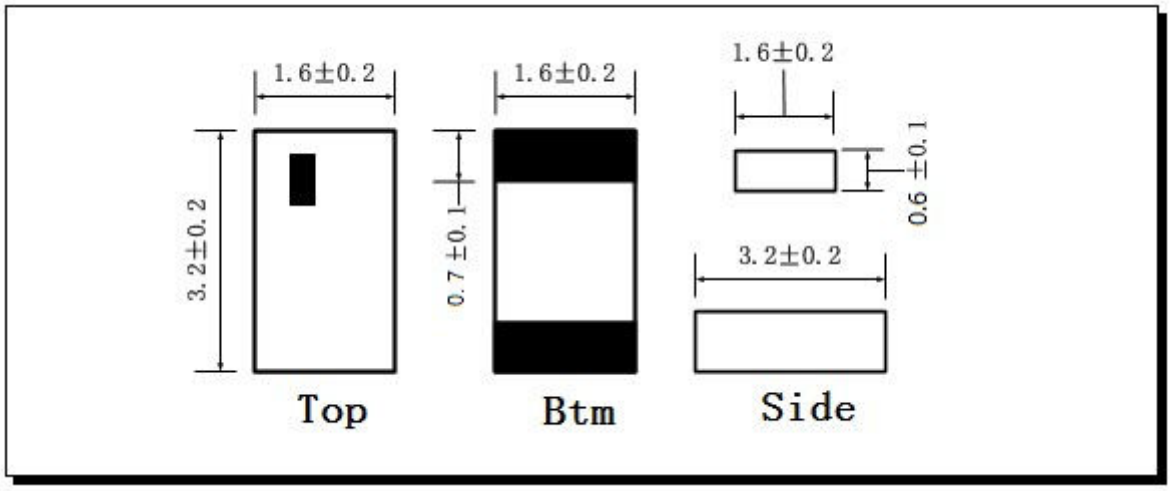
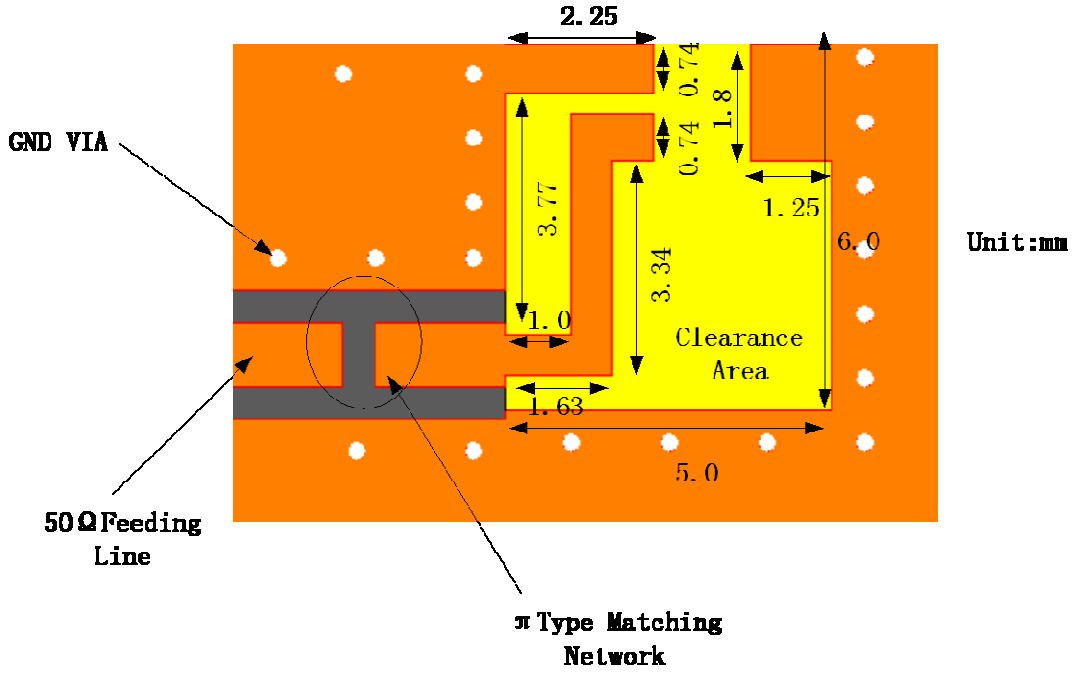
AE-WSW3216C005

