



東莞市仕研電子通訊有限公司

DONGGUAN SEYA ELECTRONIC COMMUNICATION CO.,LTD

規格承認書

SPECIFICATION FOR APPROVAL

客 戶

CUSTOMER: _____

客 戶 料 号

CUSTOMER NO: _____

品 名 2450MHZ CHIP ANTEENA

PART NAME: _____

供 方 料 号 SY52H2450 – S85

SUPPLIER NO: _____

送样日期 Date:

送样数量 Q'TY: PCS

客户确认 CUSTOMER APPROVED BY		
APPROVAL	CHIEF	SUPERVISOR

供方确认 SUPPLIER SIGNATURE		
APPROVAL	CHECK	DESIGN
Jammy	Jeff	Patrick

SH-RD-F04-A

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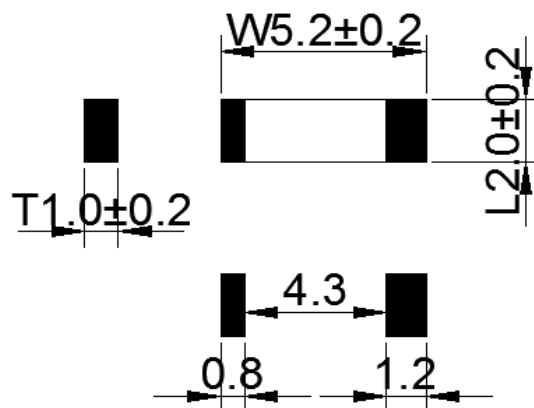
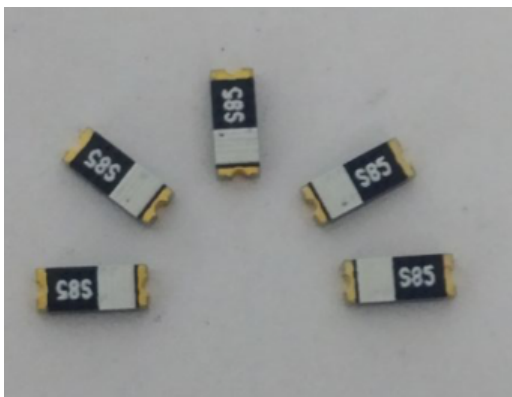
1. 概述 INTRODUCTION

SY 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。

2. 型号 Part Number

SY	52	H	2450 – S85	
				产品名称, 编号 S85 Product Name: S85
				天线频率/ Antenna Frequency: 2450 MHz
				产品设计结构 H 型/Via Design Series
				产品尺寸/Size: 5.2×2.0×1.0
				多层结构天线/Multi-layer Antenna

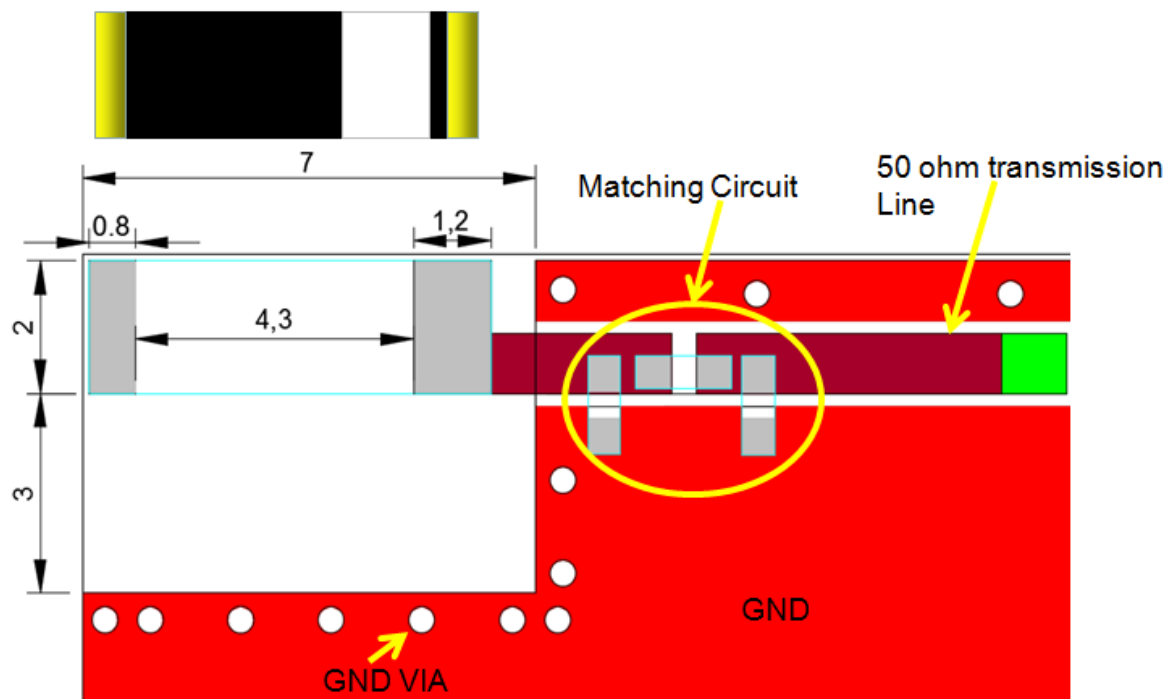
3. 外型尺寸及测试板焊盘尺寸 Dimensions (Unit: mm)



