



Antenna Datasheet

Product OC: Y2WTI00A0AA

Version: 1.0

Date: 2025-02-20

Status: Released

Product Name: 5G Sucker Antenna

Key Features:

Frequency Band: 600–6000 MHz

Dimensions: Φ 30 mm $\times$ 88 mm

Efficiency: Up to 62 %

RoHS Compliant

IP67

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1 Specification

Test Condition: On 300 × 300 mm metal plane & Free Space

1.1. Electrical

Electrical	
Frequency Range	600–6000 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

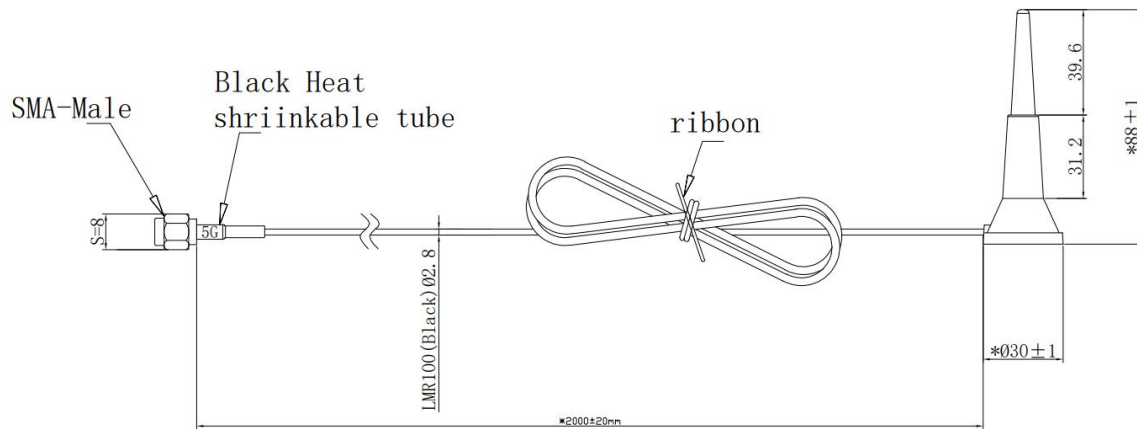
Electrical – Detail												
SPEC	Band	B71	B12 /B13 /B28	B5 /B8 /B26	n74 /n75 /n76	B1 /B2 /B3	B40	Wi-Fi 2G	B38 /B41	B42 /B48 /n77	n79	Wi-Fi 5G
	Freq. (MHz)	600– 700	700– 810	820– 960	1420– 1520	1700– 2170	2300– 2400	2400– 2500	2500– 2690	3300– 4200	4400– 5000	5150– 5850
Max. VSWR	MP	3.2	3.6	3.1	-	2.3	2.2	2.1	1.9	2.0	1.4	1.6
	FS	5.1	3.6	2.8	-	2.5	2.2	2.1	1.9	2.1	1.4	1.5
Max. Return Loss (dB)	MP	-5.5	-5.0	-5.8	-	-8.2	-8.7	-9.2	-10.1	-9.8	-15.6	-12.8
	FS	-3.5	-5.0	-6.6	-	-7.3	-8.7	-8.8	-9.9	-9.1	-16.3	-13.4
AVG Eff. (%)	MP	30.1	45.4	43.2	-	38.8	33.3	36.4	40.3	32.5	33.7	28.3
	FS	51.5	50.9	42.8	-	29.1	31.8	27.8	33.1	27.9	30.9	29.5
AVG.AVG Gain (dB)	MP	-5.3	-3.5	-3.7	-	-4.1	-4.8	-4.4	-4.0	-4.9	-4.7	-5.5
	FS	-3.0	-3.0	-3.8	-	-5.7	-5.0	-5.6	-4.8	-5.6	-5.1	-5.3
Max. Peak	MP	-0.8	2.5	3.0	-	1.1	1.6	1.6	2.0	1.7	3.5	2.8

Gain (dBi)	FS	2.9	1.4	2.1	-	0.5	0.1	0.3	2.8	2.9	2.6	1.6
VSWR	MP					≤ 3.6						
	FS					≤ 5.1						
Return Loss	MP					≤ -5.0 dB						
	FS					≤ -3.5 dB						
Gain	MP					≤ 3.5 dBi						
	FS					≤ 2.9 dBi						

1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	Φ 30 mm × 88 mm
Material & Color	ABS & Black
Cable Type & Color & Length	LMR 100 & Black & 2000 mm
Connector Type	SMA Male
Mounting Type	Magnet
Weight	Typ. 42 g
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Ingress Protection (IP) Rating	IP67
RoHS Compliant	Yes

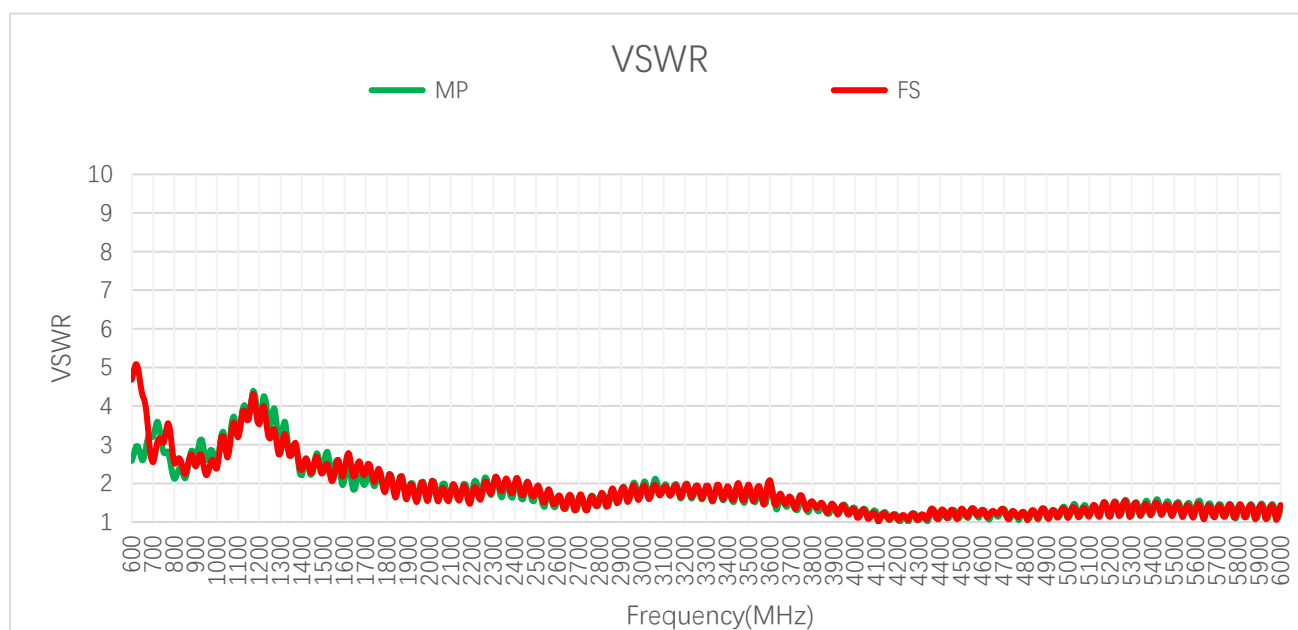
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

