SPECIFICATION

Part No. : **CGGP.18.4.C.02**

Product Name : 18mm Ceramic GPS/GLONASS/GALILEO Patch Antenna, 1575-1610MHz

Features :
- Wide-band Operation
- 18mm*18mm*4mm
- 3dBi Peak Gain (on 70mm*70mm ground-plane)
- Pin type
- Automotive TS16949 Production and Quality Approved
- RoHS Compliant





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, GLONASS and GALILEO systems from 1575MHz to 1610MHz. It is mounted via pin and double-sided adhesive.

This antenna has been tuned for a center 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 center or on different ground-plane sizes, custom tuned patch antennas can be supplied. For more details please email sales@taoglas.com

2. Specification

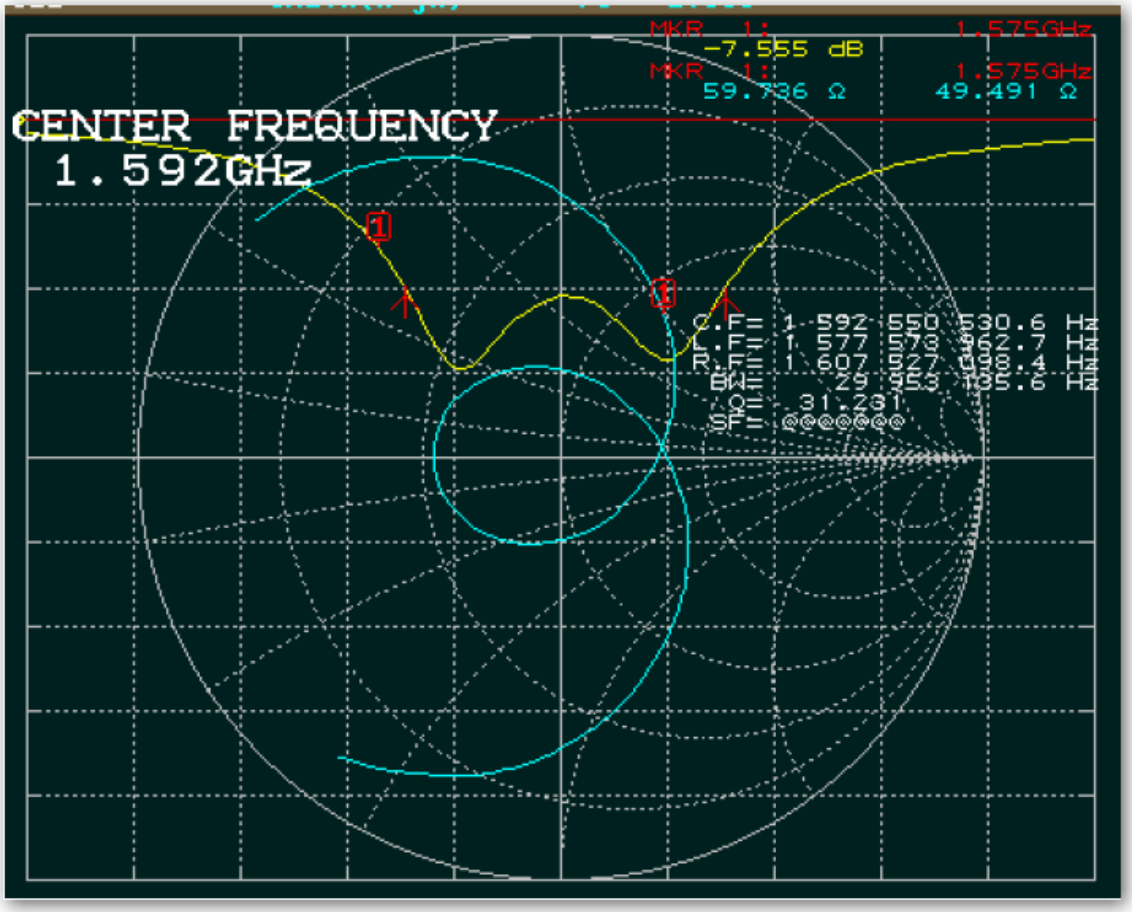
ELECTRICAL	
Range of Receiving Frequency	GPS/GALILEO: 1575.42±1.023MHz GLONASS: 1602±5MHz
Center Frequency	1592MHz ± 3MHz
VSWR	2.4 max
Gain at Zenith	+3.0 dBi typ.
Impedance	50 ohms
MECHANICAL	
Ceramic Dimension	18mm x 18mm x 4mm
Pin Diameter	0.9mm
Pin Length	1.8mm
ENVIRONMENTAL	
Operation Temperature	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