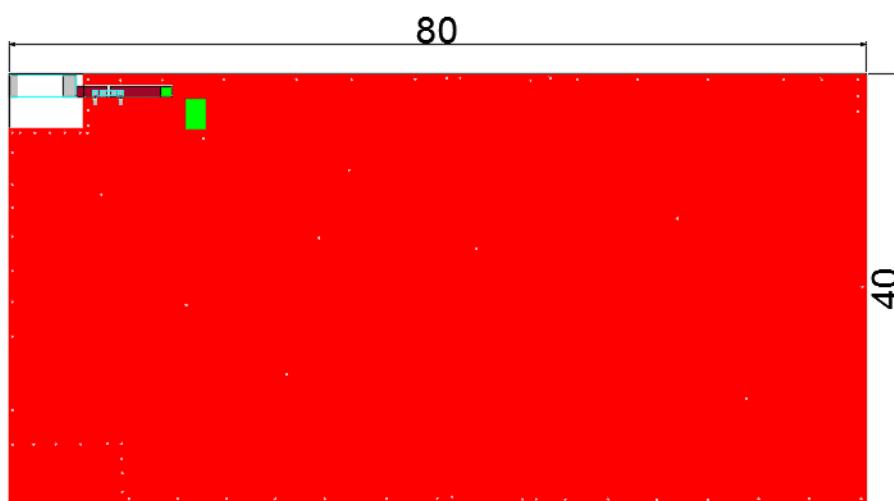


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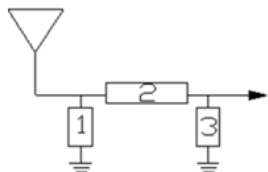


