



Specification

SPECIFICATION

Part No. : **GP-1575-15-4-A-14**

Specification No : **FCG-G06004**

Product Name : **Miniature GPS Patch Antenna**

Features : 15mm*15m*4mm
ROHS Compliant

Photo :



REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	Sept 23 rd 2007	All	New format	TW Product Centre	Ronan Quinlan



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1.0 Introduction

This miniaturized ceramic GPS patch antenna is based on smart **XtremeGain™** technology. It is mounted via pin and double-sided adhesive and has been selected as optimal solution for the 30x30mm ground plane.

2.0 Key Antenna Performance Indicators

Original Patch Specification tested on 35mm ground plane

No	Parameter	Specification	
1	Range of Receiving Frequency	1575MHz +/- 2MHz	
2	Center Frequency	1575MHz ± 2Hz when tested on a 30m² Ground Plane	
3	Bandwidth	5 MHz min Return Loss <-10dB	
4	VSWR	1.5 max	
5	Gain at Zenith	0.5 dBic typ.	
6	Gain at 10° elevation	-5.5 dBic typ.	
7	Axial Ratio	2.0 dB typical	
8	Polarization	Right Hand Circular Polarization	
10	Frequency Temperature Coefficient	0 ± 10 ppm/ °C max	@ -40°C to +125°C
11	Operating Temperature	-40°C to +105°C	

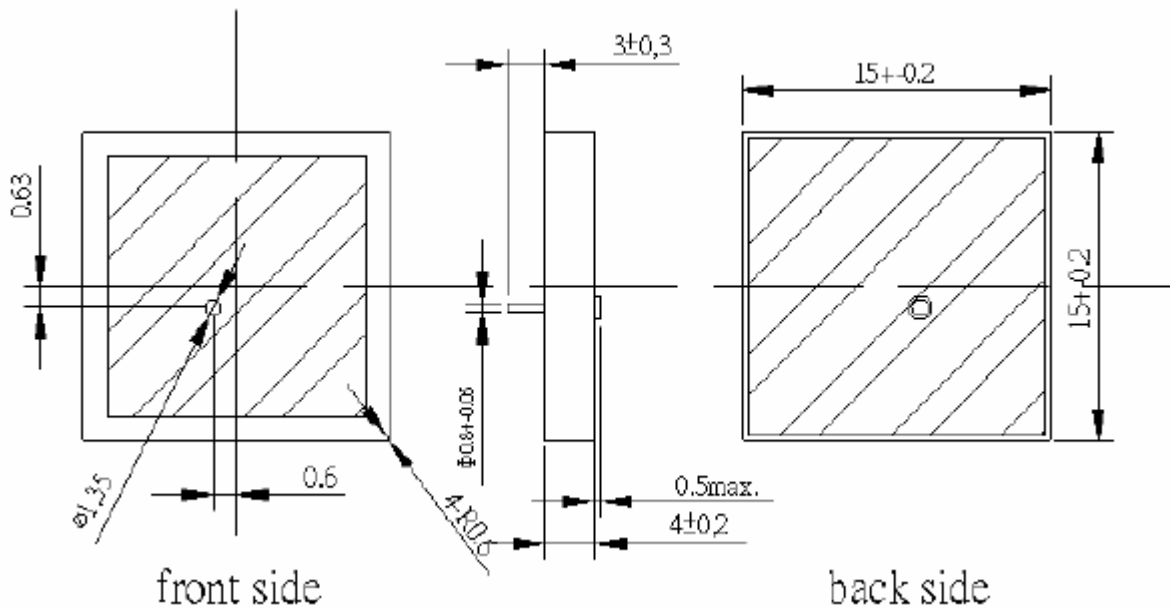
****Changes in user groundplane and environment will offset centre frequency**



