



# TAOGLAS®



# Datasheet

## CGGBP.25.4.A.02

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

### **Description:**

Embedded 25mm GPS/GLONASS/Galileo/BeiDou Patch Antenna,  
1561/1575/1602MHz

### **Features:**

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

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## 1. Introduction



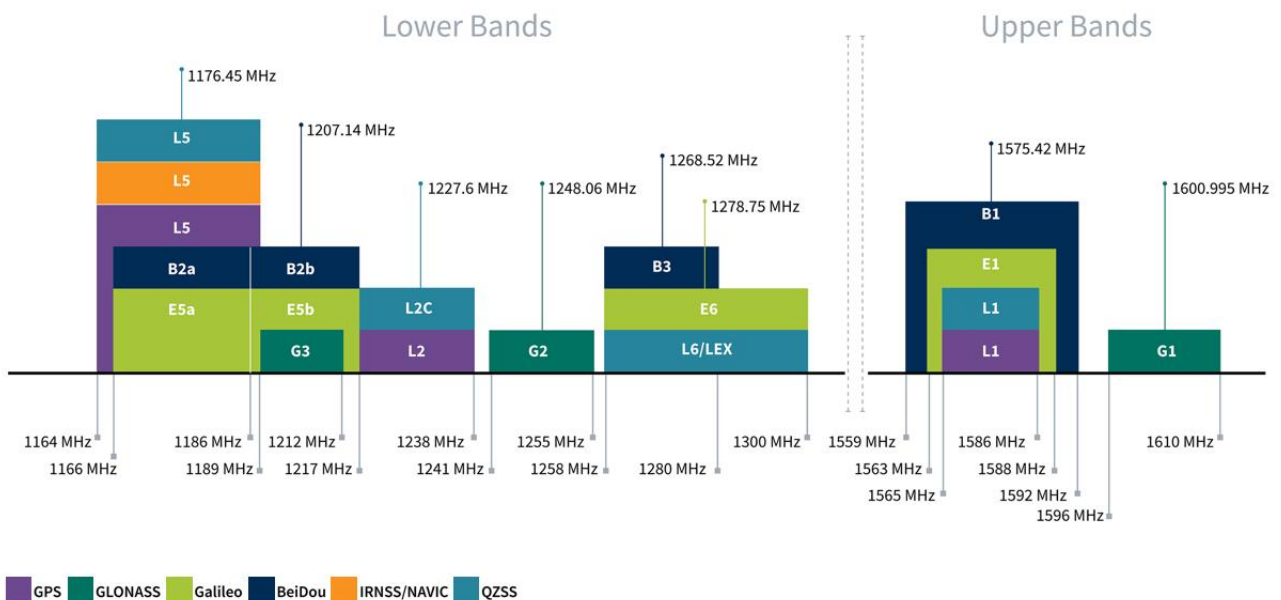
This 25mm square embedded ceramic GPS/GLONASS/Galileo/BeiDou patch antenna's wide band of operation leads to excellent gain and radiation pattern stability on all four common commercial GNSS systems worldwide.

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. This patch can be tuned subject to NRE and MOQ, for further information please contact your regional Taoglas customer support team.

## 2. Specifications

GNSS Frequency Bands Covered							
GPS/QZSS	L1	L2	L5	L6			
	1575.42MHz	1227.6MHz	1176.45MHz	1278.75MHz			
	■	□	□	□			
GLONASS	L5R	L3PT	L2PT	L1CR	L1PT		
	1176.45MHz	1201.5MHz	1246MHz	1575.42MHz	1602MHz		
	□	□	□	■	■		
Galileo	E5a	E5b	E4	E3	E6	E2	E1
	1176.45MHz	1201.5MHz	1215MHz	1256MHz	1278.75MHz	1561MHz	1575.42MHz
	□	□	□	□	□	■	■
BeiDou	B1	B2	B3				
	1561MHz	1207.14MHz	1268.52MHz				
	■	□	□				
Compass	E5B(B2)/ E6(B3)	E2(B1)					
	1268.56MHz	1561MHz					
	□	■					
SBAS	Omnistar	WAAS/EGN OS					
	1542.5MHz	1575.42MHz					
	□	■					



