

Antenna

YG0032AA Datasheet

Antenna Services

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About the Document

Revision History

Version	Date	Author	Note
-	2021-04-14	Kenny YIN	Creation of the document
1.0	2020-10-10	Kenny YIN	First official release
1.1	2021-01-19	Kenny YIN	Updated the antenna image in Chapter 2.
2.0	2021-05-06	Aria CHU	Updated all test data in the datasheets.
2.1	2021-07-25	Aria CHU	Updated working temperature (Chapter 3).
2.2	2021-11-30	Aria CHU	Updated the product description in Chapter 1.

Contents

About the Document.....	3
Contents.....	4
1 Product Description.....	5
2 Product Features	5
3 Product Specifications	6
4 Overall Performance.....	7
4.1. Test Environment	7
4.2. Return Loss.....	8
4.3. Efficiency	9
4.4. Gain.....	10
4.5. LNA Gain.....	11
4.6. Radiation Pattern	12
4.6.1. 1560.00 MHz.....	13
4.6.2. 1575.00 MHz.....	14
5 Product Size	15

1 Product Description

This Quectel GNSS antenna adopts a diversity of forms to guarantee the most suitable polarization type. Quectel's positioning products support single-band or multi-band operation modes to meet various high-precision positioning requirements of customers' products. Quectel also provides both passive and active antennas to satisfy the customer demand for high gain. Such antenna supports different installation or connection methods such as pin mount, surface mount, magnetic mount, internal cable, and external SMA. Customized connector type and cable length are provided according to requirements.

2 Product Features

- GPS + BD
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	Beidou: 1561 ±5 MHz; GPS: 1575 ±5 MHz
Input Impedance	50 Ω
VSWR	≤ 4.0
Gain	< 1.0 dBi
Polarization Type	RHCP

LNA Electrical Properties

Center Frequency	1568 MHz
Gain	28 ±3 dBi
Noise Figure	Typ. 1.5 dB (25 ±5 °C)
Output VSWR	< 2.0
Input VSWR	< 2.0
Voltage	DC 2.7–3.6 V
Current	15–20 mA (Measuring Voltage: 3.3 V)
Impedance	50 Ω

Mechanical Specifications

Antenna Size	18 mm × 18 mm × 6.6 mm
Casing	-
Connector Type	IPEX MHF I
Working Temperature	-40 °C to +85 °C
Radome Color	-