4. 测试电路和匹配电路 Evaluation Board and Matching Circuits



单位: mm

Antenna



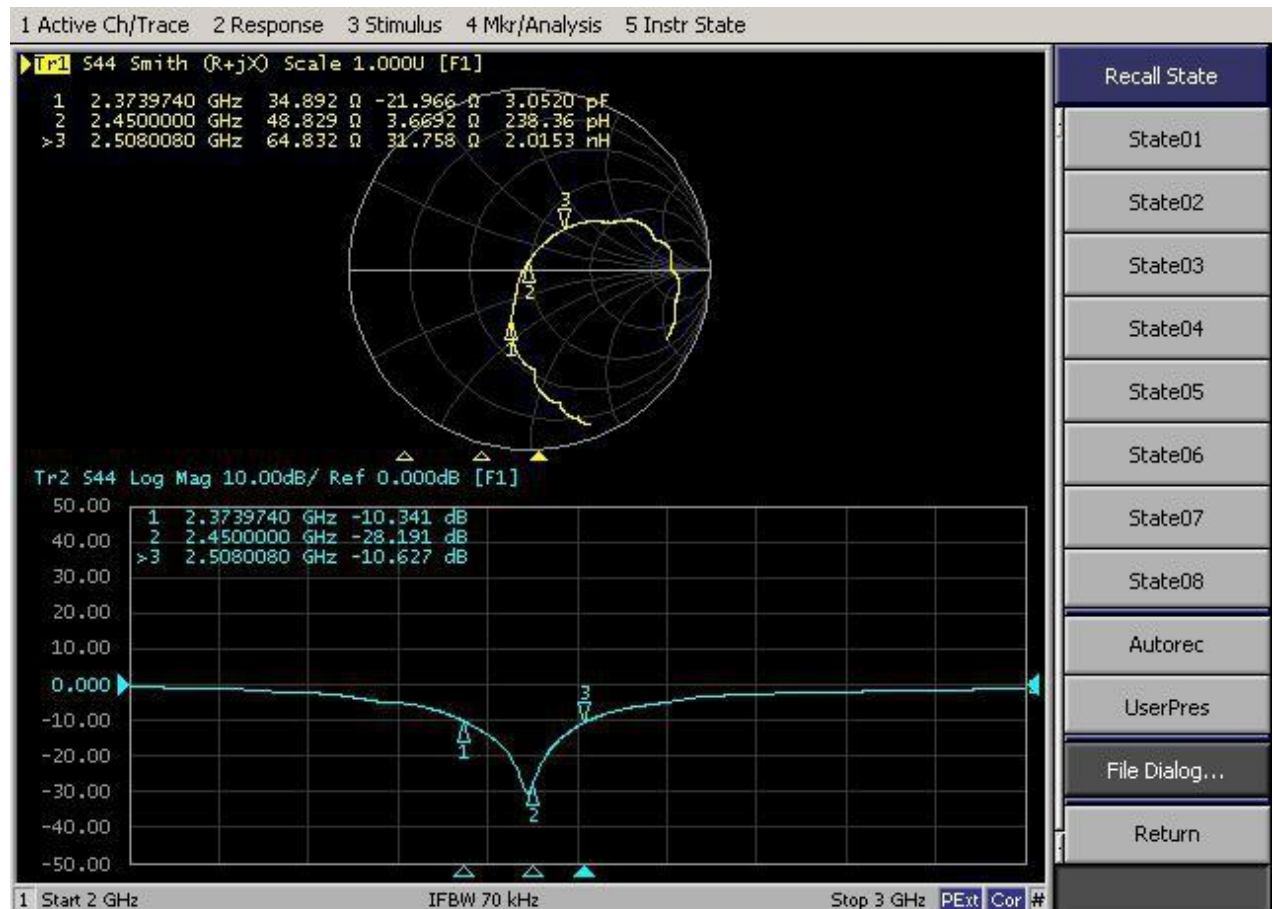
System Matching Circuit Component	
Location	Description
Antenna	S85
1	2.0NF
2	1.5NF
3	NC



