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。

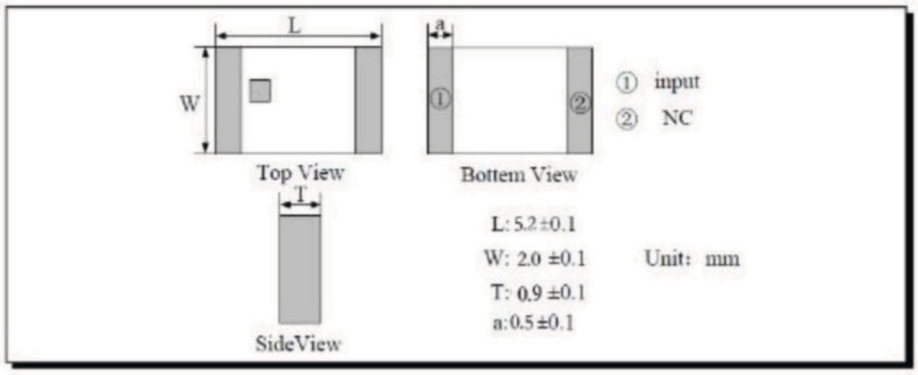
Microwave Multi-Layer Ceramic Antenna ANT series are designed to be used in WLAN、WiFi、Bluetooth、PHS、 Multiple-band Mobile phone antenna, FM, etc and compact size SMD chip design.

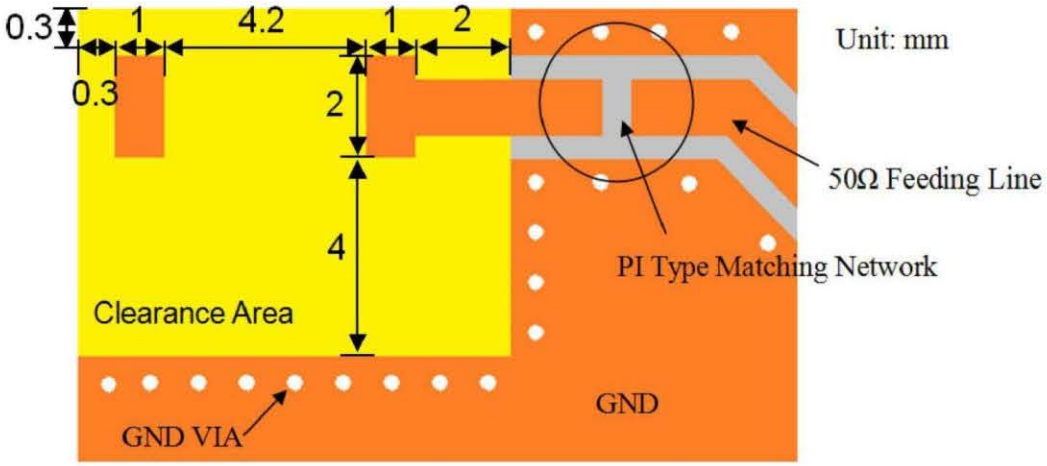
2. 型号 Part Number

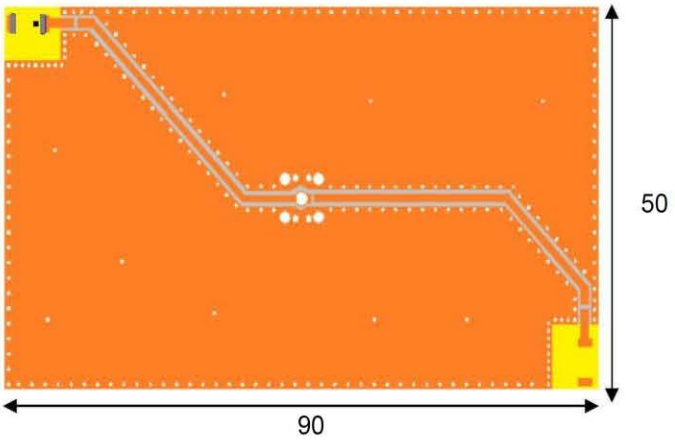
ANT 52 H 2450 – A36/S

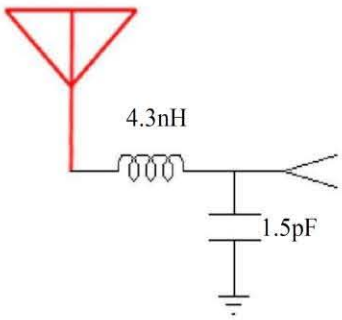
- A36/S：产品名称，编号 A36/Proudct Name: A36/S
- 2450：天线频率/ Antenna Frequency: 2450 MHz
- H：产品设计结构 H 型/Via Design Series
- 52：产品尺寸/Size：5.2×2.0×0.9
- ANT：多层结构天线/Multi-layer Antenna

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

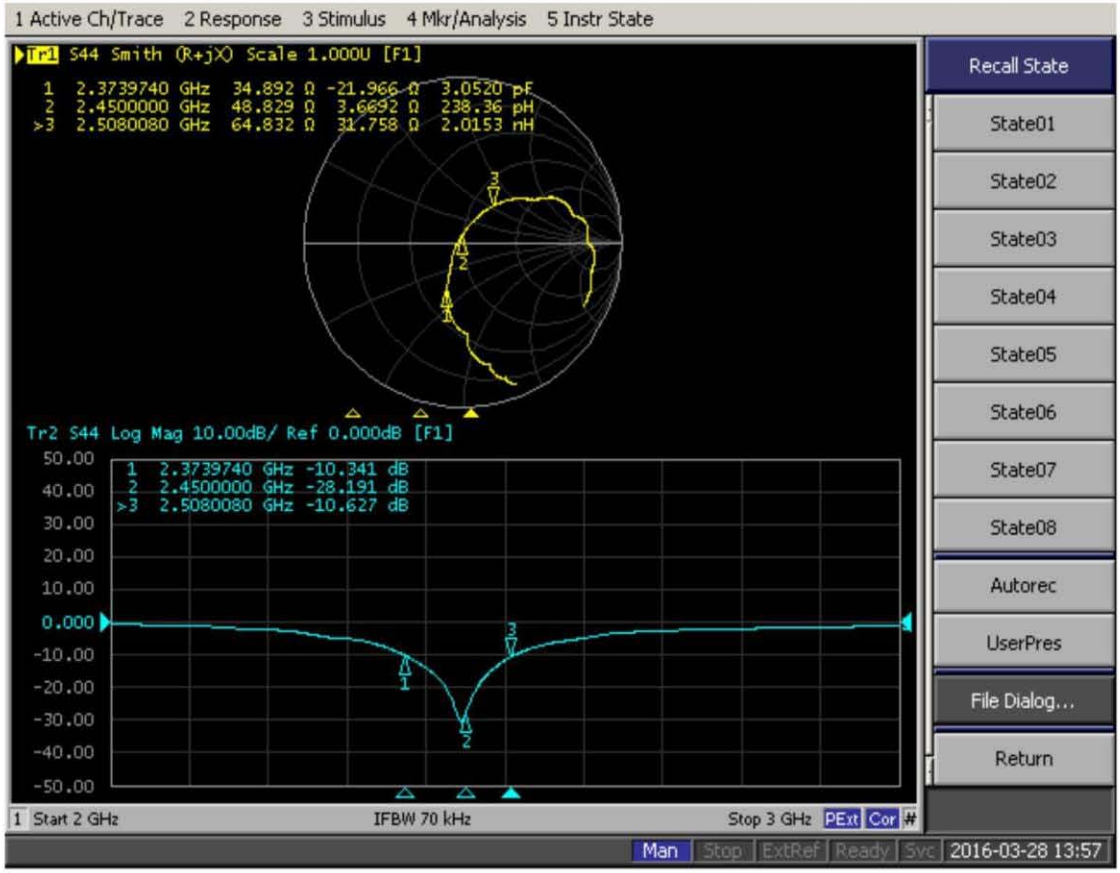

50
90


4.3nH
1.5pF

5. 电气性能 Electrical Characteristics

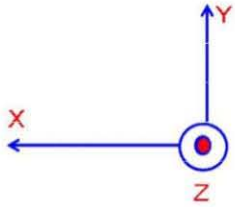
No.	Item （项目）	Specifications （特性）
5.1	Working Central Frequency 中心工作频率	2450 MHz
5.2	Band Width 通带宽度	100MHz typ.
5.3	Peak Gain 峰值增益	4.25 dBi
5.4	V.S.W.R 驻波比	≤2.0
5.5	Polarization 极化方式	Linear 线性
5.6	Azimuth Beam width 方位角	Omni-directional 全向
5.7	Impedance 阻抗	50 Ω

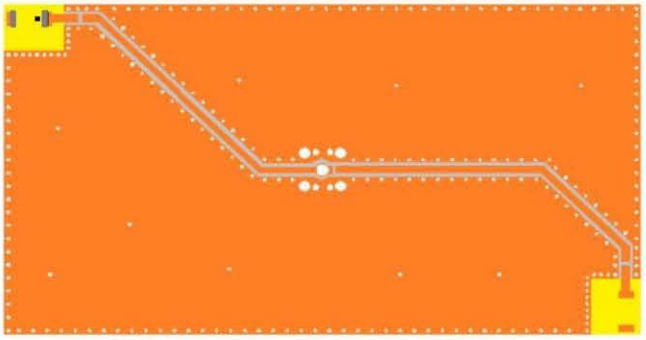
6. 特性曲线 Characteristic curve



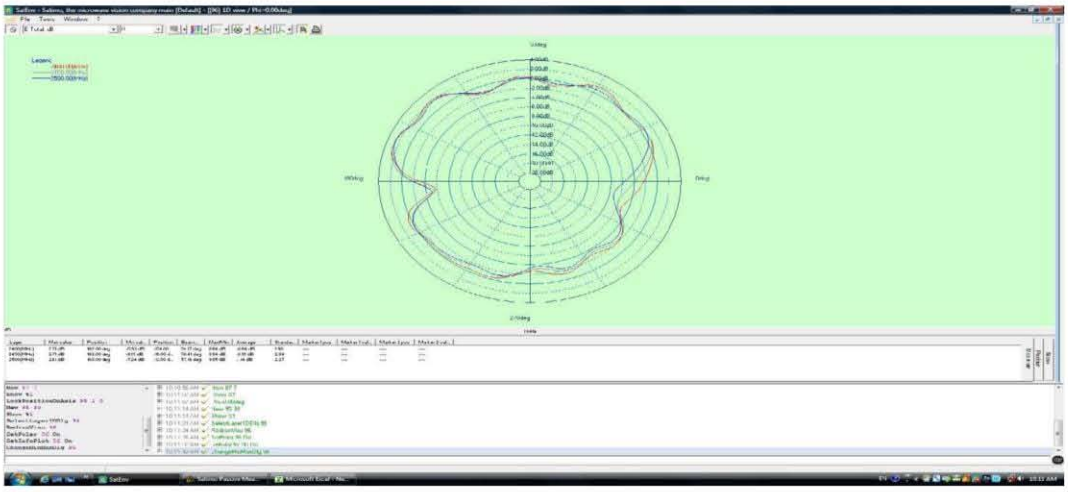
7. 方向图及效率 Radiation Pattern & Efficiency

