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。

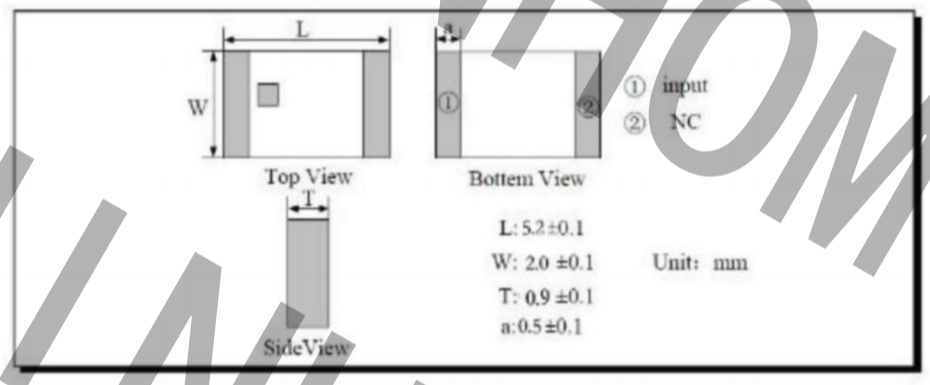
Microwave Multi-Layer Ceramic Antenna ANT series are designed to be used in WLAN、WiFi、Bluetooth、PHS、 Multiple-band Mobile phone antenna, FM, etc and compact size SMD chip design.

2. 型号 Part Number

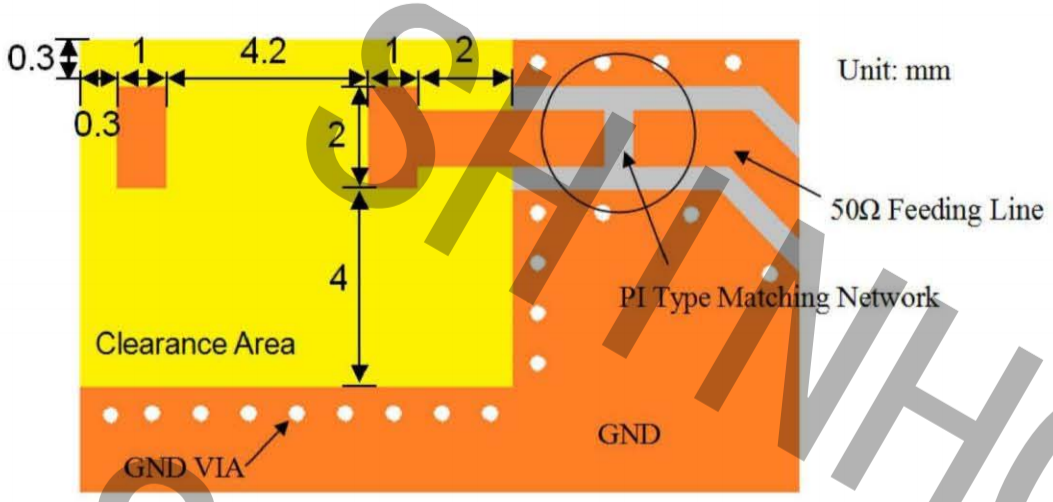
ANT 52 H 2450 – A36/S

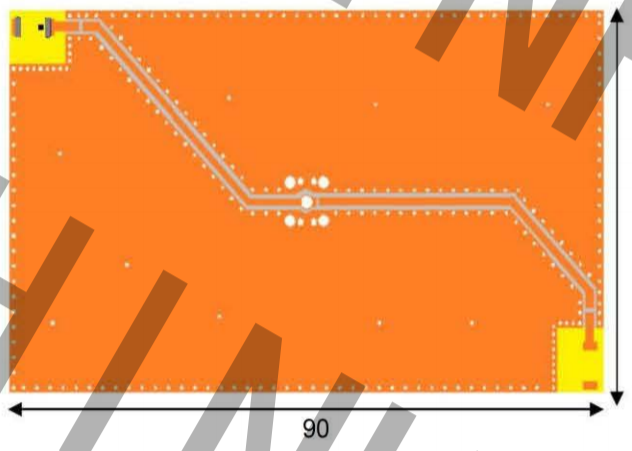
- A36/S：产品名称，编号 A36/Proudct Name: A36/S
- 2450：天线频率/ Antenna Frequency: 2450 MHz
- H：产品设计结构 H 型/Via Design Series
- 52：产品尺寸/Size：5.2×2.0×0.9
- ANT：多层结构天线/Multi-layer Antenna

