

**P/N: HLX321605A6**

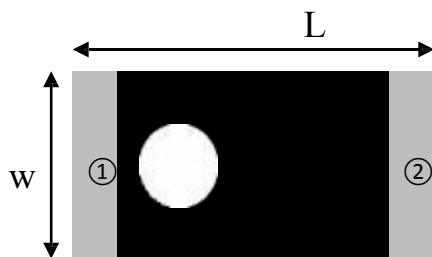
**Features**

- 1.Surface Mounted Devices with a small dimension of 3.6 x 1.6 x 0.5 mm<sup>3</sup> meet future miniaturization trend.
- 2.Embedded and LTCC (Low Temperature Co-fired Ceramic) technology is able to future integrate with system design as well as beautifying the housing of final product.
3. High Stability in Temperature / Humidity Change
- 4.Chip antenna

**Applications**

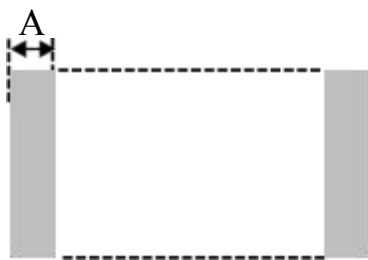
1. Bluetooth
2. Wireless LAN
3. ISMband 2.4GHz wireless applications

**Dimensions ( Unit: mm )**



( Top View )

Number	Terminal Name
①	INPUT
②	NC



( Bottom View )

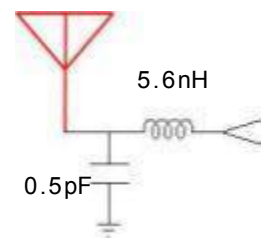
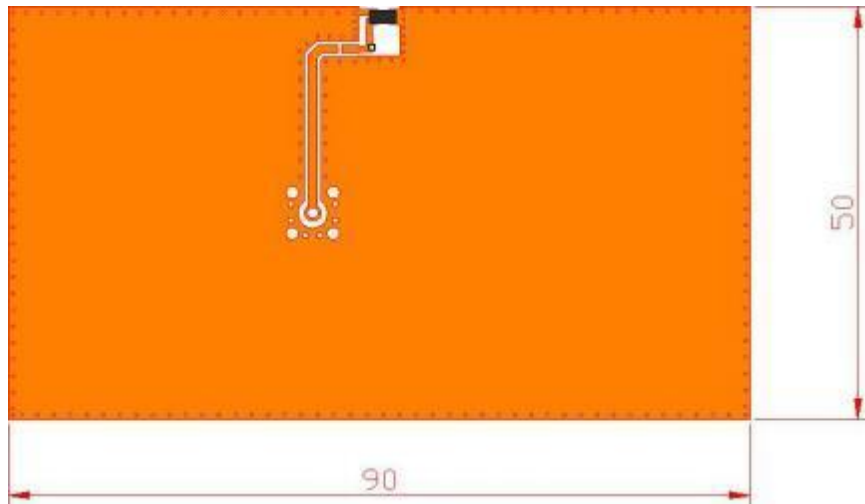
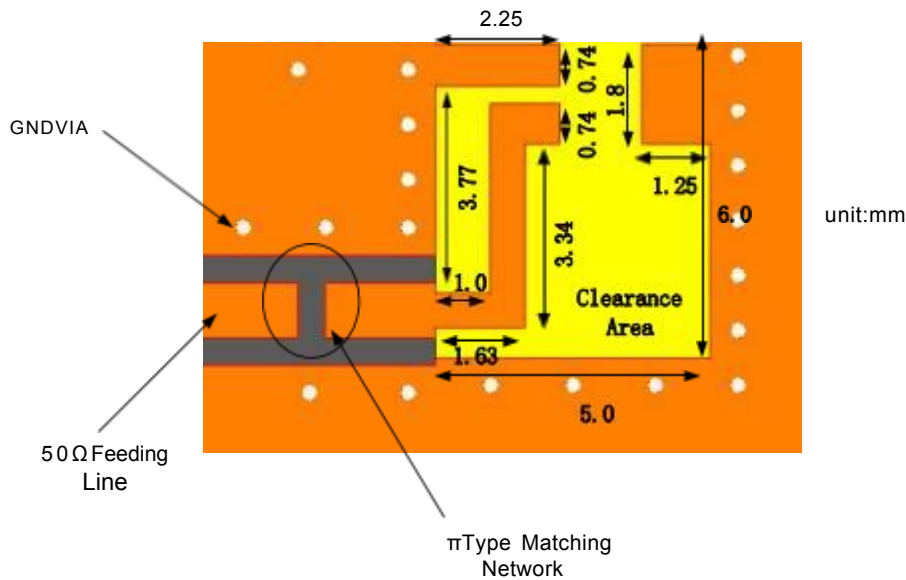