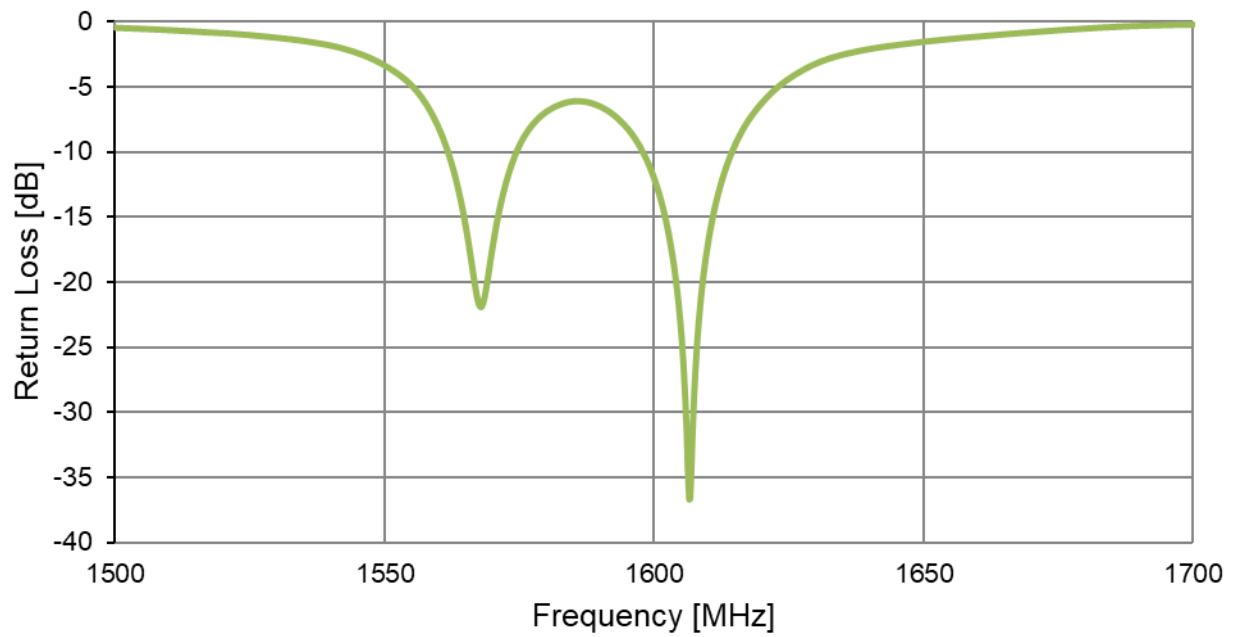
GNSS Bands and Constellations

GNSS Electrical			
Frequency (MHz)	1561	1575	1602
VSWR (max.)	2.5	2.2	2.1
Efficiency (%)	82.15	85.45	79.76
Peak Gain	4.96	4.99	5.48
Average Gain	-0.85	-0.68	-0.38
Centre Frequency			
Impedance			

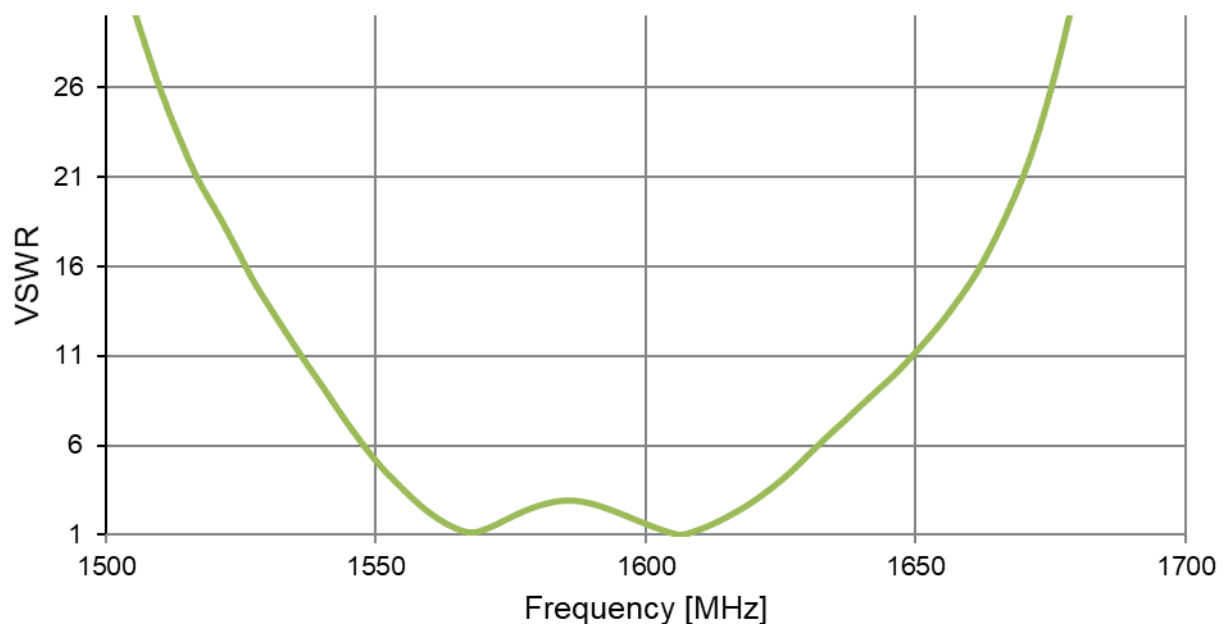
Mechanical	
Height	4 mm
Planner Dimension	25 x 25 mm
Casing	Ceramic
Pin Diameter	0.9 mm
Pin Length	2.4 mm
Environmental	
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

