

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.

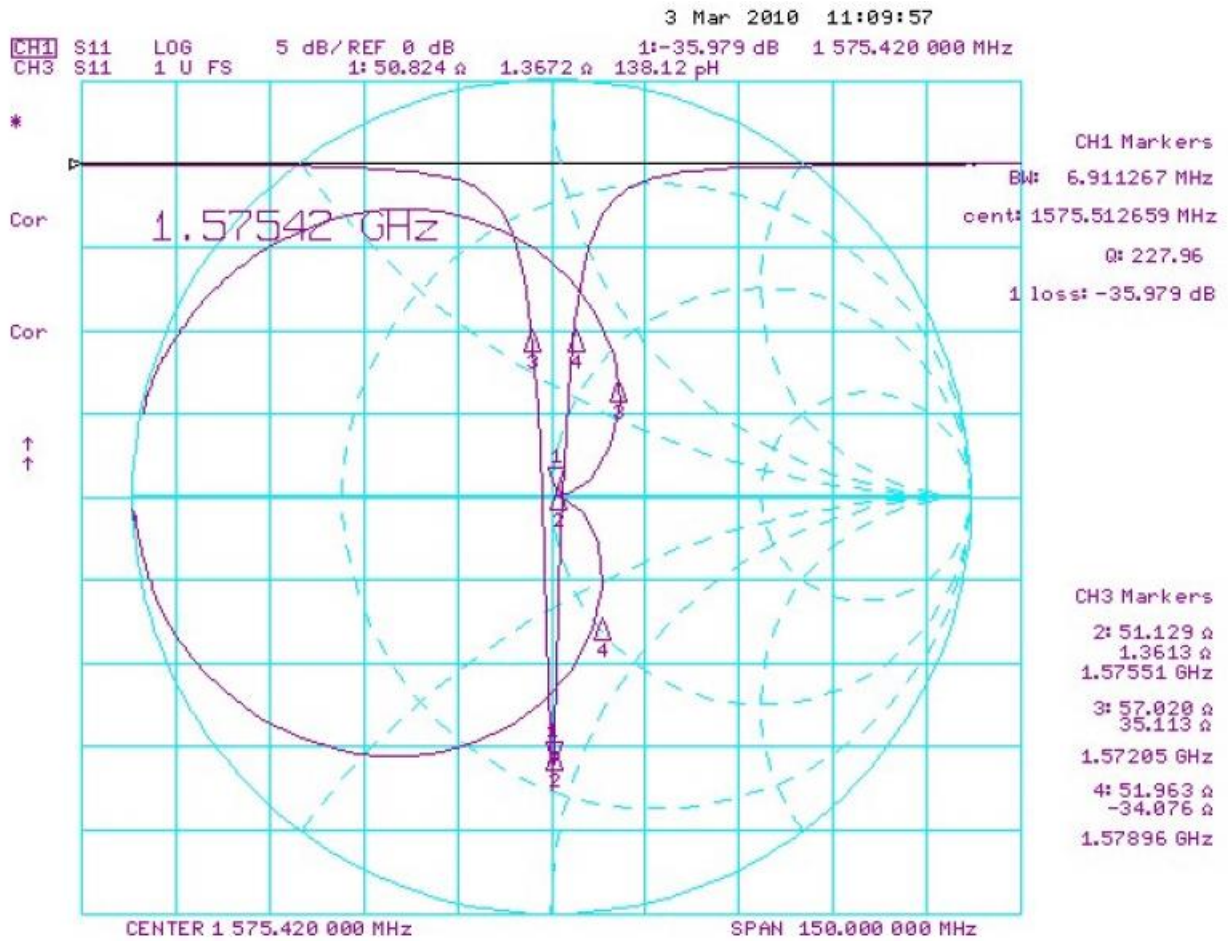
2. Specification Table

Original Patch Specification tested on 50*50mm ground plane

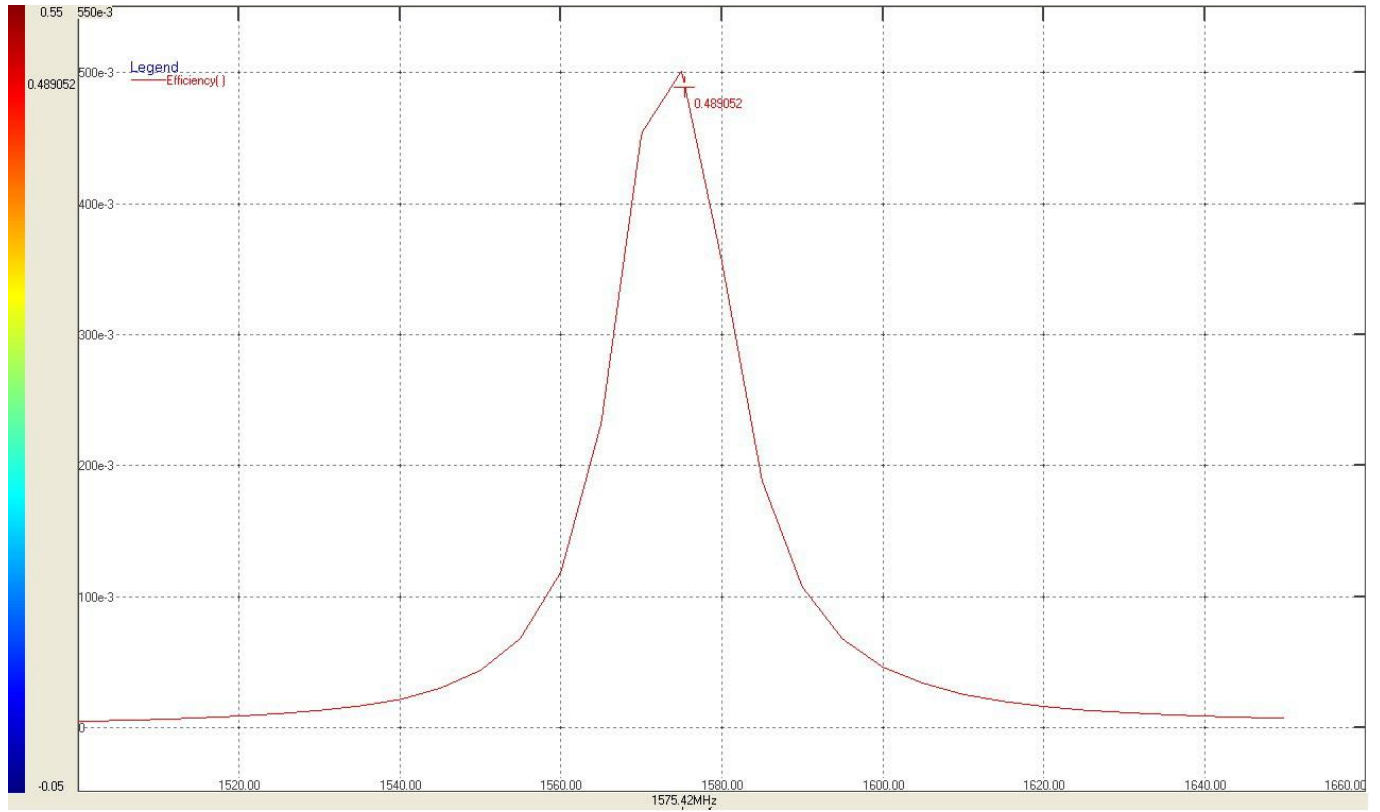
No	Parameter	Specification
1	Center Frequency	1575MHz +/- 3MHz
2	Impedance	50Ω
3	Bandwidth	5 MHz min Return Loss <-10dB
4	VSWR	1.5 max
5	Gain toward Zenith	-0.5 dBic typ.
6	Gain at 10°Elevation	-----
7	Axial Ratio	3dB Max.
8	Polarization	Right Hand Circular Polarization
9	Frequency Temperature Coefficient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

