

# Antenna

# YG0062AA Datasheet

**Antenna Services**

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# About the Document

## Revision History

Version	Date	Author	Note
-	2020-06-02	Kenny YIN	Creation of the document
1.0	2020-06-02	Kenny YIN	First official release
2.0	2021-04-28	Aria CHU	Updated all test data in the datasheets.
2.1	2021-06-17	Kenny YIN	Updated working temperature in Chapter 3.
2.2	2021-07-13	Aria CHU	Added Chapters 3 and 7.
2.3	2021-08-09	Aria CHU	Updated the VSWR data (Chapter 5.2).

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## 1 Product Description

The antenna is designed for superior performance, and can be widely used for wireless applications.

We provide comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs.

## 2 Product Features

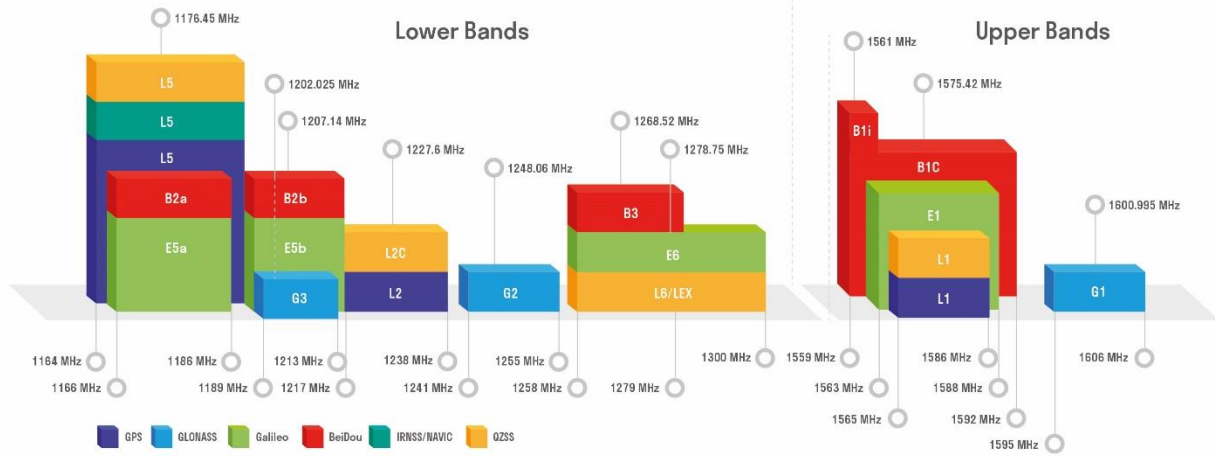
- Ceramic GNSS
- High efficiency
- Excellent performance



### 3 Product Features

GNSS Frequency Bands (MHz)					
<b>GPS</b>	<b>L1</b> Centre 1575.42 (1565–1586)	<b>L2</b> Centre 1227.6 (1217–1238)	<b>L5</b> Centre 1176.45 (1164–1189)		
	●	-	-		
<b>GLONAS S</b>	<b>G1/L10C/L10F</b> Centre 1601 (1595–1606)	<b>G2/L20C/L20F</b> Centre 1248.06 (1241–1255)	<b>G3/L30C</b> Centre 1202.025 (1189–1213)		
	●	-	-		
<b>GALILEO</b>	<b>E1</b> Centre 1575.42 (1563–1588)	<b>E5a</b> Centre 1176.45 (1166–1187)	<b>E5b</b> Centre 1207.14 (1197–1218)	<b>E6</b> Centre 1278.75 (1258–1300)	
	●	-	-	-	
<b>BEIDOU</b>	<b>B1I</b> Centre 1561.098 (1559–1564)	<b>B1C (BeiDou-3)</b> Centre 1575.42 (1559–1592)	<b>B2a/B2I</b> Centre 1176.45 (1166–1187)	<b>B2b</b> Centre 1207.14 (1197–1217)	<b>B3</b> Centre 1268.52 (1258–1279)
	●	●	-	-	-
<b>QZSS</b>	<b>L1</b> Centre 1575.42 (1573–1578)	<b>L2C</b> Centre 1227.6 (1226–1229)	<b>L5</b> Centre 1176.45 (1166–1187)	<b>L6</b> Centre 1278.75 (1257–1300)	
	●	-	-	-	
<b>IRNSS</b>	<b>L5</b> Centre 1176.45 (1164–1189)				
	-				

### GNSS Bands and Constellations





## 4 Product Specifications

- The antenna is tested on a 25 mm × 25 mm PCB.

