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## SPECIFICATION

Part No. : **GP.1575.35.3.A.02**

Specification No : **GP.35A**

Product Name : **3.5mm thick GPS Patch Antenna, 1575MHz**

Features : 35mm\*35mm\*3.5mm  
ROHS Compliant

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## 1. Introduction

This 35\*35mm ceramic GPS patch antenna is based on smart *XtremeGain*<sup>™</sup> technology. It is mounted via pin and double-sided adhesive and has been tuned as the optimal solution for the customer device environment.

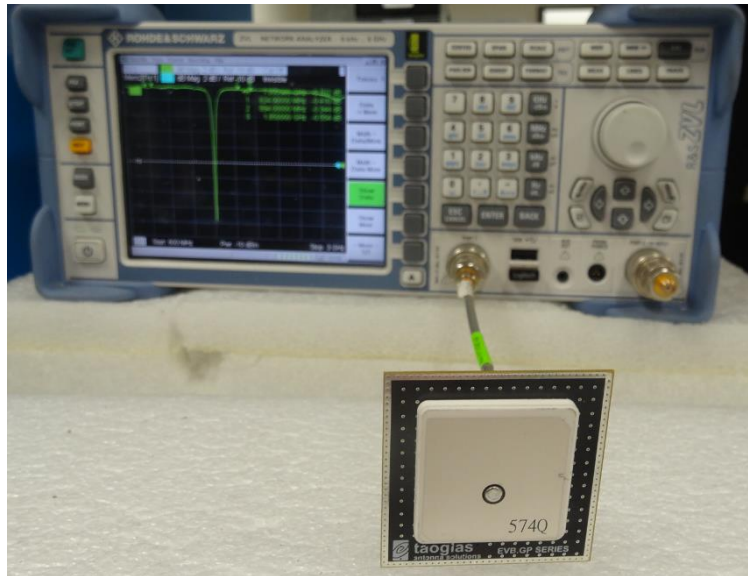
## 2. Key Antenna Performance Indicators

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

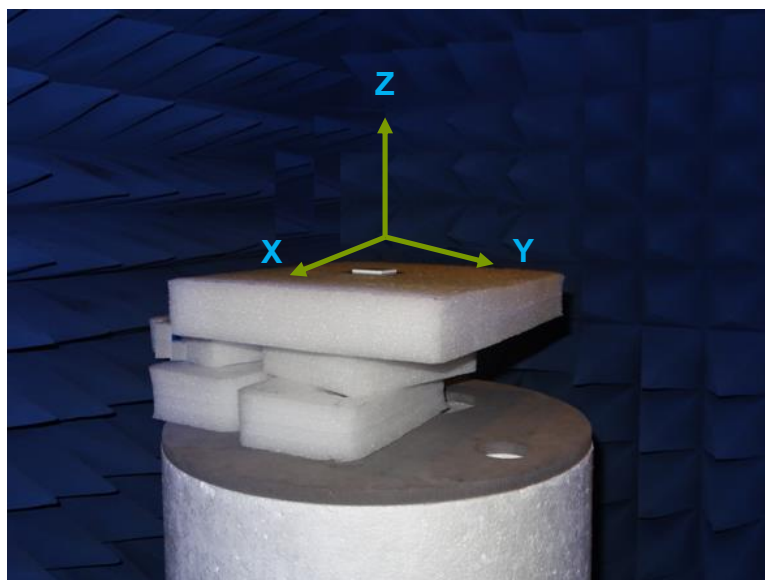
No	Parameter	Specification
1	Center Frequency	1575MHz ± 6MHz
2	Bandwidth	22MHz min
3	VSWR	1.5 max
4	Gain at Zenith	2.0 dBic typ.
5	Gain at 10°elevation	1.5dBic typ.
6	Axial Ratio	3 dB max
7	Polarization	RHCP
8	Impedance	50 Ohms
9	Frequency Temperature Coefficient ( $\tau_f$ )	0 ± 20ppm / °C
10	Operating Temperature	-40°C to +85°C



