



SATRON ELECTRONICS LTD

GPS & GLONASS Ceramic Patch Antenna (DA1840)

SPECIFICATION

PRESENTED TO: _____

MODEL NO.: _____

DATE: _____

Customer Ref. No. : _____

Specification Approved	Prepared By	
	Drawn By	
	Checked By	
	Approved By	
Customer Approved	Checked By	
	Approved By	
	Please sign and stamp	[Signature & Stamp]

GPS & GLONASS Ceramic Patch Antenna (DA1840)

1. Part Number DA1840



Product Code:

Product Categories:

ceramic patch antenna

Dimensions and Polarization:

18.5 x 18.5 x 4.0 (mm)/right hand circular polarization

Material:

MA-PF

Working Frequency:

1575.42 MHz & 1598 ~ 1606 MHz

Ground Plane Dimensions:

70x70(mm)

2. Features

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

3. Applications

- *Navigation systems or position tracking systems
- *Hand-held devices when both GPS and GLONASS function are needed, e.g., PDA, Smart phone, PND.

4. Description

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

5. Electrical Specifications (70x70(mm) ground plane)

5-1. GPS Band

Characteristics	Specification	Unit
Outline Dimensions	18.5×18.5×4.0	mm
Ground Plane	70×70	mm
Working Frequency*	1575.42	MHz
Bandwidth (under -10dB return loss)	7 min	MHz
VSWR	2 max	
Impedance	50	Ω
Polarization	RHCP	
Peak Gain	2.6 typical	dBic
Temperature Coefficient of Frequency	0±20 max (@-40°C~85°C)	ppm/°C
Electrode Plating Adhesion	>4	kg

* Working frequency will be offset to another frequency according to the conditions of user's ground plane and radome.

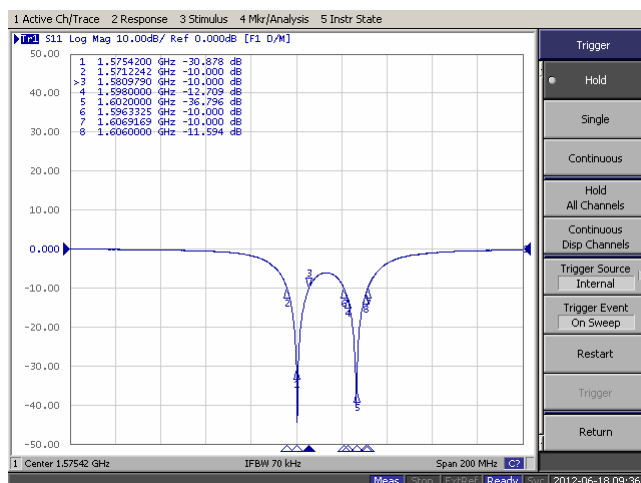
5-2. GLONASS Band

Characteristics	Specification	Unit
Working Frequency*	1598~ 1606	MHz
Bandwidth (under -10dB return loss)	8 min	MHz
VSWR	2 max	
Impedance	50	Ω
Polarization	RHCP	
Peak Gain	2.2 typical	dBic
Temperature Coefficient of Frequency	0 $\pm$ 20 max (@-40°C ~85°C)	ppm/°C
Electrode Plating Adhesion	>4	kg

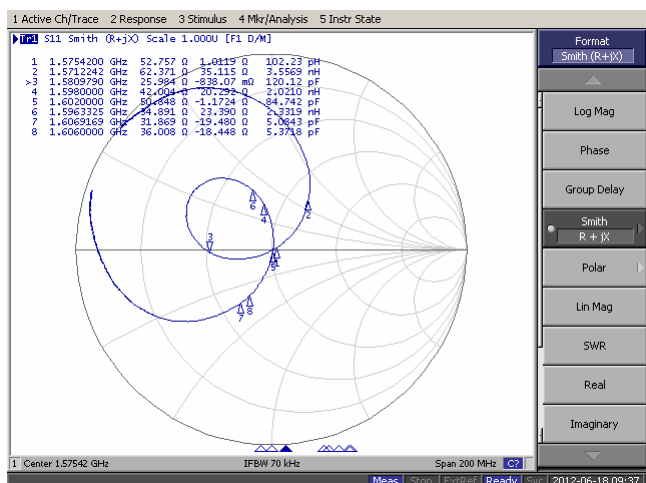
* Working frequency will be offset to another frequency according to the conditions of user's ground plane and radome.

5-3.

