

Antenna

YPCA004AA Datasheet

Antenna Services

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About the Document

Revision History

Version	Date	Author	Note
-	2021-07-05	Jason Long/ Aria Chu	Creation of the document
1.0	2021-07-05	Jason Long/ Aria Chu	First official release
1.1	2021-11-27	Jason Long/ Aria Chu	Updated the product description in Chapter 1.
2.0	2022-12-28	Eleven Rong	Updated datasheet data in Chapter 4.
2.1	2024-03-18	Jason Long	<ol style="list-style-type: none">1. Updated the product image.2. Updated the antenna size and added storage temperature (Chapter 3).3. Updated the drawing (Chapter 5).
2.2	2024-11-14	David Liu	Added the packaging (Chapter 6).
2.3	2025-03-11	Rainey Liao	Updated the starting frequency to 698 MHz (Chapter 3).
2.4	2025-04-16	Rainey Liao	Updated the antenna image (Cover page and Chapter 2).
2.5	2025-09-19	Aria Chu	Add weight information (Chapter 3).

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1 Product Description

This Quectel embedded 4G FPC/PCB antenna covers main 4G LTE bands and is compatible with 3G/2G/LPWA bands. Featuring high efficiency and gain, it is an ideal antenna for a smooth and stable connection with high-efficiency data transmission even under the influence of the device's internal structure. Ground plane independent, it's designed to be mounted directly to the underside of either a plastic or non-metallic enclosure. Ease of integration with a cable and connector which can be customized to meet your product design and RF module.

2 Product Features

- LTE
- Small and exquisite
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	698–960 MHz, 1710–2690 MHz
Input Impedance	50 Ω
VSWR	≤ 8.0
Gain	≤ 2.3 dBi
Polarization Type	Linear

Mechanical Specifications

Antenna Size (mm)	40 × 10 × 1.15
Material	PCB
Cable Type	Φ 1.13 Black
Connector	IPEX MHF I
Working Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Weight	Typ. 1.4 g
Color	Green
Mounting Type	Adhesive