### 3. TEST SET UP



**Figure 1.** Return Loss measurement.



**Figure 2.** Peak gain, average gain, efficiency and radiation pattern measurements.

## 4. ANTENNA PARAMETERS

### 4.1. Return Loss

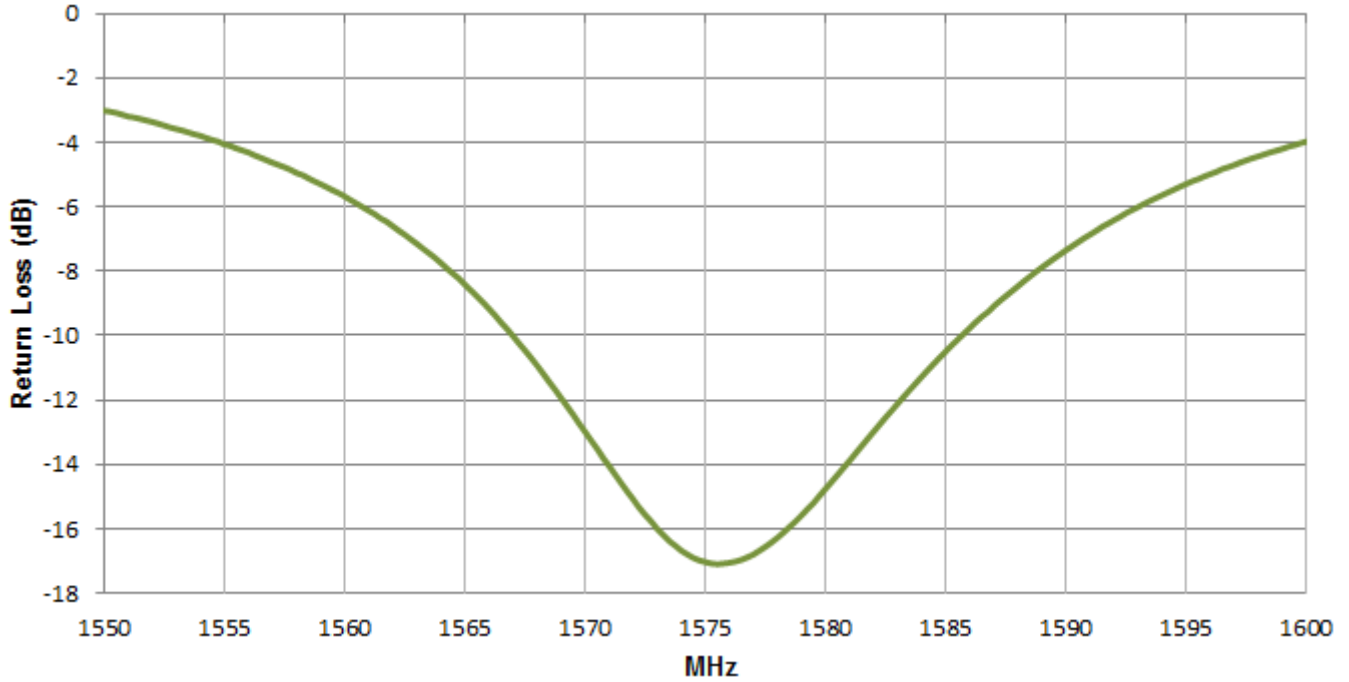


Figure 3. Return Loss of the GP.1575.35.A.02

### 4.2. VSWR

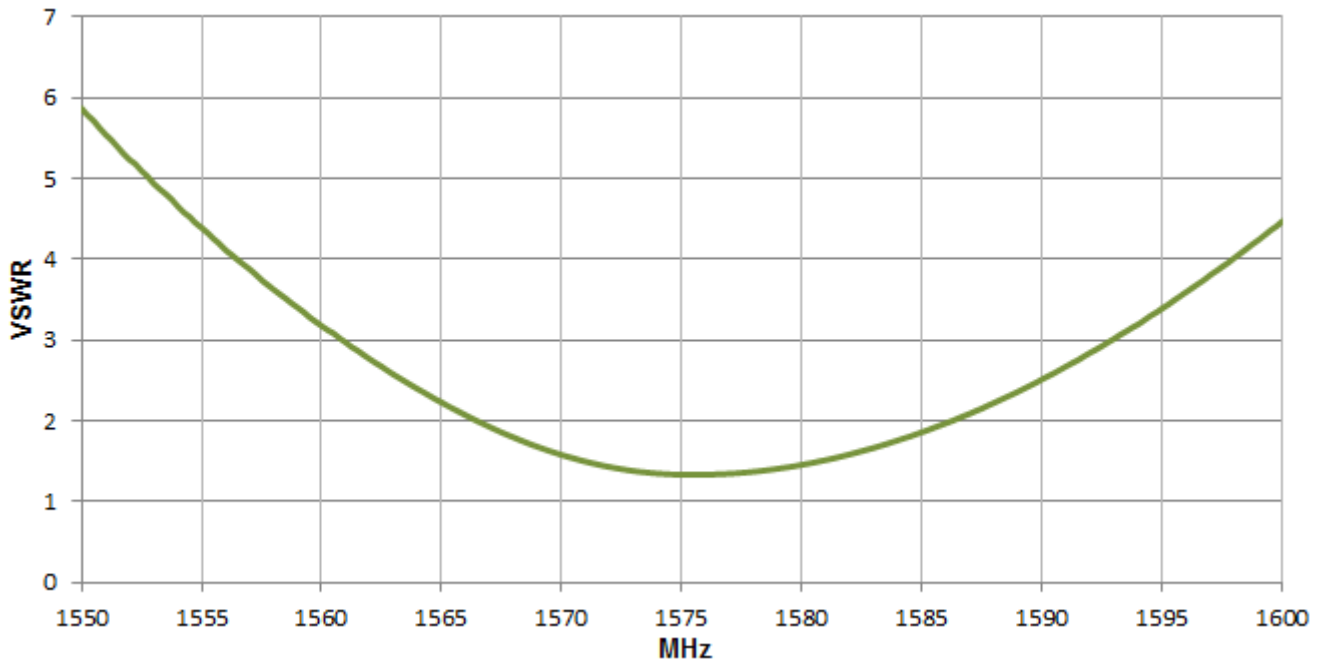
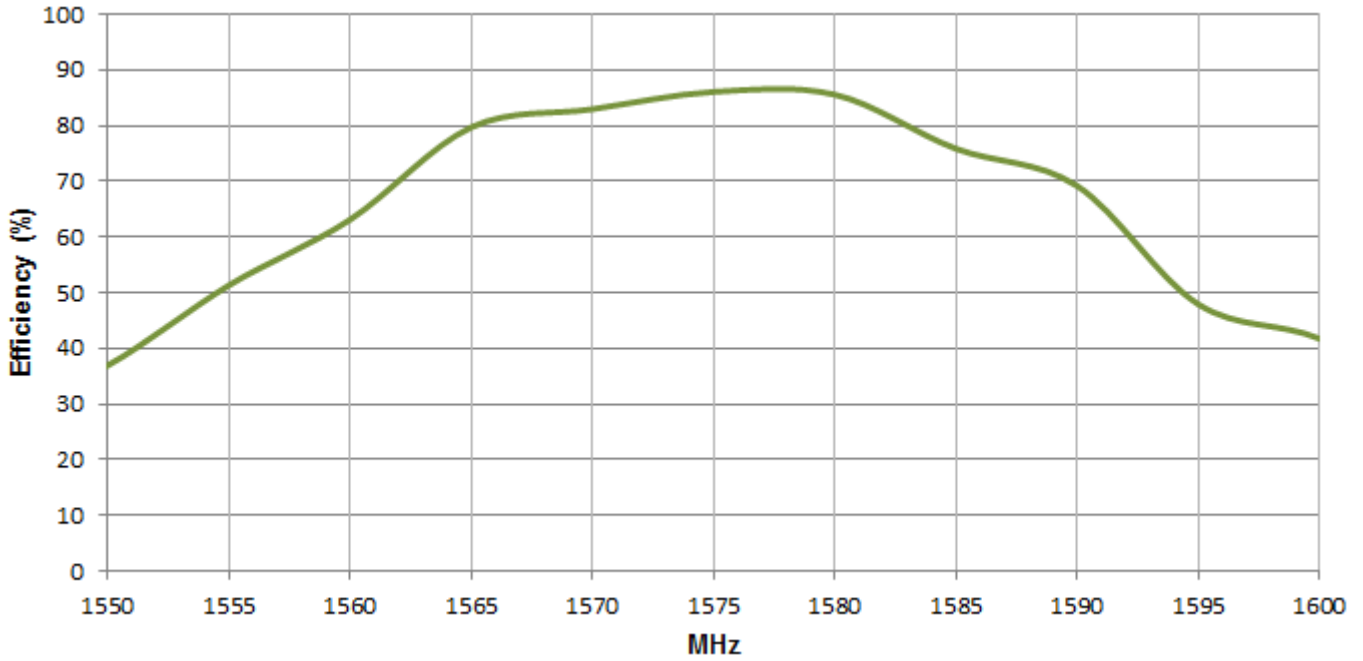