### Passive Electrical Specifications

Frequency Range	1575.42 ±3 MHz, 1602 ±3 MHz
Input Impedence	50 Ω
VSWR	≤ 3.5
Gain	≤ 2.0 dBi
Polarization Type	RHCP

### Mechanical Specifications

Antenna Size	25 mm × 25 mm × 4 mm
Casing	Ceramics
Connector Type	-
Working Temperature	-40 °C to +85 °C
Radome Color	-

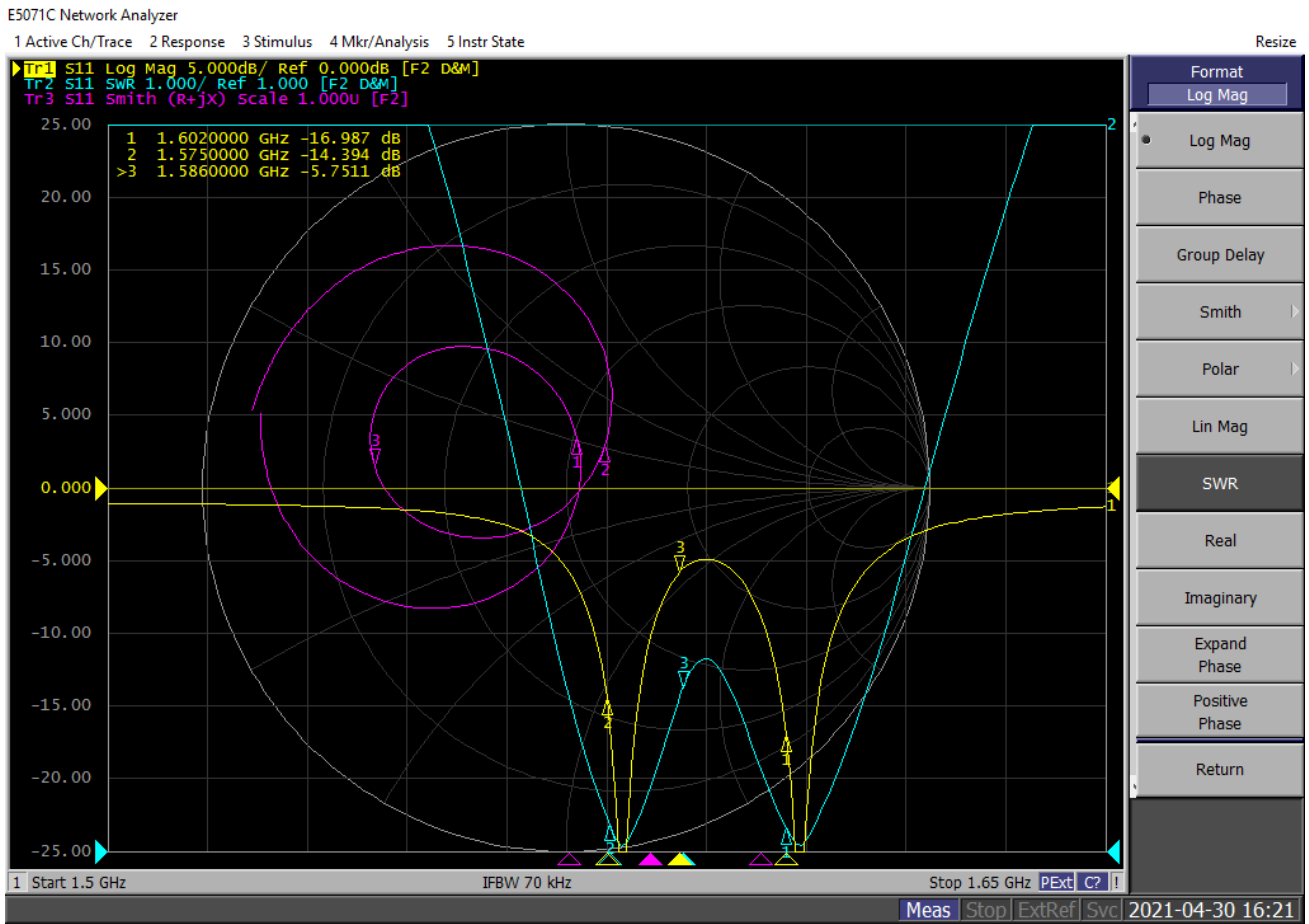
## 5 Overall Performance

### 5.1. Test Environment

- KEYSIGHT VNA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 400 MHz – 8.0 GHz

