

Specification

Part No.	:	CGGBP.35.2.A.08
Description	:	GPS/GLONASS/GALILEO/BeiDou L1 Embedded Patch Antenna 35x35x2mm
Features	:	Wide-band Operation L1 1559-1610MHz 3.45dBi Peak Gain for BeiDou Band 3.68dBi Peak Gain for GPS/GALILEO Band 4.87dBi Peak Gain for GLONASS Band Low profile – 2mm Height Pin type Ceramic Patch Antenna Manufactured in an IATF16949 Approved Facility RoHS compliant



1. Introduction

The CGGBP.35.2.A.08 is a ceramic GNSS L1 GPS/GLONASS/GALILEO/BeiDou embedded passive patch antenna, with a low profile of 2mm thickness. It is designed for professional applications in vehicle navigation devices as well as other M2M devices. Typical uses are in transportation, defense, marine, agriculture, and navigation.

Compared to using a smaller antenna, this will translate into the GNSS system having much higher location accuracy, improved reliability of lock in urban areas, better signal reception, with more satellites acquired and a quicker time to first fix. The CGGBP.35.2.A.08 is manufactured and tested in a TS16949 first tier automotive approved facility.

The patch is mounted via pin and double-sided adhesive. While the antenna will work very well in most device environments (Note cannot be covered with metal enclosure), tuning and further optimization of this antenna to different ground-planes and enclosures can be done if required, also including a pin length change, subject to possible NRE and minimum order quantity. Contact your local Taoglas sales office for more details.

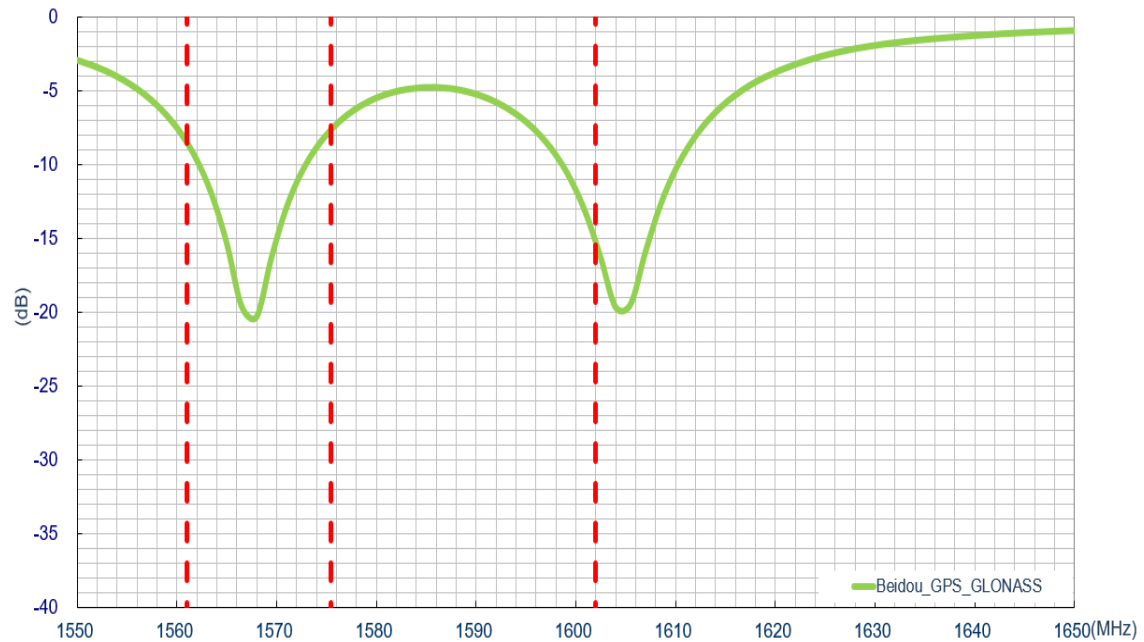
2. Specification

ELECTRICAL			
Application Bands	BeiDou	GPS/GALILEO	GLONASS
Frequency	1561.098±2.046MHz	1575.42 ±1.023MHz	1602±5MHz
Efficiency	58.60 %	59.94 %	71.33%
Peak Gain	3.45dBi	3.68dBi	4.87dBi
Average Gain	-2.32dBi	-2.22dBi	-1.47dBi
Impedance	50 ohms		
MECHANICAL			
Ceramic Dimension		35.5 x 35.5 x 2mm	
Material		Ceramic	
Pin Diameter		0.85mm	
Pin Length		2.4mm	
Weight		8.6g	
ENVIRONMENTAL			
Operation Temperature		-40℃ to 85℃	
Storage Temperature		-40℃ to 105℃	
Humidity		Non-condensing 65℃ 95% RH	

