

产 品 技 术 规 格 书

SPECIFICATION

产品型号 PART NO: LA52H2450/5500-A28
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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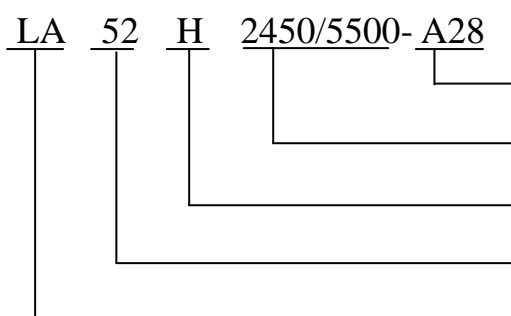
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1. 概述 INTRODUCTION

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。

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 Part Number



产品名称, 编号 A28/Product Name: A28

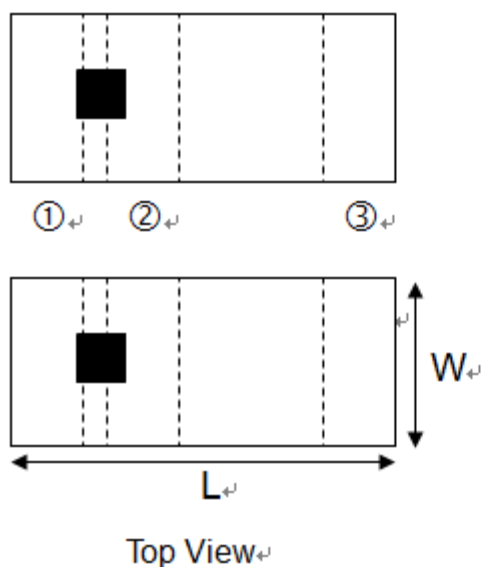
天线频率/ Antenna Frequency: 2450 MHz/5500MHz

产品设计结构 H 型/ Via Design Series

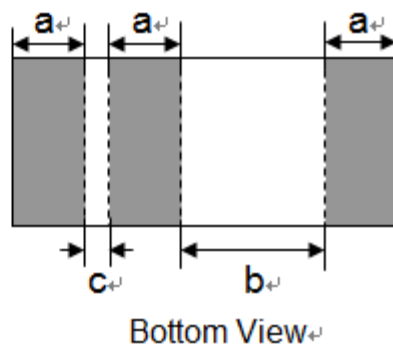
产品尺寸/Size: 5.0×2.0×1.0

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)

