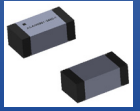


# 2.45 GHz Ceramic Chip Antenna



ACAG0301-2450-T



3.2 x 1.6 x 1.2 mm  
RoHS/RoHS II Compliant  
MSL = N/A

## Features

- Low VSWR
- High gain of 5.19 dBi
- Bandwidth of 100MHz
- Omnidirectional pattern
- Linear polarization

## Applications

- WiFi
- Bluetooth
- ISM
- Wearables
- IoT
- AR/VR
- Drones

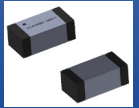
## Electrical Specifications

Parameters	Min.	Typ.	Max.	Units
Center Frequency (No matching)		2875		MHz
Center Frequency (After matching)		2450		MHz
Bandwidth		100		MHz
VSWR		≤ 2.0		
Impedance		50		Ω
Gain		5.19		dBi
Azimuthal Beam width	Omni-directional			
Polarization	Linear			

## Environmental Characteristics

Parameters	Description
Operating Temperature	-40°C to +85°C
Relative Humidity	55 ~ 75 %

# 2.45 GHz Ceramic Chip Antenna

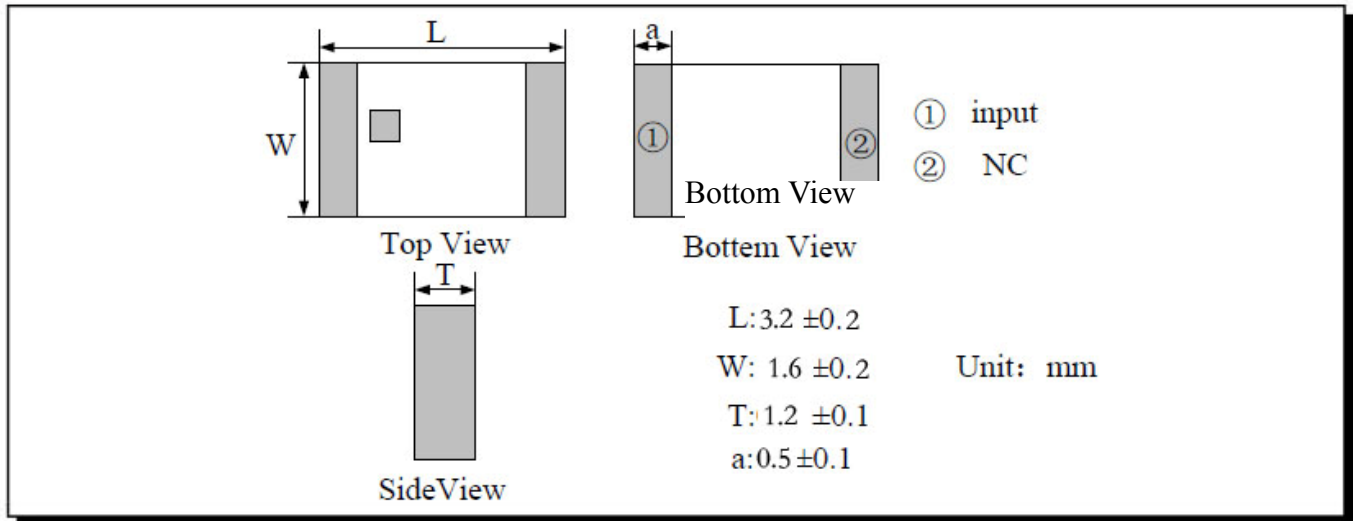


ACAG0301-2450-T

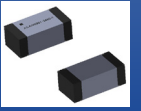


3.2 x 1.6 x 1.2 mm  
RoHS/RoHS II Compliant  
MSL = N/A

## Product Dimensions (Unit: mm)



# 2.45 GHz Ceramic Chip Antenna

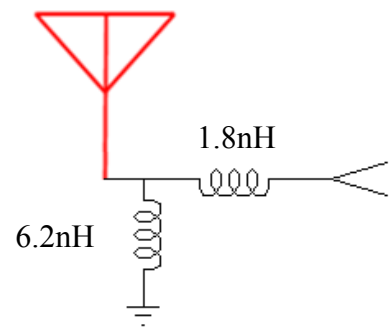
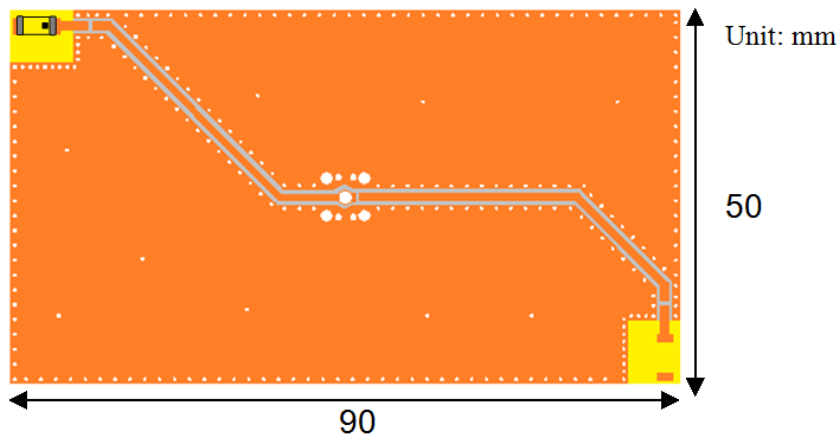
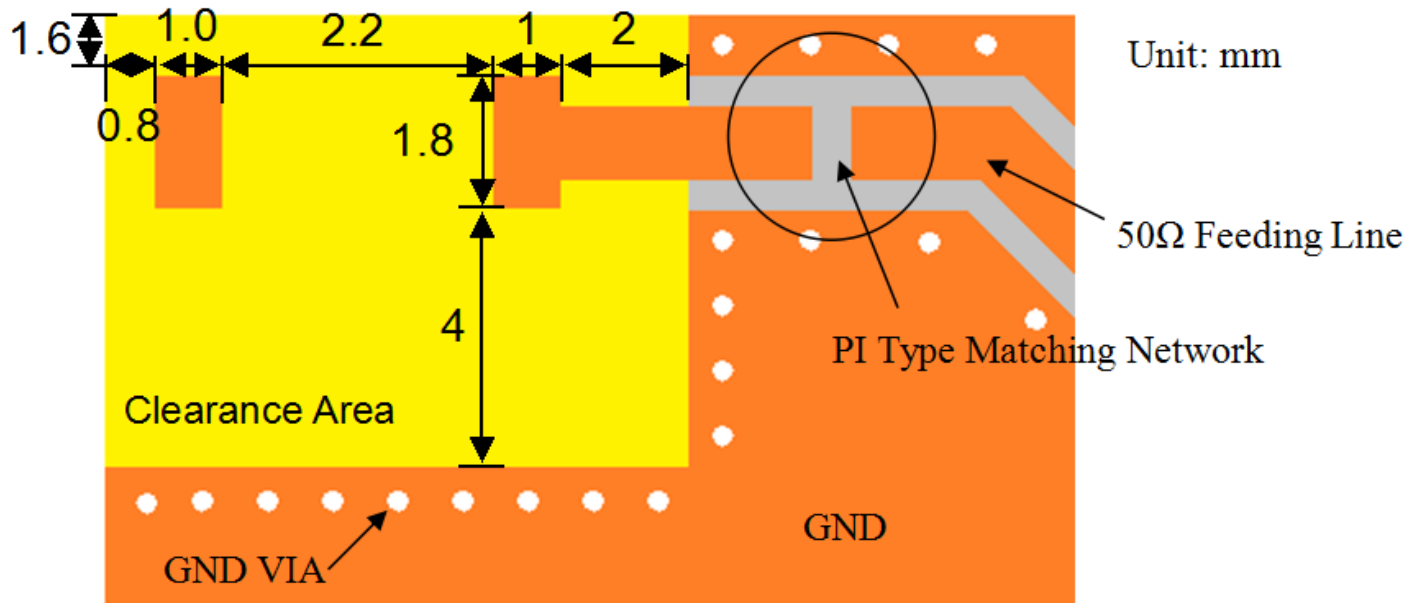


