



Antenna Datasheet

Product OC: YECT000WBA

Version: 2.2

Date: 2025-01-19

Status: Released

Product Name: 5G Terminal Mount Stubby Monopole External Antenna

Key Features:

Frequency Band: 600–960 MHz, 1400–2690 MHz, 3300–6000 MHz

Dimensions: Φ 40.6 mm \times 104 mm

Efficiency: Up to 85.5 %

RoHS and REACH Compliant

IP67

IP69K

IK10

Overview

The Quectel YECT000WBA is an external Screw mounting antenna. This ultra-wide-band antenna provides coverage the 5G/4G/3G/2G networks as well as LPWA, Cat-M, NB IoT, ZigBee, ISM, Wi-Fi/BT. Its shape is cylinder, with dimensions of Φ 40.6 mm × 104 mm. YECT000WBA has a N Female connector.

YECT000WBA is an external antenna with high performance, which can be installed outside the device. It can adopt waterproof, dustproof, and anti-drop design, with IP67 and IP69K waterproof and dustproof ratings, and IK10 impact protection (IK) rating, this design can maximize the protection of the antenna from natural environmental damage such as water droplets, dust and falls. We also provide a housing UV resistant of UL 746c f1, which can allow the YECT000WBA to be used in outdoor environments for a long time and remain intact even in harsh environments, thereby extending its service life for providing a more flexible and reliable high-performance antenna solution for products in external application environments.

YECT000WBA allows high efficiency, stable signal transmission and reception for from 600 to 960 MHz, 1400 to 2690 MHz and 3300 to 6000 MHz.

- **Typical Applications Include:**

- ✓ Smart Buildings: Climate control, access control, security, irrigation
- ✓ Transport (Busses, Utility & Public Safety)
- ✓ Agricultural machinery
- ✓ Mining Vehicles & Machinery communications, telemetry and automation
- ✓ Industrial factory automation
- ✓ Warehouses & Logistic systems

Quectel provides customized service for optimization of your devices, we have regional R & D centers to offer quick response to meet your requirements. Please contact our sales & FAEs if you have any requests.

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1 Specification

Test Condition: On 300 mm × 300 mm metal plane

1.1. Electrical

Electrical	
Frequency Range	600–960 MHz, 1400–2690 MHz, 3300–6000 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

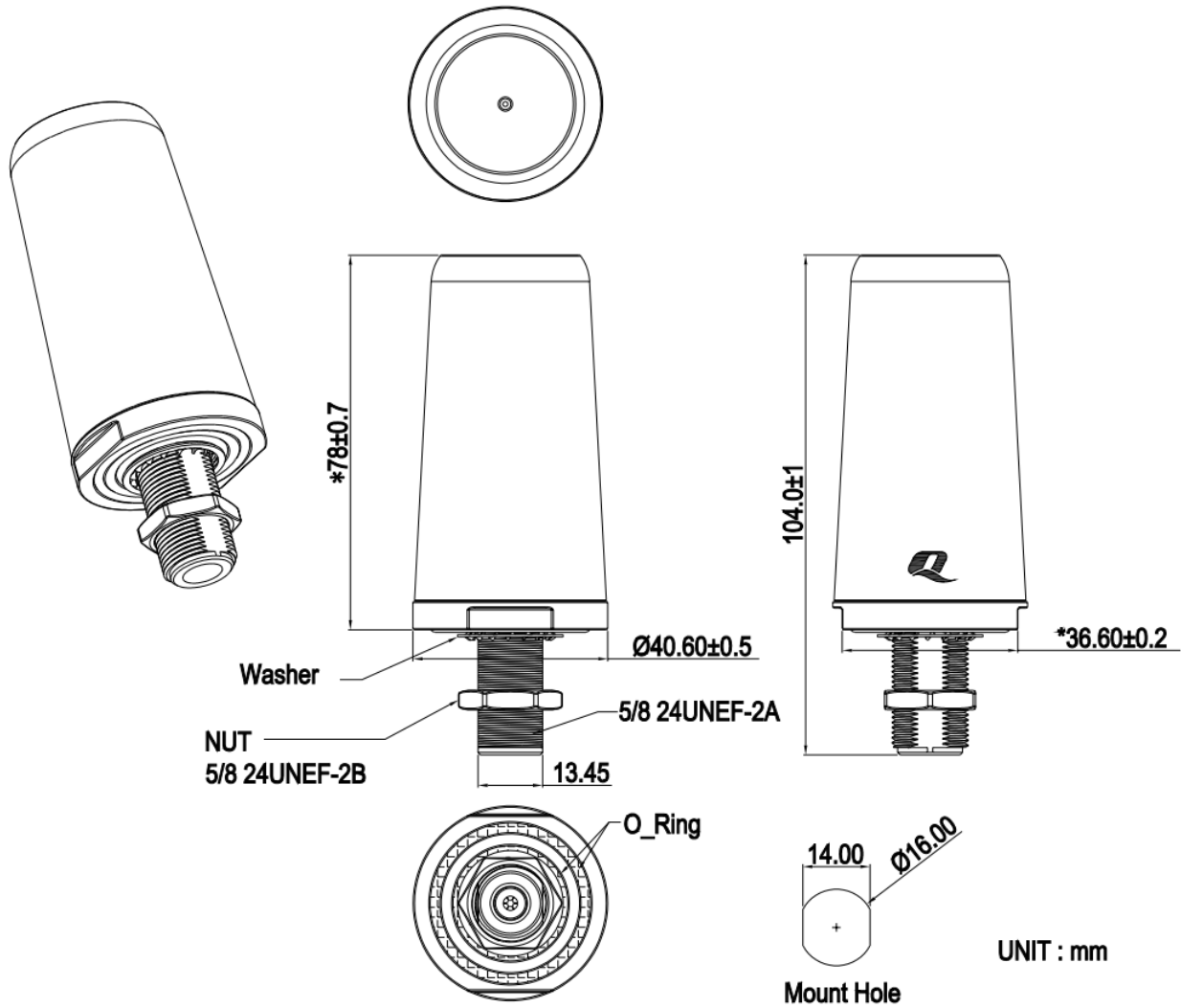
Electrical – Detail												
Band	Band	B71	B12 /B13 /B28	B5 /B8 /B26	n74 /n75 /n76	B1 /B2 /B3	B40	Wi-Fi 2G	B38 /B41	B42 /B48 /n77	n79	Wi-Fi 5G
	SPEC	Freq. (MHz)	600– 700	700– 810	820– 960	1420– 1520	1700– 2170	2300– 2400	2400– 2500	2500– 2690	3300– 4200	4400– 5000
Max. VSWR		10.1	3.1	1.2	1.8	1.5	1.3	1.2	1.4	2.2	3.3	2.6
Max. Return Loss (dB)		-1.7	-5.8	-21.7	-11.1	-13.9	-16.8	-19.5	-15.7	-8.4	-5.4	-6.9
AVG Eff. (%)		41.7	73.1	82.7	79.4	78.7	77.3	76.3	76.1	68.6	52.3	62.7
AVG AVG Gain (dB)		-4.0	-1.4	-0.8	-1.0	-1.0	-1.1	-1.2	-1.2	-1.6	-2.8	-2.1
Max. Peak Gain (dBi)		0.9	2.3	2.6	3.4	4.4	3.1	2.8	2.8	6.1	6.8	6.8
VSWR						≤ 10.1						
Return Loss						≤ -1.7 dB						
Peak Gain						≤ 6.8 dBi						