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

Taoglas Part # CGGPD.18.C

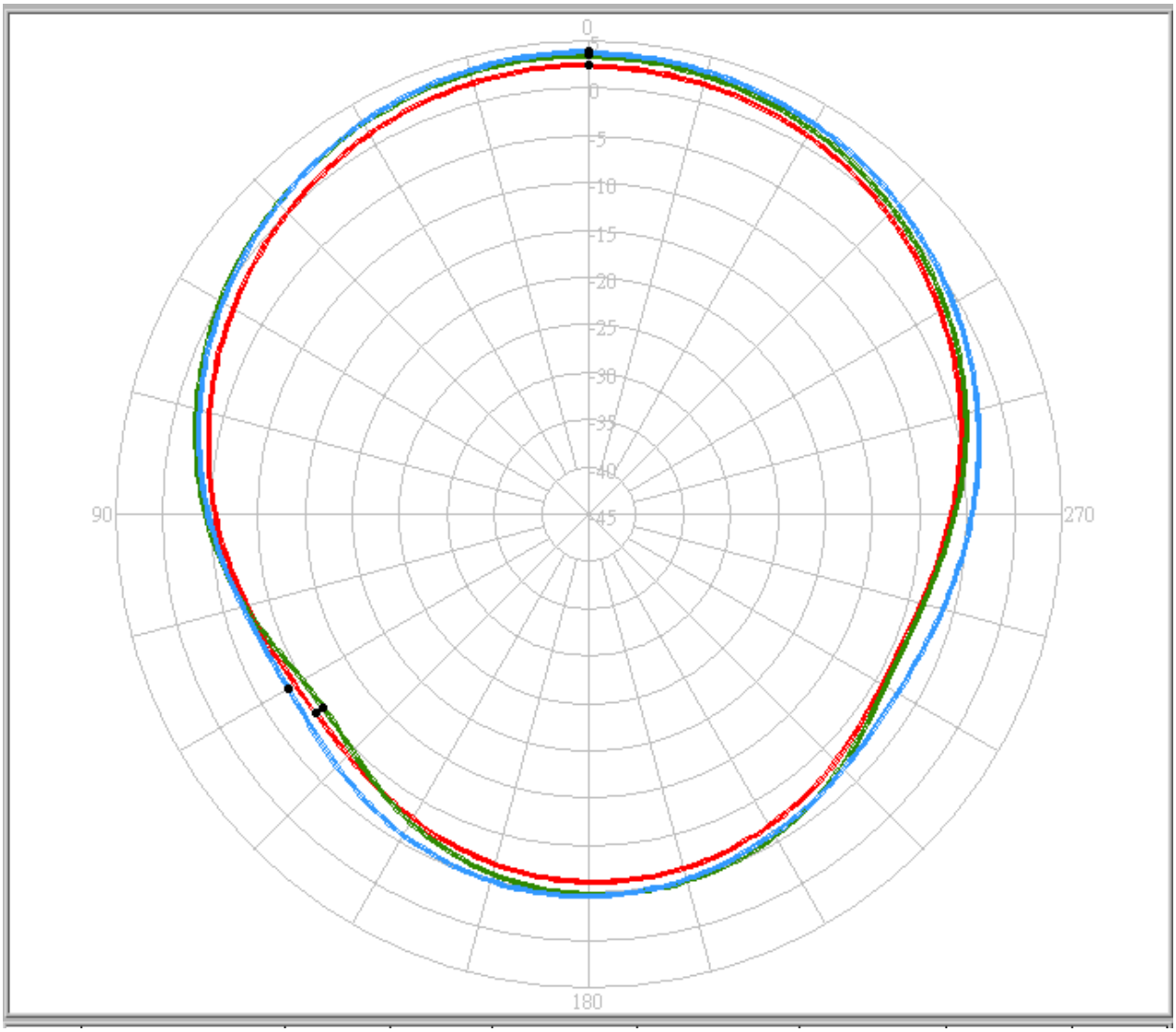
3. Antenna S11 Properties

1592 MHz Typical Return Loss, SWR, Impedance, measured on the test fixture