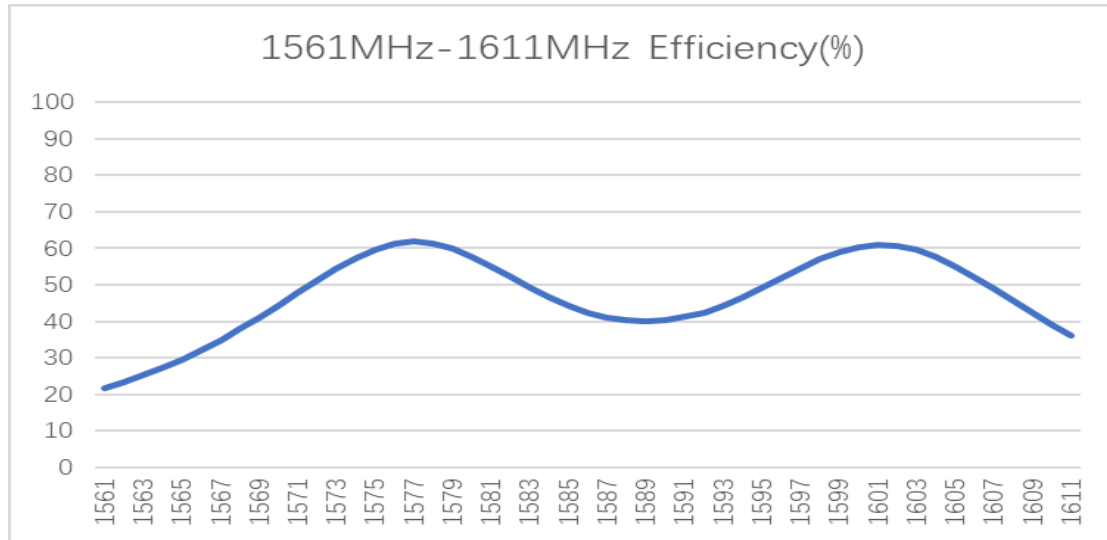


## 5.2. VSWR



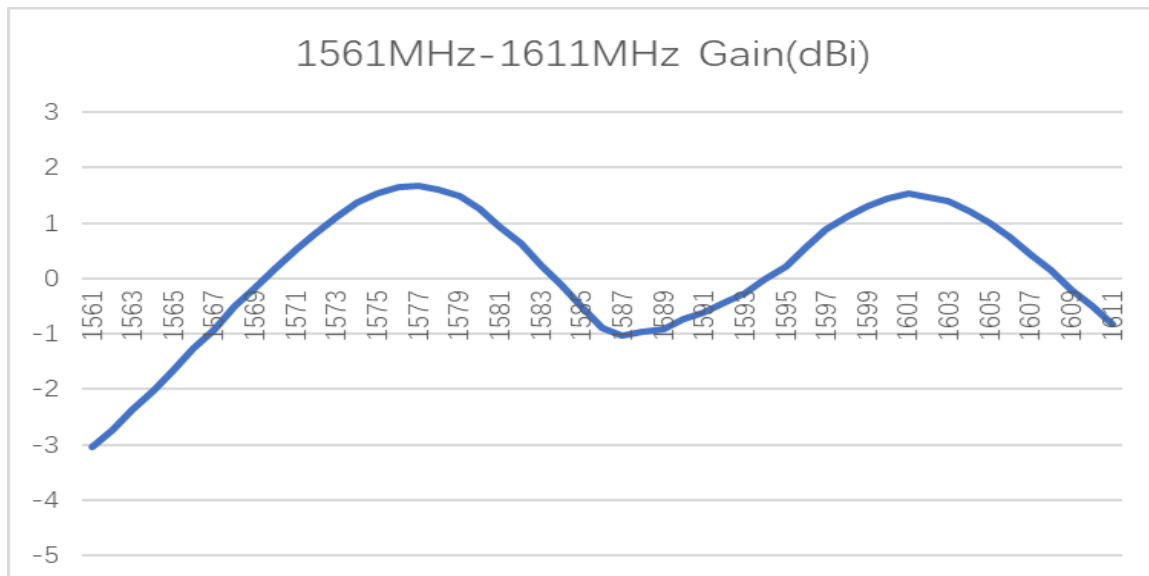
Frequency (MHz)	1575	1602
RL	-14.39	-16.98
VSWR	1.47	1.33

