

## **SPECIFICATION**

Model No. : **SGP.12a** 

Part No. : **SGP.1575.12.4.A.02** 

Product Name : **GPS SMT Patch Antenna** 

Features 12mm\*12mm\*4.5mm

1575MHz Centre Frequency

Patent Pending

RoHS ✓





#### 1.0 Introduction

This ceramic GPS patch antenna is based on smart **XtremeGain**™ technology. It is mounted via SMT process and has been selected as optimal solution for the 45x45mm ground plane.

### 2.0 Specification

#### Original Patch Specification tested on 45mm ground plane

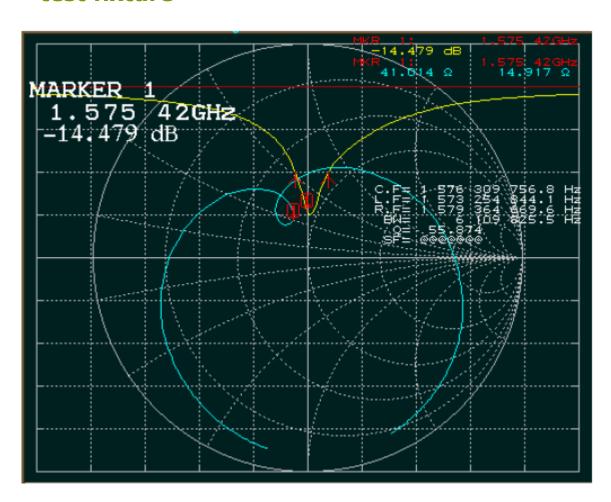
original rates openication tested on 1511111 ground plane							
No	Parameter	Specification	Notes				
1	Range of Receiving Frequency	1575.42 MHz ± 1.023 MHz					
2	Center Frequency	1575.42 ± 3MHz	With 45*45mm ground plane				
3	Bandwidth	4MHz min	Return Loss ≤-10 dB				
4	VSWR	1.5 max					
5	Gain at Zenith	-1.0 dBic typ.					
6	Gain at 10°elevation	-1.5 dBic typ.					
7	Axial Ratio	4.0 dB max					
8	Polarization	RHCP					
9	Impedance	50 Ohms					
	Frequency Temperature						
10	Coefficient (Tf)	0 ± 20ppm / °C	-40°C to +85°C				
11	Operating Temperature	-40°C to +85°C					

<sup>\*\*</sup>Changes in user groundplane and environment will offset centre frequency



### 3.0 Electrical Specifications

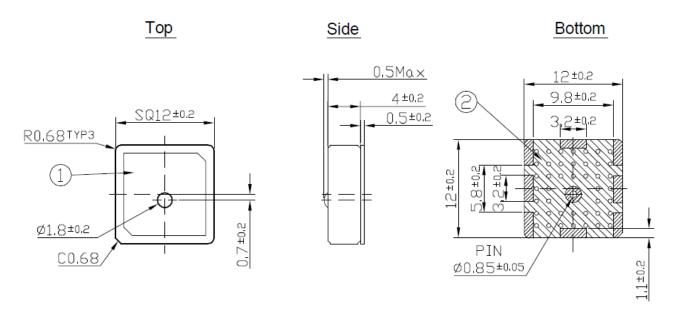
# 3.1 Return Loss, SWR, Impedance, measured on the test fixture





## 4.0Mechanical Specifications

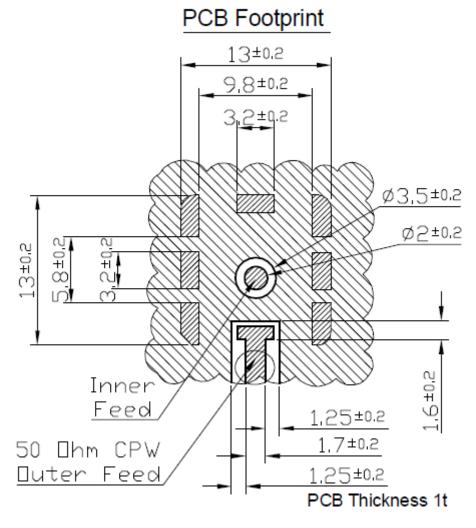
### **4.1** Dimensions and Drawing



	Name	Part no.	Material	Finish	QTY
1	SGP.12 Patch 12x12x4	SGP.12	Ceramic	Clear	1
2	SGP.12 PCB		FR 0.5t	Green	1



#### 4.2 Antenna footprint

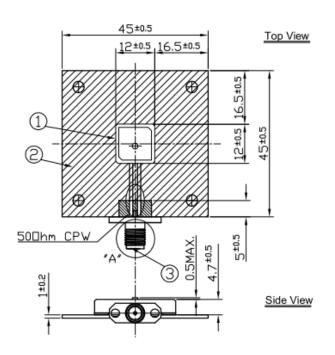


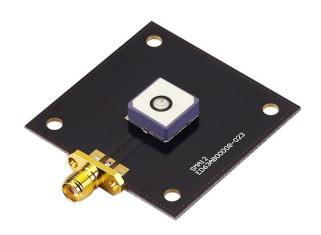
#### NOTE:

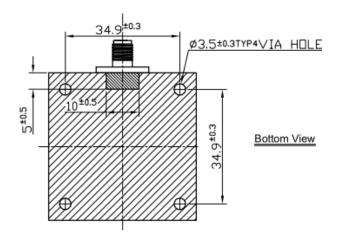
- 1.Solder mask
- 2.Area to be soldered
- 3.Clearance area
- 4.Diemension of 50 Ohm CPW dependent on individual board.
- 5. Must be soldered to complete antenna feed connection.

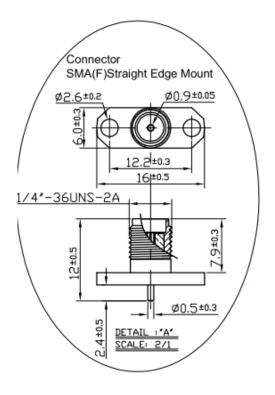


#### 4.3 Test Jig and Dimension





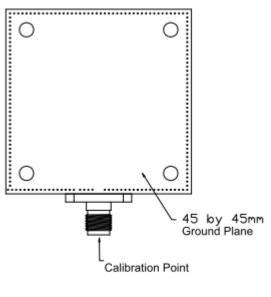






#### 4.4 Test Fixture set up and measurements

Test Fixture





Patch Antenna Network Analyzer S11 Characteristics Log map Smith Chart SMA Adapter

Antenna Setup & Measurements



## 5.0 Packaging

500pcs/reel/inner carton

5 reels in an outer carton(2500)