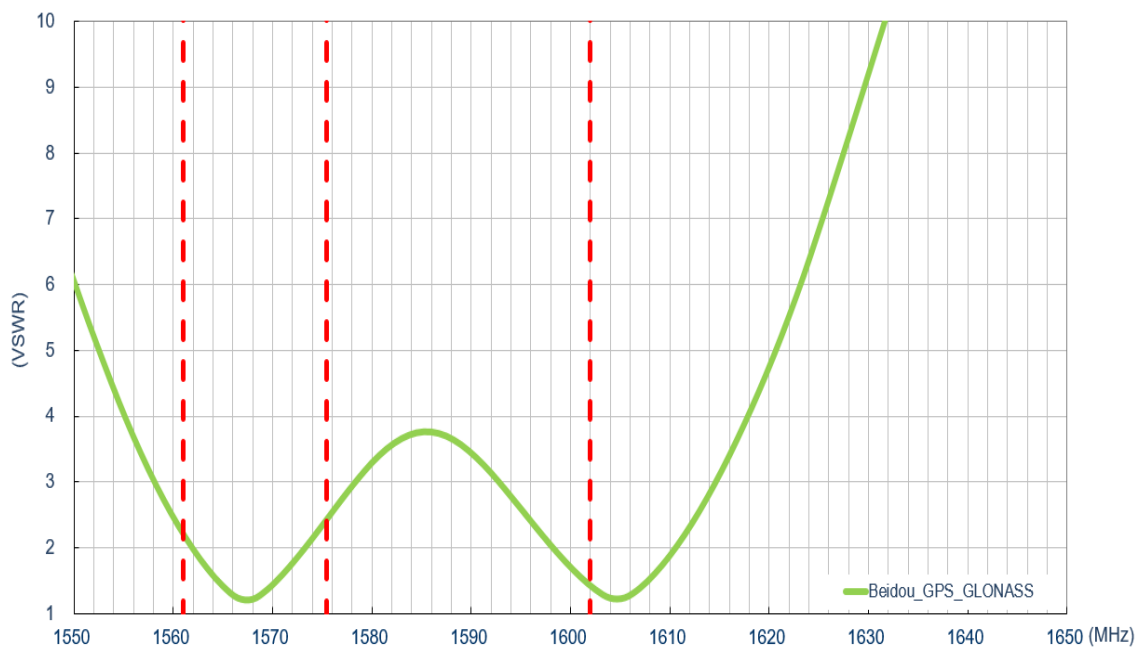
* Antenna properties were measured with the antenna mounted on 70*70mm Ground Plane

