

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

:



1. Introduction

This 35*35mm ceramic GPS patch antenna is based on smart *XtremeGain*[™] 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 (τ_f)	0 ± 20ppm / °C
10	Operating Temperature	-40°C to +85°C

3. TEST SET UP

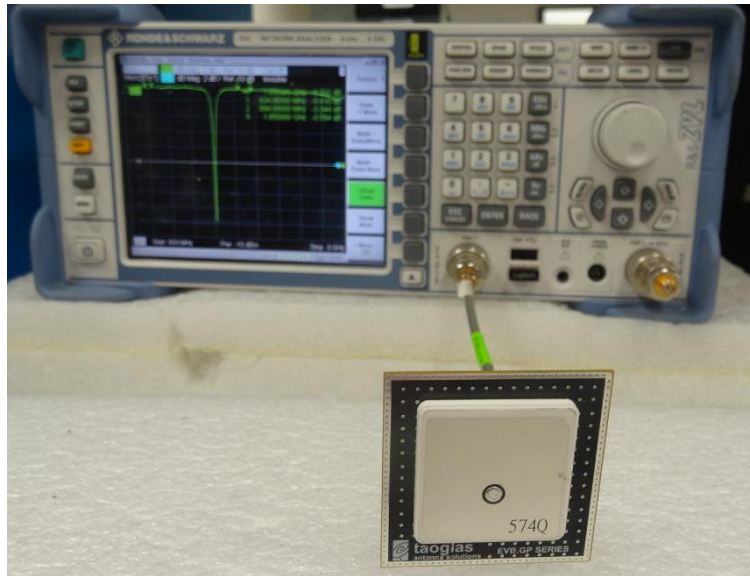


Figure 1. Return Loss measurement.

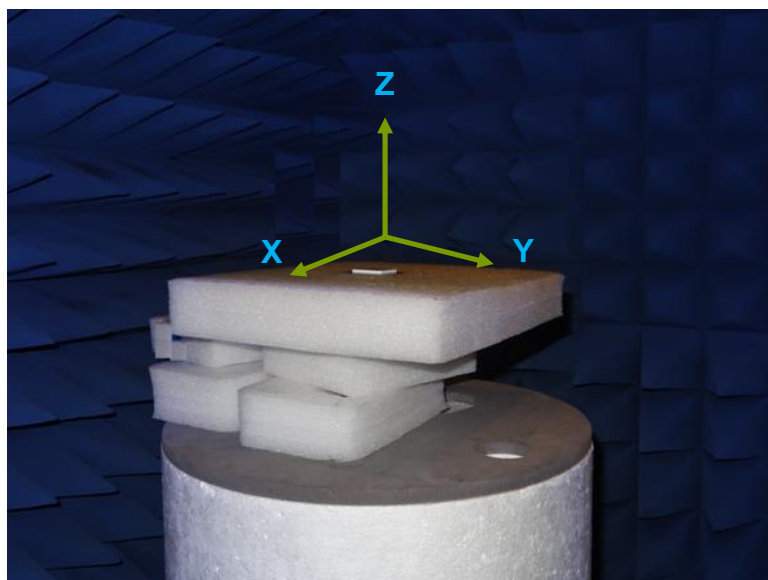


Figure 2. Peak gain, average gain, efficiency and radiation pattern measurements.