3. Electrical Specification

3.1 Smith Chart

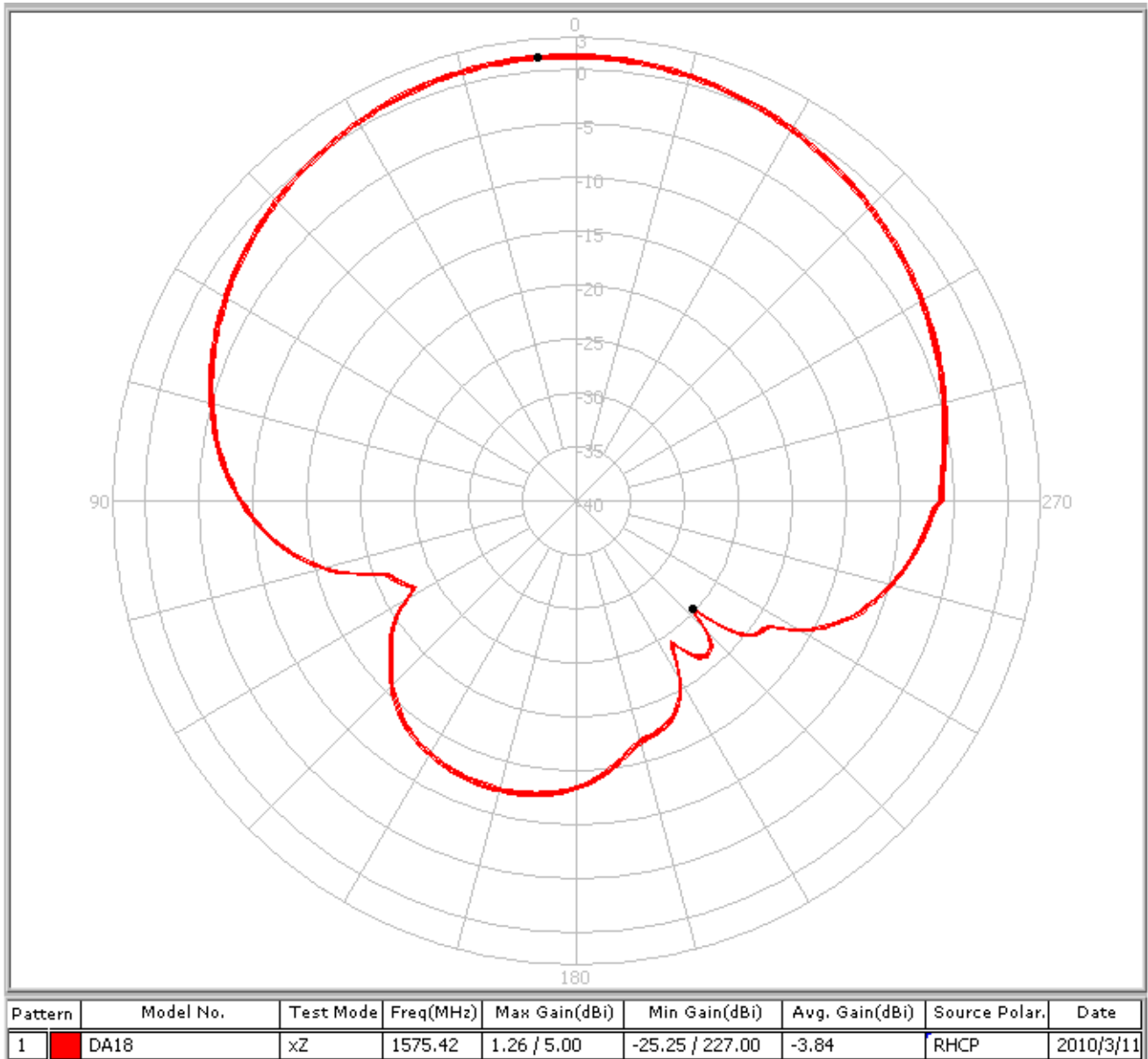


3.2 Efficiency

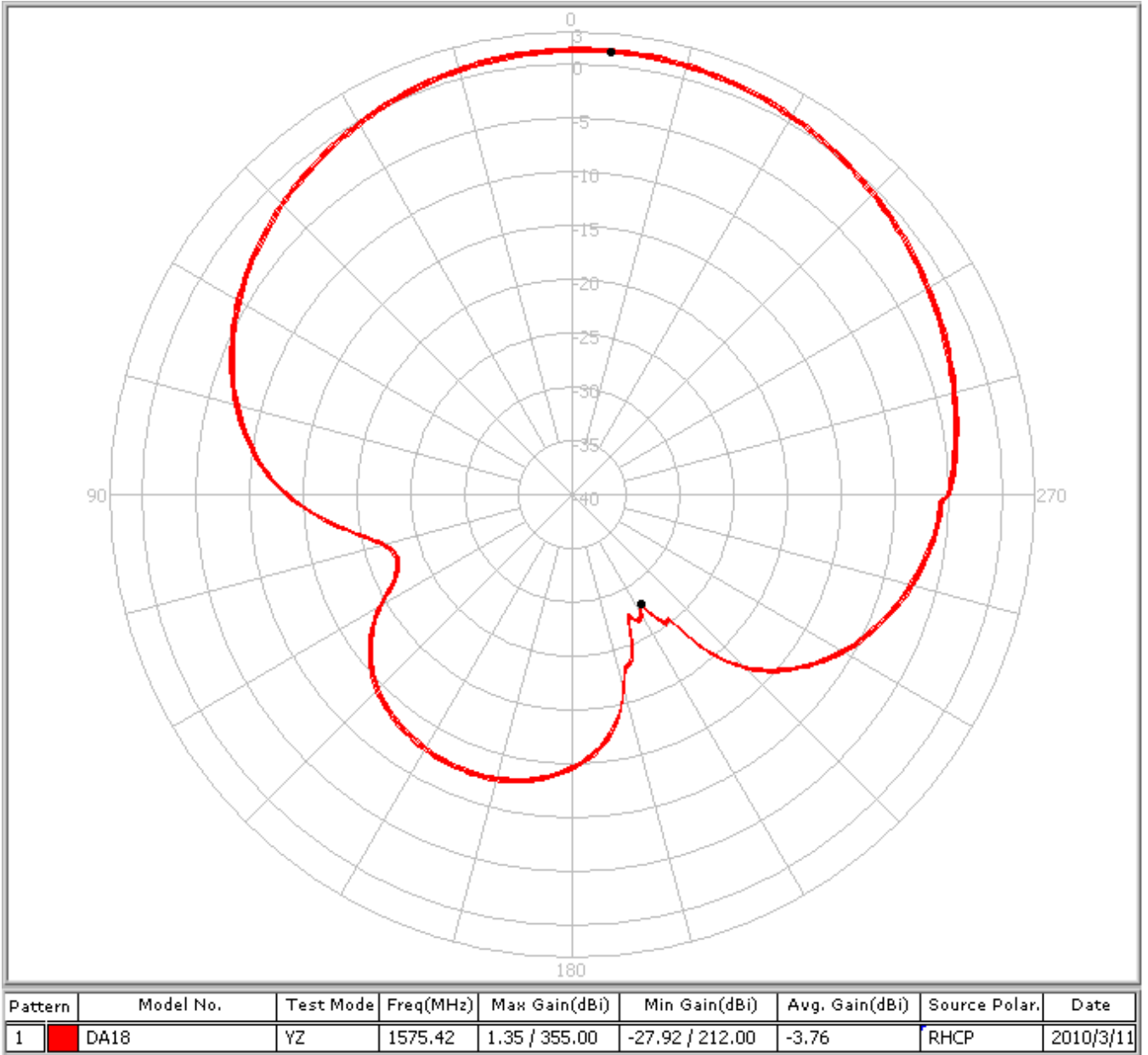