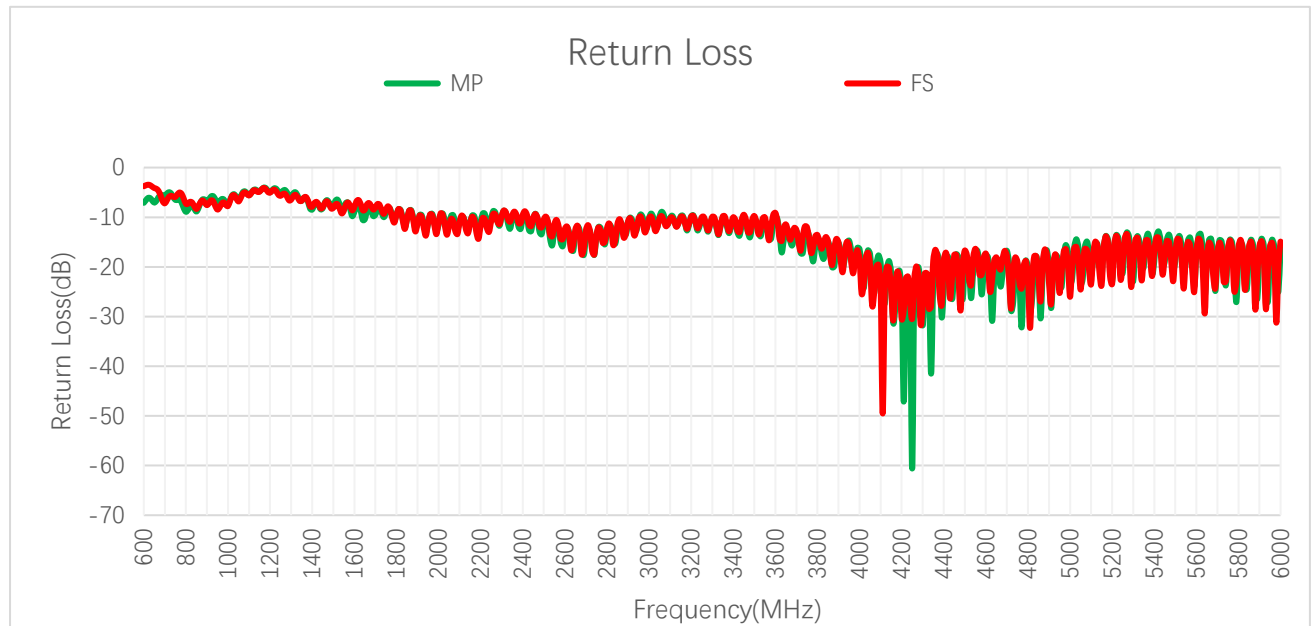
3.1.1. VSWR



VSWR

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
VSWR	MP	2.6	2.9	3.4	2.4	2.7	2.7	-	2.2	1.9	1.9
	FS	4.7	5.0	2.8	2.6	2.4	2.3	-	2.5	2.0	1.8
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
VSWR	MP	1.7	1.6	1.9	1.9	1.6	2.0	1.3	1.1	1.3	1.4
	FS	1.8	1.6	2.0	1.9	1.6	2.1	1.3	1.1	1.3	1.4

3.1.2. Return Loss

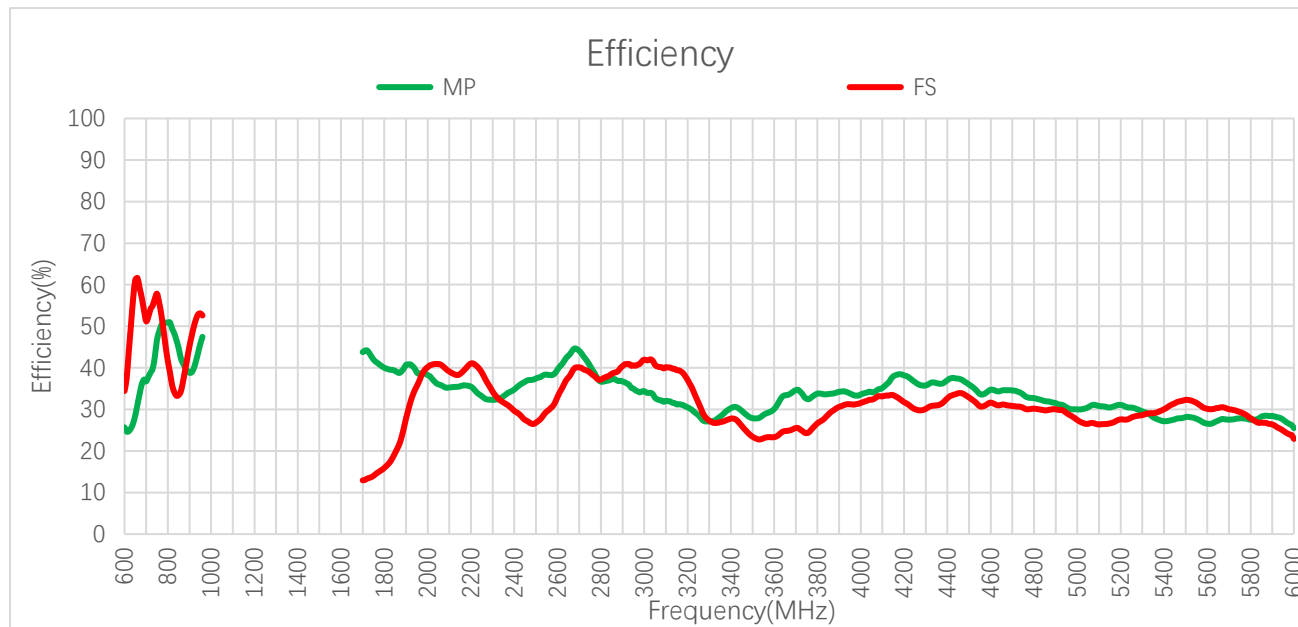


Return Loss (dB)

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
Return Loss (dB)	MP	-7.1	-6.1	-5.2	-7.7	-6.7	-6.8	-	-8.4	-10.0	-10.1
	FS	-3.8	-3.6	-6.6	-7.1	-7.6	-8.0	-	-7.3	-9.3	-10.6
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
Return Loss (dB)	MP	-11.4	-12.8	-10.4	-10.3	-13.2	-9.8	-16.8	-23.5	-18.8	-16.3
	FS	-11.2	-13.2	-9.6	-10.1	-12.4	-9.1	-17.8	-26.0	-17.3	-14.9

