

# SPECIFICATION

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

Product Name : GPS/Galileo Patch Antenna for 1575MHz

Features : Passive GPS/Galileo Patch Antenna  
Centre Frequency: 1575MHz  
Mounted with pin and adhesive tape  
Dimensions: 12mm\*12mm\*4mm  
**RoHS & 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 selected as optimal solution for the customer device environment.

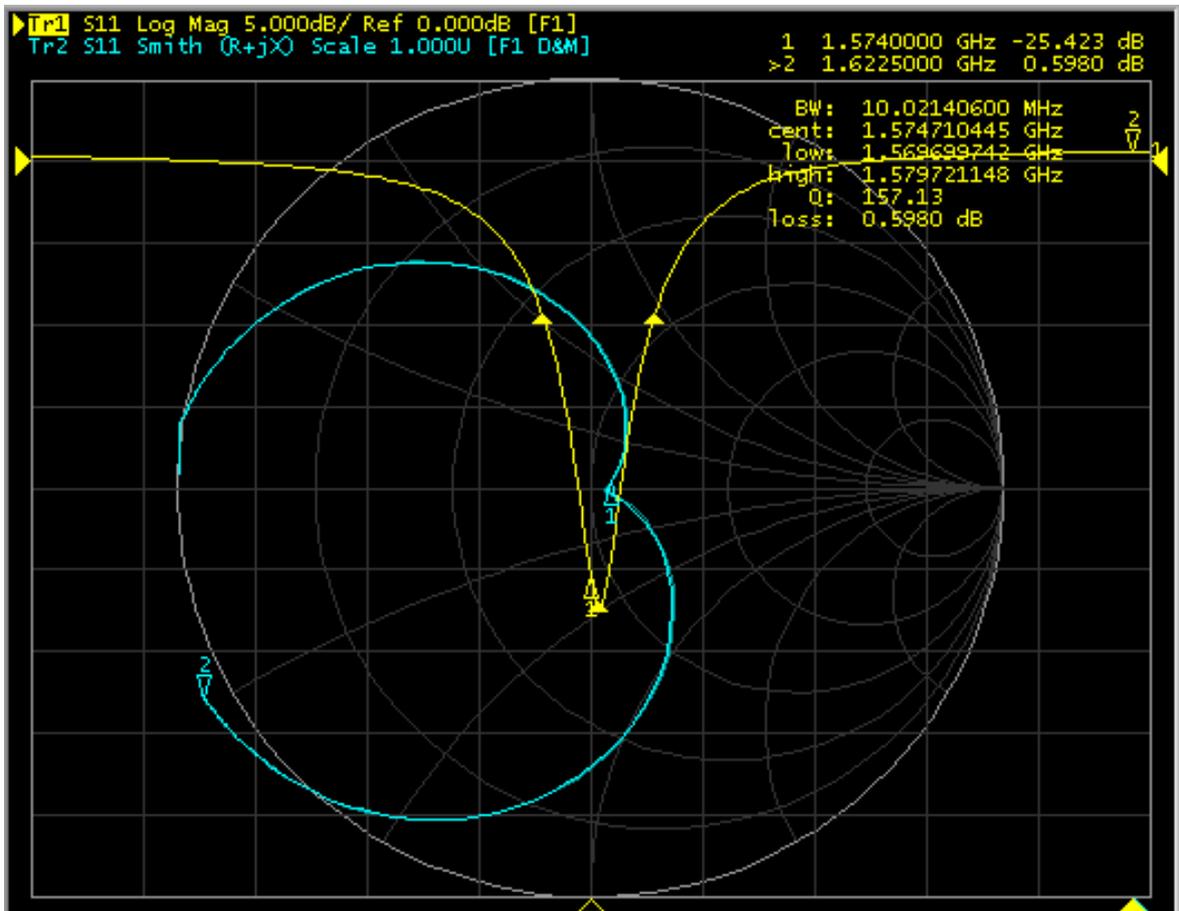
