



TAOGLAS®



Datasheet

Part No:
CGGP.18.4.C.02

Description:
18mm Ceramic GPS/GLONASS/Galileo Patch Antenna, 1575-1610MHz

Features:
GPS/GLONASS/Galileo Operational
18mm*18mm*4mm
3dBi Peak Gain (on 70mm*70mm ground-plane)
Pin type
Automotive TS16949 Production and Quality Approved
RoHS & REACH compliant

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1. Introduction



This 18mm ceramic GPS/GLONASS/Galileo patch antenna, by means of a double resonance design, has unique wide-band operation over the whole operating bands of GPS and GLONASS systems from 1575MHz to 1610MHz. It is mounted via pin and double-sided adhesive.

This antenna has been tuned for a centre position on a 70mm*70mm ground-plane. It is manufactured and tested in a TS16949 first tier automotive approved facility. For further optimization to customer specific device environments where positioning is off centre or on different ground-plane sizes, custom tuned patch antennas can be supplied. For further information please contact your regional Taoglas customer support team.

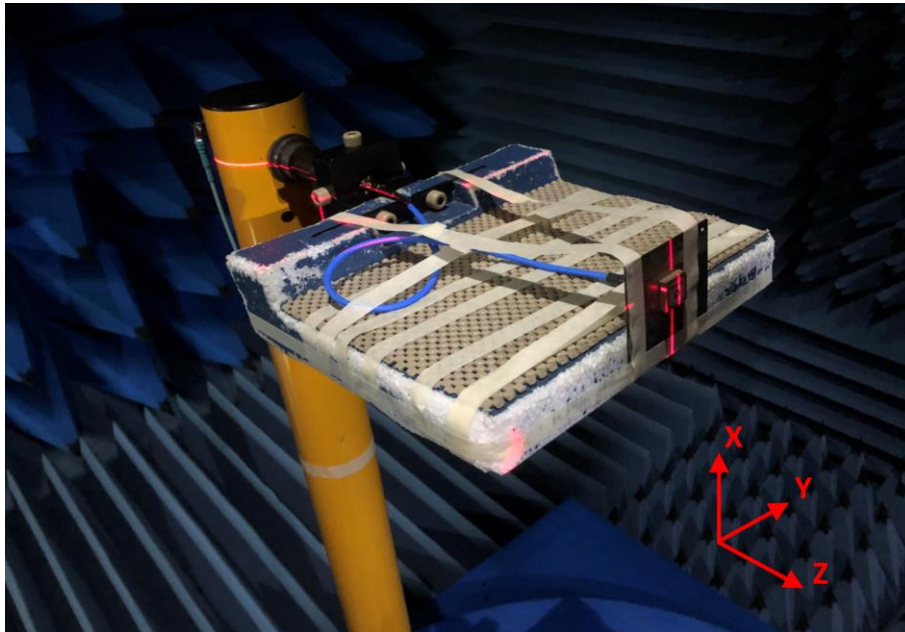
2. Specifications

Electrical	
Range of Receiving Frequency	GPS: 1575.42±1.023MHz GLONASS: 1602±5MHz
Center Frequency	1592MHz ± 3MHz
Return Loss	<-4 dB
Efficiency	75%
Gain at Zenith	+3.0 dBi typ.
Impedance	50 ohms
Mechanical	
Ceramic Dimension	18mm x 18mm x 4mm
Pin Diameter	0.9mm
Pin Length	1.8mm
Weight	7g
Environmental	
Operation Temperature	-40°C to 85°C
Moisture Sensitivity	Level 3

