



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.

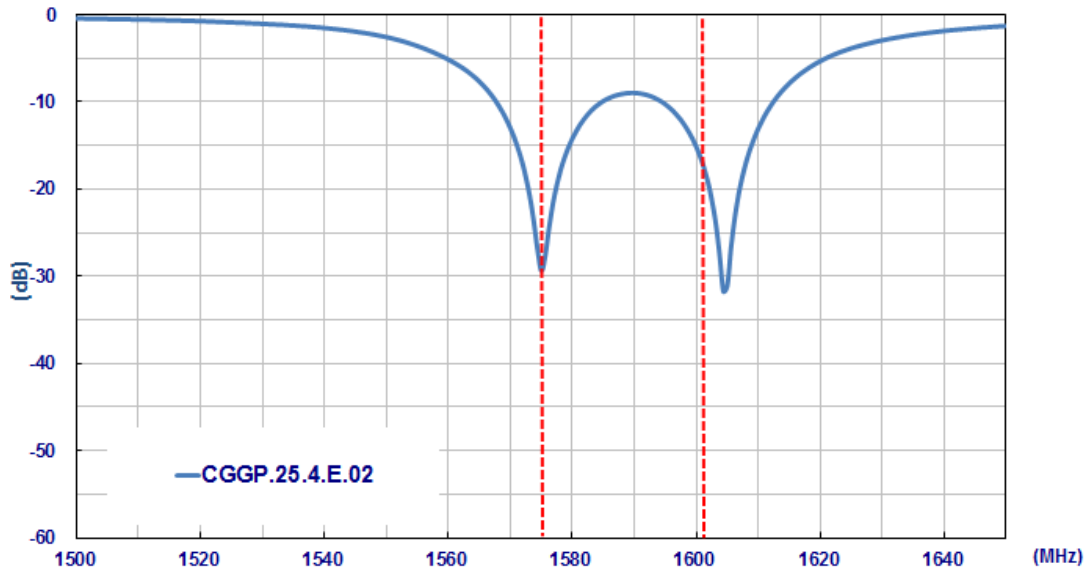
2. Specifications

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	2.4mm	
Weight	9.5g	
Environmental		
Operation Temperature	-40°C to 105°C	
Moisture Sensitivity	Level 3	

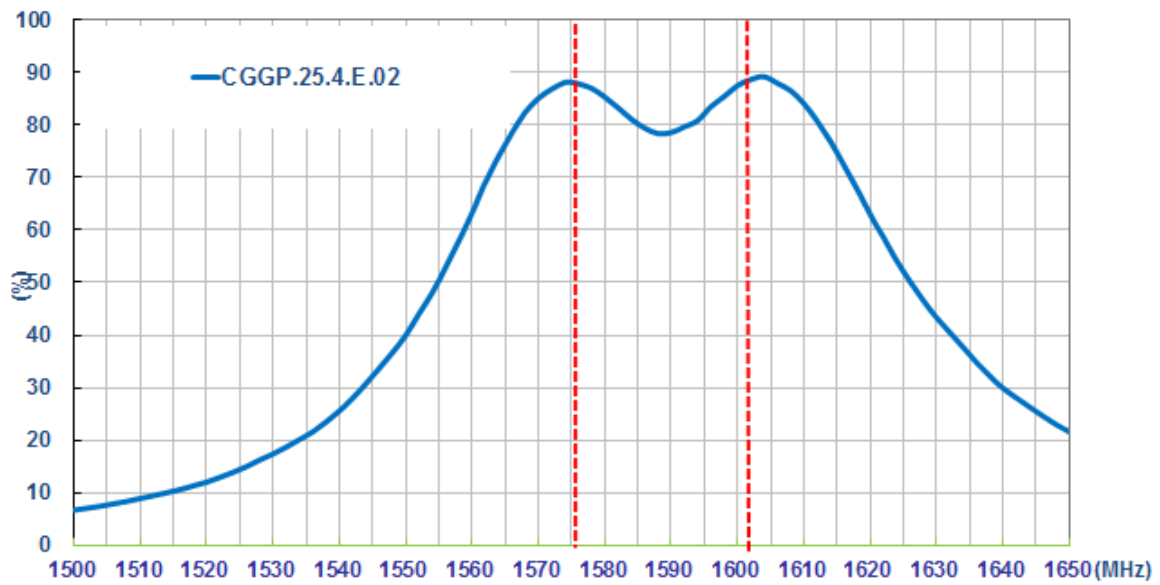
* Antenna properties were measured with the antenna mounted on 70*70mm Ground Plane