## 2. Specification Table

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

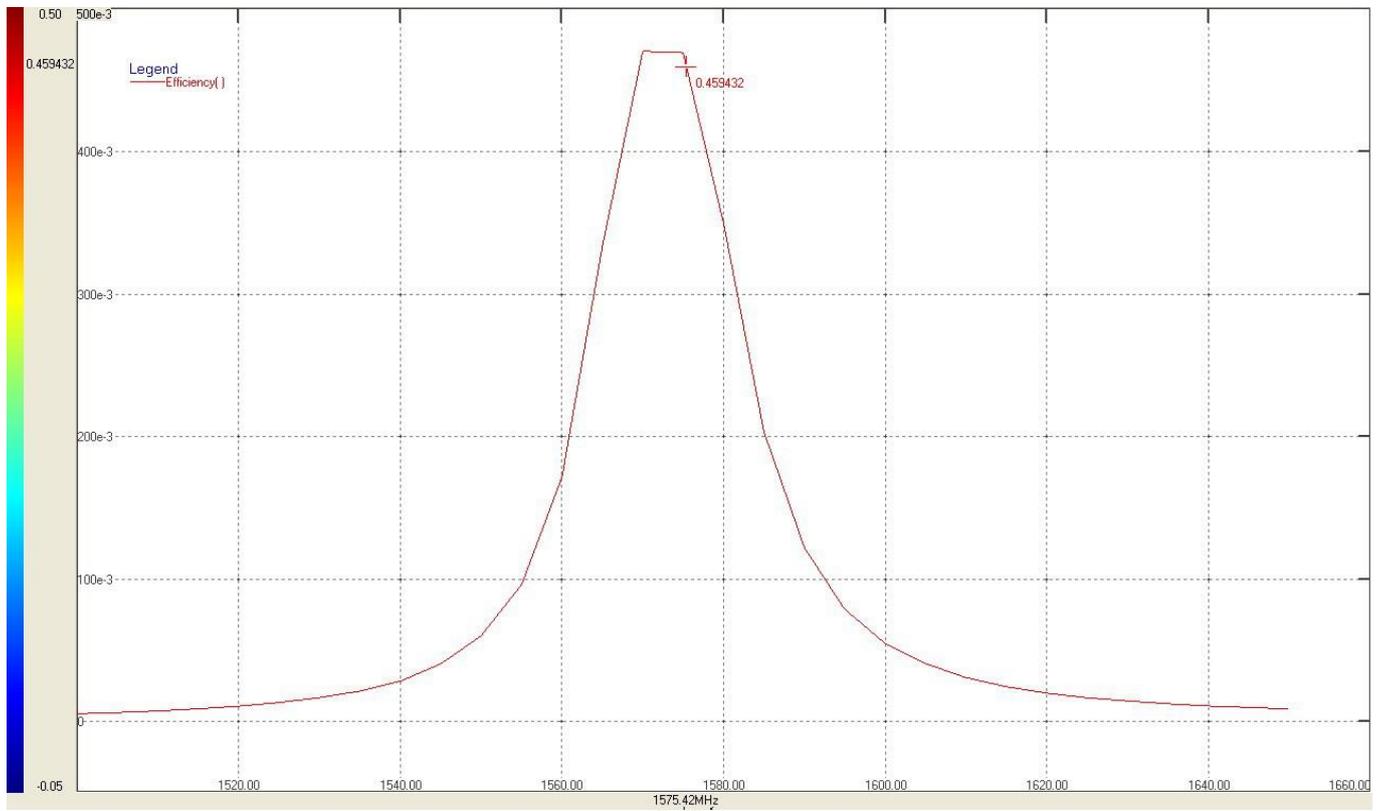
No	Parameter	Specification
1	Center Frequency	1575MHz +/- 3MHz
2	Impedance	50Ω
3	Bandwidth	8MHz min Return Loss <-10dB
4	VSWR	2
5	Gain toward Zenith	-0.5 dBic typ. Center Frequency
6	Gain at 10°Elevation	-----
7	Axial Ratio	4dB Max.
8	Polarization	Right Hand Circular Polarization
9	Frequency Temperature Coefficient ( τf )	0 ± 20ppm/°C
10	Operating Temperature	-40°C to +85°C