3. Antenna Characteristics

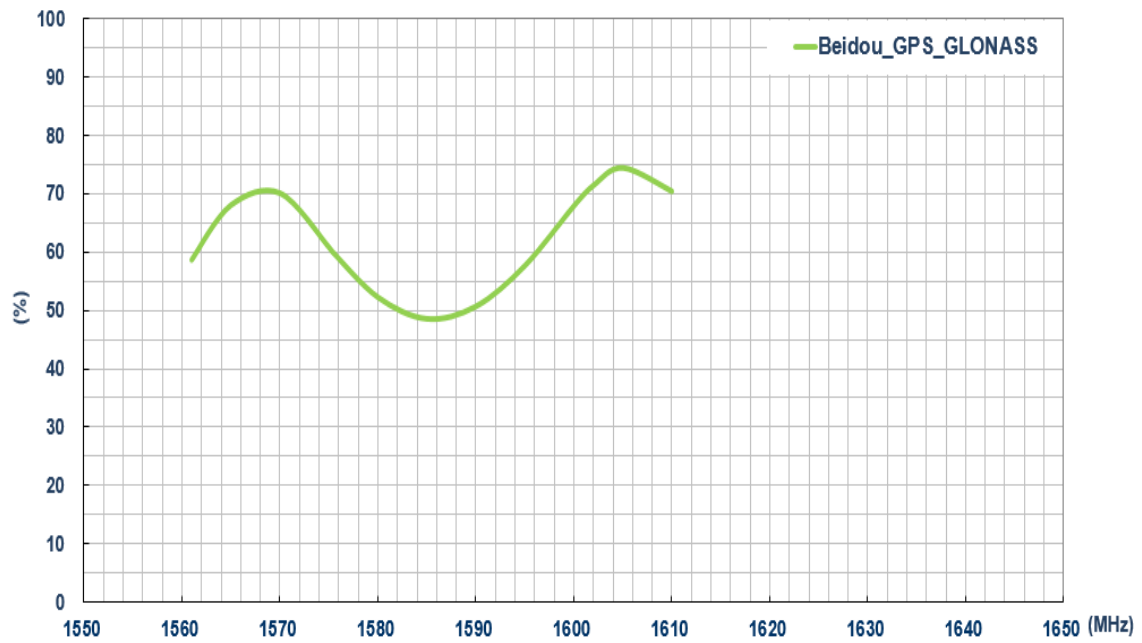
3.1. Return Loss



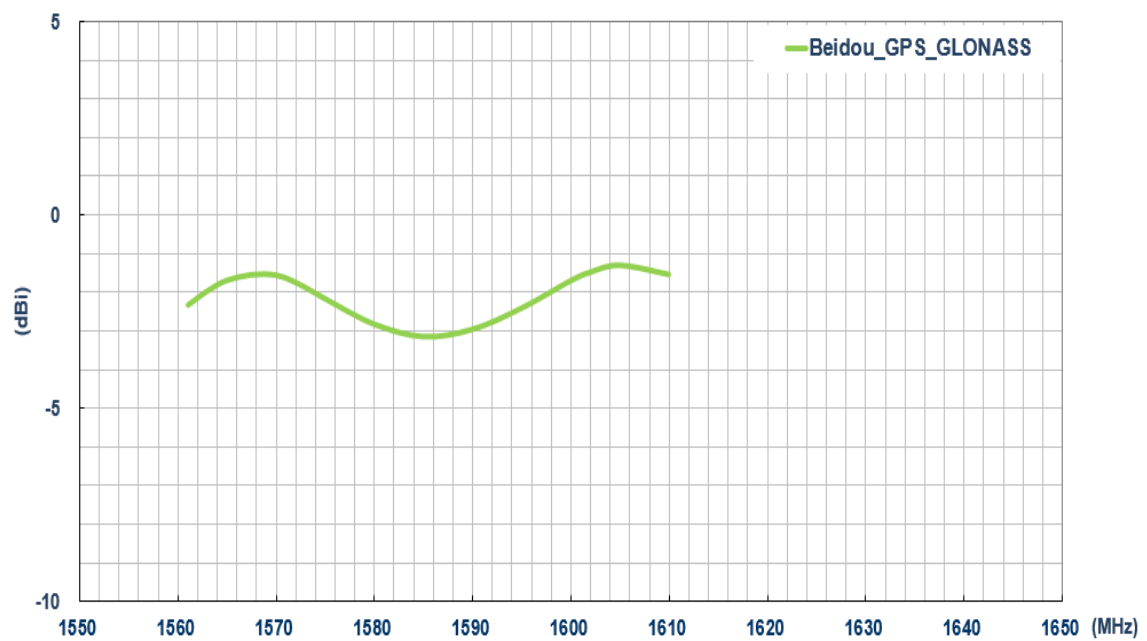
3.2. VSWR



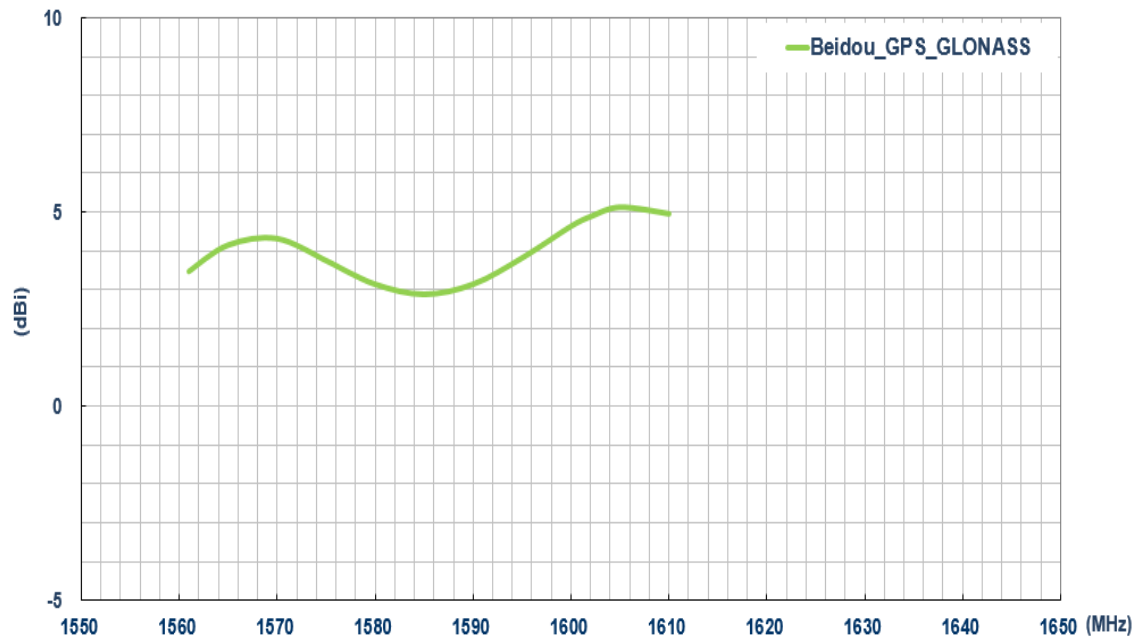
3.3. Efficiency



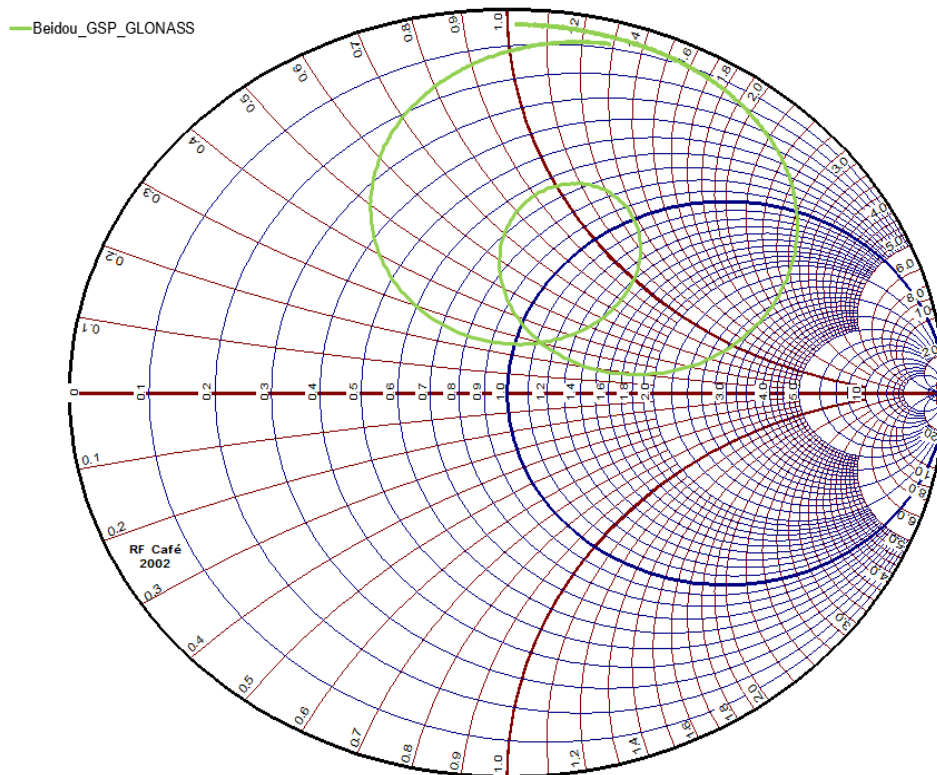
3.4. Average Gain