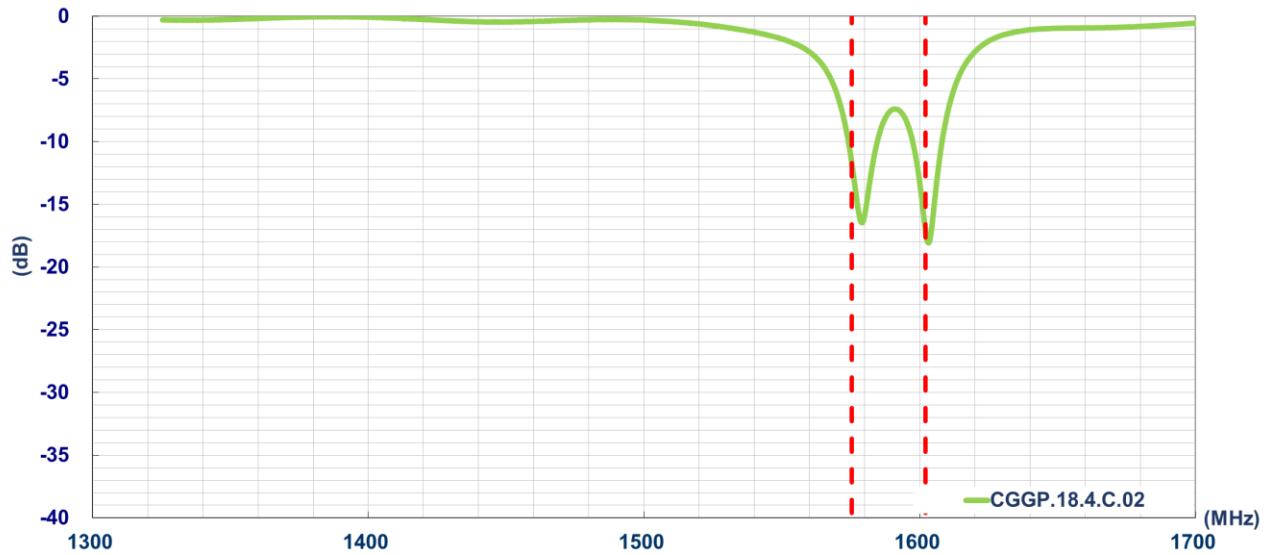
* Antenna properties were measurement with the antenna mounted on 70*70mm Ground Plane