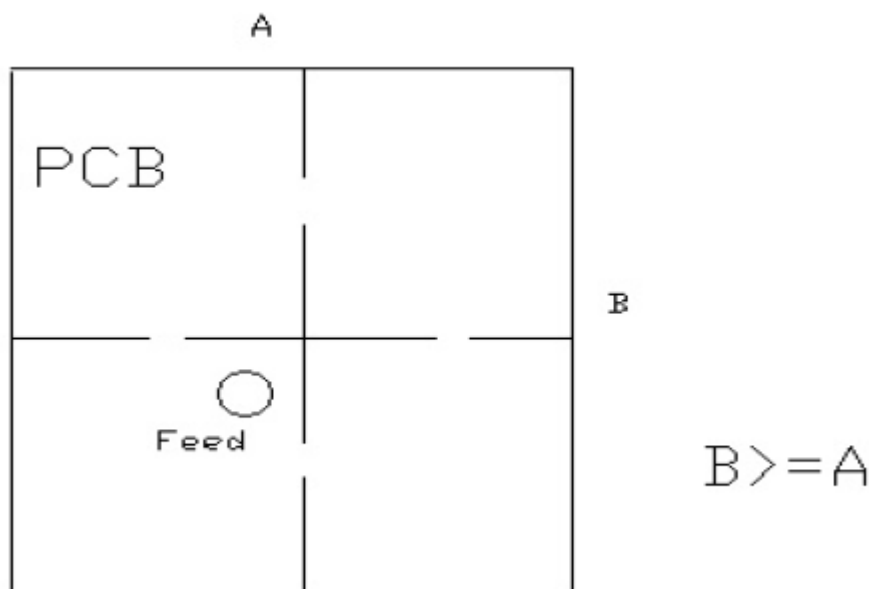
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3.0 Mechanical Specifications

