

# 5.5 GHz Ceramic Chip Antenna



ACAG0301-5500-T



3.2 x 1.6 x 1.2mm  
RoHS/RoHS II Compliant  
MSL = 1

## FEATURES

- Gain of 4.5dBi
- VSWR  $\leq$  2.0
- Made using LTCC (low temperature co-fired ceramic) technology
- Small form factor 3.2 x 1.6 x 1.2mm
- Omni-directional

## APPLICATIONS

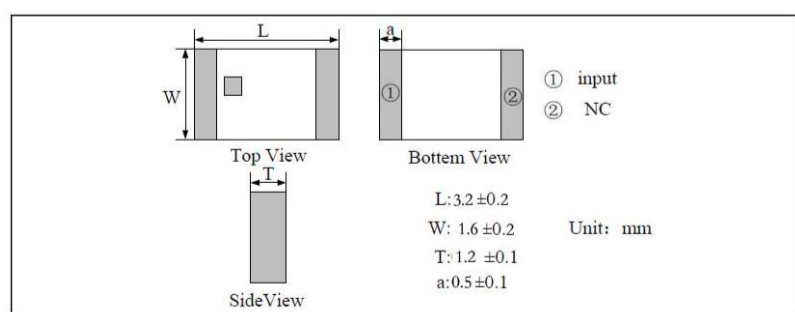
- IoT and wearables
- WiFi/WLAN
- ISM band

## ELECTRICAL CHARACTERISTICS

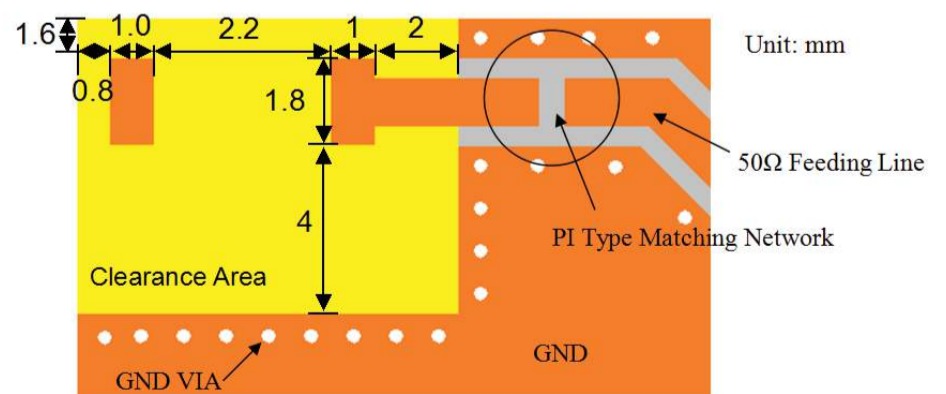
Item	Minimum
Frequency (No matching)	5785 MHz
Frequency (after matching)	5500 MHz
Bandwidth	800 MHz typ
VSWR	$\leq$ 2.0
Impedance	50 $\Omega$
Peak Gain	4.5 dBi
Azimuth	Omni-directional
Polarization	Linear
Operating Temperature Range	-40°C ~+ 85°C

