



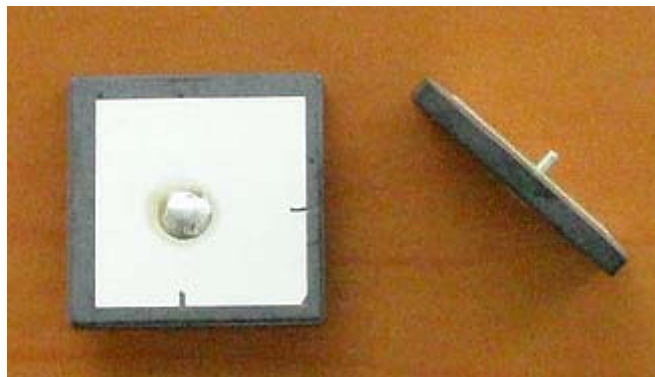
Specification

# SPECIFICATION

Part No. : GP-1575-18-2-A-14

Product Name : **18.5mm\*18.5mm\*2mm GPS Patch Antenna**

Features : ROHS Compliant



## REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	Apr 17 <sup>th</sup> 2008	All	New release	TW Product Centre	Zita Lin



Specification

## 1.0 Introduction

This miniaturized ceramic GPS patch antenna is based on smart **XtremeGain™** technology. It is mounted via pin and double-sided adhesive.

## 2.0 Key Antenna Performance Indicators

Original Patch Specification tested in custom housing and ground plane

No	Parameter	Specification	
1	Reference Ground Plane	50mm x 50mm	
2	Center Frequency	1578MHz ± 2 MHz*	
3	Bandwidth (-10dB return loss)	min. 7MHz	
4	VSWR	max 1.5	Center Frequency
5	Gain at Zenith	typ. 1.0 dBiC	
6	Gain at 10° elevation	typ -5.5 dBiC	
7	Axial Ratio	typ. 3dB	
8	Polarization	right hand circular polarization	
9	Impedance	50 Ohms	
10	Frequency Temperature Coefficient ( $\tau_f$ )	0 ± 20ppm/°C @ -20°C to +80°C	
11	Operating Temperature	-40°C to +105°C	

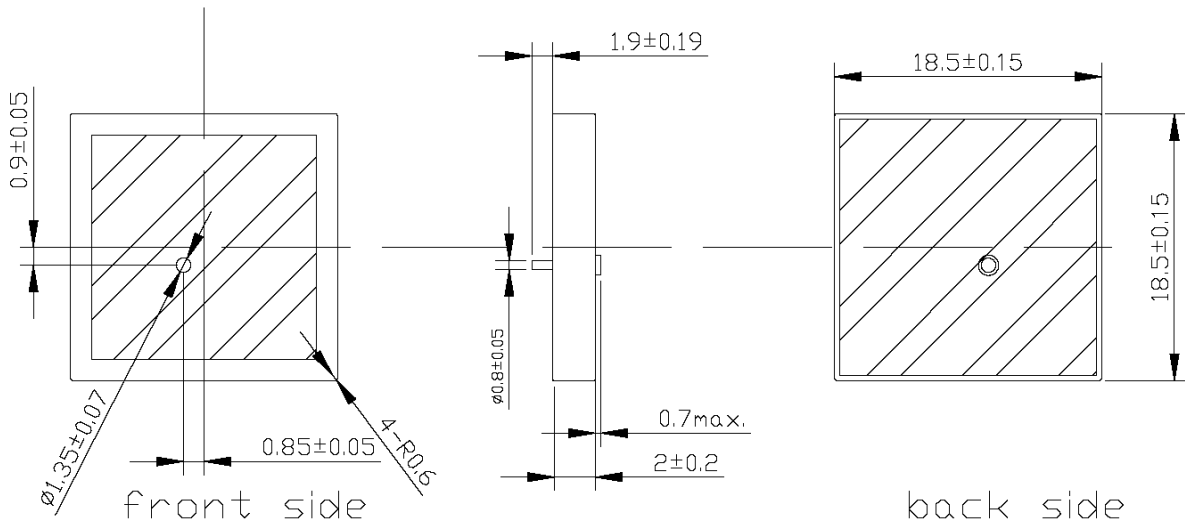
\* Centre frequency will be offset to working frequency according to the conditions of user's ground plane and radome.