( Side View )

Symbols	L	W	T	A
Dimensions	3.2+/-0.2	1.6+/-0.2	0.5+/-0.1	0.4+/-0.1

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Evaluation Board and Matching Circuits



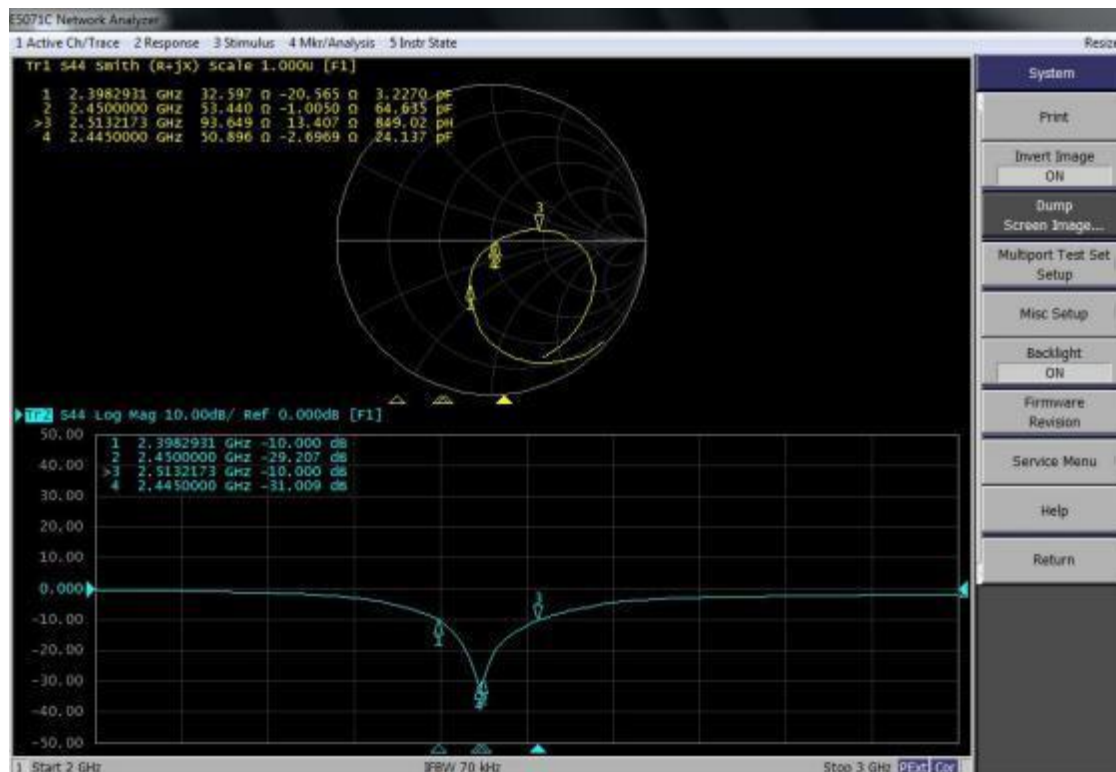
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**Electrical Characteristics**

