

## SPECIFICATION

Part No. : **GP.1575.18.2.A.02**

Product Name : **2mm thick GPS Patch Antenna, 1575MHz**

Features : 18mm\*18mm\*2mm  
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 selected as optimal solution for the customer device environment.

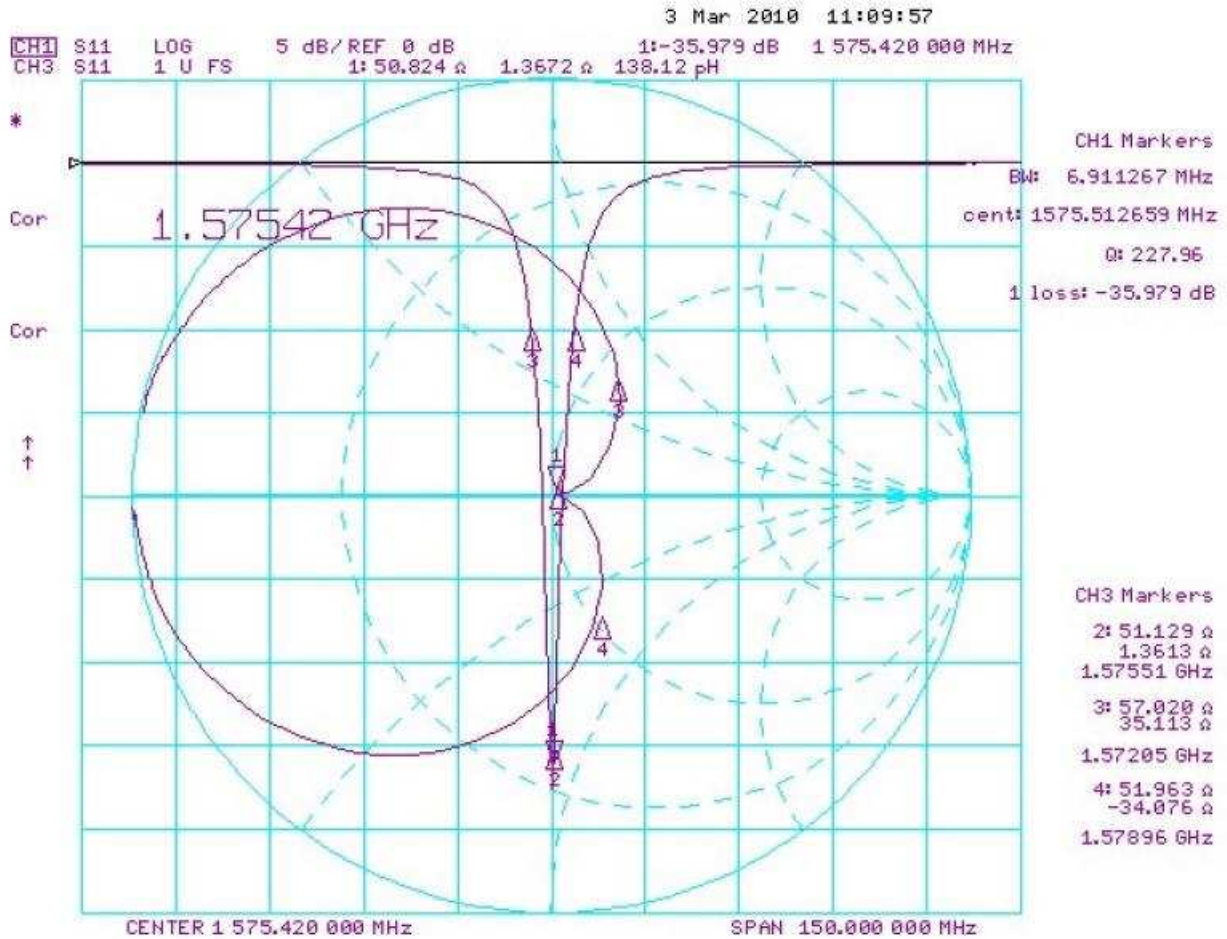
## 2. Specification Table

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

