

# P/N: HLX321605A6

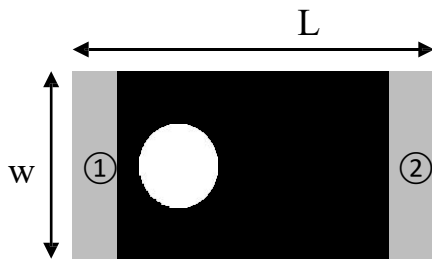
## Features

1. Surface Mounted Devices with a small dimension of  $3.6 \times 1.6 \times 0.5 \text{ mm}^3$  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

## Applications

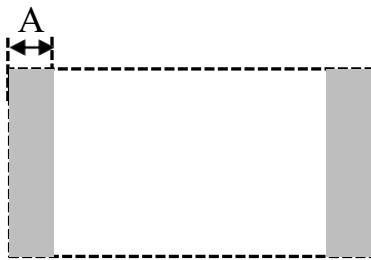
1. Bluetooth
2. Wireless LAN
3. ISM band 2.4GHz wireless applications

## Dimensions (Unit: mm)



( Top View )

Number	Terminal Name
①	INPUT
②	NC



( Bottom View )

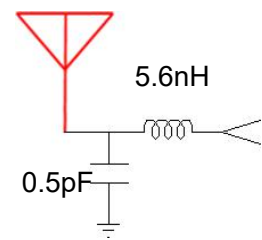
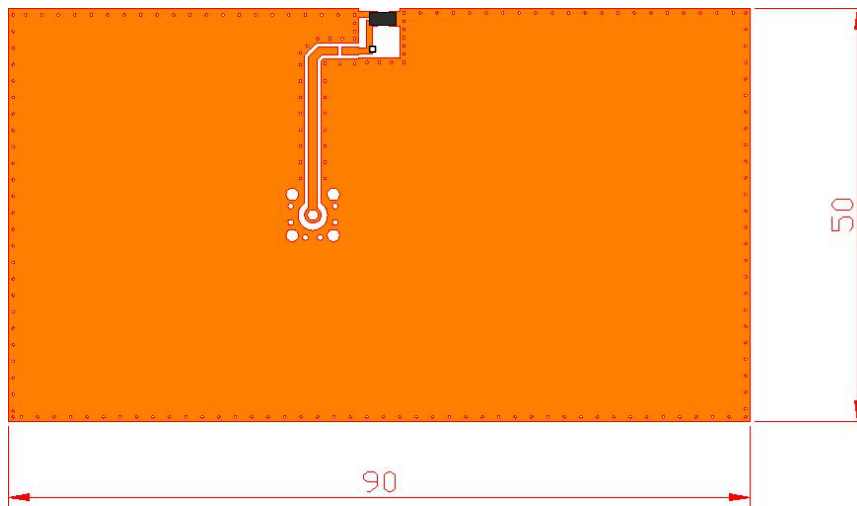
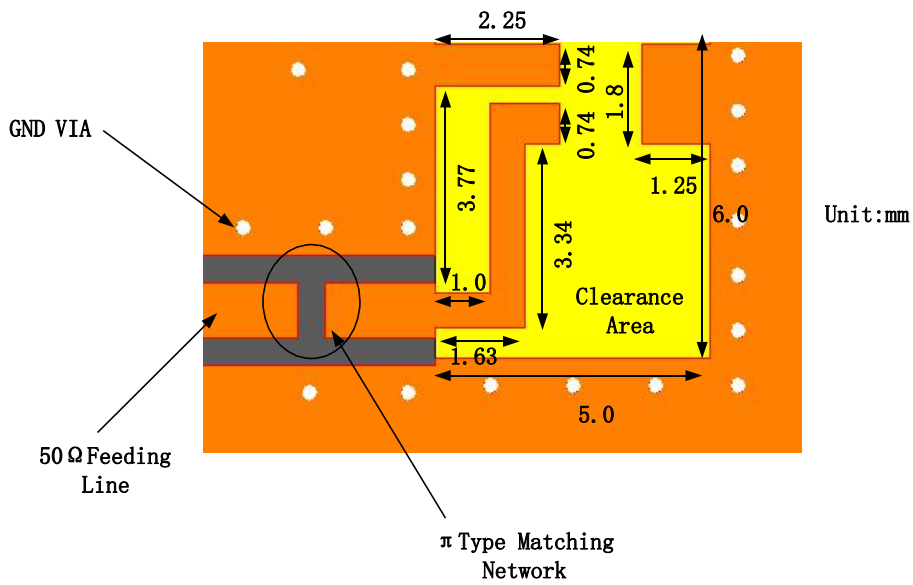