3.2. Radiation Performance Test

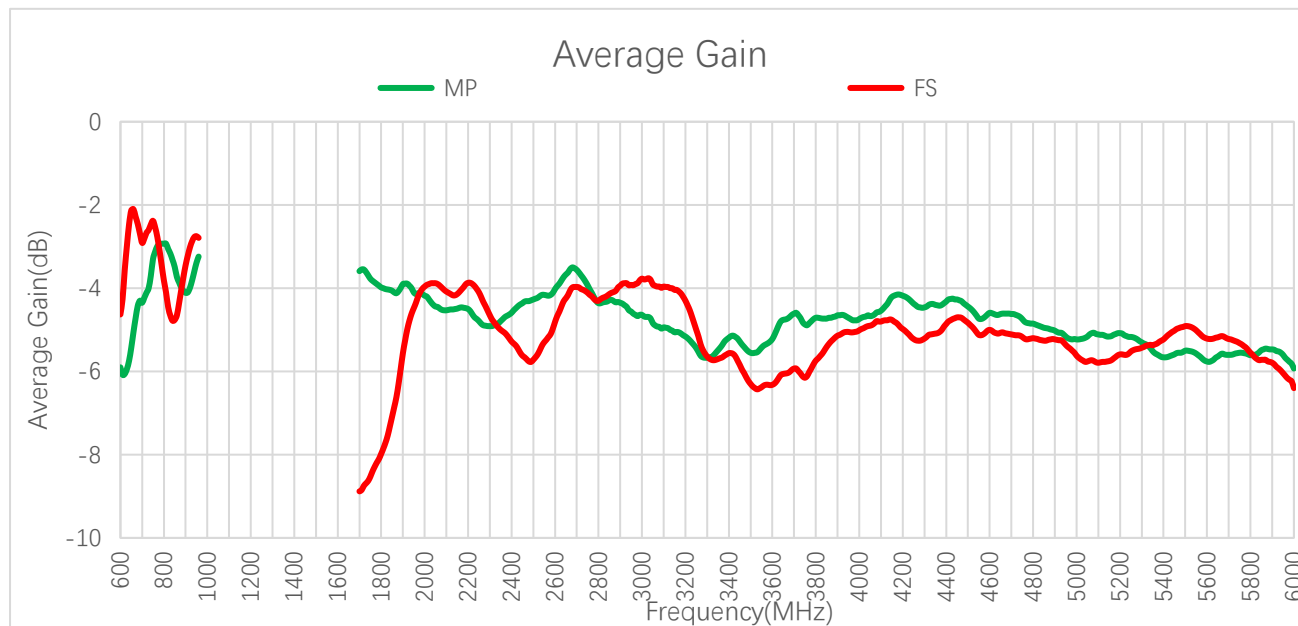
3.2.1. Efficiency



Efficiency (%)

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
Efficiency (%)	MP	25.7	25.5	37.8	48.3	38.8	47.5	-	44.1	42.7	39.2
	FS	34.4	50.4	52.3	34.2	45.2	52.6	-	13.0	13.7	23.5
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
Efficiency (%)	MP	38.9	35.4	33.2	36.7	39.6	30.1	34.6	30.0	28.2	25.5
	FS	35.6	38.3	31.7	27.4	33.1	23.3	30.8	27.4	32.3	22.9

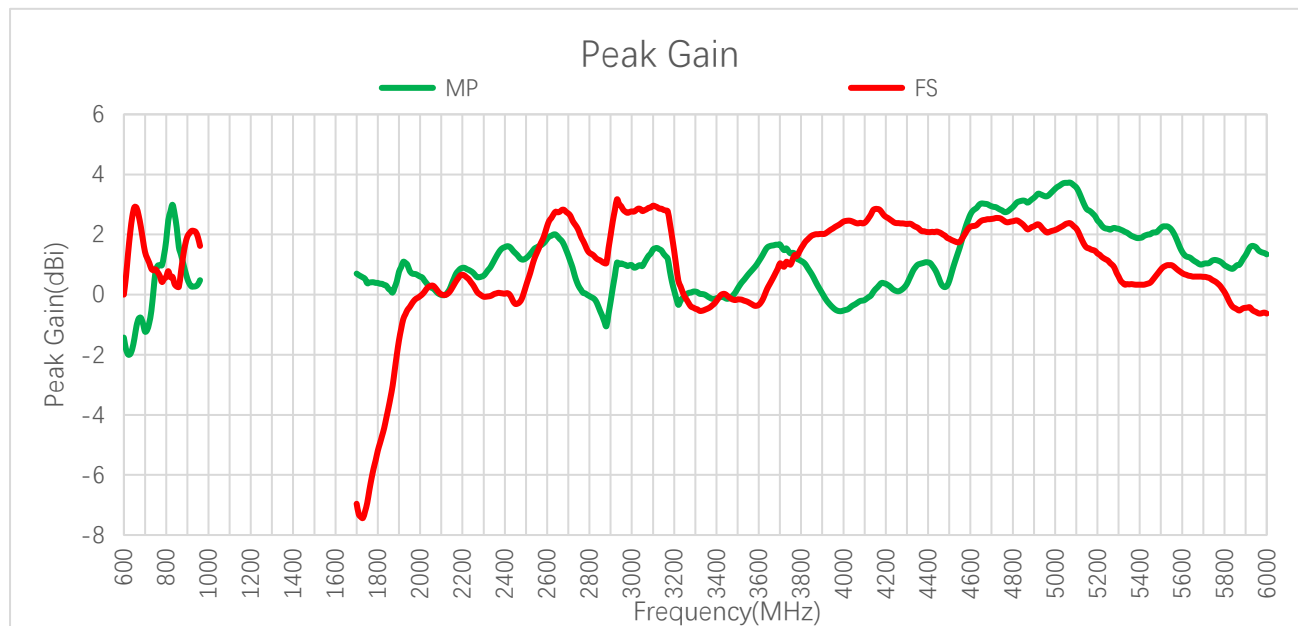
3.2.2. Average Gain



Average Gain (dB)

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
Average Gain (dB)	MP	-5.9	-5.9	-4.2	-3.2	-4.1	-3.2	-	-3.6	-3.7	-4.1
	FS	-4.6	-3.0	-2.8	-4.7	-3.5	-2.8	-	-8.9	-8.6	-6.3
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
Average Gain (dB)	MP	-4.1	-4.5	-4.8	-4.4	-4.0	-5.2	-4.6	-5.2	-5.5	-5.9
	FS	-4.5	-4.2	-5.0	-5.6	-4.8	-6.3	-5.1	-5.6	-4.9	-6.4

3.2.3. Peak Gain



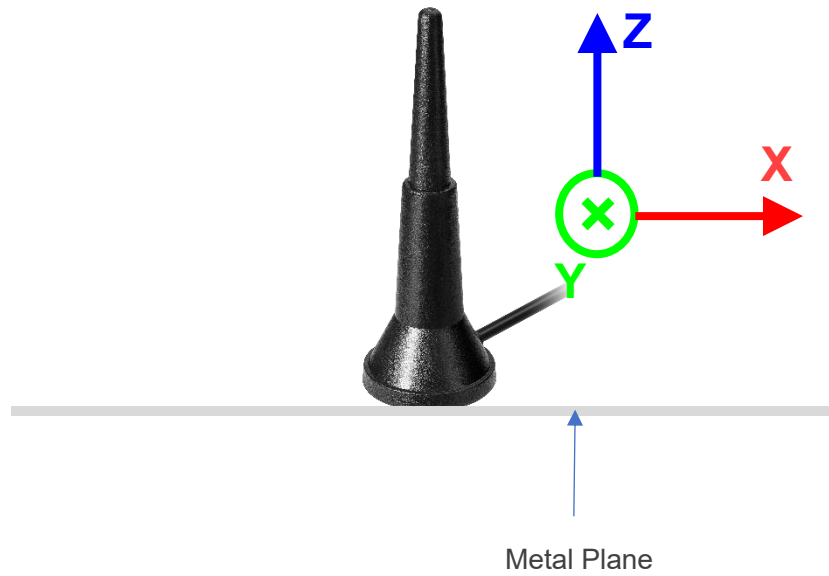
Peak Gain (dBi)

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
Peak Gain (dBi)	MP	-1.4	-2.0	-1.2	3.0	0.5	0.5	-	0.7	0.5	0.3
	FS	0.0	2.1	1.2	0.6	1.9	1.6	-	-7.3	-7.2	-2.5
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
Peak Gain (dBi)	MP	0.8	0.2	1.1	1.4	1.9	1.1	2.9	3.5	2.2	1.3
	FS	-0.4	0.1	0.0	-0.3	2.3	-0.3	2.5	2.2	0.8	-0.6

