



Antenna Datasheet

Product OC: YECA000G1AM-4RMVHA2A

Version: 1.0

Date: 2024-09-20

Status: Preliminary

Product Name: 4G External Antenna

Key Features:

Frequency Band: 698–2700 MHz

Dimensions: 116.5 × 21.7 × 5.6 mm

Efficiency: Up to 43.3 %

RoHS Compliant

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1 Specification

Test Condition: Free Space

1.1. Electrical

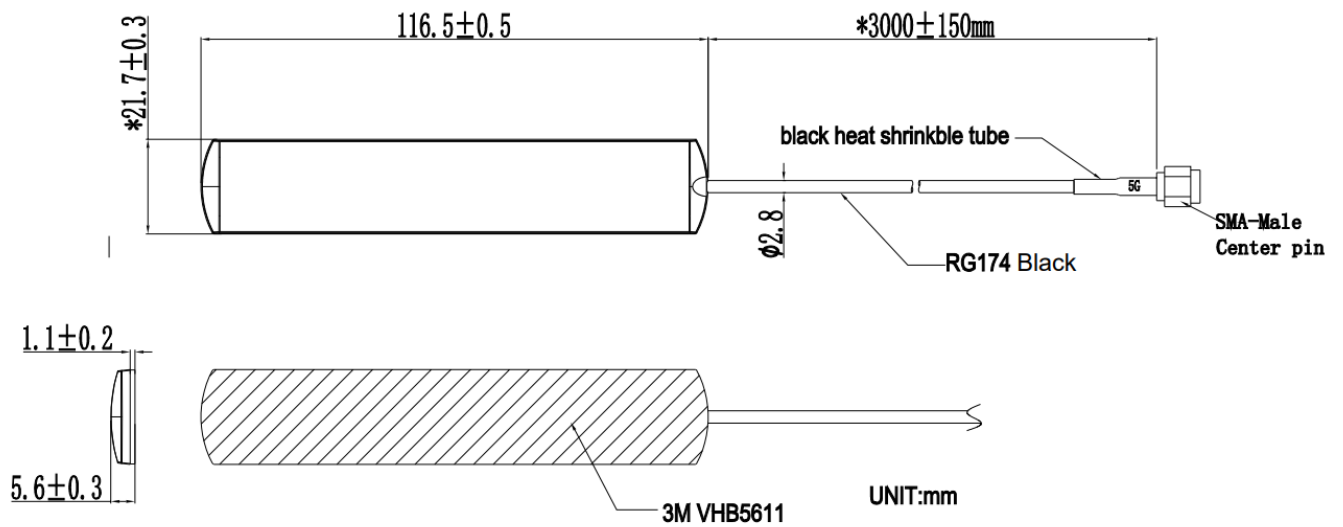
Electrical	
Frequency Range	698–2700 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

Electrical - Detail												
SPEC	Band	B71	B12 /B13 /B28	B5 /B8 /B26	n74 /n75 /n76	B1 /B2 /B3	B40	Wi-Fi 2G	B38 /B41	B42 /B48 /n77	n79	Wi-Fi 5G
	Freq. (MHz)	600– 700	700– 810	820– 960	1420– 1520	1700– 2170	2300– 2400	2400– 2500	2500– 2690	3300– 4200	4400– 5000	5150– 5850
Max. VSWR		-	1.4	1.9	-	1.5	1.5	1.4	1.5	-	-	-
Max. Return Loss (dB)		-	-15.4	-10.2	-	-13.3	-14.6	-16.2	-14.5	-	-	-
AVG Eff. (%)		-	40.2	36.2	-	24.6	13.7	15.2	16.4	-	-	-
AVG Gain (dB)		-	-4.0	-4.4	-	-6.1	-8.6	-8.2	-7.9	-	-	-
Max. Peak Gain (dBi)		-	1.9	1.3	-	0.4	-3.1	-2.0	-2.0	-	-	-
VSWR						≤ 1.9						
Return Loss						≤ -10.2 dB						
Peak Gain						≤ 1.9 dBi						

1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	116.5 × 21.7 × 5.6 mm
Casing Material & Color	ABS + PC & Black
Cable Type & Color & Length	RG174 & Black & 3000 mm
Connector Type	SMA Male
Mounting Type	Adhesive
Weight	Typ. 44.3 g
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
RoHS Compliant	Yes

