

SPECIFICATION

Part No.	:	GP.1575.25.4.A.02
Product Name	:	4mm thick GPS/Galileo Patch Antenna
Features	:	25mm*25mm*4mm Halogen Free RoHS and REACH Compliant



1. Introduction

This miniaturized ceramic GPS/Galileo 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.

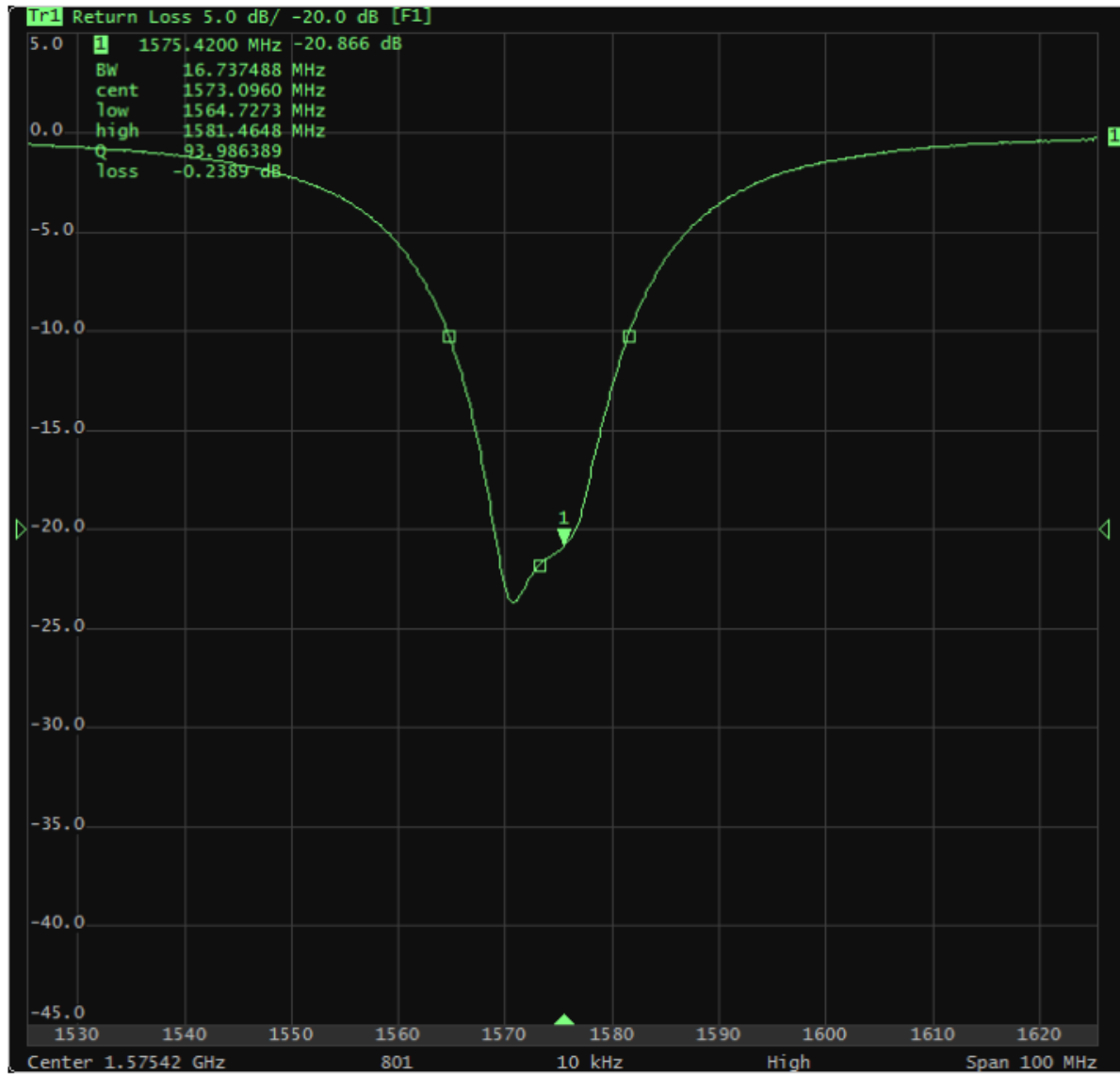
2. Specification Table

Original Patch Specification tested on 50*50mm ground plane

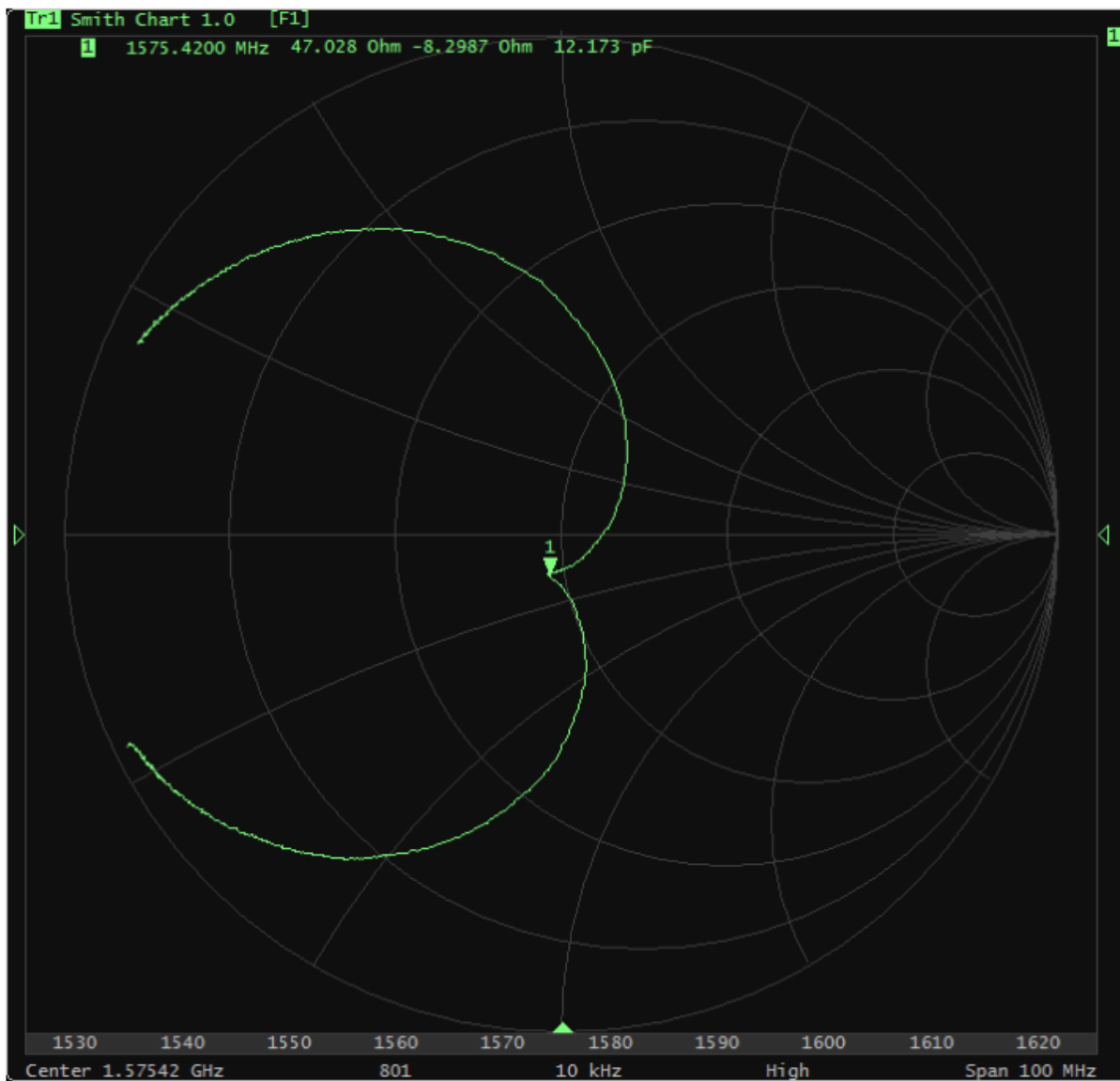
No	Parameter	Specification
1	Range of Receiving Frequency	1575.42MHz +/- 1.023MHz
	Center Frequency	1575MHz +/- 3MHz
2	Impedance	50Ω
3	Bandwidth	10 MHz min Return Loss <-10dB
4	VSWR	2:1
5	Gain toward Zenith	1.55 dBic typ.
6	Gain at 10°Elevation	-2.5 dBic typ.
7	Axial Ratio	3dB Max.
8	Polarization	Right Hand Circular Polarization
9	Frequency Temperature Coefficient (Tf)	0 ± 20ppm/°C
	Weight	15 g
10	Operating Temperature	-40°C to +85°C