3.5. Peak Gain

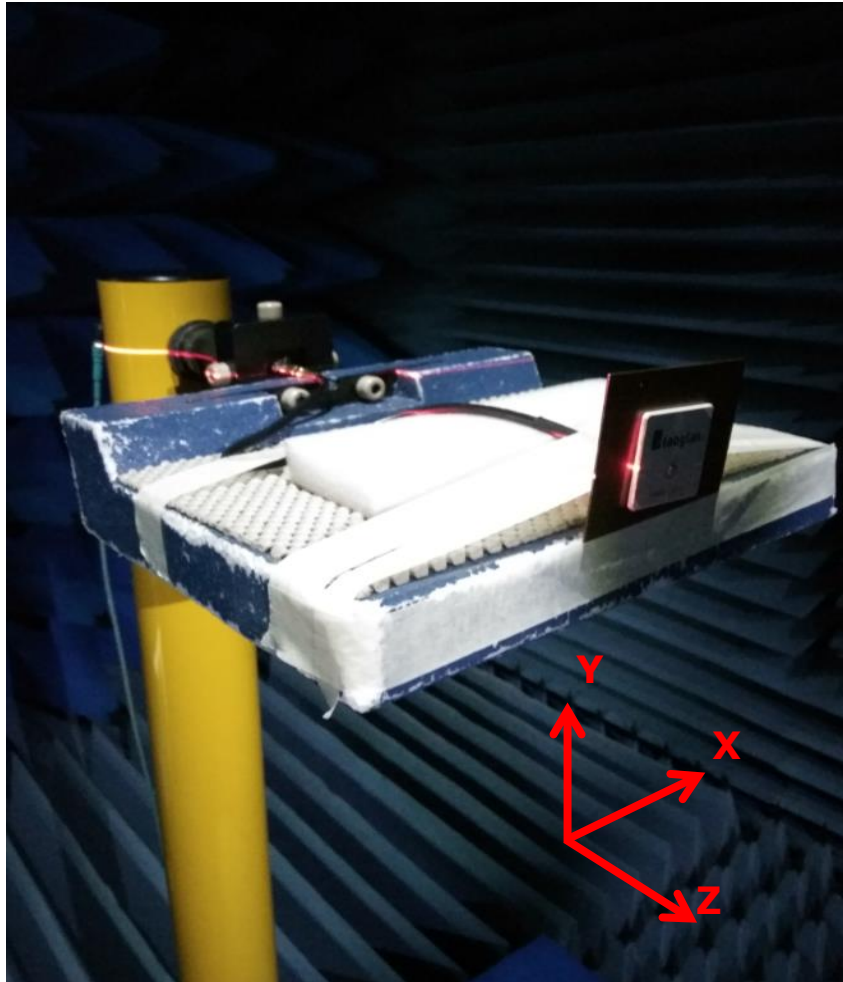


3.6. Smith Chart



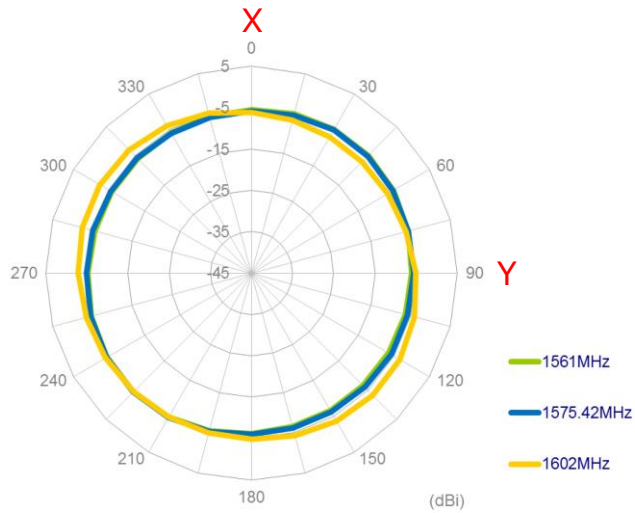
4. Antenna Radiation Pattern

4.1. Test Setup

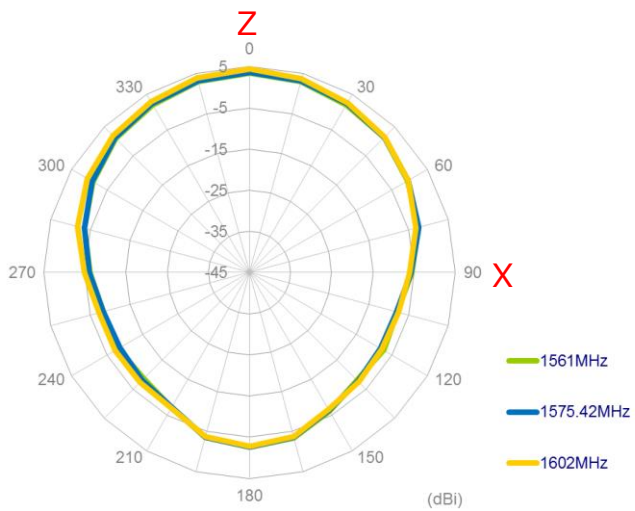


4.2. 2D Radiation Pattern

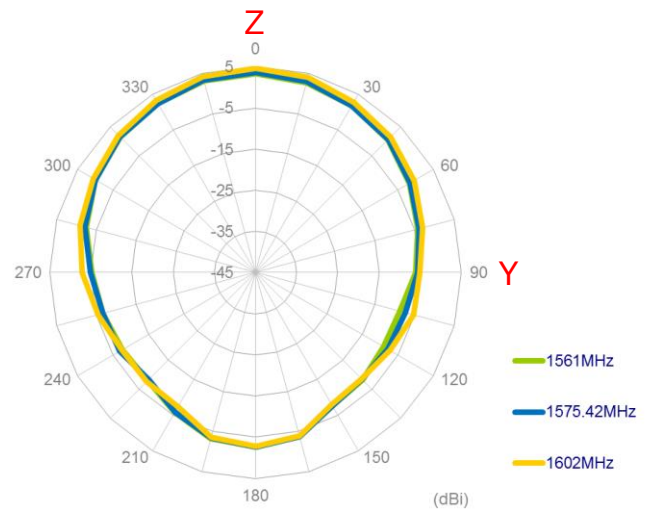