coordinates：

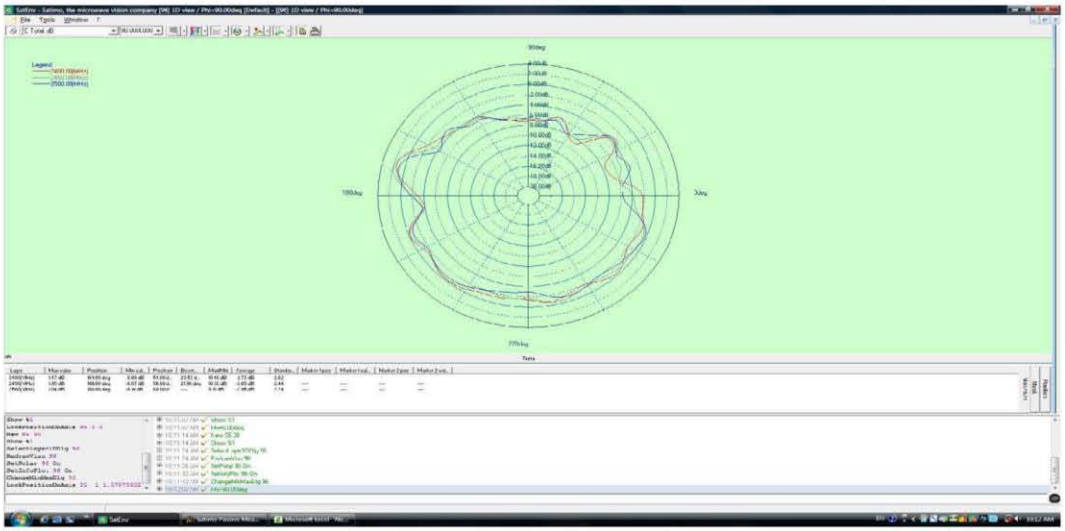




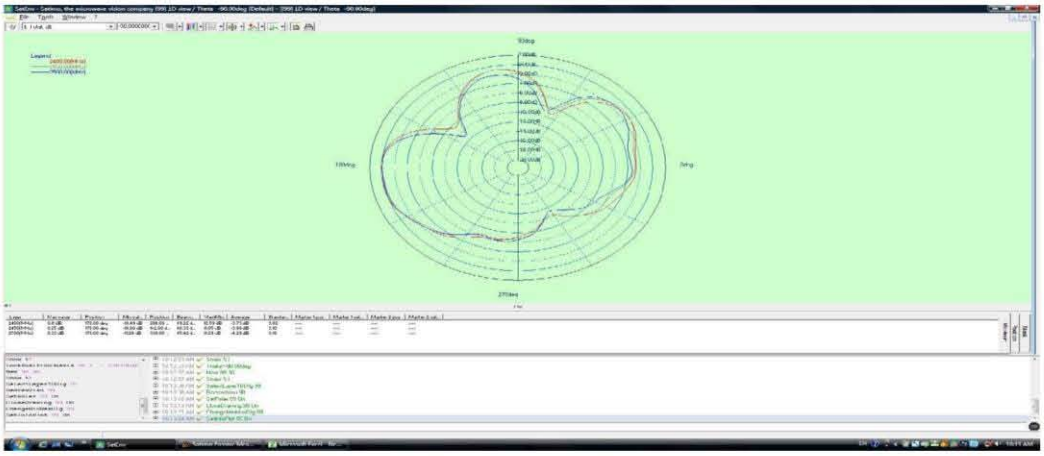
X-Z Plane Plane



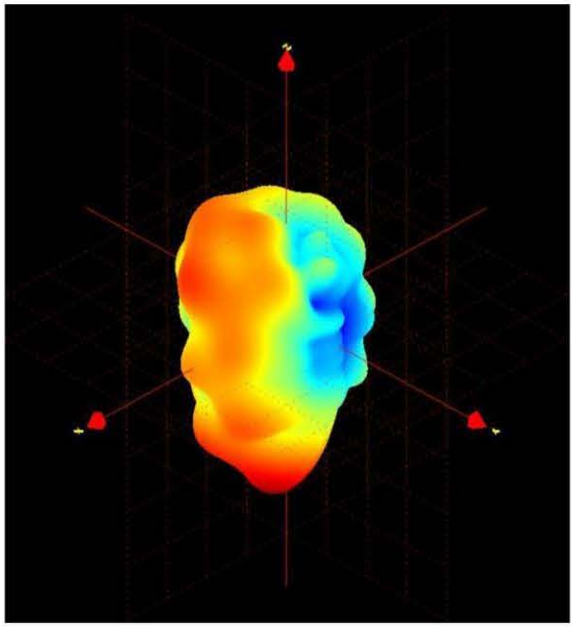
Y-Z Plane



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。

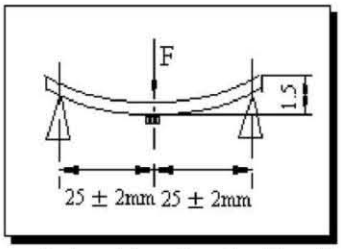
The device should be satisfied after preheating at 120℃~150℃ for 120 seconds and dipping in soldering Sn at 255℃+10℃ for 5±0.5 seconds，or electric iron 300℃-10℃ for 3±0.5 seconds，without damnify.

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。

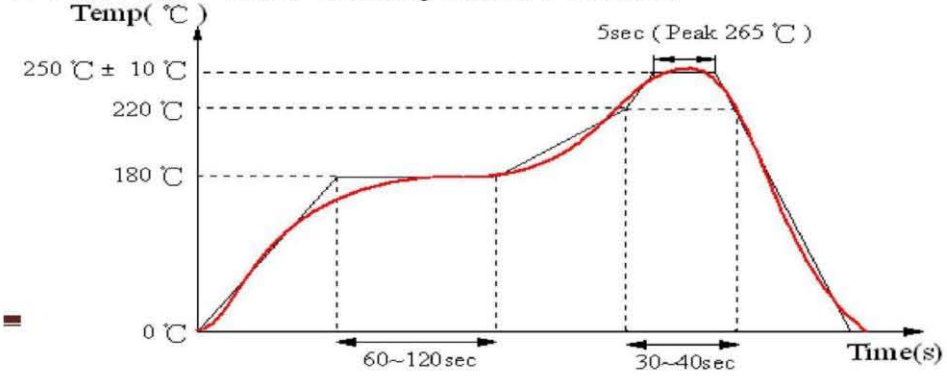
The device should also satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to the temperature -40℃±5℃ for 96±2 hours and to 2 hours recovery time under normal temperature.

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。

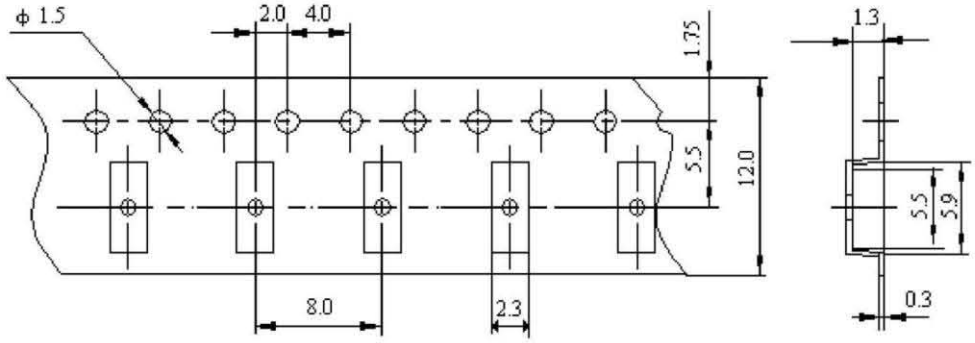
The device should also satisfy the electrical characteractics specified in paragraph 9.1~9.4 after exposed to the low temperature -40℃ and high temperature +85℃ for 30±2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

10 回流焊温度 Reflow Soldering Standard Condition



11包装尺寸(5220) Packaging and Dimensions

11.1 Plastic Tape

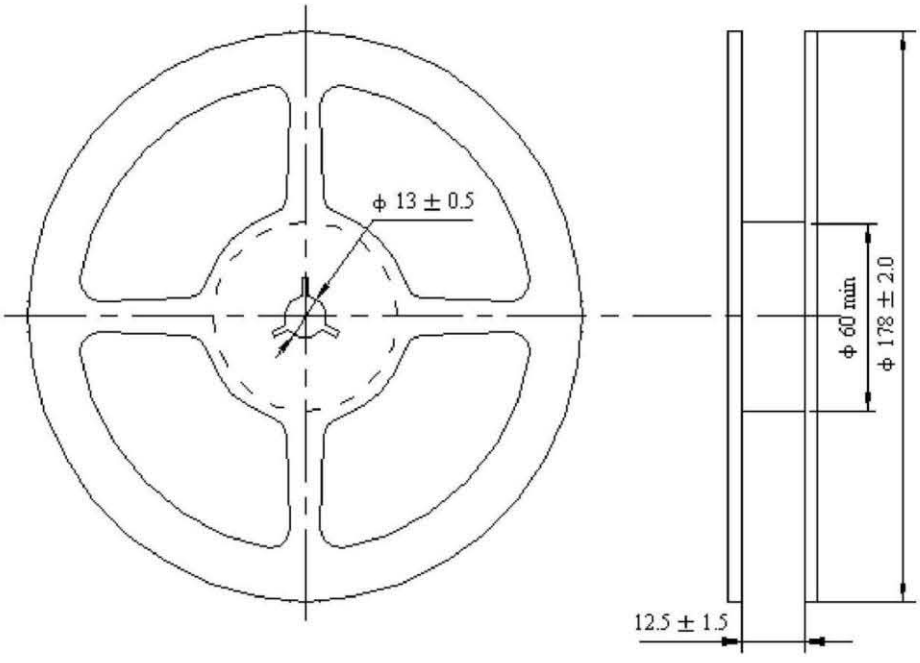


包装说明： Remarks for Package

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

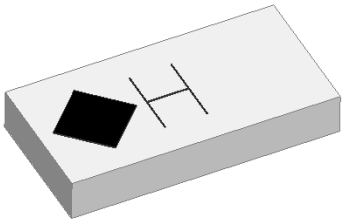
易氧化产品，产品拆封后请于48小时内用完或重新密封包装！

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

2.4/5GHz 3216 Chip Antenna: ANT3216R24503KL1

Applications:

WLAN, 802.11a, b, c/g, Bluetooth, etc…



Features

SMD, high reliability, ultra compact, Omni-directional…

Part number

ANT	3216	R	2450	3K	L1
	(1)	(2)	(3)	(4)	(5)

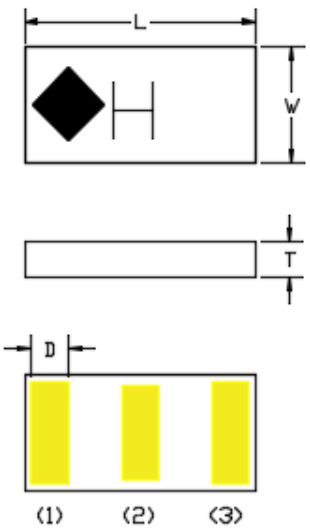
(1) Size Code	3.2x1.6mm
(2) Packing	Tape and reel
(3) Frequency	2.4GHz/5GHz
(4) Packing Number	3K
(5) Code	L1

Electrical Specification

Working Frequency Range	2400 ~2.484 MHz 5150~5850 MHz
Peak Gain	2.8 dBi (Typ.) 5.3 dBi (Typ)
Impedance	50 Ohm
VSWR	2.5 (Max)
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Operation Temperature(℃)	-40 ~85℃

The specification is defined on EVB.

Dimension and Terminal Configuration



Dimension (mm)	
L	3.20+-0.15
W	1.60+-0.15
T	0.55+-0.10
D	0.50+-0.15

No.	Terminal Name
1	Ground
2	Feeding
3	Ground

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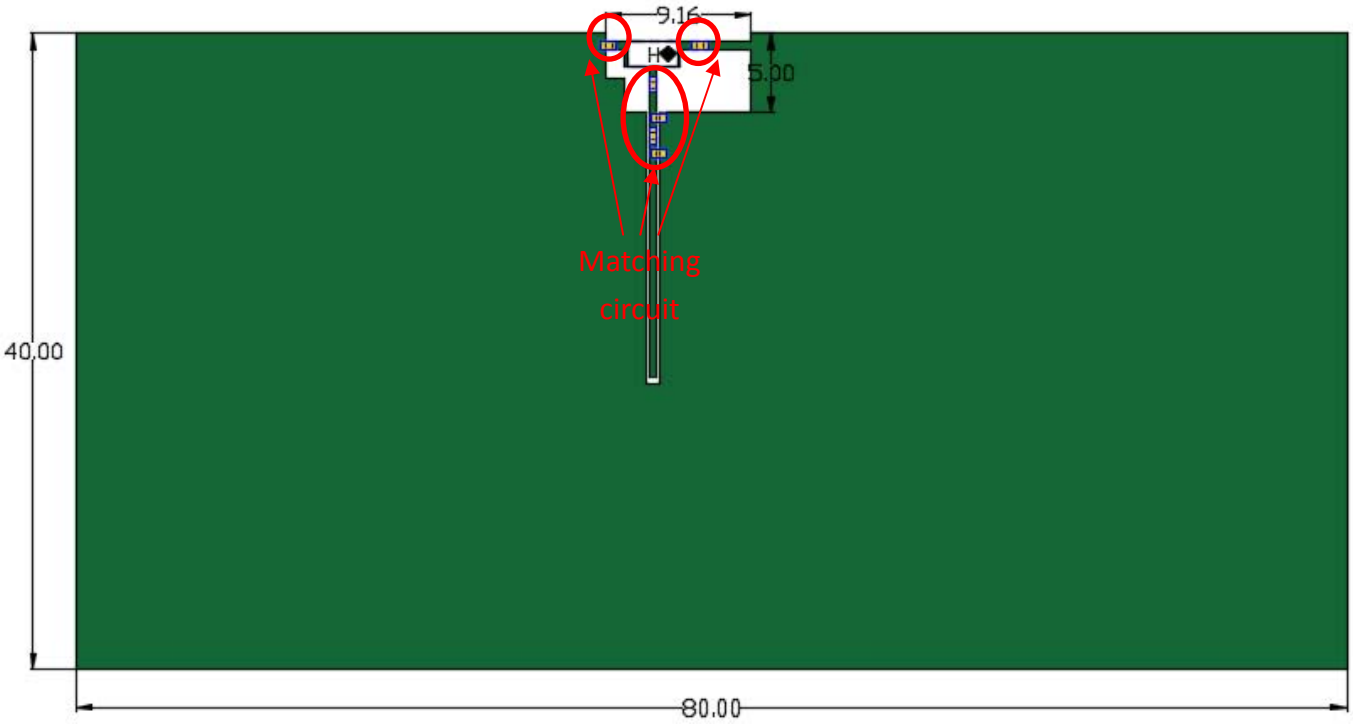
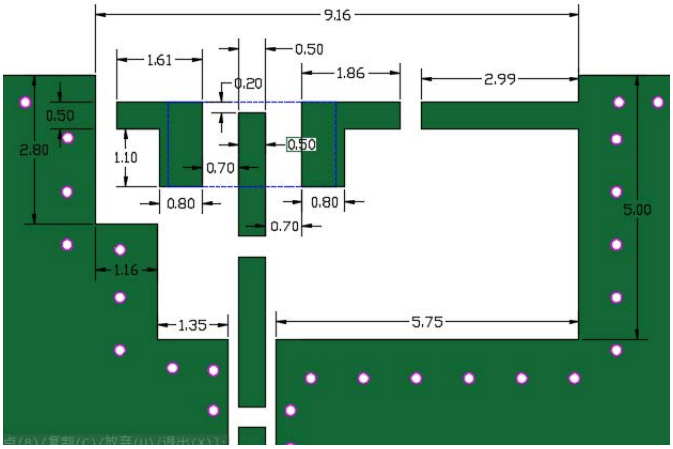
2.4/5GHz 3216 Chip Antenna: ANT3216R24503KL1