1. INTRODUCTION

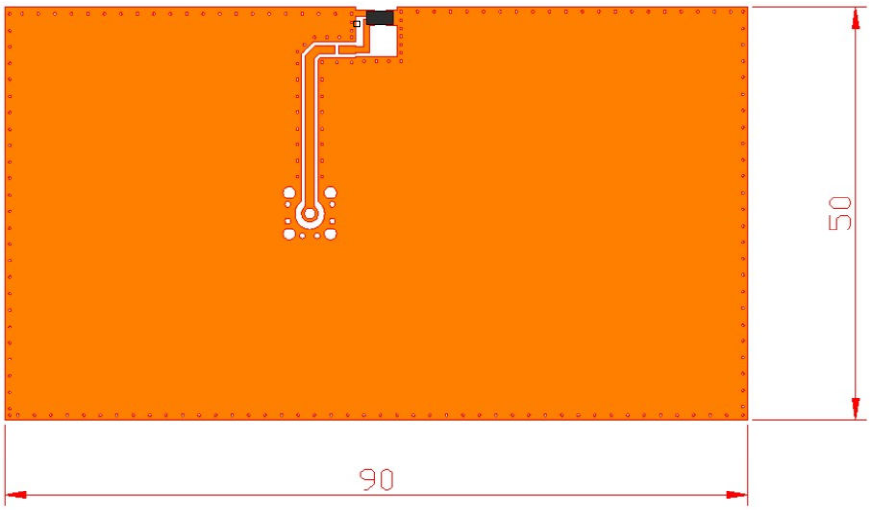
Microwave Multi-Layer Ceramic Antenna series are designed to be used in WLAN, WiFi, Bluetooth, PHS, Multiple-band Mobile phone antenna, FM, etc and compact size SMD chip design.

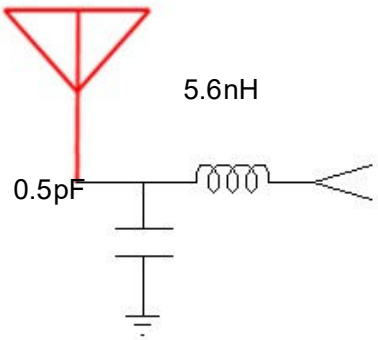
2. Dimensions (Unit: mm)