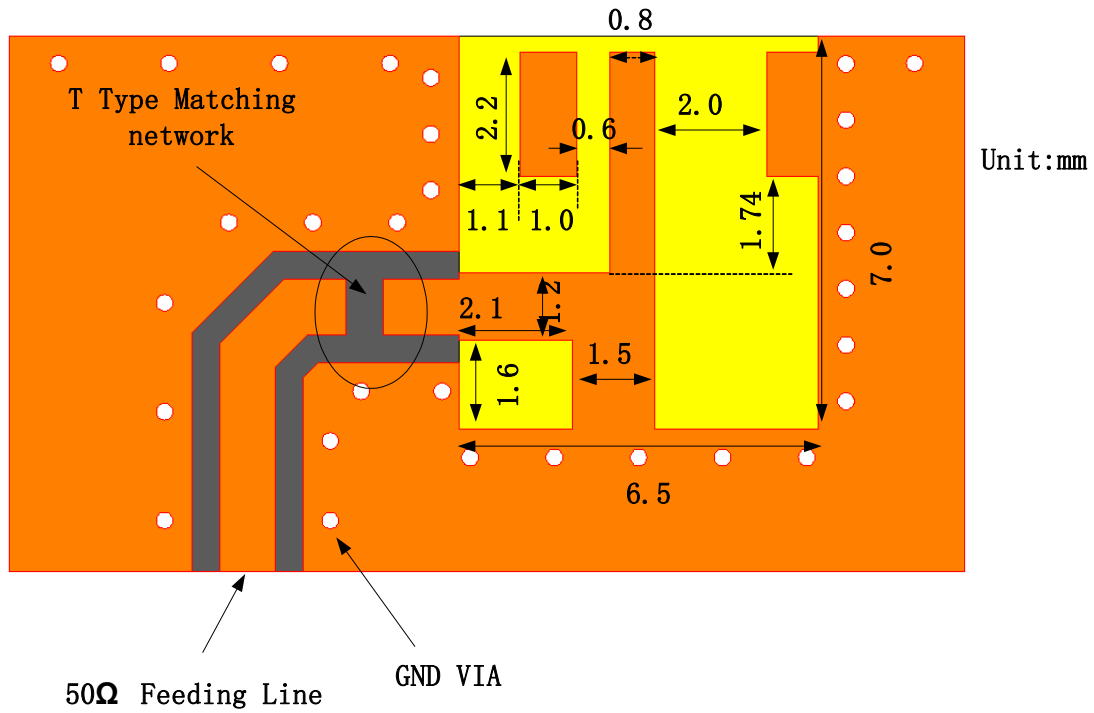


- ① NC
- ② INPUT
- ③ GND

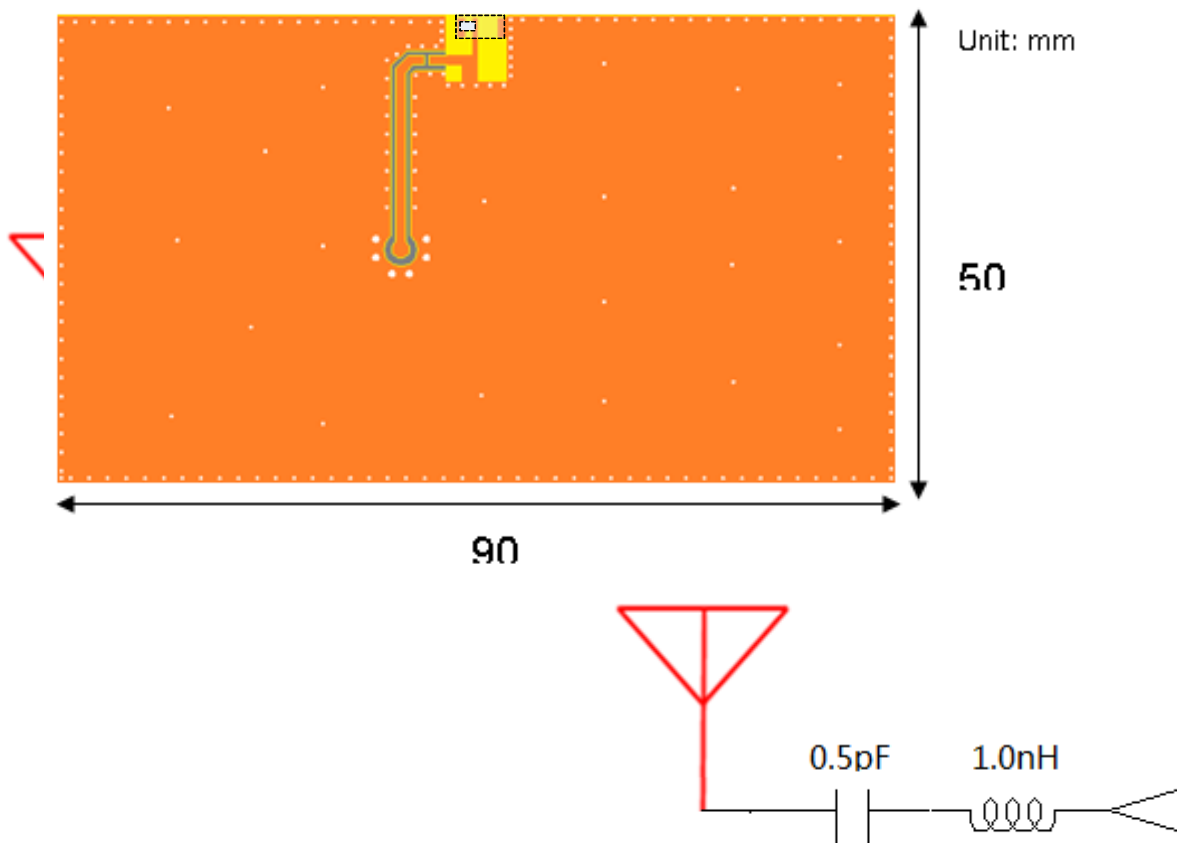


Symbol	L	W	T	a	b	c
Dimensions	5.00±0.20	2.0±0.20	1.0±0.2	0.8±0.2	2.0±0.2	0.6±0.1