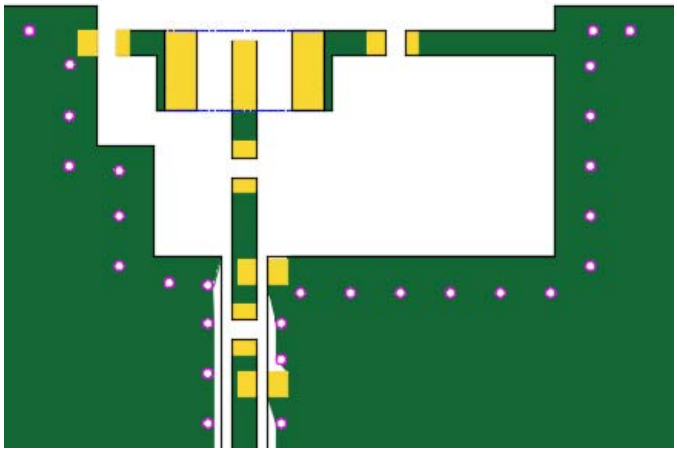
Evaluation Board Reference

PCB Dimension



Antenna Layout Reference





Unit : mm

Chip Antenna

Land Pattern

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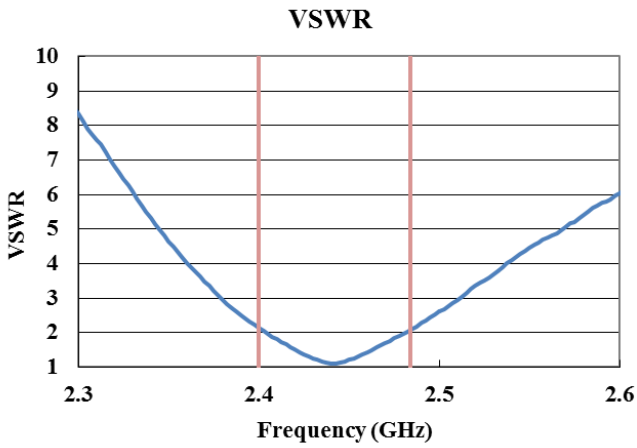
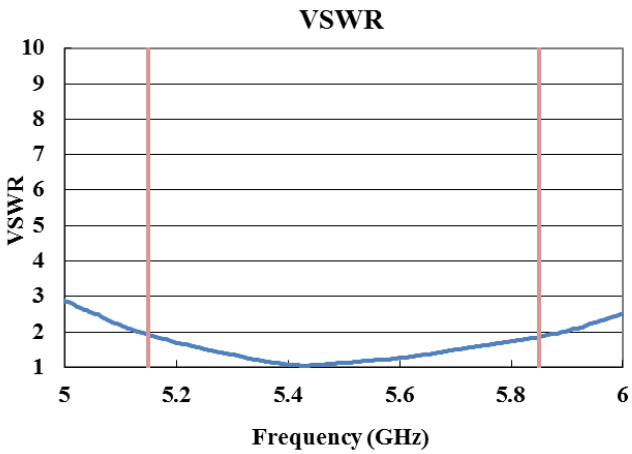
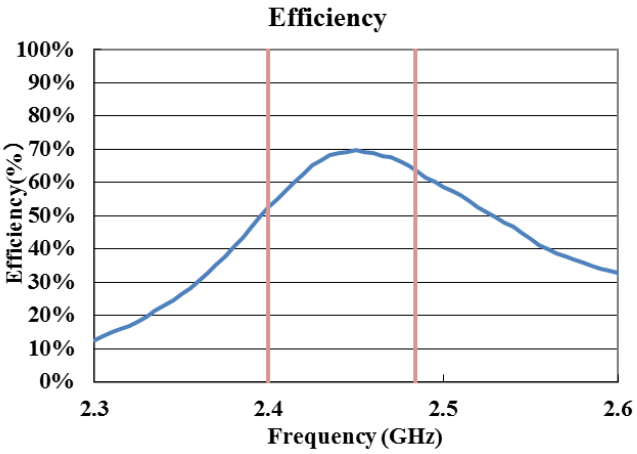
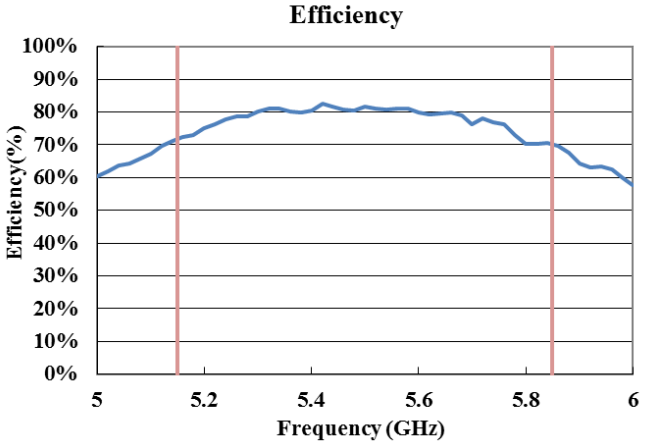
2.4/5GHz 3216 Chip Antenna: ANT3216R24503KL1

VSWR&Efficiency

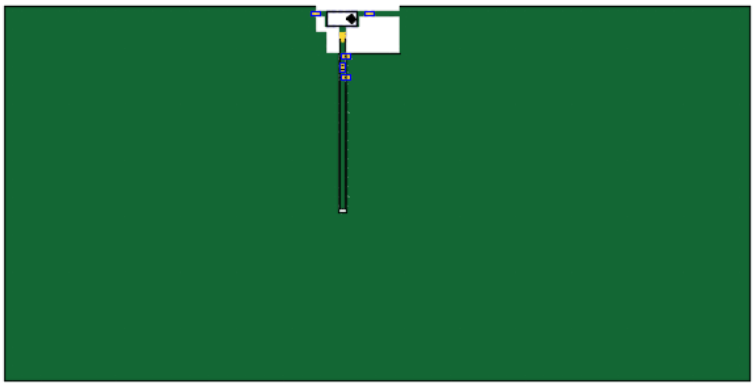


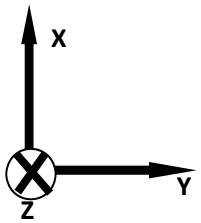






Radiation Pattern

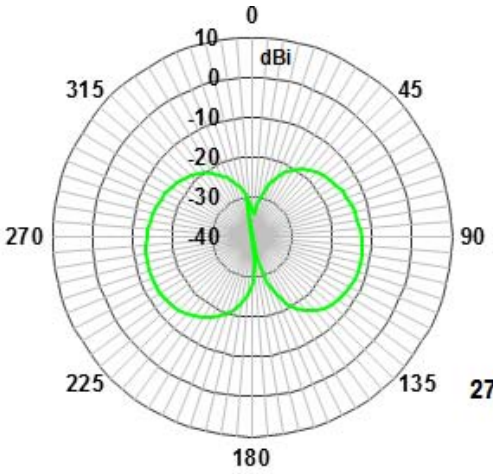




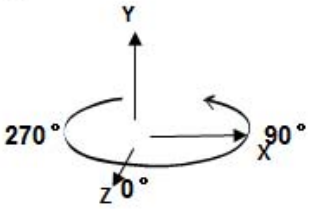
2.4/5GHz 3216 Chip Antenna: ANT3216R24503KL1

