



# TAOGLAS®



# Datasheet

**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 & REACH Compliant

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## 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 1602MHz respectively. This antenna has been tuned for a center position on a 70mm \*70mm ground plane. Return loss is -28dB at 1575.42MHz and -22dB 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. For more information please contact your regional Taoglas customer support team.

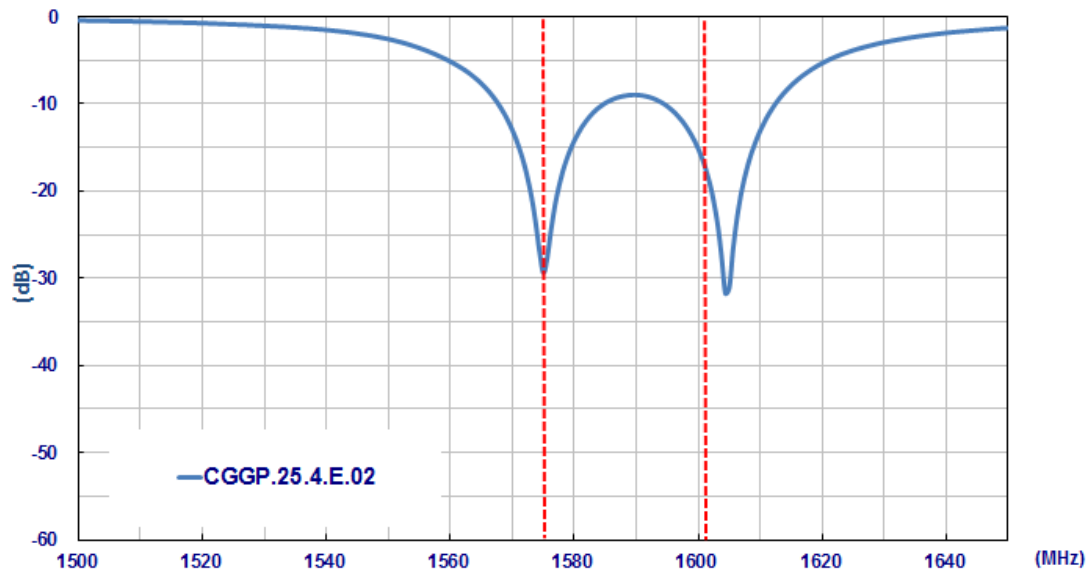
## 2. Specifications

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	25x25x4 mm	
Pin Diameter	Ø0.9 mm	
Pin Length	1.7mm	
Weight	9.5g	
Environmental		
Operation Temperature	-40°C to 105°C	
Moisture Sensitivity	Level 3	

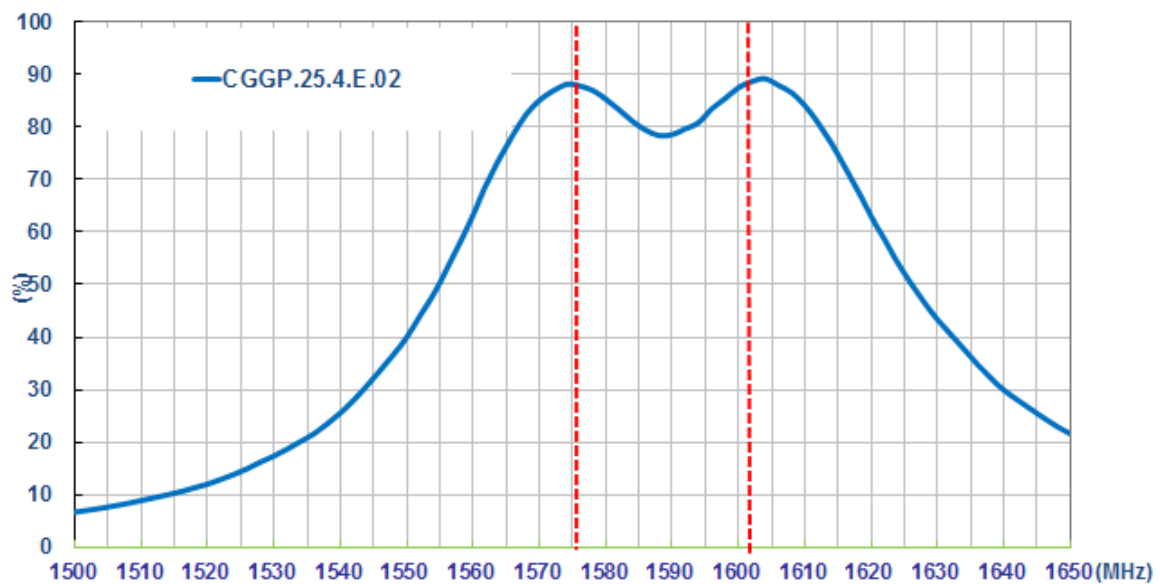
\* Antenna properties were measured with the antenna mounted on 70\*70mm Ground Plane