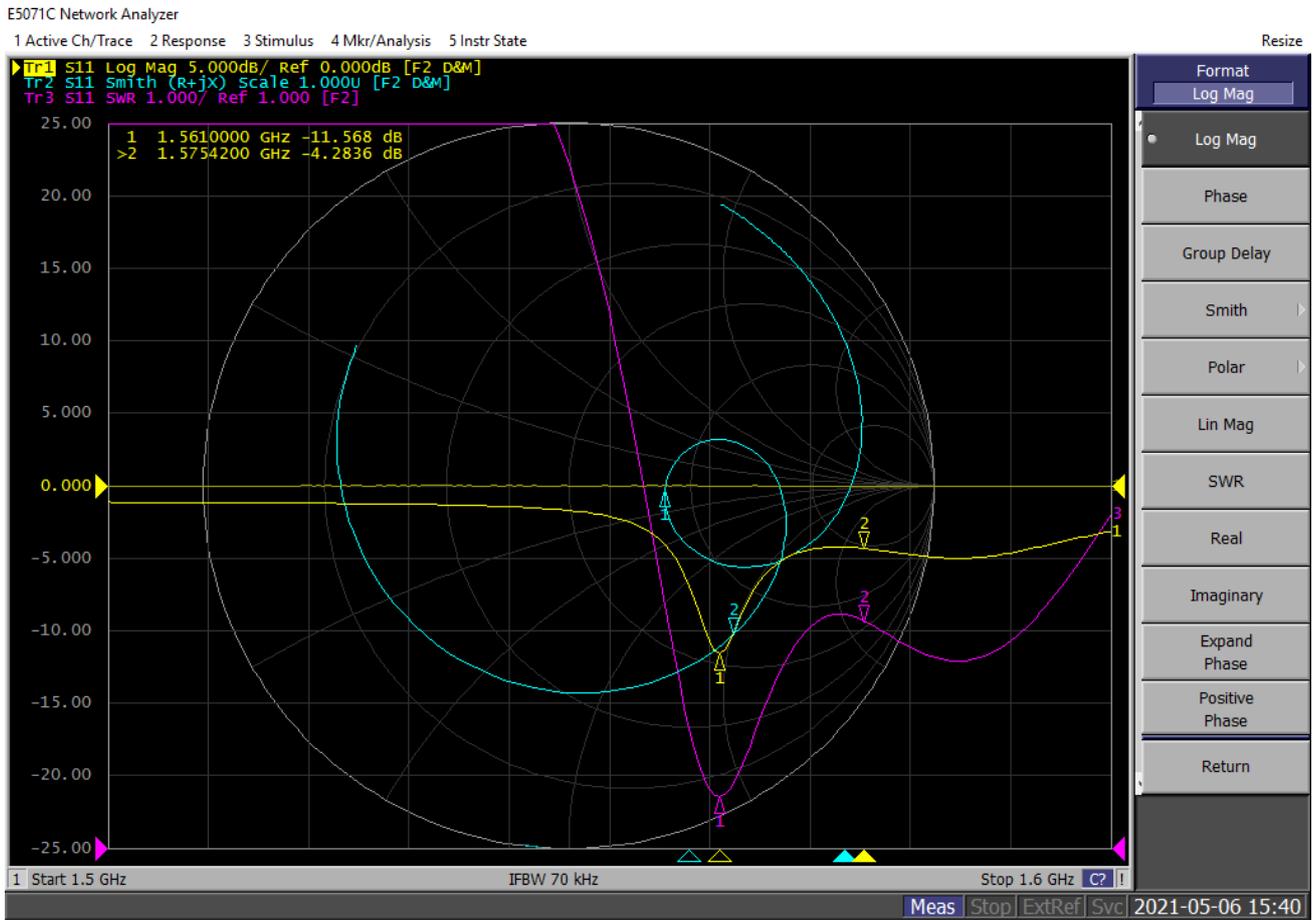
4 Overall Performance

4.1. Test Environment

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