( Side View )

Symbols	L	W	T	A
Dimensions	$3.2 \pm 0.2$	$1.6 \pm 0.2$	$0.5 \pm 0.1$	$0.4 \pm 0.1$

# P/N: HLX321605A6

## Evaluation Board and Matching Circuits

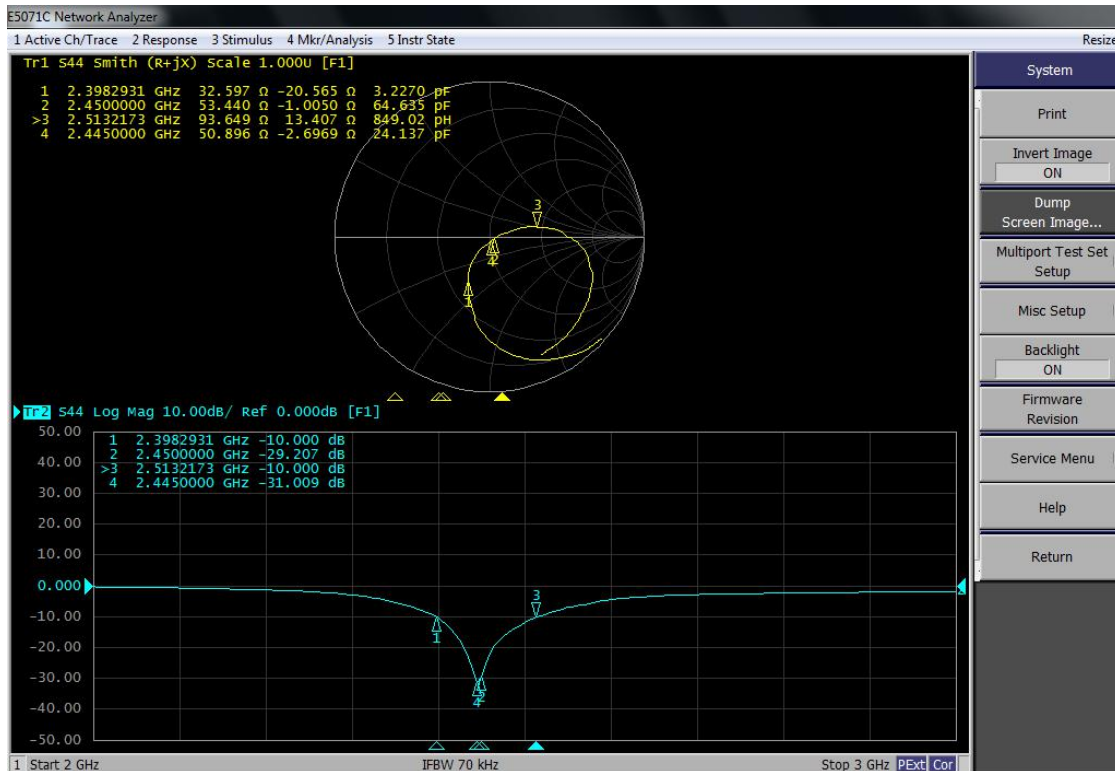


# P/N: HLX321605A6

## 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 $\Omega$

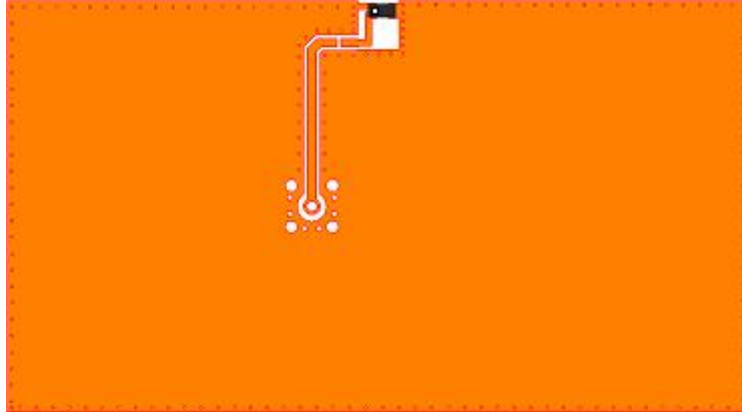
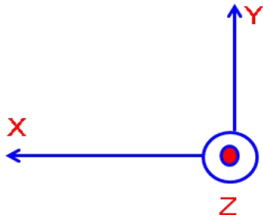
## Characteristic curve