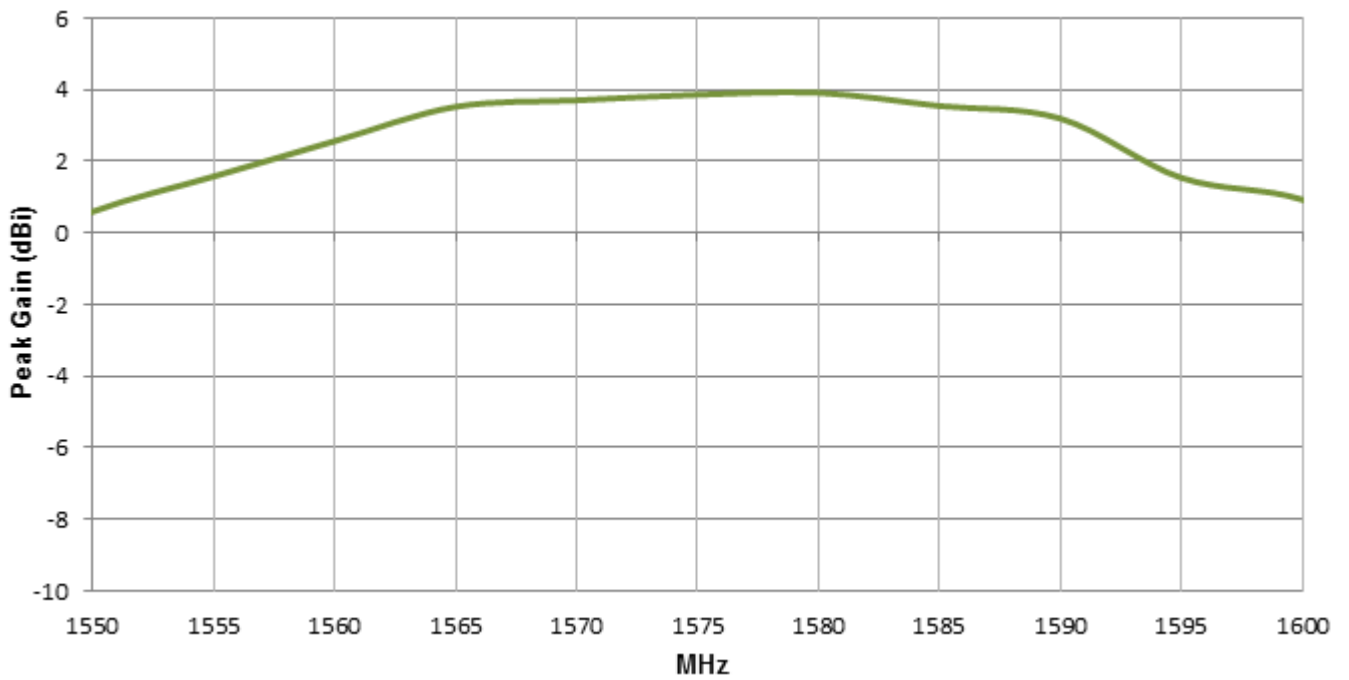
Figure 4. VSWR of the GP.1575.35.A.02

### 4.3. Efficiency



**Figure 5.** Efficiency of the GP.1575.35.A.02