4. ANTENNA PARAMETERS

4.1. Return Loss

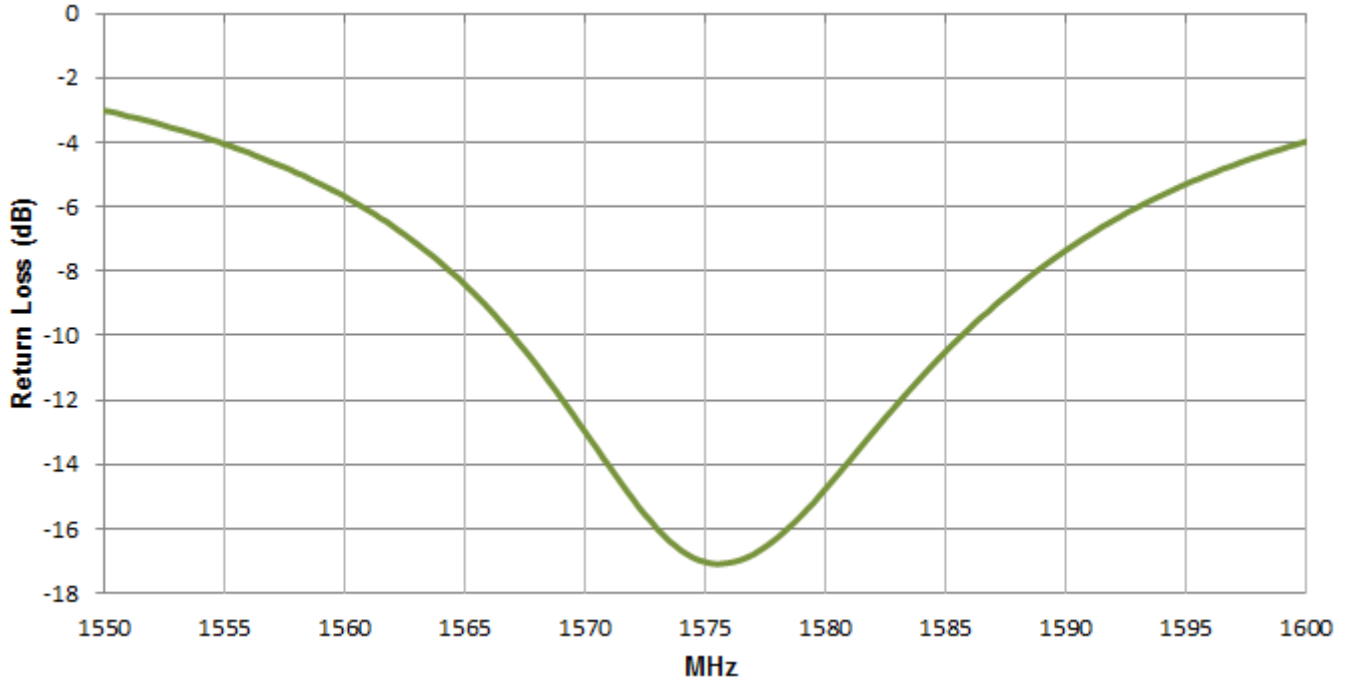


Figure 3. Return Loss of the GP.1575.35.A.02

4.2. VSWR