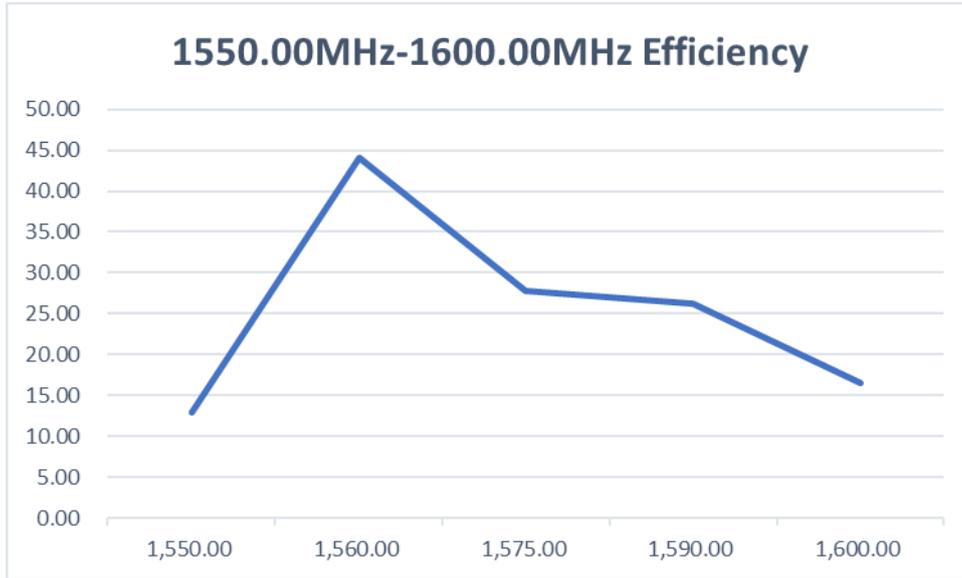


4.2. Return Loss



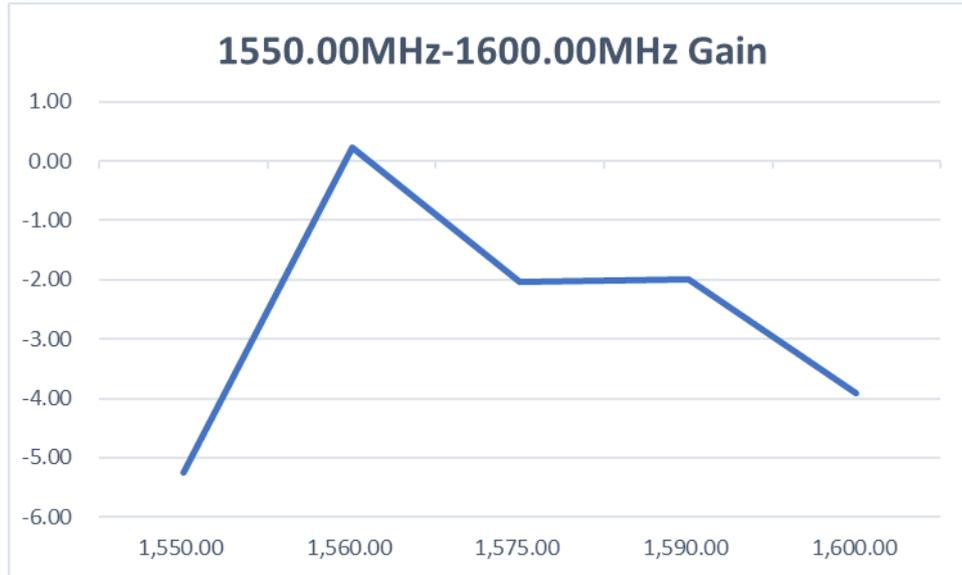
Frequency (MHz)	1561	1575
Return Loss	-11.57	-4.28

