

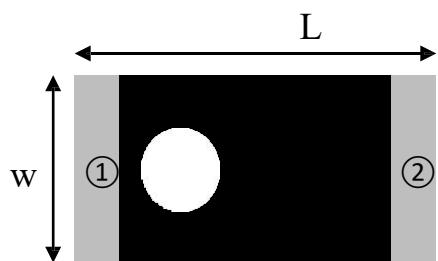
## Features

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. Antenna type: Chip Antenna

## Applications

1. Bluetooth
2. Wireless LAN
3. ISM band 2.4GHz wireless applications

## Dimensions (Unit: mm)



Number	Terminal Name
①	INPUT
②	NC

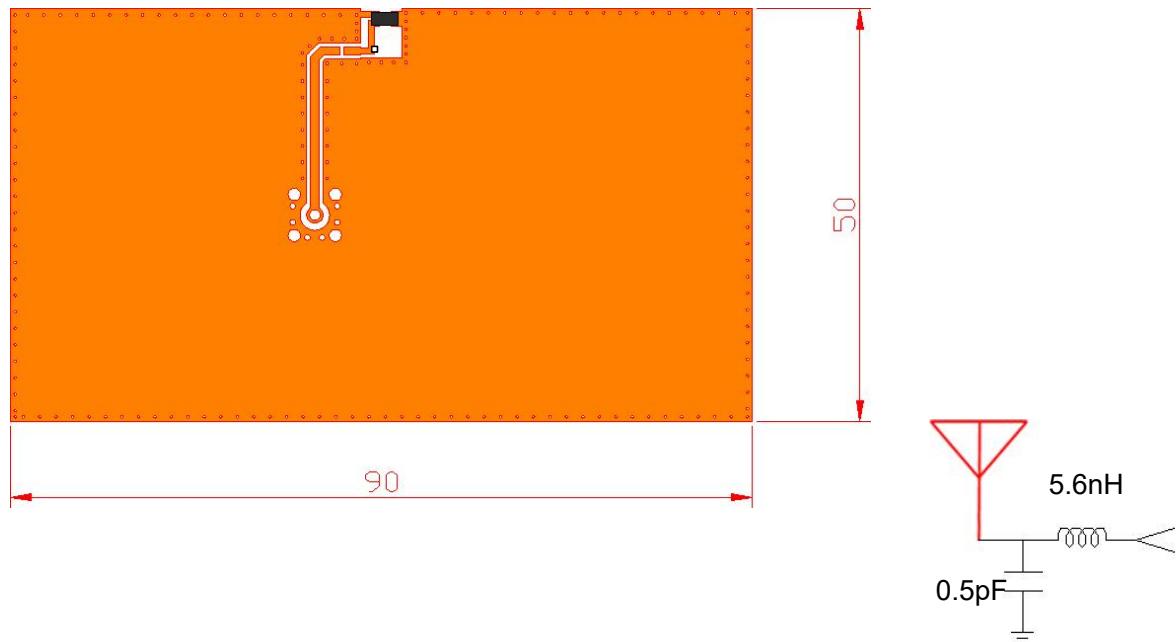
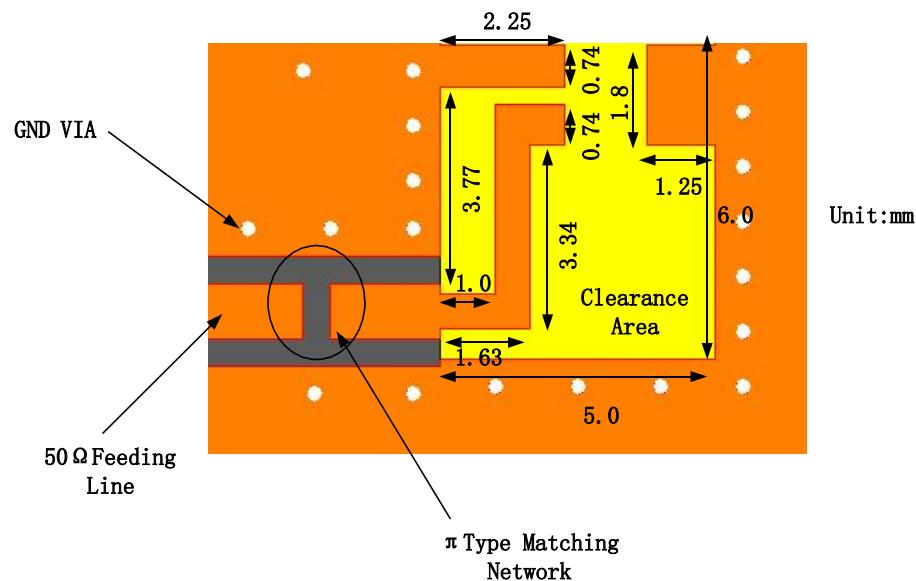
( Top View )