### 5.3. Efficiency



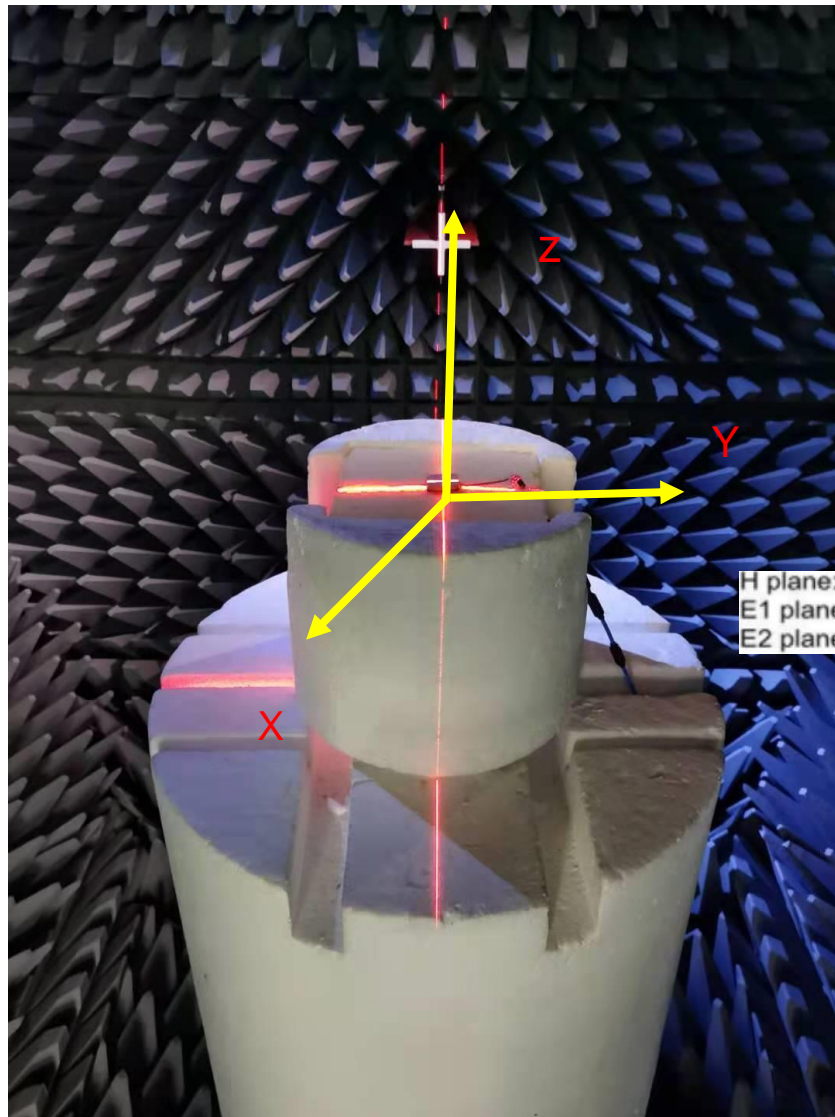
<b>Frequency (MHz)</b>	1575	1602
<b>Efficiency (%)</b>	59.81	60.60

