

### P/N: HLX321605A6

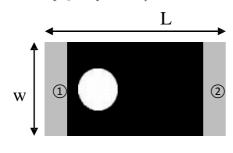
### **Features**

- 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.Ceramic antenna

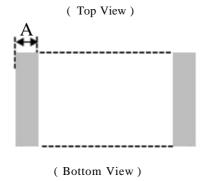
### **Applications**

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

### Dimensions (Unit: mm)



Number	Terminal Name
1	INPUT
2	NC



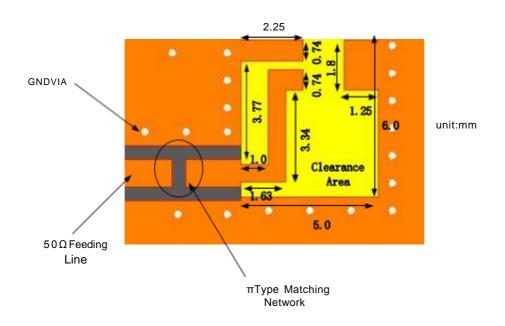


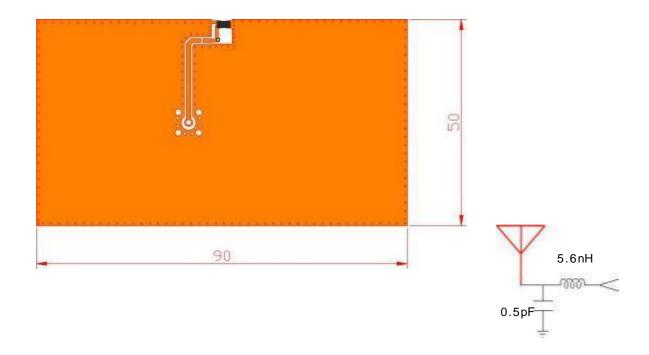
Symbols	L	W	Т	A
Dimensions	3.2+/-0.2	1.6+/-0.2	0.5+/-0.1	0.4+/-0.1



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### **Evaluation Board and Matching Circuits**





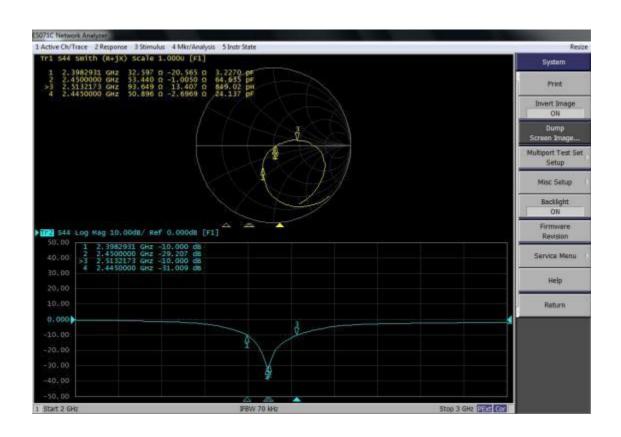


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### **Electrical Characteristics**

No.	Item	Specifications	
1	Central Frequency	2545MHz	
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

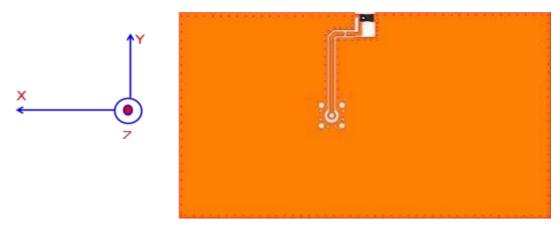




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### **Radiation Pattern**

coordinates:





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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  $25\pm5^{\circ}$ C Relative Humidity range  $55\sim75\%$  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.

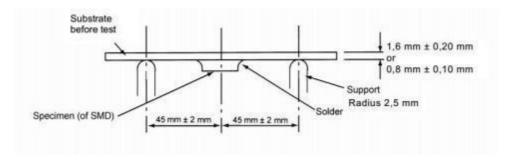
#### Solder Heat Proof

The device should be satisfied after preheating at  $120\,^{\circ}\text{C} \sim 150\,^{\circ}\text{C}$  for 120 seconds and dipping in soldering Sn at  $255\,^{\circ}\text{C} + 10\,^{\circ}\text{C}$  for  $5\pm0.5$  seconds , or electric iron  $300\,^{\circ}\text{C} - 10\,^{\circ}\text{C}$  for  $3\pm0.5$  seconds , without damnify.

### Adhesive Strength of Termination

The device have no remarkable damage or removal of the termination after horizontal force of  $5N (\le 0603)$ ; 10N (> 0603) with  $10\pm 1$  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  $5\pm1S$  at the position of 1.5mm bending distance , so far , any peeling off of the product metal coating should not be detected .



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#### Moisture Proof

The device should fulfill the electrical specification after exposed to the temperature 60±2°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  $85\pm5$  °C for  $96\pm2$  hours and  $1\sim2$  hours recovery time under normal temperature.

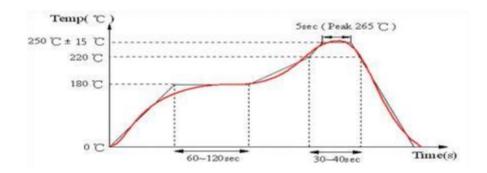
#### Low Temperature Endurance

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.

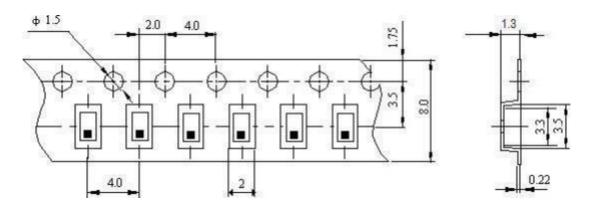
### **Reflow Soldering Standard Condition**





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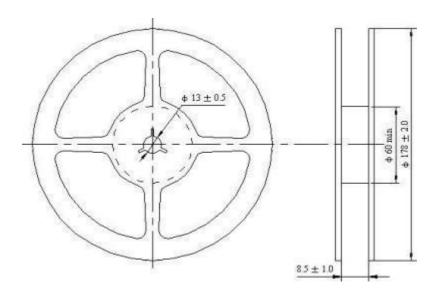
# Packaging and Dimensions (3216) Plastic Tape



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