1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	Φ 40.6 mm × 104 mm
Material & Color	ASA & Black
Connector Type	N Female
Weight	Typ. 194.2 g
Mounting Type	Screw
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Ingress Protection (IP) Rating	IP67 (After Installation) IP69K (After Installation)
Impact Protection (IK) Rating	IK10 ^①
RoHS & REACH Compliant	Yes
Housing UV Resistant	UL 746c f1

^① Only the top surface of the product meets IK10.

2 Drawing



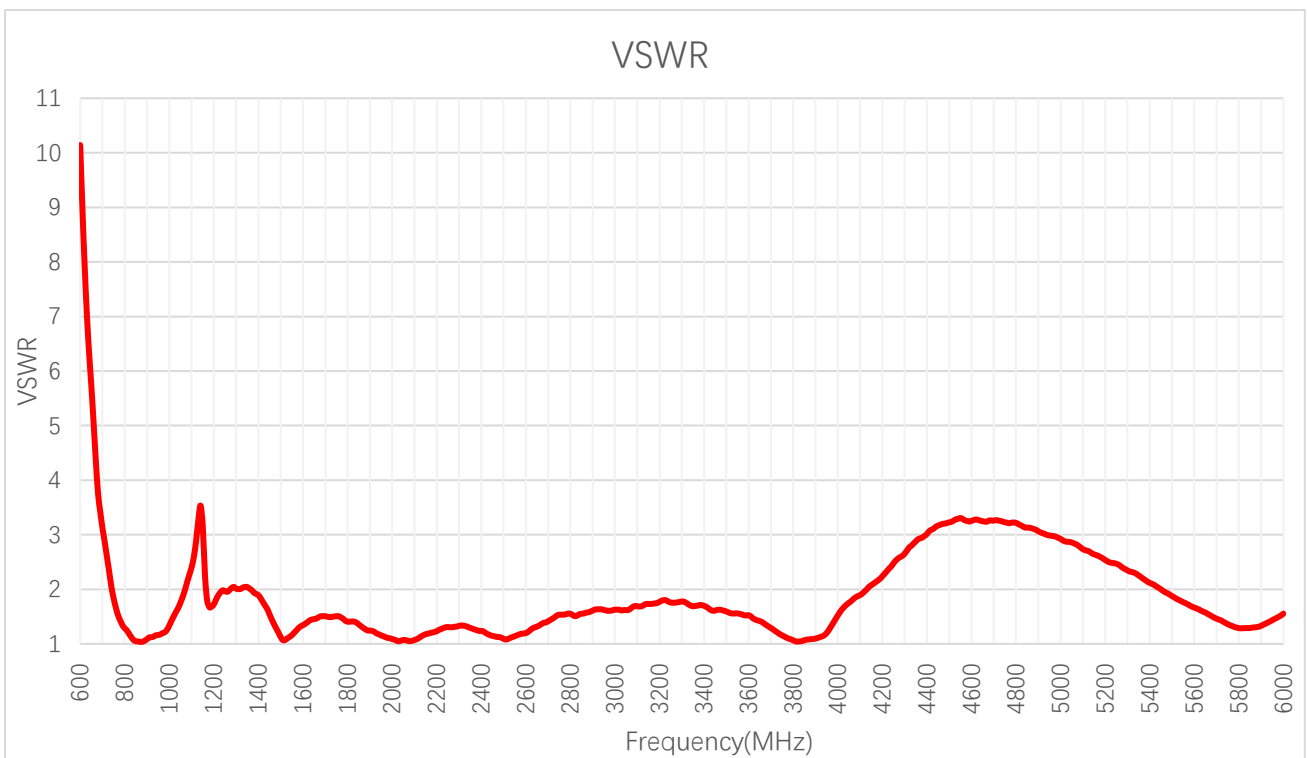
Caution: If you find the silicon seal ring dropping out of the groove when opening the package, it's a normal phenomenon due to its special structure design. Please assemble the silicon seal ring into groove before you assemble antenna on the device, thanks!



