

# Antenna

# YCGO012AA Datasheet

## Antenna Services

Version: 1.0

Date: 2021-03-29

Status: Released



Build a Smarter World

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# About the Document

## Revision History

Version	Date	Author	Note
-	2021-03-29	Kenny YIN	Creation of the document
1.0	2021-03-29	Kenny YIN	First official release

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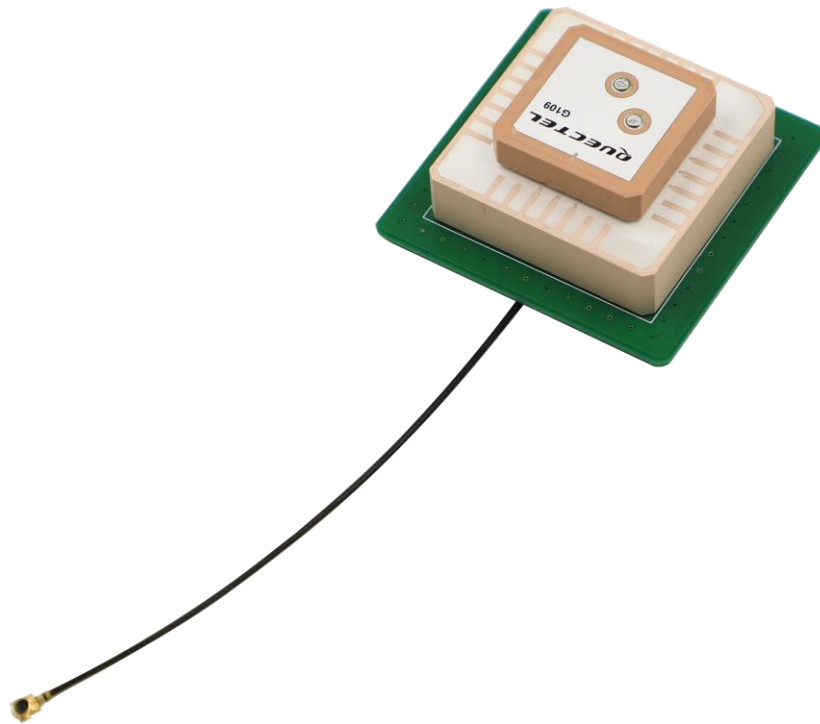
## 1 Product Description

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

- GPS L1/L5
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency	GPS L1: 1575.42 MHz GPS L5: 1176.45 MHz
Input Impedence	50Ω
Gain	L1: 1.0 dBic typ. L5: -4.0 dBic typ.
Axial Ratio	L1: 3.0 dB Max L5: 3.0 dB Max
Polarization Type	R.H.C.P

#### Mechanical Specifications

Antenna Size	50 mm × 50 mm × 20.46 mm
Casing	Ceramics
Connector Type	IPEX MHF I
Working Temperature	-40 °C ~ +80 °C
Radome Color	/