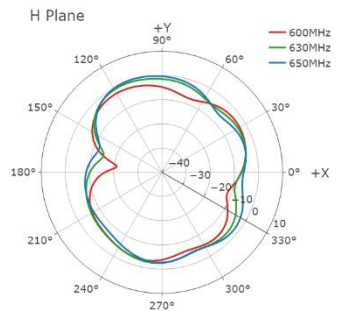
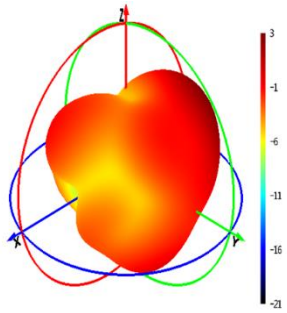
3.2.4. 3D & 2D Radiation Pattern

3.2.4.1. Test Condition: On 300 mm × 300 mm metal plane

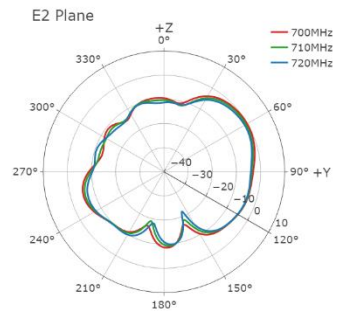
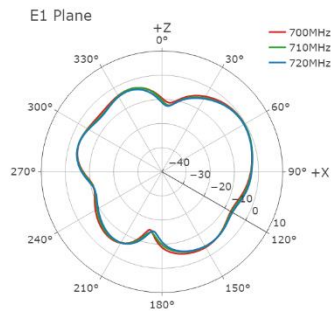
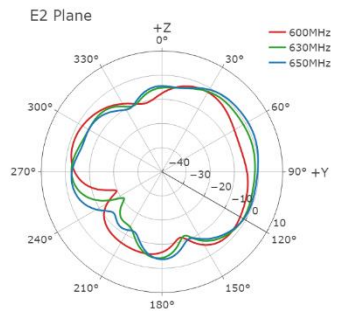
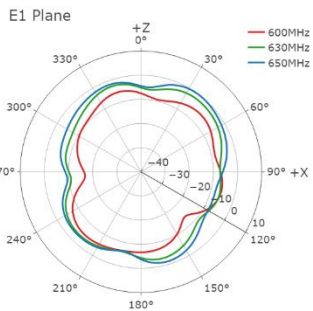
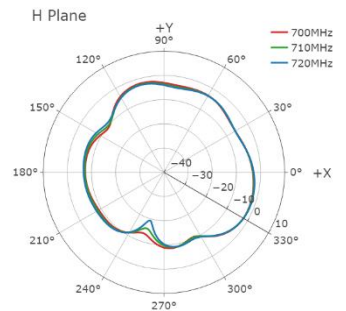
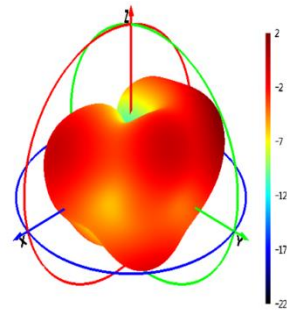
- Test Chamber: GL-S-1



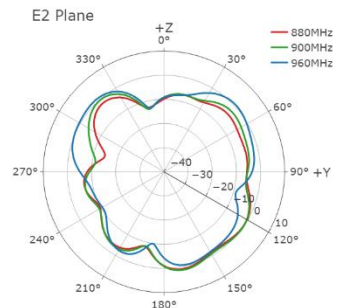
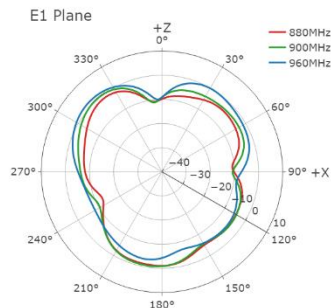
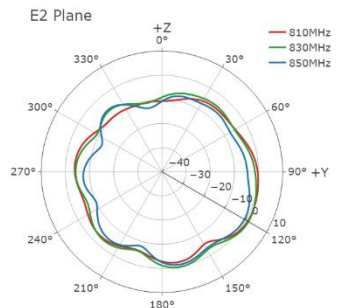
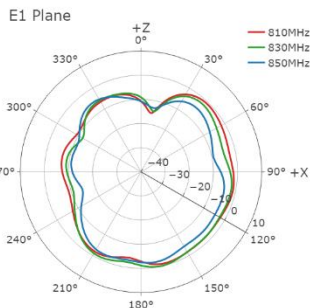
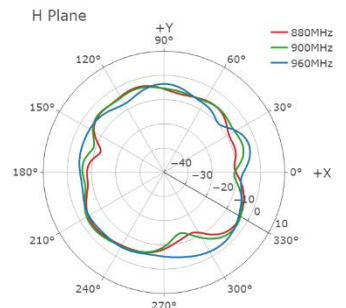
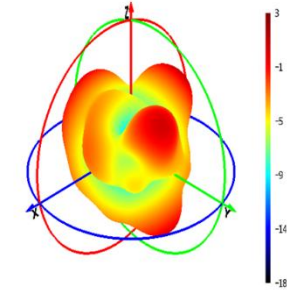
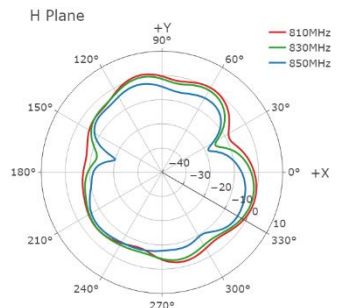
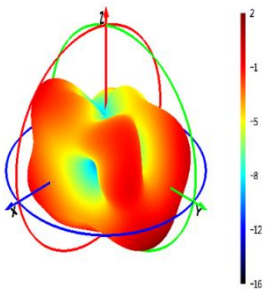
630 MHz

