

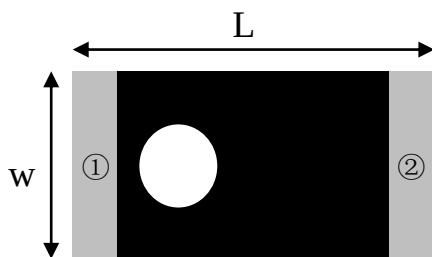
Features

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

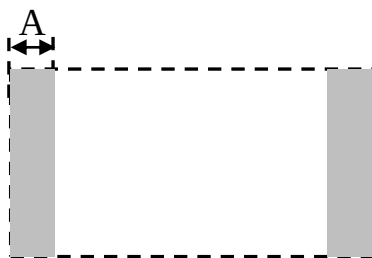
1. Bluetooth
2. Wireless LAN
3. ISM band 2.4GHz wireless applications

Dimensions (Unit: mm)



(Top View)

Number	Terminal Name
①	INPUT
②	NC



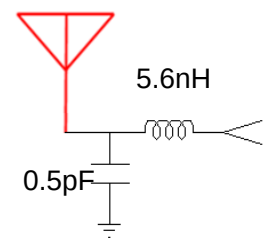
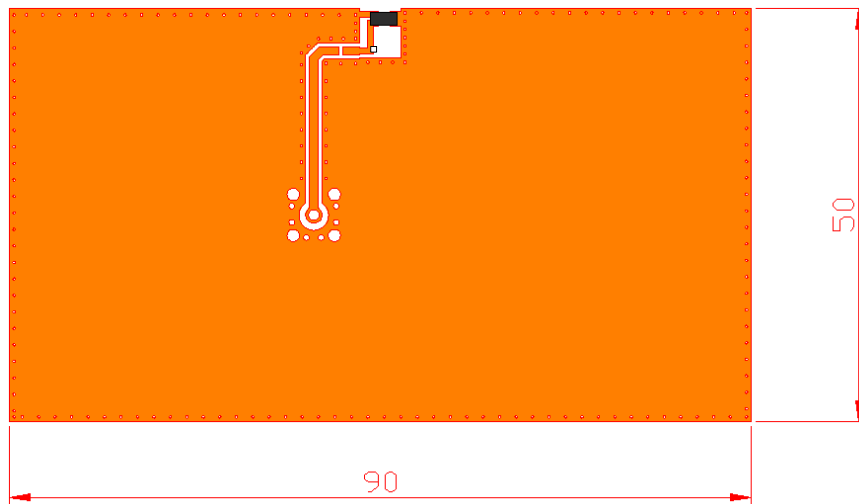
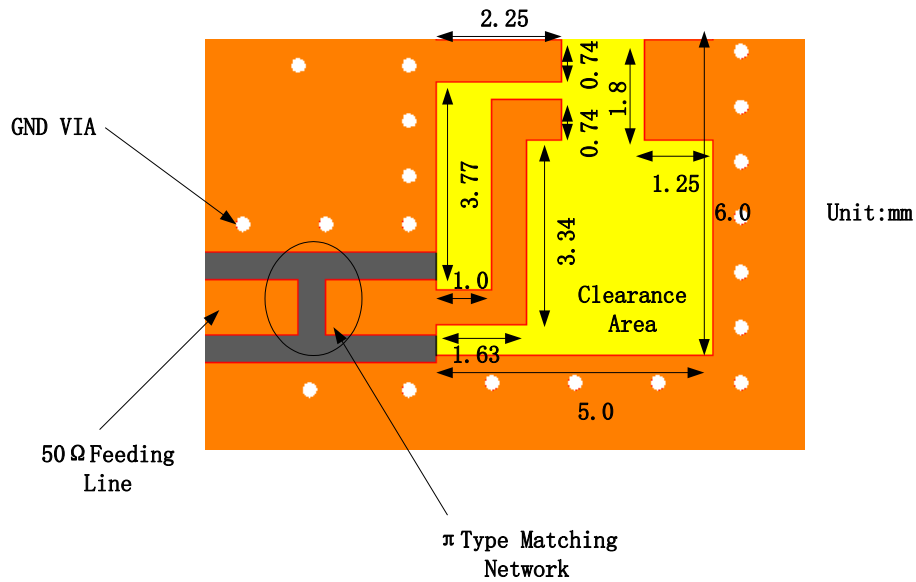
(Bottom View)



