

# 1575MHz GPS Ceramic Chip Antenna



ACAG0301-1575-T

3.2 x 1.6 x 0.6mm



RoHS/RoHS II Compliant

MSL = 1

## FEATURES

- High gain of 4.18dBi
- Made using LTCC (low temperature co-fired ceramic) technology
- VSWR  $\leq 2.0$
- Compact form factor and low profile 3.2 x 1.6 x 0.6mm
- Omni-directional

## APPLICATIONS

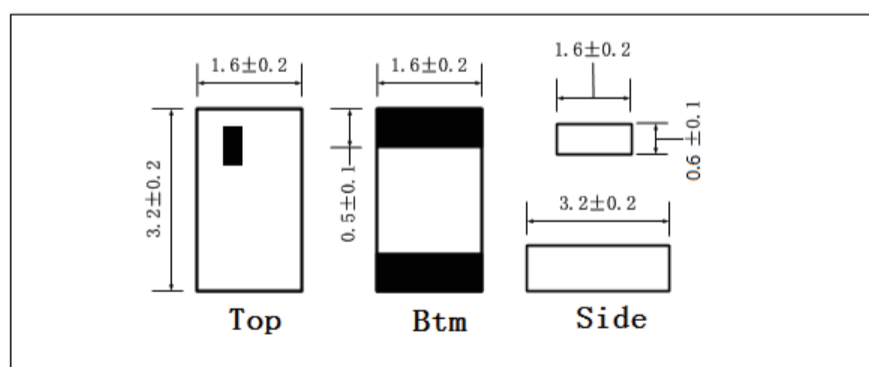
- GPS/Glonass devices
- IoT and wearables with embedded GPS systems
- Tablets and mobile devices
- Navigation devices
- GPS accessories: USB dongle, SDIO cards, PCMCIA card

## ELECTRICAL CHARACTERISTICS

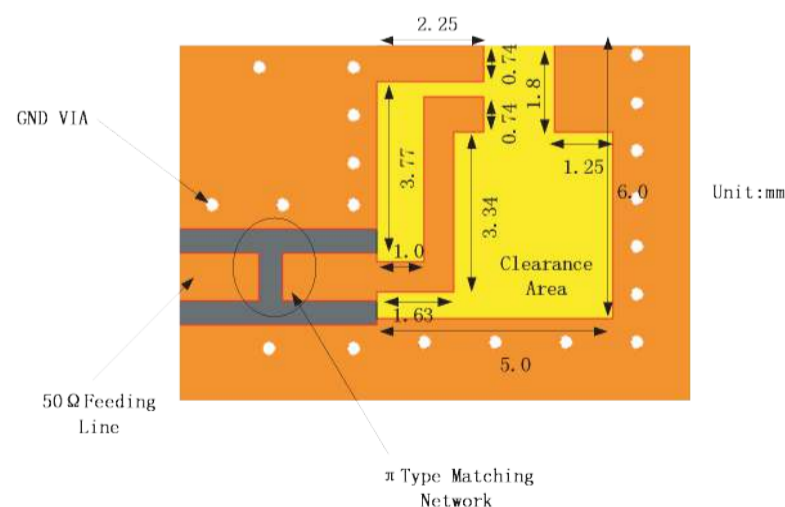
Item	Specification
Frequency (No matching)	1590 MHz
Frequency (after matching)	1575 MHz
Bandwidth	40 MHz typ
VSWR	$\leq 2.0$
Impedance	50 $\Omega$
Peak Gain	4.18 dBi
Azimuth	Omni-directional
Polarization	Linear
Operating Temperature range	-40°C ~+ 85°C

## MECHANICAL DIMENSIONS (mm)

### Antenna Dimensions



### Layout



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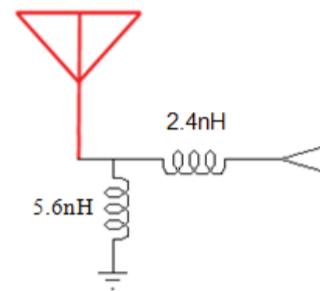
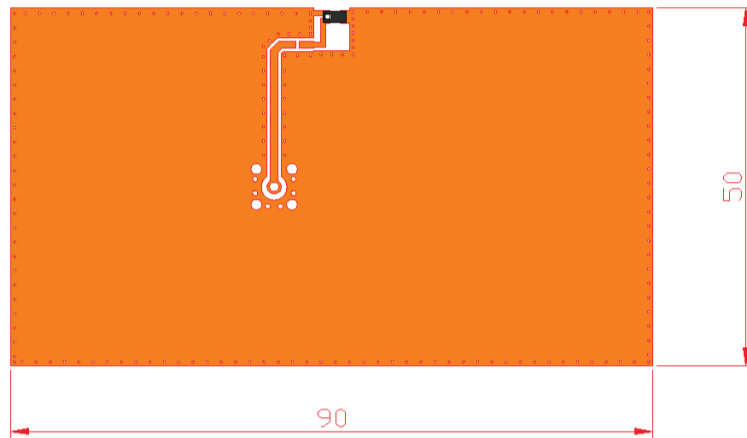


