



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.

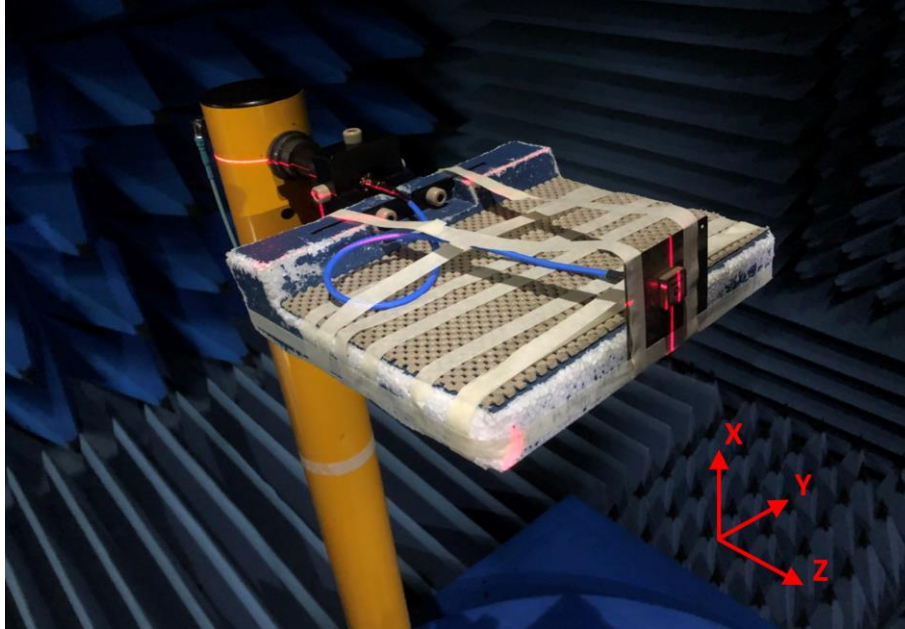
2. Specifications

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

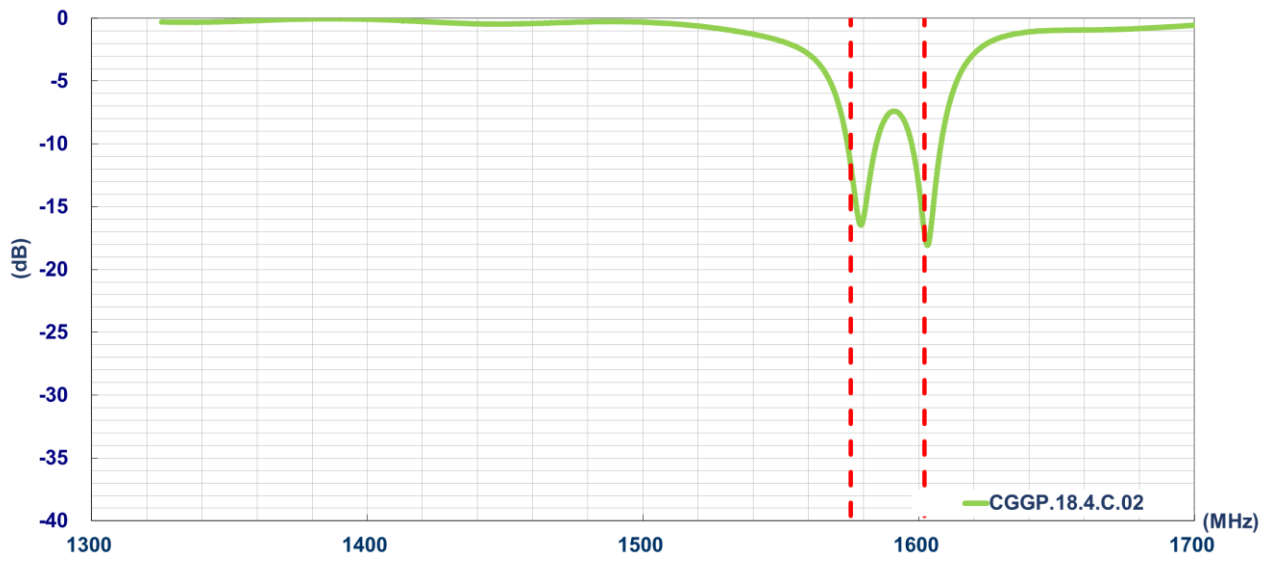
* Antenna properties were measurement with the antenna mounted on 70*70mm Ground Plane