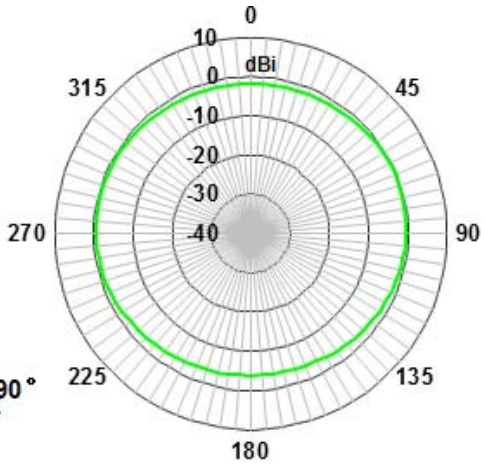
Frequency=2440MHz

ZX-Plane



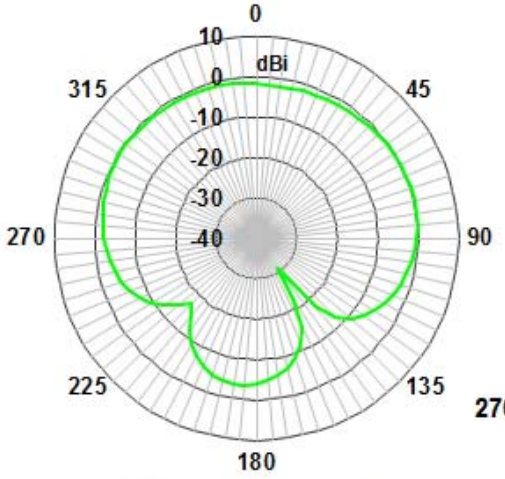
Horizontal Polarization



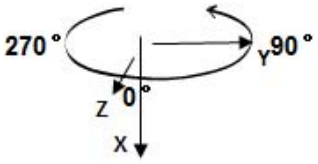


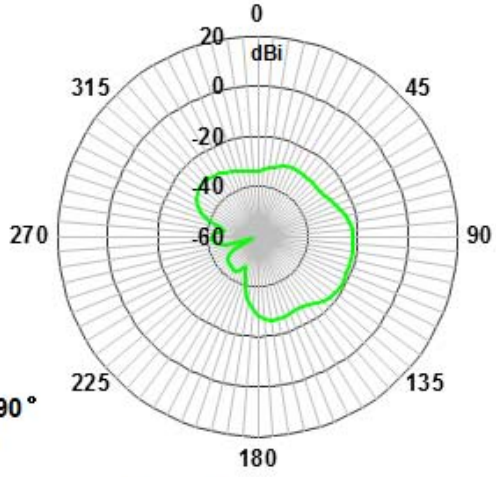
Vertical Polarization

ZY-Plane



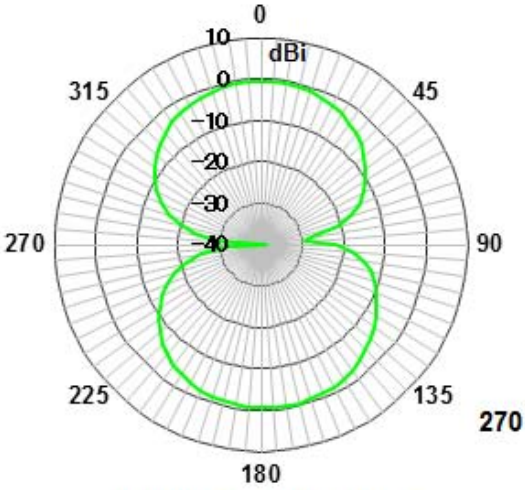
Horizontal Polarization



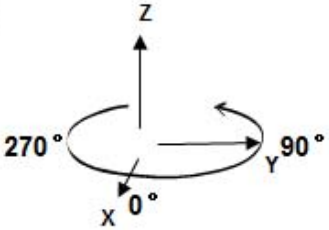


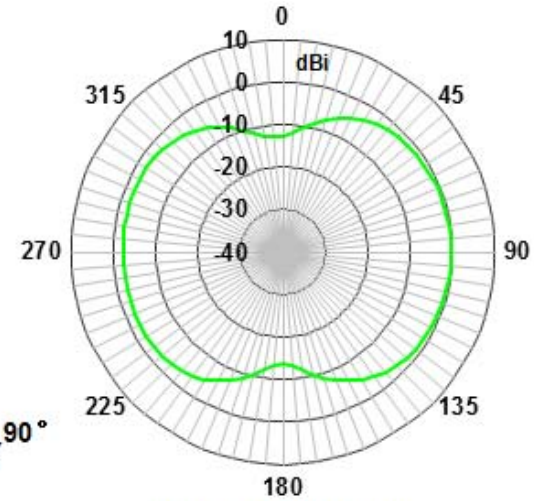
Vertical Polarization

XY-Plane



Horizontal Polarization





Vertical Polarization

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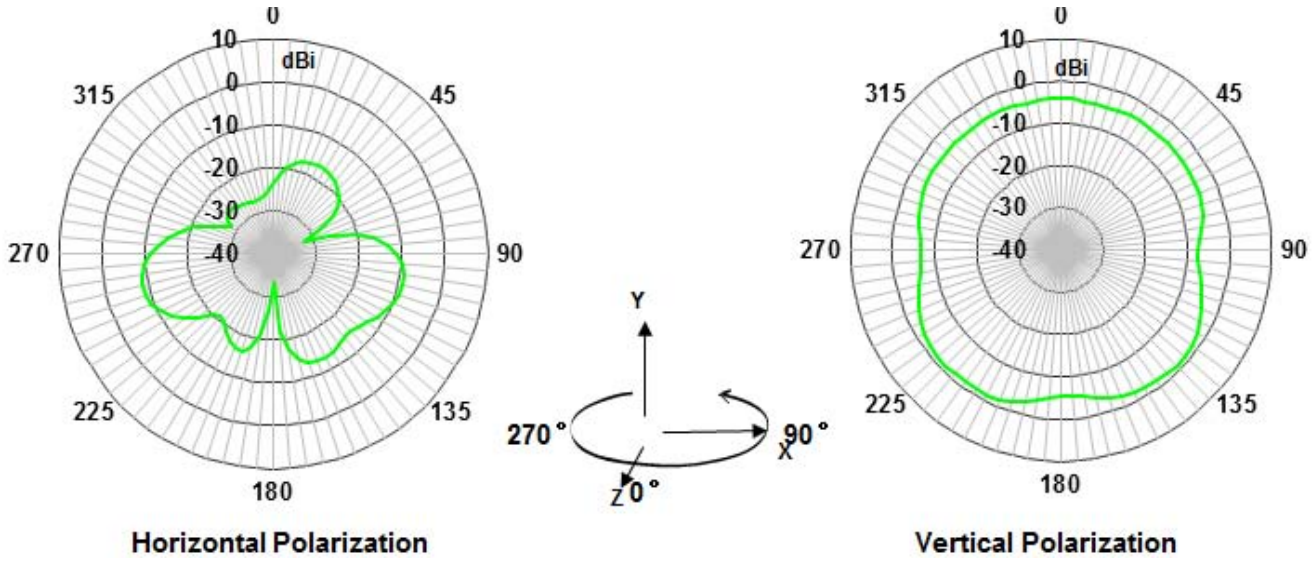
2.4/5GHz 3216 Chip Antenna: ANT3216R24503KL1

Frequency=5500MHz

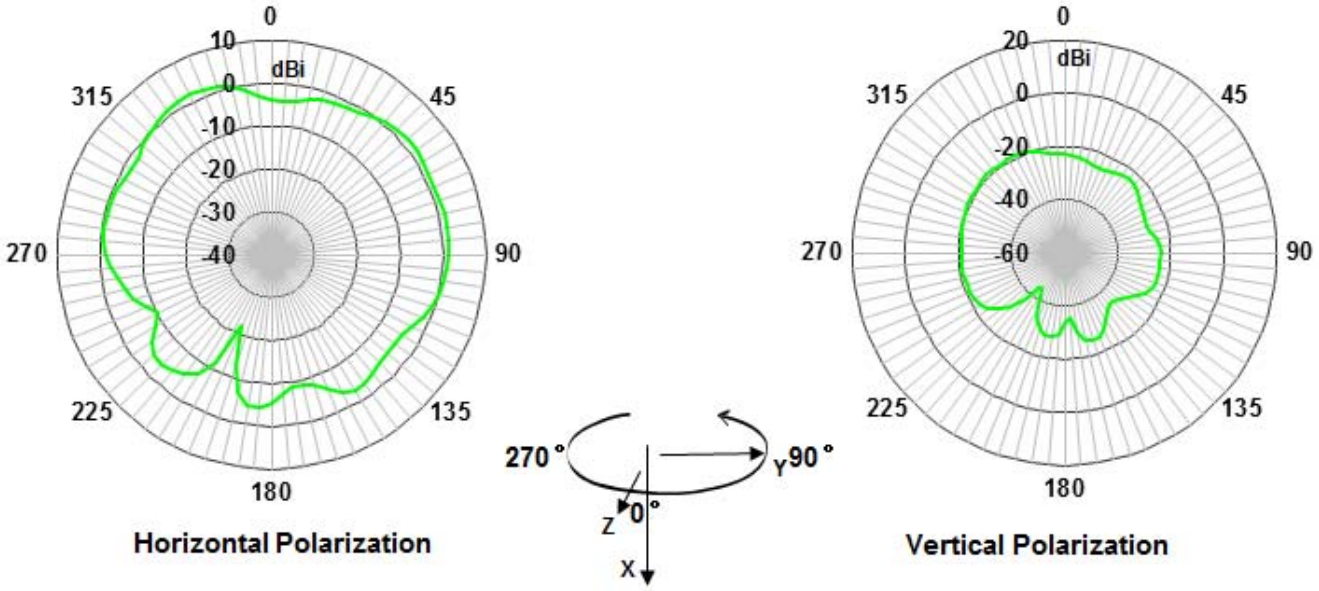
ZX-Plane



Horizontal Polarization

Vertical Polarization

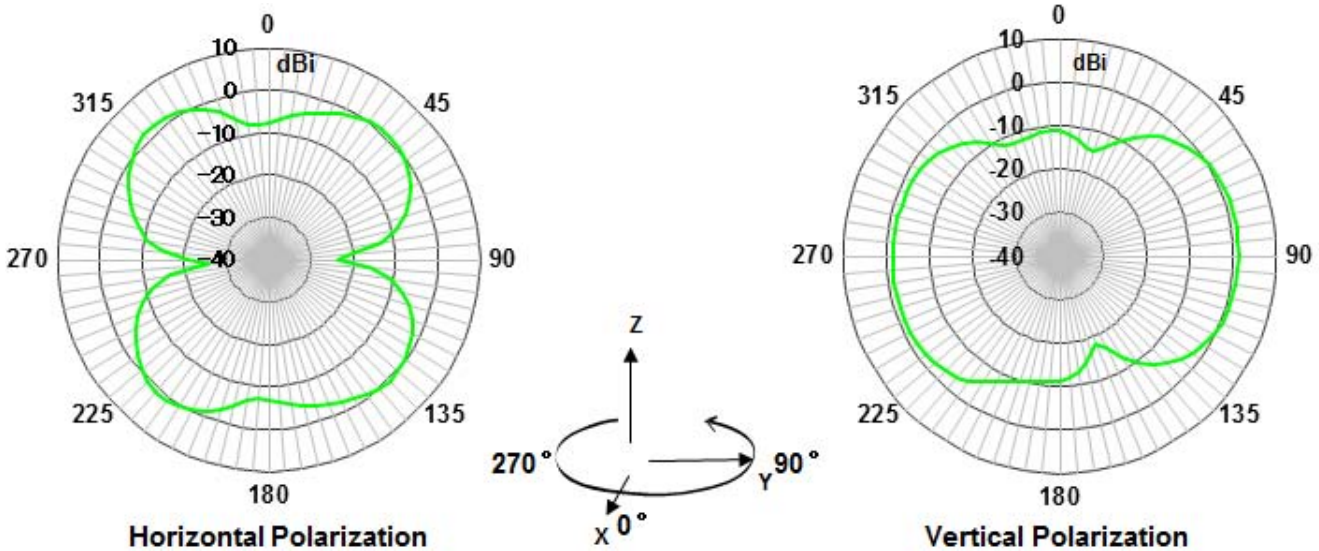
ZY-Plane



Horizontal Polarization

Vertical Polarization

XY-Plane



Horizontal Polarization

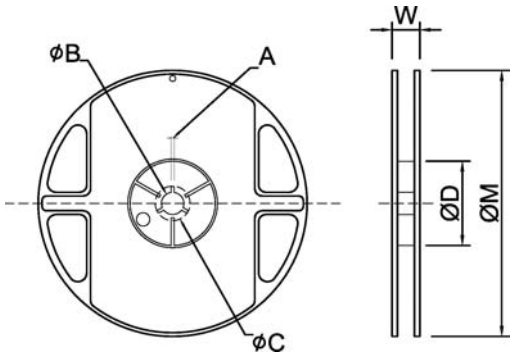
Vertical Polarization

2.4/5GHz 3216 Chip Antenna: ANT3216R24503KL1

Taping Specifications

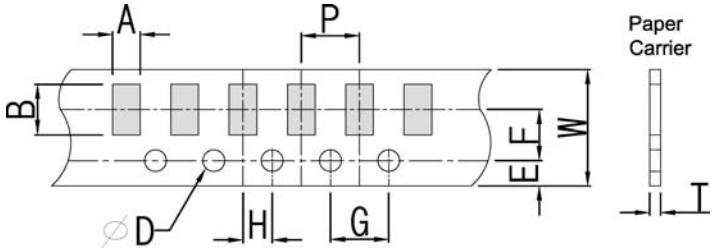
Reel and Taping Specification

Reel Specification



TYPE	SIZE		A	φB	φC	φD	W	φM
3216	7”	3K/Reel	2.0±0.5	13.5±1.0	21±1.0	60±1.0	11.5±2.0	178±2.0

Taping Specification

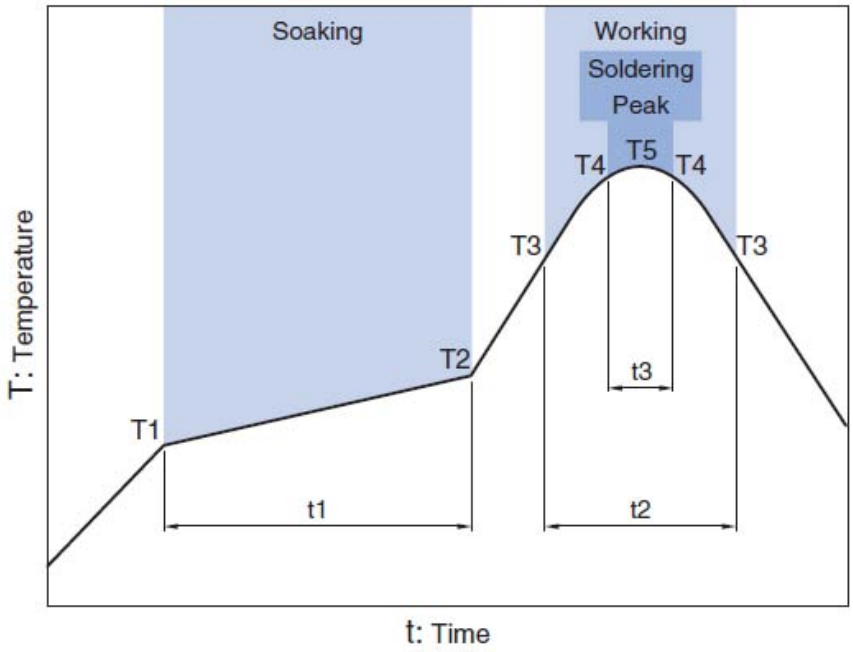


Packaging	Type	A	B	W	E	F	G	H	T	φD	P
Paper Type	3216	1.90±0.20	3.50±0.20	8.0±0.20	1.75±0.10	3.5±0.05	4.0±0.10	2.0±0.05	0.75±0.10	$1.50^{+0.10}_{-0}$	4.0±0.1

2.4/5GHz 3216 Chip Antenna: ANT3216R24503KL1

Recommended Reflow Profile

Pb free solder

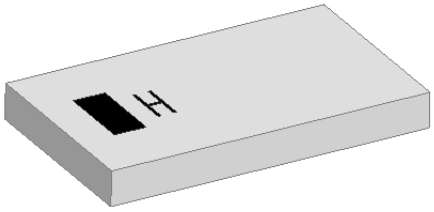


Soaking			Working		Soldering		Peak
Temp.		Time	Temp.	Time	Temp.	Time	Temp.
T1	T2	t1	T3	t2	T4	t3	T5
150°C	180°C	60 to 120sec	230°C	more than 30sec	247 to 253°C	within 10sec	260°C Max.

