

Antenna Datasheet

Product OC: YECA000G1AM

Version: 1.2

Date: 2025-08-18

Status: Released

Product Name: 5G Adhesive Mount Low Profile Dipole External Antenna

Key Features:

Frequency Band: 600–7125 MHz

Dimensions: 116.5 mm × 21.7 mm × 5.6 mm

Efficiency: Up to 80 %

RoHS and REACH Compliant

Overview

YECA000G1AM is a 5G rubber external antenna measuring 116.5 mm × 21.7 mm × 5.6 mm. This ultra-wide-band antenna provides broad coverage from 600–7125 MHz whilst offering backward-compatibility to support 4G/3G and 2G networks as well as LTE Cat-M and narrowband IoT (NB-IoT). The antenna is available with connection via cable lengths from 215 mm, terminated with SMA Male connector. This low profile, terminal mount omni-directional antenna, ideal for applications where the antenna is required to be discrete, is easy to install with maximum durability assured thanks to its PC + ABS enclosure. It is compatible with Quectel's 5G Series modules.

It allows constant and reliable transmission and reception due to its omni-directional gain across all frequency bands. YECA000G1AM is designed as a monopole antenna, which offers high efficiency in all working bands. It is a perfect antenna product for customers that desire highest performance. This omni-directional antenna is ideally suited for high-speed video, real-time streaming, public transportation, offering great performance with its high gain and efficiency.

Typical applications include:

- High-speed Video
- Real-time Streaming
- Public Transportation

Quectel provides comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs. We have regional R & D centers to offer quick response to meet your requirements. Please contact our sales & FAEs if you have any requests.

Contents

Overview	1
Contents	2
1 Specification	3
1.1. Electrical.....	3
1.2. Mechanical & Environmental	4
2 Drawing	5
3 Detailed Performance	6
3.1. S-Parameter Test	6
3.1.1. VSWR	6
3.1.2. Return Loss.....	8
3.2. Radiation Performance Test.....	10
3.2.1. Efficiency.....	10
3.2.2. Average Gain	12
3.2.3. Peak Gain	14
3.2.4. 3D & 2D Radiation Pattern	16
4 Packaging	25
Contact Us	27
Legal Notices	28
Revision History	30

1 Specification

Test Condition: On 130 mm × 130 mm EVB

1.1. Electrical

Electrical	
Frequency Range	600–7125 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

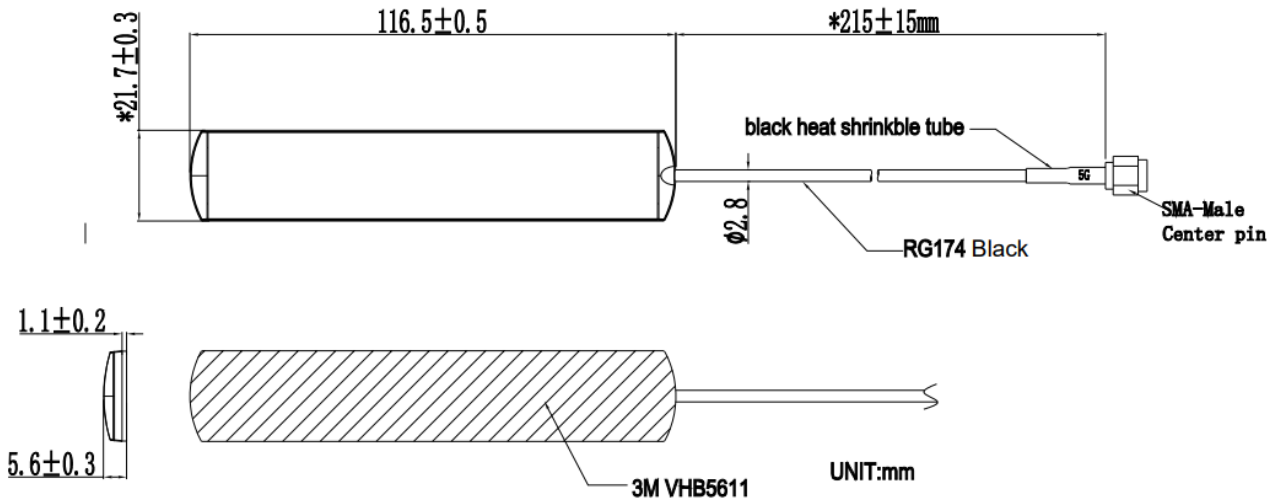
Electrical – Detail													
SPEC	Band	Band	B71	B12 /B13 /B28	B5 /B8 /B26	n74 /n75 /n76	B1 /B2 /B3	B40	Wi-Fi 2G	B38 /B41	B42 /B48 /n77	n79	n46
	Freq. (MHz)	600– 700	700– 810	820– 960	1420– 1520	1700– 2170	2300– 2400	2400– 2500	2500– 2690	3300– 4200	4400– 5000	5150– 5925	
Max. VSWR		4.2	2.1	4.3	-	3.7	2.2	3.9	3.8	2.5	3.7	3.1	
Max. Return Loss (dB)		-4.2	-9.0	-4.1	-	-4.8	-8.6	-4.5	-4.7	-7.3	-4.9	-5.7	
AVG Eff. (%)		58.0	72.8	55.0	-	59.1	53.9	40.1	46.7	47.0	43.9	43.7	
AVG AVG Gain (dB)		-2.4	-1.4	-2.7	-	-2.3	-2.7	-4.0	-3.3	-3.3	-3.6	-3.6	
Max. Peak Gain (dBi)		2.7 (700)	3.0 (710)	3.1 (850)	-	4.2 (2040)	3.7 (2310)	1.9 (2410)	1.7 (2560)	2.0 (4110)	1.5 (4430)	4.2 (5850)	
VSWR		≤ 4.3											
Return Loss		≤ -4.1 dB											
Peak Gain		≤ 4.2 dBi											

Specification	Band	Band	Wi-Fi 2G	Wi-Fi 5G	Wi-Fi 6G
		Freq. (MHz)	2400–2500	5150–5850	5925–7125
Max. VSWR			3.9	3.1	3.2
Max. Return Loss (dB)			-4.5	-5.7	-5.6
AVG Eff. (%)			40.1	42.0	34.6
AVG Gain (dB)			-4.0	-3.8	-4.7
Max. Peak Gain (dBi)			1.9 (2410)	4.2 (5850)	2.7 (6075)
VSWR	≤ 3.9				
Return Loss	≤ -4.5 dB				
Peak Gain	≤ 4.2 dBi				

1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	116.5 mm × 21.7 mm × 5.6 mm
Material & Color	PC + ABS & Black
Cable Type & Color & Length	RG174 & Black & 215 mm
Connector Type	SMA-MALE
Mounting Type	Adhesive
Weight	Typ. 15 g
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
RoHS and REACH Compliant	Yes