(Side View)

Symbols	L	W	T	A
Dimensions	3.2 ± 0.2	1.6 ± 0.2	0.5 ± 0.1	0.4 ± 0.1

Evaluation Board and Matching Circuits



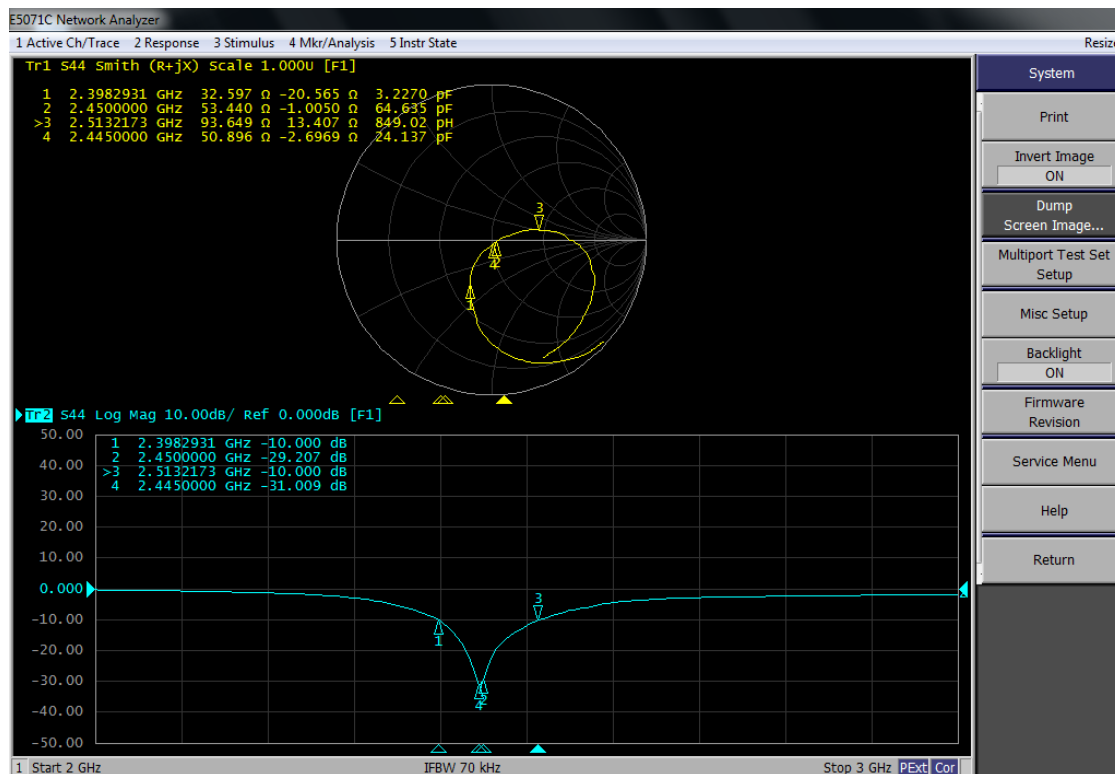
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Electrical Characteristics

