

Antenna

YBY00A0KA Datasheet

Antenna Services

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About the Document

Revision History

Version	Date	Author	Note
-	2021-08-19	Mordecai LIU/ Jason LONG	Creation of the document
1.0	2021-08-19	Mordecai LIU/ Jason LONG	First official release
1.1	2021-12-06	Mordecai LIU/ Jason LONG	Updated the product description in Chapter 1.
1.2	2022-05-11	Aria CHU	Added Chapter 6.

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1 Product Description

This Quectel external 5G antenna covers 5G NR Sub-6 GHz frequency bands and is compatible with 4G/3G/2G/LPWA bands. Featuring high efficiency and gain, it is an ideal omni-directional antenna solution to ensure high-speed data transmission, which can be widely used in a diversity of wireless communication devices such as AP, routers, outdoor equipment, real-time monitoring equipment, and many more. The antenna is designed to work with any ground plane size or in free space for ease of integration. Quectel also offers flexible installation with custom cable length and connector options.

2 Product Features

- Cellular 5G & LTE
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	700–960 MHz, 1710–2690 MHz, 3300–5000 MHz
Input Impedence	50 Ω
VSWR	≤ 4.0
Gain	≤ 5.1 dBi
Polarization Type	Linear

Detailed Passive Electrical Specifications

Frequency Range (MHz)	698–960	1176–1280	1400–1610	1710–2170	2170–2690	3300–4000	4000–5000	5000–6000
VSWR (Max.)	3.66	-	-	2.4	1.7	1.8	2.7	-
Average Efficiency (%)	65.62	-	-	75	80	68.25	63.44	-
Max. Peak Gain (dBi)	0.94	-	-	2.0	5.1	5.07	4.29	-

Mechanical Specifications

Antenna Size	Φ 20 mm x 300 mm
Casing	FRP
Connector Type	N-J (Male pin with internal thread)
Working Temperature	-20 °C to +75 °C
Radome Color	Black
Weight	Typ.127.5 g
IP Rating	IP65

