P/N: SURL201212506TT6

Features

1.Surface Mounted Devices with a small dimension of 2.0 x 1.25 x 0.6 mm^3 meet future miniaturization trend.

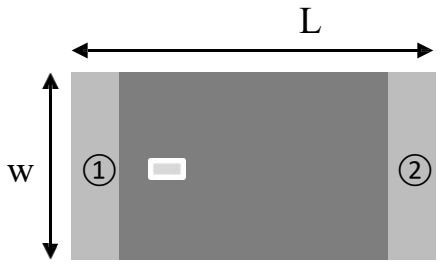
2.Embedded and LTCC (Low Temperature Co-fired Ceramic) technology is able to future integratewith system design as well as beautifying the housing of final product.

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)

①	INPUT
②	GND

(Bottom View)

(Side View)

Symbols	L	W	T	A
Dimensions	2.0+/-0.2	1.25+/-0.2	0.6+/-0.1	0.6+/-0.1

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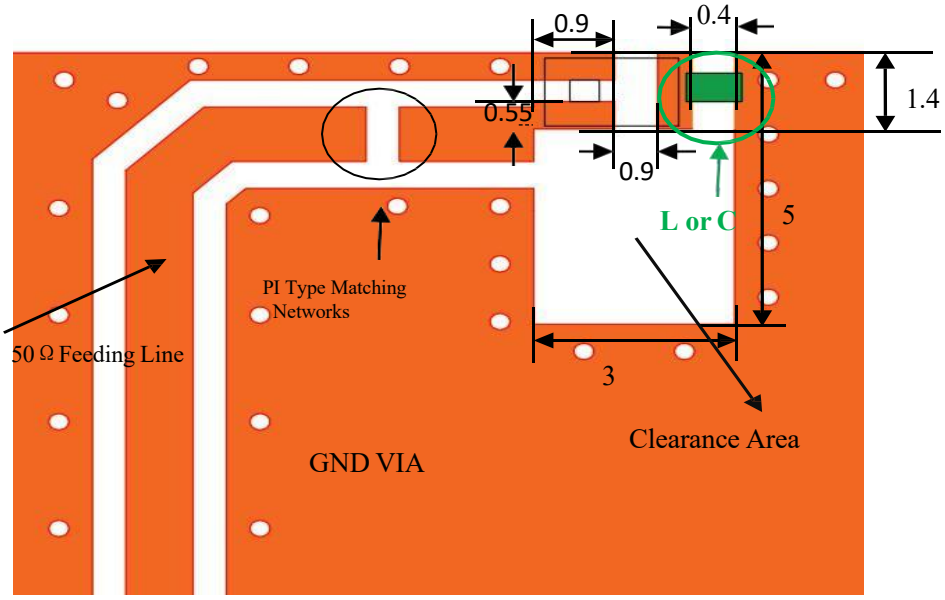
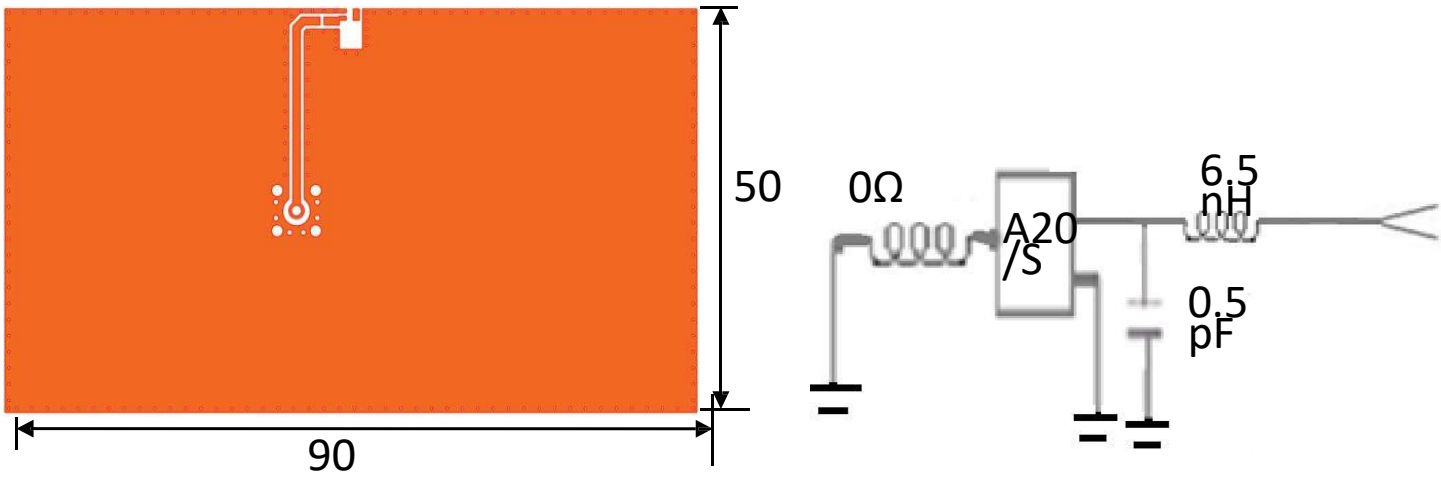
Evaluation Board and Matching Circuits





