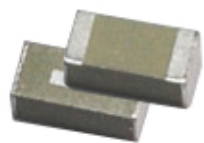


# 1575MHz GPS Ceramic Chip Antenna



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

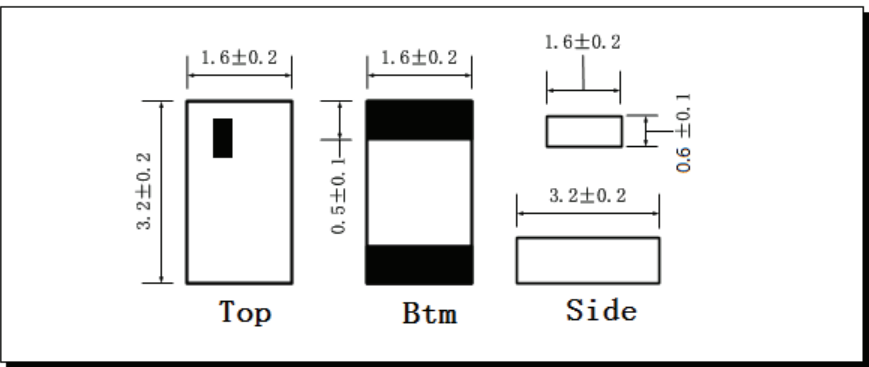
- GPS/Glonass devices
- IoT and wearables with embedded GPS systems
- Tablets and mobile devices
- Navigation devices
- GPS accessories: USB dongle, SDIO cards, PCMCIA card

## ELECTRICAL CHARACTERISTICS

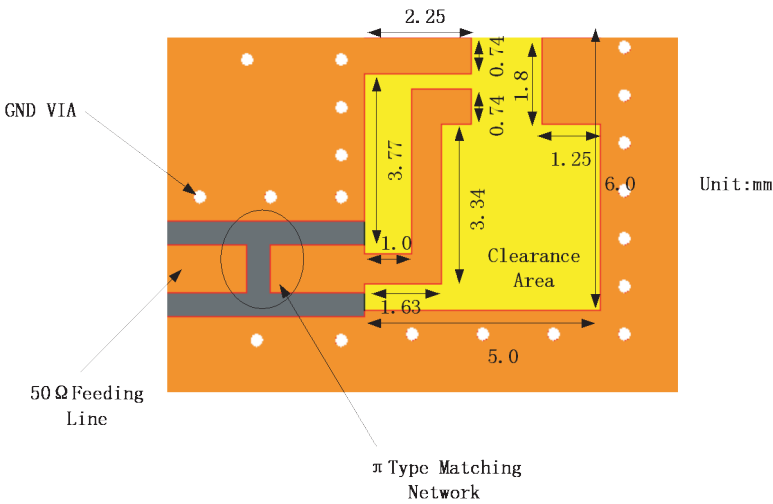
| Item                        | Specification    |
|-----------------------------|------------------|
| Frequency (No matching)     | 1590 MHz         |
| Frequency (after matching)  | 1575 MHz         |
| Bandwidth                   | 40 MHz typ       |
| VSWR                        | $\leq 2.0$   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

