



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



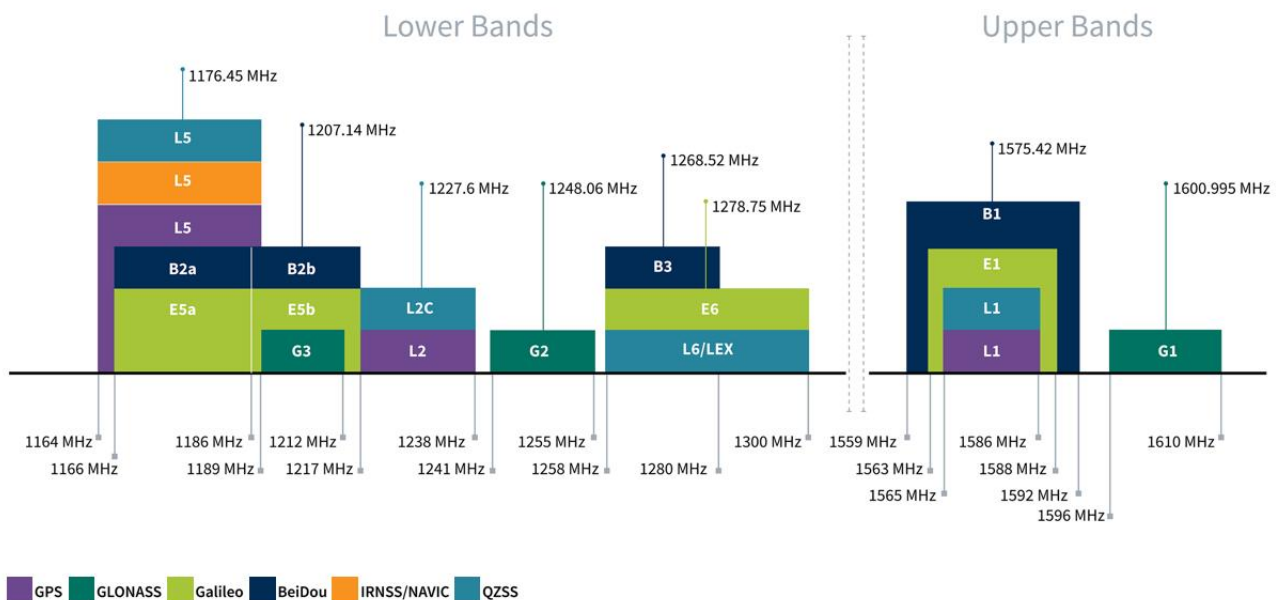
This 25mm square embedded ceramic GPS/GLONASS/Galileo/BeiDou patch antenna's wide band of operation leads to excellent gain and radiation pattern stability on all four common commercial GNSS systems worldwide.