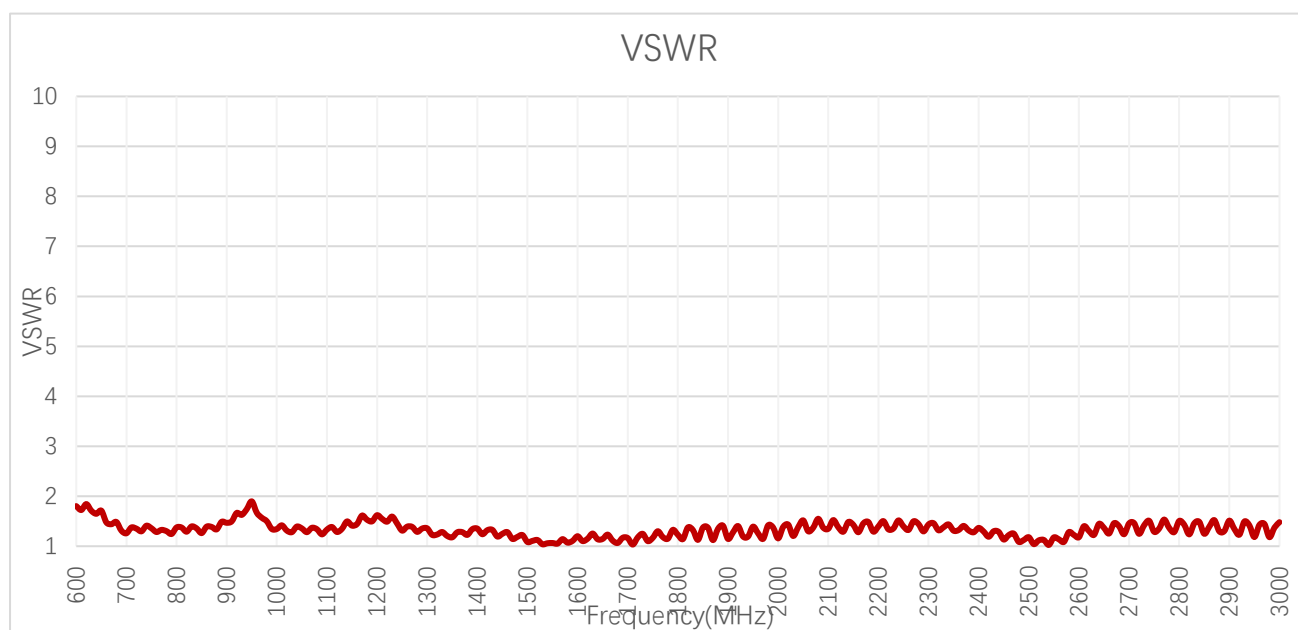
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

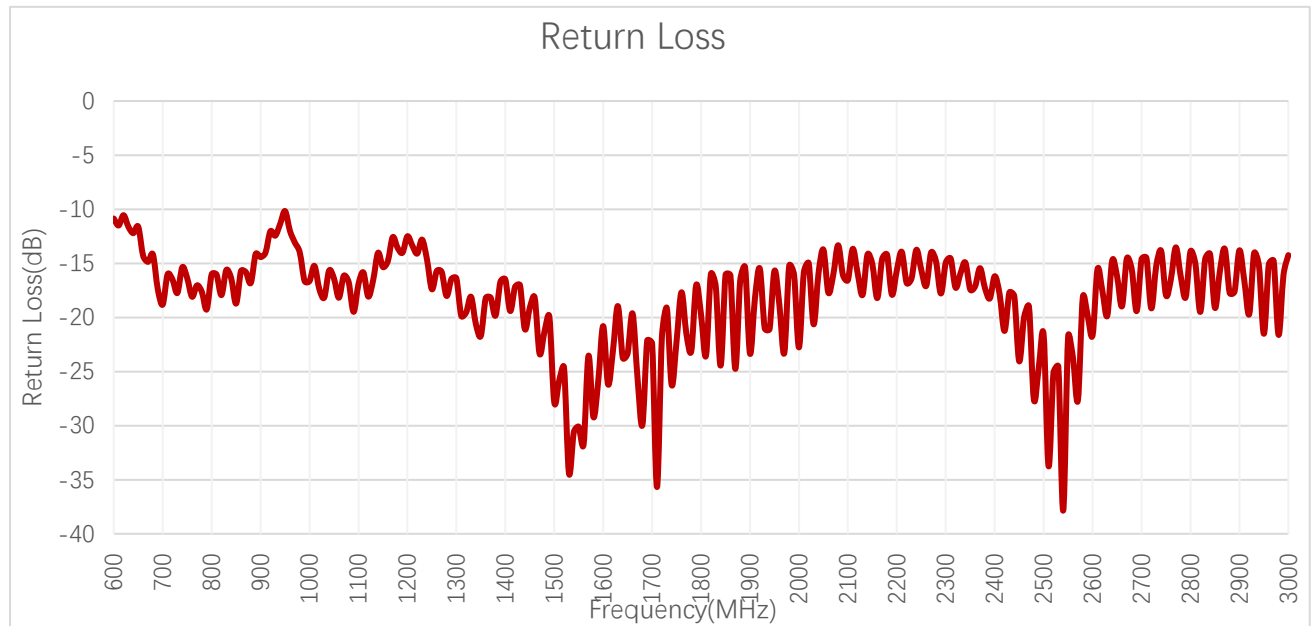
3.1.1. VSWR



VSWR

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
VSWR	-	-	1.4	1.4	1.5	1.7	-	1.0	1.1	1.4
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
VSWR	1.4	1.5	1.3	1.3	1.3	1.4	-	-	-	-

