

SPECIFICATION

Part No.	: CGGP.25.4.E.02
Description	: GPS/GLONASS/GALILEO Dual-Band Patch Antenna 25*25*4mm
Features	: Dual-band GNSS Operation 1575.42MHz and 1602MHz Resonance 25*25*4mm Pin type Ceramic Patch Antenna Automotive TS16949 Production and Quality Approved RoHS compliant



1. Introduction

The CGGP.25.4.E.02 is a 25*25*4 mm embedded ceramic GPS/GLONASS/GALILEO Patch antenna. It features a double resonance design at GPS/GALILEO and GLONASS bands, 1575.42 MHz and 1602 MHz respectively. This antenna has been tuned for a center position on a 70mm *70mm ground plane. Return loss is -28 dB at 1575.42MHz and -22 dB at GLONASS. Overall the antenna has greater than 60% efficiency.

For further optimization to customer specific device environments where positioning is off center or a different ground-plane size, custom tuned patch antennas can be supplied.

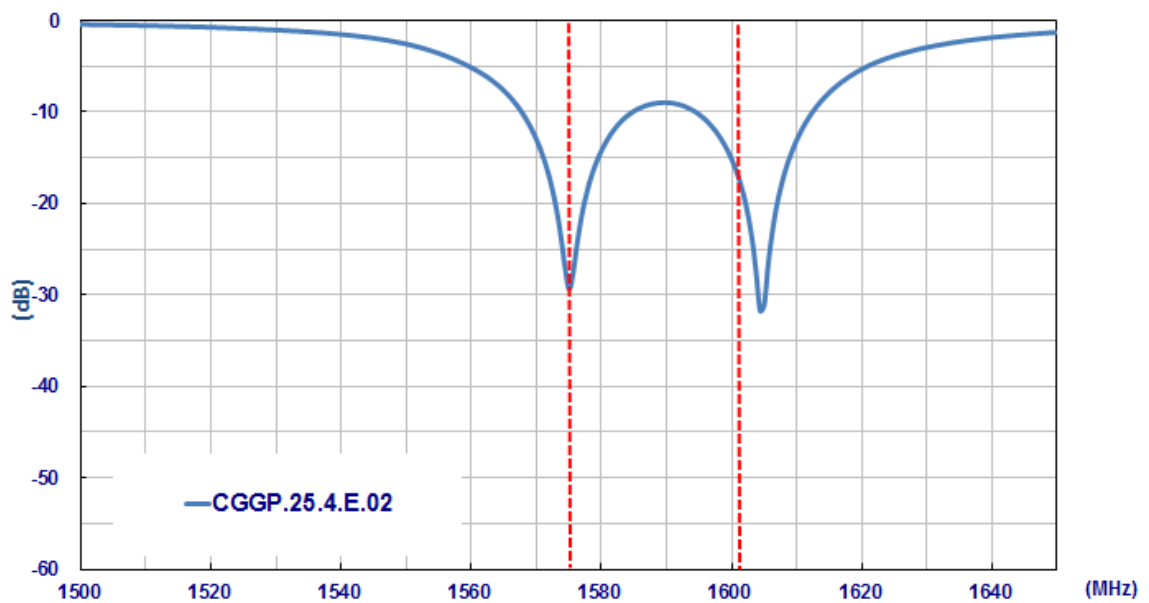
2. Specification

ELECTRICAL		
Application Bands	GPS/GALILEO	GLONASS
Operation Frequency	1575.42 ±1.023MHz	1602±5MHz
VSWR	1.8 max	
Efficiency	88.02%	88.63%
Peak Gain	5.39dBi	5.46dBi
Axial Ratio	~10	~9
Polarization	Linear	
Impedance	50 ohms	
MECHANICAL		
Ceramic Dimension	25 x 25 x 4 mm	
Pin Diameter	Φ 0.9 mm	
Pin Length	1.7mm	
Weight	9.5g	
ENVIRONMENTAL		
Operation Temperature	-40°C to 105°C	
Humidity	Non-condensing 65°C 95% RH	

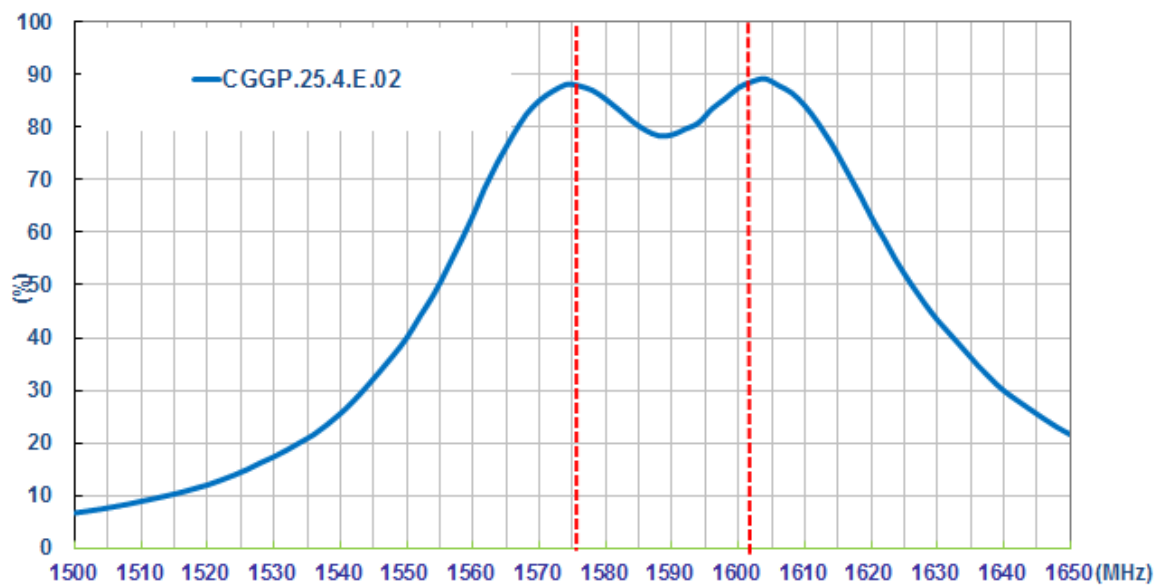
* Antenna properties were measured with the antenna mounted on 70*70mm Ground Plane
Taoglas Part# CGGPD.25.H

