

SPECIFICATION

Part No. : **CGGBP.25.4.A.02**

Product Name : Embedded 25mm
GPS/GLONASS/GALILEO/BEIDOU Patch
Antenna, 1561/1575/1602MHz

Feature : 25*25*4mm Ceramic patch
High Gain (up to 3.5dBi)
Excellent stability on the three GNSS systems
Optimized radiation patterns
Pin Mount
RoHS Compliant



1. Introduction

This 25mm square embedded ceramic GPS/GLONASS/GALILEO/BEIDOU patch antenna's wide band of operation leads to excellent gain and radiation pattern stability on all four common commercial GNSS systems worldwide.

Compared to using a smaller antenna, this will translate into the GNSS system having much higher location accuracy, improved reliability of lock in urban areas, better signal reception, with more satellites acquired and a quicker time to first fix.

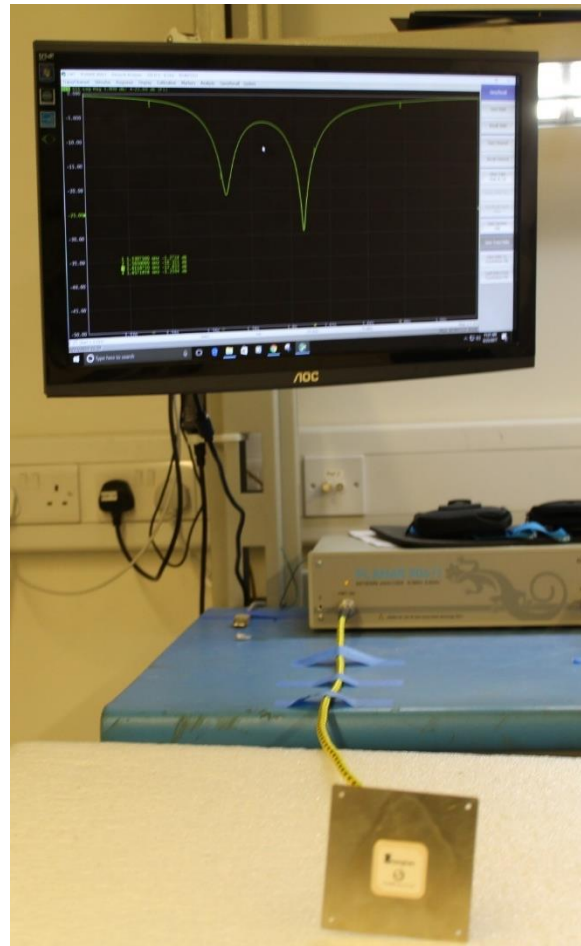
The patch is mounted via pin and double-sided adhesive.

2. Specification

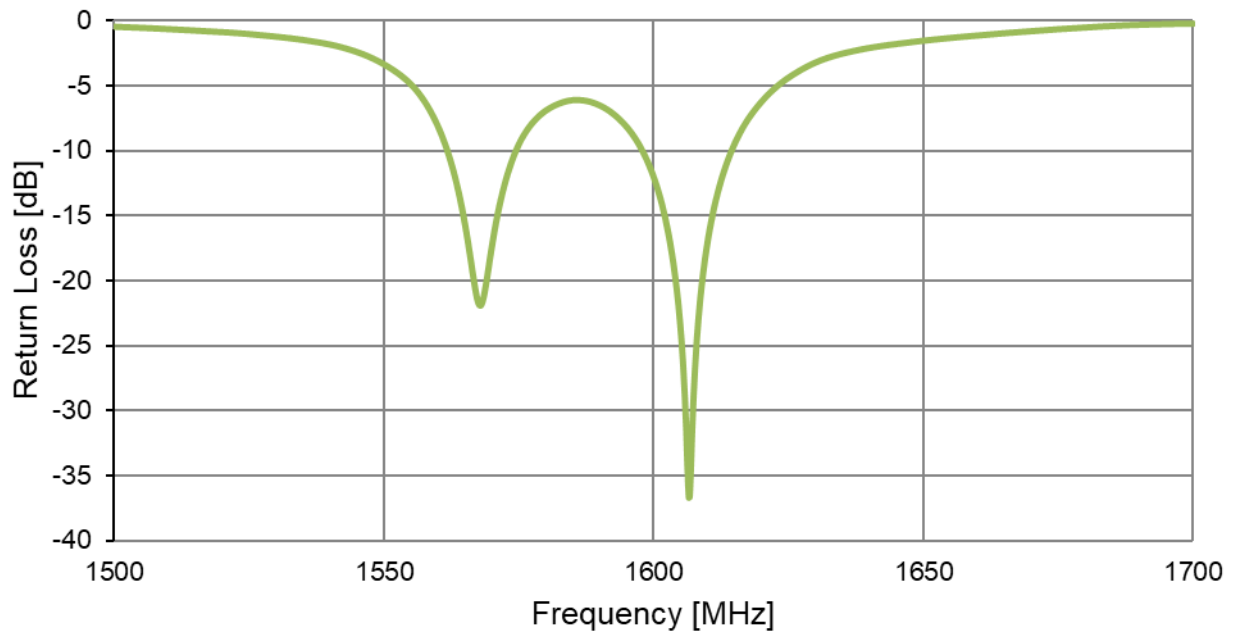
ELECTRICAL			
Frequency	BeiDou	GPS/GALILEO	GLONASS
	1561.098MHz ± 2.046MHz	1575.42 ± 1.023MHz	1602 ± 5MHz
VSWR	2.52	2.2	2.07
Efficiency	82.15	85.45	79.76
Peak Gain	4.96	4.99	5.48
Average Gain	-0.854	-0.683	-0.377
Centre Frequency	1582MHz ± 3MHz		
Impedance	50 Ω		
MECHANICAL			
Dimensions	25 x 25 x 4mm		
Material	Ceramic		
Pin Diameter	0.9mm		
Pin Length	1.65mm		
ENVIRONMENTAL			
Operation Temperature	-40°C to 85°C		
Storage Temperature	-40°C to 105°C		
Humidity	Non-condensing 65°C 95% RH		