3.1 Dimensions and Drawing



3.2 PCB Layout position

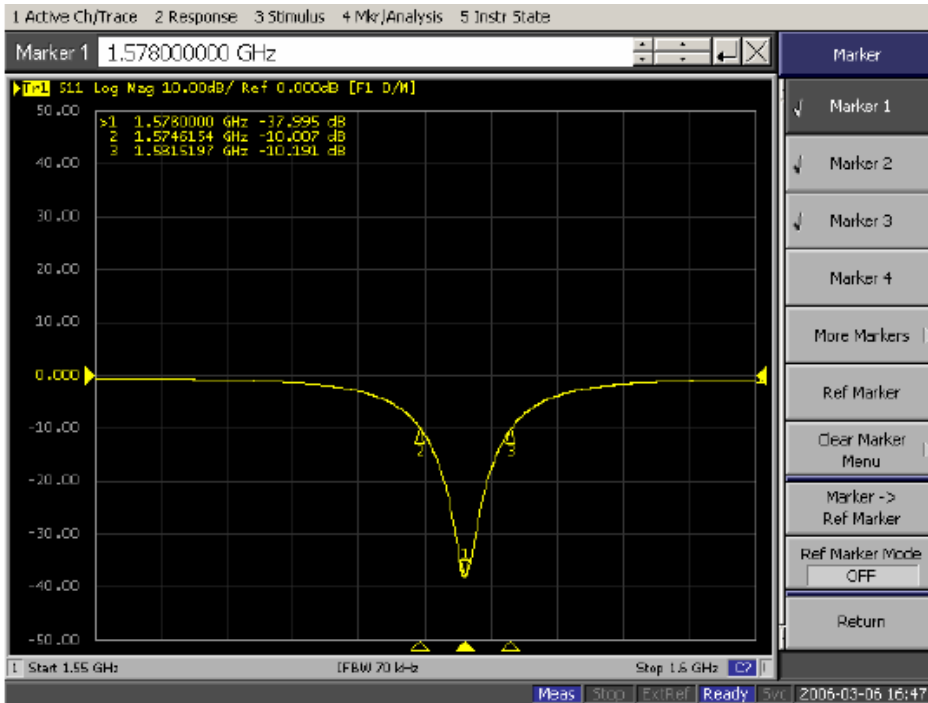




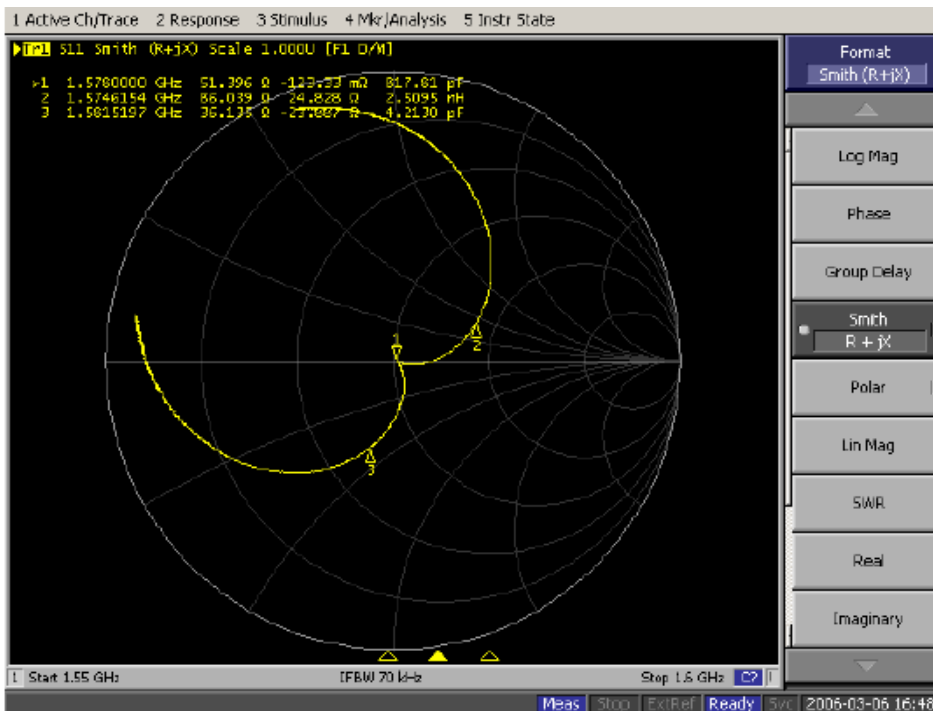
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4.0 Electrical characteristics