4.3. Efficiency



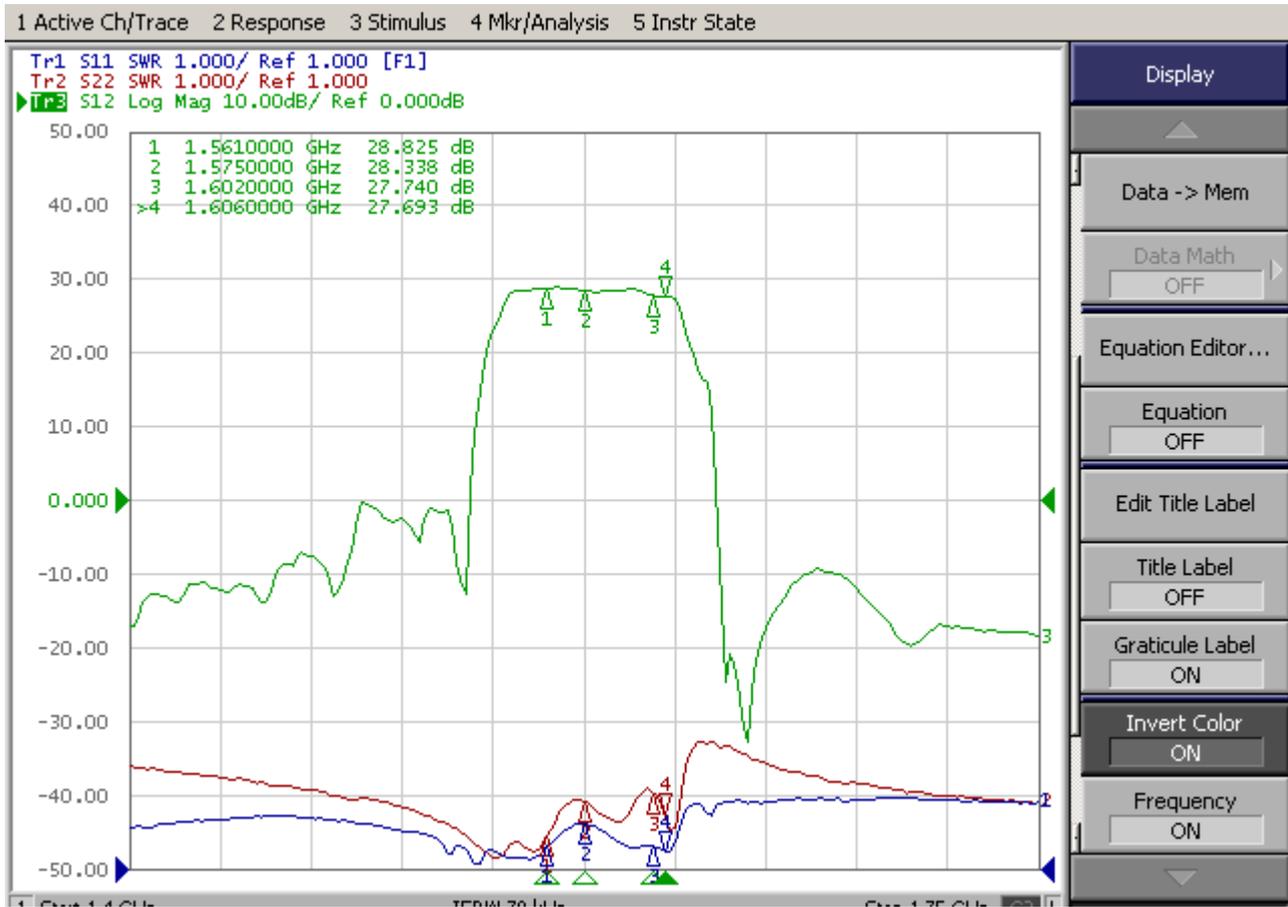
Frequency (MHz)	1561	1575
Efficiency (%)	44.26	27.83

