



Antenna Datasheet

Product OC: YEBM001L1AH-2RHCMA0B

Version: 1.0

Date: 2025-08-08

Product Name: Wi-Fi Magnetic Mount External Monopole Antenna

Key Features:

Frequency Band: 2400–2500 MHz, 5150–5850 MHz, 5925–7125 MHz

Dimensions: ϕ 30 mm x 82.2 mm

Efficiency: Up to 57.4 % (FS)

RoHS, REACH and CA65 Compliant

IP67

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1 Specification

Test Condition: Free Space & On 300 mm × 300 mm Metal Plane

1.1. Electrical

Electrical	
Frequency Range	2400–2500 MHz, 5150–5850 MHz, 5925–7125 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

Electrical – Detail						
Specification	Band	Band Freq. (MHz)	Wi-Fi 2G 2400–2500	Wi-Fi 5G		Wi-Fi 6G
				5150–5350	5470–5725	5725–5850
Max. VSWR	FS		1.2	2.1	2.4	2.5
	MP		1.5	1.8	2.1	2.2
Max. Return Loss (dB)	FS		-21.6	-9.1	-7.8	-7.4
	MP		-13.3	-11.2	-9.1	-8.6
AVG Eff. (%)	FS		50.8	40.2	39.4	36.6
	MP		48.4	55.5	49.2	48.0
AVG Gain (dB)	FS		-2.9	-4.0	-4.1	-4.4
	MP		-3.1	-2.6	-3.1	-3.2
Max. Peak Gain (dBi)	FS		4.7	2.9	3.0	2.2
	MP		4.2	3.0	3.0	2.8
VSWR	FS		≤ 2.8			

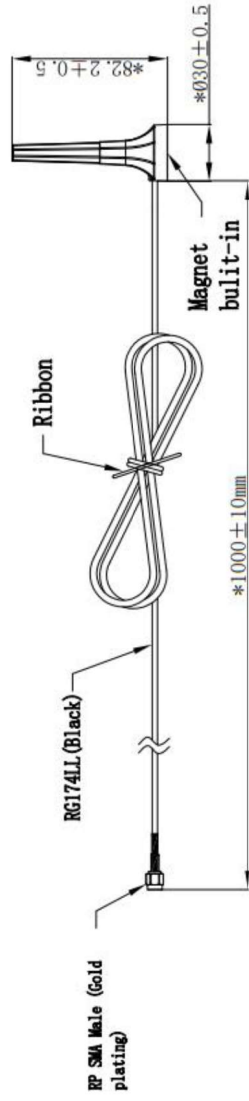
	MP	≤ 2.5
Return Loss	FS	≤ -6.4 dB
	MP	≤ -7.2 dB
Peak Gain	FS	≤ 4.7 dBi
	MP	≤ 4.2 dBi

- FS: In Free Space
- MP: On 300 mm × 300 mm Metal Plane

1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	Φ 30 mm × 82.2 mm
Material & Color	ASA & Black
Cable Type & Color & Length	RG174LL & Black & 1000 mm
Connector Type	RP SMA Male
Weight	Typ. 26.6 g
Mounting Type	Magnetic
Magnetic Pull Force	1.1 kgf
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Ingress Protection (IP) Rating	IP67
Housing UV Resistant	UL 746C f1
RoHS, REACH and CA65 Compliant	Yes