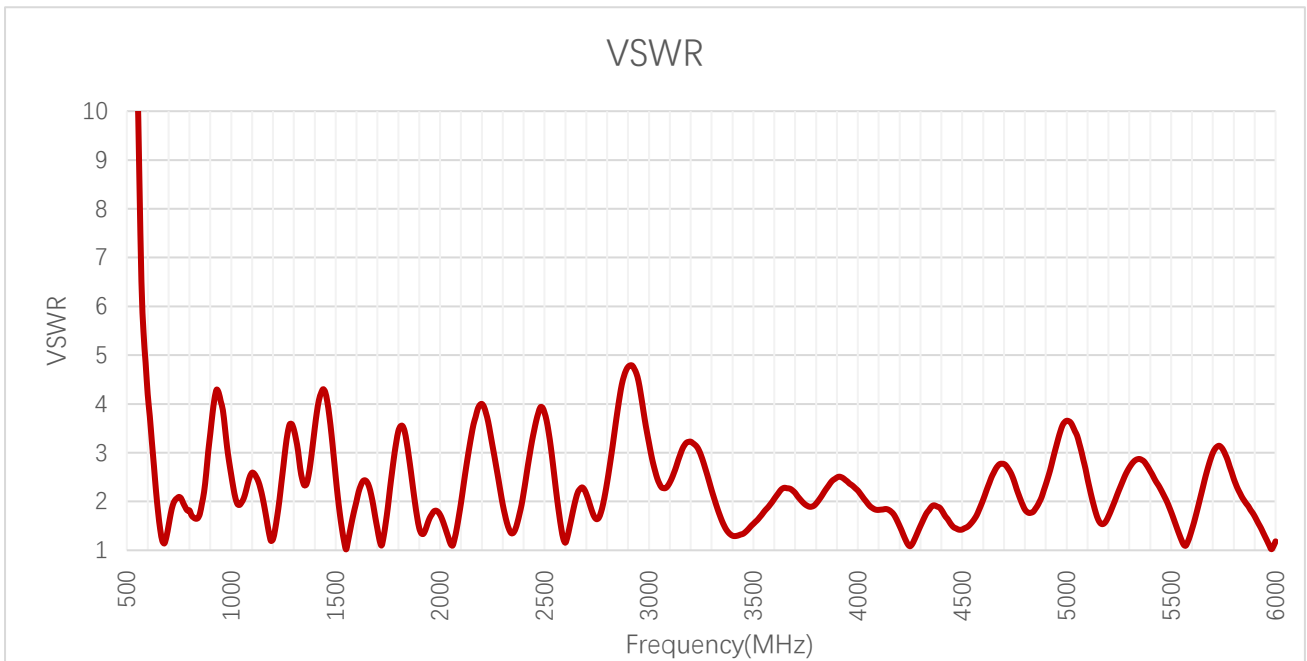
2 Drawing



3 Detailed Performance

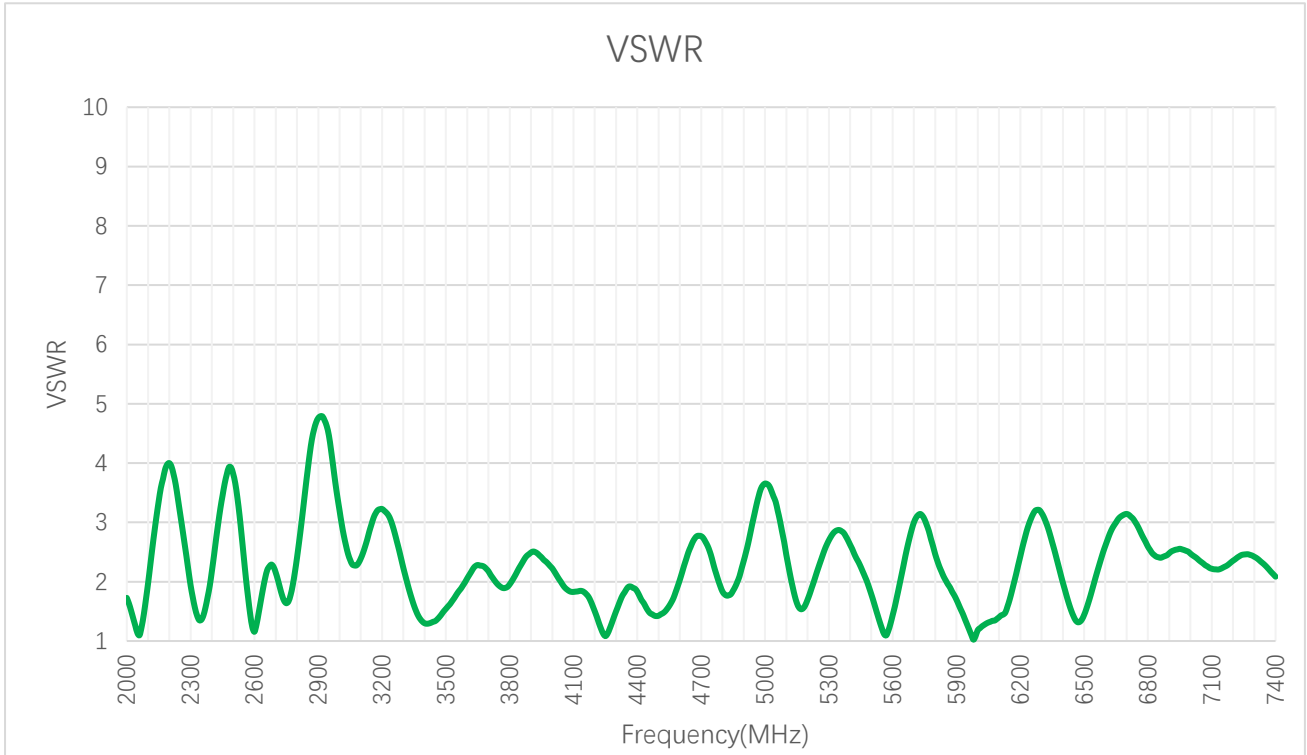
3.1. S-Parameter Test

3.1.1. VSWR



VSWR

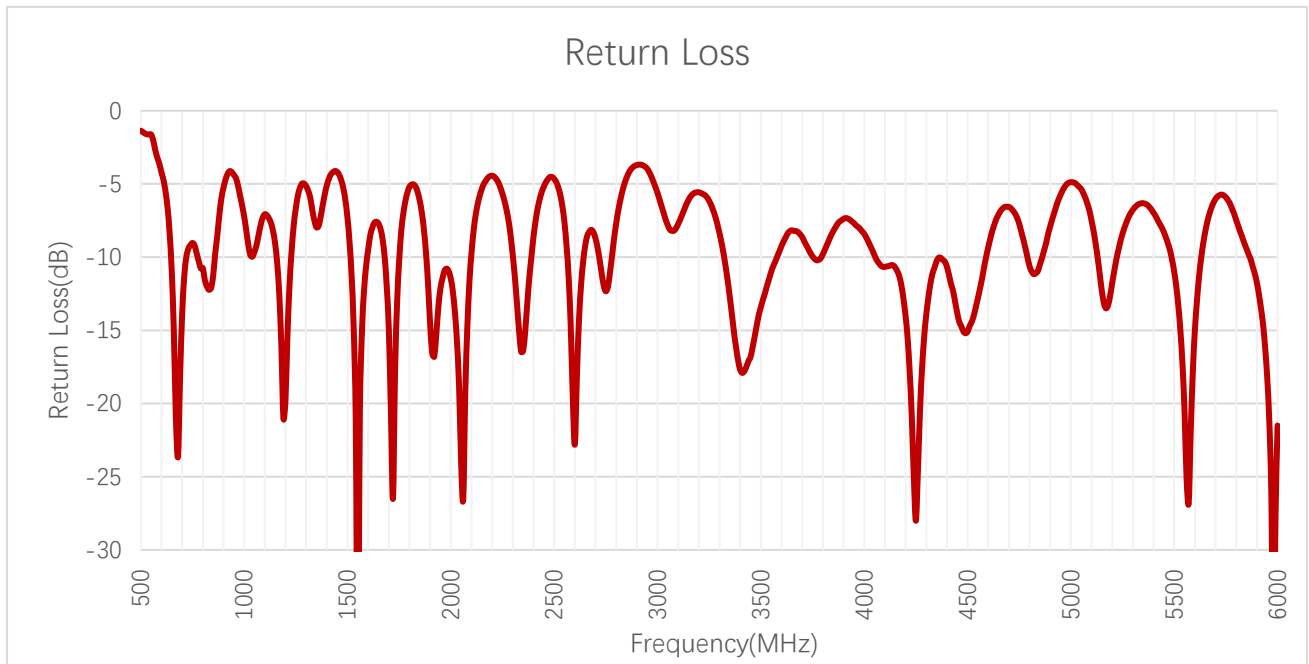
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
VSWR	4.2	2.7	1.7	1.6	3.4	3.9	-	1.2	1.6	2.0
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
VSWR	1.7	3.1	1.4	3.5	1.2	2.1	2.8	3.7	1.8	1.2



VSWR

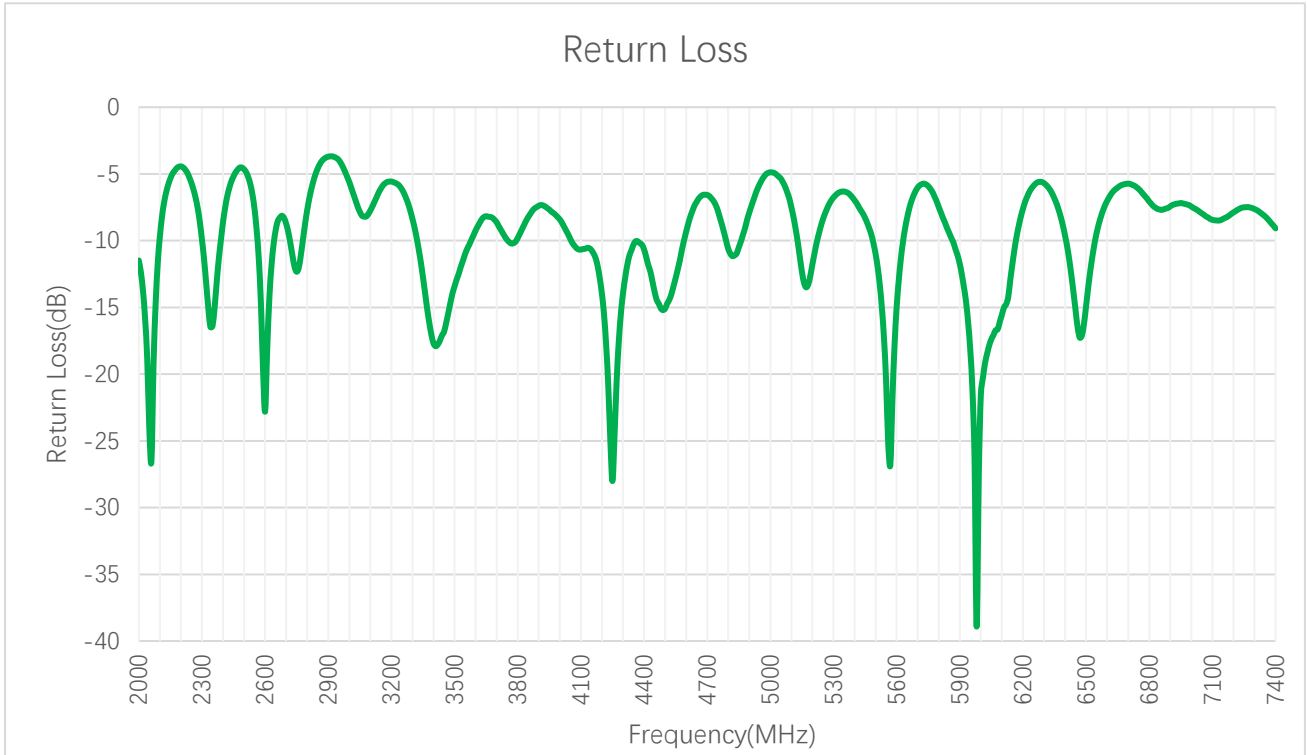
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6525	7125
VSWR	2.2	3.5	3.8	1.6	1.8	2.0	1.5	1.7	2.2

3.1.2. Return Loss



Return Loss (dB)

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Return Loss (dB)	-4.2	-6.7	-11.3	-12.2	-5.3	-4.6	-	-20.5	-13.1	-9.7
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
Return Loss (dB)	-12.1	-5.8	-16.4	-5.2	-22.8	-9.2	-6.6	-4.9	-11.0	-21.5

