

# P/N: SURL321605T66

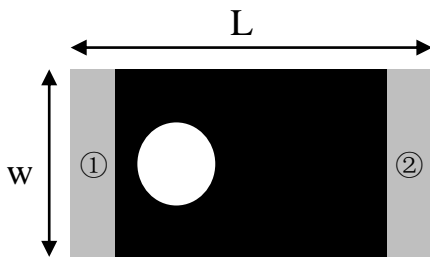
## Features

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

## Applications

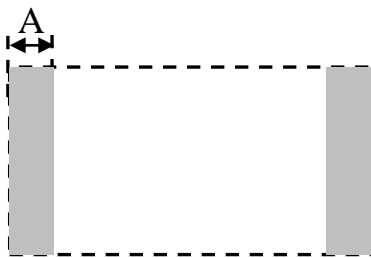
1. Bluetooth
2. Wireless LAN
3. ISM band 2.4GHz wireless applications

## Dimensions (Unit: mm)



( Top View )

Number	Terminal Name
①	INPUT
②	NC



( Bottom View )



( Side View )

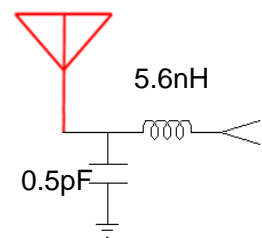
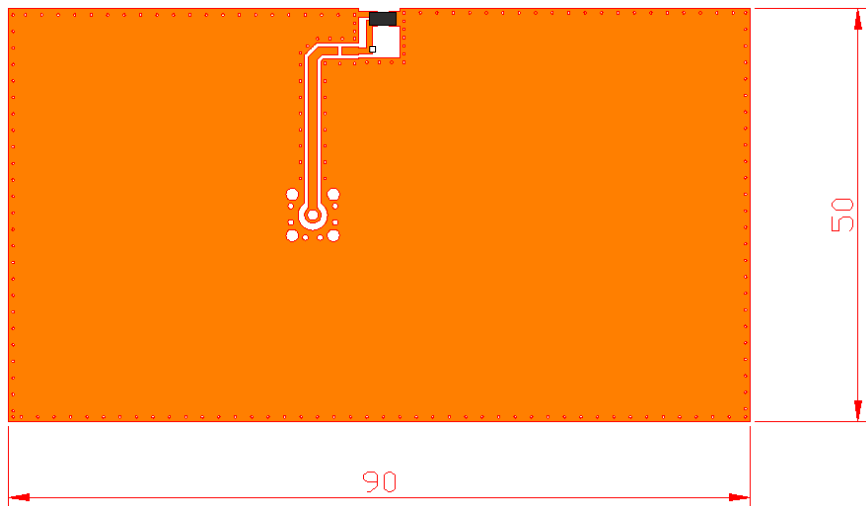
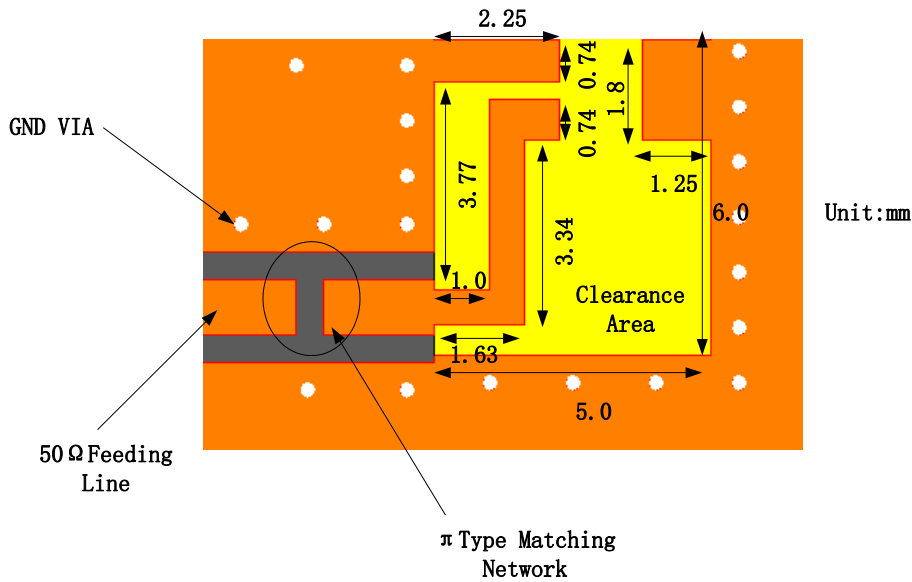
Symbols	L	W	T	A
Dimensions	3.2+/-0.2	1.6+/-0.2	0.5+/-0.1	0.4+/-0.1