3.1.2. Return Loss

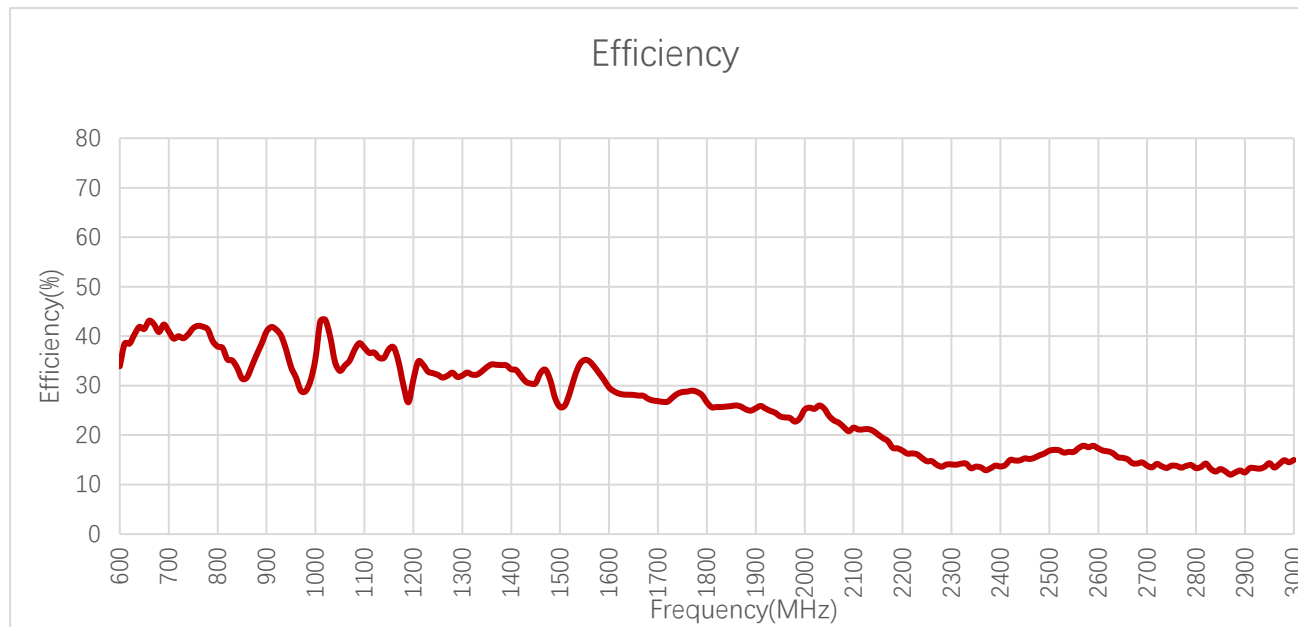


Return Loss (dB)

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Return Loss (dB)	-	-	-16.0	-25.6	-14.4	-12.0	-	-35.7	-26.3	-16.6
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
Return Loss (dB)	-15.7	-14.2	-17.4	-24.0	-21.6	-19.4	-	-	-	-