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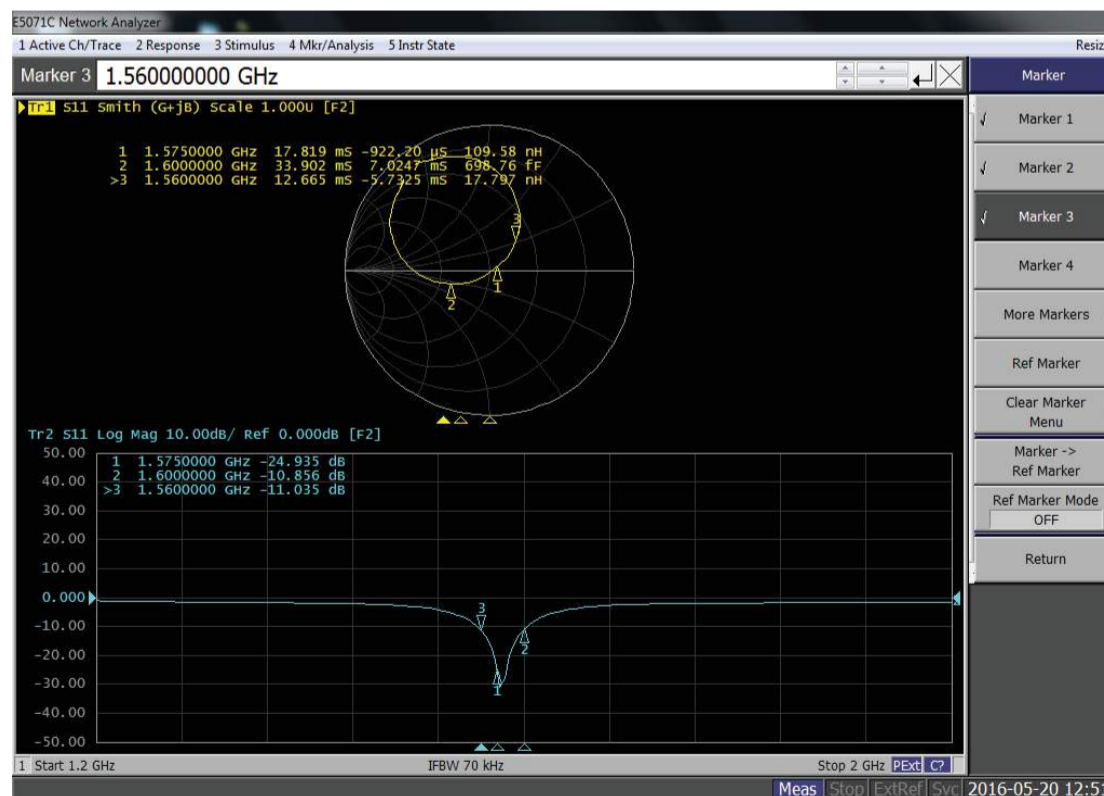


3.2 x 1.6 x 0.6mm  
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## EVALUATION BOARD AND MATCHING CIRCUITS



## ANTENNA RESPONSE | SMITH CHART AND RETURN LOSS S11



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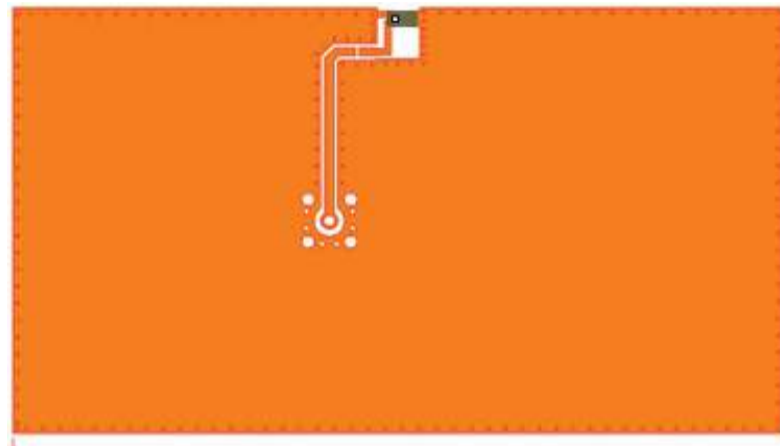
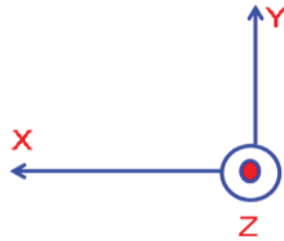


