

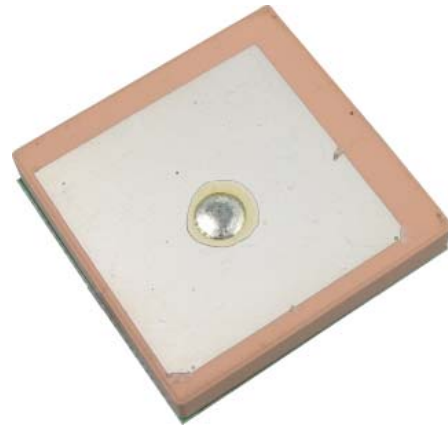


# AQ001 GPS Ceramic Patch Antenna

P/N AQ00153GPS000

## Features

- Stable and reliable in performances
- Low temperature coefficient of frequency
- Compact size
- RoHS compliance



## Application

- Navigation systems or position tracking systems
- Hand-held devices when GPS function is needed, e.g., PDA, Smart phone, PND.

## Description

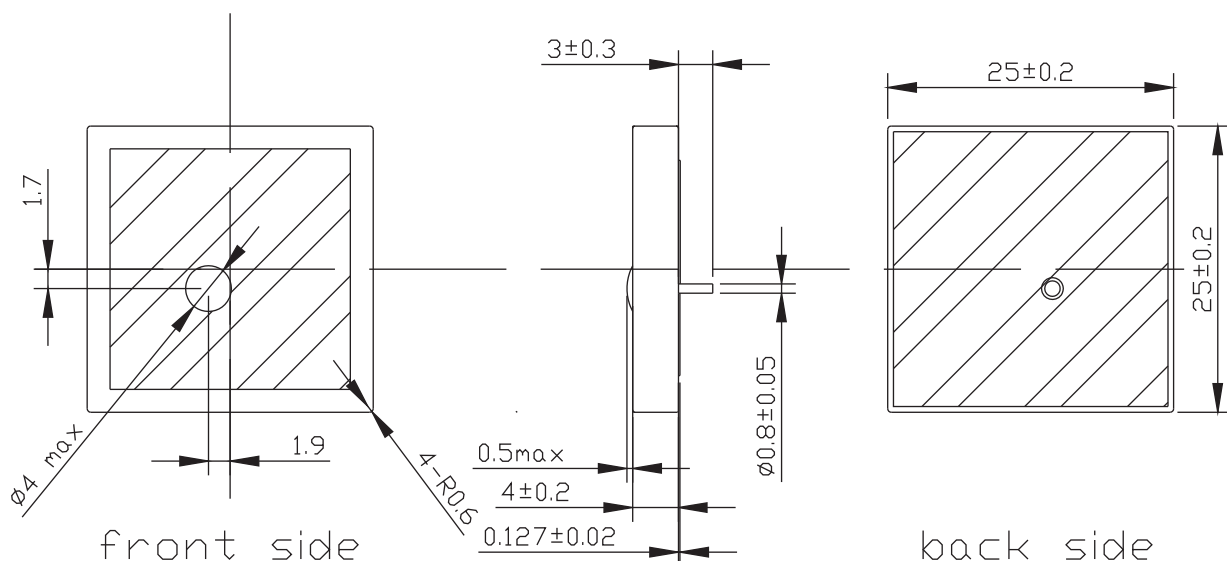
Wellshow's patch antenna series are ceramic antennas specially designed for GPS application. This ceramic patch antenna has excellent stability and sensitivity through the use of high performance proprietary ceramic materials and processes.

## Electrical Specification

Center Frequency*	1581±2 MHz
Bandwidth (under -10dB return loss)	Min. 15 MHz
VSWR	Max. 1.5
Impedance	50 Ω
Gain at Zenith	+5 dBic typ.
Gain at 10° elevation	-1 dBic typ.
Polarization	R.H.C.P
Axial Ratio	3.0 dB typ.
Outline Dimensions	25x25x4 mm
Ground Plane	70 x 70 mm
Temperature Coefficient of Frequency	Max. 0 ± 20 ppm/°C (at -40°C~80°C)

\*Center frequency will be offset to working frequency according to the conditions of user's ground plane and radome.