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## Evaluation Board and Matching Circuits



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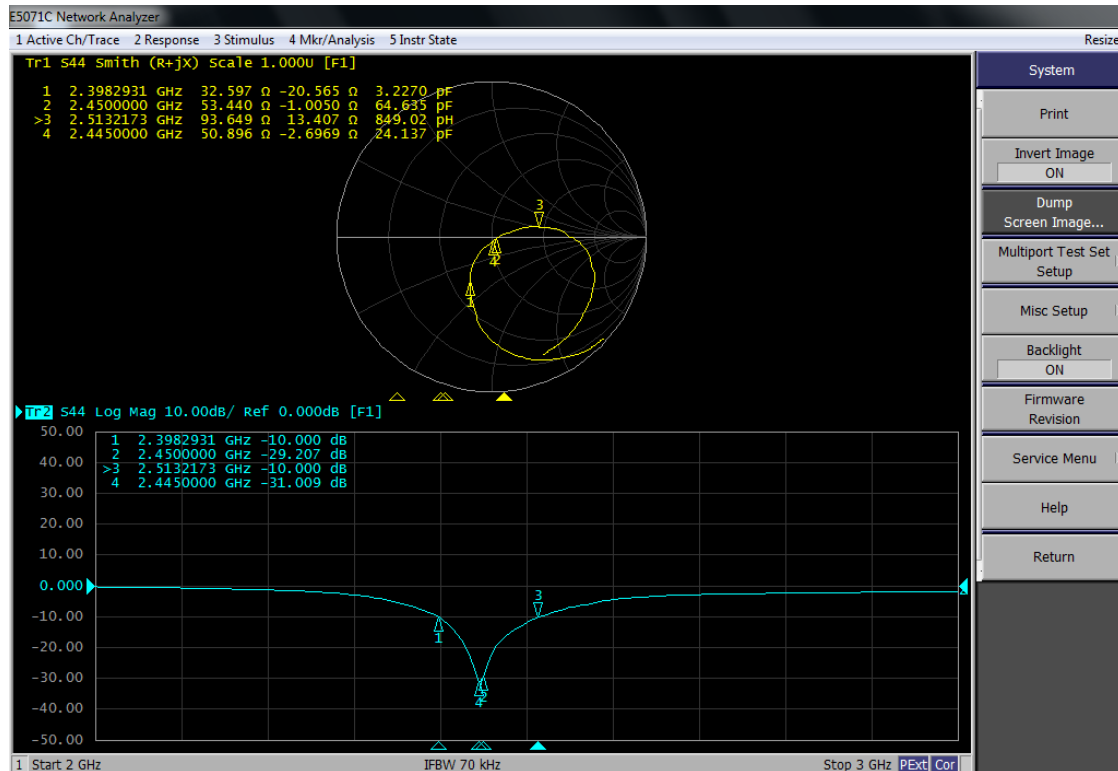
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## Electrical Characteristics

No.	Item	Specifications
1	Central Frequency	2545MHz
2	Band Width	100 MHz typ.
3	Peak Gain	5.54 dBi
4	Return Loss	$\leq 2.0$
5	Polarization	Linear
6	Azimuth Beam width	Omni-directional
7	Impedance	50 $\Omega$