3. Antenna Characteristics

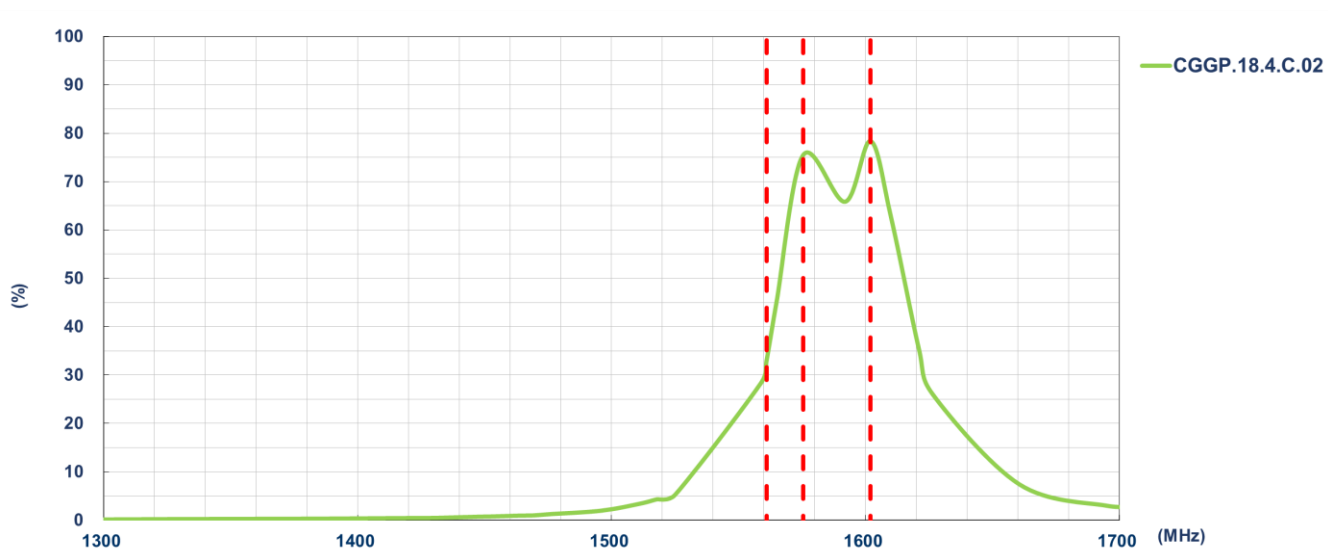
3.1 Test Setup



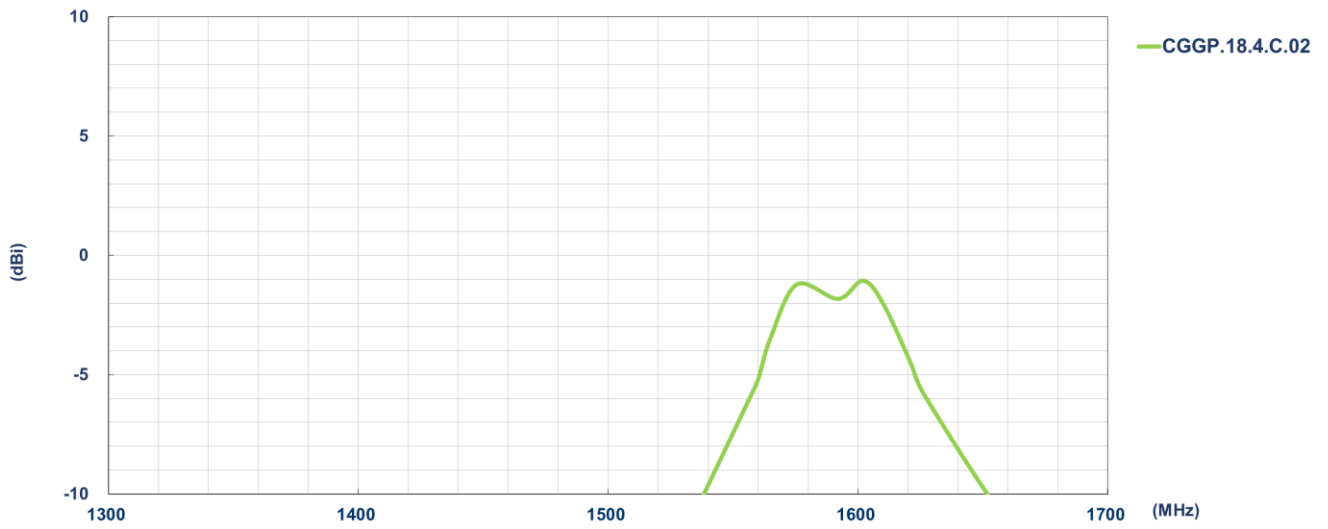
3.2 Return Loss



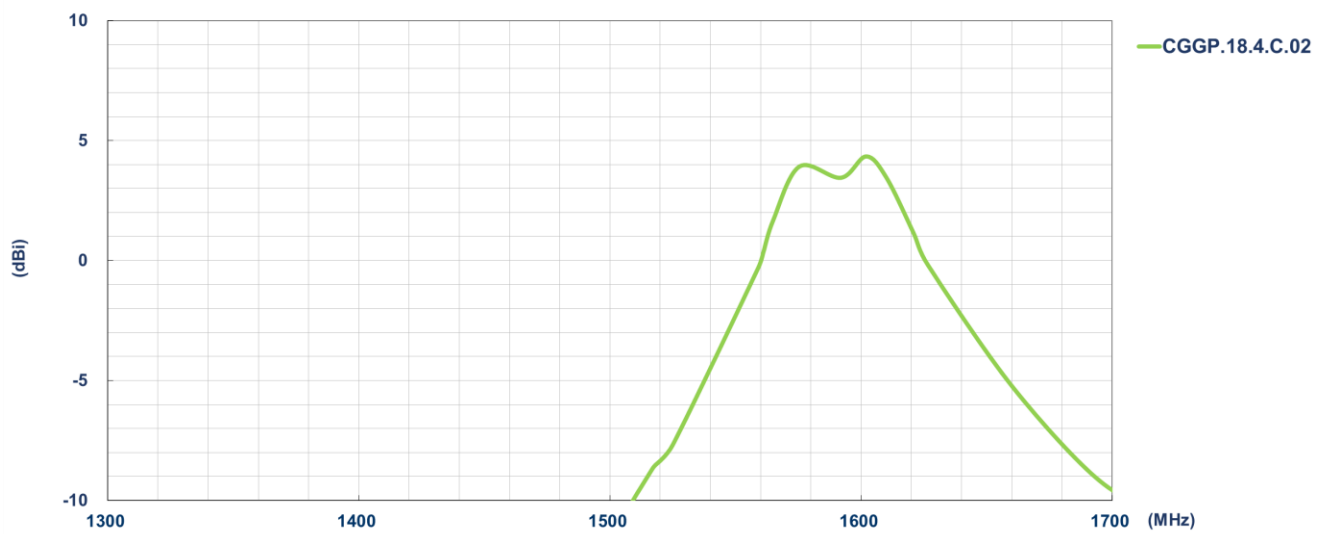
3.3 Efficiency



3.4 Average Gain