3. Electrical Specification

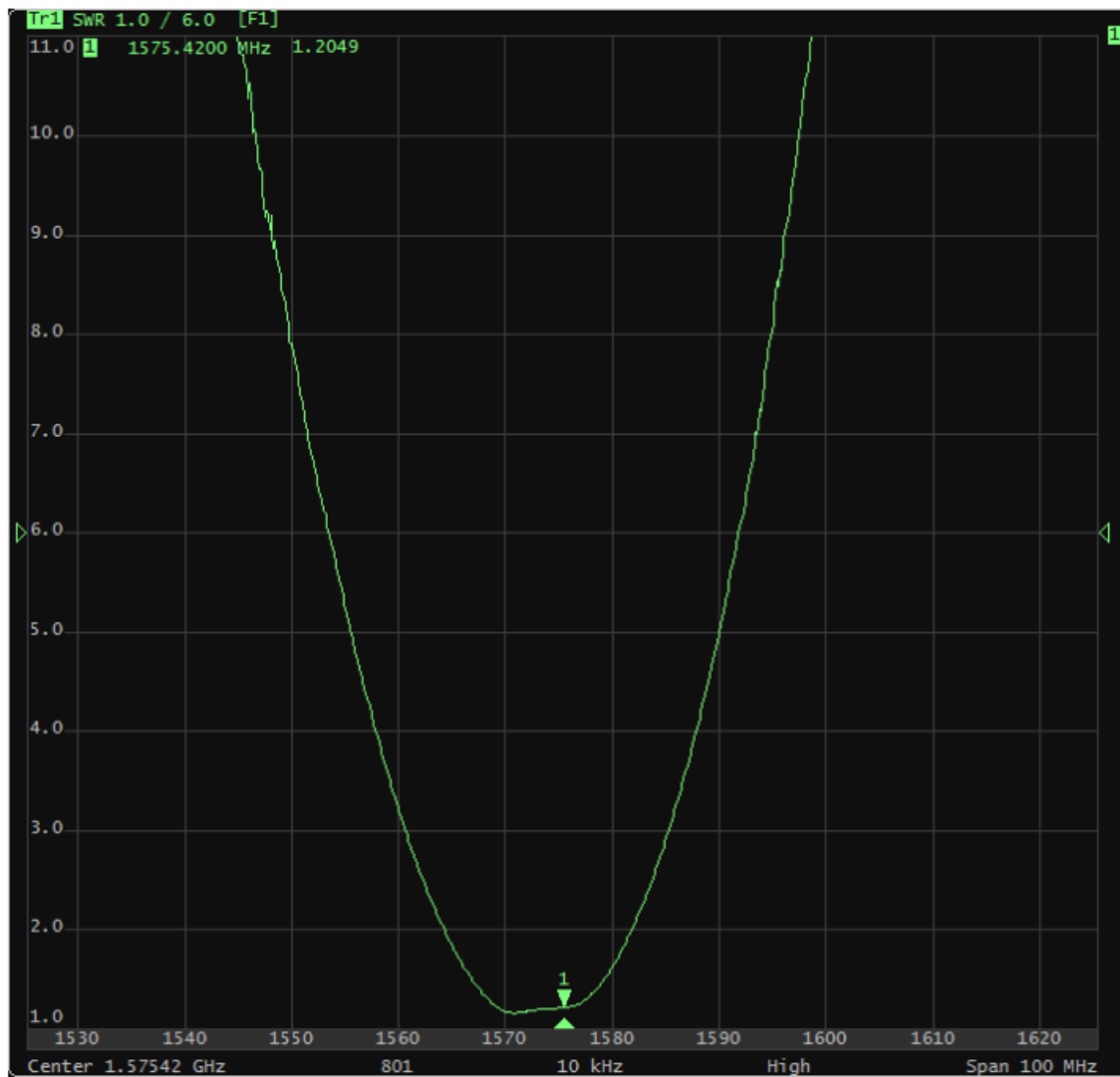
3.1 Return Loss



3.2 Smith Chart

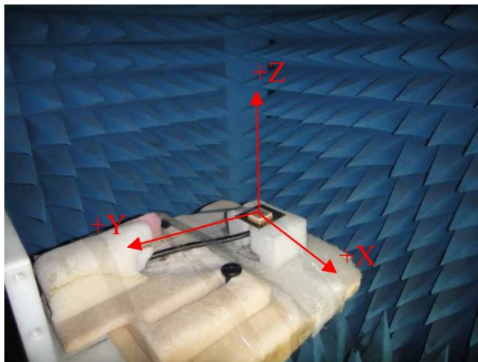


3.3. VSWR