### 3. Antenna Characteristics

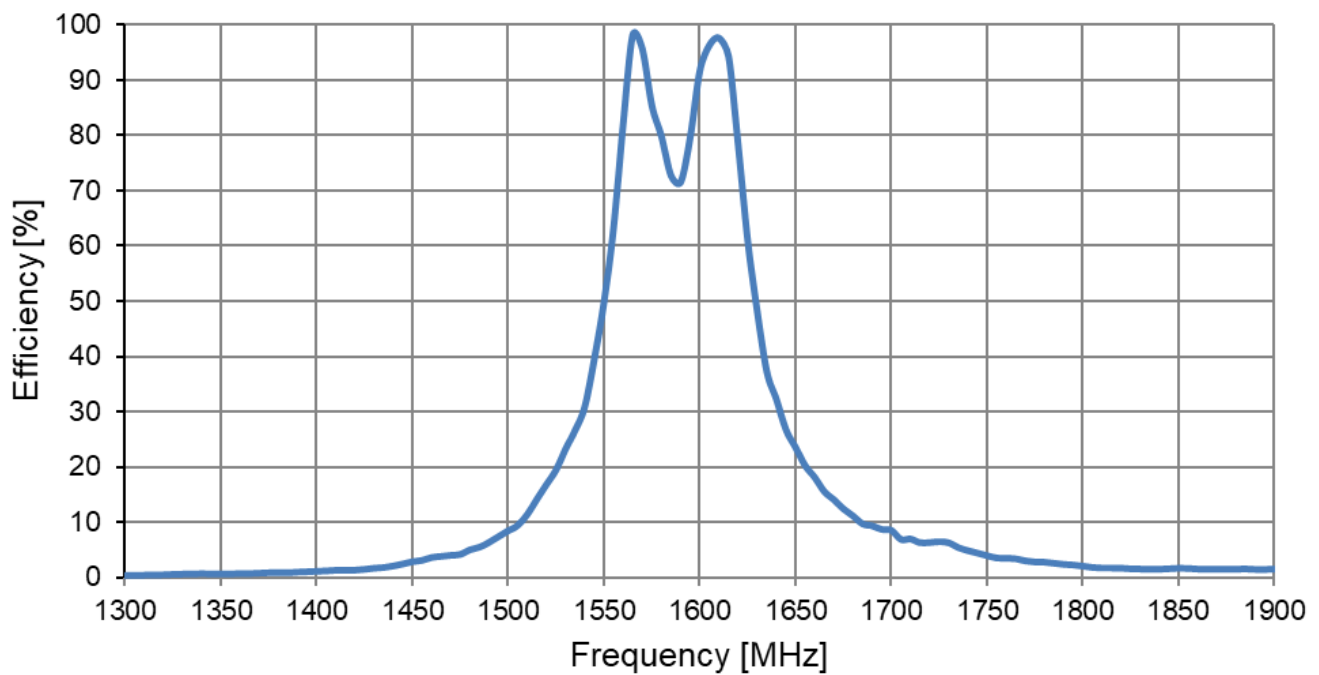
#### 3.1 Return Loss



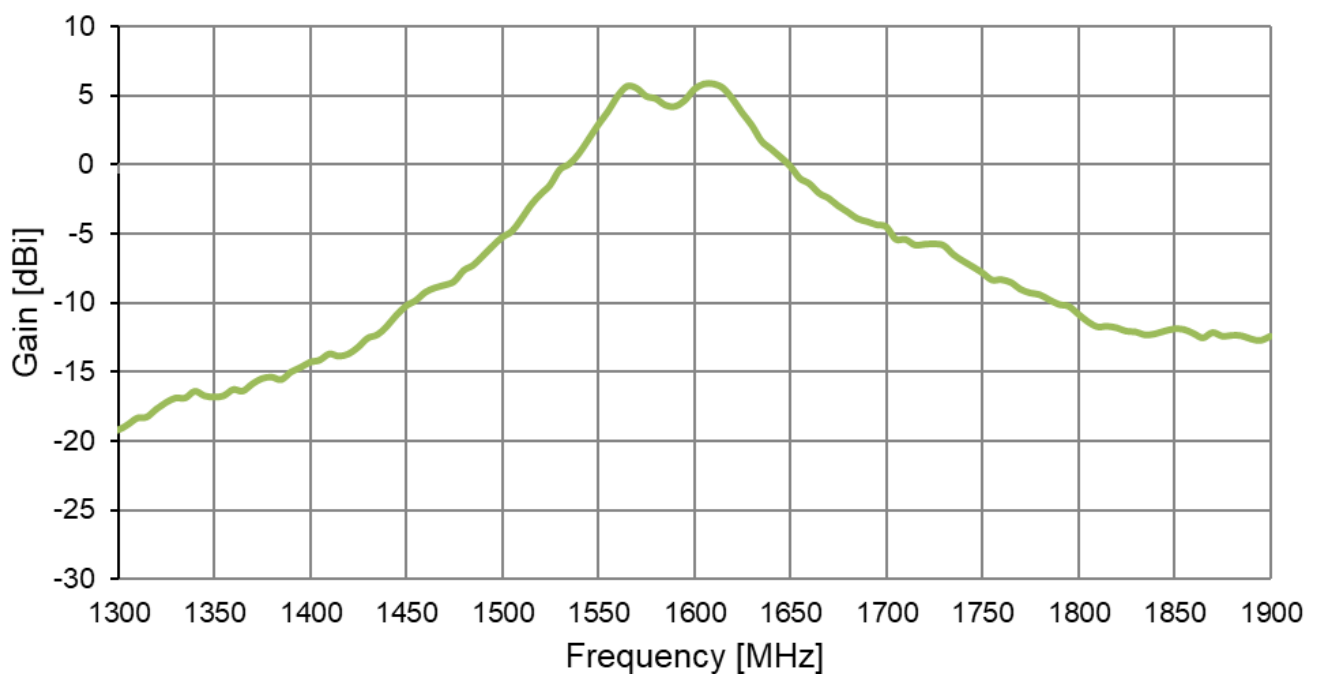
#### 3.2 VSWR



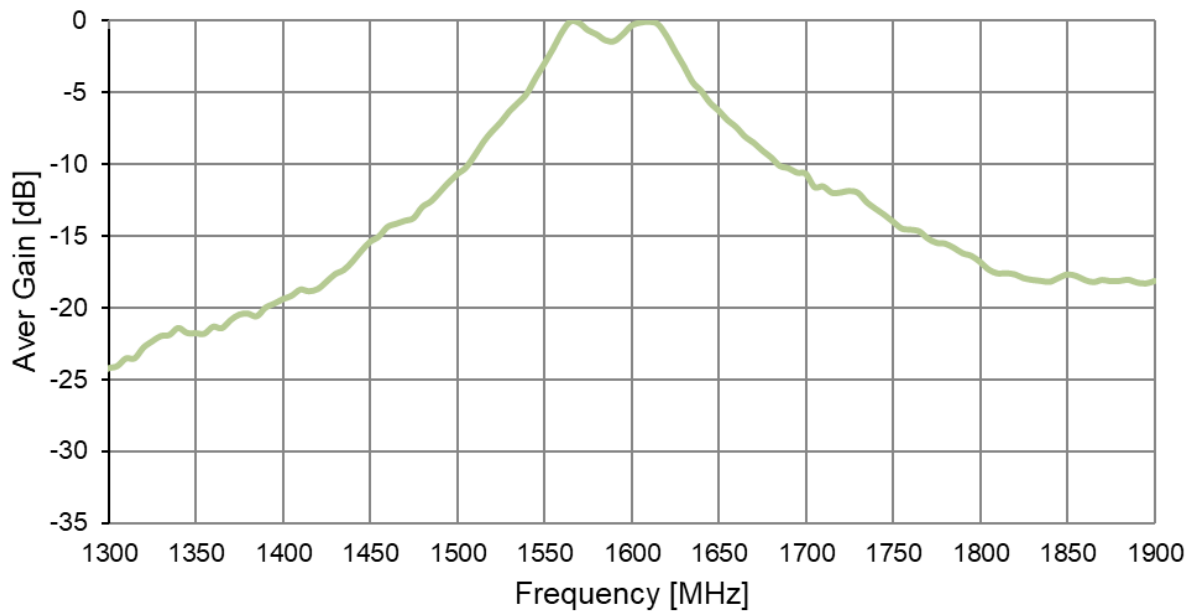