4. 2D Radiation Patterns

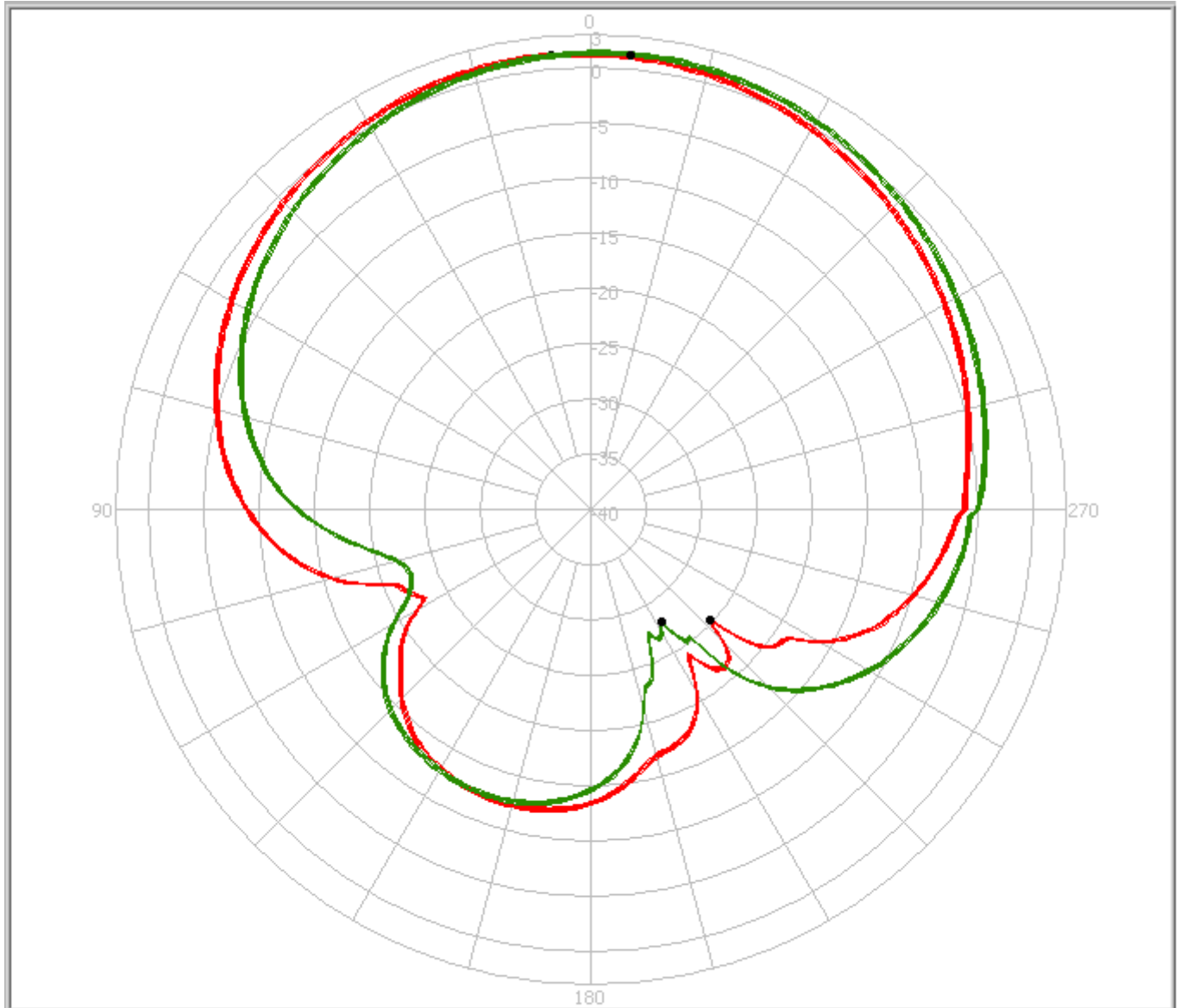
4.1 XZ Plane Radiation



4.2 YZ Plane Radiation