No.	Item	Specifications
1	Central Frequency	2 545 MHz
2	BandWidth	100 MHz typ.
3	Peak Gain	5.54 dBi
4	Return Loss	≤2.0
5	Polarization	Linear
6	Azimuth Beam width	Omni-directional
7	Impedance	50 Ω

**Characteristic curve**

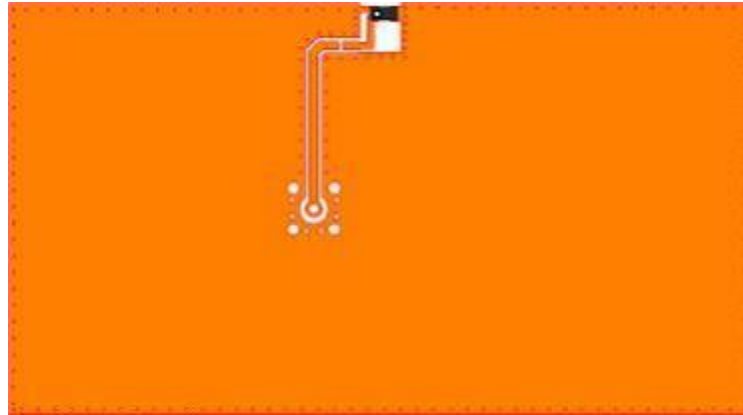
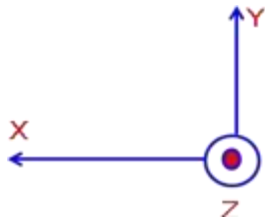


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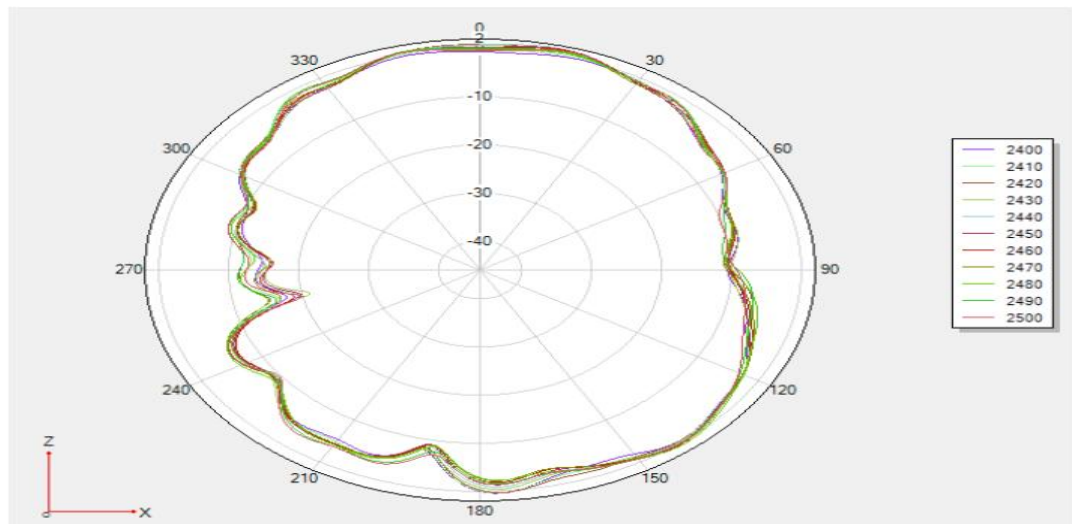
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**Radiation Pattern**

