

Specification

- Part No.** : **CGGP.35.2.A.08**
- Description** : 35mm with 2mm Low Profile
GPS/GLONASS/GALILEO Dual-Band
Ceramic Patch Antenna
- Features** : 4.27dBi Peak Gain for GPS/GALILEO Band
4.63dBi Peak Gain for GLONASS Band
Low Profile – 2mm Height
Pin Type Ceramic Patch Antenna
Manufactured in an IATF16949 Approved Facility
Dims: 35*35*2mm
RoHS Compliant



1. Introduction

The CGGP.35.2.A.08 is a low profile ceramic GPS/GLONASS/GALILEO passive patch antenna with a thickness of 2mm. It was designed for vehicle navigation applications as well as other M2M/IoT devices. Typical applicable industries are transportation, defense, marine, agriculture and navigation.

The antenna has been tuned on a 70*70mm ground plane, working at 1575.42MHz and 1602MHz, with 4.27dBi gain and 4.63dBi gain, respectively. The low profile design makes this antenna perfect for applications where space is limited. It can be easily through-hole mounted on PCB via pin. Double sided adhesive on the bottom of the patch helps to keep it in place while undergoing mounting. The CGGP.35.2.A.08 is manufactured and tested in a TS16949 first tier automotive approved facility.

For large volume GPS/GLONASS/GALILEO projects where performance is paramount, tuning for customer specific device environments and ground-plane sizes is needed, so custom tuned patch antennas should always be used. Taoglas can also provide different pin lengths for these antennas, subject to potential NRE and MOQ. For more details please contact your regional Taoglas sales office.

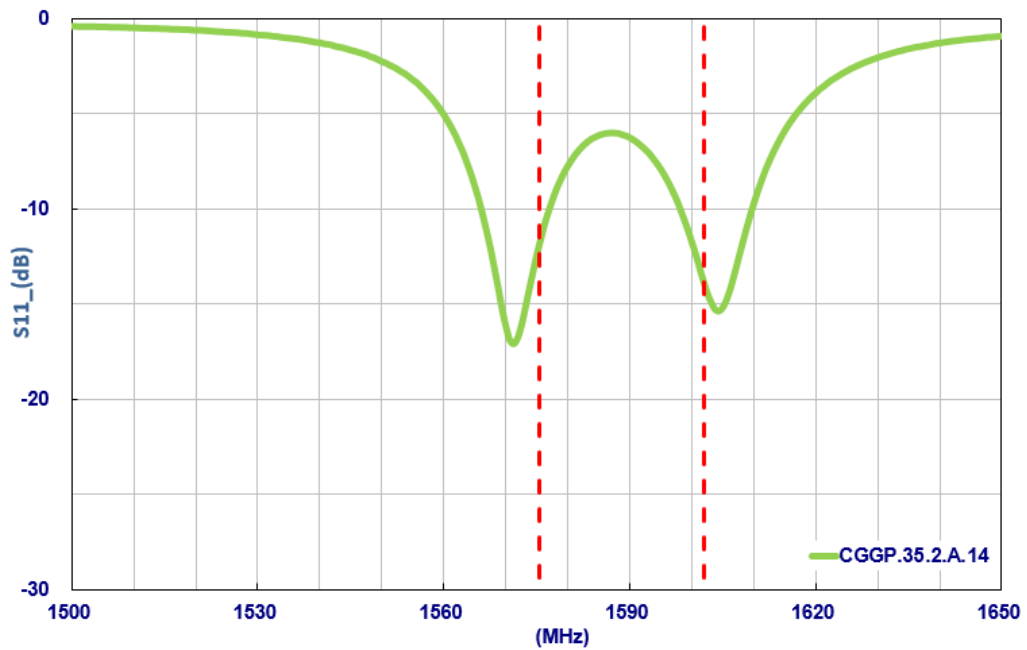
2. Specification

ELECTRICAL		
Application Bands	GPS/GALILEO	GLONASS
Operation Frequency	1575.42 ±1.023MHz	1602 ±5MHz
Return Loss	-10dB max.	
Peak Gain	4.27dBi	4.63dBi
Efficiency	69.73%	71.98%
Impedance	50Ω	
MECHANICAL		
Ceramic Dimension	35*35*2mm	
Pin Diameter	0.85mm	
Pin Length	2.4mm	
Weight	3g	
ENVIRONMENTAL		
Storage Temperature	-40℃ to 85℃	
Operation Temperature	-40℃ to 85℃	
Humidity	Non-condensing 65℃ 95% RH	

