

Antenna

YEGM008BA Datasheet

Antenna Services

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About the Document

Revision History

Version	Date	Author	Note
-	2021-07-06	Kenny YIN/ Aria CHU	Creation of the document
1.0	2021-07-06	Kenny YIN/ Aria CHU	First official release
2.0	2022-03-16	Riona HAN/ Aria CHU	Updated all test data in this datasheet.

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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 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

- Cellular GNSS
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	1575.42 ±5 MHz; 1602.5625 ±5 MHz
Input Impedence	50 Ω
VSWR	≤ 2.0
Gain	≤ 1.5 dBi
Polarization Type	RHCP

Low Noise Amplifier Electrical Specifications

Frequency Range	1555–1605 MHz
Input Impedence	50 Ω
Output VSWR	≤ 2.0
LNA Gain	27 ±2 dB
Voltage Range	3.0–3.6 V
Impedance	≤10 mA

Mechanical Specifications

Antenna Size	50.4 mm × 38.3 mm × 18.2 mm RG174 L = 1500 mm
Casing	ABS + PC
Connector Type	FKARA C
Working Temperature	-40 °C to +85 °C
Radome Color	Black
Weight	Typ. 44.2 g
Mounting Type	Adhesive
IP Rating	IP66

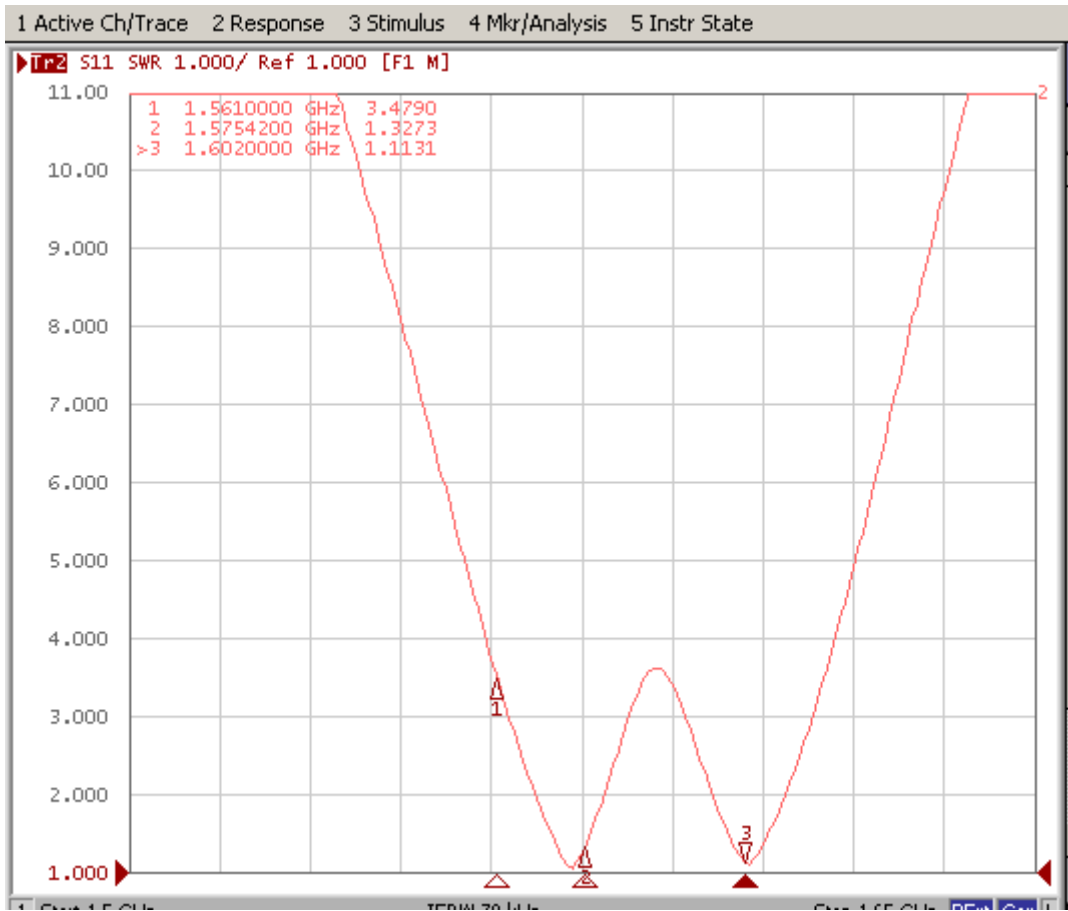
4 Overall Performance

4.1. Test Environment

- KEYSIGHT ENA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz

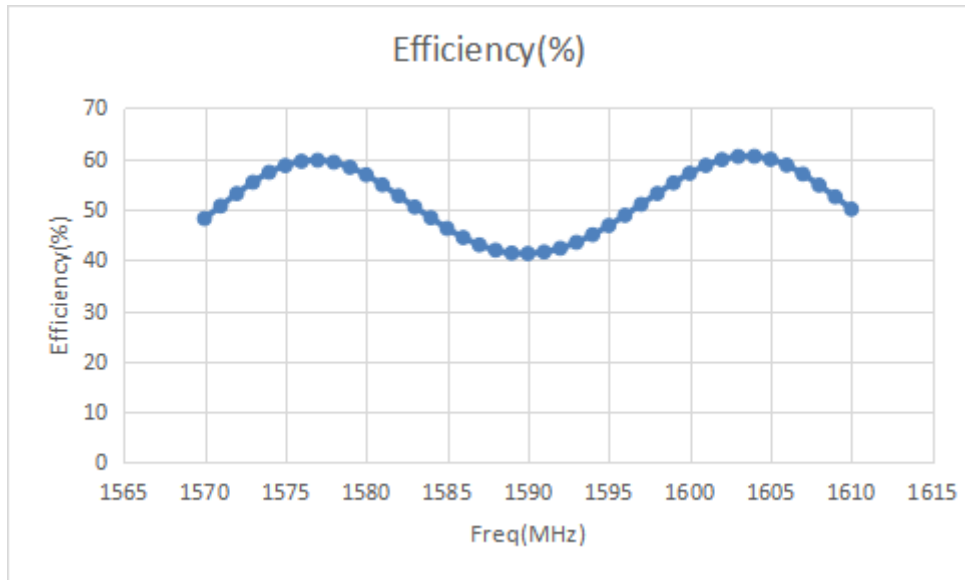


4.2. VSWR



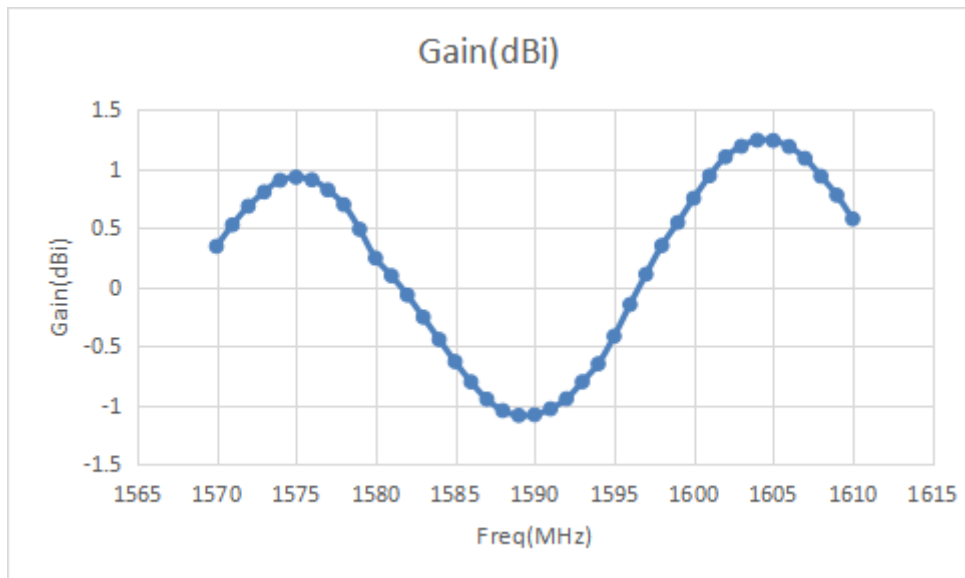
Frequency (MHz)	1575	1602
VSWR	1.32	1.11