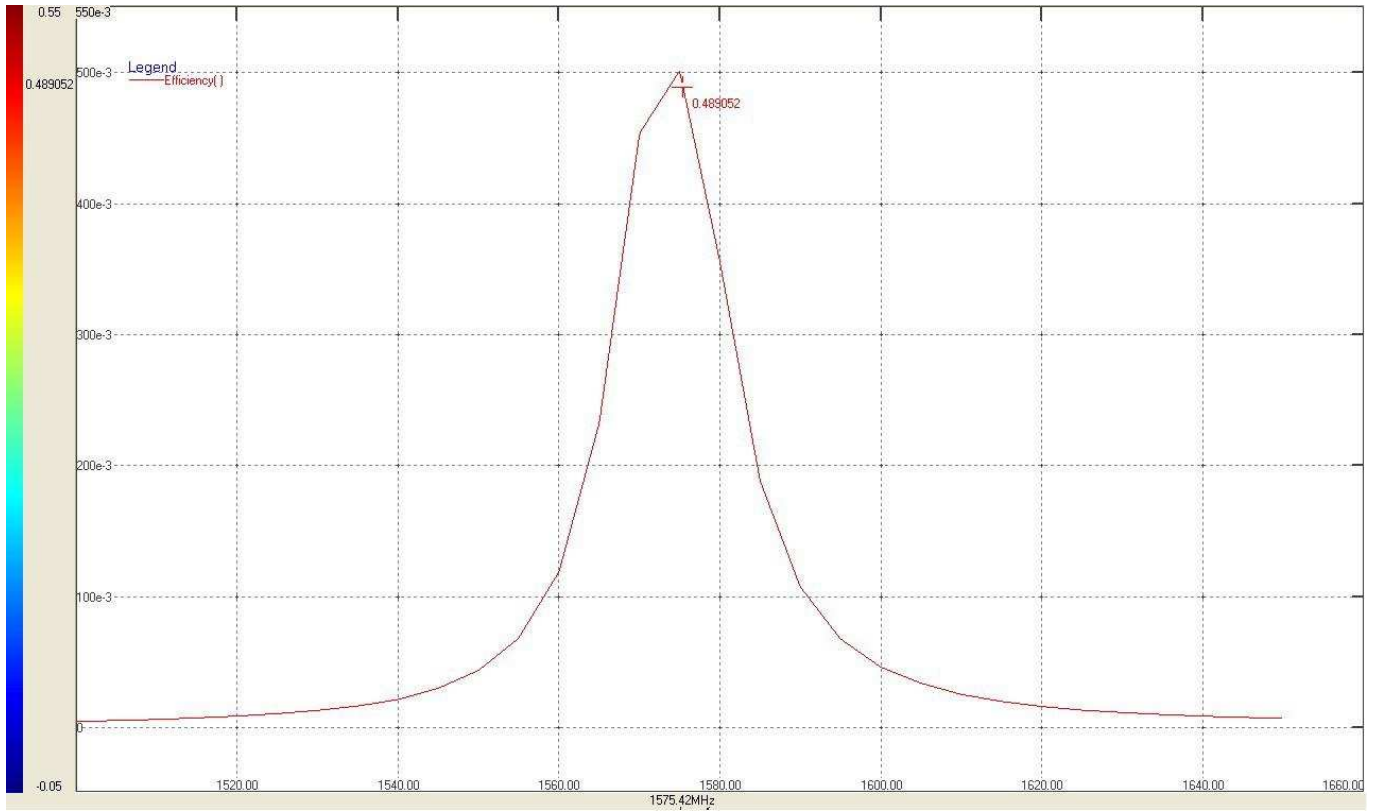
No	Parameter	Specification
1	Center Frequency	1575MHz +/- 3MHz
2	Impedance	50Ω
3	Bandwidth	5 MHz min Return Loss <-10dB
4	VSWR	1.5 max
5	Gain toward Zenith	-0.5 dBic typ.
6	Gain at 10°Elevation	-----
7	Axial Ratio	3dB Max.
8	Polarization	Right Hand Circular Polarization
9	Frequency Temperature Coefficient (τf)	0 ± 20ppm/°C
10	Operating Temperature	-40°C to +85°C