3. Antenna Characteristics

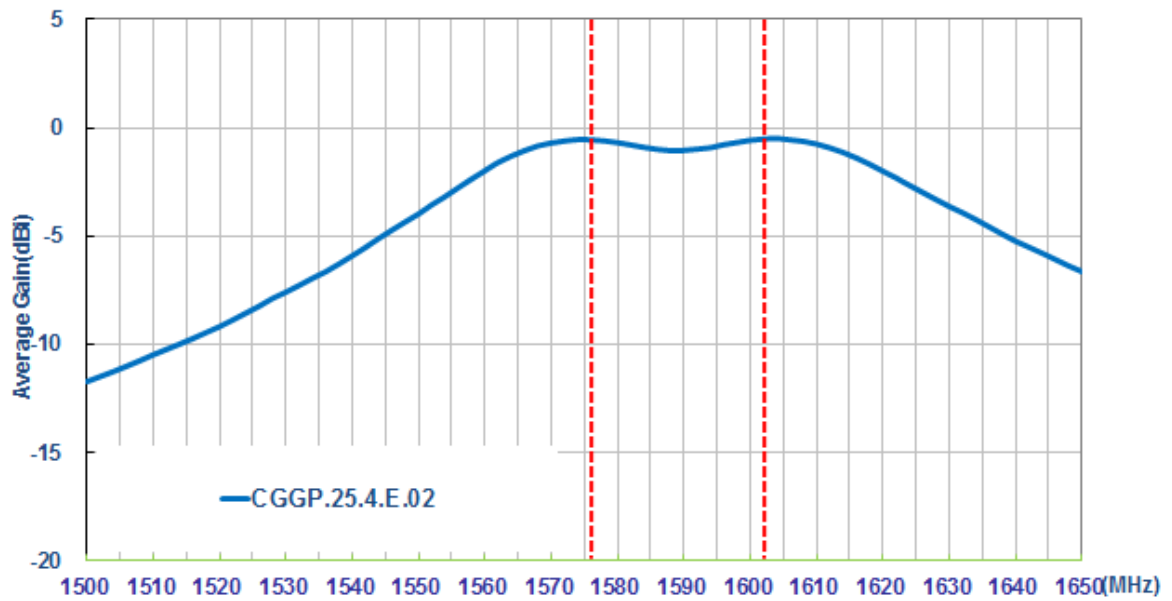
3.1 Return Loss



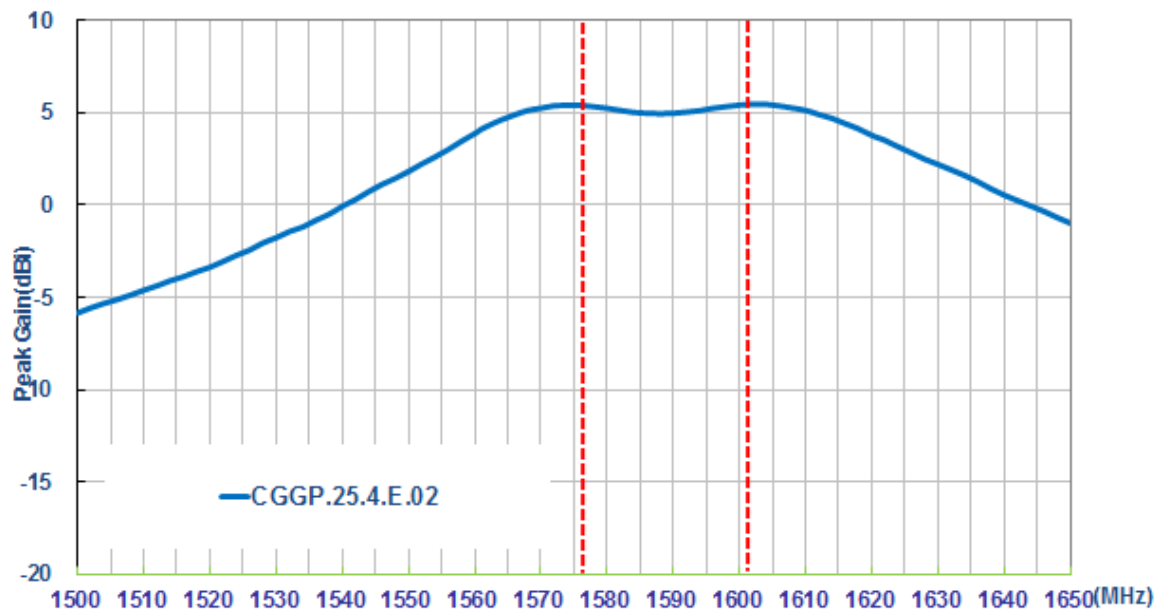
3.2 Efficiency



3.3 Average Gain

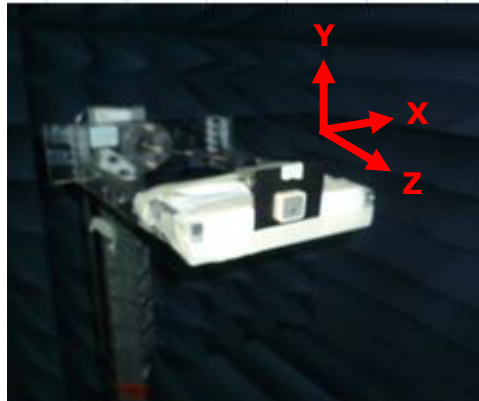


3.4 Peak Gain