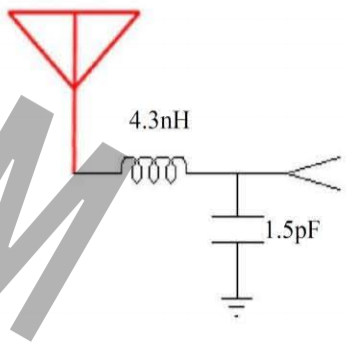
3. 外型尺寸及测试板焊盘尺寸 Dimensions（Unit：mm）



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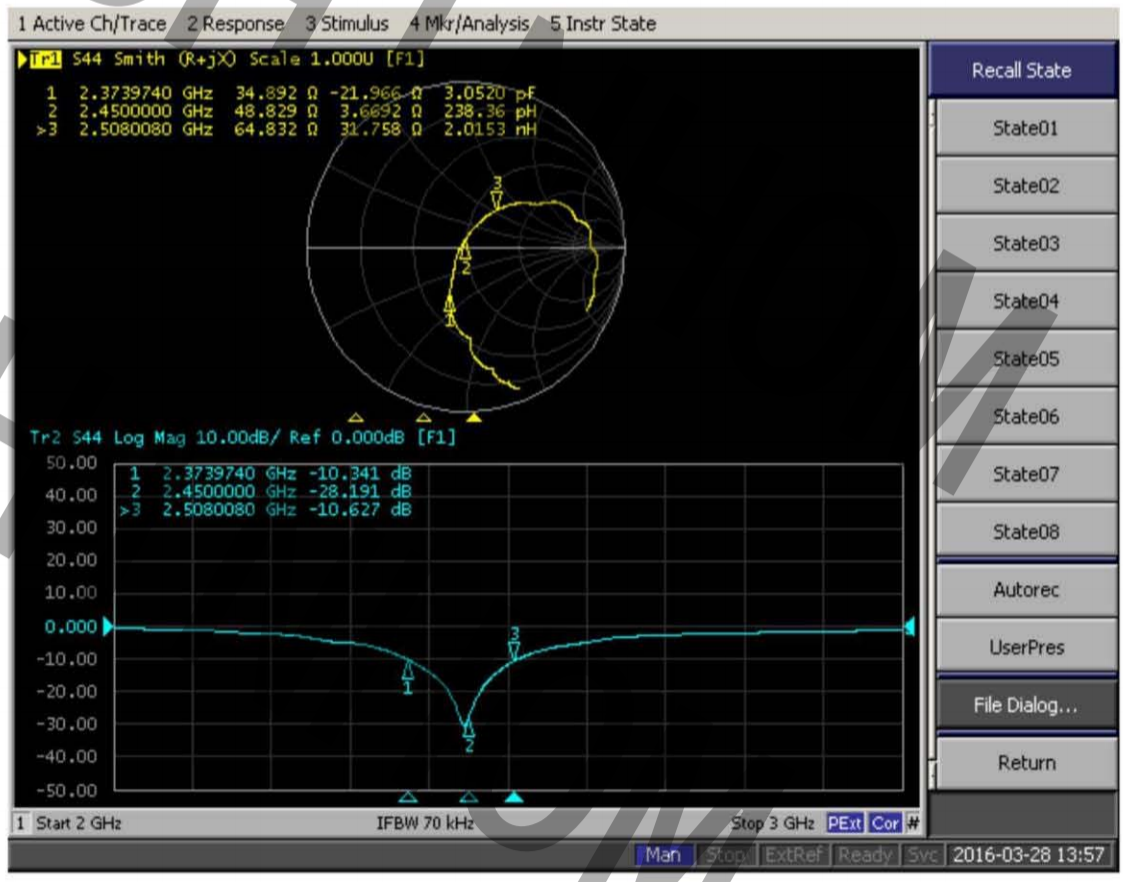