# 3. Electrical Specification

## 3.1 Smith Chart

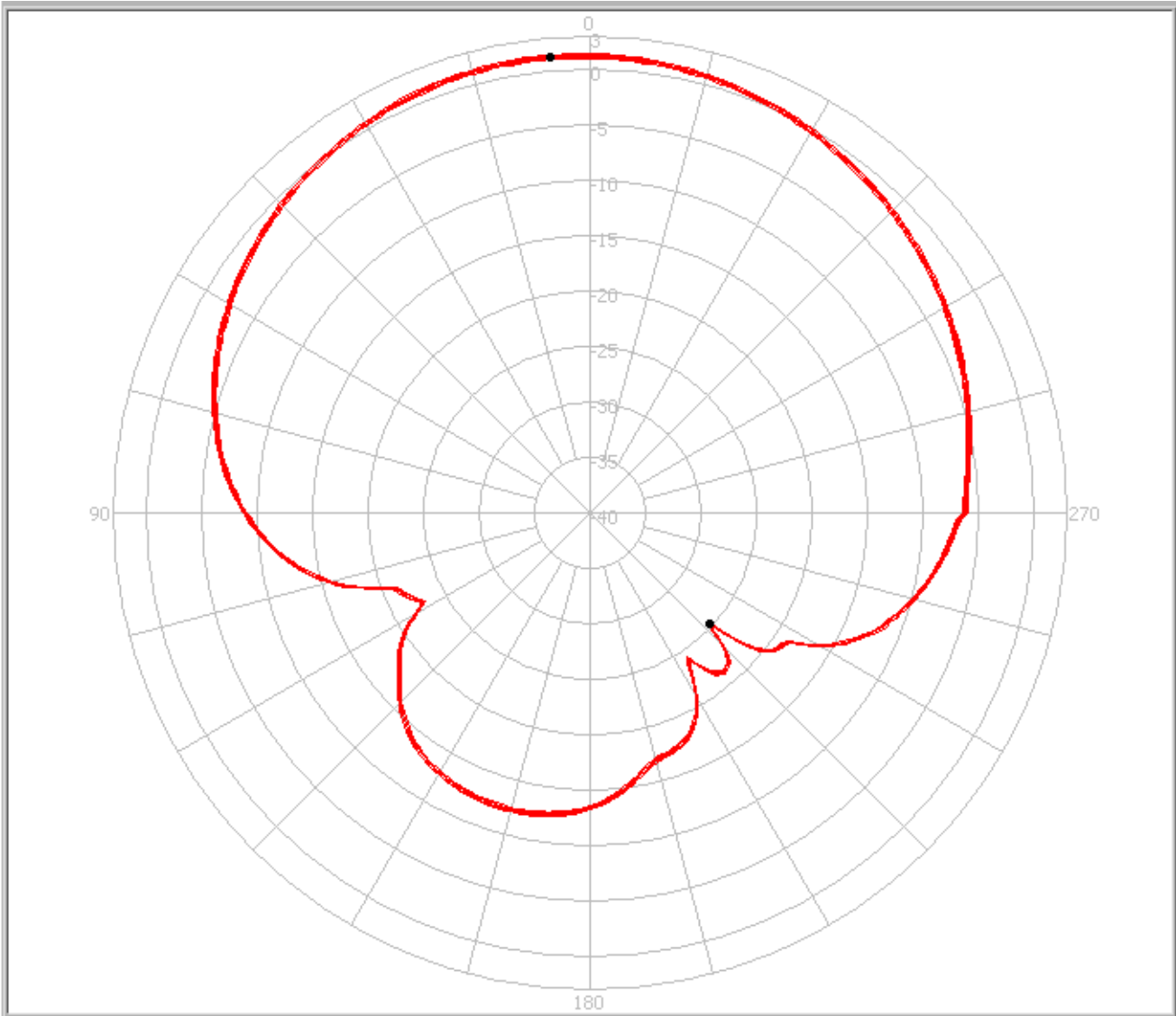


### 3.2 Efficiency



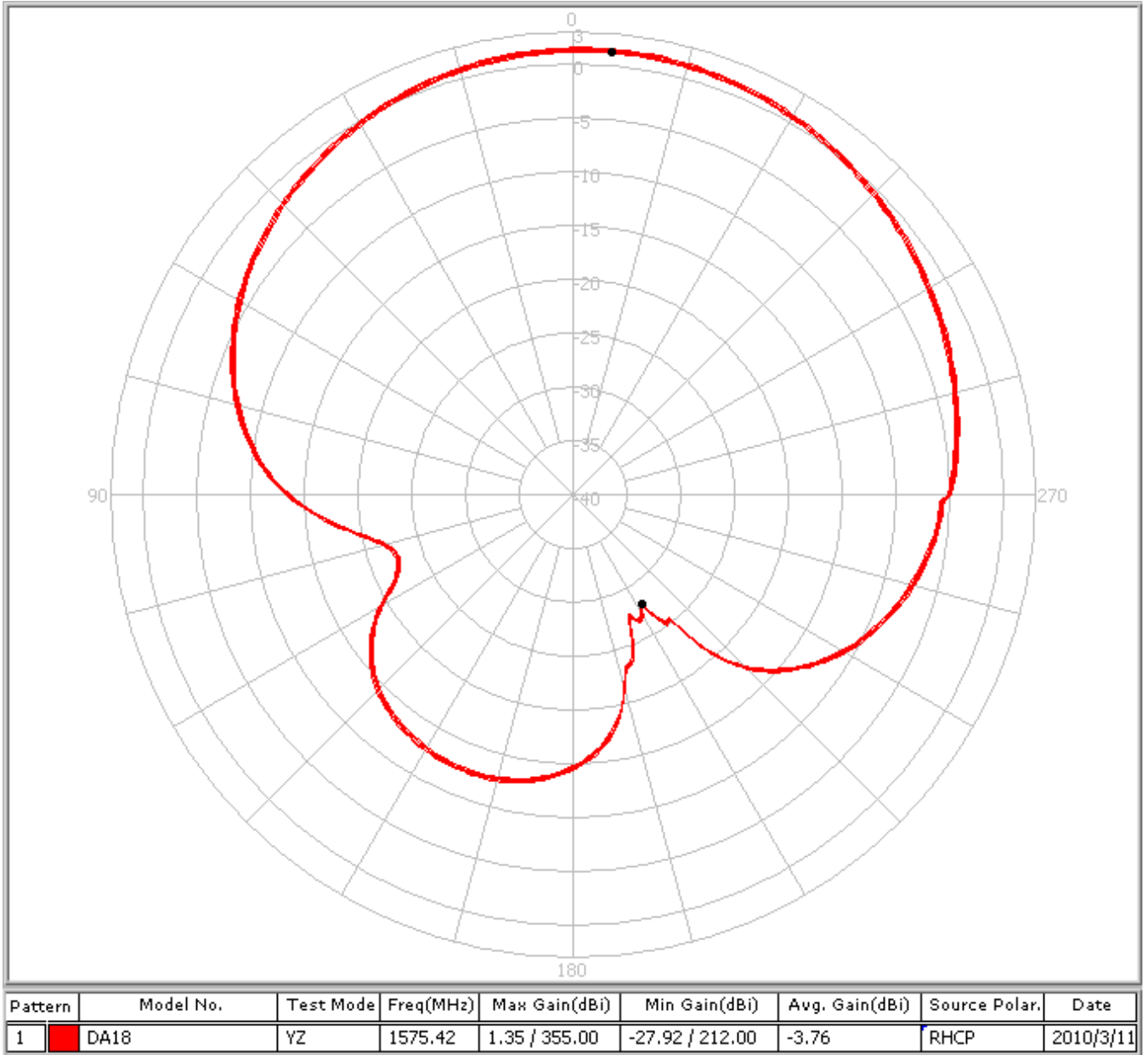
## 4. 2D Radiation Patterns

### 4.1 XZ Plane Radiation

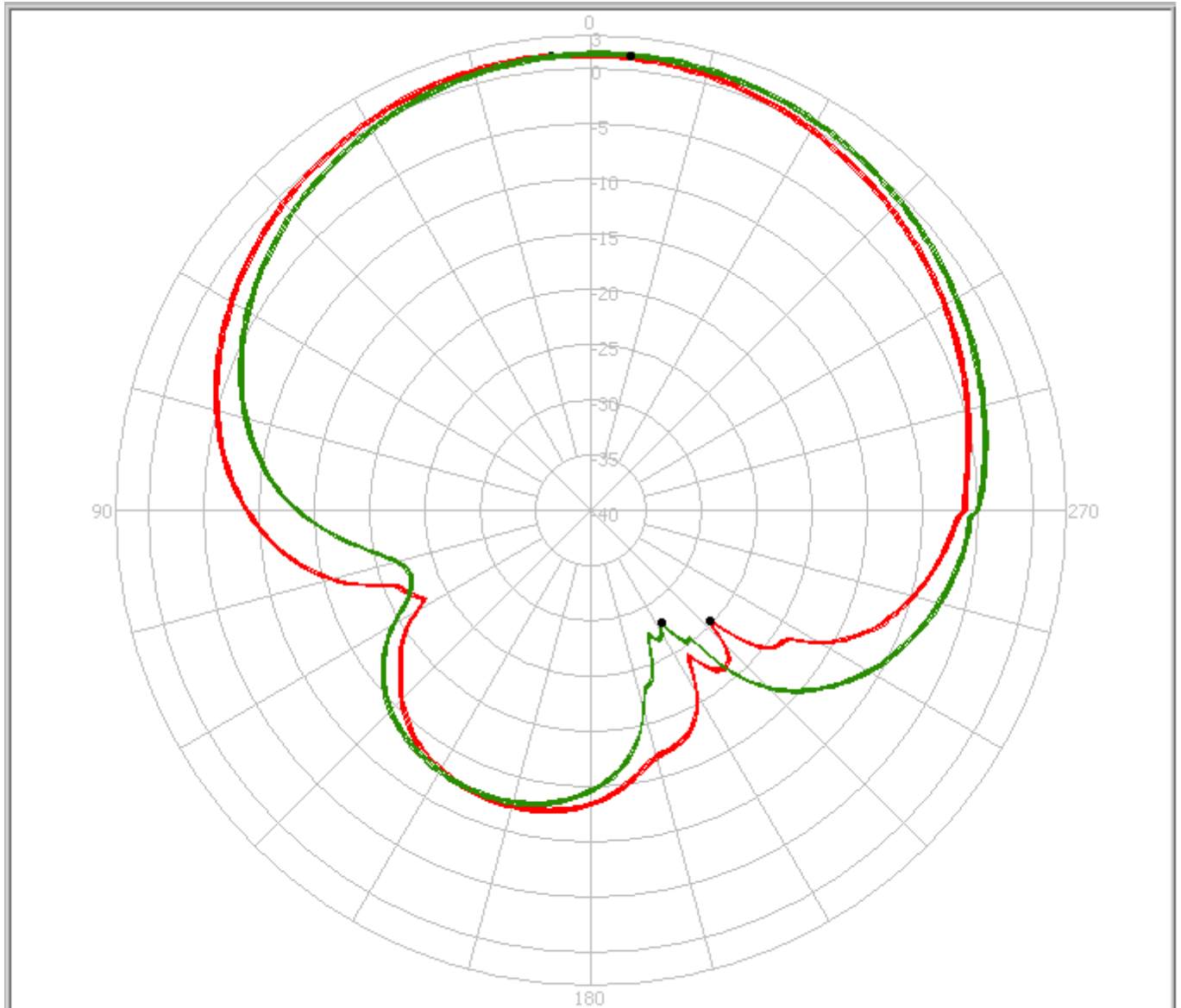


Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	DA18	xz	1575.42	1.26 / 5.00	-25.25 / 227.00	-3.84	RHCP	2010/3/11

## 4.2 YZ Plane Radiation

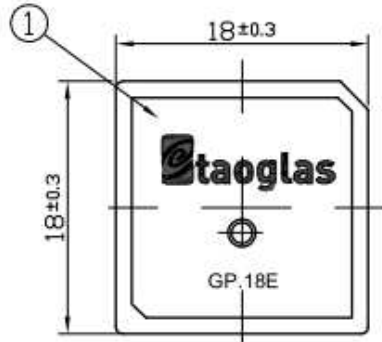


### 4.3 XZ Plane Radiation

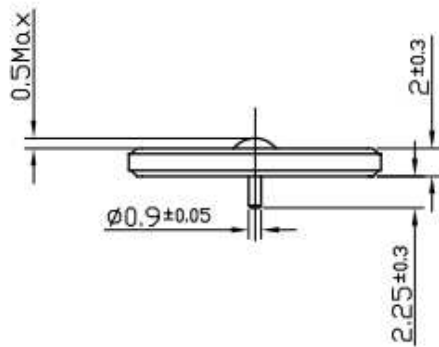


Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	DA18	xZ	1575.42	1.26 / 5.00	-25.25 / 227.00	-3.84	RHCP	2010/3/11
2	DA18	YZ	1575.42	1.35 / 355.00	-27.92 / 212.00	-3.76	RHCP	2010/3/11

