

SPECIFICATION

Part No. : **CGGBP.18.4.A.02**

Product Name : 18mm*18mm*4mm

GPS/GLONASS/GALILEO/BEIDOU

Embedded Patch Antenna

GPS-GALILEO 1575MHz / BEIDOU 1561MHz /

GLONASS 1602MHz

Feature : Dielectric Ceramic

Pin Mount

RoHS Compliant



1. Introduction

This 18mm*18mm square ceramic GPS/GLONASS/GALILEO/BEIDOU patch antenna's wide band of operation leads to excellent gain and radiation pattern stability on all three GNSS system bands.

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.

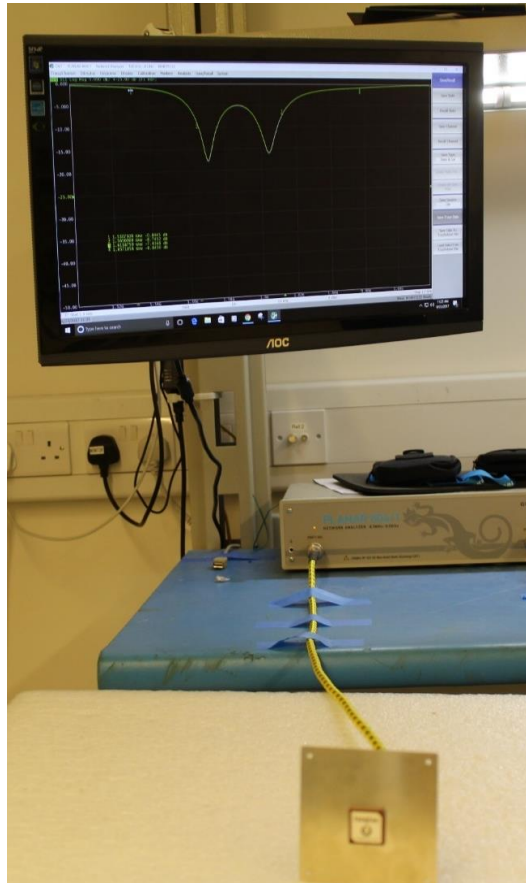
2. Specification

ELECTRICAL			
Frequency	BeiDou	GPS	GLONASS
	1561.098MHz ± 2.046MHz	1575.42 ± 1.023MHz	1602 ± 5MHz
VSWR	3.97 max.	1.97 max.	2.42 max.
Efficiency	55%	83.7%	87.6%
Peak Gain (dBi)	3.4 dBi typ.	4.9 dBi typ.	5.4 dBi typ.
Average Gain (dB)	-2.58 dB	-0.77 dB	-0.57 dB
Centre Frequency	1583MHz ± 3MHz		
Impedance	50 Ω		
MECHANICAL			
Dimensions	18*18*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		