### 3.3 Efficiency



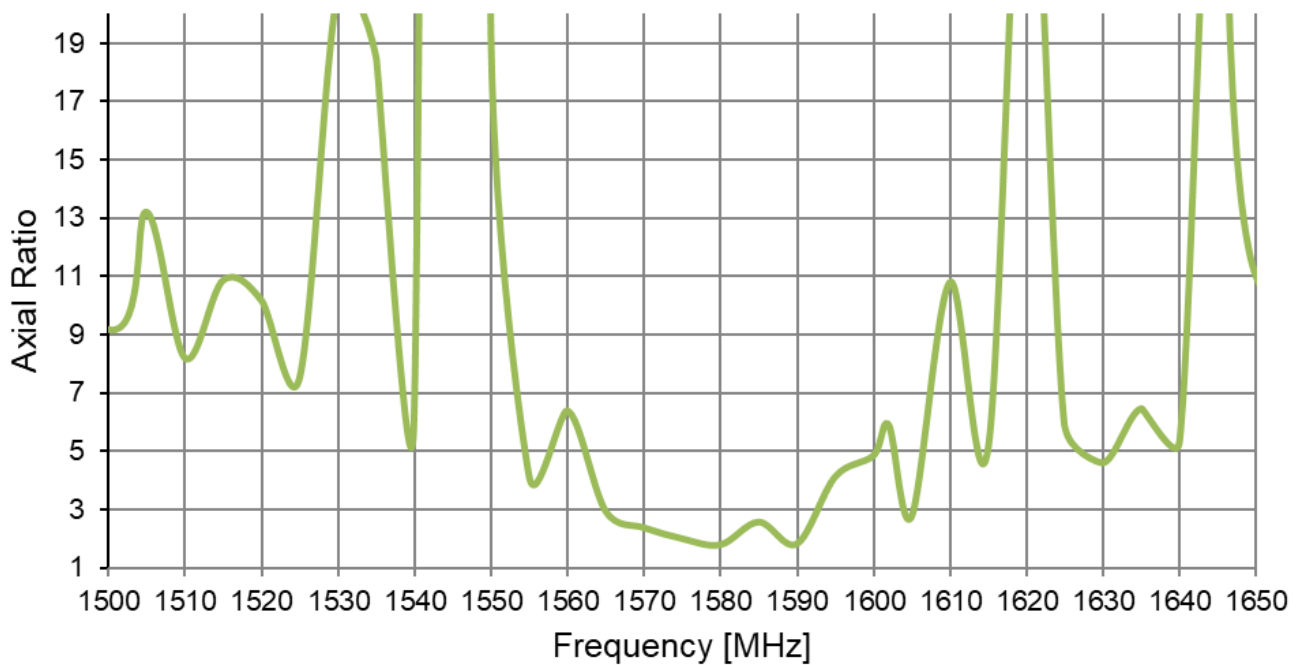
### 3.4 Peak Gain



### 3.5 Average Gain



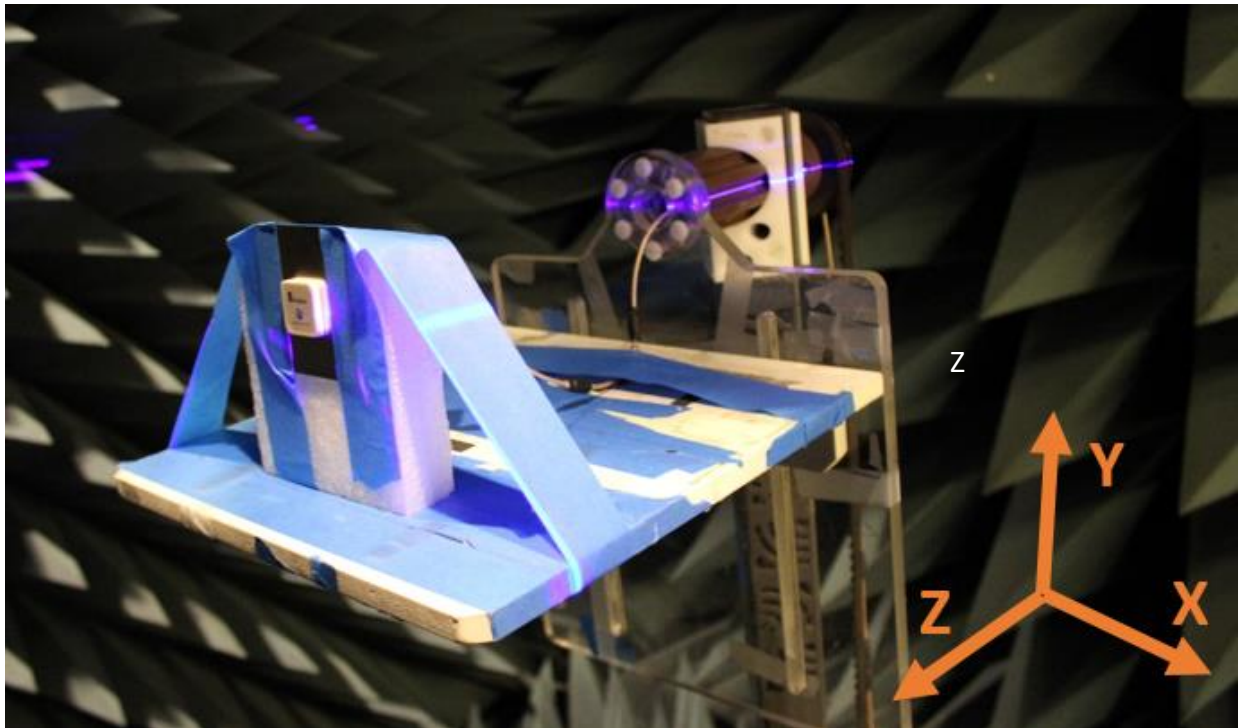
### 3.6 Axial Ratio





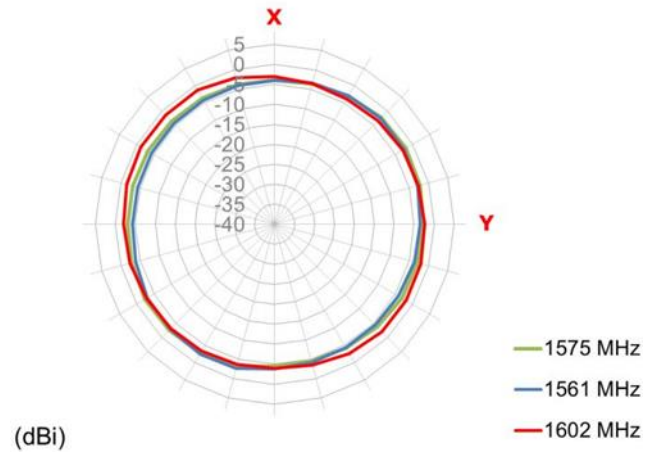