( Side View )

( Bottom View )

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

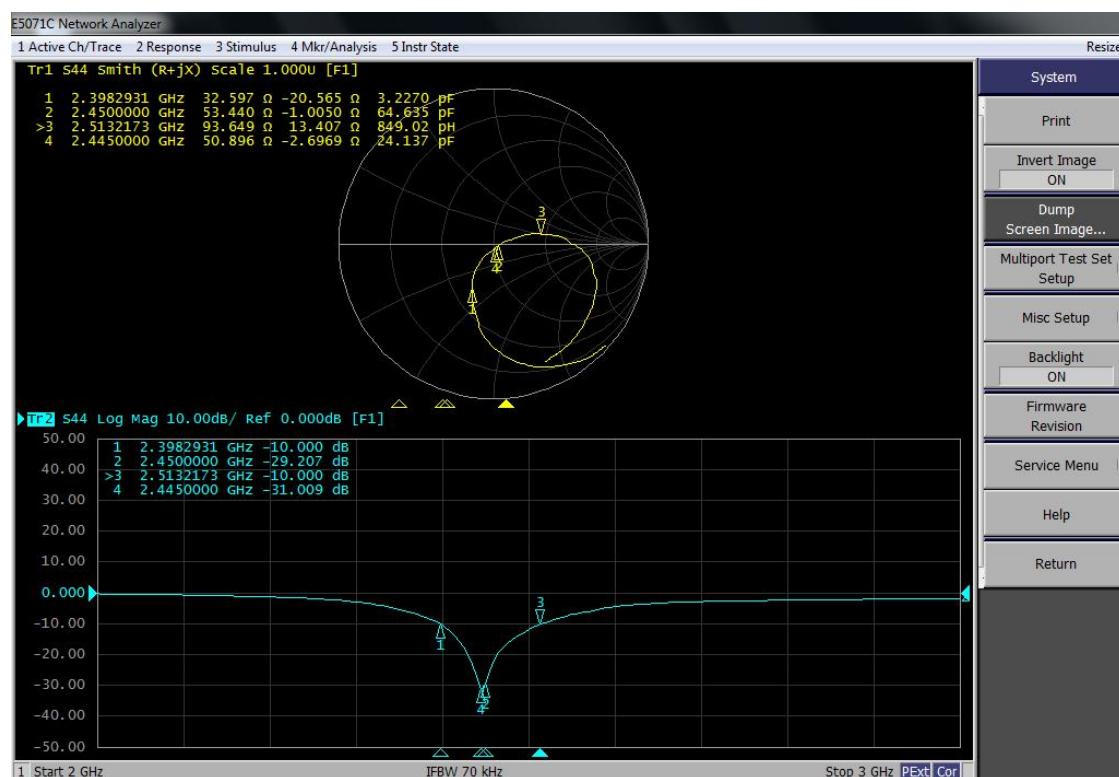
**Evaluation Board and Matching Circuits**

# HYX321605H2

## Electrical Characteristics

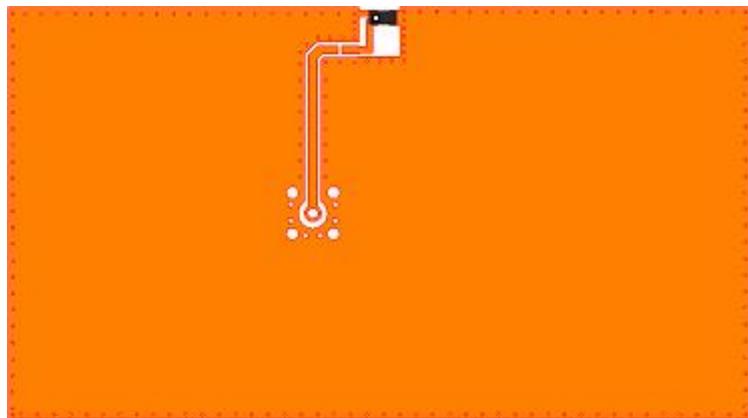
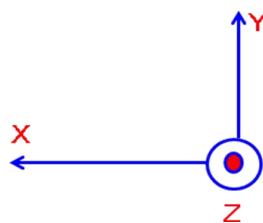
No.	Item	Specifications
1	Central Frequency	2545MHz
2	Band Width	100 MHz typ.
3	Peak Gain	4.08 dBi
4	Return Loss	$\leq 2.0$
5	Polarization	Linear
6	Azimuth Beam width	Omni-directional
7	Impedance	50 $\Omega$