RETURN LOSS S11



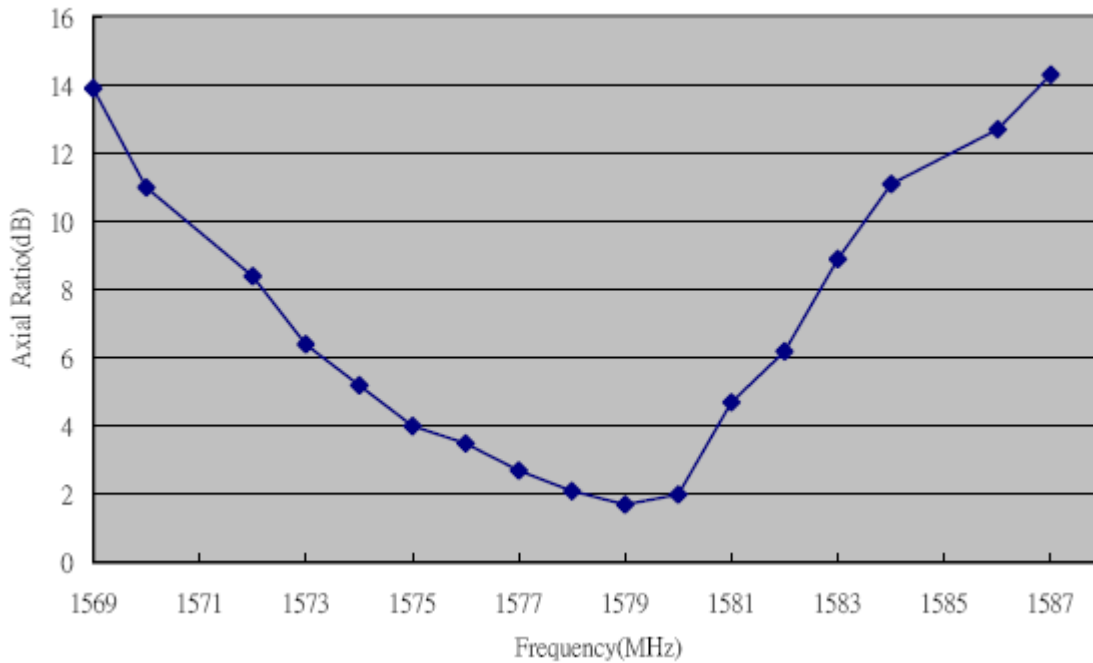
SMITH CHART S11



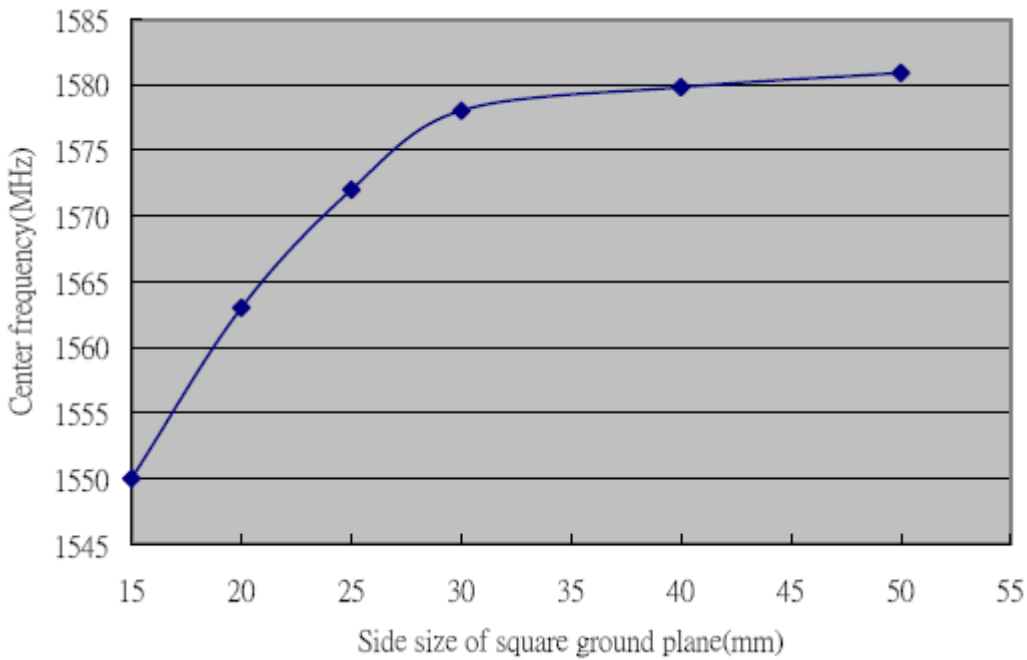


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MEASURED AXIAL RATIO



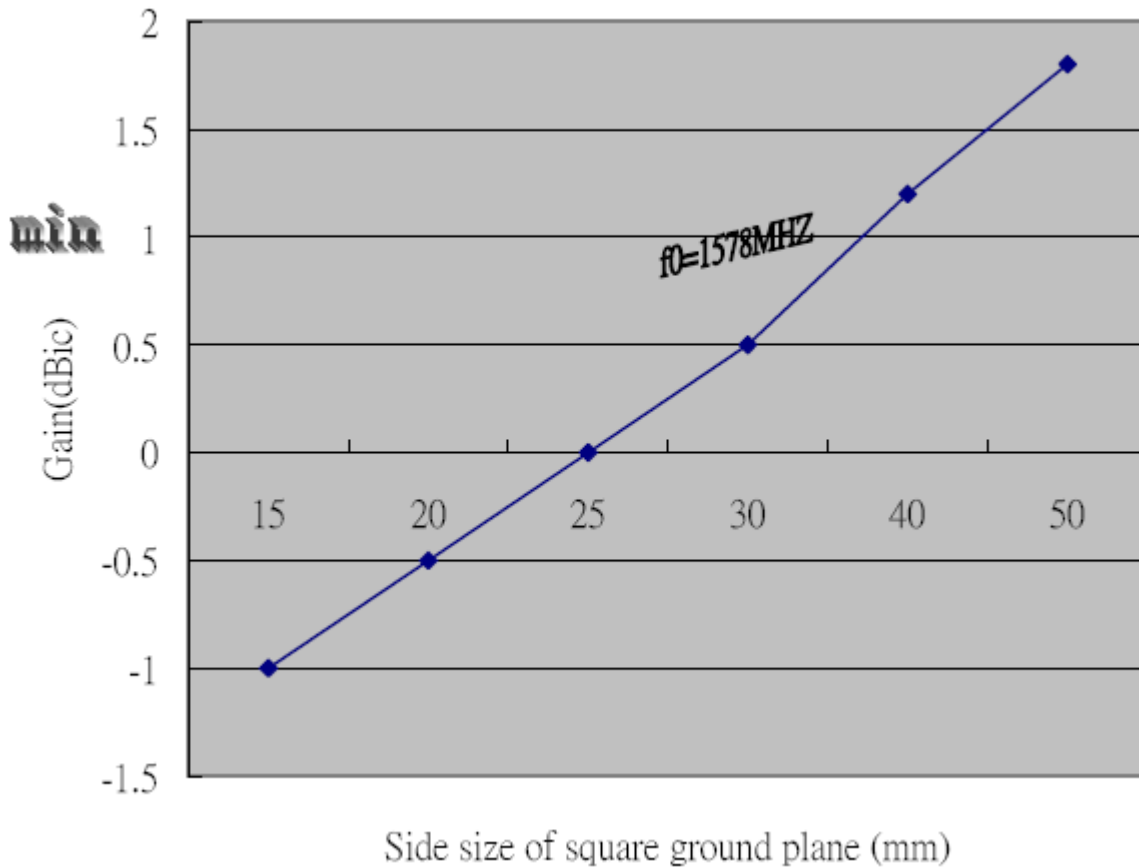
CENTRE FREQUENCY VERSUS GROUNDPLANE





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Gain versus ground plane size



