

## SPECIFICATION

Part No. : **GP.1575.25.4.A.02**

Product Name : **4mm thick GPS Patch Antenna**

Features : 25mm\*25mm\*4mm  
Halogen Free  
ROHS Compliant

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## 1. 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 tuned as optimal solution for the customer device environment.

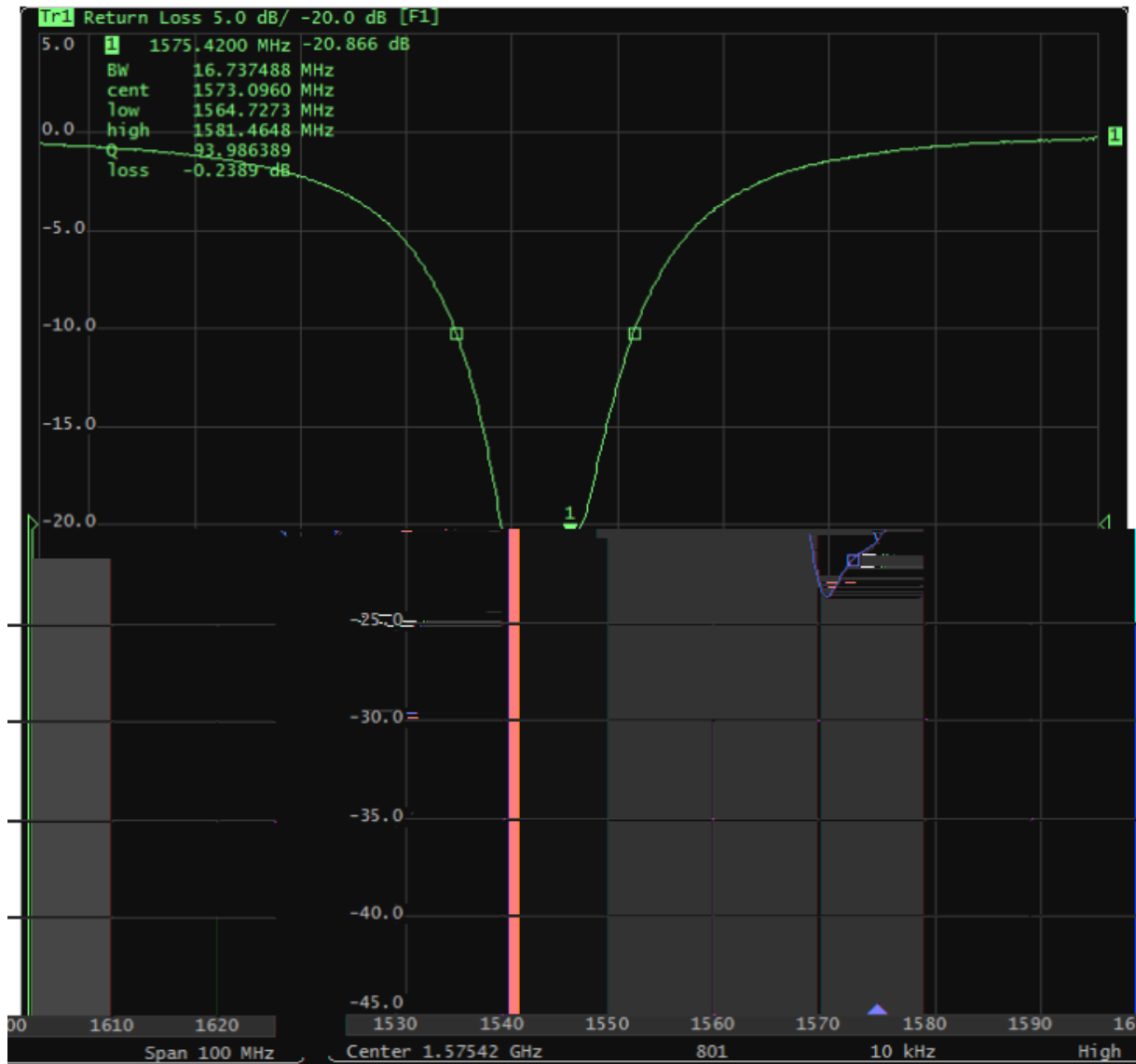
## 2. Specification Table

Original Patch Specification tested on 50\*50mm ground plane