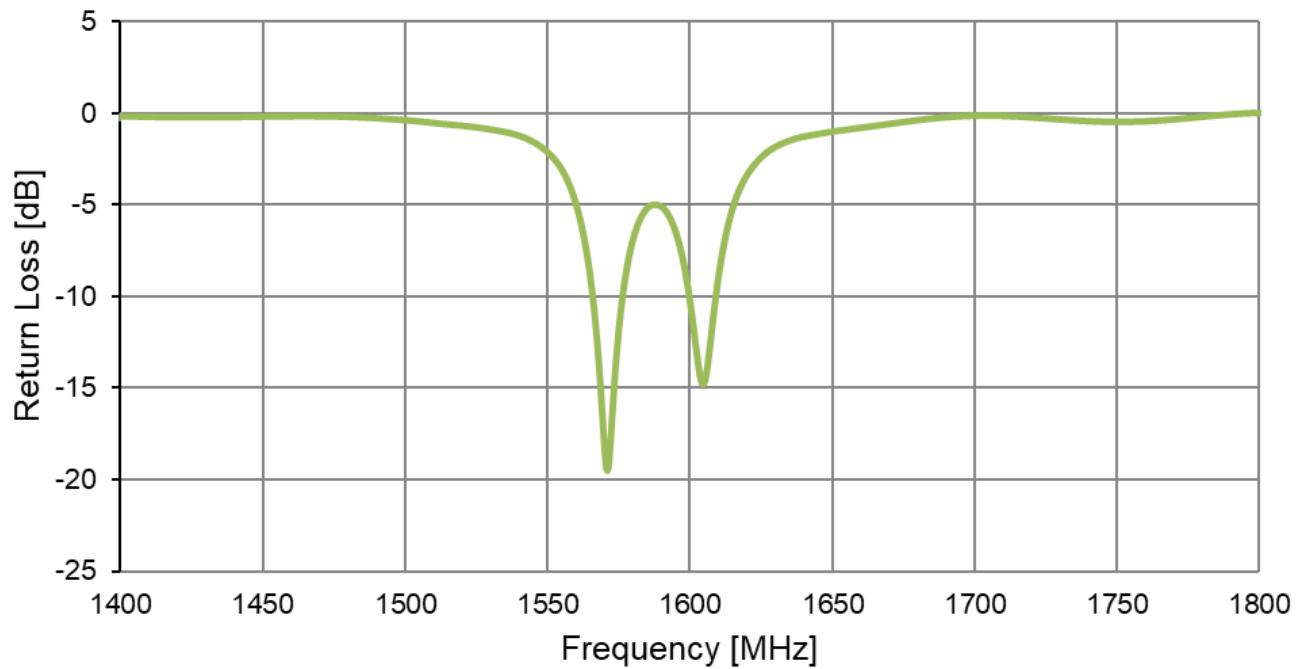
*measured on a 70*70mm Ground Plane

3. Antenna Characteristics

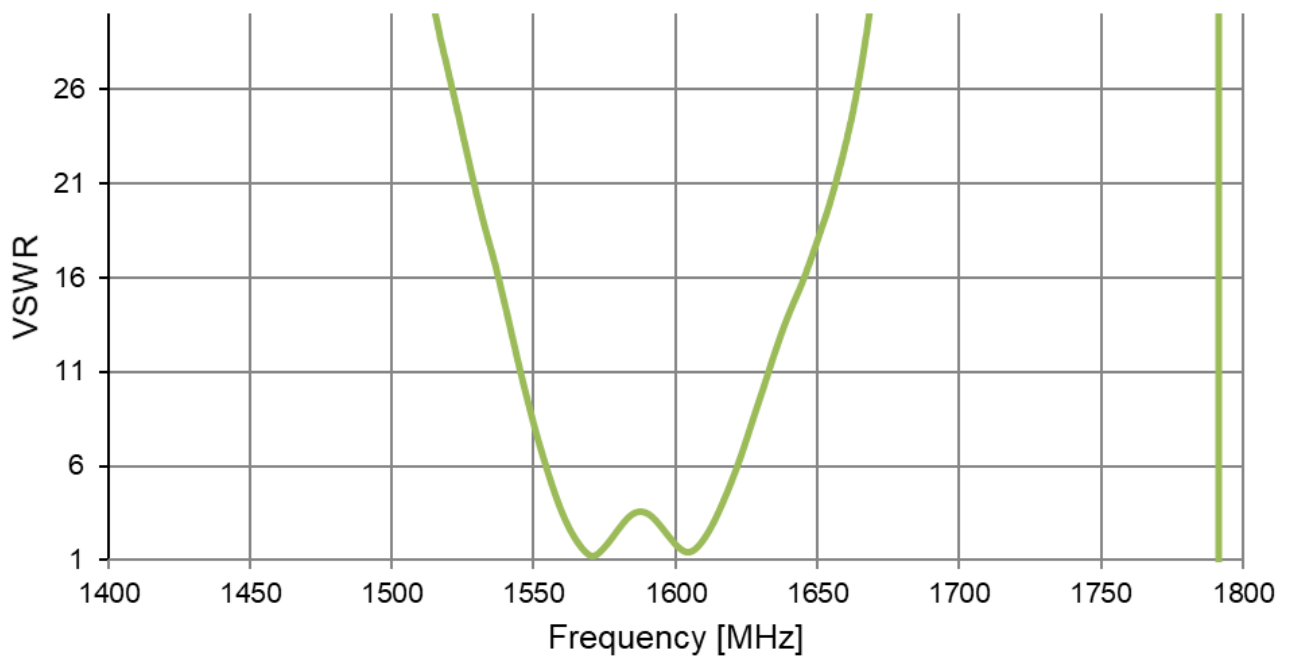
3.1. Test Setup