3. Antenna Characteristics

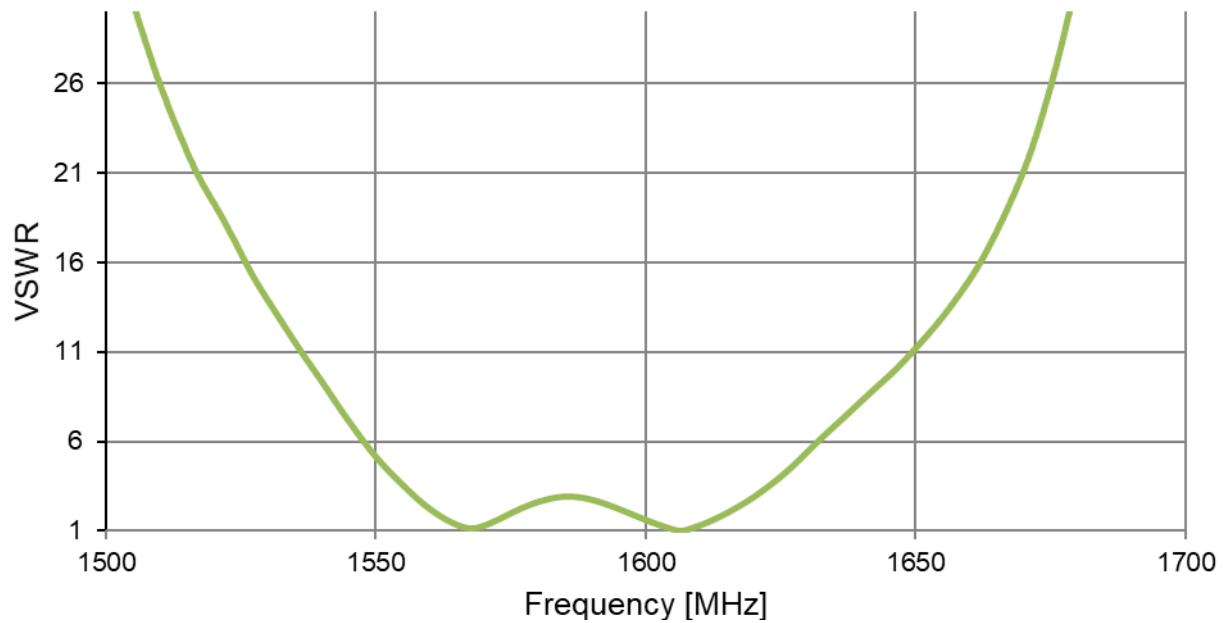
3.1. Test Setup



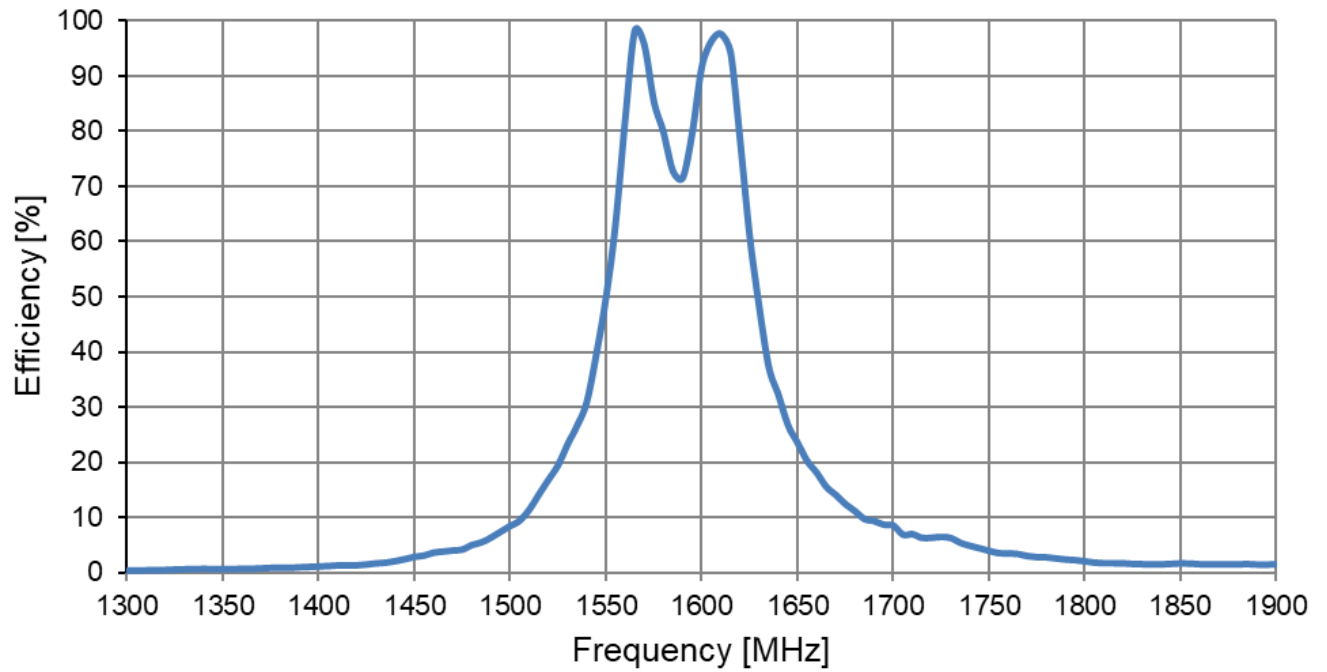
3.2. Return Loss



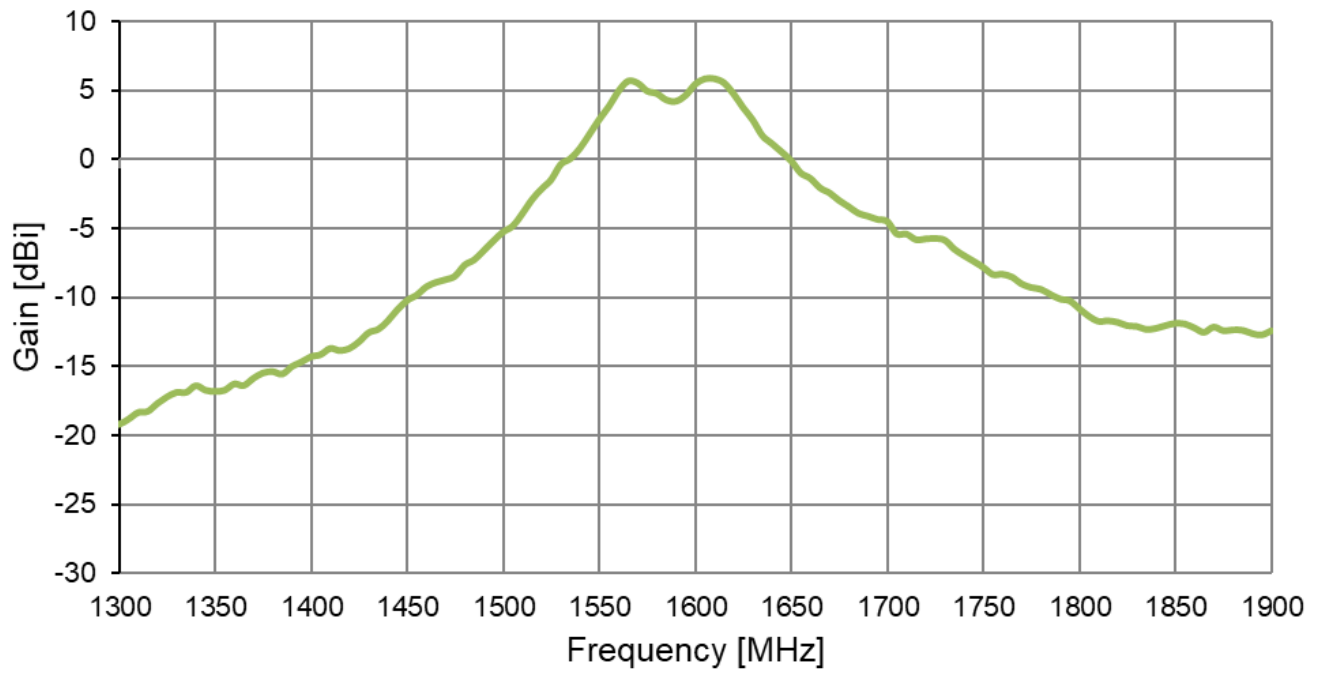
3.3. VSWR



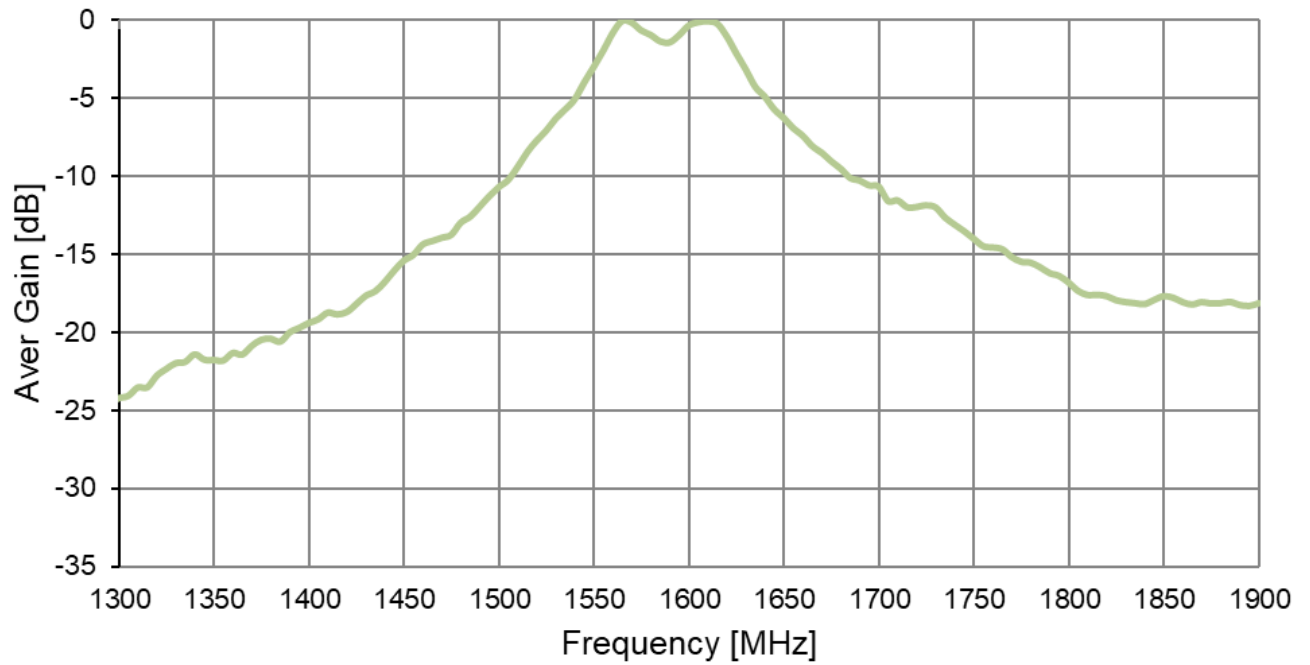