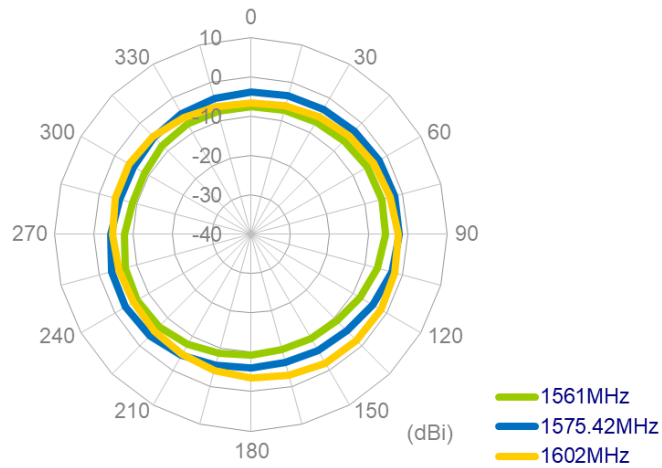
3.5 Peak Gain



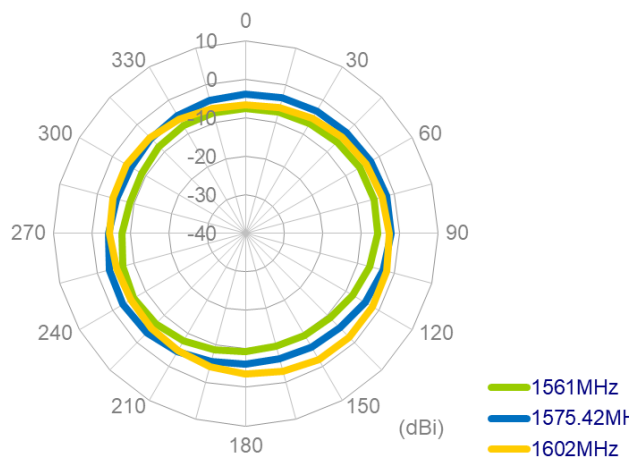
4. Antenna 2D Radiation Pattern

4.1 2D Radiation Pattern

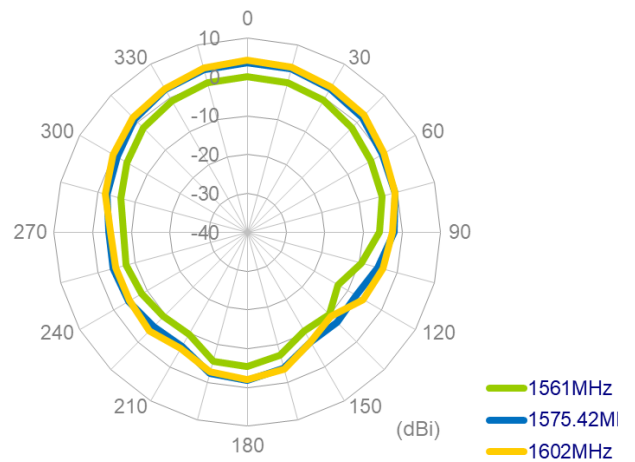
XY Plane



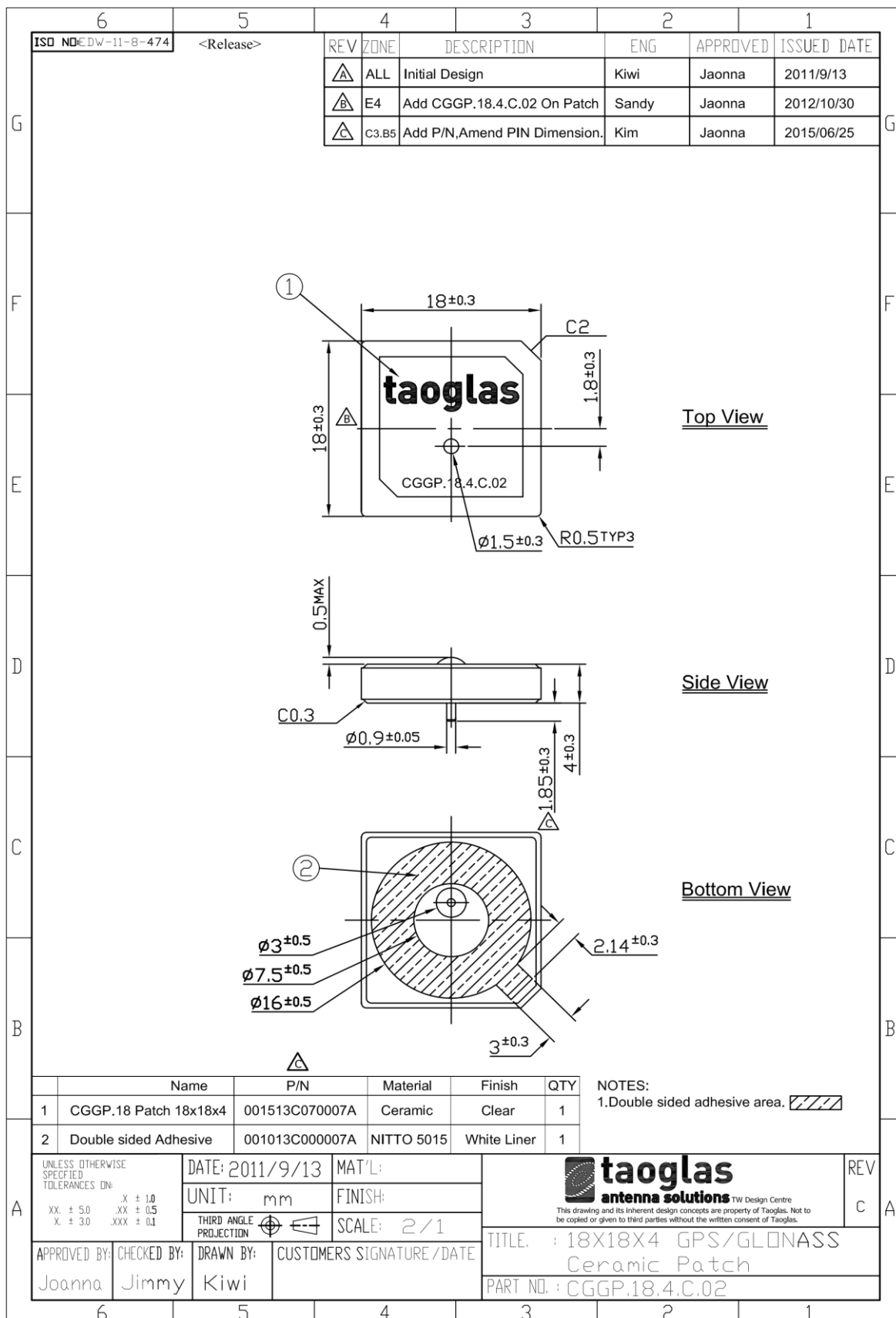
XZ Plane