ACAG0301-2450-T

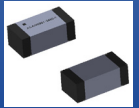


3.2 x 1.6 x 1.2 mm  
RoHS/RoHS II Compliant  
MSL = N/A

## Evaluation Board and Matching Circuits



# 2.45 GHz Ceramic Chip Antenna

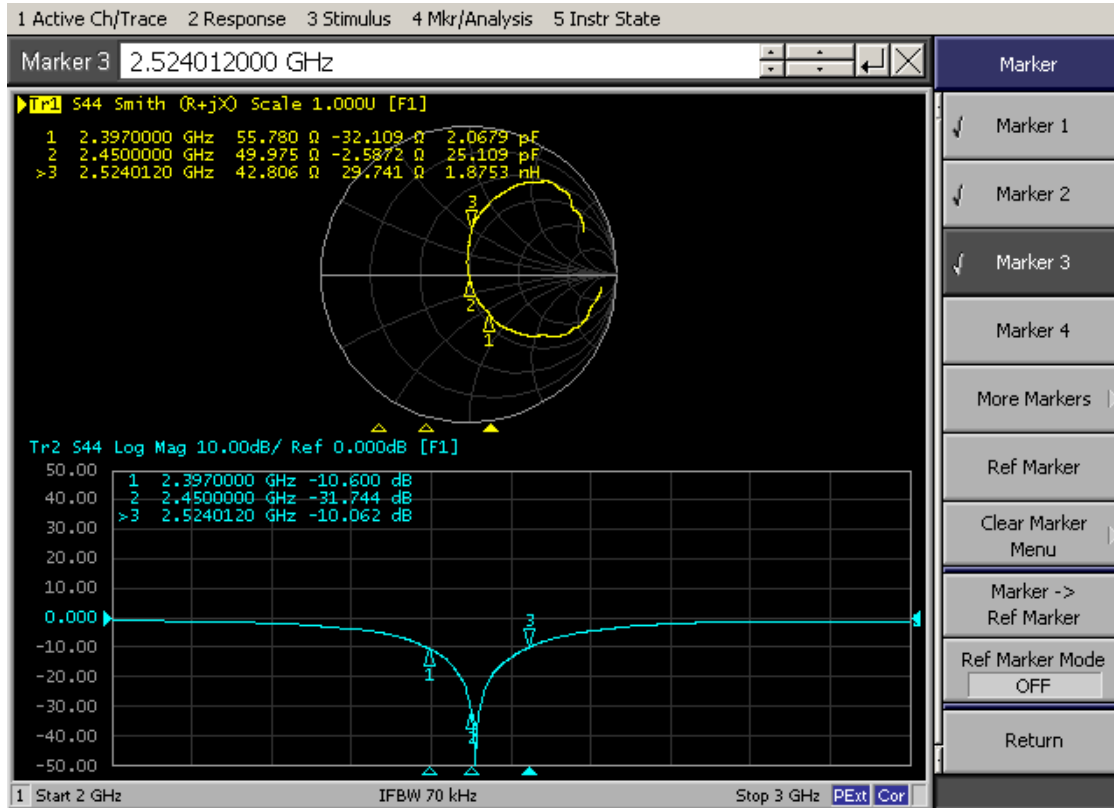


ACAG0301-2450-T



3.2 x 1.6 x 1.2 mm  
RoHS/RoHS II Compliant  
MSL = N/A

## Return Loss and Impedance Characteristics



# 2.45 GHz Ceramic Chip Antenna

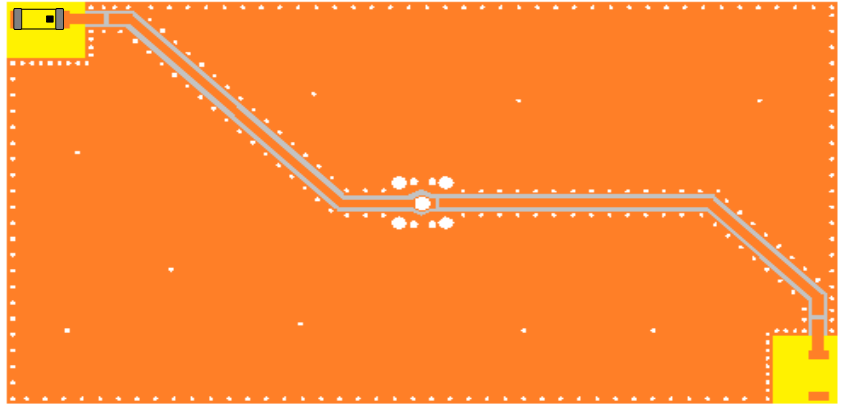
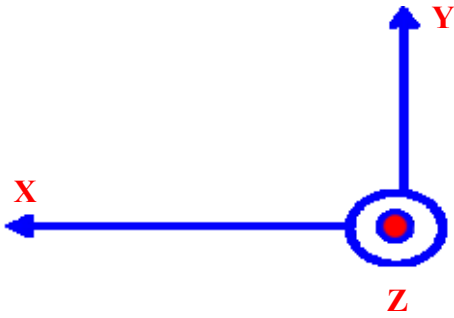