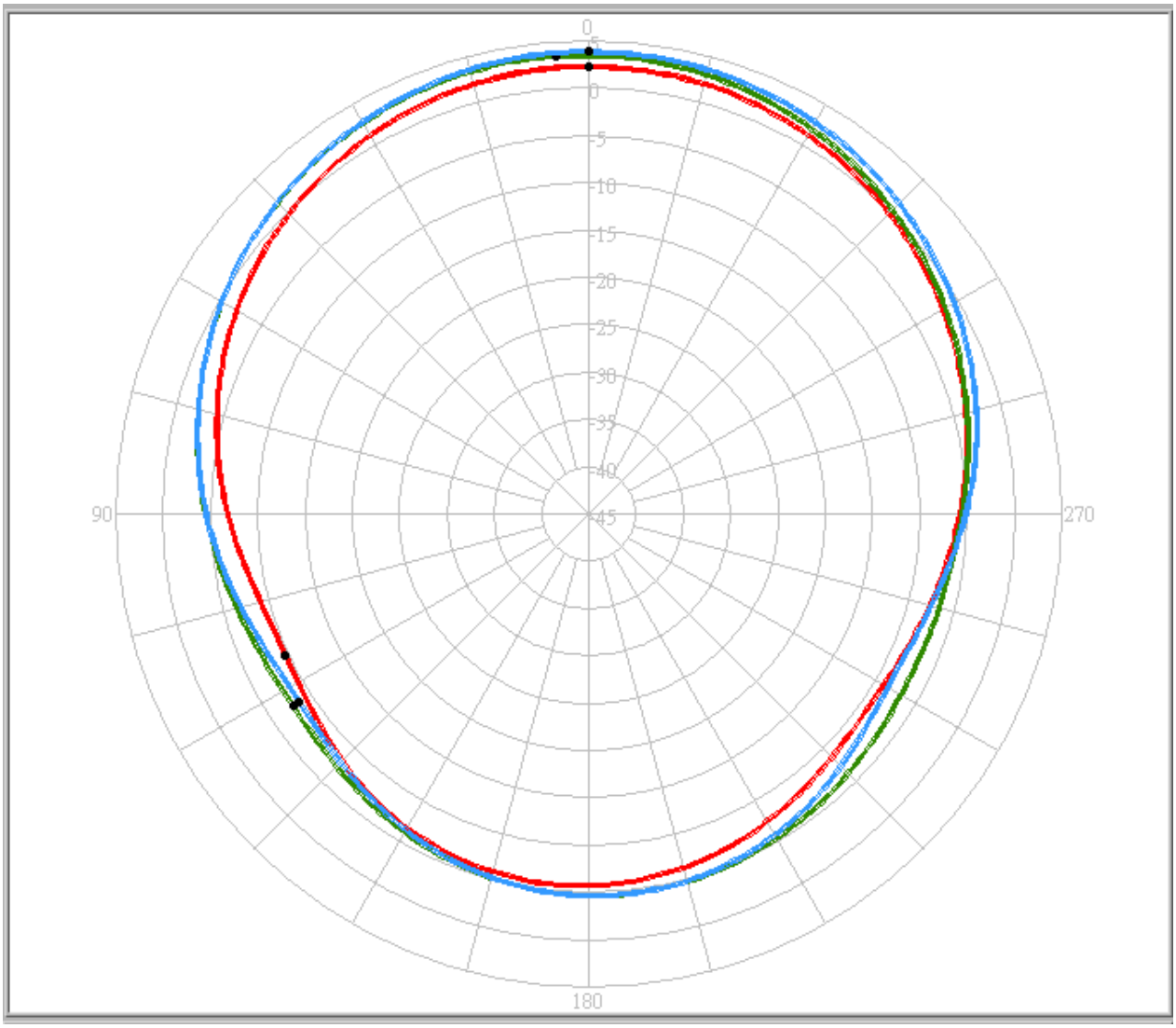
4. Antenna Radiation Properties

4.1. XZ Plane Radiation



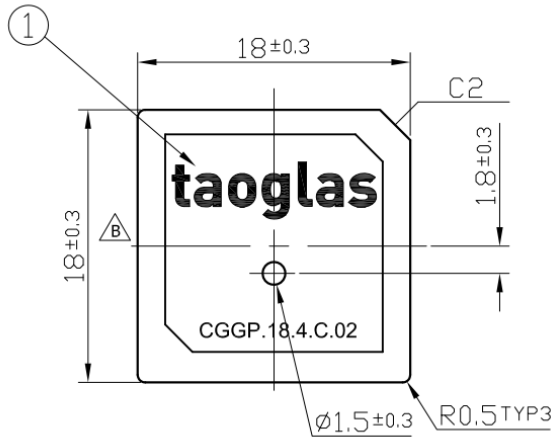
Item	XZ Plane
1575 MHz	2.49 dBi
1592 MHz	3.47 dBi
1608 MHz	3.85 dBi