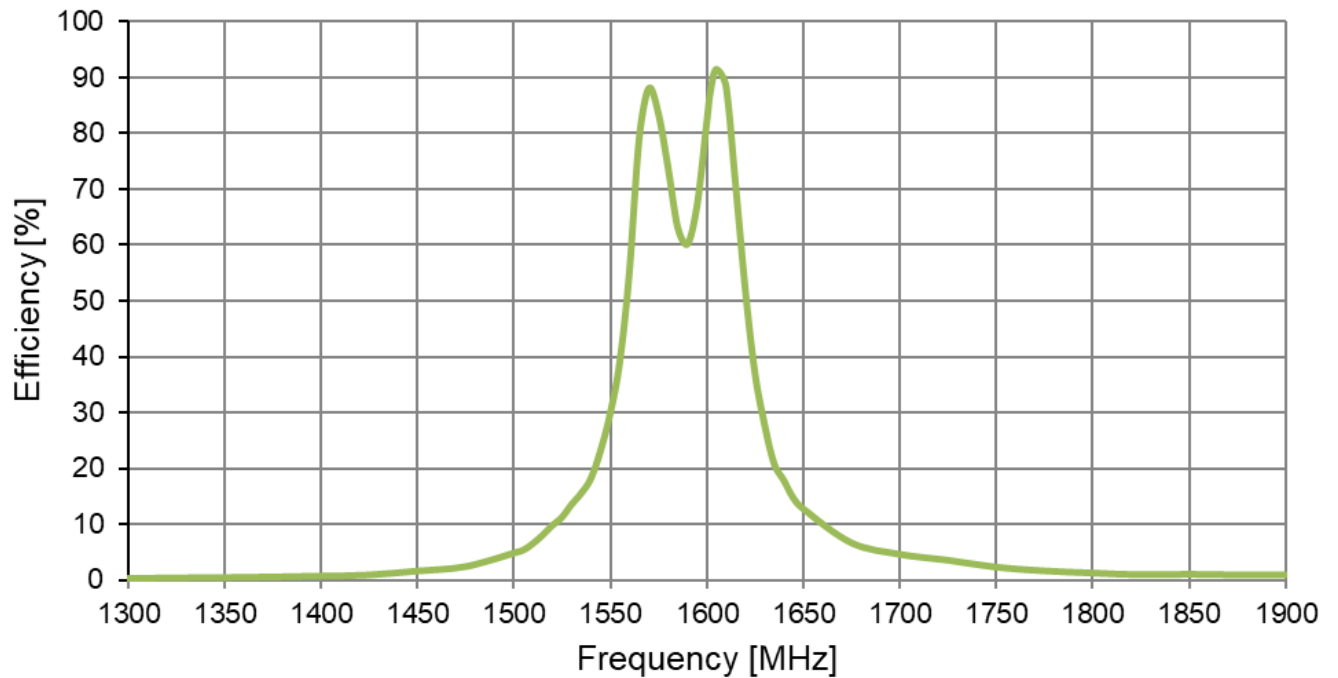
3.2. Return Loss



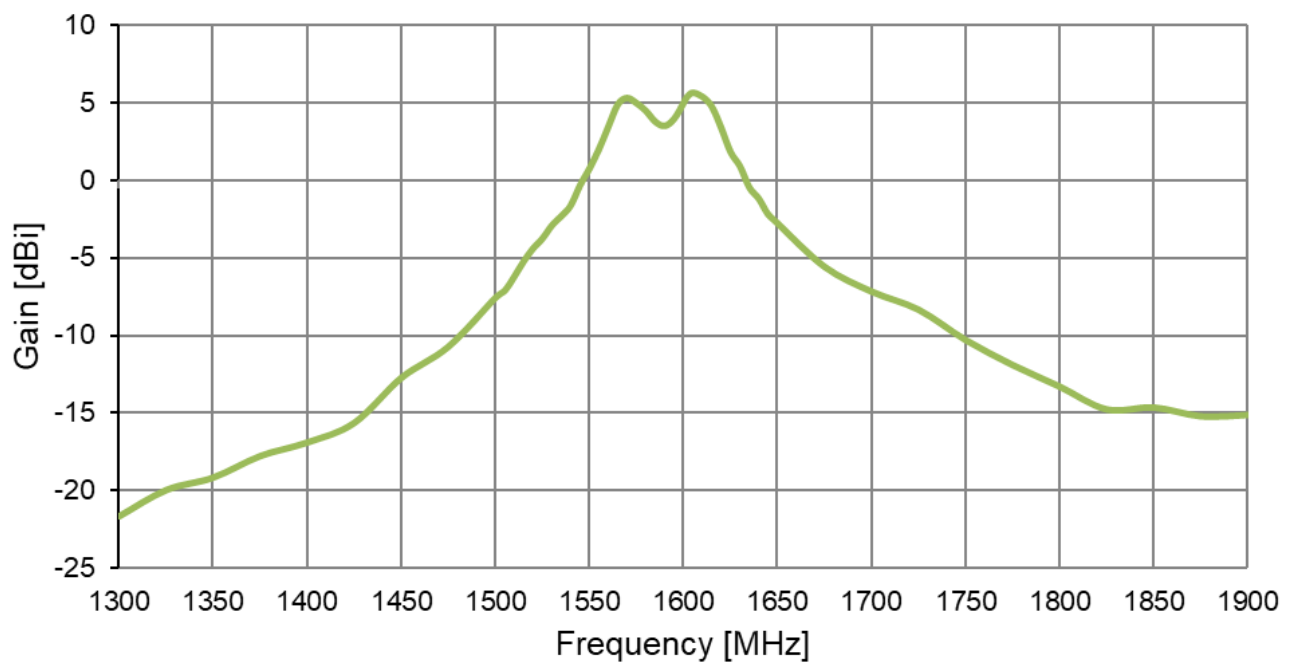
3.3. VSWR



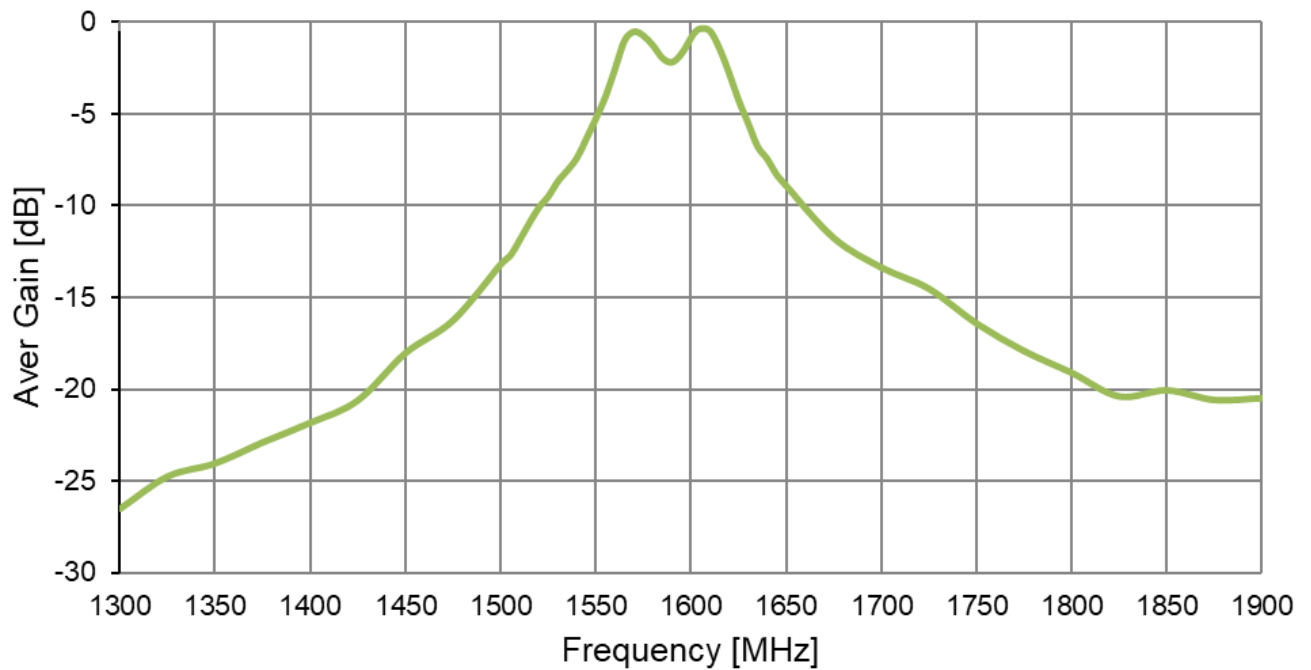