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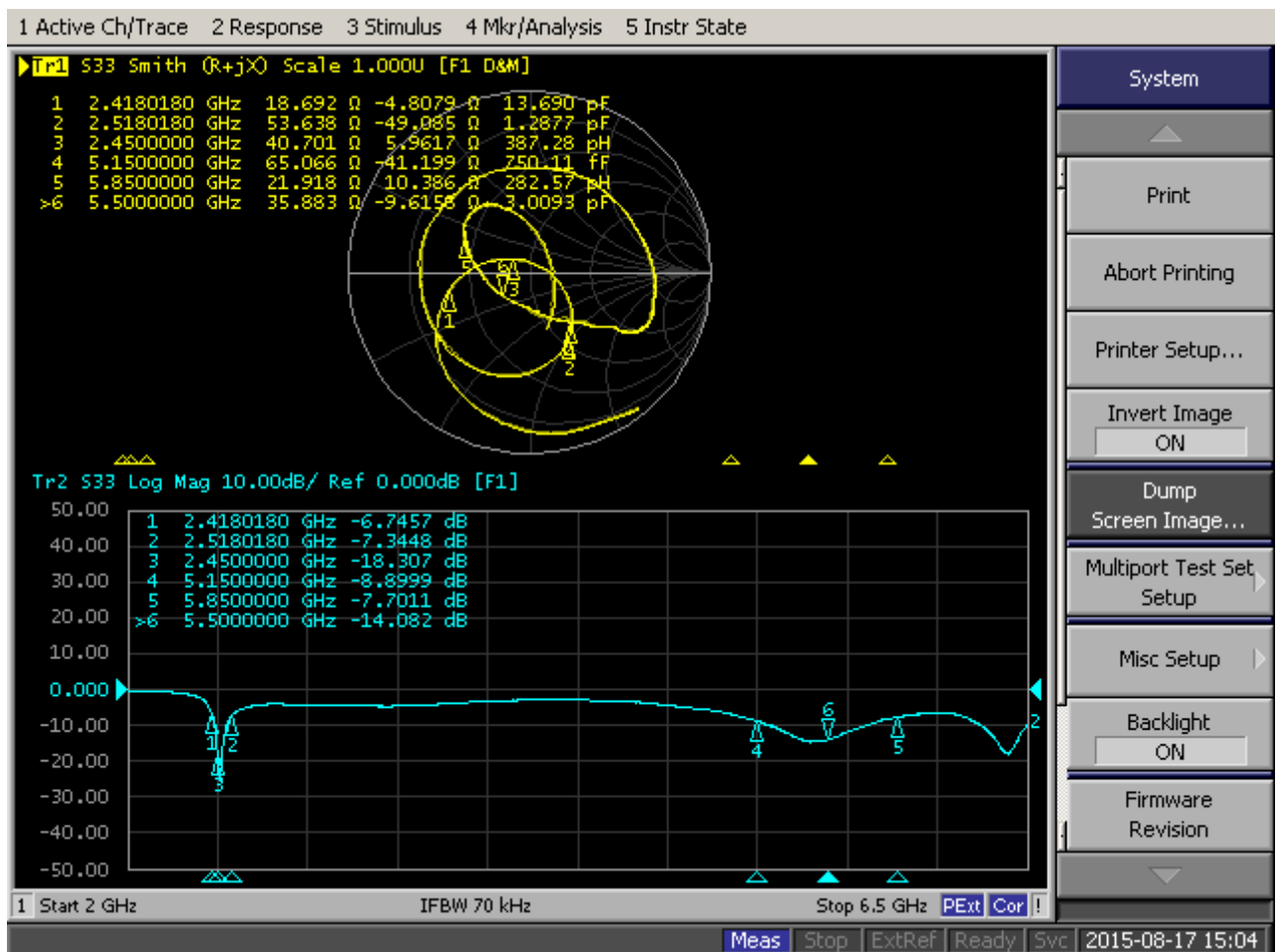
4. 测试电路和匹配电路 Evaluation Board and Matching Circuits