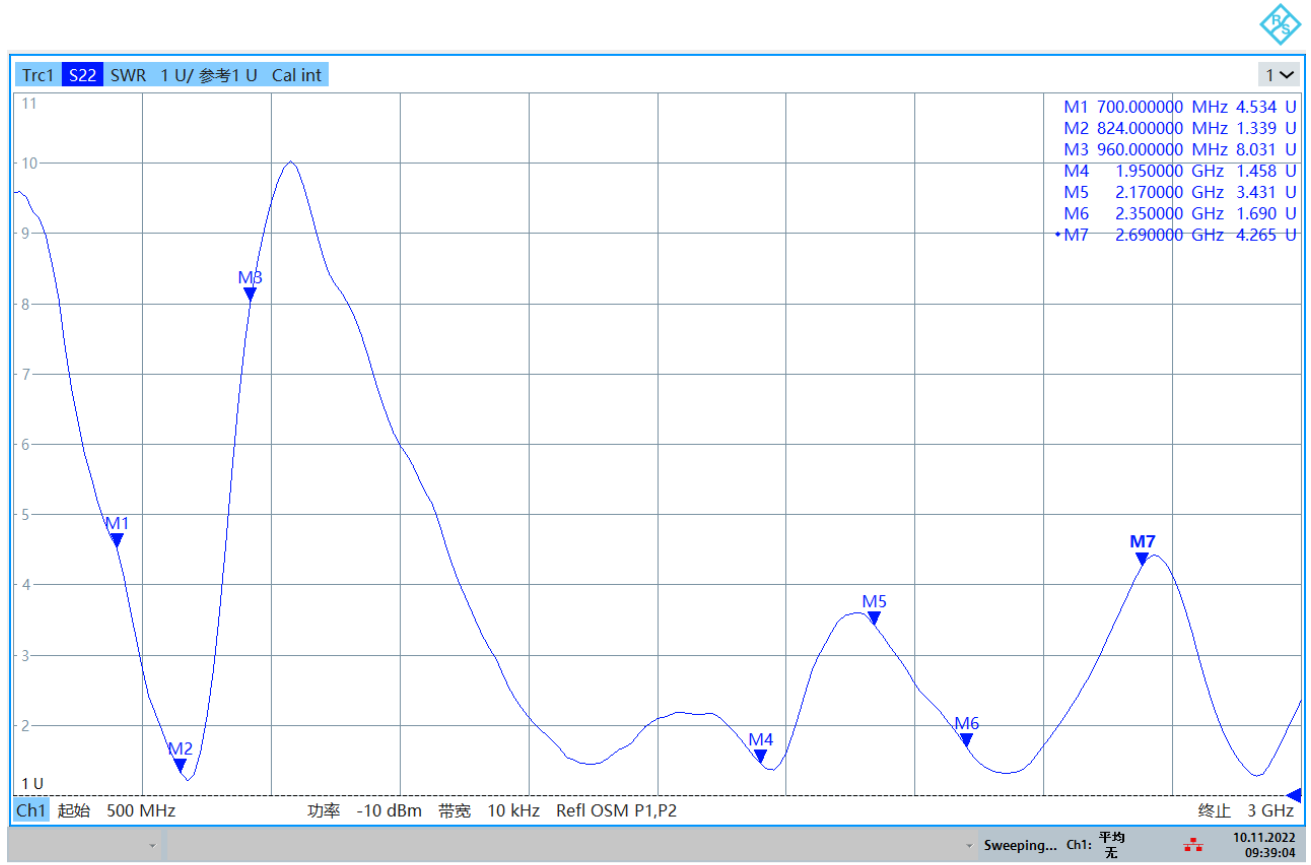
4 Overall Performance

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



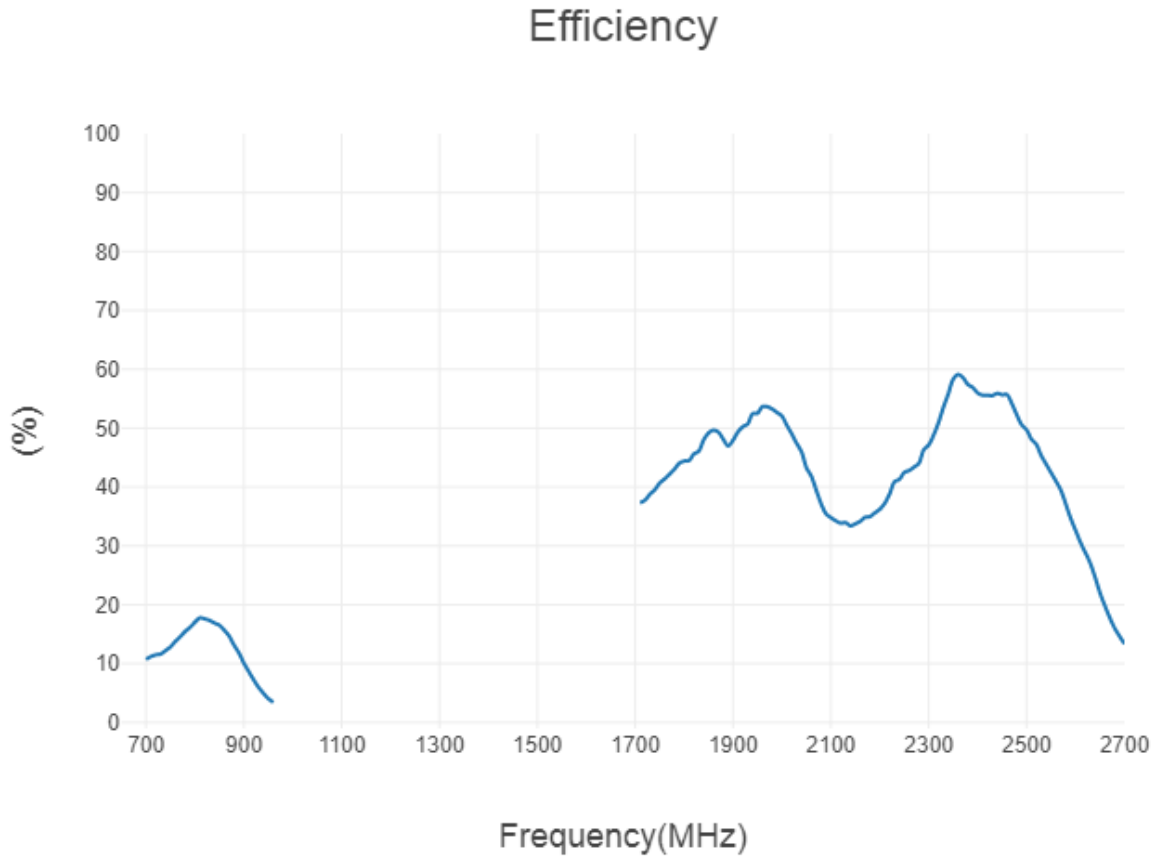
4.2. VSWR



09:39:05 10.11.2022

Frequency (MHz)	700	830	960	1710	1950	2170	2300	2690
VSWR	4.53	1.2	8.03	2.1	1.46	3.43	2.3	4.27

