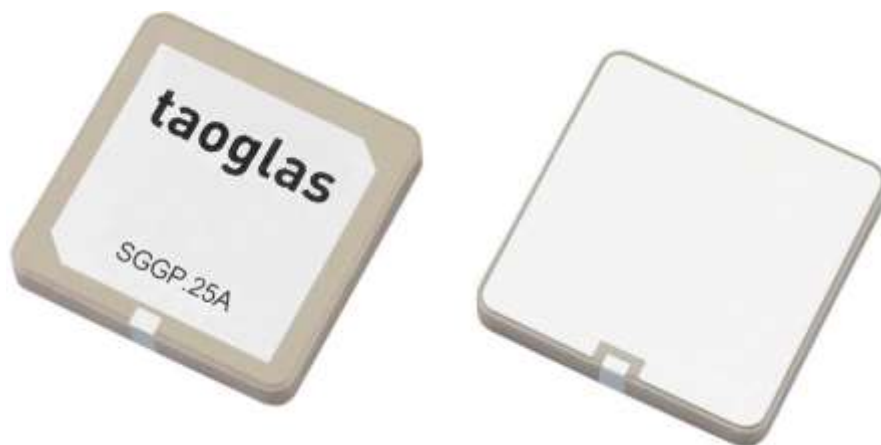


## Specification

- Part No. : **SGGP.25.4.A.02**
- Description : GPS/GLONASS/GALILEO SMT Patch Antenna
- Features : 25mm\*25mm\*4mm  
Single Feed SMT Mount GPS/GALILEO: 1575MHz  
GLONASS: 1602MHz  
Patent pending  
**RoHS Compliant**



## 1. Introduction

This ceramic 25\*25\*4mm GPS/GLONASS/GALILEO patch antenna is mounted via SMT process and has been pre-tuned for a 50\*50mm ground plane. Custom part no's tuned for different ground-plane or layout positions and taking into account the specific conditions of your device can be created and supplied by Taoglas.

## 2. Specification

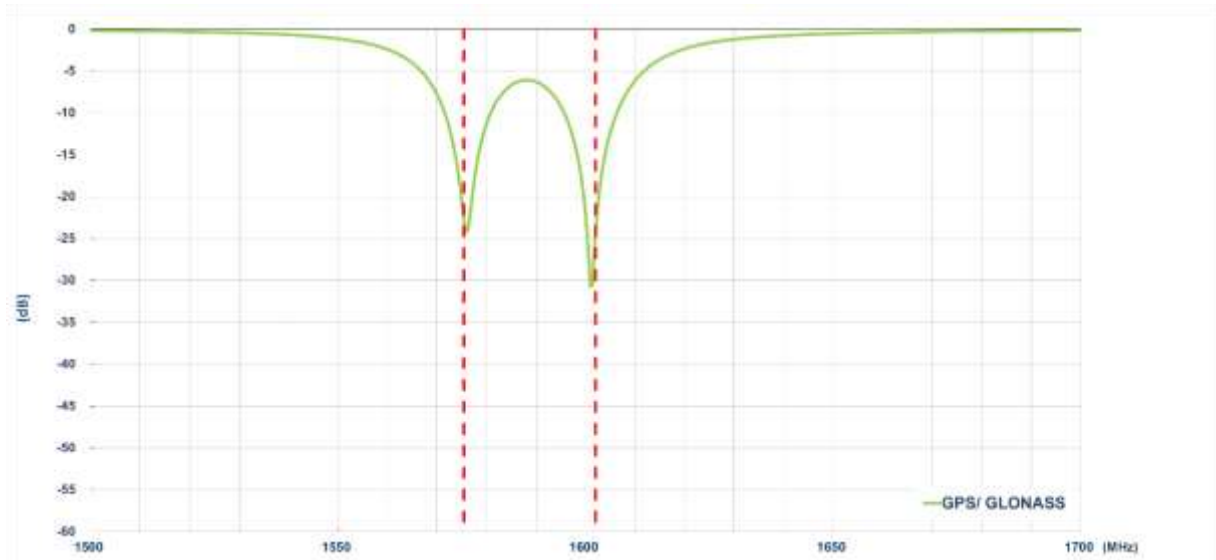
Patch Specification tested on 50\*50mm ground plane

Parameter	Specification
Operating Bands	GPS/GALILEO: 1575.42 MHz $\pm$ 1.023 MHz GLONASS: 1602 $\pm$ 5 MHz
VSWR	<2.5
Return Loss in Band	<-10 dB
Efficiency	GPS/GALILEO (1575.42 MHz): 83% GLONASS (1602 MHz): 84%
Polarization	RHCP
Impedance	50 $\Omega$
Frequency Temperature Coefficient ( -40°C to +85°C )	0 $\pm$ 20ppm / °C
Operating Temperature	-40°C to +85°C
Moisture Sensitivity Level (MSL)	3 (168 Hours)