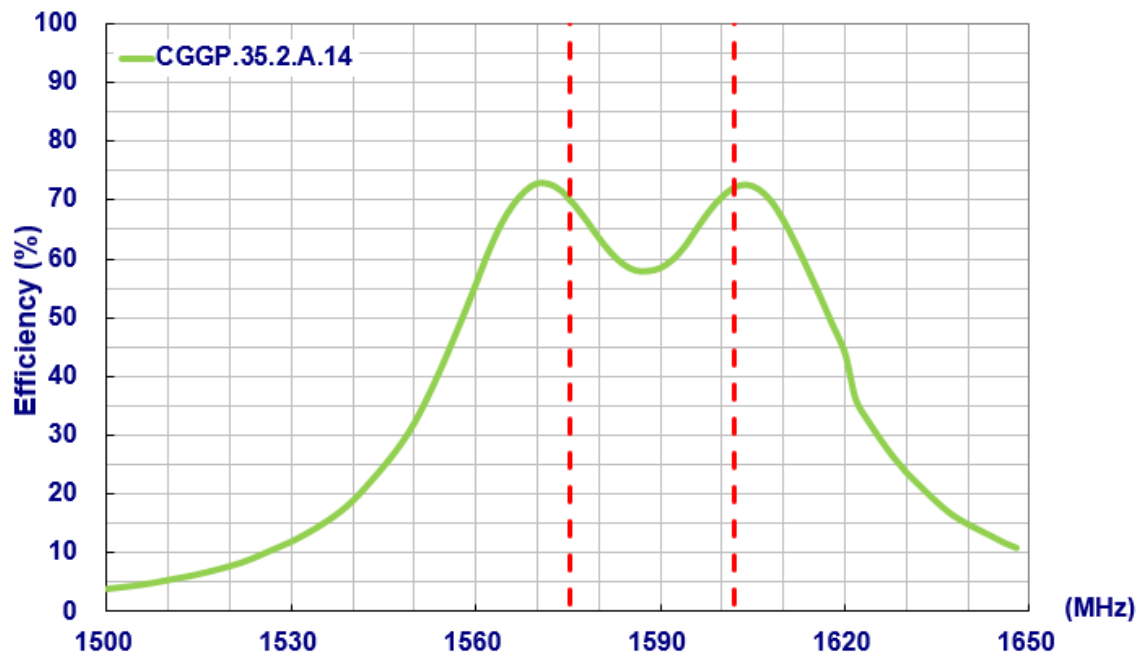
* Antenna properties were measured with the antenna mounted
on 70*70mm Ground Plane Taoglas Part #CGGPD.35.B

