reel）



10. 3 储存条件　Storage Period

产品收到后一年内使用完毕.

Product should be used within twelve 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