3 Detailed Performance

3.1. S-Parameter Test

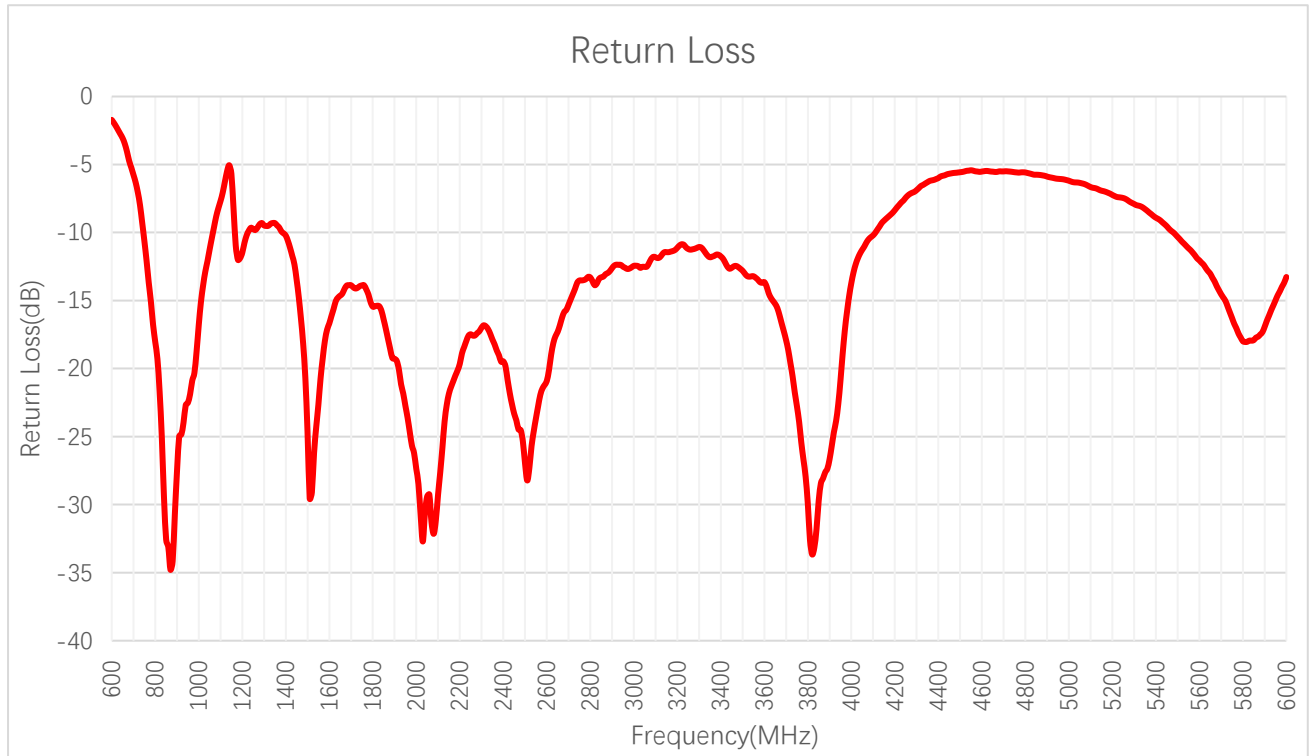
3.1.1. VSWR



VSWR

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
VSWR	10.1	7.0	2.9	1.1	1.1	1.2	1.6	1.5	1.5	1.3
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
VSWR	1.2	1.2	1.3	1.1	1.2	1.5	3.3	2.9	1.9	1.6