ACAG0301-2450-T

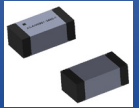


3.2 x 1.6 x 1.2 mm  
RoHS/RoHS II Compliant  
MSL = N/A

## Radiation Pattern



# 2.45 GHz Ceramic Chip Antenna



ACAG0301-2450-T

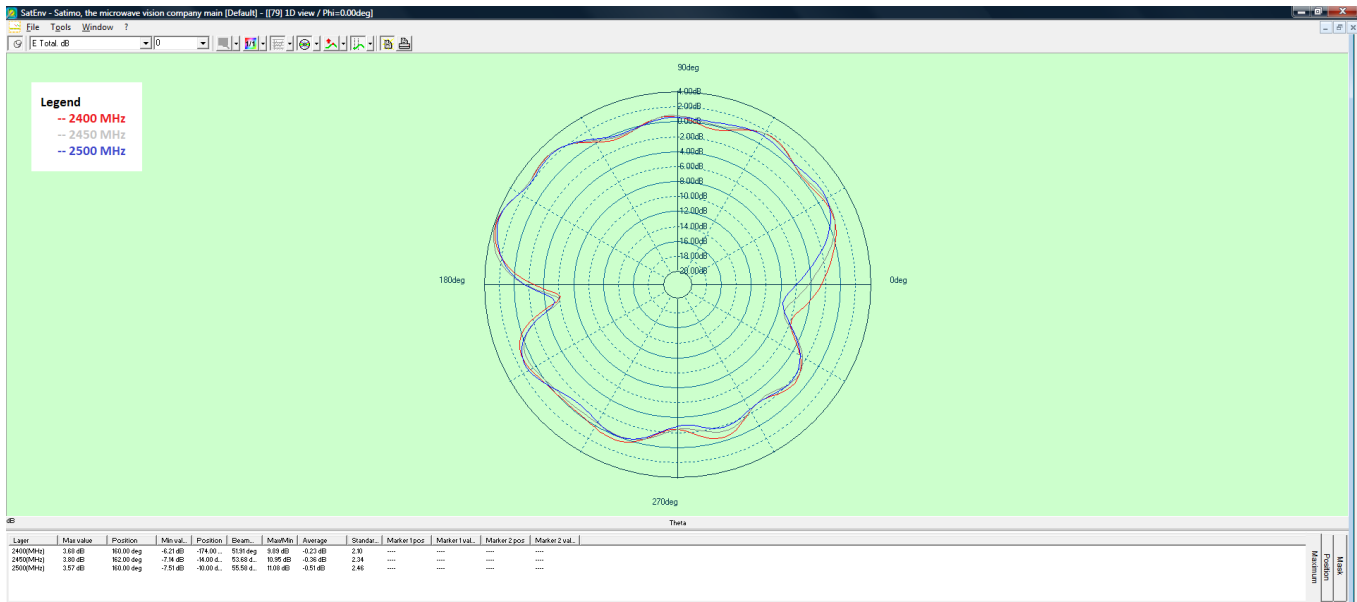


3.2 x 1.6 x 1.2 mm  
RoHS/RoHS II Compliant  
MSL = N/A

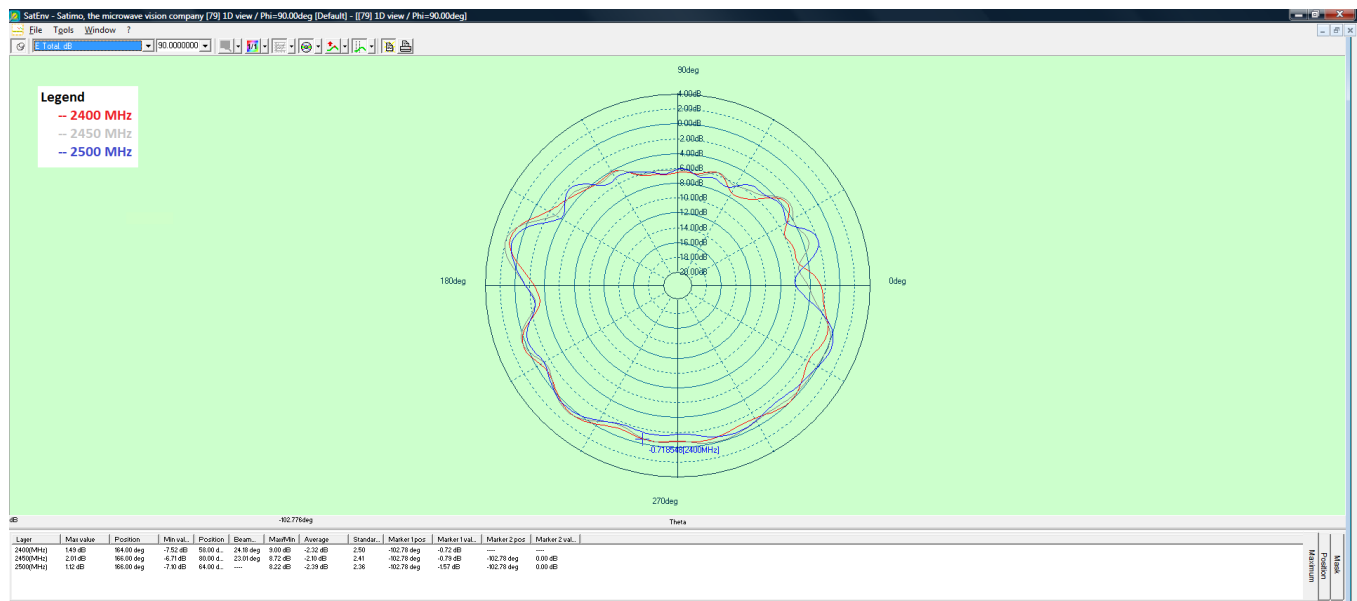