3.4. Efficiency



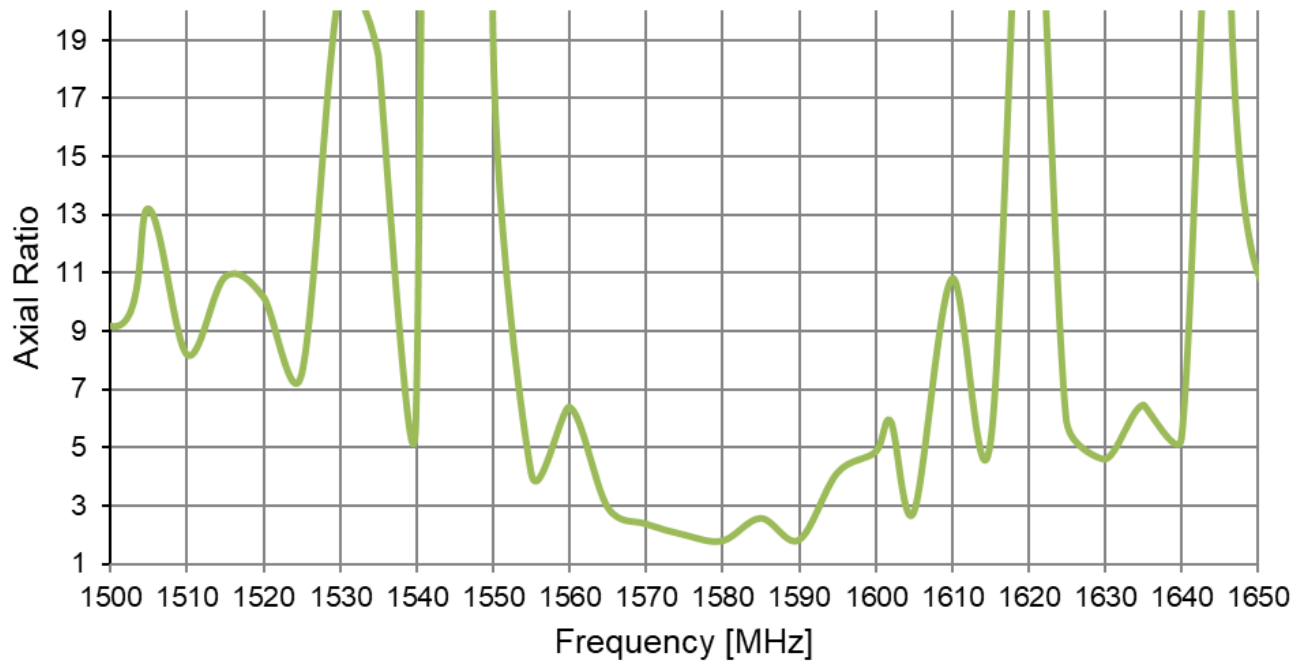
3.5. Peak Gain



3.6. Average Gain

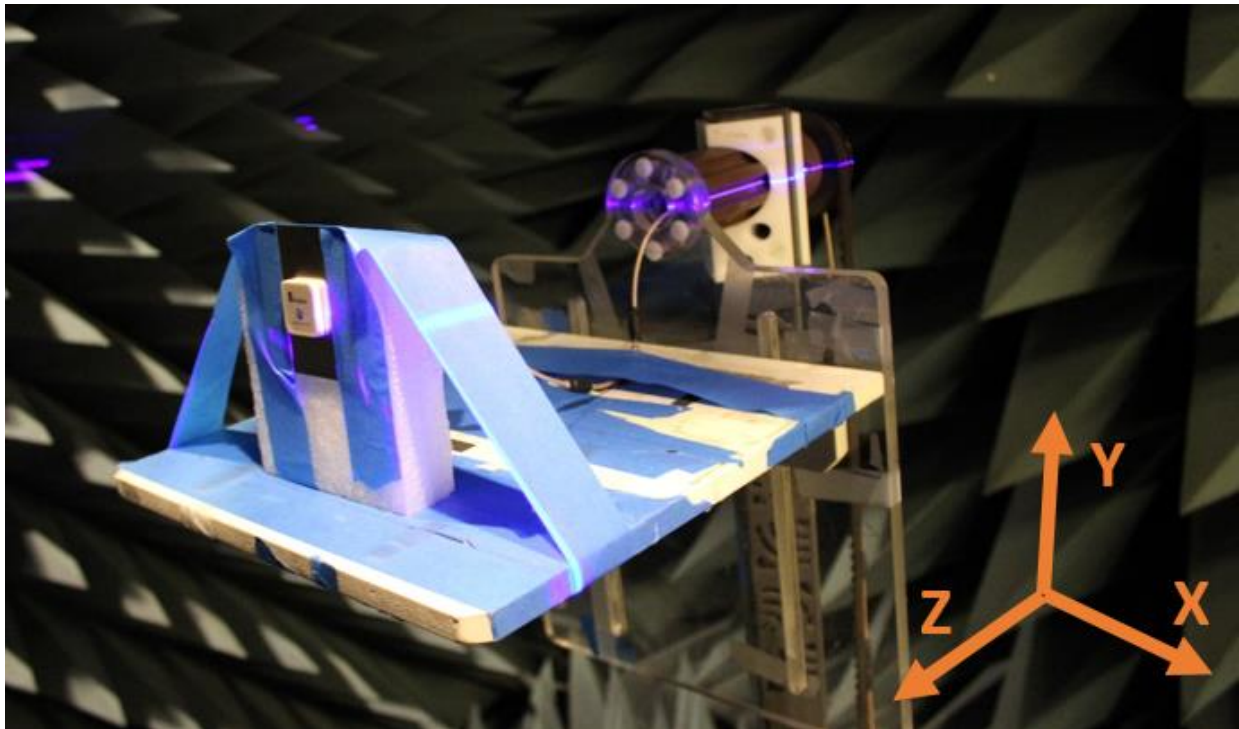


3.7. Axial Ratio



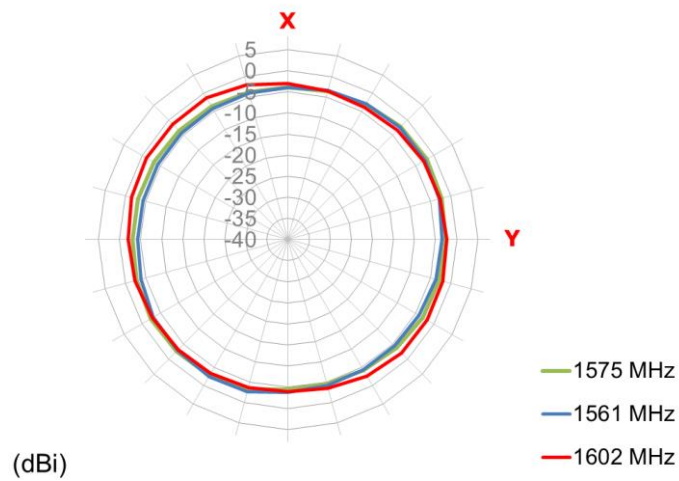
4. 2D Antenna Radiation