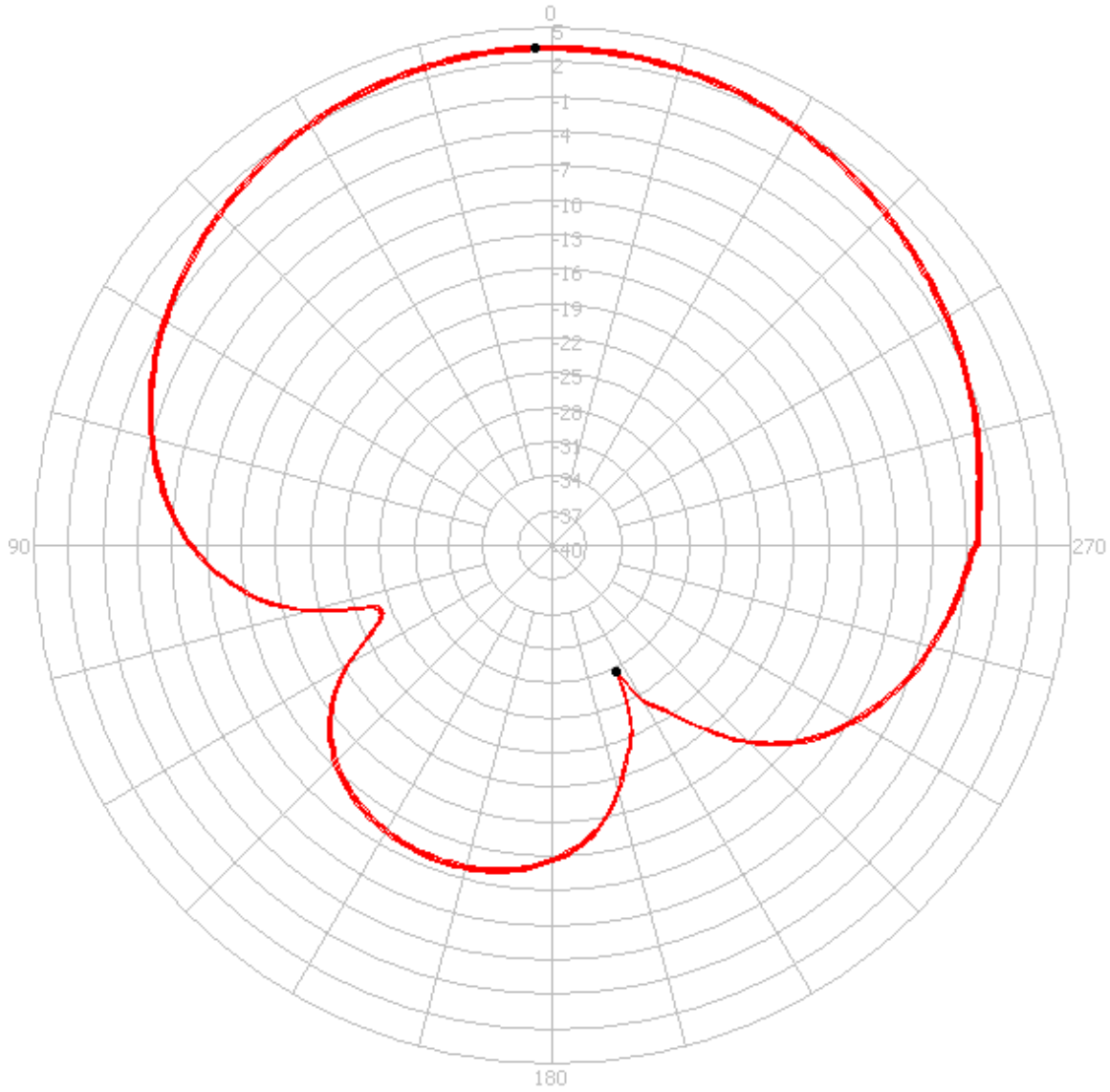
### 4.4. Peak Gain



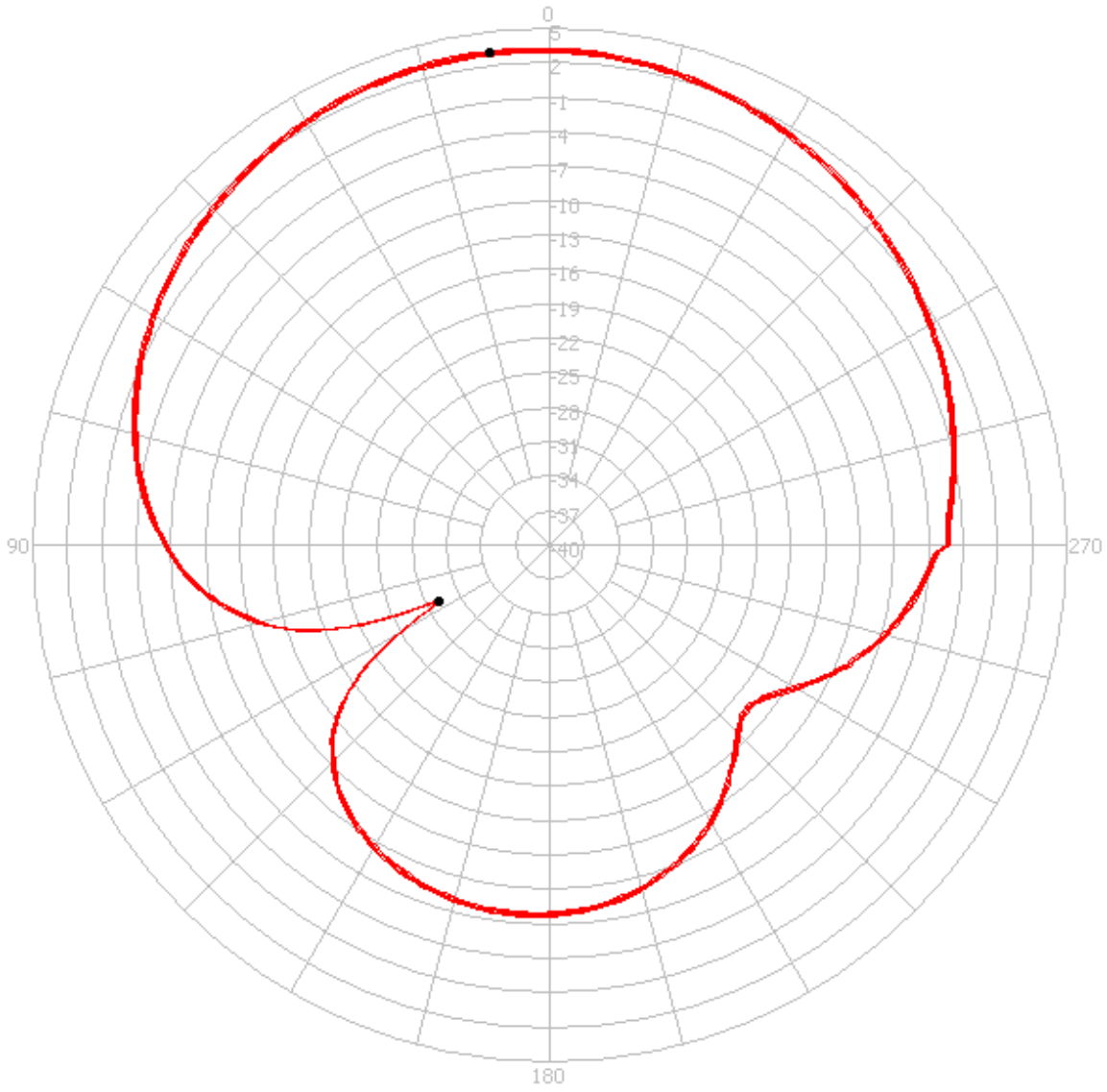
**Figure 6.** Peak Gain of the GP.1575.35.A.02.