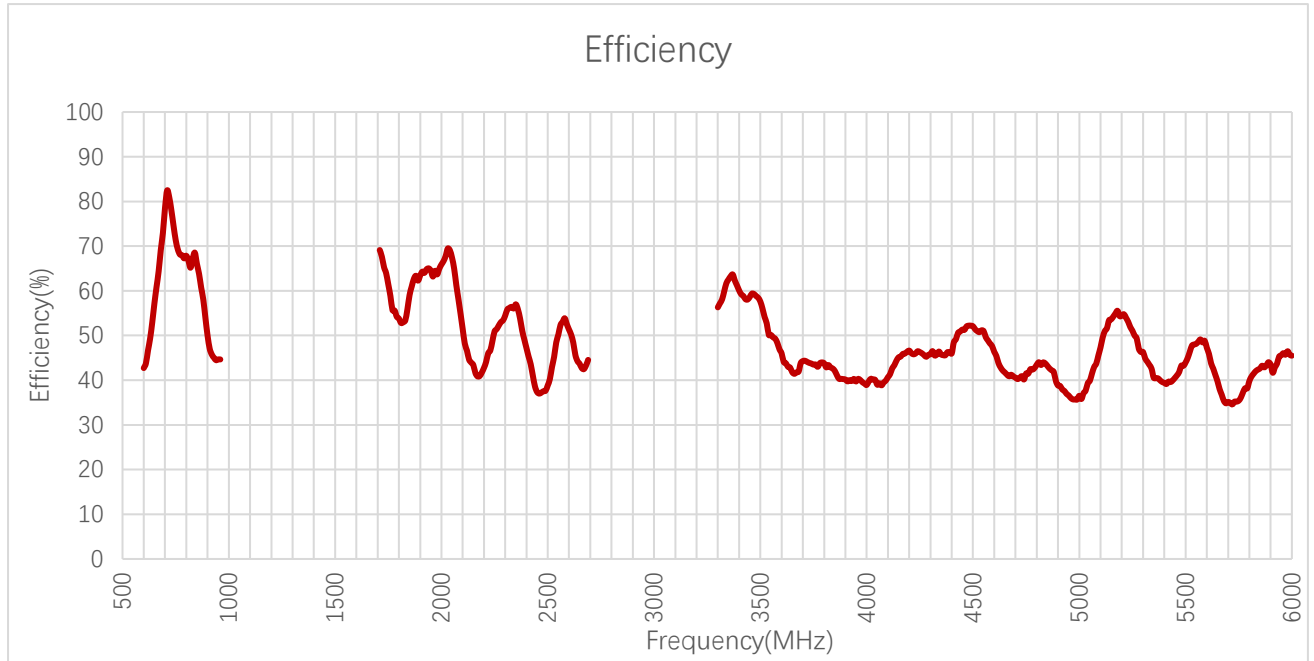


Return Loss (dB)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6525	7125
Return Loss (dB)	-8.6	-5.2	-4.7	-12.3	-11.0	-9.4	-14.5	-12.5	-8.6

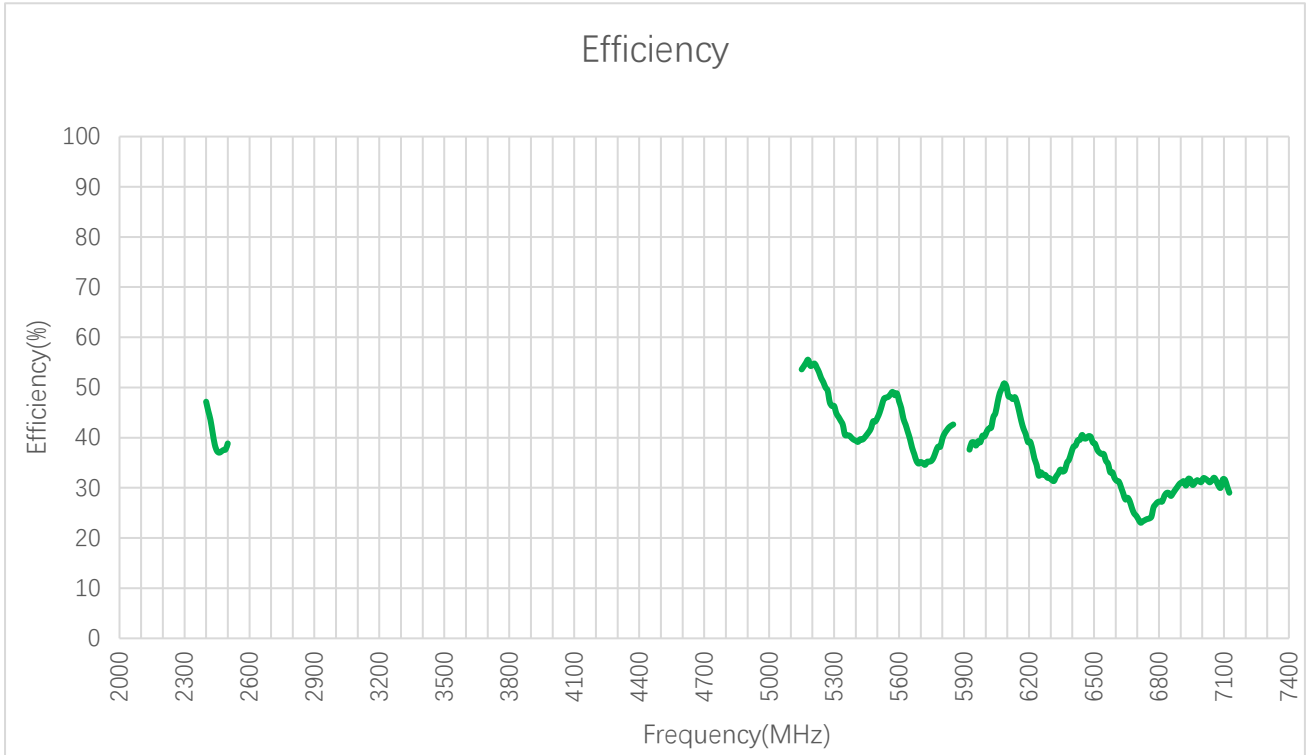
3.2. Radiation Performance Test

3.2.1. Efficiency



Efficiency (%)

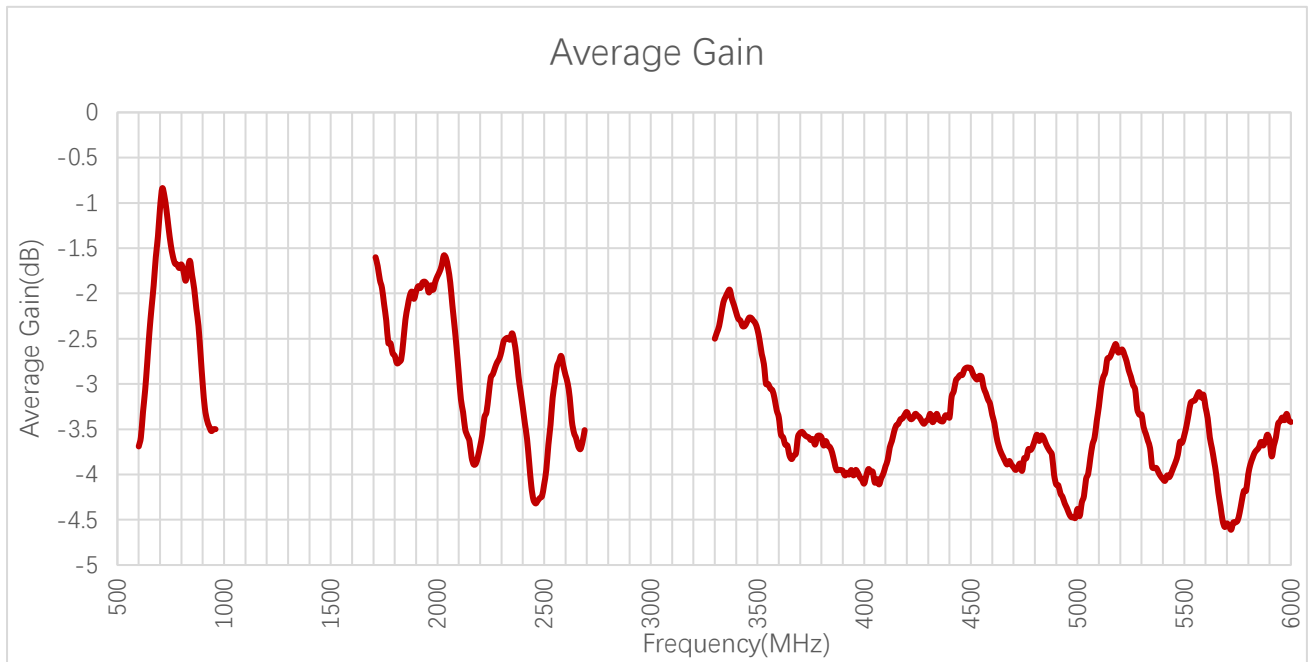
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Efficiency (%)	42.7	49.4	82.5	67.2	50.0	44.6	-	69.1	63.9	63.4
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
Efficiency (%)	64.5	44.0	57.0	37.4	51.3	46.0	40.6	36.5	44.0	45.5



Efficiency (%)