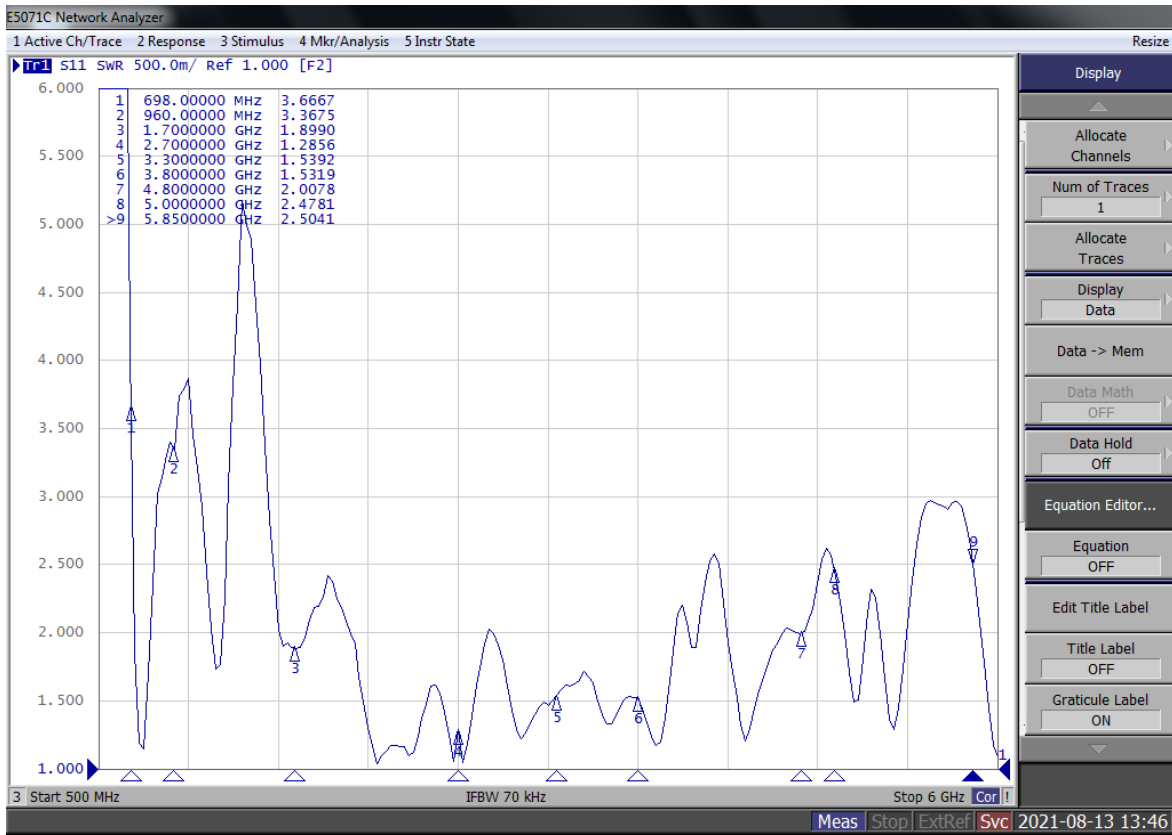
4 Overall Performance

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

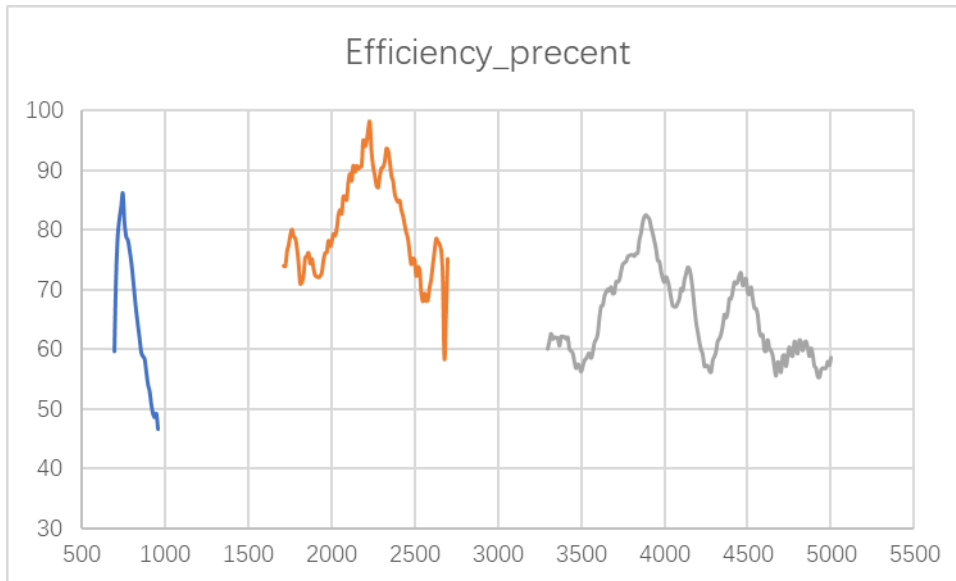


4.2. VSWR



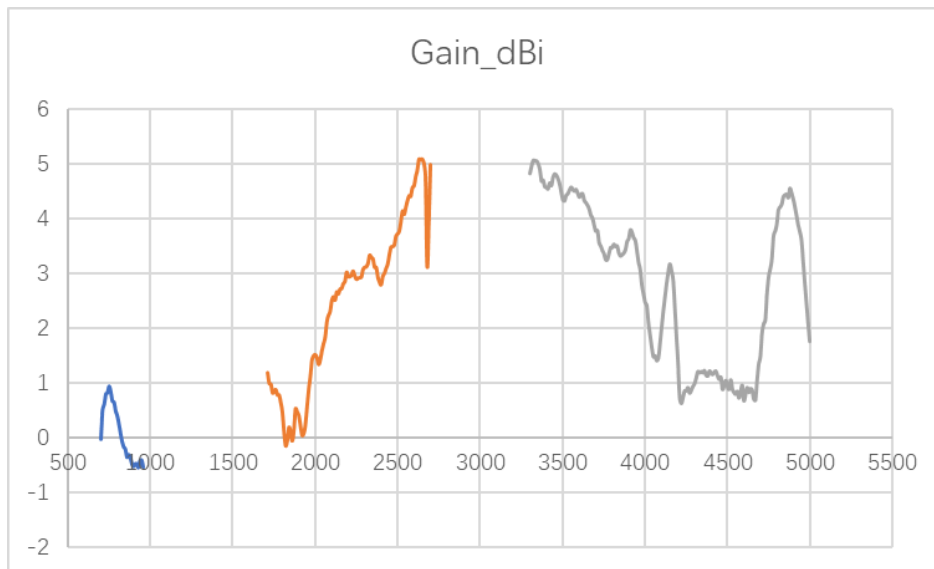
Frequency (MHz)	698	960	1710	2700	3300	3800	4800	5000
VSWR	3.66	3.36	1.89	1.28	1.53	1.53	2.00	2.47

