

Antenna

YFGA001AA Datasheet

Antenna Services

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Quectel Wireless Solutions Co., Ltd.

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

Tel: +86 21 5108 6236

Email: info@quectel.com

Or our local offices. For more information, please visit:

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About the Document

Revision History

Version	Date	Author	Note
-	2021-05-25	Kenny YIN/ Aria CHU	Creation of the document
1.0	2021-05-25	Kenny YIN/ Aria CHU	First official release
2.0	2021-06-17	Aria CHU	Updated all test data in this datasheet.
2.1	2021-06-25	Aria CHU	Updated the antenna picture in Chapter 2.
2.2	2021-12-03	2021-06-25	Updated the product description in Chapter 1.

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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.

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/L2/L5/L6
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	1160–1270 MHz; 1560–1605 MHz
Input Impedance	50 Ω
VSWR	≤ 2.0
Gain	≤ 3.6 dBi
Polarization Type	Linear

Mechanical Specifications

Antenna Size	74.56 mm x 24.5 mm
Casing	FPC
Connector Type	IPEX MHF I
Working Temperature	-40 °C to +85 °C
Radome Color	Black

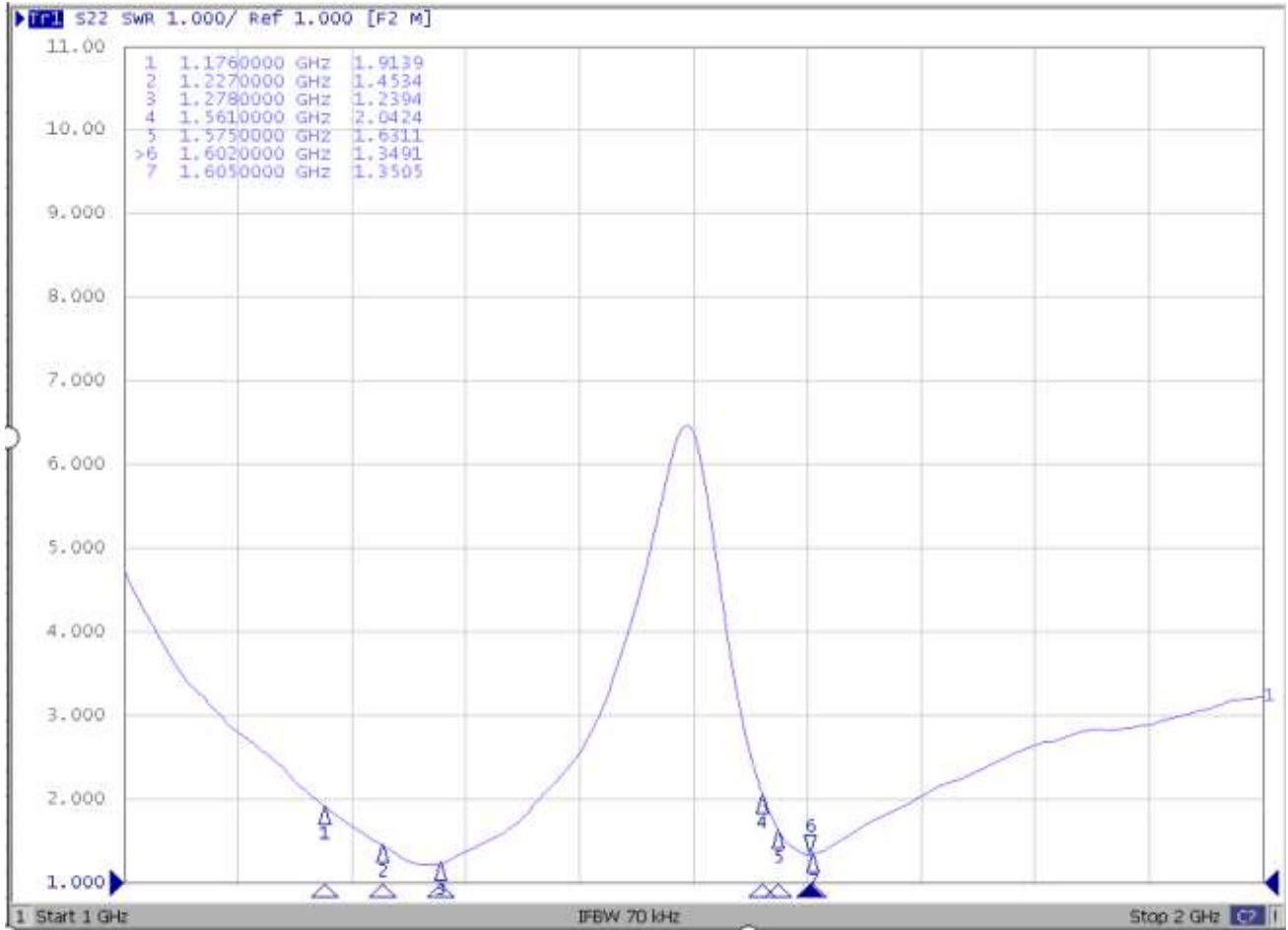
4 Overall Performance

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

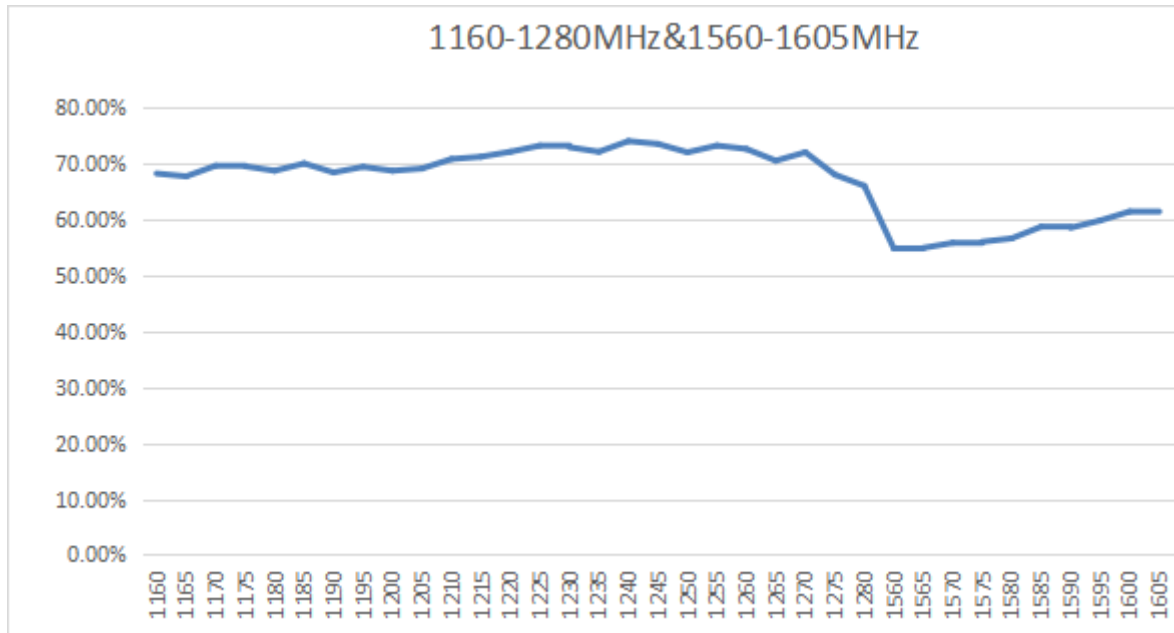


4.2. VSWR



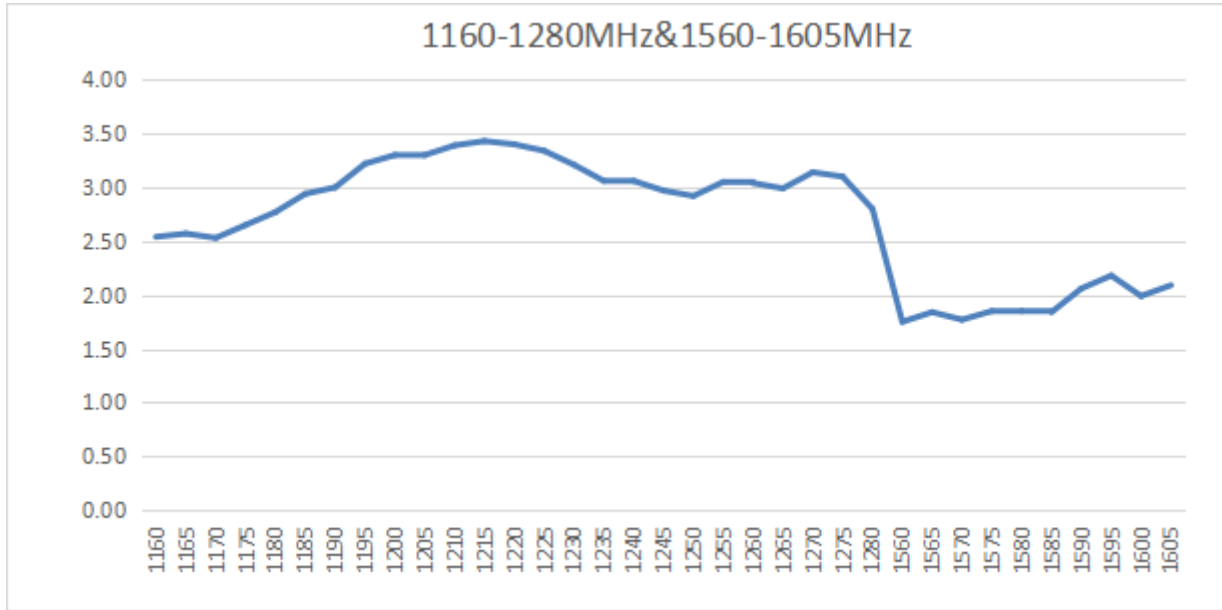
Frequency (MHz)	1176	1227	1278	1561	1575	1602
VSWR	1.91	1.45	1.24	2.04	1.63	1.35

4.3. Efficiency



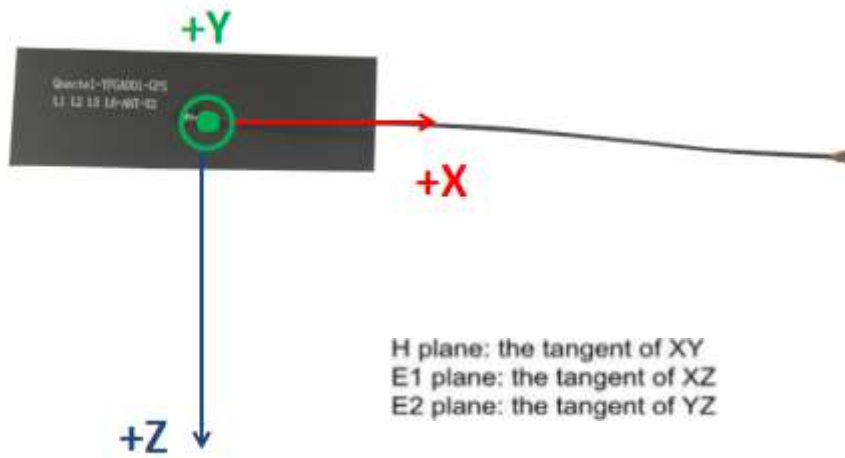
Frequency (MHz)	1175	1225	1280	1560	1575	1602
Efficiency (%)	69.5	73.2	66.2	54.8	56	60