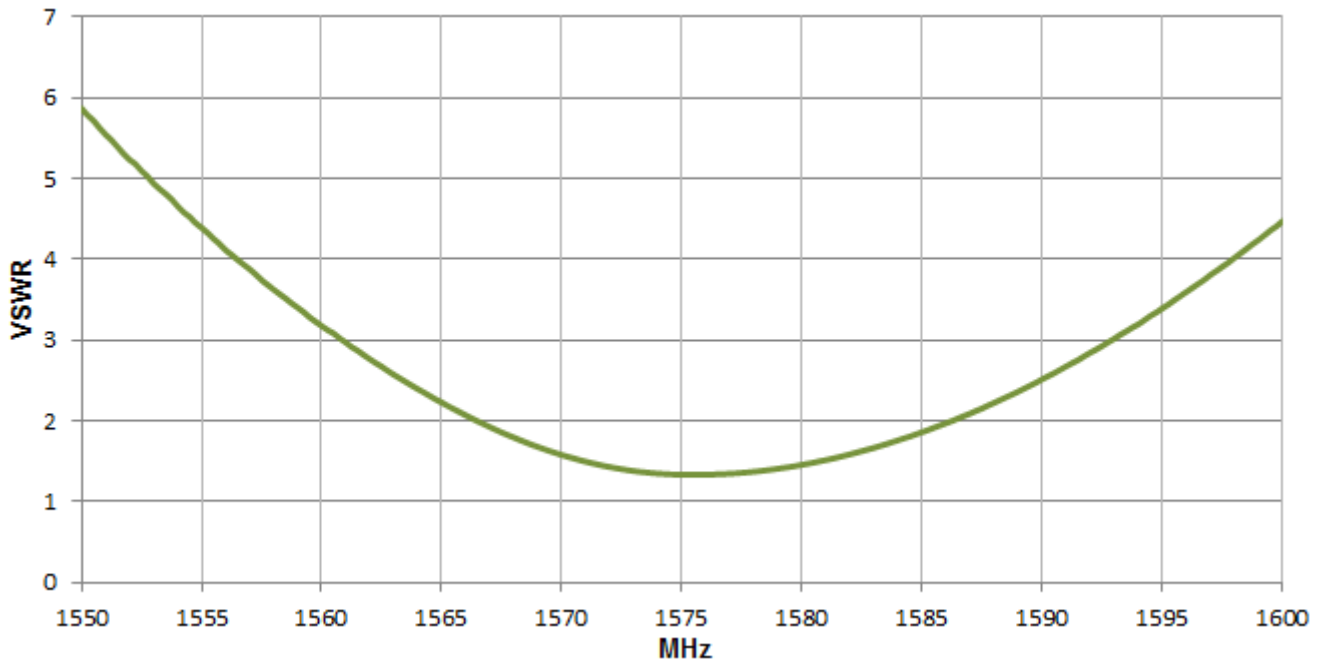


Figure 4. VSWR of the GP.1575.35.A.02

4.3. Efficiency

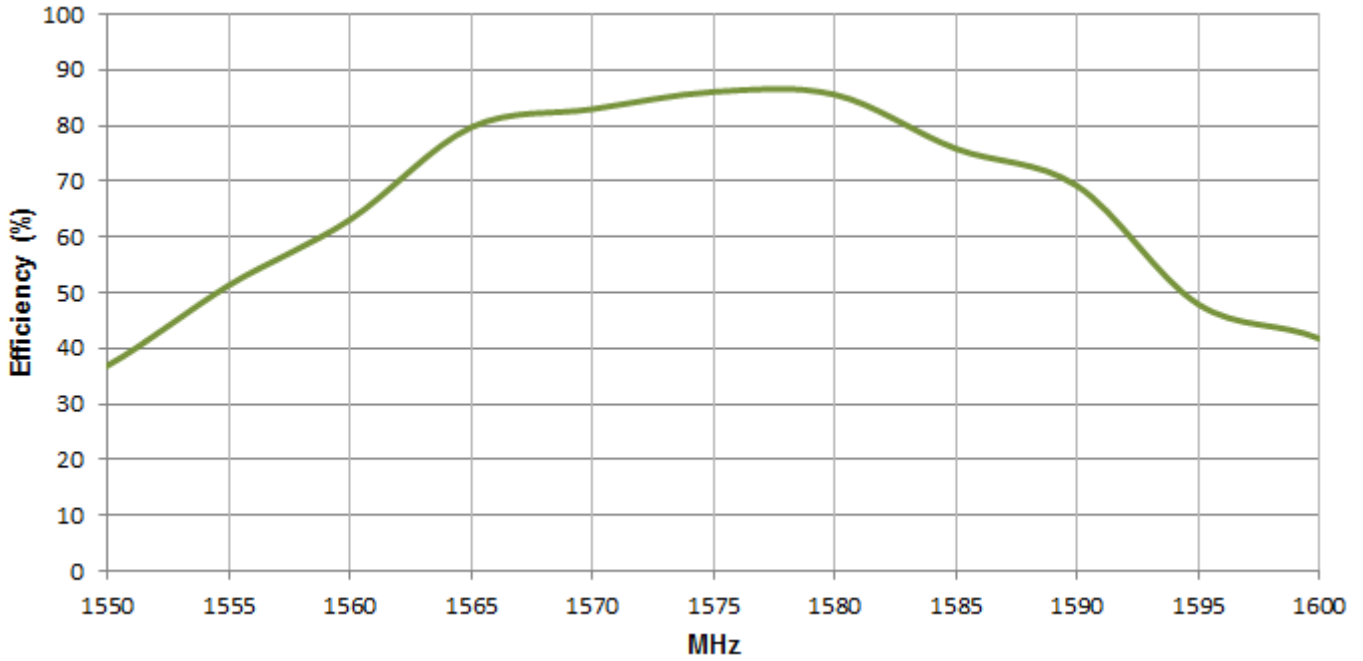