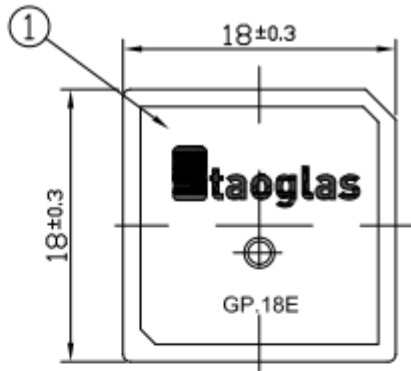


4.3 XZ Plane Radiation

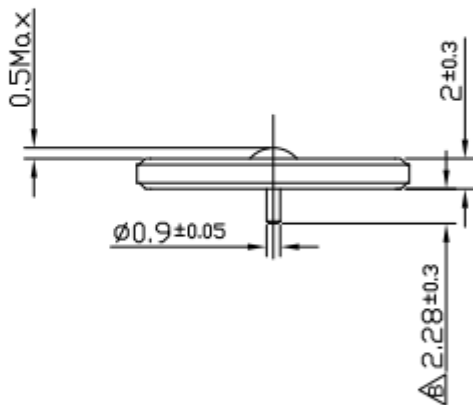


Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	DA18	xZ	1575.42	1.26 / 5.00	-25.25 / 227.00	-3.84	RHCP	2010/3/11
2	DA18	YZ	1575.42	1.35 / 355.00	-27.92 / 212.00	-3.76	RHCP	2010/3/11

