

## SPECIFICATION

- Model No. : **SGGP.25A**
- Product Name : **GPS/GLONASS SMT Patch Antenna**
- Features : 25mm\*25mm\*4mm  
Single Feed SMT Mount  
GPS: 1575MHz  
GLONASS: 1602MHz  
Patent pending
- RoHS ✓
- Photo :



# 1. Introduction

This ceramic 25mm GPS/GLONASS 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 in your device can be created and supplied by Taoglas.

# 2. Specification

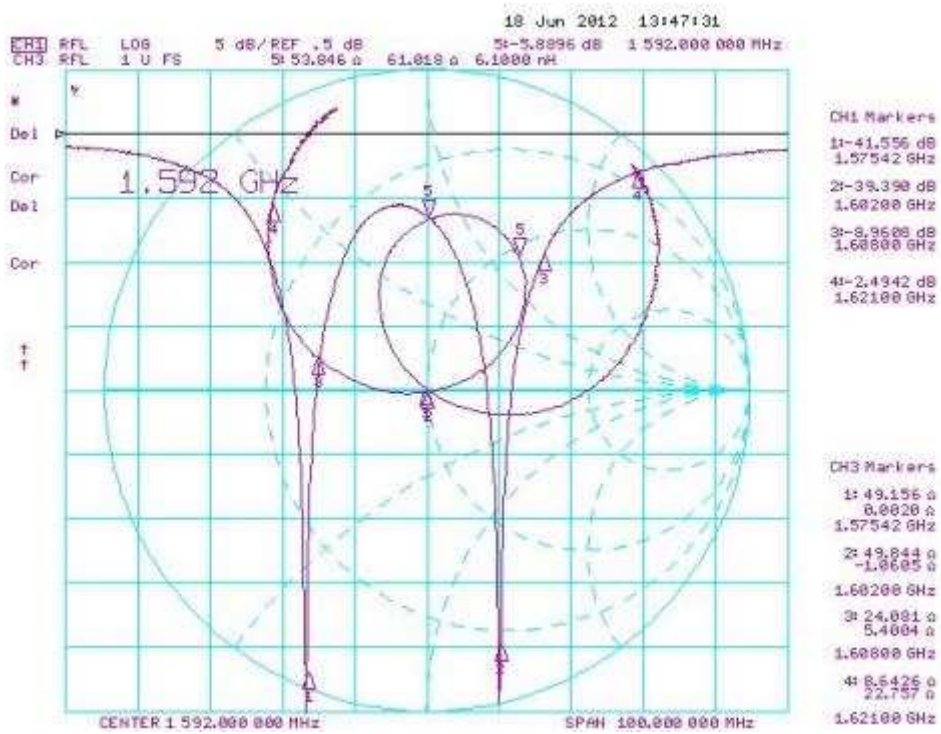
## Original Patch Specification tested on 50\*50mm ground plane

No	Parameter	Specification	Notes
1	Range of Receiving Frequency	GPS:1575.42 MHz ± 1.023 MHz GLONASS: 1602± 5 MHz	
2	Center Frequency	1592± 3MHz	With 50*50mm ground plane
3	Bandwidth	8MHz min	Return Loss <-10 dB
4	VSWR	1.5 max	Center Frequency
5	Gain at Zenith	GPS: -0.14dBic typ. GLONASS: 1.75dBic typ.	
8	Polarization	RHCP	
9	Impedance	50 Ohms	
10	Frequency Temperature Coefficient (τf)	0 ± 20ppm / °C	-40°C to +85°C
11	Operating Temperature	-40°C to -85°C	