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					
	□	■					



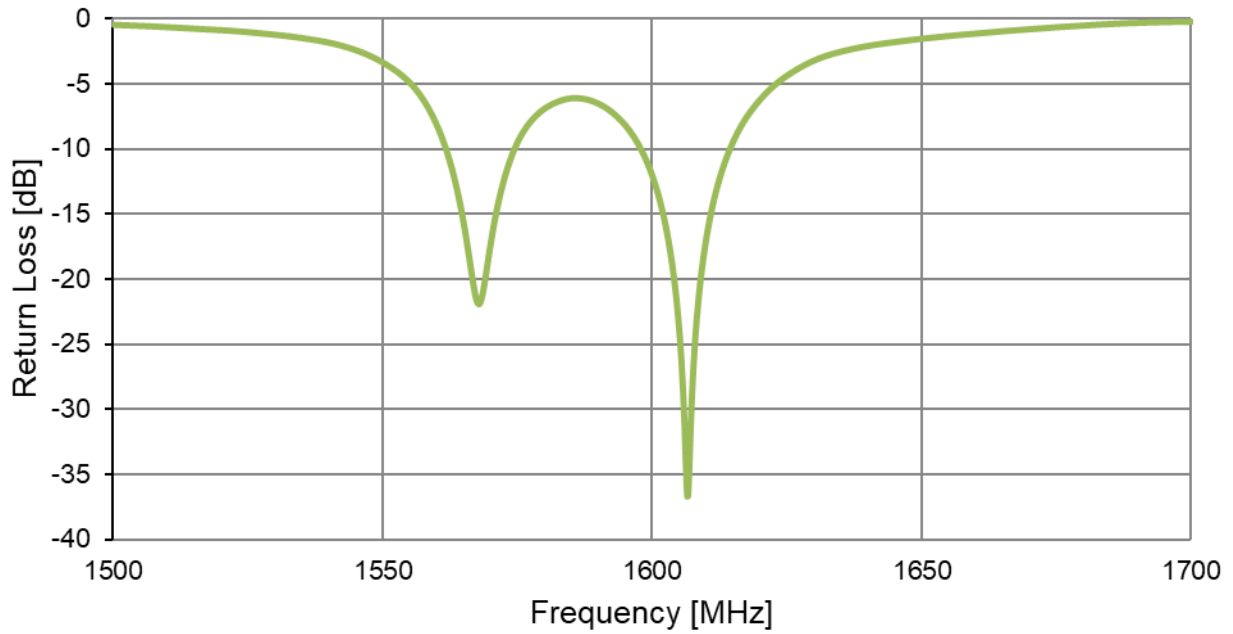
GNSS Bands and Constellations

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			

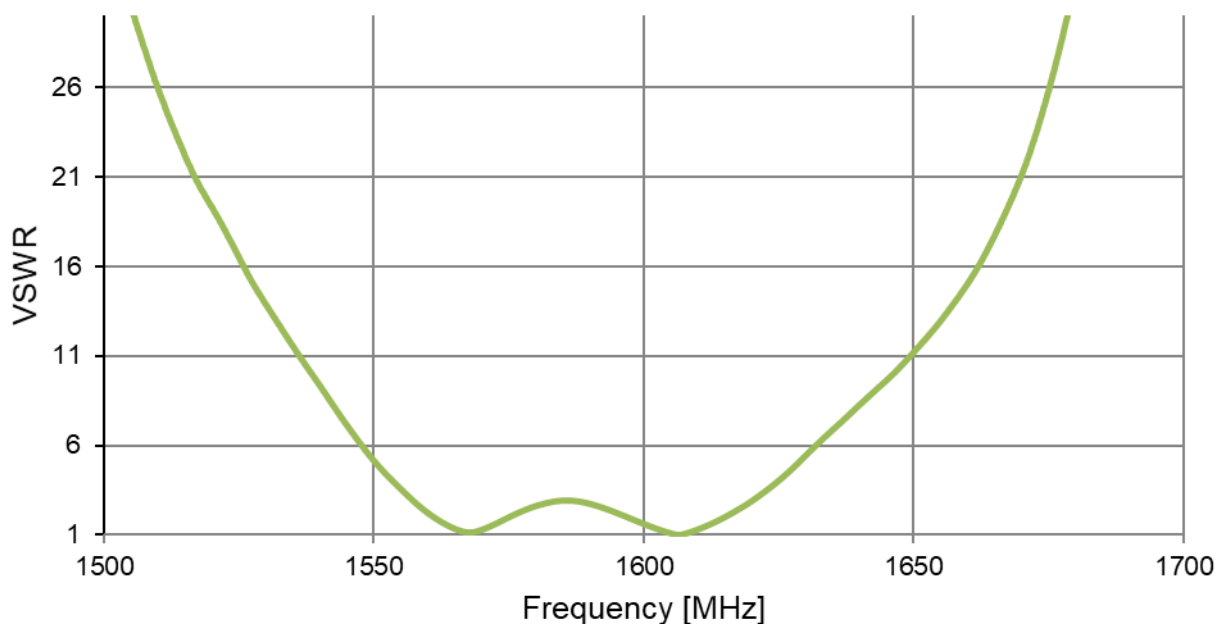
Mechanical	
Height	4 mm
Planner Dimension	25 x 25 mm
Casing	Ceramic
Pin Diameter	0.9 mm
Pin Length	2.4 mm
Environmental	
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

