

## SPECIFICATION

Part No.	:	CGGP.18.4.C.02
Product Name	:	18mm Ceramic GPS/GLONASS Patch Antenna, 1575-1610MHz
Features	:	Wide-band Operation 18mm*18mm*4mm 3dBiC Peak Gain (on 70mm*70mm ground-plane) Pin type Automotive TS16949 Production and Quality Approved RoHS compliant



## I. Introduction

This 18mm ceramic GPS/Glonass 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. The antenna achieves best in class right hand circularly polarized gain with good axial ratio characteristics mitigating multi-path effects which is vital to improved S/N carrier ratio and faster locking times on the device itself. It is mounted via pin and double-sided adhesive.

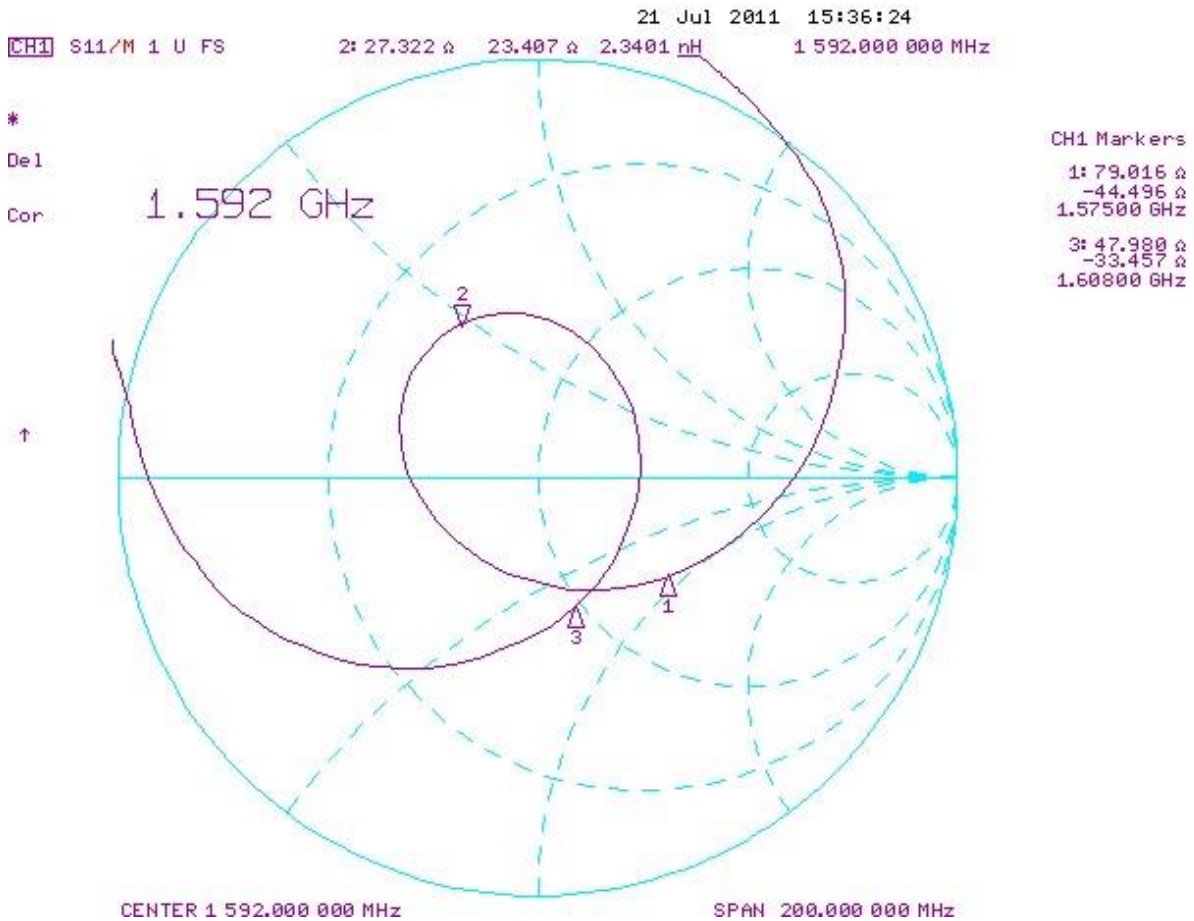
This antenna has been tuned for a centre position on a 70mm\*70mm ground-plane. It is manufactured and tested in a TS16949 first tier automotive approved facility. For further optimization to customer specific device environments where positioning is off centre or on different ground-plane sizes, custom tuned patch antennas can be supplied. For more details please email [sales@taoglas.com](mailto:sales@taoglas.com)