3.1.2. Return Loss

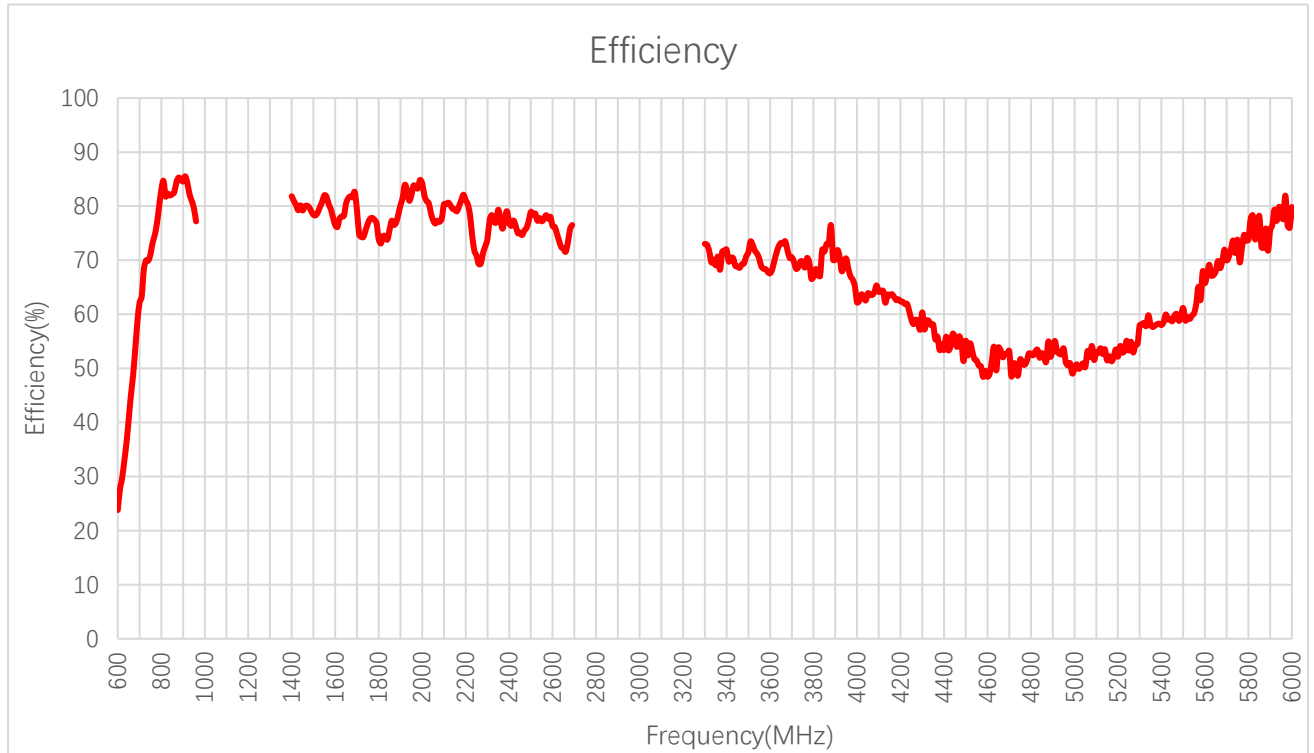


Return Loss (dB)

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Return Loss (dB)	-1.7	-2.5	-6.3	-25.0	-27.5	-21.9	-12.4	-14.0	-13.9	-18.6
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
Return Loss (dB)	-22.7	-22.7	-17.9	-23.3	-20.9	-13.6	-5.5	-6.2	-10.3	-13.3

3.2. Radiation Performance Test

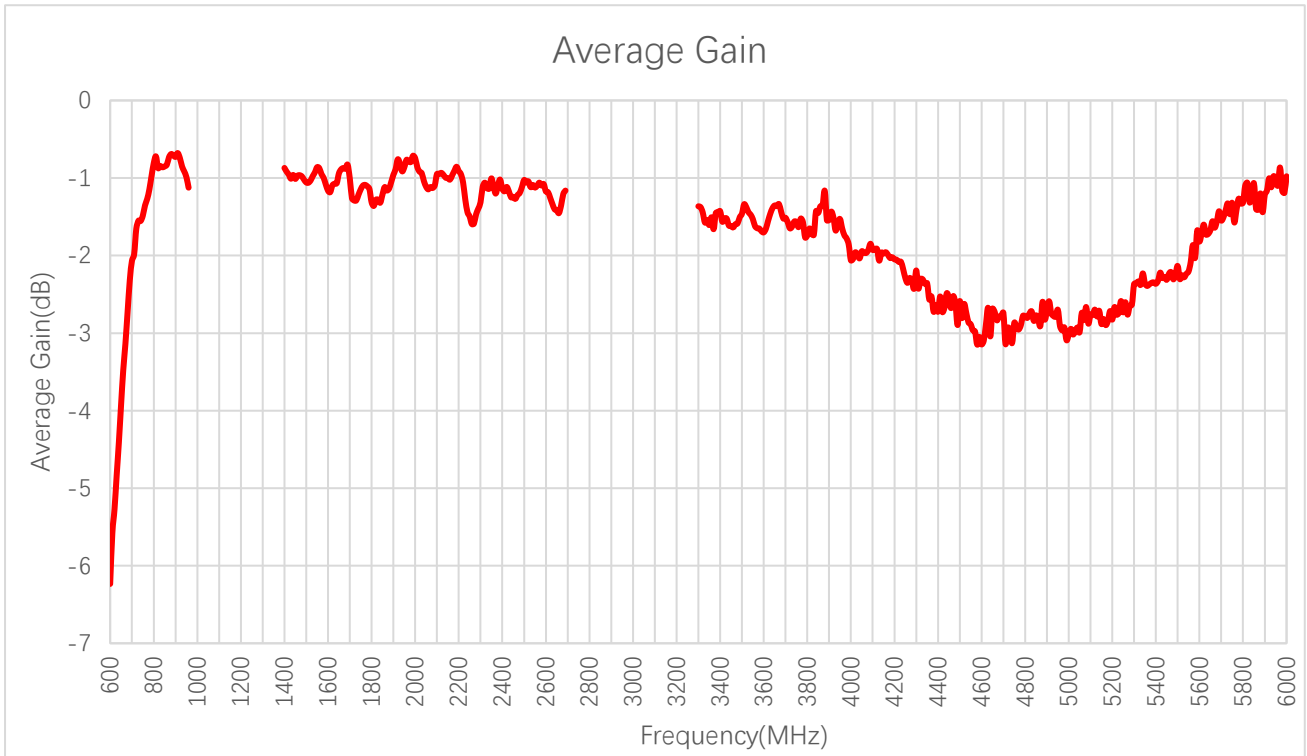
3.2.1. Efficiency



Efficiency (%)