RoHS/RoHS II Compliant

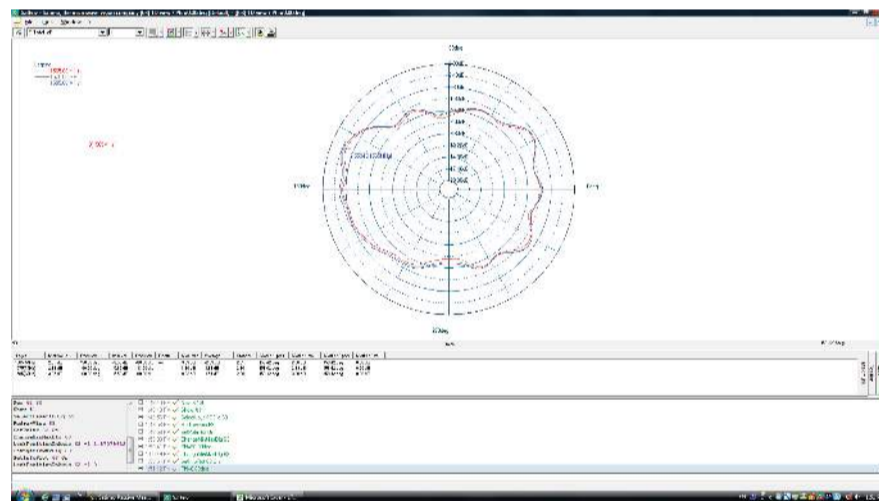
MSL = 1

## RADIATION PATTERNS

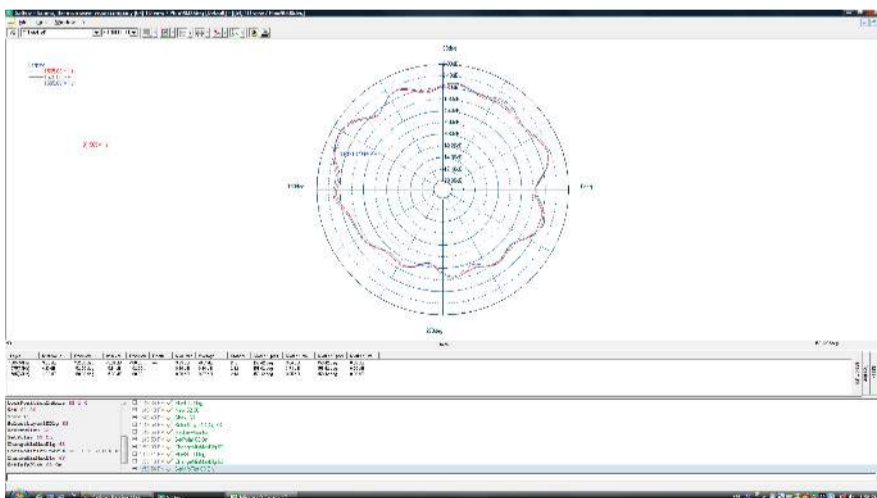
### Coordinates



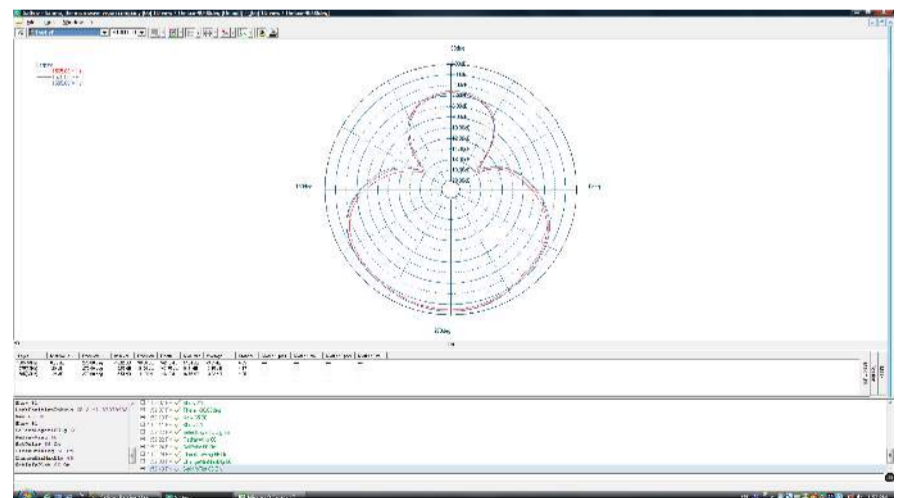
### X-Z Plane



### X-Y Plane



### Y-Z Plane