3. Evaluation Board and Matching Circuits

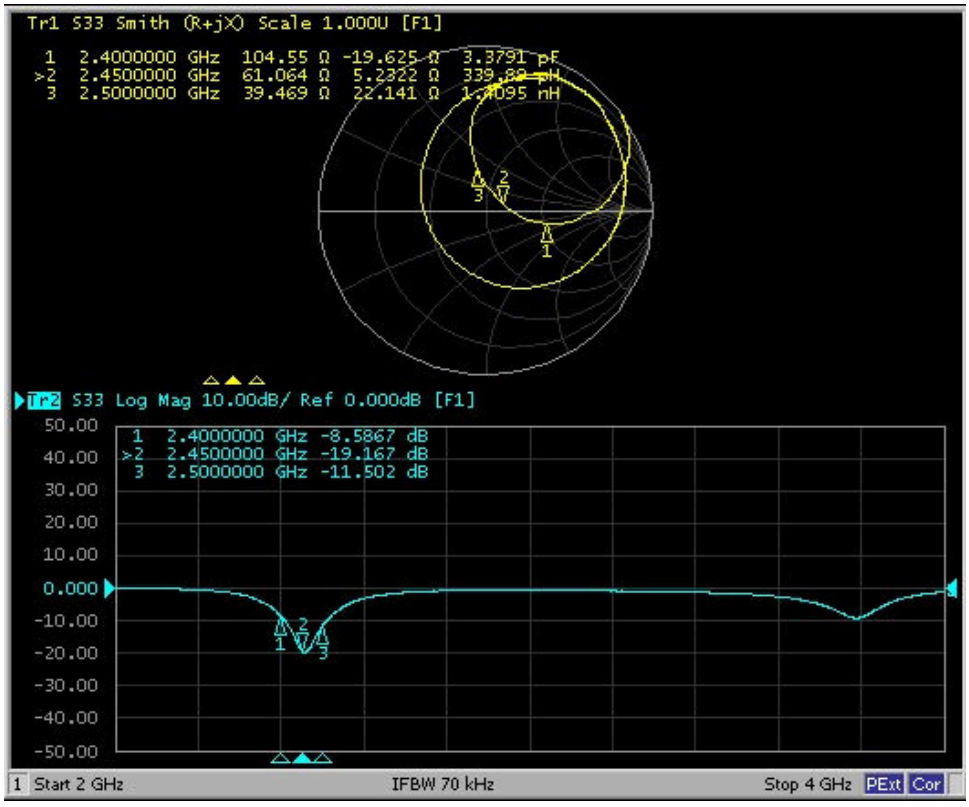




4. Electrical Characteristics

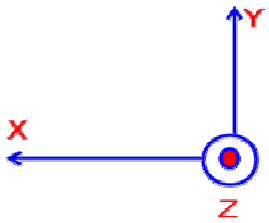
No.	Item	Specifications
5.1	Central Frequency (No matching)	2545MHz
	After Matching	2450 MHz
5.2	Band Width	100 MHz typ.
5.3	Peak Gain	2.5 dBi
5.4	V.S.W.R (in BW)	≤2.0
5.5	Polarization	Linear
5.6	Azimuth Beam width	Omni-directional
5.7	Impedance	50 Ω

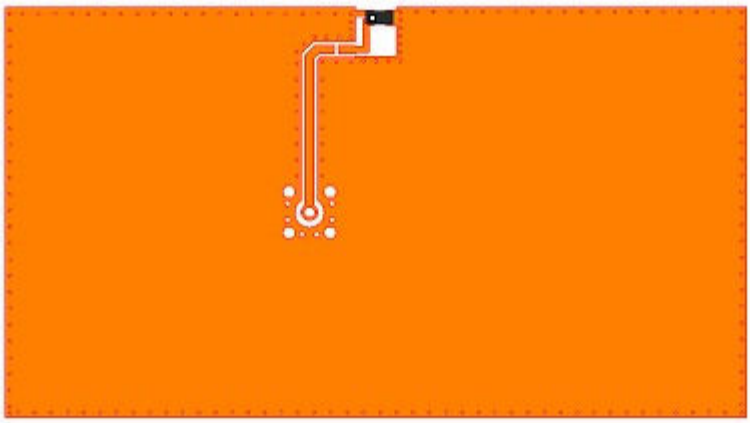
5. Characteristic curve



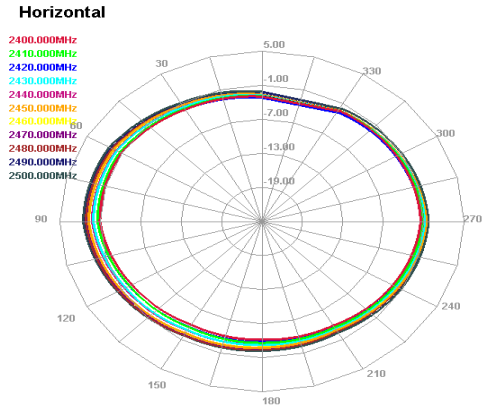
6. Radiation Pattern & Efficiency

coordinates:

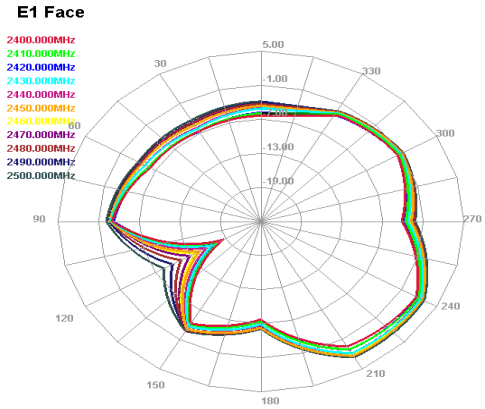




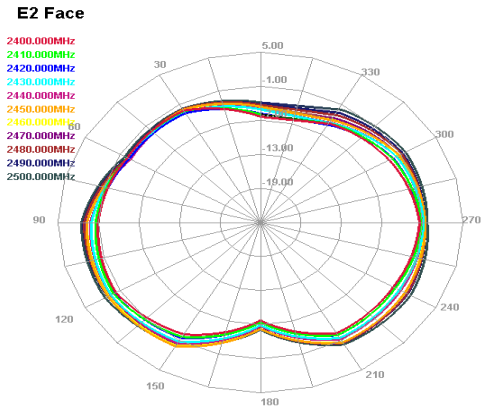
H Plane



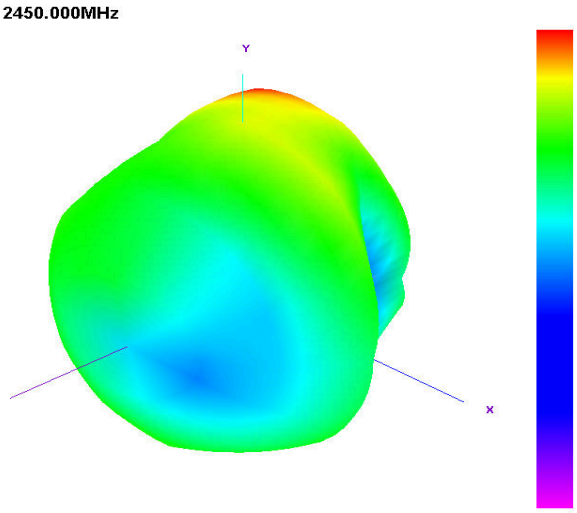
E1 Plane



E2 Plane



3D Radiation Pattern



Frequency (MHz)	2400	2450	2500
Avg. Gain (dBi)	-1.56	-1.28	-1.15
Peck Gain (dBi)	1.7	1.8	2.5
Efficiency (%)	62.5	71.2	73.8

7. Post Dependability Tolerance

Post Dependability Tolerance (Refer to the table)

No.	Item	Post Dependability Tolerance
8.1	Central Frequency	±5 MHz
8.2	Band Width	±5 MHz
8.3	Gain	±0.1 dBi
8.4	V.S.W.R (in BW)	±0.1

8.Dependability Test

Temperature range	25±5℃
Relative Humidity range	55~75%RH
Operating Temperature range	-40℃~+85℃
Storage Temperature range	-40℃~+85℃

8.1 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.

8.2 Drop Shock

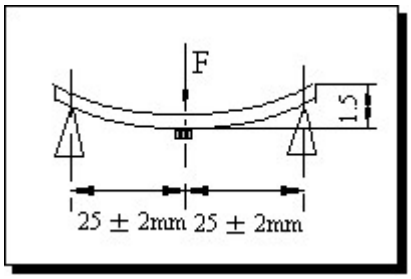
The device should satisfy the electrical characteristics specified in paragraph 8.1~8.4 after dropping onto the hard wooden board from the height of 100cm for 3 times each facet of the 3 dimensions of the device.

8.3 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 damage.

8.4 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.



8.5 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 .

8.6 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.

8.7 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.

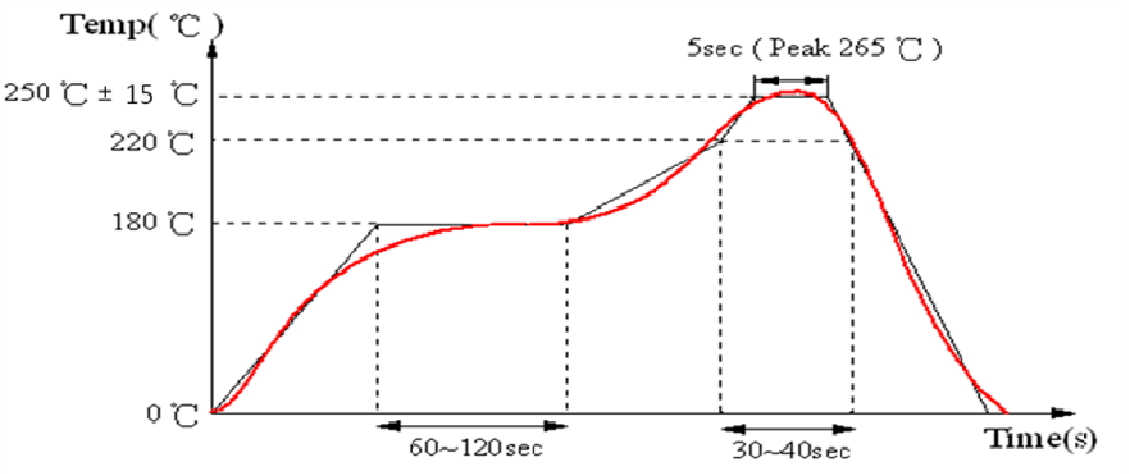
8.8 Low Temperature Endurance

The device should also satisfy the electrical characteristiccisf iesdp ein 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.