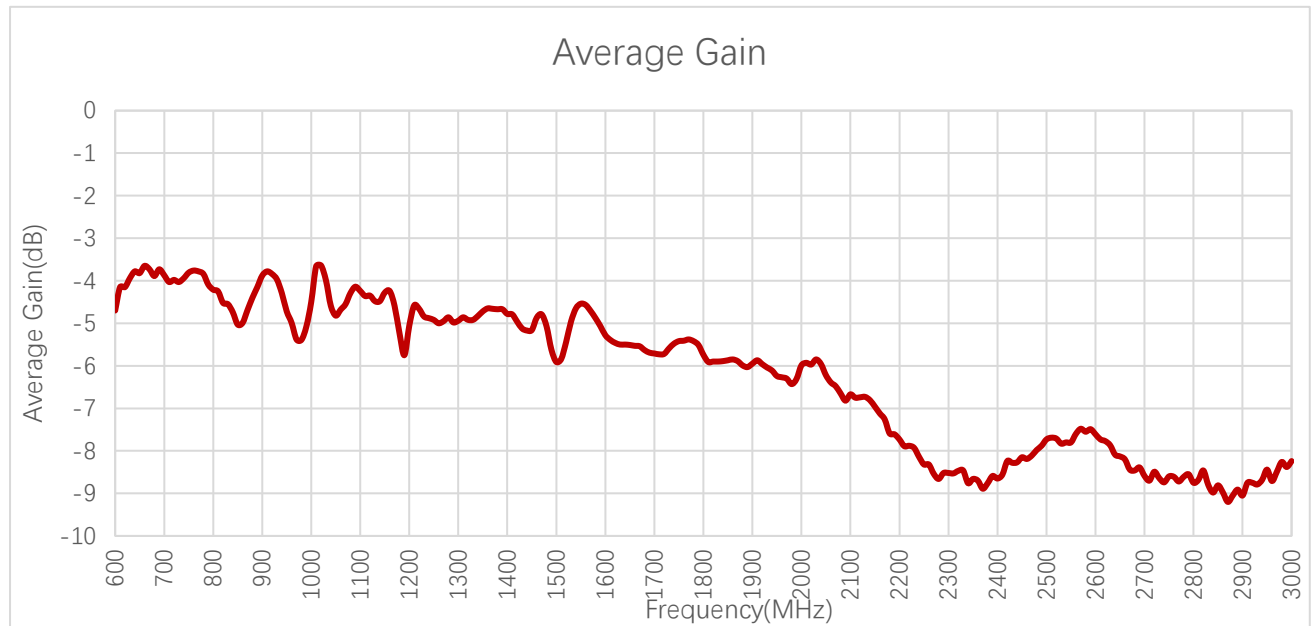
3.2. Radiation Performance Test

3.2.1. Efficiency



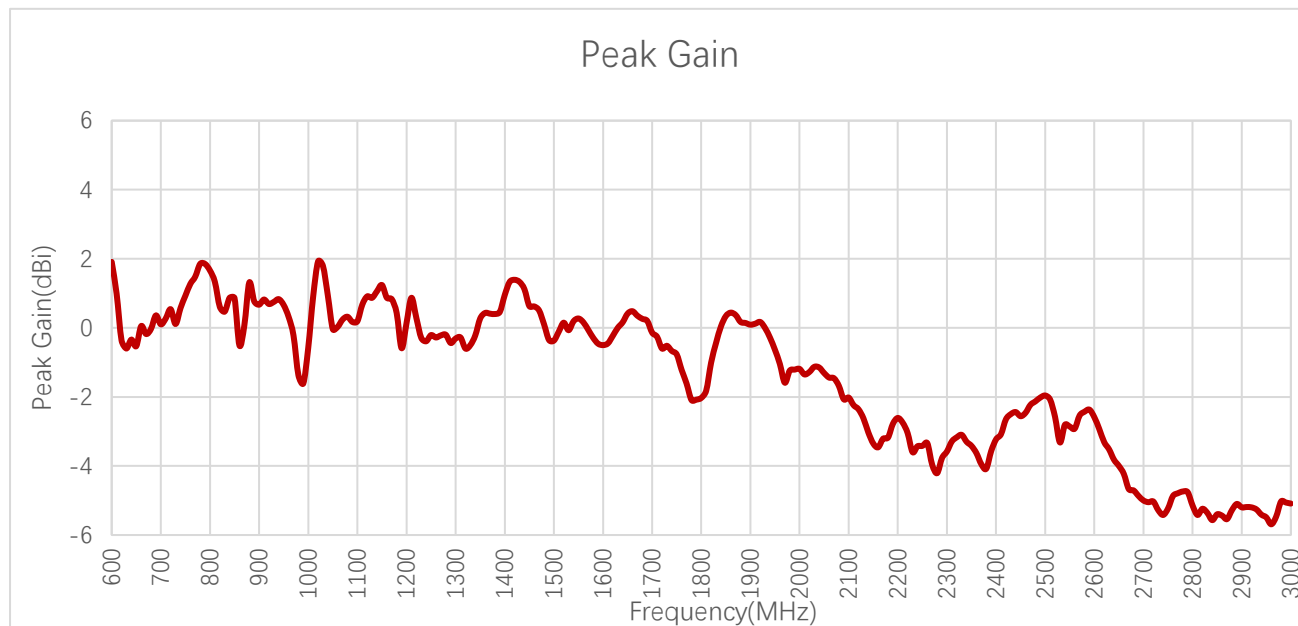
Return Loss (dB)										
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Efficiency (%)	-	-	39.5	35.1	40.9	31.7	-	26.7	28.4	25.2
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
Efficiency (%)	23.8	20.9	13.6	15.3	17.3	14.5	-	-	-	-