3. Antenna Characteristics

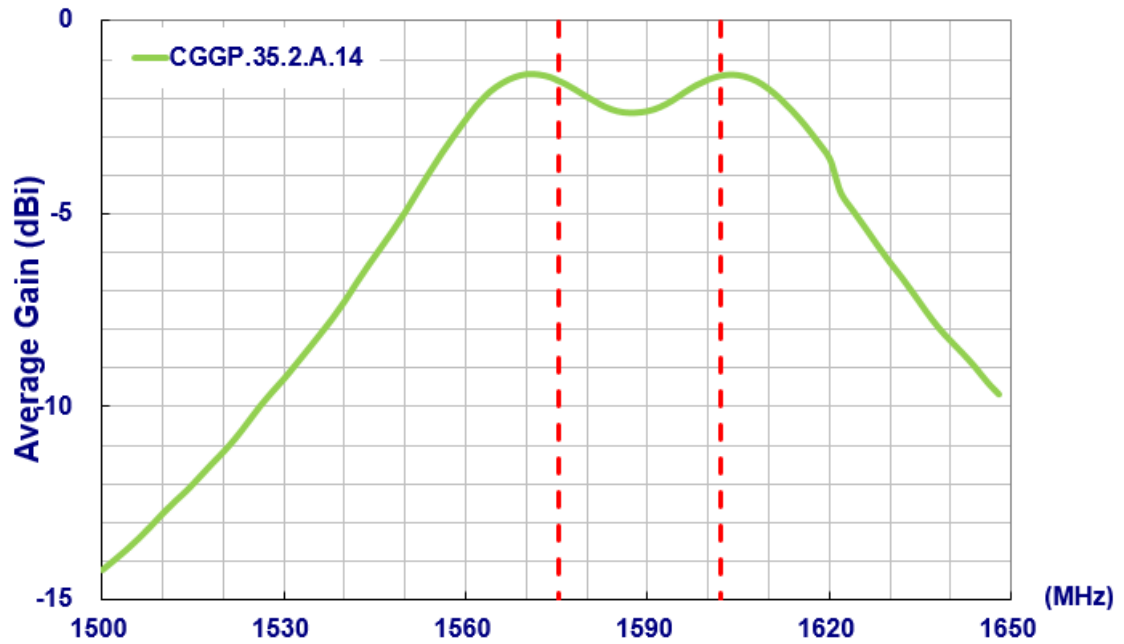
3.1. Return Loss



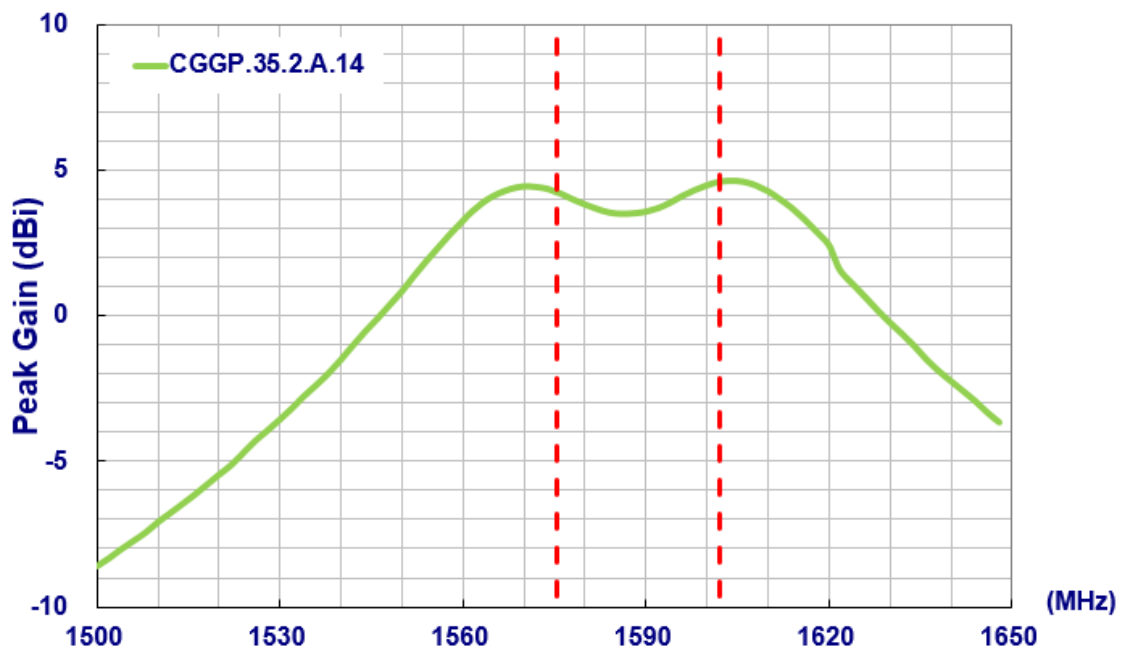
3.2. Efficiency



3.3. Average Gain



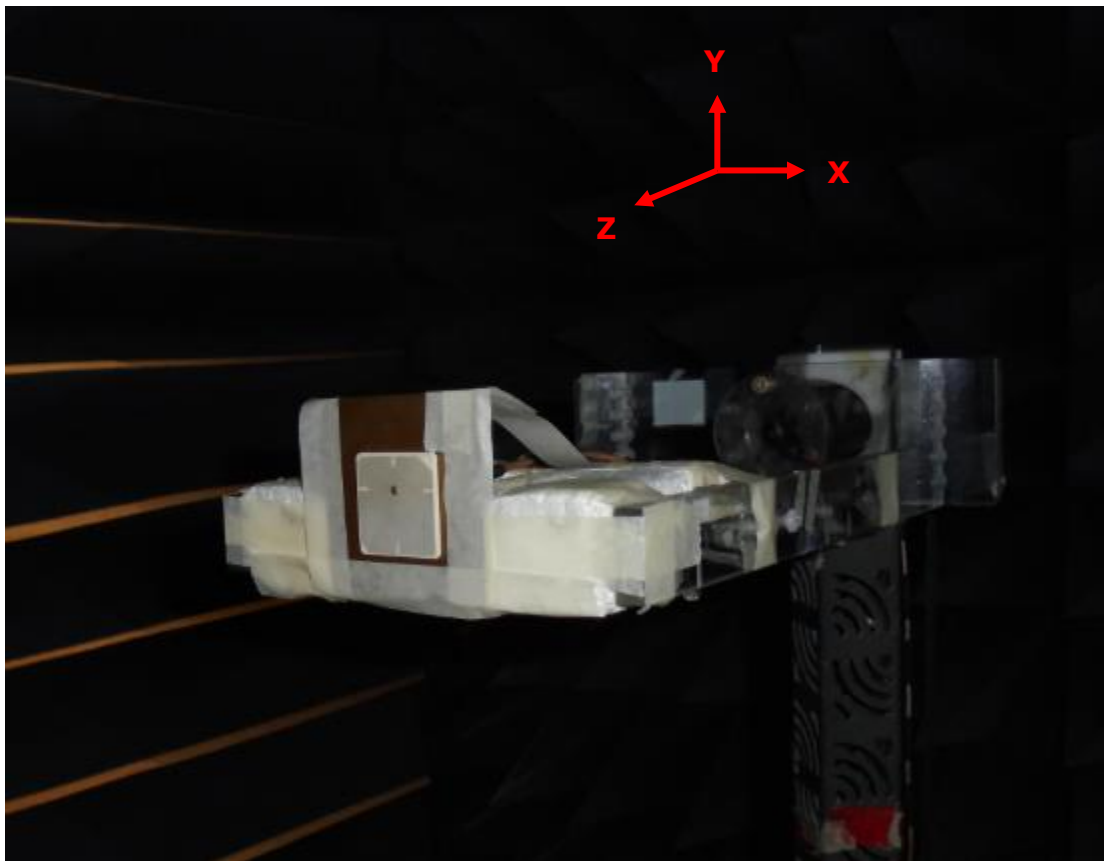
3.4. Peak Gain