## MECHANICAL DIMENSIONS (mm)

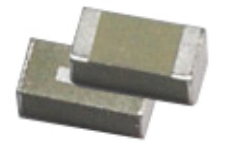
Antenna Dimmensions



Layout



# 1575MHz GPS Ceramic Chip Antenna

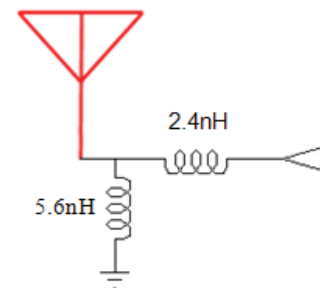
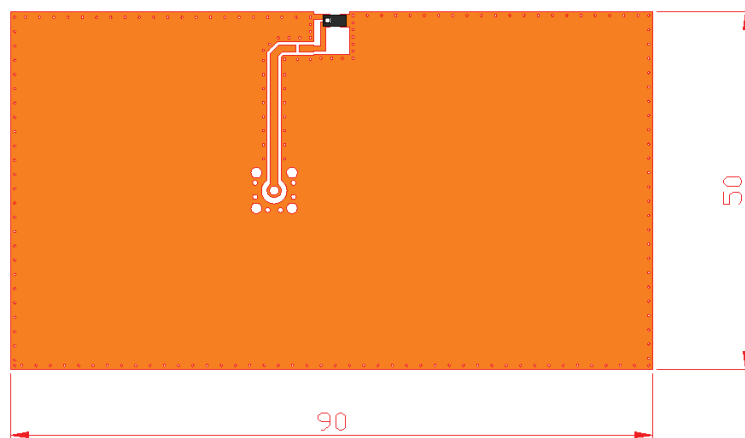