## Characteristic curve

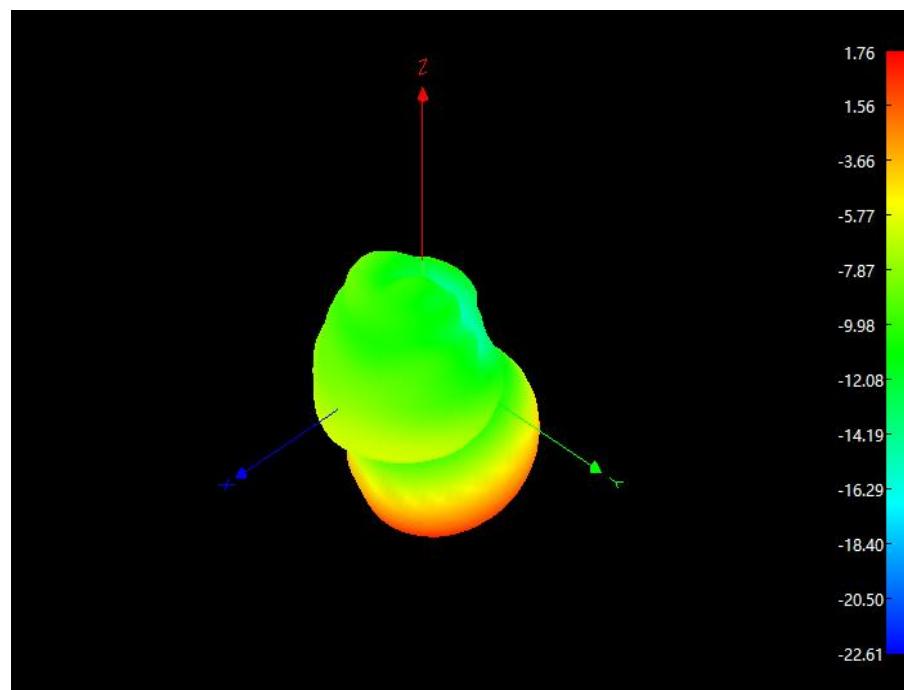


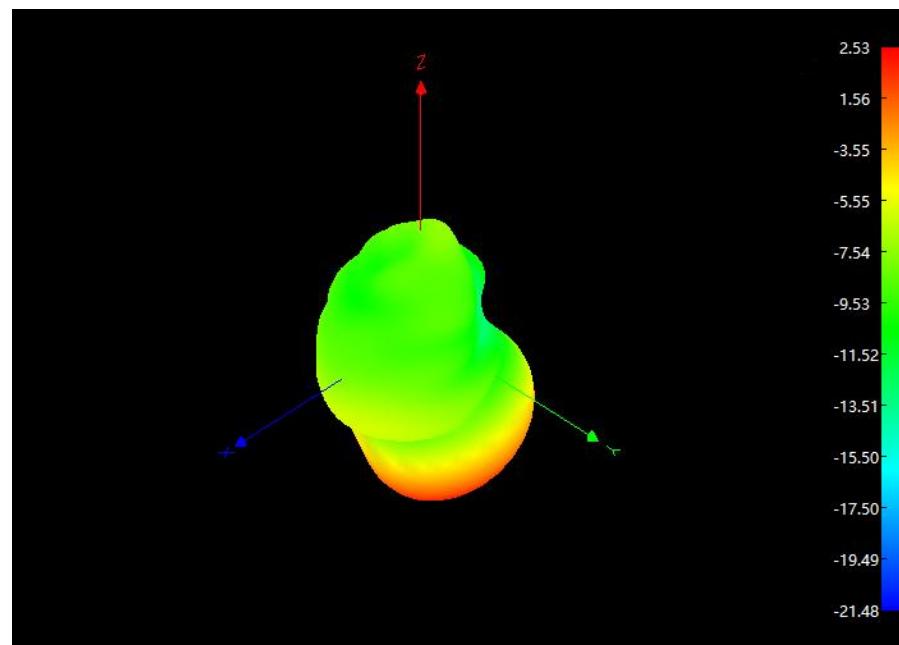
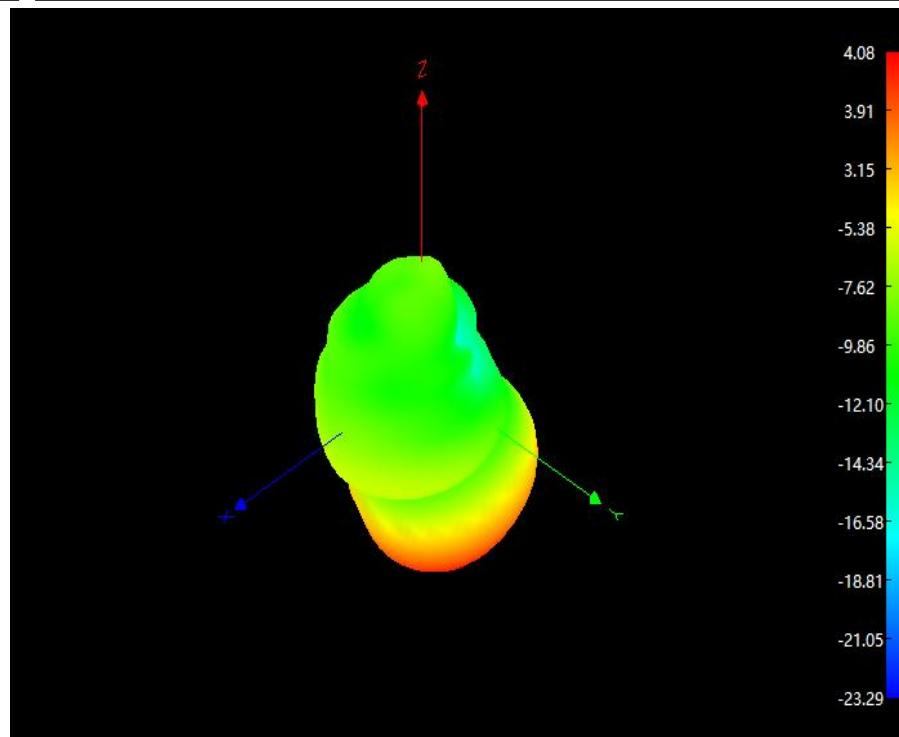
### Radiation Pattern

coordinates:



### 3D Radiation Pattern



**HYX321605H2**

Frequency (MHz)	2400	2450	2500
Avg. Gain (dBi)	-1.91	-1.30	-1.48
Peck Gain (dBi)	1.76	4.08	2.53
Efficiency (%)	72.1	78.2	71.8

## 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.

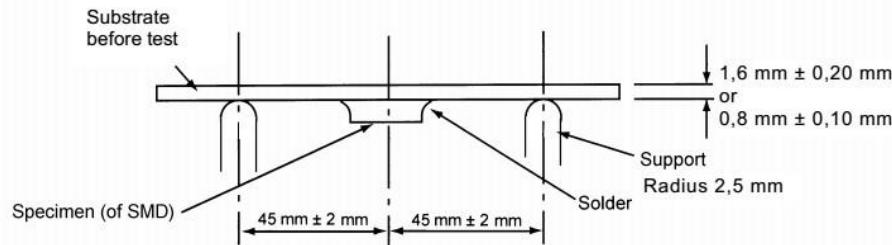
## Solder Heat Proof

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  $1.6 \pm 0.20 \text{ mm}$  or  $0.8 \pm 0.10 \text{ mm}$  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 .

## HYX321605H2

### Moisture Proof

The device should fulfill the electrical specification after exposed to the temperature  $60\pm2^{\circ}\text{C}$  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  $85\pm5^{\circ}\text{C}$  for 96±2 hours and 1~2 hours recovery time under normal temperature.