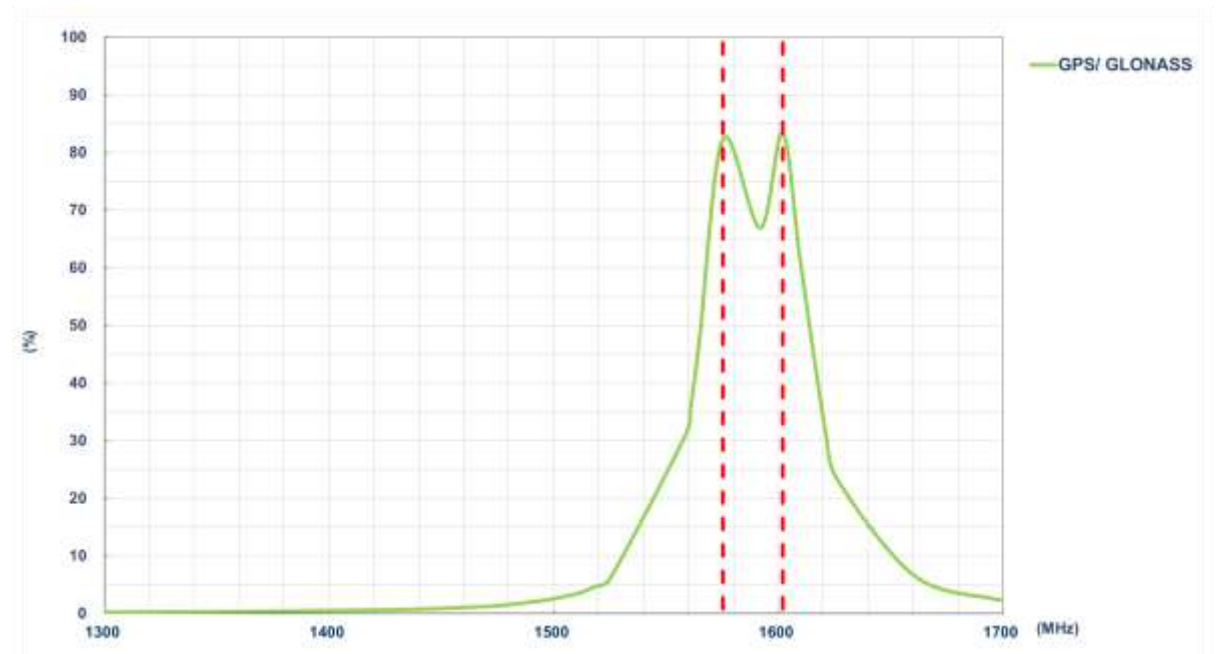
\*\*Changes in user groundplane and environment will offset centre frequenc