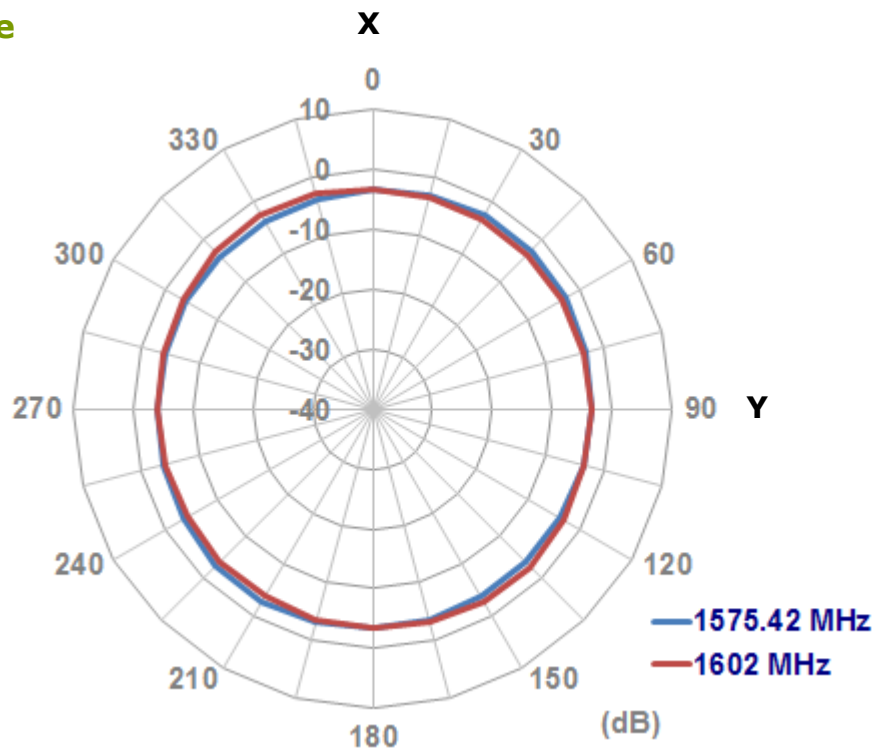
4. Antenna Radiation Pattern

4.1 Measurement Setup

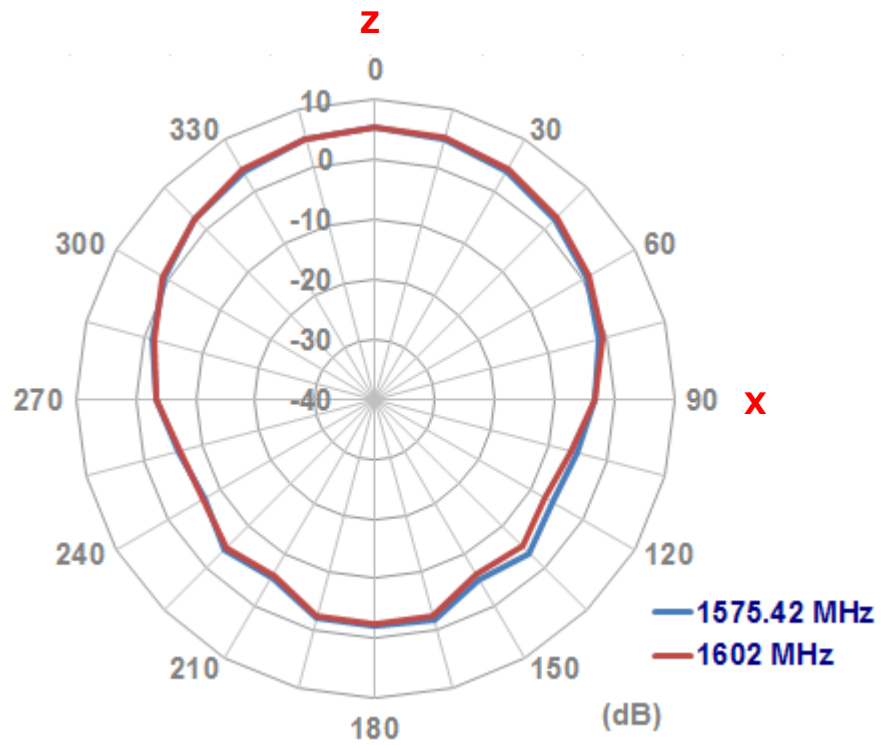


4.2 2D Radiation Pattern

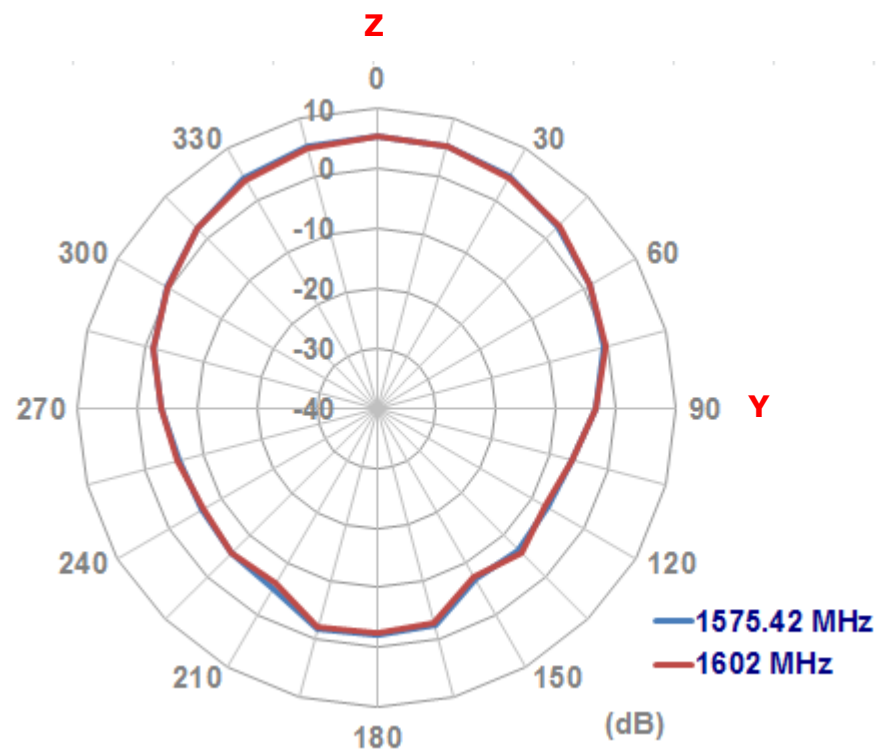
XY Plane