ACAG0301-1575-T

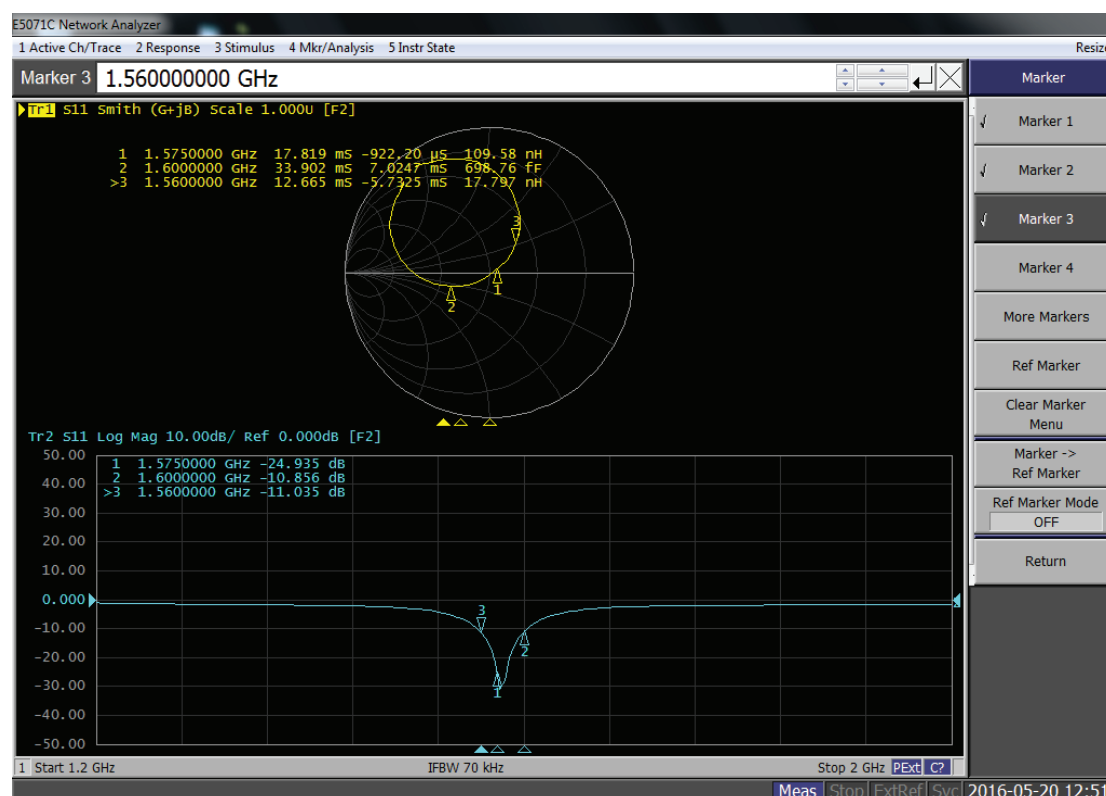


3.2 x 1.6 x 0.6mm  
RoHS/RoHS II Compliant  
MSL = 1

## EVALUATION BOARD AND MATCHING CIRCUITS

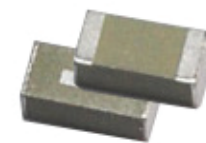


## ANTENNA RESPONSE | SMITH CHART AND RETURN LOSS S11



# 1575MHz GPS Ceramic Chip Antenna

ACAG0301-1575-T



3.2 x 1.6 x 0.6mm

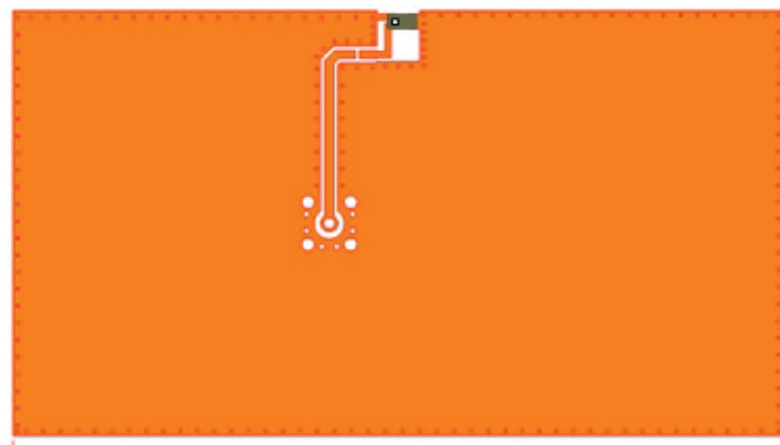
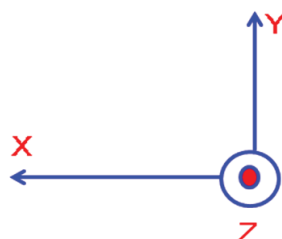