Figure 5. Efficiency of the GP.1575.35.A.02

4.4. Peak Gain

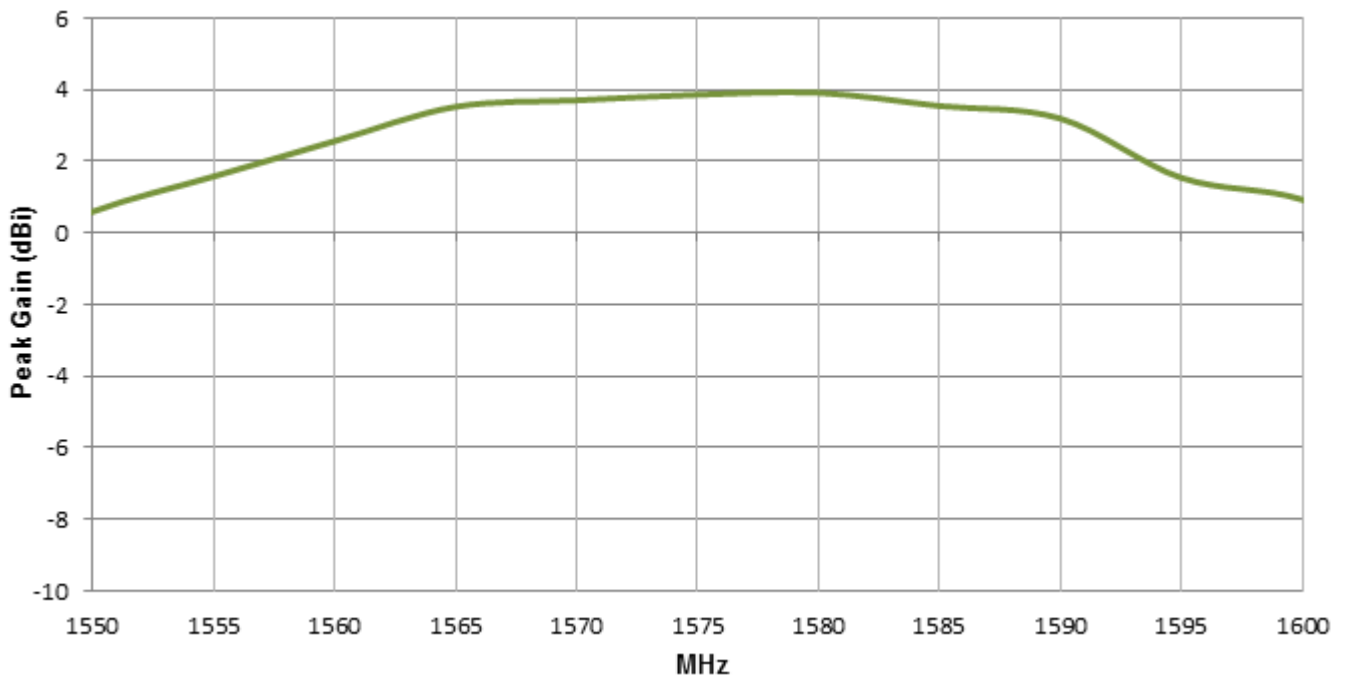
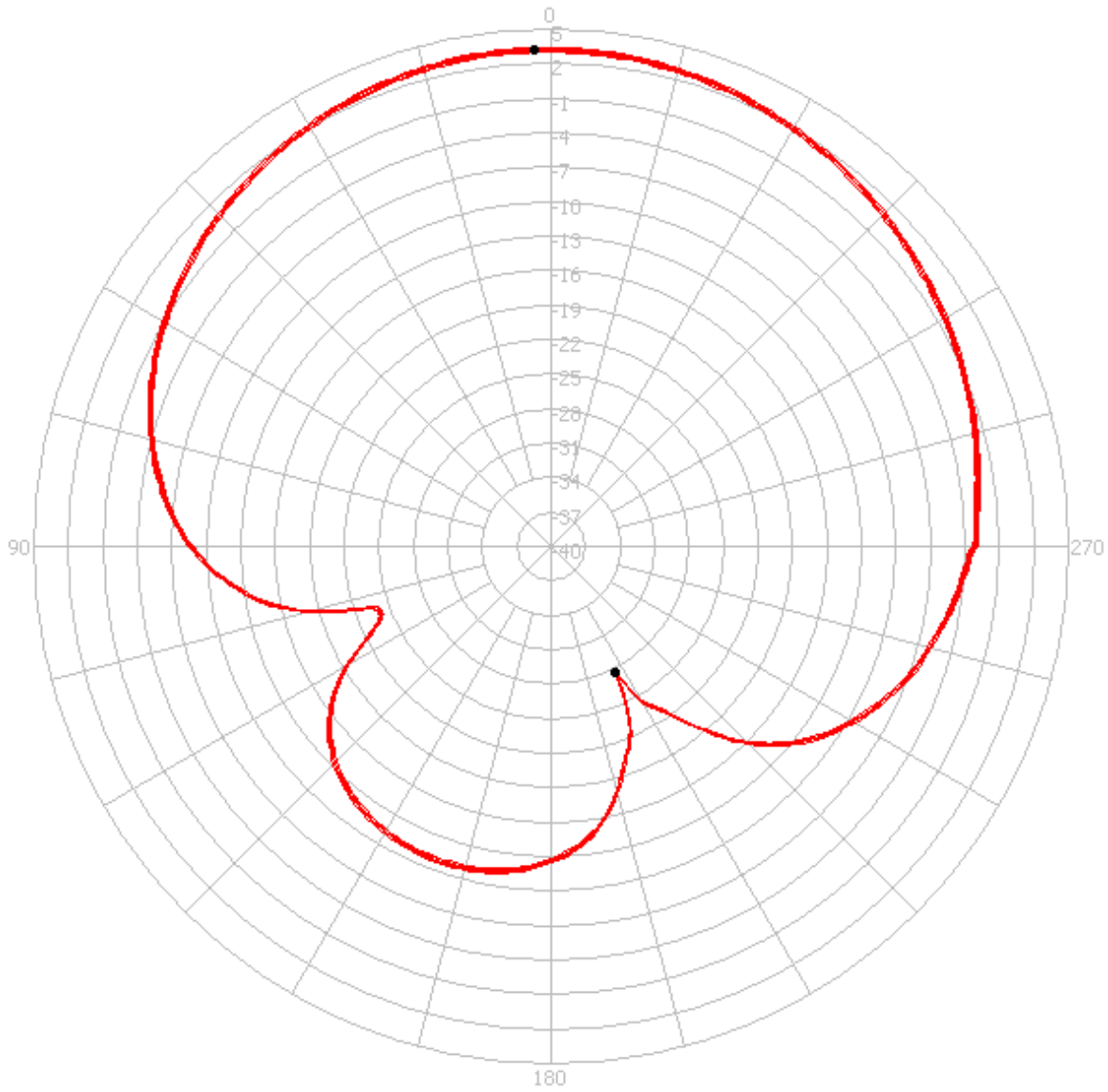