8.9 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.

9.Reflow Soldering Standard Condition



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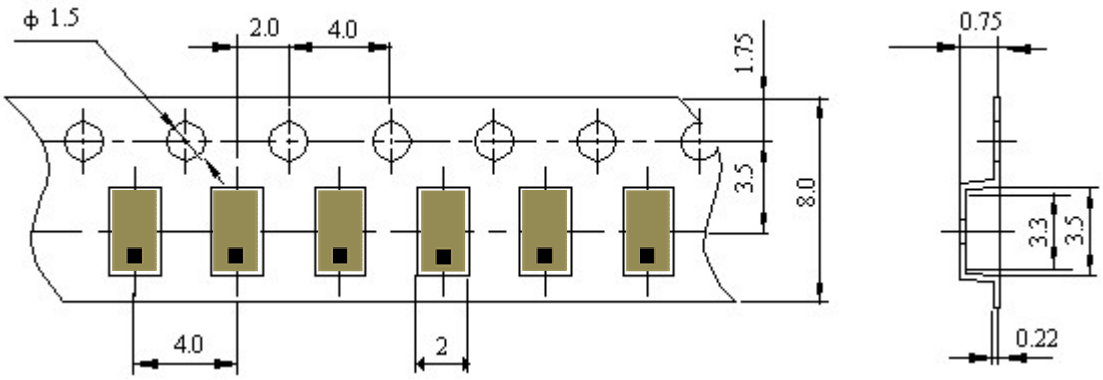
10. Packaging and Dimensions

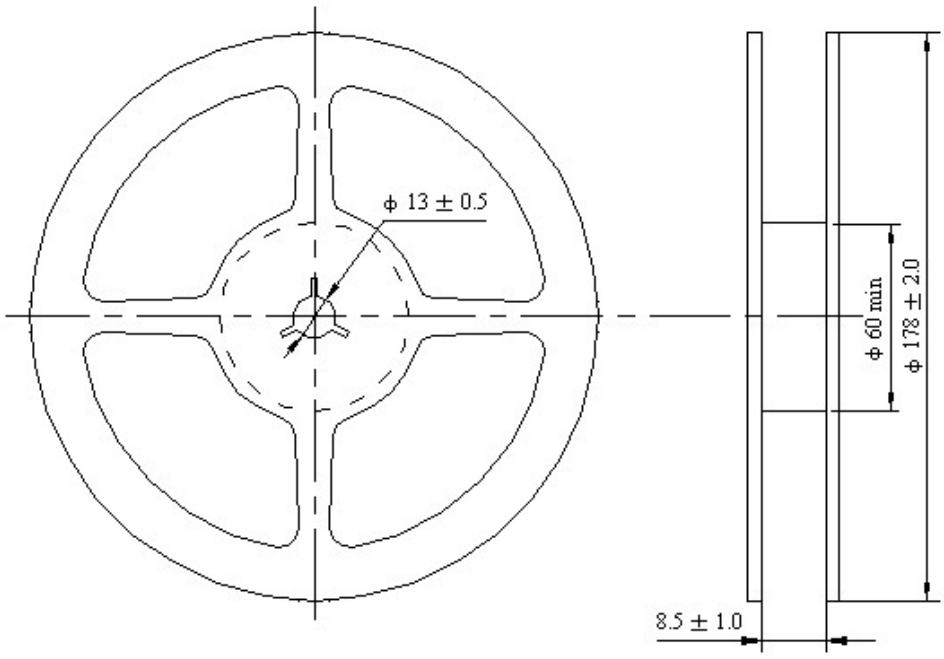
10.1 Plastic Tape



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.

10.2 Reel (3000 pcs/Reel)



10.3 Storage Period

Product should be used within six months of receipt.

MSL 1 / Storage Temperature Range : <30 degree C, Humidity : <85%RH