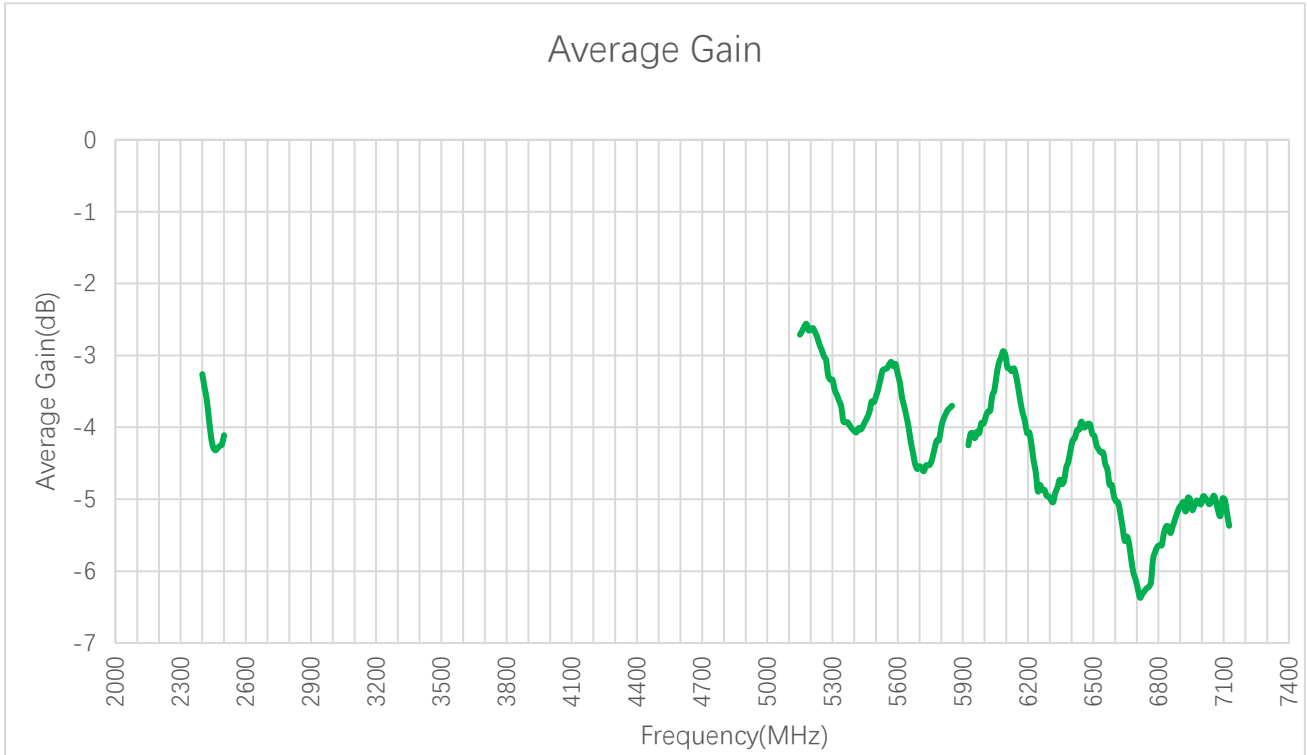
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6525	7125
Efficiency (%)	47.2	37.4	38.8	53.6	44.0	42.6	37.6	37.0	29.0

3.2.2. Average Gain



Average Gain (dB)

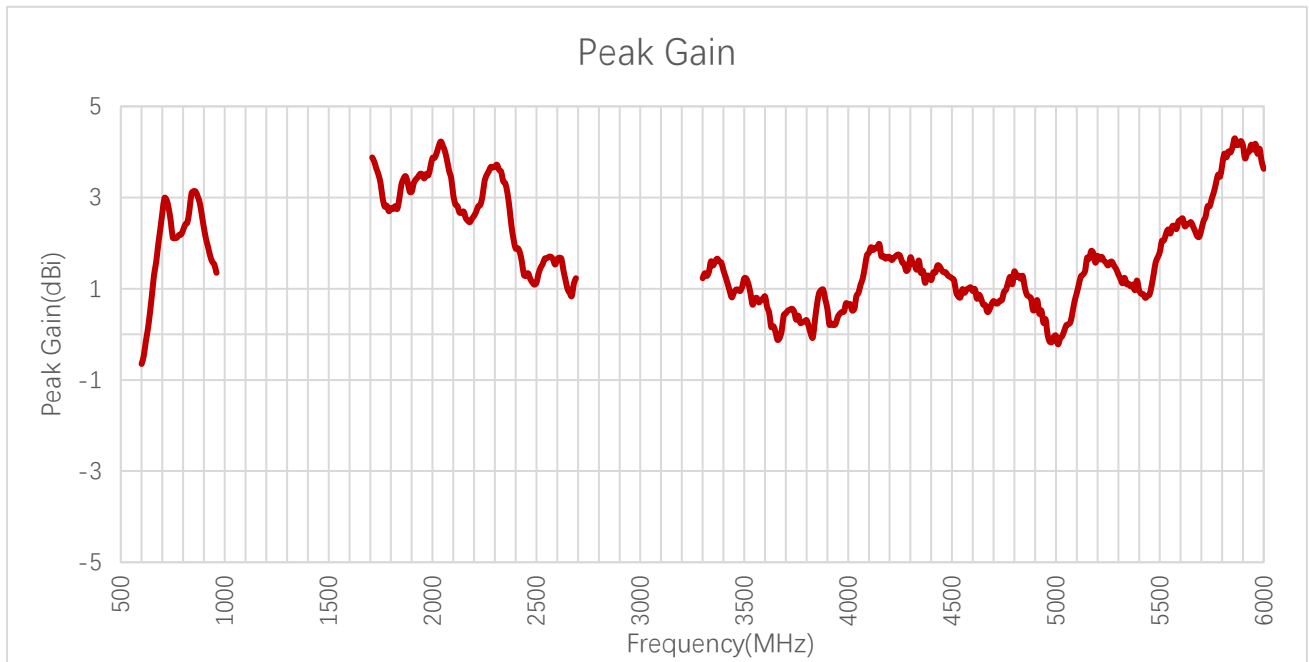
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Average Gain (dB)	-3.7	-3.1	-0.8	-1.7	-3.0	-3.5	-	-1.6	-1.9	-2.0
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
Average Gain (dB)	-1.9	-3.6	-2.4	-4.3	-2.9	-3.4	-3.9	-4.4	-3.6	-3.4



Average Gain (dB)

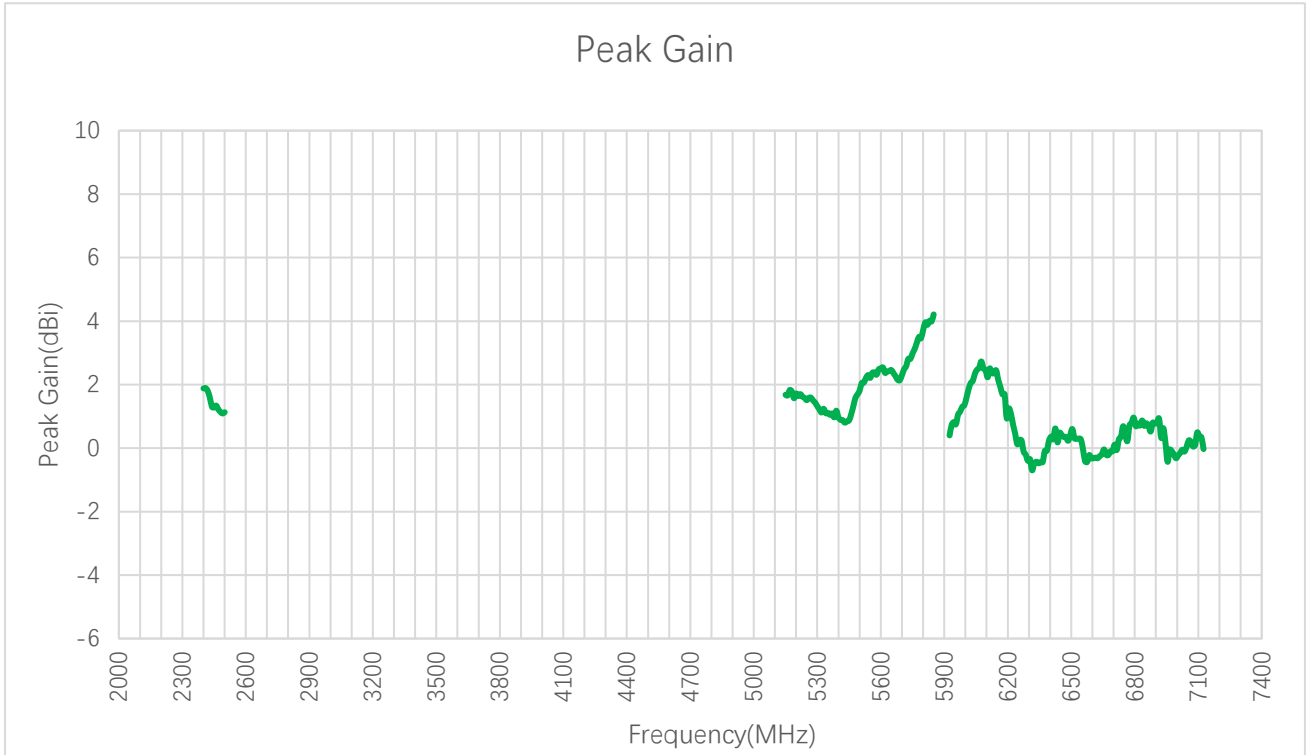
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6525	7125
Average Gain (dB)	-3.3	-4.3	-4.1	-2.7	-3.6	-3.7	-4.3	-4.3	-5.4

3.2.3. Peak Gain



Peak Gain (dBi)

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Peak Gain (dBi)	-0.7	0.1	3.0	2.7	2.3	1.4	-	3.9	3.5	3.3
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
Peak Gain (dBi)	3.5	2.7	3.3	1.3	1.7	0.8	0.7	0.0	1.8	3.6