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Efficiency (%)	23.8	32.9	63.3	82.3	84.6	77.2	80.2	74.8	75.6	76.9
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
Efficiency (%)	82.0	79.5	79.4	75.1	76.3	67.6	53.2	49.9	61.2	79.8

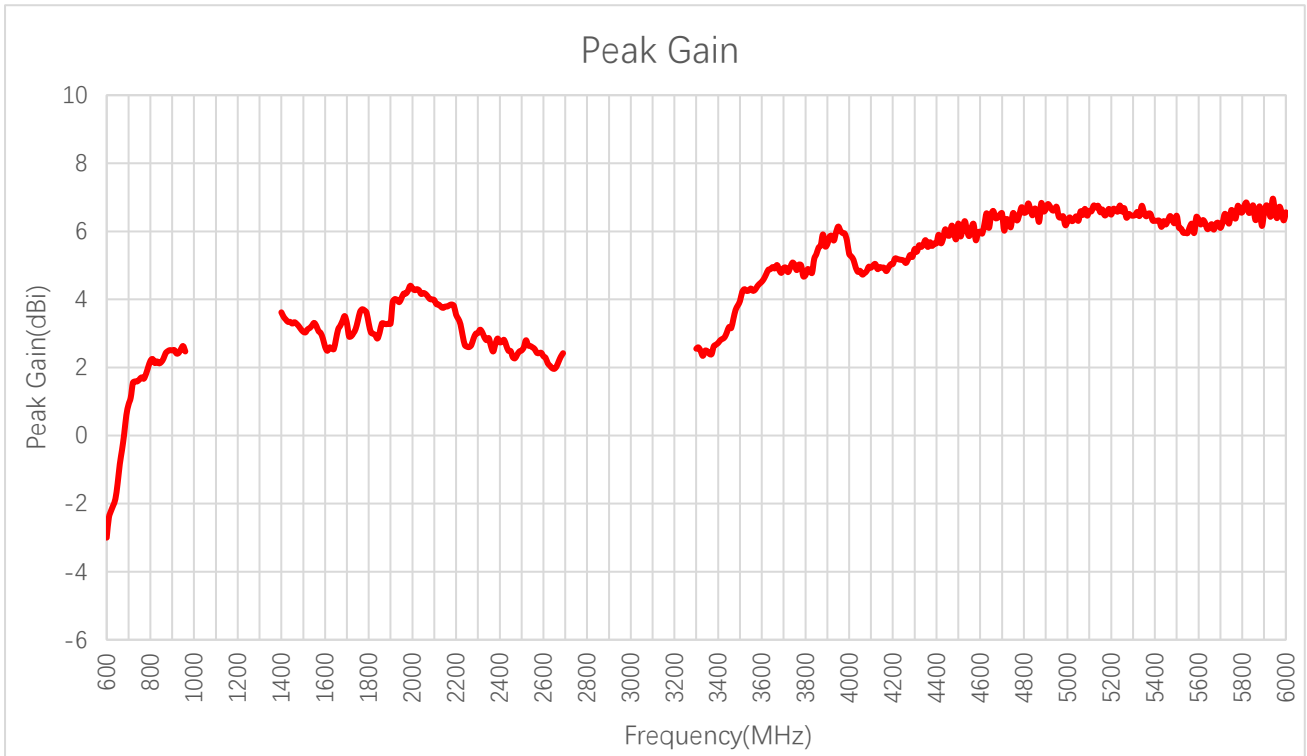
3.2.2. Average Gain



Average Gain (dB)

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Average Gain (dB)	-6.2	-4.8	-2.0	-0.8	-0.7	-1.1	-1.0	-1.3	-1.2	-1.1
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
Average Gain (dB)	-0.9	-1.0	-1.0	-1.2	-1.2	-1.7	-2.7	-3.0	-2.1	-1.0