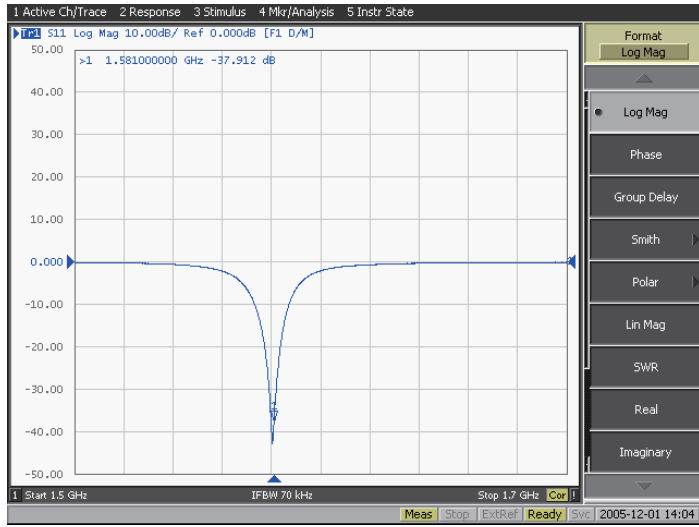
## Dimensions (unit: mm)



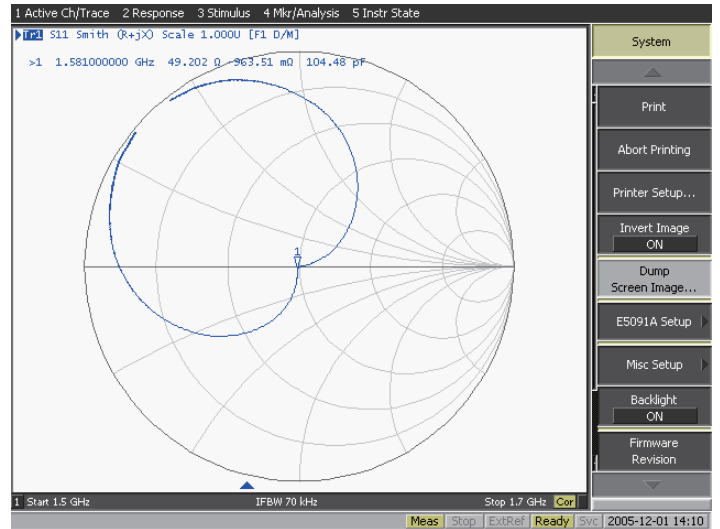
# Test report

## Electrical Characteristics Ground plane 70x70 mm

### S<sub>11</sub> Return Loss

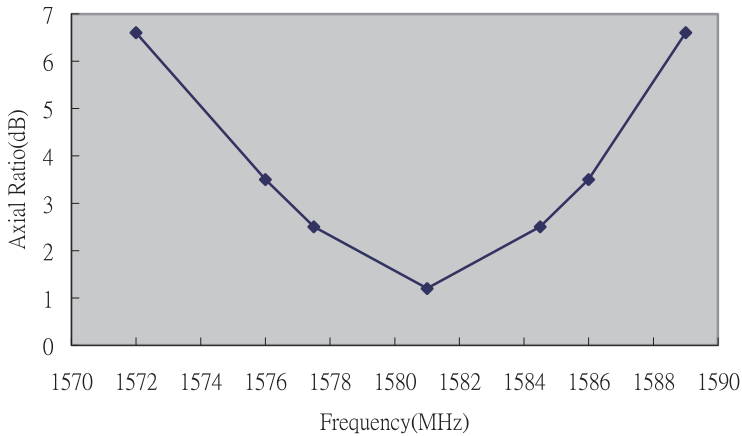


### Smith Chart



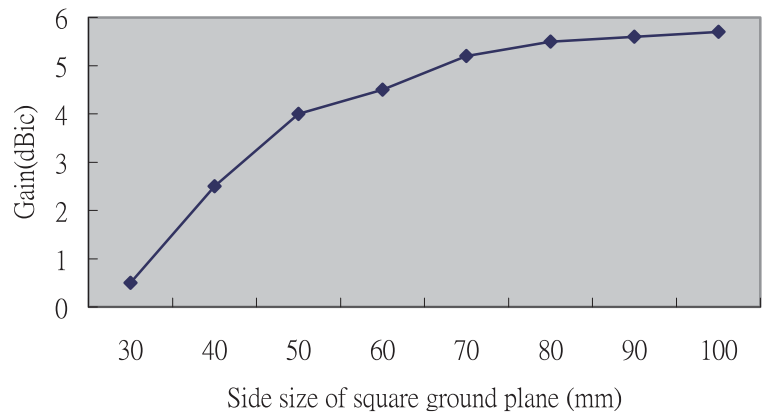
### Axial Ratio

Ground plane 70x70 mm