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

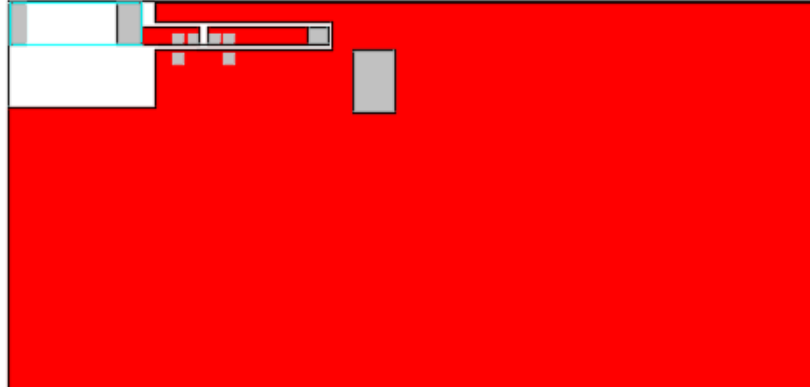




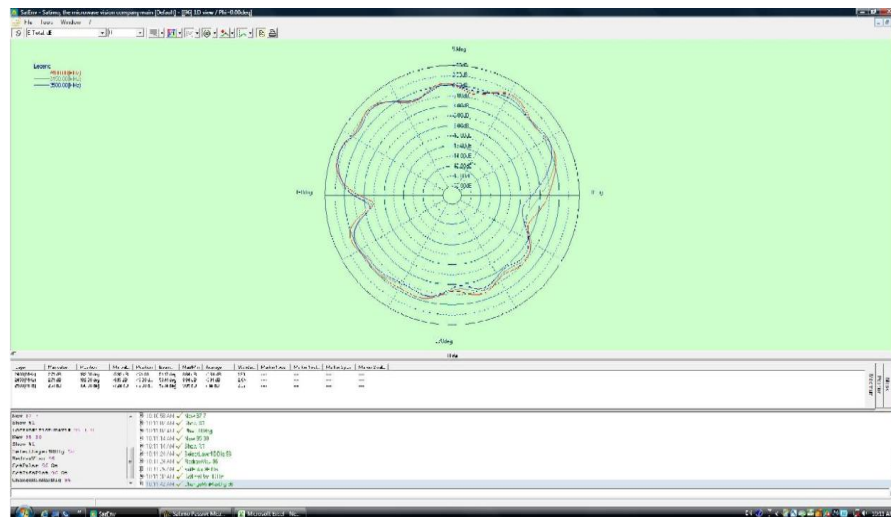
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7. 方向图及效率 Radiation Pattern & Efficiency

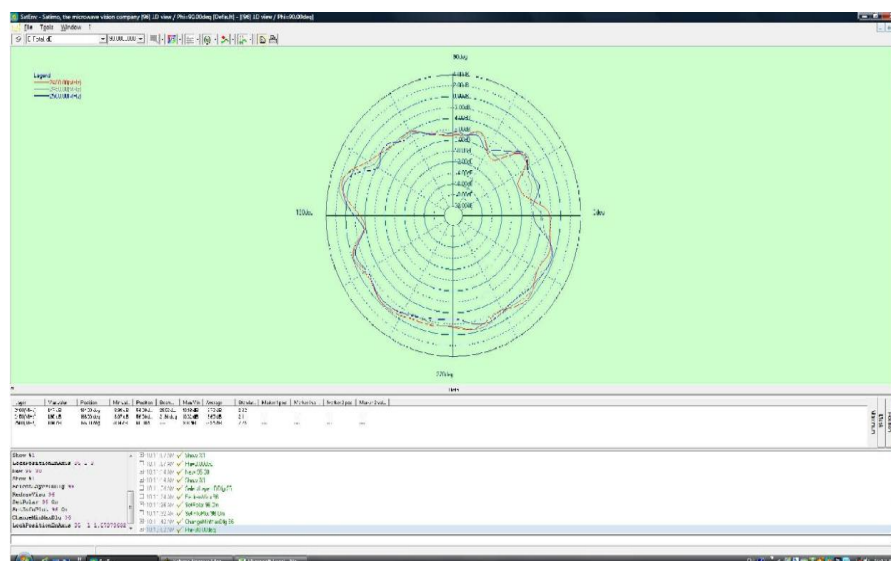
coordinates:



X-Z Plane



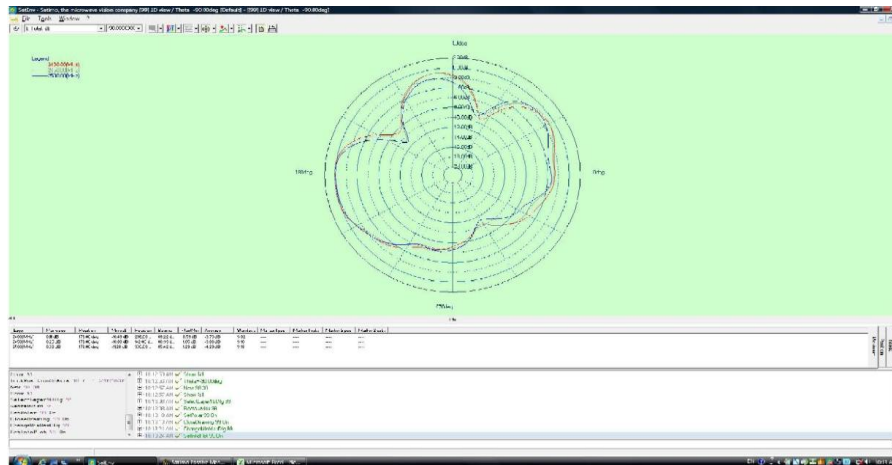
Y-Z Plane



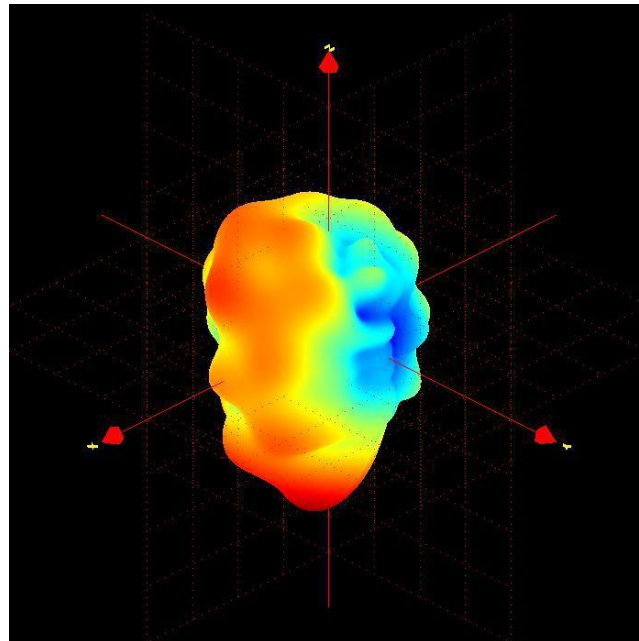


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X-Y Plane



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



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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 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 $255^{\circ}\text{C} + 10^{\circ}\text{C}$ 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 damnify.

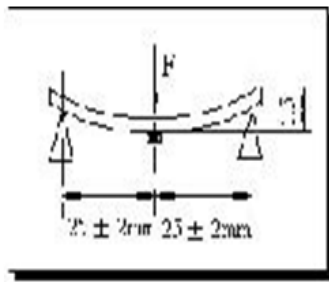
9.4 结合力试验 Tensile Strength of Terminal

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.

9.4 9.5 耐弯曲试验

Bending Resist Test



将产品按图焊在 $11.6 \pm 0.2\text{mm}$ 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 $11.6 \pm 0.2\text{mm}$ as the illustration shows, and keep exerting force arrowward on it at speed of :1mm/S, and hold for $5 \pm 1\text{s}$ at the position of.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 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 $60 \pm 2^\circ\text{C}$ and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condition.

9.5 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 9.1~9.4 规定。

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to temperature $85 \pm 5^\circ\text{C}$ for 96 ± 2 hours and 1~2 hours recovery time under normal temperature.

9.6 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 9.1~9.4 规定。

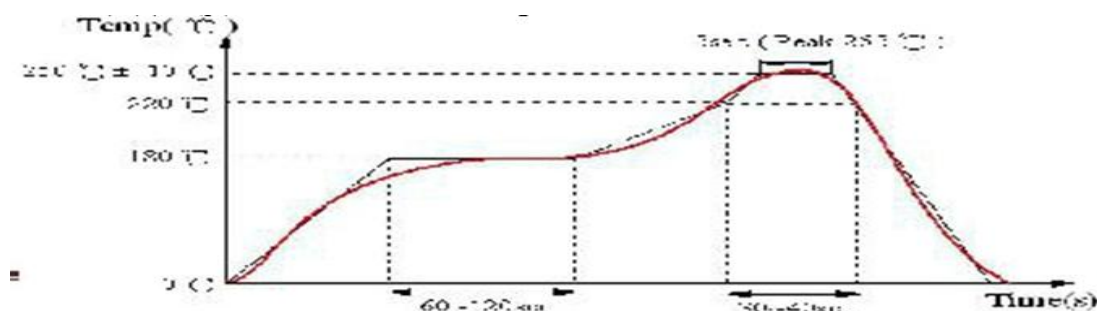
The device should also satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to the temperature $-40^\circ\text{C} \pm 5^\circ\text{C}$ for 96 ± 2 hours and to 2 hours recovery time under normal temperature.