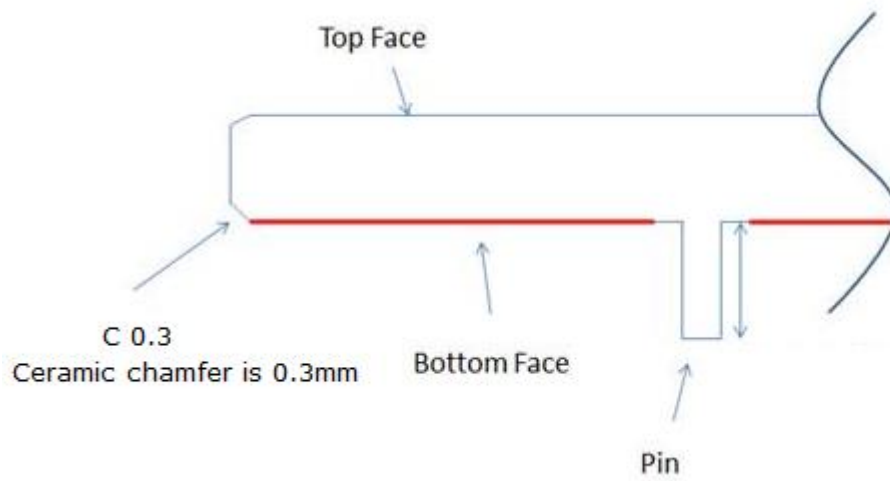
YZ Plane



5. Mechanical Drawing (Unit: mm)

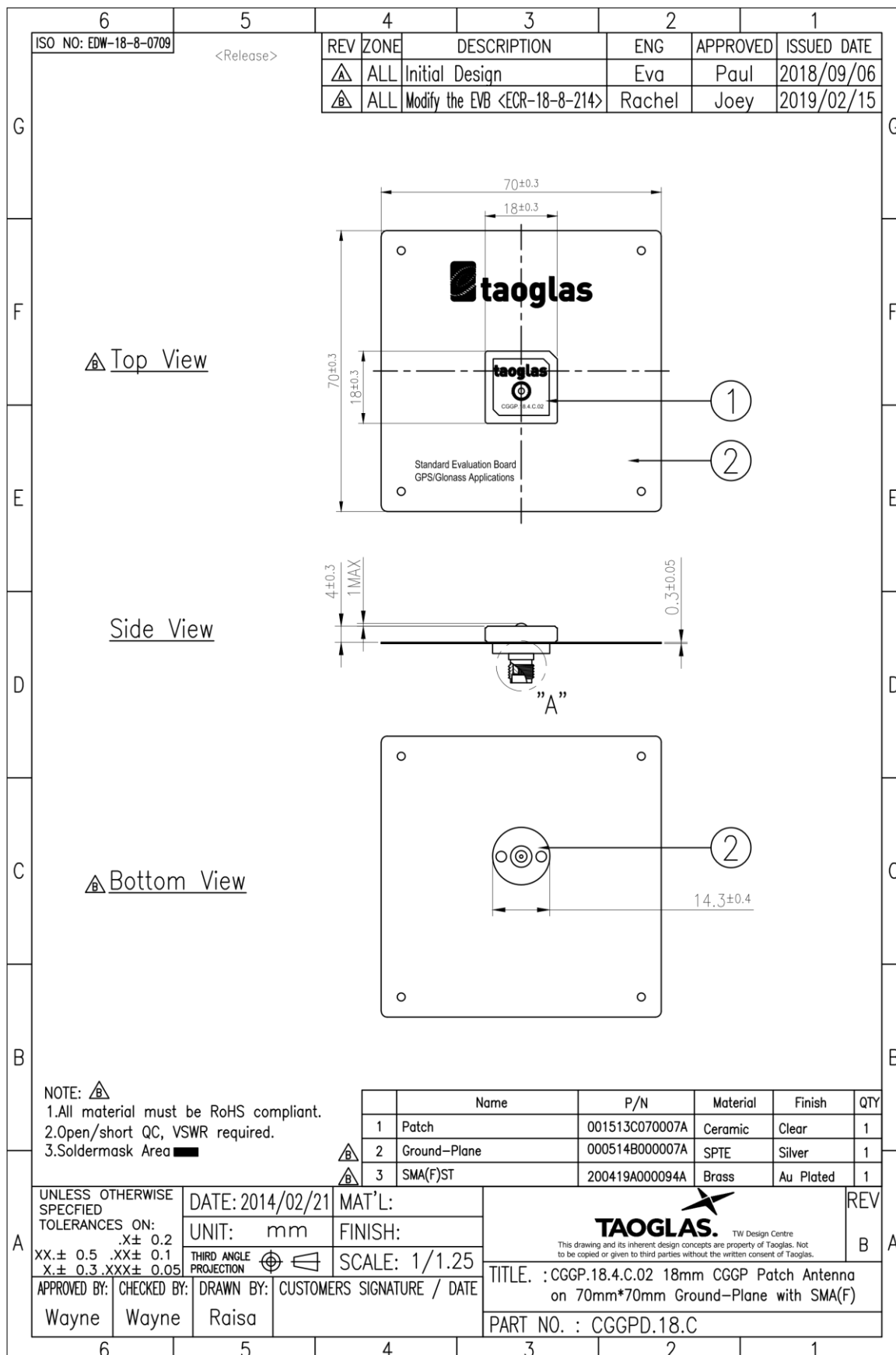


Adhesive Thickness

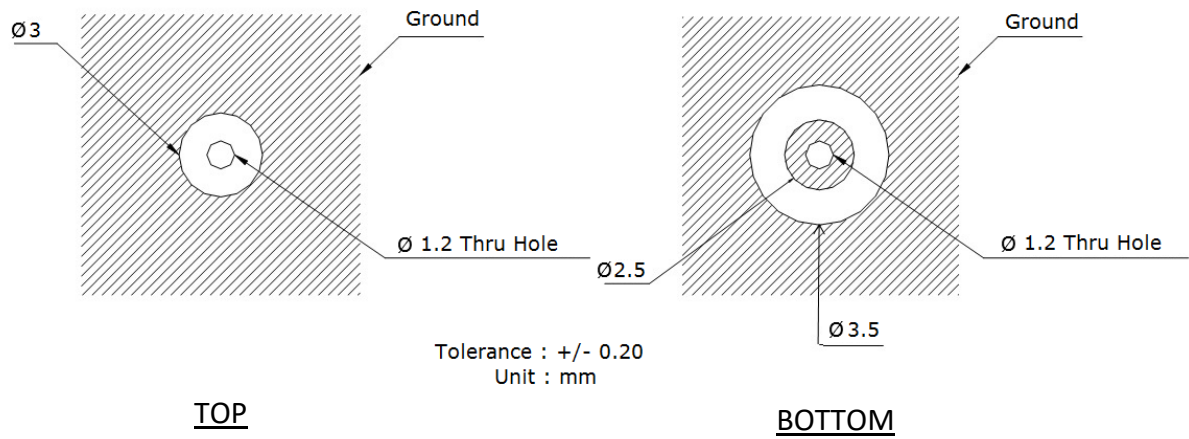


Red Line shows the adhesive without Liner – thickness 0.08~0.1mm

