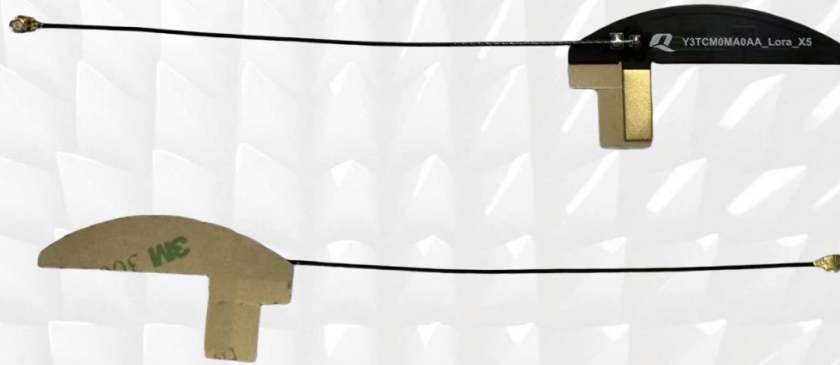




Antenna Datasheet

Product OC: Y3TCM0MA0AA

Version: 1.0

Date: 2026-07-02

Product Name: LoRa FPC PIFA Embedded Antenna

Key Features:

Frequency band: 863–868, 902–928 MHz

Dimensions: 45.88 mm × 23.42 mm × 0.16 mm

Efficiency: Up to 30.5 %

RoHS & REACH Compliant

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1 Specification

Test Condition: Assembled in the device

1.1. Electrical

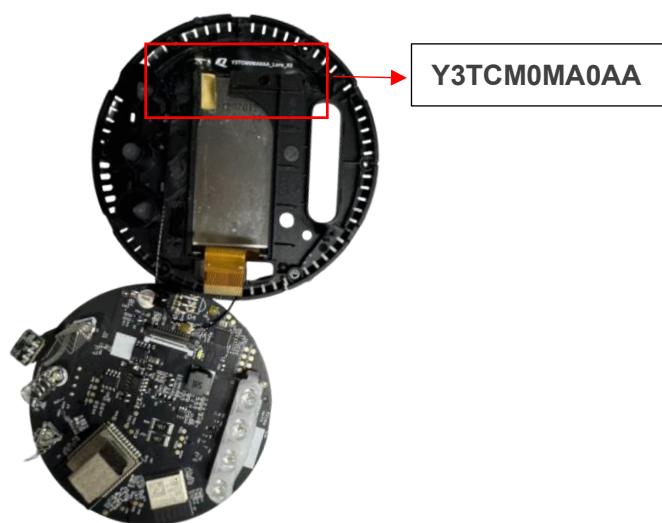
Electrical	
Frequency Range	863–868 MHz, 902–928 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

Specification \ Band	Band	
	863–868	902–928
Max. VSWR	1.7	2.0
Max. Return Loss (dB)	-11.4	-9.7
AVG Eff. (%)	24.9	29.2
AVG AVG Gain (dB)	-6.0	-5.4
Max. Peak Gain (dBi)	-1.2	-0.6

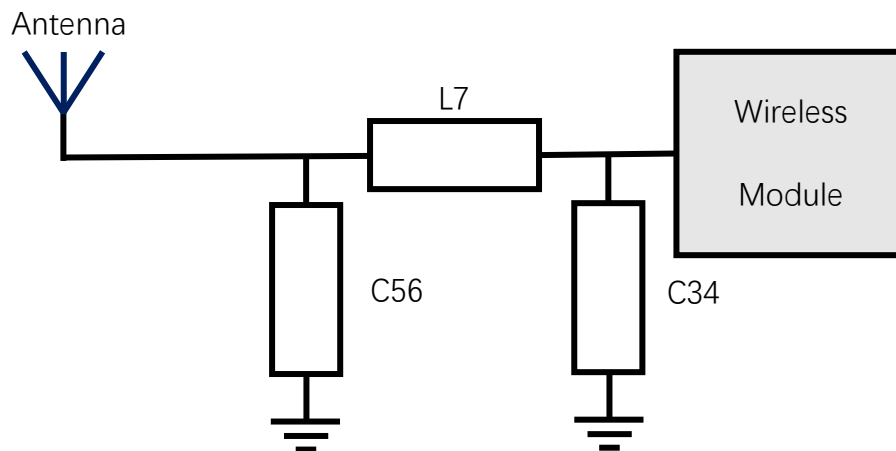
1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	45.88 mm × 23.42 mm × 0.16 mm
Material & Color	FPC & Black
Cable Type & Color & Length	Φ 0.81 & Black & 105 mm
Connector Type	IPEX MHF 1
Mounting Type	Adhesive
Weight	Typ. 1 g
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
RoHS & REACH Compliant	Yes

