

SPECIFICATION

Model No. : SGP.25C

Part No. : **SGP.1575.25.4.C.02**

Product Name : GPS SMT Patch Antenna

Features : 25mm*25mm*4.5mm

1575MHz Centre Frequency

Patent pending

RoHS ✓

Photo :





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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 45*45mm ground plane.

2.0 Specification

Original Patch Specification tested on 45*45mm ground plane

IJ				g p.		
	No	Parameter	Specification	Notes		
	1	Range of Receiving Frequency	1575.42 M	ИНz ± 1.023 МНz		
	2	Center Frequency	1575.42 ± 3MHz	With 45*45mm ground plane		
	3	Bandwidth	8MHz min	Return Loss ≤-10 dB		
	4	VSWR	1.5 max			
	5	Gain at Zenith	+2.0 dBic typ.	Center Frequency		
	6	Gain at 10°elevation	-1.0 dBic typ.			
	7	Axial Ratio	3 dB max			
	8	Polarization	RHCP			
	9	Impedance	50 Ohms			
	10	Frequency Temperature Coefficient(Tf)	0 ± 20ppm / °C	-40ºC to +85ºC		
	11	Operating Temperature -40°C to -85°C				

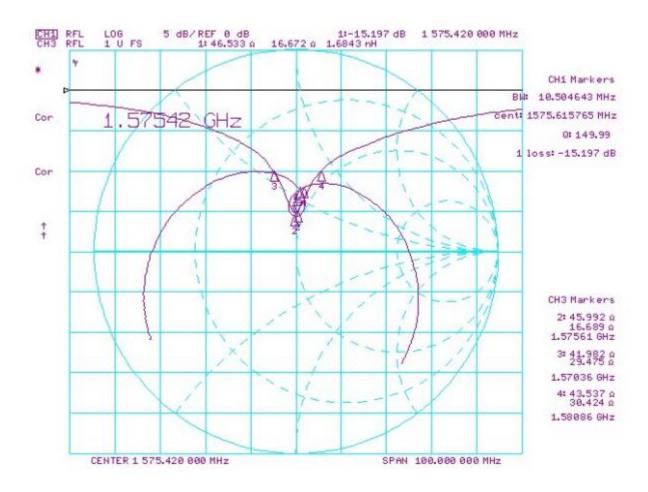
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^{**}Changes in user groundplane and environment will offset centre frequency



3.0Electrical Specifications

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

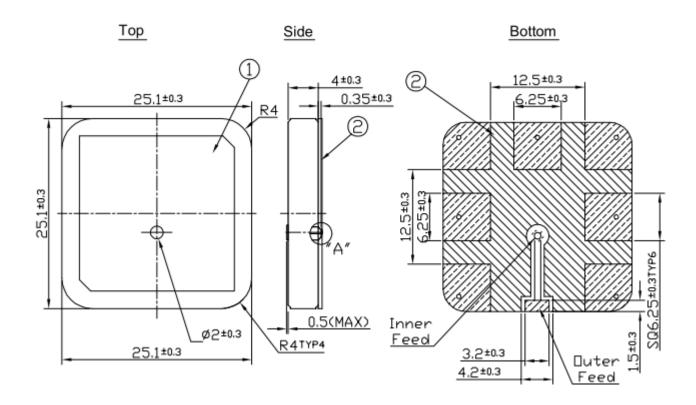


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4.0 Mechanical Specifications

4.1 Antenna Dimensions and Drawing





NOTE:

1.Solder mask

2.Area to be soldered

- Diemension of 50 Ohm CPW dependent on individual board.
- Matching circuit-capacitor and inductor values dependent on individual environment.
- Must be soldered to complete antenna feed connection.