## Radiation Pattern

### 2D – Pattern

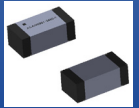
#### XZ- Plane



#### YZ- Plane



# 2.45 GHz Ceramic Chip Antenna



ACAG0301-2450-T

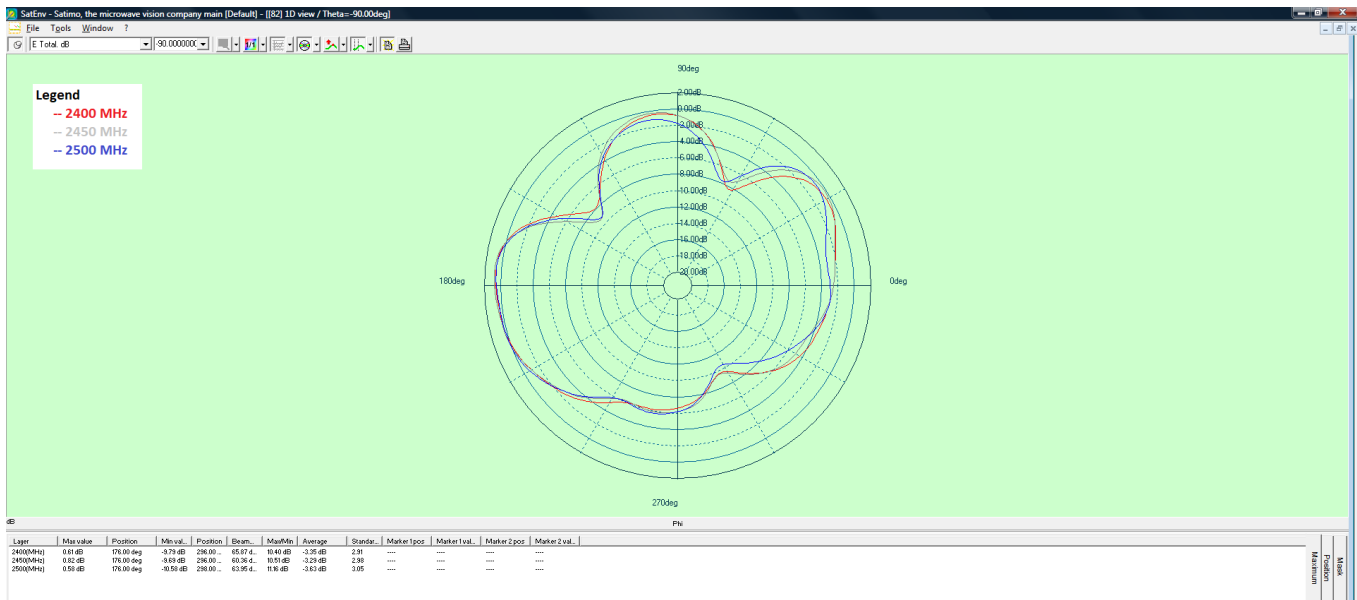


3.2 x 1.6 x 1.2 mm  
RoHS/RoHS II Compliant  
MSL = N/A

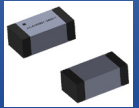
## Radiation Pattern

### 2D – Pattern

#### XY- Plane



# 2.45 