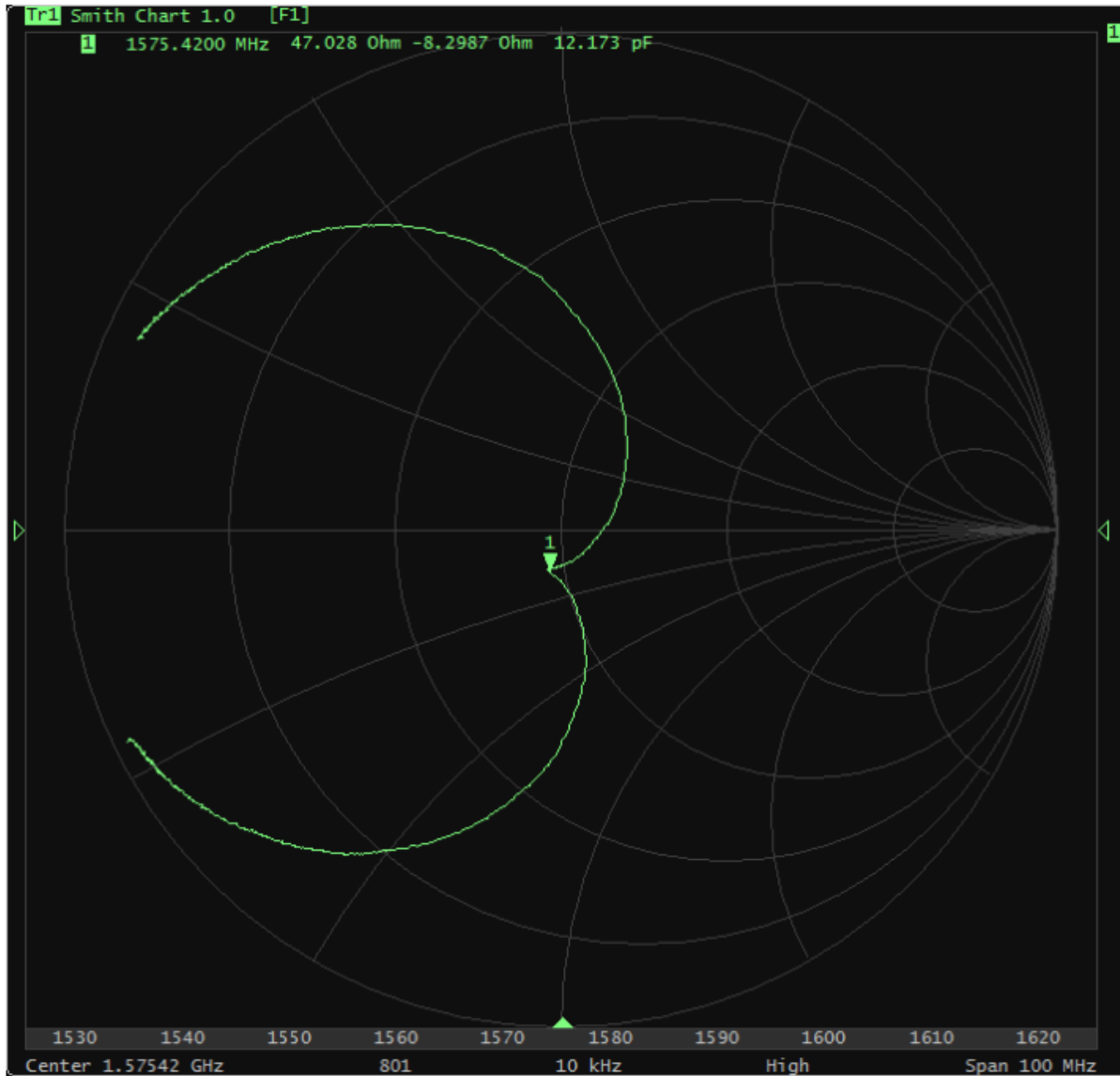
No	Parameter	Specification
1	Range of Receiving Frequency	1575.42MHz +/- 1.023MHz
	Center Frequency	1575MHz +/- 3MHz
2	Impedance	50Ω
3	Bandwidth	10 MHz min Return Loss <-10dB
4	VSWR	1.2:1
5	Gain toward Zenith	1.55 dBic typ.
6	Gain at 10°Elevation	-2.5 dBic typ.
7	Axial Ratio	3dB Max.
8	Polarization	Right Hand Circular Polarization
9	Frequency Temperature Coefficient ( Tf )	0 ± 20ppm/°C
10	Operating Temperature	-40°C to +85°C