### 3. Antenna Characteristics

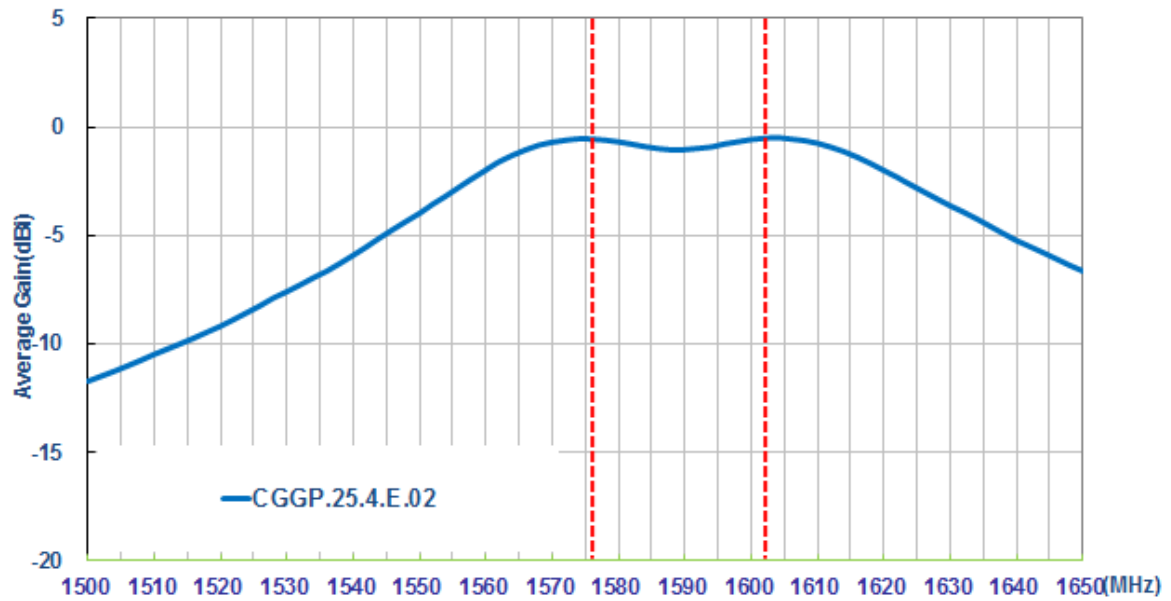
#### 3.1 Return Loss



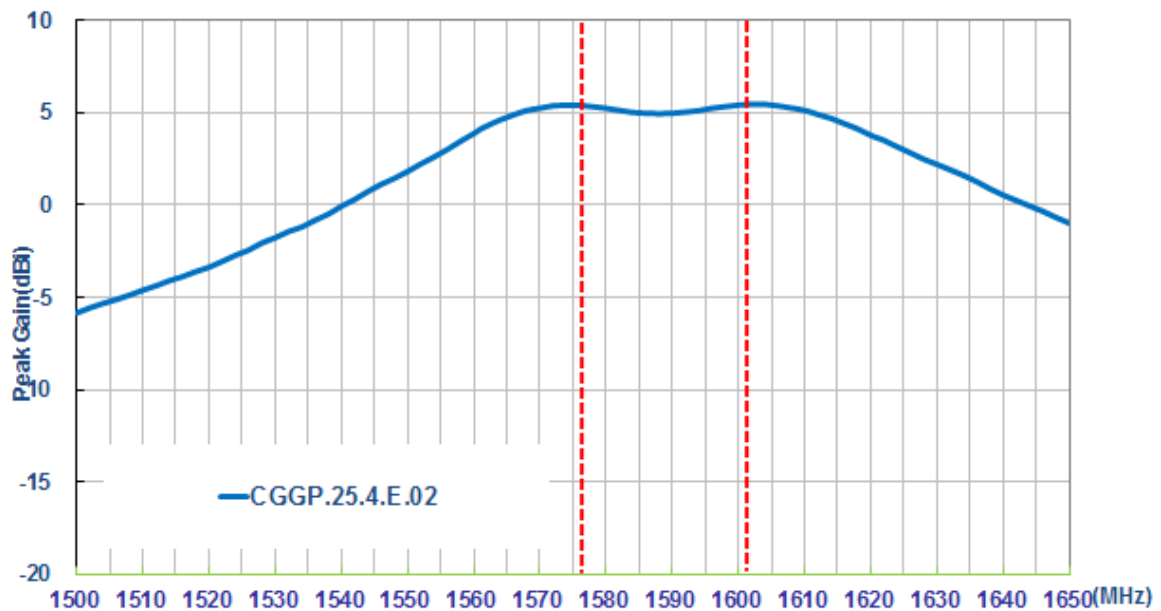
#### 3.2 Efficiency



### 3.3 Average Gain



### 3.4 Peak Gain



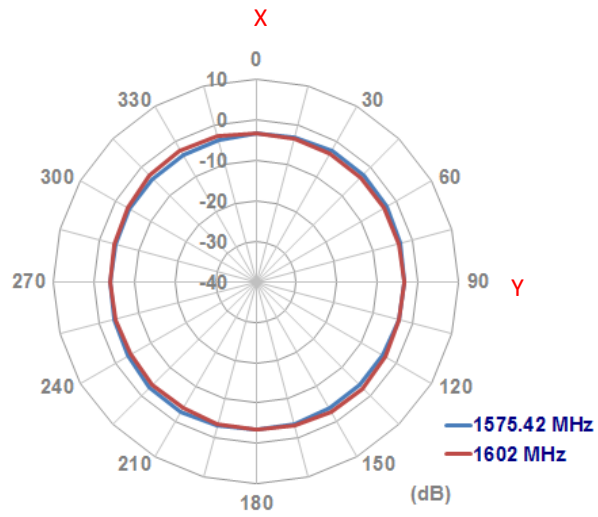