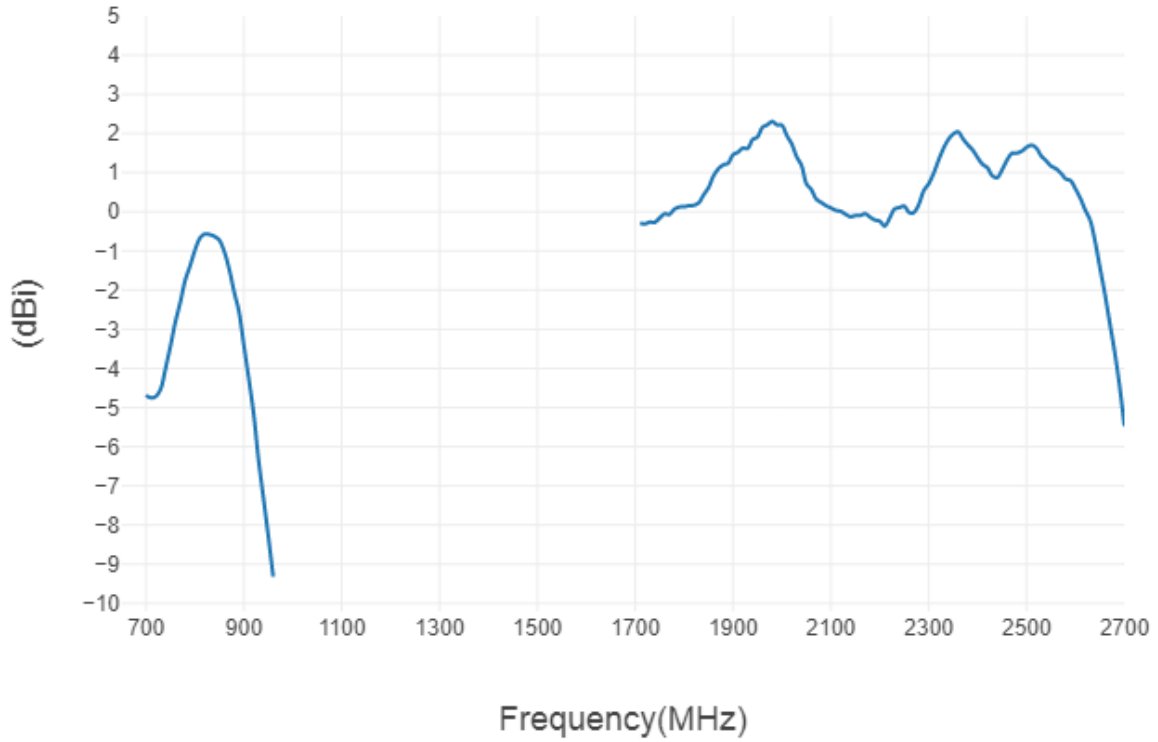
4.3. Efficiency



Frequency (MHz)	700	830	960	1710	1950	2170	2300	2690
Efficiency (%)	10.7	17.3	3.4	37.3	52.5	34.9	47.1	14.7