4. Antenna Radiation Pattern

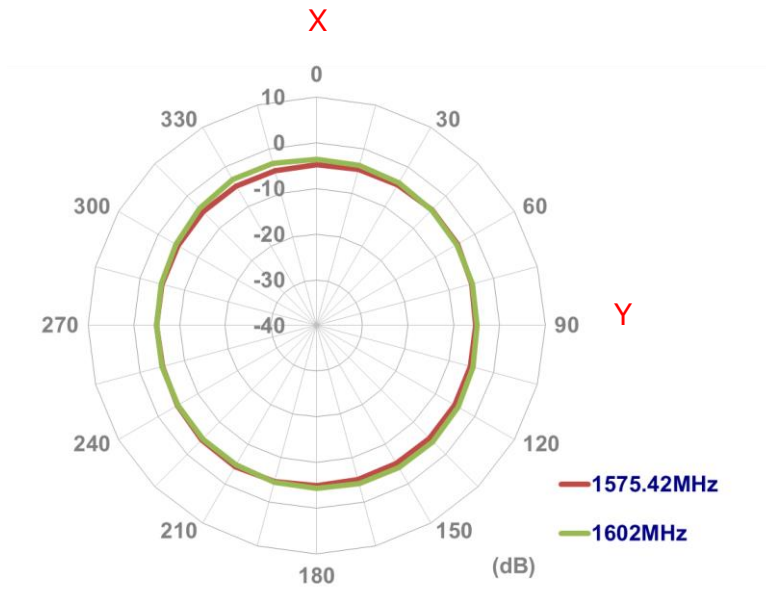
4.1. Measurement Setup

The CGGP.35.2.A.08 antenna is tested with 70*70mm ground plane in a CTIA certified ETS-Lindgren Anechoic Chamber. The test setup is shown below.