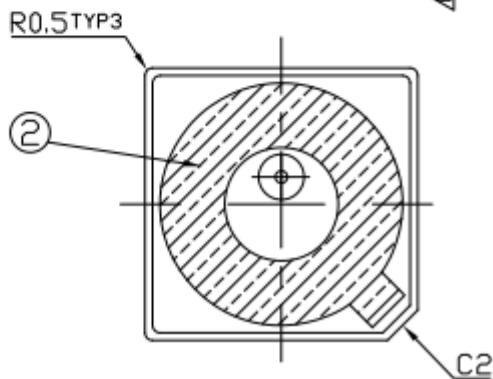
5. Mechanical Drawing




Top View



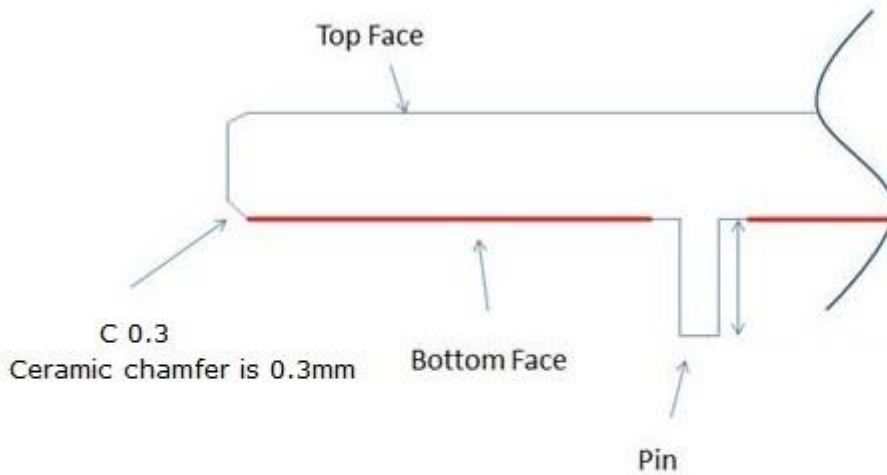
Side View



Bottom View

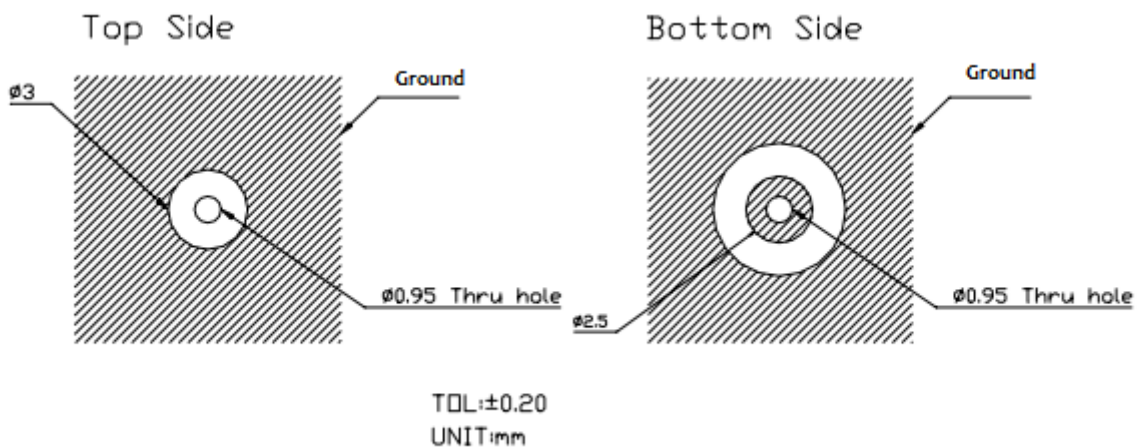
	Name	Material	Finish	QTY	NOTES:
1	Patch 18x18x2	Ceramic	Clear	1	1.Double sided adhesive area 
2	Double sided Adhesive	NITTO 5015	White Liner	1	

5.1 Adhesive Thickness



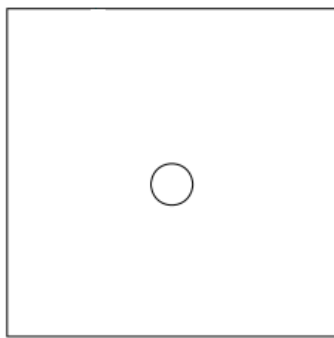
Red Line shows the adhesive without Liner - thickness 0.08~0.1mm