## 5. 2D Radiation

### 5.1 XZ Plane Radiation

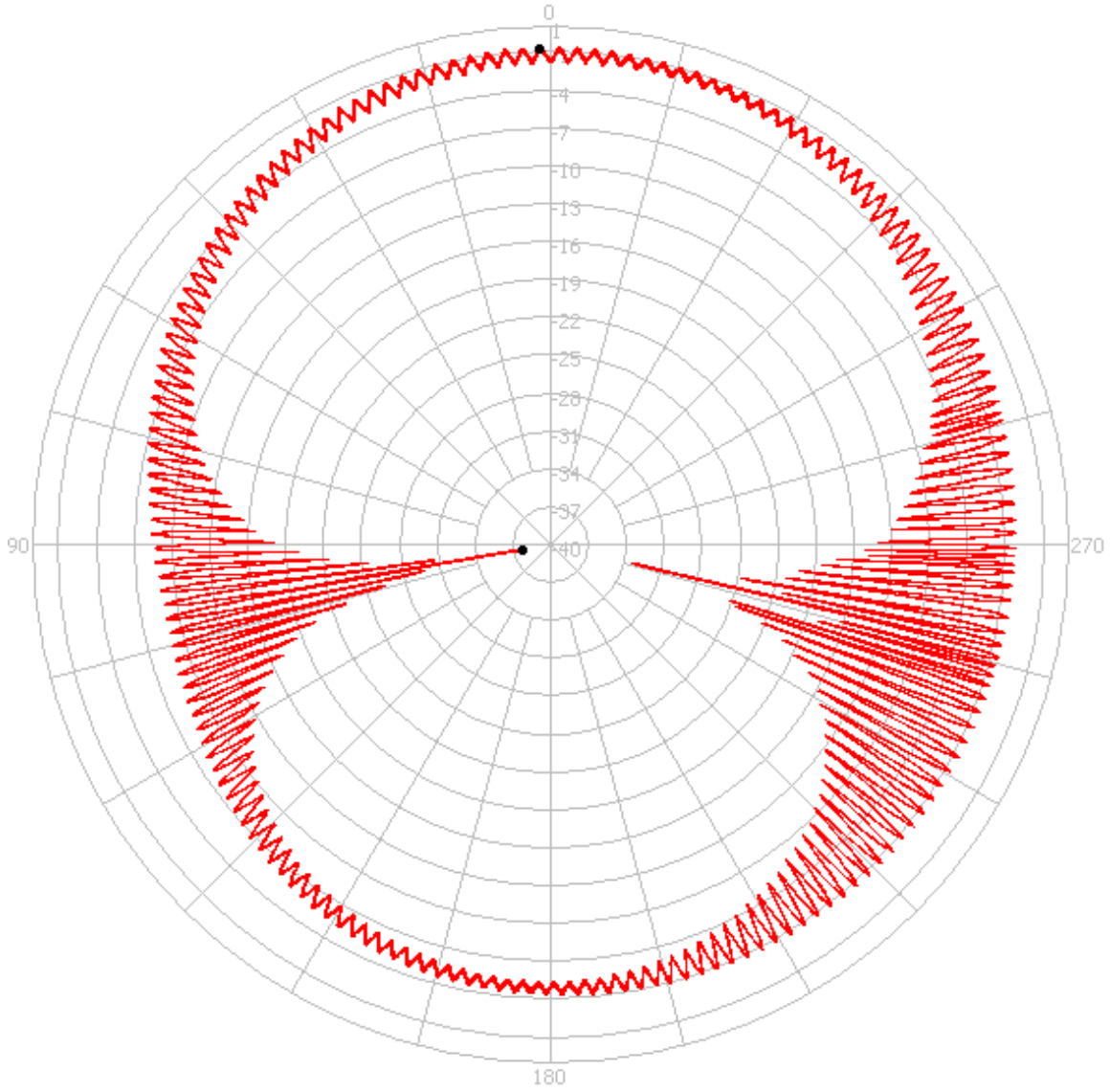


## 5.2 YZ Plane Radiation

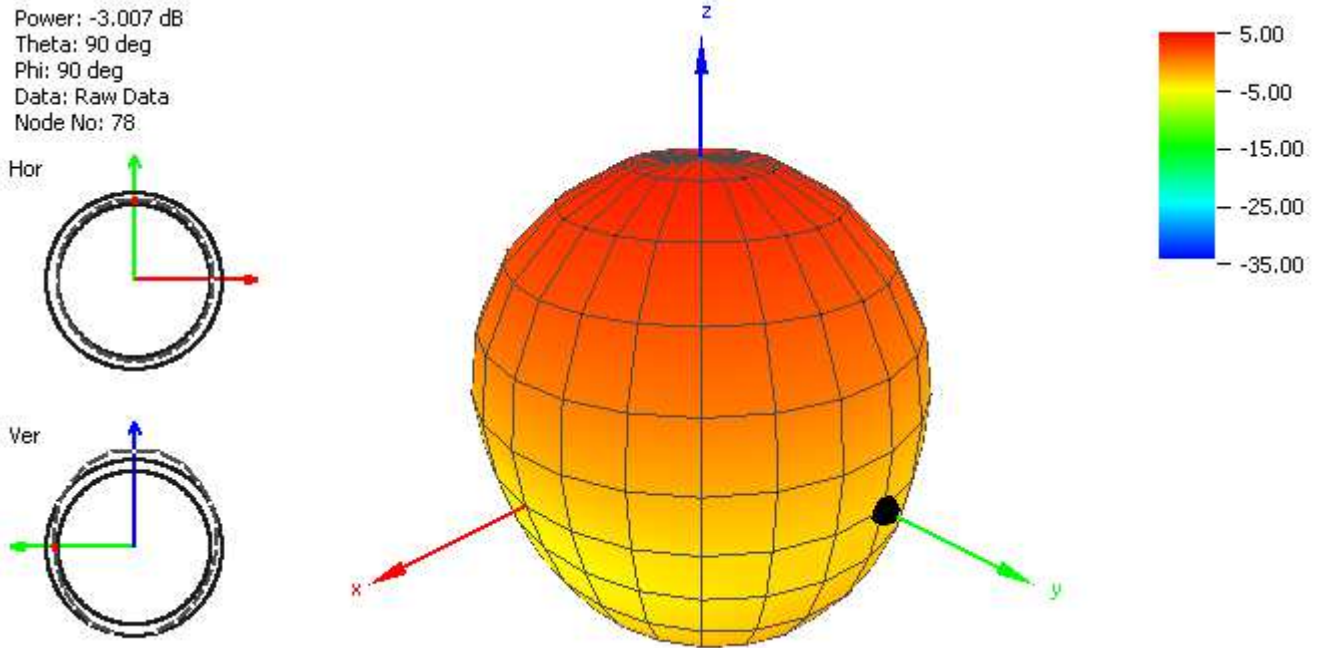




### 5.3 Axial Ratio

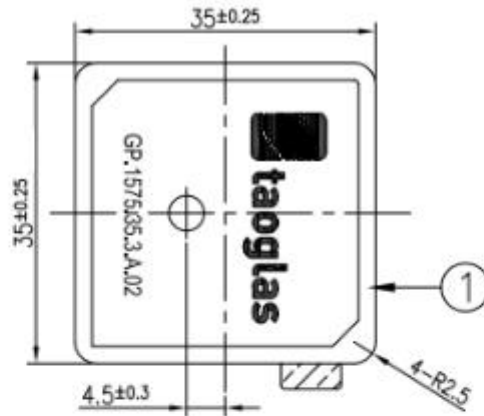


## 5.4 3D Radiation



**Figure 7.** Radiation Pattern of the GP.1575.35.A.02 at 1575Mhz.

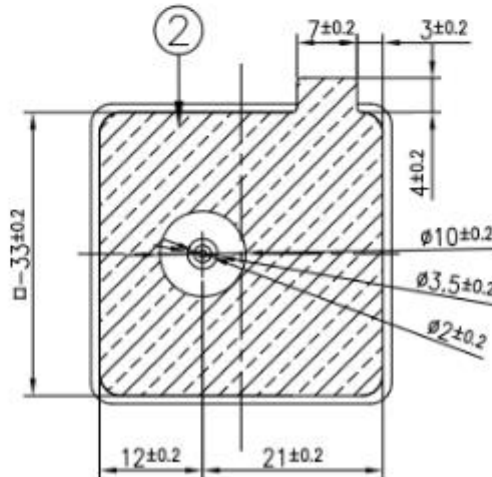