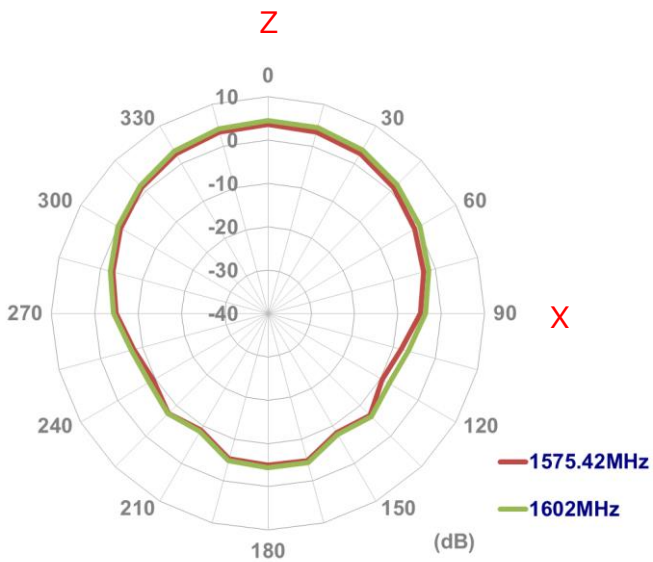


4.2. 2D Radiation Pattern

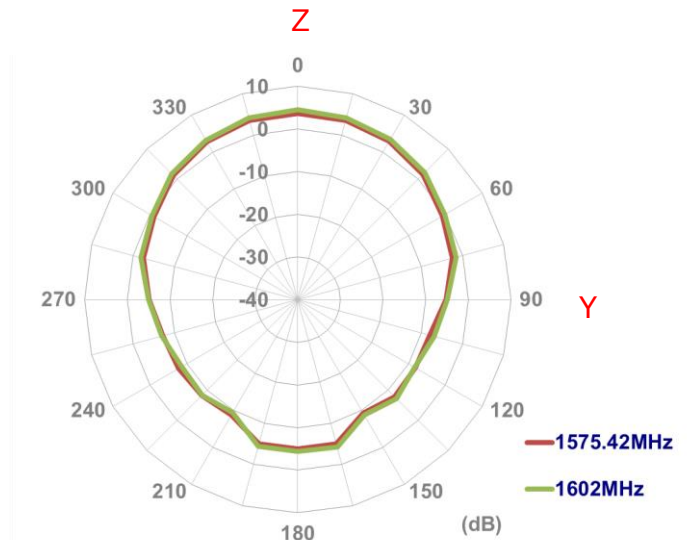
XY Plane



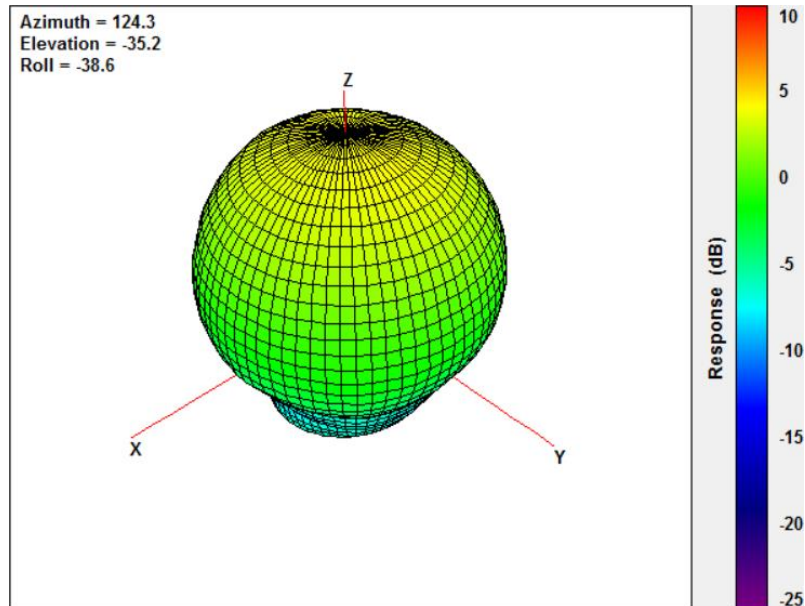
XZ Plane



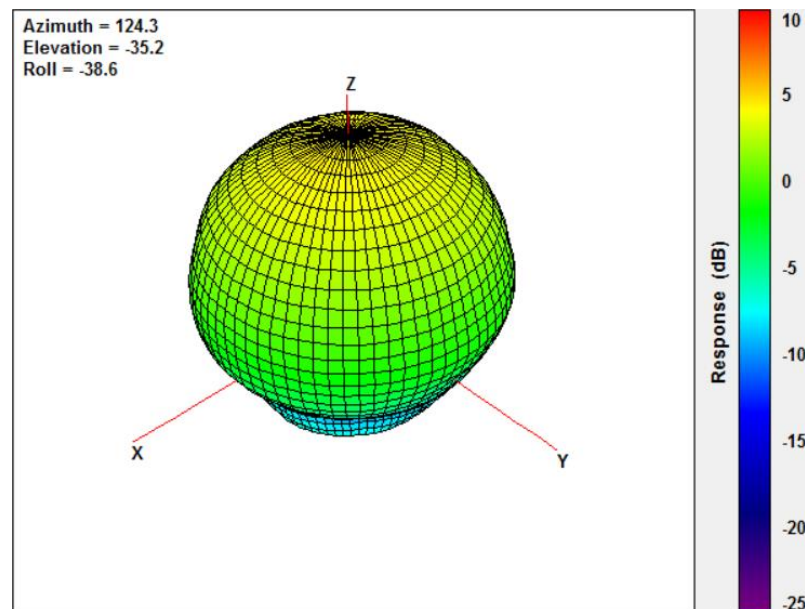