## 4. Radiation Patterns

### 4.1 Test Setup

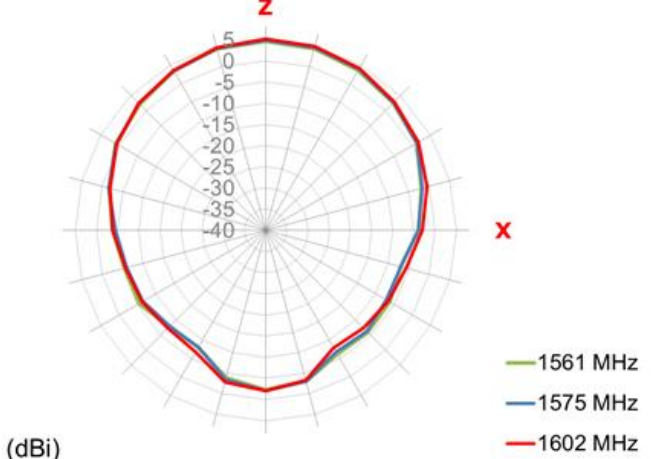


4.2 842MHz 3D and 2D Radiation Patterns

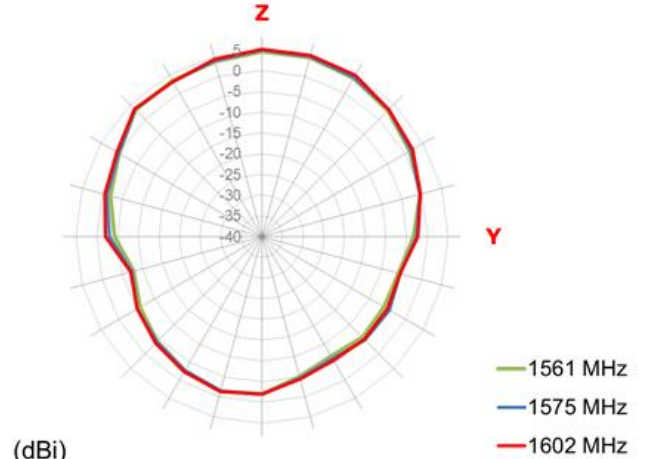
XY Plane



XZ Plane