3. Antenna Characteristics

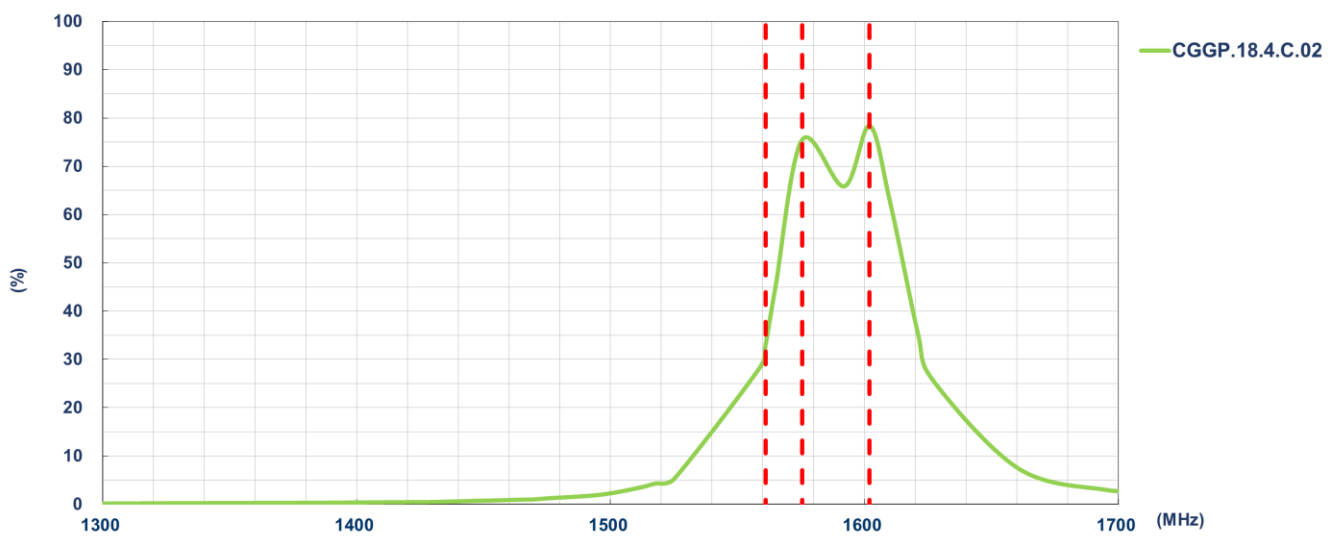
3.1 Test Setup



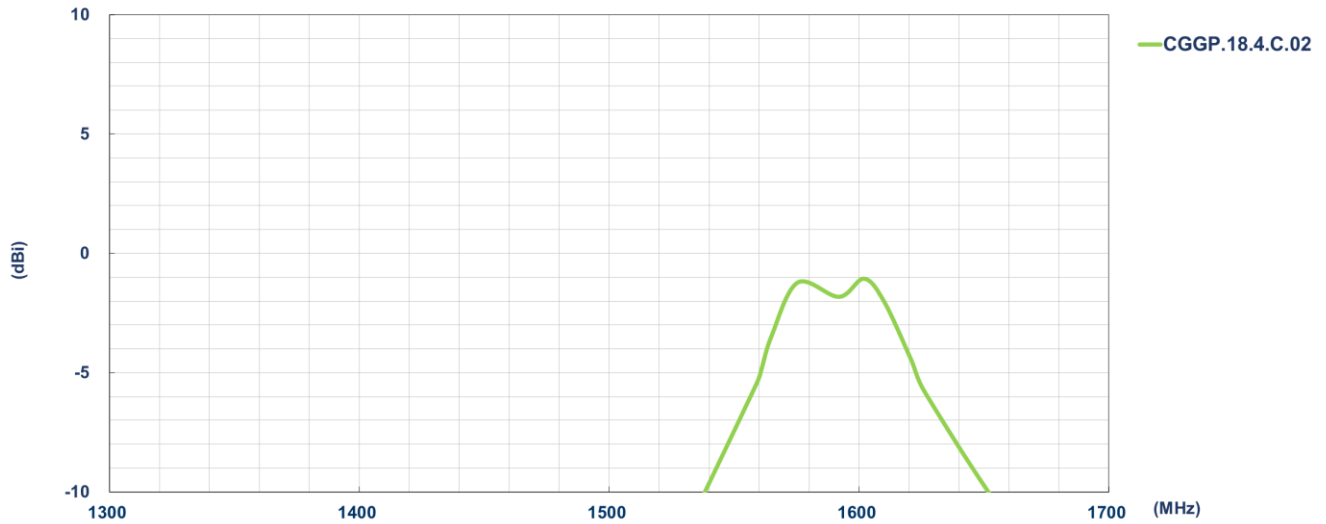
3.2 Return Loss



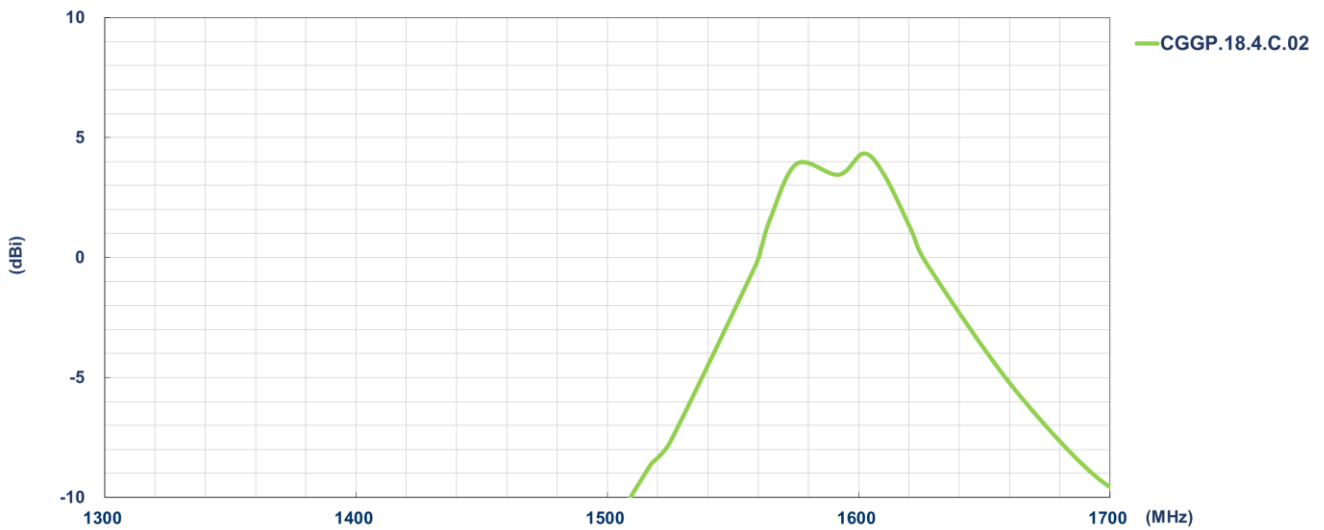
3.3 Efficiency



3.4 Average Gain