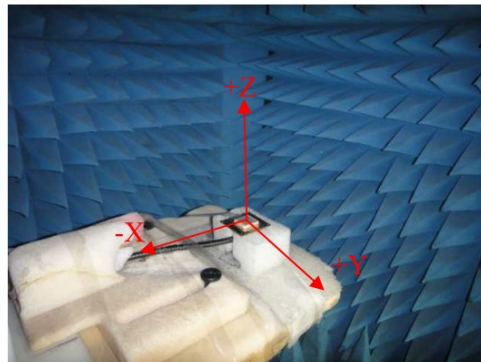


4. 2D Radiation Patterns

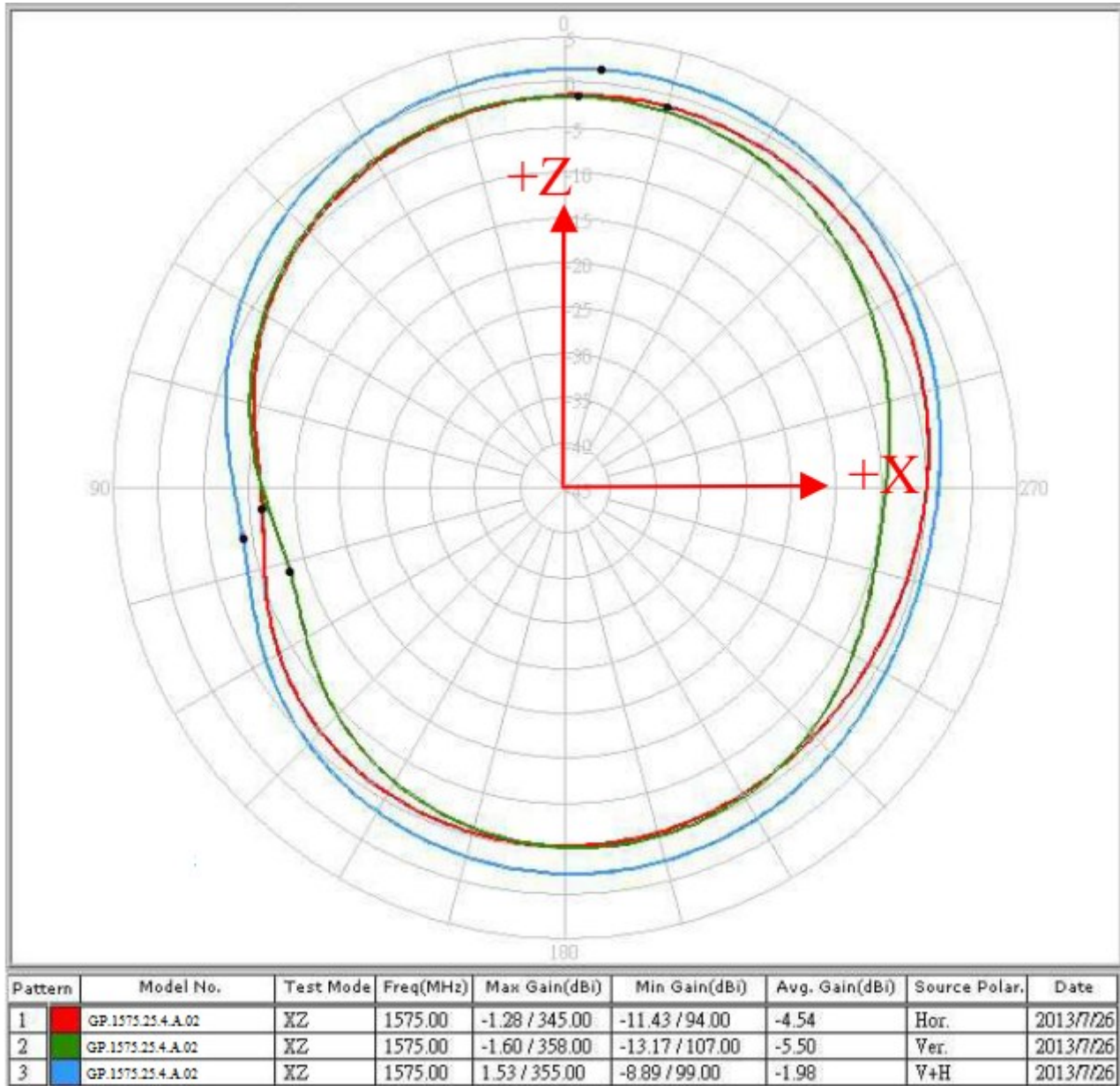
XZ-Plane



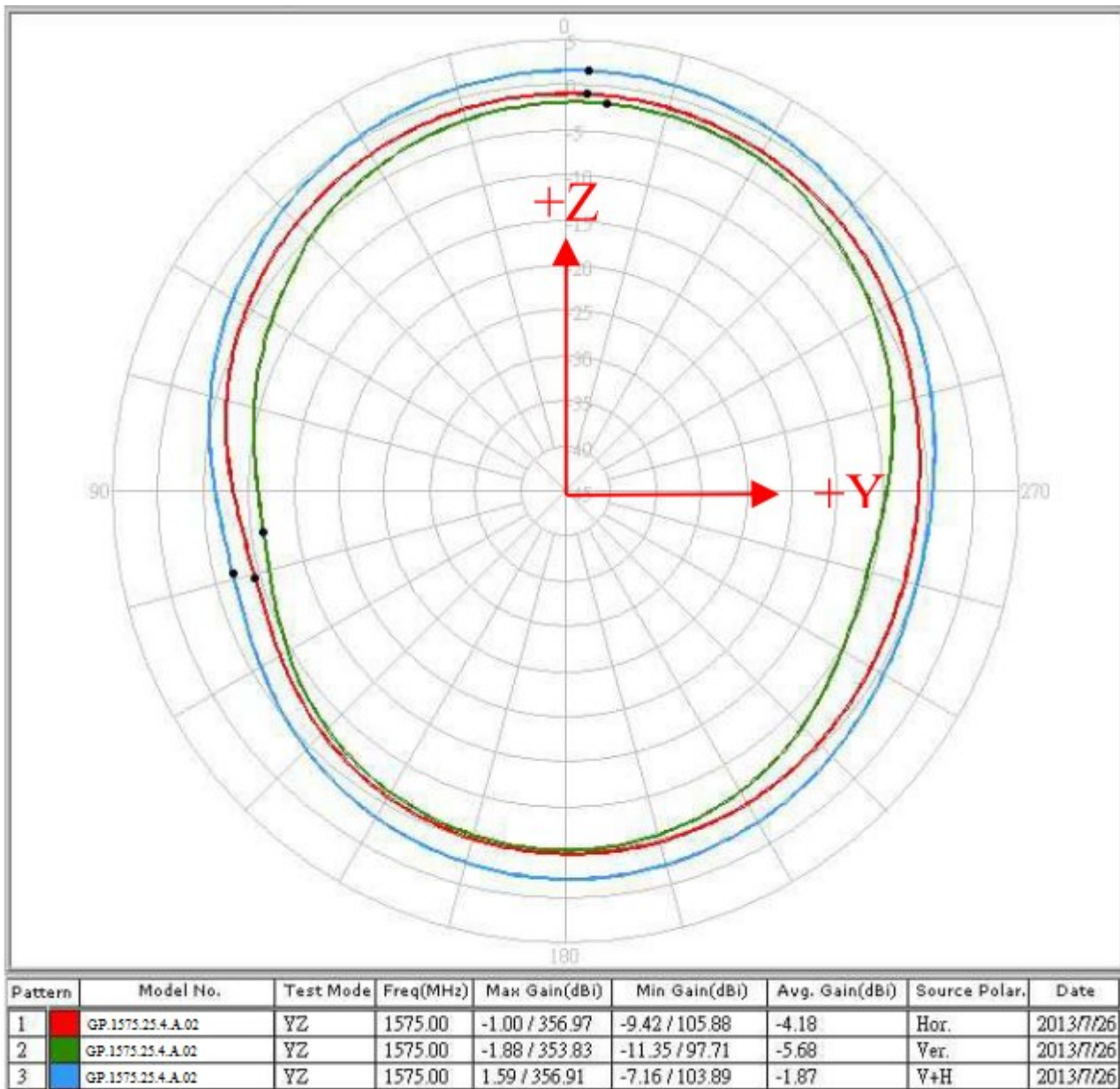
YZ-Plane



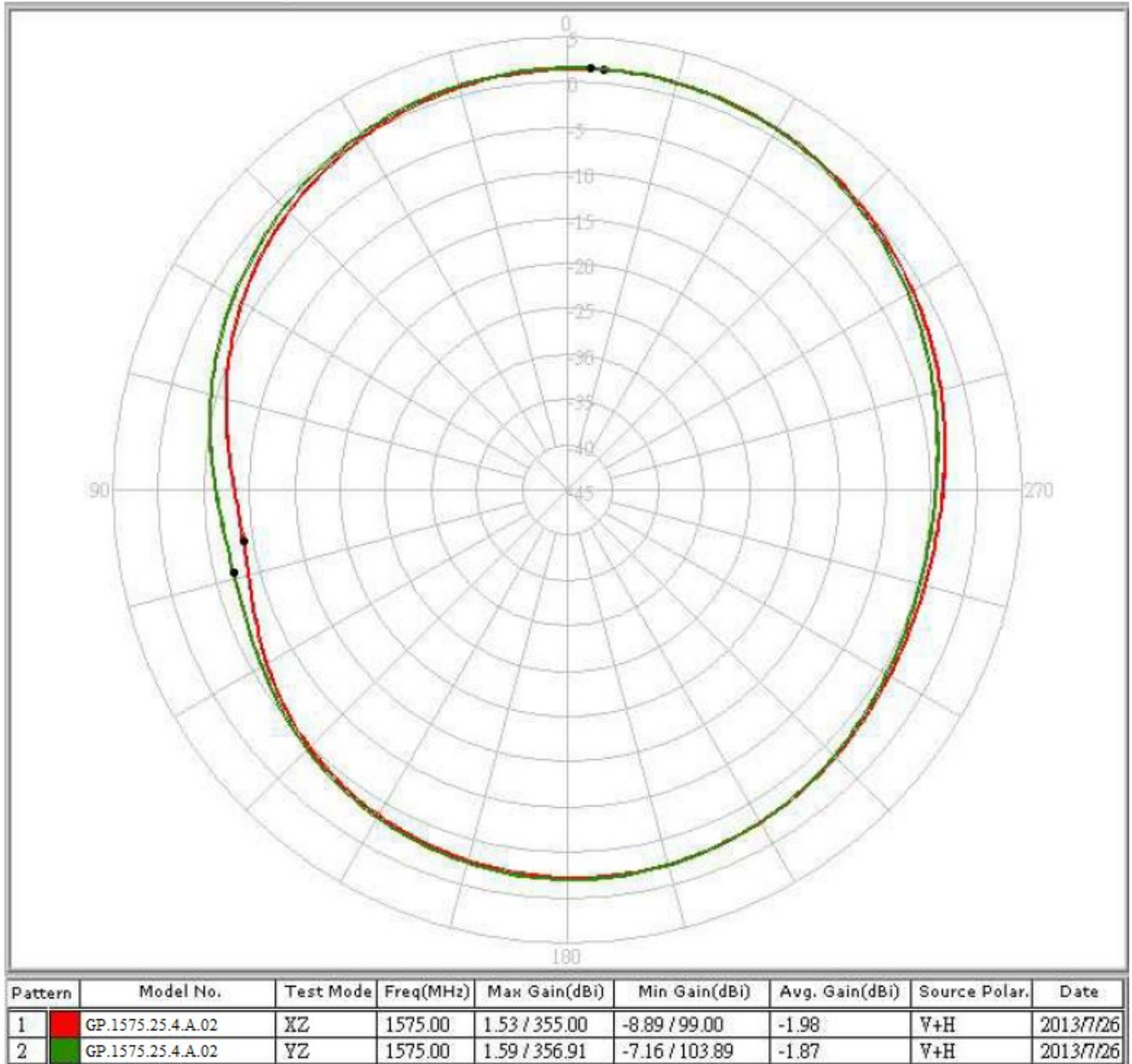