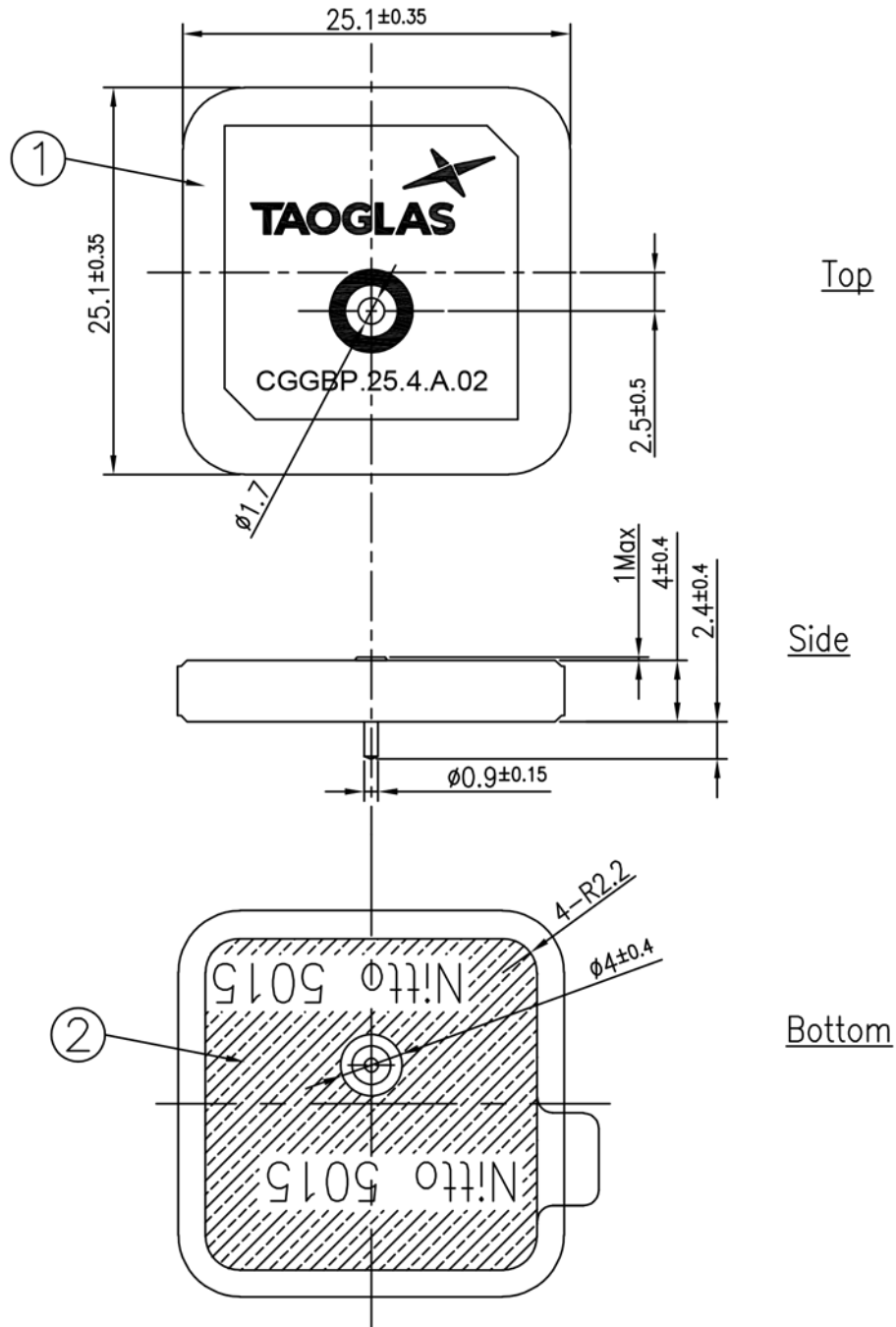


YZ Plane



# 5. Mechanical Drawing (Units: mm)

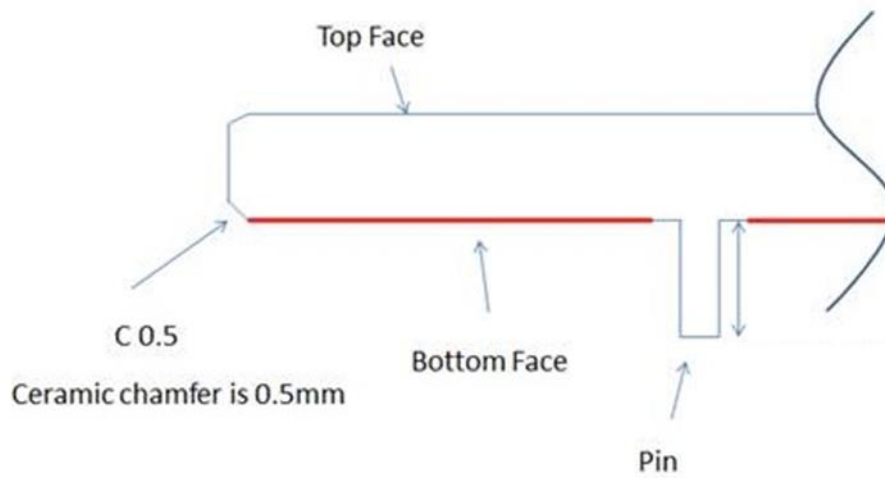
## 5.1 Patch Drawings



NOTES: 1. Double sided adhesive area. 2. Soldermask Area.