3. Antenna Characteristics

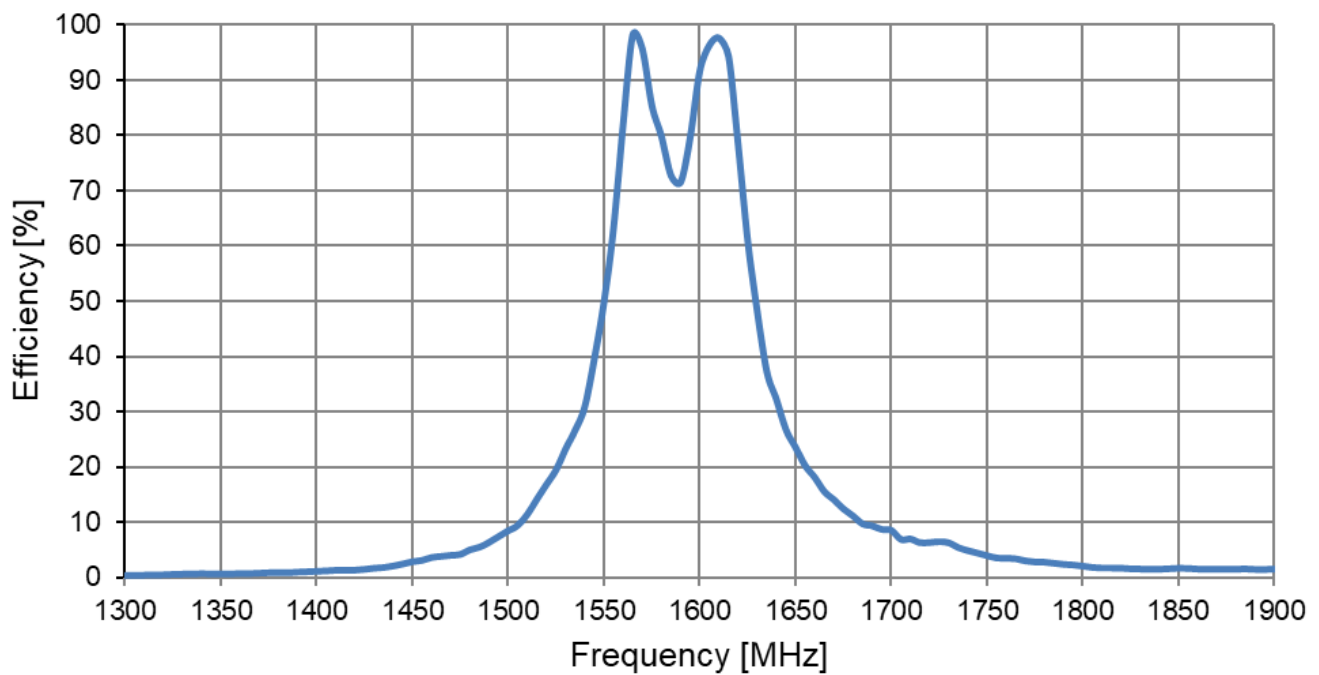
3.1 Return Loss



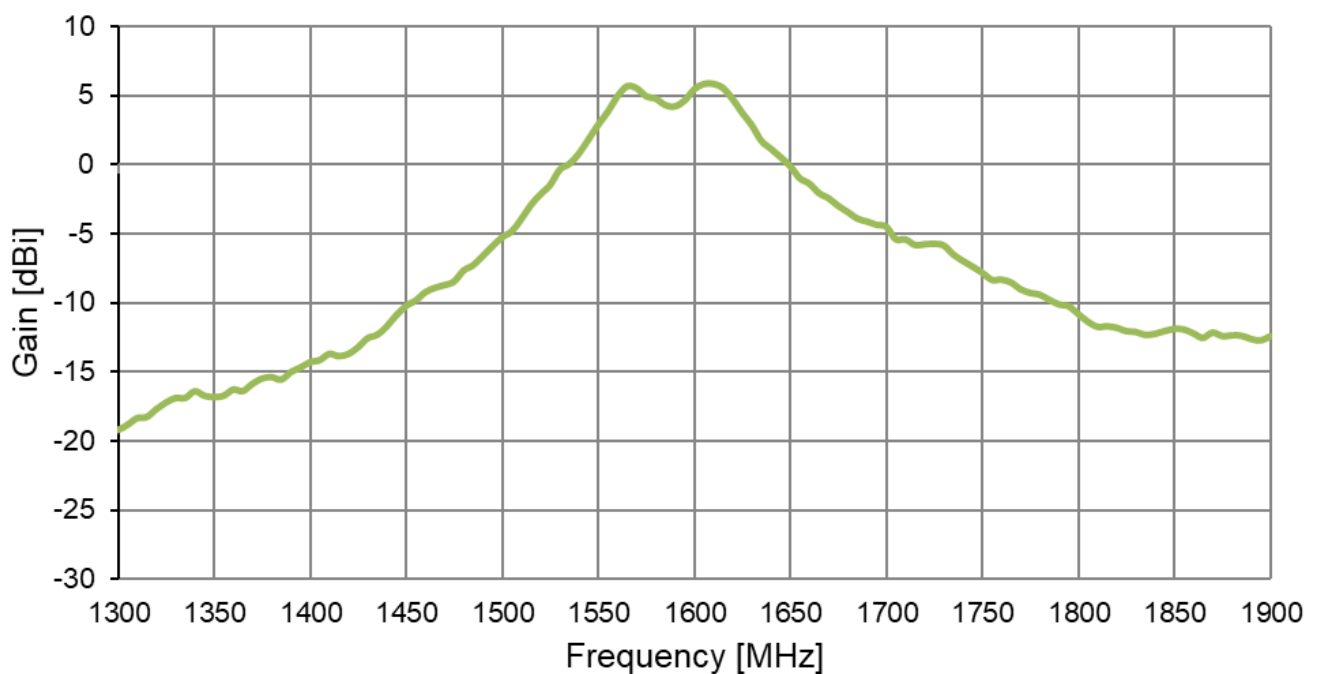
3.2 Efficiency



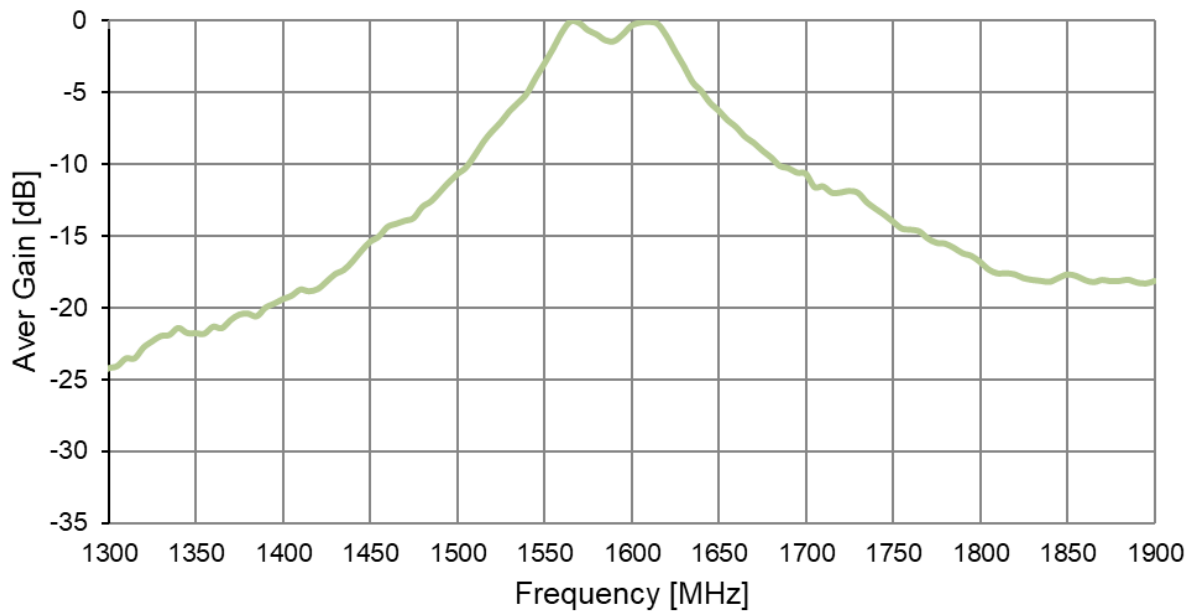