4.3. Efficiency



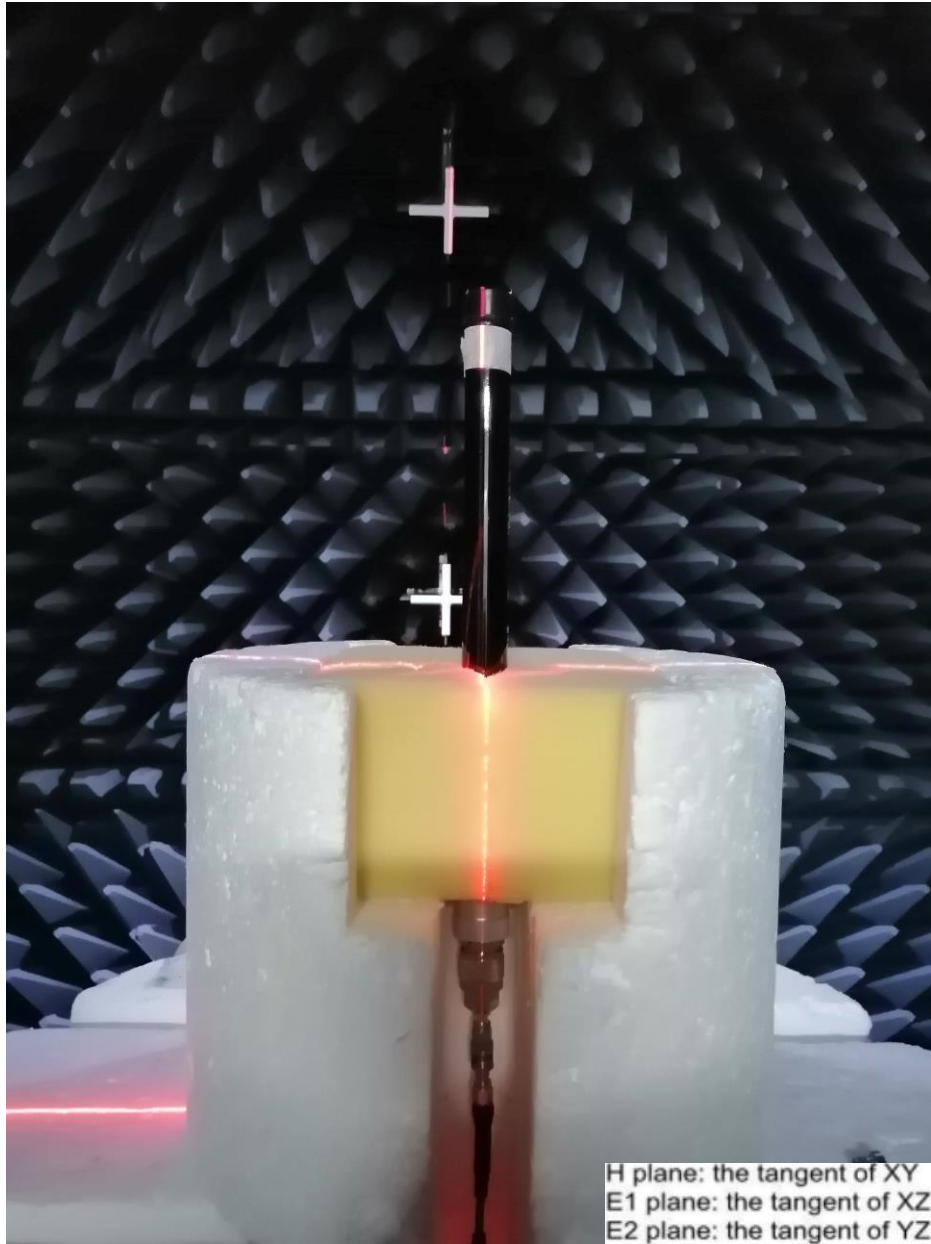
Frequency (MHz)	698	960	1710	2700	3300	3800	4800	5000
Efficiency (%)	59.73	46.72	73.94	75.13	60.17	75.92	59.37	58.71