## MECHANICAL DIMENSIONS (mm)

Antenna Dimensions



Layout Dimensions



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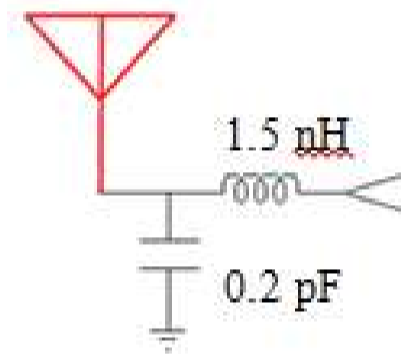
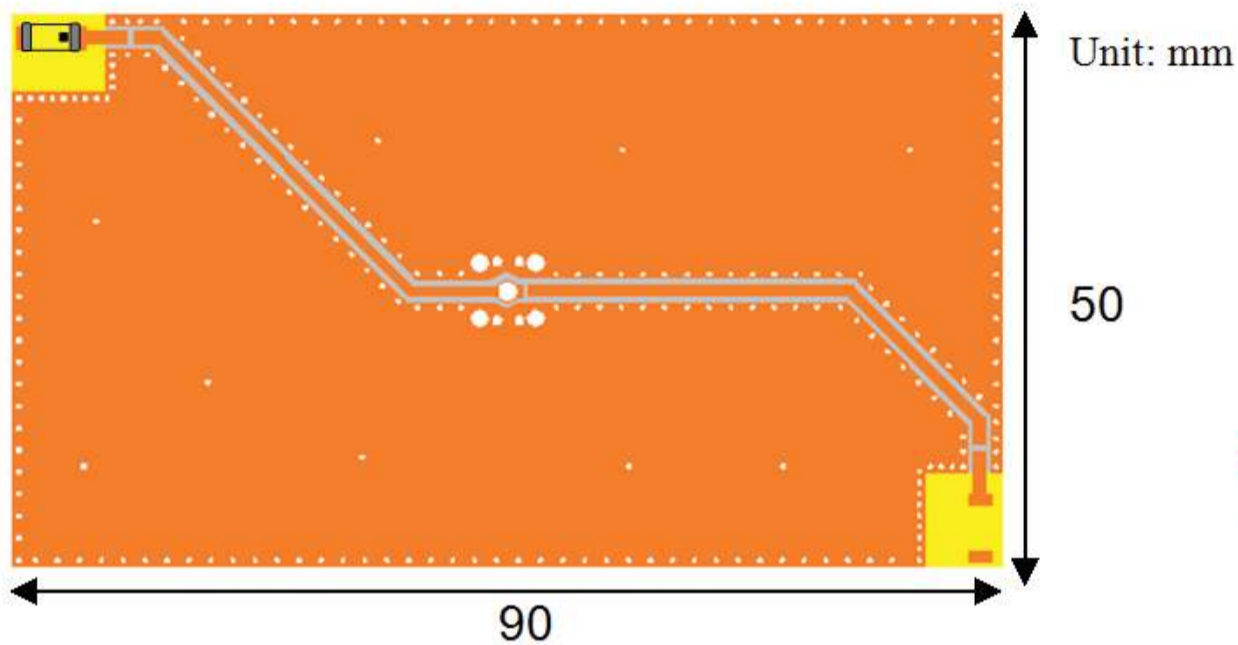


ACAG0301-5500-T

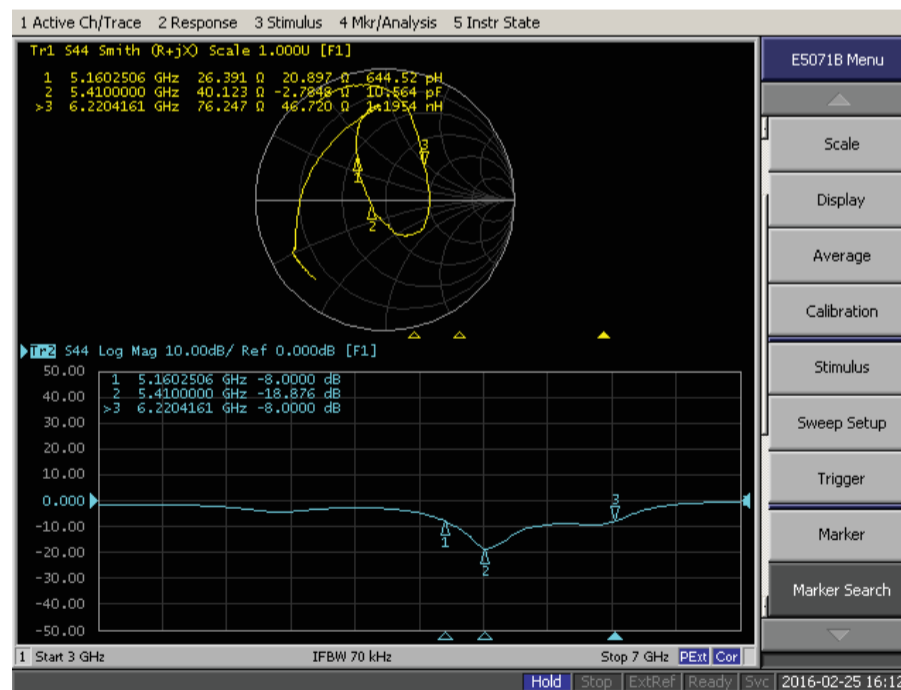


3.2 x 1.6 x 1.2mm  
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## EVALUATION BOARD AND MATCHING CIRCUITS