4.4. Gain

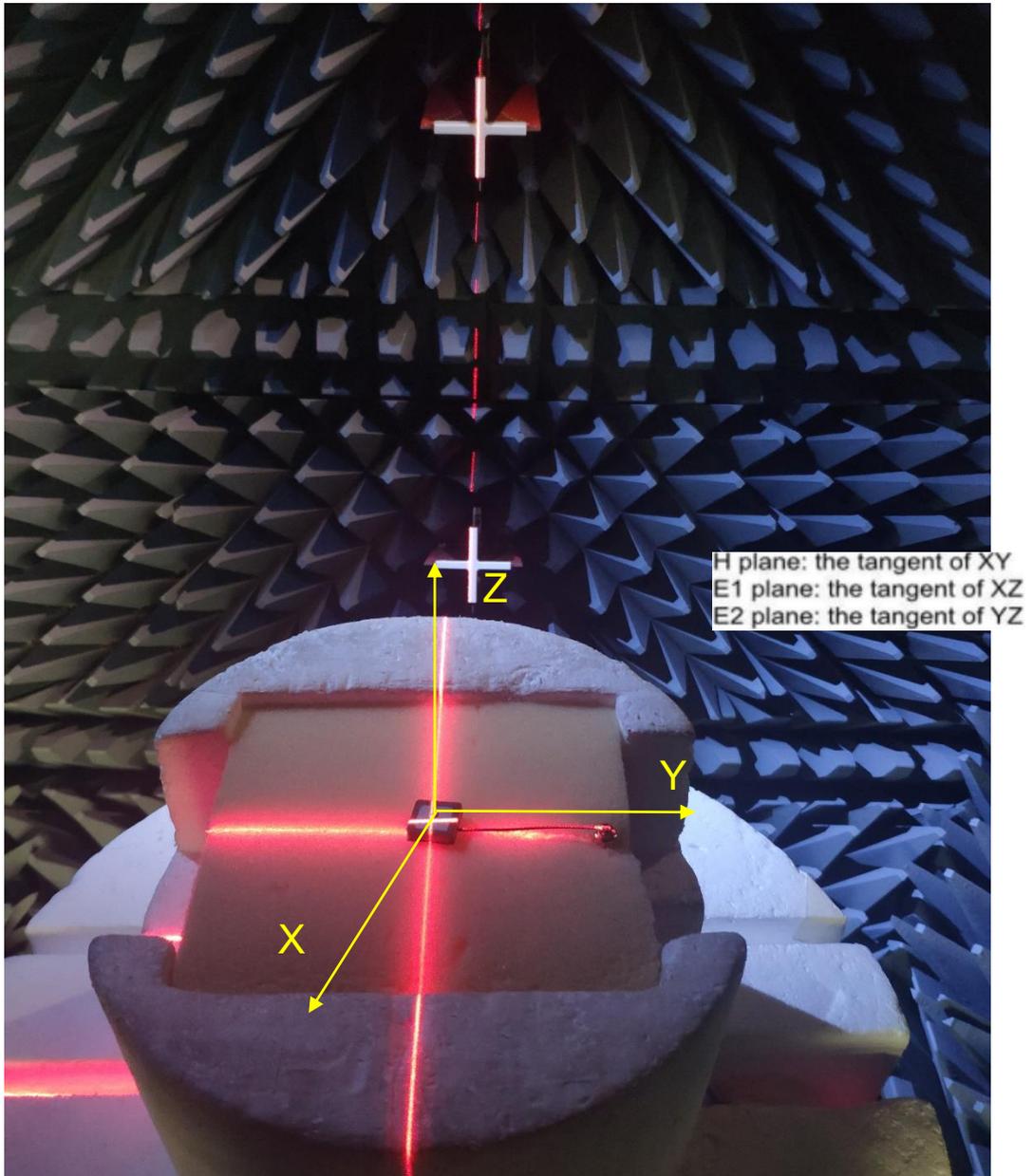


Frequency (MHz)	1561	1575
Gain (dBi)	0.12	-2.05

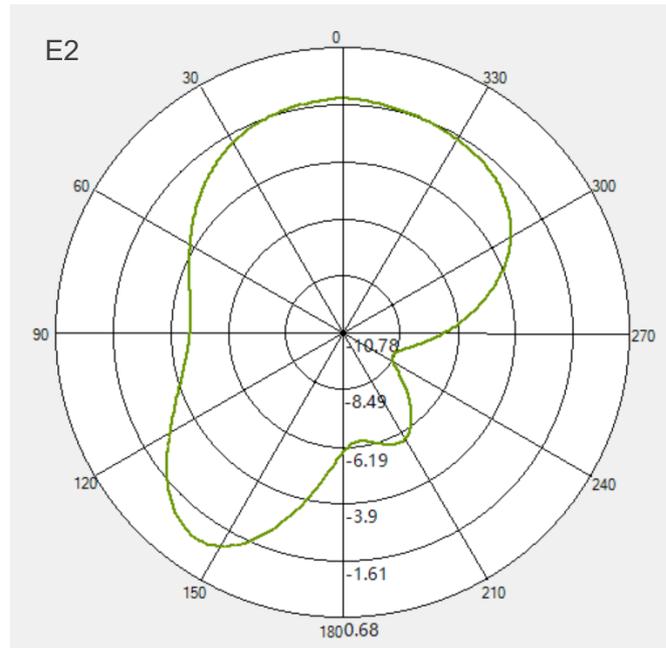