UWB 8060 Chip Antenna: ANT8060R55002KM1

Application:

UWB indoor location, Smart Key, etc…



Features

SMD, high reliability, ultra compact, Omni-directional…

Part number

ANT	8060	R	5500	1K	M1
	(1)	(2)	(3)	(4)	(5)

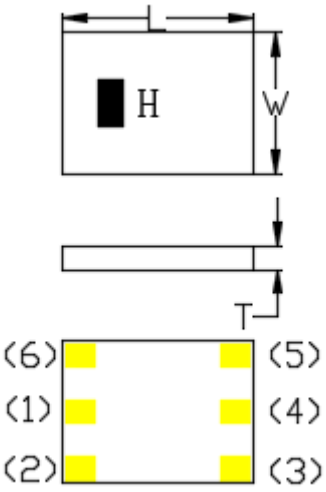
(1) Size Code	8.0x6.0mm
(2) Packing	Tape and reel
(3) Frequency	5500MHz
(4) Packing Number	1K
(5) Code	M1

Electrical Specification

Working Frequency Range	3500~8000 MHz
Peak Gain	3.5 dBi (Typ.)
Impedance	50 Ohm
VSWR	3 (Max)
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Operation Temperature(℃)	-40 ~85℃

The specification is defined on HEK EVB.

Dimension and Terminal Configuration



Dimension (mm)	
L	8.0+-0.15
W	6.0+-0.15
T	1.0+-0.10

No.	Terminal Name
1	Feeding
2,3,4,5,6	Soldering

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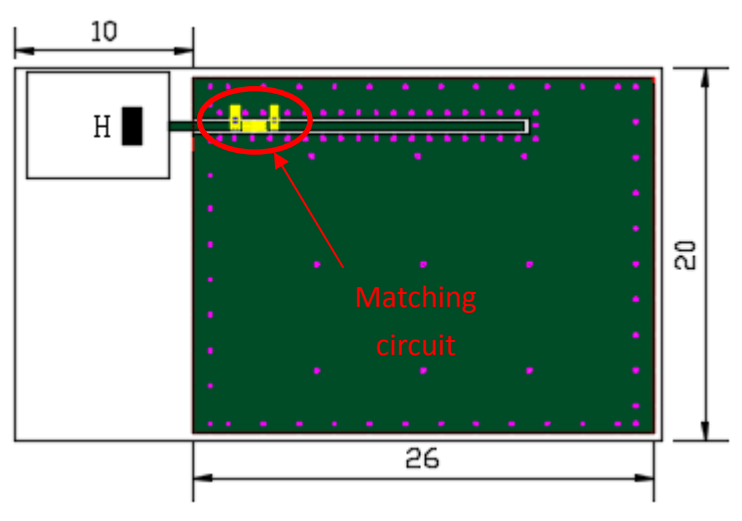
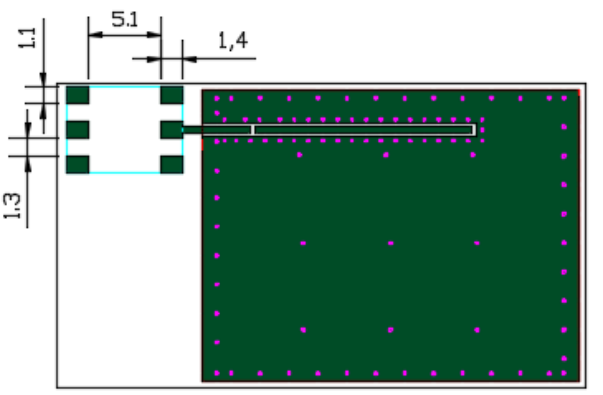
UWB 8060 Chip Antenna: ANT8060R55002KM1

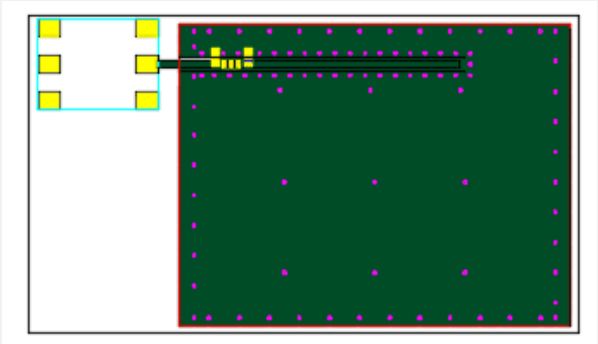
Evaluation Board Reference

PCB Dimension



Antenna Layout Reference





Unit : mm

:Chip Antenna

: Land Pattern

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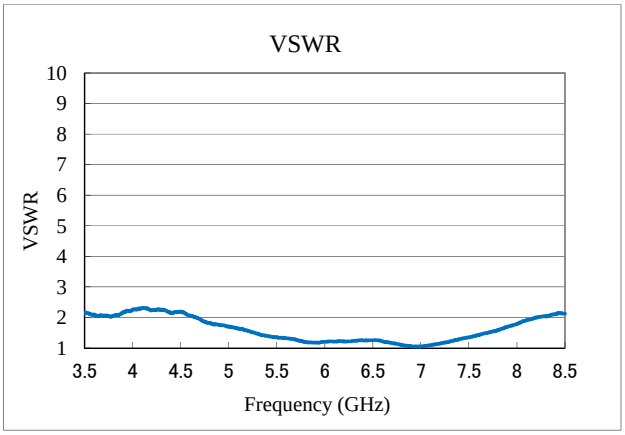
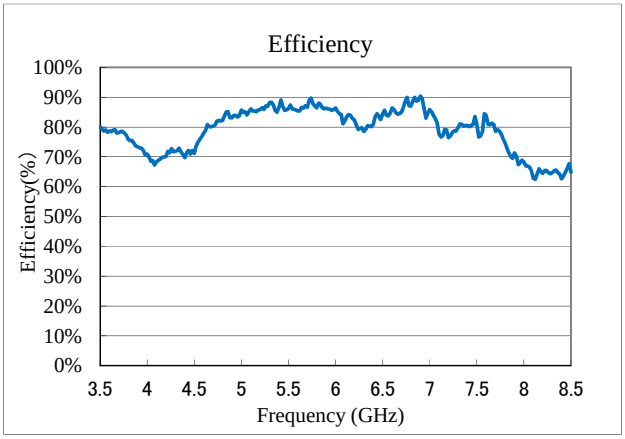
UWB 8060 Chip Antenna: ANT8060R55002KM1