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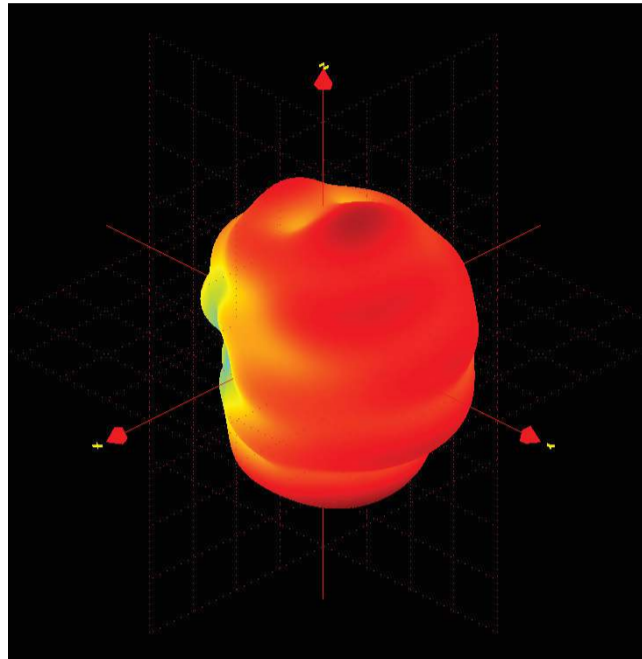
3.2 x 1.6 x 0.6mm



RoHS/RoHS II Compliant

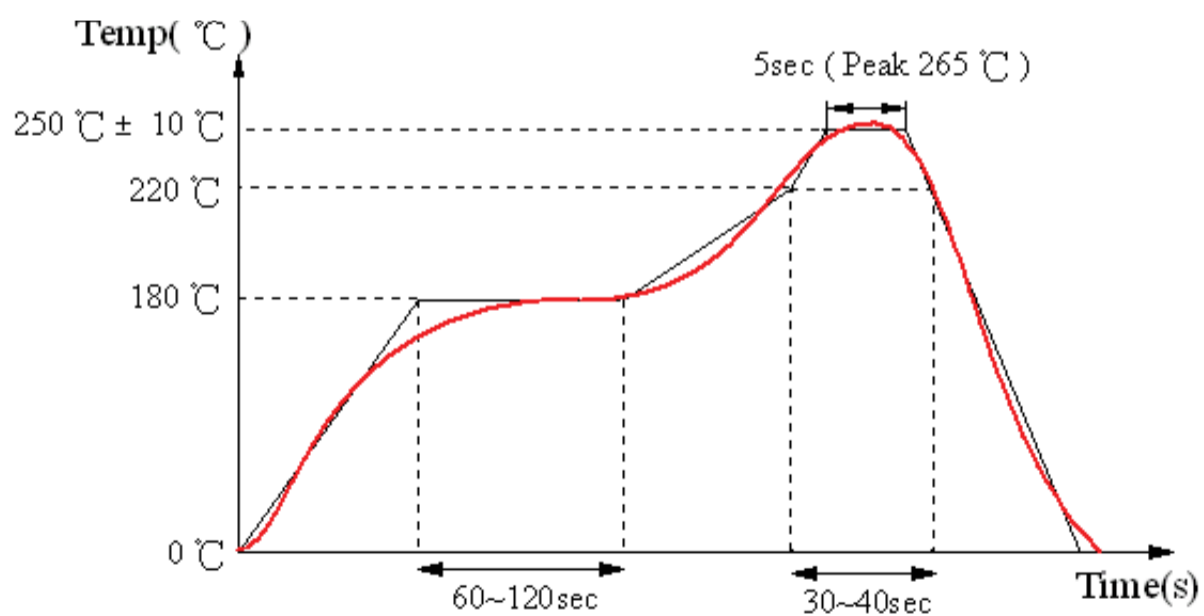
MSL = 1

## 3D PATTERNS



Frequency (MHz)	1565	1575	1585
Avg. Gain (dBi)	-1.26	-0.56	-1.58
Peak Gain (dBi)	3.96	4.18	4.05
Efficiency (%)	73	79	81