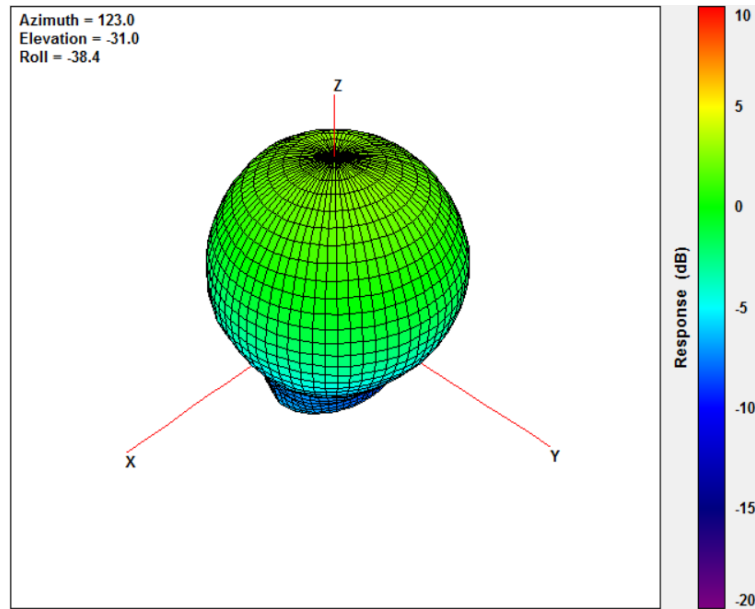
XZ Plane



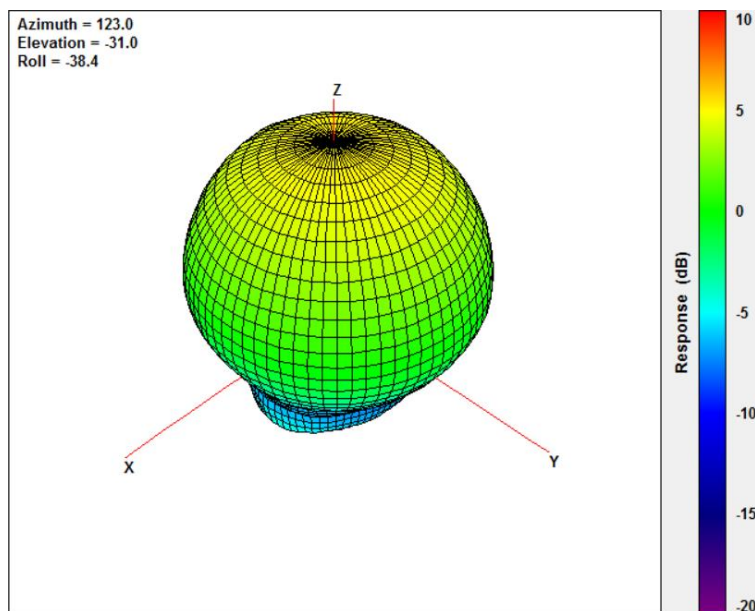
YZ Plane



4.3 3D Radiation Pattern



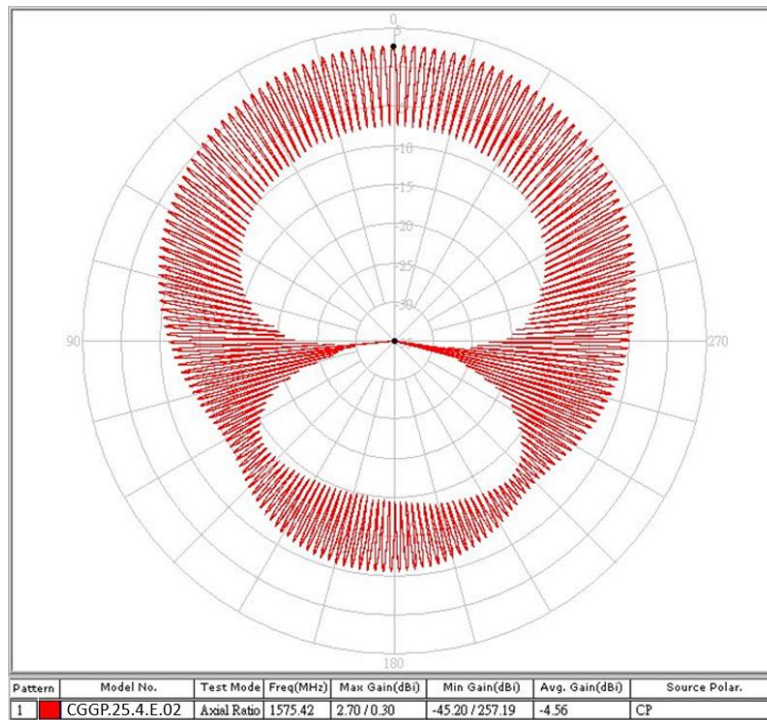
@1575.42MHz



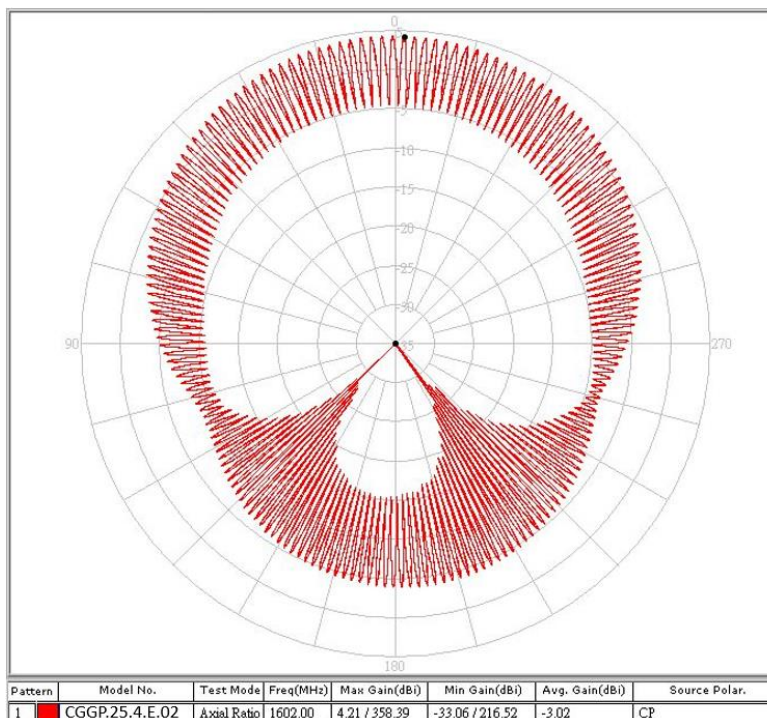