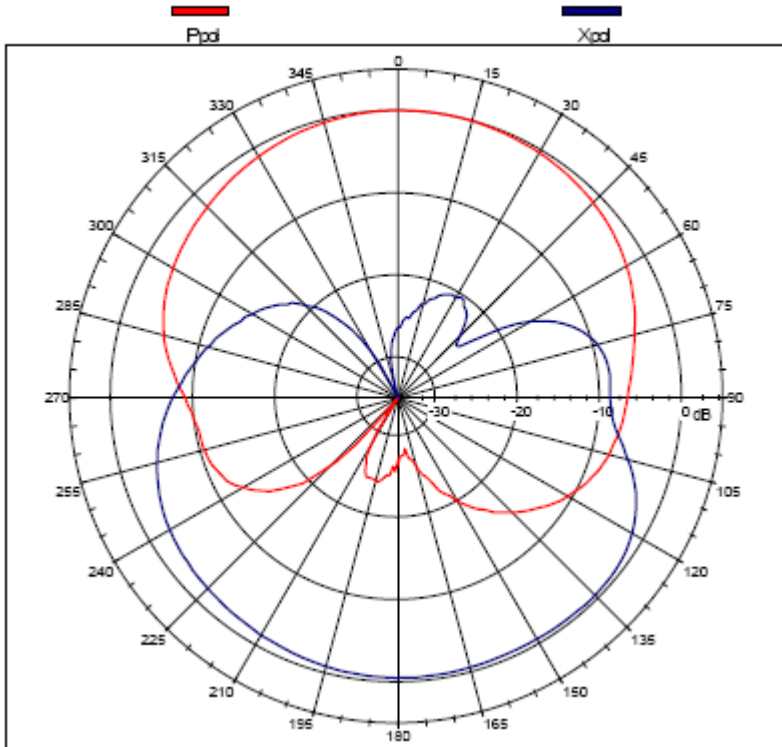
Radiation patterns below



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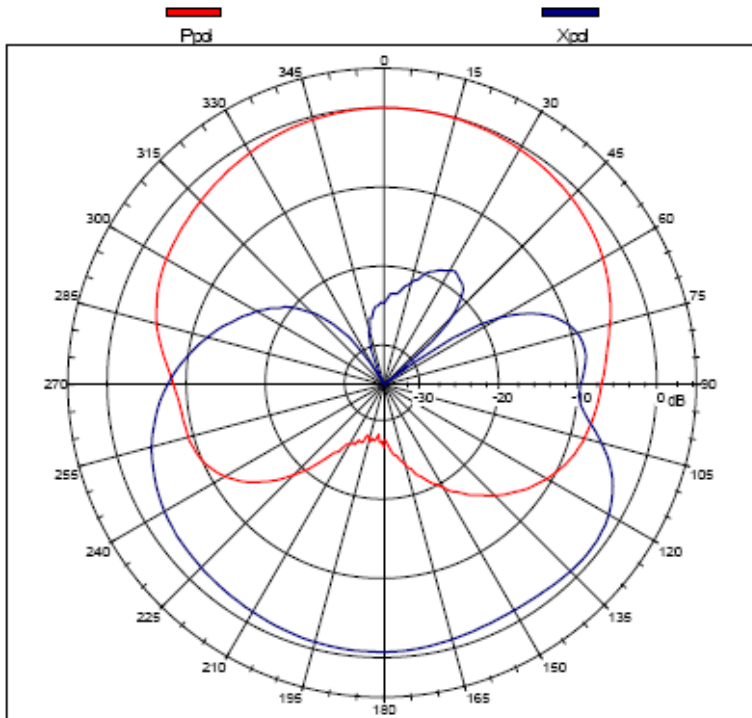
0°

Far-field amplitude of Gain Chart01.nsi



90°

Far-field amplitude of Gain Chart02.nsi



RHCP signal f0 = 1578MHz