## 4. Antenna Radiation Pattern

### 4.1 Measurement Setup

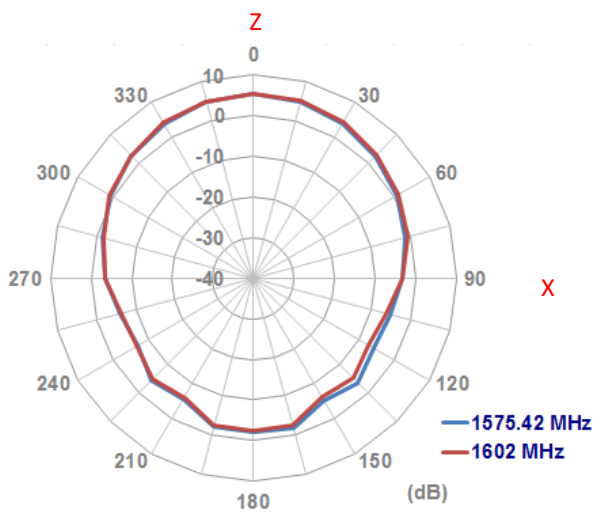


## 4.2 2D Radiation Pattern

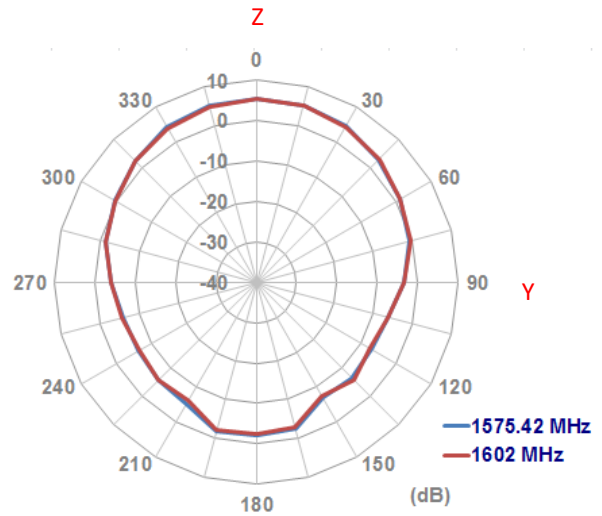
**XY Plane**



**XZ Plane**

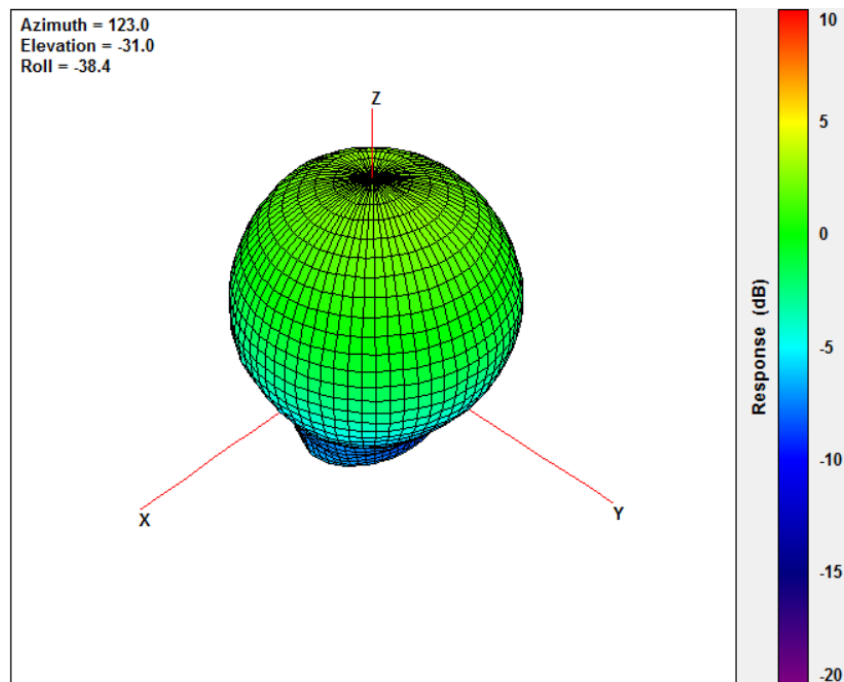


**YZ Plane**

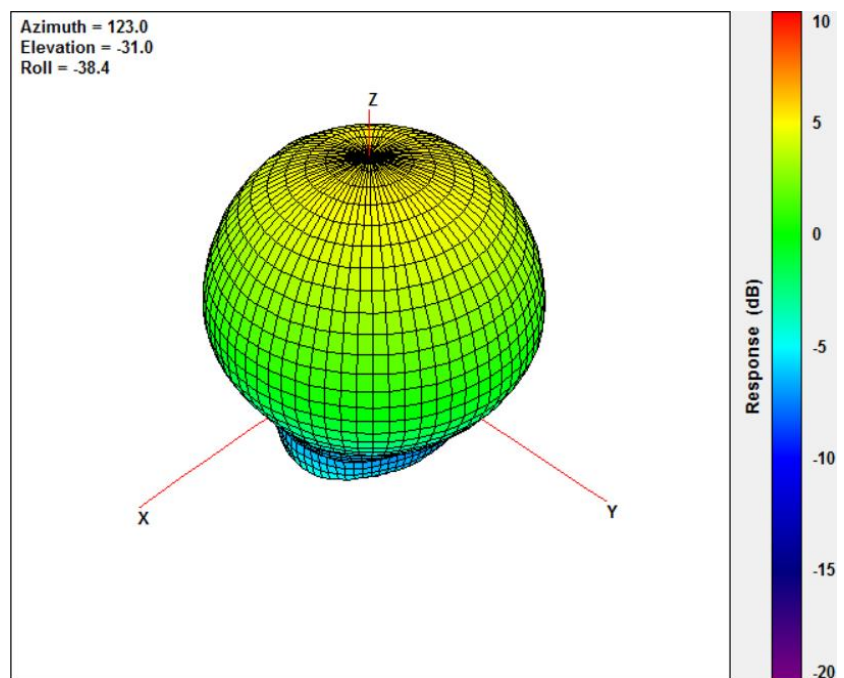