### 5.4. Gain



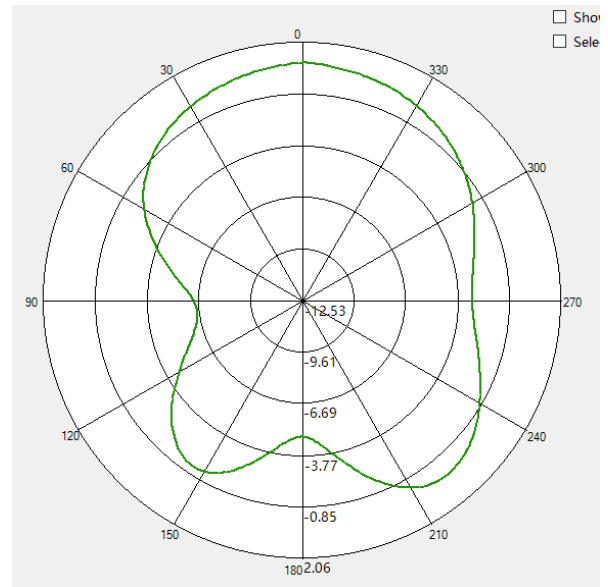
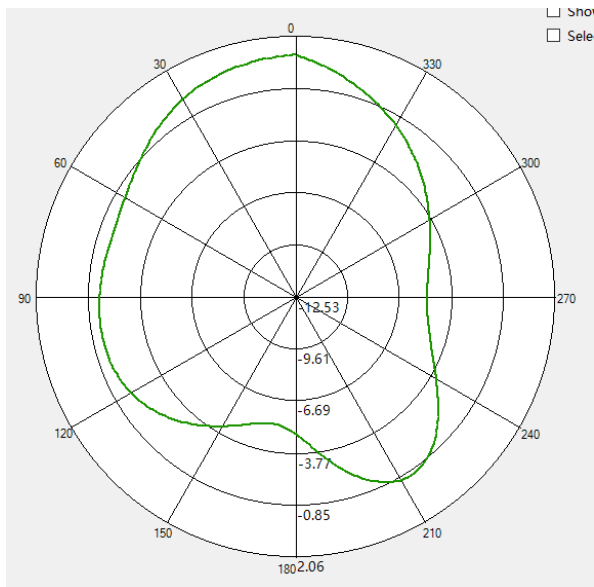
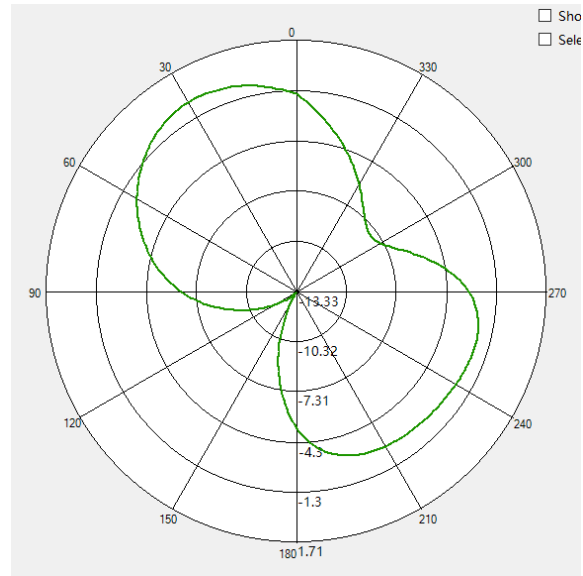
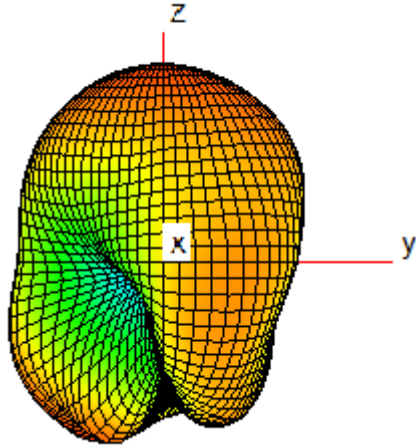
<b>Frequency (MHz)</b>	1575	1602
<b>Gain (dBi)</b>	1.54	1.46