@1575.42MHz

5. Axial Ratio

5.1 1575.42 MHz

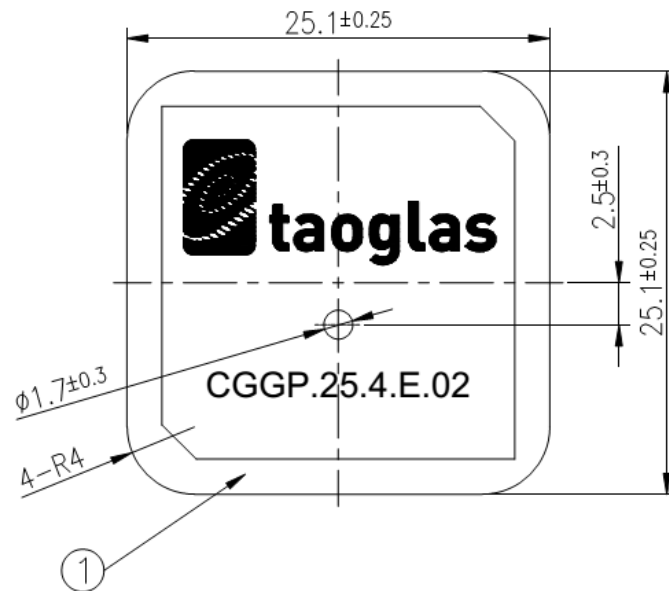


5.2 1602 MHz

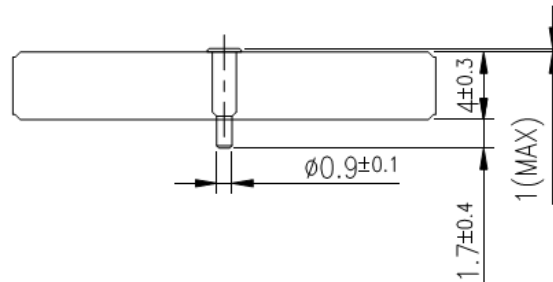


6. Mechanical Drawing

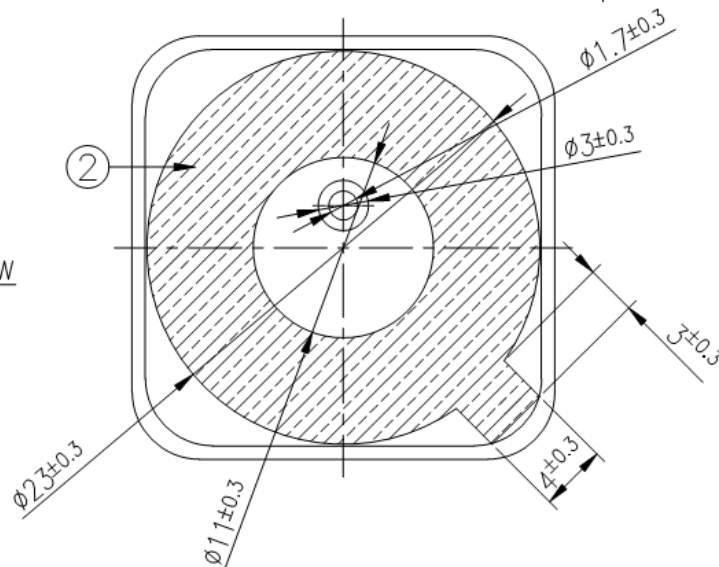
Top View



