

## SPECIFICATION

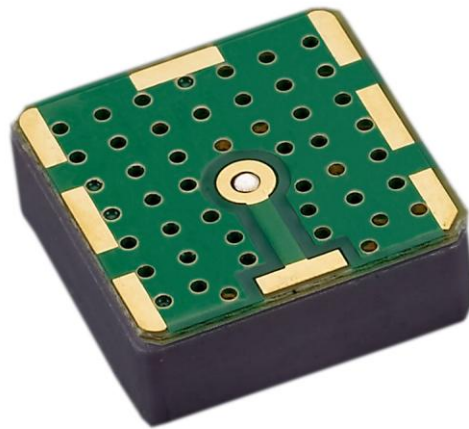
Model No. : **SGP.12A**

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

Product Name : **GPS SMT Patch Antenna**

Features : 12\*12\*4.5mm  
1575MHz Centre Frequency  
Patent Pending

**RoHS** ✓



## 1.0 Introduction

This miniaturized 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 35\*35mm ground plane.

## 2.0 Key Antenna Performance Indicators

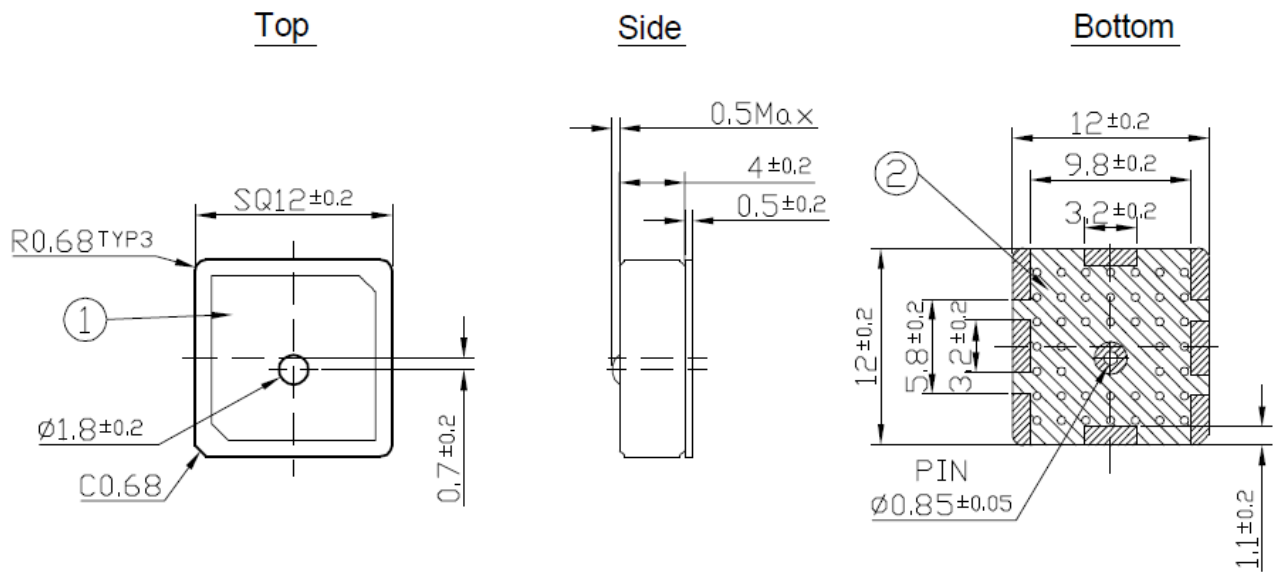
### Original Patch Specification tested on 35mm ground plane

No	Parameter	Specification	Notes
1	Range of Receiving Frequency	1575.42 MHz ± 1.023 MHz	
2	Center Frequency	1575.42 ± 3MHz	With 35mm <sup>2</sup> ground plane
3	Bandwidth	6MHz min	Return Loss ≤ -10 dB
4	VSWR	1.5 max	
5	Gain at Zenith	-2.0 dBic typ.	
6	Gain at 10° elevation	-	
7	Axial Ratio	4.0 dB max	
8	Polarization	RHCP	
9	Impedance	50 Ohms	
10	Frequency Temperature Coefficient ( Tf )	0 ± 20ppm / °C	-40°C to +85°C
11	Operating Temperature	-40°C to +85°C	