## 3. Electrical Specification

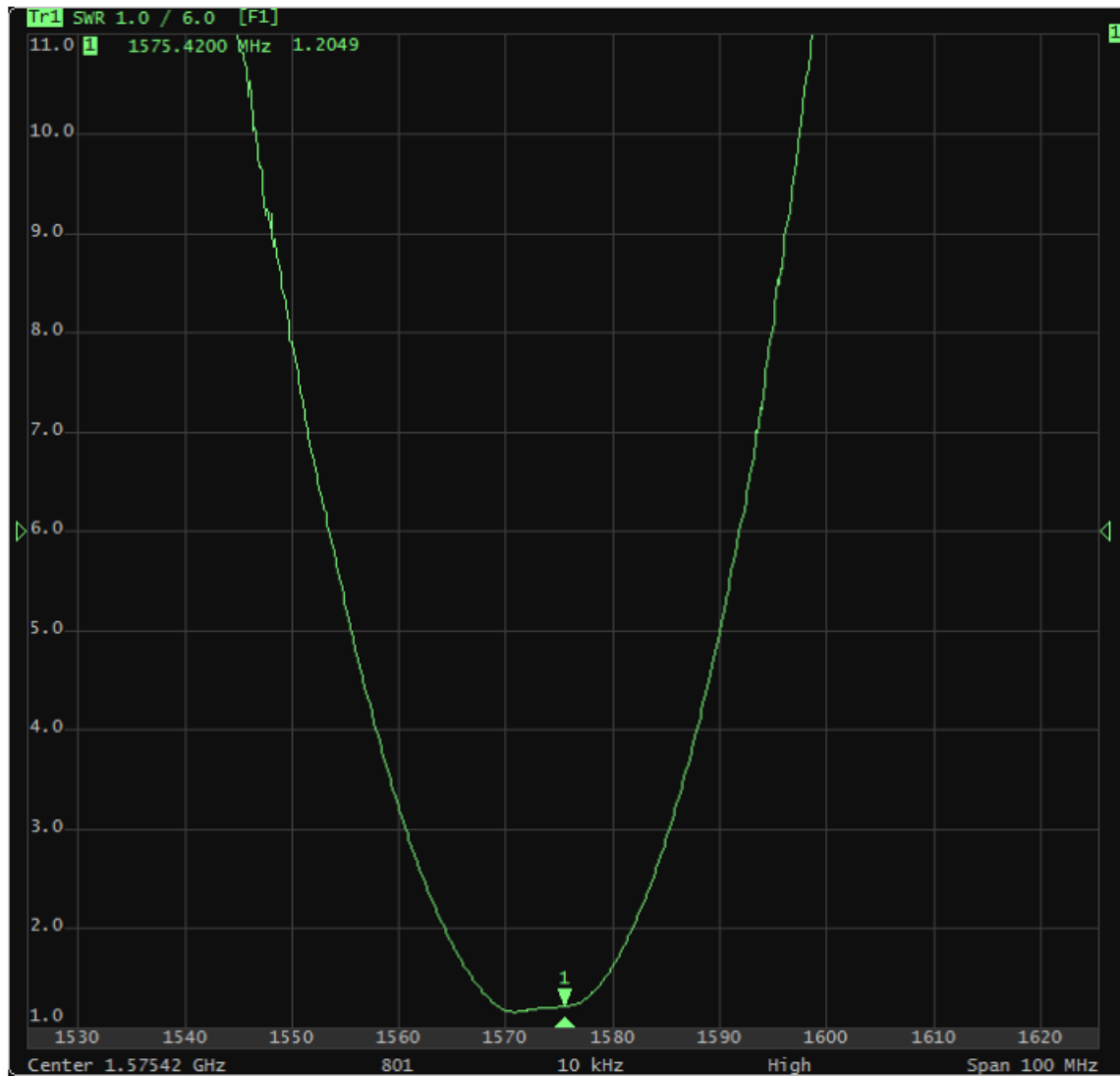
### 3.1 Return Loss



## 3.2 Smith Chart



### 3.3 VSWR

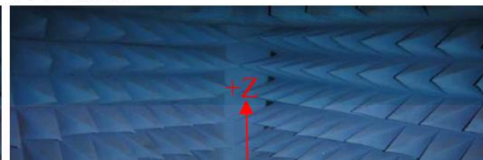