Electrical Characteristics

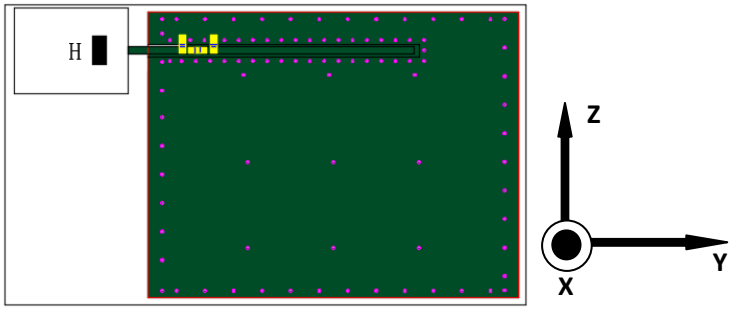
Return Loss & Radiation

VSWR&Efficiency



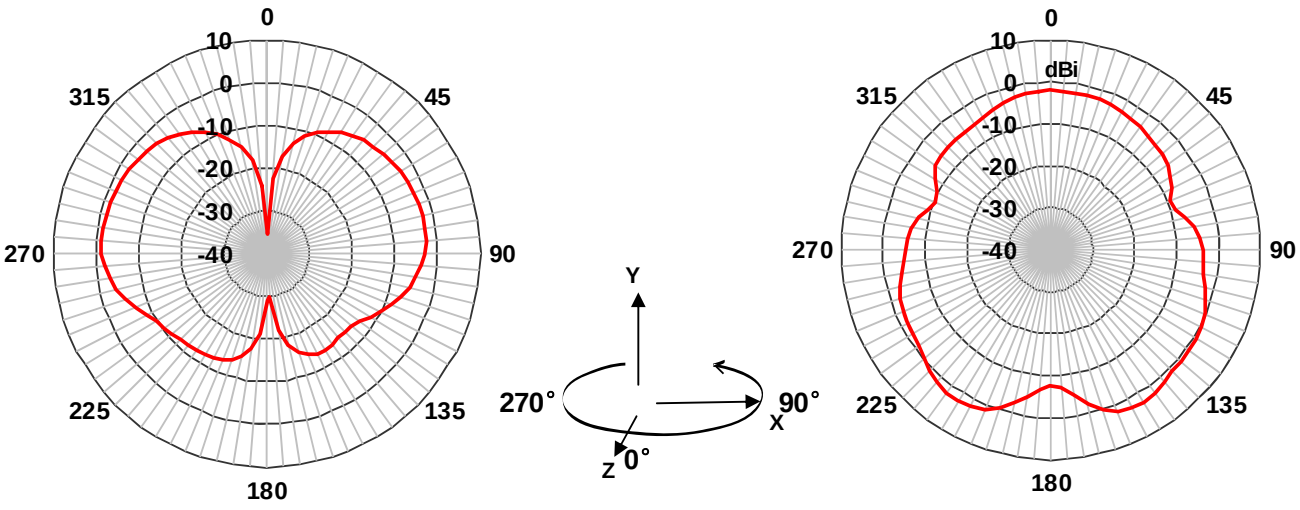


Radiation Pattern



Frequency=5500MHz

ZX-Plane

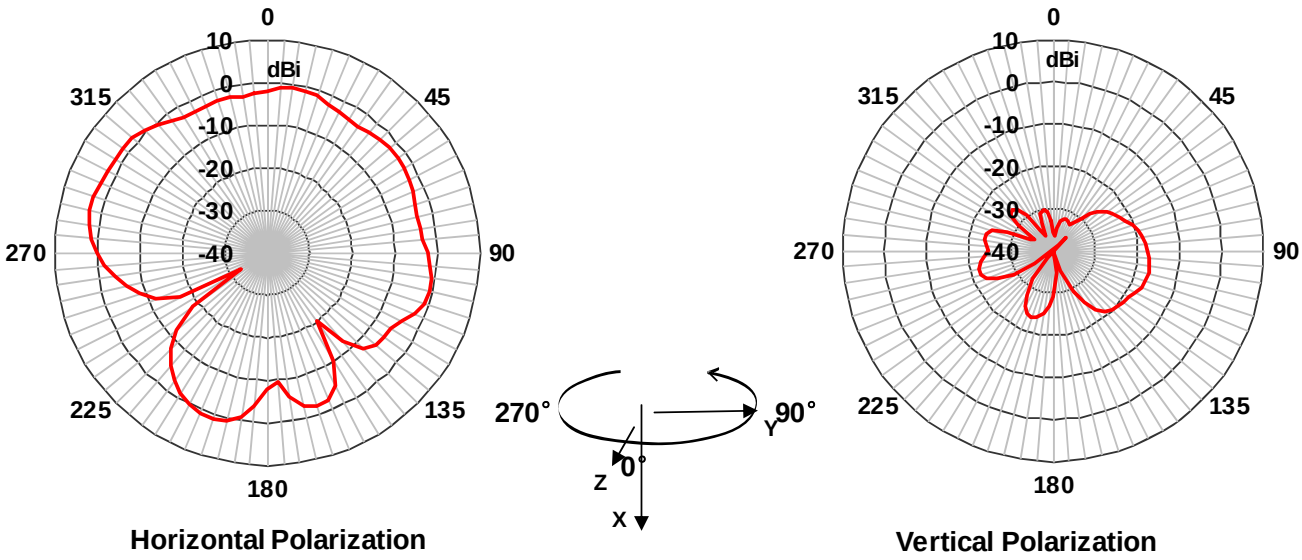


Horizontal Polarization

Vertical Polarization

UWB 8060 Chip Antenna: ANT8060R55002KM1

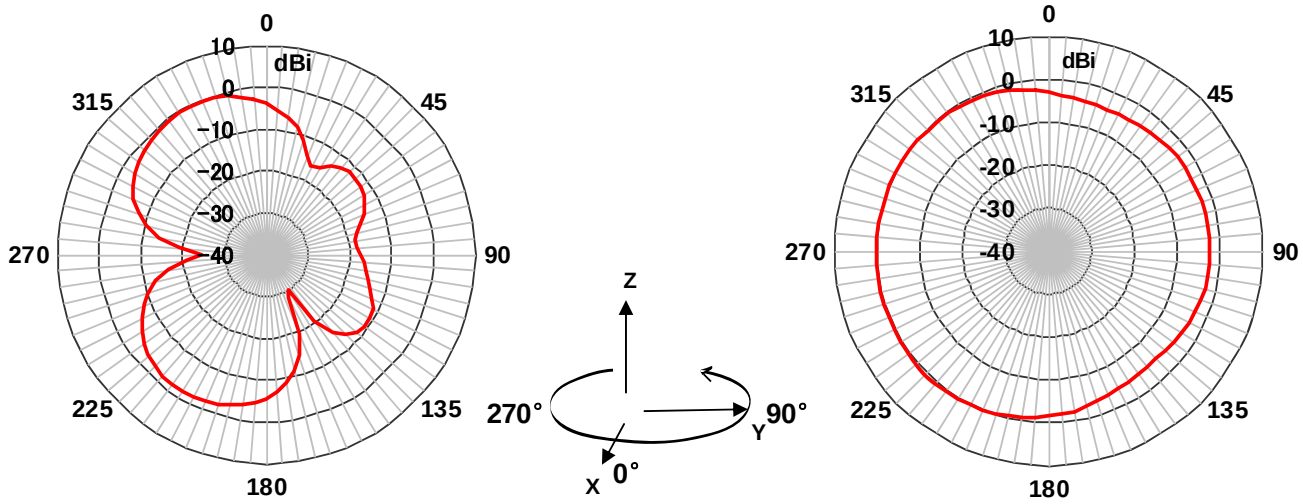
ZY-Plane



Horizontal Polarization

Vertical Polarization

XY-Plane



Horizontal Polarization

Vertical Polarization

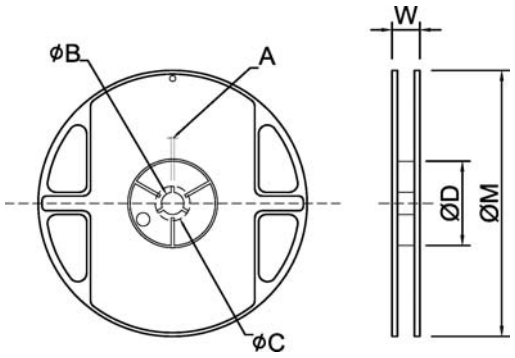
SHINHOM ELECTRONICS ENTERPRISE CO.,LTD. No.100YanTa Northern Road Zip:710054 Tel:0086-29-87851838 Fax:0086-29-87851840

UWB 8060 Chip Antenna: ANT8060R55002KM1

Taping Specifications

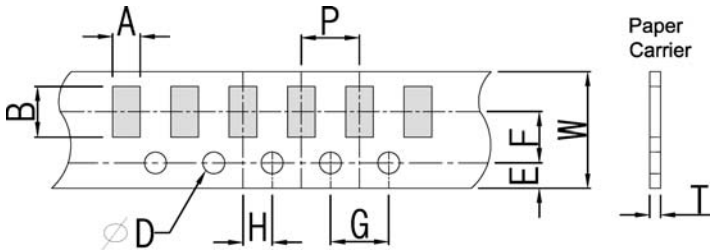
Reel and Taping Specification

Reel Specification



TYPE	SIZE		A	φB	φC	φD	W	φM
8060	13”	2K/Reel	2.0±0.5	13.0±1.0	21±1.0	67±1.0	20.5±2.0	178±2.0

Taping Specification

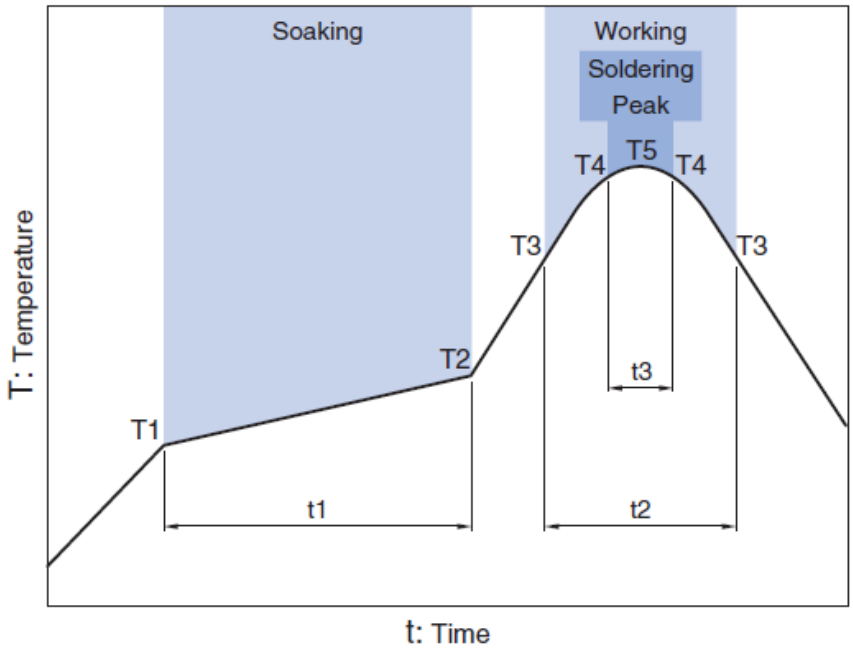


Packaging	Type	A	B	W	E	F	G	H	T	φD	P
Paper Type	8060	6.30±0.20	8.30±0.20	16.0±0.20	1.75±0.10	7.5±0.05	4.0±0.10	2.0±0.05	0.30±0.10	$1.50^{+0.10}_{-0}$	12±0.1

UWB 8060 Chip Antenna: ANT8060R55002KM1

Recommended Reflow Profile

Pb free solder



Soaking			Working		Soldering		Peak
Temp.		Time	Temp.	Time	Temp.	Time	Temp.
T1	T2	t1	T3	t2	T4	t3	T5
150°C	180°C	60 to 120sec	230°C	more than 30sec	247 to 253°C	within 10sec	260°C Max.

CHIP ANTENNA

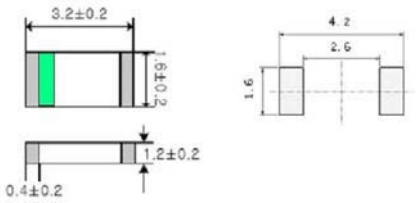
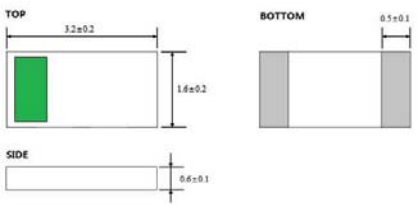
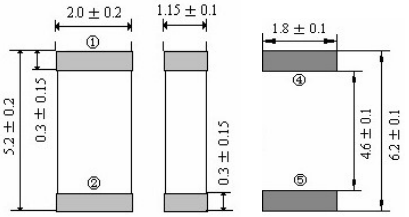
Multilayer Chip Type

Small Size • Low Loss • High Reliability

Simplify Circuit Design & Tuning

CHIP ANTENNA

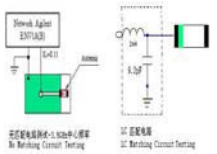
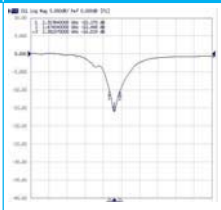
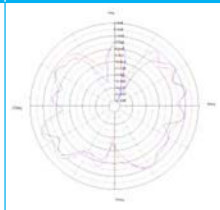
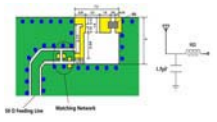
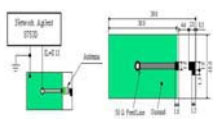
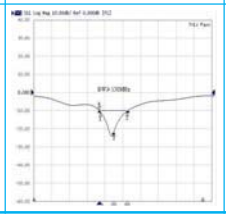
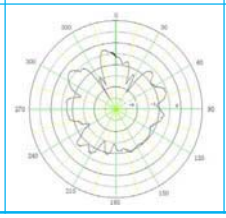
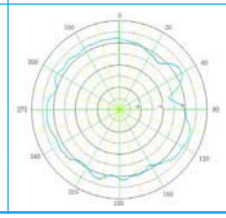
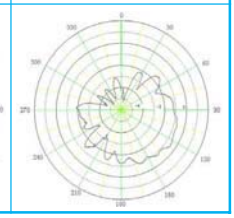
Product Structure

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					

GPS Attenna Module GPS 天线模块

FEATURES 特点

- The antenna outline is compact size，

  产品外型呈扁平状小型结构，

- Featuring low RL, low Axial Ratio but high gain, etc

  性能具有低反射损耗、轴比小、增益高的特点

- Pb-free, ROHS compliant

  本产品采用的工艺和材料符合 ROHS 要求

APPLICATIONS 应用

- 适用于 GPS 产品中

  Designed to be used for GPS products

Product Identification 产品标识

GDAS	1575	R	15	C1	4
①	②	③	④	⑤	⑥

① Series name 系列名称

②Character Frequency 特征频率：1575 MHz

③ Patch Antenna 极化方式：R=右旋圆极化

④Patch Antenna 天线尺寸:15=15×15 [*可以根据客户需要而更改产品尺寸]

⑤Center frequency 中心频率: 1575MHz

⑥ thickness 厚度：4mm

Product Specification Summary 产品规格简表

Part No.产品型号	Dimensions 尺寸 L×W×H（mm）	Center Frequency 中心频率 （MHZ）	Antenna Gain* 天线增益
GDAS1575R18C14	18×18×4	1575.42MHz±2	2.5-dBi
GDAS1575R18C12	18×18×2	1575.42MHz±2	1.2 dBi
GDAS1575R15C14	15×15×4	1575.42MHz±2	2 dBi
GDAS1575R12C14	12×12×4	1575.42MHz±2	-1 dBi
GDAS1575R12C12	12×12×2	1575.42MHz±2	-2 dBi
GDAS1575R10C14	10×10×4	1575.42MHz±2	-3.5 dBi
GDAS1575L2006C14	20×6×4	1575.42MHz±2	0 dBi
GDAS1575L1606C14	16×6×4	1575.42MHz±2	-0.5 dBi
GDAS1575L1003C14	10×3×4	1575.42MHz±2	-1 dBi

*天线增益测试是按各种天线尺寸大小的地面来进行测试的

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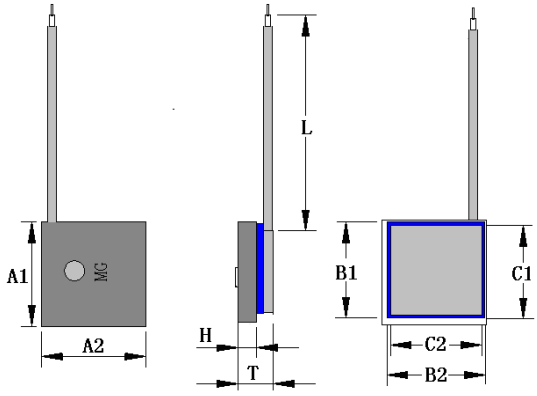
GPS Attenna Module GPS 天线模块

Part No. 产品型号：GDAS1575

1. Dimensions 外形尺寸（Unit：mm）



Unit:mm

Part No.产品型号	天线尺寸 Antenna Size		PCB 尺寸 PCB size		屏蔽罩尺寸 Shielding Size		总厚度 Total Thickness	天线厚度 Antenna Thickess	电缆线长 Cable Length
	A1	A2	B1	B2	C1	C2	T	H	L*
GDAS1575R18C14	18	18	16.5	16.5	15	15	5.6	4	40±3mm
GDAS1575R18C12	18	18	16.5	16.5	15	15	3.6	2	
GDAS1575R15C14	15	15	12	12	12	12	5.6	4	
GDAS1575R12C14	12	12	12	12	8.4	7.9	5.6	4	
GDAS1575R12C12	12	12	12	12	8.4	7.9	3.6	2	
GDAS1575R10C14	10	10	10	10	8.4	7.9	5.6	4	
GDAS1575L2006C14	20	6	20	6	14	5.5	5.6	2	
GDAS1575L1606C14	16	6	16	6	14	5.5	3	3	