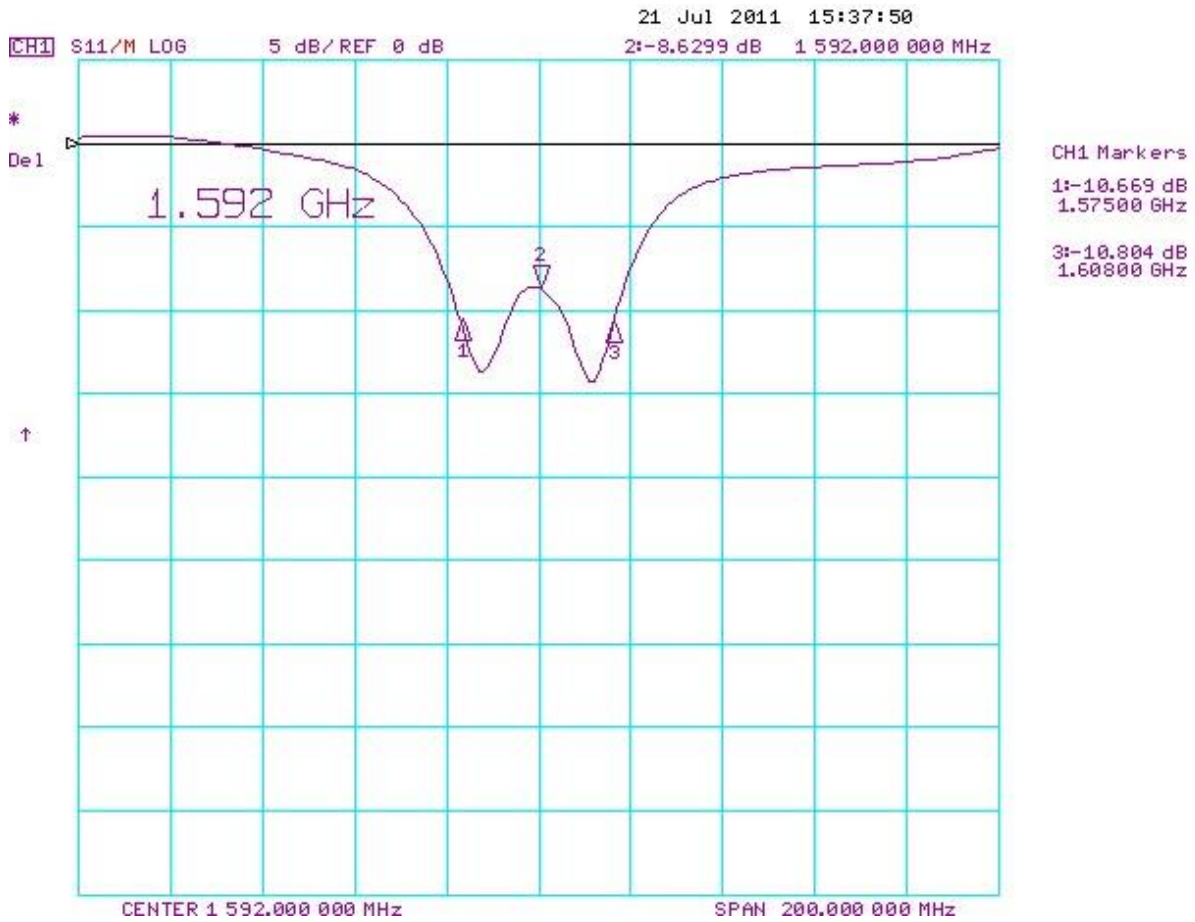
## II. Specification

ELECTRICAL	
Range of Receiving Frequency	GPS: 1575.42±1.023MHz GLONASS: 1602±5MHz
Center Frequency	1592MHz ± 3MHz
VSWR	1.5 max
Gain at Zenith	+3.0 dBic typ.
Gain at 10° Elevation	--
Axial ratio	--
Polarization	RHCP
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