## 3. Electrical Specifications

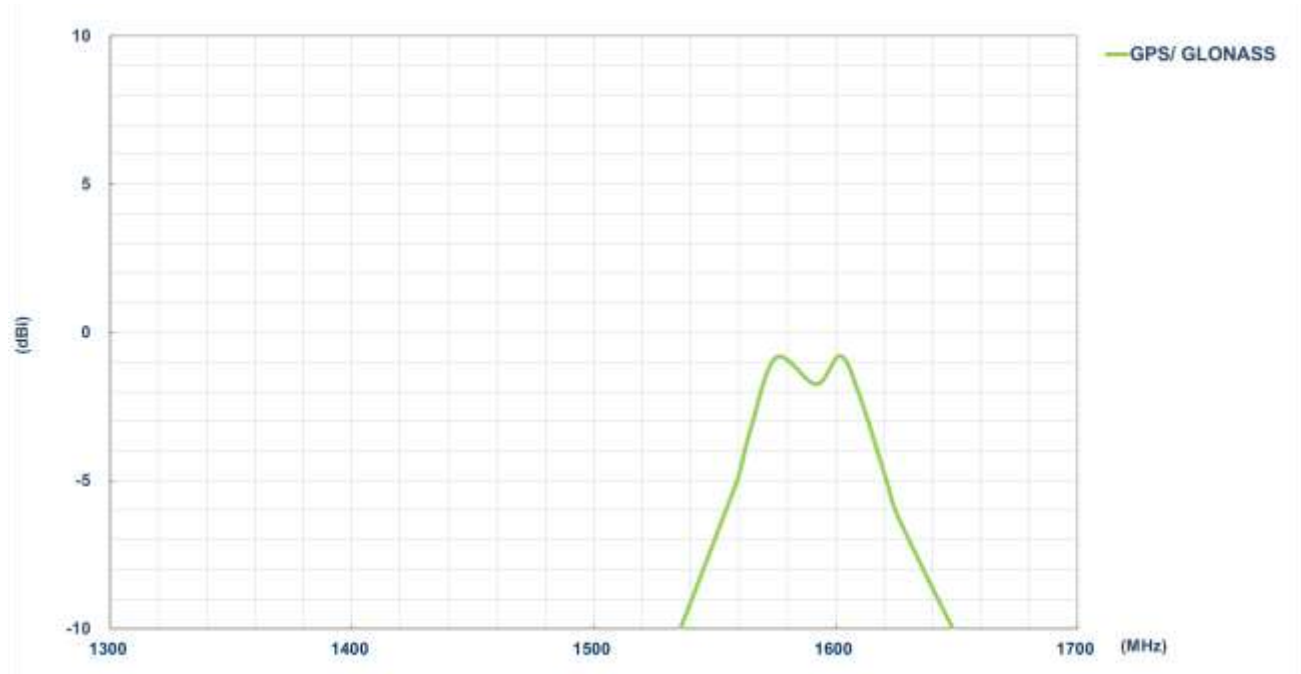
### 3.1. Return Loss



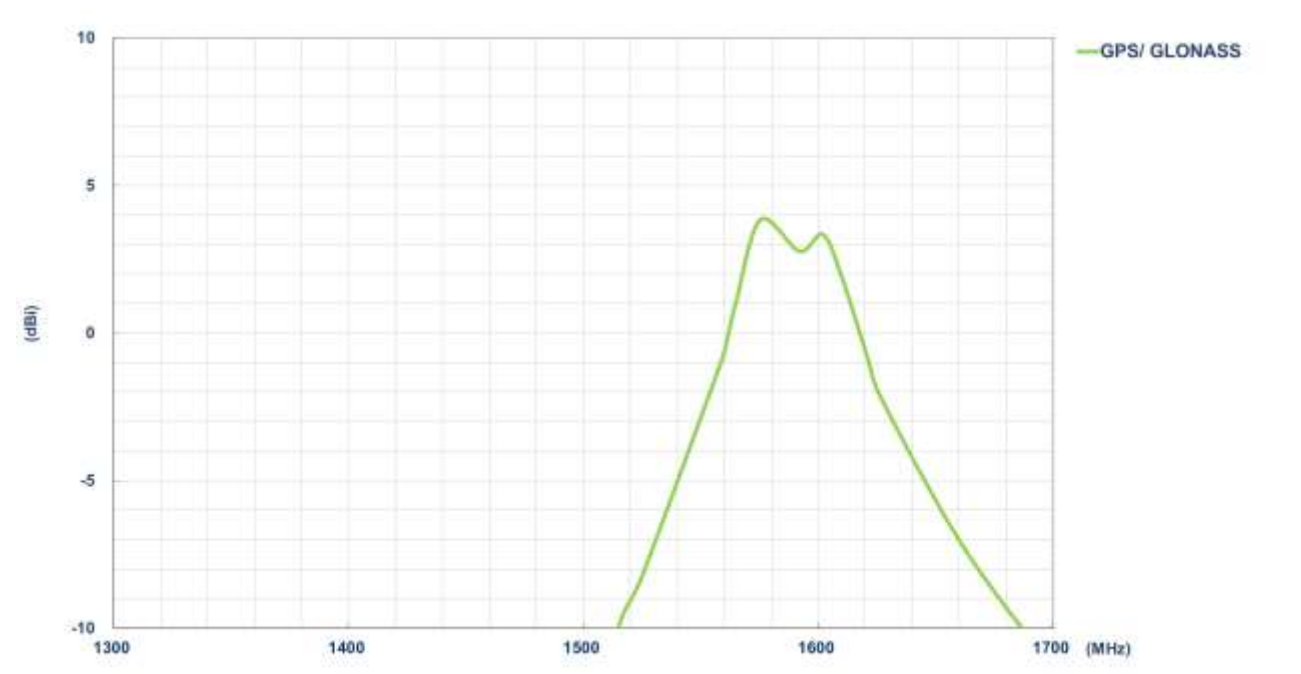
### 3.2. Efficiency



### 3.3. Average Gain

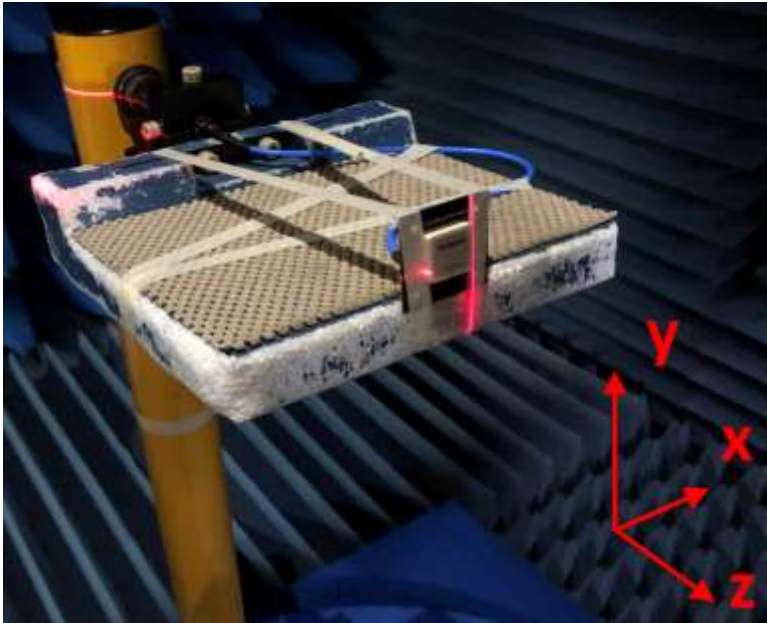