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

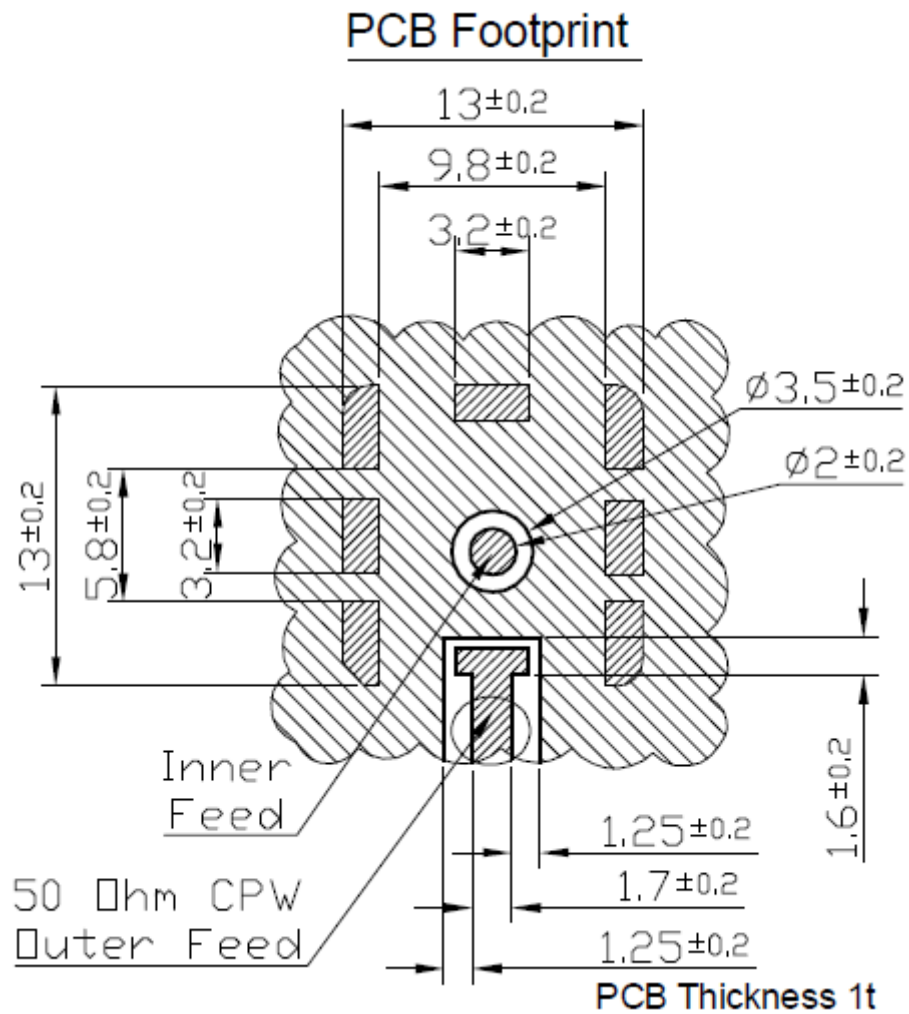
### 3.0 Mechanical Specifications

#### 3.1 Dimensions and Drawing



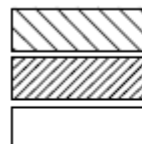
	Name	Part no.	Material	Finish	QTY
1	SGP.12 Patch 12x12x4	SGP.12	Ceramic	Clear	1
2	SGP.12 PCB		FR 0.5t	Green	1