## 3. Electrical Specifications

### 3.1 Smith Chart

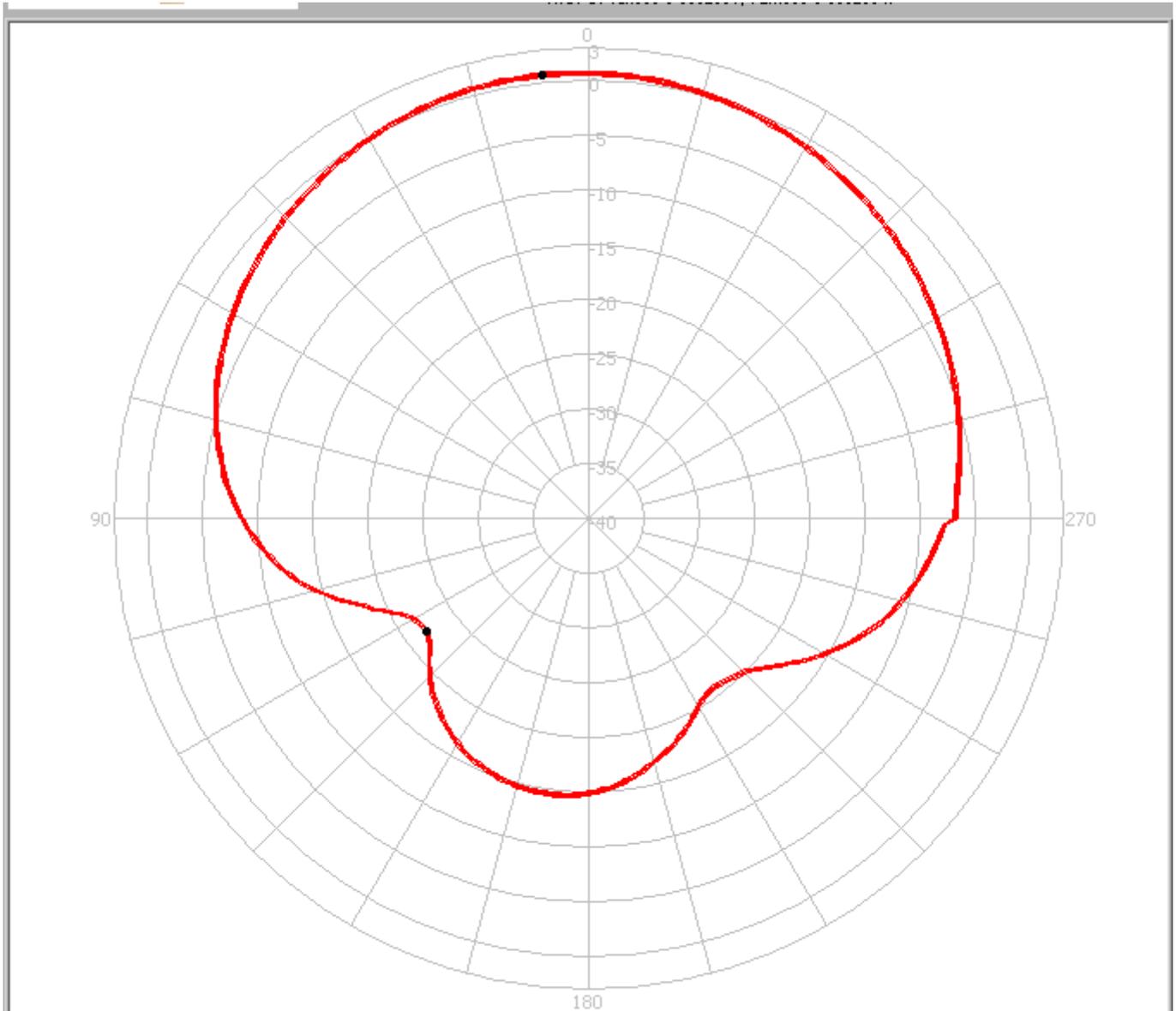


### 3.2 Efficiency



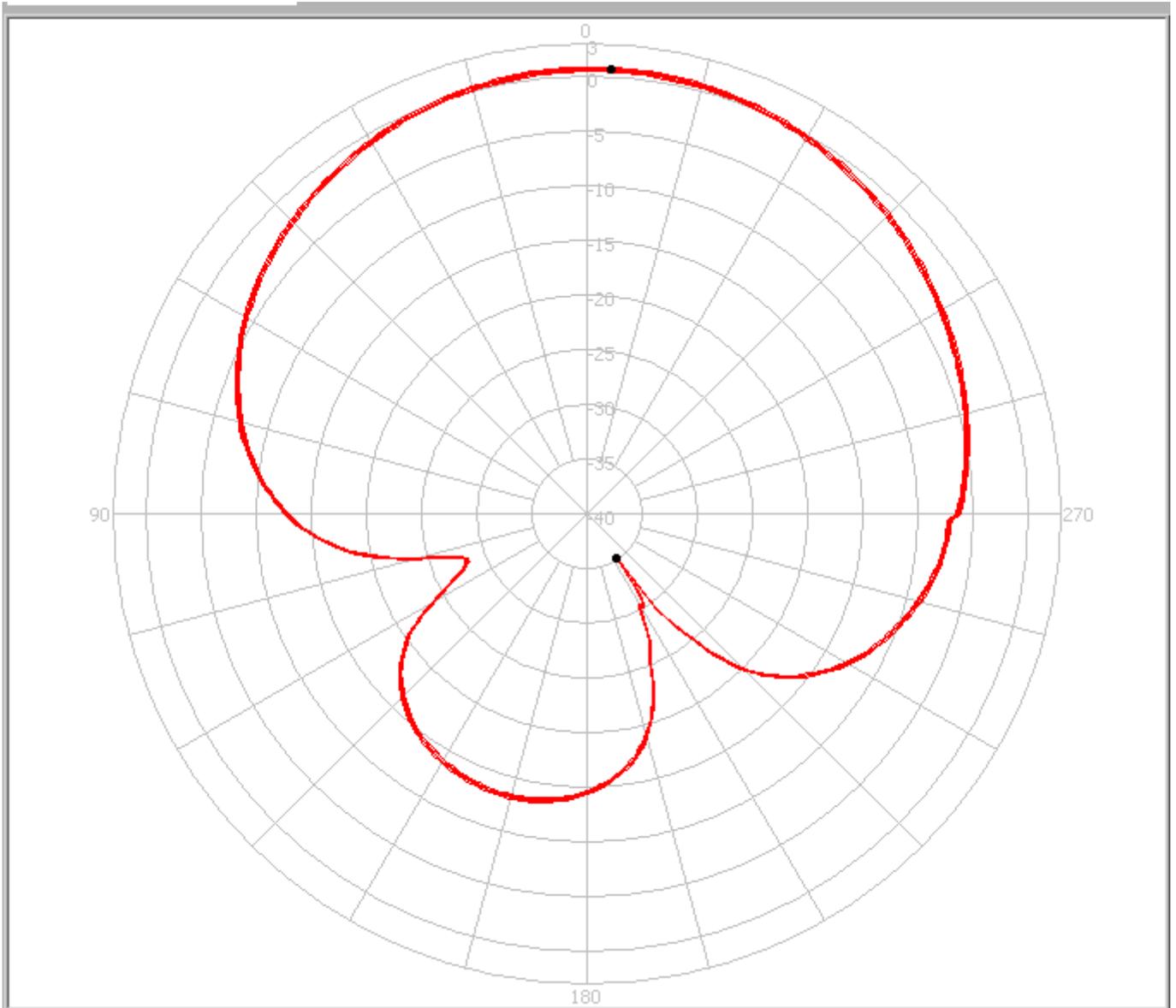
## 4. 