4.1 XZ Patterns



4.2 YZ Patterns



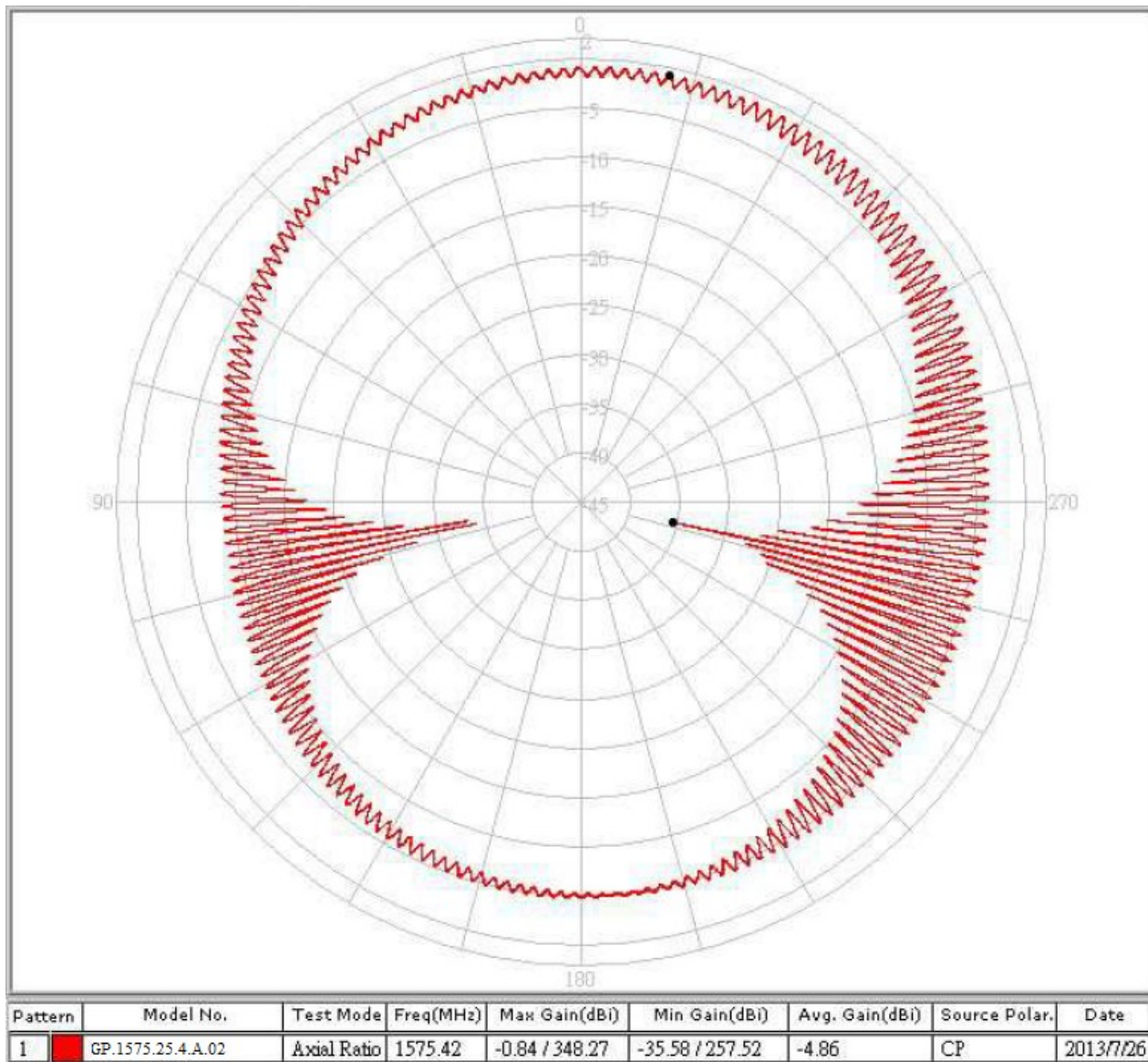
5. Gain Pattern Value



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)