## ANTENNA RESPONSE – SMITH CHART AND RETURN LOSS S11



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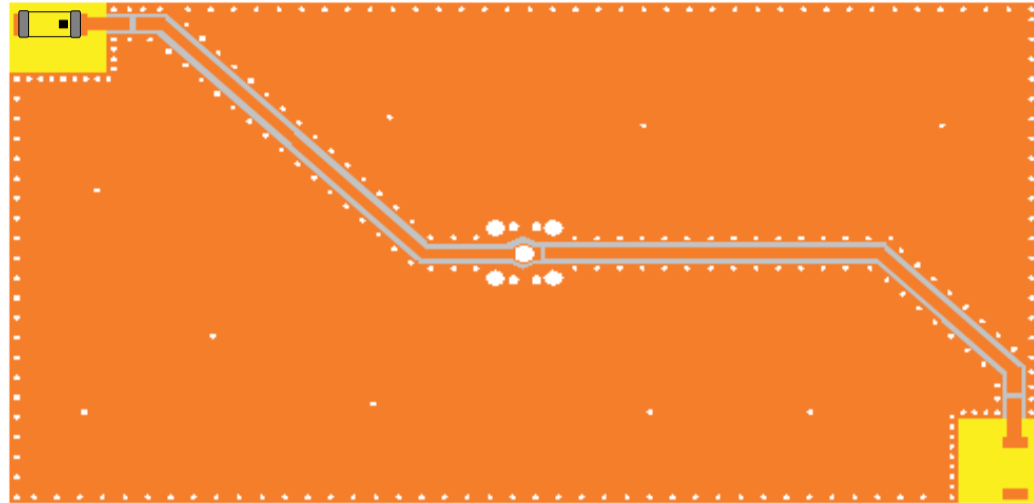
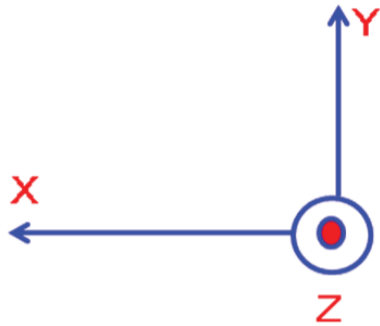