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

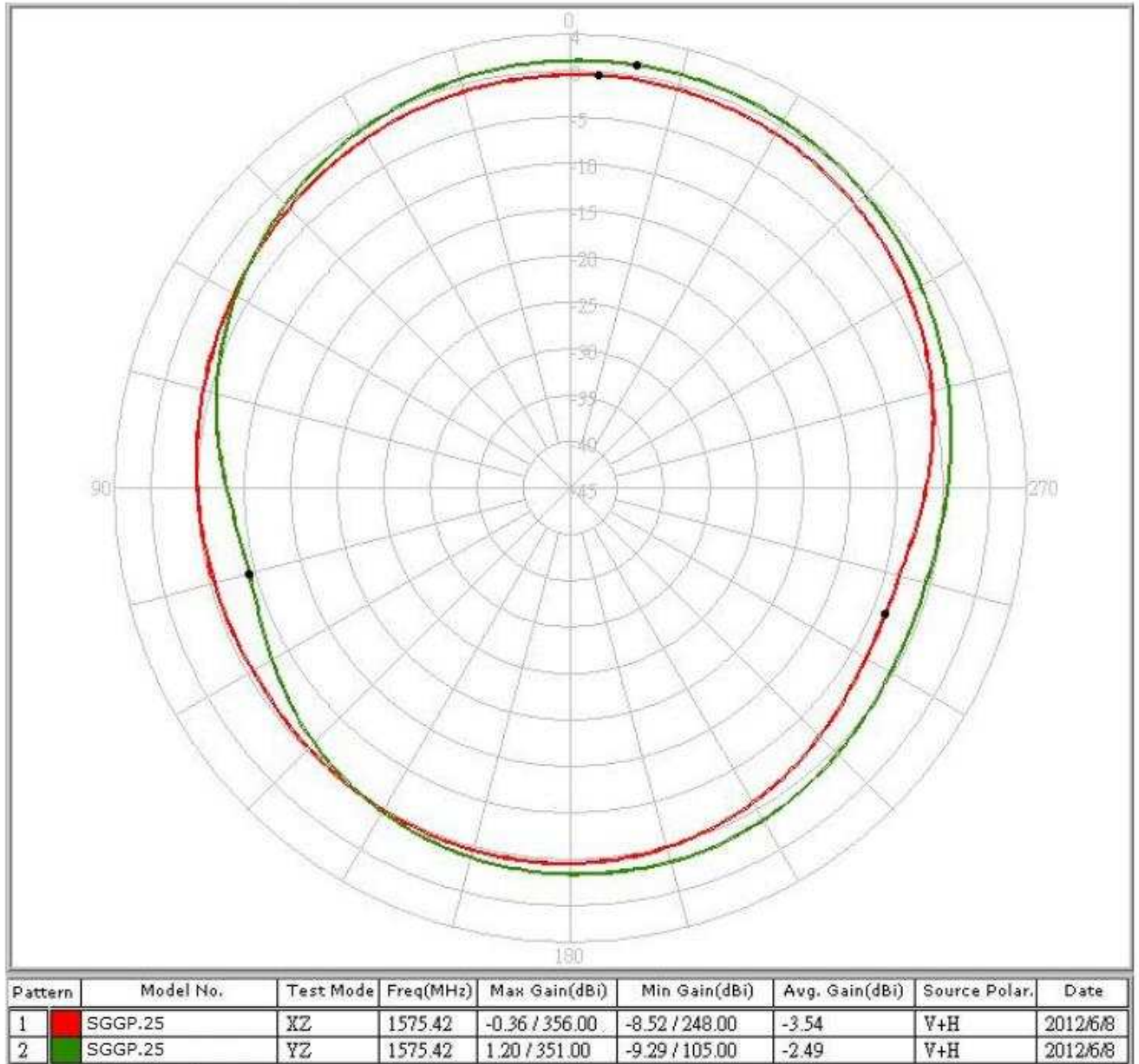
### 3. Electrical Specifications

#### 3.1 Return Loss, SWR, Impedance, measured on the test fixture