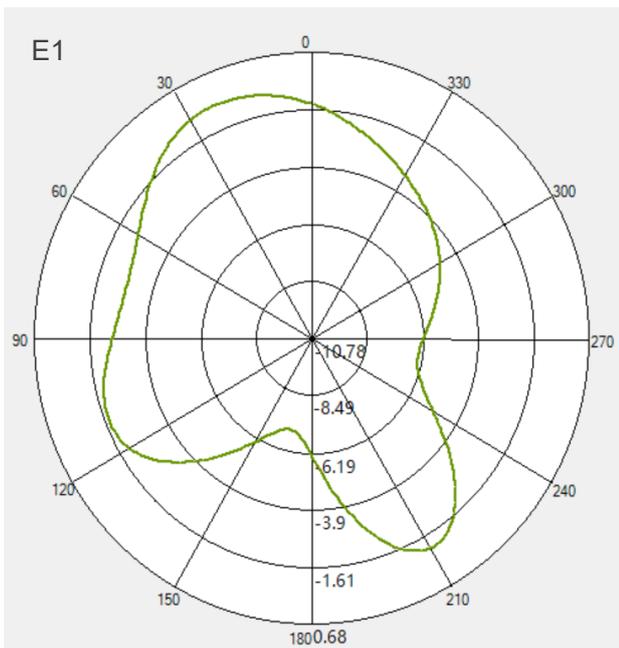
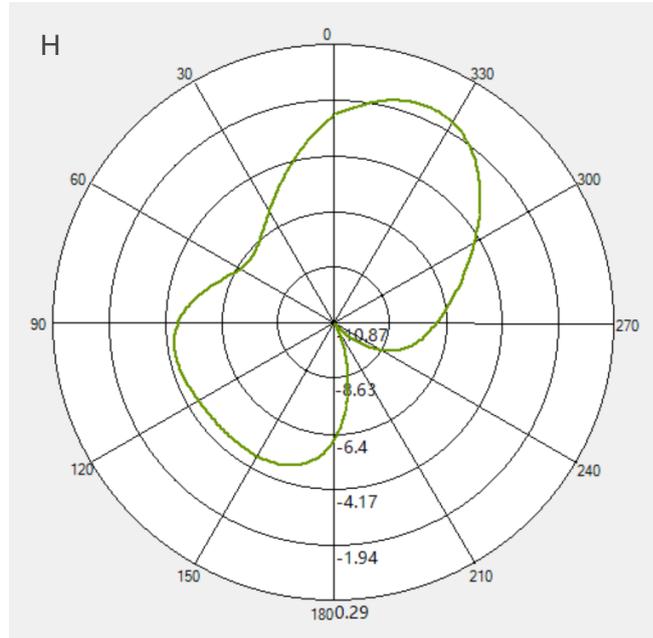
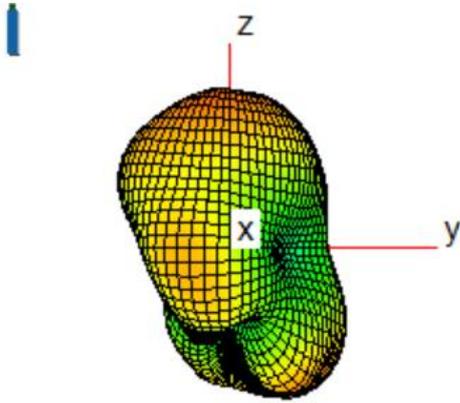
4.5. LNA Gain