### 4.3 3D Radiation Pattern

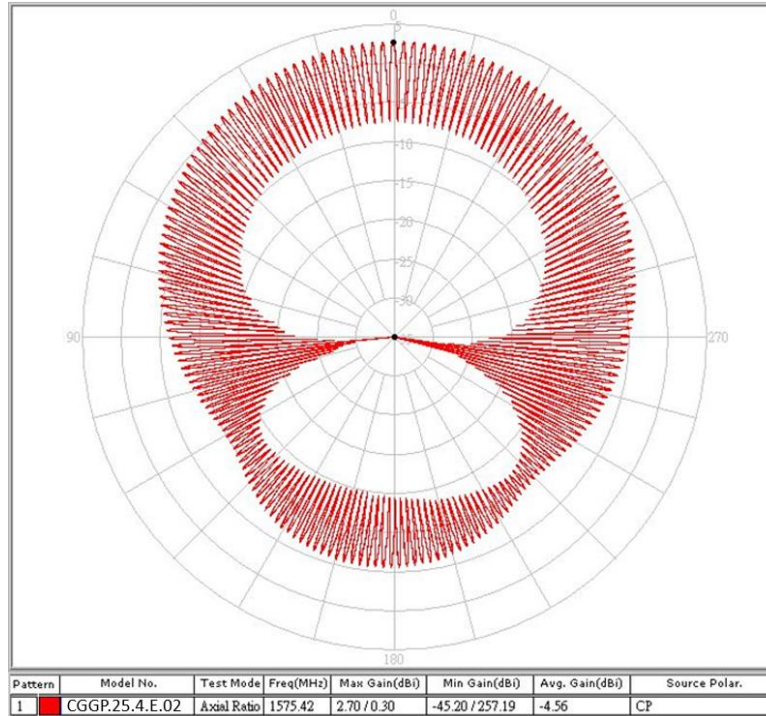


1575.42MHz

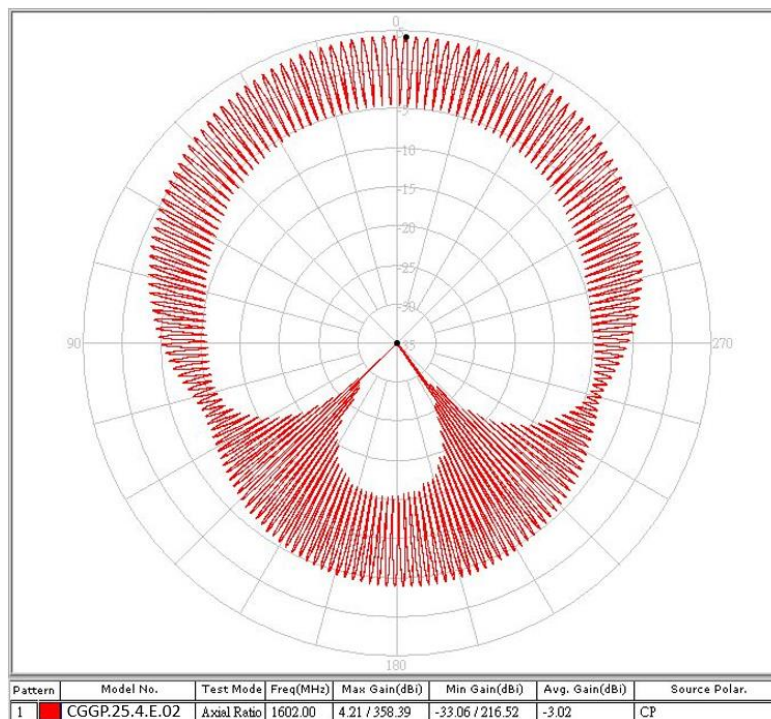


1602MHz

# 5. Axial Ratio

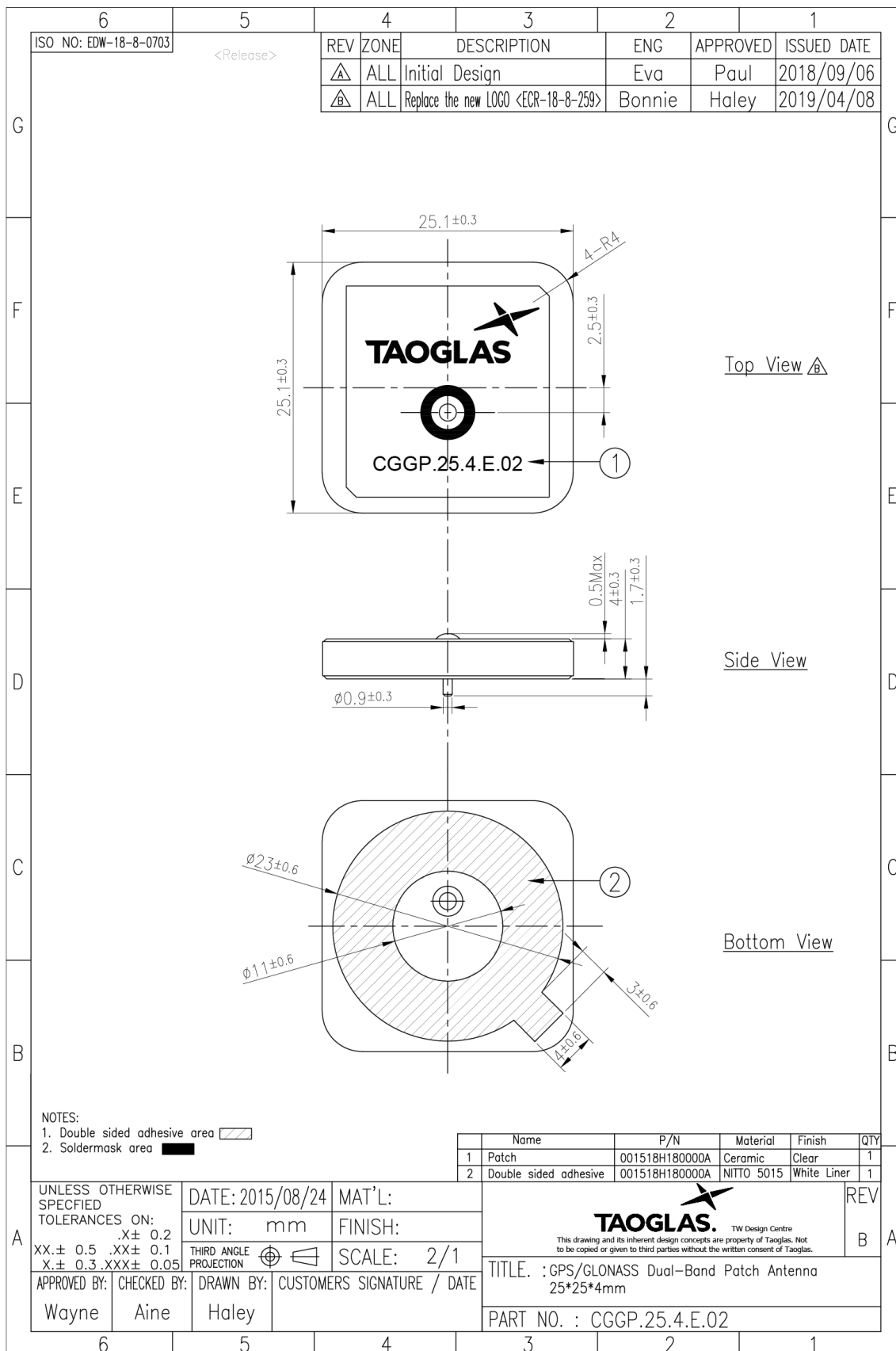


1575.42 MHz

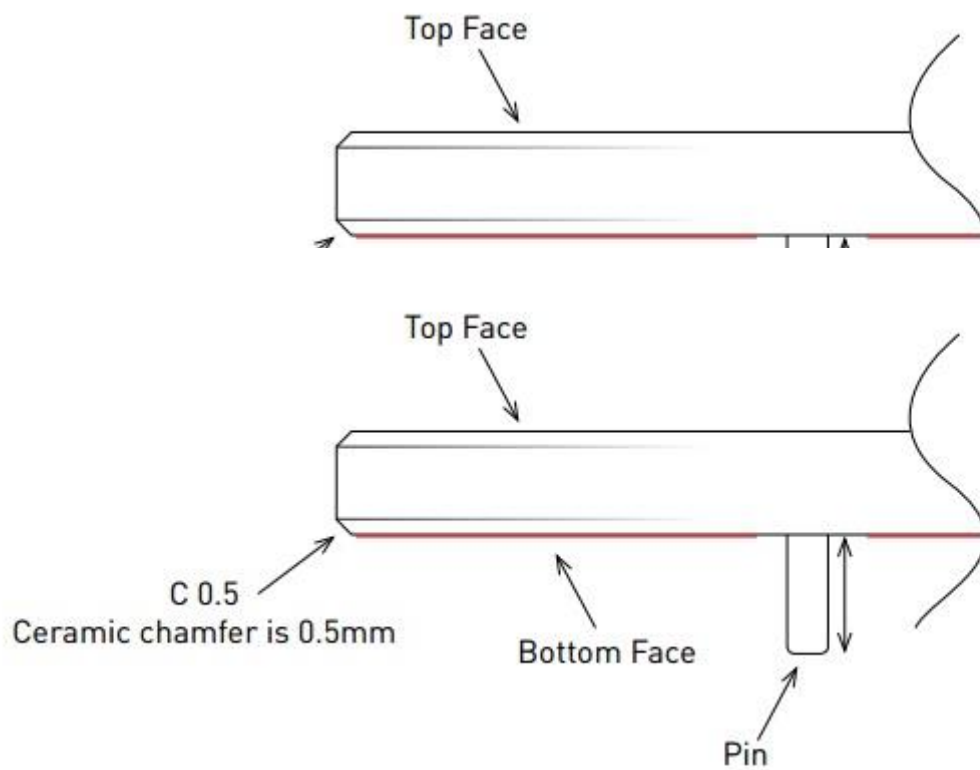


1602MHz

# 6. Mechanical Drawing (Unit: mm)

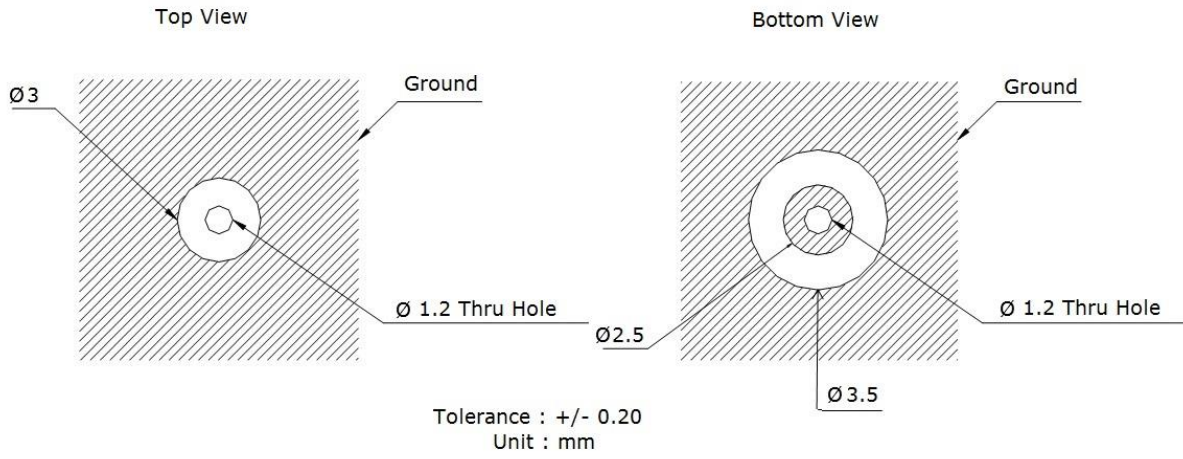