## Characteristic curve

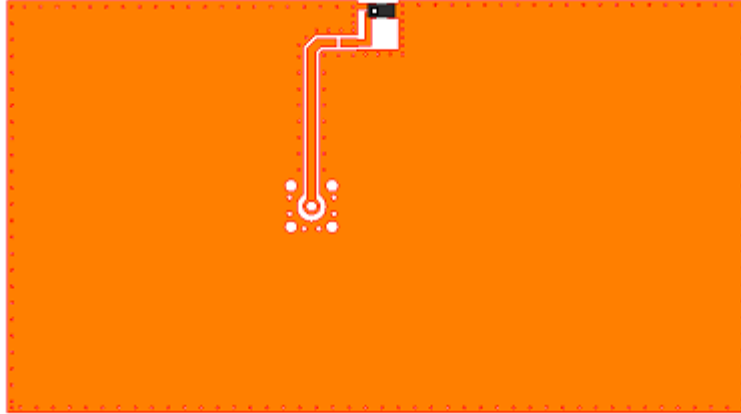
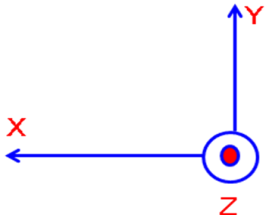


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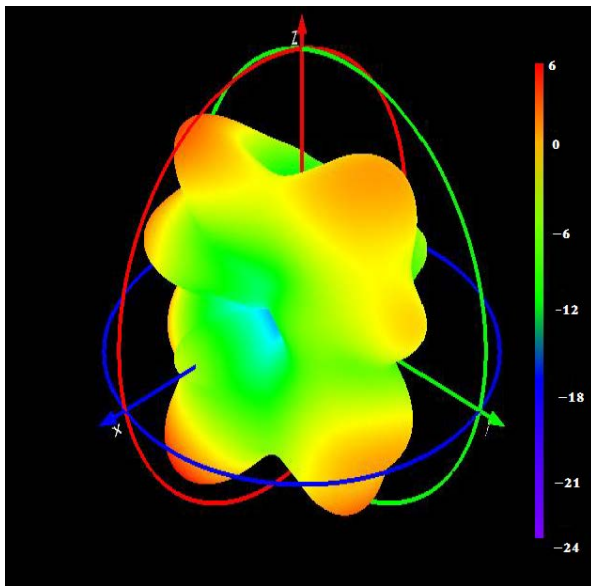
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Radiation Pattern

coordinates:



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	$25 \pm 5^{\circ}\text{C}$
Relative Humidity range	55~75%RH
Operating Temperature range	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Storage Temperature range	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

## 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.

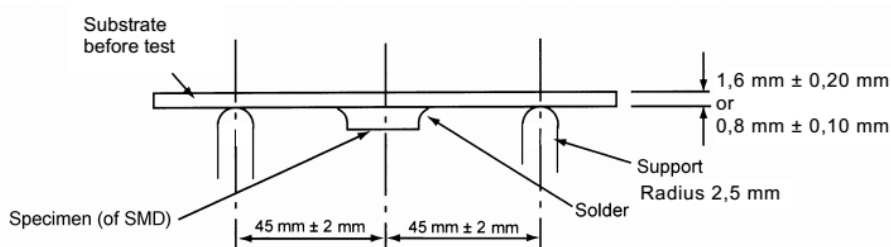
## Solder Heat Proof

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  $5 \pm 0.5$  seconds, or electric iron  $300^{\circ}\text{C} - 10^{\circ}\text{C}$  for  $3 \pm 0.5$  seconds, without damage.

## Adhesive Strength of Termination

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

## Bending Resist Test



Weld the product to the center part of the PCB with the thickness  $1.6 \pm 0.2\text{mm}$  or  $0.8 \pm 0.1\text{mm}$  as the illustration shows, and keep exerting force arrow-ward on it at speed of  $1\text{mm/S}$ , 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.

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## 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.