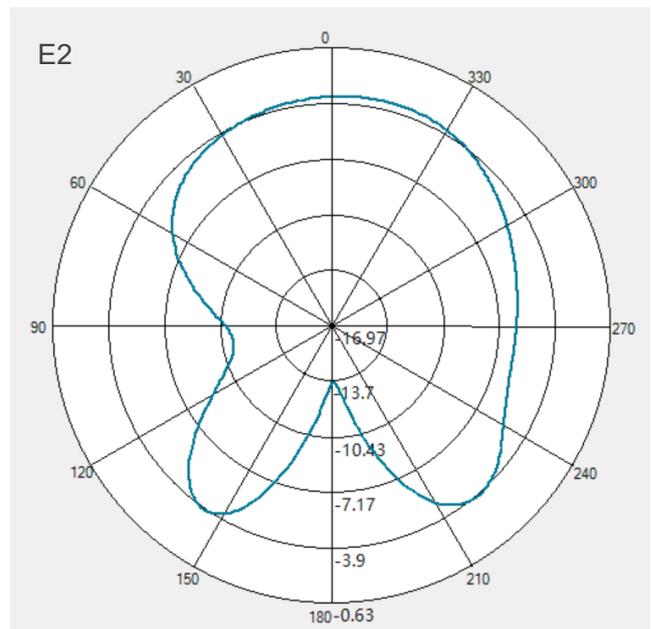
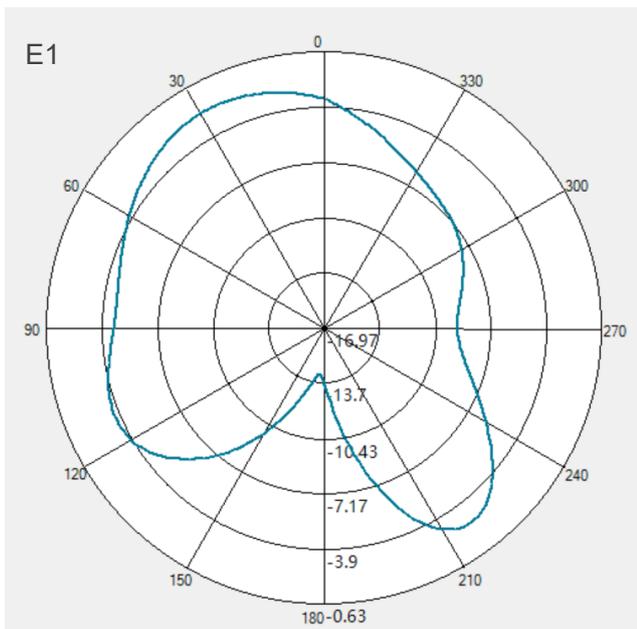
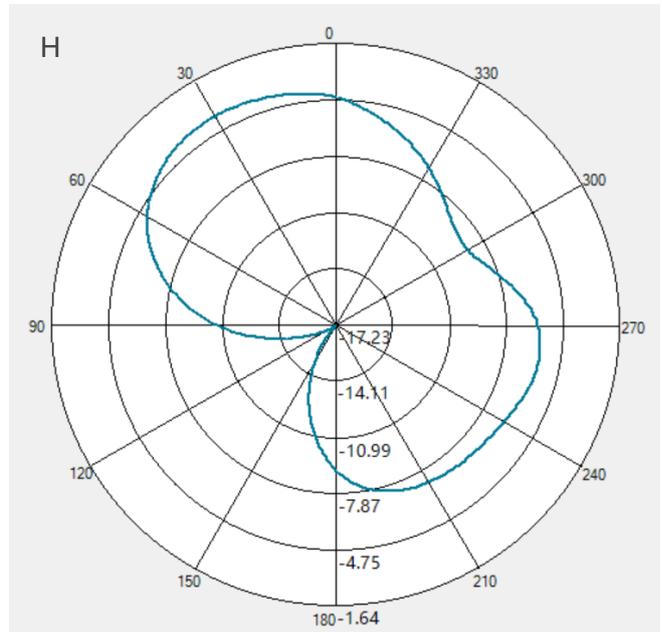
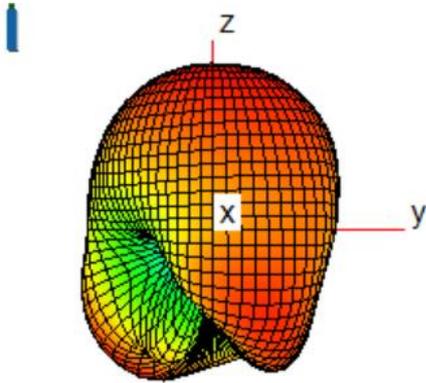
4.6. Radiation Pattern