4.4. Gain



Frequency (MHz)	698	960	1710	2700	3300	3800	4800	5000
Gain (dBi)	-0.03	-0.54	1.19	5.00	4.83	3.48	3.91	1.77

4.5. Radiation Pattern

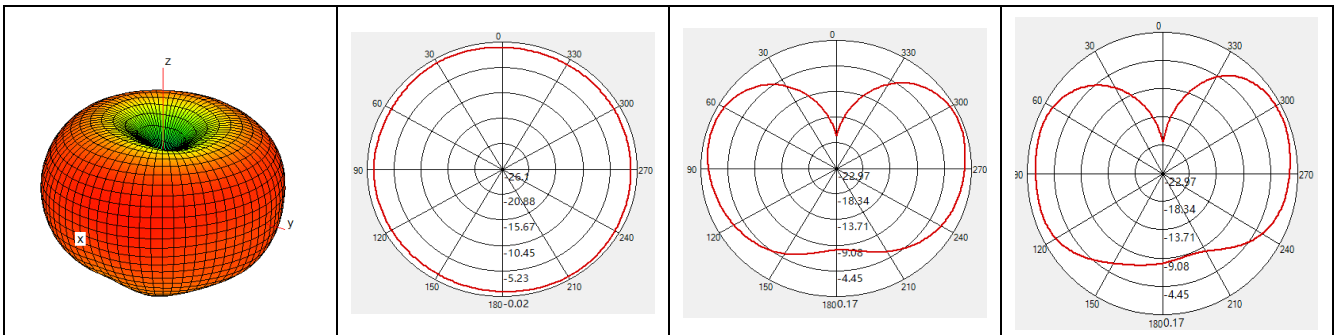


698 MHz

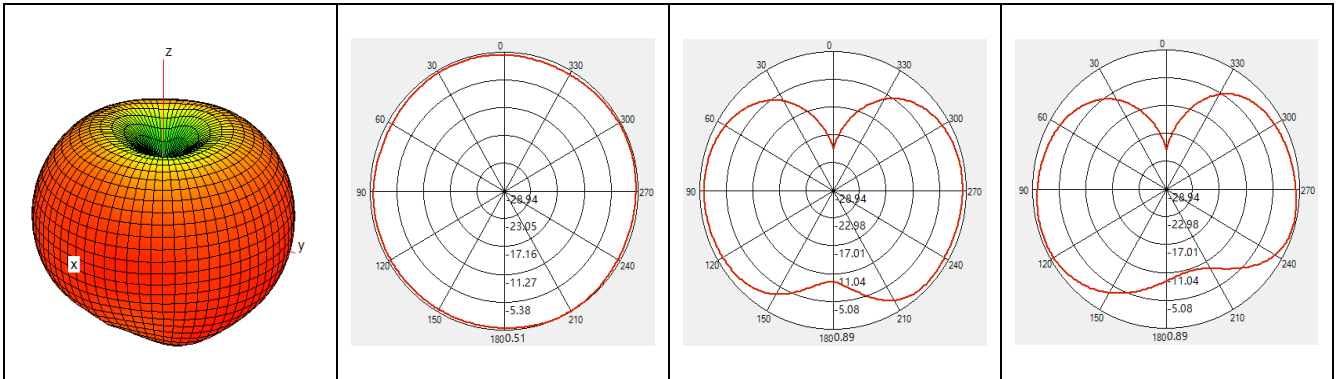
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E1