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

Characteristic curve



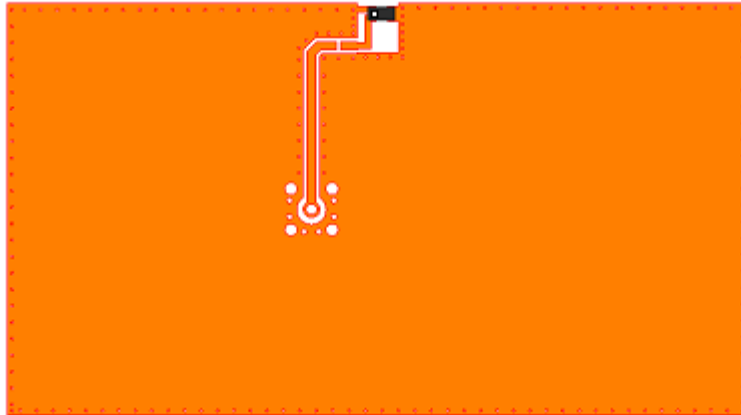
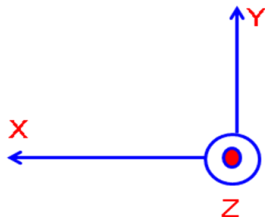
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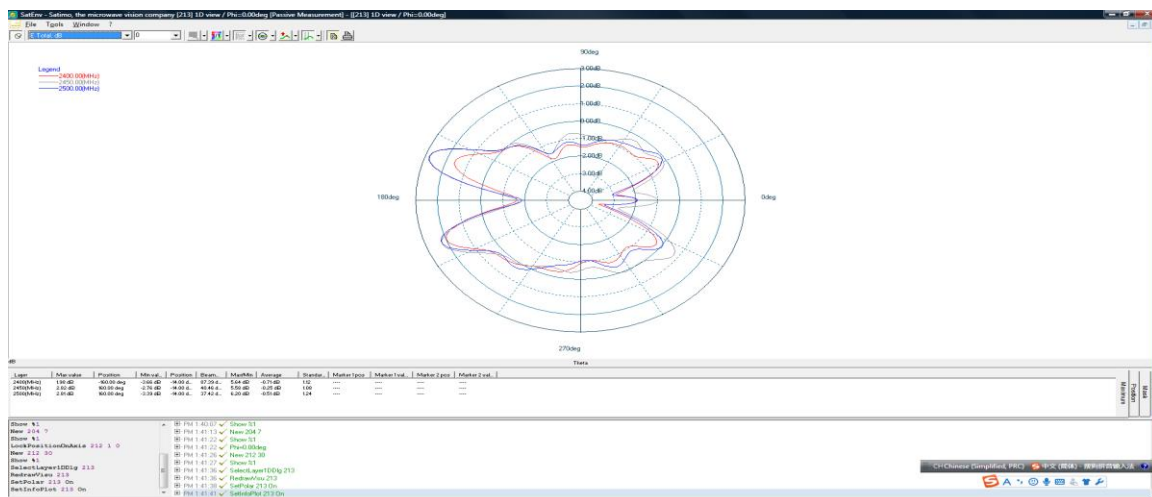
P/N: SURL321605T66

Radiation Pattern

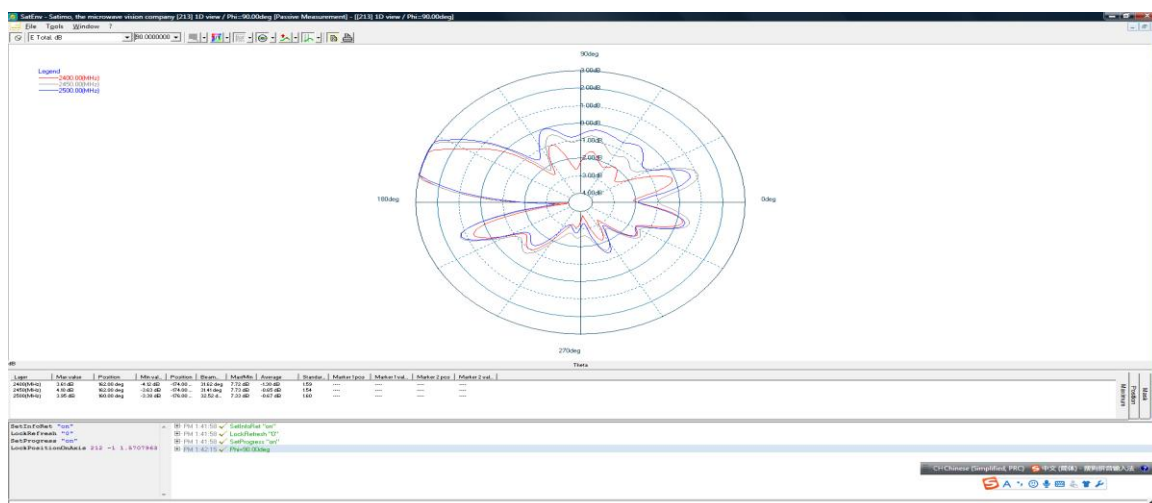
coordinates:



X-Z Plane



X-Y Plane

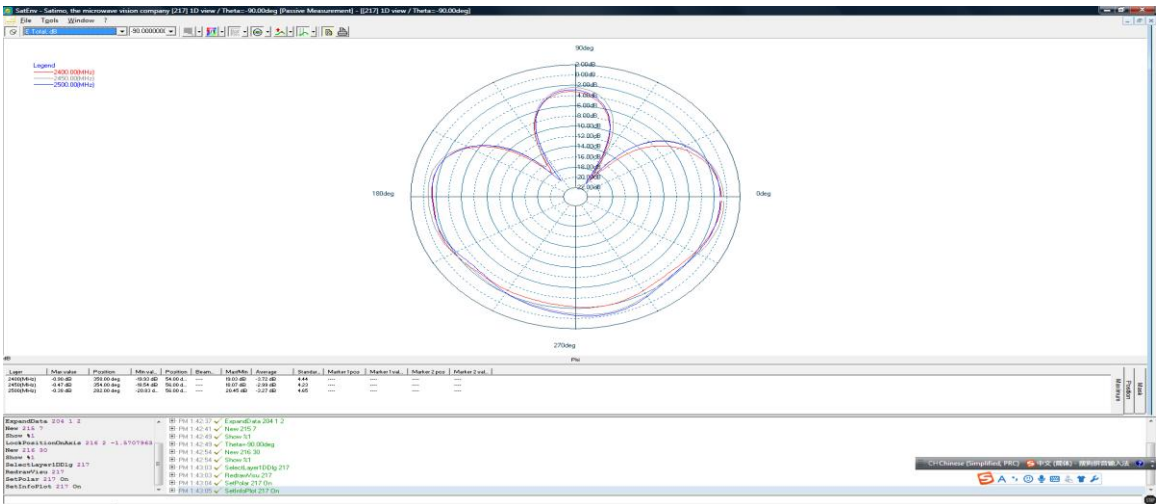


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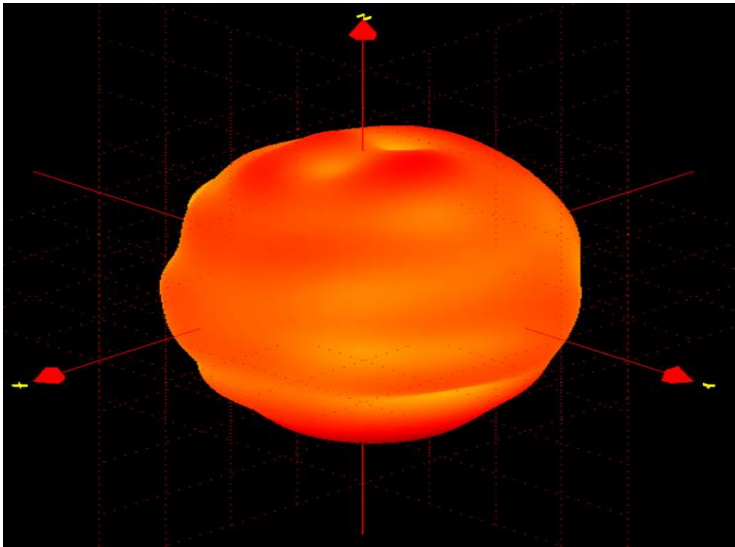
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Y-Z Plane



3D Radiation Pattern



Frequency (MHz)	2400	2450	2500
Avg. Gain (dBi)	-1.91	-1.30	-1.48
Peck Gain (dBi)	1.76	4.08	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.

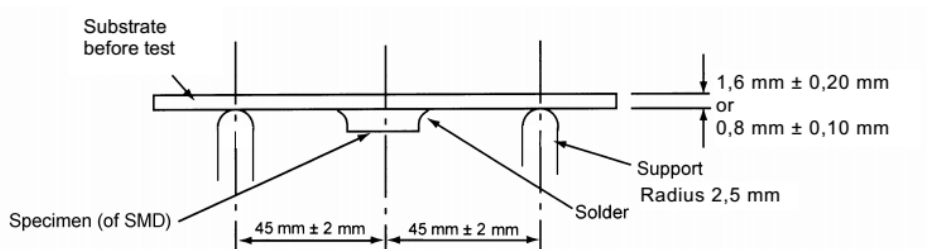
Solder Heat Proof

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 ± 0.5 seconds, or electric iron $300^{\circ}\text{C} - 10^{\circ}\text{C}$ 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 $1.6 \pm 0.2\text{mm}$ or $0.8 \pm 0.1\text{mm}$ as the illustration shows, and keep exerting force arrow-ward on it at speed of 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.