Side View



Bottom View



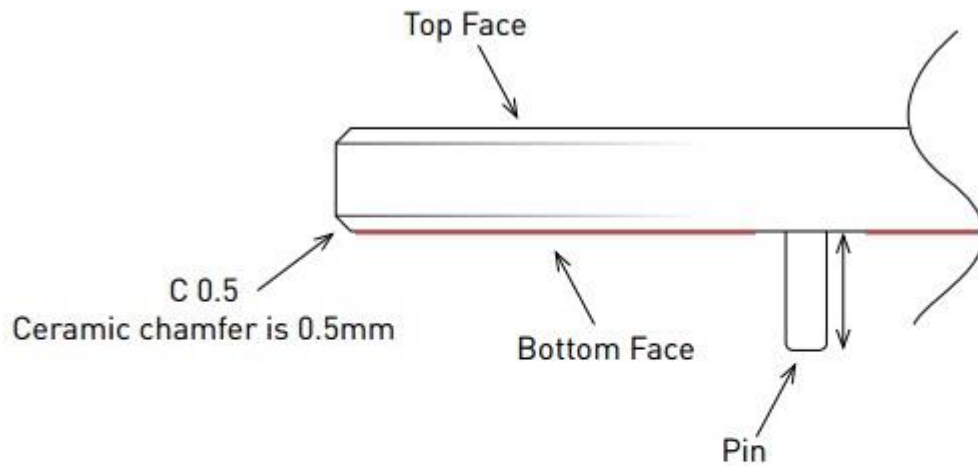
NOTE:

1. Double sided adhesive area. 

	Name	Material	Finish	QTY
1	CGGP.25 Patch 25x25x4mm	Ceramic	Clear	1
2	Double sided Adhesive	NITTO 5015	White Liner	1