XY Plane



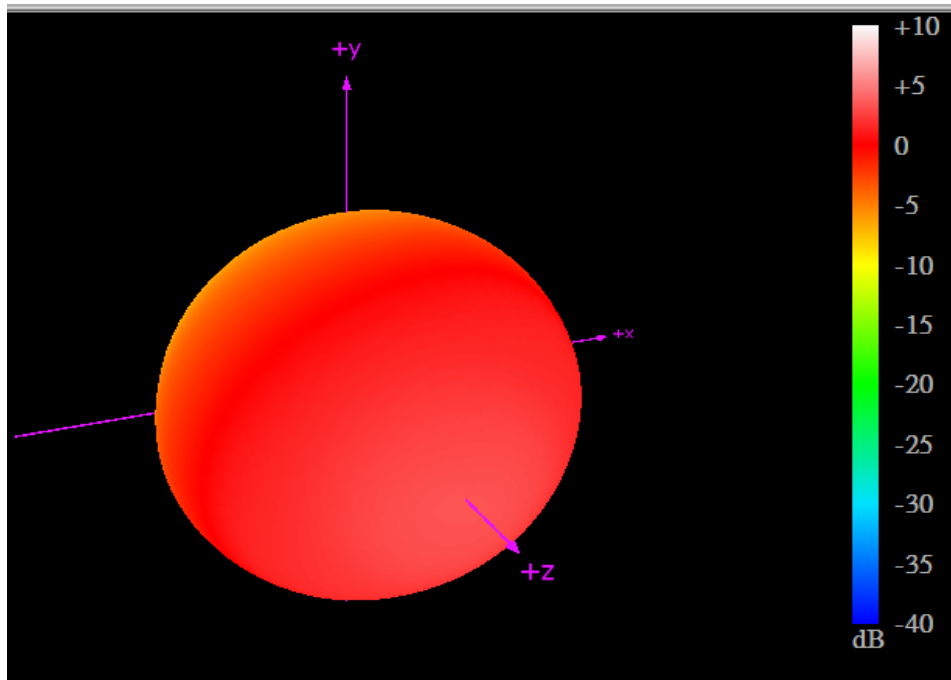
XZ Plane



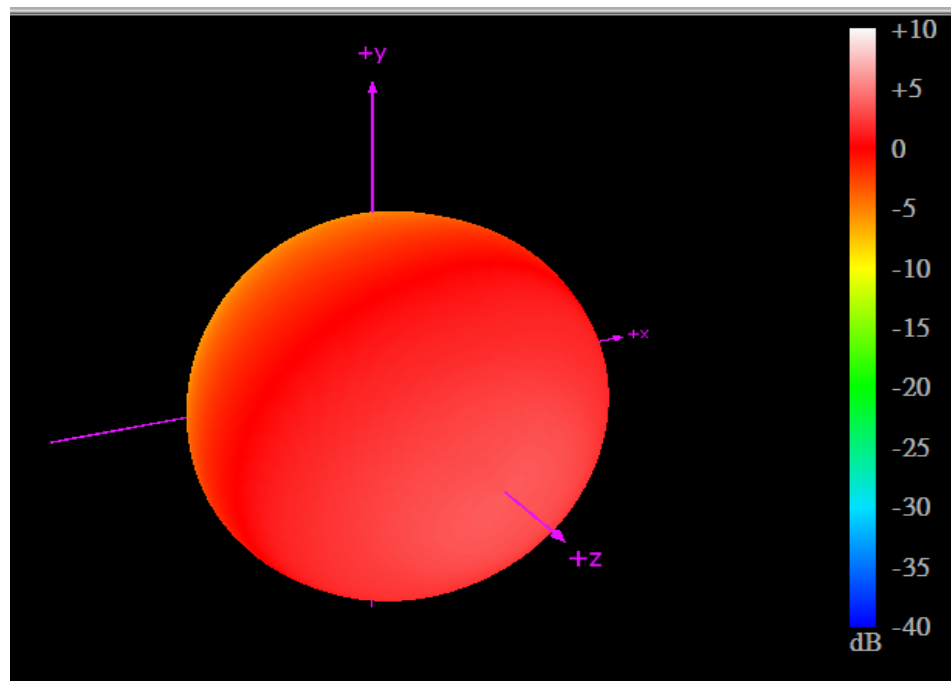
YZ Plane



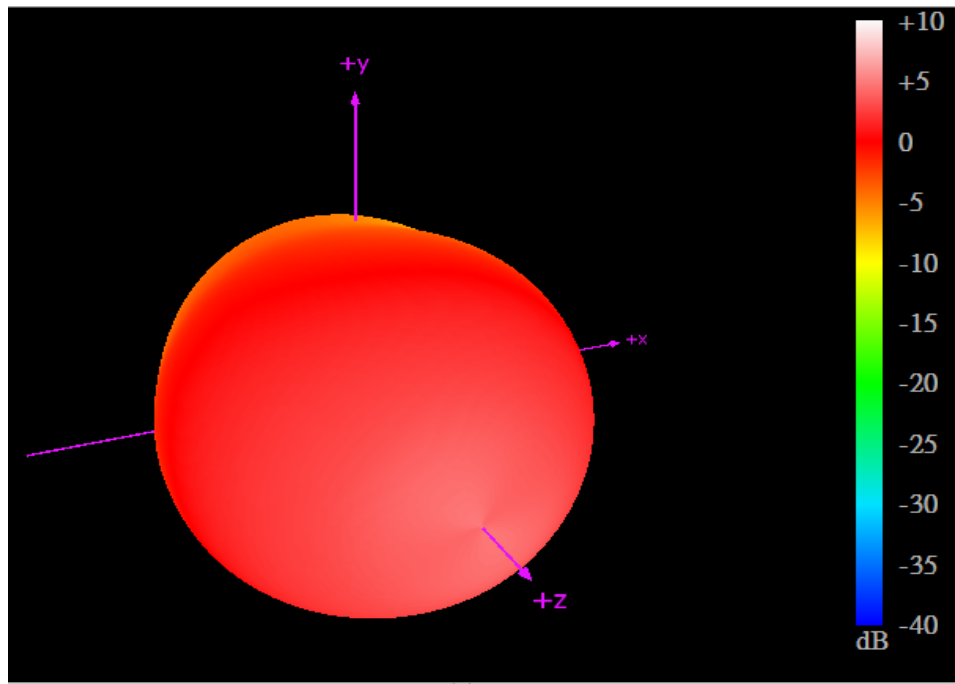
4.3. 3D Radiation Pattern



1561MHz

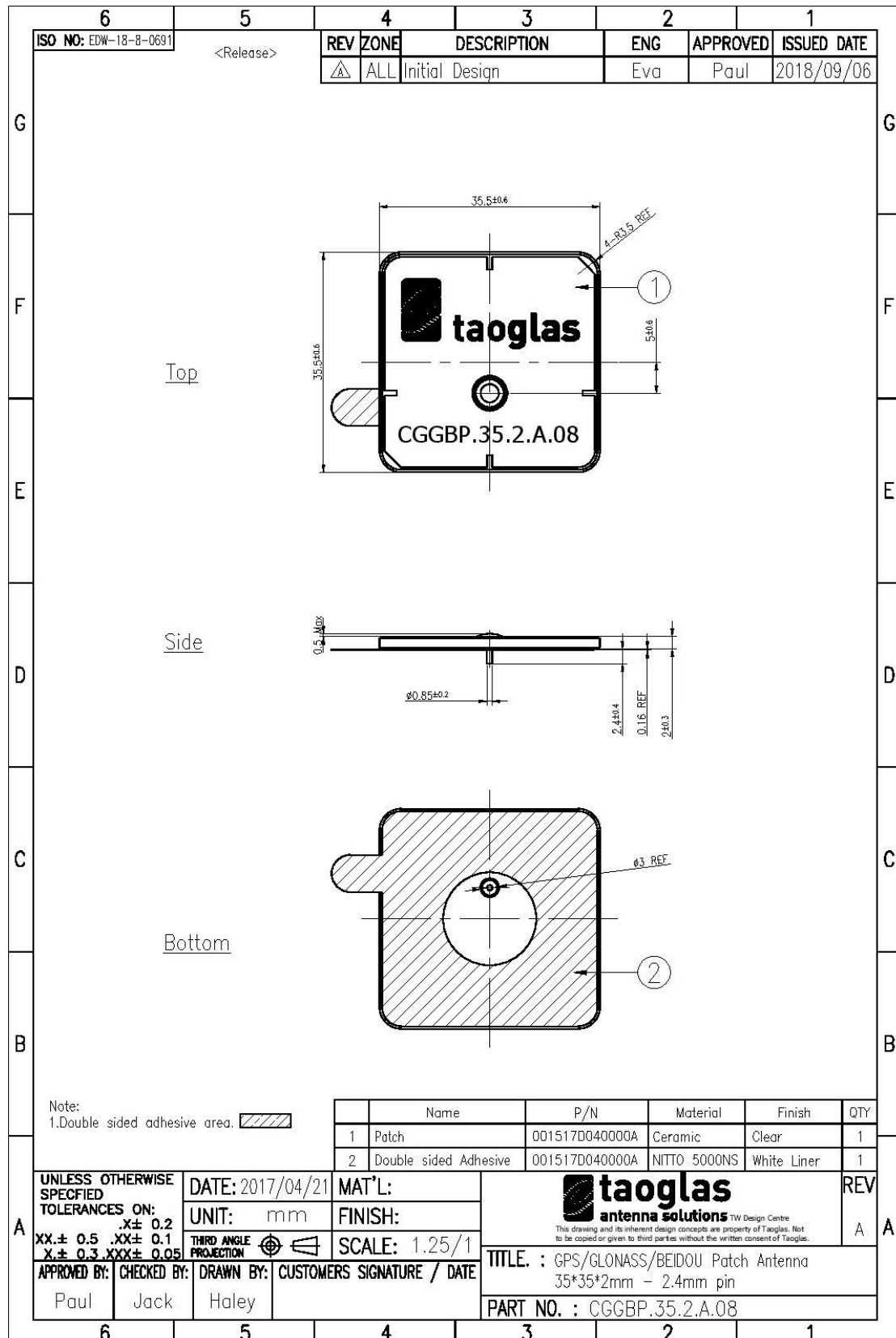


1575.42MHz