3.4. Efficiency



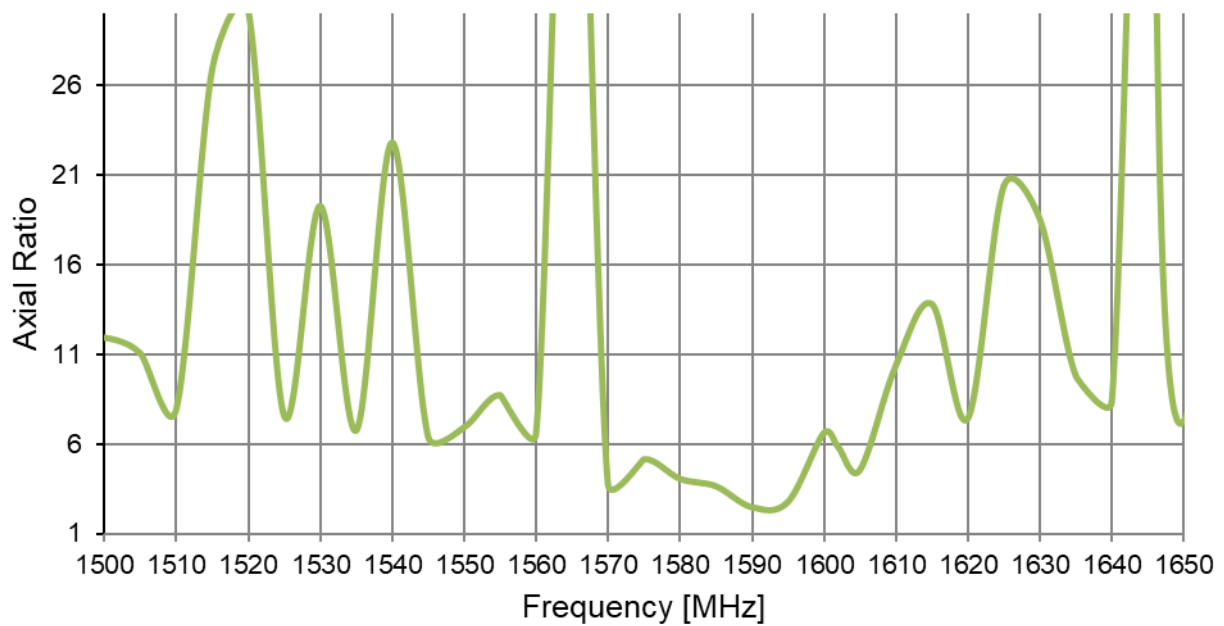
3.5. Peak Gain



3.6. Average Gain

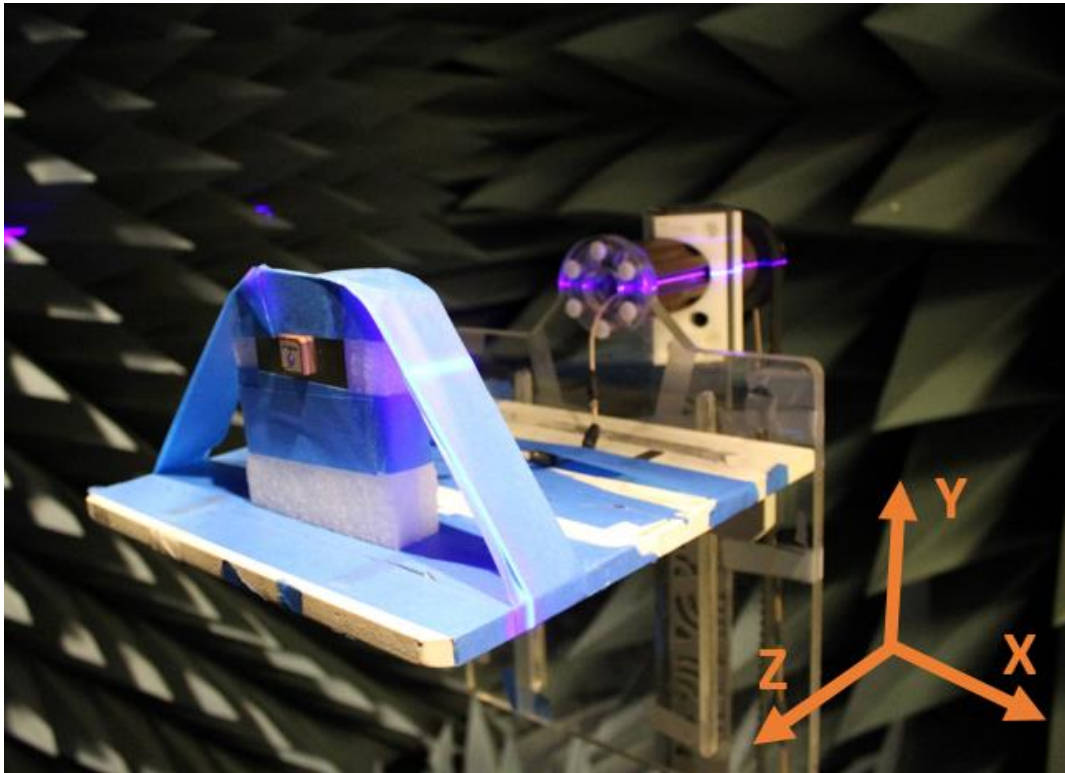


3.7. Axial Ratio