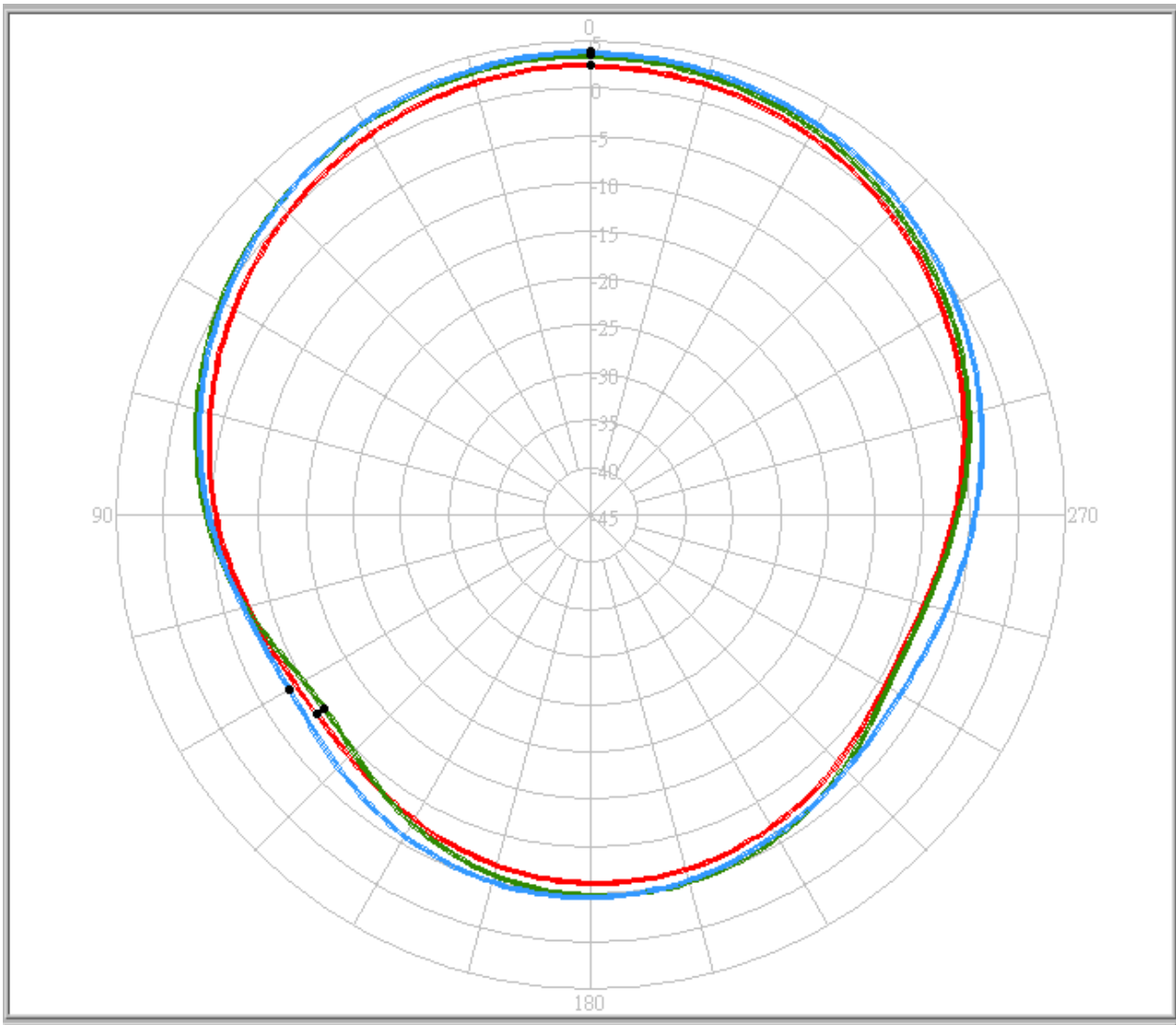
### III. Antenna S11 Properties - 1592 MHz Typical Return Loss, SWR, Impedance, measured on the test fixture