1.3. Antenna Assembly

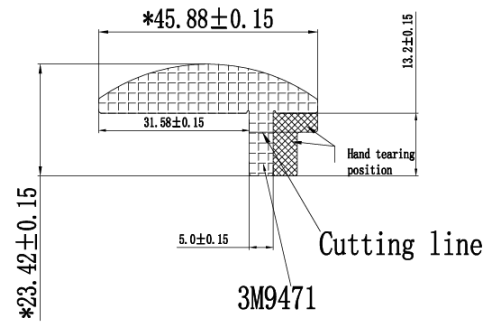
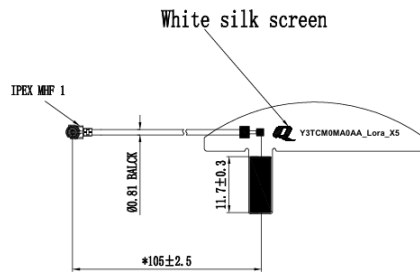


1.4. Matching Circuit



	C56	L7	C34
Default Matching	NA	0 Ω	NA
Tolerance	-	-	-

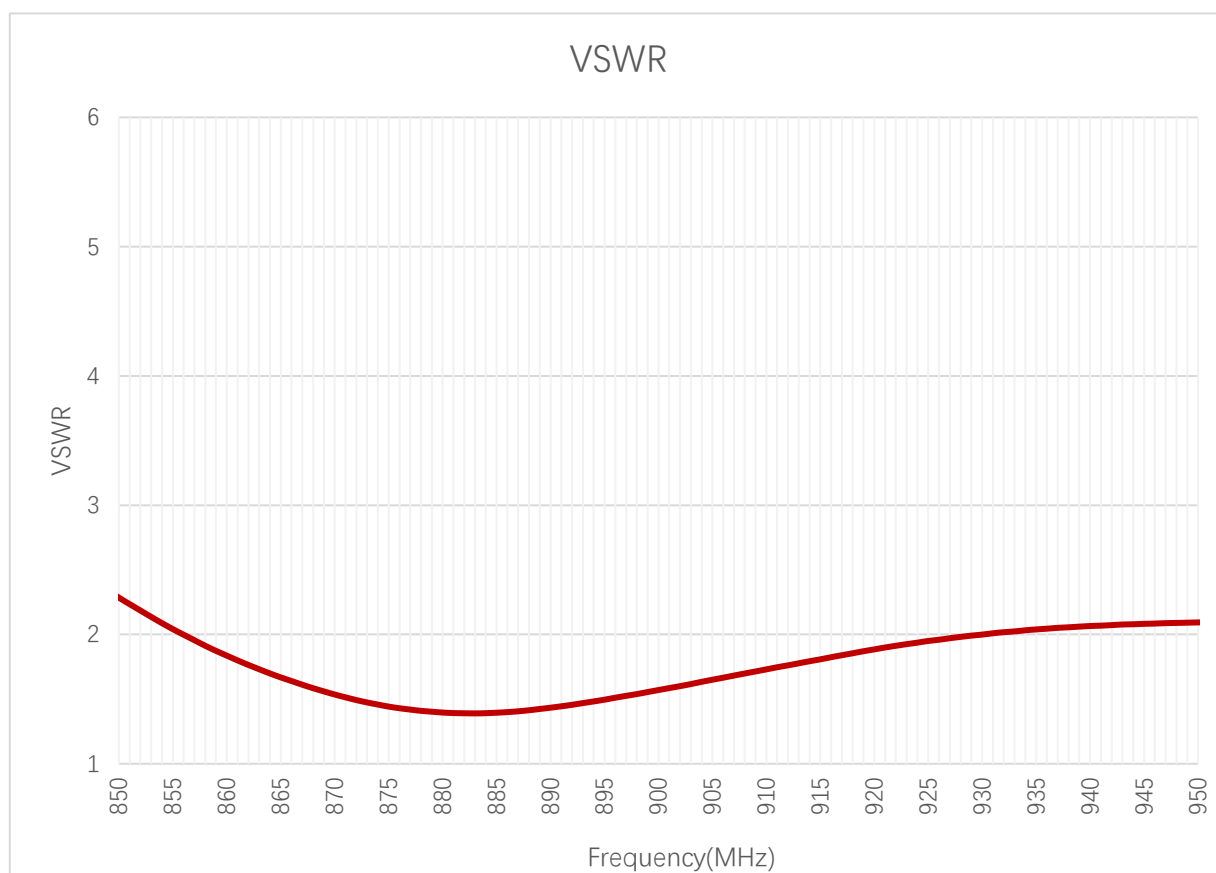
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