4.4. Gain

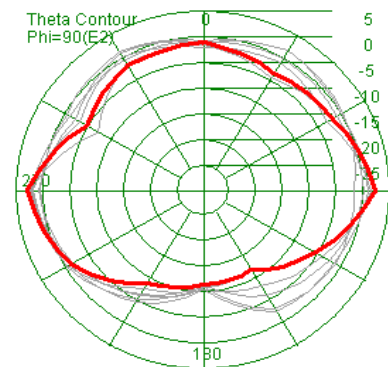
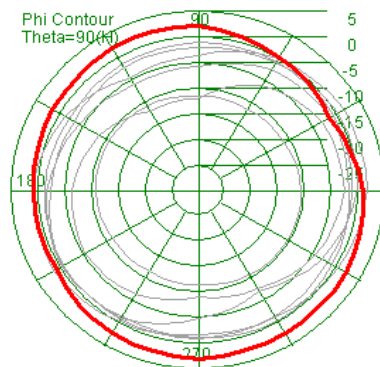
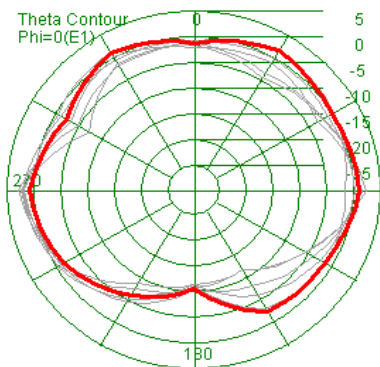
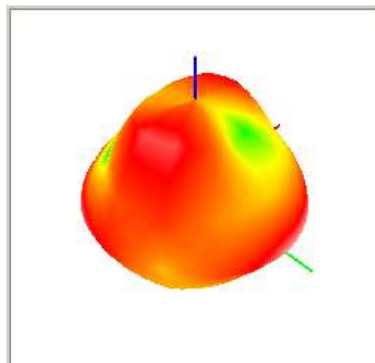


Frequency (MHz)	1175	1225	1280	1560	1575	1602
Gain (dBi)	2.65	3.34	2.8	1.75	1.85	1.95

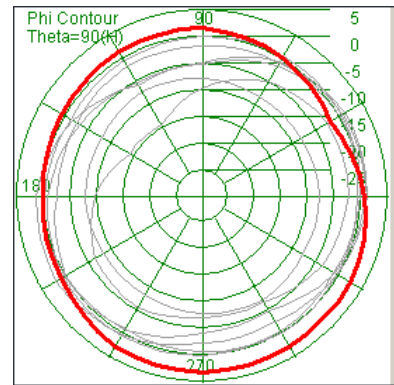
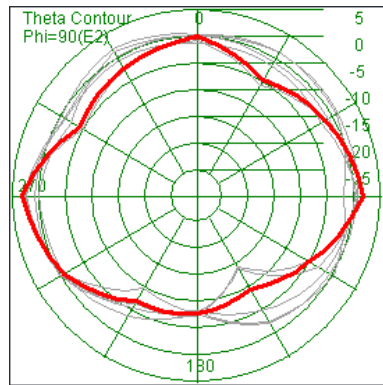
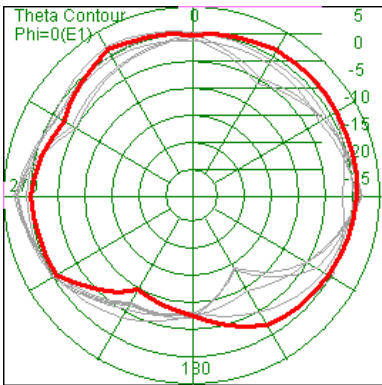
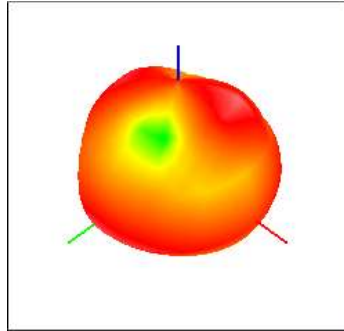
4.5. Radiation Pattern