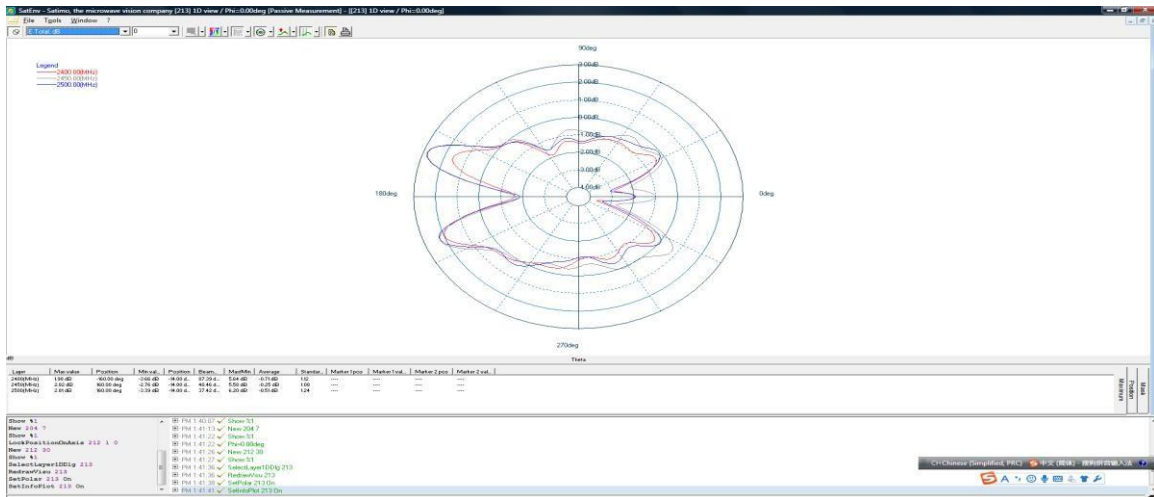
# P/N: HLX321605A6

## Radiation Pattern

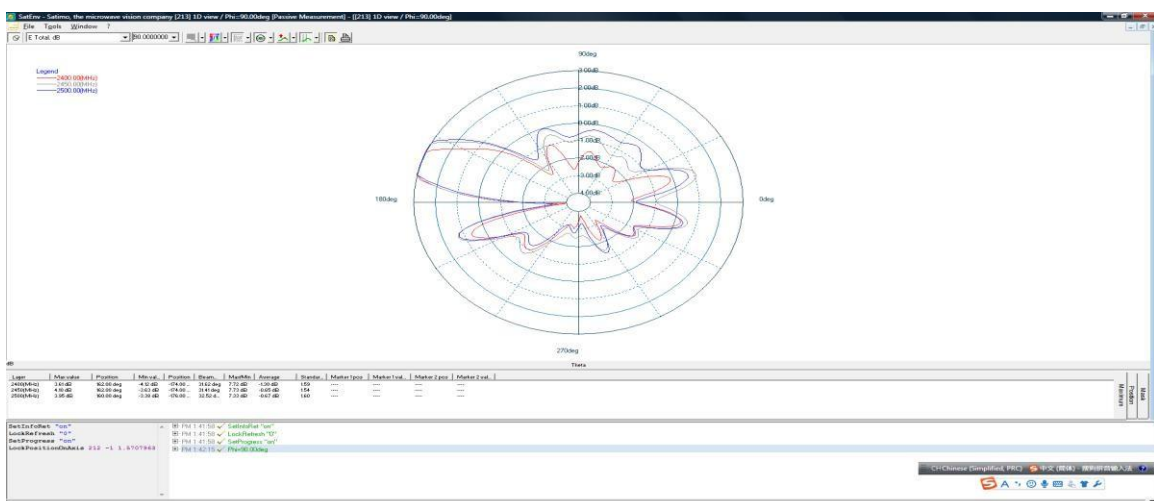
coordinates:



## X-Z Plane

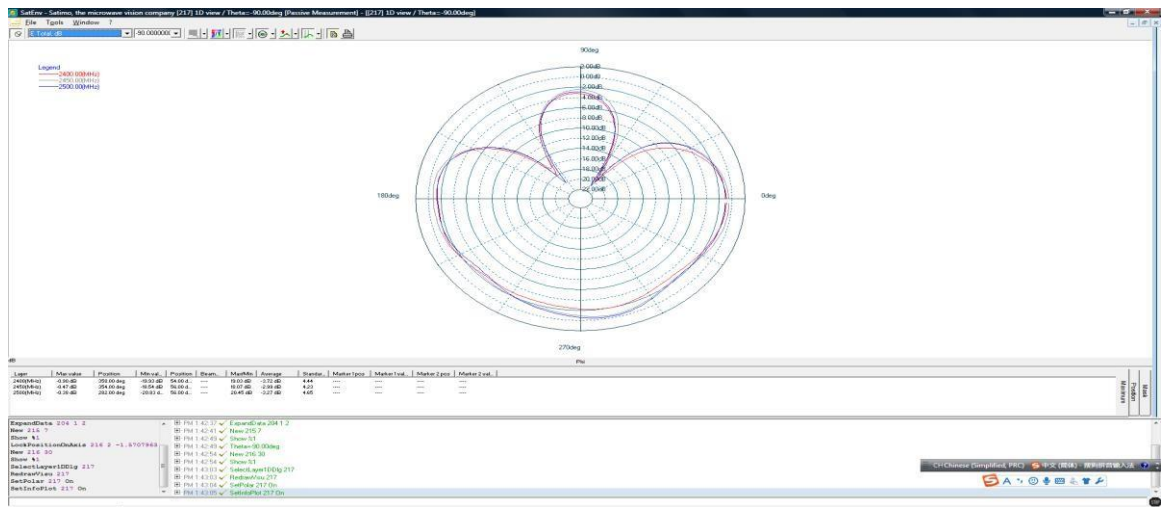


## X-Y Plane

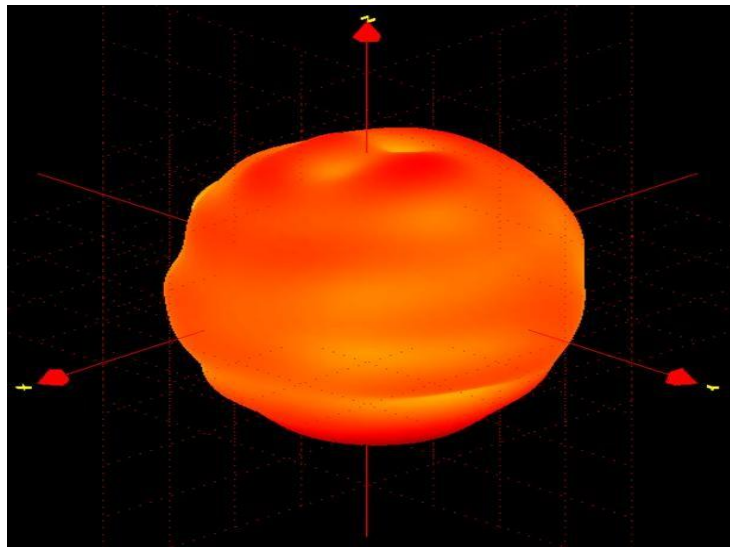


# P/N: HLX321605A6

Y-Z Plane



3D Radiation Pattern



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

# P/N: HLX321605A6

## 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.

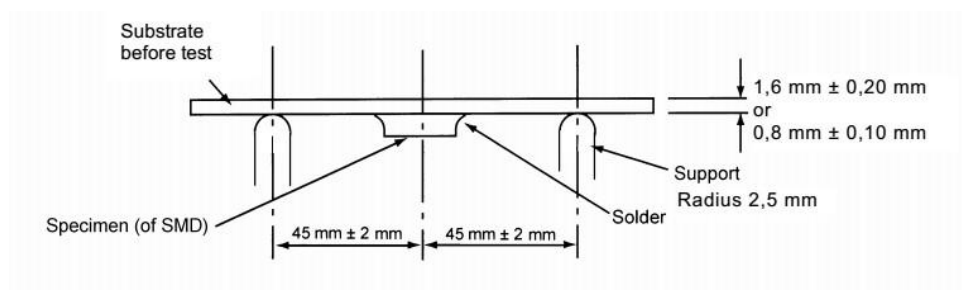
## Solder Heat Proof

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 .