3. Antenna Characteristics

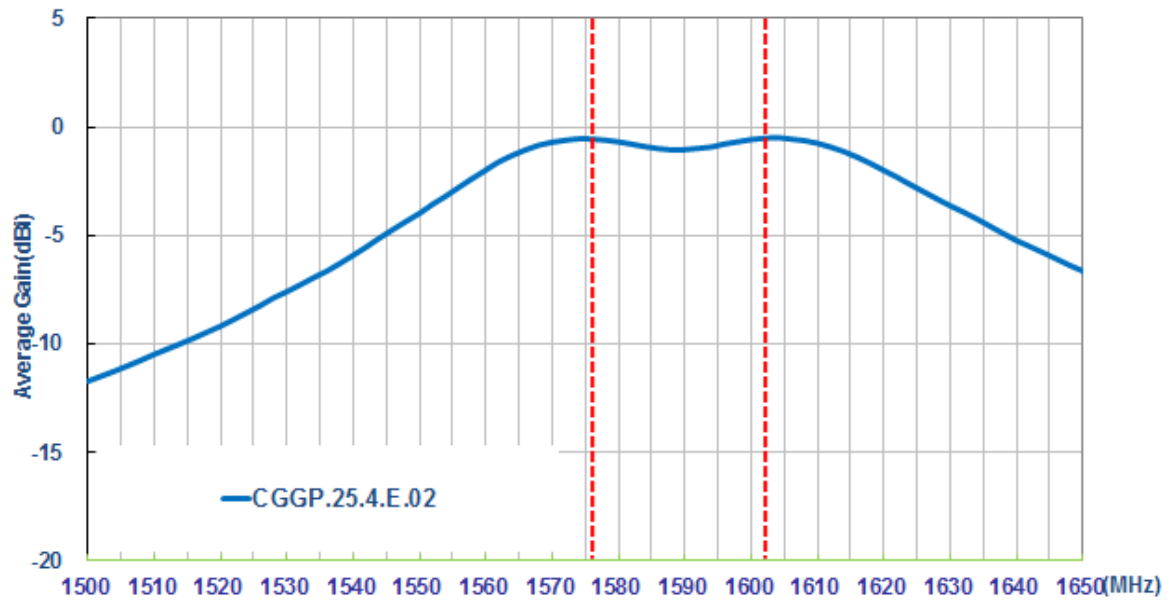
3.1 Return Loss



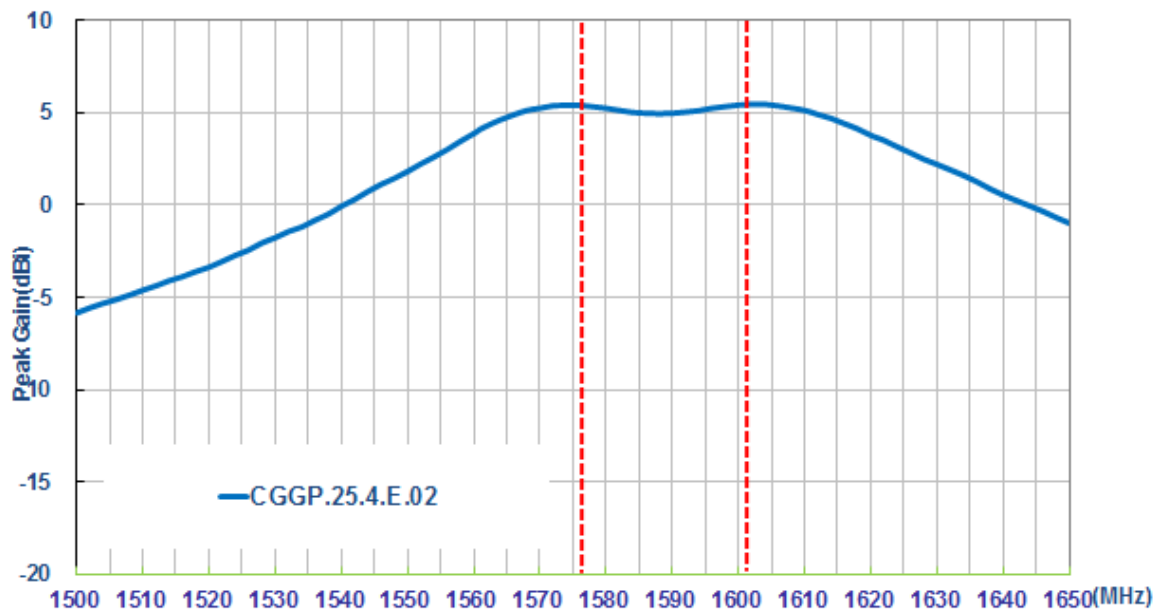
3.2 Efficiency



3.3 Average Gain



3.4 Peak Gain



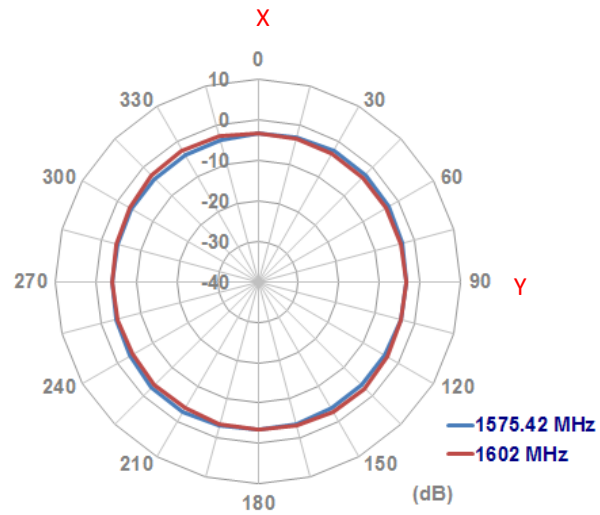
4. Antenna Radiation Pattern