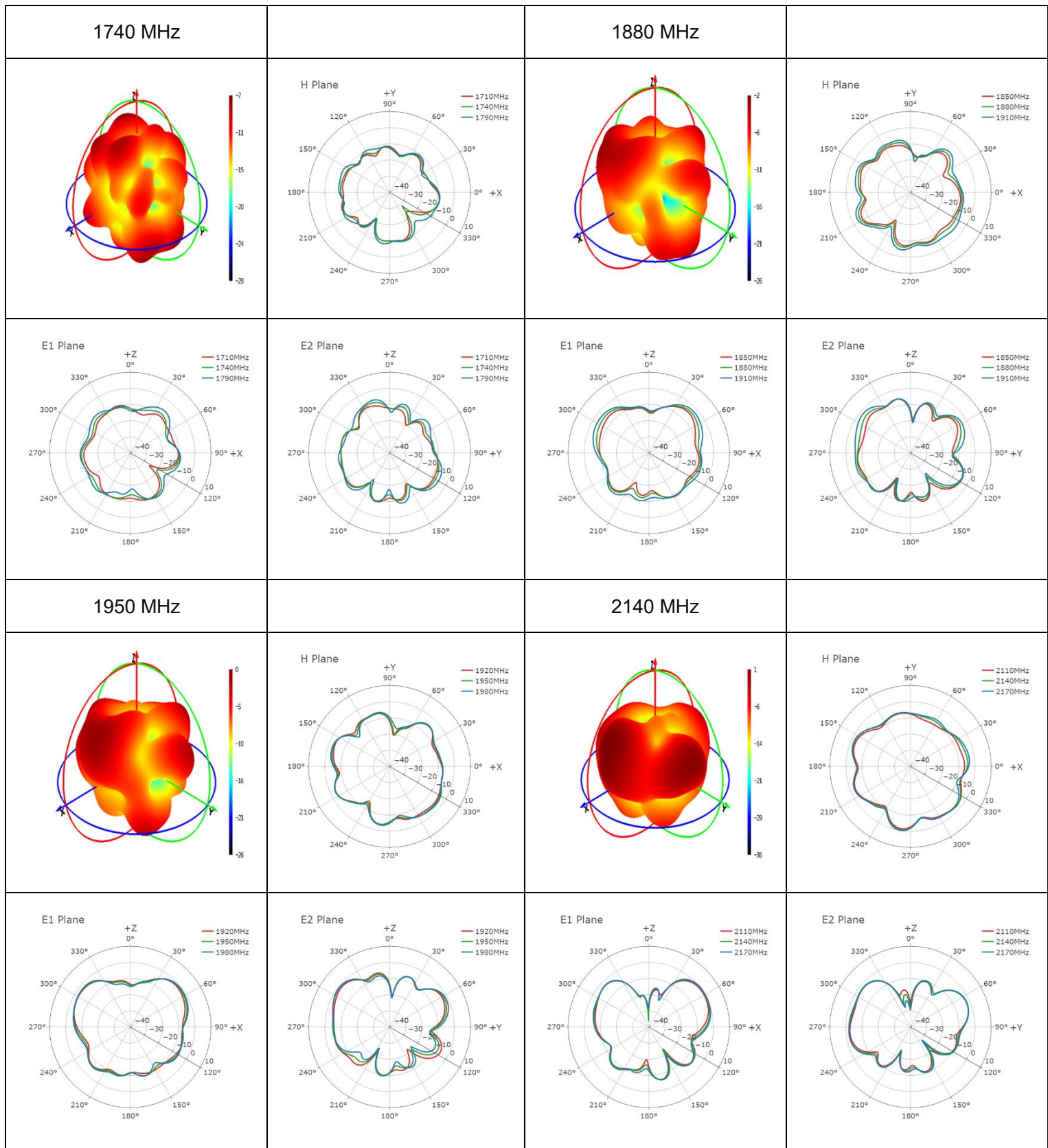


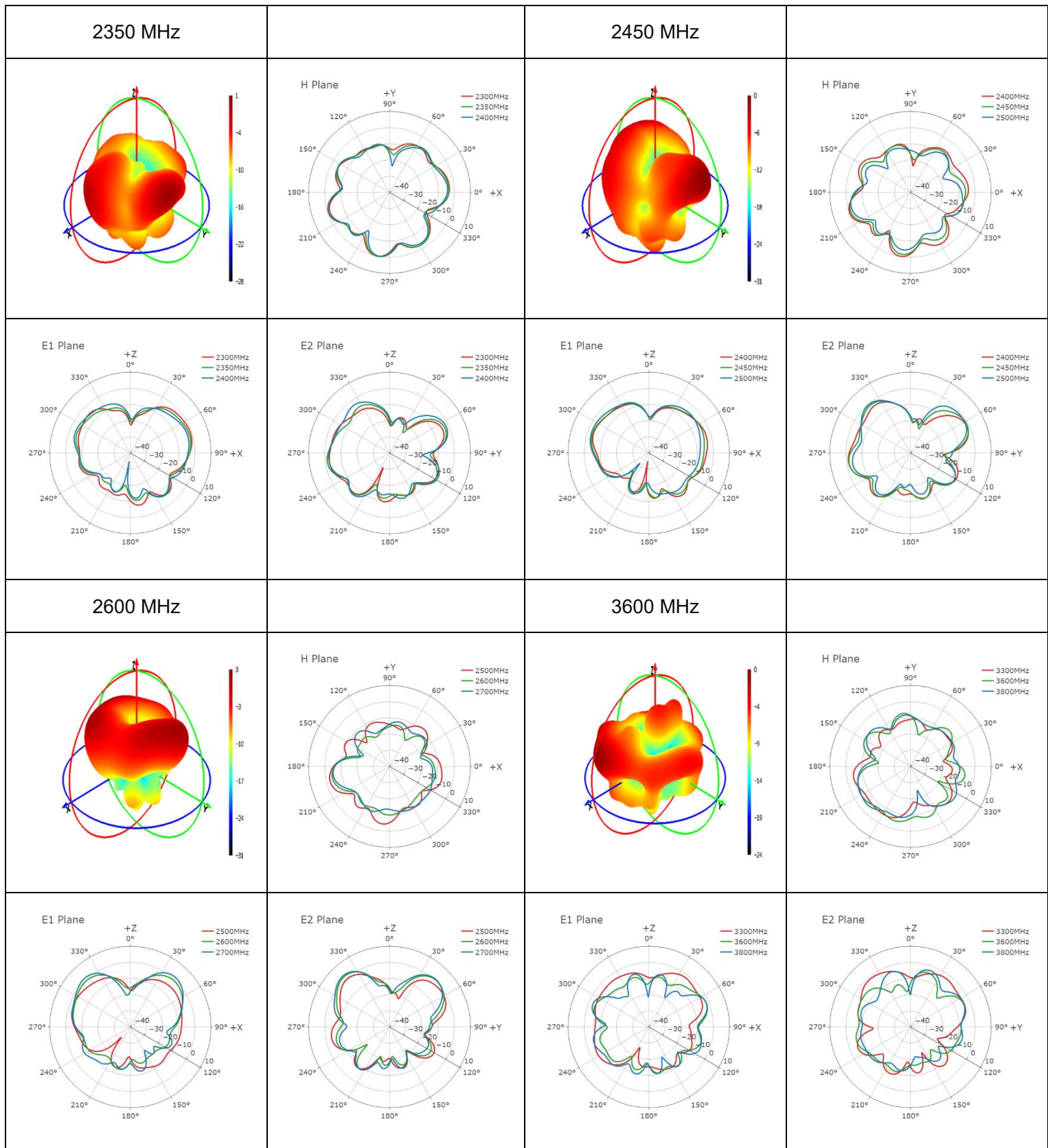
710 MHz

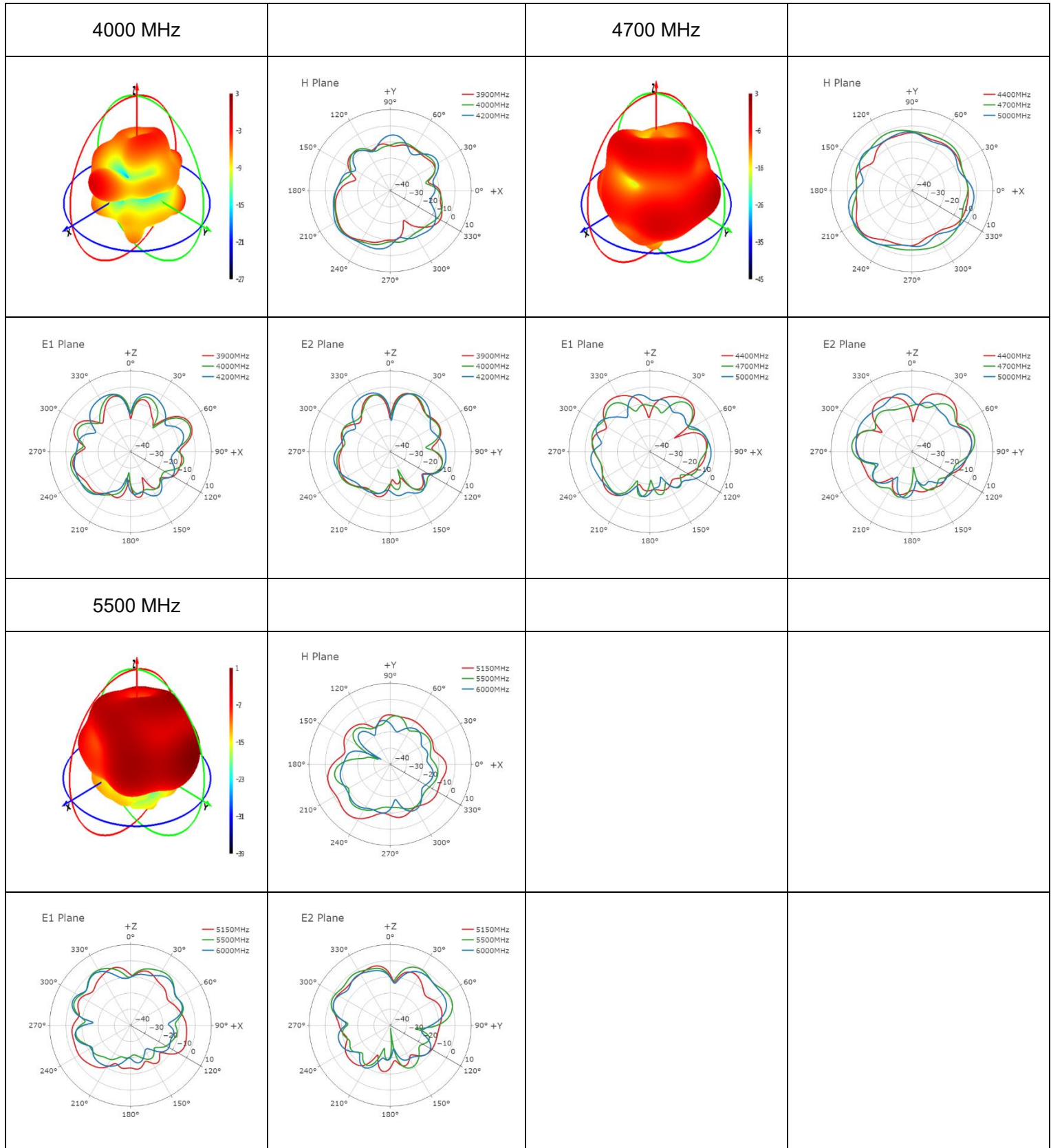


830 MHz



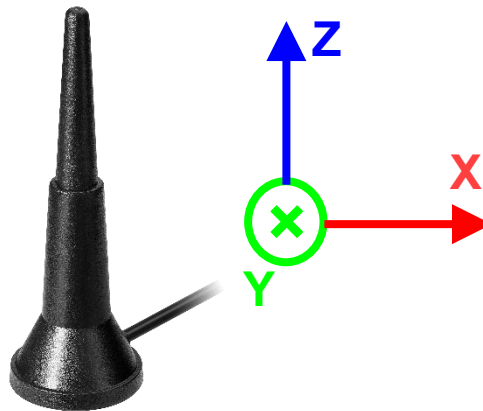




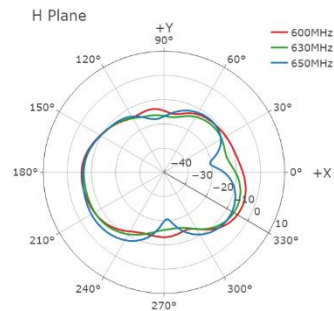
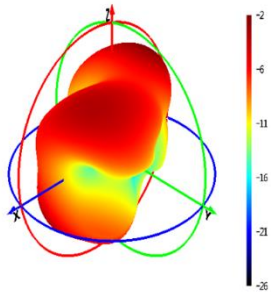


3.2.4.2. Test Condition: Free Space

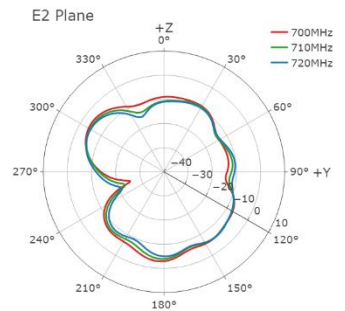