Specification

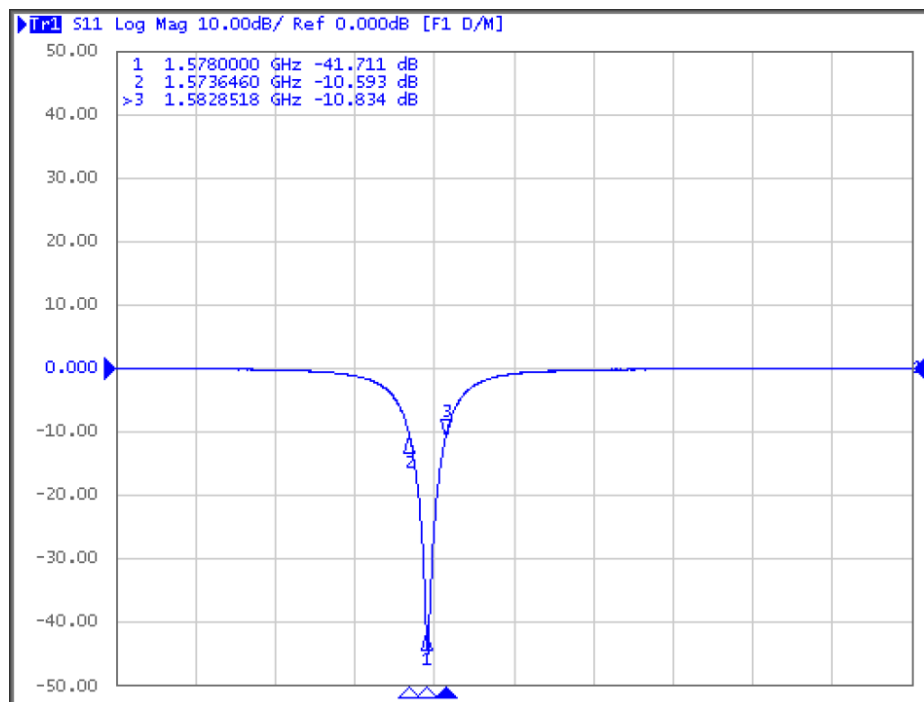
### 3.0 Mechanical Specifications

#### I. Dimensions and Drawing



### 4.0 Electrical Specifications

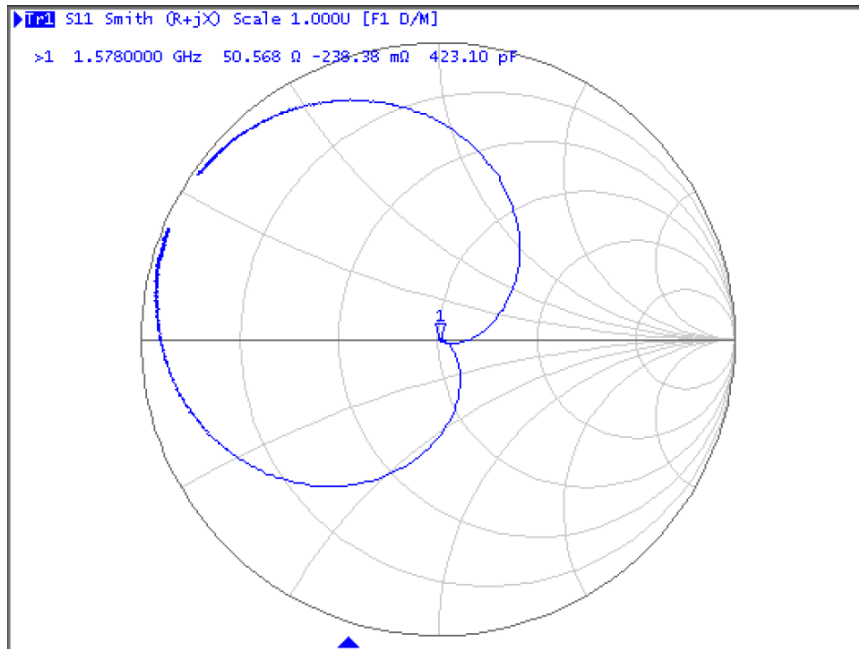
#### I. S11 Return Loss





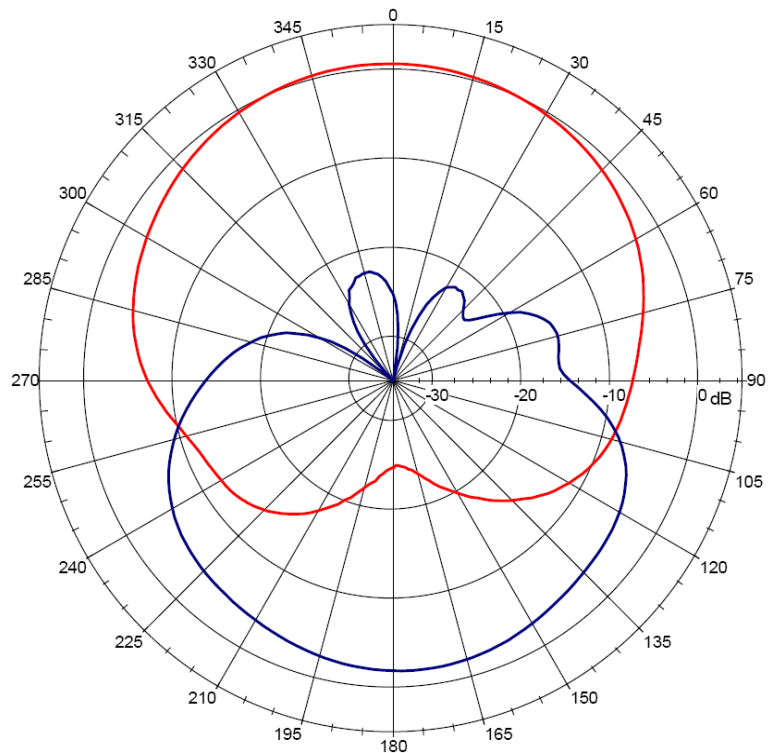
Specification