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



7. PCB Footprint Recommendation

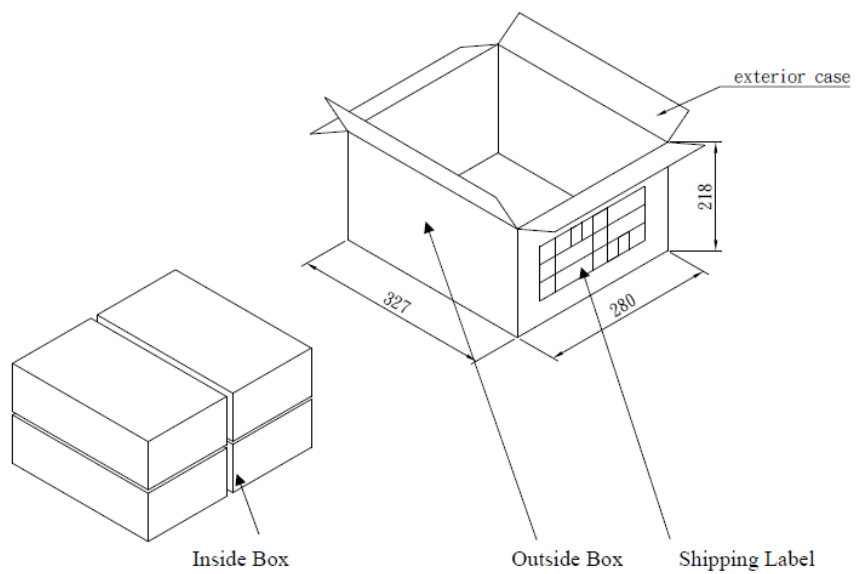
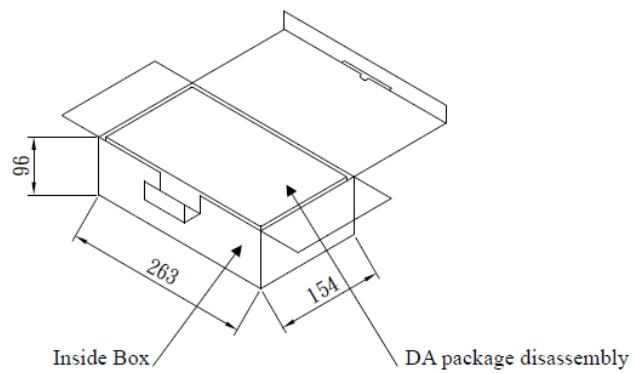
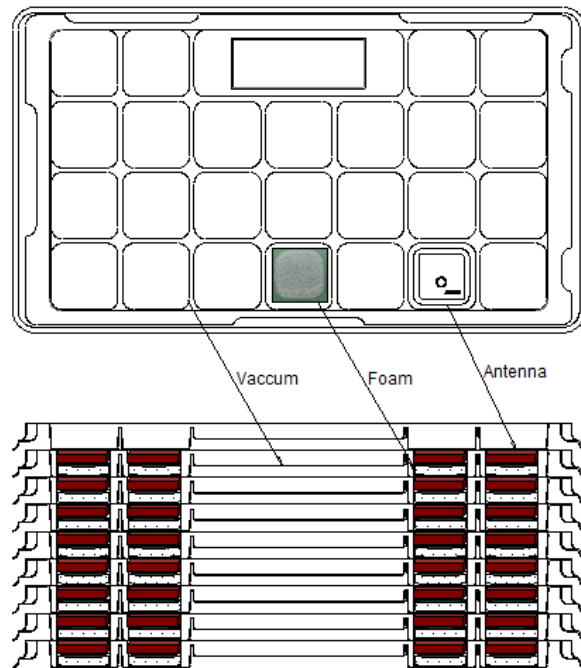


8. Packaging

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: J (Current Version)

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

Previous Revisions

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

Revision: F

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

Revision: A (Original First Release)

Date:	2011-09-14
Notes:	
Author:	Technical Writer

Revision: E

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



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