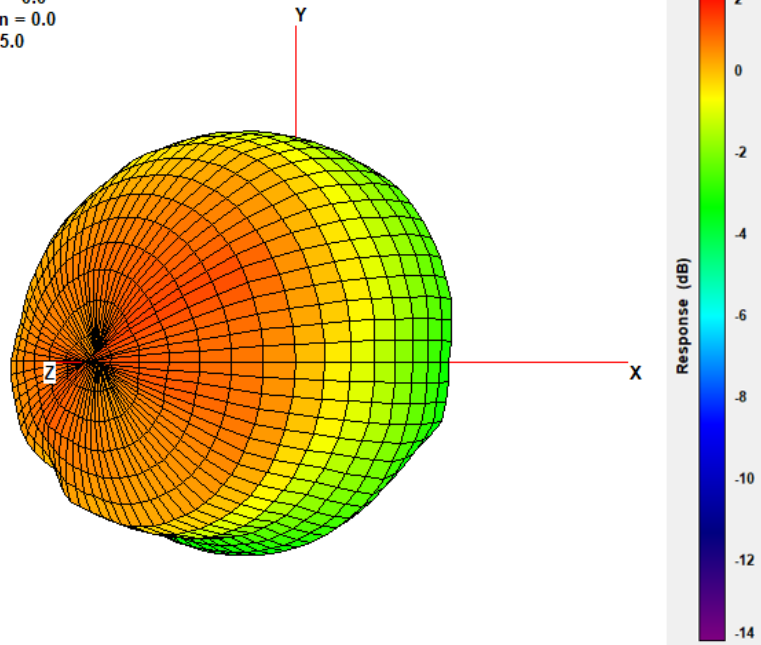
3.5 Peak Gain



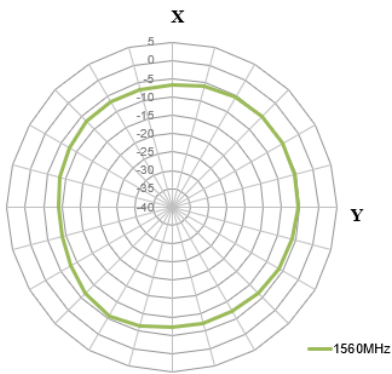
4. Antenna 2D Radiation Pattern

1560MHz

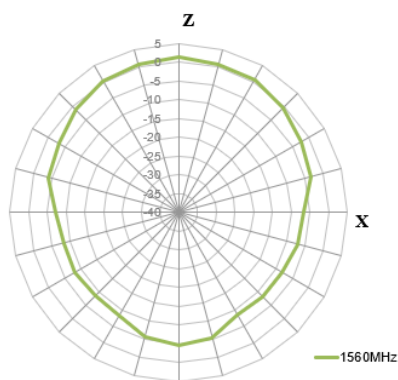
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Elevation = 0.0
Roll = -35.0