3.2 x 1.6 x 1.2mm  
RoHS/RoHS II Compliant

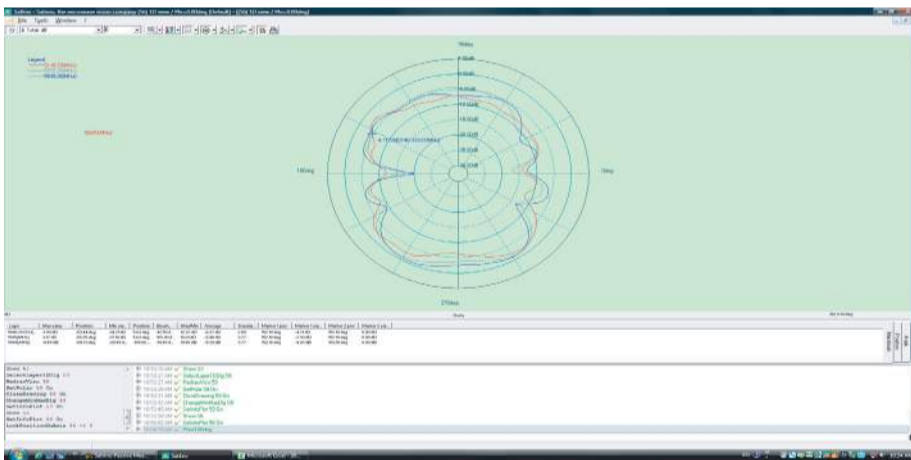
MSL = 1

## RADIATION PATTERNS

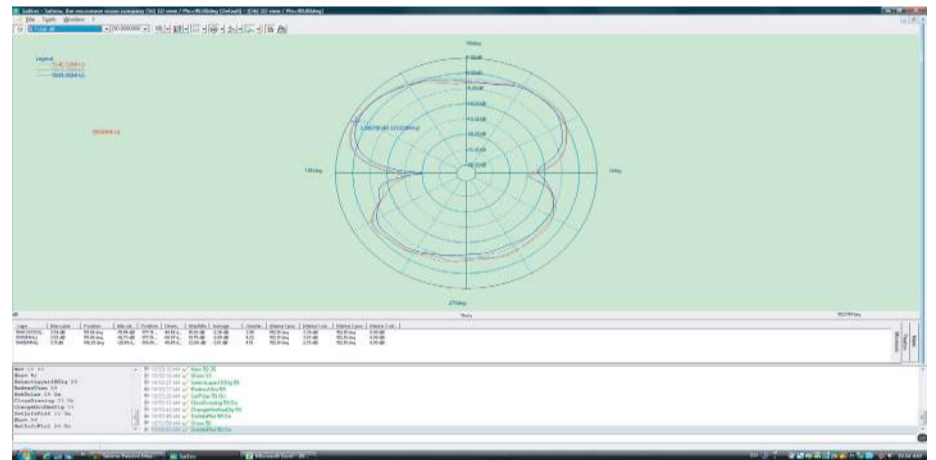
### Coordinates



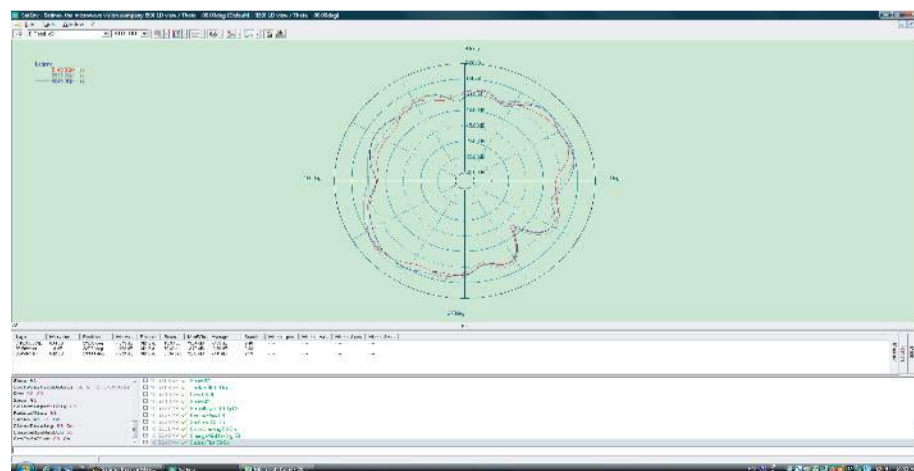
### X-Z Plane



### Y-Z Plane



### X-Y Plane



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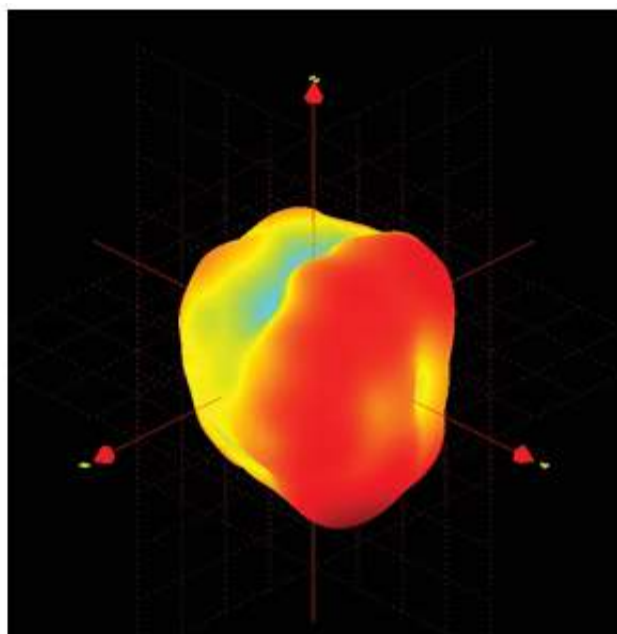