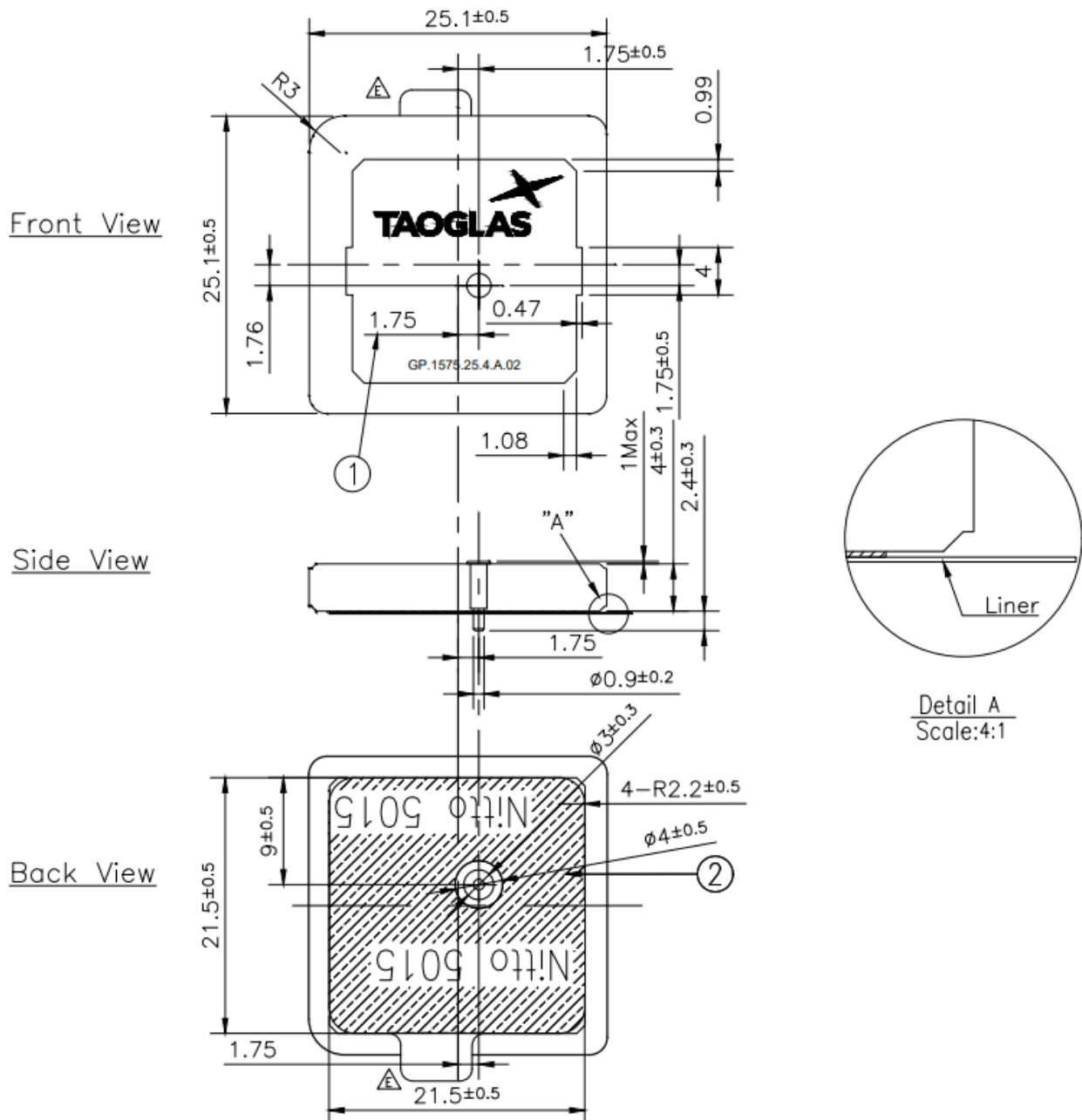
6. Axial Ratio Pattern



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)

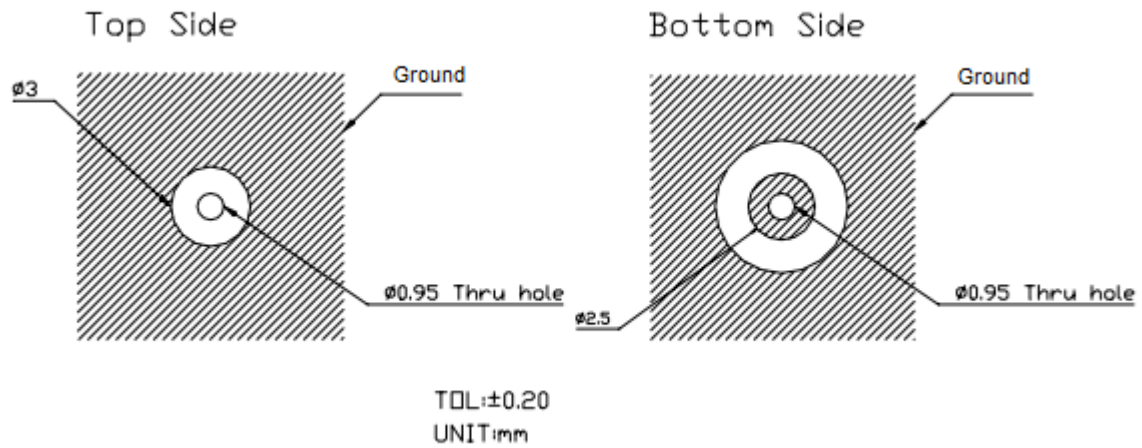
7. 2D Mechanical Drawing



	Name	P/N	Material	Finish	QTY
1	GP.1575 Patch 25x25x3mm	0015148020000A	Ceramic	Clear	1
2	Double Sided Adhesive	0015148020000A	NITTO 5015	White Liner	1

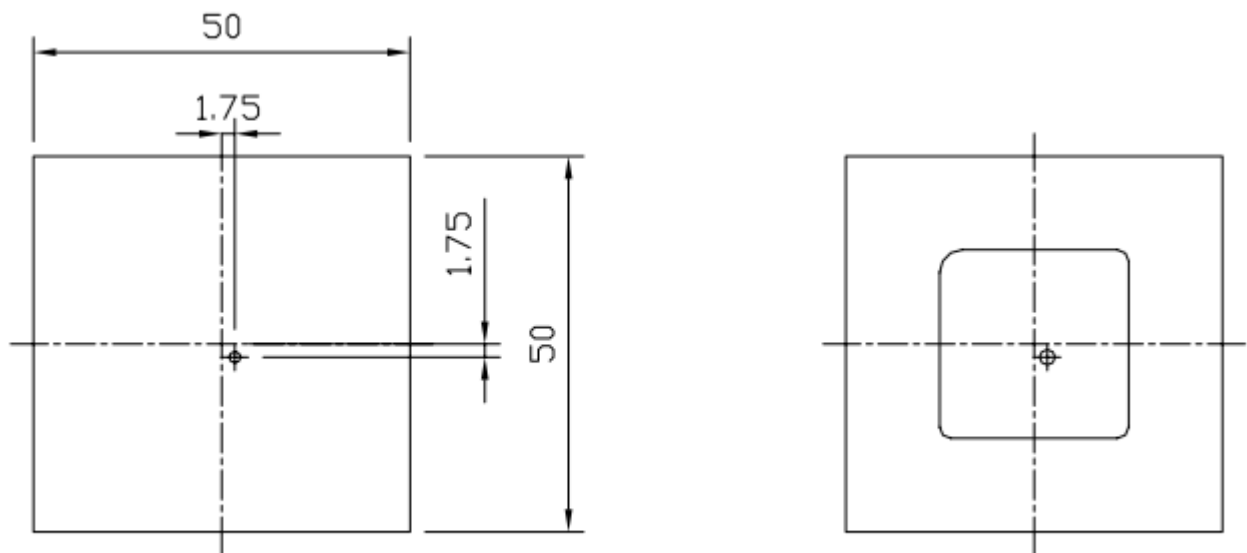
APPROVED BY: Paul	 TW Design Centre This drawing and its inherent design concepts are property of Taoglas. Not to be copied or given to third parties without the written consent of Taoglas.			
CHECK BY: Jack/Jason				
DRAWN BY: Paul	TITLE :GPS Ceramic Patch with Pin 25*25*4mm			
DATE: 2016/02/18	PART NO. GP.1575.25.4.A.02			
UNLESS OTHERWISE SPECIFIED TOLERANCES ON:	XX±0.5	X±0.3	X±0.2	XX±0.1
THIRD ANGLE PROJECTION	UNIT: mm	SCALE: 2:1	PAGES: 1/1	REV. E