## 6 . Mechanical Drawing




Top View



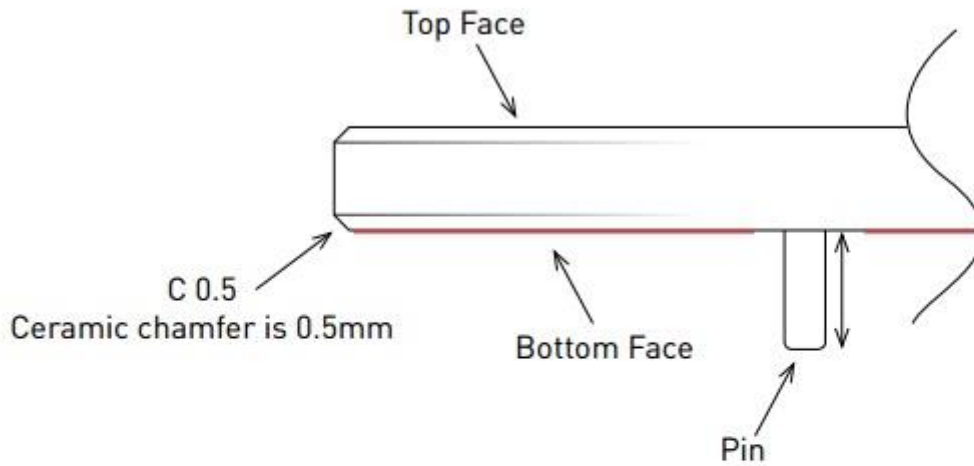
Side View



Bottom View

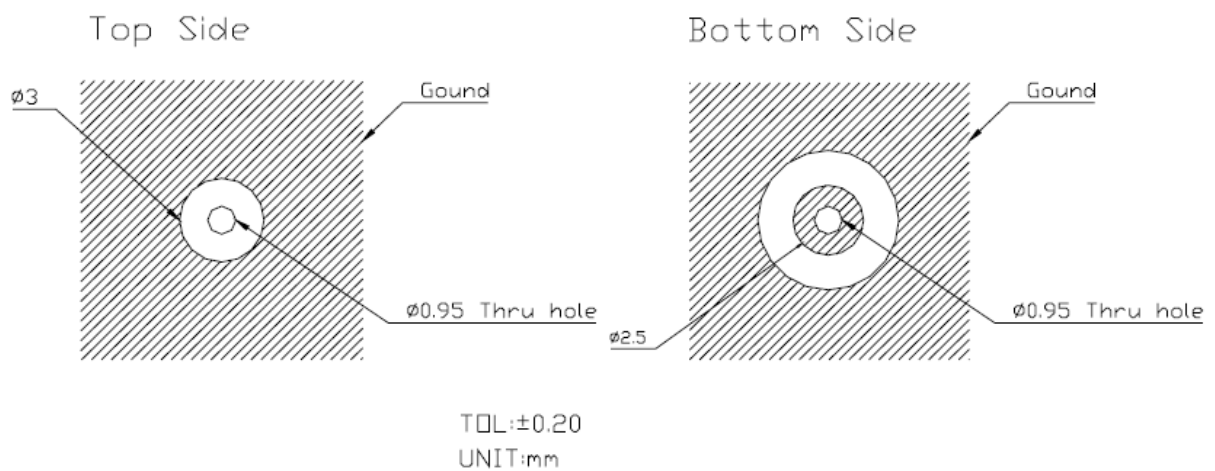
	Name	Material	Finish	QTY	NOTES:
1	GP.35 Patch 35x35x3.5	Ceramic	Clear	1	1.Double sided adhesive area. 
2	Double sided Adhesive	NITTO 5015	White Liner	1	