3.2.2. Average Gain



Average Gain (dB)										
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Average Gain (dB)	-	-	-4.0	-4.6	-3.9	-5.0	-	-6.7	-6.4	-6.6
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
Average Gain (dB)	-6.7	-7.4	-8.3	-8.1	-7.9	-7.8	-	-	-	-

3.2.3. Peak Gain

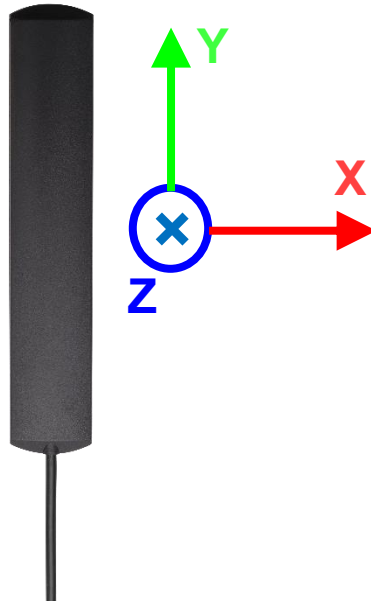


Peak Gain (dBi)

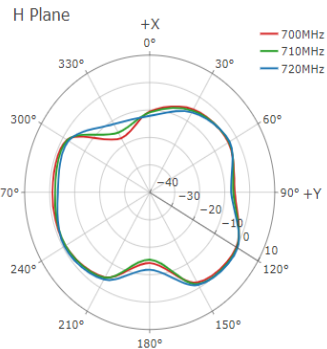
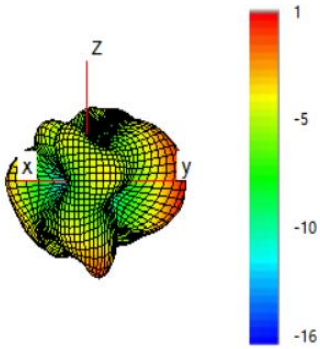
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Peak Gain (dBi)	-	-	0.3	0.5	0.7	0.3	-	-0.3	-0.7	0.2
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
Peak Gain (dBi)	-0.6	-3.0	-3.4	-2.6	-2.6	-4.9	-	-	-	-

3.2.4. 3D & 2D Radiation Pattern

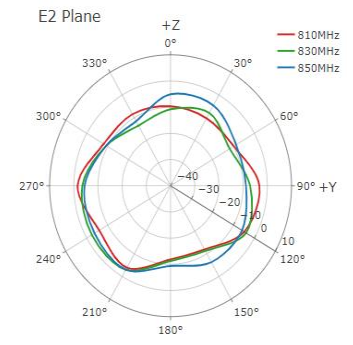
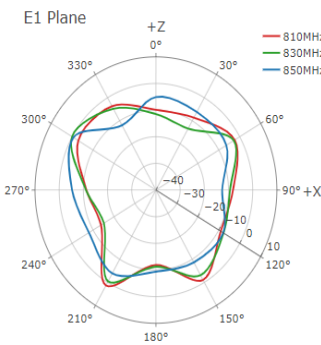
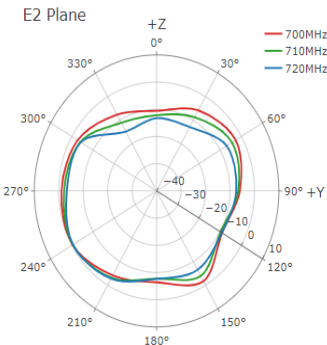
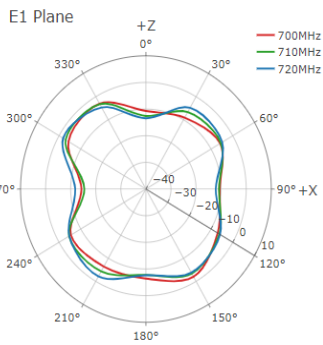
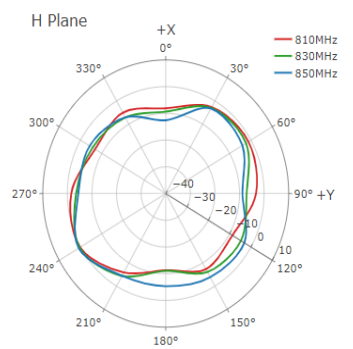
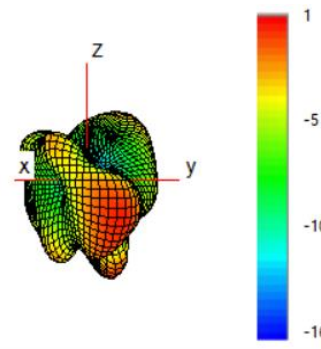
- Test Condition: Free Space
- Test Chamber: GL-G-1