## 4 Overall Performance

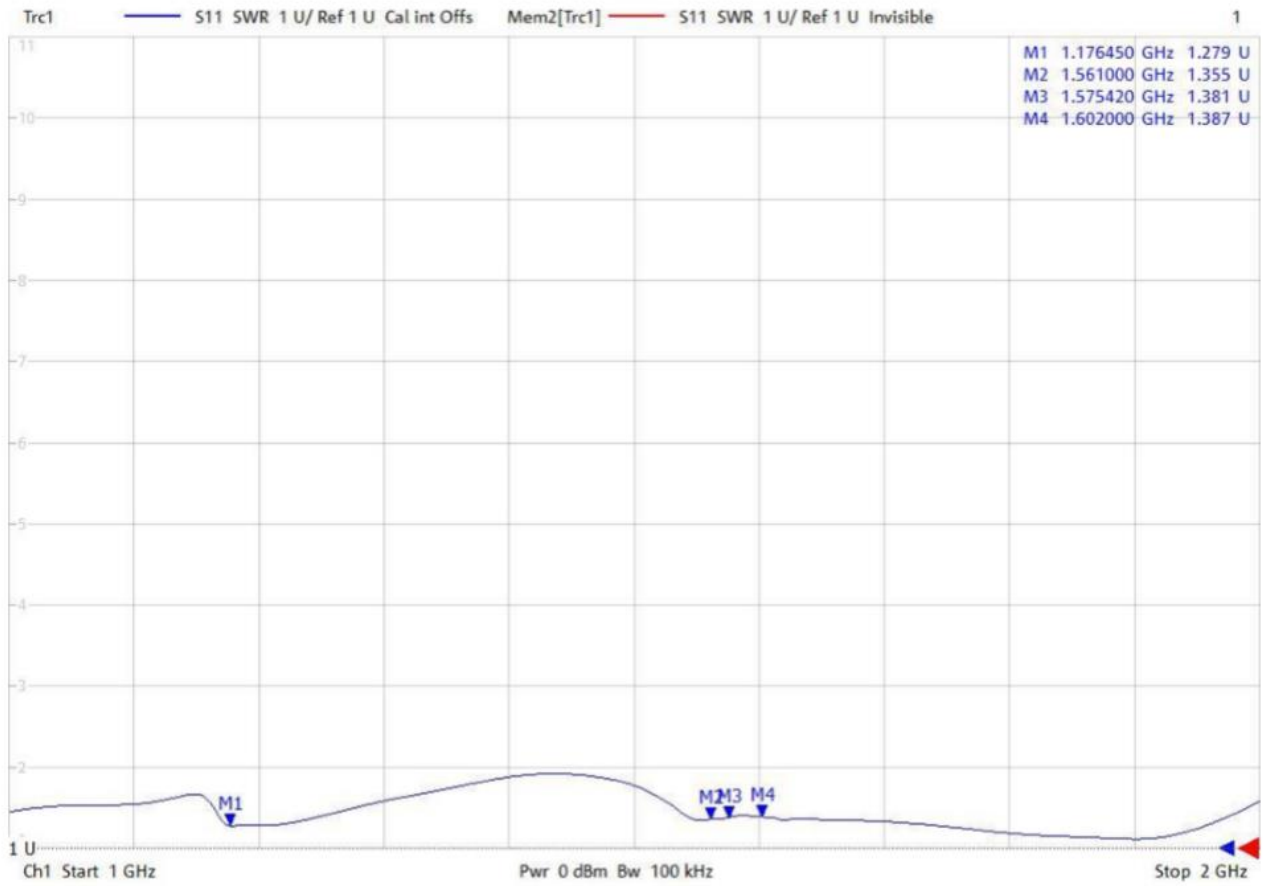
### 4.1. Test Environment

- KEYSIGHT VNA Network Analyzer E5063A 100 kHz – 6.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 400 MHz – 6.0 GHz

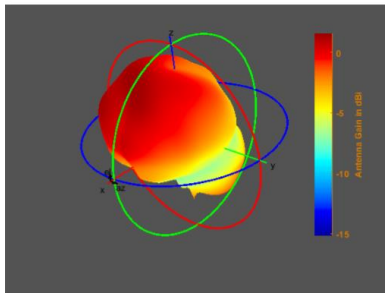




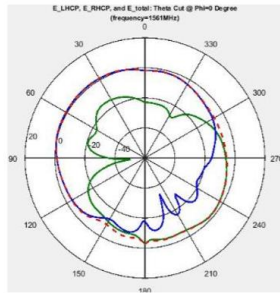
### 4.2. VSWR



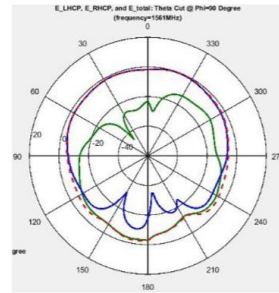
### 4.3. 2D&3D Circular Polarization Gain Pattern: RHCP (Unit: dBic)