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Electrical Characteristics

No.	Item	Specifications
1	Central Frequency	2545MHz
2	Band Width	100MHz typ.
3	Peak Gain	2.7 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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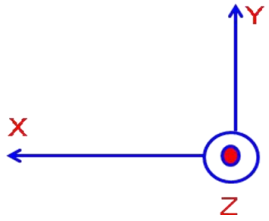
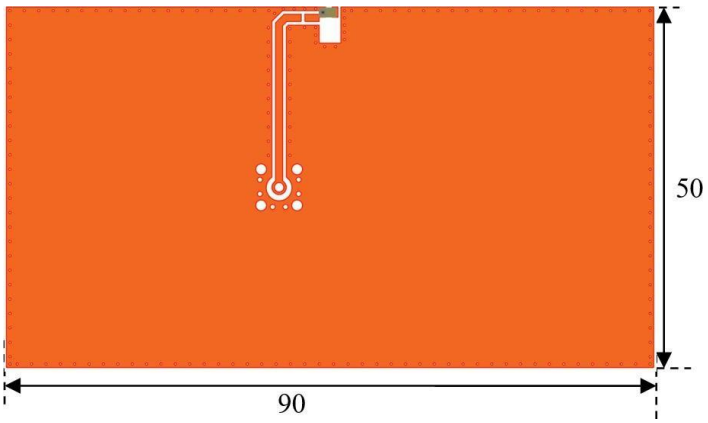
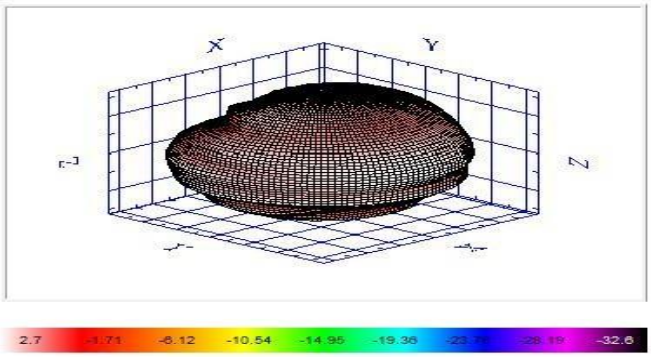
Radiation Pattern

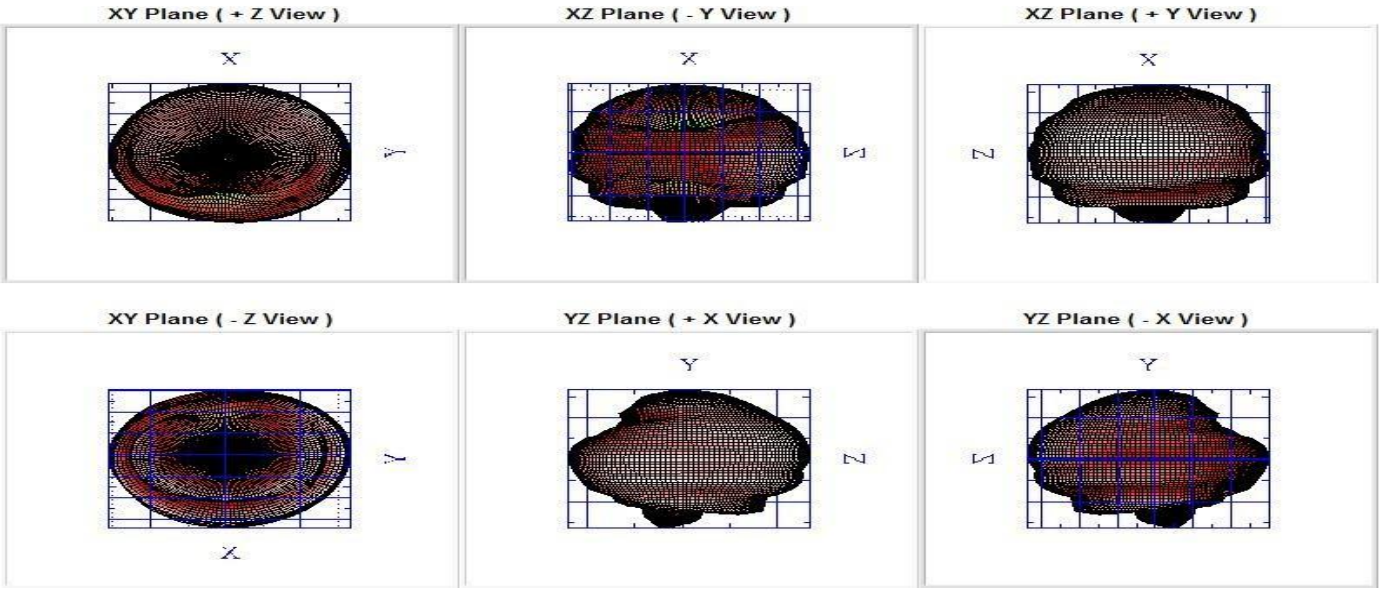
coordinates:







Frequency (MHz)	TRP (dBm)	Efficiency (%)
2450.00	-1.38	72.7
Peak EIRP (dBm)	**Max. Power (dBm)**	**Directivity (dBi)**
2.7	2.7	4.09
NHPRP +/- 45 (dBm)	**Min. Power (dBm)**	**Average Gain (dB)**
-2.41	-32.6	-1.38
NHPRP +/- 30 (dBm)	**Avg. Power (dBm)**	**Upper Hem. (dBm)**
-3.45	-1.13	-3.84
E-Theta Peak Gain (dBi)	**Max. / Min. Ratio (dB)**	**Lower Hem. (dBm)**
1.85	35.3	-5.02
E-Phi Peak Gain (dBi)	**Max. / Avg. Ratio (dB)**	**Upper Hem. (%)**
2.23	3.83	41.26
E-Total Peak Gain (dBi)	**Min. / Avg. Ratio (dB)**	**Lower Hem. (%)**
2.7	-31.47	31.45



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Post Dependability Tolerance

Item	Post Dependability Tolerance
Central Frequency	±5 MHz
Band Width	±5 MHz
Gain	±0.1 dBi
V.S.W.R (in BW)	±0.1

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 satisfy the electrical characteristics specified in paragraph 8.1~8.4 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 satisfy the electrical characteristics specified in paragraph 8.1~8.4 after dropping onto the hard wooden board from the height of 100cm for 3 times each facet of the 3 dimensions of the device.

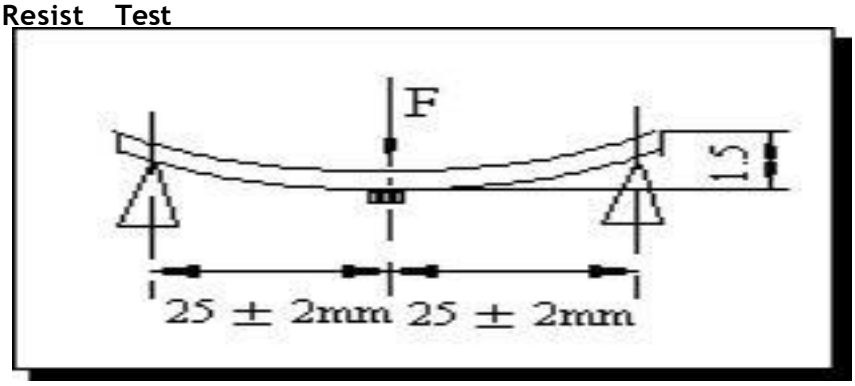
Solder Heat Proof

The device should be satisfied after preheating at 120℃~150℃ for 120 seconds and dipping in soldering Sn at 255℃+10℃ for 5±0.5 seconds，or electric iron 300℃-10℃ for 3±0.5 seconds， without damnify.

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 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 .

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Moisture Proof

The device should satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to the temperature 60±2℃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 satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to temperature 85±5℃ for 96±2 hours and 1~2 hours recovery time under normal temperature.

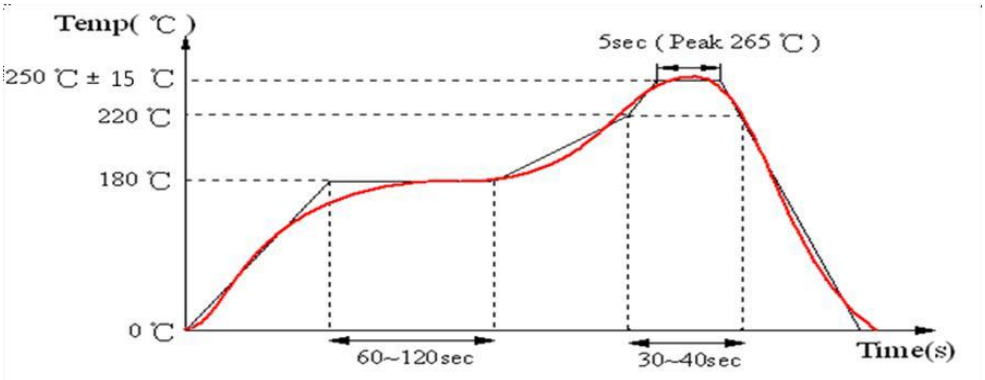
Low Temperature Endurance

The device should also satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to the temperature -40℃±5℃ for 96±2 hours and to 2 hours recovery time under normal temperature.