7.1 Layout Dimension

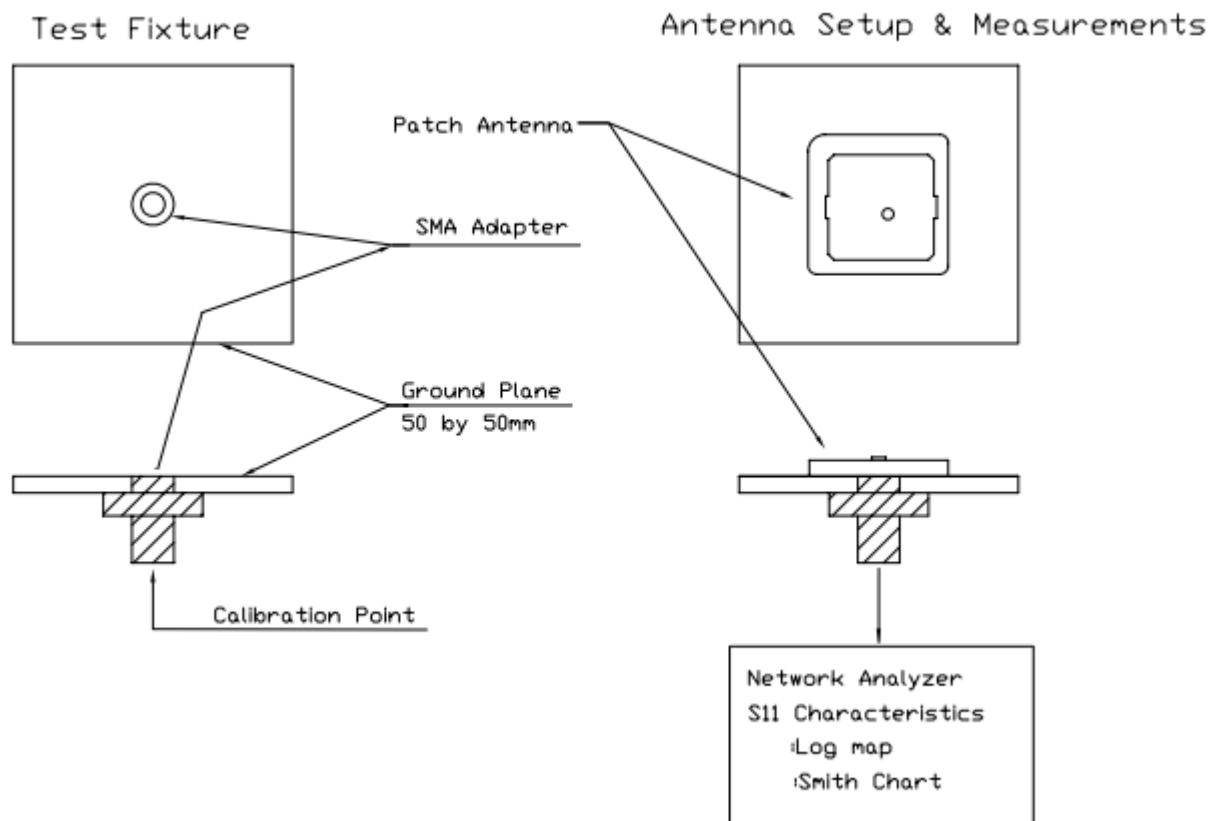


*Note Layout Dimensions may be affected by the thickness of the PCB

8. Test Jig and Dimension



8.1 Test Fixture Antenna Setup and Measurements

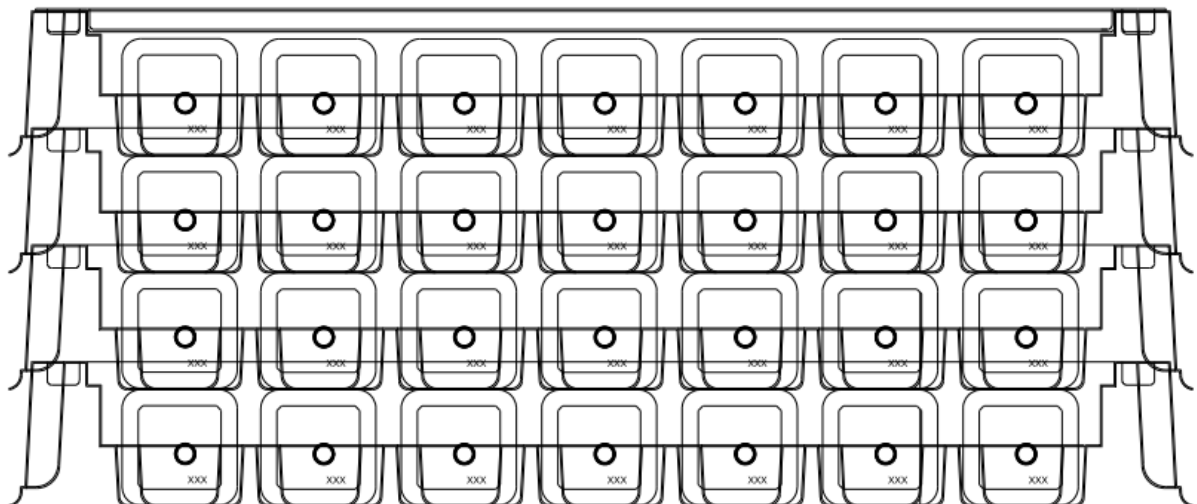