2D Radiation Patterns

### 4.1 XZ Plane Radiation



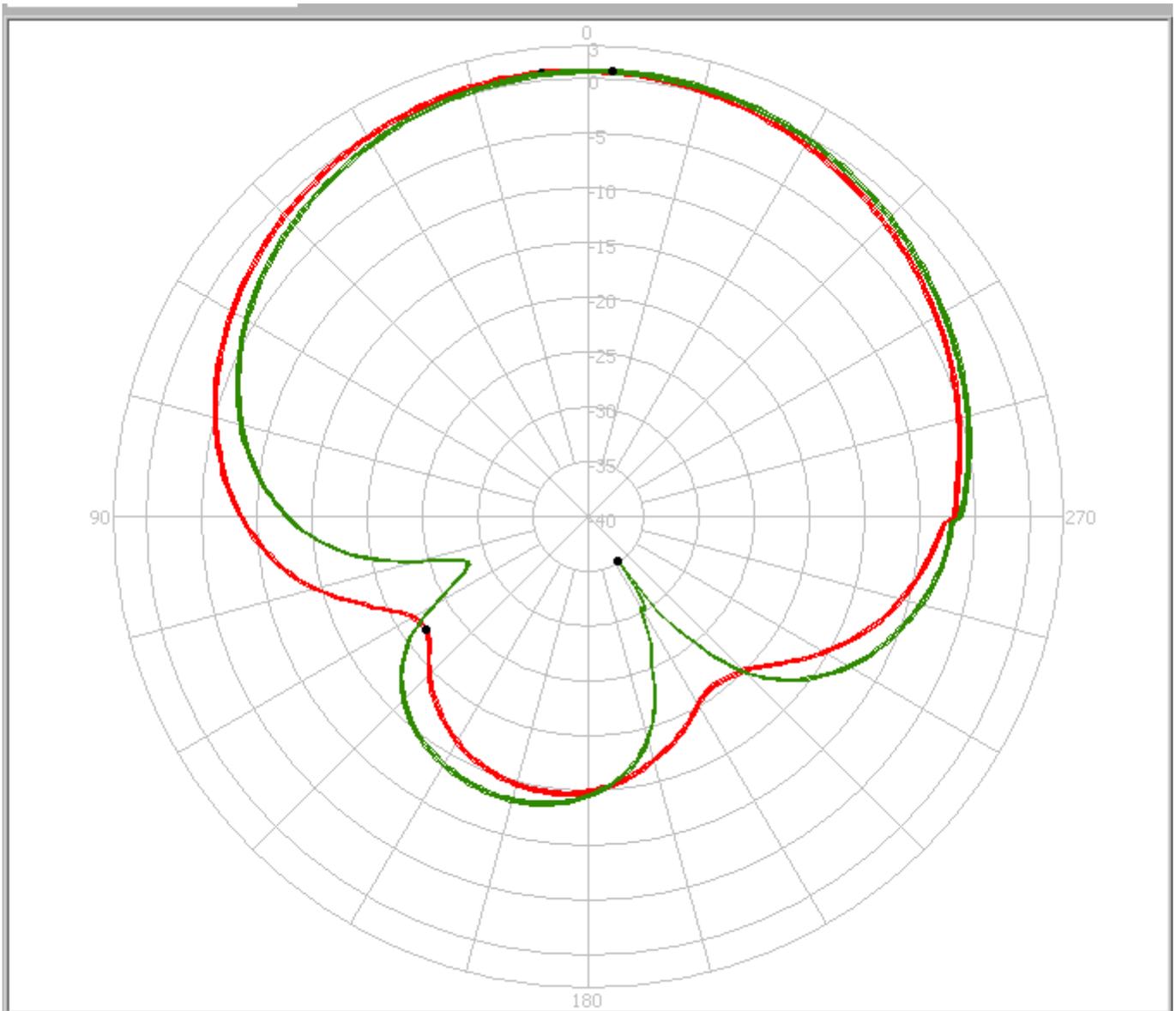
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	DA12	XZ	1575.42	0.70 / 6.00	-22.04 / 125.00	-4.37	RHCP	2010/3/11