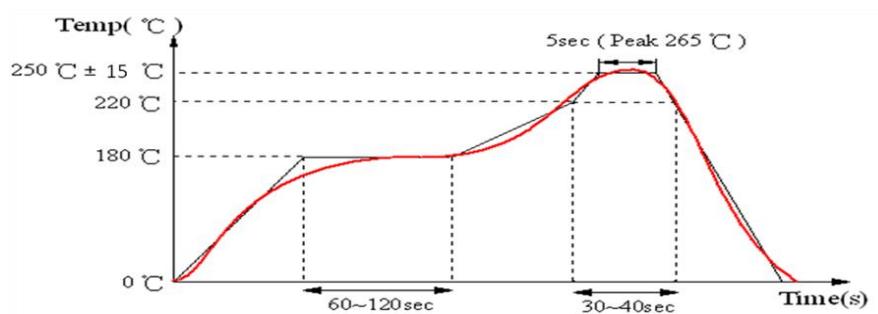
### Low Temperature Endurance

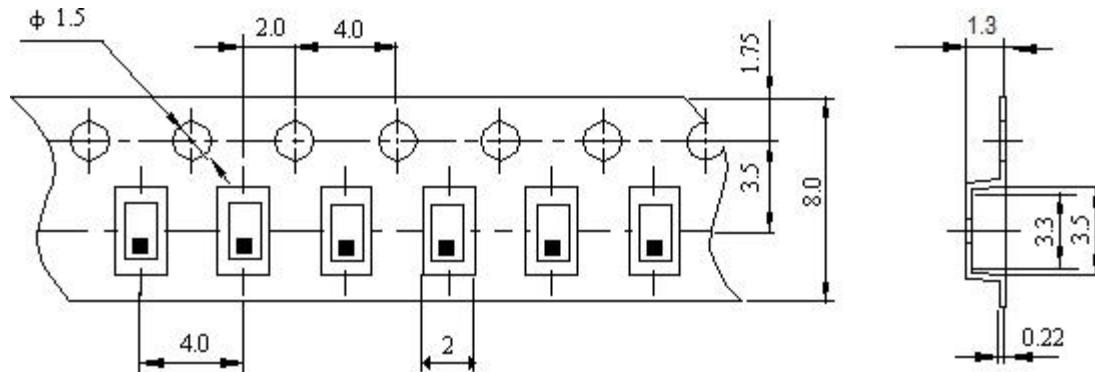
The device should fulfill the electrical specification after exposed to the temperature  $-40^{\circ}\text{C}\pm5^{\circ}\text{C}$  for 96±2 hours and to 2 hours recovery time under normal temperature.

### Temperature Cycle Test

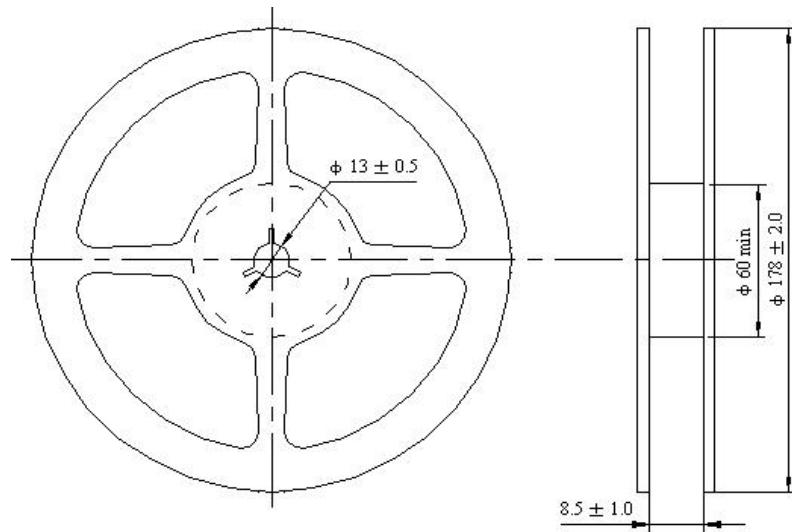
The device should fulfill the electrical specification after exposed to the low temperature  $-40^{\circ}\text{C}$  and high temperature  $+85^{\circ}\text{C}$  for  $30\pm2$  min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

### Reflow Soldering Standard Condition



**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 (6000 pcs/Reel)****Storage Period**

Product should be used within six months of receipt.

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