5. 电气性能 Electrical Characteristics

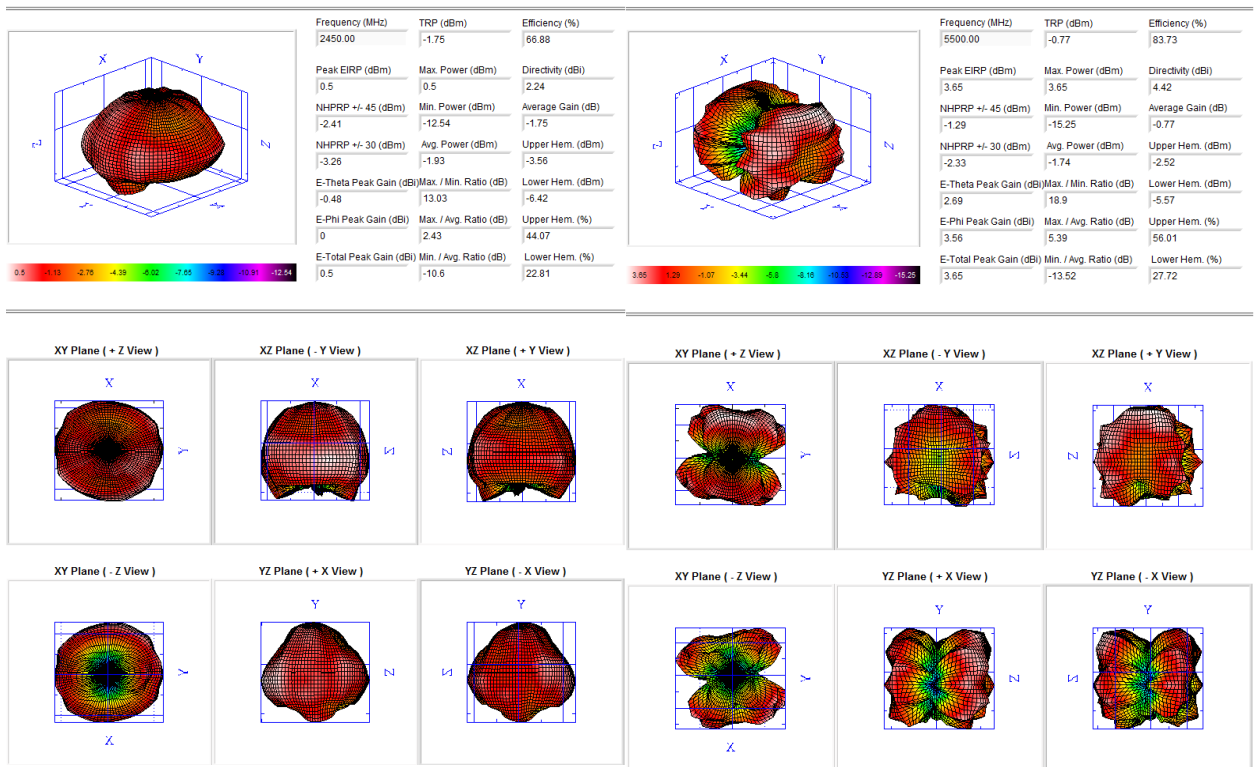
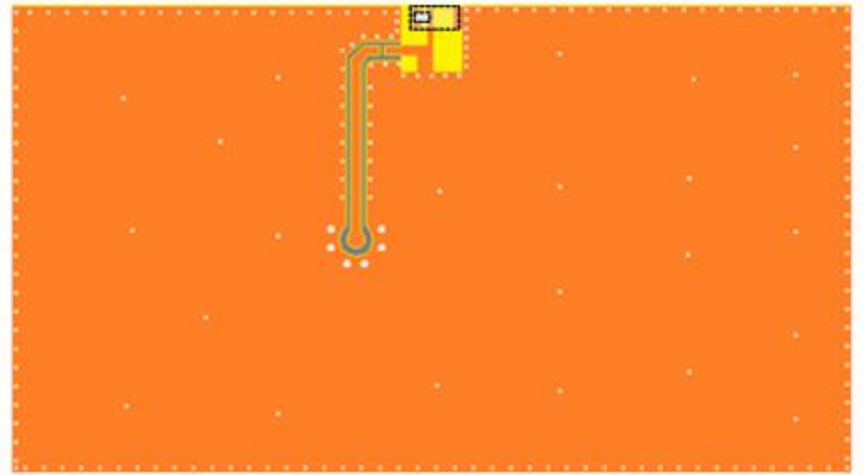
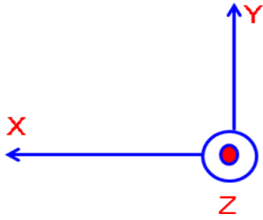
No.	Item (项目)	Specifications (特性)
5.1	Central Frequency 中心频率(No matching)	2400 ~ 2500 MHz / 5150 ~ 5850 MHz
	(带匹配电路测试)After Matching	2450 MHz/5500MHz
5.2	Band Width 通带宽度	100MHz (typ.) / 1000 MHz (typ.)
5.3	Peak Gain 峰值增益	0.5dBi / 3.65dBi
5.4	Return Loss 回波损耗	-7 dB (max.) / -7 dB (max.)
5.5	Polarization 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:



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

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

Post Dependability Tolerance (Refer to the table)

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 $255^\circ\text{C} + 10^\circ\text{C}$ 的焊锡浸 5 ± 0.5 秒, 或 $300^\circ\text{C} - 10^\circ\text{C}$ 的电烙铁焊接 3 ± 0.5 秒, 焊接面无损伤。

The device should be satisfied after preheating at $120^\circ\text{C} \sim 150^\circ\text{C}$ for 120 seconds and dipping in soldering Sn at $255^\circ\text{C} + 10^\circ\text{C}$ for 5 ± 0.5 seconds, or electric iron $300^\circ\text{C} - 10^\circ\text{C}$ for 3 ± 0.5 seconds, without damage.

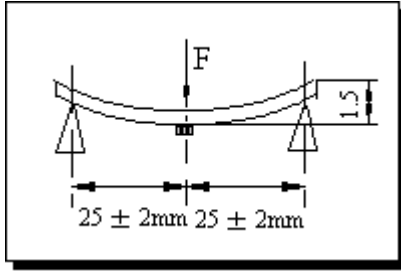
9.4 结合力试验 Tensile Strength of Terminal

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 $1.6 \pm 0.2\text{mm}$ 的 PCB 板中间，由箭头方向施力： 1mm/S ，弯曲距离： 1.5mm ，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 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，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 90~95% RH for 96 hours and 1~2 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 1~2 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 1~2 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 1~2 小时测试符合表 8.1~8.4 规定。

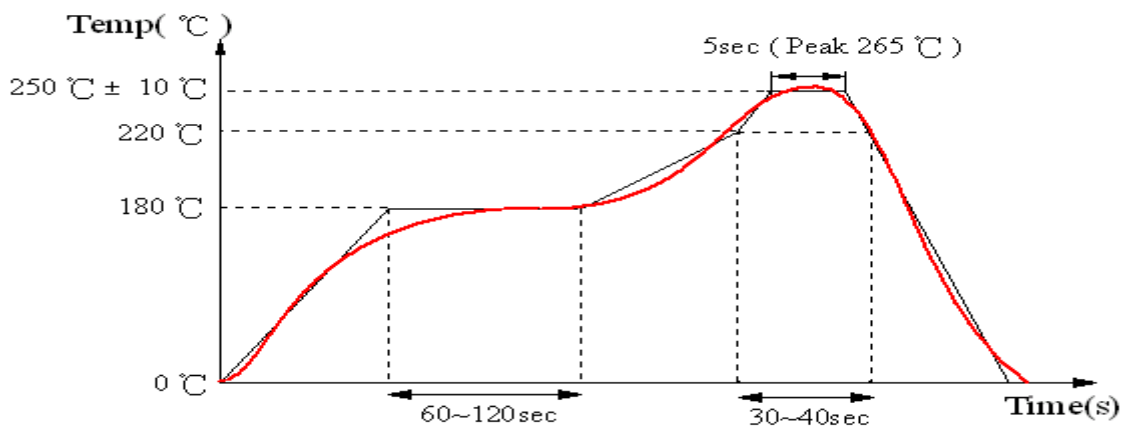
The device should also satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to the temperature $-40^\circ\text{C} \pm 5^\circ\text{C}$ for 96 ± 2 hours and to 2 hours recovery time under normal temperature.