3.3 Efficiency



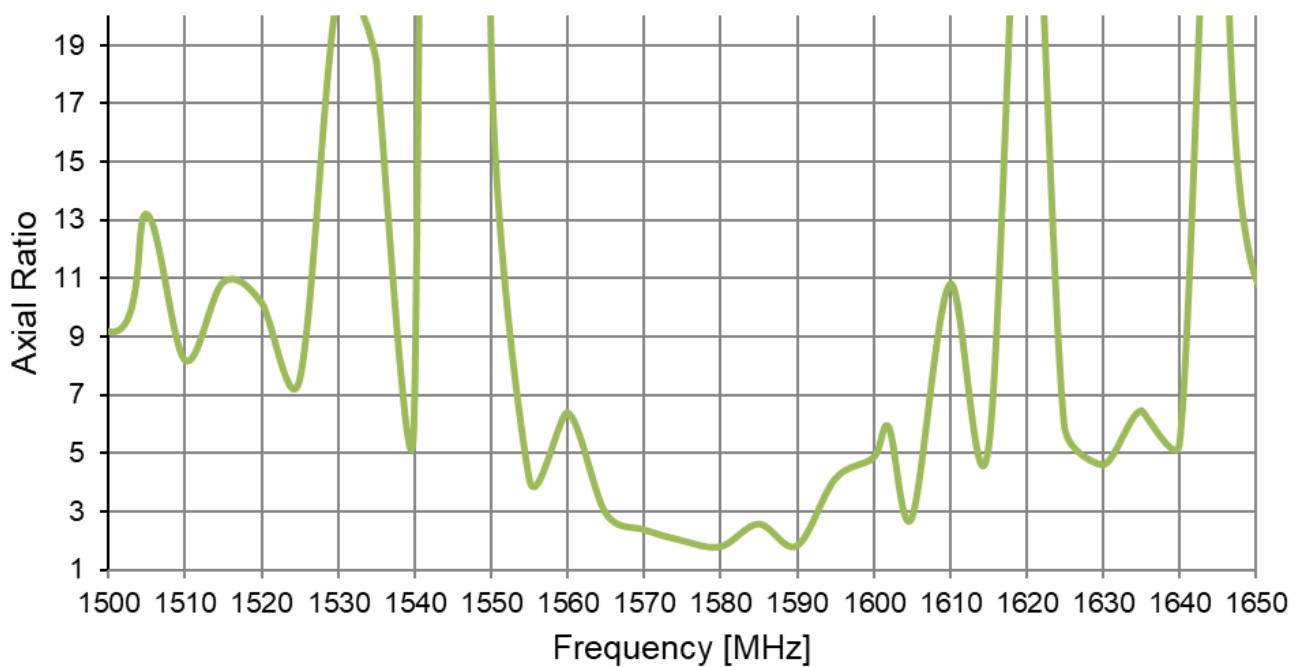
3.4 Peak Gain



3.5 Average Gain

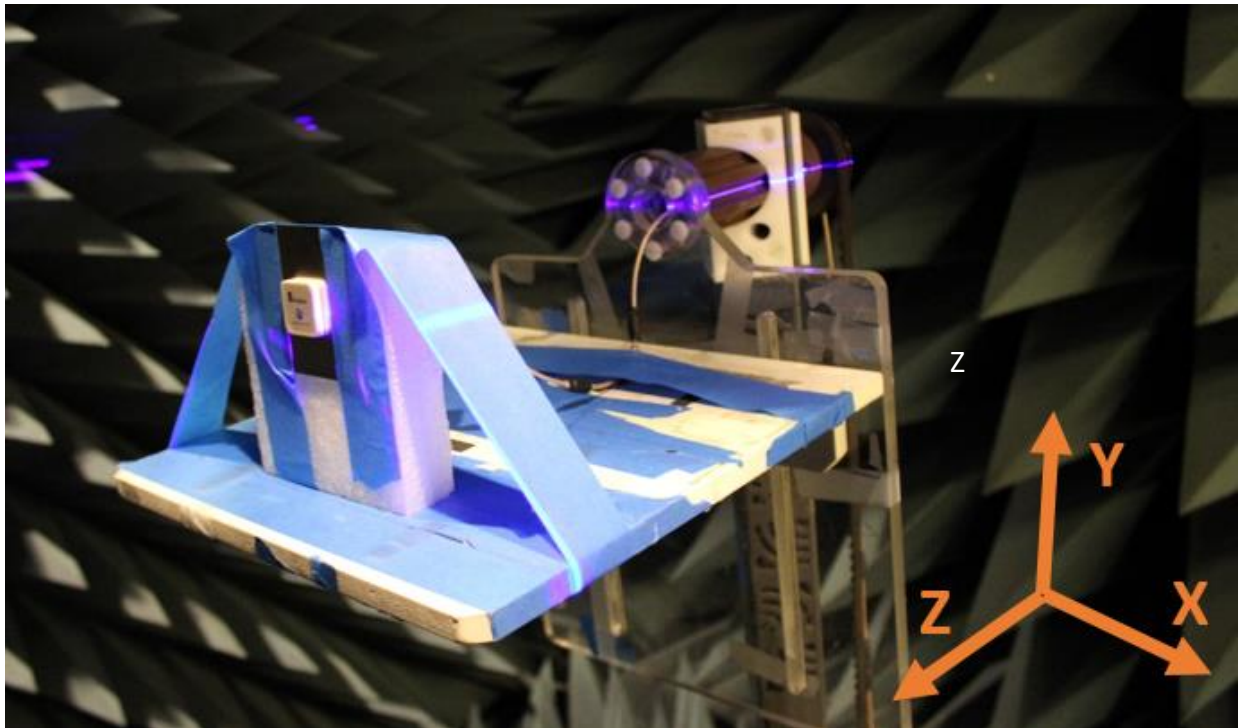


3.6 Axial Ratio



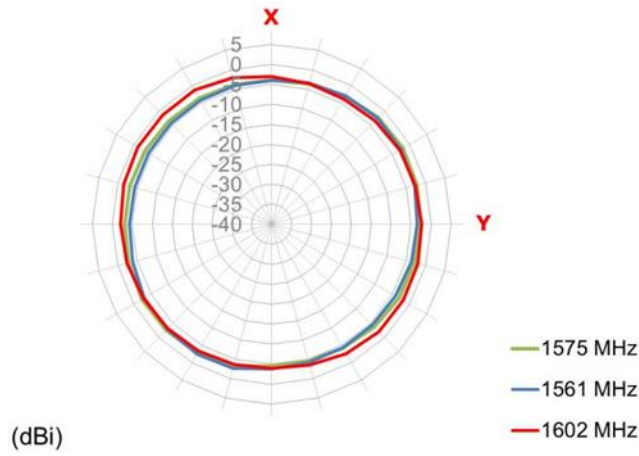