4.1 Measurement Setup

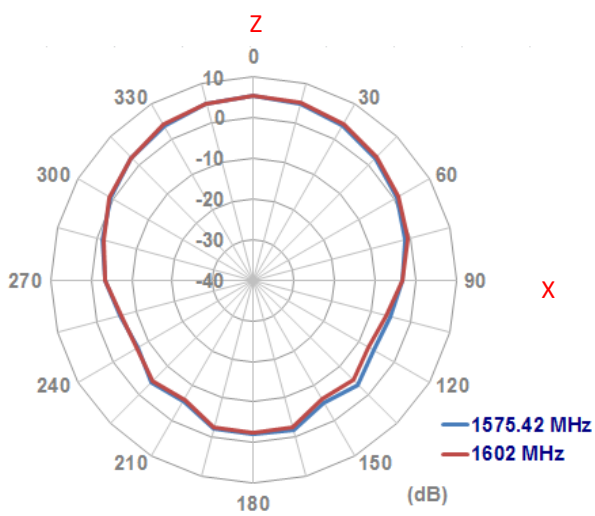


4.2 2D Radiation Pattern

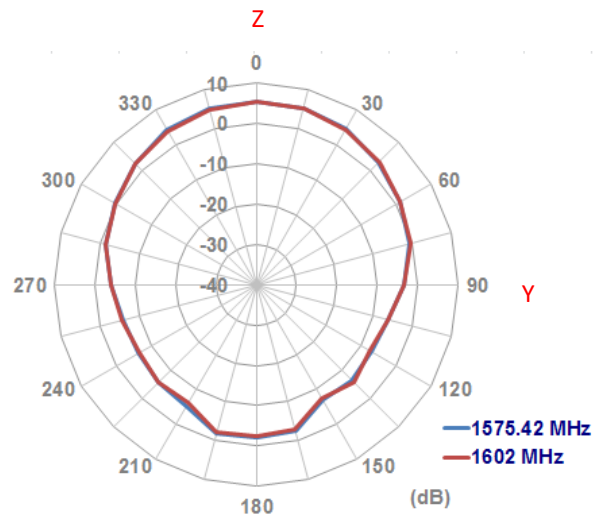
XY Plane



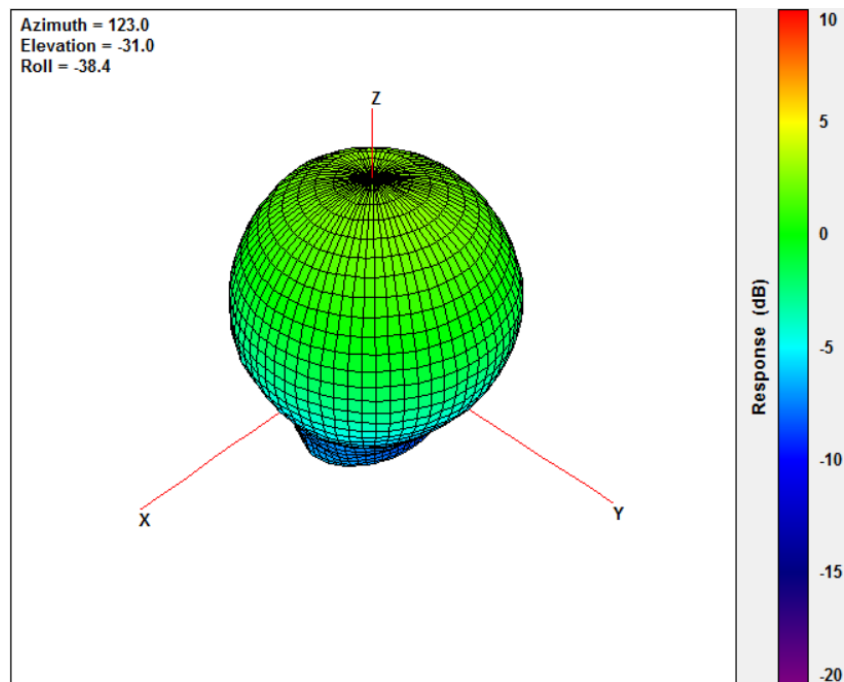
XZ Plane



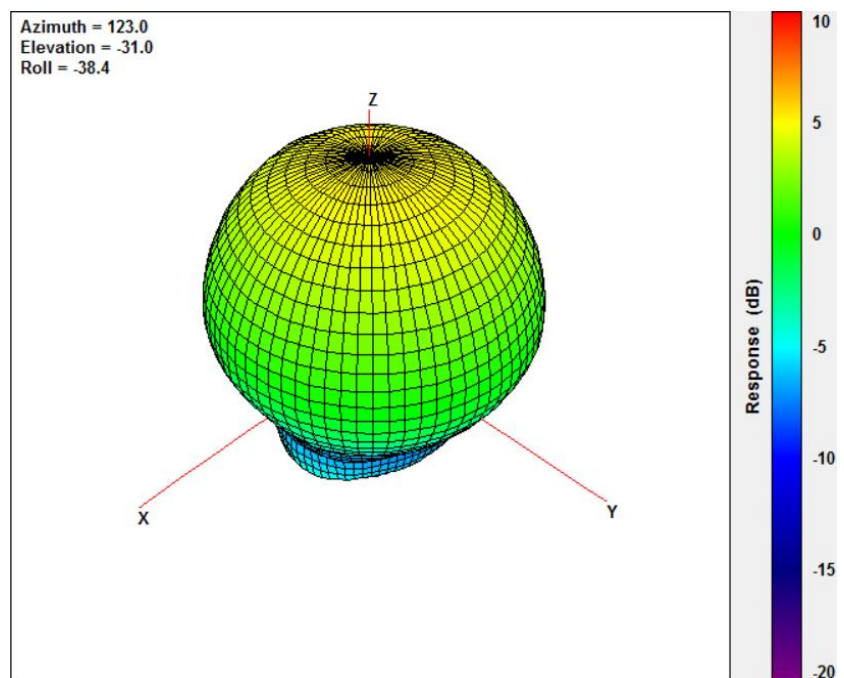
YZ Plane