3.2.3. Peak Gain

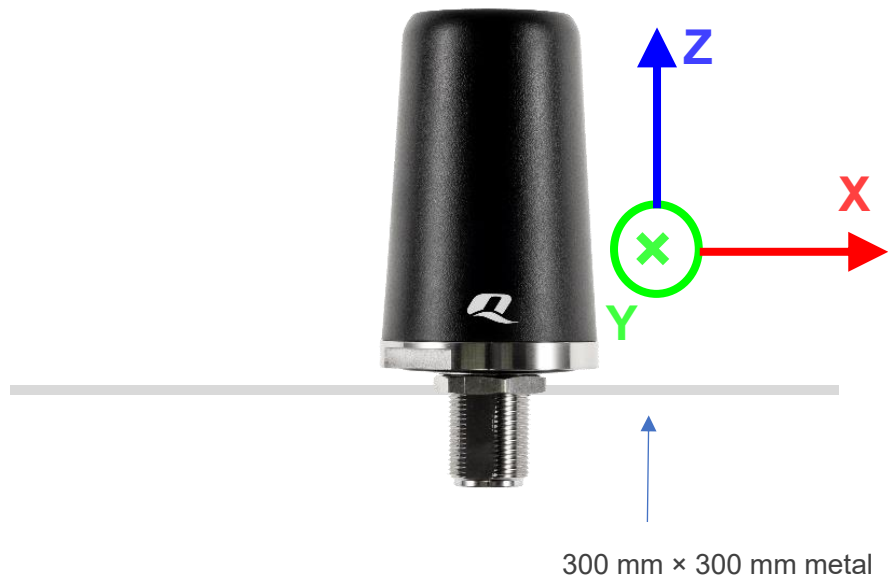


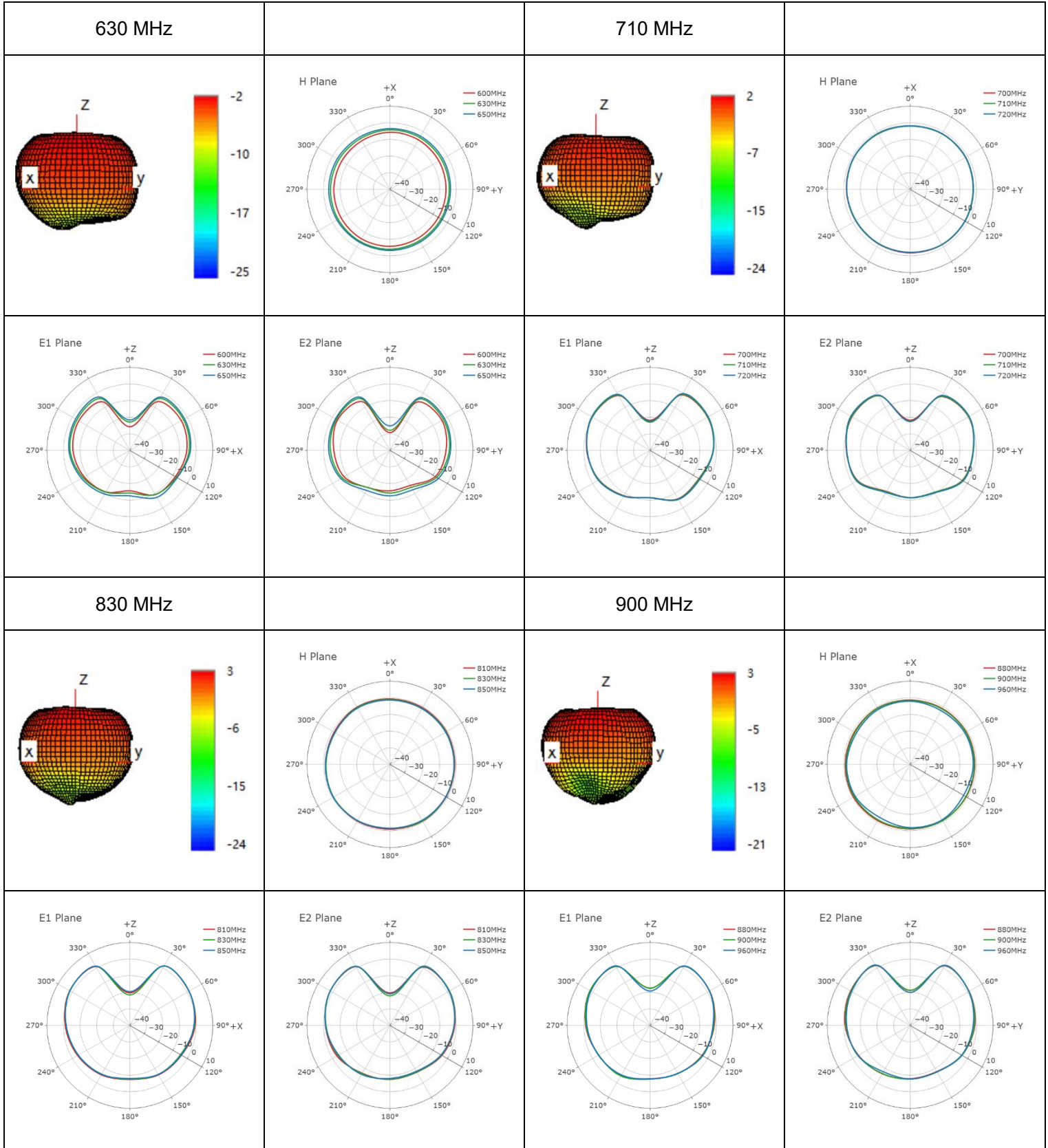
Peak Gain (dBi)