4.2. YZ Plane Radiation

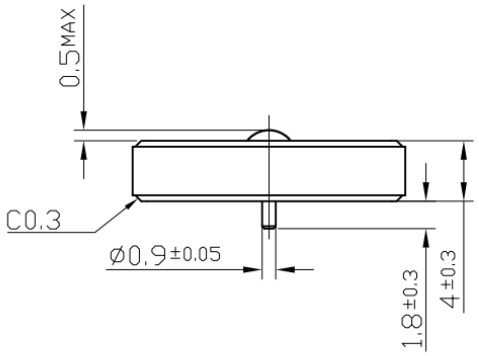


Item	YZ Plane
1575 MHz	2.33 dBi
1592 MHz	3.49 dBi
1608 MHz	3.88 dBi

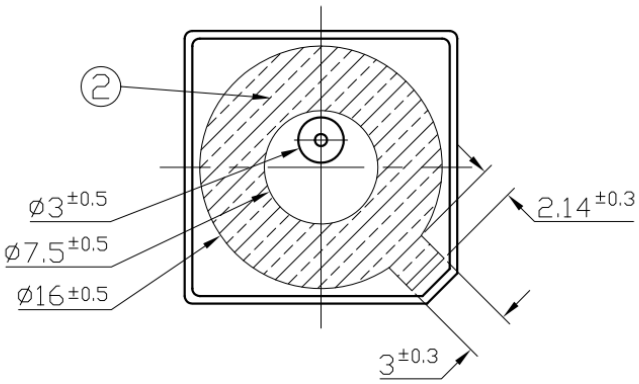
5. Mechanical Drawing



Top View



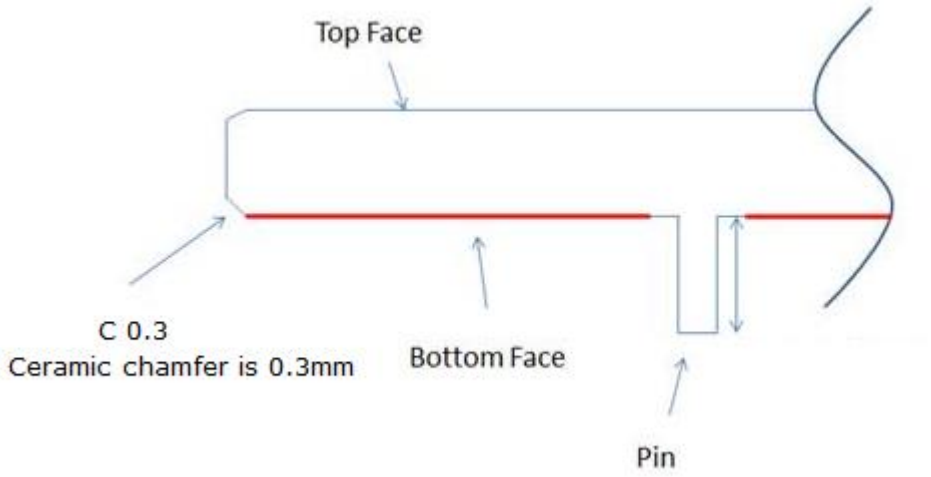