4. Radiation Patterns

4.1 Test Setup

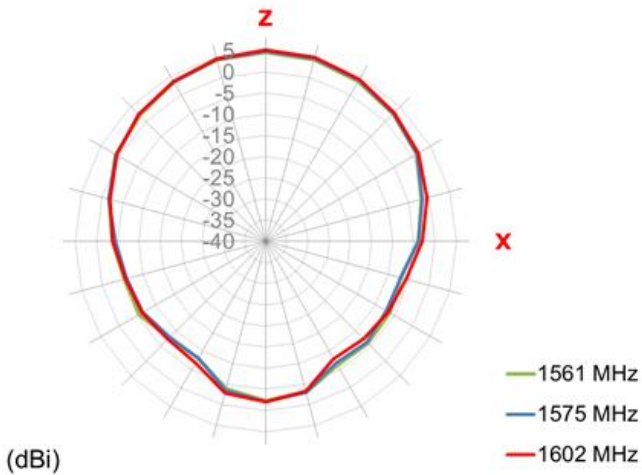


4.2 842MHz 3D and 2D Radiation Patterns

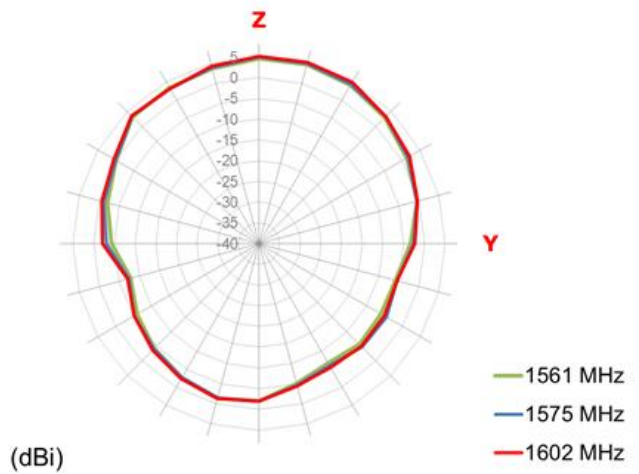
XY Plane



XZ Plane