4.4. Gain

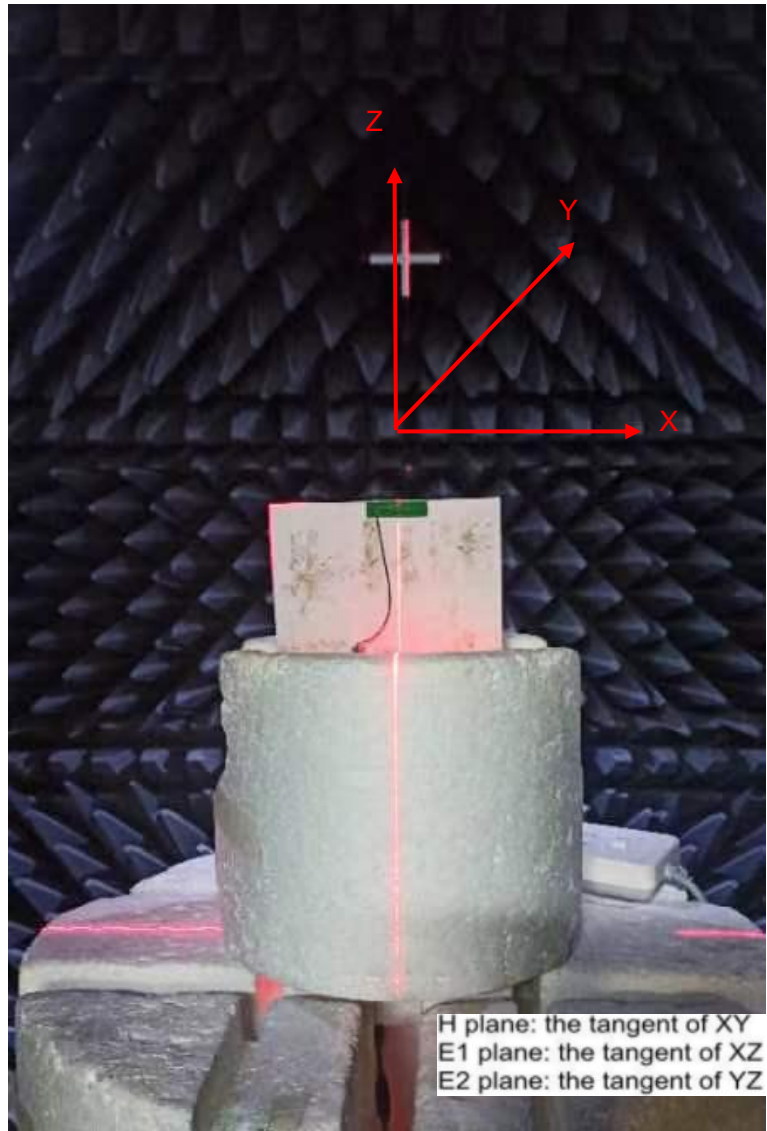
Peak Gain



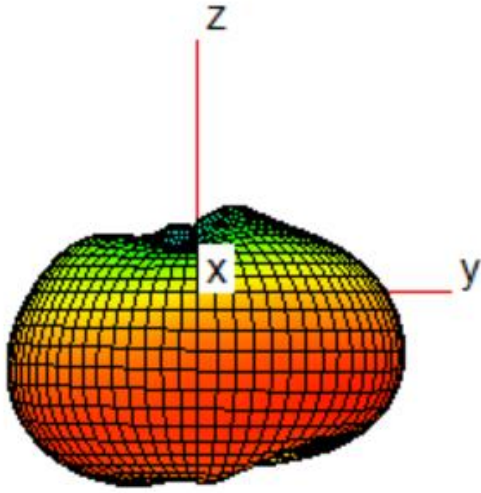
Frequency (MHz)	700	830	960	1710	1950	2170	2300	2690
Gain (dBi)	-4.75	-0.58	-9.31	-0.29	1.91	-0.05	0.71	-4.43

4.5. Radiation Pattern

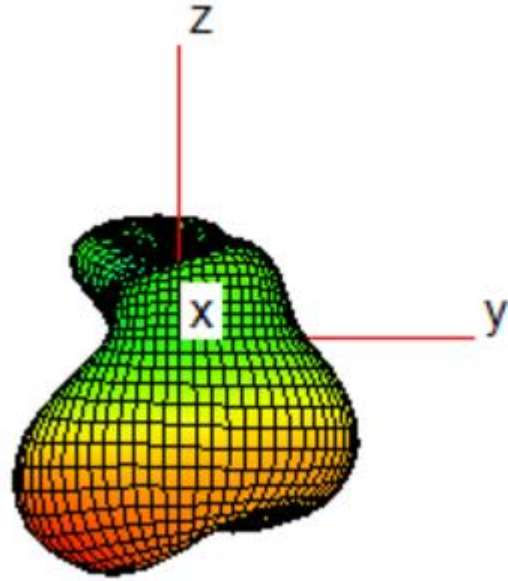
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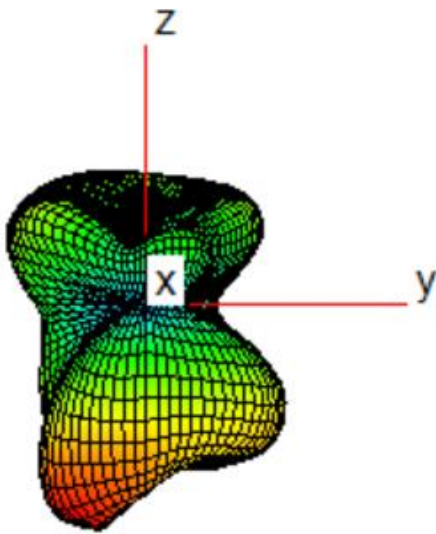
700 MHz