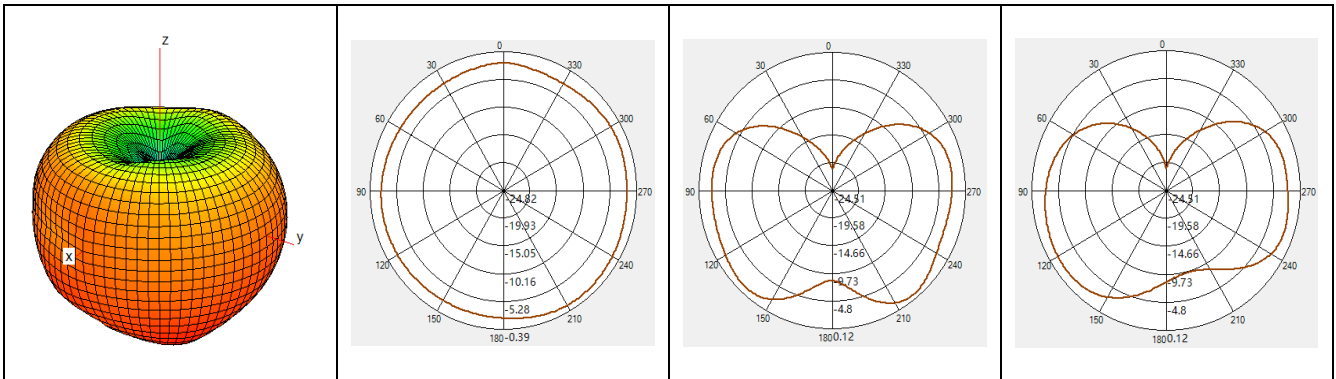
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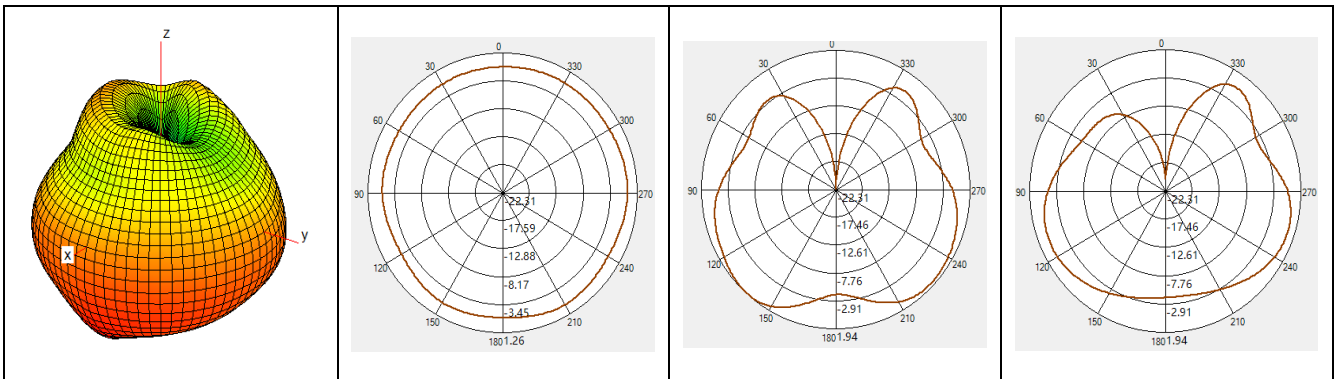
800 MHz