## Adhesive Thickness

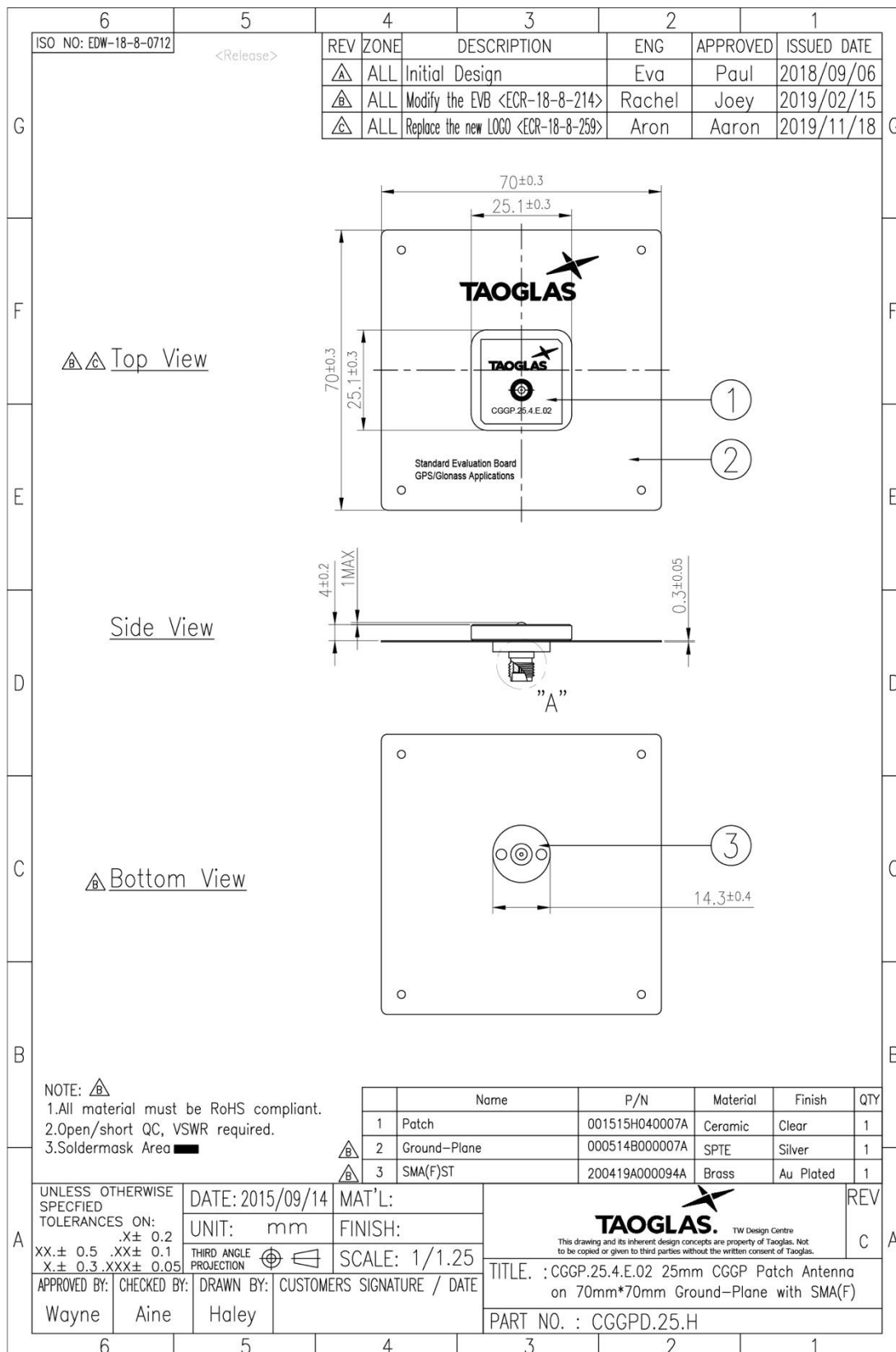


**Red Line** shows the adhesive without Liner – thickness 0.08-0.1mm

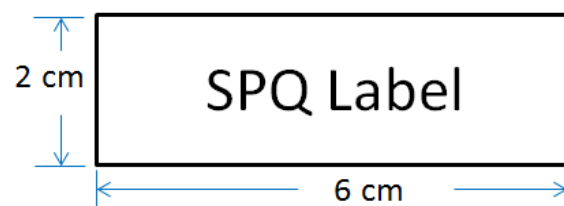
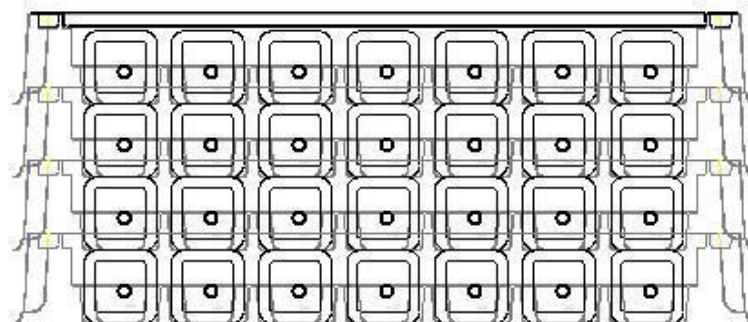
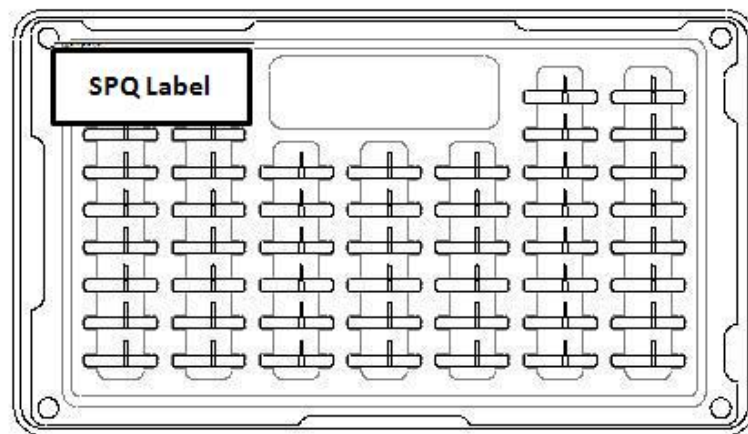