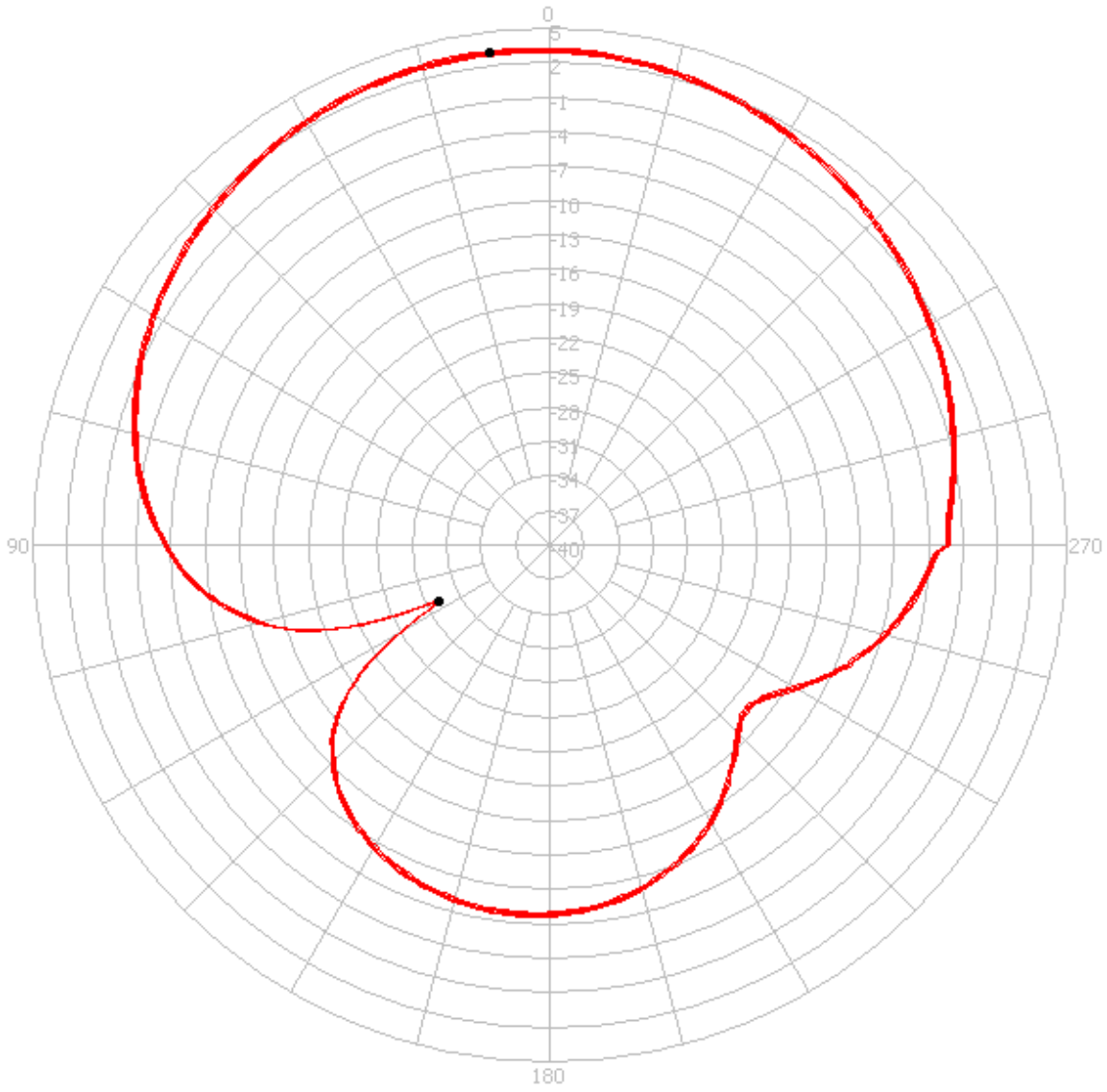
Figure 6. Peak Gain of the GP.1575.35.A.02.