4.1. Test Setup

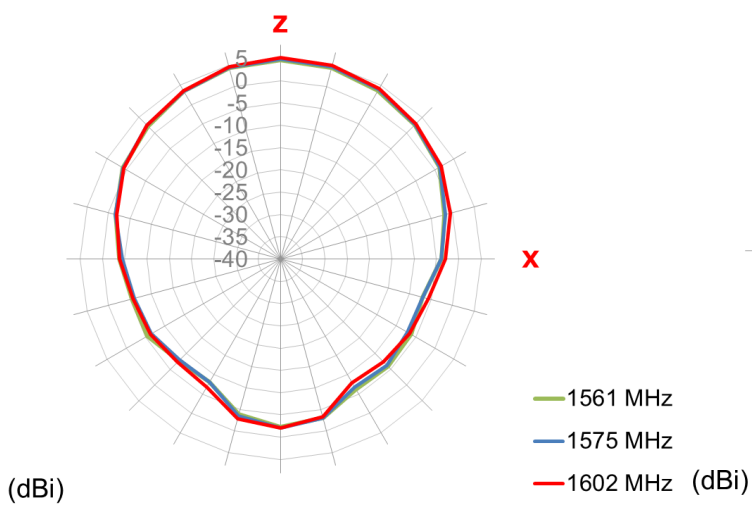


4.2. Radiation Patterns

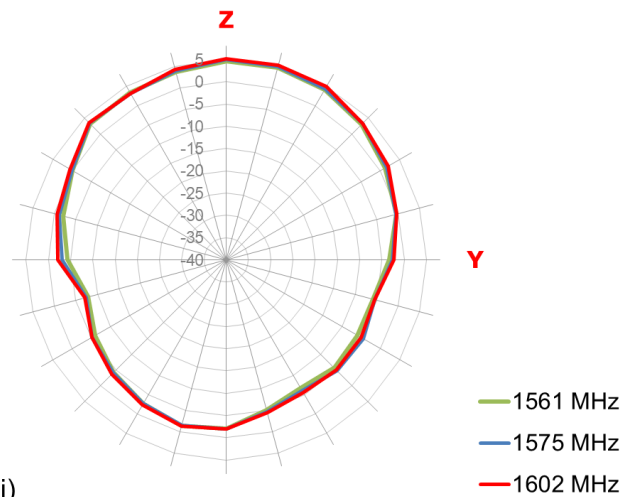
XY Plane



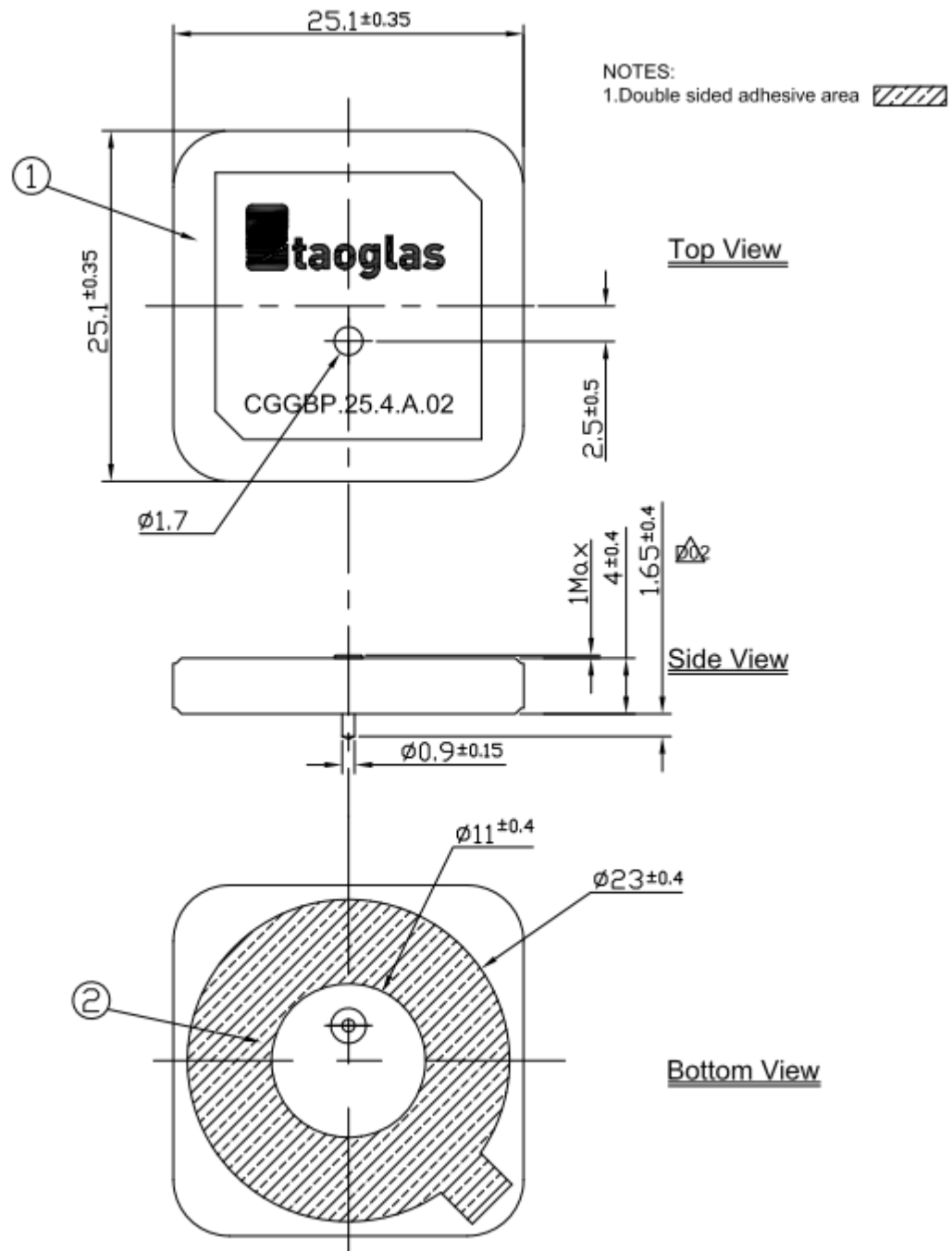
XZ Plane



YZ Plane

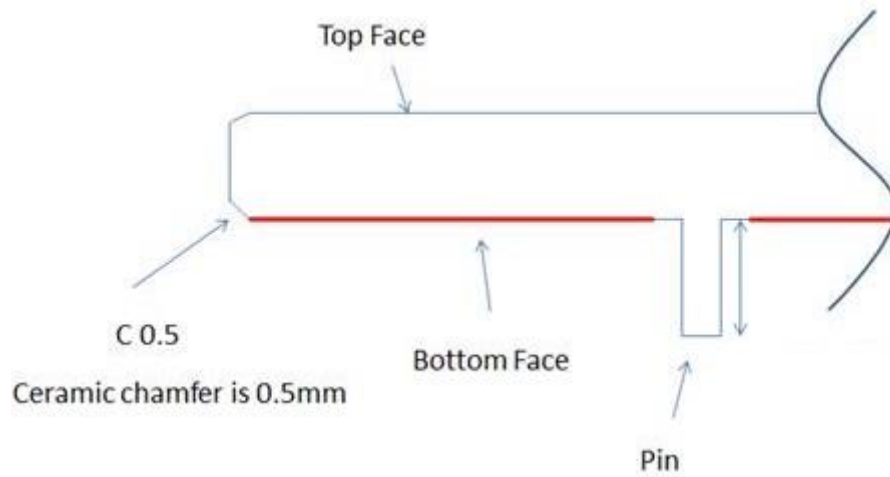