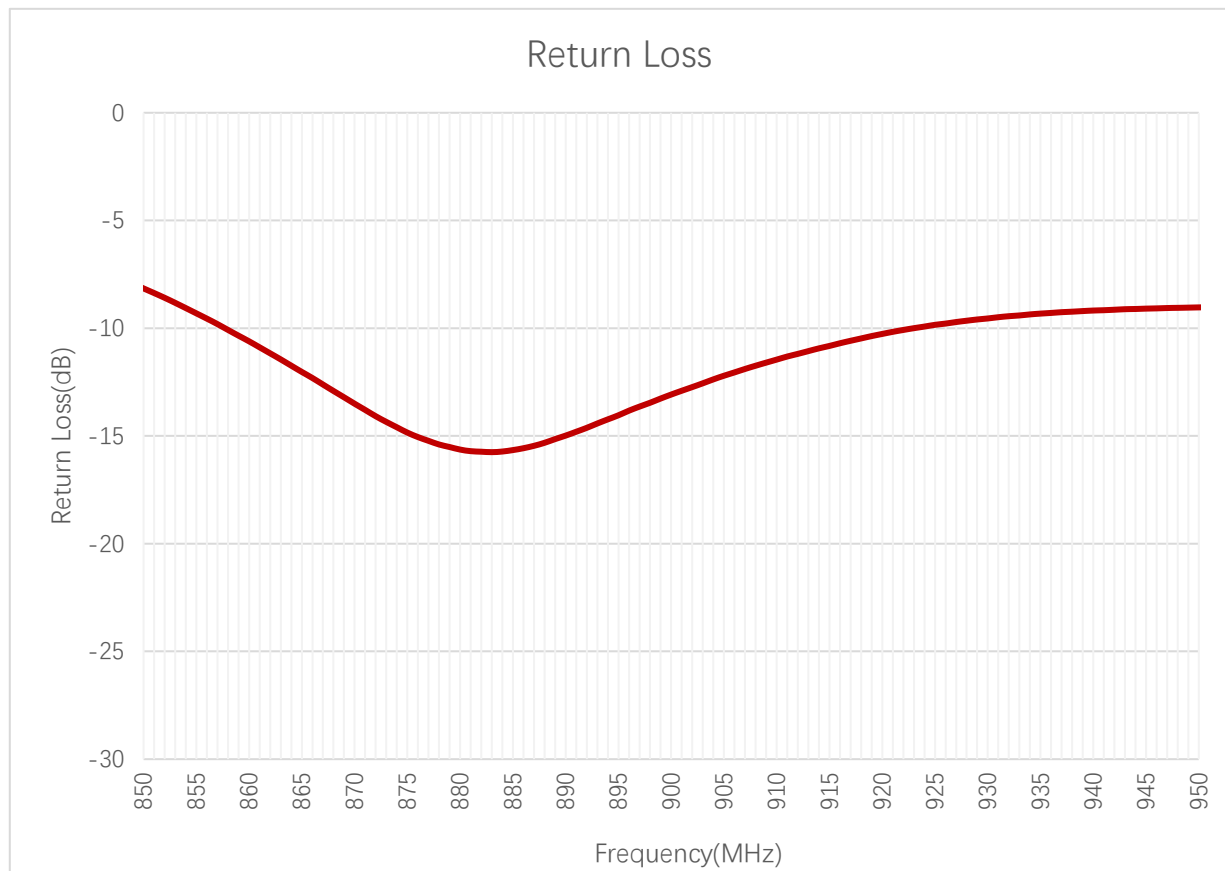
3.1.1. VSWR



VSWR

Frequency (MHz)	863	865	868	902	915	928
VSWR	1.7	1.7	1.6	1.6	1.8	2

3.1.2. Return Loss



Return Loss (dB)

Frequency (MHz)	863	865	868	902	915	928
Return Loss (dB)	-11.4	-12	-12.9	-12.7	-10.8	-9.7