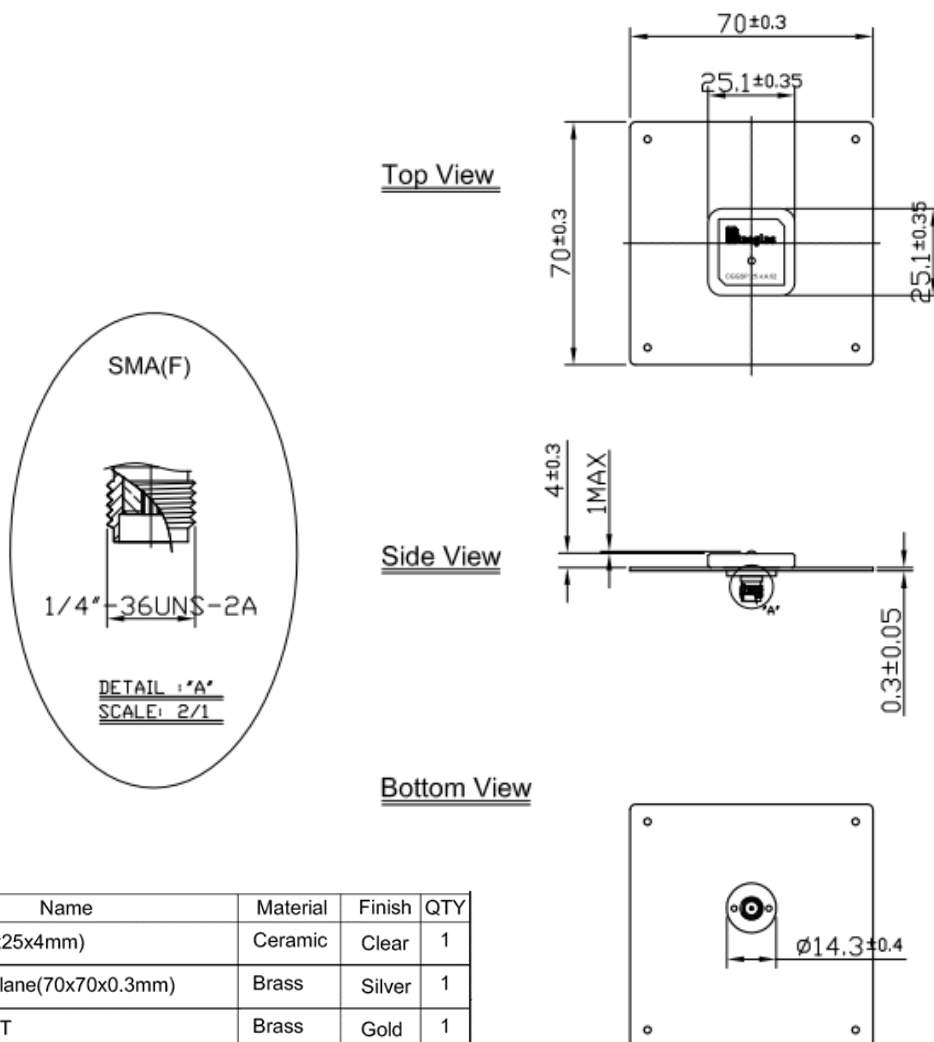
	Name	P/N	Material	Finish	QTY
1	Patch 25x25x4	001513E010007A	Ceramic	Clear	1
2	Double sided Adhesive	001513E010007A	NITTO 5015	White Linter	1