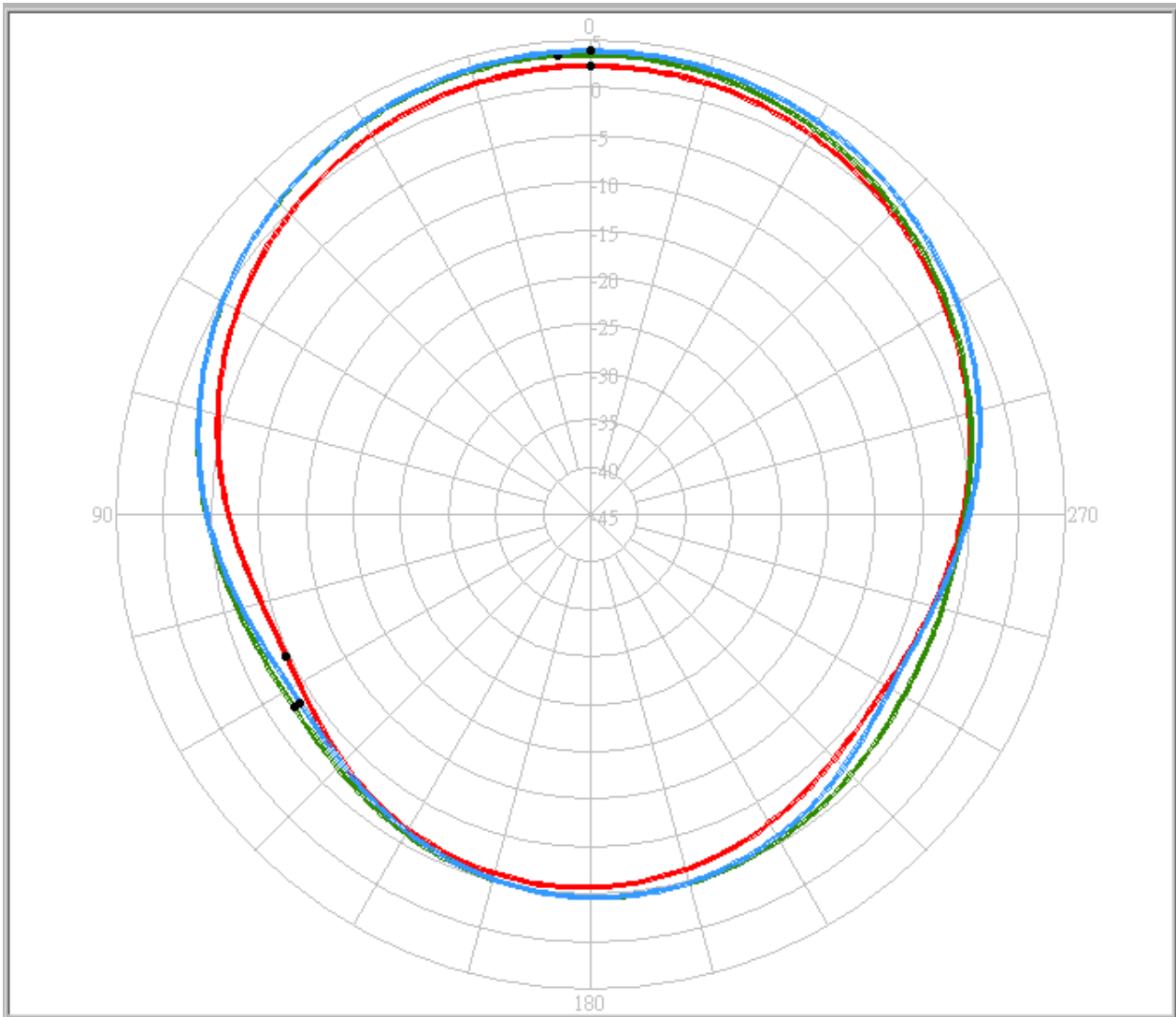
## IV. Antenna Radiation Properties

### IV.1. XZ – Plane Radiation



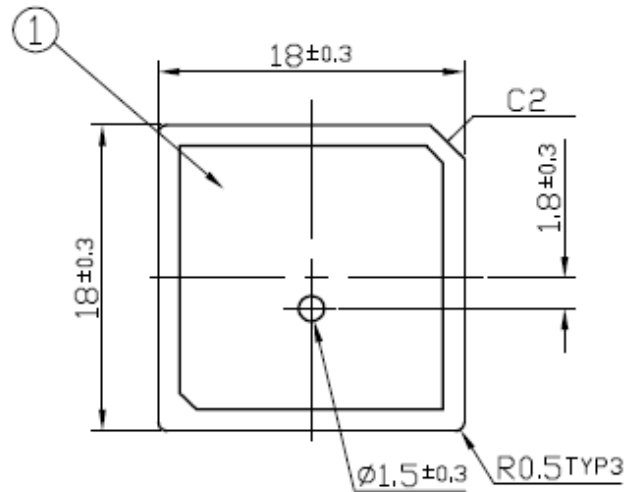
Item	XZ-plane
1575 MHz	2.49 dBi
1592 MHz	3.47 dBi
1608 MHz	3.85 dBi