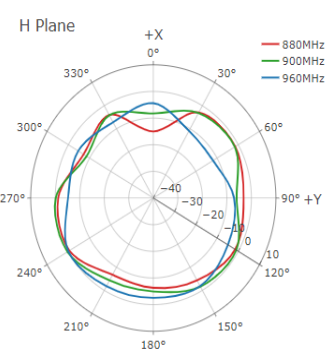
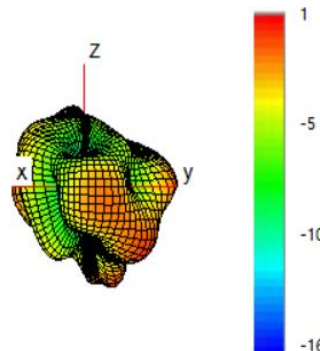
710 MHz



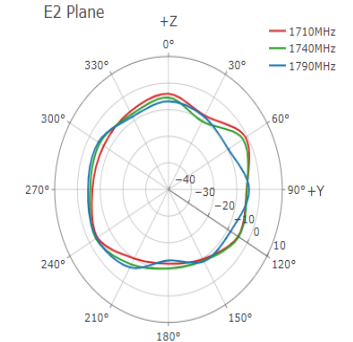
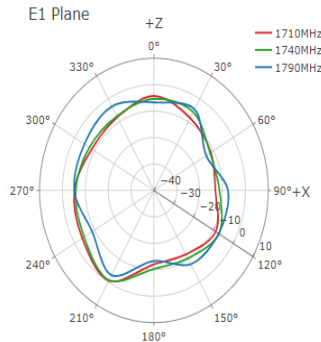
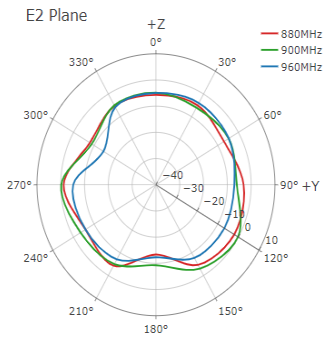
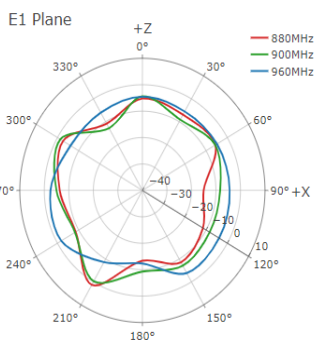
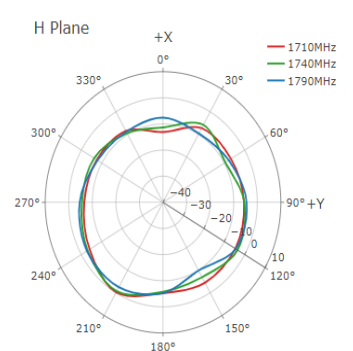
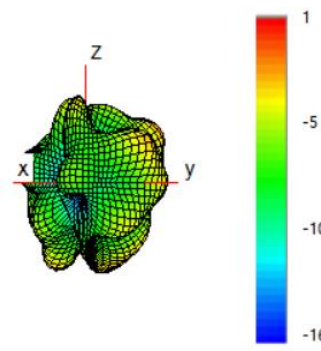
830 MHz