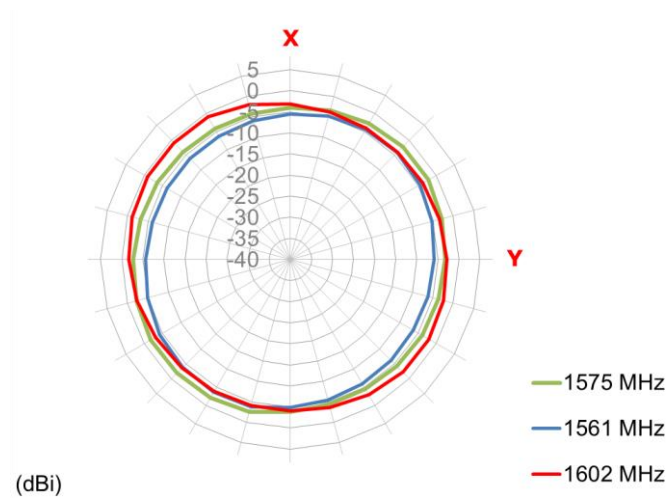
4. 2D Antenna Radiation

4.1. Test Setup

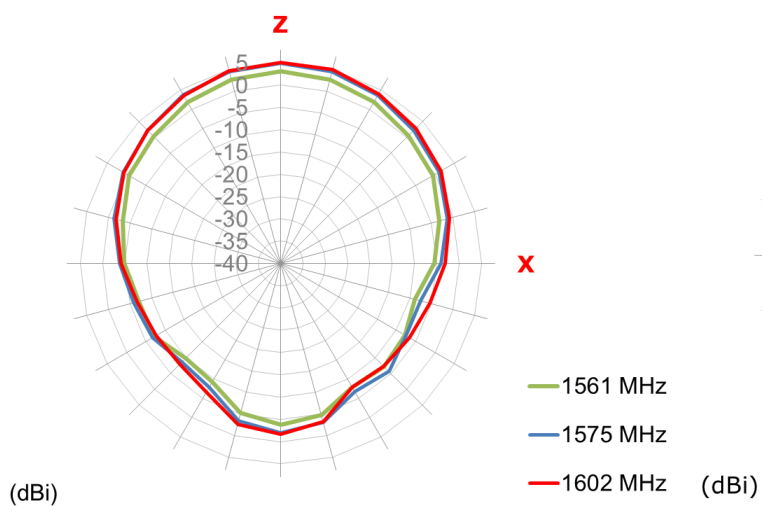


4.2. Radiation Pattern

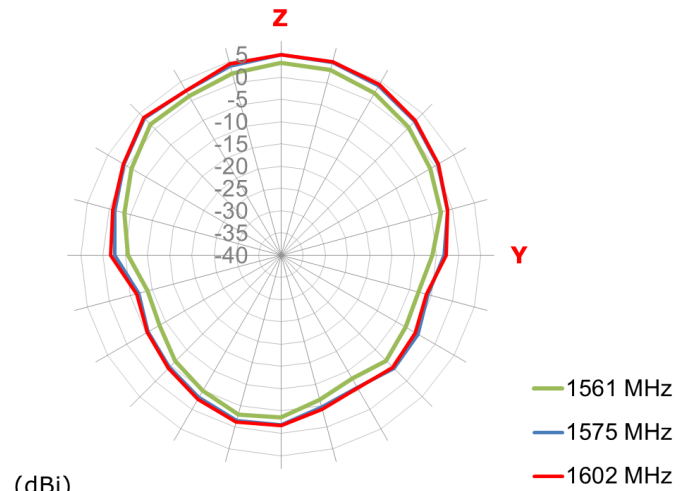