Side View



Bottom View

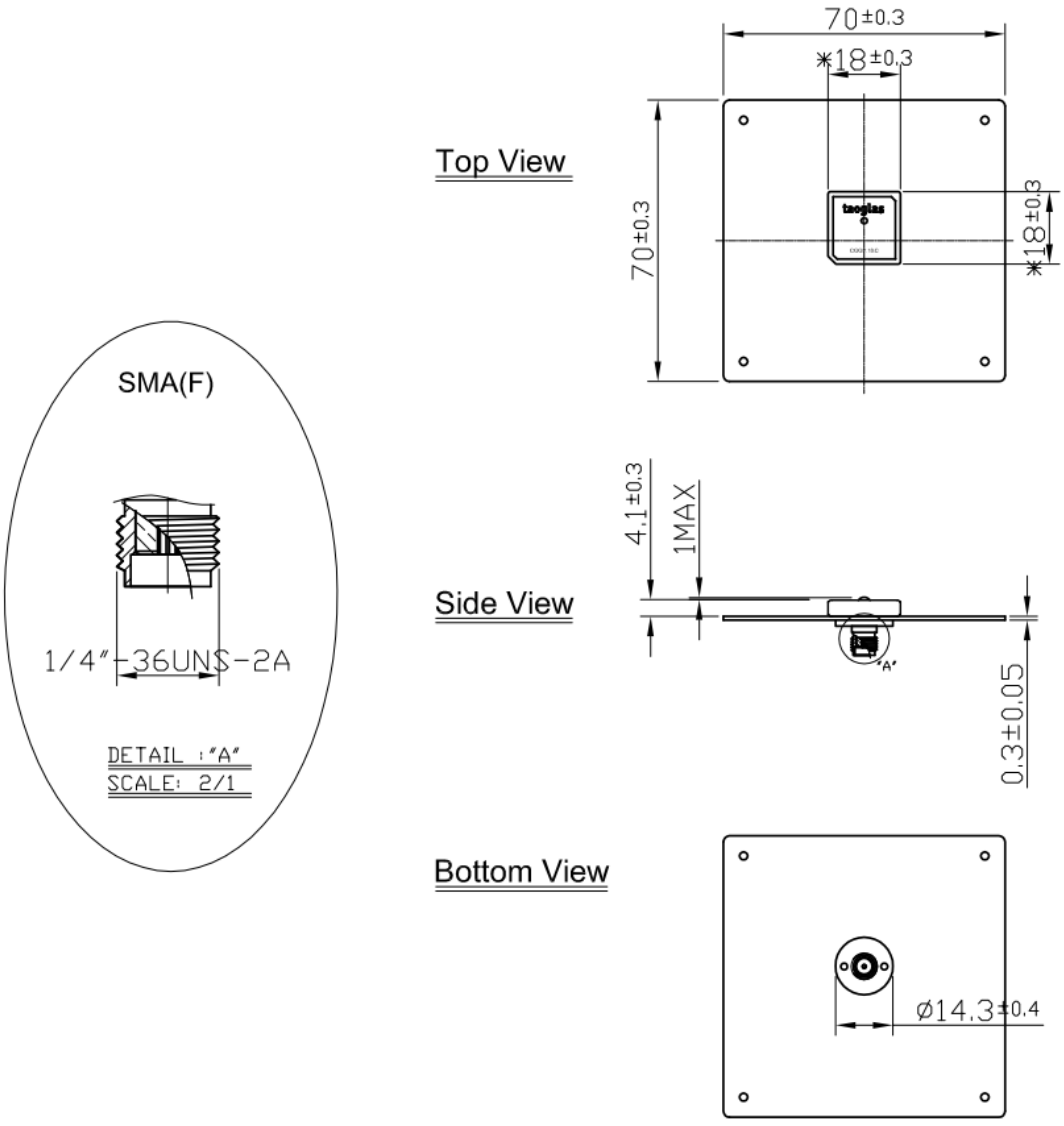
	Name	Material	Finish	QTY	NOTES:
1	CGGP.18 Patch 18x18x4	Ceramic	Clear	1	1.Double sided adhesive area.
2	Double sided Adhesive	NITTO 5015	White Liner	1	