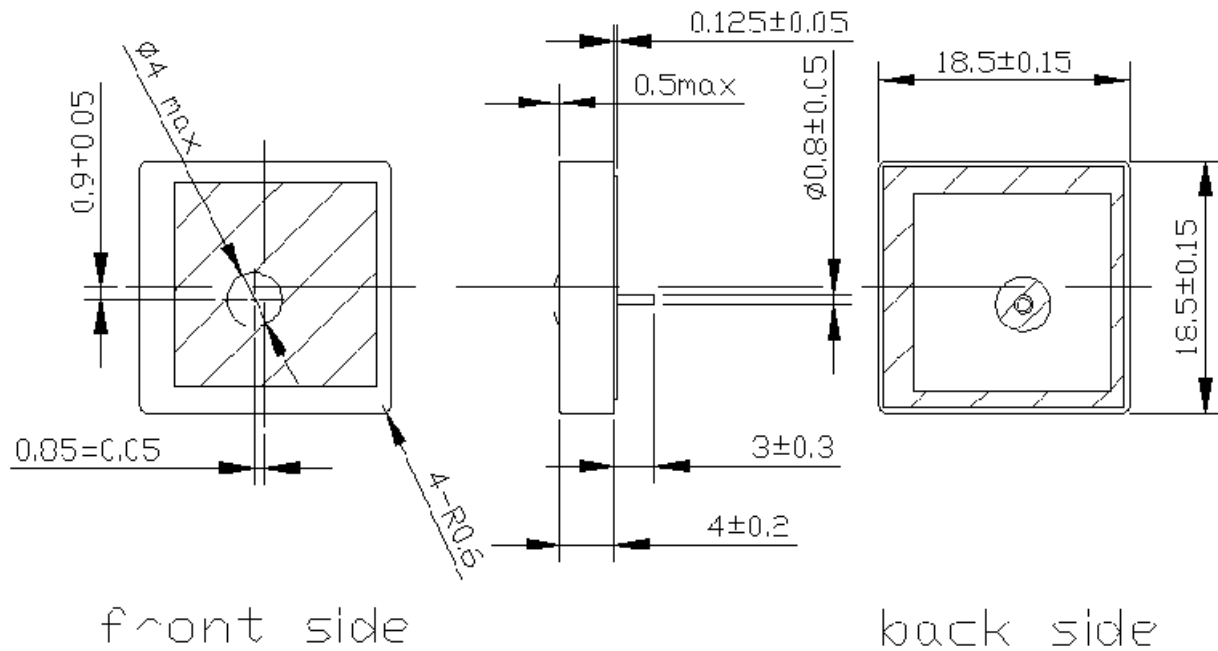
Return Loss(S_{11})



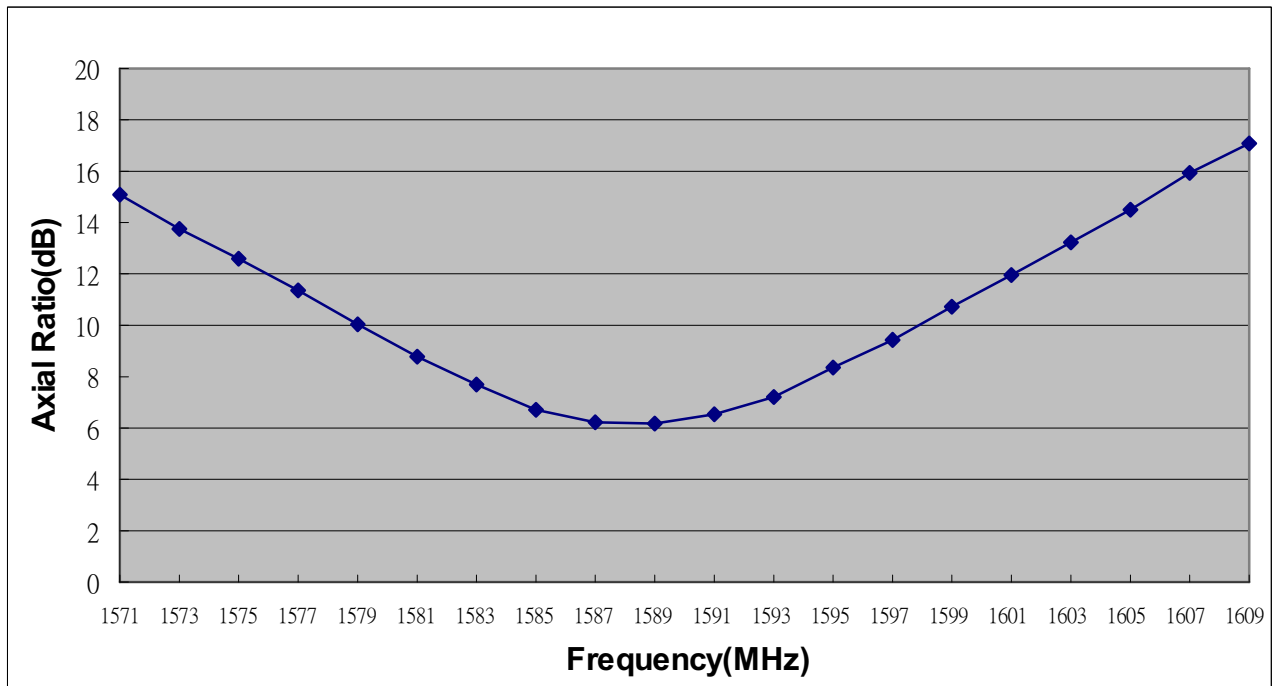
Smith Chart(S_{11})