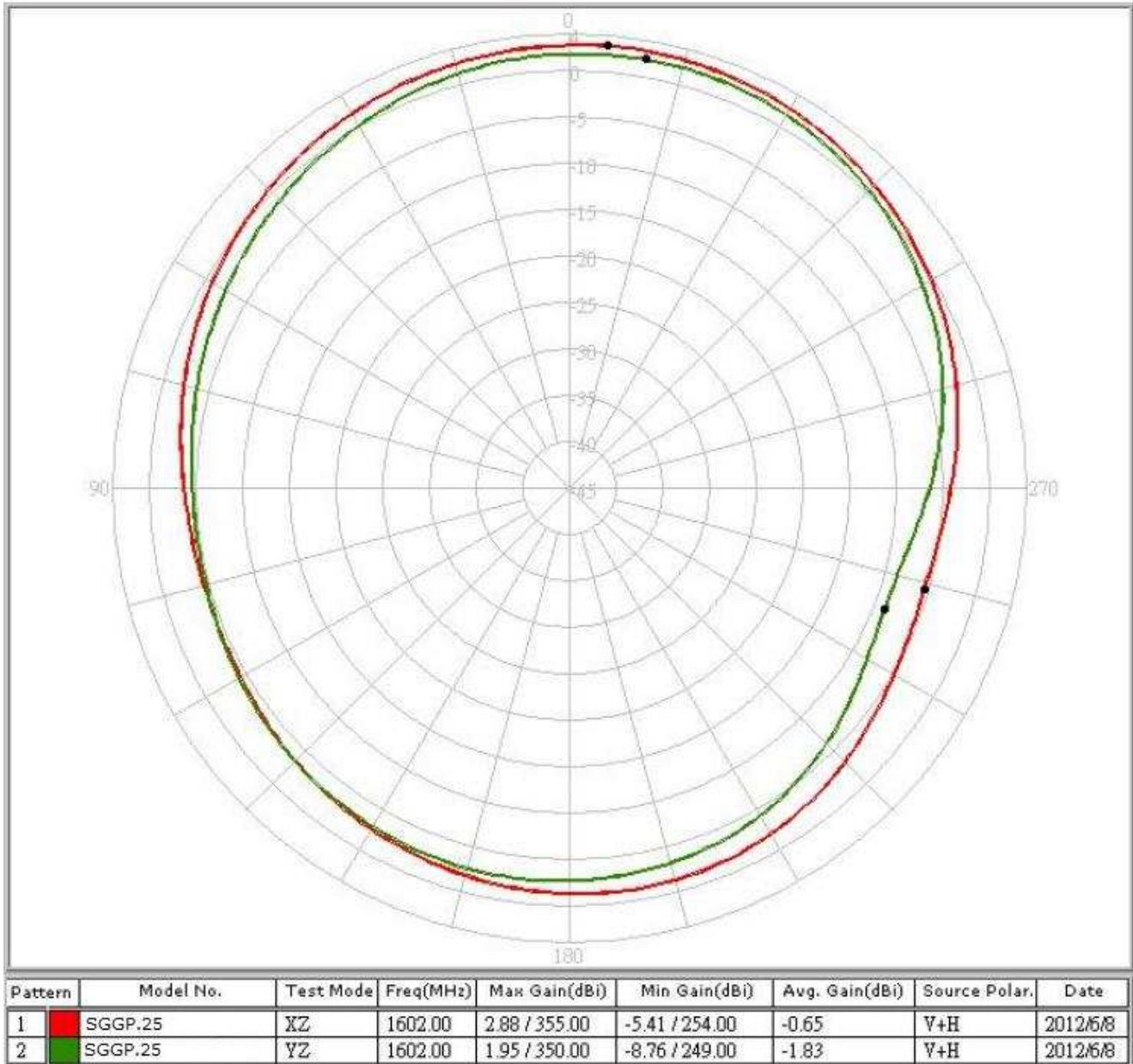
## 4. Radiation Patterns

### 4.1 1575MHz



1575.4 MHz XZ+YZ-Plane

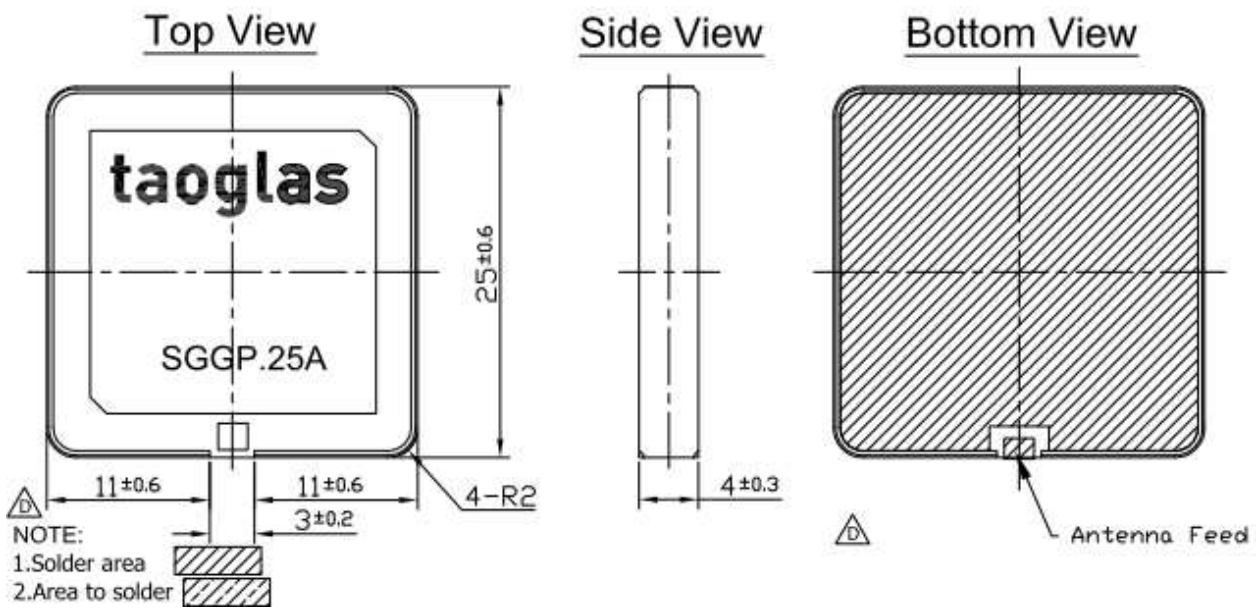
## 4.2 1602MHz



1602.0 MHz XZ+YZ-Plane