## REFLOW SOLDERING STANDARD CONDITION



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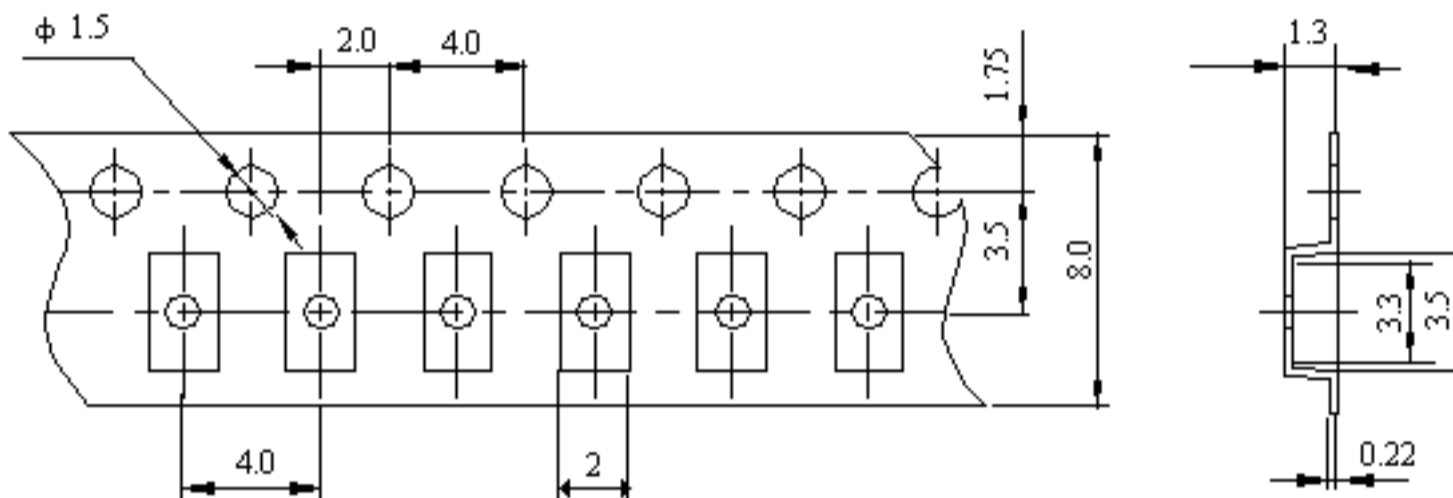
MSL = 1

## PACKAGING

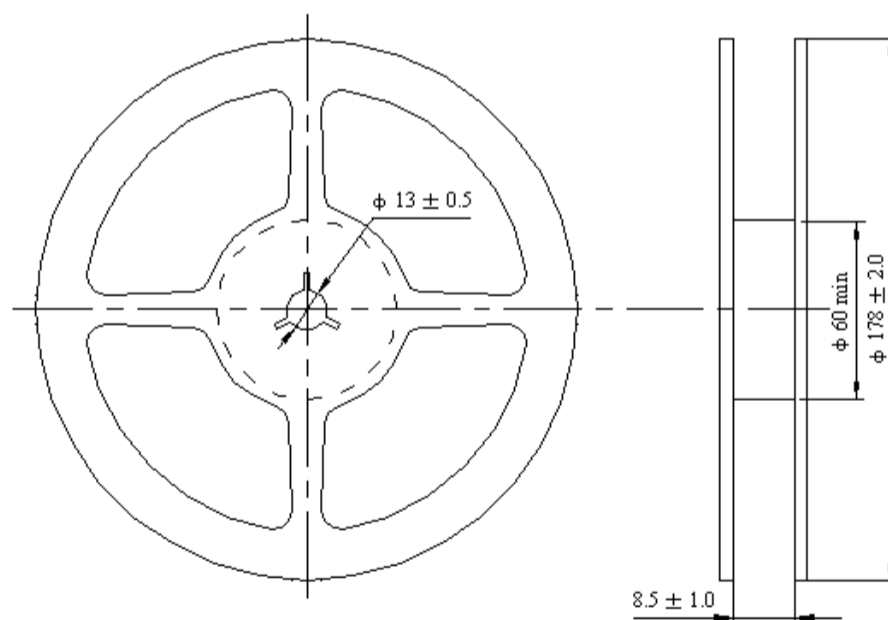
Reel (3000 pcs/Reel)

Size of the carton: 330 x 210 x 210 mm

Tape Dimensions: mm



Reel Dimensions: mm



Storage Temperature Range : <30 degree C, Humidity : <60%RH

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.