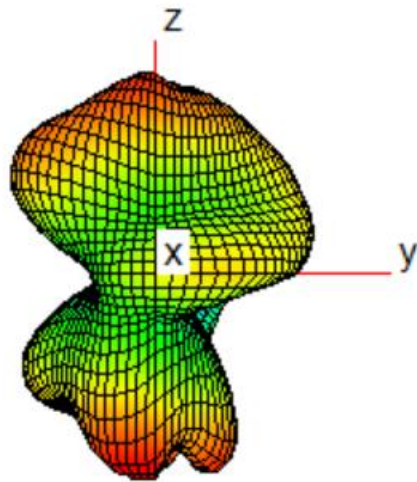
830 MHz



960 MHz

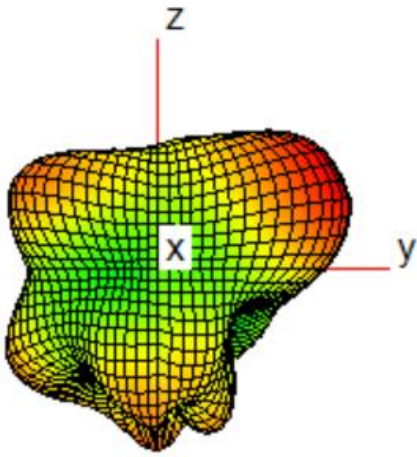


1710 MHz

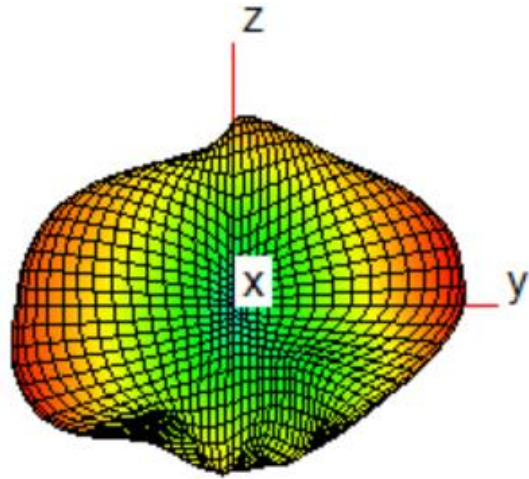


1950 MHz

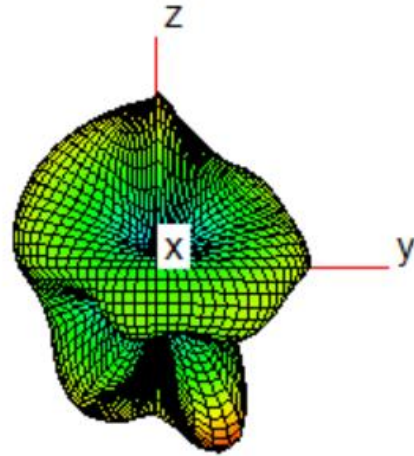
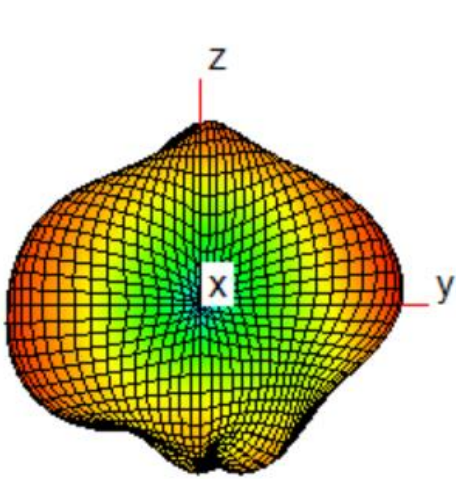
2170 MHz