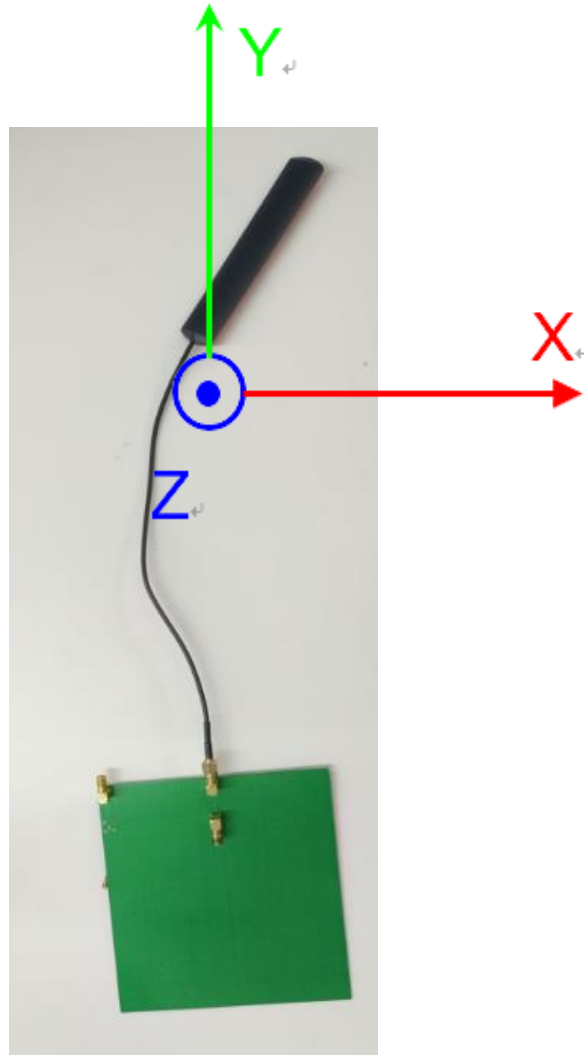


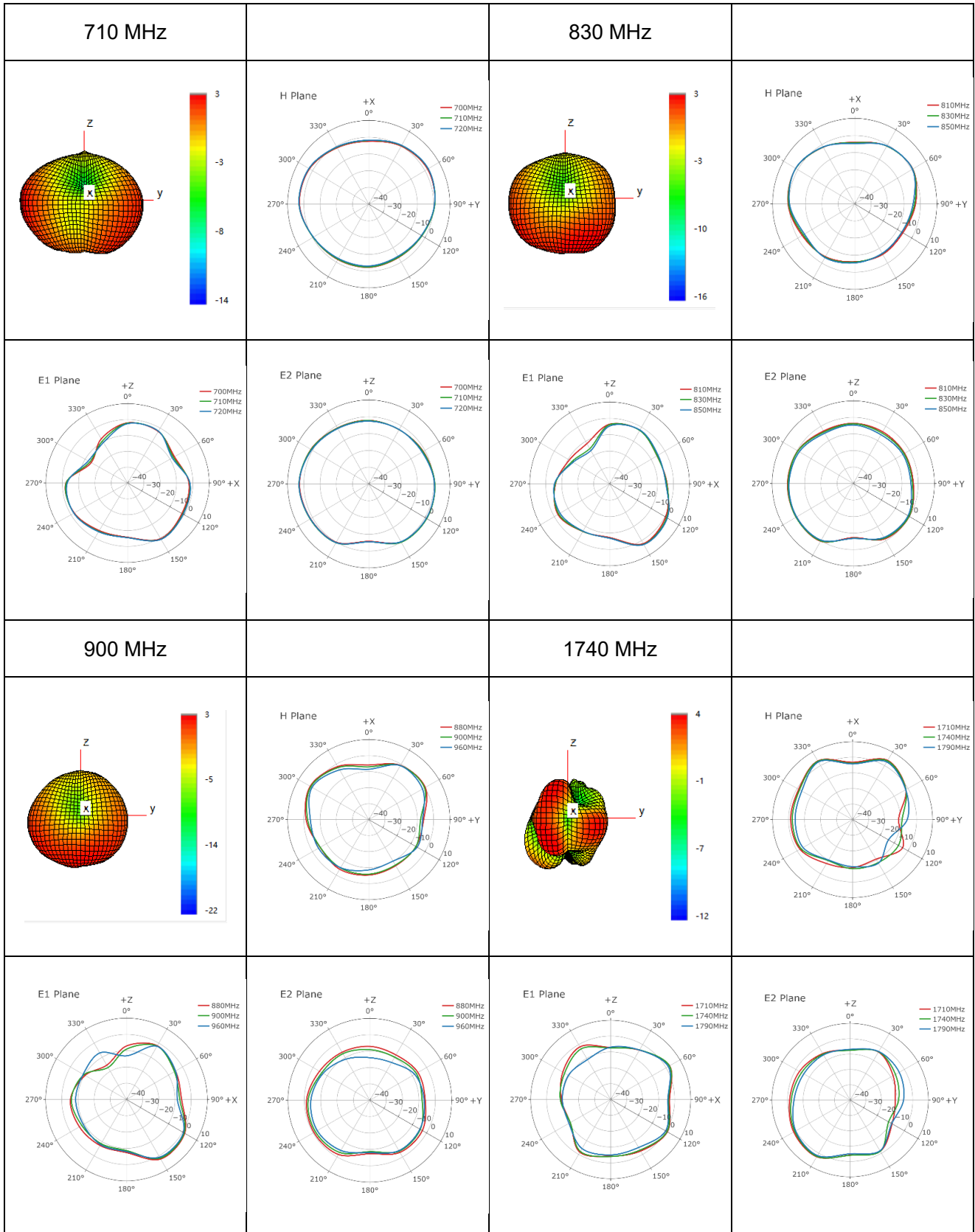
Peak Gain (dBi)

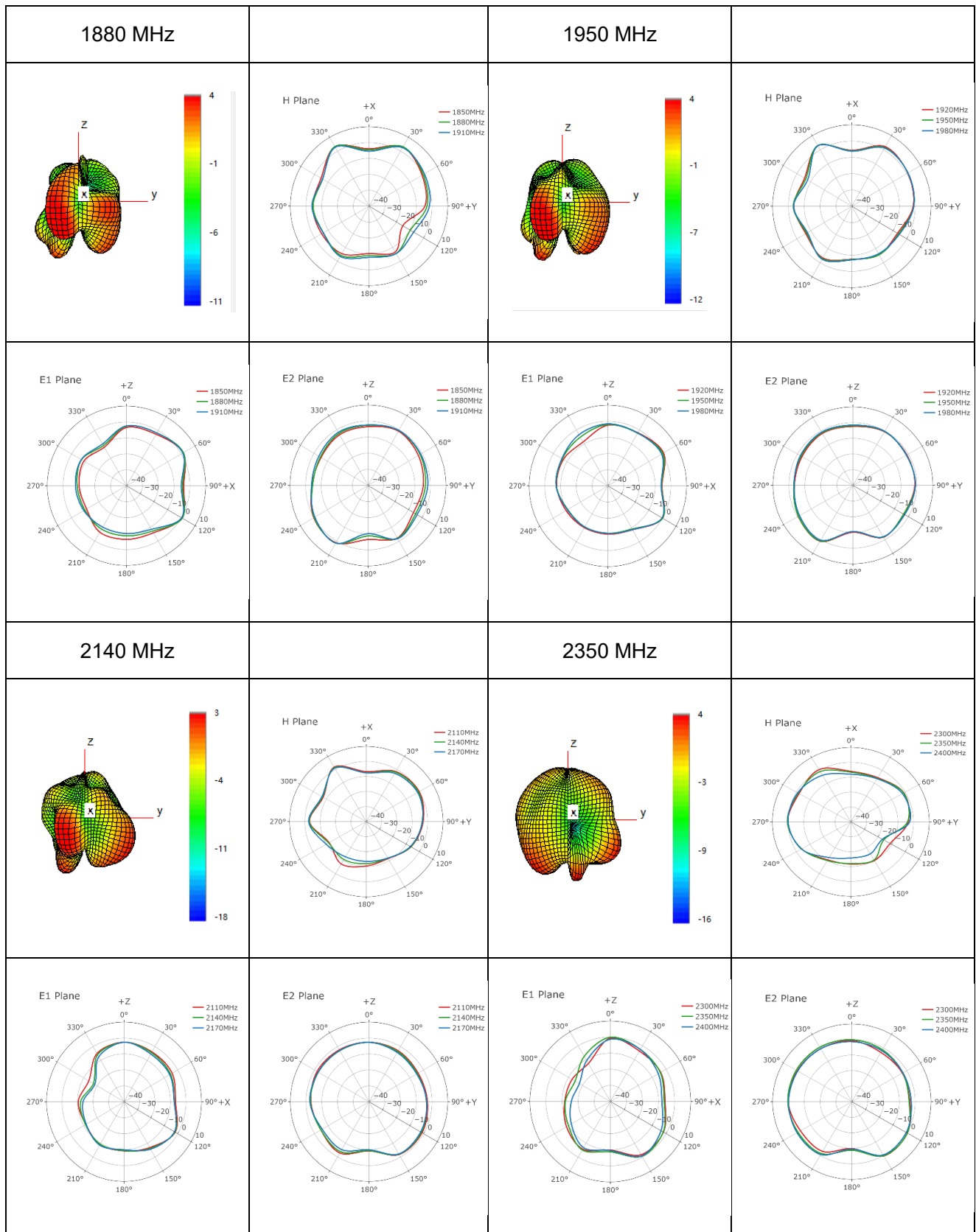
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6525	7125
Peak Gain (dBi)	1.9	1.3	1.1	1.7	1.8	4.2	0.4	0.3	0.0