4.3 3D Radiation Pattern

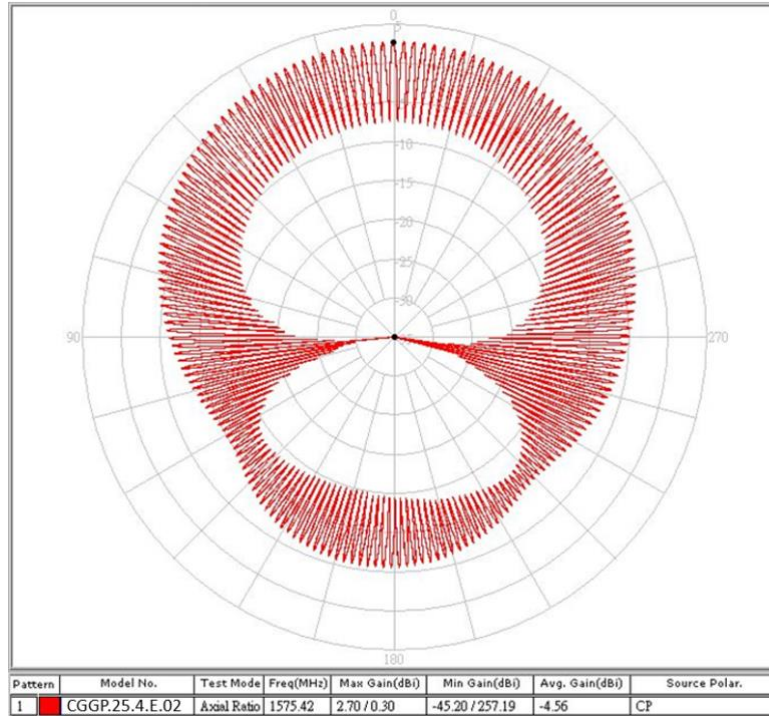


1575.42MHz

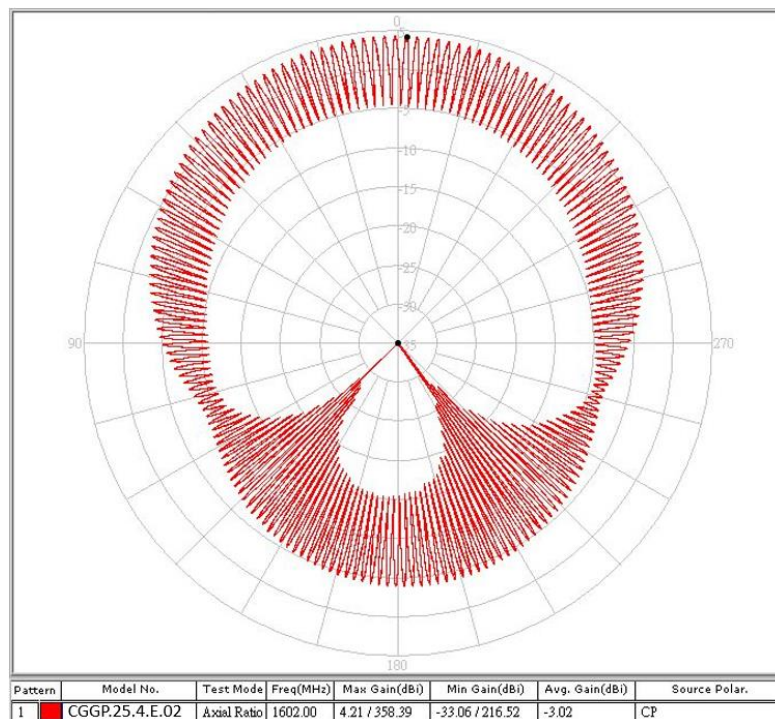


1602MHz

5. Axial Ratio



1575.42 MHz



1602MHz

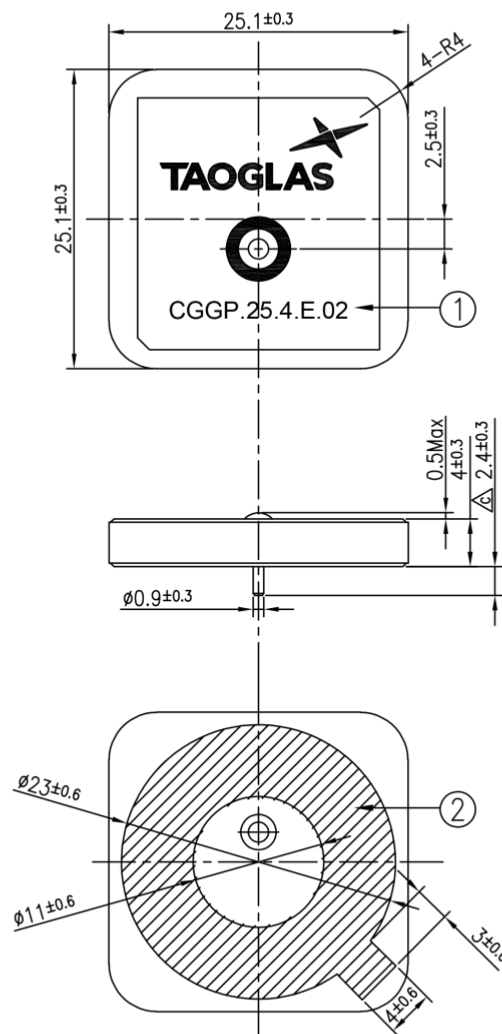
6. Mechanical Drawing (Unit: mm)

ISO NO.: EDW-18-8-0703

STATE: Release

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

REV.	DESCRIPTION	ENG.	APPROVED	DATE
A	Initial Design	Eva	Paul	2018/09/06
B	Replace the new LOGO EDW-18-8-259	Bonnie	Haley	2019/04/08
C	EC-21-08-010	Mickey	Buluto	2021/03/02