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5. 电气性能 Electrical Characteristics

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



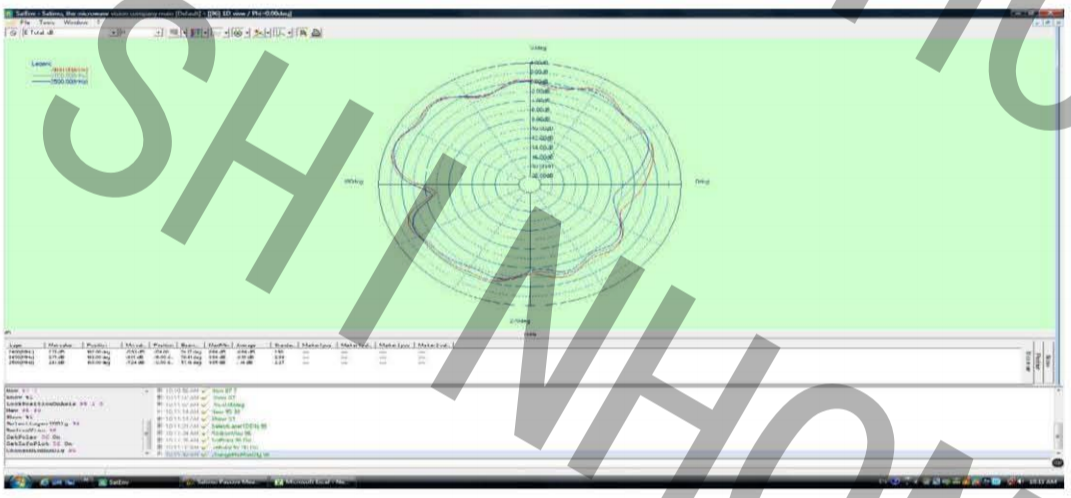
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7. 方向图及效率 Radiation Pattern & Efficiency