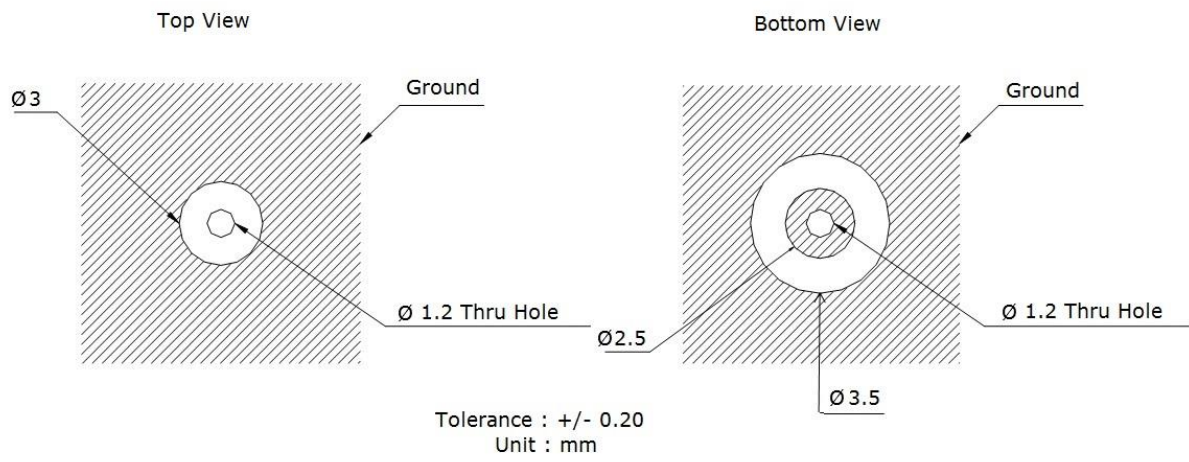
Unit:mm

6.1. Adhesive Thickness

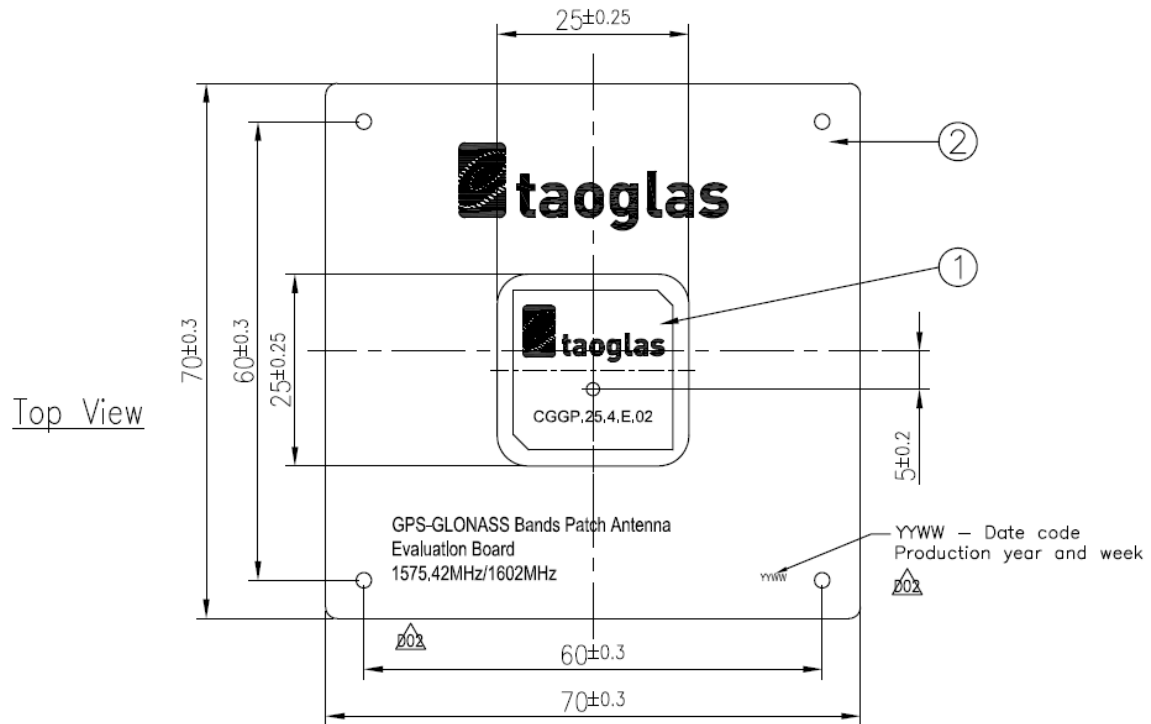


Red Line shows the adhesive without Liner – thickness 0.08–0.1mm

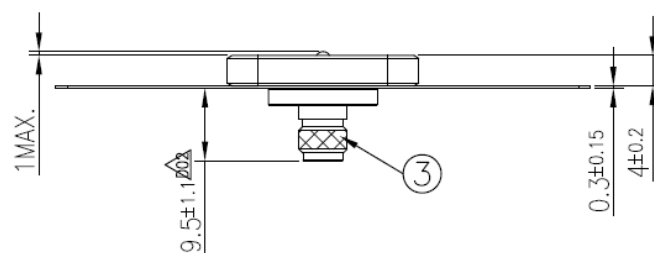
7. PCB Footprint Recommendation



8. Evaluation Board (CGGPD.25.H)

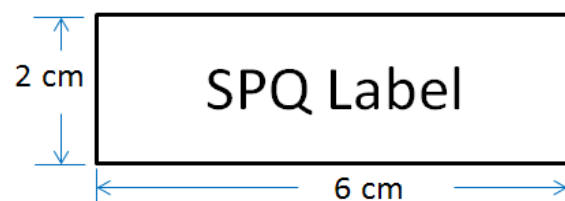
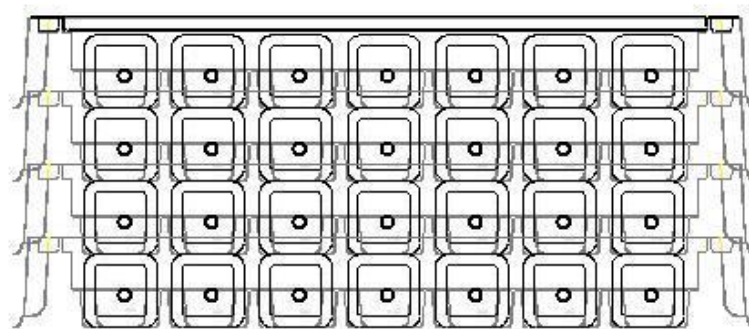
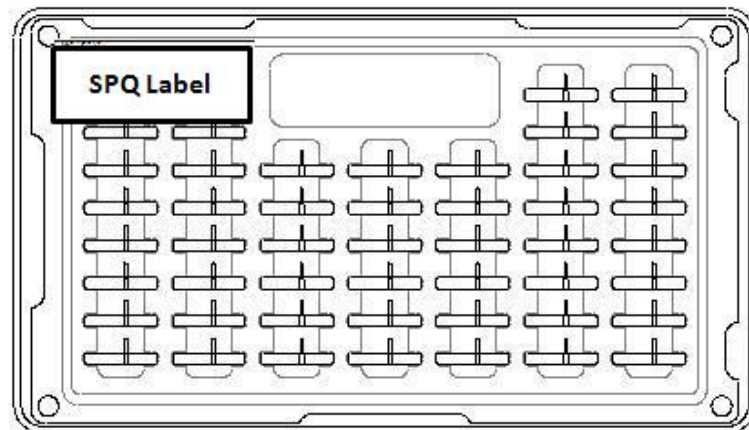
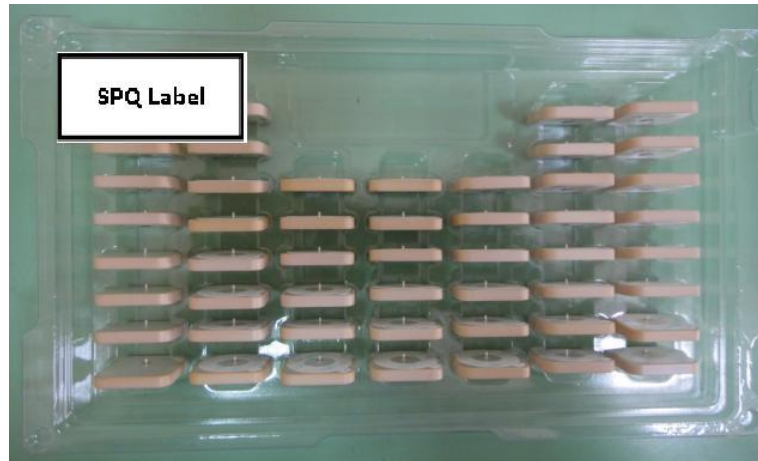


Side View

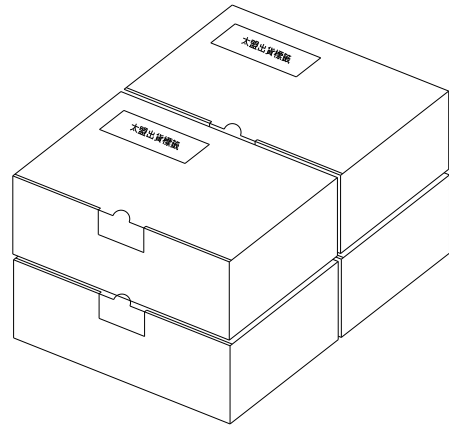