GHz Ceramic Chip Antenna



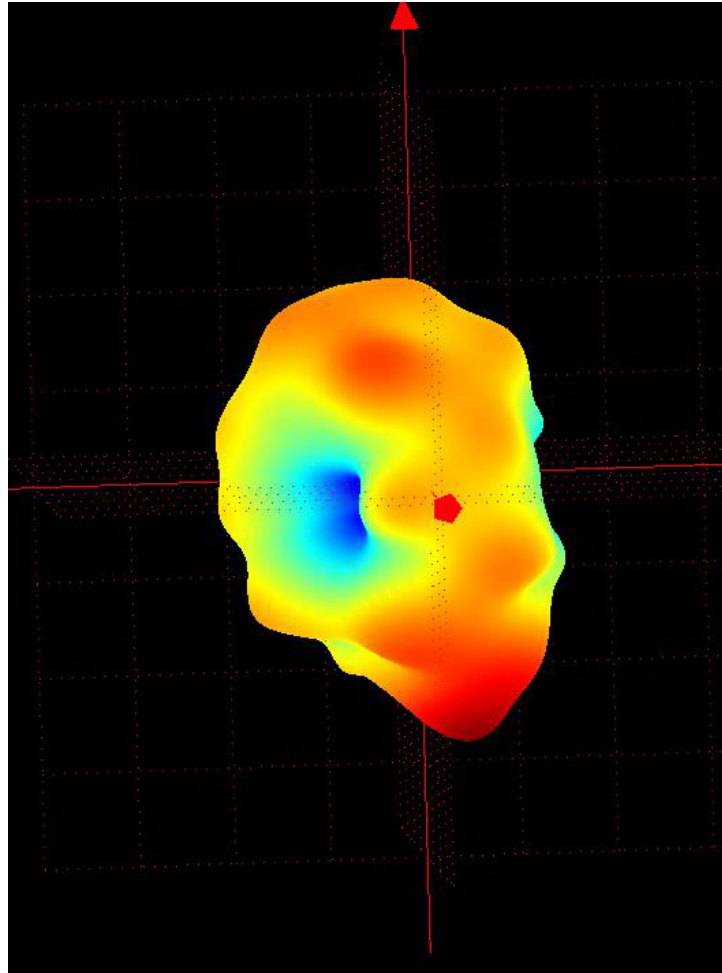
ACAG0301-2450-T



3.2 x 1.6 x 1.2 mm  
RoHS/RoHS II Compliant  
MSL = N/A

## Radiation Patterns

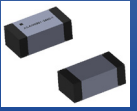
### 3D – Pattern



Frequency (MHz)	Average Gain (dBi)	Peak Gain (dBi)	Efficiency (%)
2400	-0.23	4.98	70
2450	-0.36	5.19	71.2
2500	-0.51	4.55	69