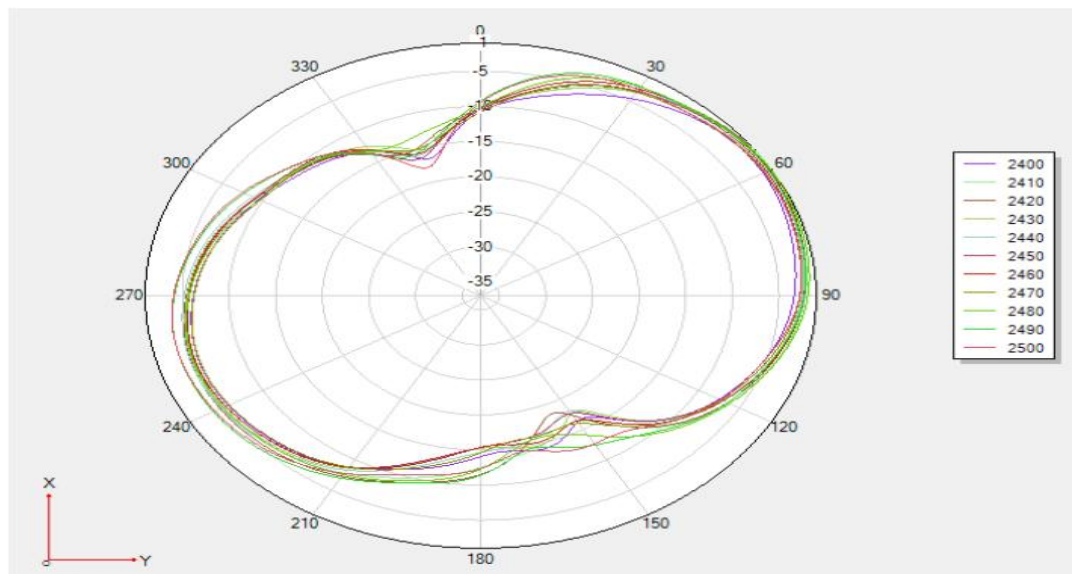
coordinates:



X-Z Plane



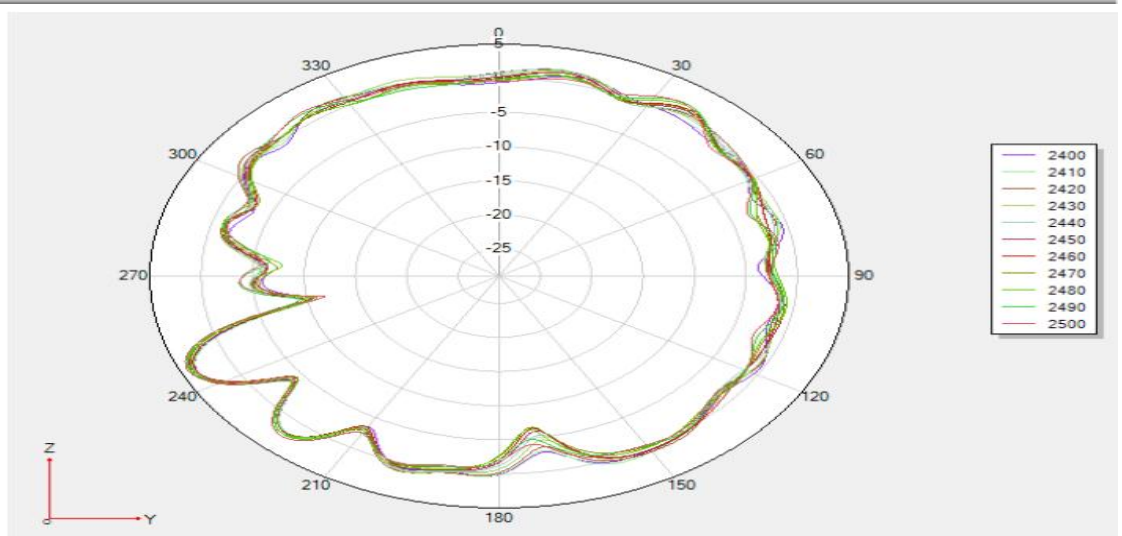
X-Y Plane



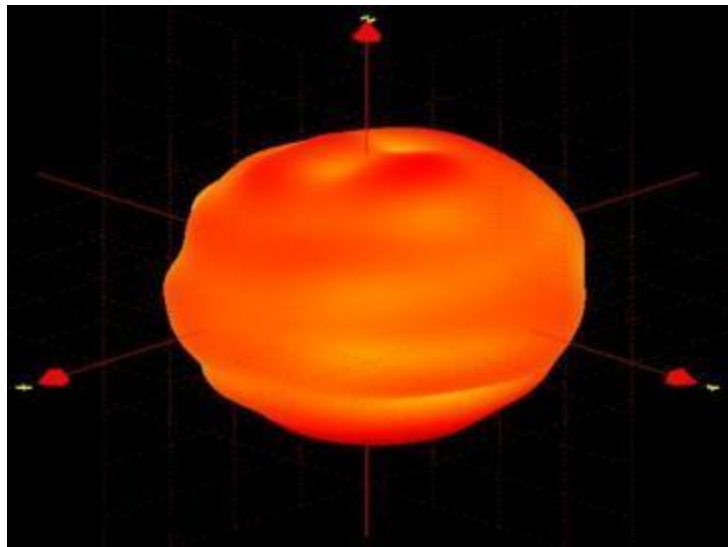
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Y-Z Plane



3D Radiation Pattern



Frequency (MHz)	2400	2450	2500
Avg. Gain (dBi)	- 1 .91	- 1.30	- 1 .48
Peck Gain (dBi)	1 .76	5.54	2 .53
Efficiency (%)	72. 1	78.2	71.8

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**Dependability Test**

Temperature range	25±5°C
Relative Humidity range	55~75%RH
Operating Temperature range	-40°C~+85°C
Storage Temperature range	-40°C~+85°C

**Vibration Resist**

The device should fulfill the electrical specification after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X , Y and Z directions.

**Drop Shock**

The device should have no mechanical damage after dropping onto the hard wooden board from the height of 100cm for 3 times each facet of the 3 dimensions of the device.

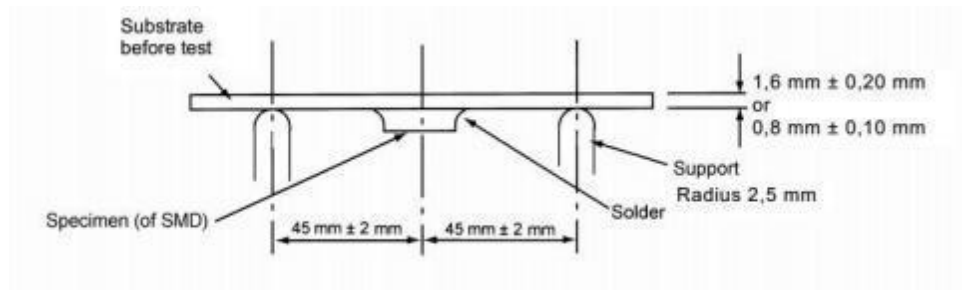
**Solder Heat Proof**

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

**Adhesive Strength of Termination**

The device have no remarkable damage or removal of the termination after horizontal force of 5N(≤0603); 10N(>0603)with 10±1 seconds.

**Bending Resist Test**



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 .

**Moisture Proof**

The device should fulfill the electrical specification 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.

**High Temperature Endurance**

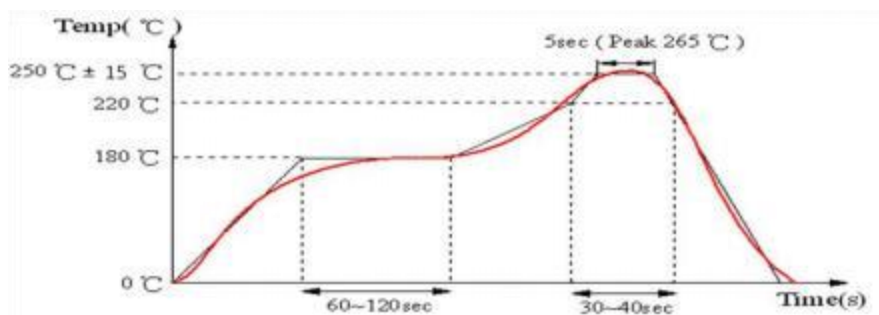
The device should fulfill the electrical specification after exposed to temperature  $85\pm 5^{\circ}\text{C}$  for  $96\pm 2$  hours and 1~2 hours recovery time under normal temperature.