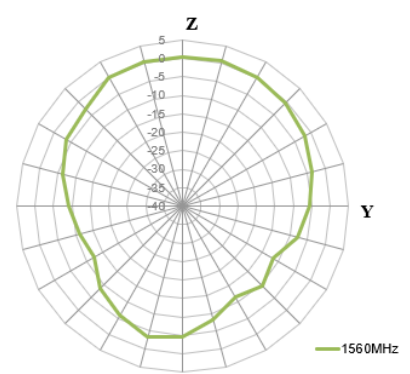
XY Plane



XZ Plane

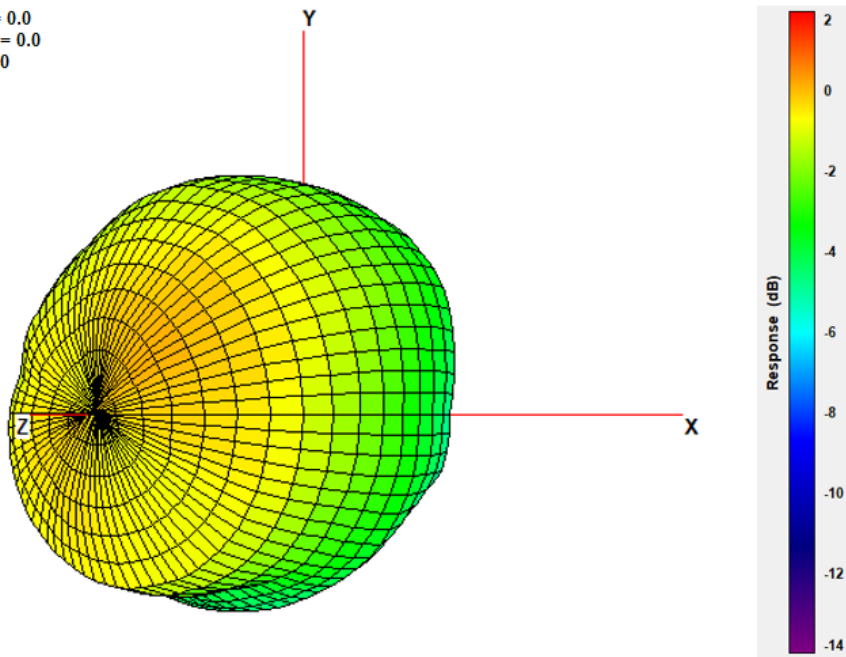


YZ Plane



1575MHz

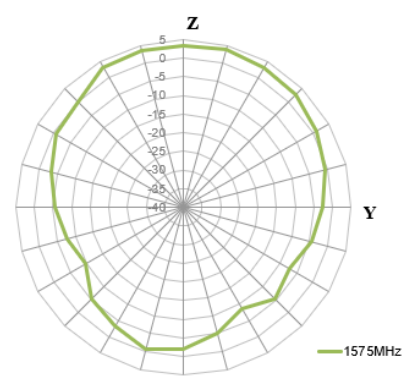
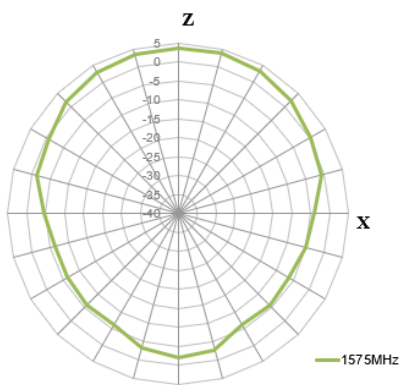
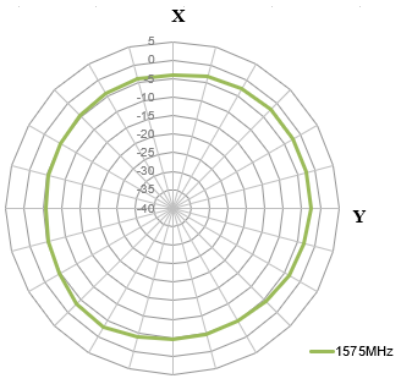
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XY Plane