YZ Plane



4.3. 3D Radiation Pattern

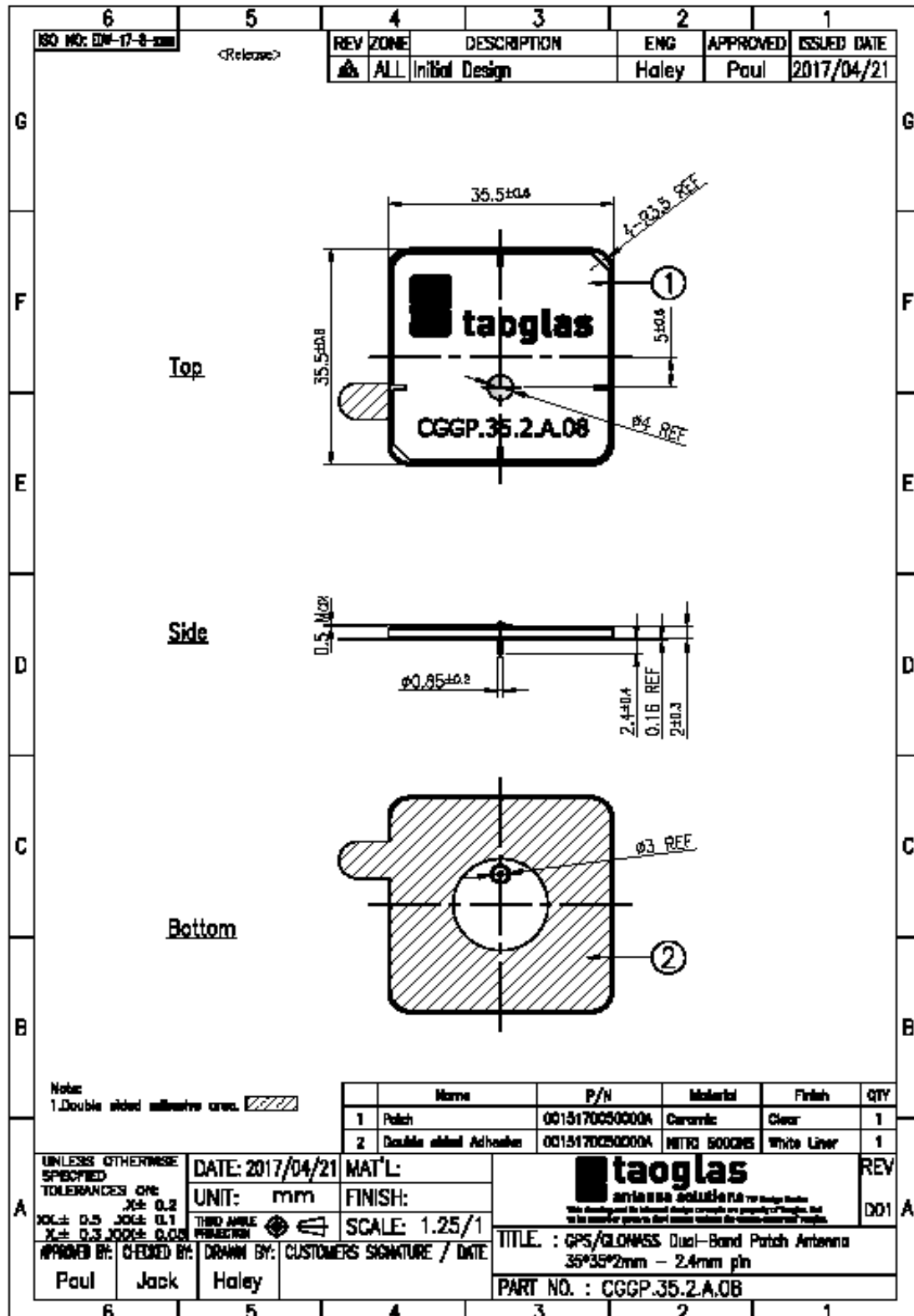


@1575.42MHz

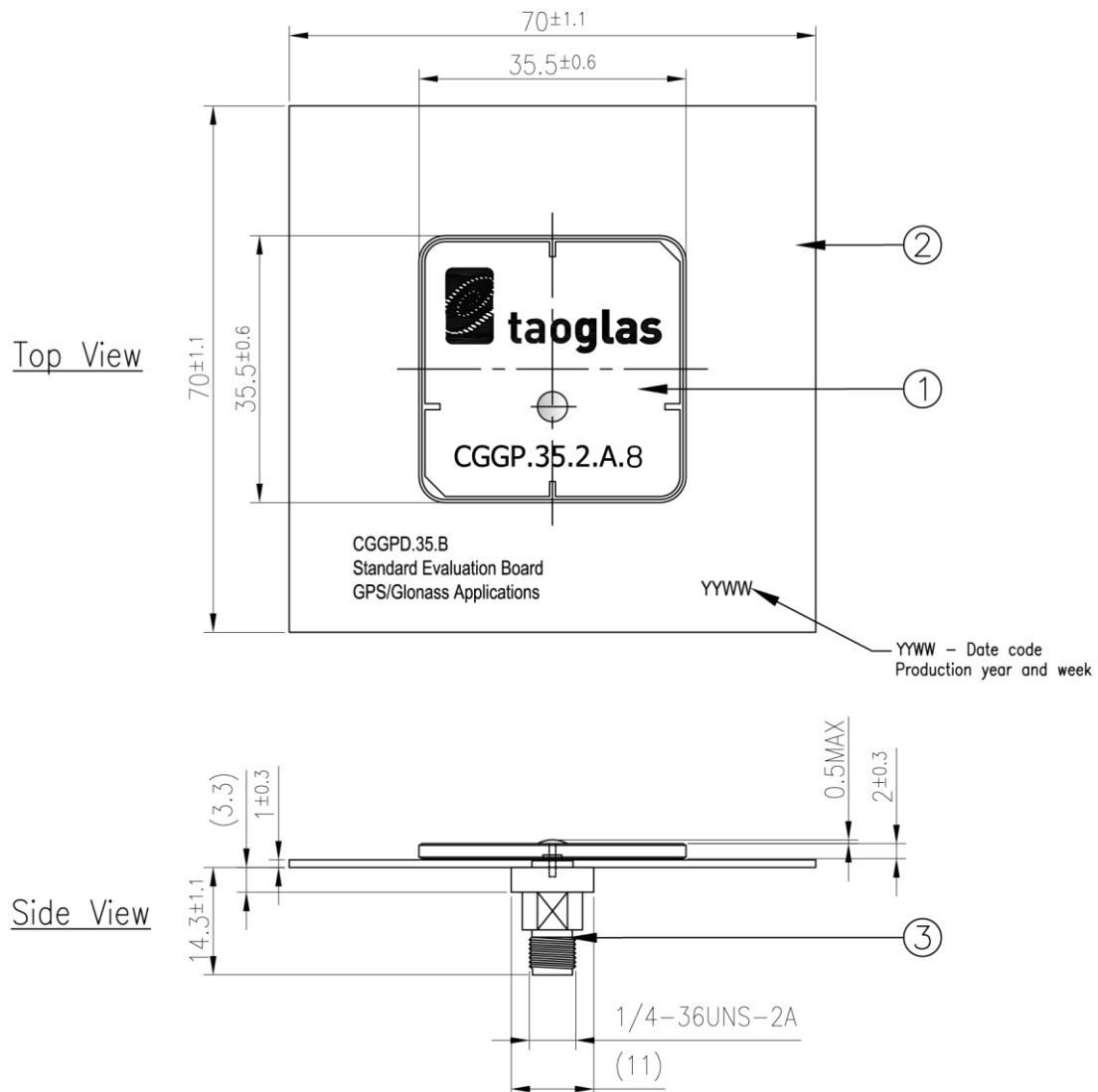


@1602MHz

5. Mechanical Drawing (Unit: mm)

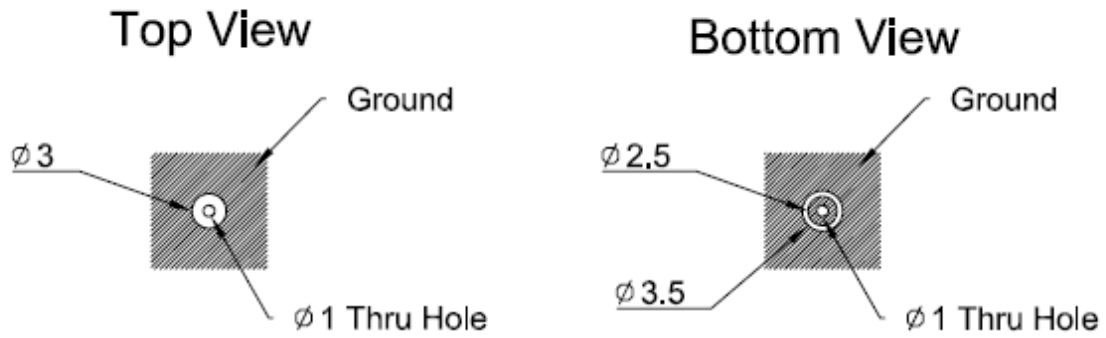


6. Evaluation Board CGGPD.35.B (Unit: mm)



	Name	Material	Finish	QTY
1	CGGP.35.2.A.14 Patch	Ceramic	Clear	1
2	Ground-Plane(70x70x1.0mm)	Composite 1.0t	Black	1
3	SMA(F) ST	Brass	Au Plated	1