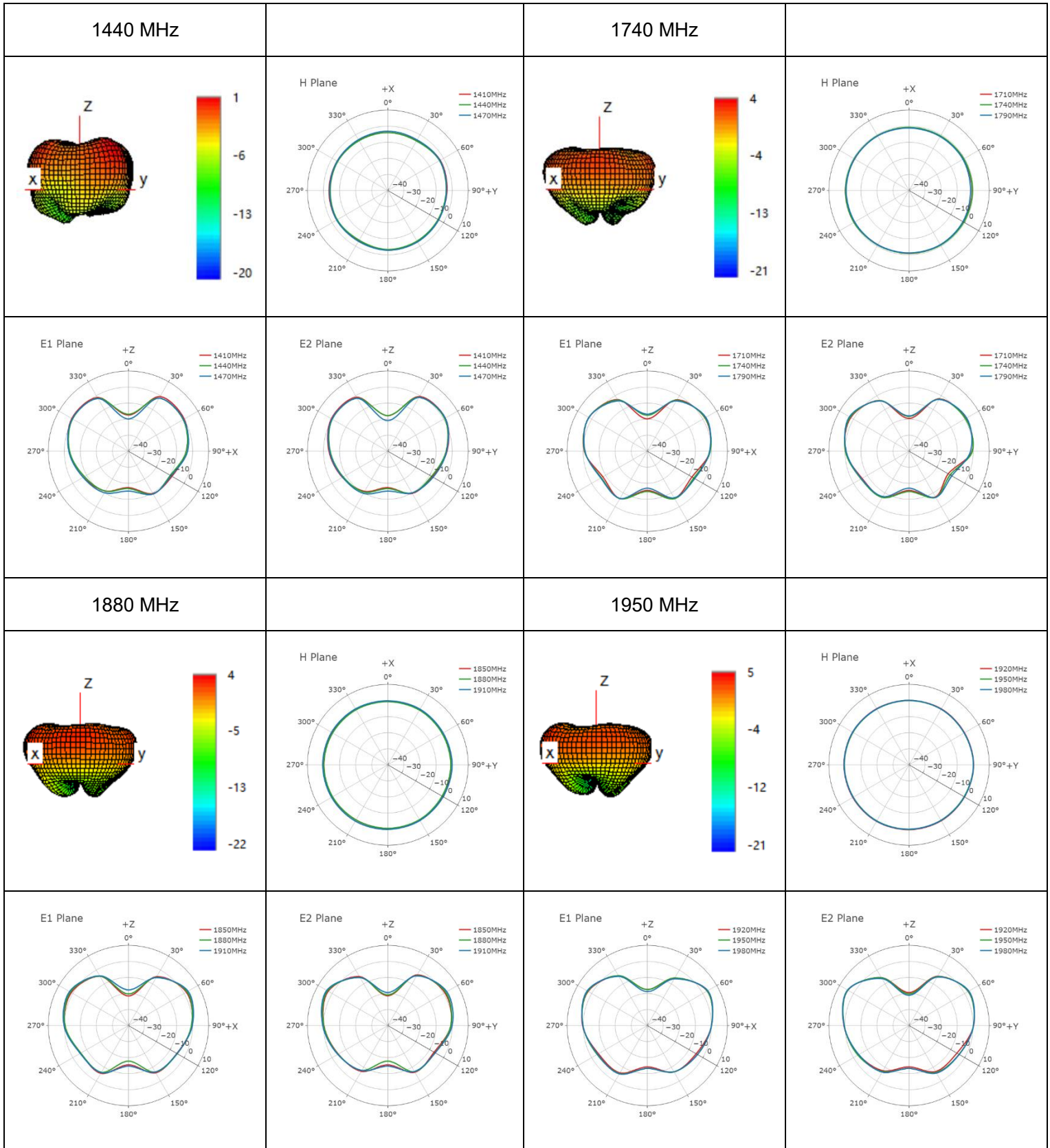
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Peak Gain (dBi)	-3.0	-2.1	1.1	2.2	2.5	2.5	3.3	2.9	3.1	3.3
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
Peak Gain (dBi)	4.0	3.8	2.9	2.5	2.3	4.5	6.5	6.3	6.5	6.6