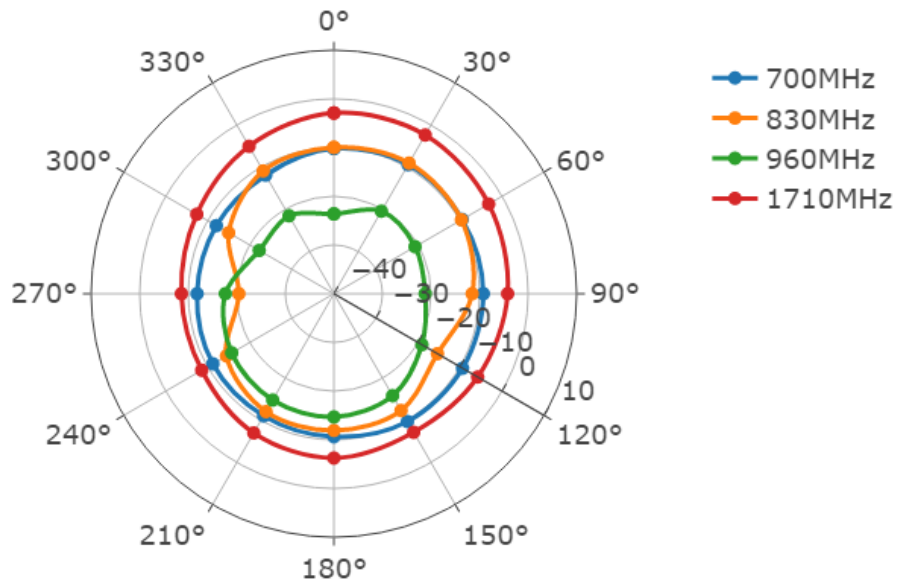
2300 MHz



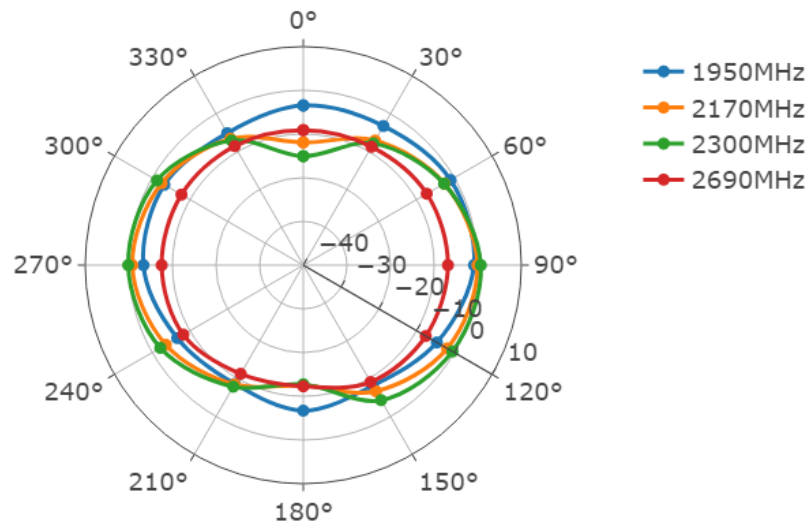
2690 MHz



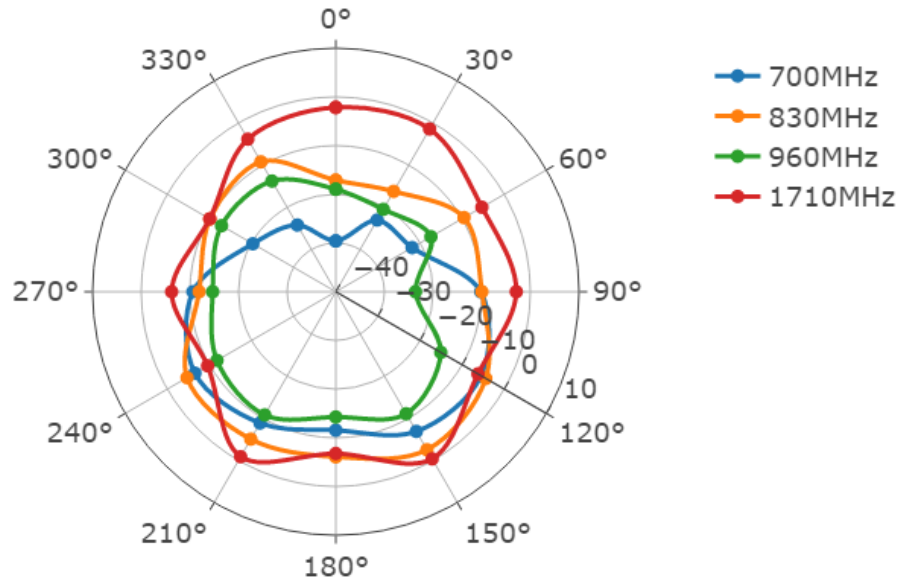
H Plane:XY



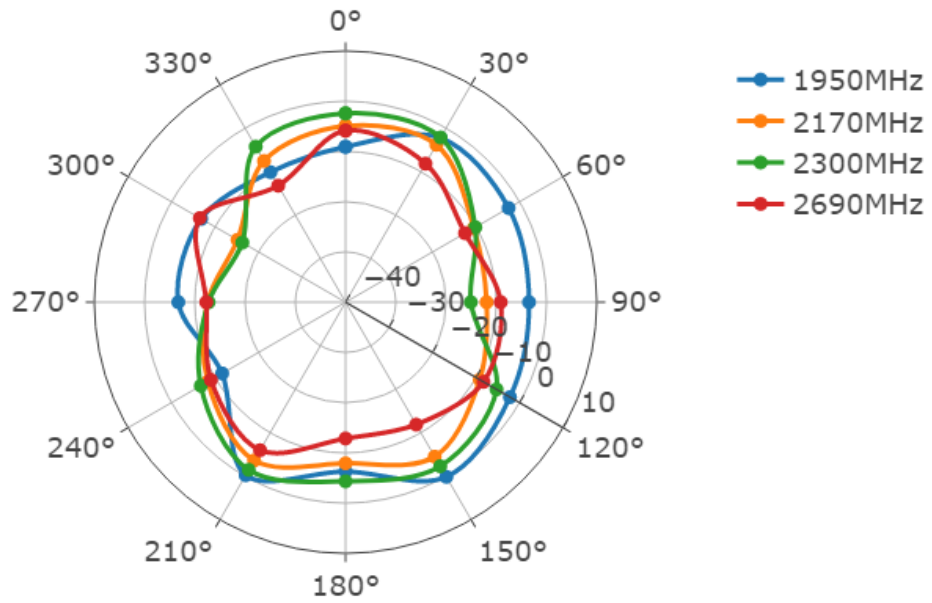
H Plane:XY



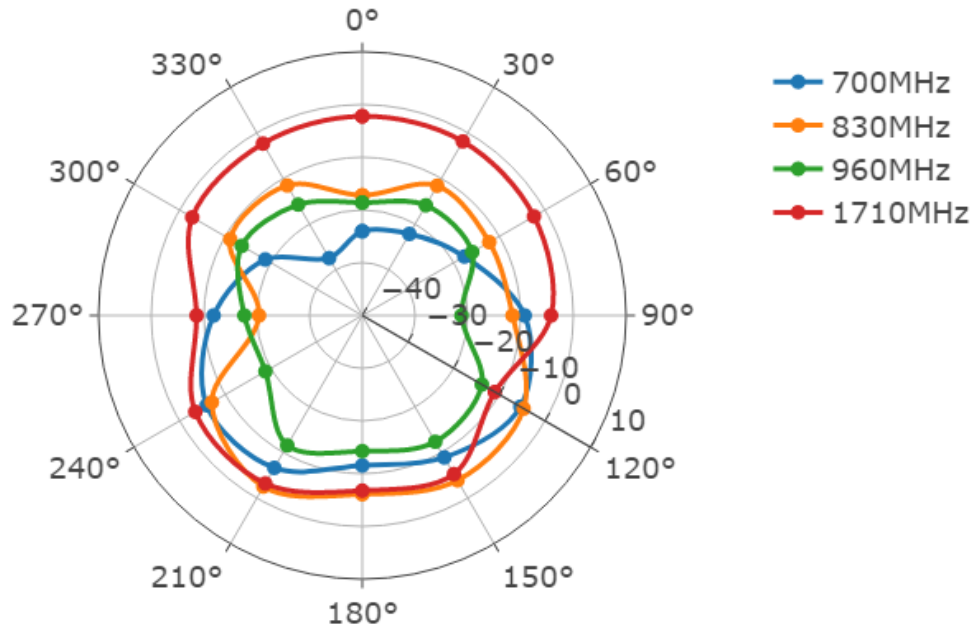
E1 Plane:XZ



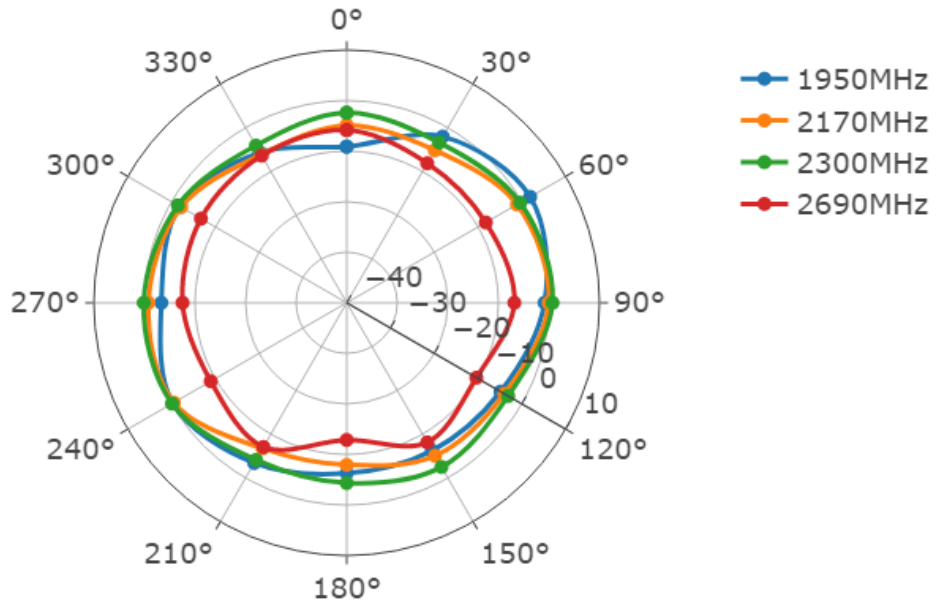
E1 Plane:XZ



E2 Plane:YZ

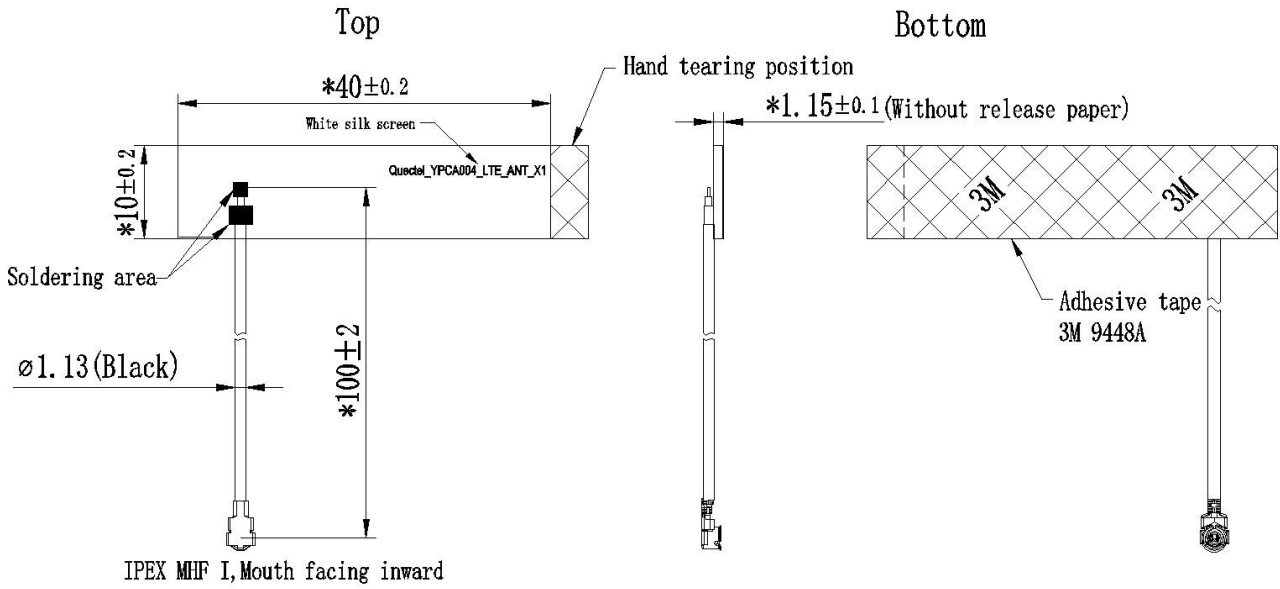


E2 Plane:YZ




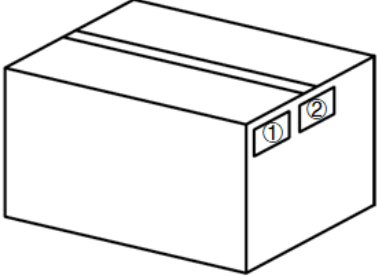