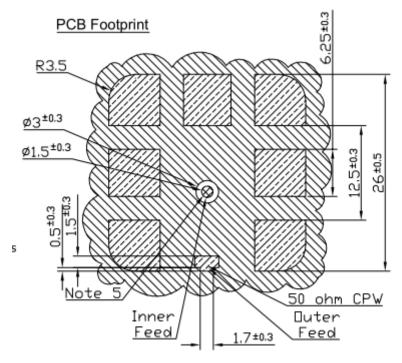
	Name	Part no.	Material	Finish	QTY
1	SGP.25 Patch 25x25x4	SGP.25C	Ceramic	Clear	1
2	SGP.25 PCB		FR 0.5t	Green	1

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4.2 Antenna footprint (view from underneath)

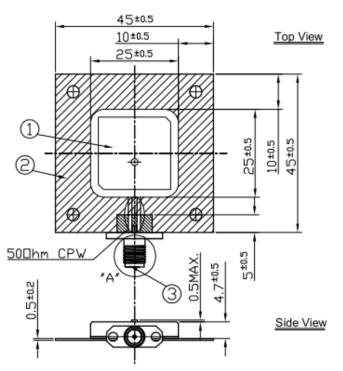
Please note: solder mask has been added to all areas except gold solder areas (green highlighted areas), this will prevent Feed points connecting to ground of main PCB

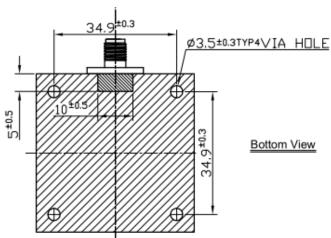


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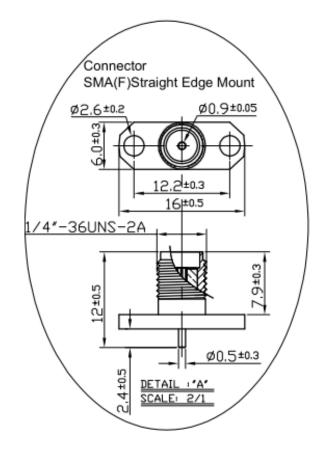
4.3 Test Jig and Dimension











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4.4 Test Fixture set up and measurements

Test Fixture

Antenna Setup & Measurements

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45 by 45mm
Ground Plane

Calibration Point

Network Analyzer
S11 Characteristics
Log map
Smith Chart

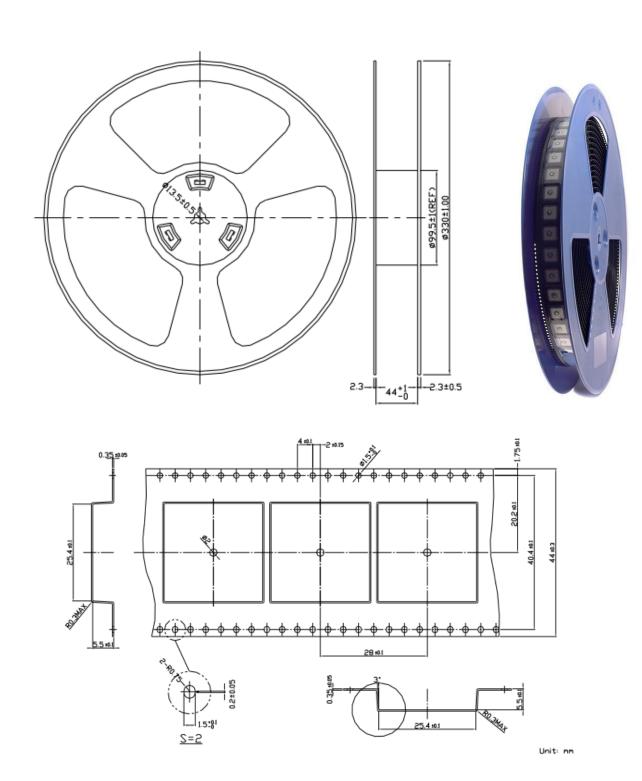
SMA Adapter

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5.0 Packaging

200 pieces/Reel/Inner carton, 4 reels in outer carton - (800)



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