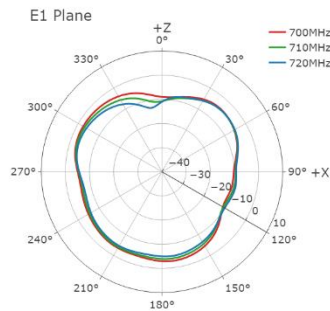
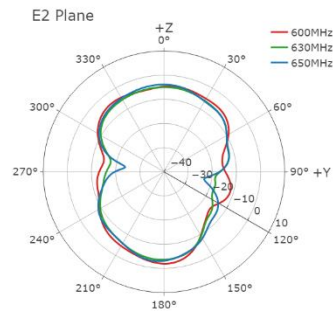
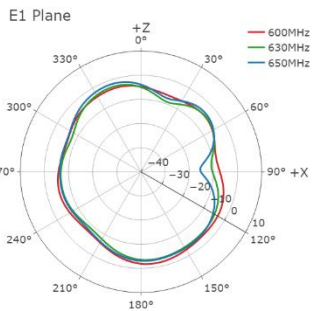
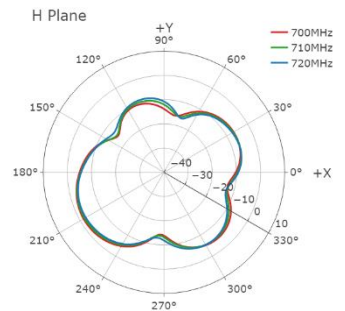
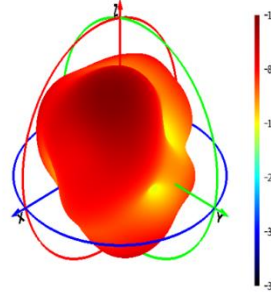
- Test Chamber: GL-S-1



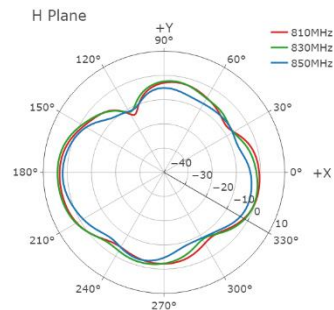
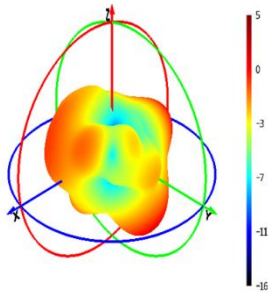
630 MHz