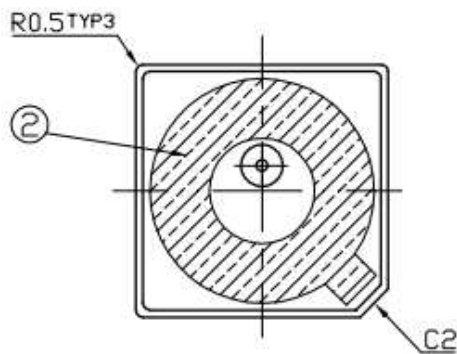
## 5. Mechanical Drawing




Top View



Side View

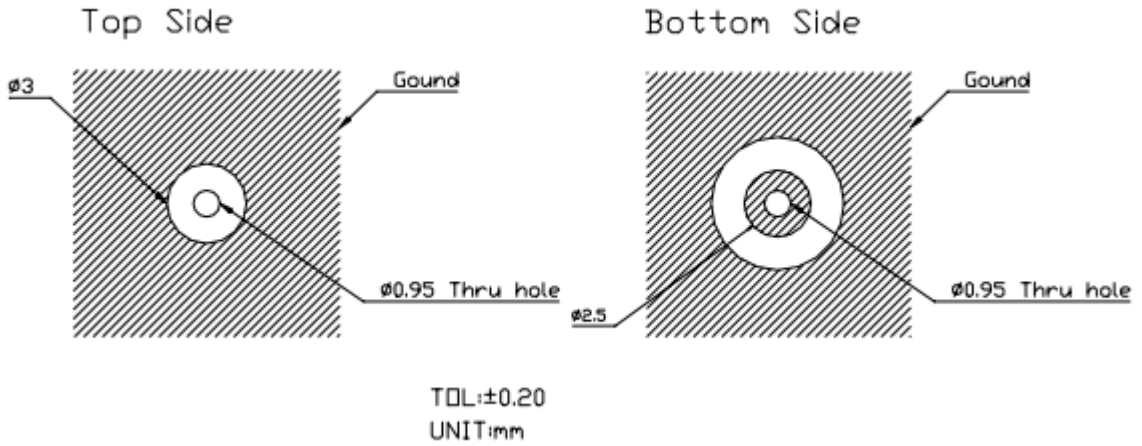


Bottom View

	Name	Material	Finish	QTY	NOTES:
1	Patch 18x18x2	Ceramic	Clear	1	1.Double sided adhesive area 
2	Double sided Adhesive	NITTO 5015	White Liner	1	