### 3.2 Antenna Foot Print

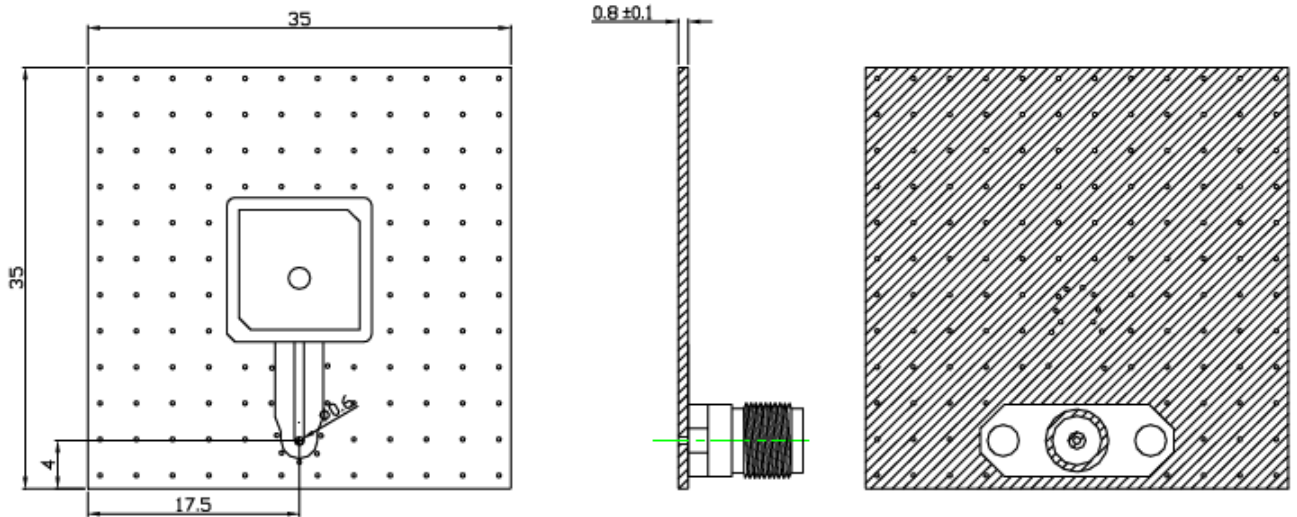


**NOTE:**

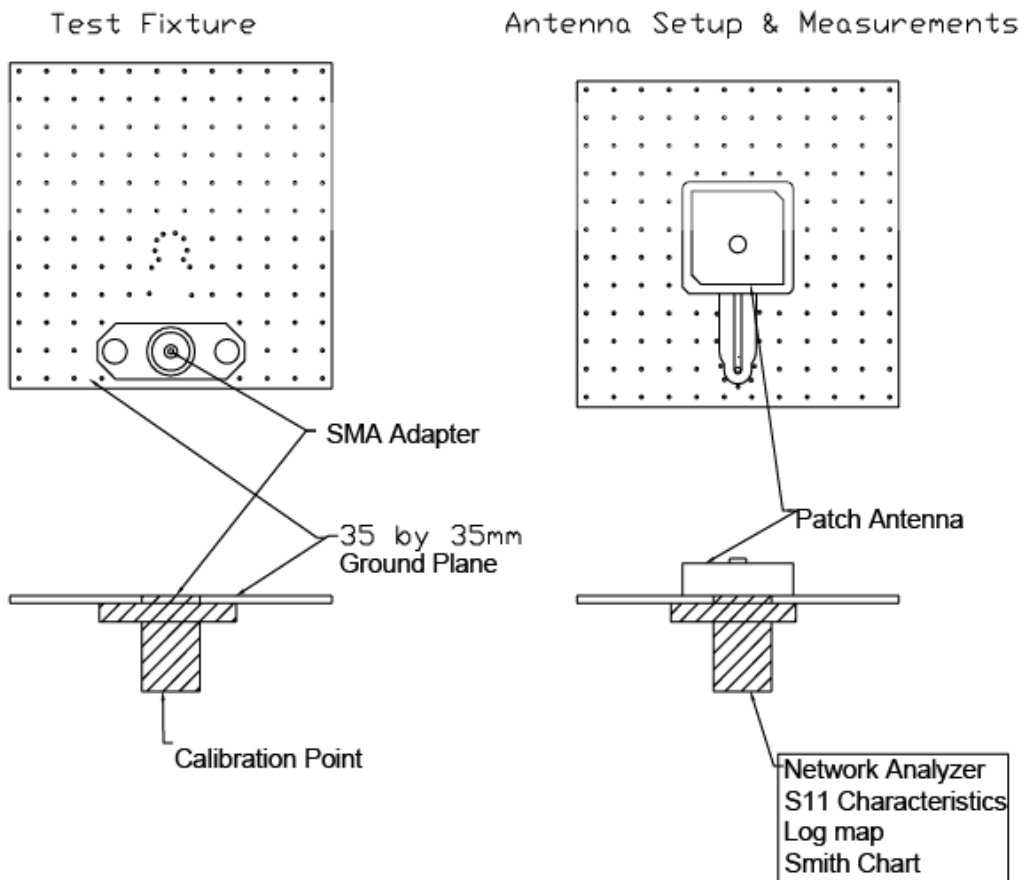
1. Solder mask
2. Area to be soldered
3. Clearance area
4. Dimension of 50 Ohm CPW dependent on individual board.
5. Must be soldered to complete antenna feed connection.