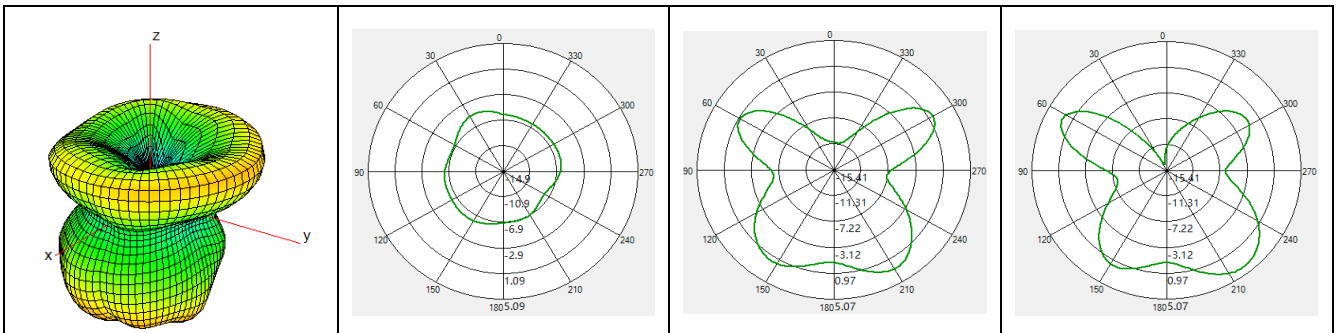
960 MHz



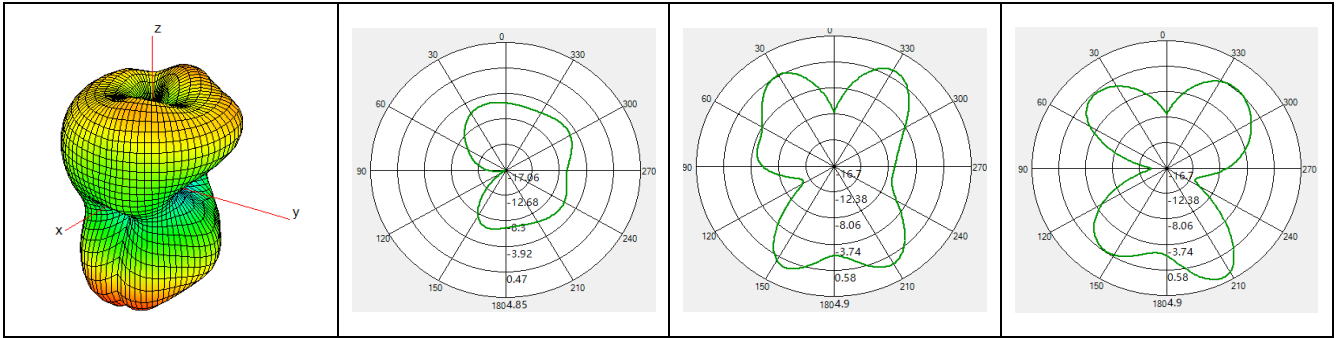
1710 MHz



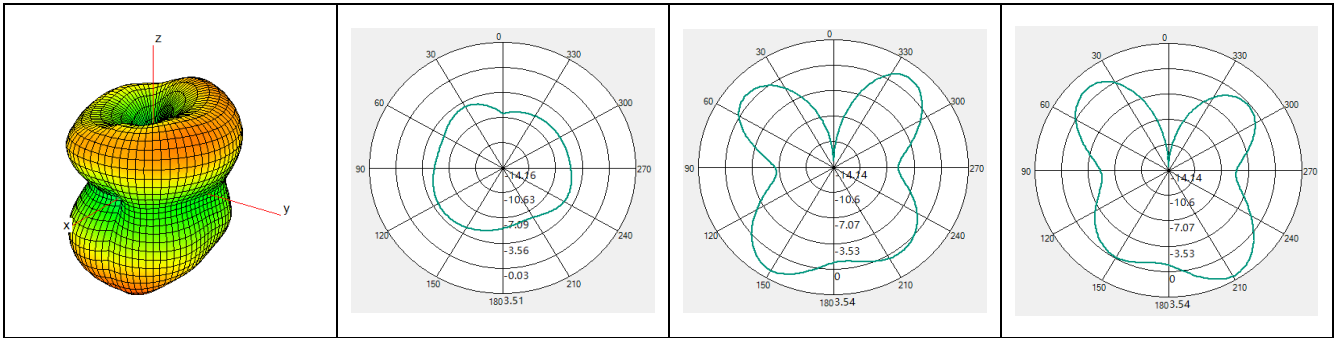
2700 MHz



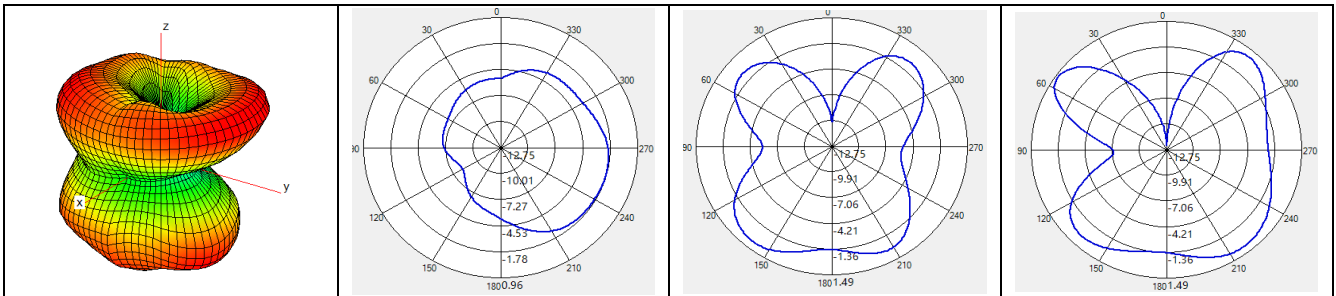