5. Mechanical Drawing-Patch (Unit: mm)



	Name	Material	Finish	QTY
1	Patch 25x25x4	Ceramic	Clear	1
1	Double sided Adhesive	NITTO5015	White Liner	1

5.1. Adhesive Thickness

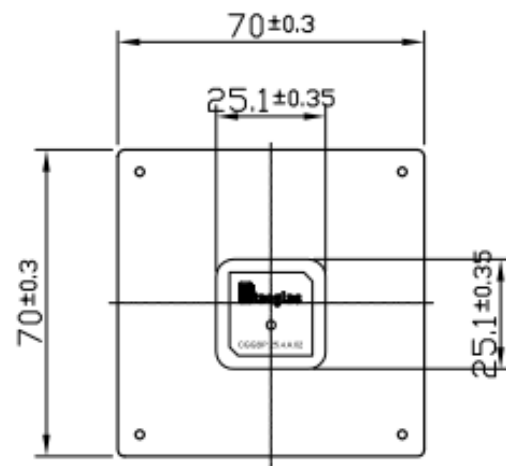


Red Line shows the adhesive without Liner – thickness 0.08~0.1mm

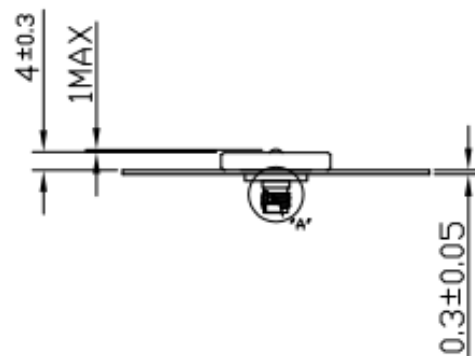
5.2. CGGBP.D.25.A EVB

	Name	Material	Finish	QTY
1	Patch(25x25x4mm)	Ceramic	Clear	1
2	Ground-Plane(70x70x0.3mm)	Brass	Silver	1
3	SMA(F) ST	Brass	Gold	1