Top View

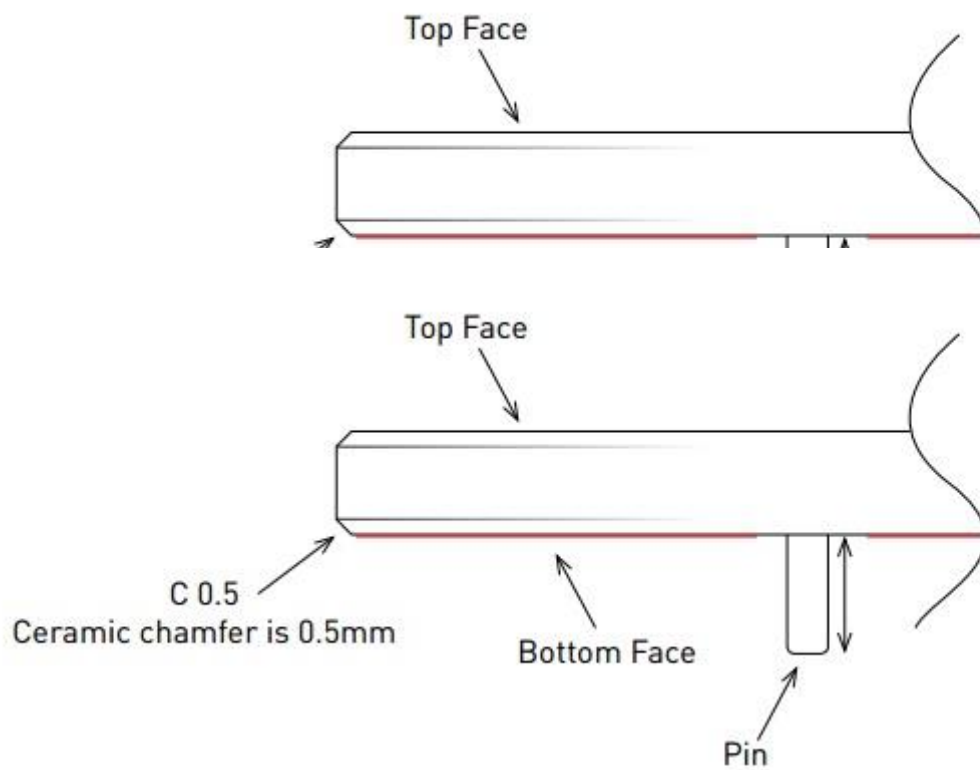
Side View

Bottom View

	Name	P/N	Material	Finish	QTY
1	Patch	001518H180000A	Ceramic	Clear	1
2	Double sided Adhesive	001518H180000A	NIITO 5015	White Liner	1

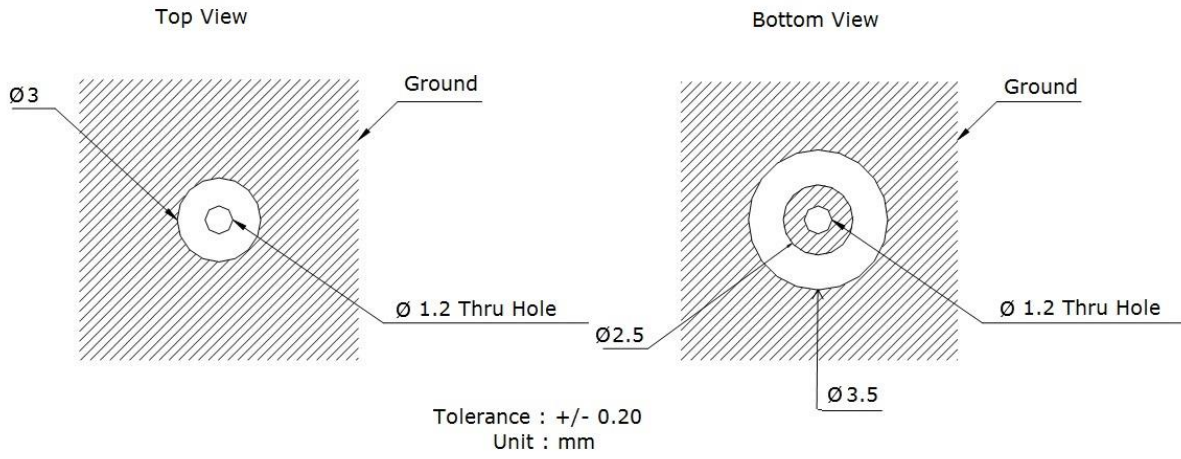
APPROVED BY: Wayne	 <small>TAOGLAS. TW Design Centre</small> <small>This drawing and its inherent design concepts are property of Taoglas. Not to be copied or given to third parties without the written consent of Taoglas.</small>
CHECK BY: Aine	
DRAWN BY: Haley	
DATE: 2015/08/24	TITLE : GPS/GLONASS Dual-Band Patch Antenna 25*25*4mm
UNLESS OTHERWISE SPECIFIED TOLERANCES ON: XX±0.5 X±0.3 XX±0.2 XX±0.1 XXX±0.05	PART NO. : CGGP.25.4.E.02
THIRD ANGLE PROJECTION	UNIT: mm SCALE: 2:1 PAGES: 1/1 REV. C