## 4. 2D Radiation Patterns

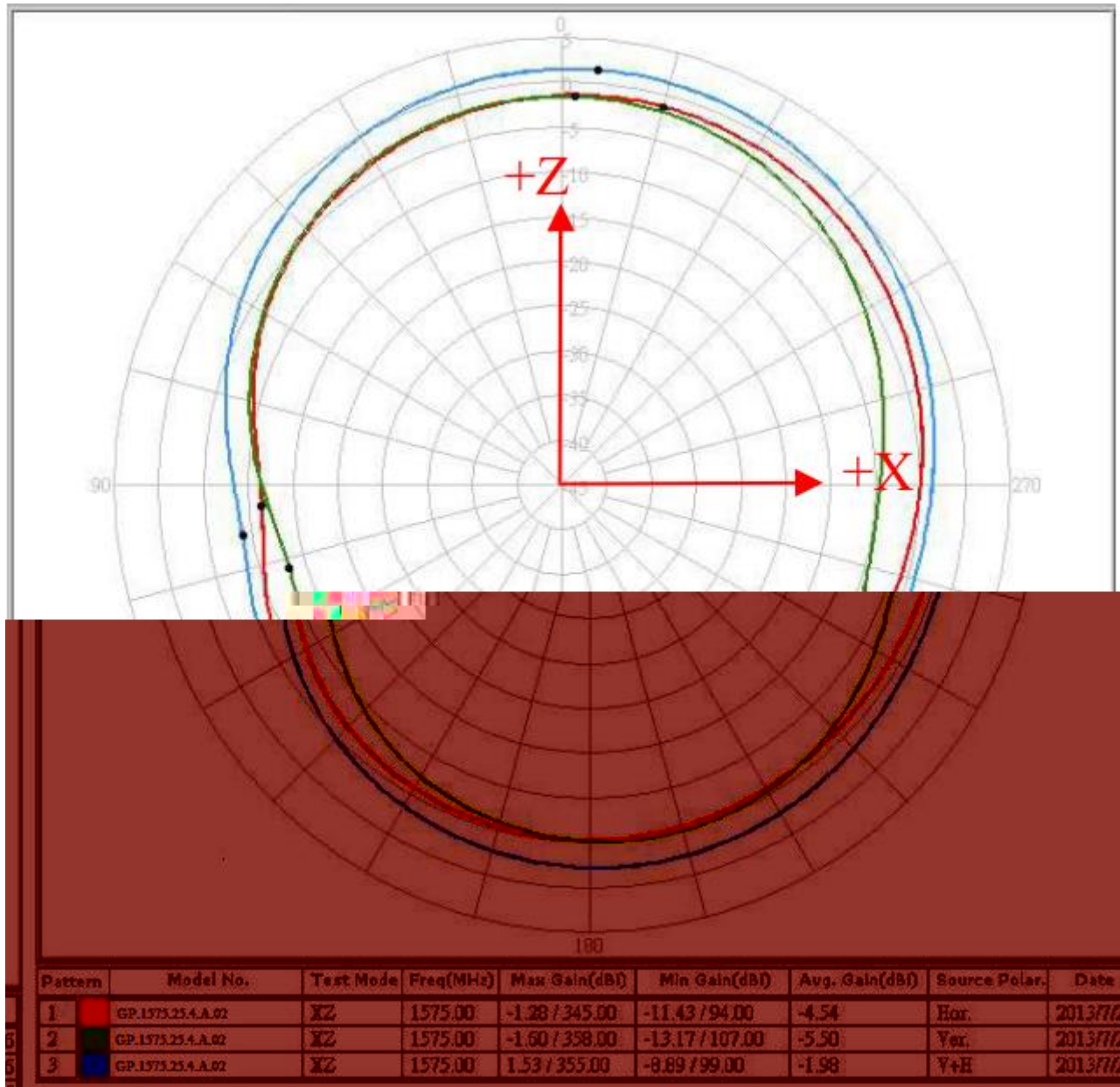
XZ-Plane



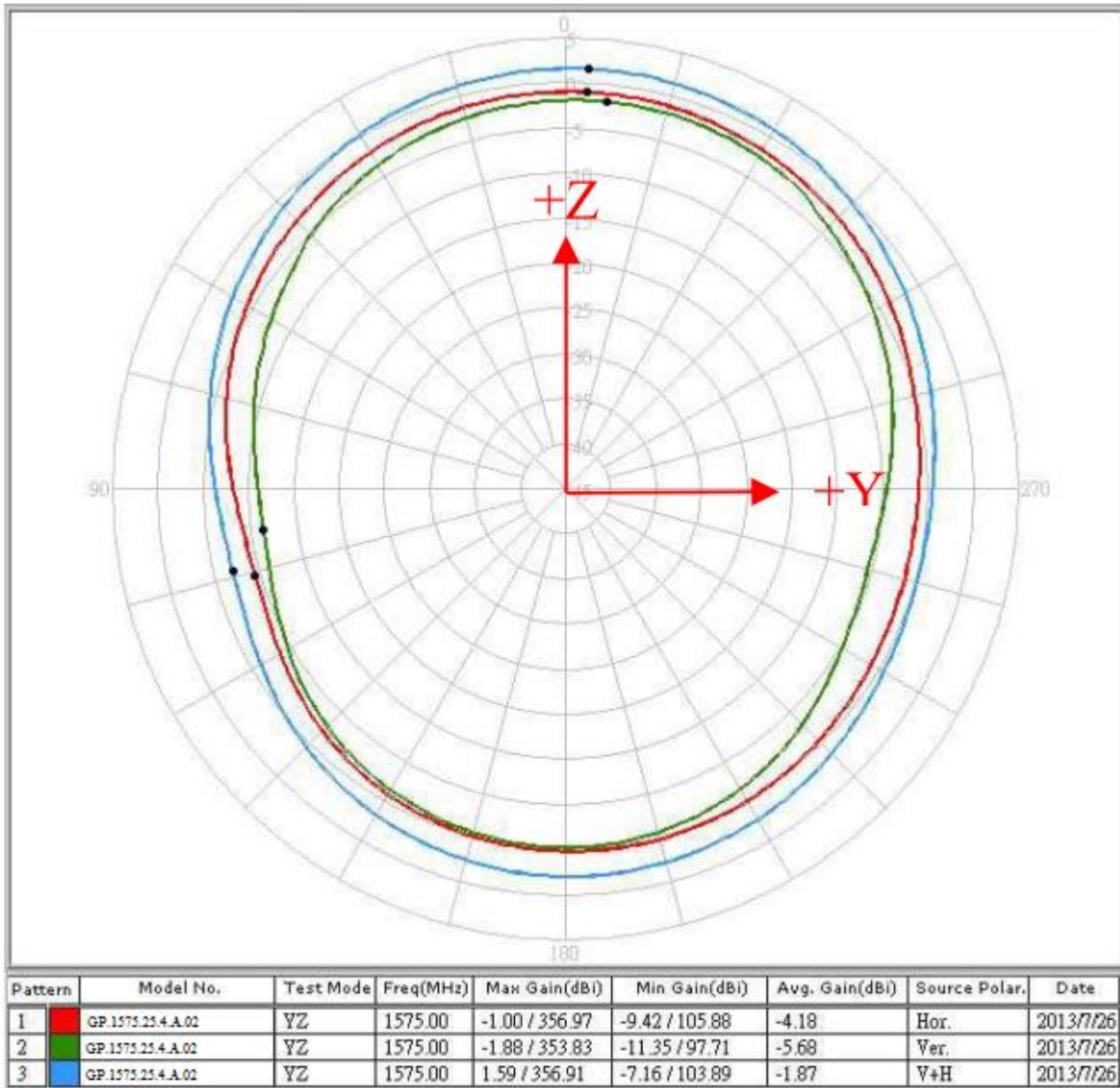
YZ-Plane



## 4.1 XZ Patterns

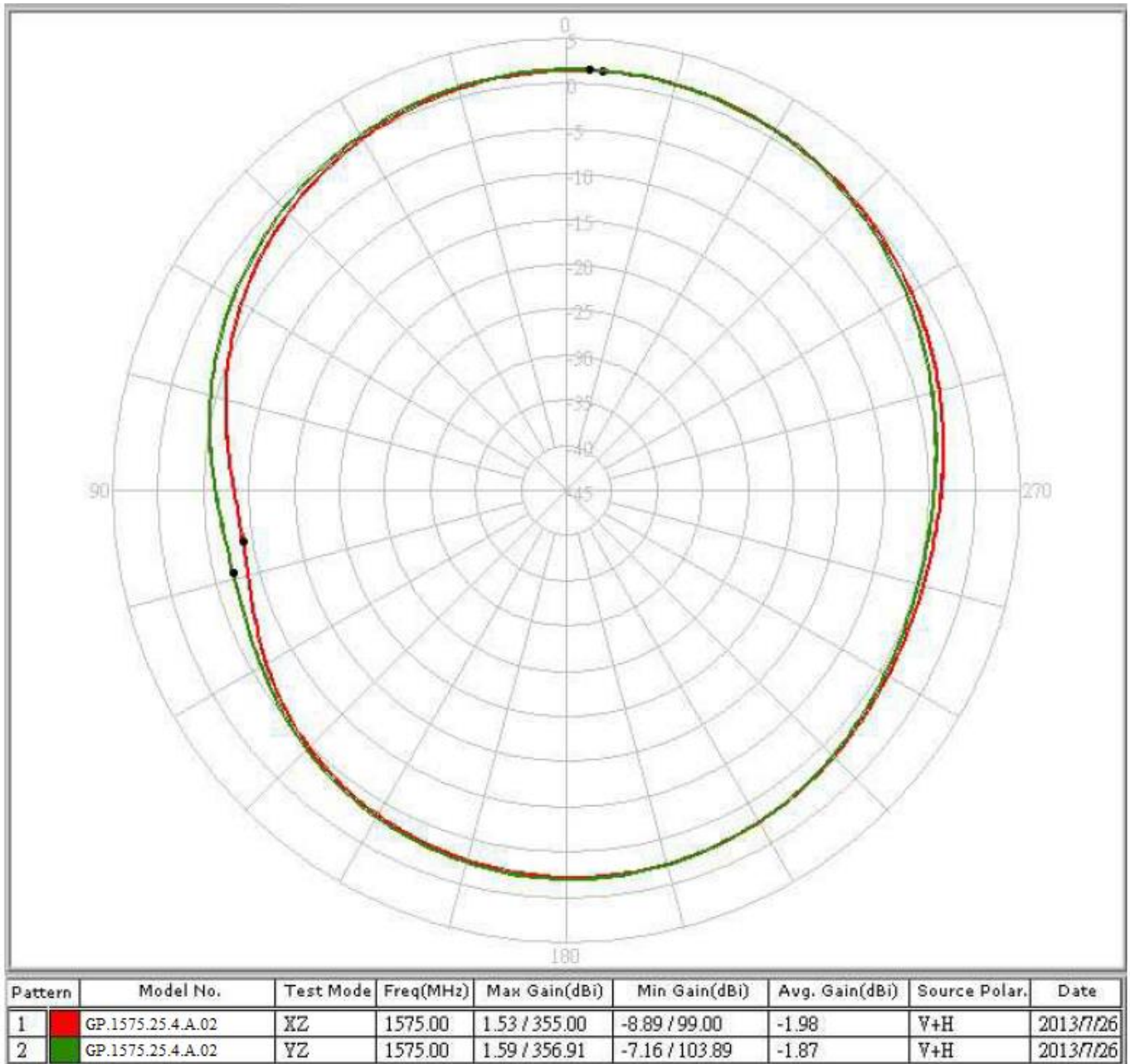