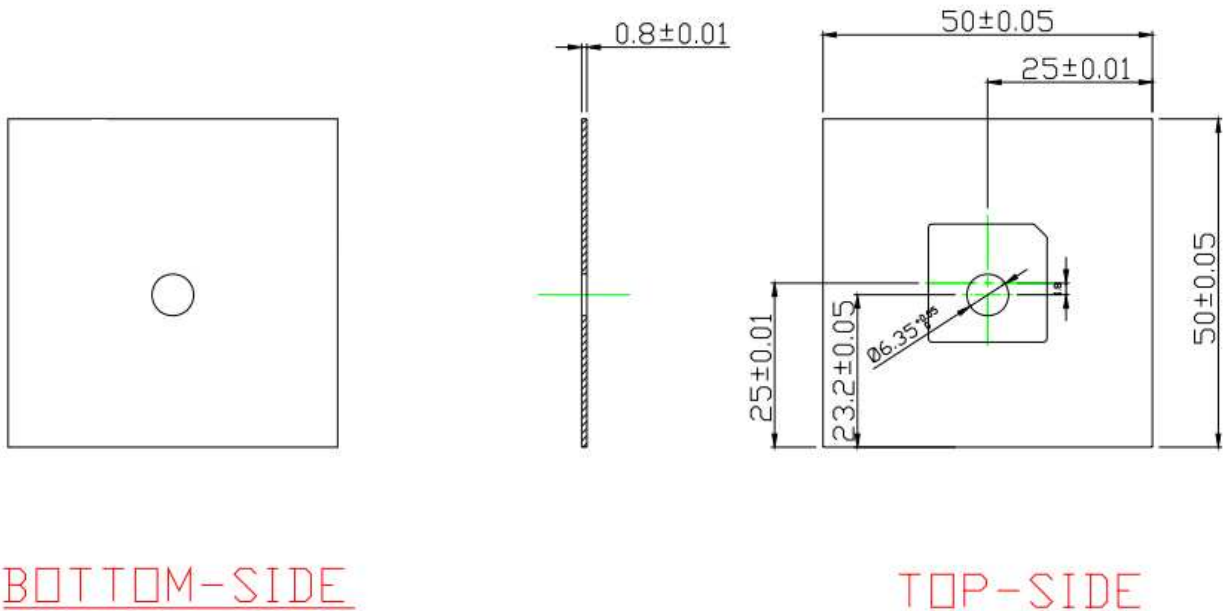


### 5.1 Layout Dimension



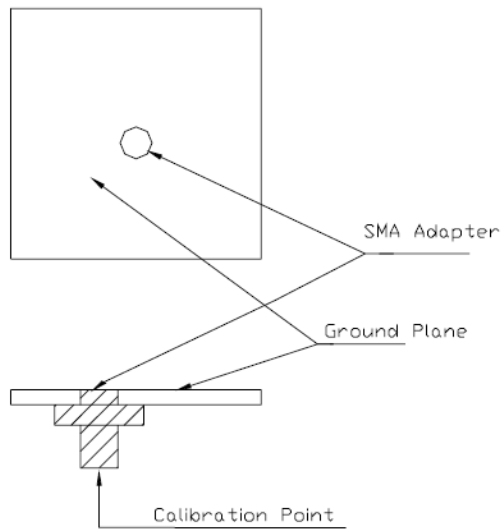
\*Note Layout Dimensions may be affected by the thickness of the PCB