### 3.4. Peak Gain

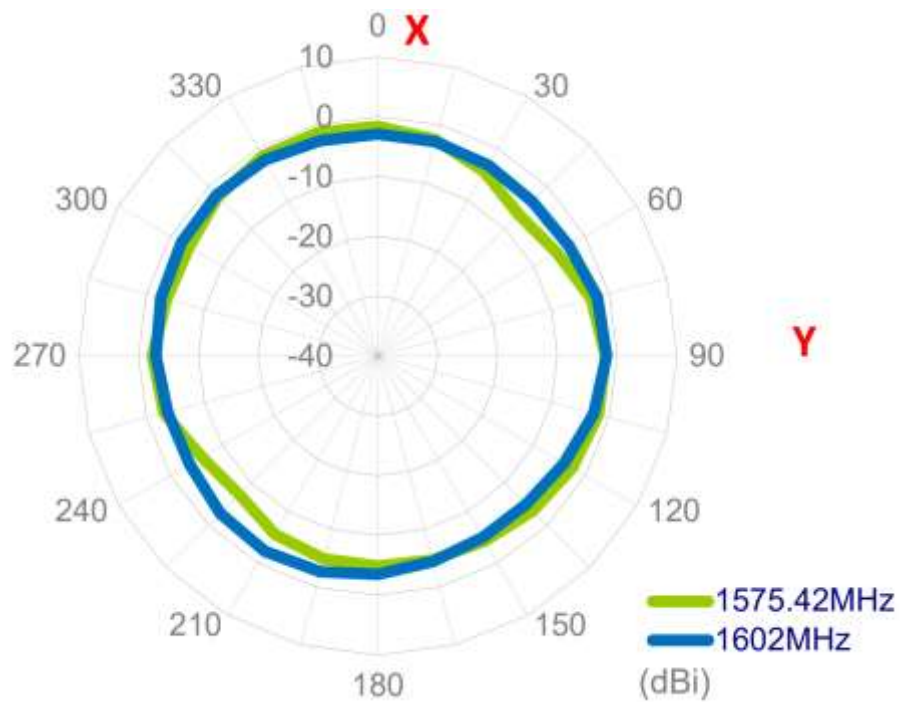


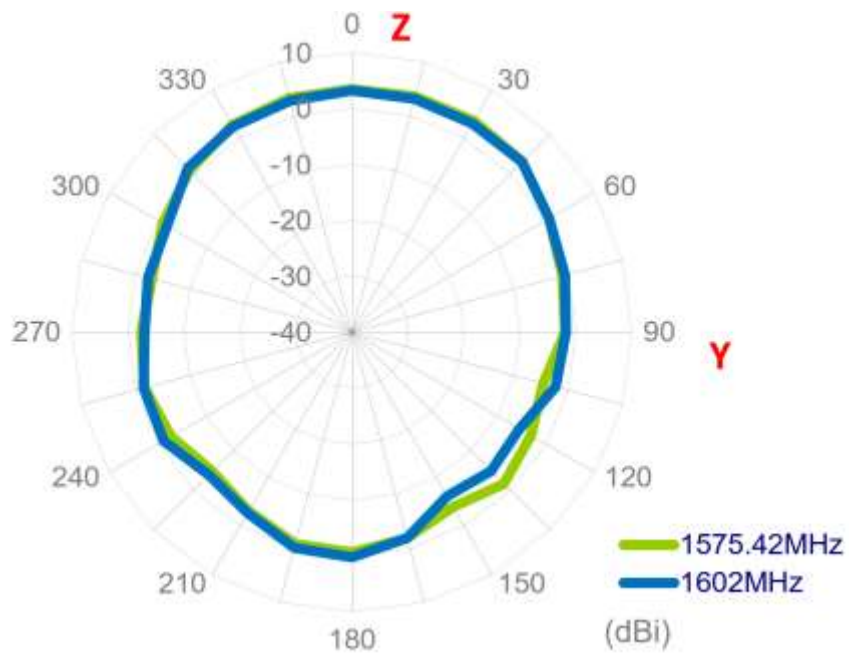
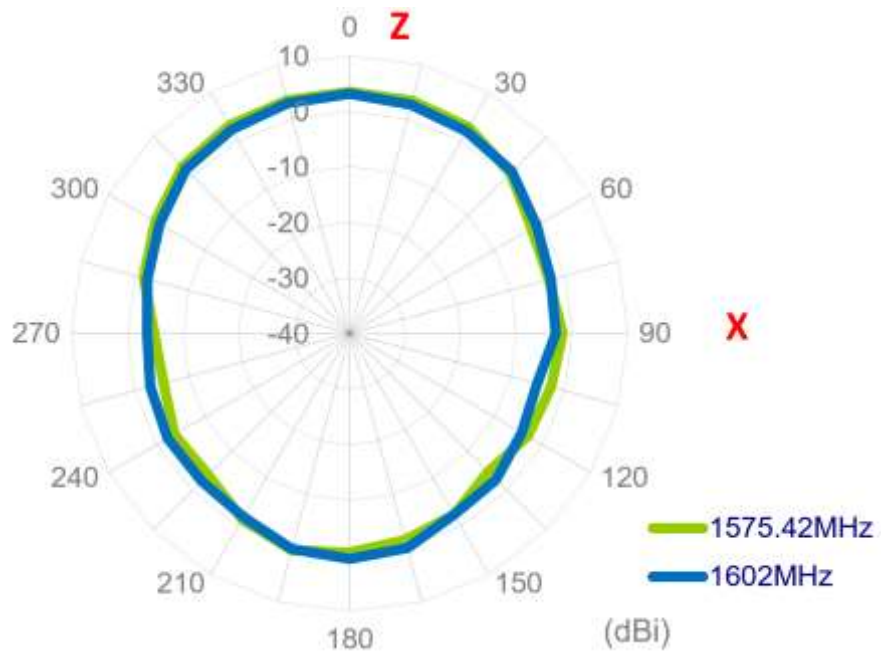
## 4. Radiation Patterns