RoHS/RoHS II Compliant

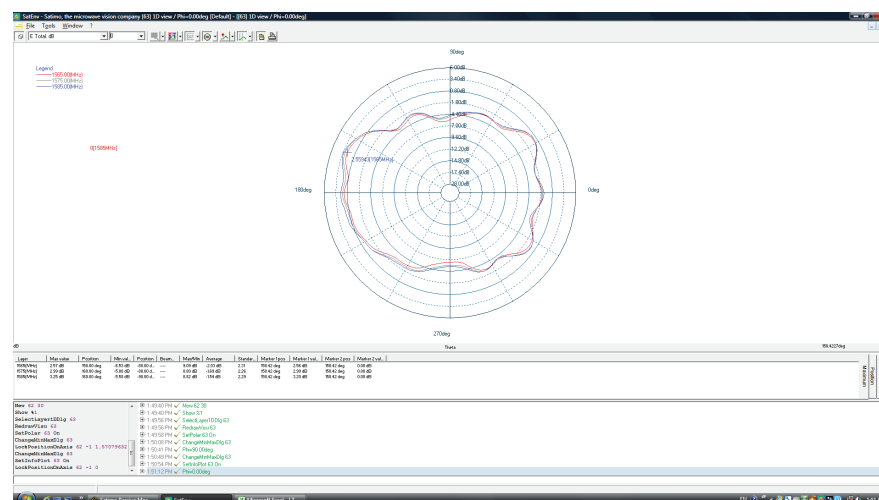
MSL = 1

## RADIATION PATTERNS

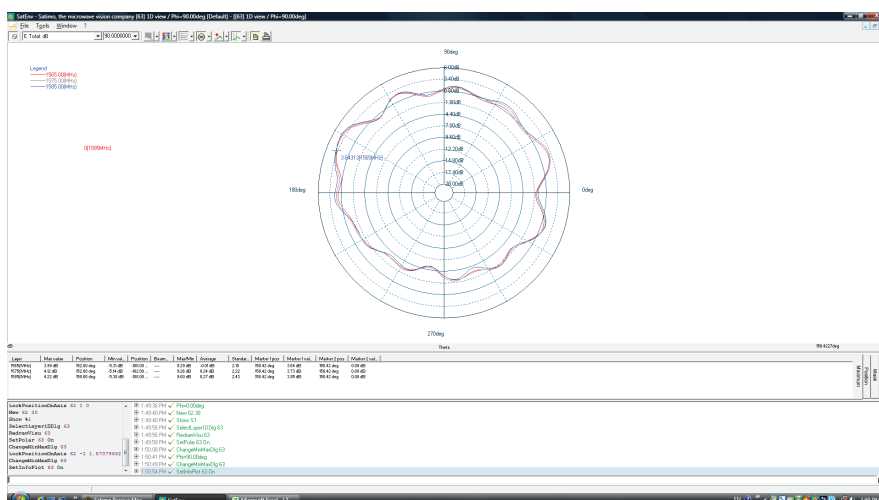
### Coordinates



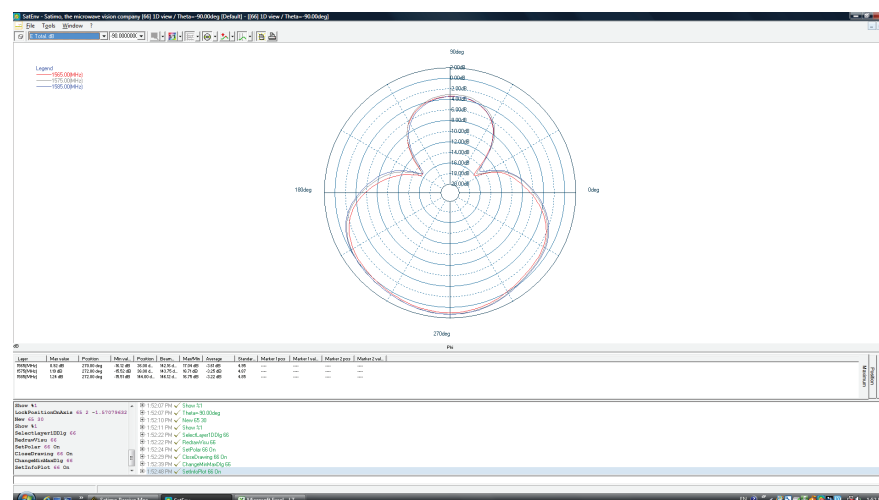
### X-Z Plane



### X-Y Plane



### Y-Z Plane



# 1575MHz GPS Ceramic Chip Antenna

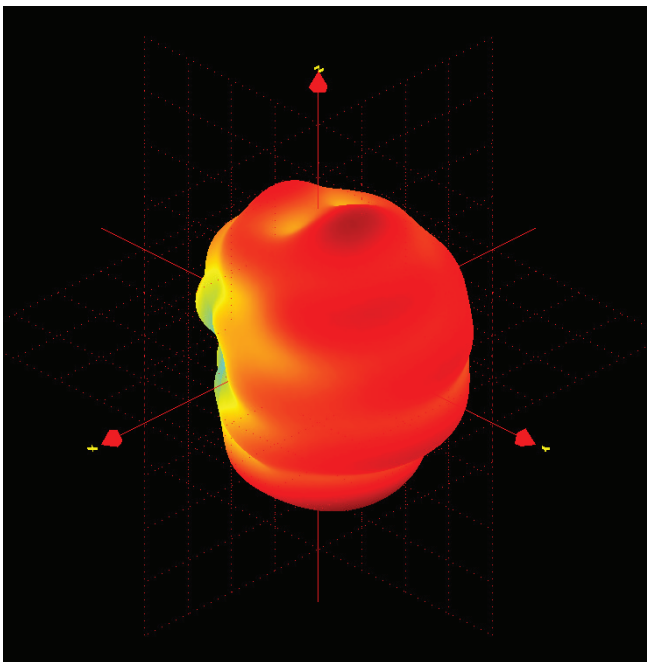


ACAG0301-1575-T



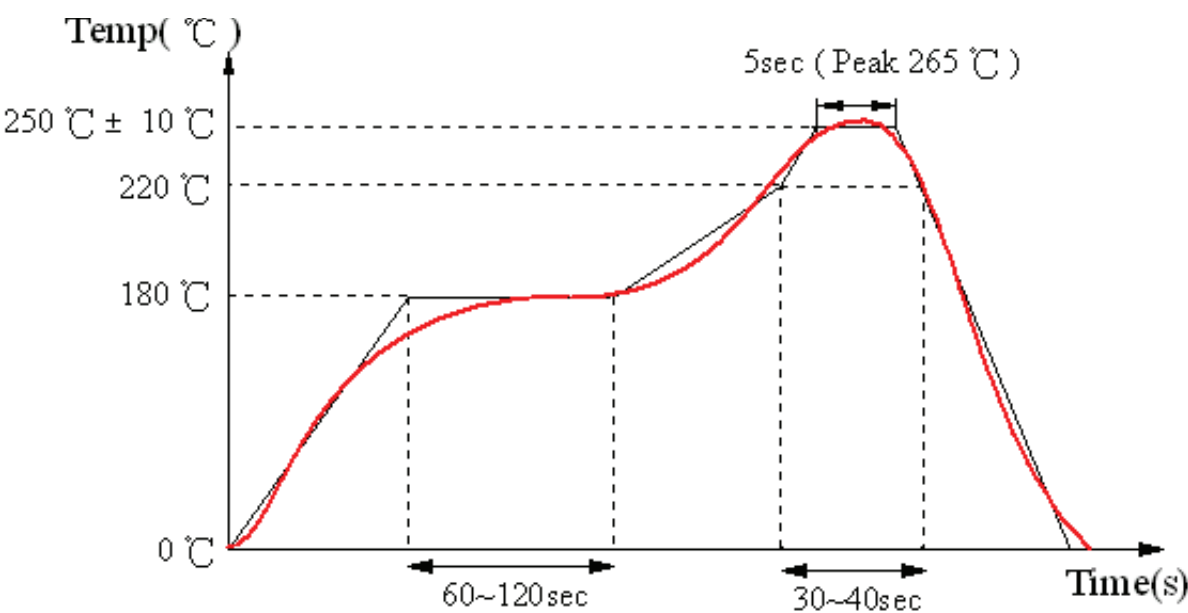
3.2 x 1.6 x 0.6mm  
RoHS/RoHS II Compliant  
MSL = 1

## 3D PATTERNS

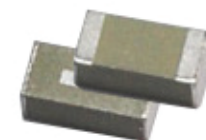


|                 |       |       |       |
|-----------------|-------|-------|-------|
| Frequency (MHz) | 1565  | 1575  | 1585  |
| Avg. Gain (dBi) | -1.26 | -0.56 | -1.58 |
| Peak Gain (dBi) | 3.96  | 4.18  | 4.05  |
| Efficiency (%)  | 73    | 79    | 81    |