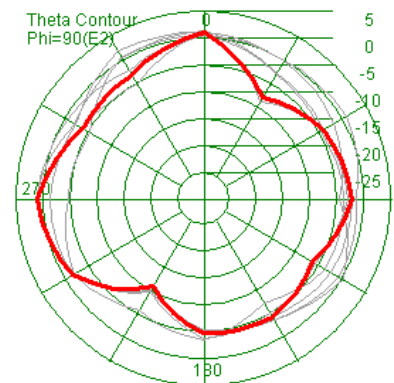
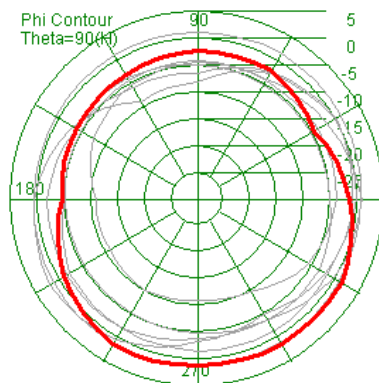
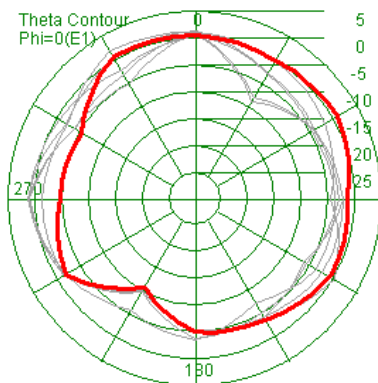
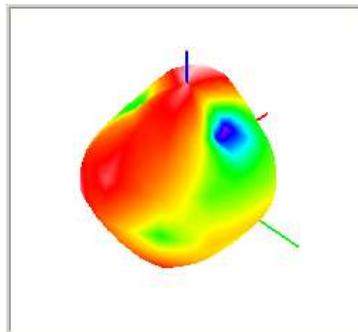
4.5.1. 1175 MHz



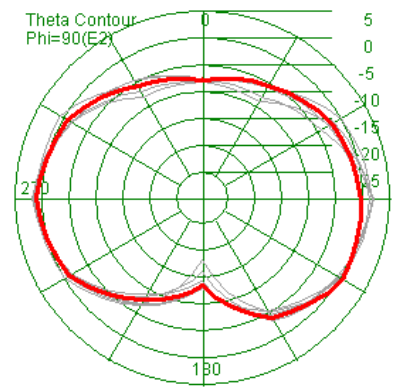
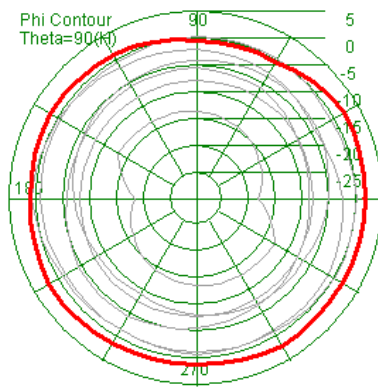
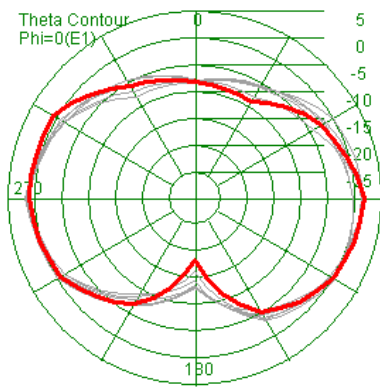
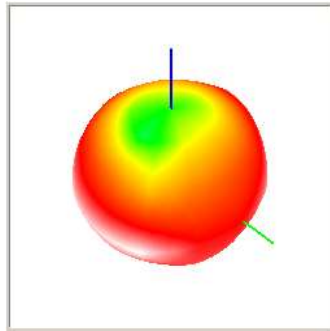
4.5.2. 1227 MHz