5.1. Adhesive Thickness



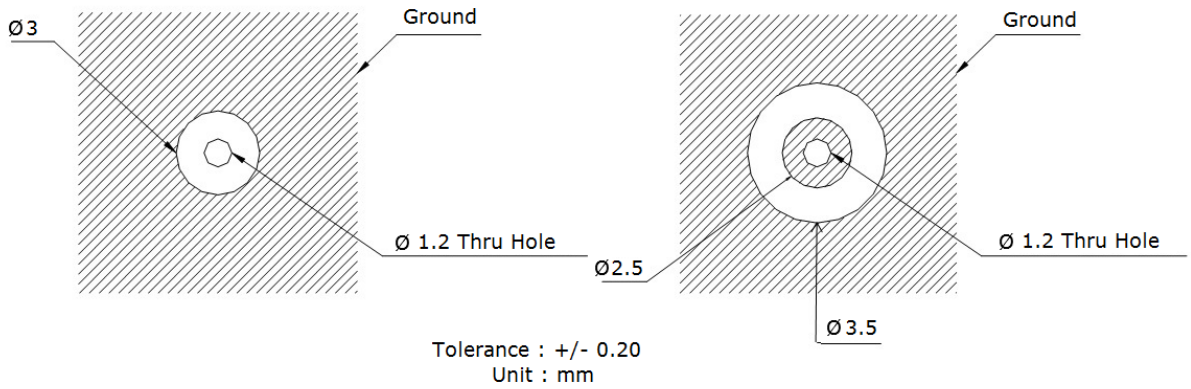
Red Line shows the adhesive without Liner – thickness 0.08~0.1mm

6. Evaluation Board (CGGPD.18.C)



	Name	Material	Finish	QTY
1	Patch(18x18x4mm)	Ceramic	Clear	1
2	Ground-Plane(70x70x0.3mm)	Brass	Silver	1
3	SMA(F) ST	Brass	Gold	1