4.3. Efficiency



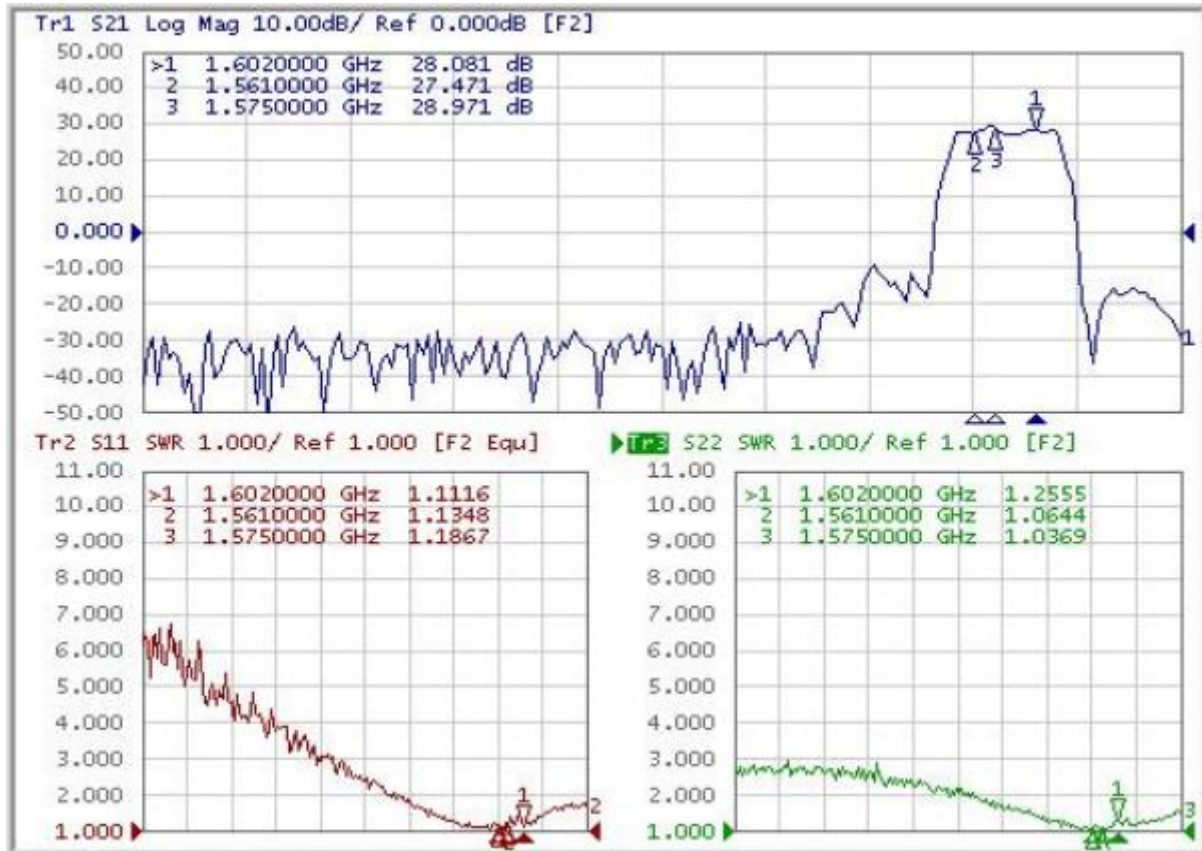
Frequency (MHz)	1575	1602
Efficiency (%)	58.65	59.83