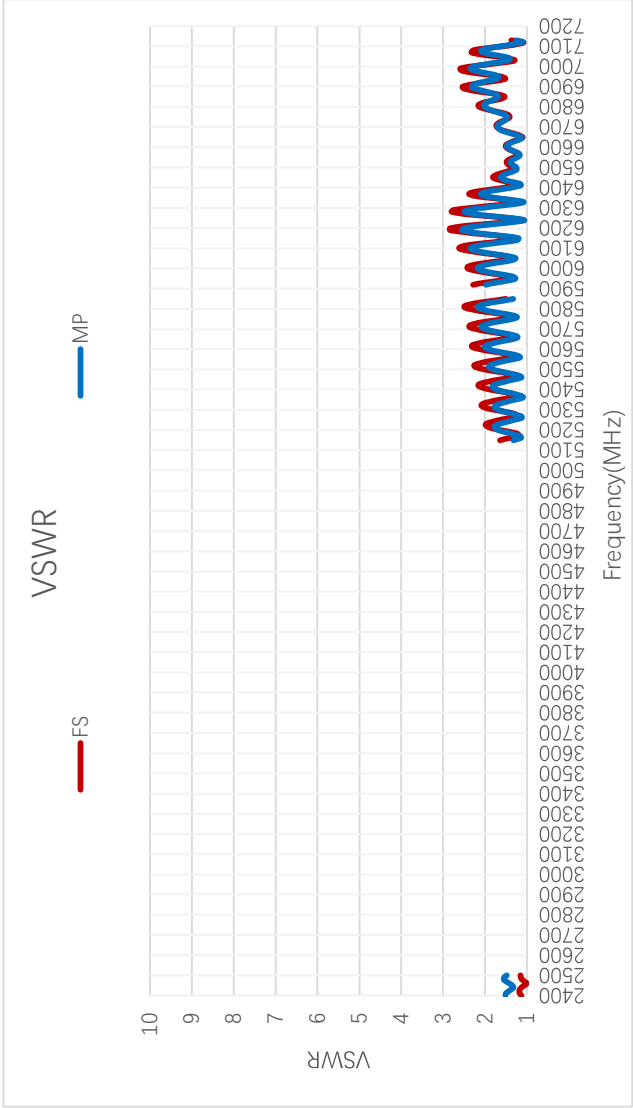
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

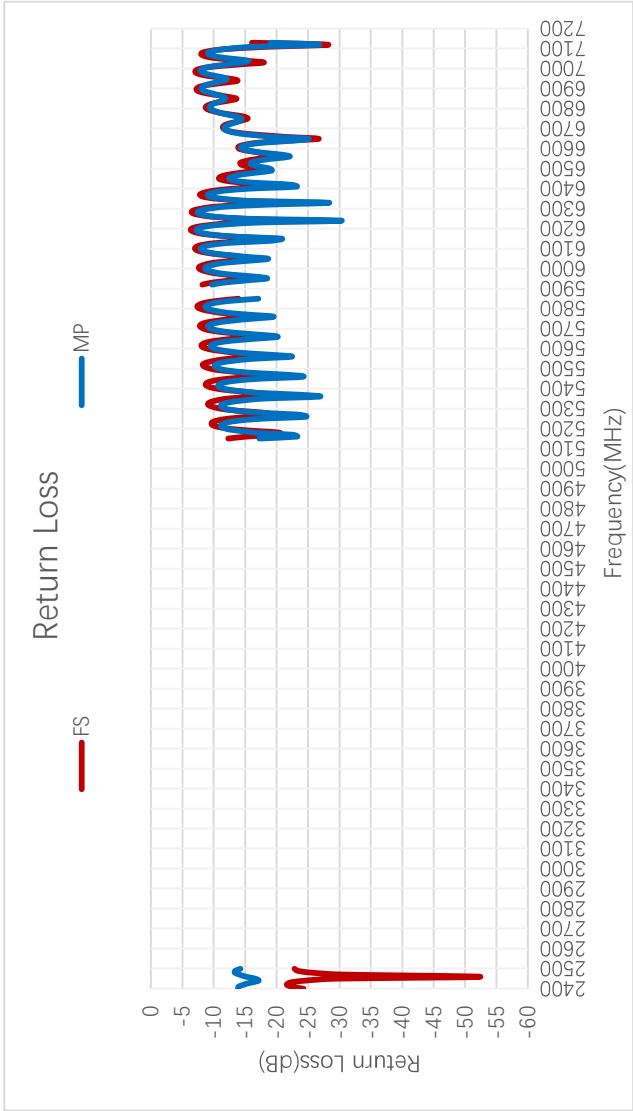
3.1.1. VSWR



VSWR

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
FS	1.1	1.1	1.2	1.6	2	1.5	2	1.2	1.6	1.4
MP	1.5	1.3	1.5	1.3	1.8	1.3	1.7	1.1	1.6	1.3