## 4.2 YZ Plane Radiation



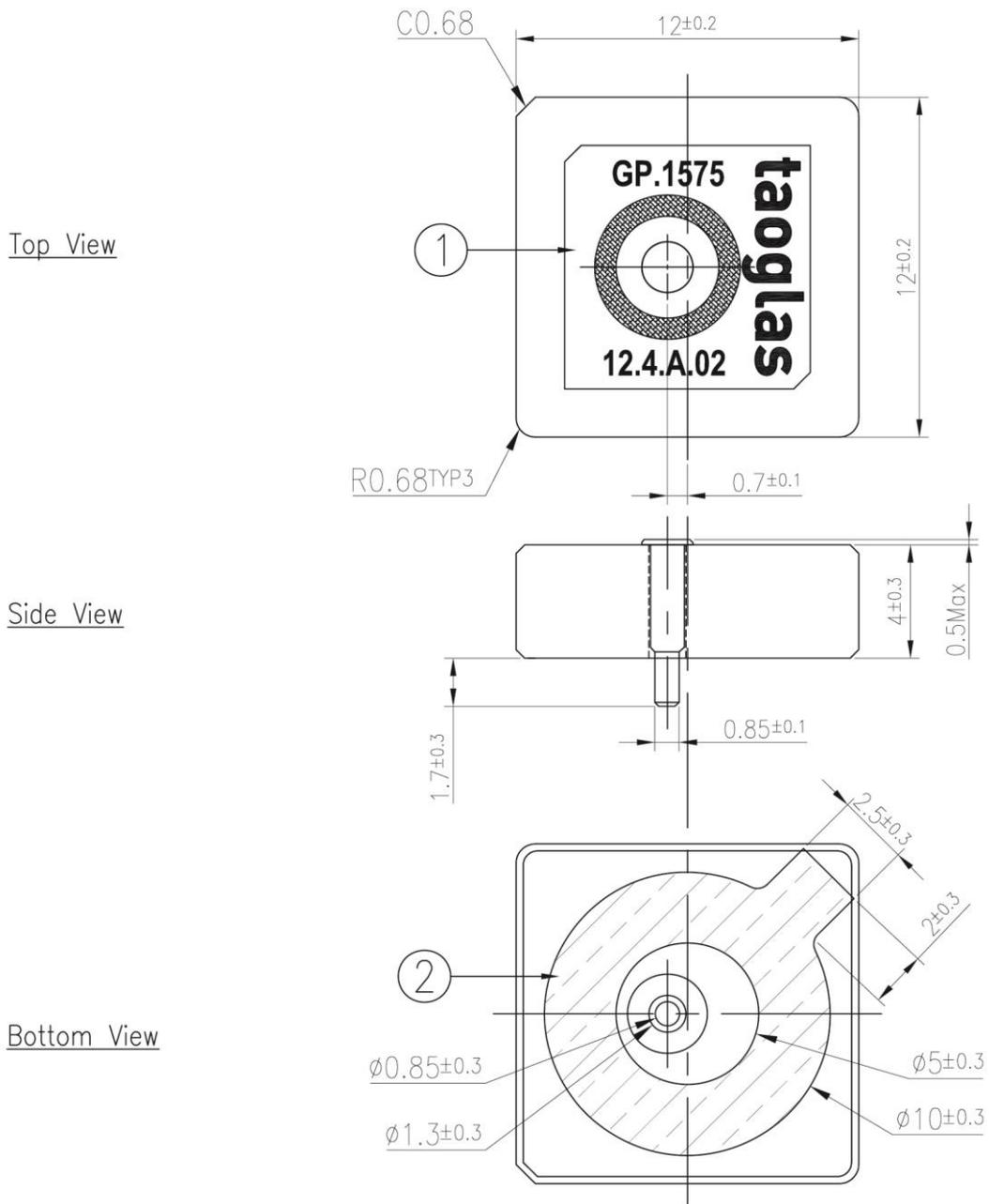
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	DA12	YZ	1575.42	0.65 / 357.00	-35.14 / 214.00	-4.50	RHCP	2010/3/11