5. 2D Radiation

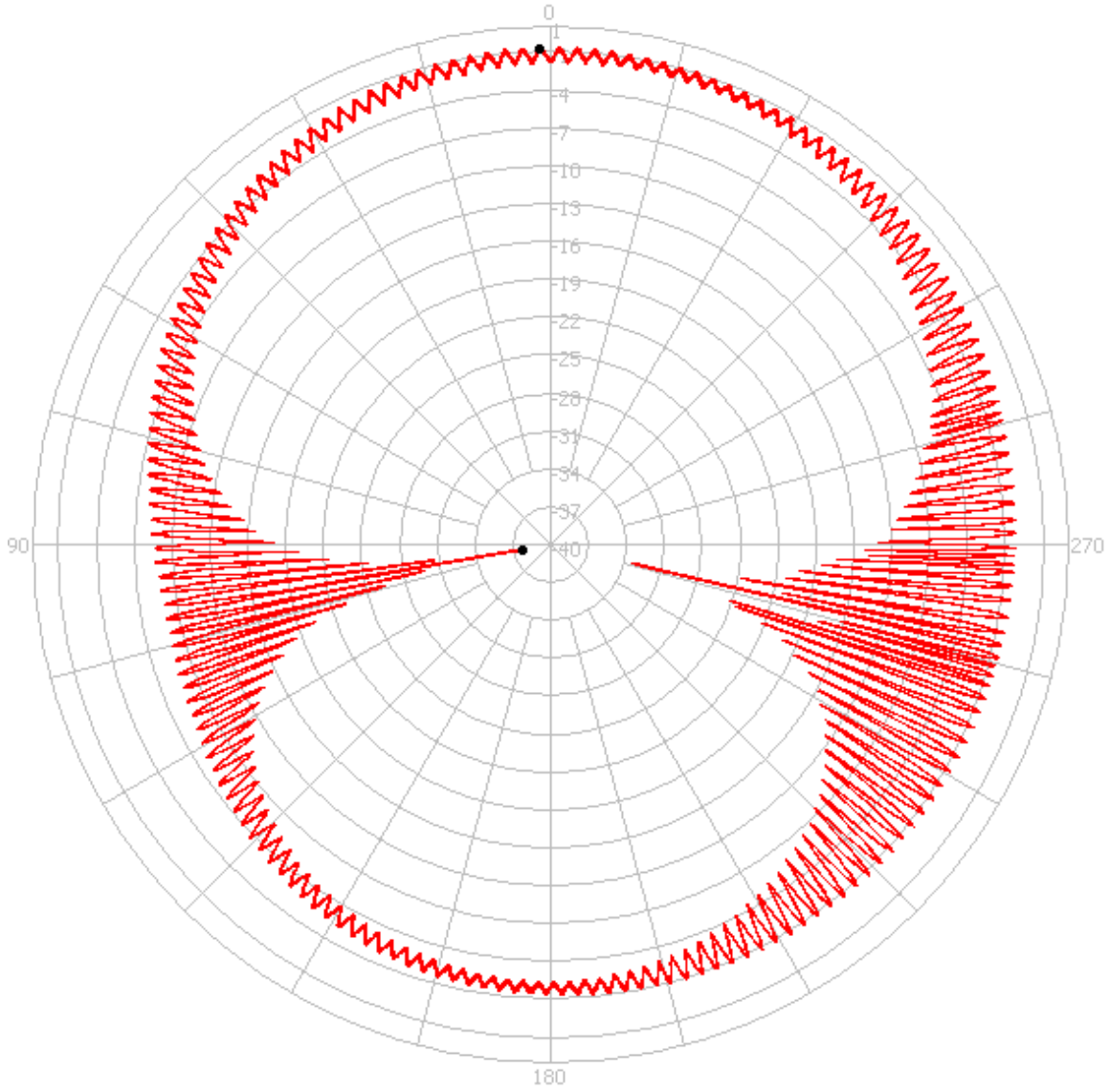
5.1 XZ Plane Radiation



5.2 YZ Plane Radiation



5.3 Axial Ratio



5.4 3D Radiation

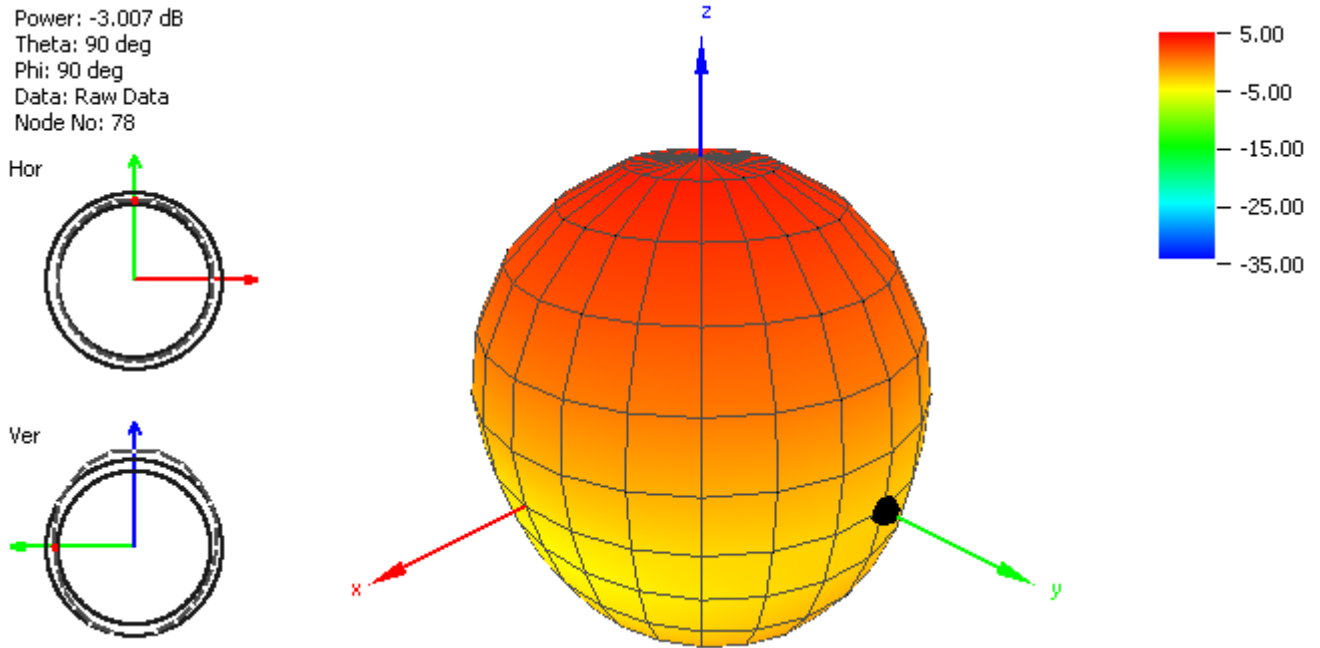
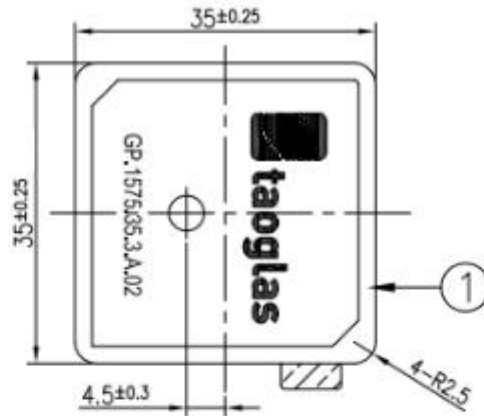