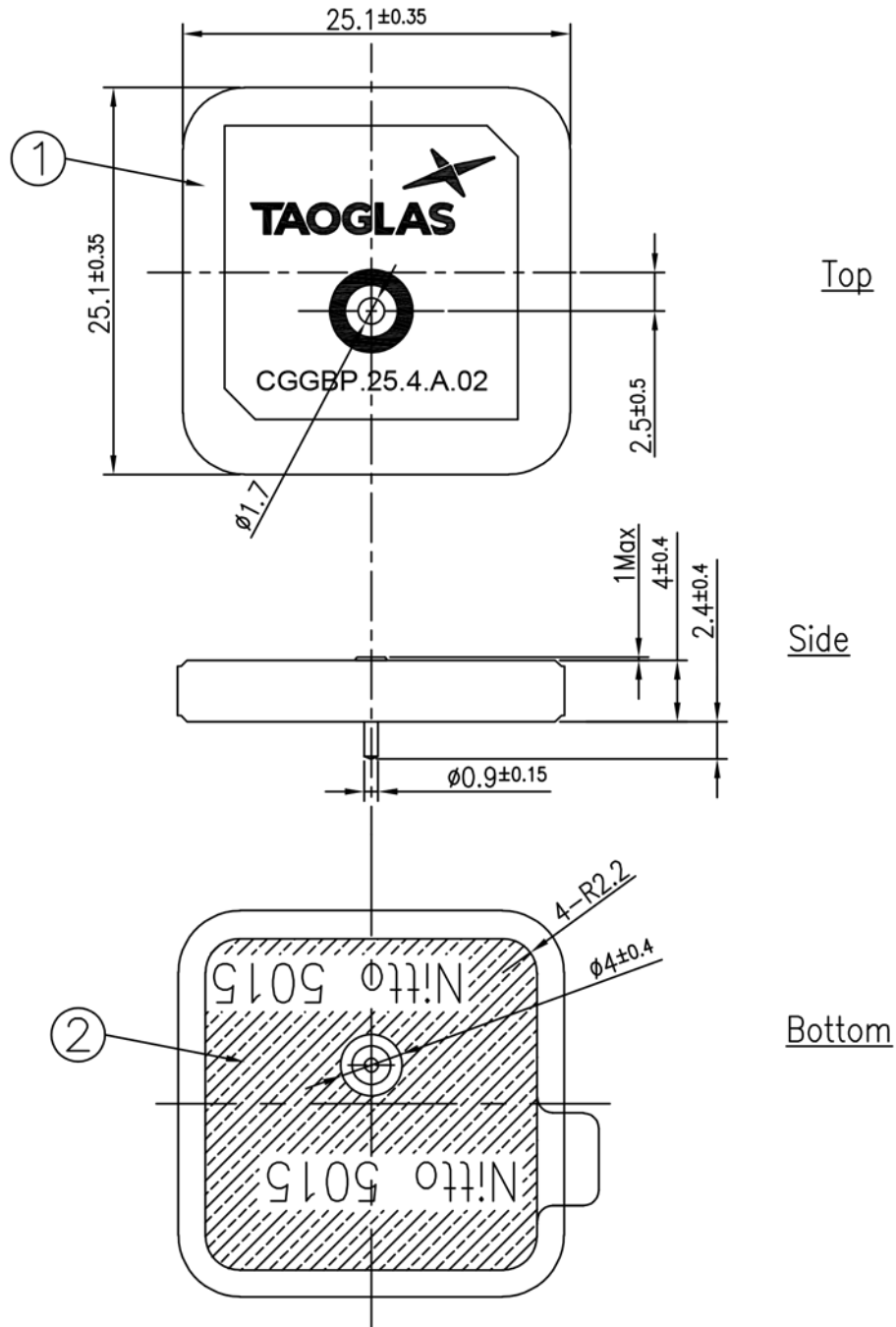


YZ Plane



5. Mechanical Drawing (Units: mm)

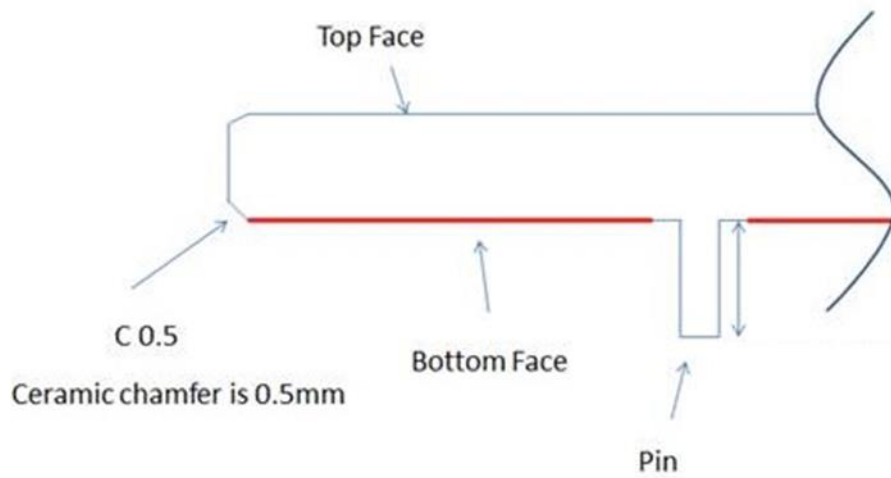
5.1 Patch Drawings



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