5.2 Layout Dimension

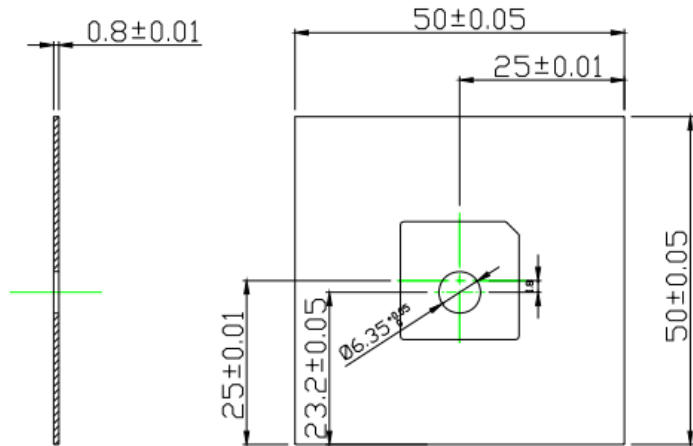


*Note Layout Dimensions may be affected by the thickness of the PCB

6. Test Jig and Dimension



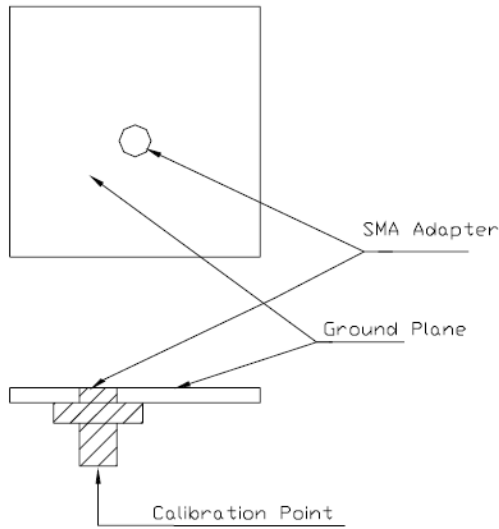
BOTTOM-SIDE



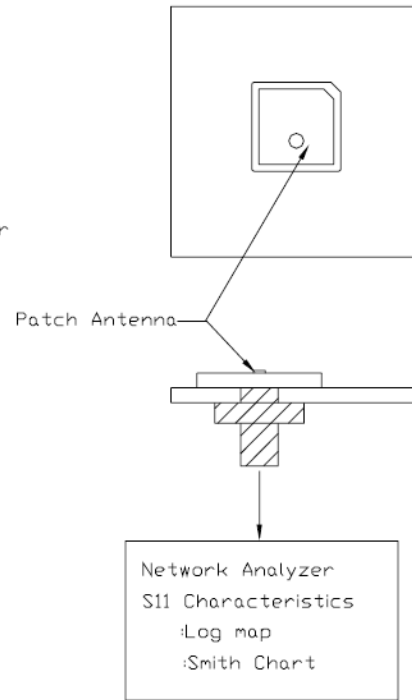
TOP-SIDE

6.1 Test Fixture Antenna Setup and Measurements

Test Fixture



Antenna Setup & Measurements

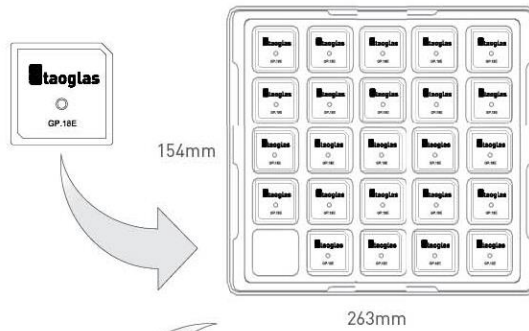


7. Packaging

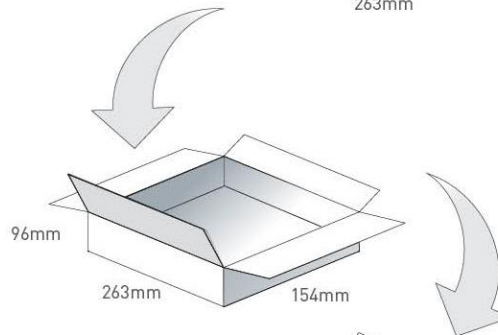
GP.1575.18.2.A.02

Packaging Specifications

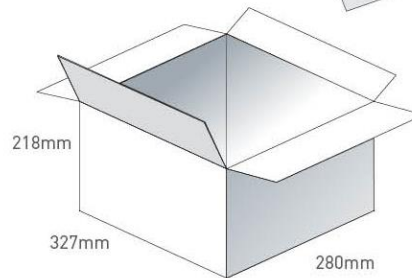
25 pcs GP.1575.18.2.A.02 per tray
 Tray Dimensions - 263*154mm
 Total Weight - 143g



8 trays / 200 pcs per small box
 Box Dimensions - 263*154*96mm
 Weight - 1.1Kg



4 boxes / 800 pcs per carton
 Carton Dimensions - 327*280*218mm
 Weight - 4.6Kg



Pallet Dimensions 1100mm*1120mm*1470mm
 72 Cartons per pallet
 12 Cartons per layer
 6 Layers