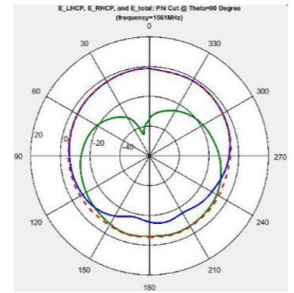
**1561MHz**



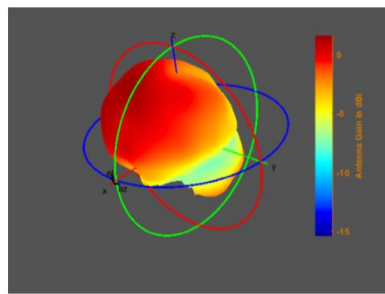
**XZ**



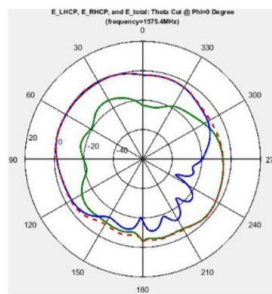
**YZ**



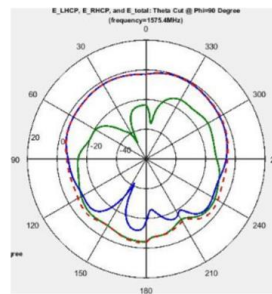
**XY**



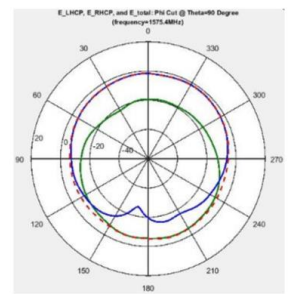
**1575.42MHz**



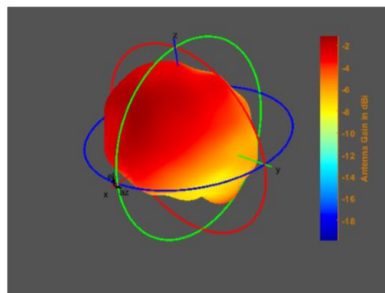
**XZ**



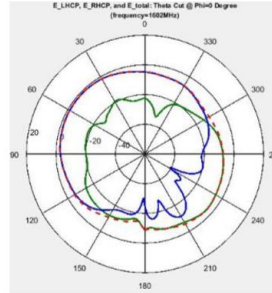
**YZ**



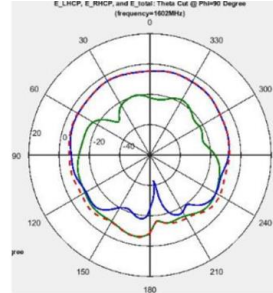
**XY**



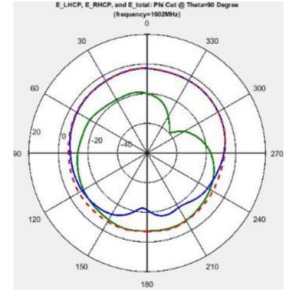
**1602MHz**



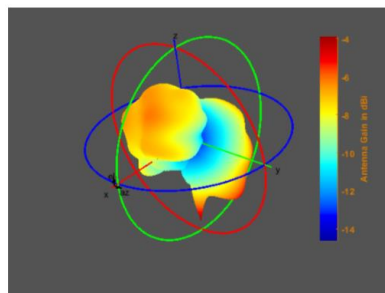
**XZ**



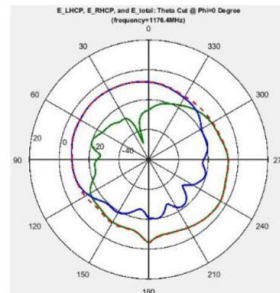
**YZ**



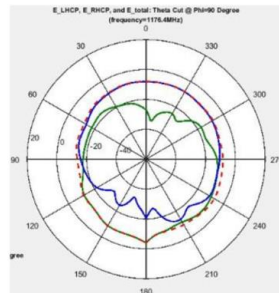
**XY**



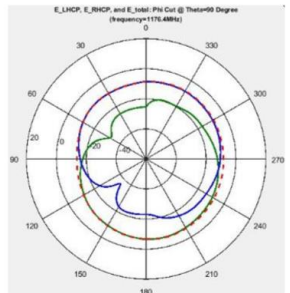