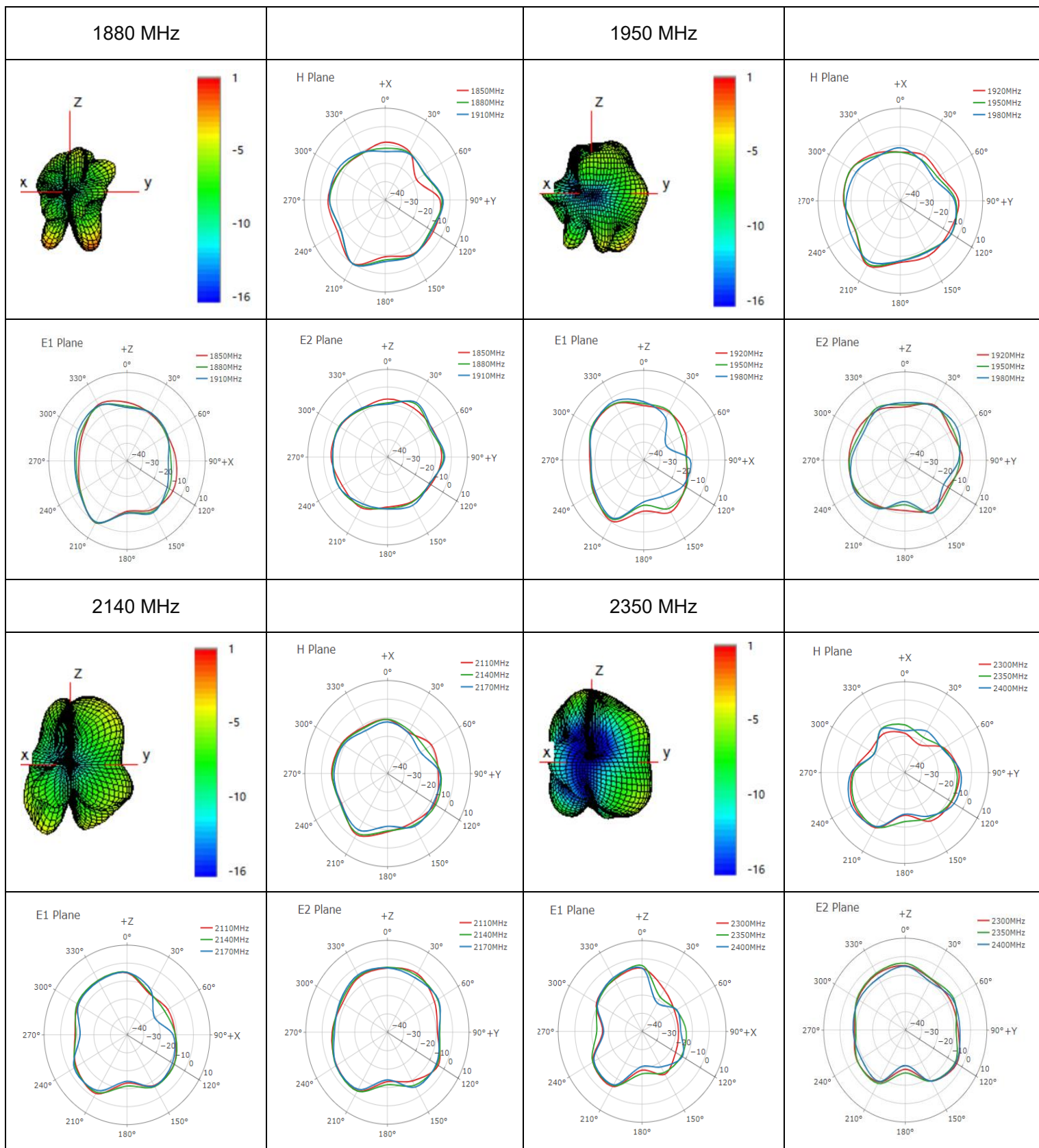


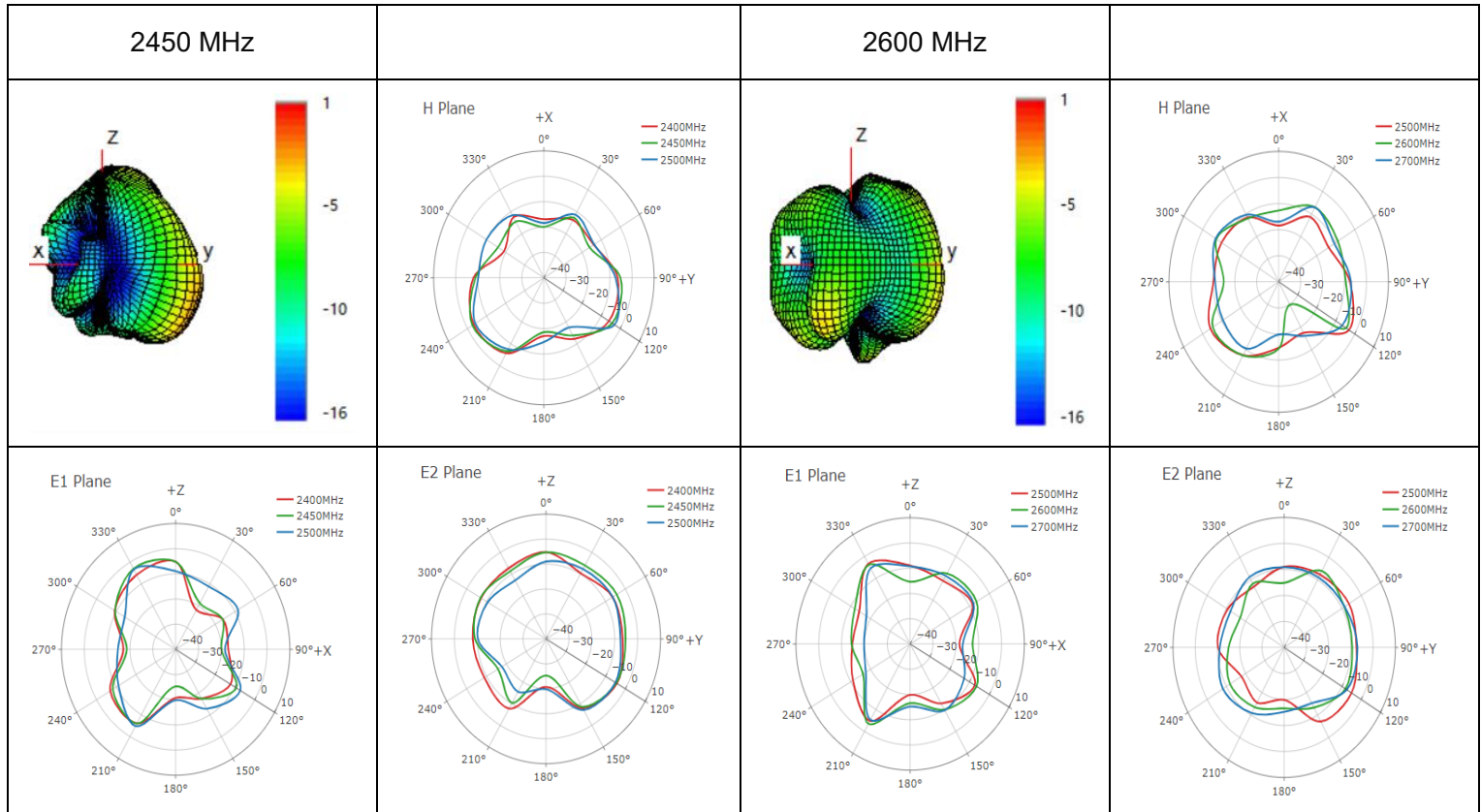
900 MHz



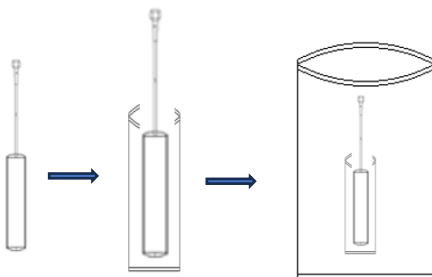
1740 MHz

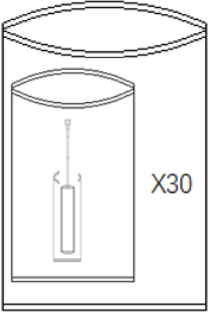
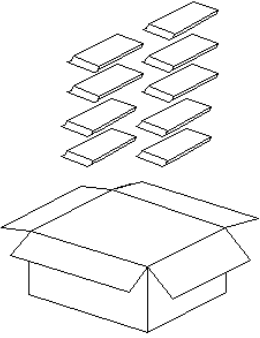
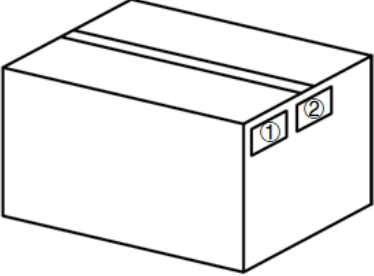
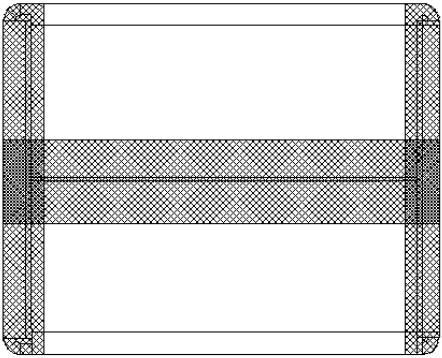






4 Packaging

Step	Packaging picture / 2D picture	Description
1		1 pcs Antenna products in a small PE bag (1 pcs Antenna / Per small PE Bag)
2		Product set PE bag The wire harness is fixed with zip ties, and the length of the tied wire harness is less than 18cm
		Secure the harness and place it in a ziplock bag

2		30 pcs Antenna products in a big PE bag (30 pcs Antenna / Per big PE Bag)
3		9 PE Bag / Per Carton Box (270 pcs Antenna / Per 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 = 400 × 290 × 210 mm</u>
4		Position for Attaching Labels--- ① Carton Label ② Quality Label
5		Sealing Cartons--- “工” type sealing cartons
6	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
-	2024-09-20	Jacob MO/ Lance SUN/ David LIU/ Rainey LIAO	Creation of the document
1.0	2024-09-20	Jacob MO/ Lance SUN/ David LIU/ Rainey LIAO	First official release



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