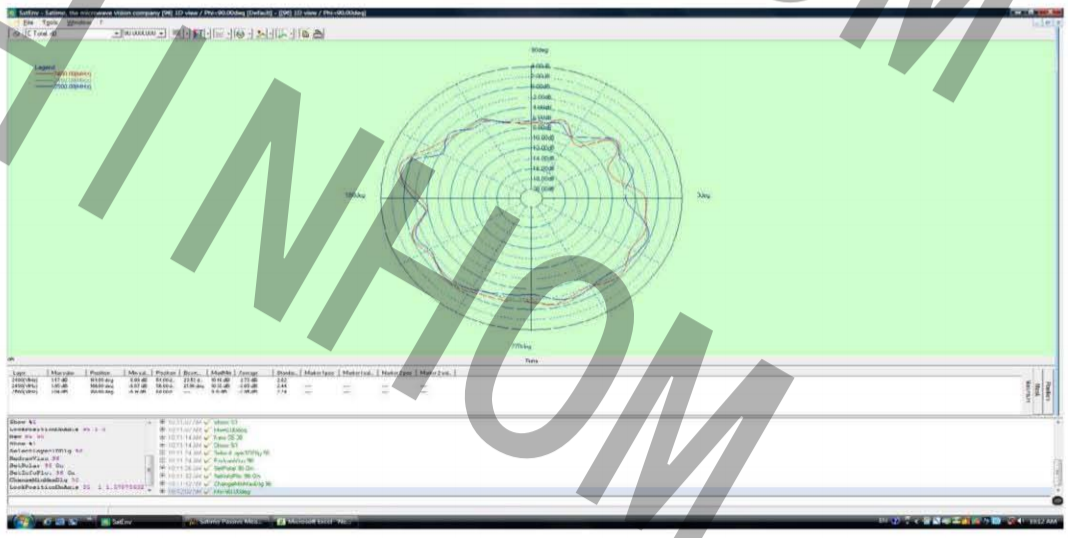
coordinates：



X-Z Plane Plane

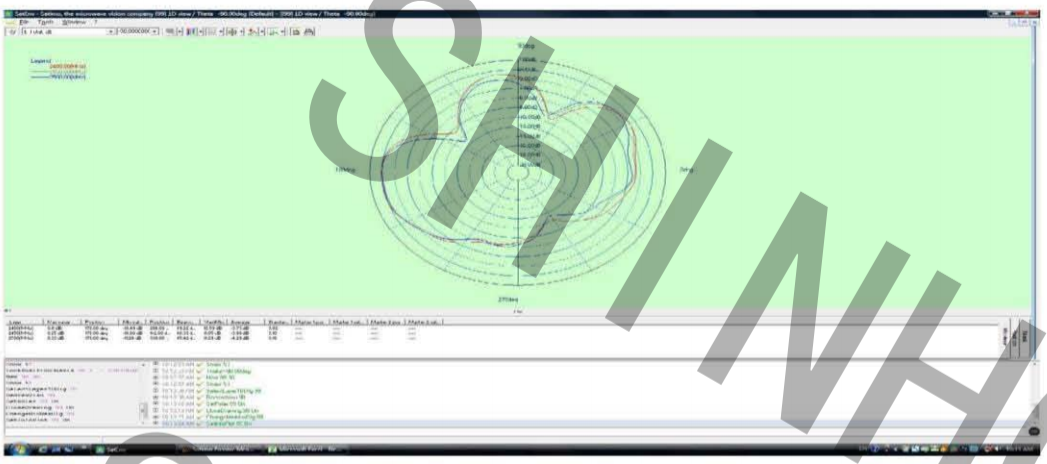


Y-Z Plane

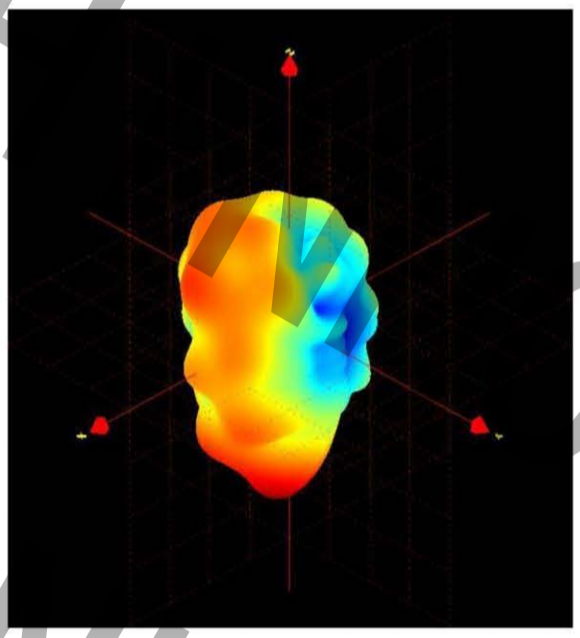


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X-Y Plane



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±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.

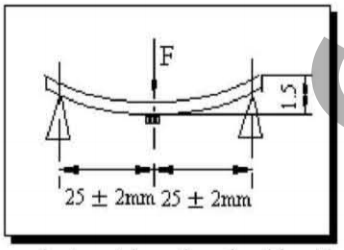
9.4 结合力试验 Tensile Strength of Terminal

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.

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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。

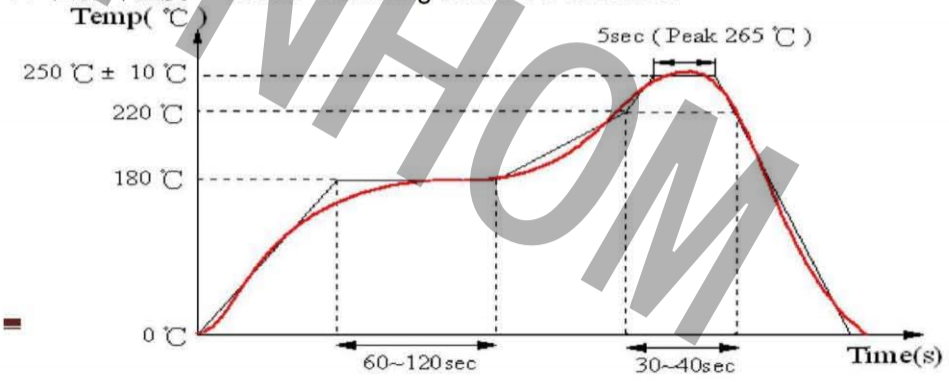
The device should also satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to the temperature -40℃±5℃ for 96±2 hours and to 2 hours recovery time under normal temperature.