***:可以根据客户要求定制电缆线长**

2. Electrical Characteristics 电气性能

No.	Item （项目）	GDAS1575R
1	Center Frequency 中心频率	1575.42MHz±3 MHz
2	V.S.W.R 电压驻波比	<2.0
3	Band Width 带 宽	>10MHz
4	Impendence 阻 抗	50 ohm
5	Peak Gain 最高增益	＞2.5 dBi Based on standard ground plane
6	Gain Coverage 增益范围	＞-1dBi at –90°＜0＜+90°(over 75% Volume)
7	Polarization 天线极化	RHCP

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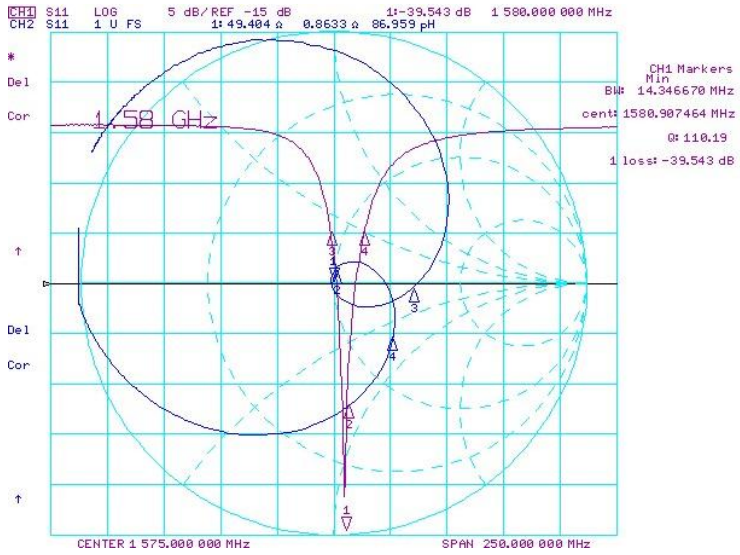
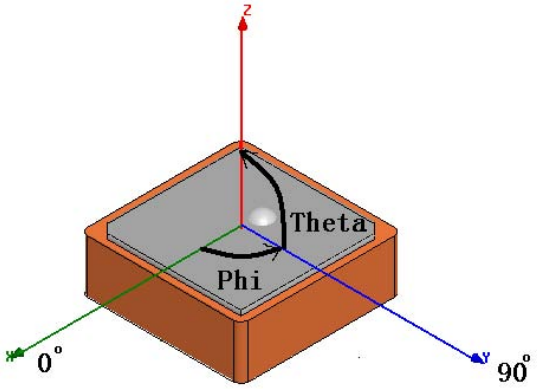
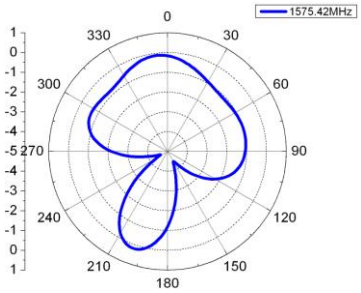
3. Characteristic curve 特性曲线

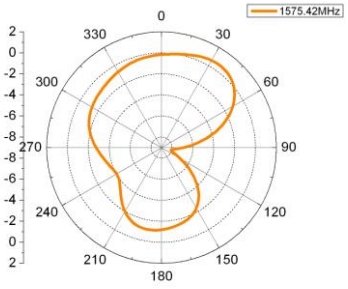


4. Radlation Pattern 天 线 方 向 图

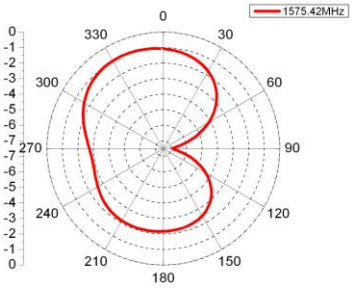




Phi=0 deg



Phi=90deg

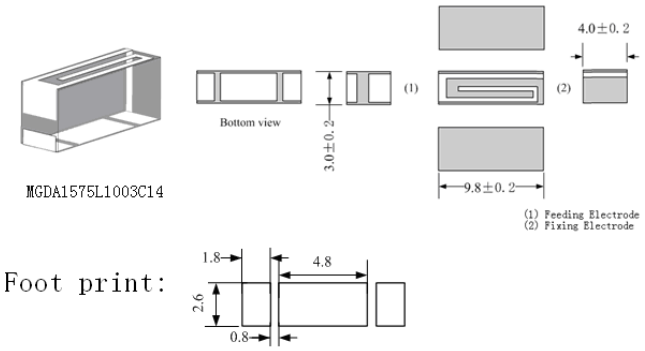


Theta=90deg

GPS Attenna Module GPS 天线模块

Part No. 产品型号：GDAS1575L1003C14

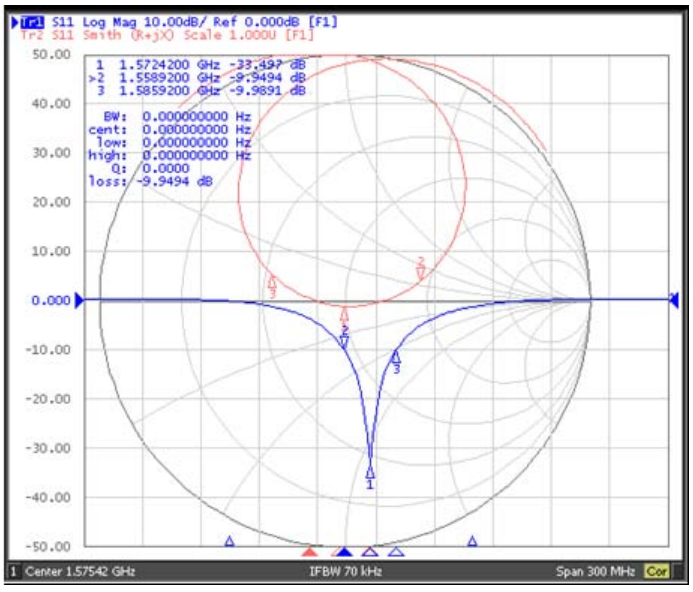
1. Dimensions 外形尺寸（Unit：mm）



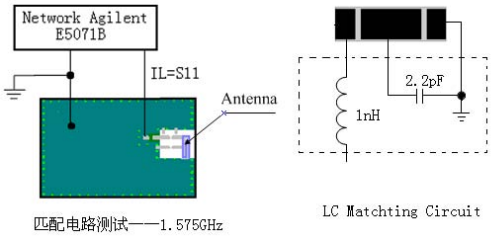
2. Electrical Characteristics 电气性能

No.	Item （项目）	GDAS1575R (10×3×4)
1	Center Frequency 中心频率	1575.42MHz±2 MHz
2	V.S.W.R 电压驻波比	<2.0
3	Band Width 带 宽	>20MHz
4	Impendence 阻 抗	50 ohm
5	Peak Gain 最高增益	＞-1 dBi
6	Polarization 天线极化	LINEAR

3. Characteristic curve 特性曲线



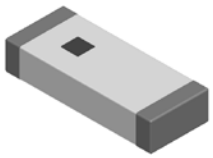
4. Test Circuit 测试电路



SHINHOM ELECTRONICS ENTERPRISE CO.,LTD. No.100YanTa Northern Road Zip:710054 Tel:0086-29-87851838 Fax:0086-29-87851840

Multilayer Chip Antenna – ANT Series

Operating Temp. : -40℃~+85℃



FEATURES

- Light weight, compact
- Wide bandwidth, low cost
- Built-in antenna with high gain

APPLICATIONS

- Bluetooth, Wireless LAN, Mobile TV
- Home RF system, etc

PRODUCT IDENTIFICATION

ANT	31	-2R800G	-S1	T	F
①	②	③	④	⑤	⑥

①

Type	
ANT	Multilayer Chip Antenna

②

(L×W) (mm) External Dimensions (L×W) (mm)	
21	2.0×1.2
31	3.2×1.6
52	5.2×2.1
62	6.0×2.0
72	7.0×2.0
81	8.0×1.0
92	9.0×2.0

③

Center Frequency	
Example	Nominal Value
2R800G	2800.0MHz
2R450G	2450.0MHz

④

Series Code
S1, 01, etc.

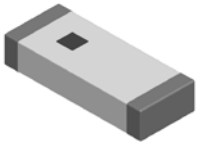
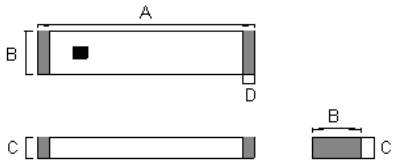
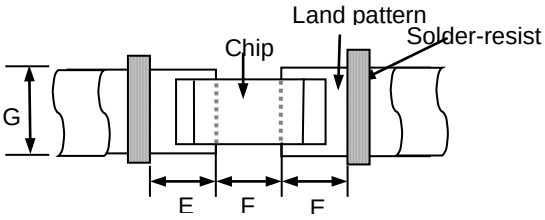
⑤

Packing	
T	Tape & Reel

⑥

Hazardous Substance Free Products
F

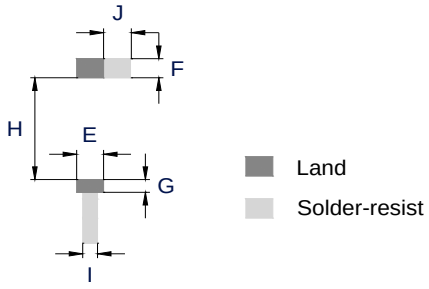
SHAPE AND DIMENSIONS

Type:	Dimensions (mm)
	
Type: ANT21-2R450G-S1TF	Land Pattern (mm)
	

SHINHOM ELECTRONICS ENTERPRISE CO.,LTD. No.100YanTa Northern Road Zip:710054 Tel:0086-29-87851838 Fax:0086-29-87851840

SHAPE AND DIMENSIONS

Land Pattern (mm)



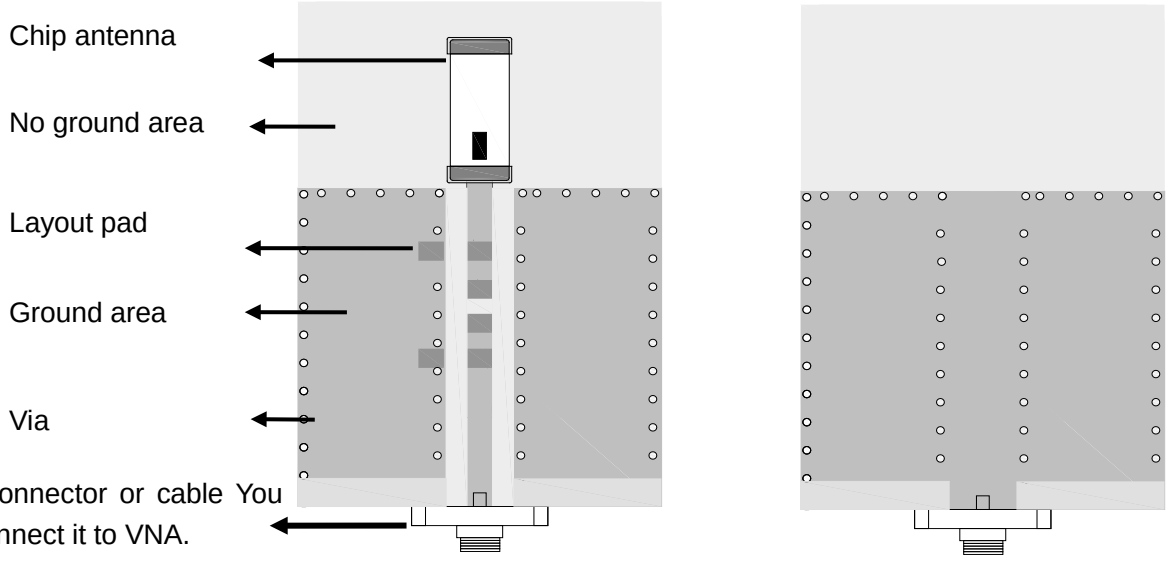
SHAPE AND DIMENSIONS

Series	A	B	C	D	E	F	G	H	I	J
ANT21	2.0±0.2	1.25±0.2	0.85±0.2	0.5±0.2	1.0±0.2	1.0±0.2	1.5±0.2	-	-	-
ANT31	3.2±0.2	1.6±0.2	1.2±0.2	0.5±0.2	1.6±0.2	0.8±0.2	0.8±0.2	2.2±0.2	1.4	1.6±0.2
ANT52	5.2±0.2	2.1±0.2	1.0±0.2	0.5±0.2	2.3±0.2	1.5±0.2	1.0±0.2	4.0±0.2	1.4	2.3±0.2
ANT62	6.0±0.2	2.0±0.2	1.0±0.2	0.5±0.2	2.2±0.2	1.5±0.2	1.0±0.2	5.0±0.2	1.4	2.2±0.2
ANT72	7.0±0.2	2.0±0.2	1.0±0.2	0.5±0.2	2.2±0.2	1.5±0.2	1.0±0.2	6.0±0.2	1.4	2.2±0.2
ANT81	8.0±0.2	1.0±0.2	1.0±0.2	0.5±0.2	1.5±0.2	1.5±0.2	1.0±0.2	7.0±0.2	1.4	1.5±0.2
ANT92	9.0±0.2	2.0±0.2	1.0±0.2	0.5±0.2	2.2±0.2	1.5±0.2	1.0±0.2	8.0±0.2	1.4	2.2±0.2