### 4.1. Chamber Test Setup

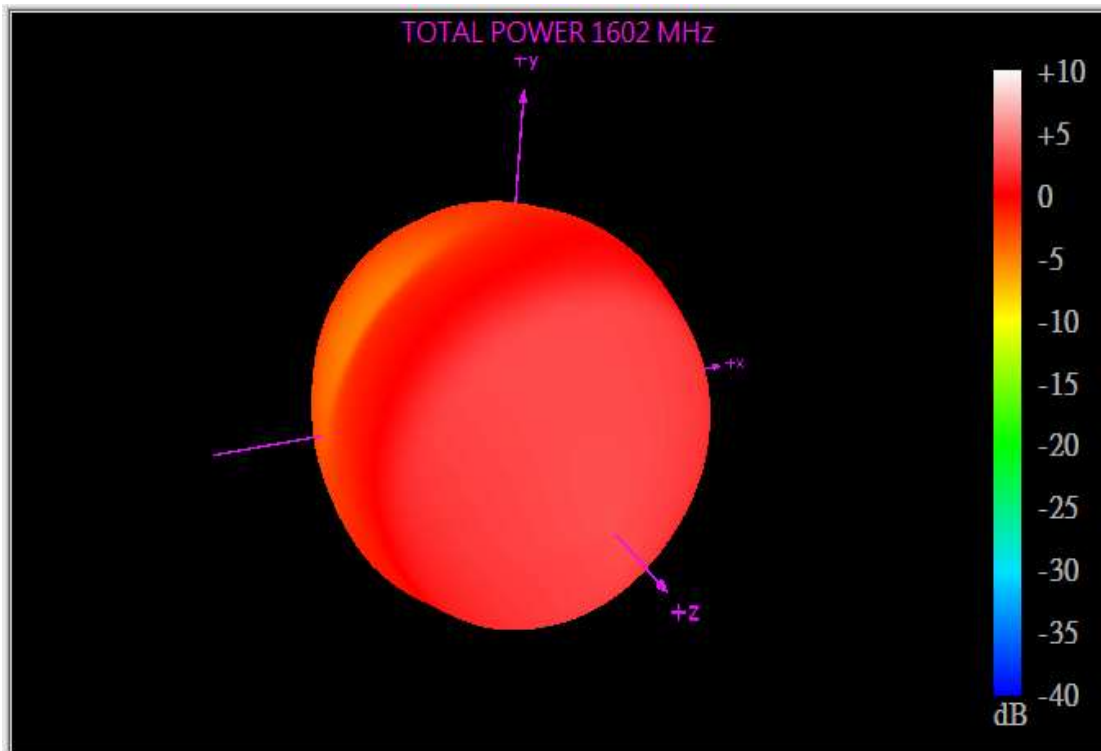
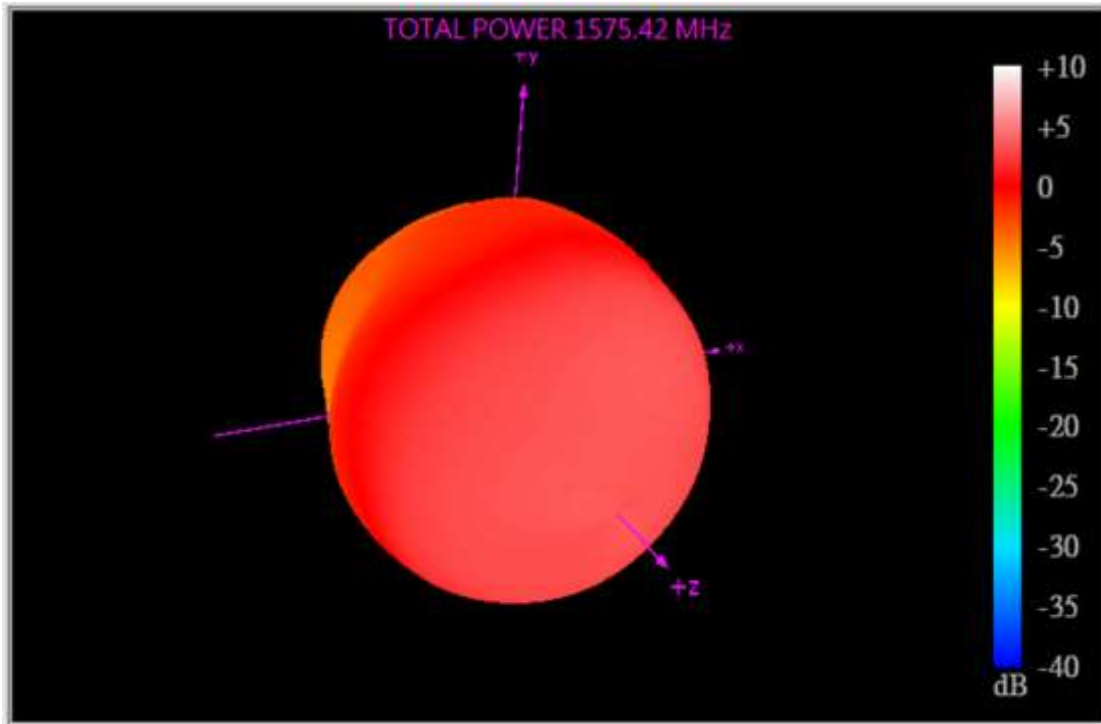