4.4. Gain



Frequency (MHz)	1575	1602
Gain (dBi)	0.93	1.10

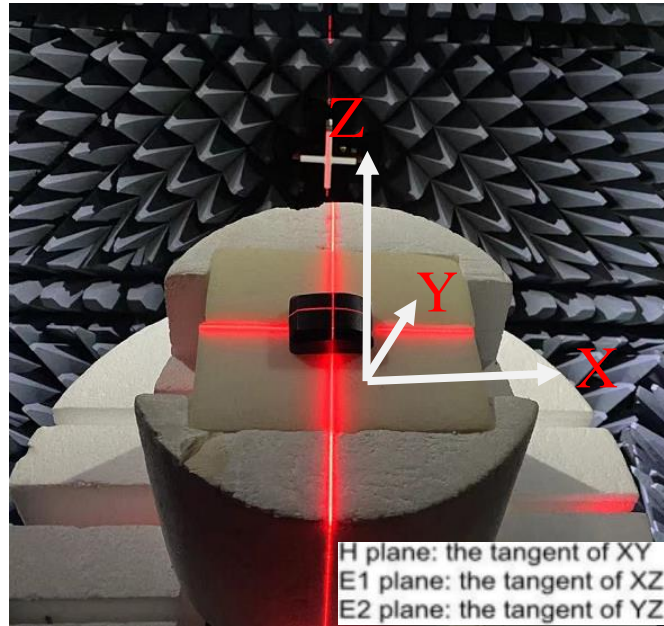
4.5. LNA

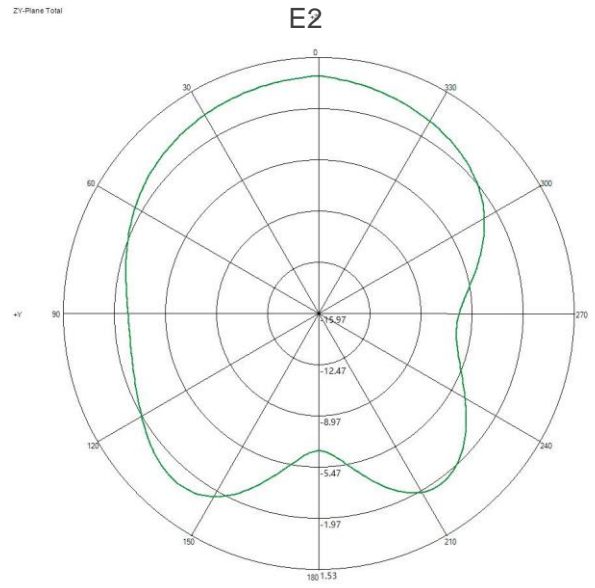
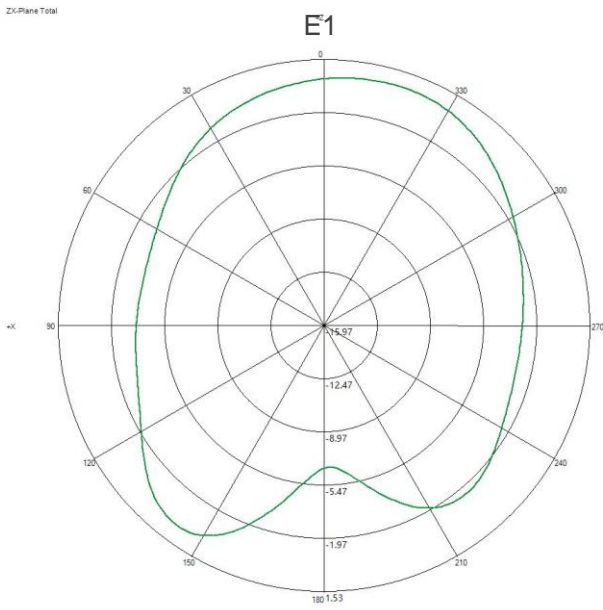
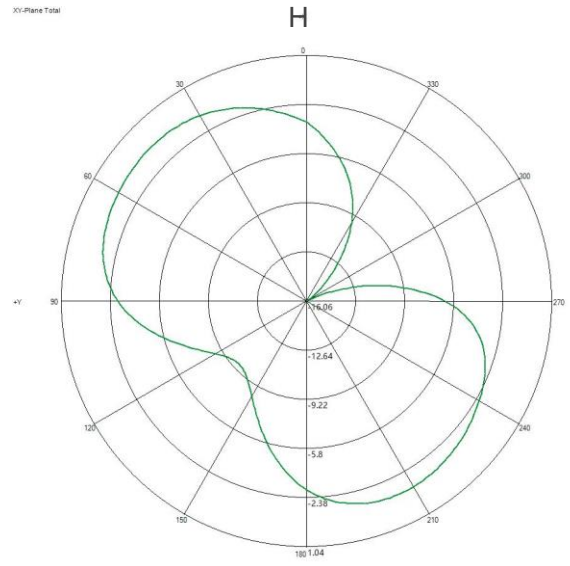
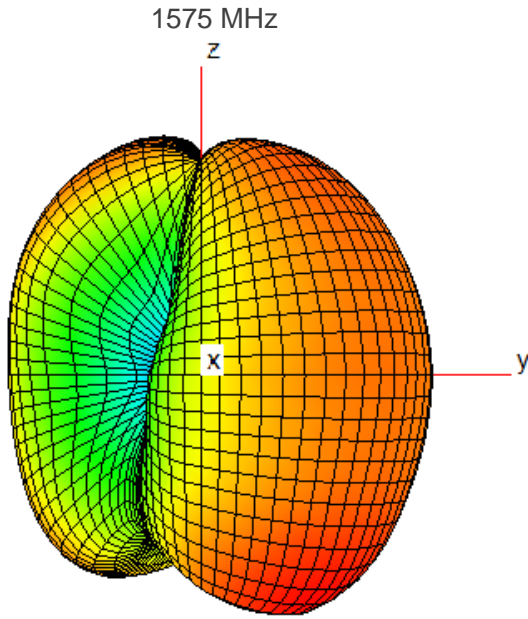