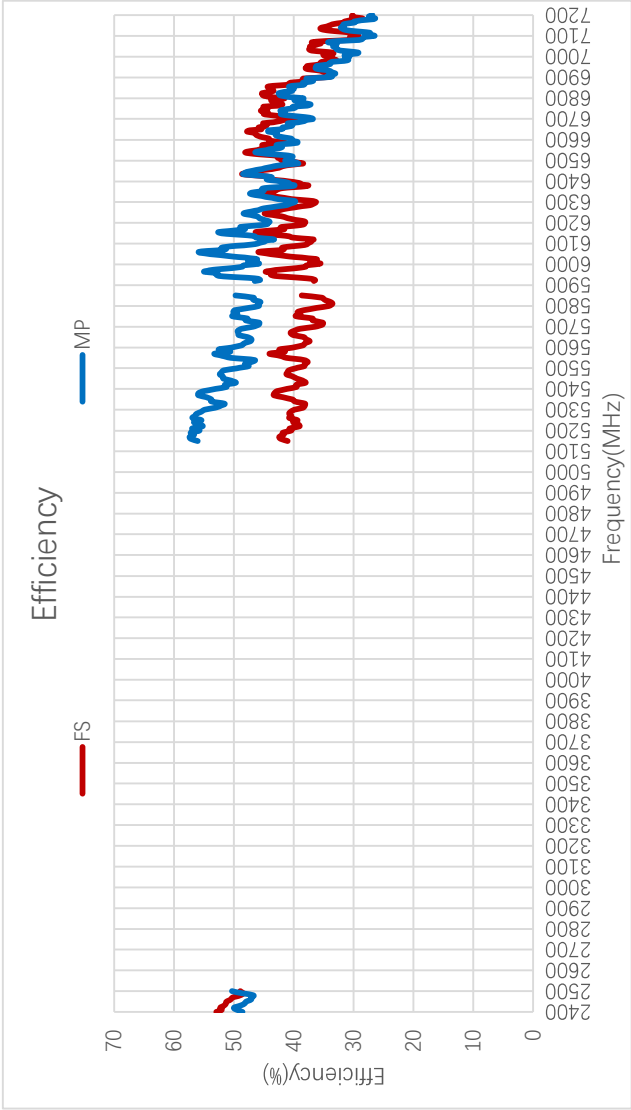
3.1.1.2. Return Loss



Return Loss (dB)						
Frequency (MHz)	2400	2450	2500	5150	5500	7125
FS	-24.3	-29.3	-22.9	-12.3	-9.5	-16.1
MP	-13.8	-16.7	-14.2	-17.2	-10.9	-19.1