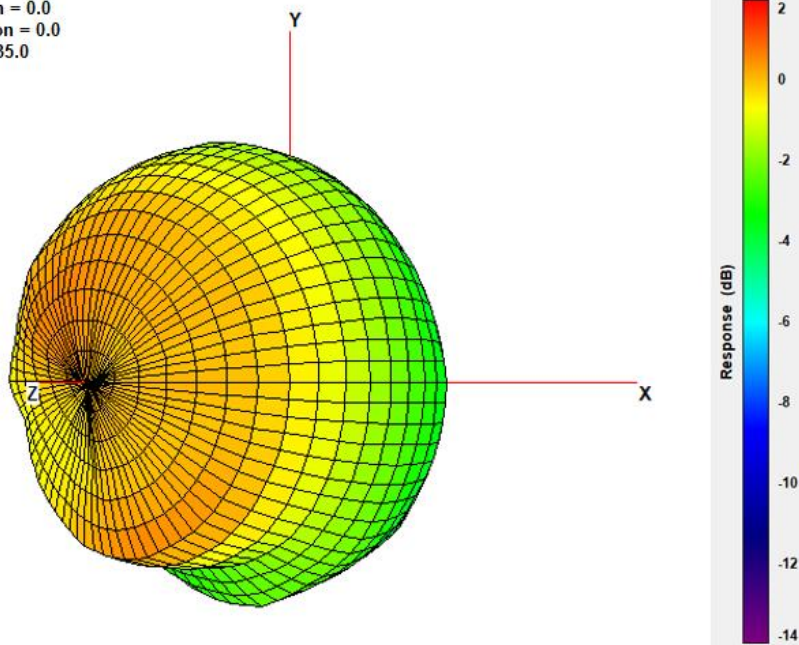
XZ Plane

YZ Plane



1602MHz

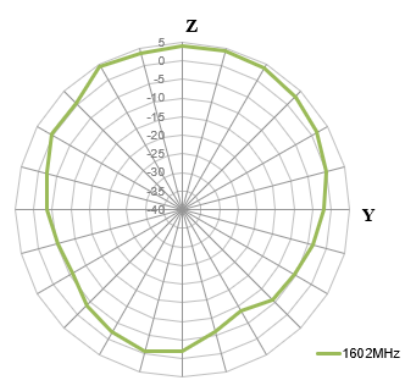
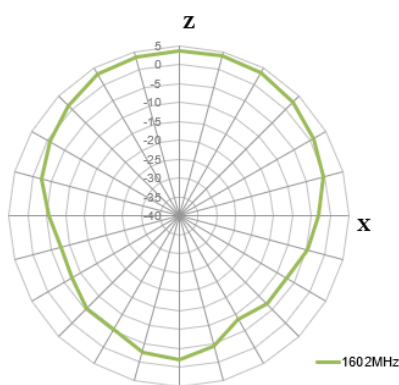
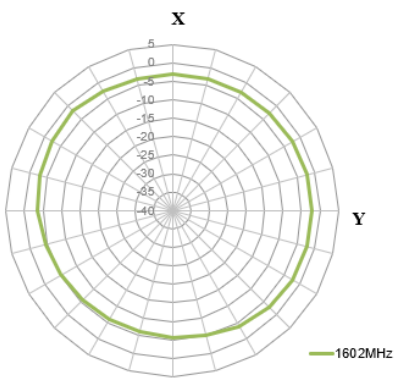
Azimuth = 0.0
Elevation = 0.0
Roll = -35.0