### 4.2. 2D Radiation Patterns



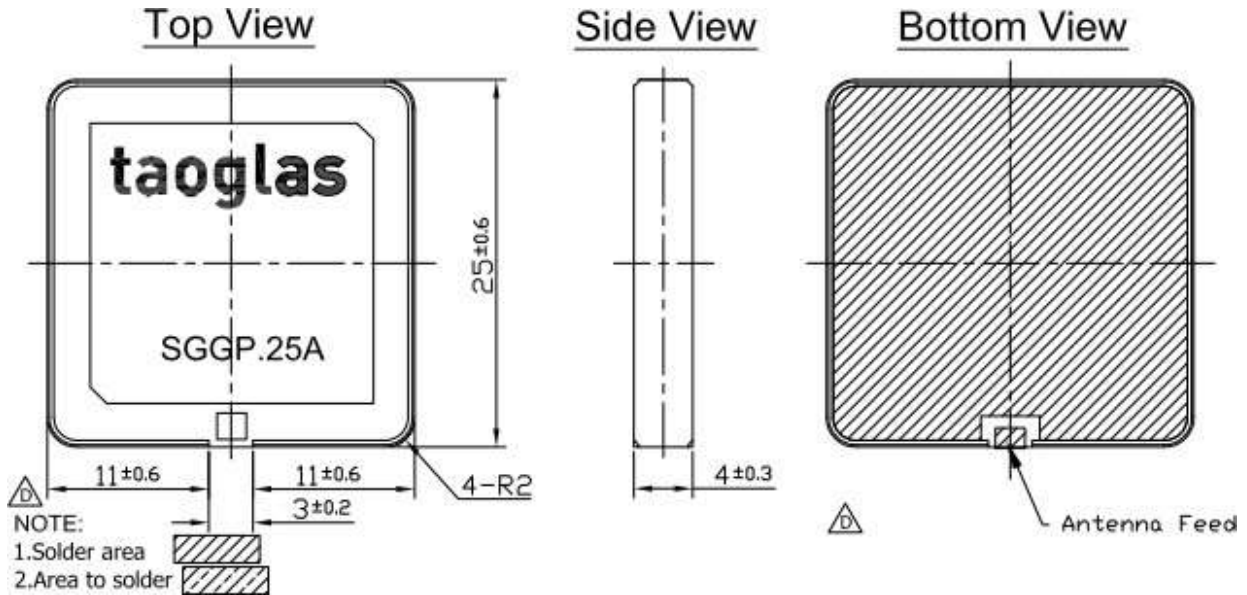


## 4.2. 3D Radiation Patterns



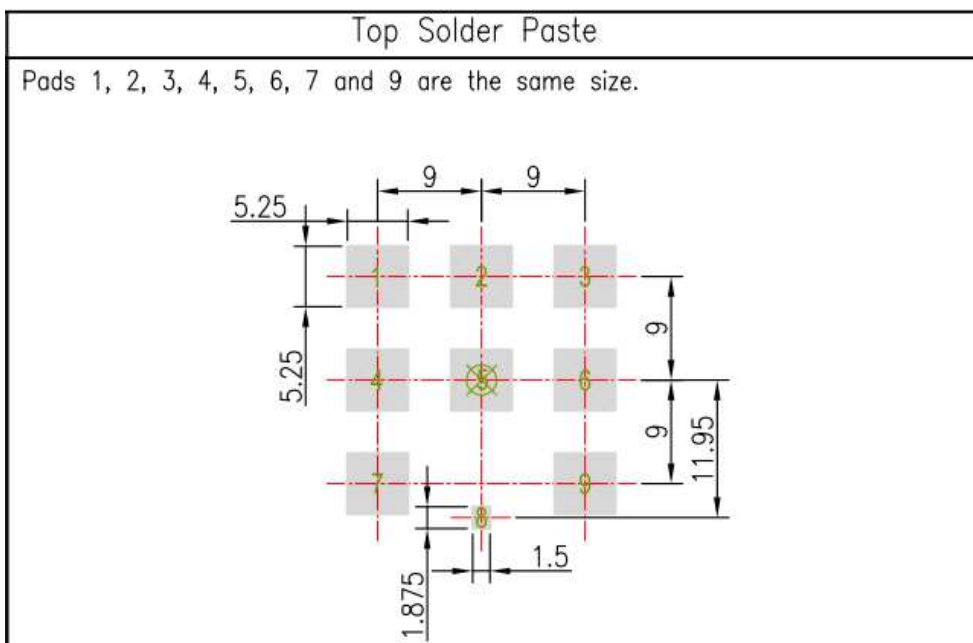
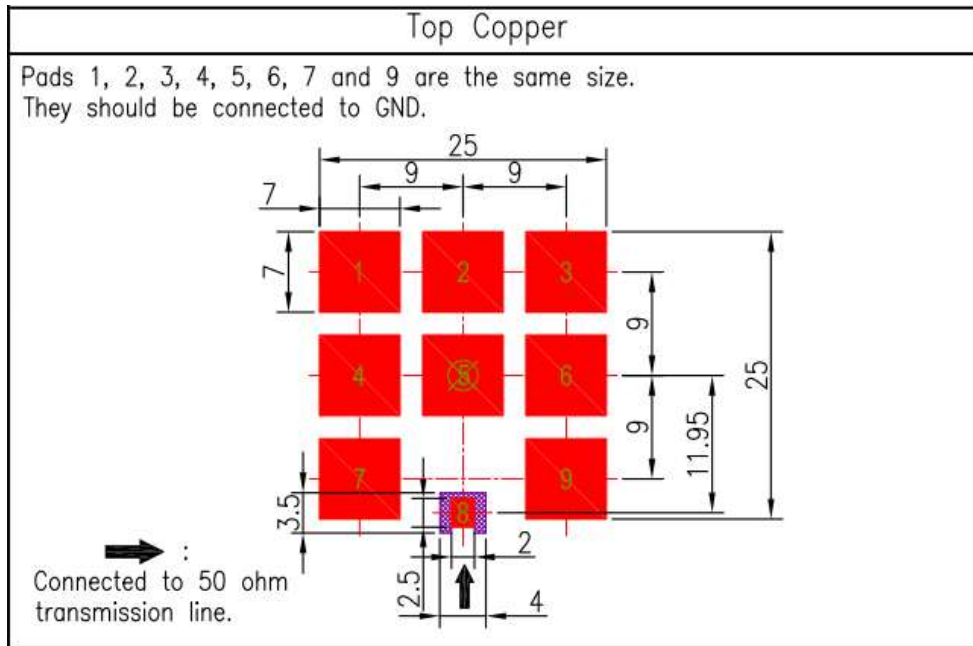
## 5. Mechanical Specifications