3.2. Radiation Performance Test

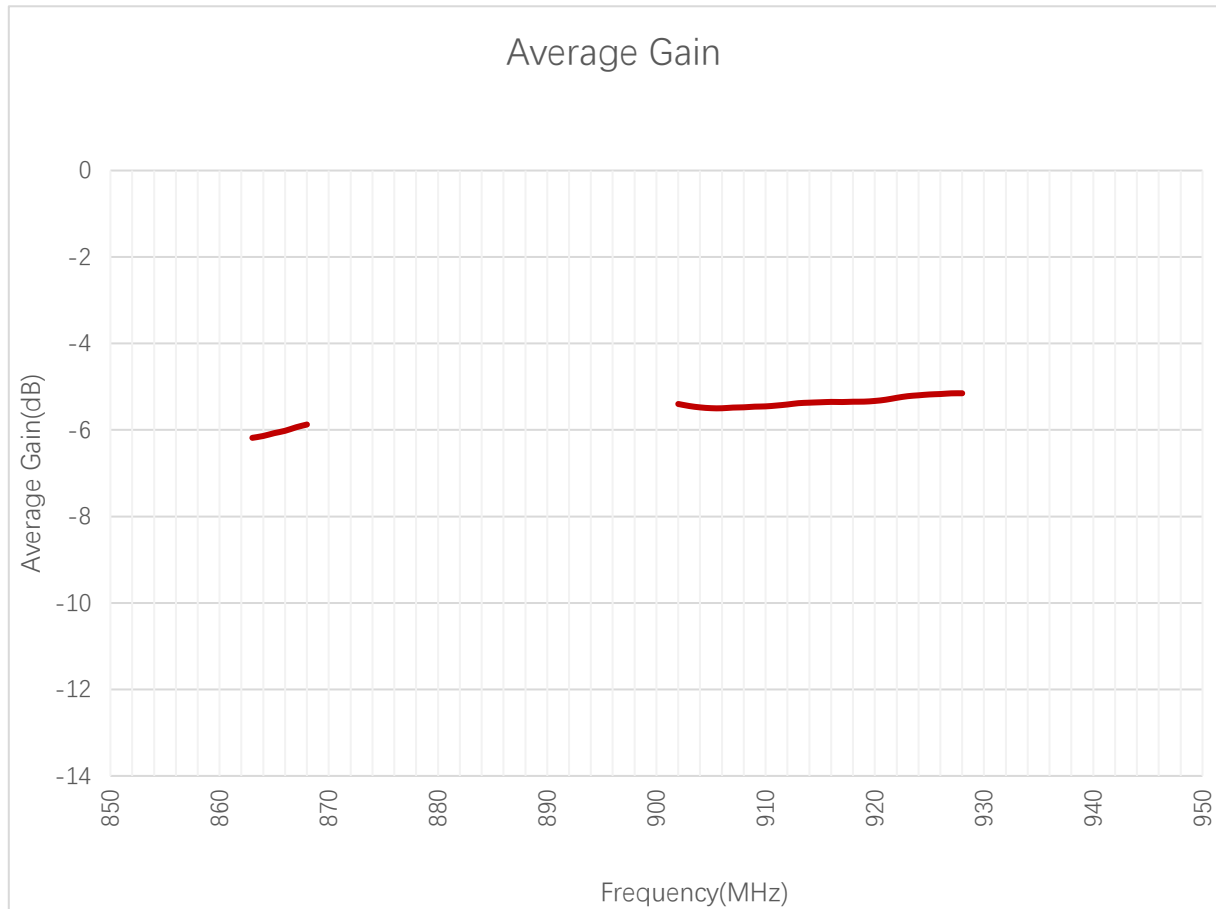
3.2.1. Efficiency



Efficiency (%)

Frequency (MHz)	863	865	868	902	915	928
Efficiency (%)	24.1	24.7	25.9	28.9	29.1	30.5