### 6. Test Jig and Dimension

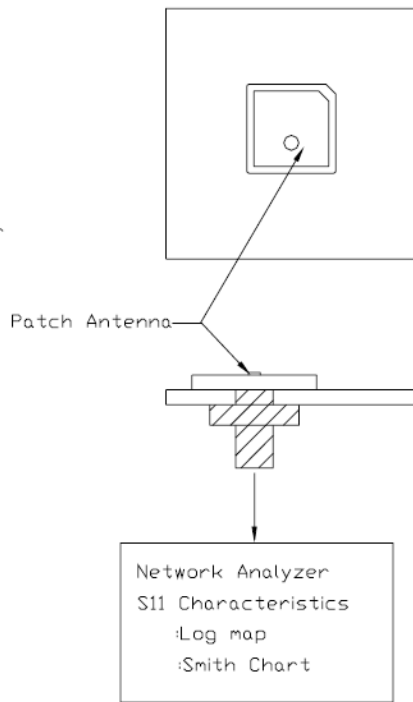


## 6.1 Test Fixture Antenna Setup and Measurements

Test Fixture

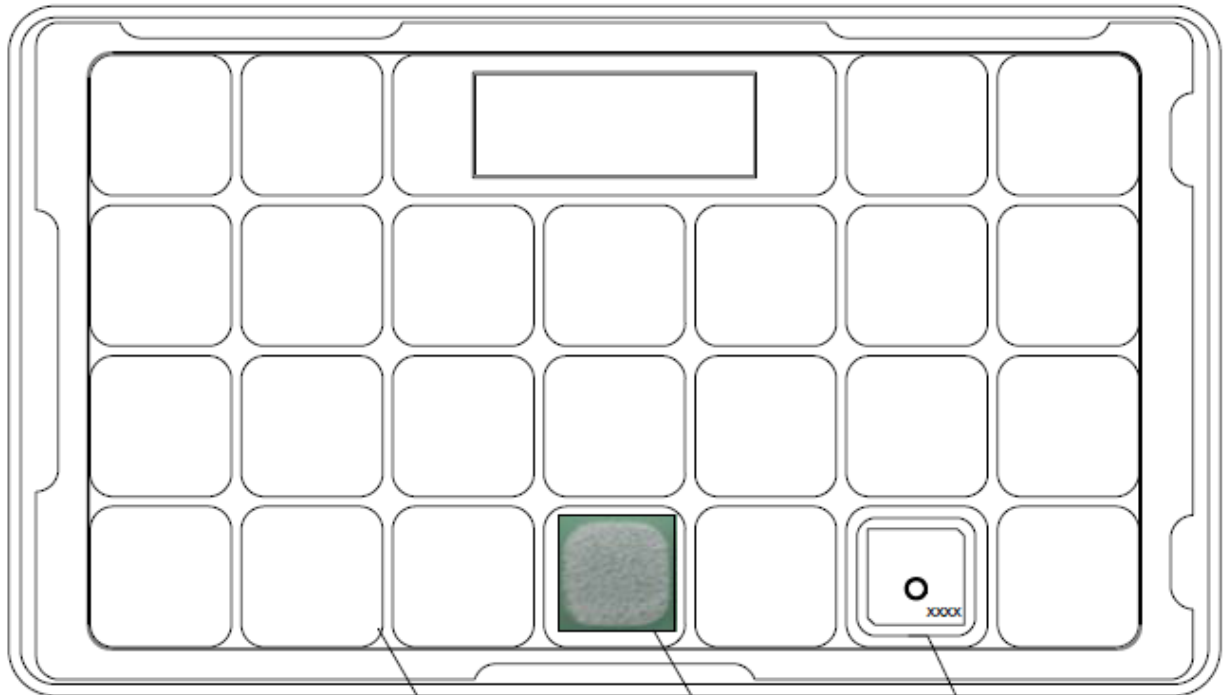


Antenna Setup & Measurements



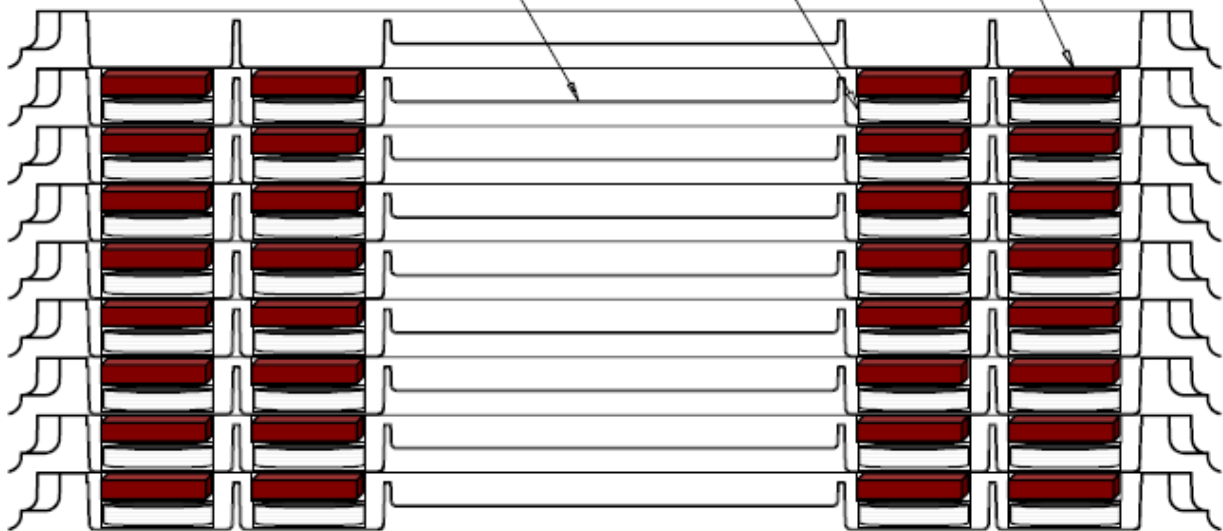
# 7. Packaging

Pieces per Inner Carton: 200



VACCUM

Antenna



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## Packing