## 5. Mechanical Specifications

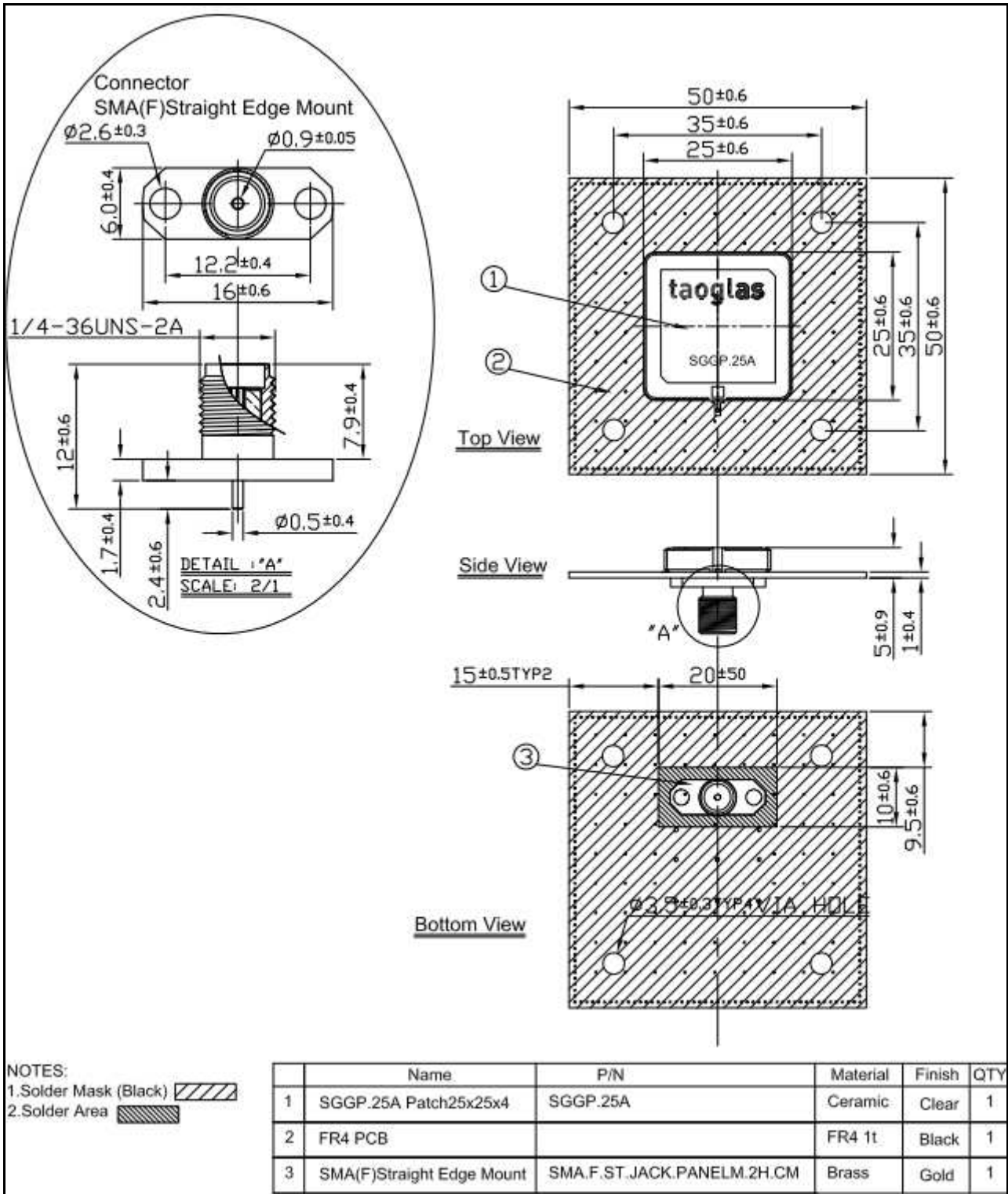
### 5.1 Antenna Dimensions and Drawing



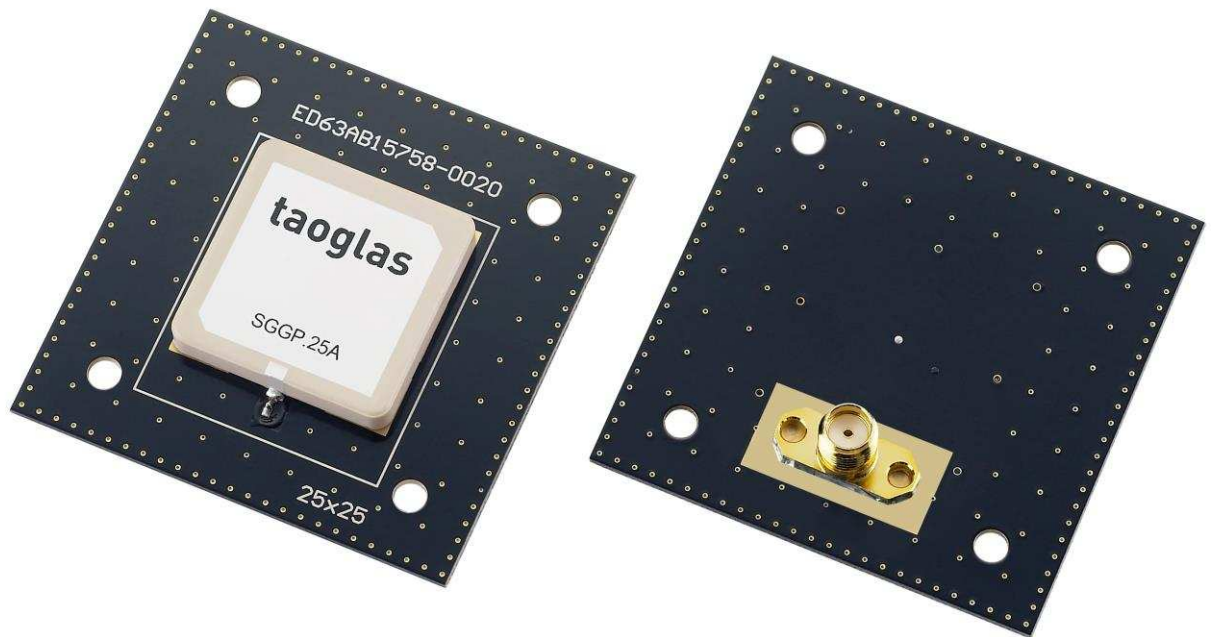
Contact Taoglas Engineering for Footprint Information at [support@taoglas.com](mailto:support@taoglas.com)



## 5.2 Test Jig and Dimension SGGPD.25A



### 5.3 SGGPD.25A





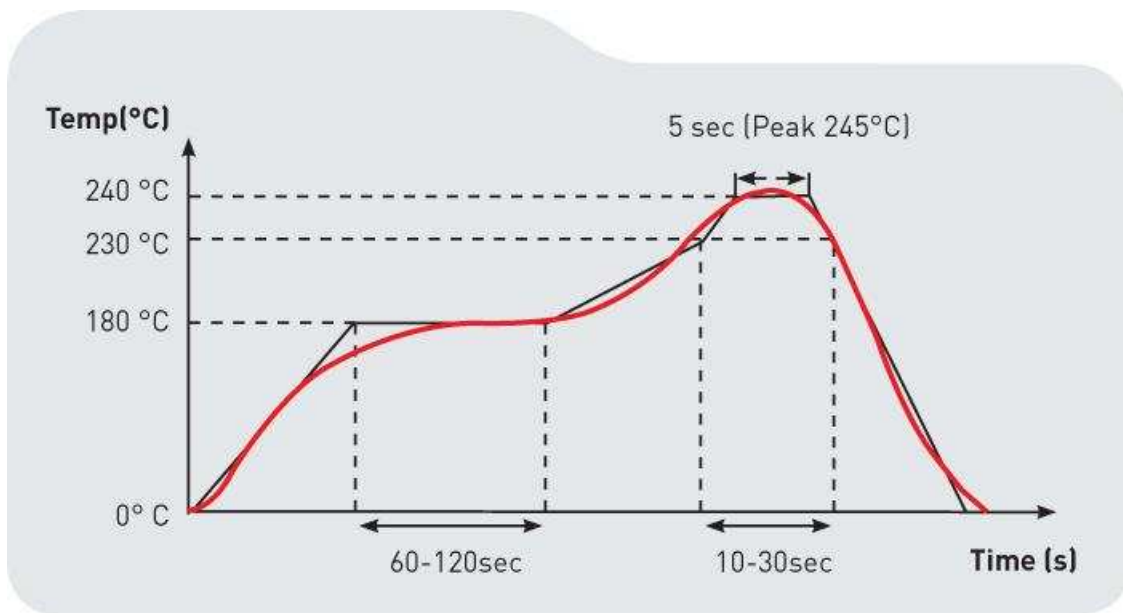
## 6. Antenna Recommended Soldering Conditions