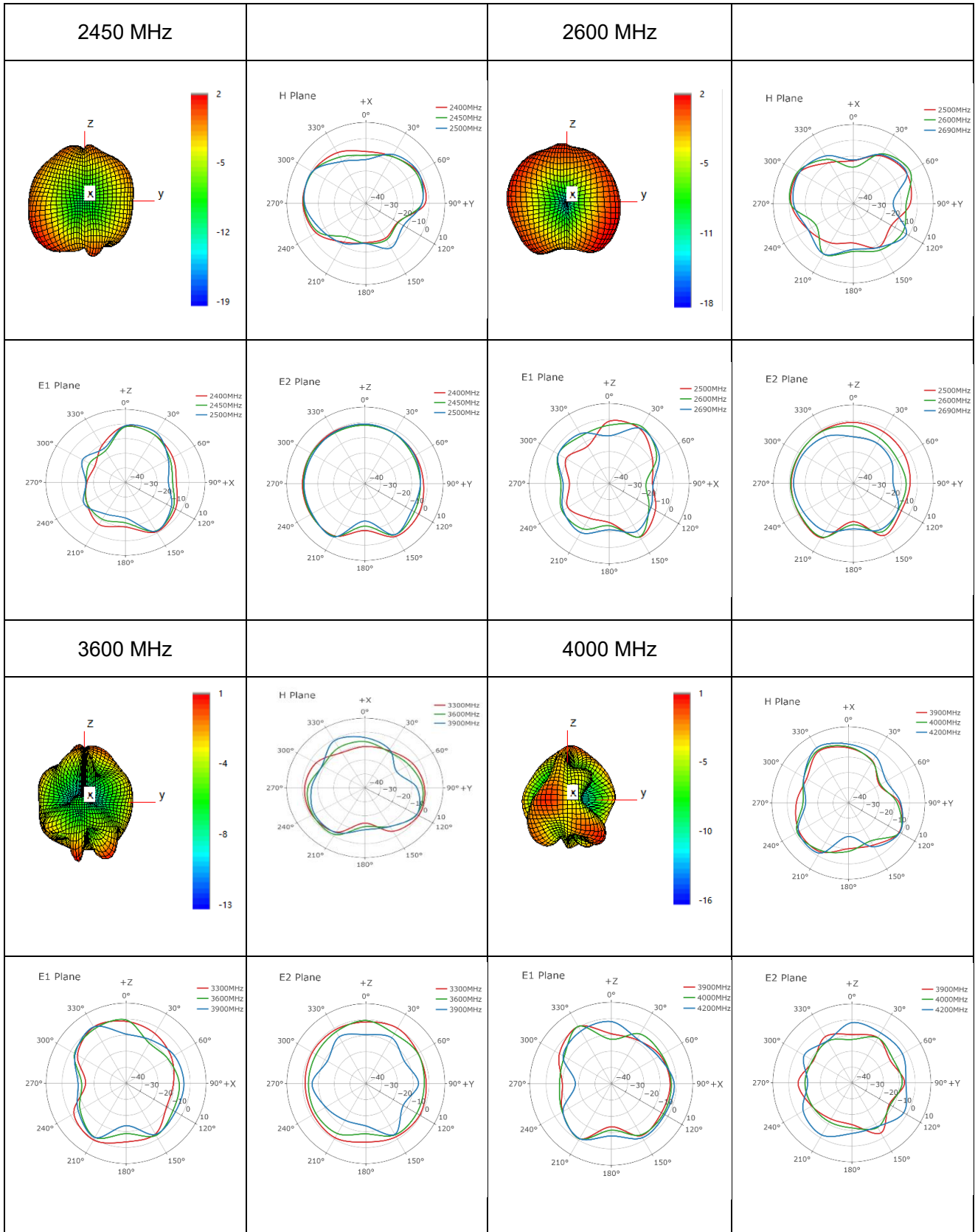
3.2.4. 3D & 2D Radiation Pattern

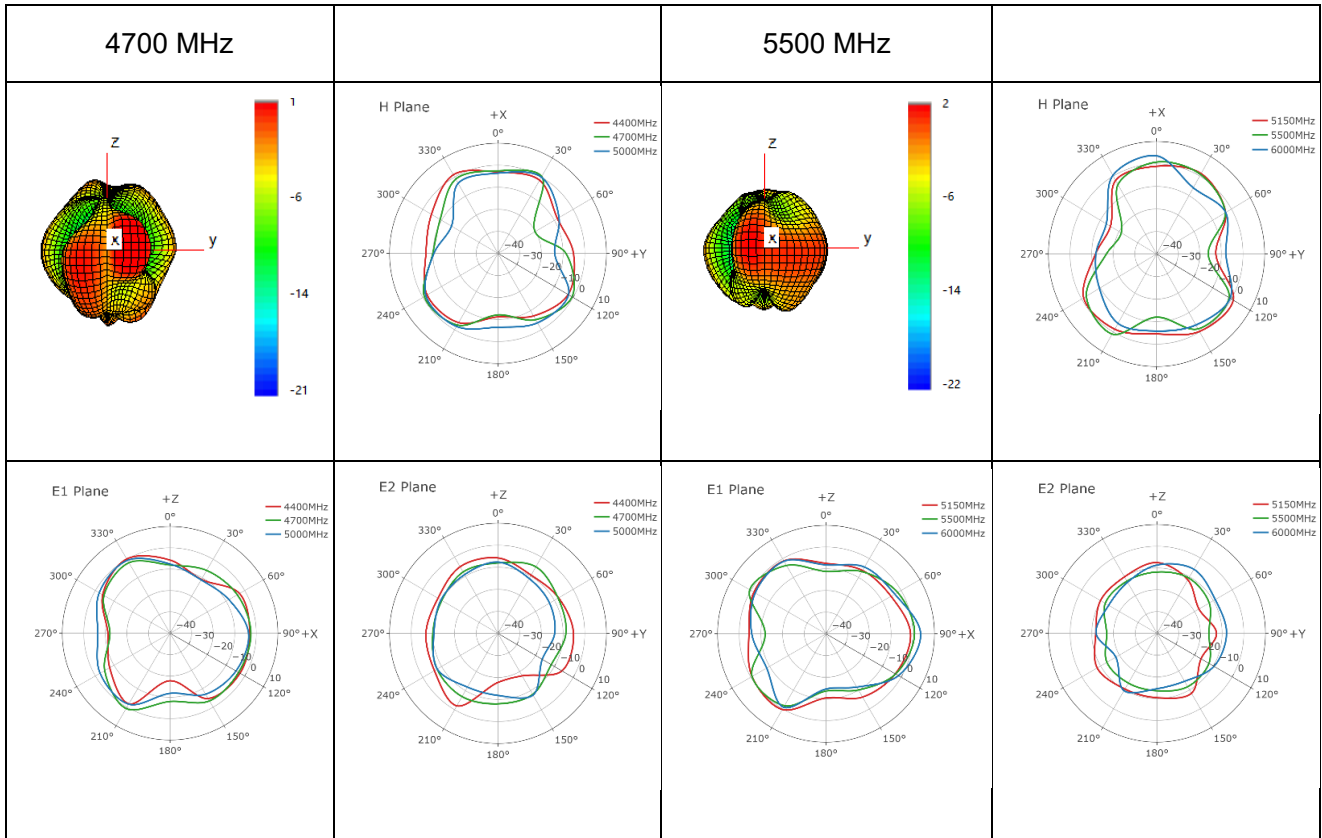
- Test Condition: On 130 mm × 130 mm EVB
- Test Chamber: HF-G-1