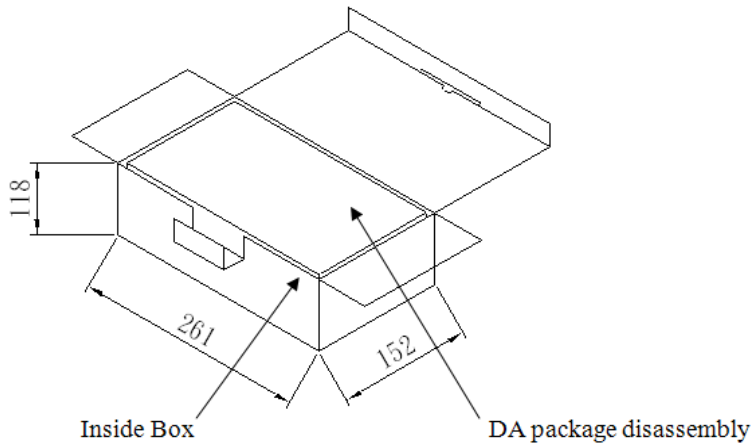


	Name	P/N	Material	Finish	QTY
1	CGGP.25 Patch 25x25x4mm	001515H040007A	Ceramic	Clear	1
2	Ground-Plane(70x70x0.3mm)	000514B000007A	Brass	Silver	1
3	SMA(F) ST	200413L000007A	Brass	Gold	1

9. Packaging

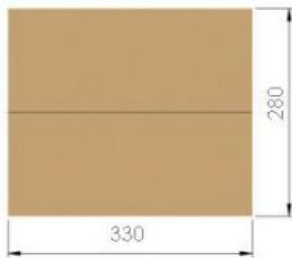


200 Units / Inside Carton (261*152*118mm)

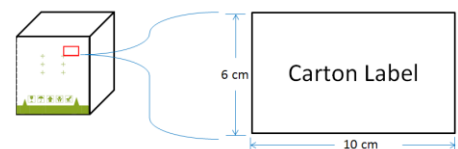
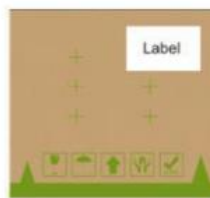


800 Units / Outside Carton (330*280*270mm)

Total Weight :9.3 kg



Outside Box



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