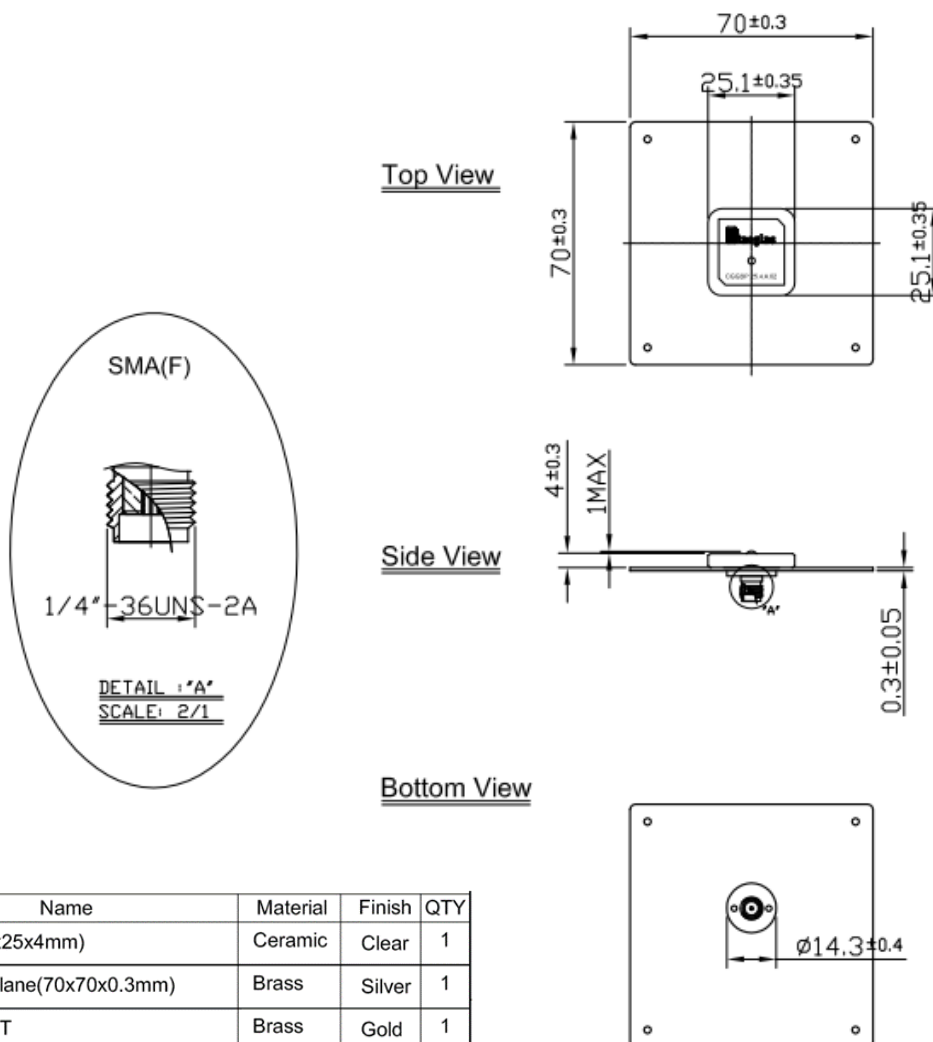
	Name	P/N	Material	Finish	QTY
1	Patch 25x25x4	001513E010007A	Ceramic	Clear	1
2	Double sided Adhesive	001513E010007A	NITTO 5015	White Linter	1