ACAG0301-5500-T



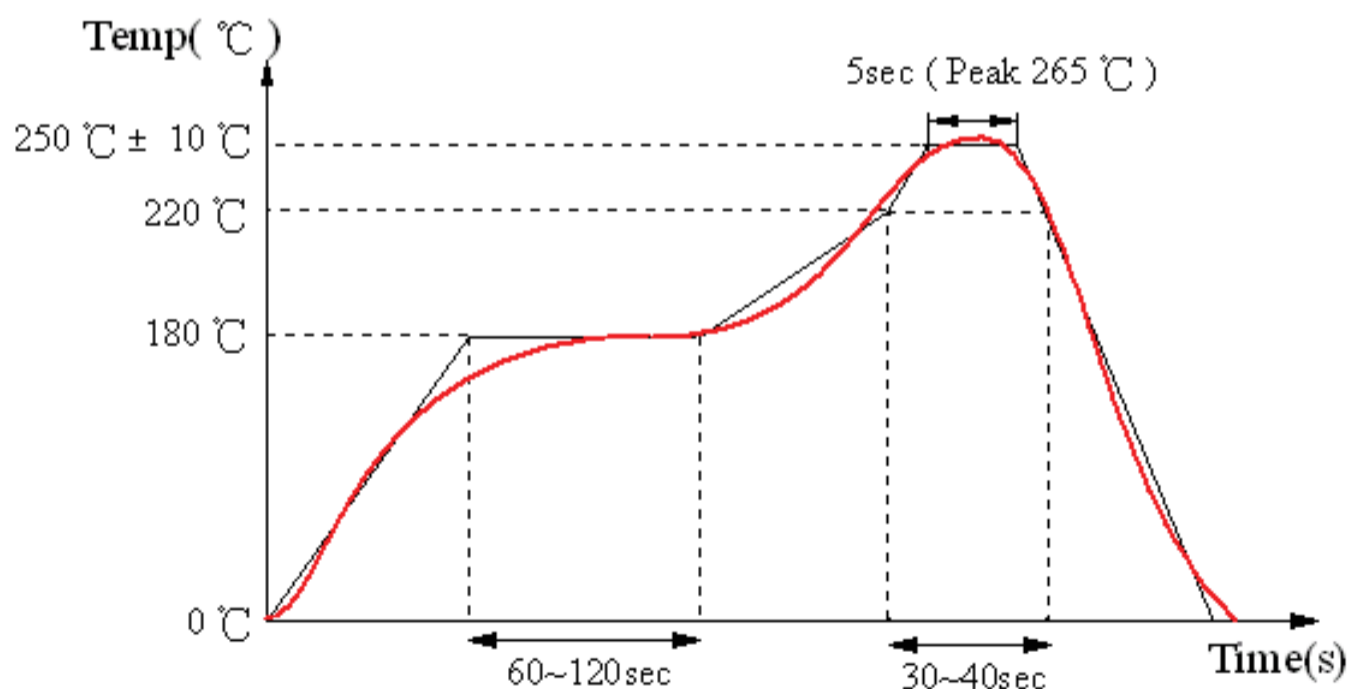
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## 3D PATTERNS



Frequency (MHz)	5150	5500	5850
Avg. Gain (dBi)	-2.36	-2.05	-3.01
Peak Gain (dBi)	3.98	4.5	4.06
Efficiency (%)	60	72	63