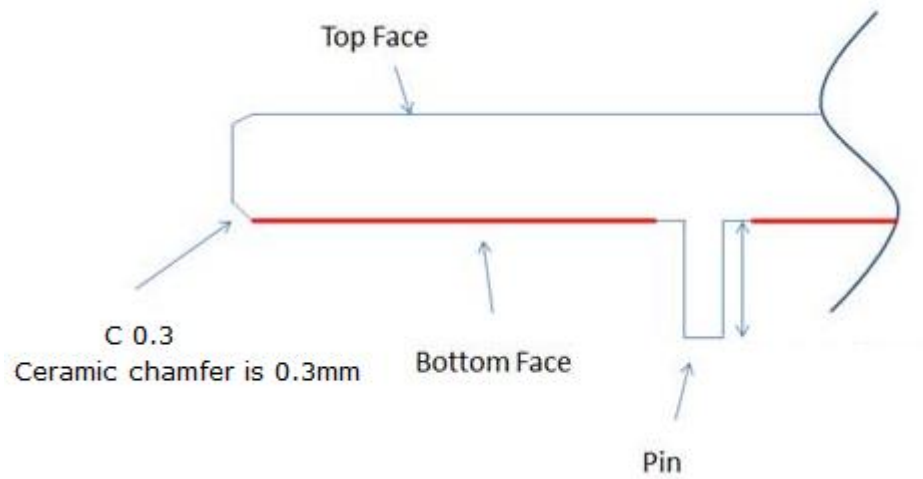
XY Plane

XZ Plane

YZ Plane

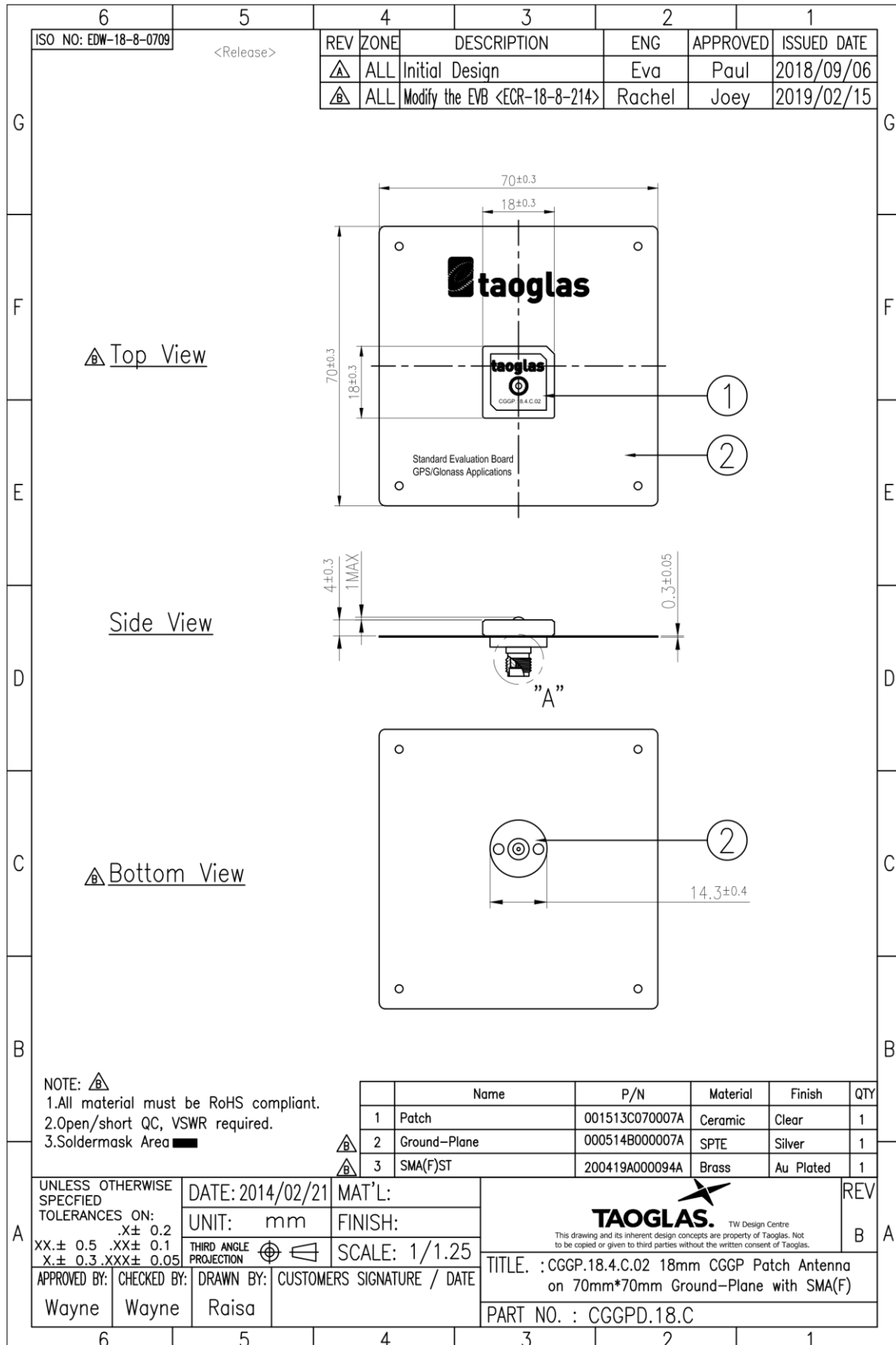


5.1 Adhesive Thickness

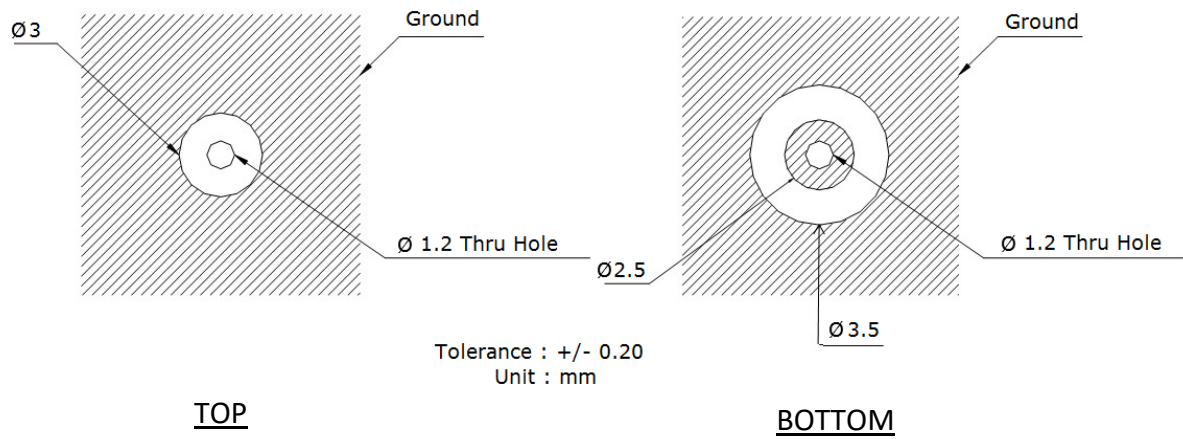


Red Line shows the adhesive without Liner – thickness 0.08~0.1mm

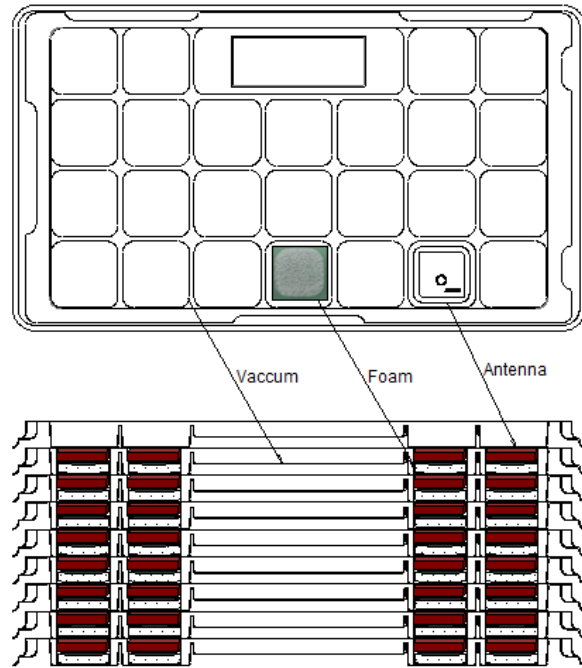
6. Evaluation Board (CGGPD.18.C) (Unit: mm)