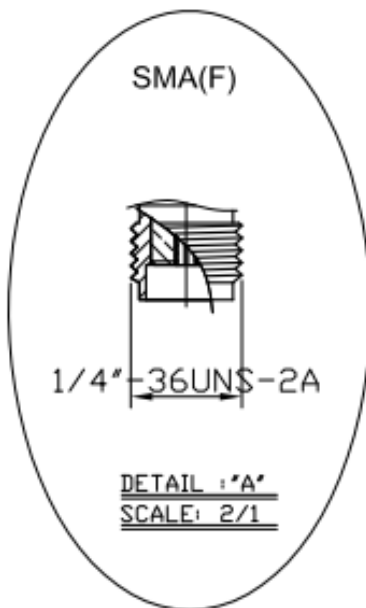
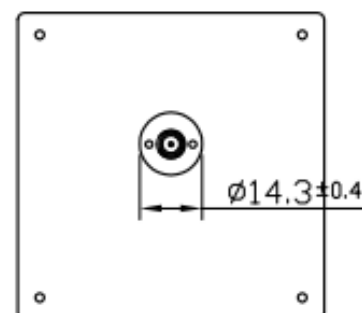
Top View



Side View



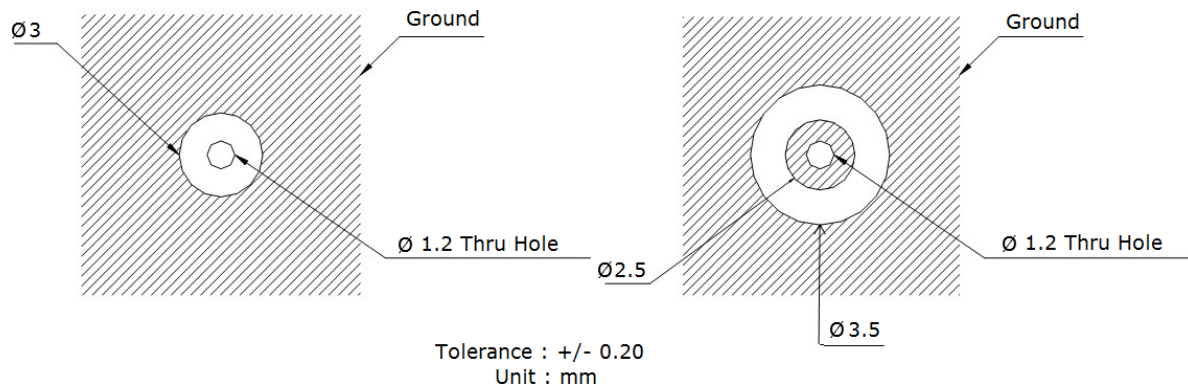
Bottom View





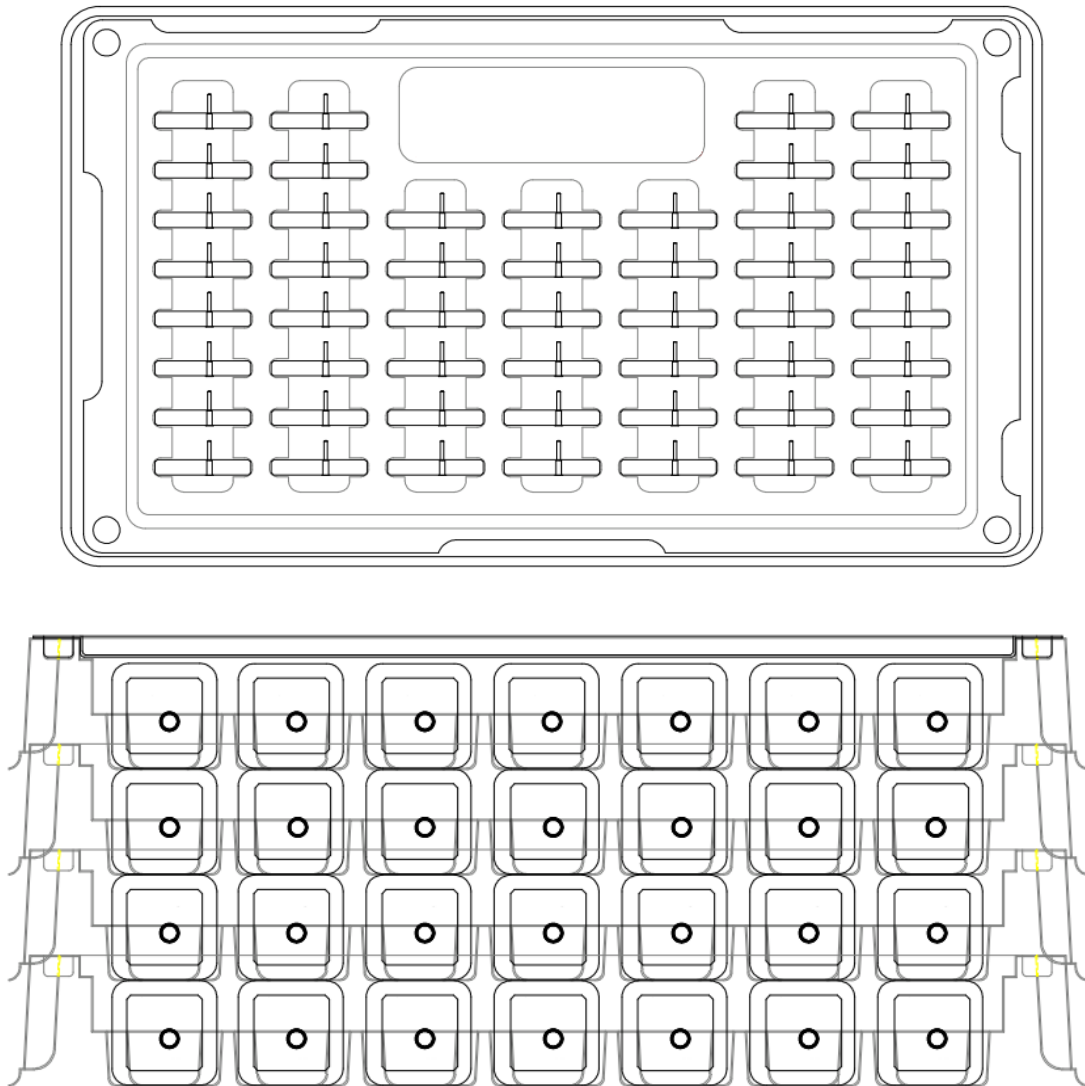
CGGBP.25.4.A.02 Patch on 70*70mm Ground Plane