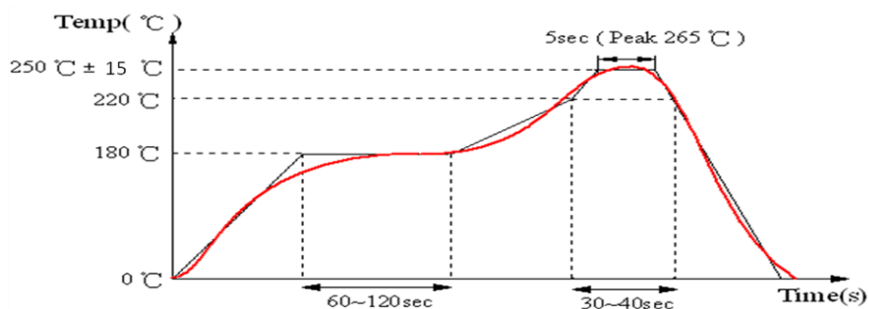
## Low Temperature Endurance

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



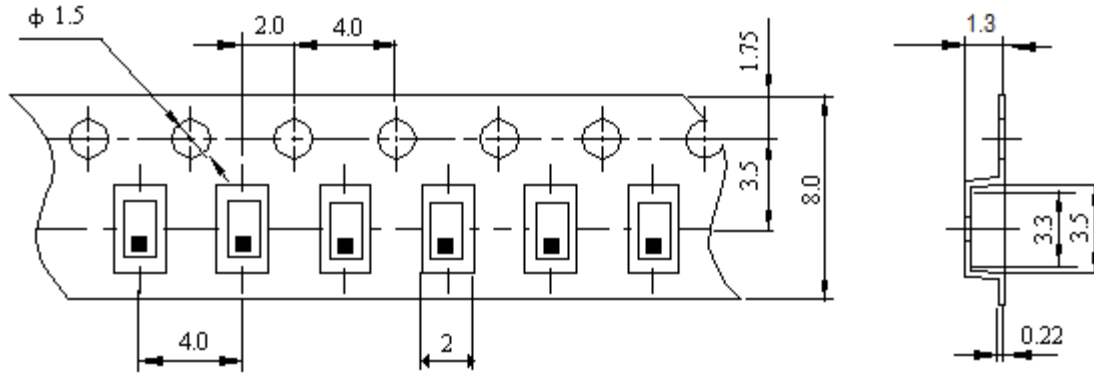
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## Packaging and Dimensions (3216)

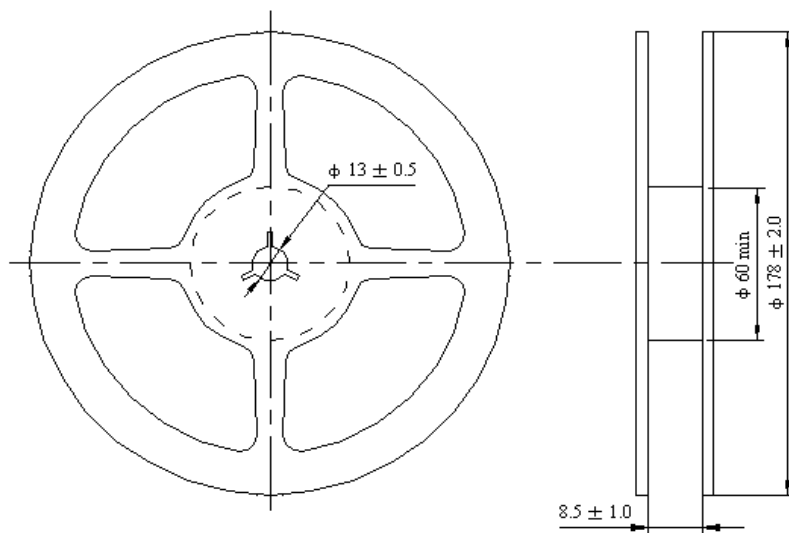
### Plastic Tape



### 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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