7. PCB Footprint Recommendation



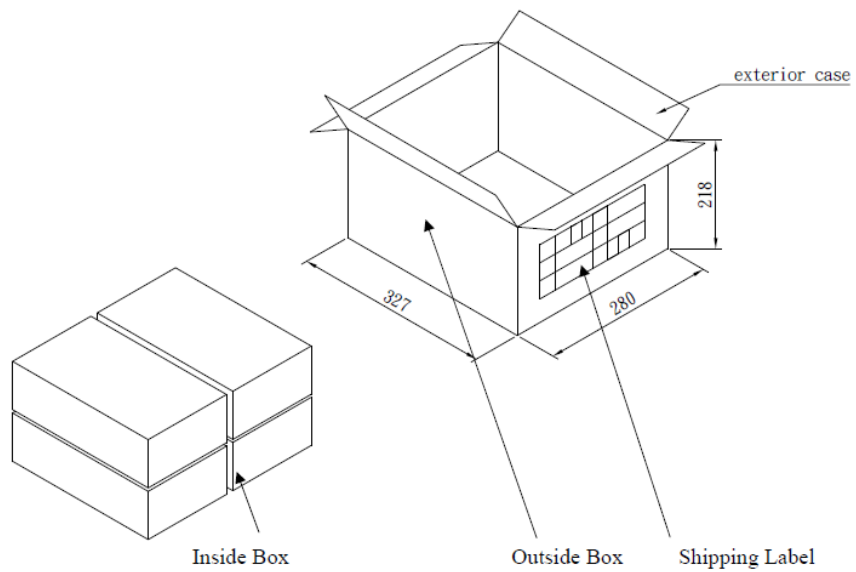
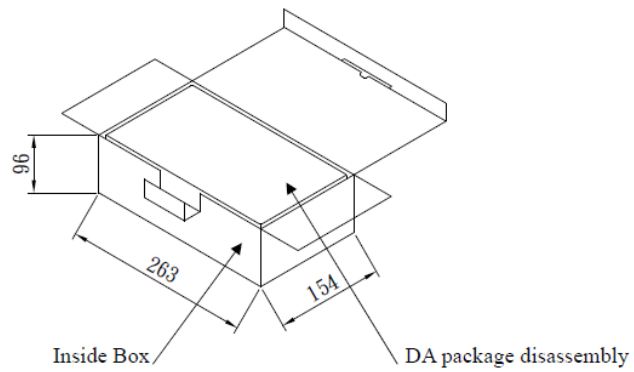
8. Packaging



25 pieces
per tray

200 pieces
per inner
carton

800 pieces
per outer
carton



Changelog for the datasheet

SPE-11-8-098– CGGP.18.4.C.02

Revision: L (Current Version)

Date:	2021-06-11
Changes:	Updated Mechanical Drawing
Changes Made by:	Gary West

Previous Revisions

Revision: K (Current Version)

Date:	2021-06-03
Changes:	Updated 2D & 3D Radiation Patterns
Changes Made by:	Gary West

Revision: F

Date:	2014-08-19
Changes:	Removed Circular Polarization from Spec
Changes Made by:	Aine Doyle

Revision: J

Date:	2021-03-26
Changes:	Updated Weight and Efficiency
Changes Made by:	Jack Conroy

Revision: E

Date:	2014-11-06
Changes:	Added EBV info
Changes Made by:	Aine Doyle

Revision: I

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

Revision: D

Date:	2012-08-14
Changes:	
Changes Made by:	Technical Writer

Revision: H

Date:	2018-11-06
Changes:	Added Plots
Changes Made by:	Technical Writer

Revision: C

Date:	2012-02-27
Changes:	Added Packaging
Changes Made by:	Technical Writer

Revision: G

Date:	2015-06-01
Changes:	Amended PCB footprint doc
Changes Made by:	Aine Doyle

Revision: B

Date:	2012-01-16
Changes:	
Changes Made by:	Technical Writer

Previous Revisions

Revision: A (Original First Release)		
Date:	2011-09-14	
Notes:		
Author:	Technical Writer	



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