3300 MHz



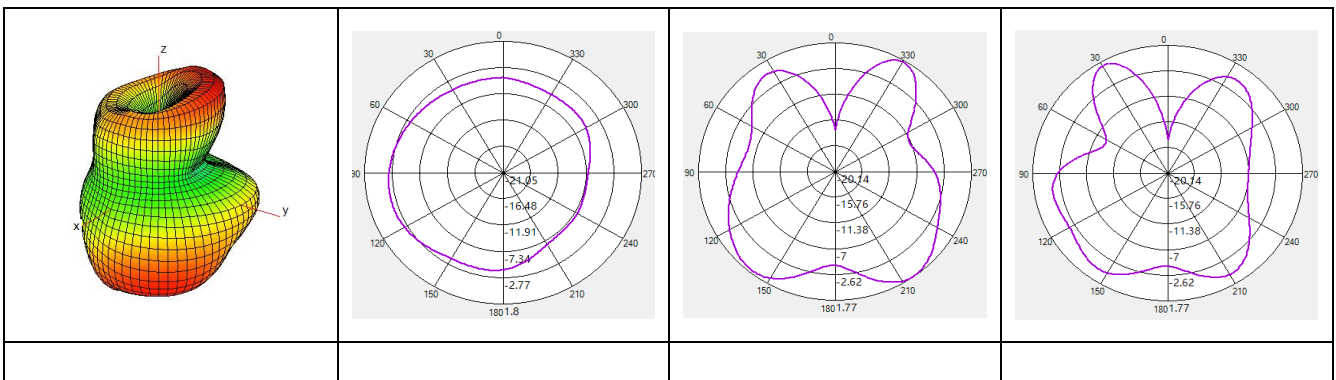
3800 MHz



4500 MHz

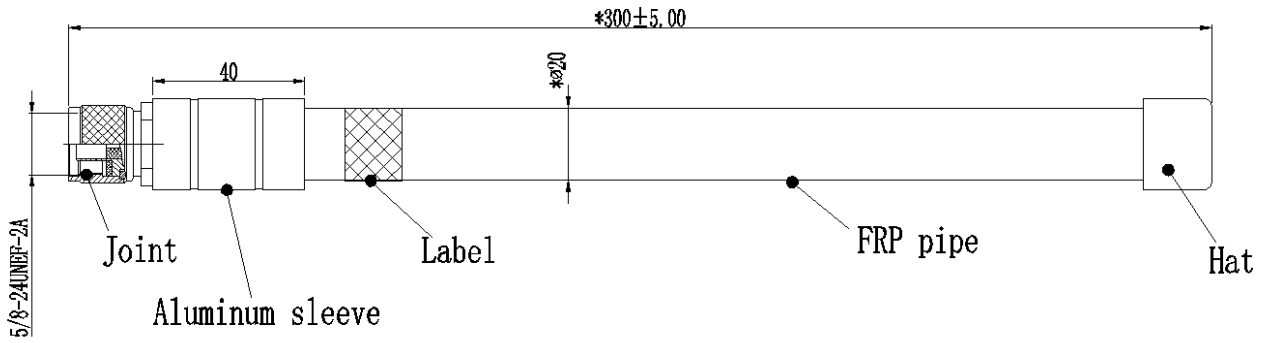


5000MHz



5 Product Size

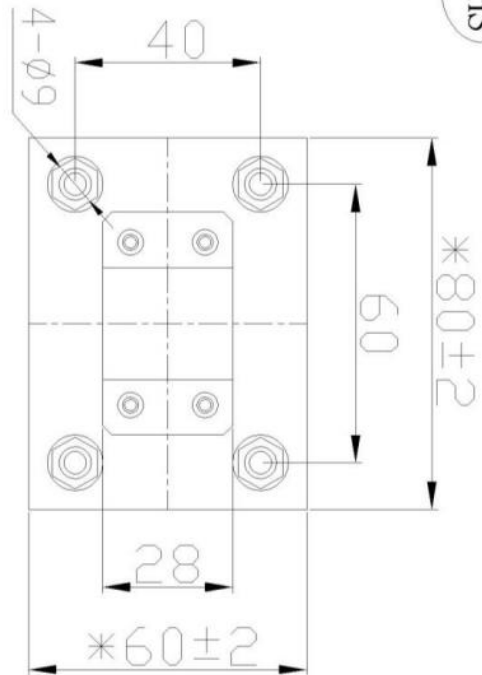