## REFLOW SOLDERING STANDARD CONDITION



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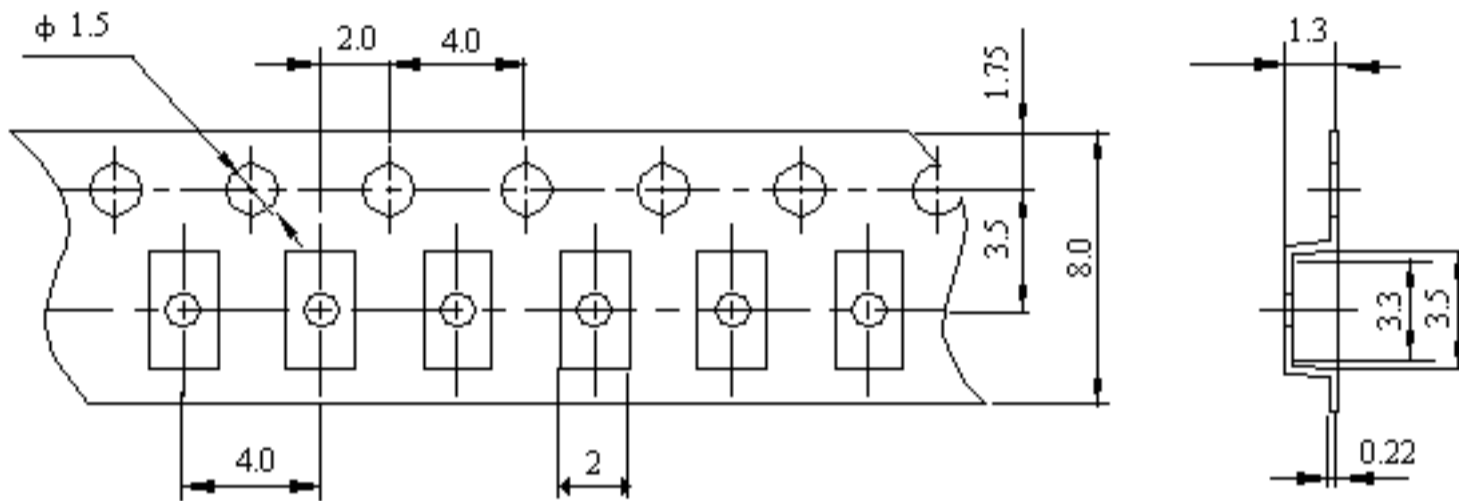
3.2 x 1.6 x 1.2mm  
RoHS/RoHS II Compliant  
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## PACKAGING

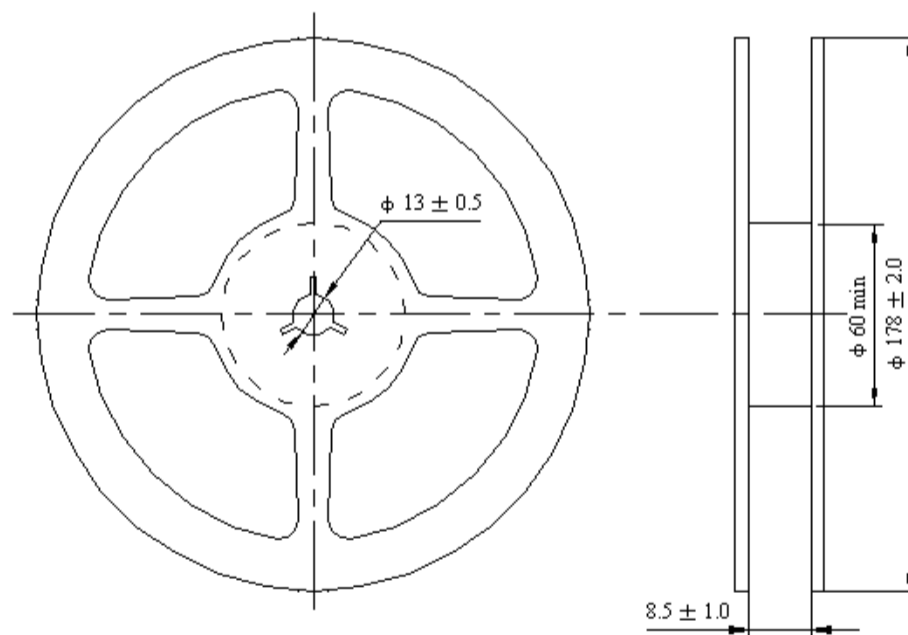
Reel (3000 pcs/Reel)

Size of the carton: 330 x 210 x 210 mm

### Tape Dimensions: mm



### Reel Dimensions: mm



Storage Temperature Range : <math><30</math> degree C, Humidity : <math><60\%RH</math>

MSL - 1

Oxidizable, 12 months in a vacuum sealed bag.

Once opened, please repack the unused items within 168 hours by re-seal package treatment.

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## CAUTIONS

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### 1. Static voltage

Static voltage between signal & ground may cause deterioration & destruction of the component. Please avoid static voltage.

### 2. Ultrasonic cleaning

Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning.

### 3. Soldering

Only leads of the component may be soldered. Please avoid soldering to any other part of the component, such as on the patterns as this will change the performance of the antenna.