# P/N: HLX321605A6

---

## 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.

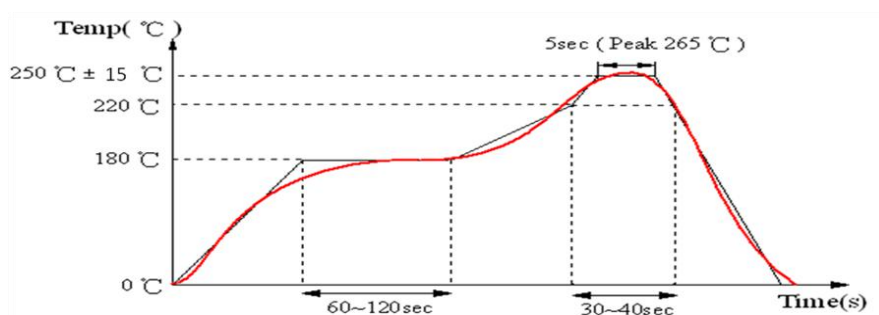
## Low Temperature Endurance

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.

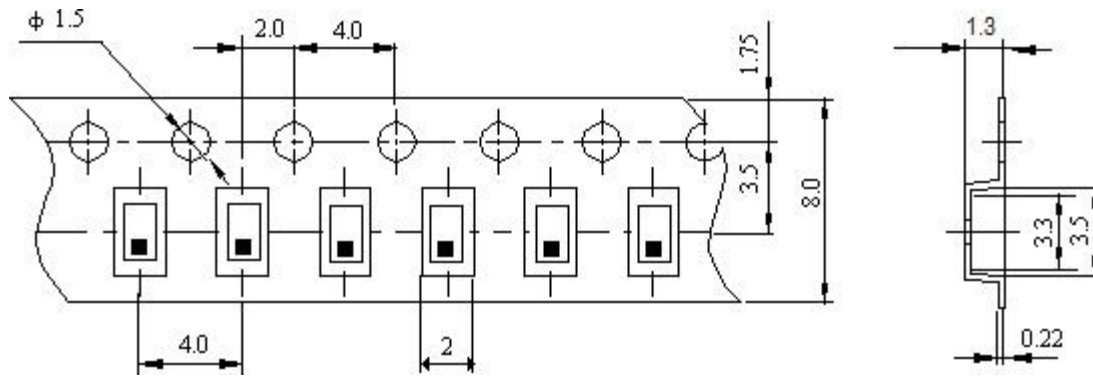
## Reflow Soldering Standard Condition



# P/N: HLX321605A6

## Packaging and Dimensions (3216)

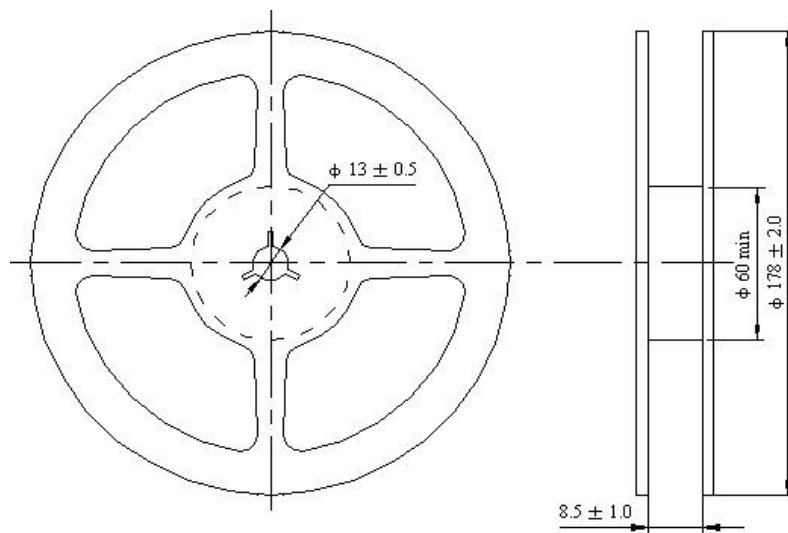
### Plastic Tape



### 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