## 4.2 YZ Patterns





## 5. Gain Pattern Value

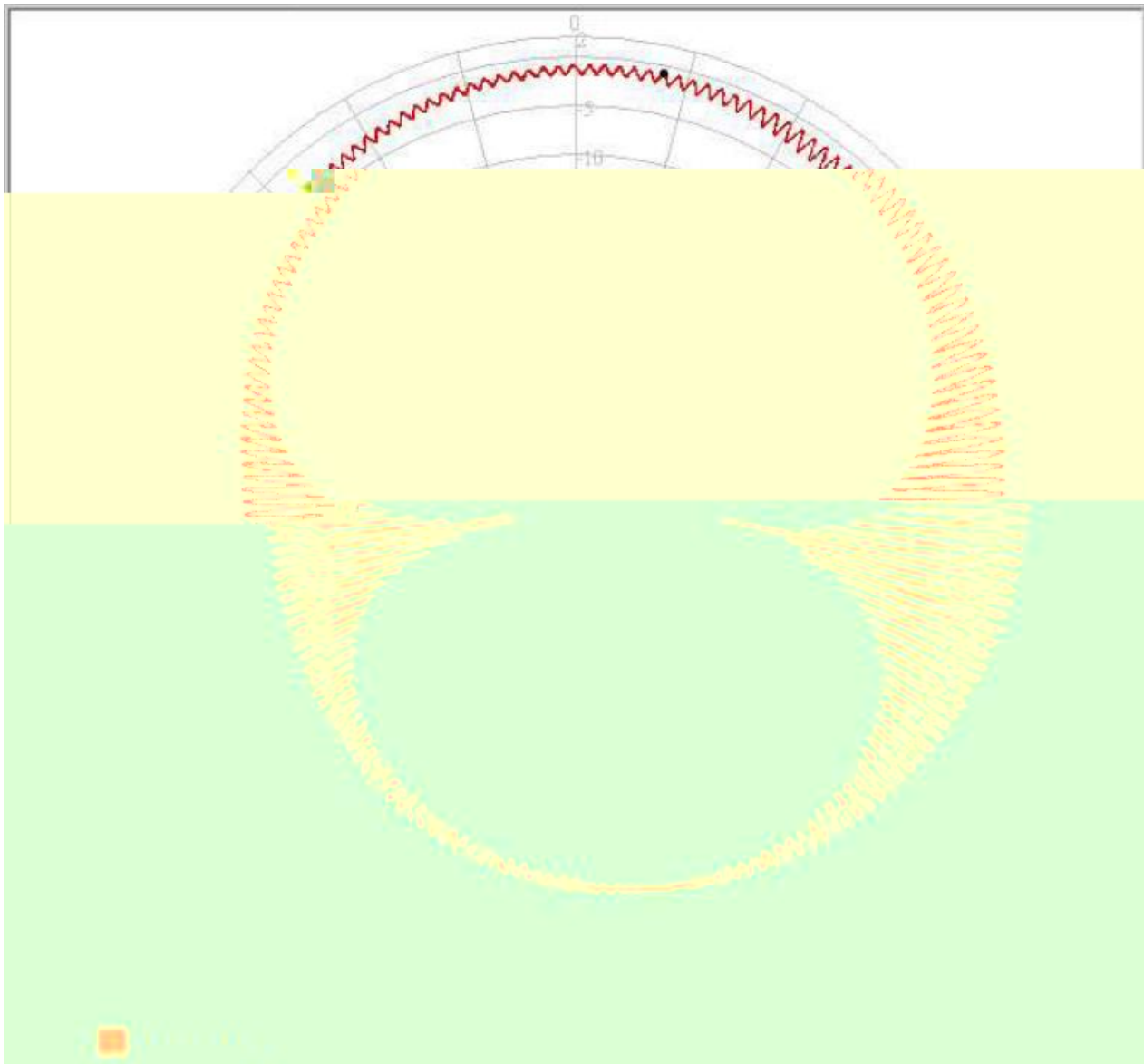




Angle	XZ-Plane	YZ-Plane
90°	-8.37	-6.59
75°	-6.12	-4.70
60°	-3.66	-2.80
45°	-1.65	-1.05
30°	-0.11	0.26
15°	0.94	1.14
0°	1.45	1.55
345°	1.46	0.00
330°	0.99	0.00
315°	0.11	0.57
300°	-1.10	-0.82
285°	-2.45	-2.45
270°	-3.69	-3.94

(Unit : dBi)