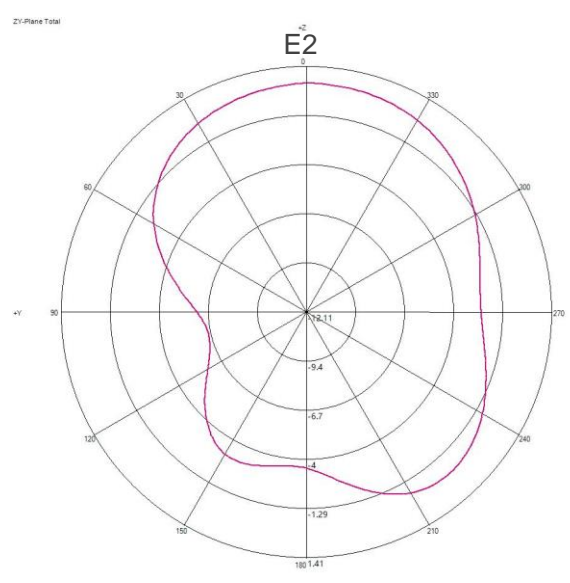
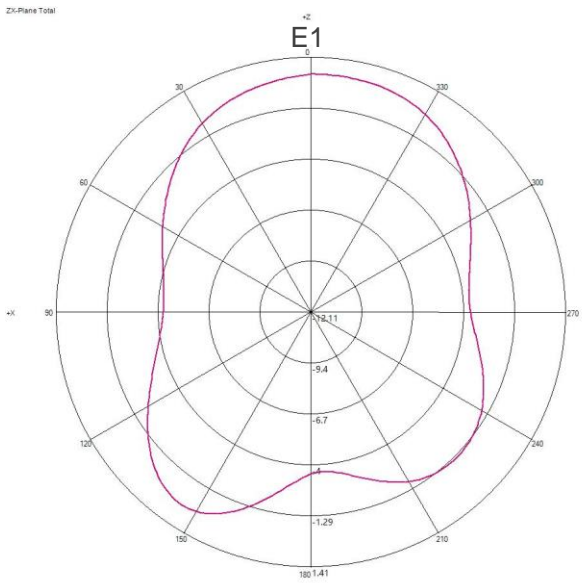
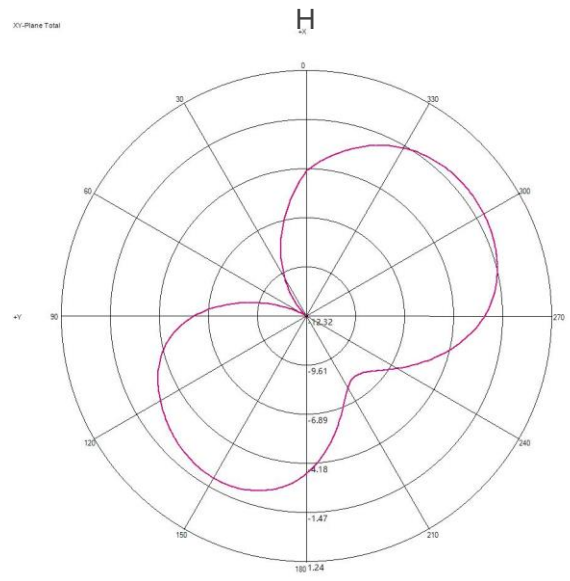
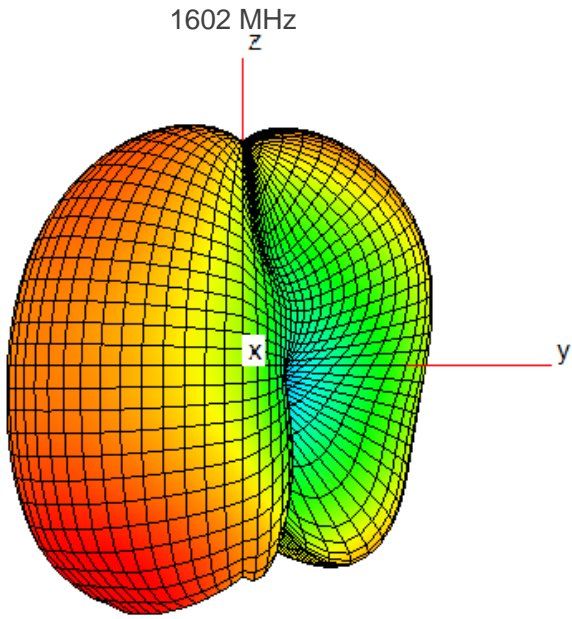
Frequency (MHz)	1575	1602
LNA Gain	28.97	28.08
Input VSWR	1.18	1.11
Output VSWR	1.03	1.25

4.6. Radiation Pattern

- Test condition: free space.







5 Product Size