## REFLOW SOLDERING STANDARD CONDITION



# 1575MHz GPS Ceramic Chip Antenna



ACAG0301-1575-T



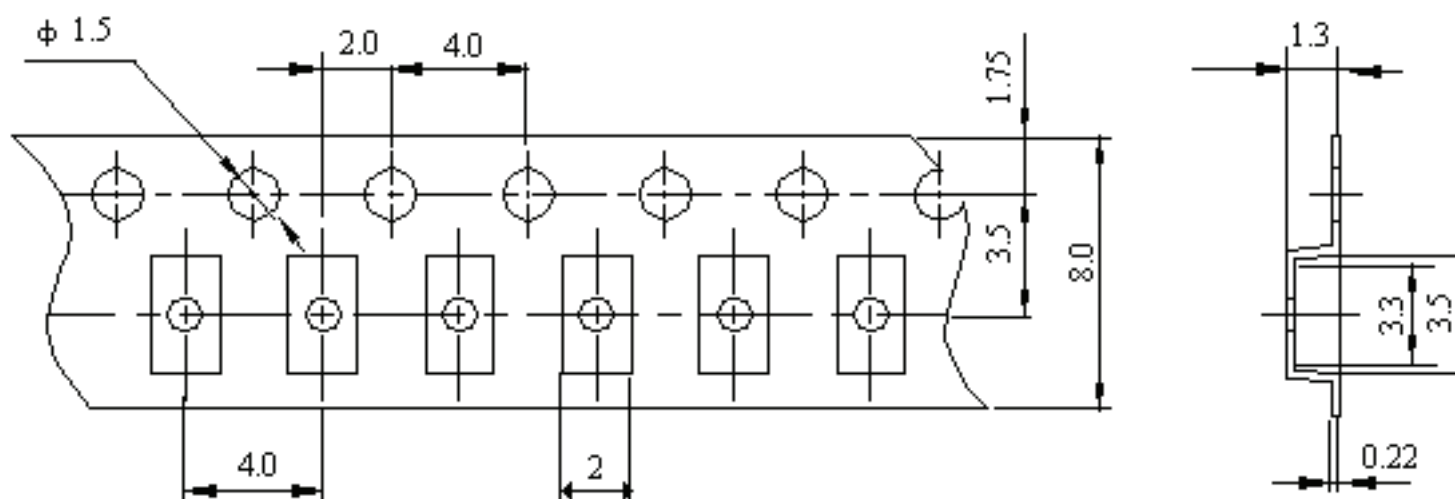
3.2 x 1.6 x 0.6mm  
RoHS/RoHS II Compliant  
MSL = 1

## PACKAGING

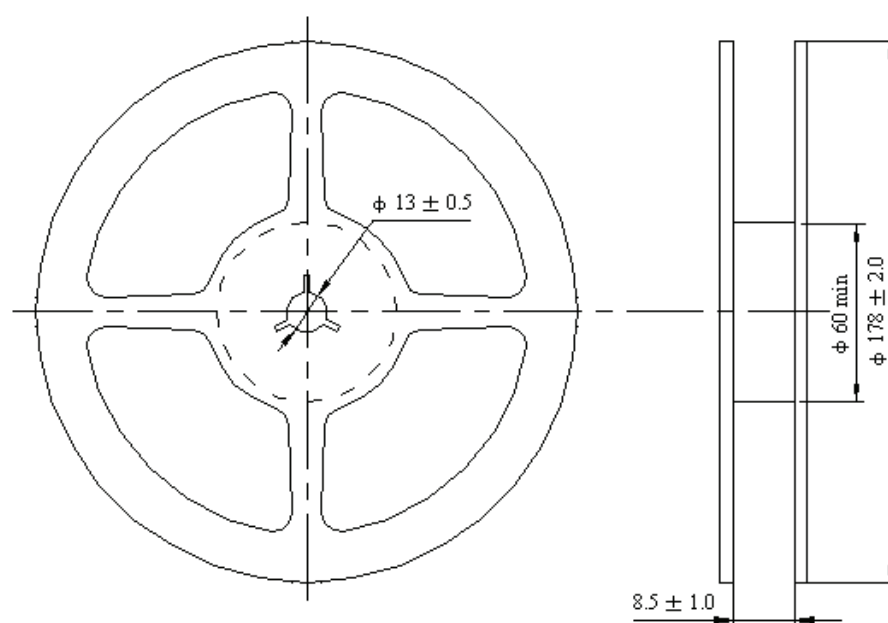
Reel (3000 pcs/Reel)

Size of the carton: 330 x 210 x 210 mm

Tape Dimensions: mm



Reel Dimensions: mm



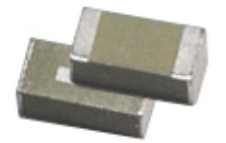
Storage Temperature Range : <30 degree C, Humidity : <60%RH

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.

# 1575MHz GPS Ceramic Chip Antenna



ACAG0301-1575-T



3.2 x 1.6 x 0.6mm  
RoHS/RoHS II Compliant  
MSL = 1

## CAUTIONS

---

### 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.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[ABRACON:](#)

[ACAG0301-1575-T](#)