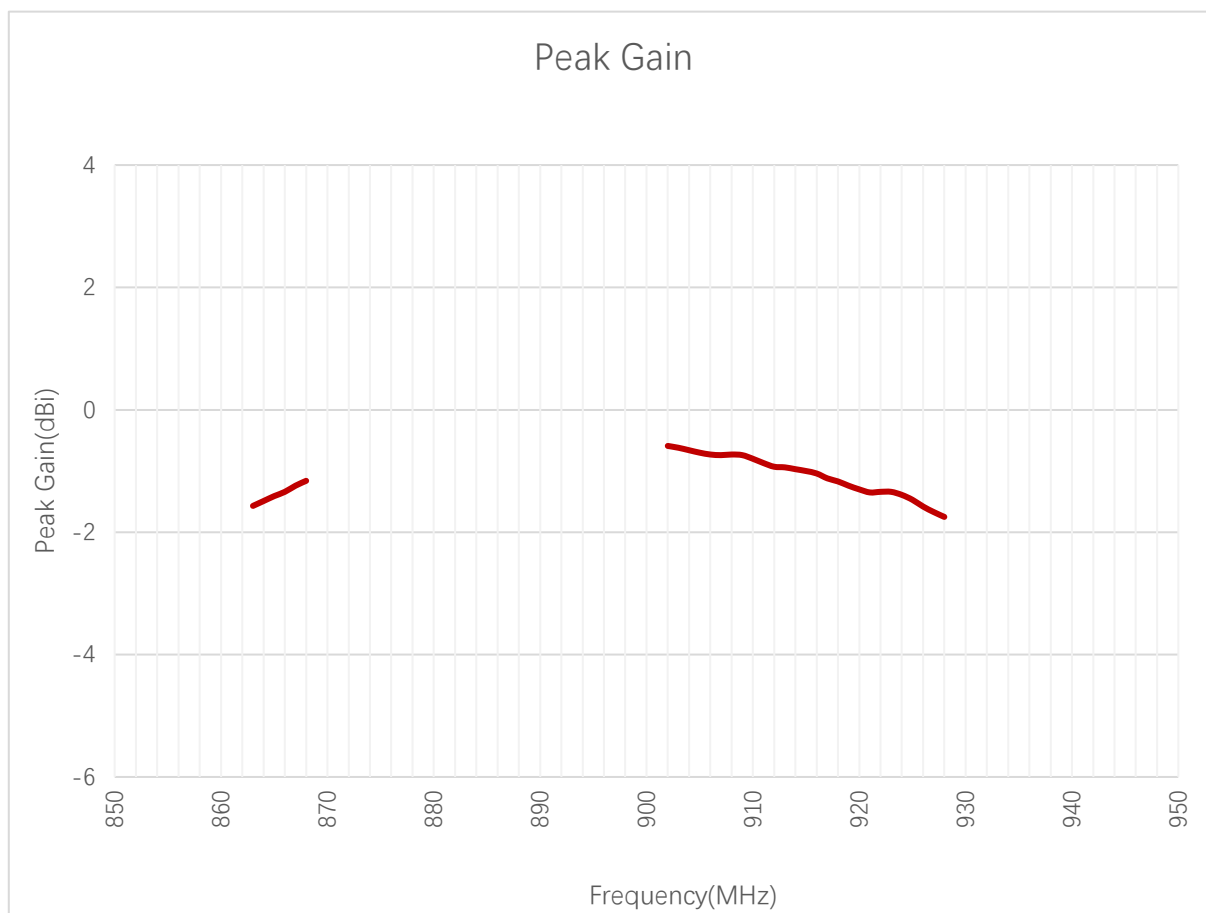
3.2.2. Average Gain



Average Gain (dB)

Frequency (MHz)	863	865	868	902	915	928