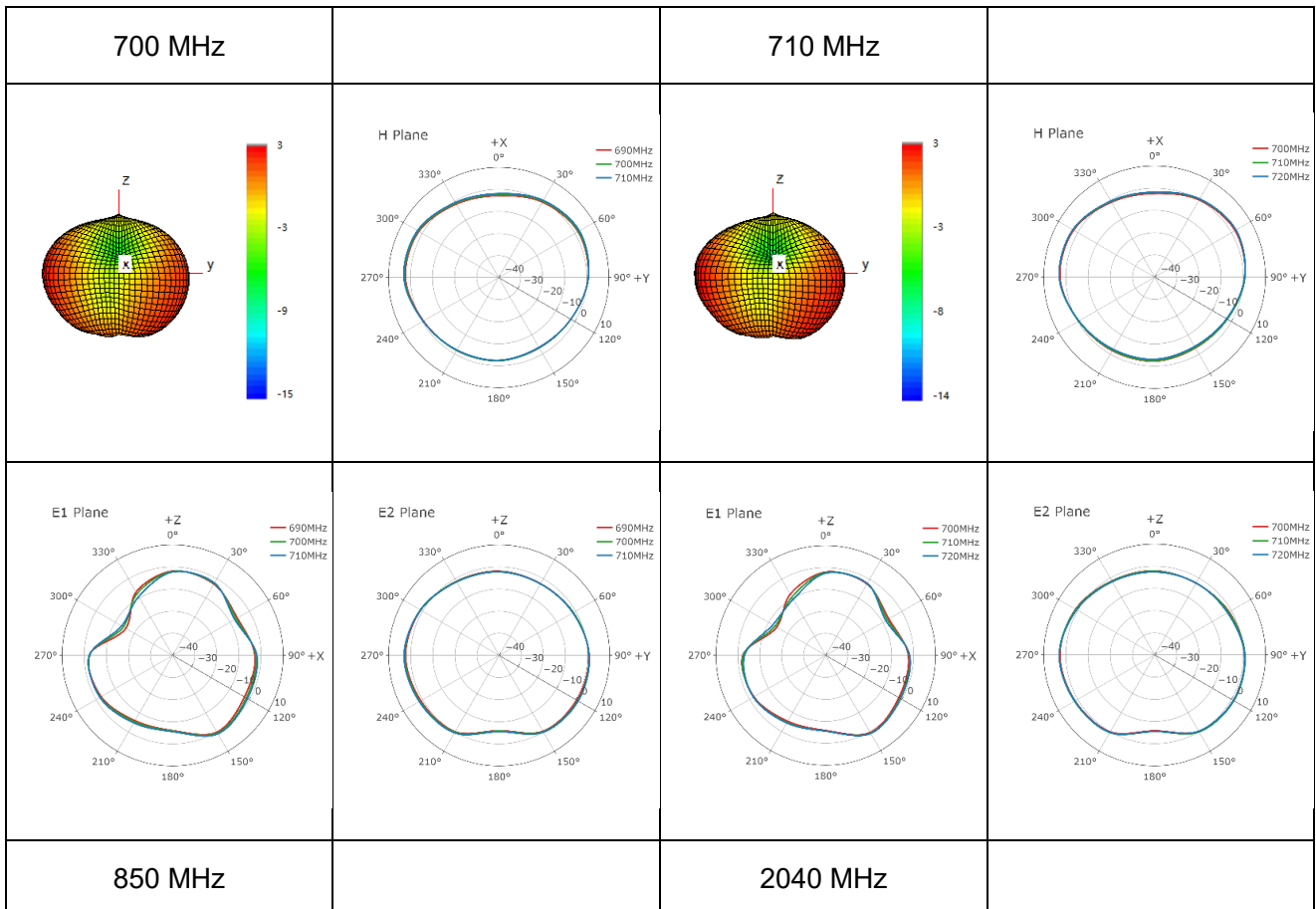


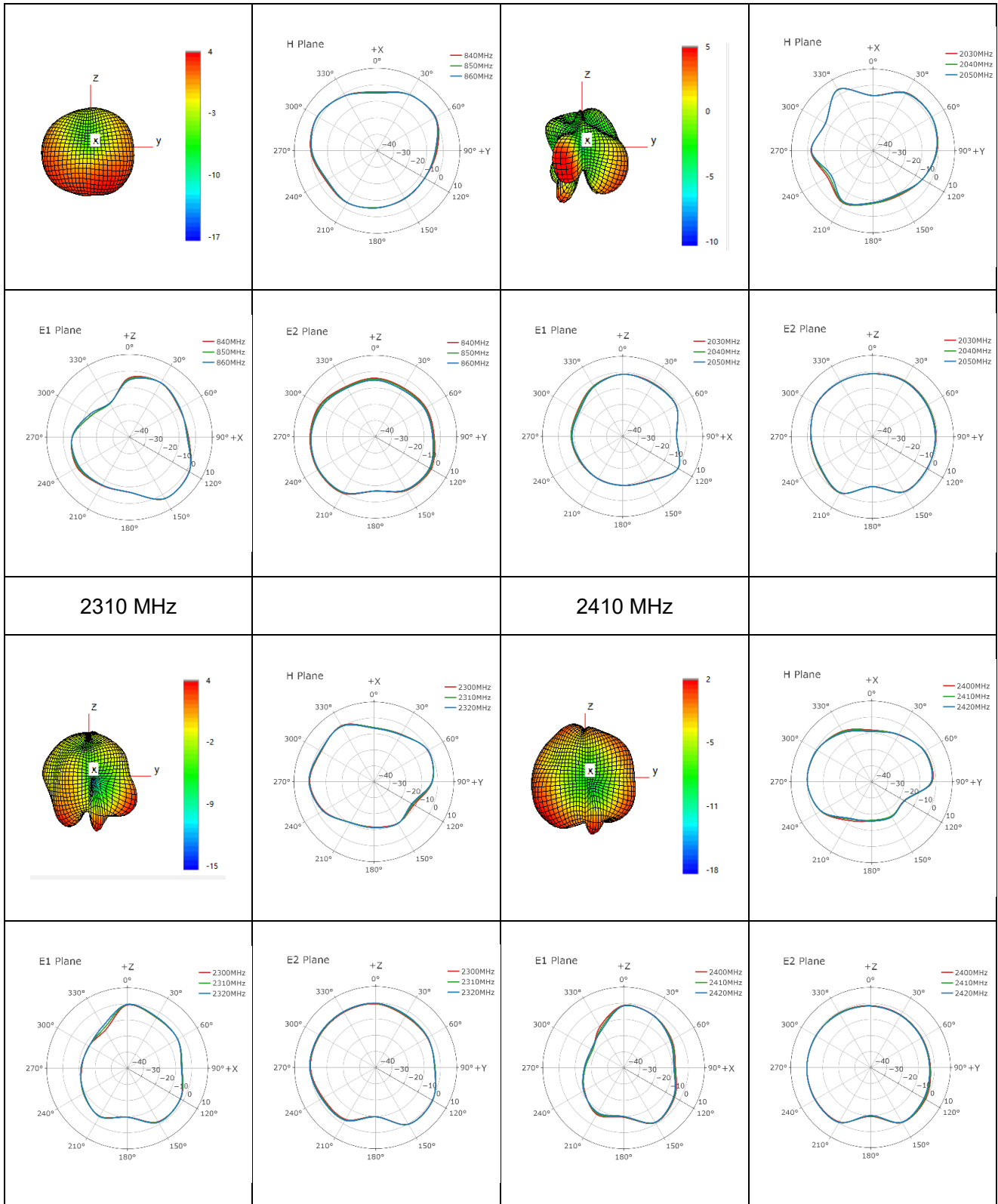


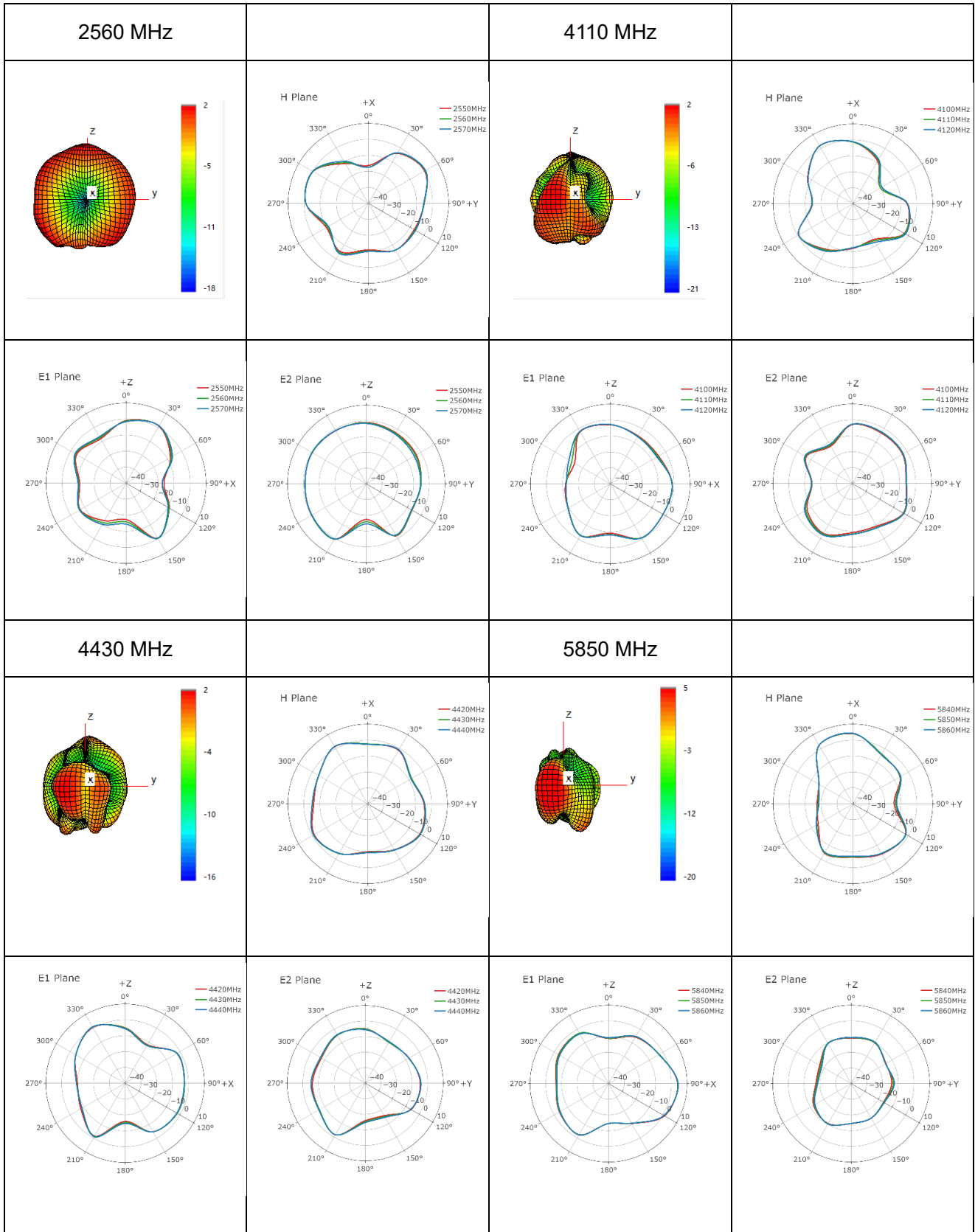


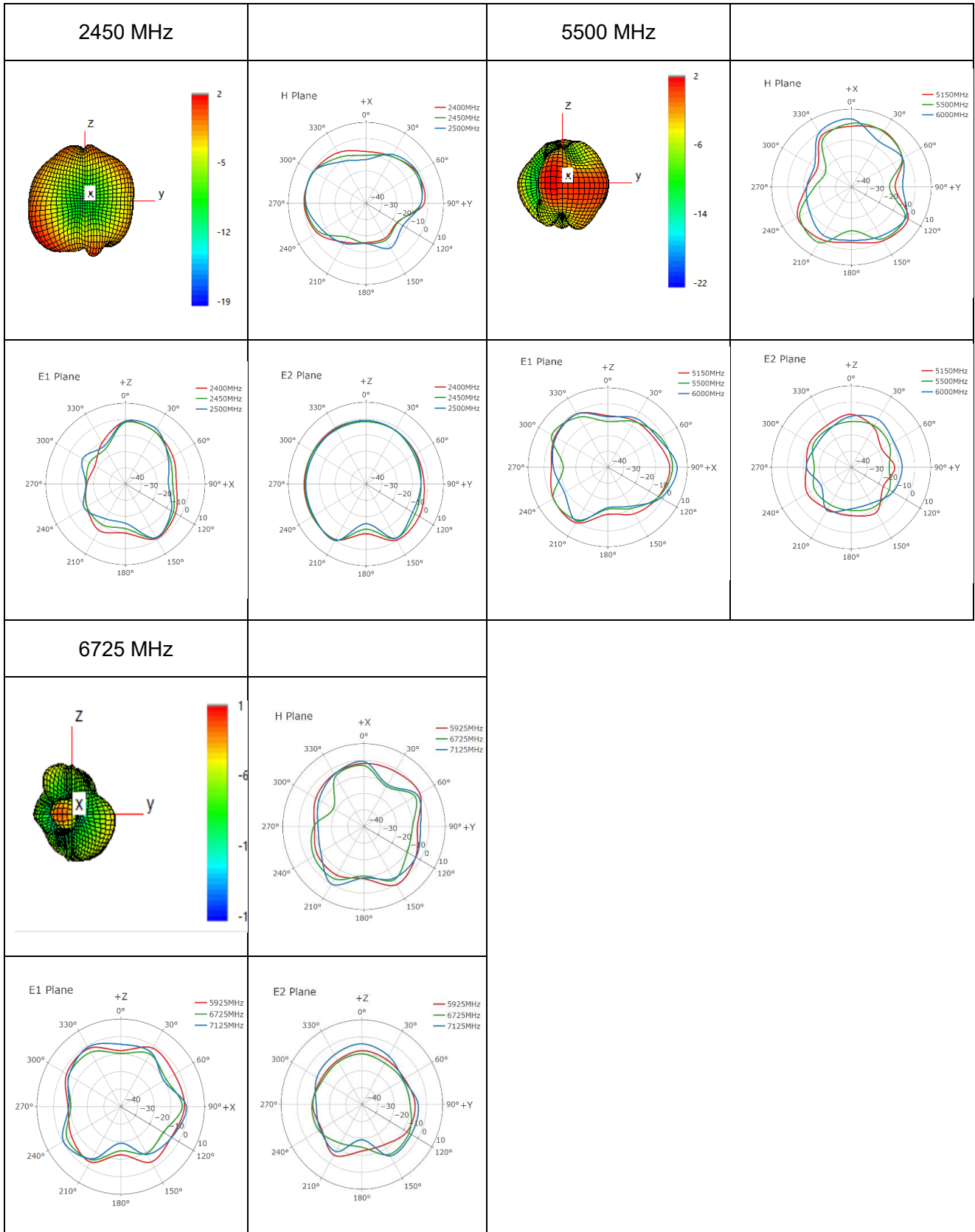


● **Max Peak Gain**

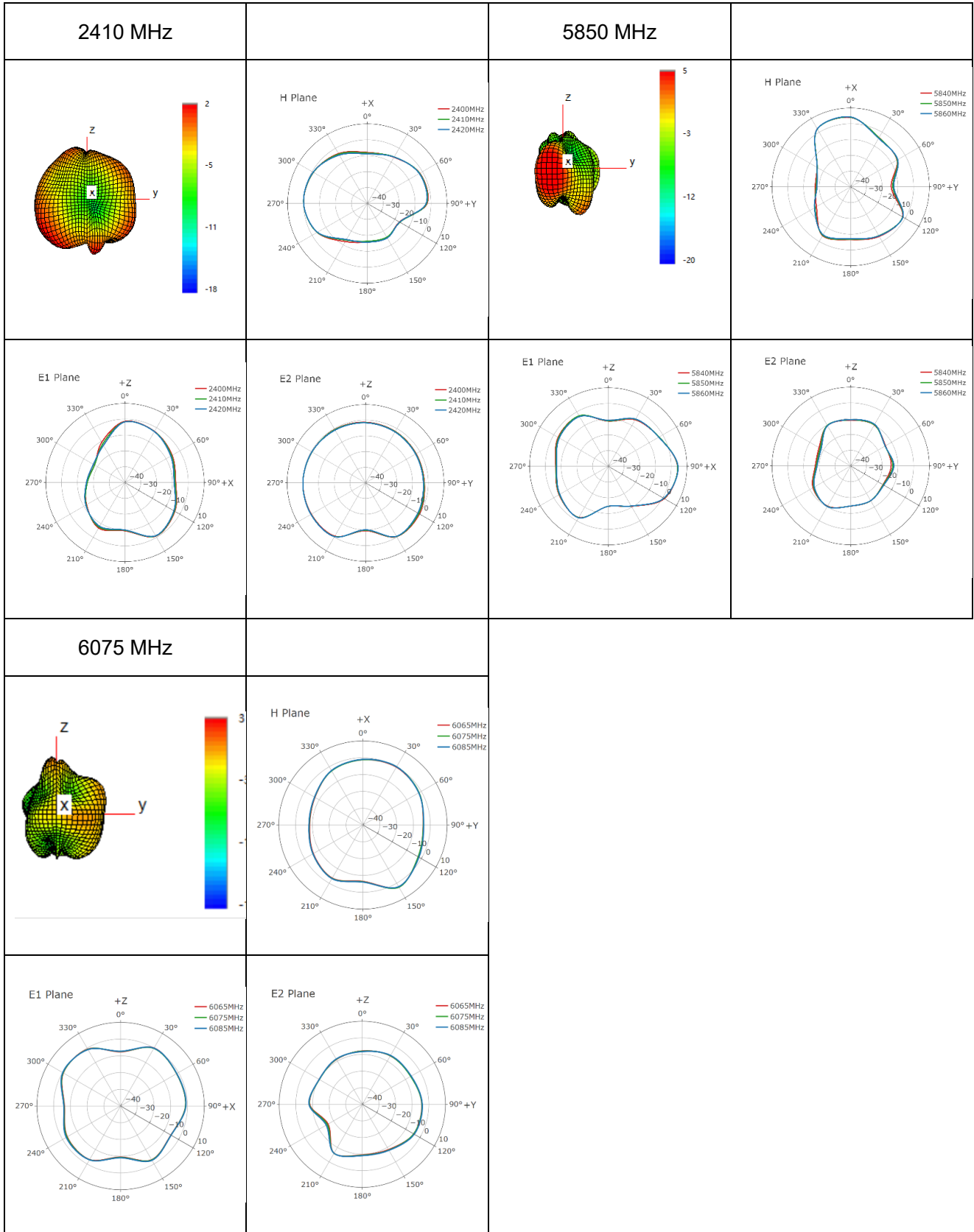





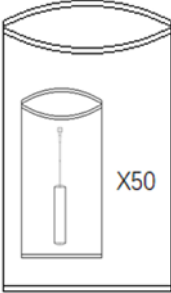
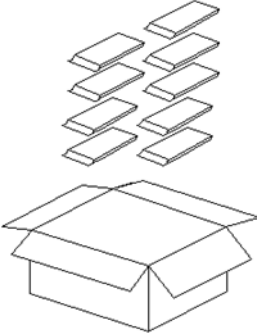
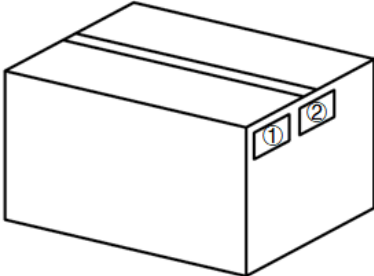


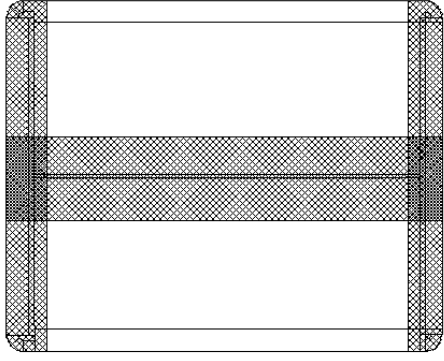


● **Max Peak Gain**



4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		<p>1 antenna product in a small PE bag. (1 Antenna / Small PE Bag)</p>
2		<p>50 antenna products in a big PE bag. (50 Antennas / Big PE Bag)</p>
3		<p>(9 PE Bags / Carton Box) (450 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 = 400 × 290 × 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 rectangular section with a cross-hatched texture, flanked by two vertical rectangular sections, also with a cross-hatched texture. The corners of the vertical sections are rounded. The entire structure is shown in a perspective view.	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:

Quectel Wireless Solutions Co., Ltd.

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

Tel: +86 21 5108 6236

Email: info@quectel.com

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Revision History

Version	Date	Author	Note
-	2024-08-15	Nero Zhang/ Lance Sun/ David Liu/ Rainey Liao	Creation of the document
1.0	2024-08-15	Nero Zhang/ Lance Sun/ David Liu/ Rainey Liao	First official release
1.1	2025-04-09	Aria Chu	Updated the antenna image (Cover page).
1.2	2025-08-18	Kane Liu	Numerous changes were made to this document. It should be read in its entirety.

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