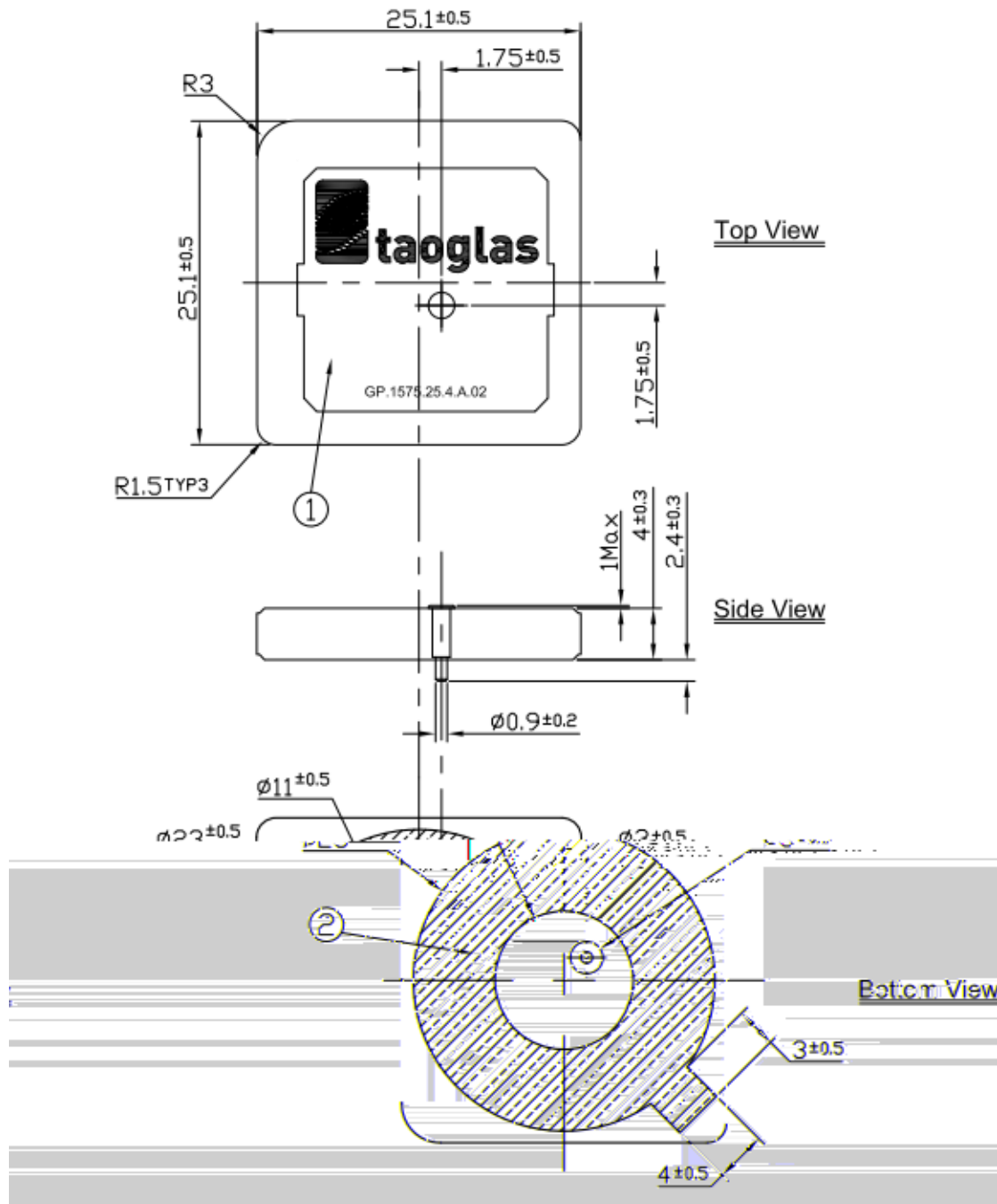
## 6. Axial Ratio Pattern



Angle	Axial Ratio
90°	10.17
75°	3.27
60°	2.03
45°	1.51
30°	1.14
15°	0.87
0°	0.83
345°	1.14
330°	1.88
315°	2.94
300°	4.58
285°	6.86
270°	12.88

( At 1575.42MHz )