9.7 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 9.1~9.4 规定。

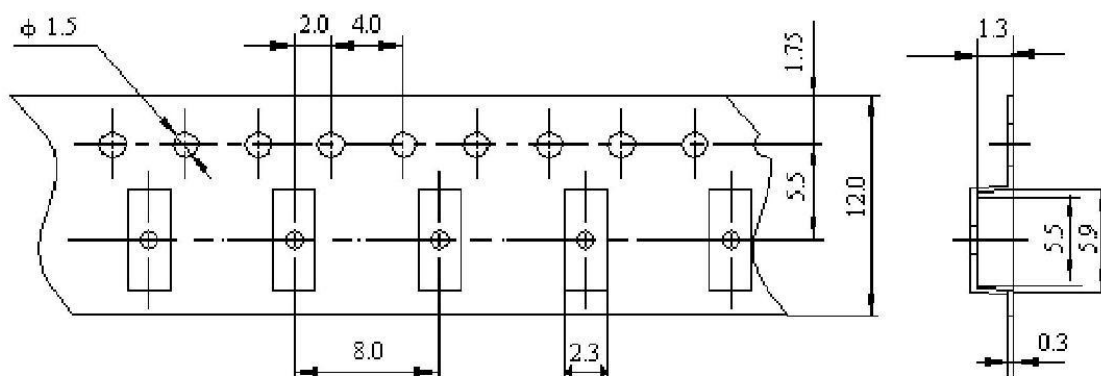
The device should also satisfy the electrical characteractics specified in paragraph 9.1~9.4 after exposed to the low temperature -40°C and high temperature $+85^\circ\text{C}$ for 30 ± 2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

10 回流焊温度 Reflow Soldering Standard Condition



11 包装尺寸 (5020) and Dimensions

Packaging 11.1 Plastic Tape

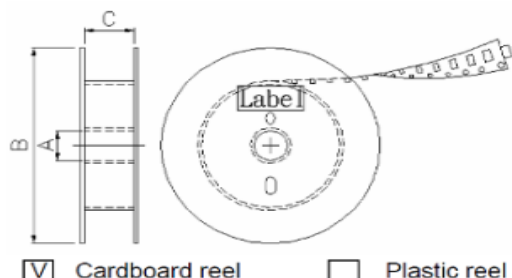


包装说明: Remarks for Package

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 (5000 pcs/Reel)



Product code: 1101 - Polycarbonate natural transparent.
1201 - Polycarbonate conductive black.
Surface resistivity 10E4 to E6 ohm/sq.

Item	Specifications	Tolerances
W	12.00	±0.20
E	1.75	±0.10
F	5.50	±0.05
D0	1.50	+0.10, -0
D1	1.50	±0.10
P0	4.00	±0.05
P1	4.00	±0.10
P2	2.00	±0.05
P0 x 10	40.00	±0.20
t	0.25	±0.05
A0	2.20	±0.10
B0	5.10	±0.10
K0	1.40	±0.10

Reel Dimensions		
A	77	mm
B	560	mm
C	96	mm
Packing		
Length / Roll	700	meters
Each Carton	3	rolls
Carton Dimension (mm)		
V	575(L)*345(W)*585(H)	

11.3 储存条件 Storage Period

易氧化产品, 真空状态储存一年. 产品拆封后请于 168 小时内用完或重新密封包装!

Oxidizable, 12 months in vacuum sealed bag . Material, please repack within 168 hours by re-seal the package treatment after use them!

储存温度与湿度:

Storage Temperature Range : <30 degree C, Humidity : <60%RH