### 6.1 Flux, Solder

- Use rosin-based flux. Don't use highly acidic flux with halide content exceeding 0.2wt%(chlorine conversion value).
- Use Sn solder.

### 6.2 Reflow soldering conditions

- Pre-heating should be in such a way that the temperature difference between solder and product surface is limited to 150°C max. Cooling into solvent after soldering also should be in such a way that temperature difference is limited to 100°C max. Unwrought pre-heating may cause cracks on the product, resulting in the deterioration of products quality.



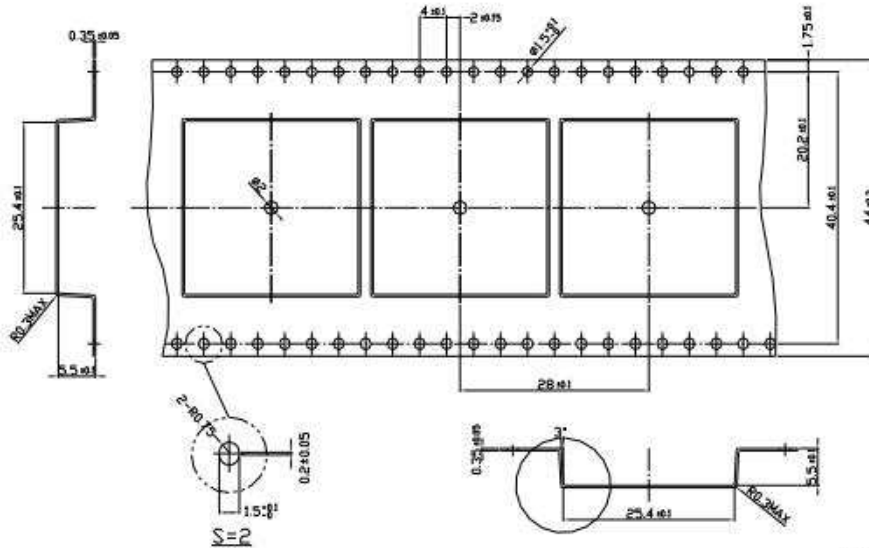
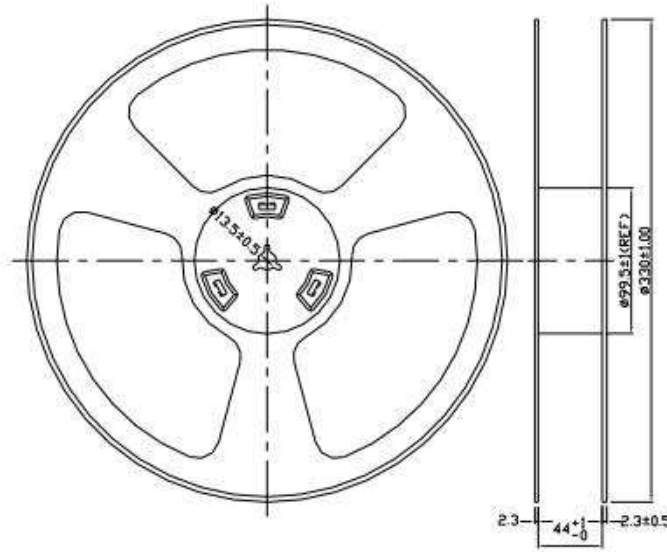
### 6.3 Reworking with soldering iron

- The following conditions must be strictly followed when using a soldering iron.

Pre-heating	150°C, 1 min
Tip temperature	290°C max
Soldering iron output	30w max
Soldering time	3 second max

# 7. Packaging

200 pcs / reel / inner carton  
 4 reels in an outer carton (800)



Unit: mm