### Gain vs. Ground Plane Size

Frequency: 1581MHz



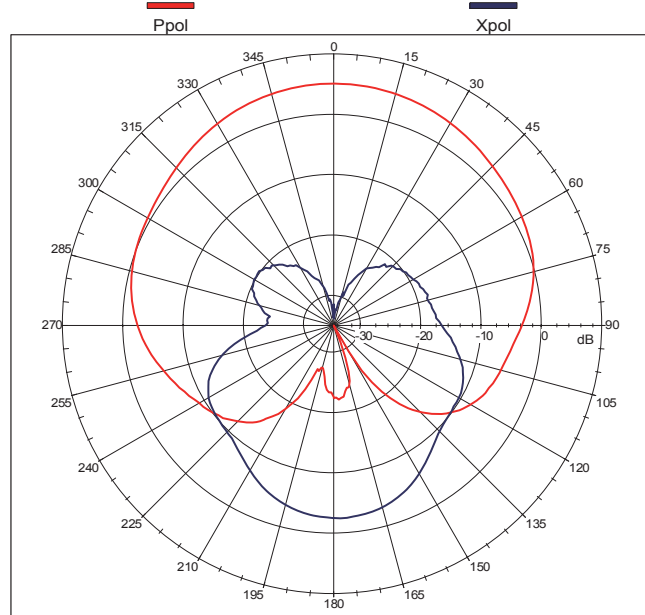


# Radiation Pattern

Ground plane 70x70 mm

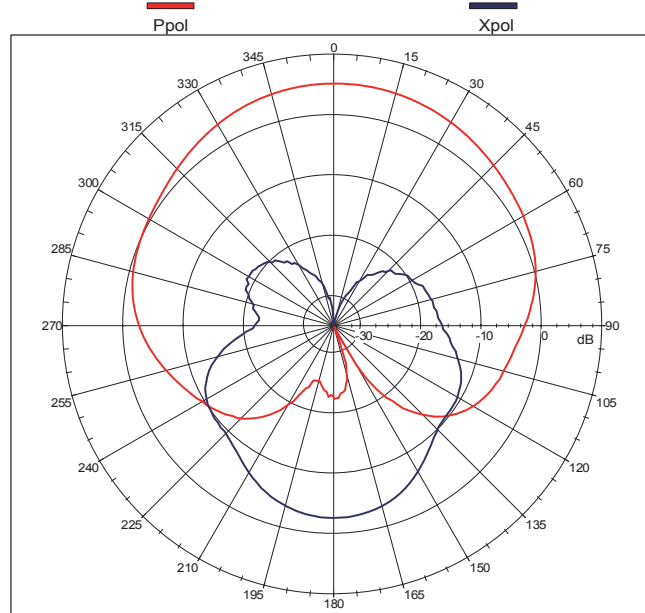
0°

Far-field amplitude of 254 Gain Chart01.nsi



90°

Far-field amplitude of 254 Gain Chart02.nsi



Right hand circular polarized signal  $f_0 = 1581\text{MHz}$