5.3. PCB Footprint Recommendation



6. Packaging

6.1. Inner Tray

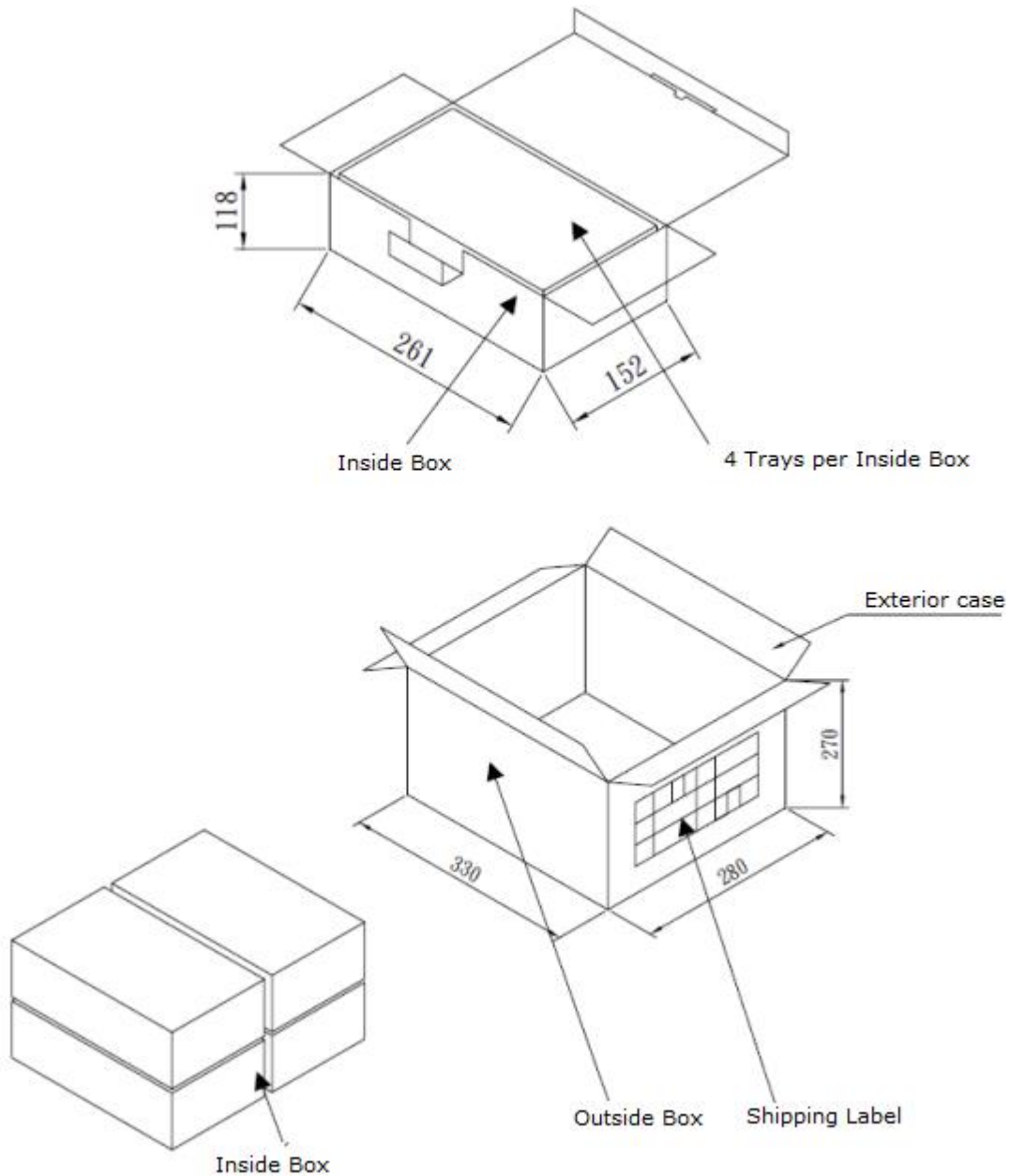


50 pieces per tray

4 Trays per Inside Box = 200

4 Inside Boxes per Outer Carton -Outer Carton contains 800 pieces

6.2. Carton



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