## 5.2 Adhesive Thickness



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

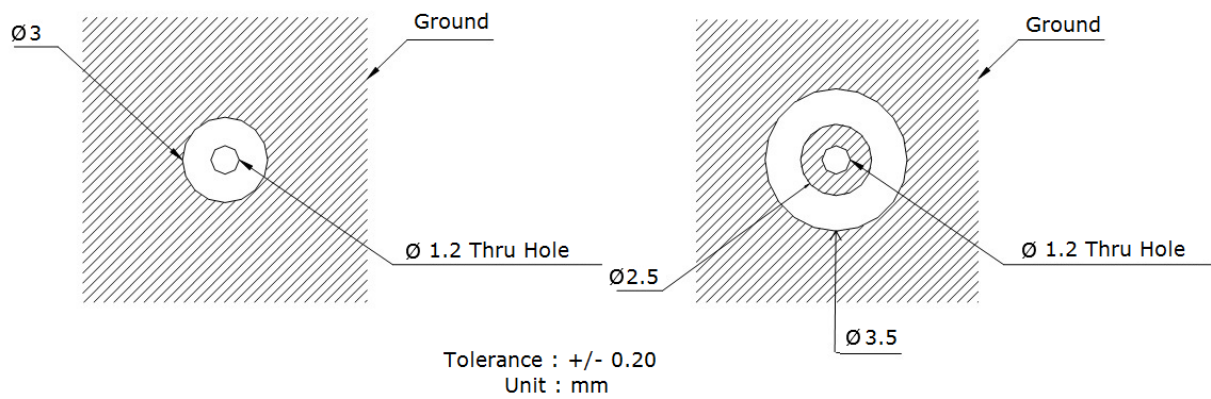
## 5.2 Groundplane Mechanical Drawing



	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

## 6. Footprint

### 6.1 Dimensions



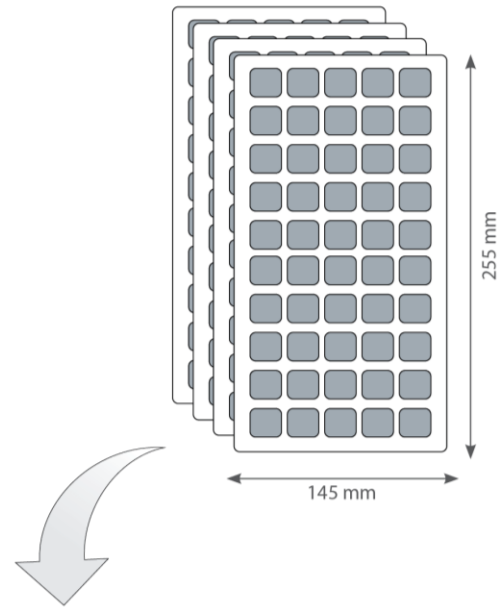
### 6.2 Patch on 70\*70mm Ground Plane



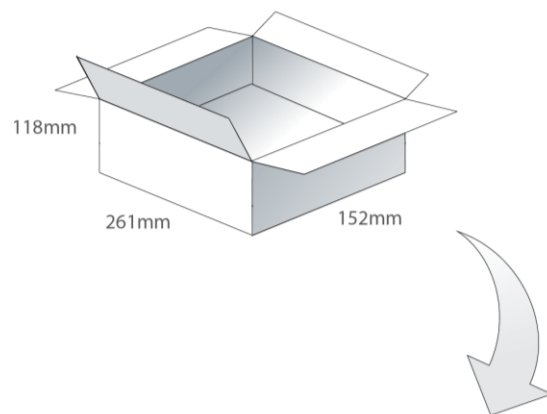
## 7. Packaging

50 pcs CGGP.25.4.A.02 per tray  
Tray Dimensions - 255\*145\*32mm

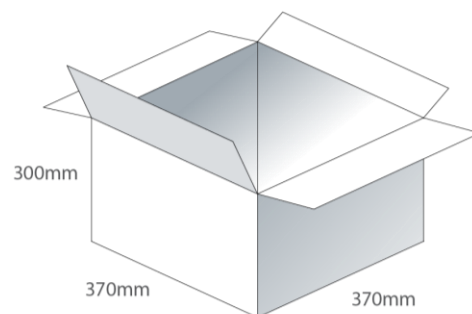
Weight - 200g



200 pcs CGGP.25.4.A.02 per Inner Carton  
Inner Carton Dimensions - 261\*152\*118mm



800 pcs CGGP.25.A.E.02 per Carton  
Carton Dimensions - 370\*370\*300mm



Changelog for the datasheet

**SPE-14-8-071 – CGGBP.25.4.A.02**

**Revision: E (Current Version)**

Date:	2022-02-18
Changes:	Updated Datasheet Template Updated Packaging Graphic
Changes Made by:	Paul Doyle

**Previous Revisions**

**Revision: C**

Date:	2017-03-08
Changes:	Packaging Details Updated
Changes Made by:	Andy Mahoney

**Revision: B**

Date:	2017-08-17
Changes:	Packaging Details Updated
Changes Made by:	Andy Mahoney

**Revision: A (Original First Release)**

Date:	2017-08-10
Notes:	
Author:	Your Name Here



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