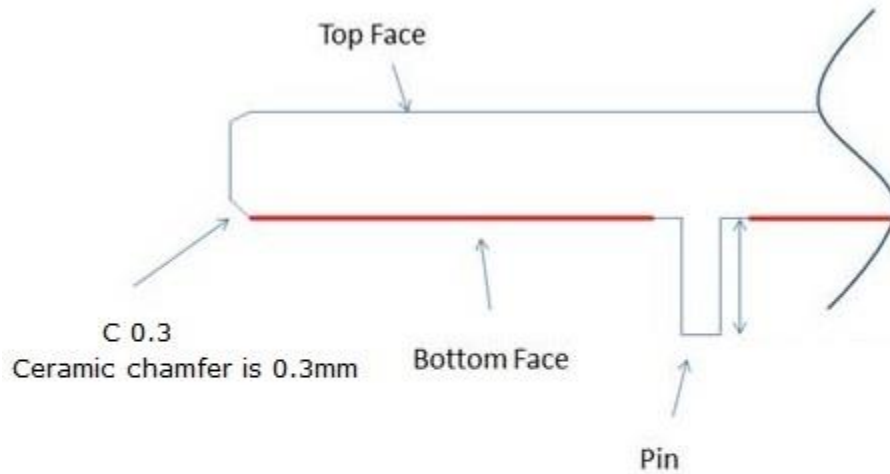


1602MHz

5. Mechanical Drawing (Unit: mm)

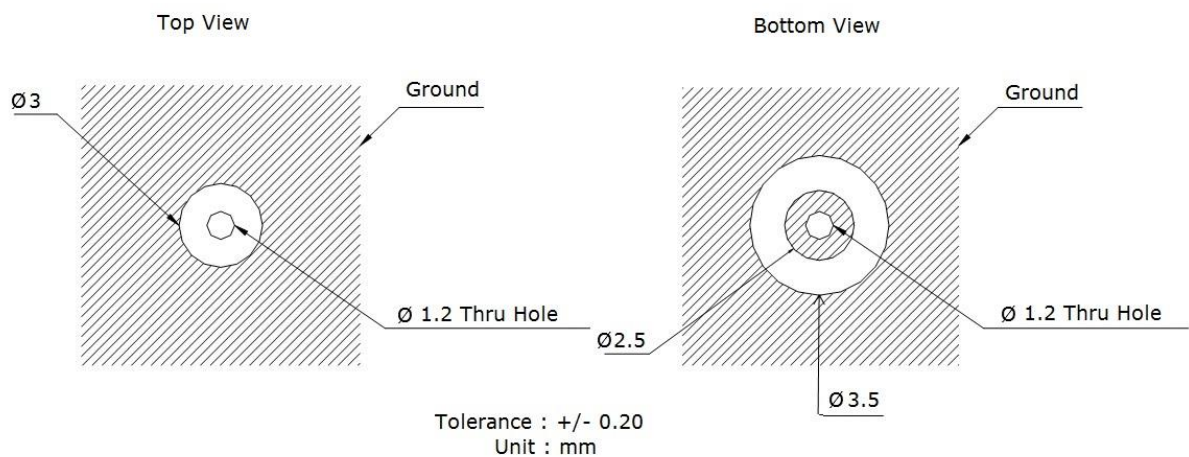


5.1. Adhesive Thickness



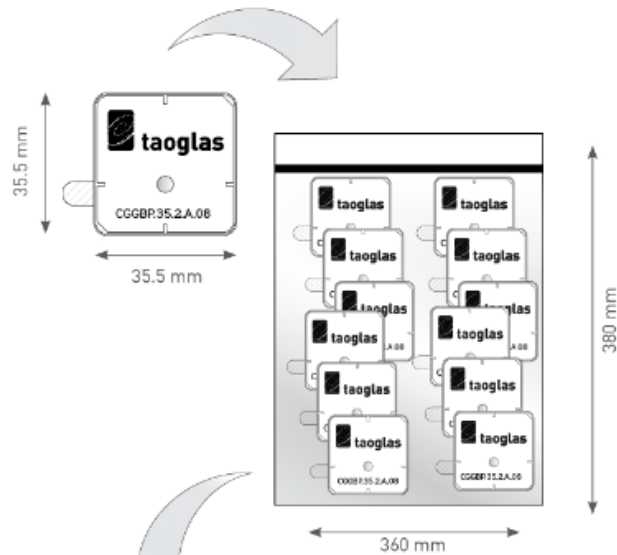
Red Line shows the adhesive without Liner - thickness 0.08~0.1mm