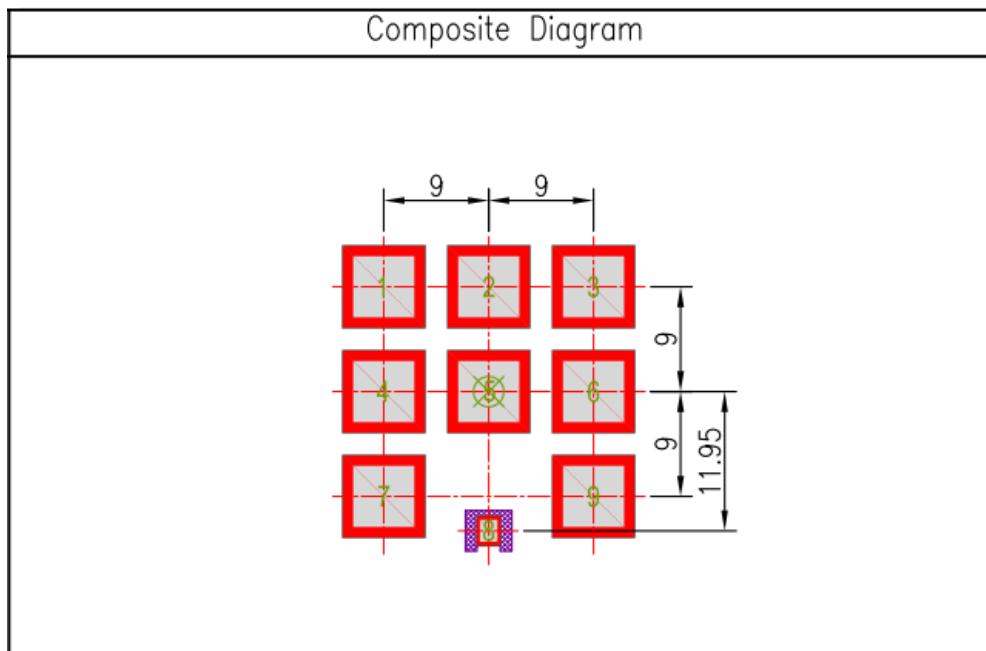
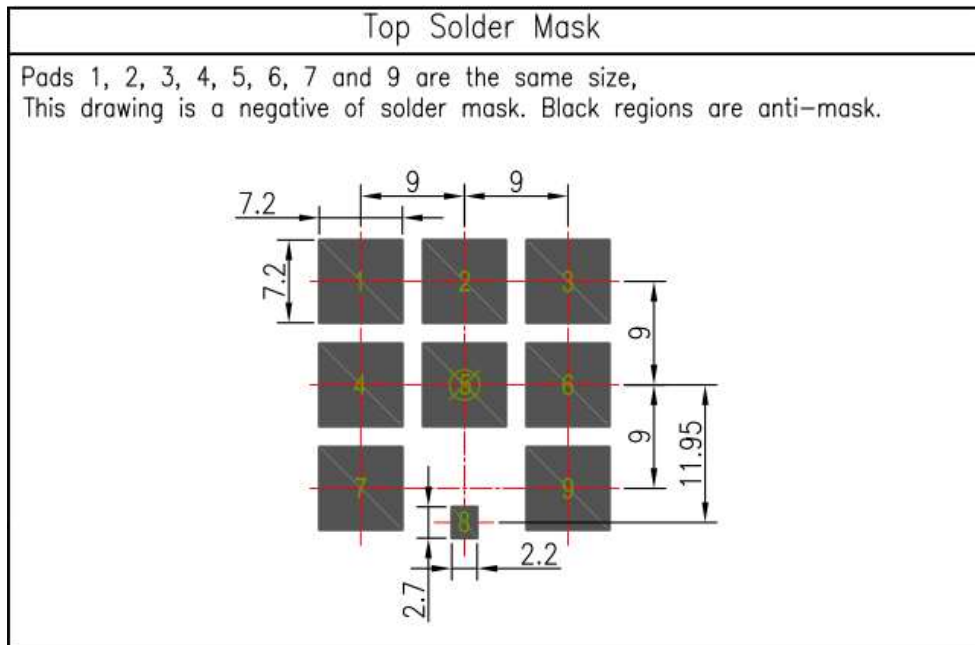
### 5.1. Antenna Dimensions and Drawing (Unit: mm)