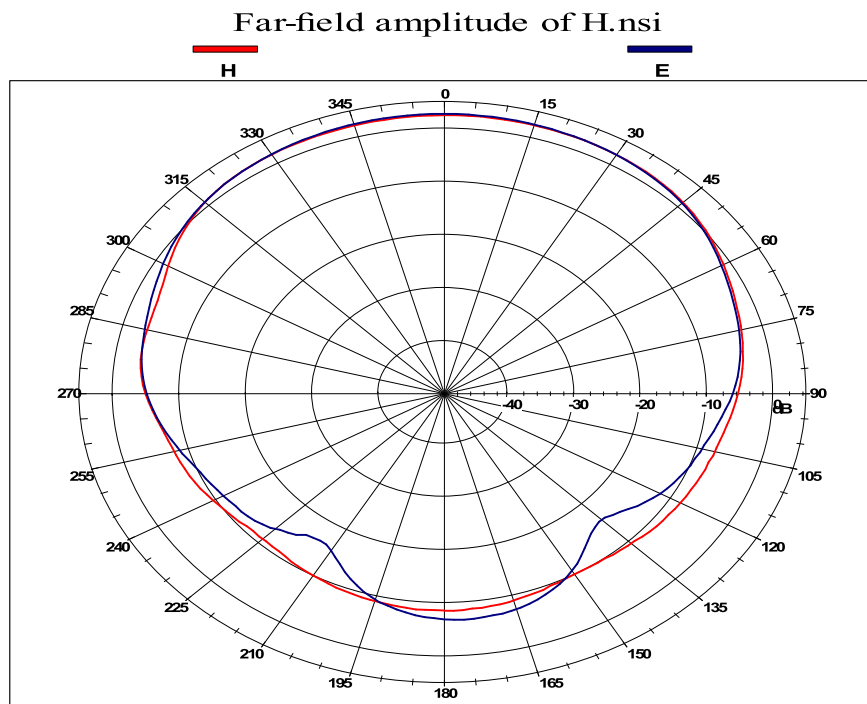
6. Antenna Dimensions (unit: mm)



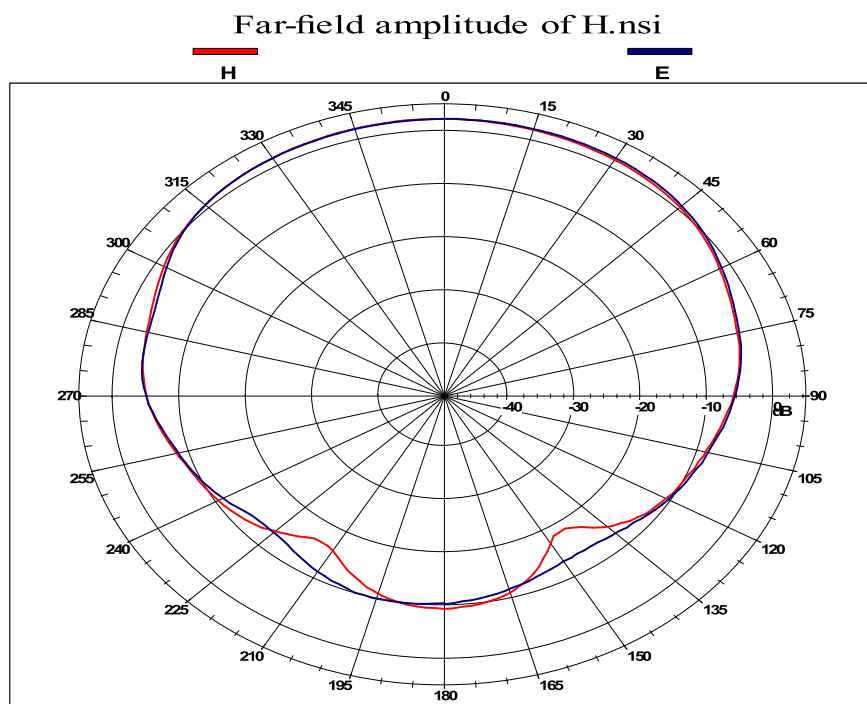
7. Axial Ratio (70x70(mm) ground plane)