## IV.2. YZ- Plane Radiation

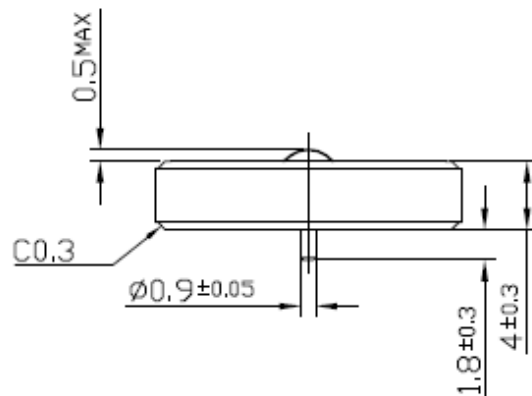


Item	YZ-plane
1575 MHz	2.33 dBi
1592 MHz	3.49 dBi
1608 MHz	3.88 dBi

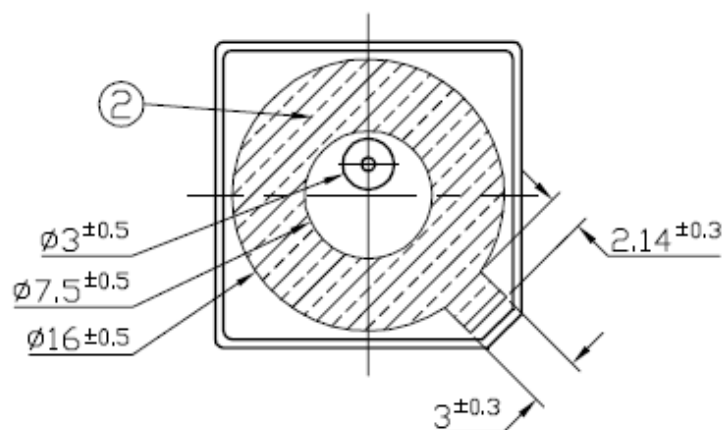
## V. Mechanical Drawing




Top View



Side View

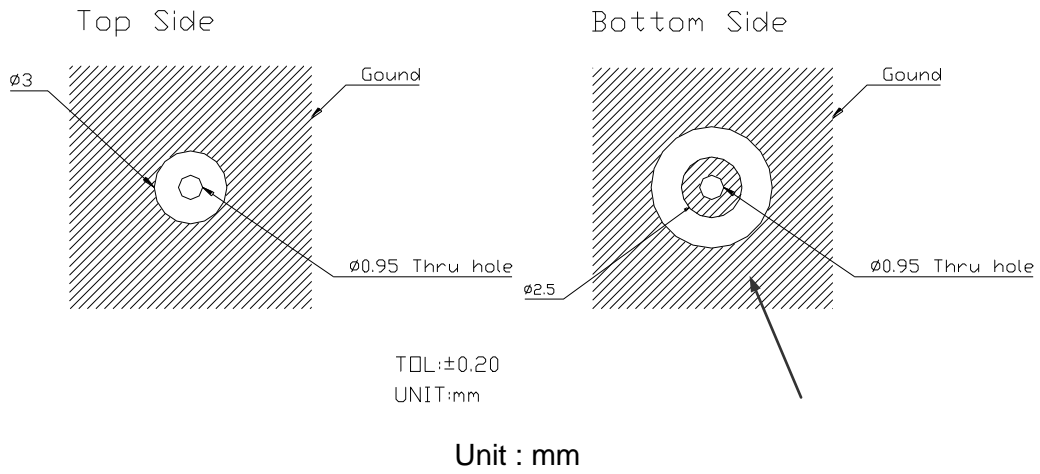


Bottom View