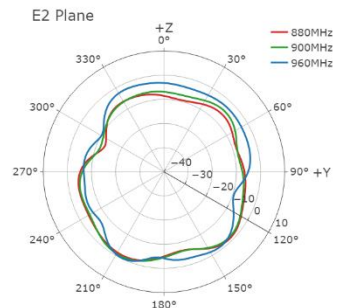
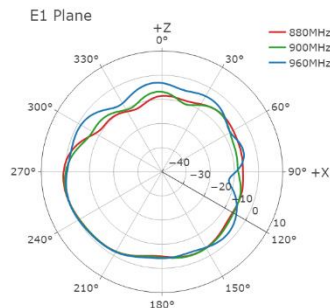
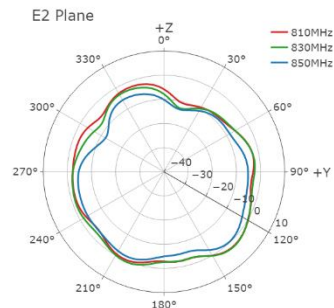
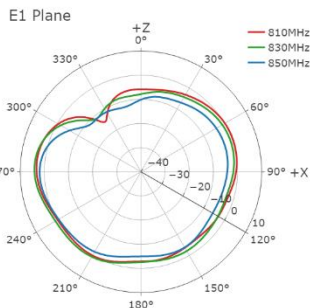
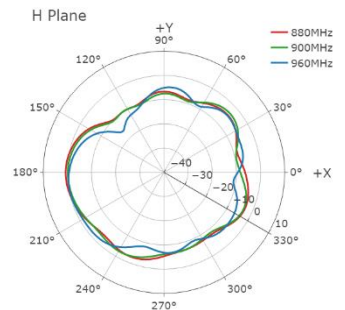
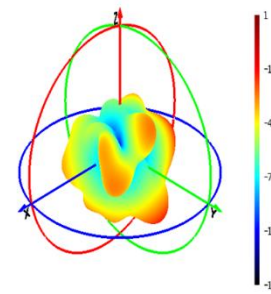
710 MHz