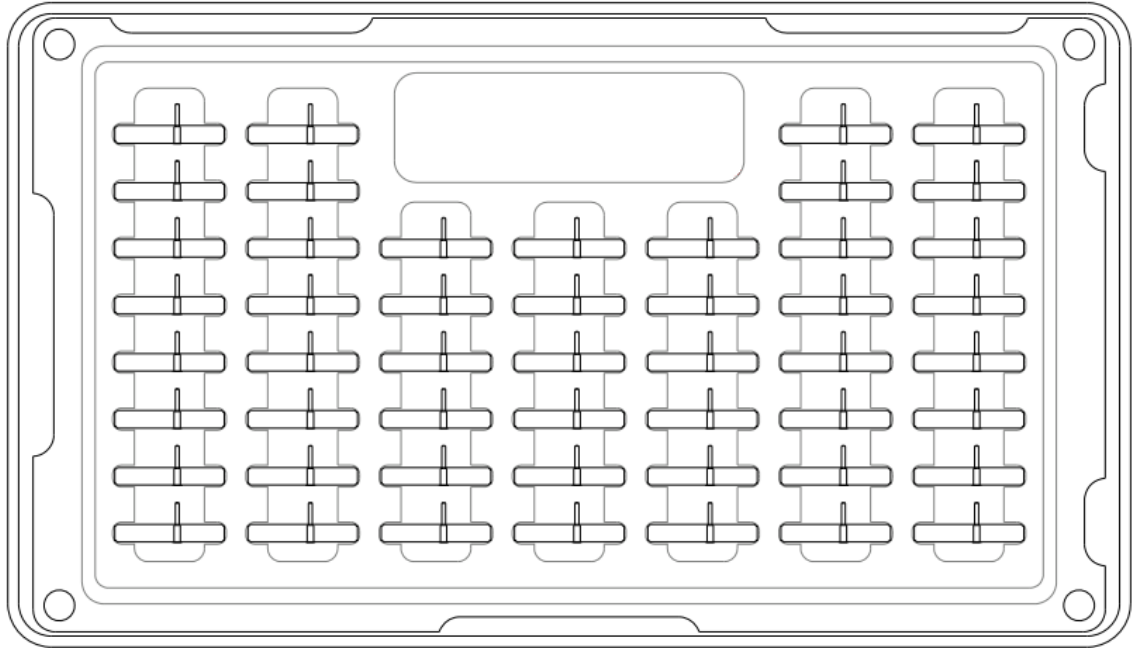


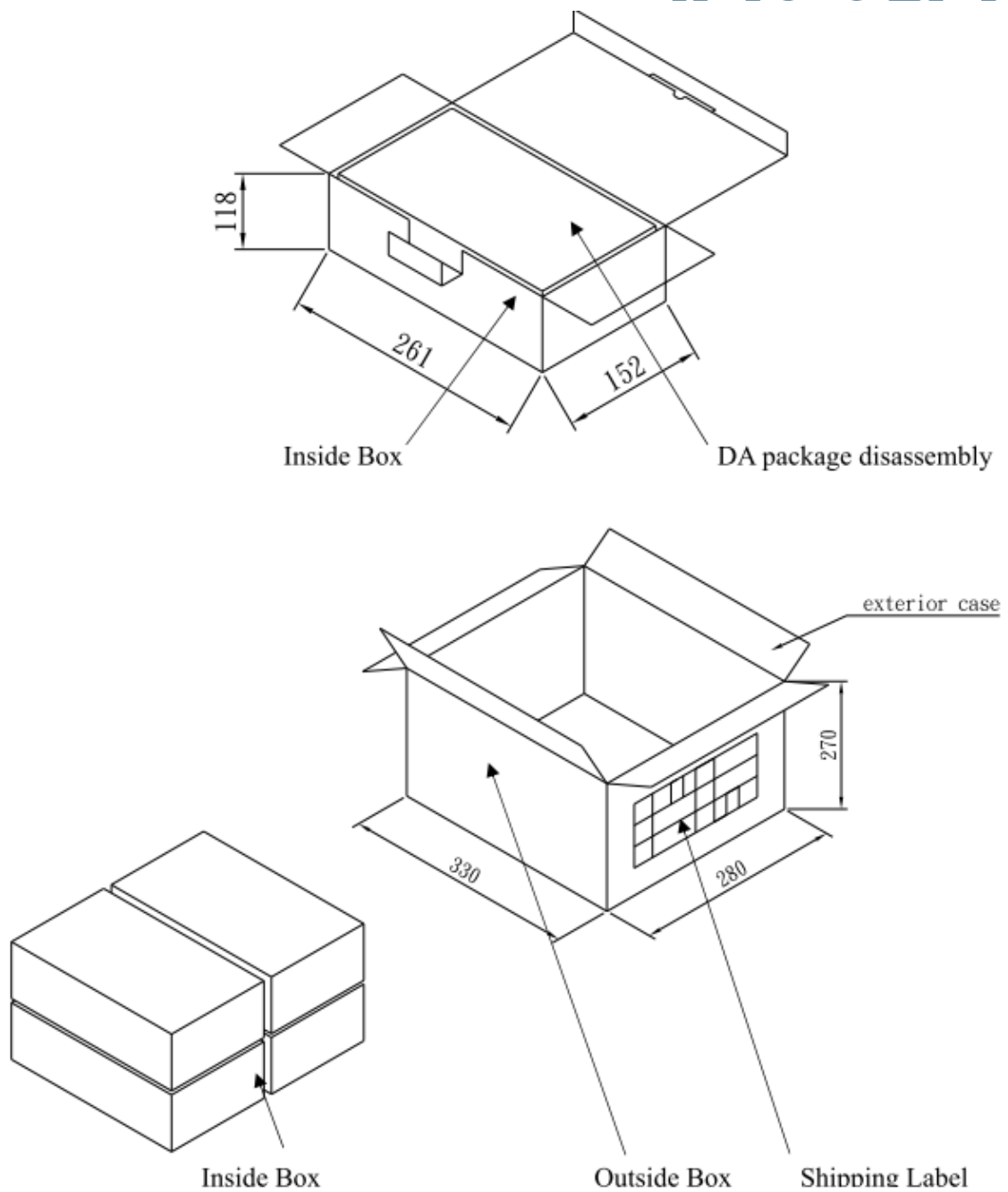
9. Packaging

50 pieces per Tray

200 per Inner Carton

4 x 200 – 800 pieces per Outer Carton





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