## 7. PCB Footprint Recommendation



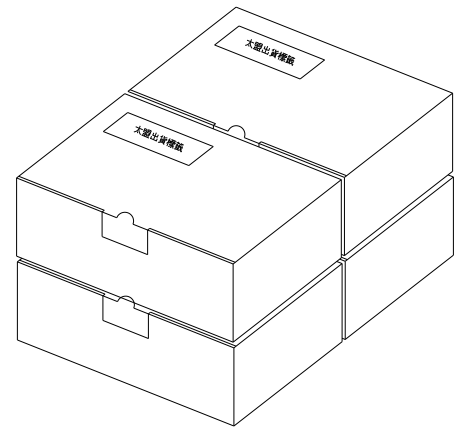
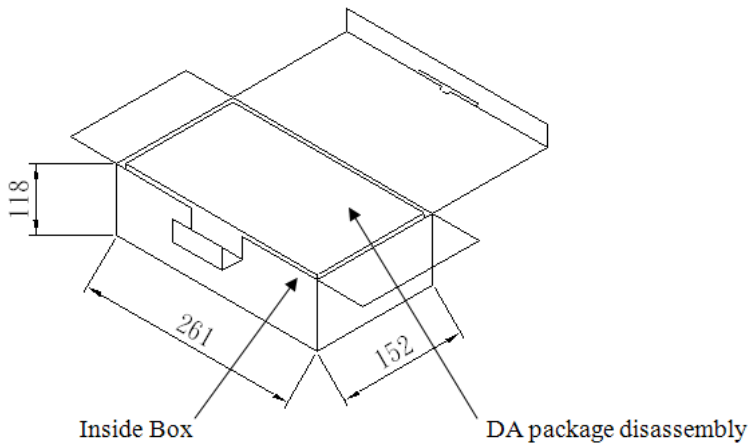
# 8. Evaluation Board (CGGPD.25.H)



## 9. Packaging



200 Units / Inside Carton (261x152x118mm)



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

Total Weight :9.3 kg





Changelog for the datasheet

**SPE-16-8-018 – CGGP.25.E.02**

<b>Revision: C (Current Version)</b>	
Date:	2020-11-19
Changes:	Updated to new format Added Moisture Sensitivity Level 3 to Environmental Specifications
Changes Made by:	Dan Cantwell

**Previous Revisions**

<b>Revision: B</b>	
Date:	2019-11-15
Changes:	Updated Images Reference ECR-18-8-259
Changes Made by:	Russell Meyler

<b>Revision: A (Original First Release)</b>	
Date:	2016-09-03
Notes:	
Author:	Technical Writer



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