**1176.45 MHz**



**XZ**



**YZ**

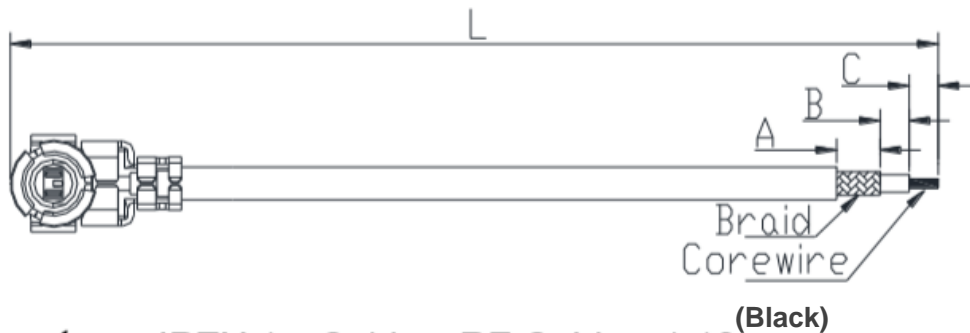
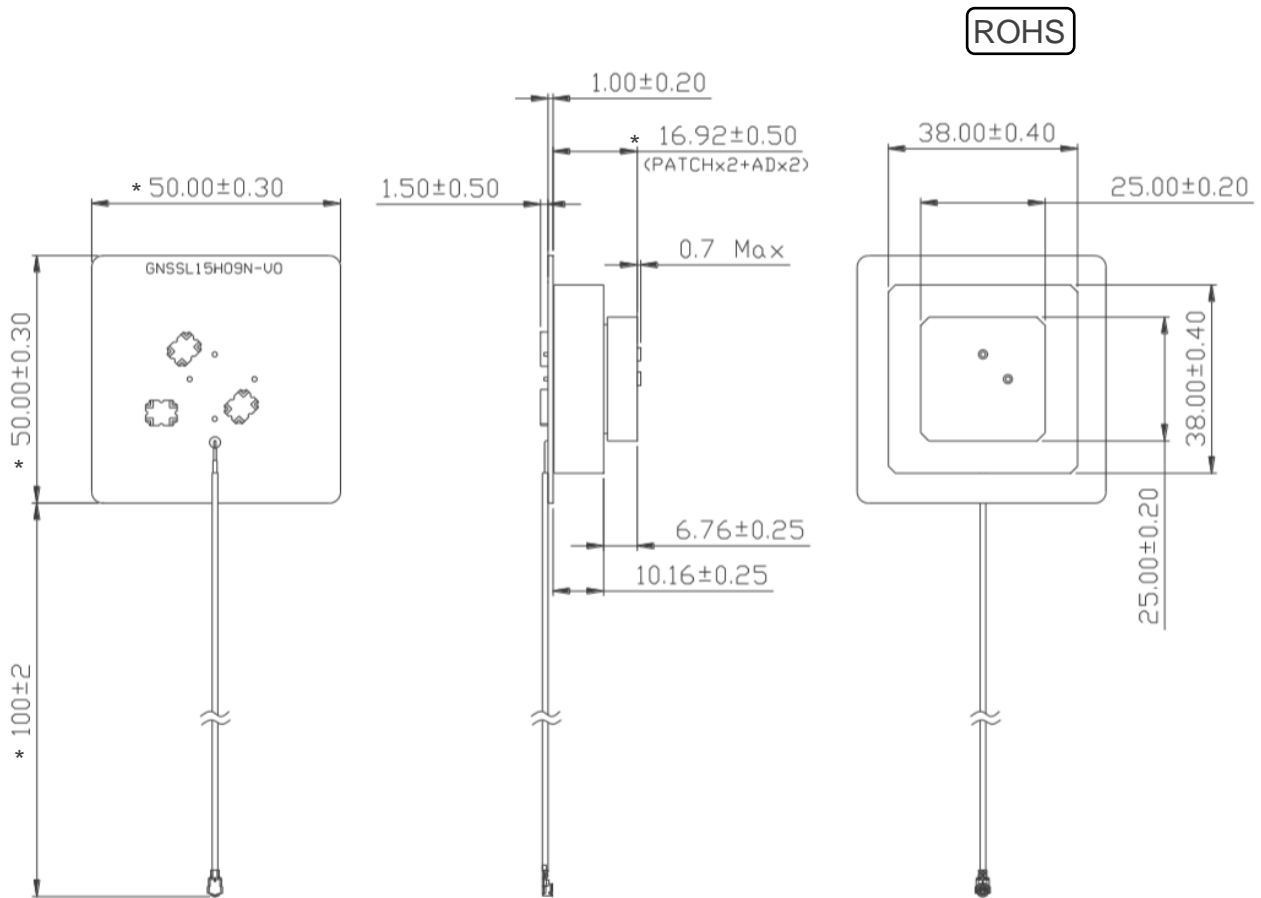


**XY**

#### 4.4. Antenna Passive Test Result

Frequency(MHz)	Peak Gain(dBi)	Efficiency (%)
1172	-3.74	20.39
1174	-3.74	20.86
1176.45	-3.90	19.87
1178	-4.08	18.03
1180	-4.40	17.88
1557	1.07	42.29
1559	1.17	41.86
1561	1.23	43.97
1563	1.50	44.50
1565	1.21	42.87
1571	1.29	42.67
1573	1.17	43.76
1575.42	1.01	43.65
1577	0.94	40.90
1579	0.81	40.88

### 5 Product Size



**Connector** : IPEX 1 , **Cable** : RF Cable  $\phi$ 1.13

**L** :  $112 \pm 2$ mm    **A** :  $2.5 \pm 0.5$ mm    **B** :  $2.5 \pm 0.5$ mm    **C** :  $1.5 \pm 0.5$ mm