XY Plane



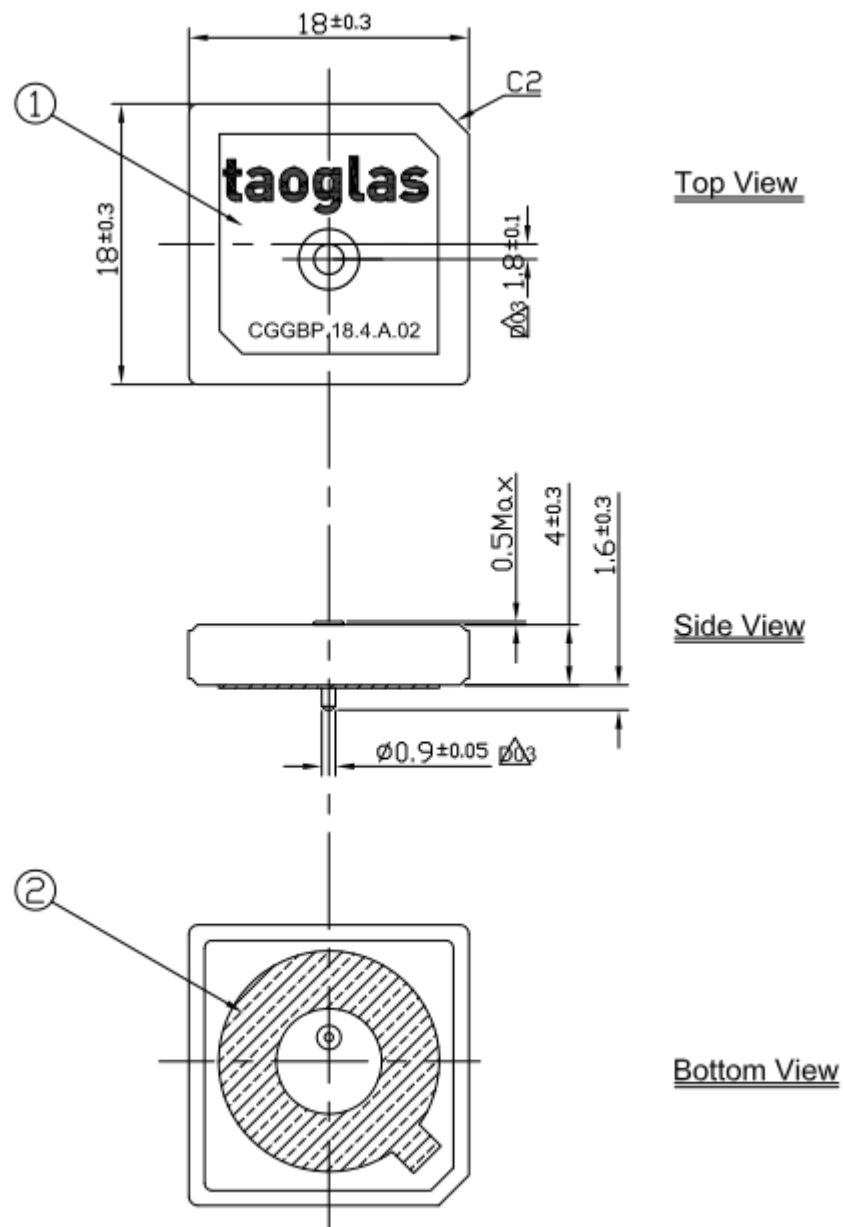
XZ Plane



YZ Plane



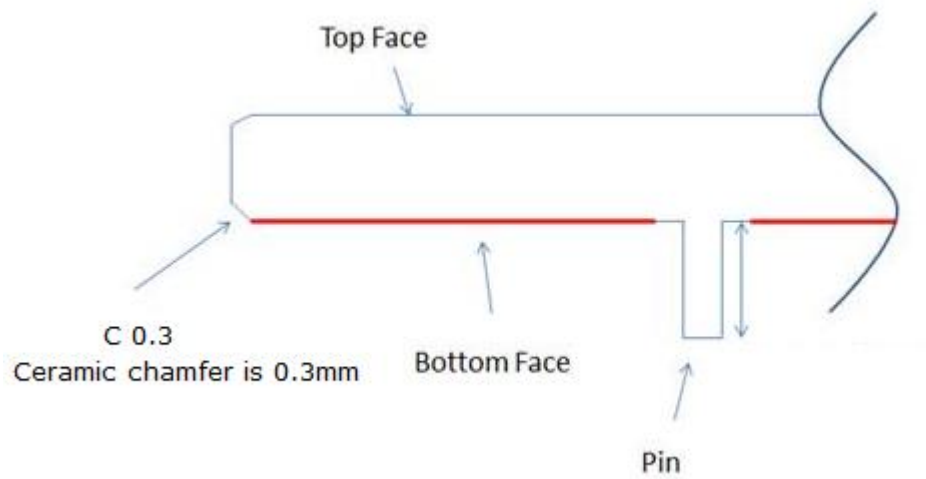
5. Mechanical Drawing



NOTES:

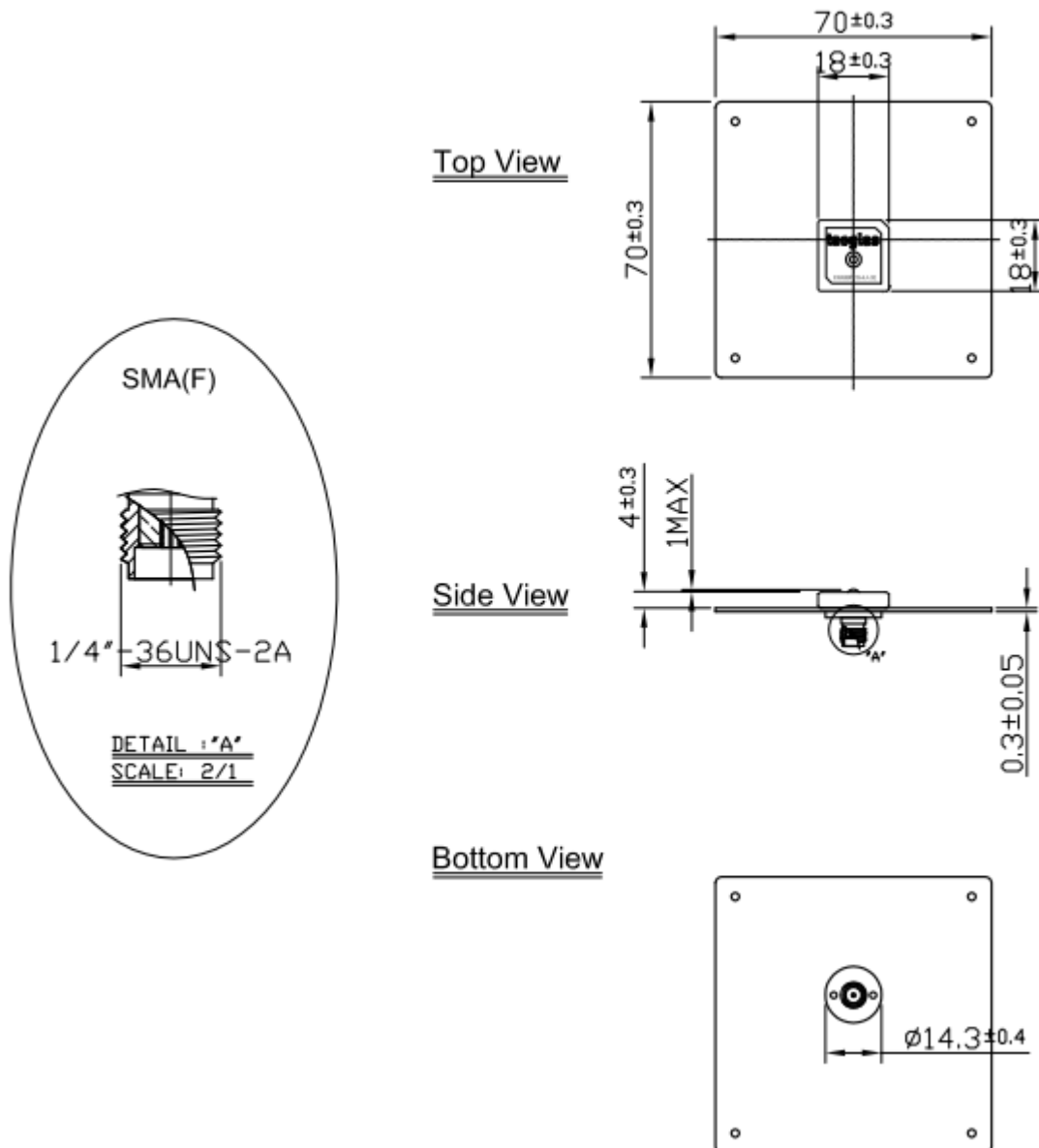
1. Double sided adhesive area 

5.1. Adhesive Thickness



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

5.2. CGGBPDP.18.A EVB

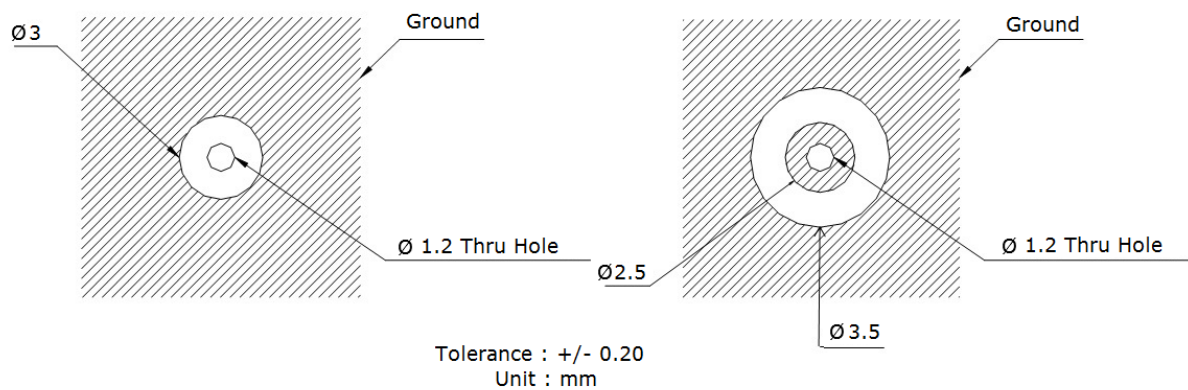


	Name	Material	Finish	QTY
1	Patch(18x18x4mm)	Ceramic	Clear	1
2	Ground-Plane(70x70x0.3mm)	Brass	Silver	1
3	SMA(F) ST	Brass	Gold	1



