

## Features

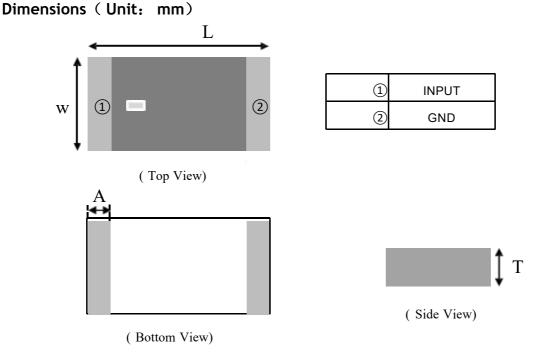
1. Surface Mounted Devices with a small dimension of 2.0 x  $1.25 \ x \ 0.6 \ mm^{_3}$  meet future miniaturization trend.

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. ISMband 2.4GHz wireless applications

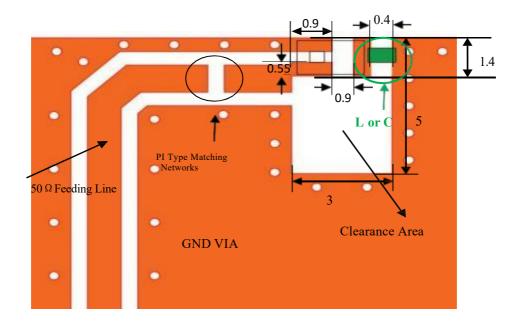


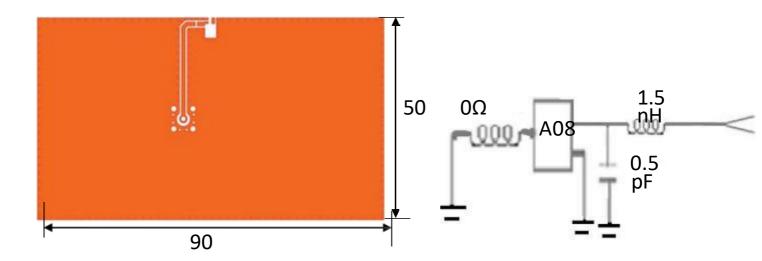
Symbols	L	W	Т	А
Dimensions	2.0+/-0.2	1.25+/-0.2	0.6+/-0.1	0.6+/-0.1

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## Evaluation Board and Matching Circuits





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## **Electrical Characteristics**

No.	Item	Specifications
1	Central Frequency	2450MHz
2	BandWidth	100MHz typ.
3	Peak Gain	2.7 dBi
4	Return Loss	$\leqslant$ 2.0
5	Polarization	Linear
6	Azimuth Beam width	Omni-directional
7	Impedance	50 Ω

## Characteristic curve



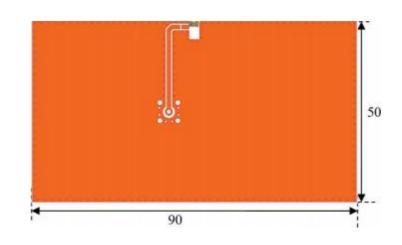
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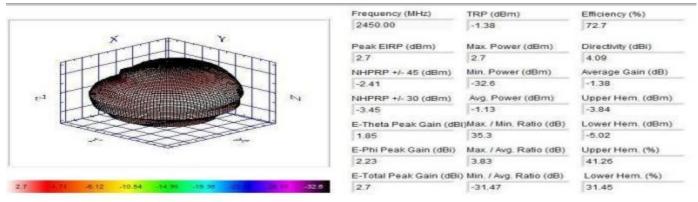


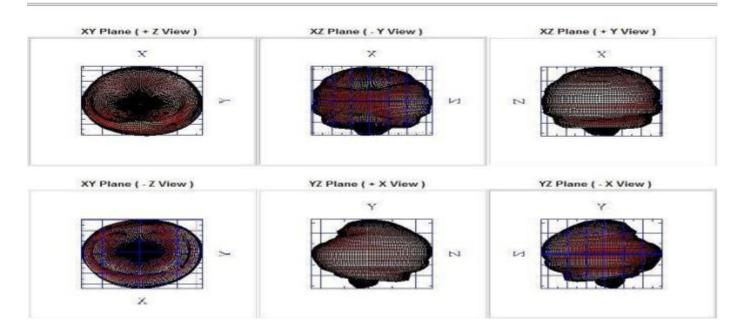
#### **Radiation Pattern**

coordinates:

х







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Item

#### Post Dependability Tolerance

#### **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

#### Central Frequency Band Width ±5 MHz Gain ±0.1 dBi V.S.W.R (in BW) ±0.1

#### Vibration Resist

Post Dependability Tolerance

±5 MHz

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.

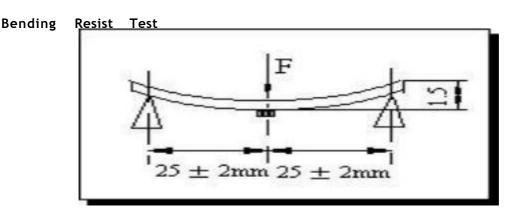
#### Drop Shock

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°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 damnify.

#### Adhesive Strength of Termination



The device have no remarkable damage or removal of the termination after horizontal force of  $5N (\leq 0.003)$ ; 10N(>0603) with 10±1 seconds.

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  $60\pm 2^{\circ}$ Cand 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  $85\pm5^{\circ}C$  for 96±2 hours and 1~2 hours recovery time under normal temperature.

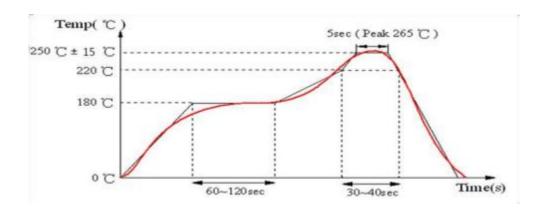
#### Low Temperature Endurance

The device should also satisfy the electrical characteristics specified in paragraph  $8.1^{\circ}8.4$  after exposed to the temperature  $-40^{\circ}C\pm5^{\circ}C$  for  $96\pm2$  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  $-40^{\circ}$ C and high temperature  $+85^{\circ}$ C for  $30\pm2$  min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

#### **Reflow Soldering Standard Condition**

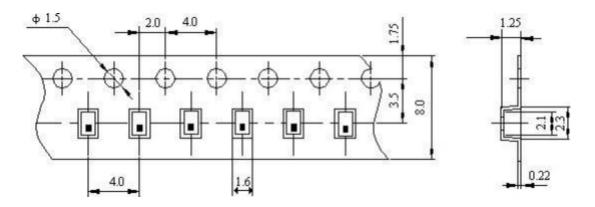


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Packaging and Dimensions (2012)

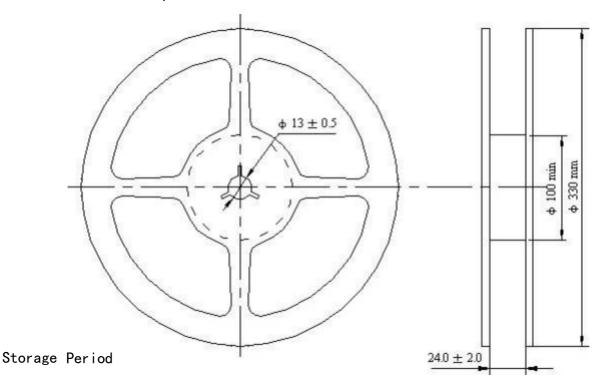
Plastic Tape



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)



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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