# 2.45 GHz Ceramic Chip Antenna

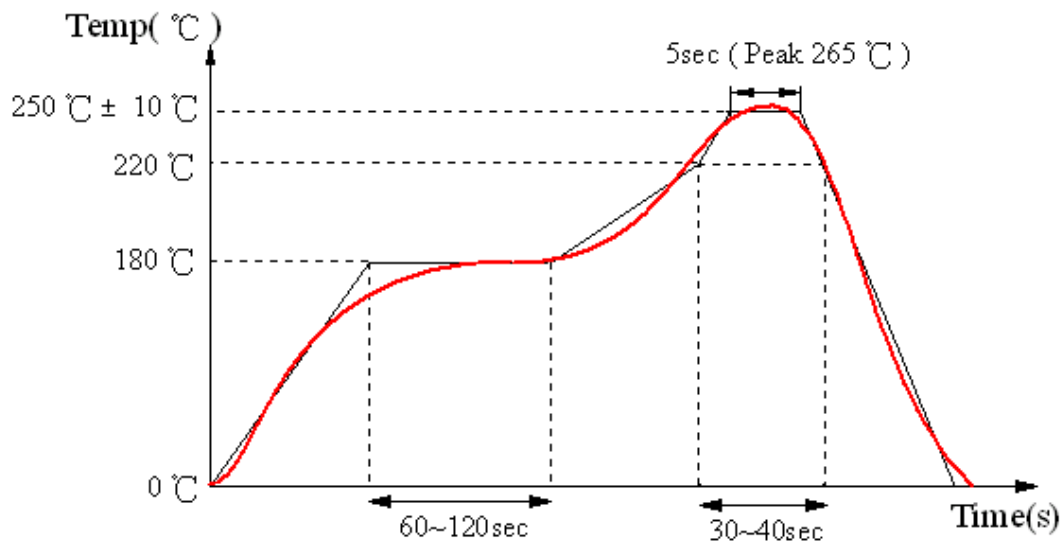


ACAG0301-2450-T

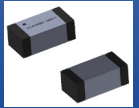


3.2 x 1.6 x 1.2 mm  
RoHS/RoHS II Compliant  
MSL = N/A

## Reflow Soldering Standard Condition



# 2.45 GHz Ceramic Chip Antenna



ACAG0301-2450-T



3.2 x 1.6 x 1.2 mm  
RoHS/RoHS II Compliant  
MSL = N/A

## Reliability Test

Item	Test Condition	Remark
Vibration Resist	Subject the device to vibration of 10 to 55 Hz with amplitude of 1.5 mm for 2 hours each in X, Y and Z directions.	It shall fulfill the specifications in Table 1.
Drop Shock	The device is dropped onto the hard wooden board from a height of 100 cm for 3 times each facet of the 3 dimensions of the device.	It shall fulfill the specifications in Table 1.
Solder Heat Proof	The device should not be damaged 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.	
Tensile Strength of Terminal	The device should not be broken after tensile force of 1.0kg is slowly applied to pull a lead pin of the fixed device in the lead axis direction for 10±1 seconds.	
Bending Resist Test	Weld the product to the center part of the PCB with a thickness of 1.6±0.2 mm as the illustration shows, and keep exerting force arrow-ward on it at speed of 1 mm/S, and hold for 5±1 S at the position of 1.5 mm bending distance, so far, any peeling off of the product metal coating should not be detected.	
Moisture Proof	The device is exposed to the temperature 60 °C ± 2 °C and the relative humidity 90~95 % RH for 96 hours and 1~2 hours recovery time under normal condition.	It shall fulfill the specifications in Table 1.
High Temperature Endurance	The device is exposed to temperature 85 °C ± 5 °C for 96±2 hours and 1~2 hour's recovery time under normal temperature.	It shall fulfill the specifications in Table 1.
Low Temperature Endurance	The device is exposed to the temperature -40 °C ± 5 °C for 96 ± 2 hours and to 2 hours recovery time under normal temperature.	It shall fulfill the specifications in Table 1.
Temperature Cycle Test	The device is exposed to the low temperature -40 °C and high temperature +85 °C for 30±2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.	It shall fulfill the specifications in Table 1.