8. Radiation Pattern (70x70 (mm) ground plane)

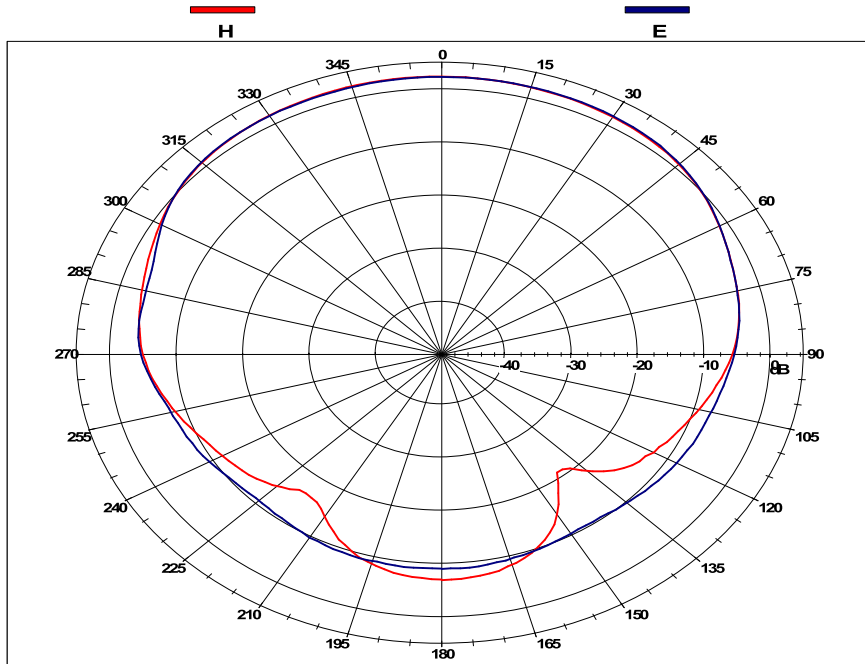


Right hand circular polarized signal $f_0=1575.42\text{MHz}$



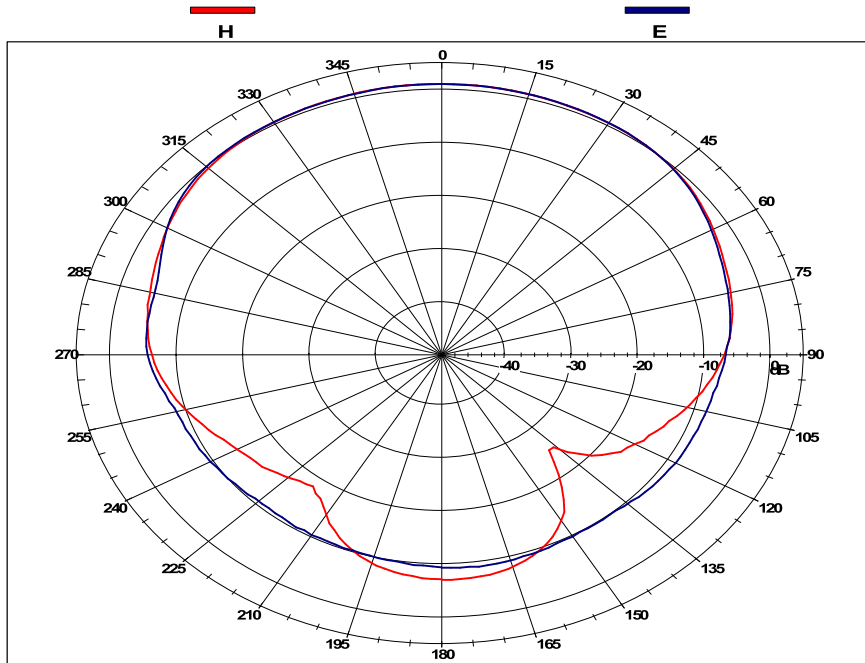
Right hand circular polarized signal $f_0=1598\text{MHz}$

Far-field amplitude of H.nsi



Right hand circular polarized signal $f_0 = 1602 \text{ MHz}$

Far-field amplitude of H.nsi



Right hand circular polarized signal $f_0 = 1606 \text{ MHz}$