5.2 Adhesive Thickness



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

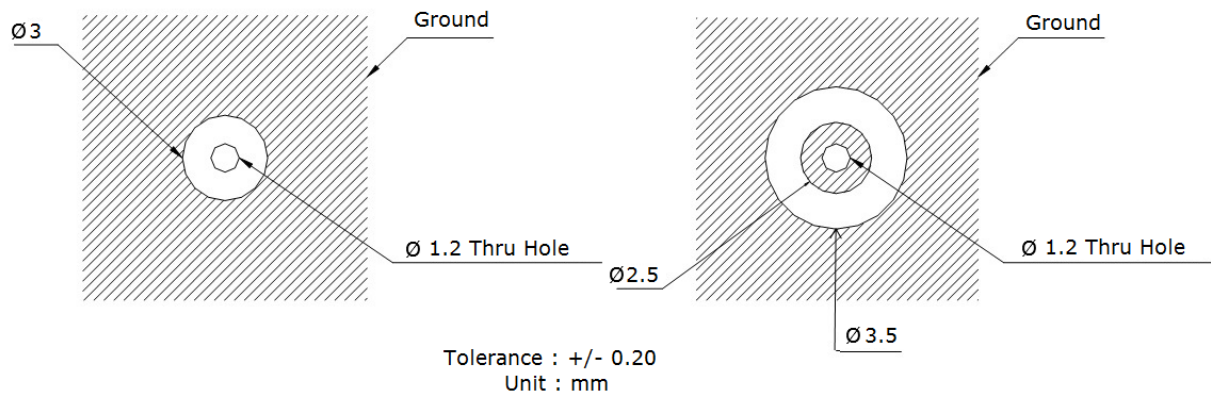
5.2 Adhesive Thickness



	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



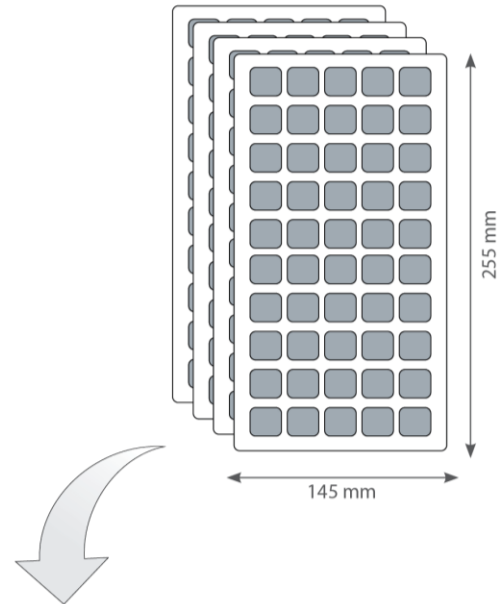
6.2 Patch on 70*70mm Ground Plane



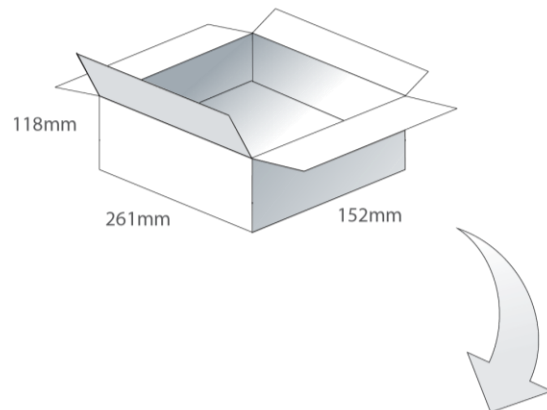
7. Packaging

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

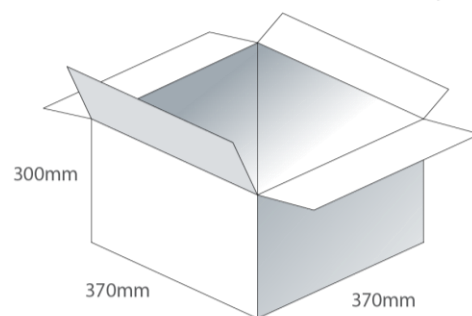
Weight - 2.0g



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:	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

Previous Revisions (Continued)



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