3.2. Radiation Performance Test

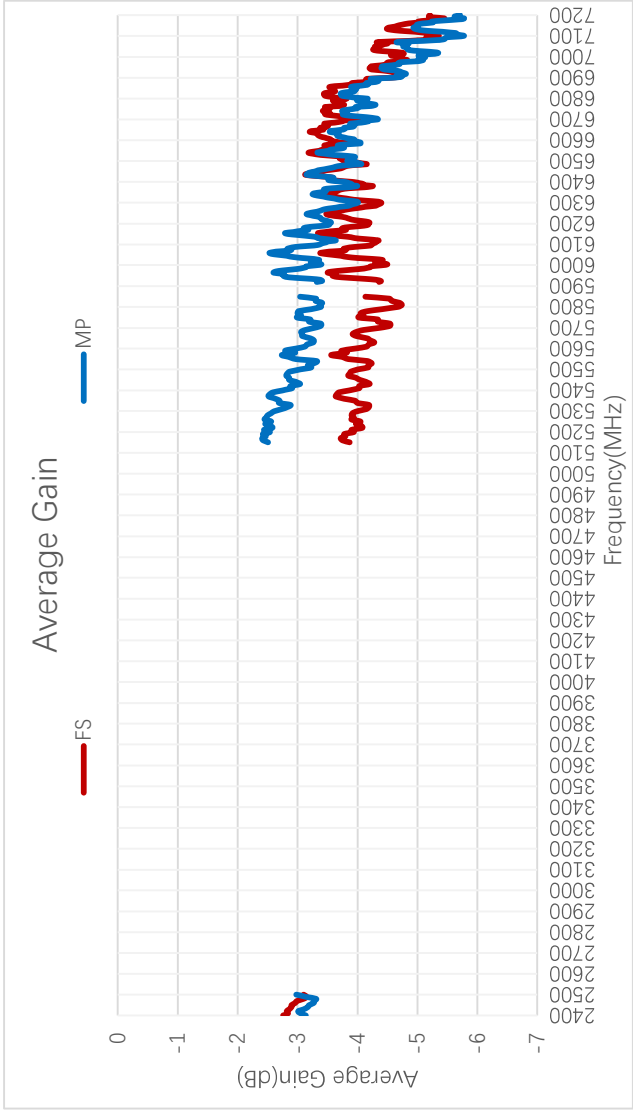
3.2.1. Efficiency



Efficiency (%)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
FS	53	51.2	48.9	41	39.8	38.7	37.1	43.7	44.3	34.9
MP	48.6	48	50.3	56.1	49.6	49.7	45.9	45.4	41.5	31.4

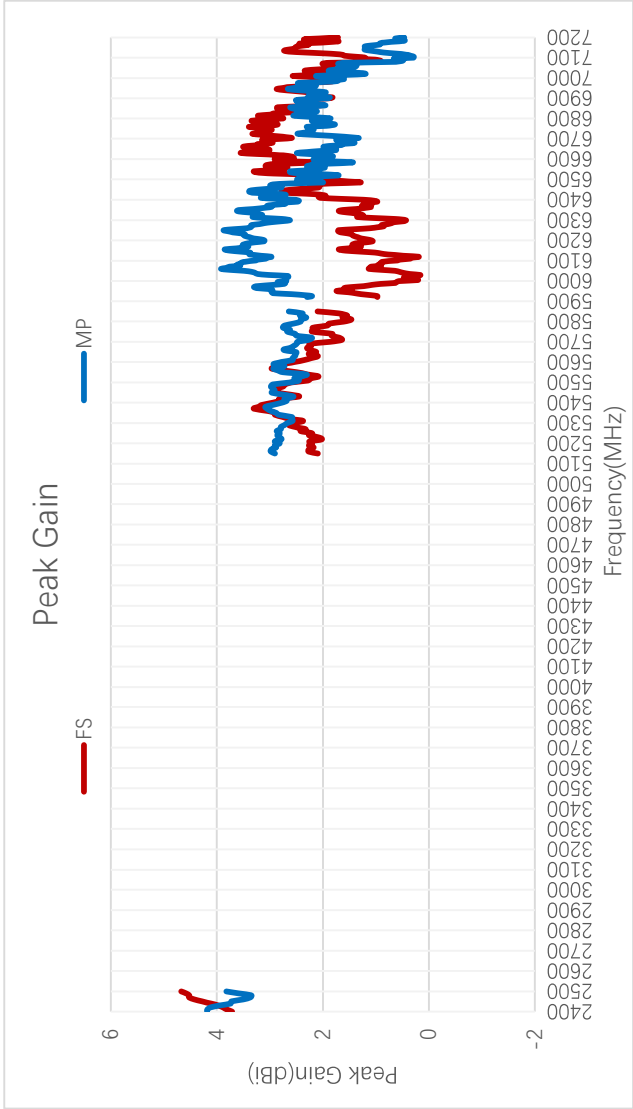
3.2.2. Average Gain



Average Gain (dB)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
FS	-2.8	-2.9	-3.1	-3.9	-4	-4.1	-4.3	-3.6	-3.5	-4.6
MP	-3.1	-3.2	-3	-2.5	-3.1	-3	-3.4	-3.4	-3.8	-5