**Low Temperature Endurance**

The device should fulfill the electrical specification after exposed to the temperature  $-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$  for  $96\pm 2$  hours and to 2 hours recovery time under normal temperature.

**Temperature Cycle Test**

The device should fulfill the electrical specification after exposed to the low temperature  $-40^{\circ}\text{C}$  and high temperature  $+85^{\circ}\text{C}$  for  $30\pm 2$  min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

**Reflow Soldering Standard Condition**

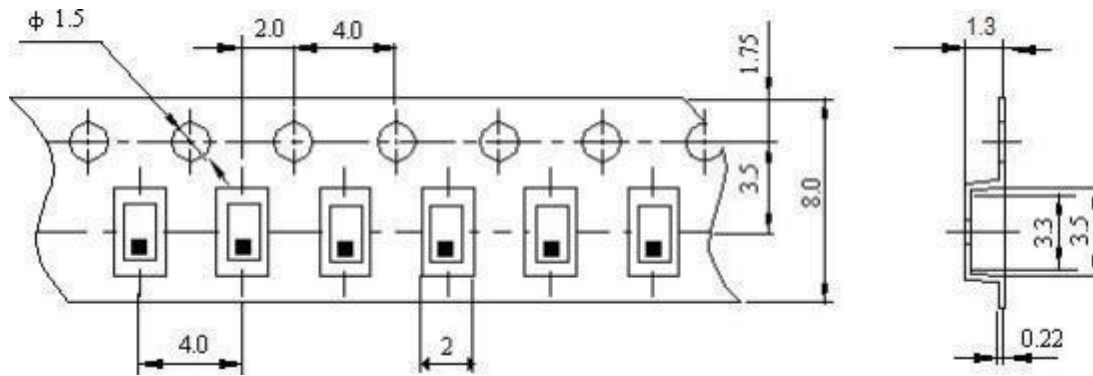
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Packaging and Dimensions (3216)

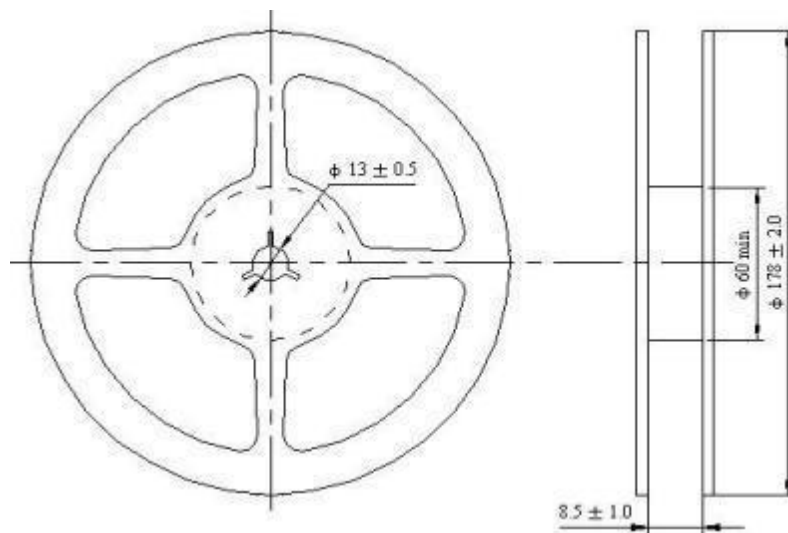
Plastic Tape



Remarks for Package

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.

Reel (3000 pcs/Reel)



Storage Period

Product should be used within six months of receipt.

MSL 1 / Storage Temperature Range : <30 degree C, Humidity : <85%RH

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