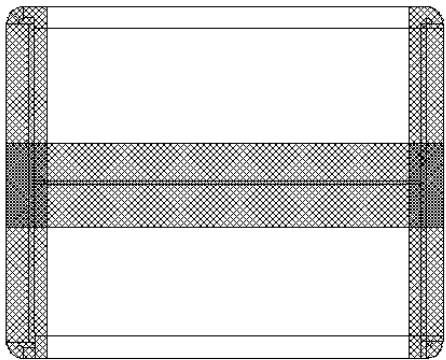
5 Product Size

ROHS



6 Packaging

Step	Packaging Picture / 2D Picture	Description
1		<p>100 antenna products are wrapped with EPE foam (100 Antennas / Tie)</p>
2		<p>100 antenna products in a PE bag. (100 Antennas / PE Bag)</p>
3		<p>(20 PE Bags / Carton Box) (2000 PCS Antennas / Carton Box) Products that cannot fill the entire carton box are packed in a suitable size carton box. <u>Carton Size:</u> <u>L × W × H = 240 × 220 × 210 mm</u></p>
4		<p>Position for Attaching Labels</p> <ul style="list-style-type: none"> ① Carton Label ② Quality Label

5	 A technical drawing of an H-shaped sealing carton. It consists of a central horizontal band with a fine cross-hatched texture, flanked by two vertical bands of the same texture. The entire structure is enclosed within a thin rectangular border.	<p>Sealing Cartons H-shaped sealing cartons</p>
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