Figure 7. Radiation Pattern of the GP.1575.35.A.02 at 1575Mhz.

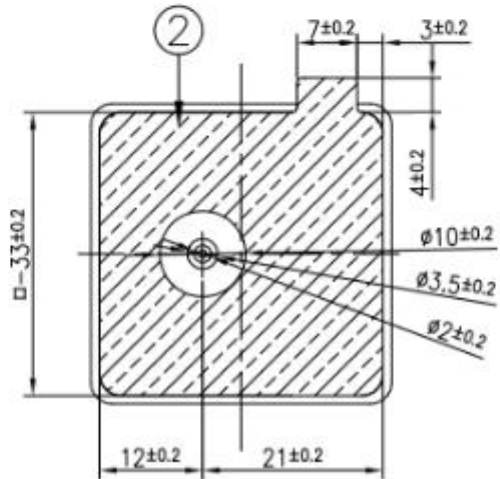
6 . Mechanical Drawing




Top View



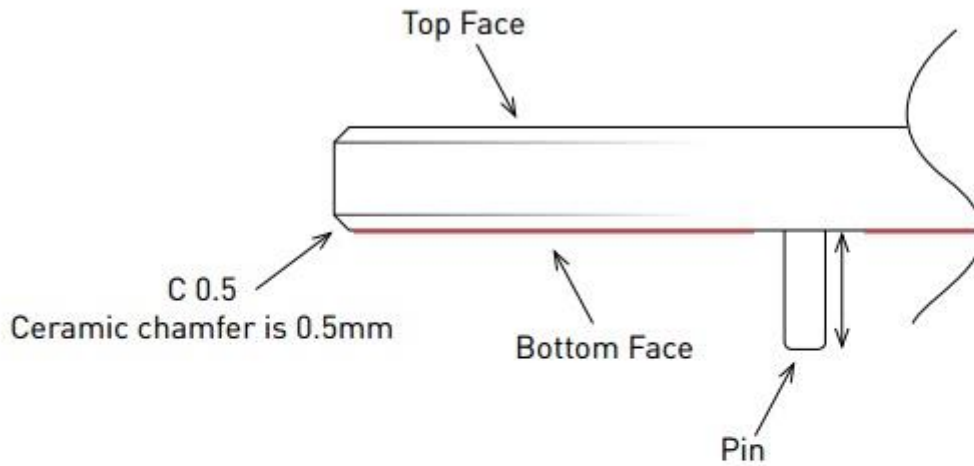
Side View



Bottom View

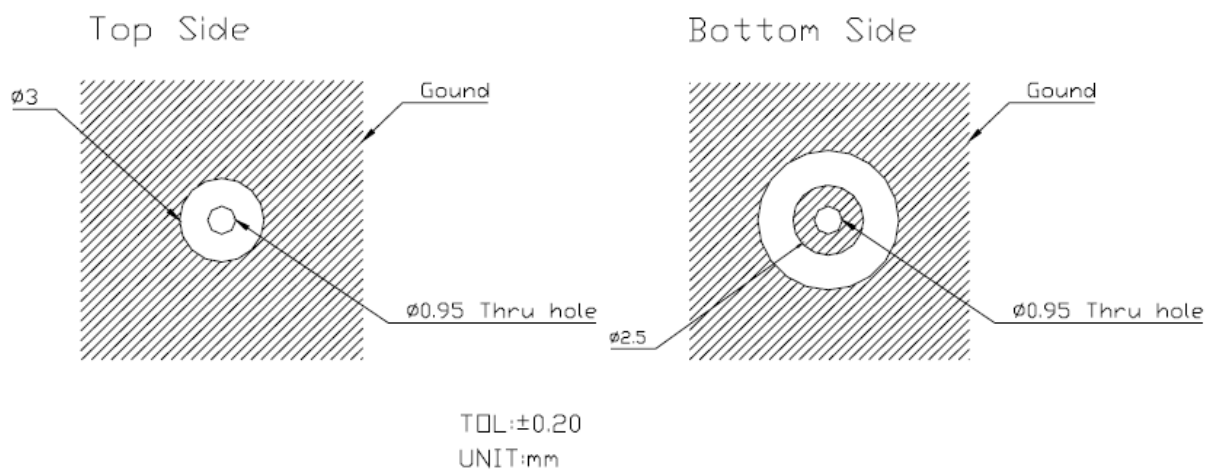
	Name	Material	Finish	QTY	NOTES:
1	GP.35 Patch 35x35x3.5	Ceramic	Clear	1	1.Double sided adhesive area. 
2	Double sided Adhesive	NITTO 5015	White Liner	1	