5.2. PCB Footprint Recommendation

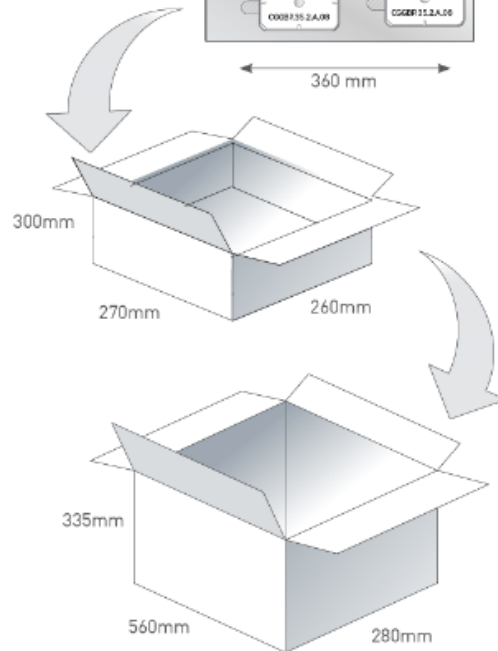


6. Packaging

100 pcs CGGBP.35.2.A.08 per PE Bag
Bag Dimensions - 360 x 380mm
Weight - 934.5g

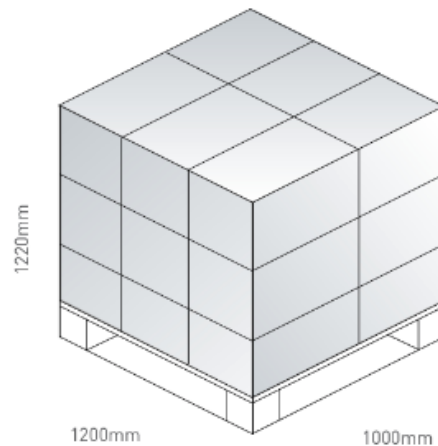


400 pcs CGGBP.35.2.A.08 per Inner Carton
Inner Carton Dimensions - 270*260*300mm
Weight - 4.49kg



800 pcs CGGBP.35.2.A.08 per Carton
Carton Dimensions - 560*280*335mm
Weight - 8.1kg

Pallet Dimensions 1200*1000*1220mm
18 Cartons per Pallet
6 Cartons per layer
3 Layers



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