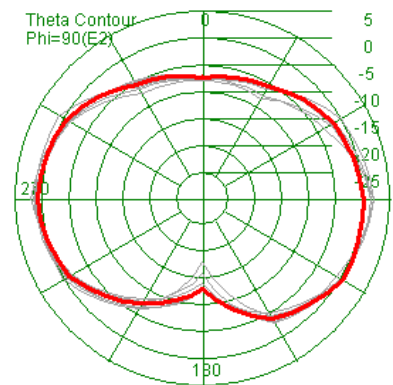
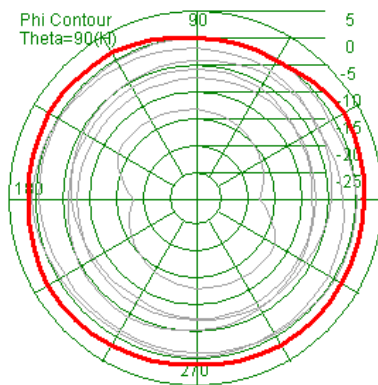
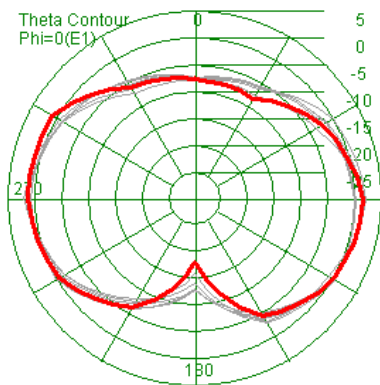
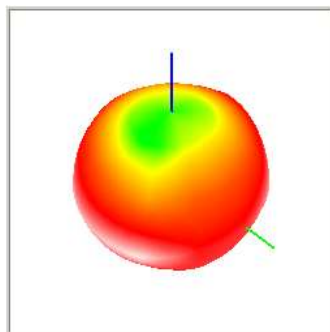
4.5.3. 1278 MHz



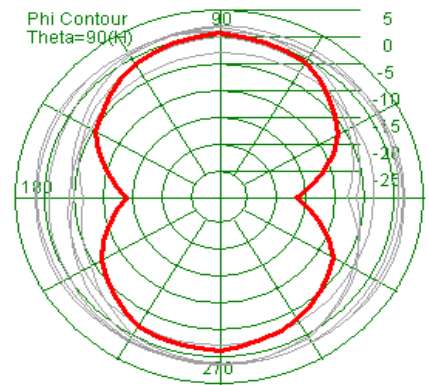
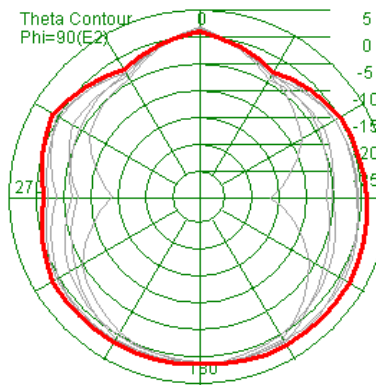
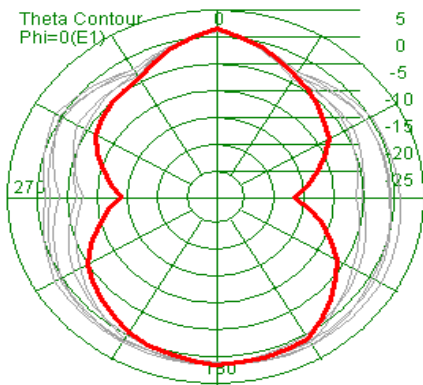
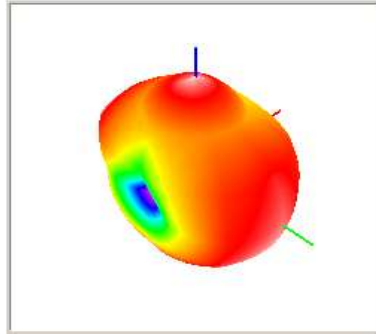
4.5.4. 1560 MHz



4.5.5. 1575 MHz



4.5.6. 1602 MHz



5 Product Size

ROHS