6.1 Adhesive Thickness

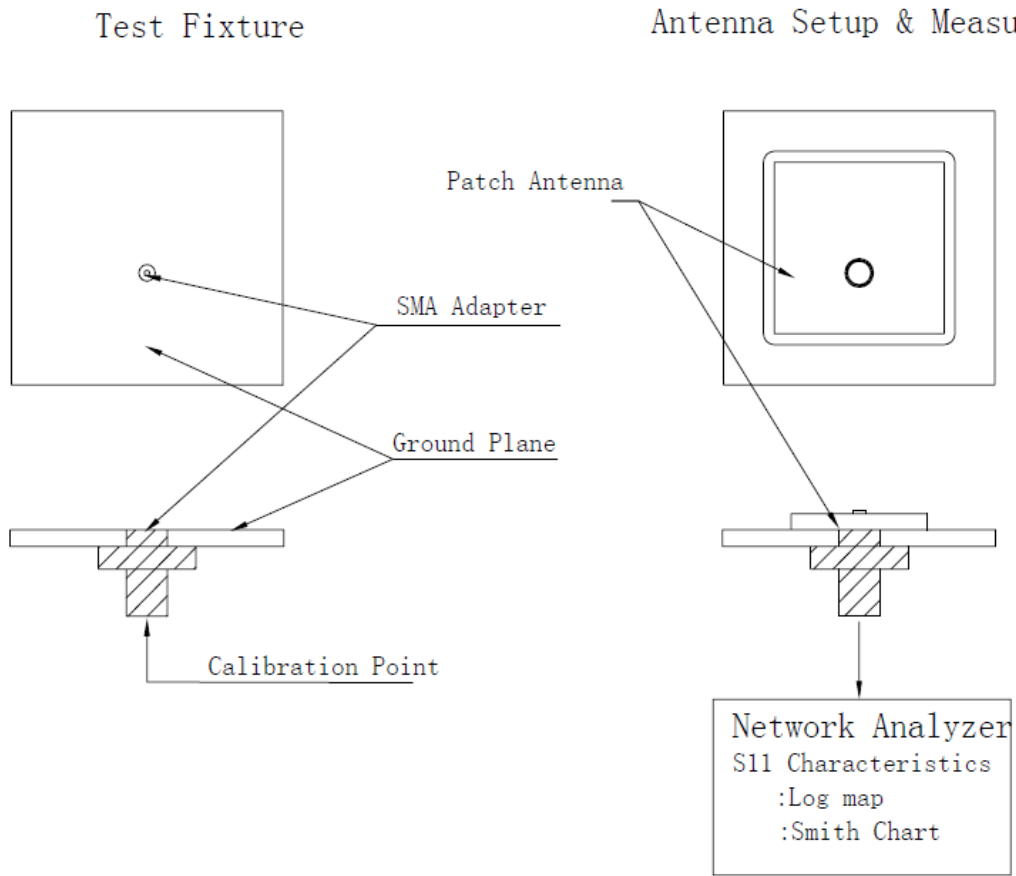


Red Line shows the adhesive without Liner – thickness 0.08–0.1mm

6.2 Layout Dimensions



6.3 Test Fixture Antenna Setup and Measurements

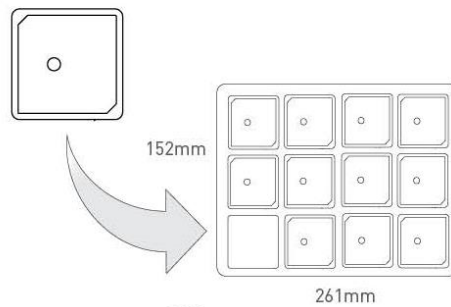


7. Packaging

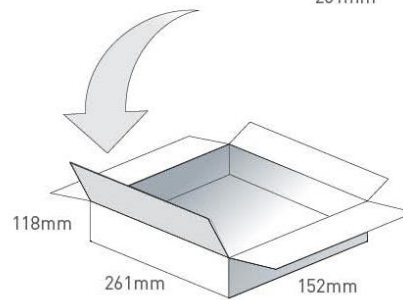
GP.1575.35.3.A.02

Packaging Specifications

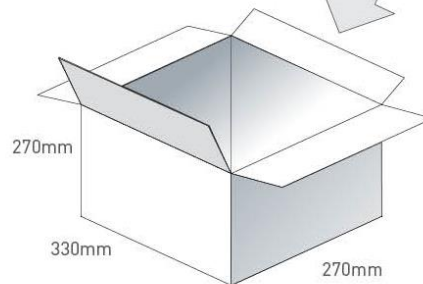
12 pcs GP.1575.35.3.A.02 per tray
 Tray Dimensions - 261*152mm
 Total Weight - 270g



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