CGGBP.18.4.A.02 Patch on 70*70mm Ground Plane

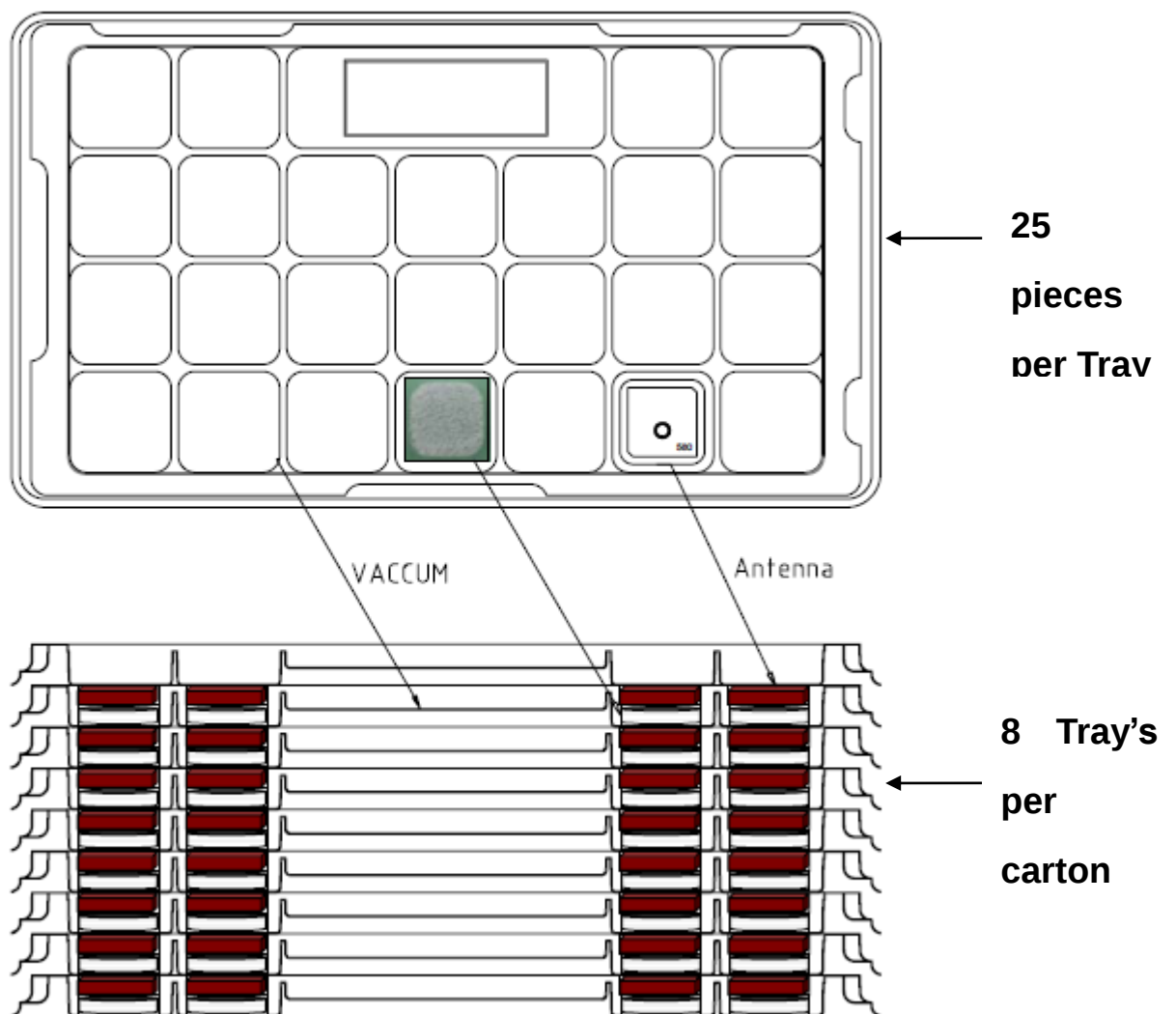
5.3. PCB Footprint Recommendation



6. Packaging

6.1. Inner Tray

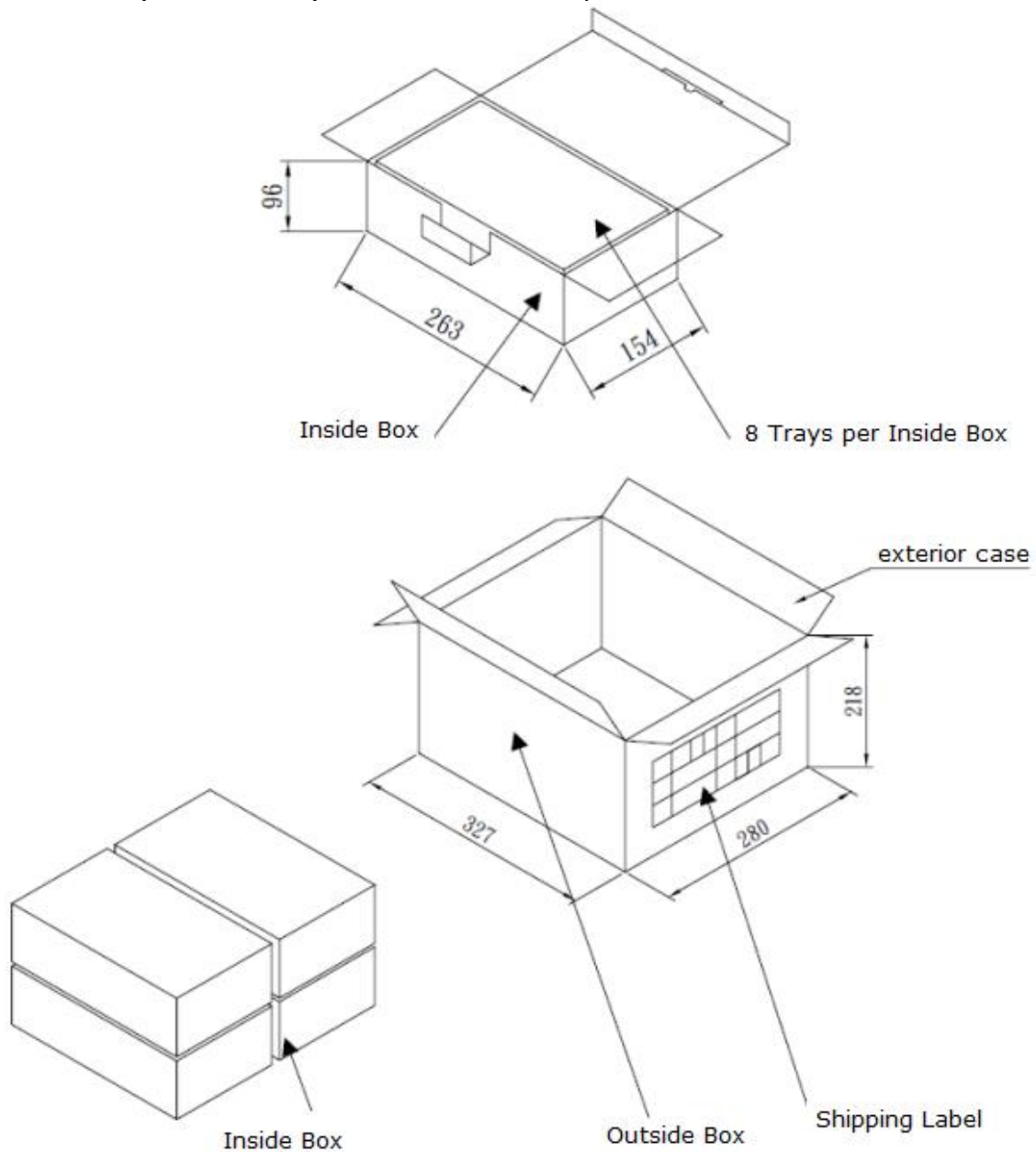
Per Tray: 25 pieces



6.2. Carton

Per Carton (Inside Box) – 8 Trays = 200 pieces

Outer Carton (Outside Box)– 4 Cartons = 800 pieces



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