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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 ± 2 hours and 1~2 hours recovery time under normal temperature.

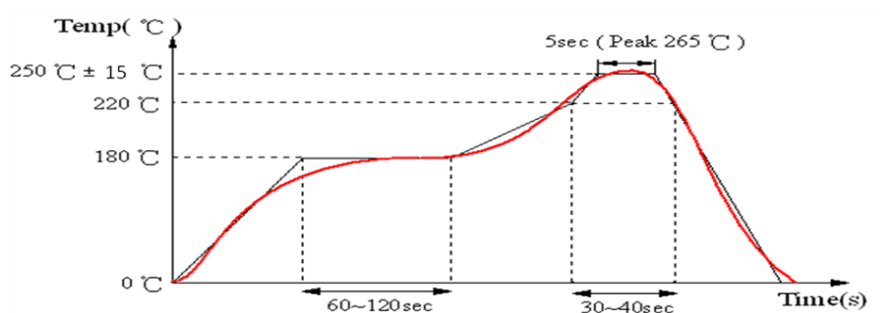
Low Temperature Endurance

The device should fulfill the electrical specification after exposed to the temperature $-40^\circ\text{C} \pm 5^\circ\text{C}$ for 96 ± 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°C and high temperature $+85^\circ\text{C}$ for 30 ± 2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

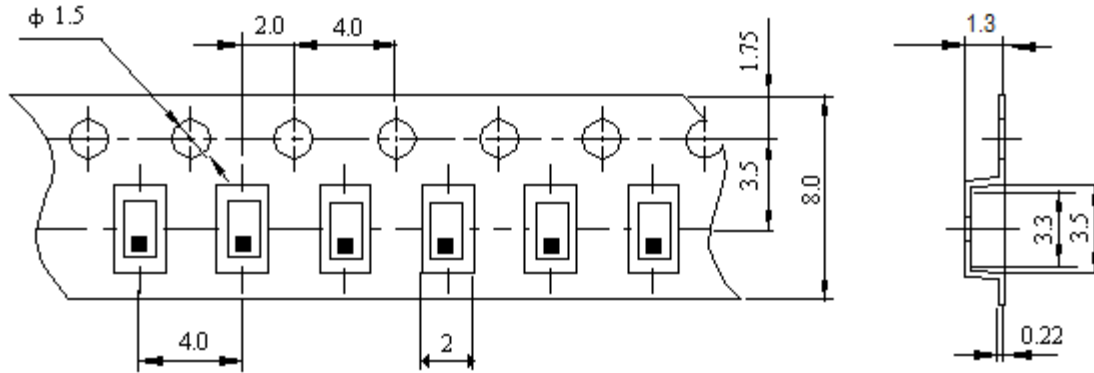
Reflow Soldering Standard Condition



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Packaging and Dimensions (3216)

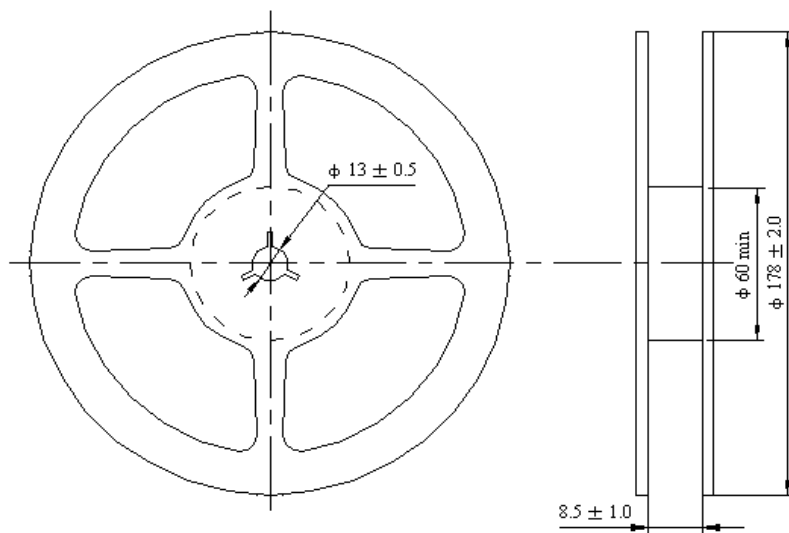
Plastic Tape



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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