## 7. 2D Mechanical Drawing

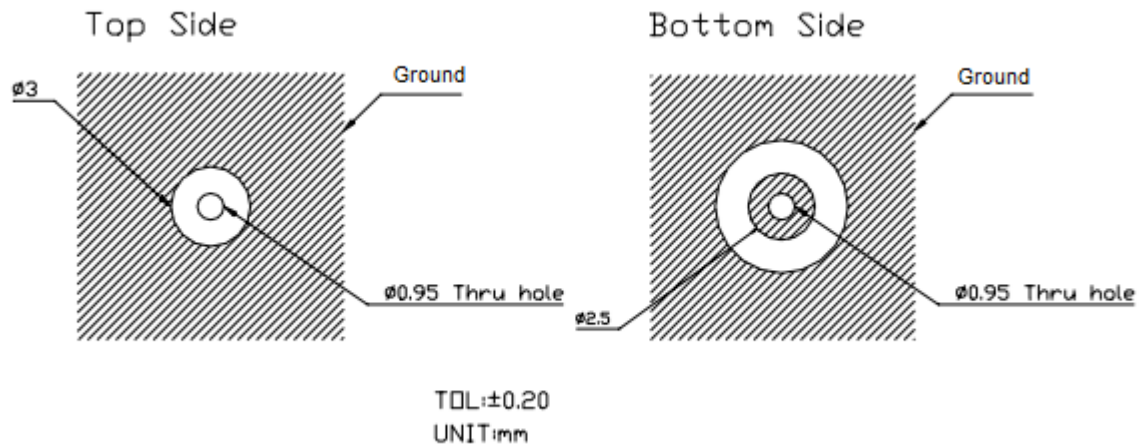


**NOTES:**

1. Double sided adhesive area 

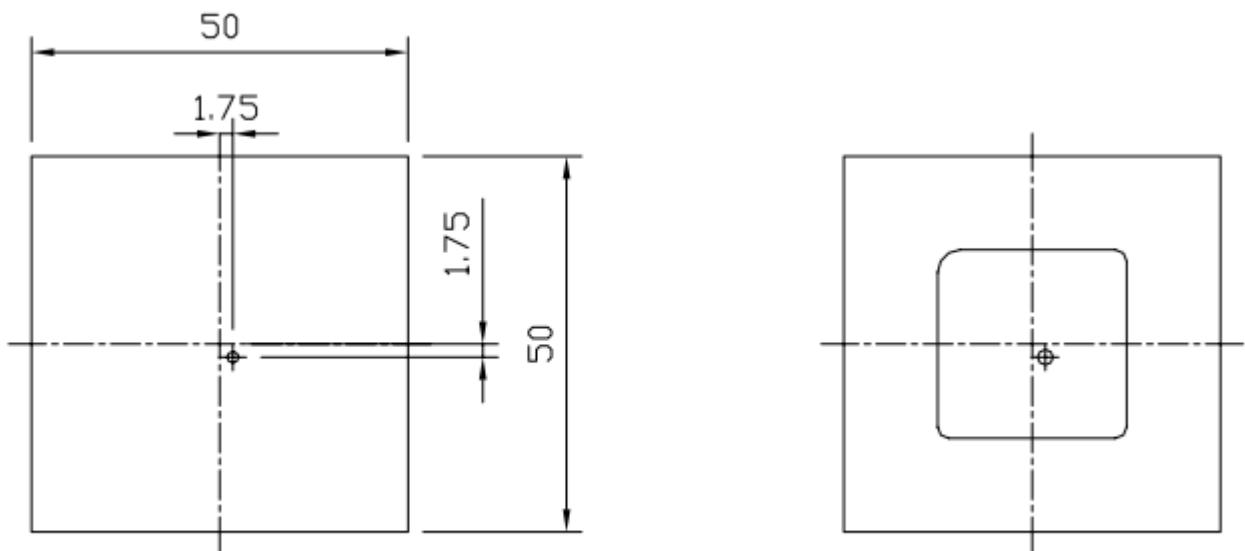
	Name	Material	Finish	QTY
1	GP.1575 Patch 25x25x4	Ceramic	Clear	1
2	Double sided Adhesive	NITTO 5015	White Liner	1

## 5.1 Layout Dimension

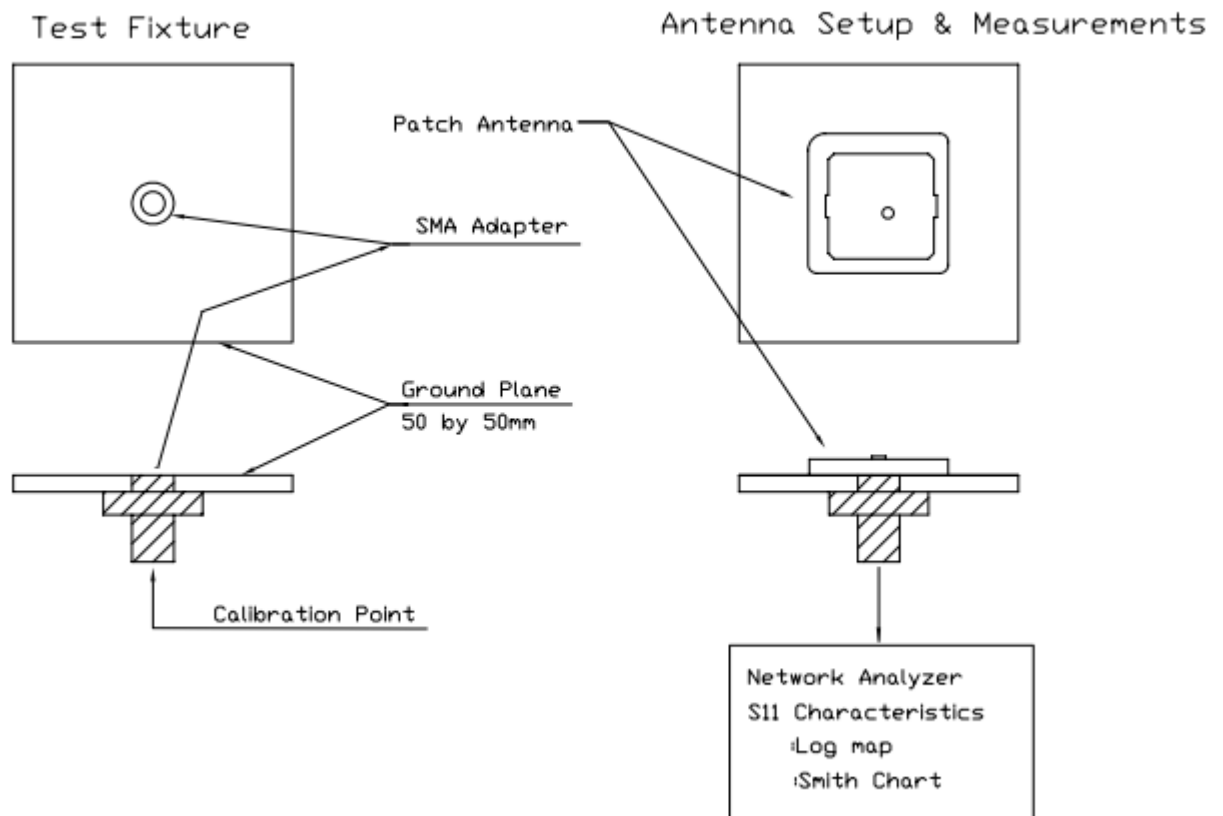


\*Note Layout Dimensions may be affected by the thickness of the PCB

## 8. Test Jig and Dimension



## 8.1 Test Fixture Antenna Setup and Measurements



## 9. Packaging

50 pieces per Tray

200 per Inner Carton

4 x 200 – 800 pieces per Outer Carton