TERINAL-CONFIGURATION

No.	Terminal Name	No.	Terminal Name
(1)	Feeding Point	(2)	NC

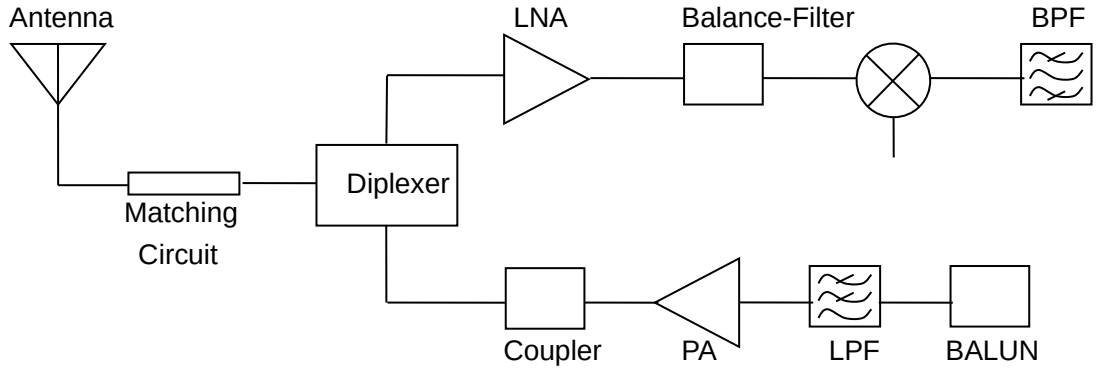
EVALUATION BOARD



Top view

Bottom view

APPLICATION GUIDE



SPECIFICATIONS

ANT21 TYPE

Part Number	Band Width	Peak Gain	Average Gain	VSWR	Impedance	Power Capacity
	MHz	V-XZ	V-XZ	In BW	Ω	W
ANT21-2R450G-S1TF	≥100	1.0dBi Typ.	-3.0dBi Typ.	<2.5	50	3

ANT31 TYPE

Part Number	Band Width	Peak Gain	Average Gain	VSWR	Impedance	Power Capacity
	MHz	V-XZ	V-XZ	In BW	Ω	W
ANT31-2R800G-S1TF	≥100	0.5dBi Typ.	-1dBi Typ.	<2	50	3
ANT31-2R400G-S1TF	≥100	2.5dB @(XZ-total)	-1.5dB @(XZ-total)	< 2	50	2
ANT31-2R450G-S2TF	≥100	2.5dBi @(XZ-total)	0.5dBi @(XZ-total)	< 2	50	2

ANT52 TYPE

Part Number	Band Width	Peak Gain	Average Gain	VSWR	Impedance	Power Capacity
	MHz	V-XZ	V-XZ	In BW	Ω	W
ANT52-2R510G-S1TF	≥200	2.5dBi Typ.	0.5dBi Typ.	<2	50	
ANT52-2R540G-S1TF	≥200	2.5dBi Typ.	0.5dBi Typ.	<2	50	

ANT62 TYPE

Part Number	Band Width	Peak Gain	Average Gain	VSWR	Impedance	Power Capacity
	MHz	V-XZ	V-XZ	In BW	Ω	W
ANT62-2R640G-01TF	≥200	2.6dBi Typ.	0.7dBi Typ.	<2	50	3

ANT72 TYPE

Part Number	Band Width	Peak Gain	Average Gain	VSWR	Impedance	Power Capacity
	MHz	V-XZ	V-XZ	In BW	Ω	W
ANT72-2R470G-S1TF	≥200	2.7dBi Typ.	1.0dBi Typ.	<2	50	3

ANT81 TYPE

Part Number	Band Width	Peak Gain	Average Gain	VSWR	Impedance	Power Capacity
	MHz	V-XZ	V-XZ	In BW	Ω	W
ANT81-3R010G-S1TF	≥200	2.0dBi Typ.	0.5dBi Typ.	<2	50	3

SPECIFICATIONS

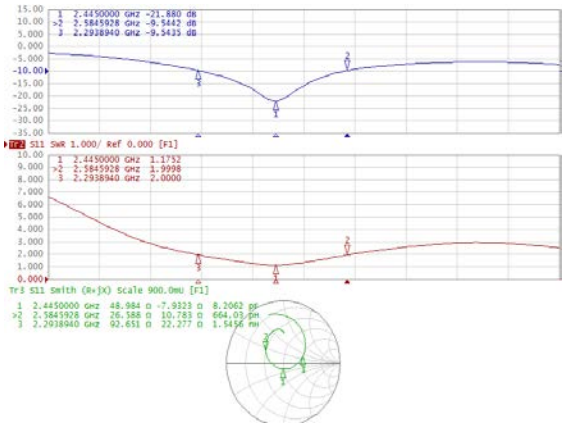
ANT92 TYPE

Part Number	Band Width	Peak Gain	Average Gain	VSWR	Impedance	Power Capacity
	MHz	V-XZ	V-XZ	In BW	Ω	W
ANT92-2R660G-S1TF	≥200	3.0dBi Typ.	1.0dBi Typ.	<2	50	3

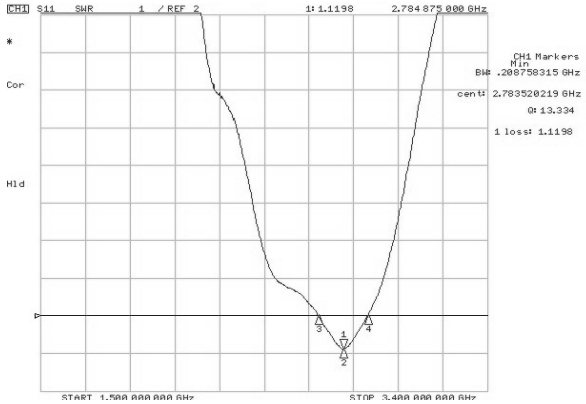
※Frequency will be changed with layout of PCB. Please contact us for appropriate design.

RETURN LOSS

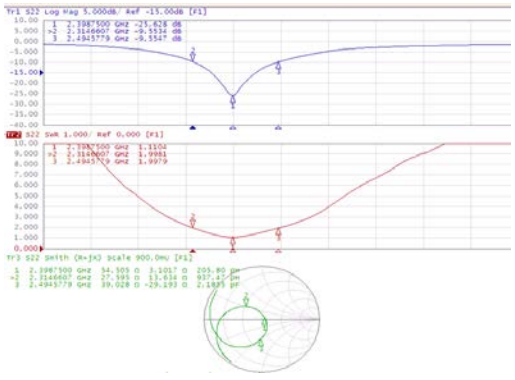
ANT21-2R450G-S1TF



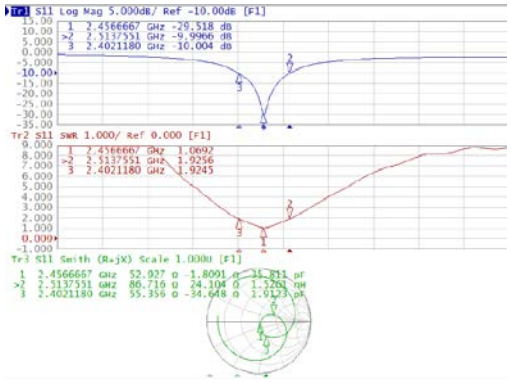
ANT31-2R800G-S1TF



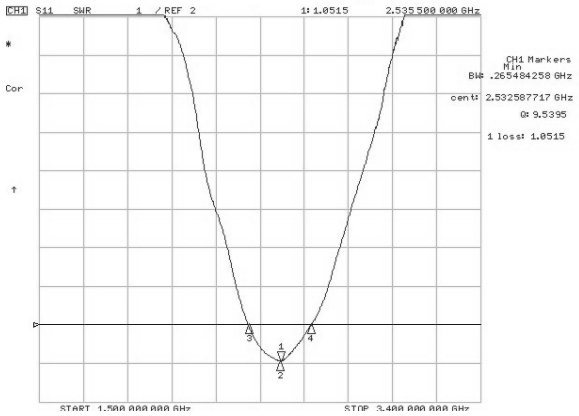
ANT31-2R400G-S1TF



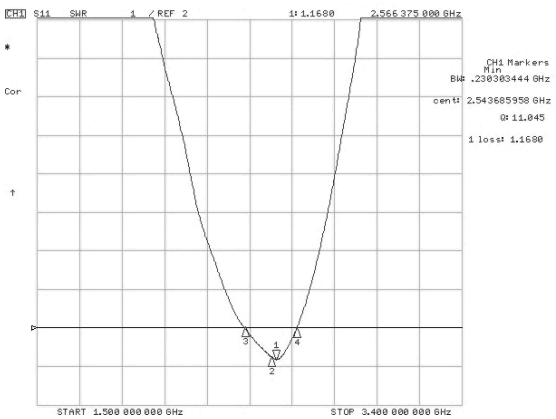
ANT31-2R450G-S2TF



ANT52-2R510G-S1TF

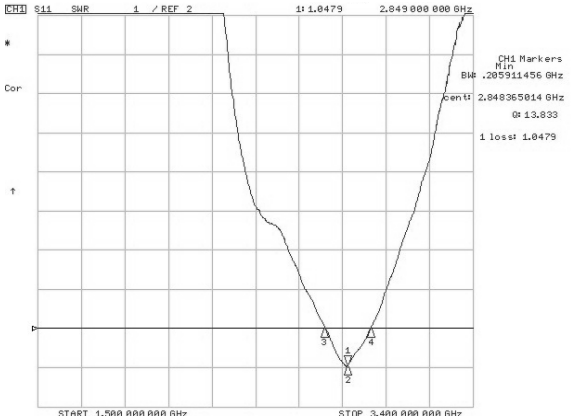


ANT52-2R540G-S1TF

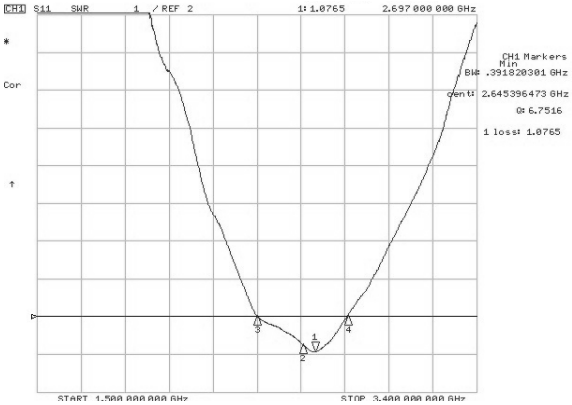


RETURN LOSS

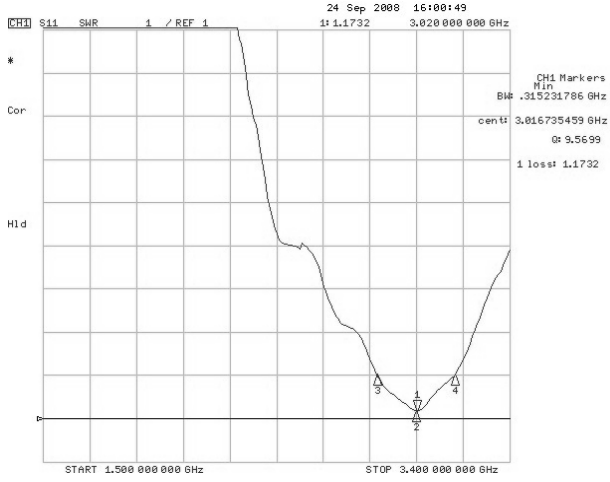
ANT62-2R640G-01TF



ANT72-2R470G-S1TF



ANT81-3R010G-S1TF



ANT92-2R660G-S1TF