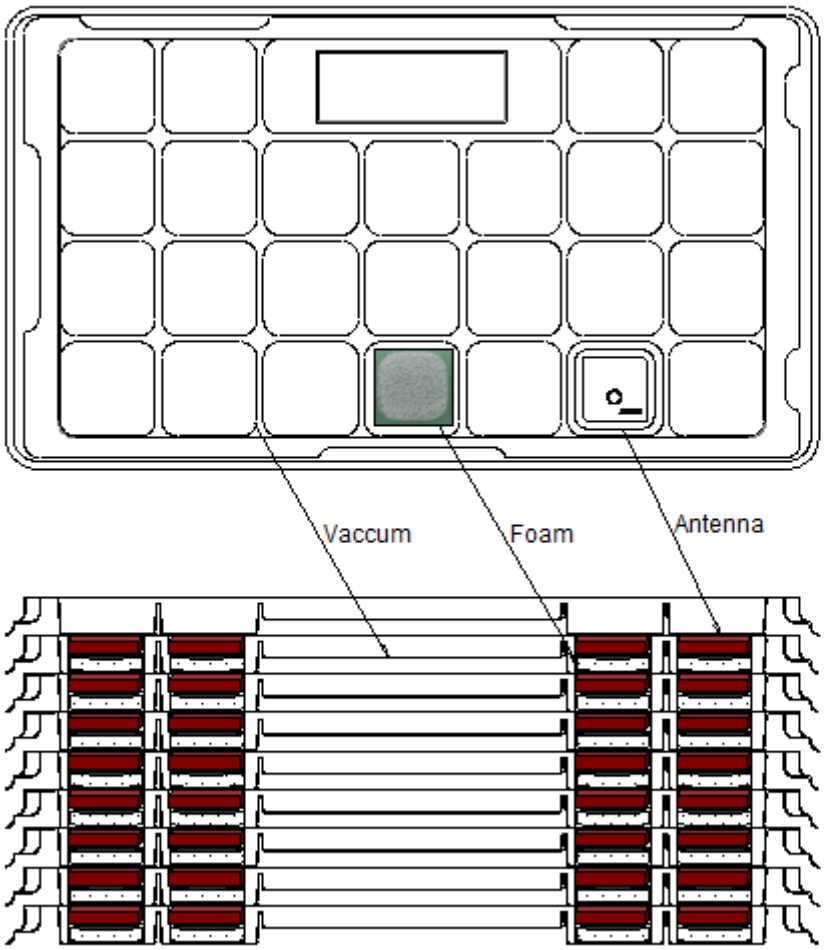
7. PCB Footprint Recommendation



Tolerance : +/- 0.20
Unit : mm

8. Packaging

8.1. Inner Tray

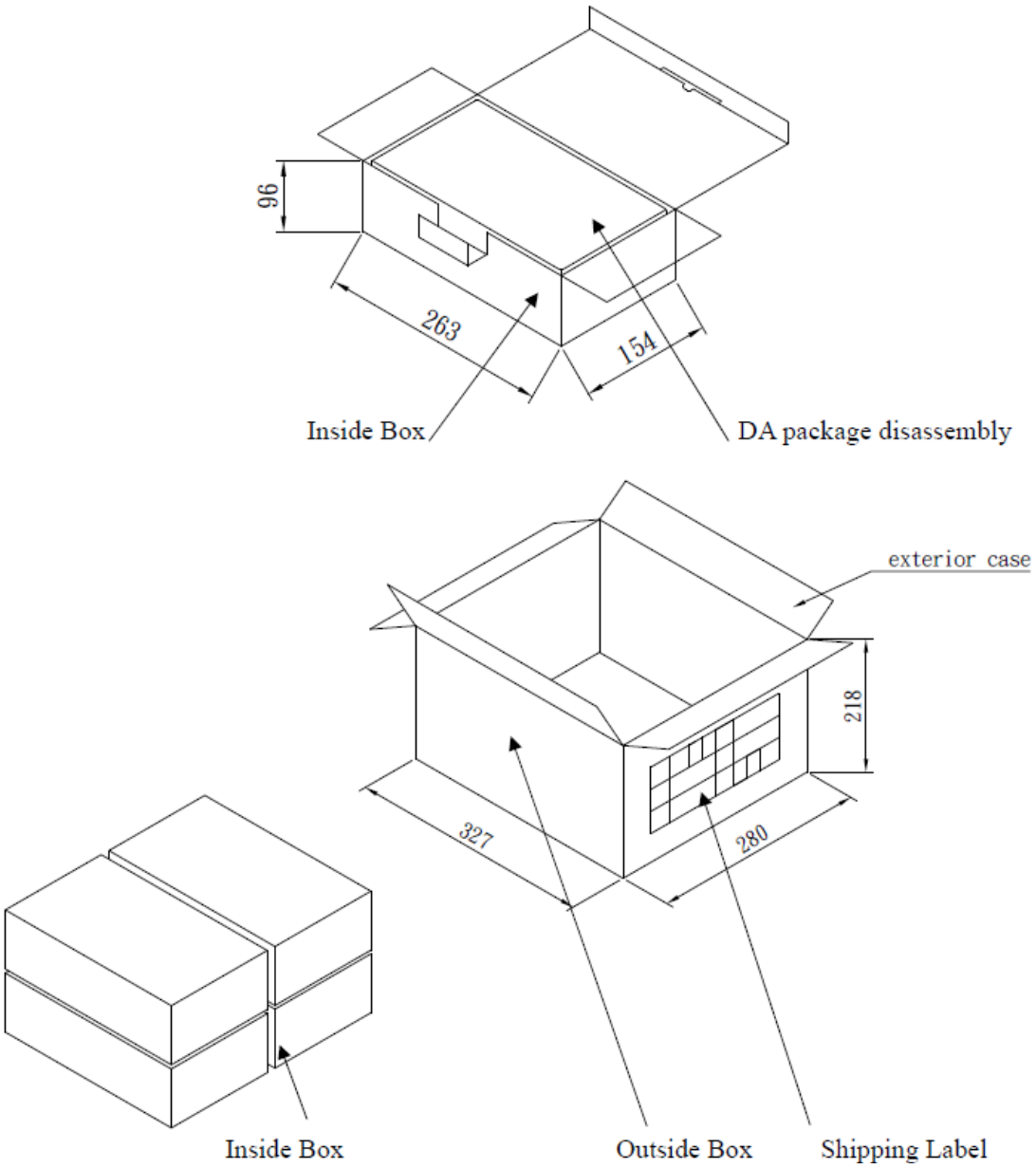


25 pieces per tray

200 pieces per inner carton

800 pieces per outer carton

8.2. Carton



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