	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	

Unit:mm

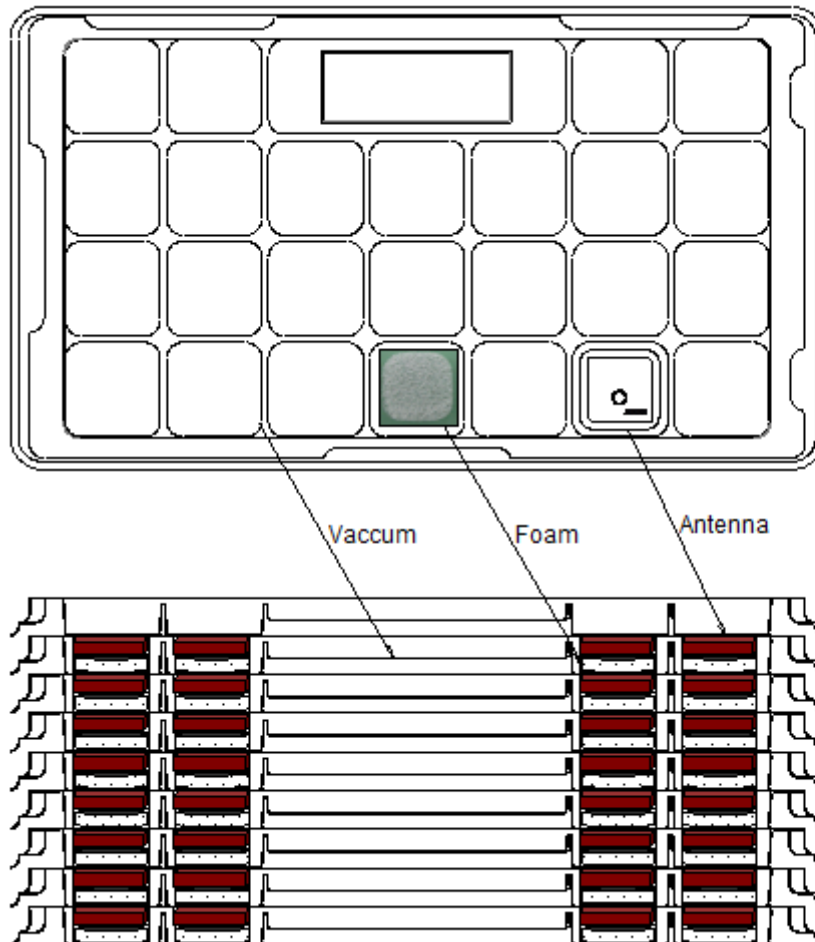
## VI. PCB Footprint Recommendation





## VII. Packaging

### VII.1. Inner Tray



25 pieces per tray

200 pieces per inner carton

800 pieces per outer carton

## VII.2. Carton