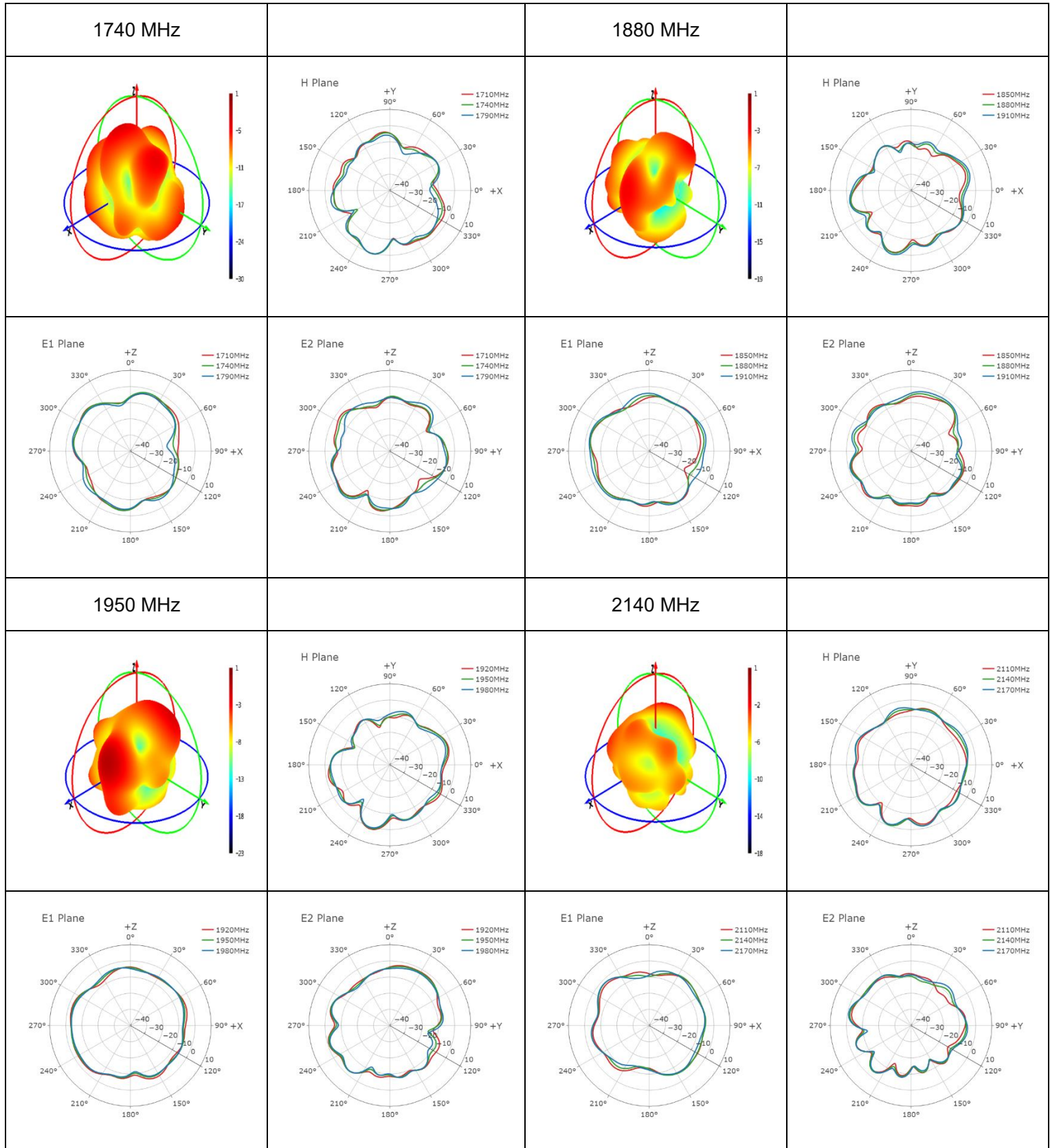


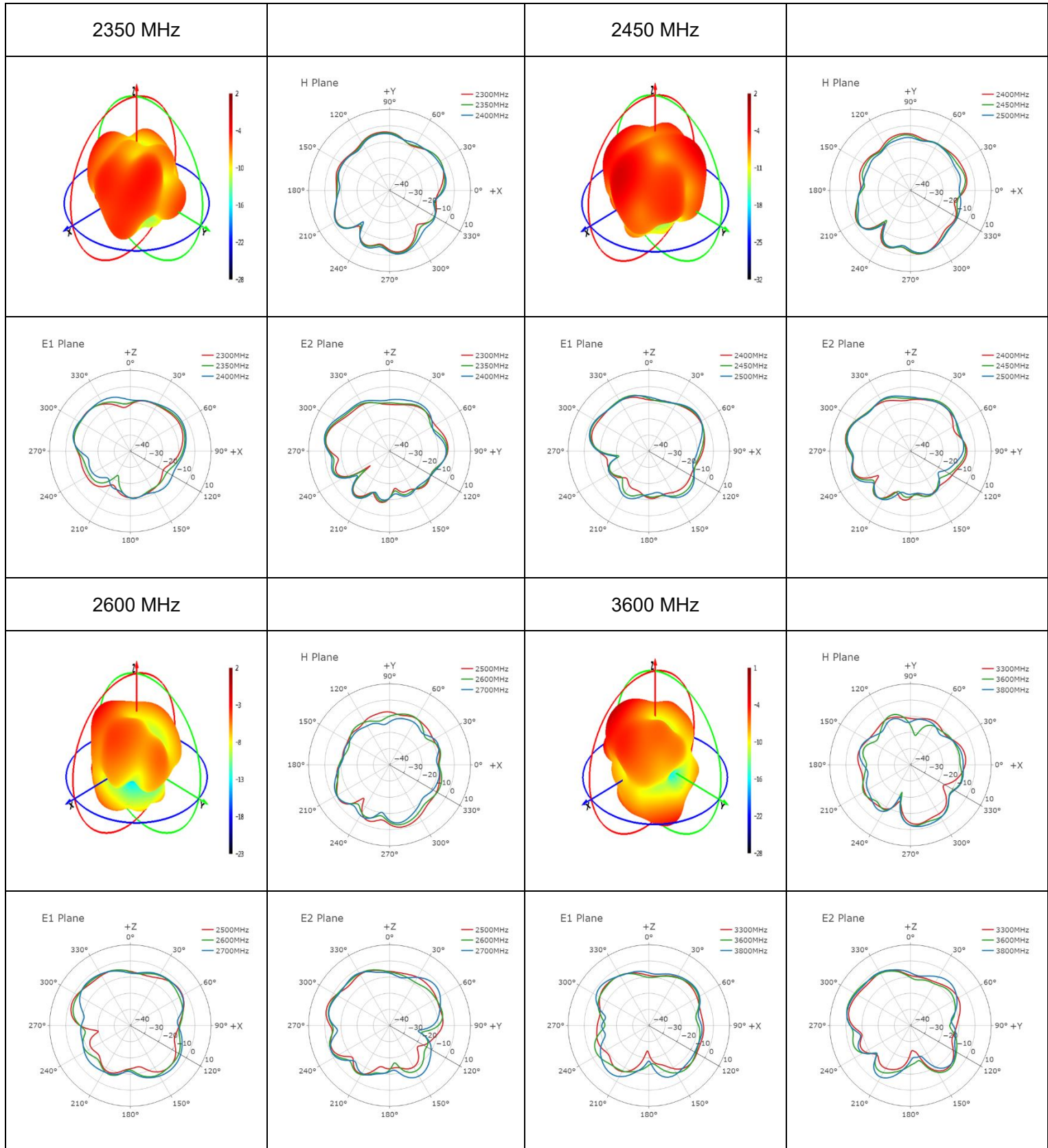
830 MHz

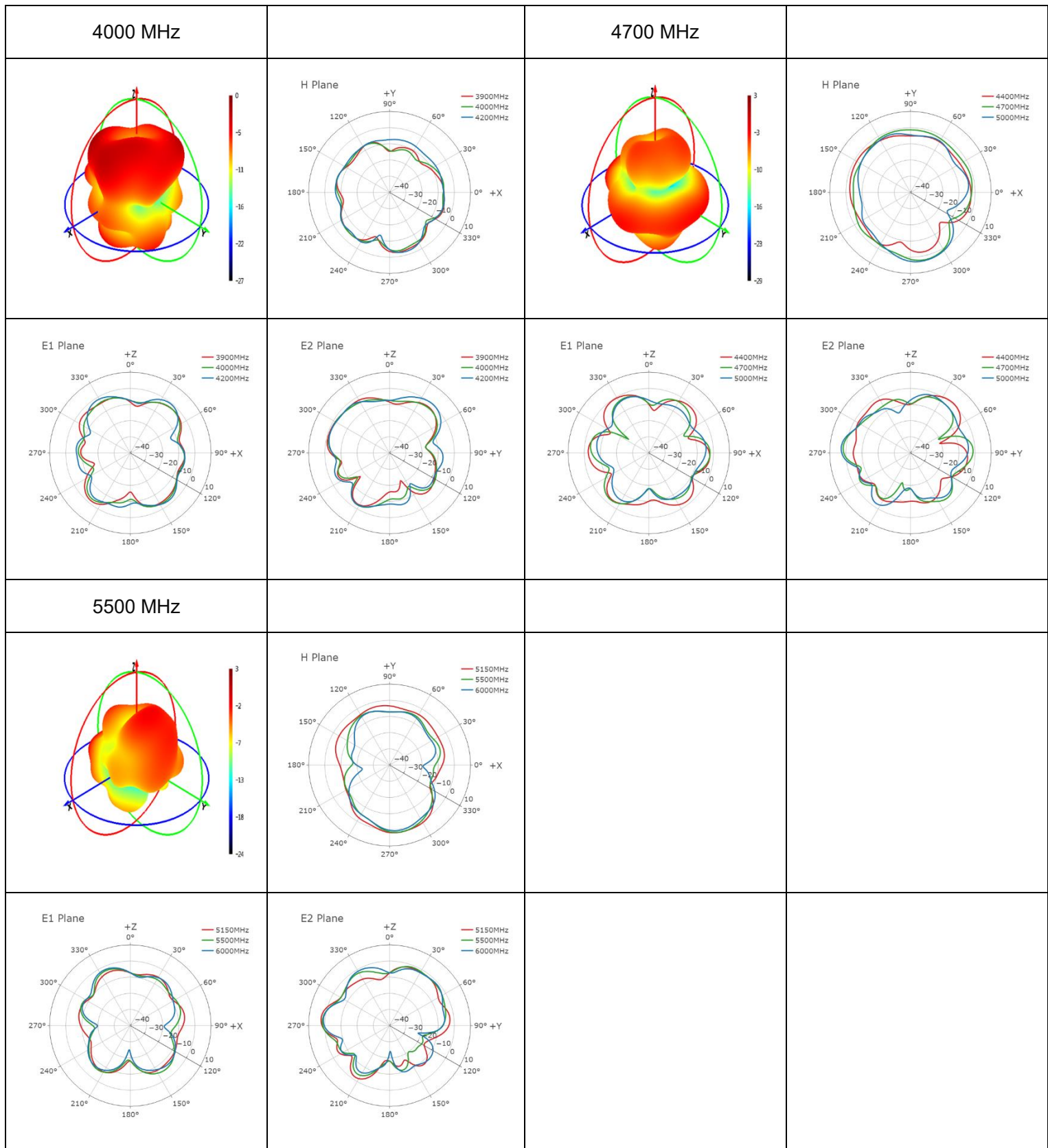


900 MHz

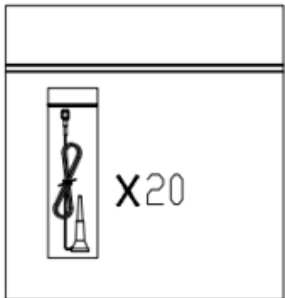
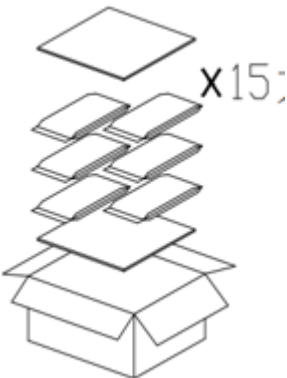


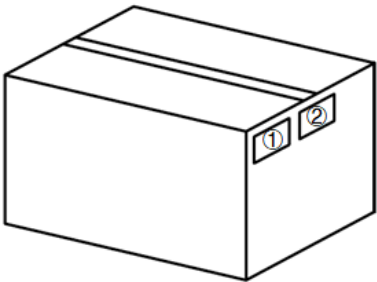
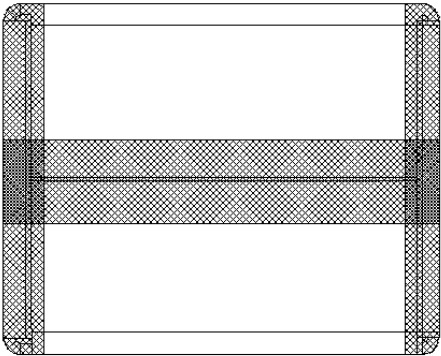






4 Packaging

Step	Packaging picture / 2D picture	Description
1		1 pc antenna product in a small PE bag. (1 PC / Small PE Bag)
2		20 pcs antenna products in a big PE bag. (20 PCS / Big PE Bag)
3		(15 PE Bags / Carton Box) (300 PCS 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 = 500 × 415 × 220 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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Tel: +86 21 5108 6236

Email: info@quectel.com

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Revision History

Version	Date	Author	Note
-	2025-02-20	Zeline LIANG/ Lucky FENG/ Riva REN/ Rainey LIAO	Creation of the document
1.0	2025-02-20	Zeline LIANG/ Lucky FENG/ Riva REN/ Rainey LIAO	First official release



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