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 1~2 小时后测试符合表 8.1~8.4 规定。

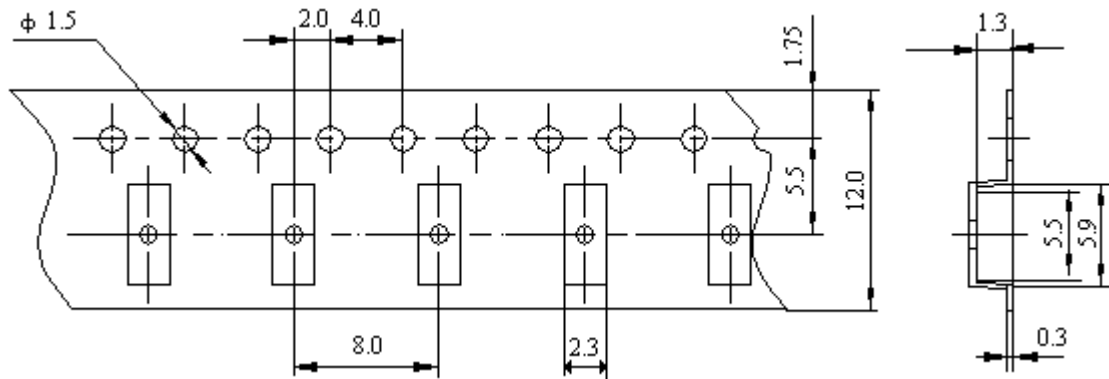
The device should also satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to the low temperature -40°C and high temperature $+85^\circ\text{C}$ for 30 ± 2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

10 回流焊温度 Reflow Soldering Standard Condition



11 包装尺寸 (5020) Packaging and Dimensions

11.1 Plastic Tape

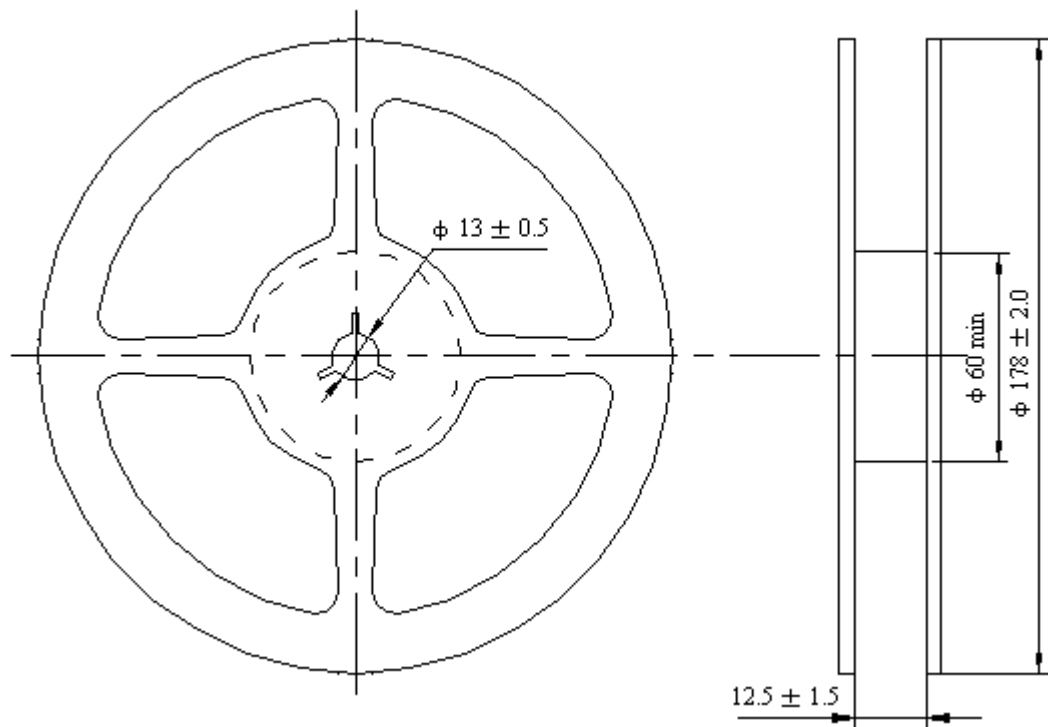


包装说明: Remarks for Package

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!