Peak Gain (dB)	-6.2	-6.1	-5.9	-5.4	-5.4	-5.2

3.2.3. Peak Gain

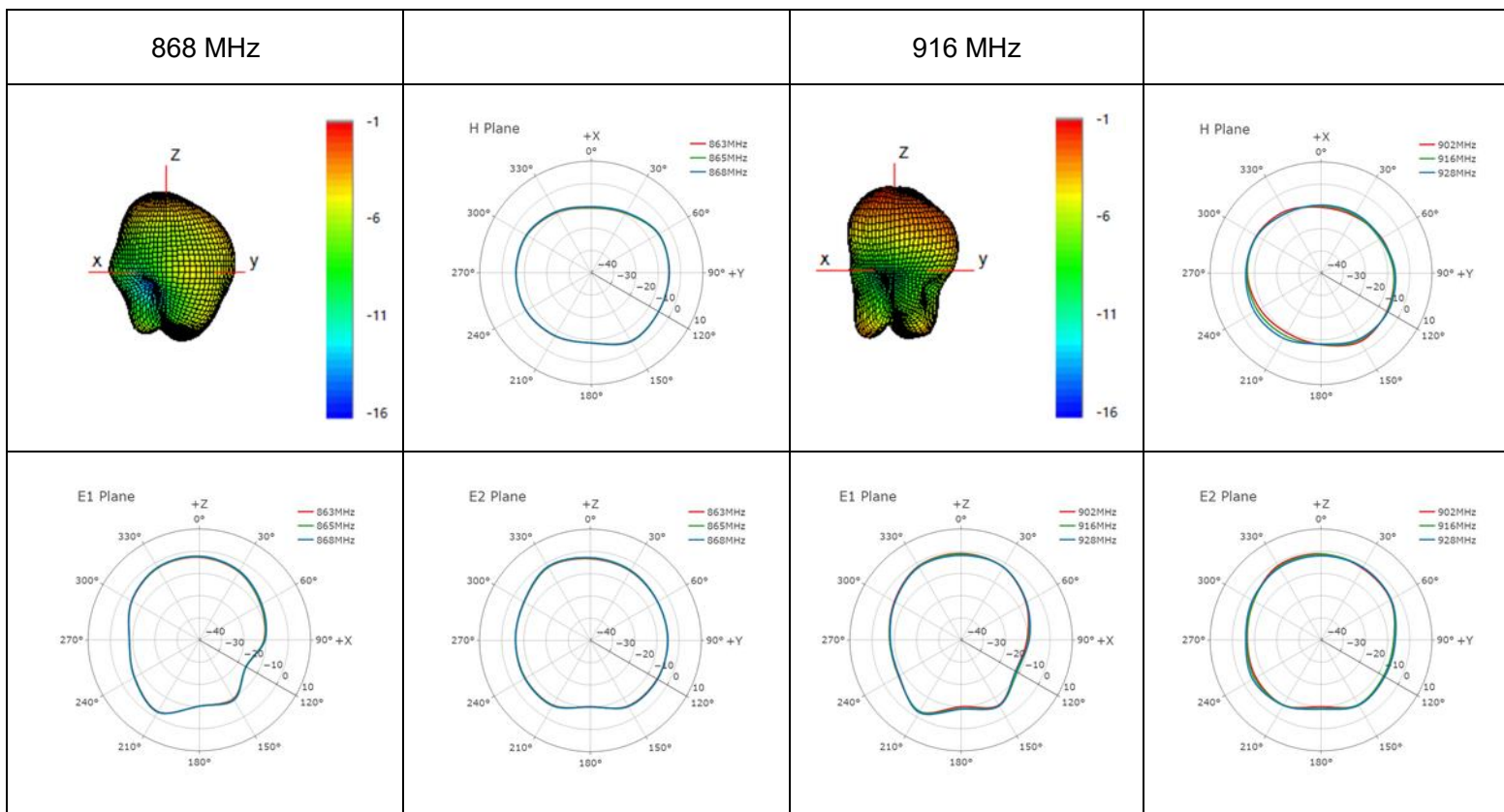
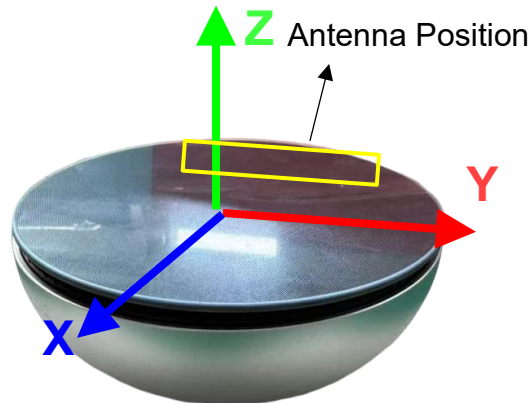