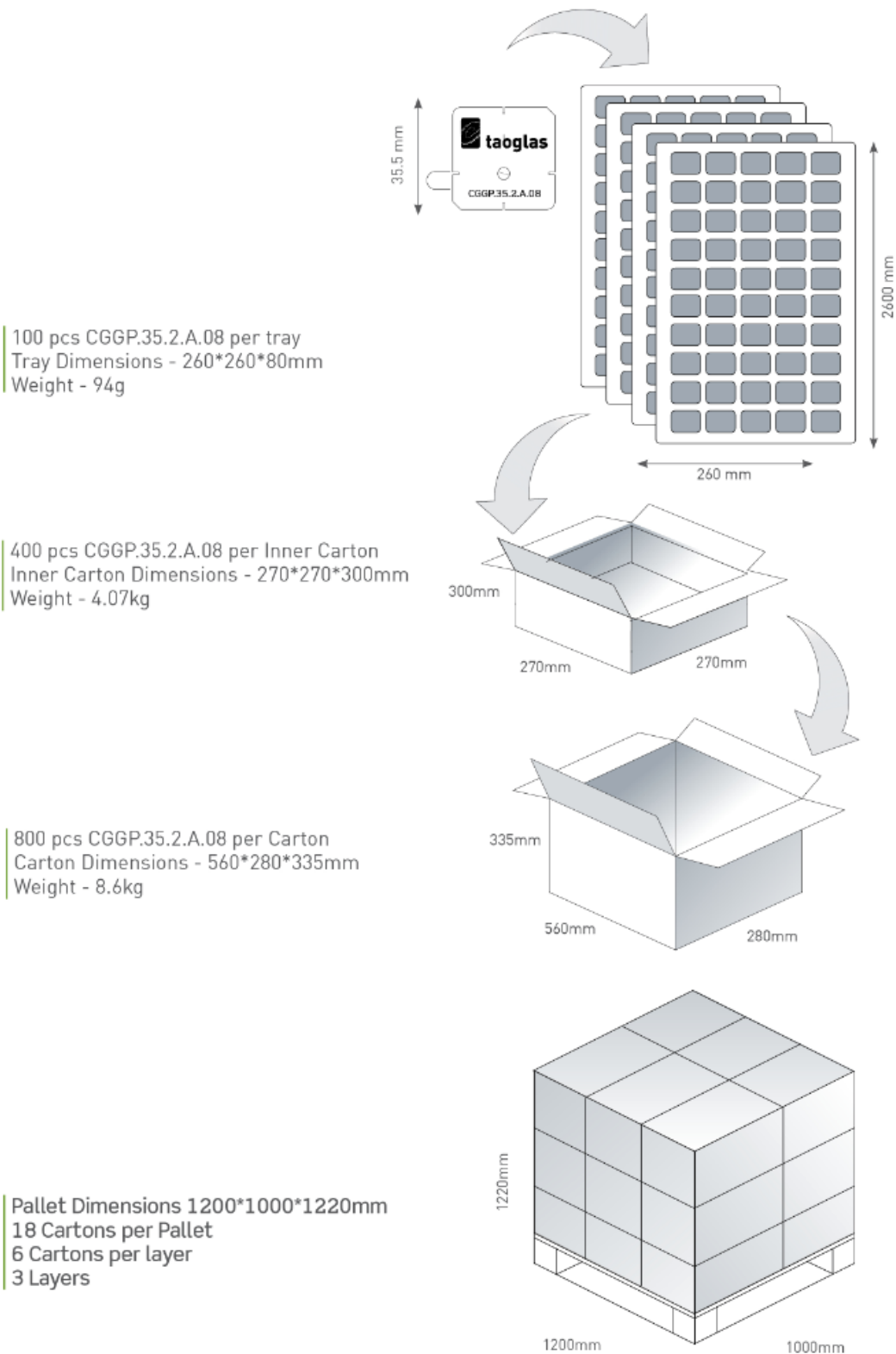
7. PCB Footprint Recommendation



Tolerance: +/- 0,20

Unit:mm

8. Packaging





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