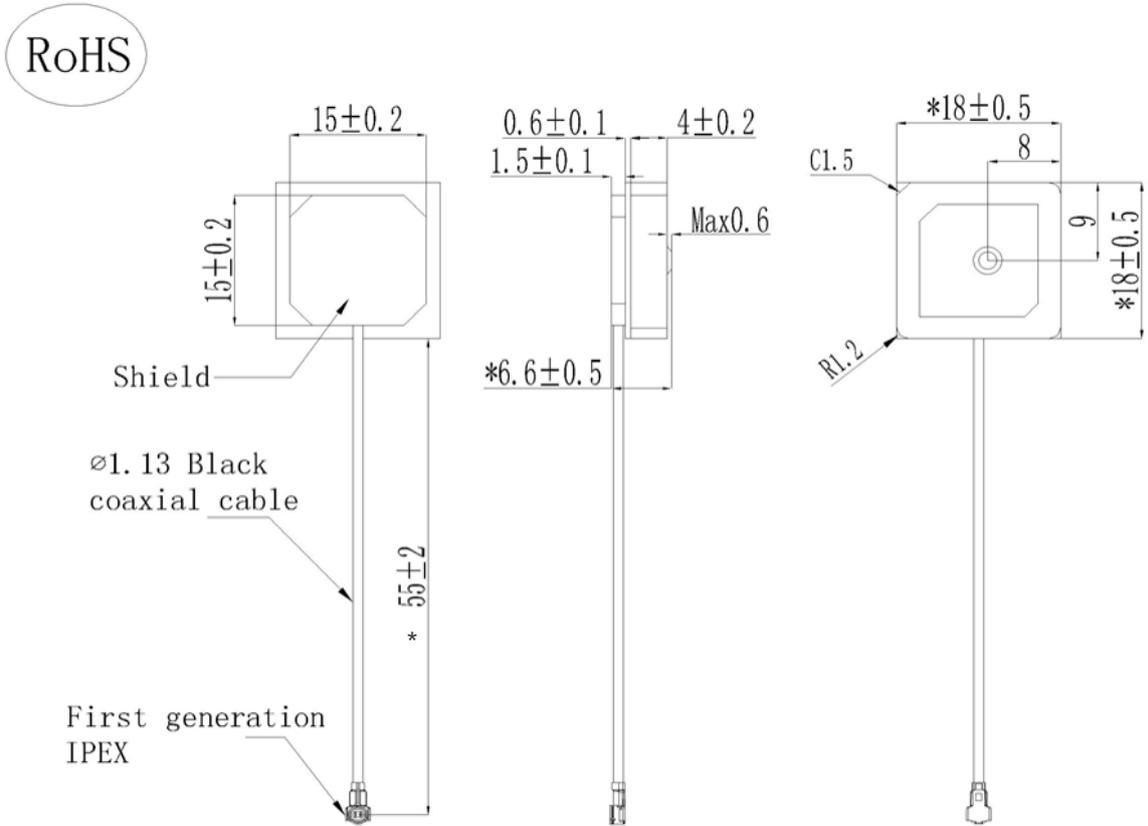
4.6.1. 1560.00 MHz



4.6.2. 1575.00 MHz



5 Product Size



Unit:mm