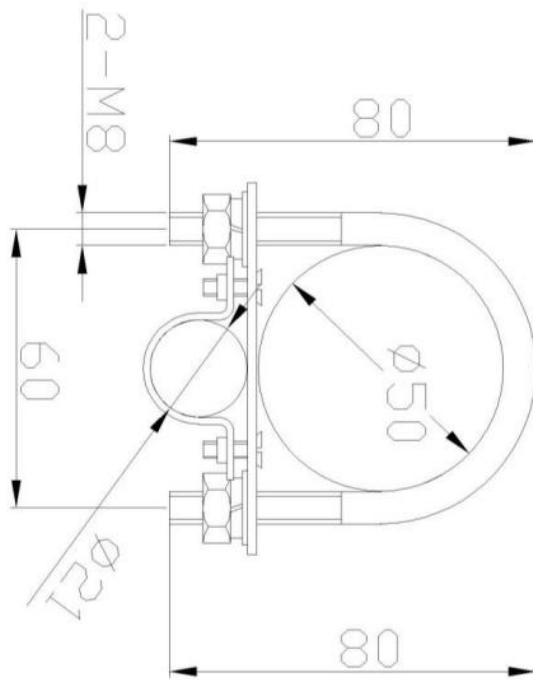
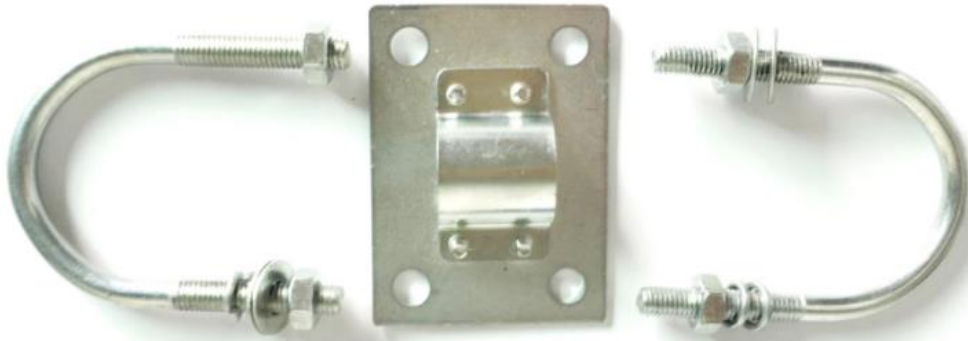
RoHS



N-J (Male pin with internal thread)

6 Mounting Type

This antenna can use the YBY00A0IA bracket.



Unit: mm