## 6.1 Adhesive Thickness

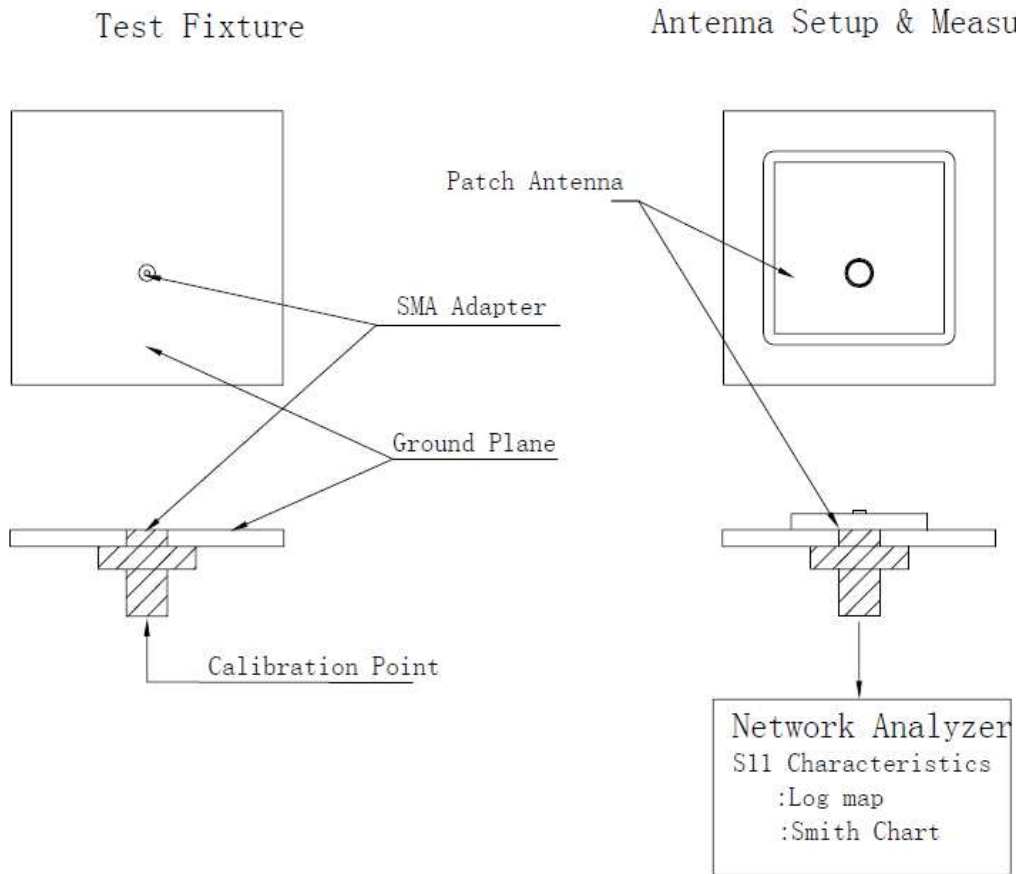


**Red Line** shows the adhesive without Liner – thickness 0.08–0.1mm

## 6.2 Layout Dimensions



### 6.3 Test Fixture Antenna Setup and Measurements

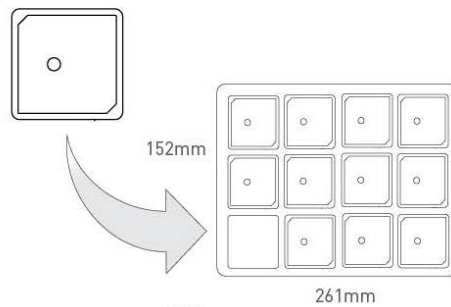


# 7. Packaging

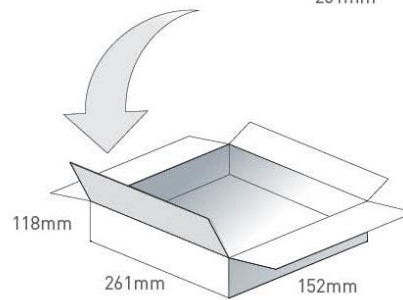
**GP.1575.35.3.A.02**

## Packaging Specifications

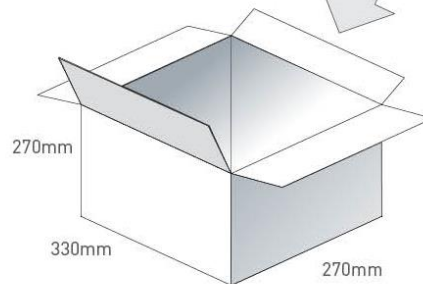
12 pcs GP.1575.35.3.A.02 per tray  
 Tray Dimensions - 261\*152mm  
 Total Weight - 270g



6 trays / 72 pcs per small box  
 Box Dimensions - 261\*152\*118  
 Weight - 1.6Kg



4 boxes / 288 pcs per carton  
 Carton Dimensions - 330\*280\*270mm  
 Weight - 6.6Kg



Pallet Dimensions 1100mm\*1120mm\*1500mm  
 60 Cartons per pallet  
 12 Cartons per layer  
 5 Layers