Temperature Cycle Test

The device should also satisfy the electrical characteristics specified in paragraph 8.1~8.4 after exposed to the low temperature -40℃ and high temperature +85℃ 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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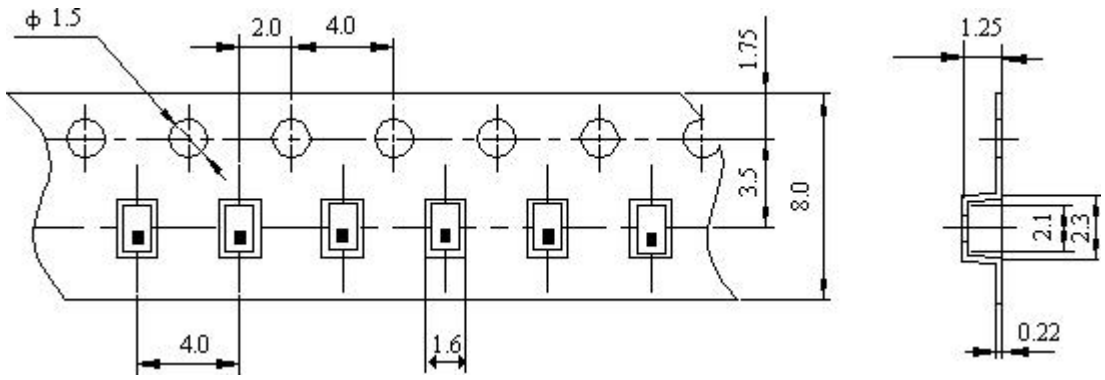
Packaging and Dimensions (2012)

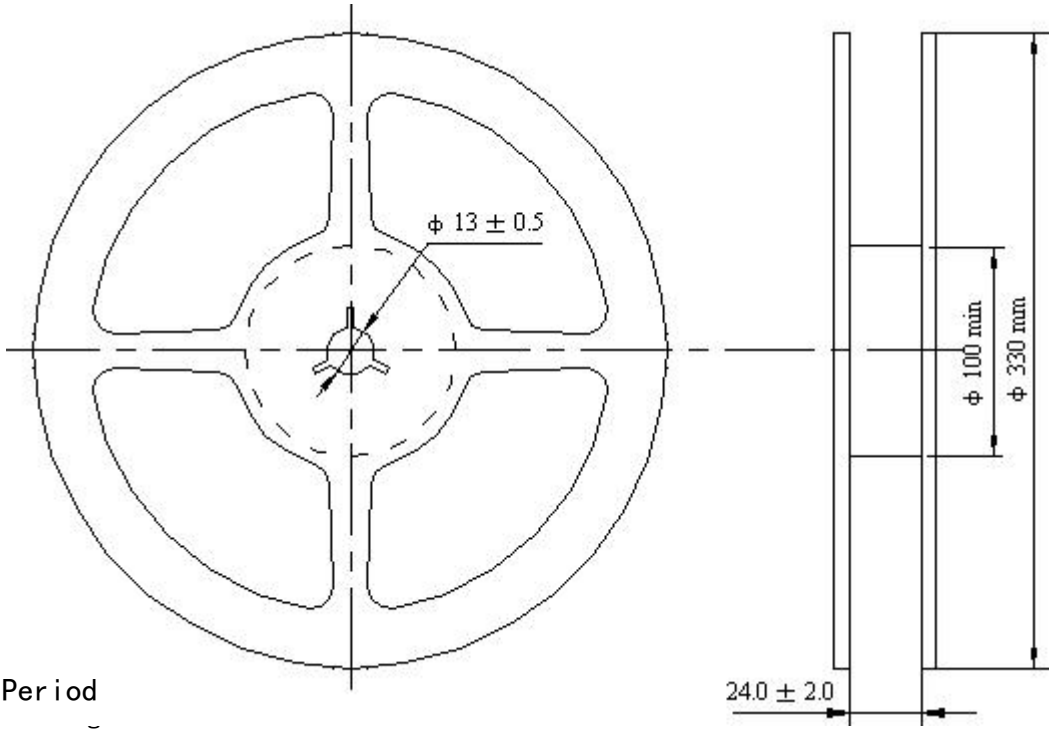
Plastic Tape



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（4000 pcs/Reel）



Storage Period

Product should be used within twelve months of receipt.

MSL 1 / Storage Temperature Range : -40~85 degree C, Humidity : <60%RH

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