Peak Gain (dBi)

Frequency (MHz)	863	865	868	902	915	928
Peak Gain (dBi)	-1.6	-1.4	-1.2	-0.6	-1	-1.8

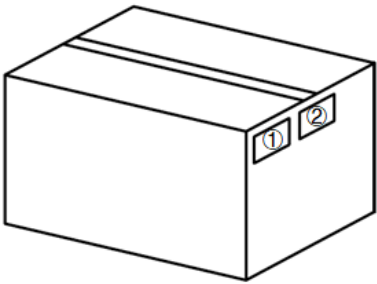
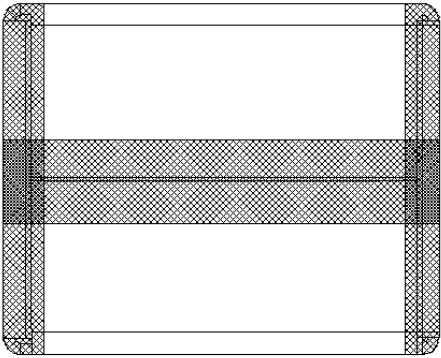
3.2.4. 3D & 2D Radiation Pattern

- Test Status: Assembled in the device
- Test Chamber: GL-G-1



4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		50 products are wrapped with EPE foam; 50 pieces per bundle
2		Each large PE bag contains 4 bundles, totaling 200 products. 4 bundles / PE bag
3		(30 PE Bags / Carton Box) (6000 Antennas / Carton Box) Estimated quantity Products that cannot fill the entire carton box are packed in a suitable size carton box. <u>Carton Size:</u> <u>L × W × H = 405 × 295 × 185 mm</u>

4		Position for Attaching Labels ① Carton Label ② Quality Label
5		Sealing Cartons H-shaped sealing cartons
Note	The initial packaging method described above is for reference only, and the final actual packaging method shall be subject to the actual shipping packaging.	

Contact Us

At Quectel, our aim is to provide timely and comprehensive services to our customers. If you require any assistance, please contact our headquarters:

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Email: info@quectel.com

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

<https://www.quectel.com/contact/>.

For technical support, or to report documentation errors, please visit:

<https://www.quectel.com/tech-support/>.

Or email us at: support@quectel.com.

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Revision History

Version	Date	Author	Note
-	2026-07-02	Tina Gan/ Lucky Feng/ Kessie Geng/ Rainey Liao	Creation of the document
1.0	2026-07-02	Tina Gan/ Lucky Feng/ Kessie Geng/ Rainey Liao	First official release



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