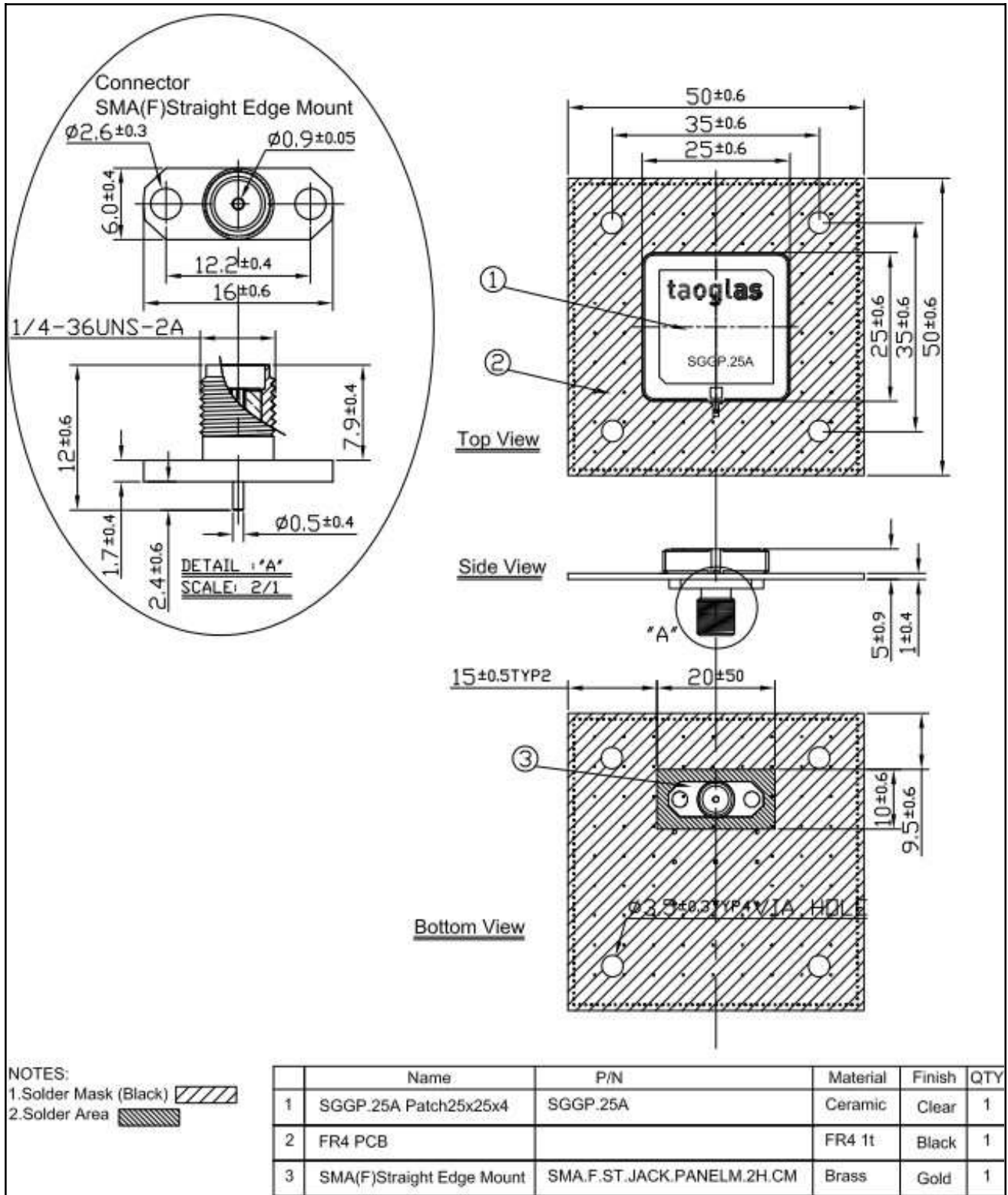
## 5.2. PCB Footprint Recommendation (Unit: mm)





<b>NOTE:</b>			6. Copper keepout should extend through all PCB layers.
1. Ag Plated area			7. Any vias in pads should be either filled or tented to prevent solder from wicking away from the pad during reflow.
2. Solder Mask area			
3. Copper area			8. The dimension tolerances should follow standard PCB manufacturing guidelines
4. Paste area			
5. Copper Keepout Area			

### 5.3. Test Jig and Dimension SGGPD.25A



## 5.4. SGGP.25A On Evaluation Board