3.2.3. Peak Gain

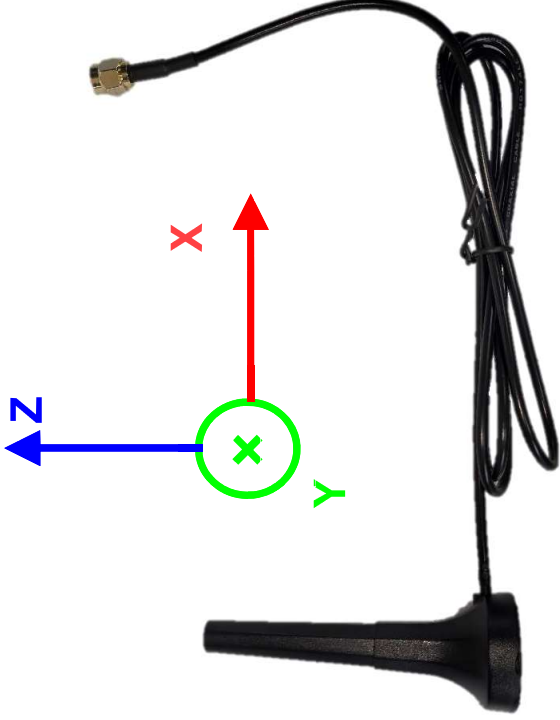


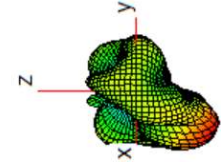
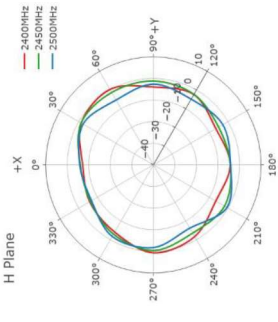
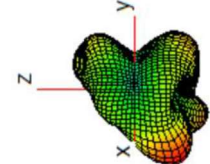
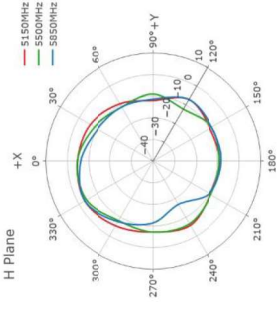
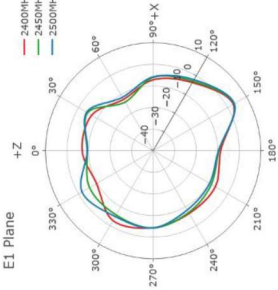
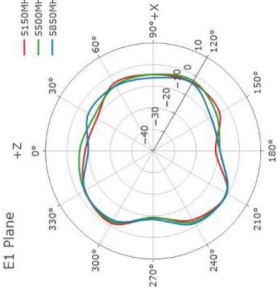
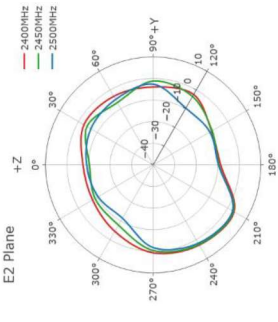
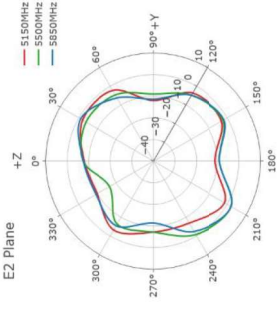
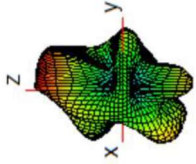
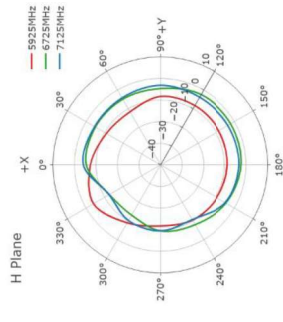
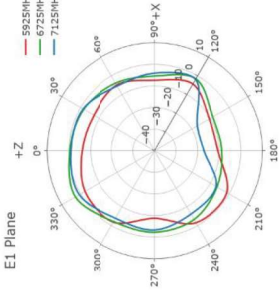
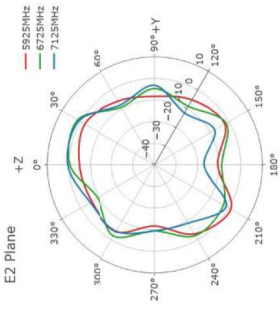
Peak Gain (dBi)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
FS	3.7	4.3	4.7	2.1	2.6	2.1	1.1	1.3	3.2	2.6
MP	4.2	3.7	3.8	2.9	2.6	2.6	2.4	3.2	2.4	1