### 4.3 XY Plane Radiation



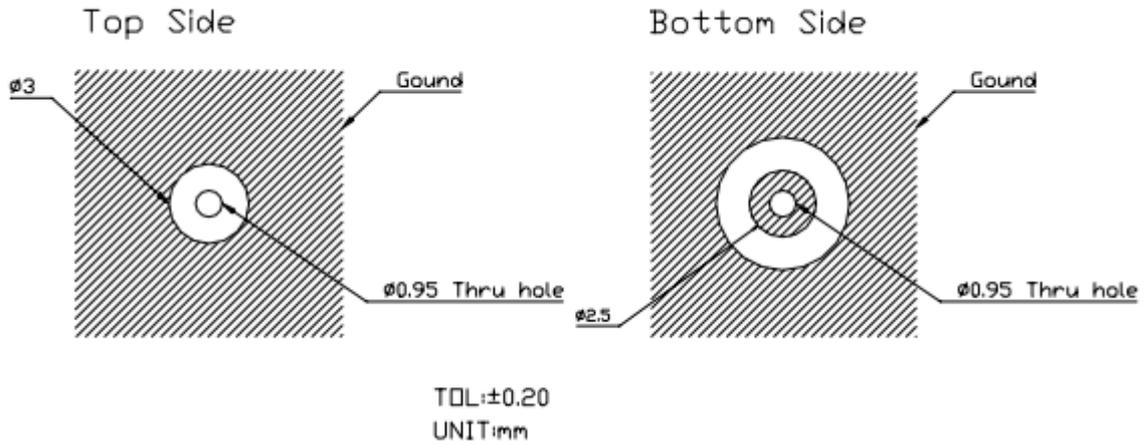
Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	DA12	XZ	1575.42	0.70 / 6.00	-22.04 / 125.00	-4.37	RHCP	2010/3/11
2	DA12	YZ	1575.42	0.65 / 357.00	-35.14 / 214.00	-4.50	RHCP	2010/3/11

## 5. Mechanical Drawing



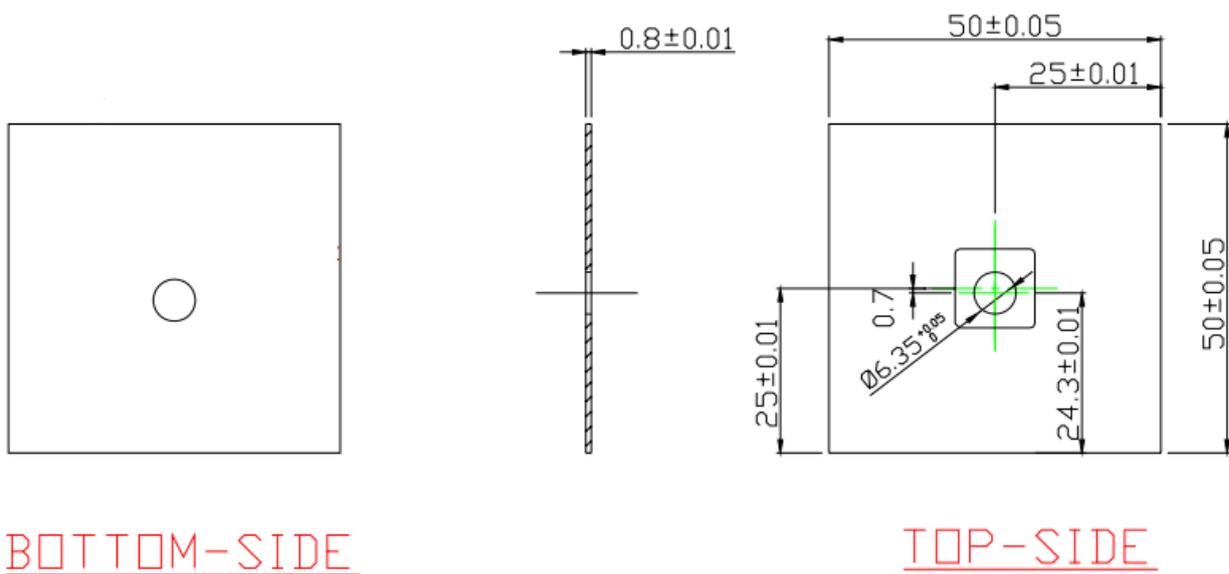
	Name	Material	Finish	QTY
1	GP.1575 Patch(12X12X4)	Ceramic	Clear	1
2	Double sided Adhesive	Tesa 4972	White Liner	1