Adhesive Thickness

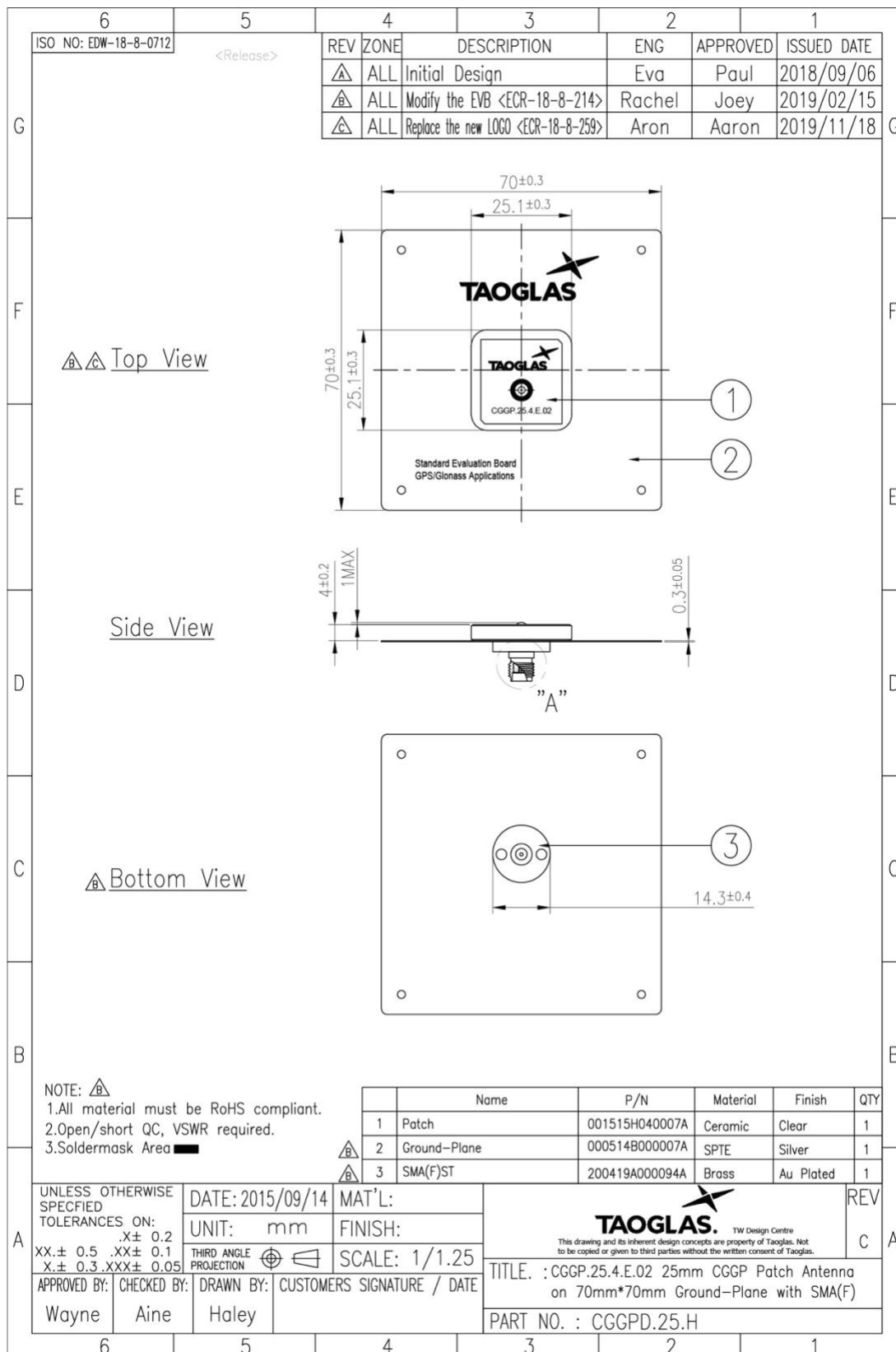


Red Line shows the adhesive without Liner – thickness 0.08-0.1mm

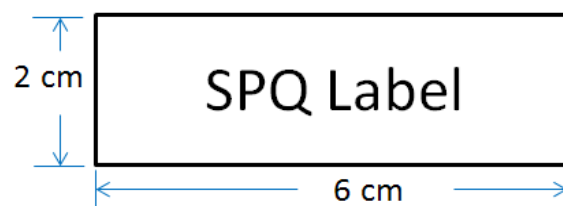
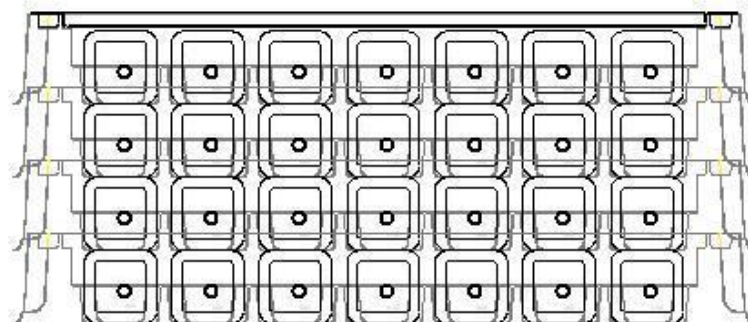
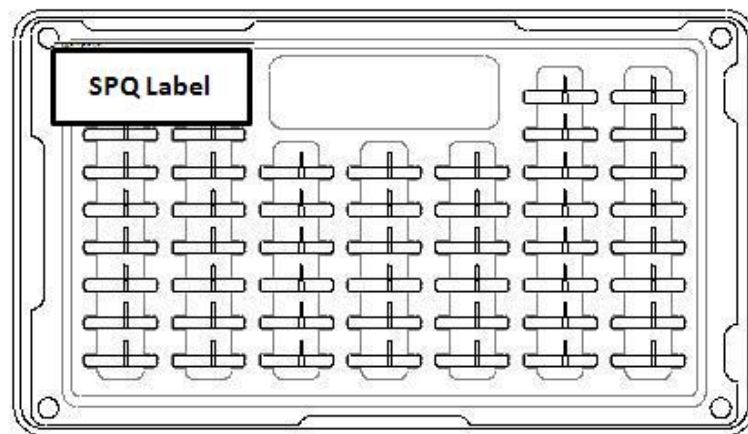
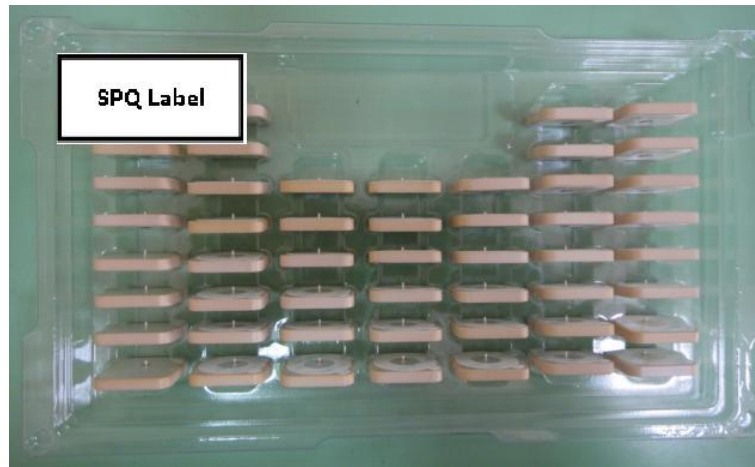
7. PCB Footprint Recommendation



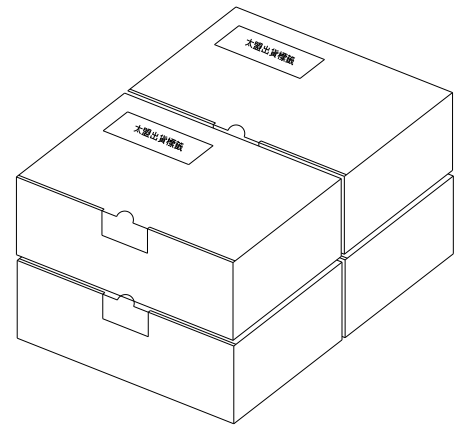
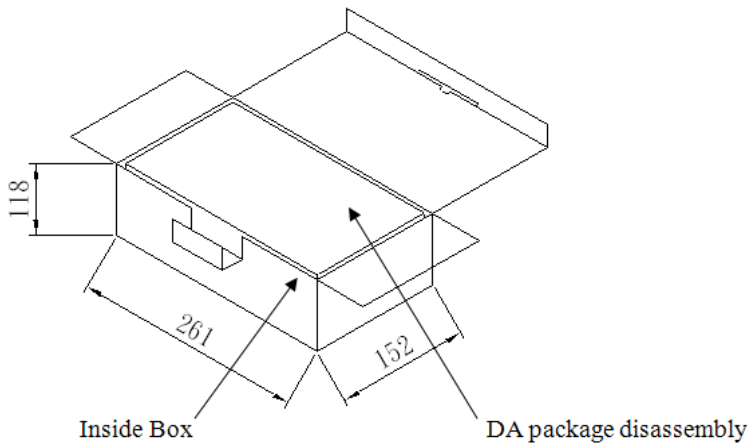
8. Evaluation Board (CGGPD.25.H)



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

Revision: D (Current Version)

Date:	2021-06-12
Changes:	Updated Pin Length to 2.4mm Updated Drawing
Changes Made by:	Dan Cantwell

Previous Revisions

Revision: C

Date:	2020-11-19
Changes:	Updated to new format Added Moisture Sensitivity Level 3 to Environmental Specifications
Changes Made by:	Dan Cantwell

Revision: B

Date:	2019-11-15
Changes:	Updated Images Reference ECR-18-8-259
Changes Made by:	Russell Meyler

Revision: A (Original First Release)

Date:	2016-09-03
Notes:	
Author:	Technical Writer



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