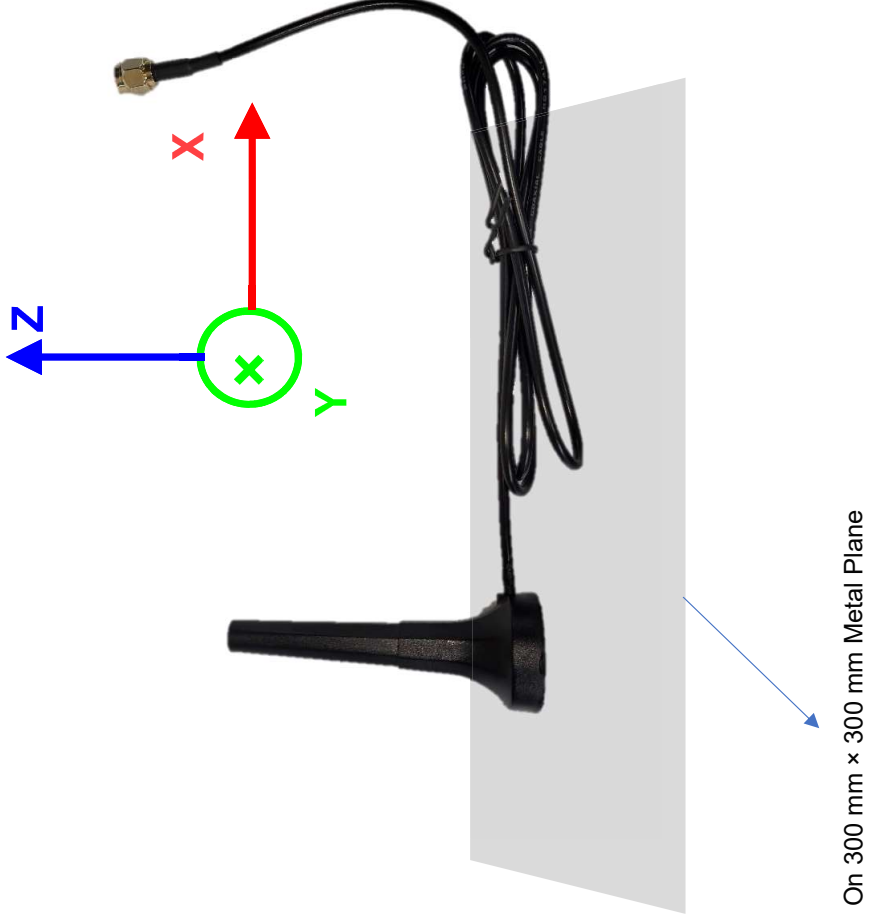
3.2.4. 3D & 2D Radiation Pattern

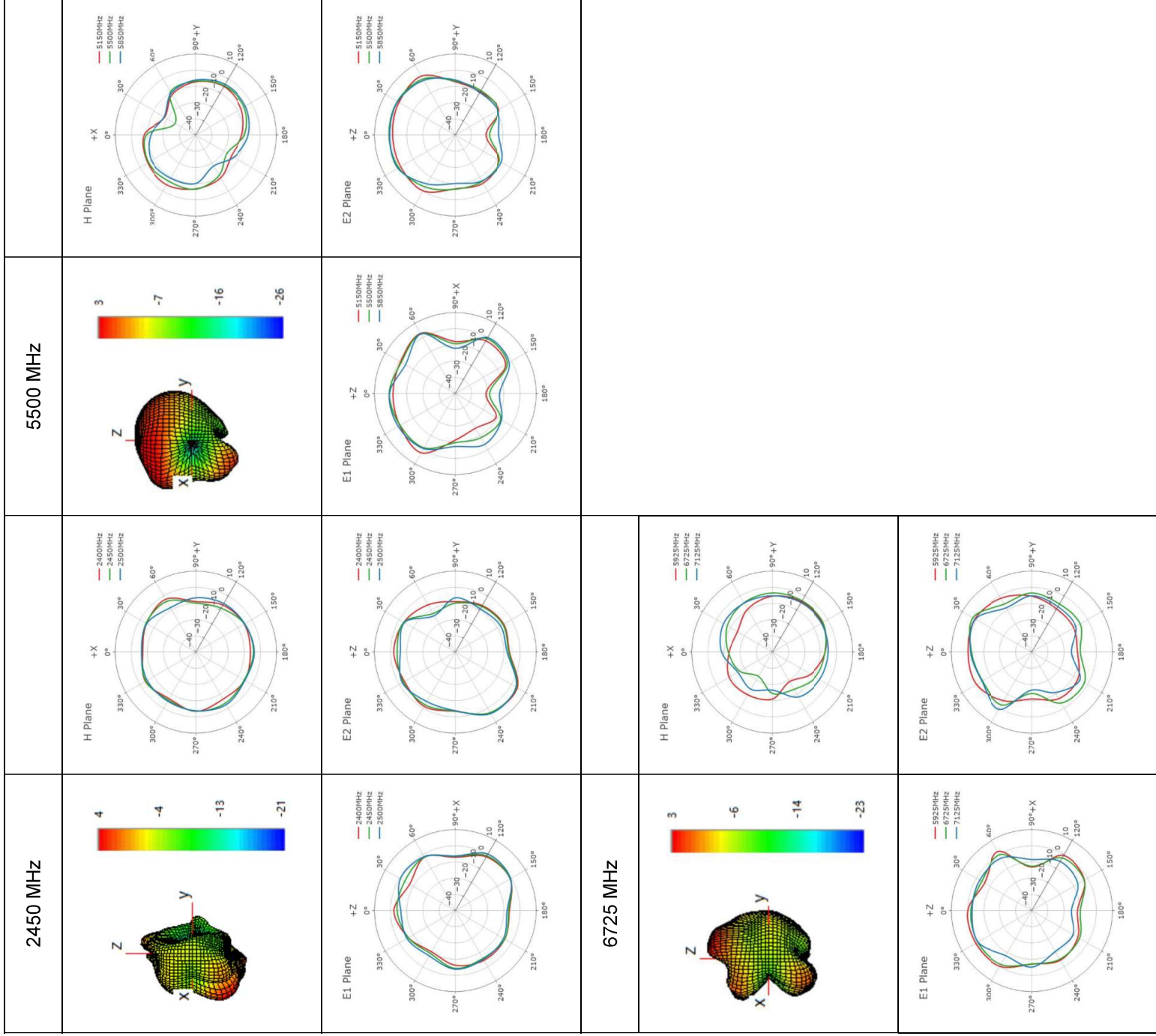
- Test Condition: Free Space
- Test Chamber: GL-G-1



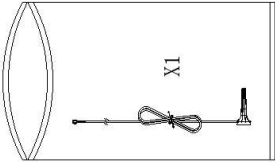
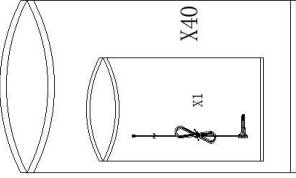
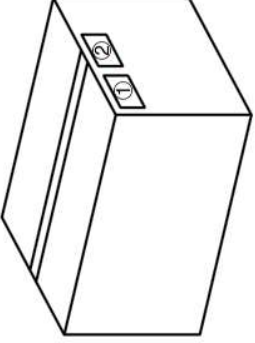
2450 MHz	5500 MHz	
  H Plane	  H Plane	
 E1 Plane	 E1 Plane	
 E2 Plane	 E2 Plane	
6725 MHz		
  H Plane		
 E1 Plane	 E2 Plane	

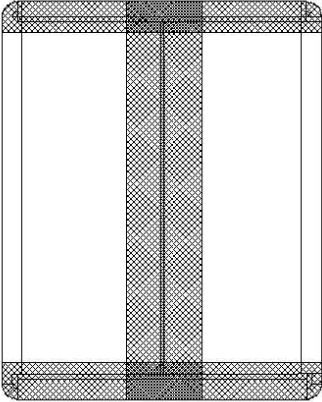
- Test Condition: On 300 mm × 300 mm Metal Plane
- Test Chamber: GL-G-1





4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		1 antenna product in a small PE bag. (1 Antenna / Small PE Bag)
2		40 antenna products in a big PE bag. (40 Antennas / Big PE Bag)
3		(6 Big PE Bags / Carton Box) (240 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 x W x H = 370 x 370 x 295 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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Or our local offices. For more information, please visit:

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Revision History

Version	Date	Author	Note
-	2025-08-08	Zeline Liang/ Lucky Feng/ Riva Ren/ Rainey Liao	Creation of the document
1.0	2025-08-08	Zeline Liang/ Lucky Feng/ Riva Ren/ Rainey Liao	First official release



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