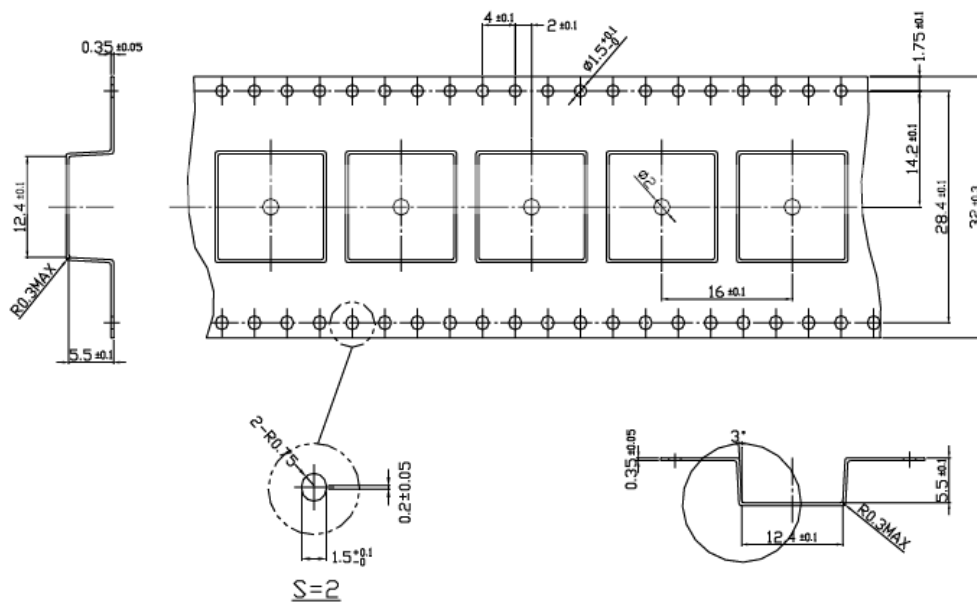
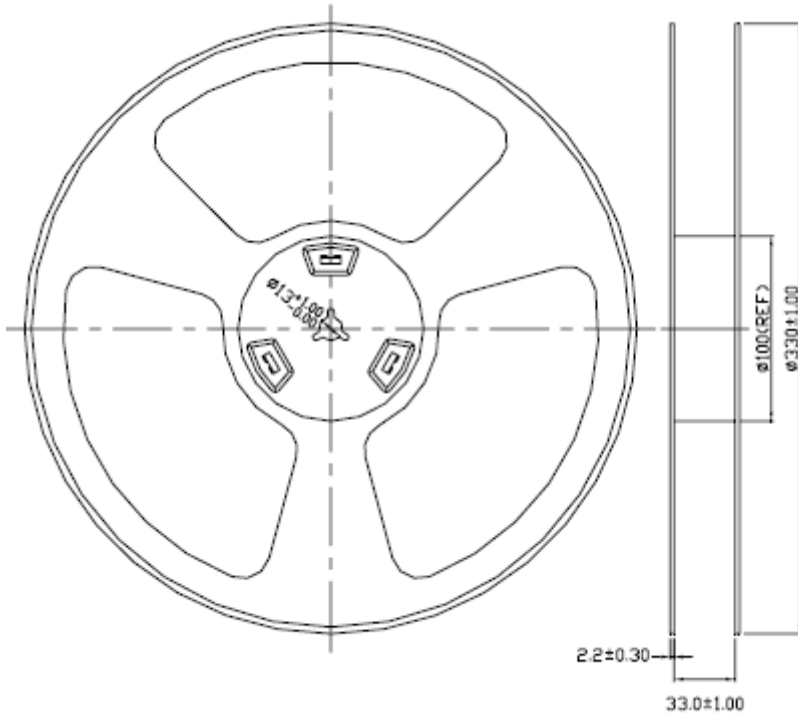
### 3.3 Test Jig and Dimension



### 3.4 Test Fixture set up and measurements



### 3.5 Delivery Mode



## 4.0 Electrical Specifications

### 4.1 Smith Chart