## II. Smith Chart



## III. Radiation Pattern (under custom housing and ground plane))

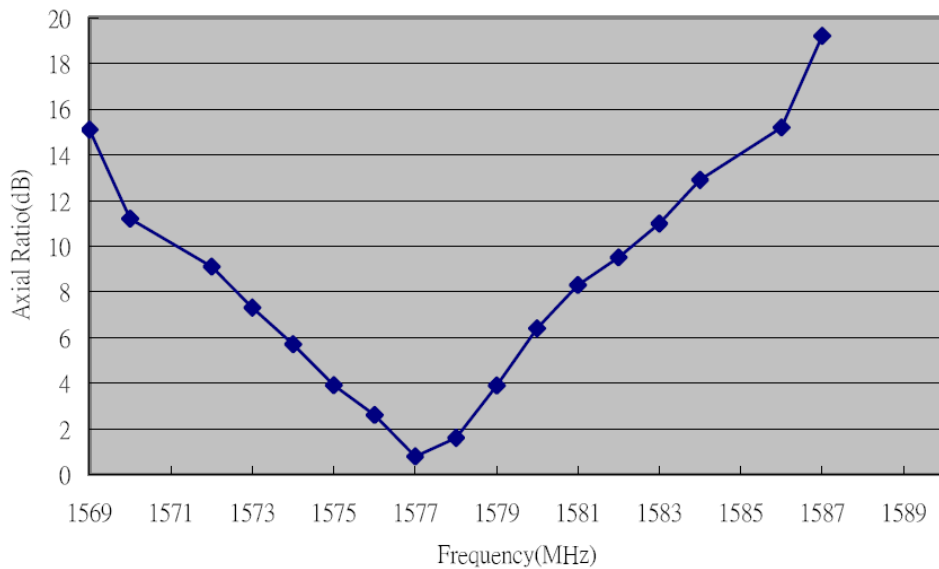
Far-field amplitude of gain chart for 1578MHz for 2mm 0.7.si





Specification

### IV. Axial Ratio (50mm x 50mm Ground Plane)



### V. Gain vs. Ground Plane Size

Frequency: 1578MHz