## 5.1 Layout Dimension

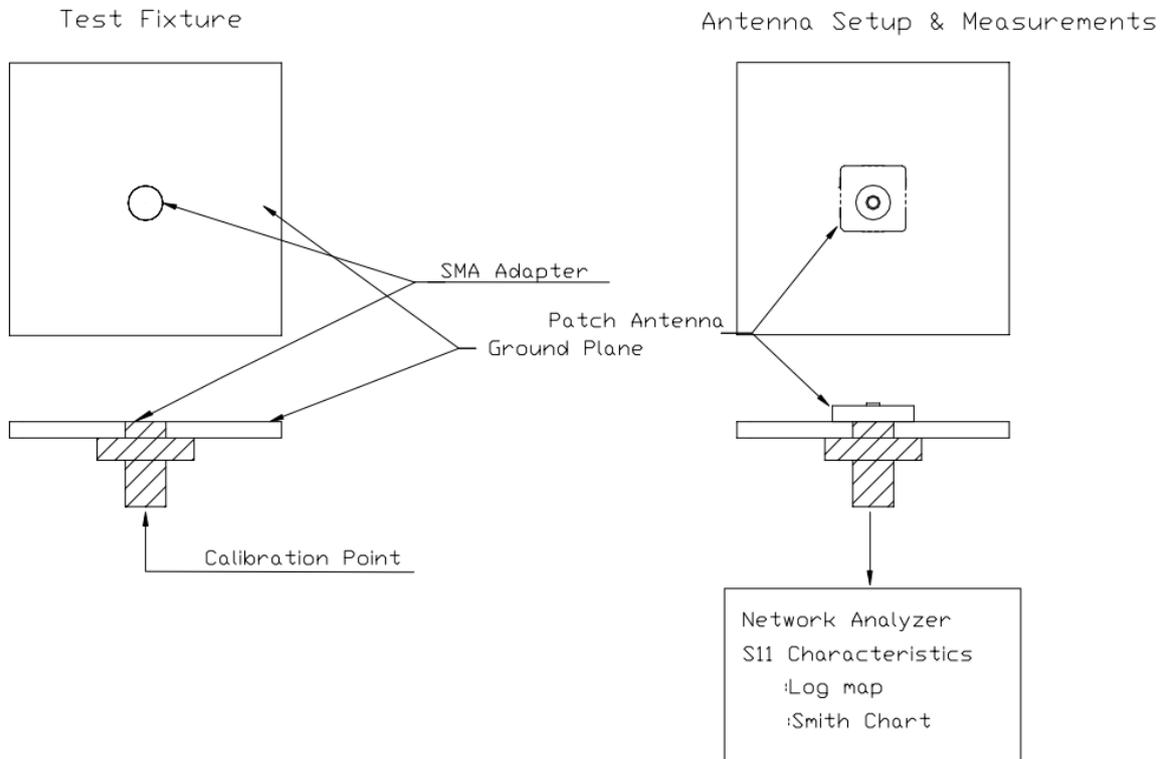


\*Note Layout Dimensions may be affected by the thickness of the PCB

## 6. Test Jig and Dimension

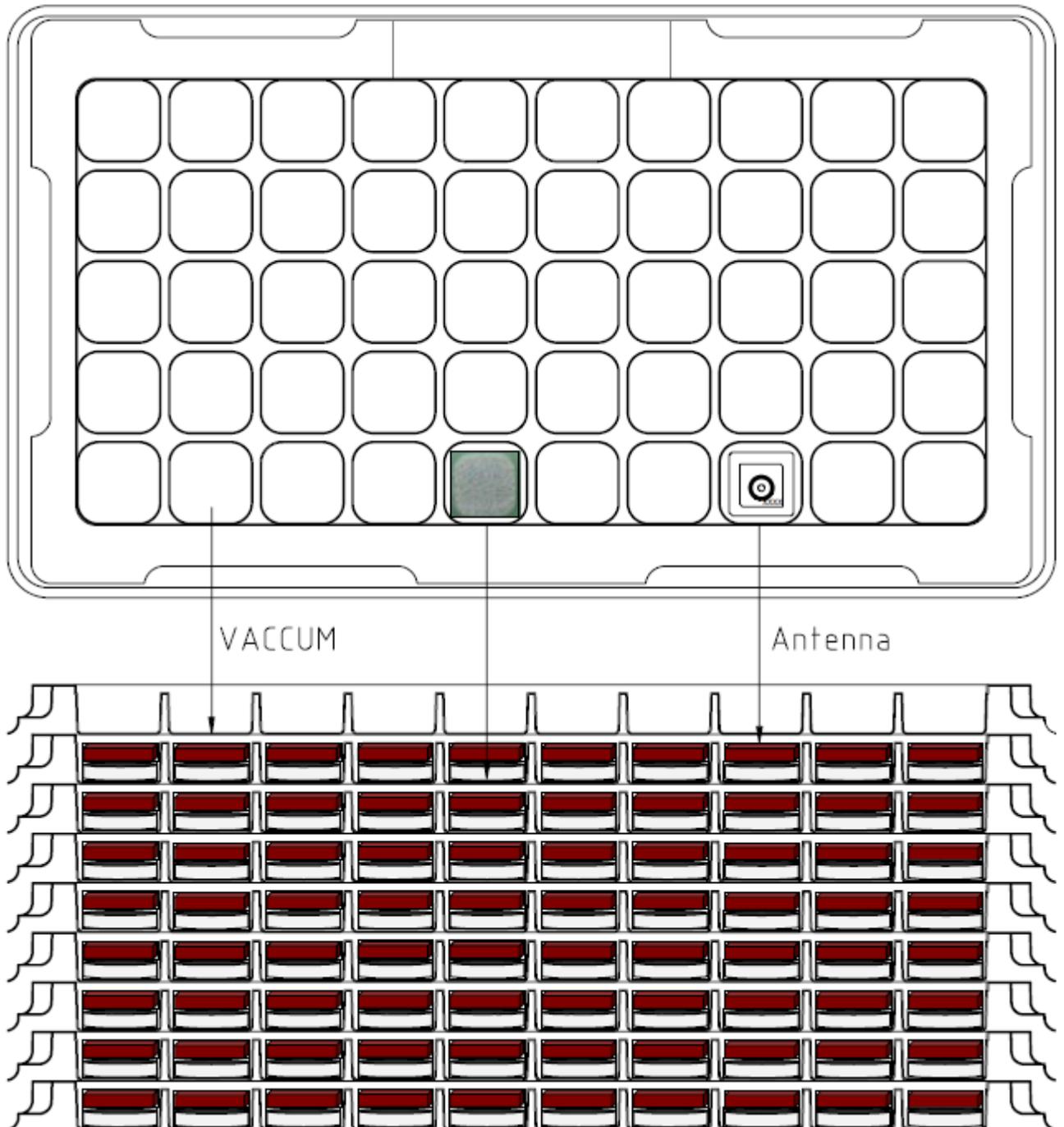


## 6.1 Test Fixture Antenna Setup and Measurements

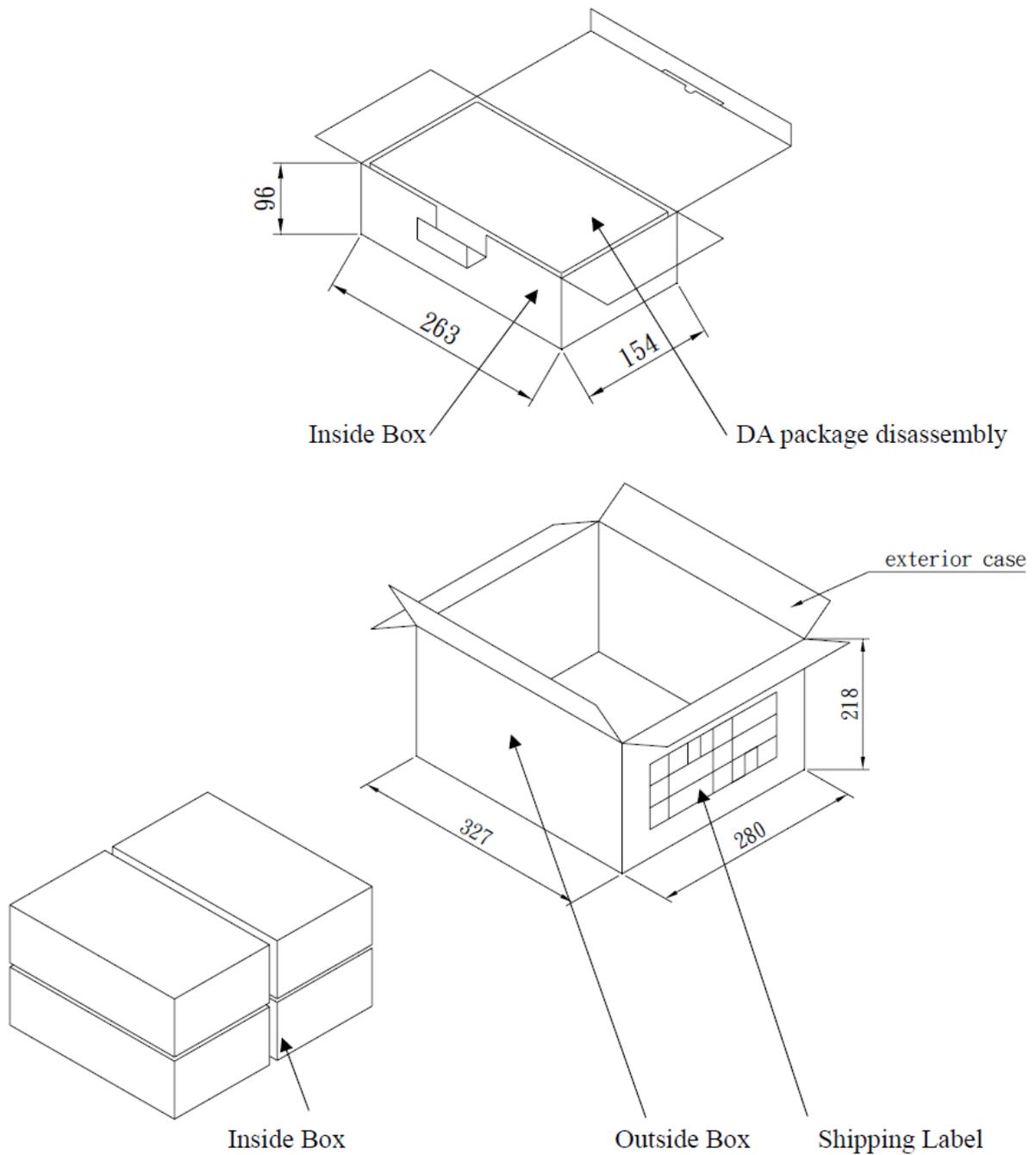


## 7. Packaging

Pieces per Inner Carton: 400



## Packing



Taoglas makes no warranties based on the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Taoglas reserves all rights to this document and the information contained herein.

Reproduction, use or disclosure to third parties without express permission is strictly prohibited.

© Taoglas