### 5.5. Radiation Pattern

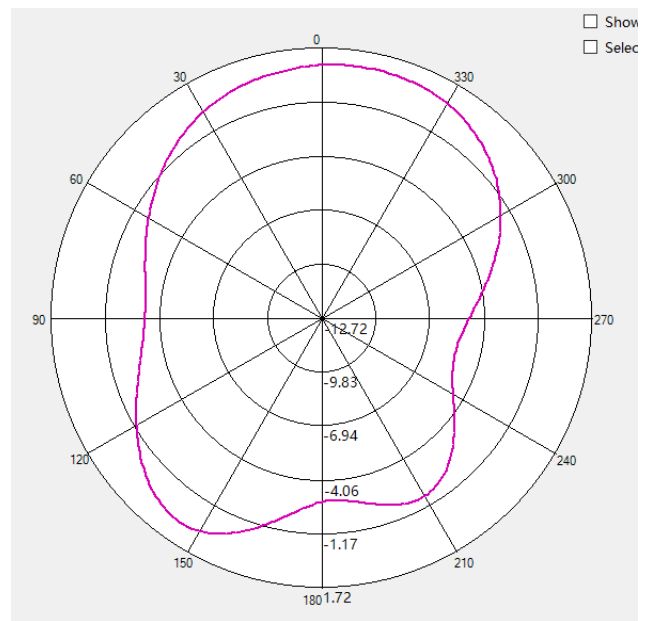
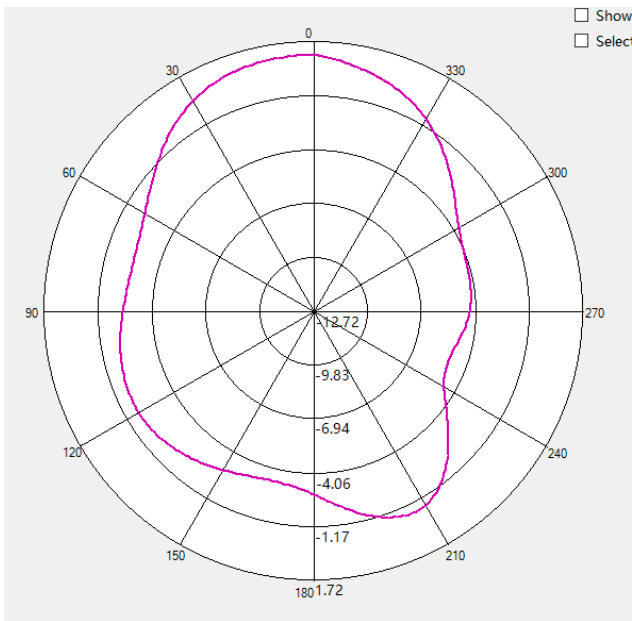
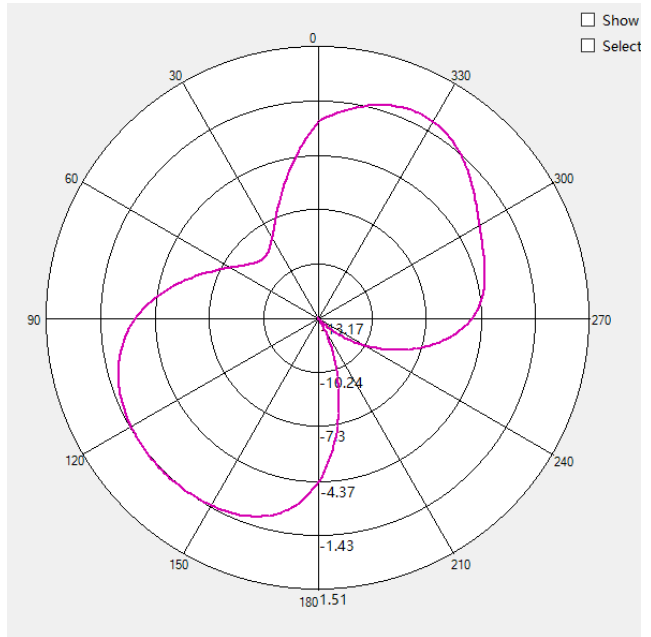
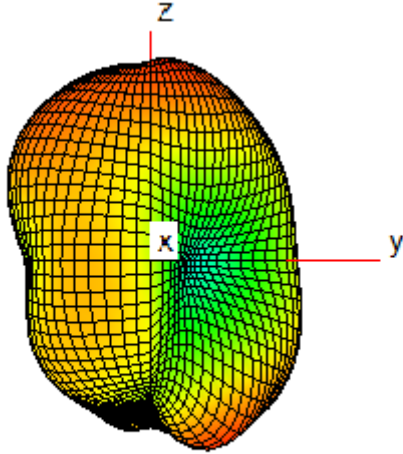


H plane: the tangent of XY  
E1 plane: the tangent of XZ  
E2 plane: the tangent of YZ

**5.5.1. 1575 MHz**

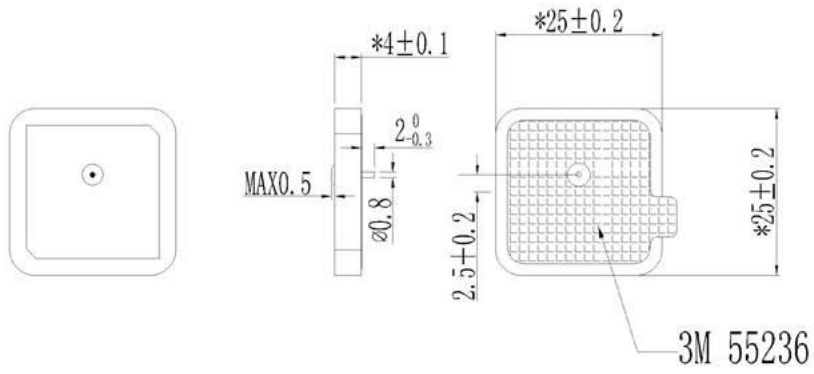


**5.5.2. 1602 MHz**



## 6 Product Size

RoHS



Unit:mm



## 7 PCB Footprint Recommendation