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.

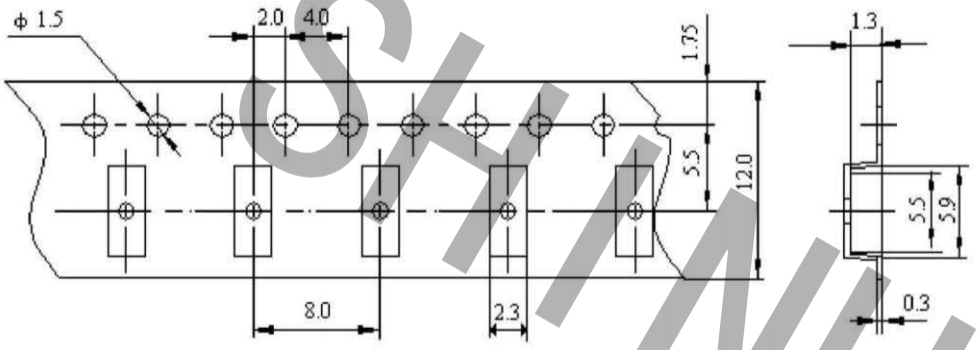
10 回流焊温度 Reflow Soldering Standard Condition



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11包装尺寸(5220) Packaging and Dimensions

11.1 Plastic Tape

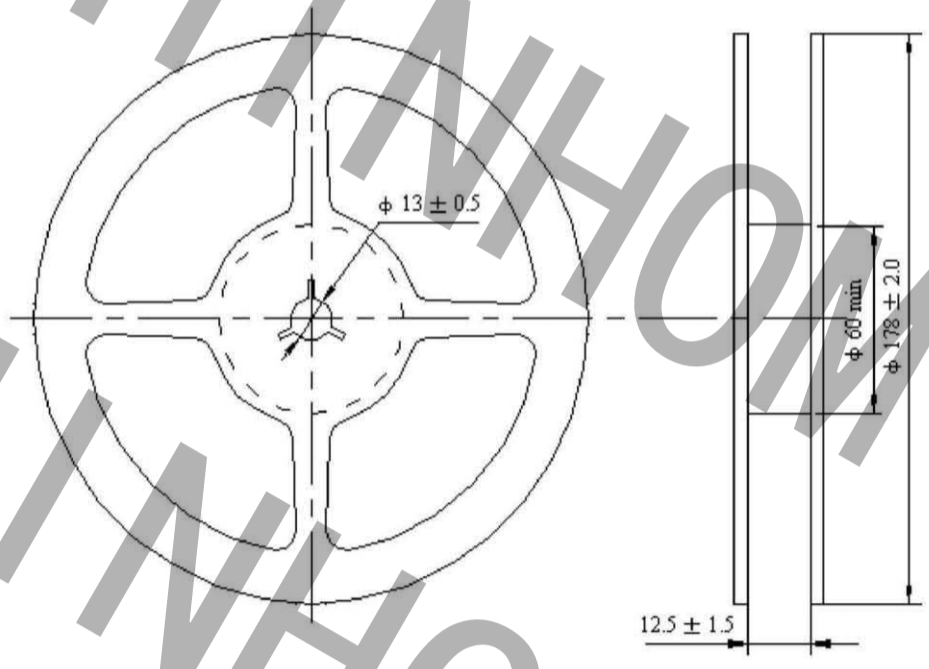


包装说明： Remarks for Package

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!