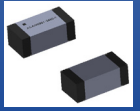
Temperature range: 25 ± 5 °C

Relative Humidity range: 55 ~ 75 % RH

Operating Temperature range: -40°C to + 85°C

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

# 2.45 GHz Ceramic Chip Antenna



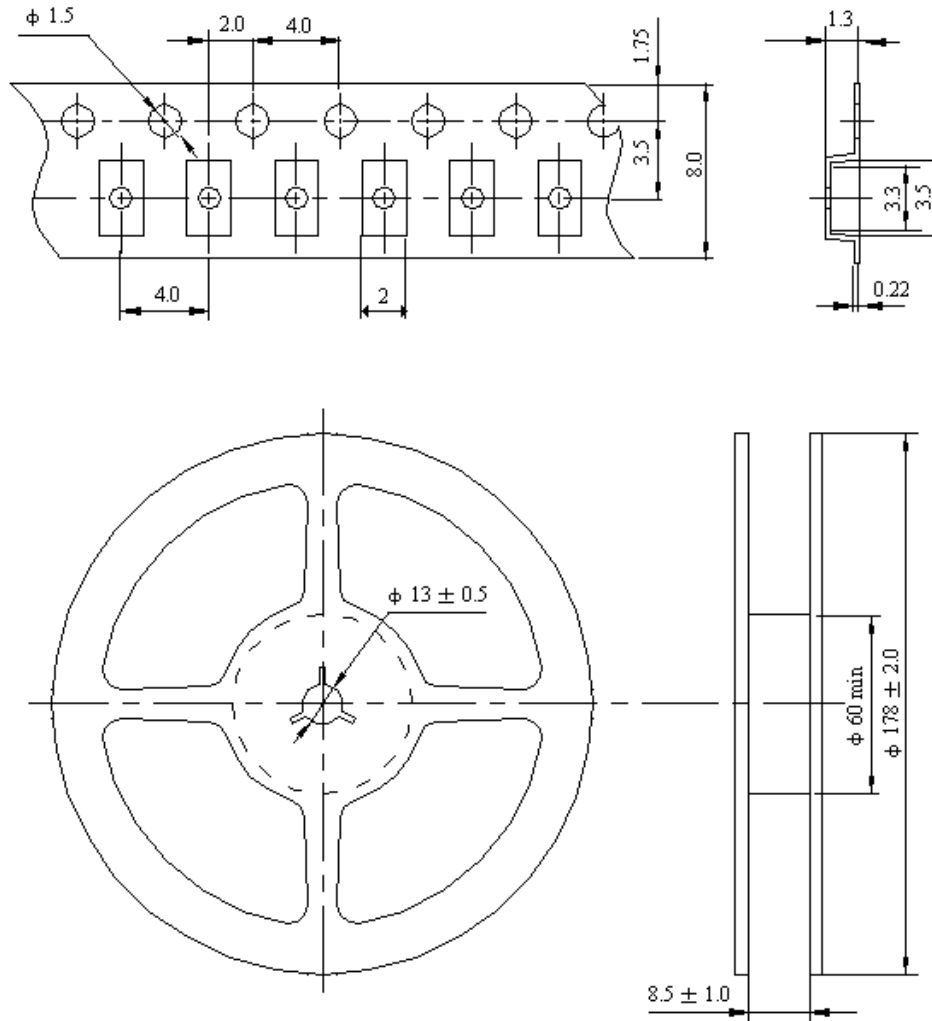
ACAG0301-2450-T



3.2 x 1.6 x 1.2 mm  
RoHS/RoHS II Compliant  
MSL = N/A

## Packaging

There are 3000 pcs/Reel.



Unit : mm

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REVISED: 05.03.2019

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