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CHIP ANTENNA

Multilayer Chip Type

Small Size • Low Loss • High Reliability

Simplify Circuit Design & Tuning



PHONE PDA RF DEVICE NOTEBOOK

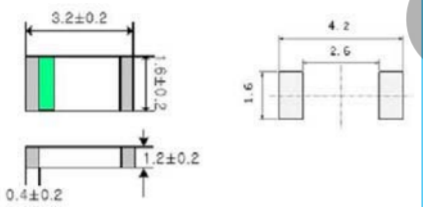
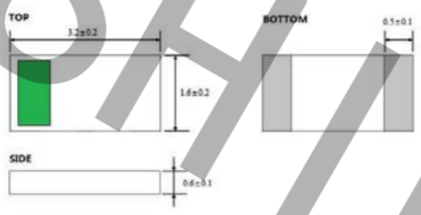
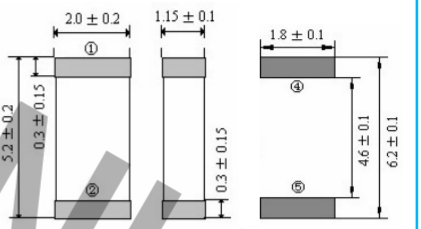


BLUETOOTH WLAN GPS DVD

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CHIP ANTENNA

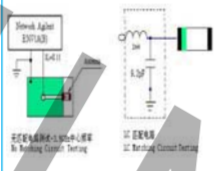
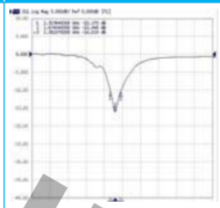
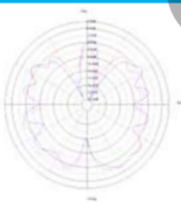
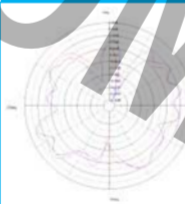
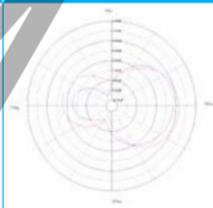
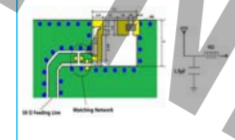
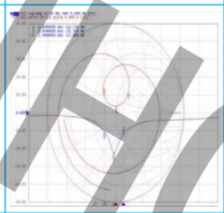
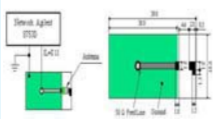
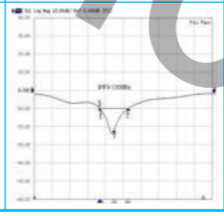
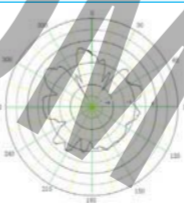
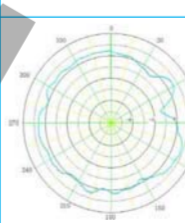
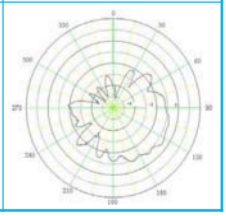
Product Structure

Structure A	Structure B	Structure C
		

Dimension & Electrical Specification

Shinhom P/N	Structure	Size (mm)			Freq. Range	Gain	VSWR	Impedance	Polarization	Azimuth Beam Width
		L	W	T	(MHz)	(dBi)	(Max.)	(Ω)		(MHz)
ANT3216H2450-A02	A	3.2±0.2	1.6±0.2	1.2±0.2	2400~2500	0~2	≤2.0	50	Linear	Omni-directional
ANT3216H2450-A09S	B	3.2±0.2	1.6±0.2	0.6±0.1	2400~2484	2 (Typ.)	≤2.0	50	Linear	Omni-directional
ANT5220H2450-A04	C	5.2±0.2	2.0±0.2	1.15±0.1	2375~2525	0~2	≤2.0	50	Linear	Omni-directional

Electrical Characteristics

Shinhom P/N	Test board	Characteristics	Radiation Pattern		
			XY-V/XY-H	XZ-V/XZ-H	YZ-V/YZ-H
ANT3216H2450-A02					
ANT3216H2450-A09S					
ANT5220H2450-A04					

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