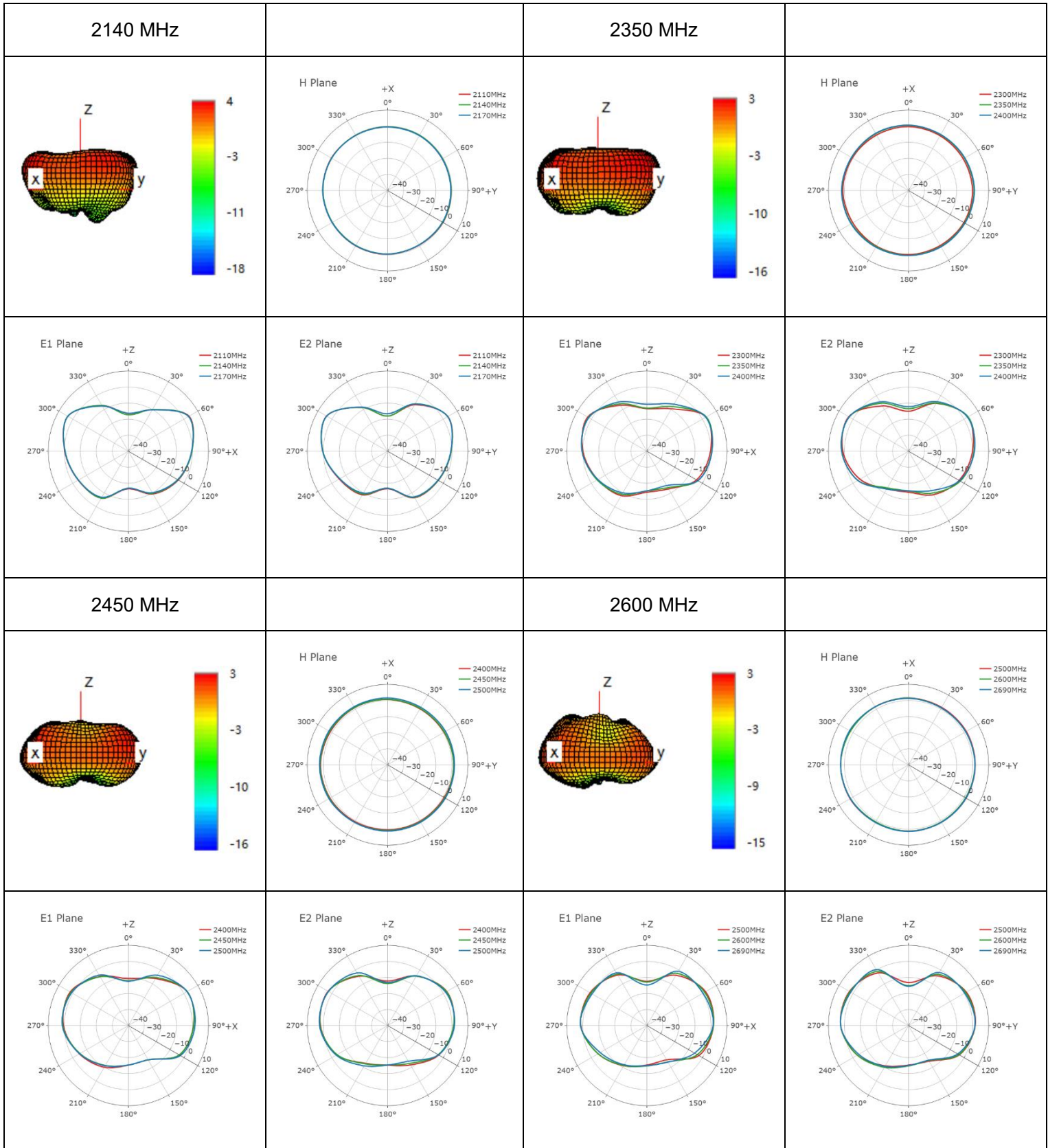
3.2.4. 3D & 2D Radiation Pattern

- Test Condition: On 300 mm × 300 mm metal plane
- Test Chamber: GL-G-1

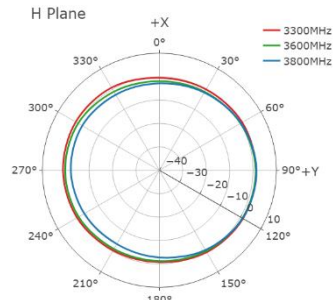
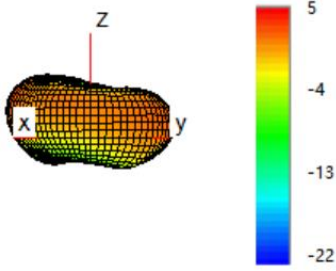




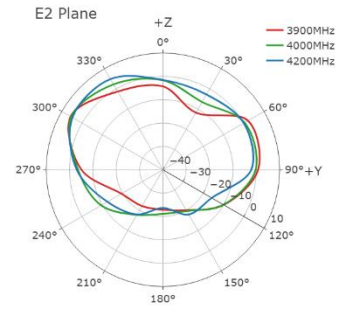
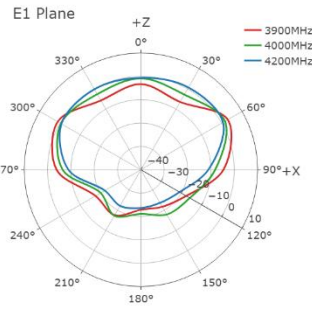
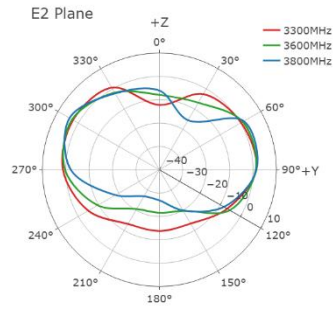
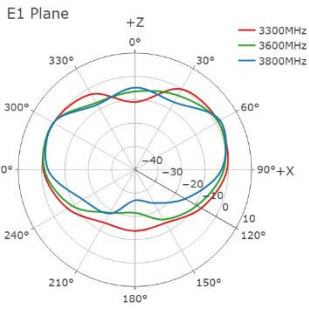
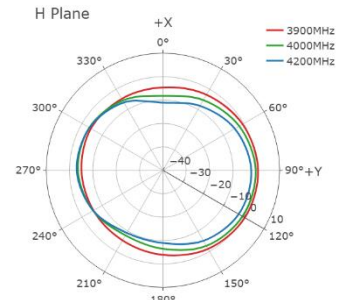
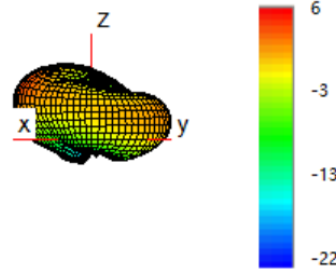




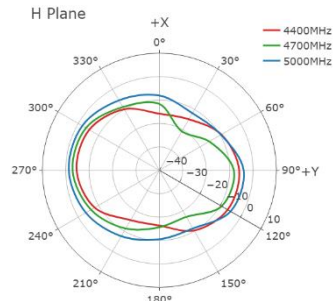
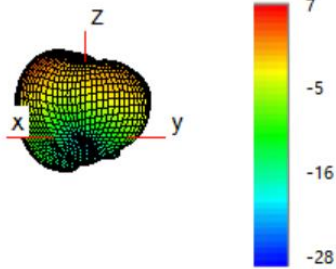
3600 MHz



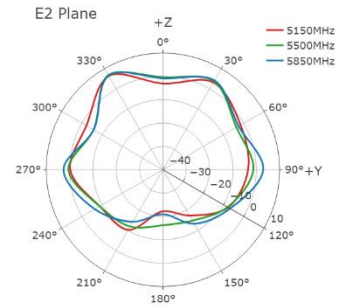
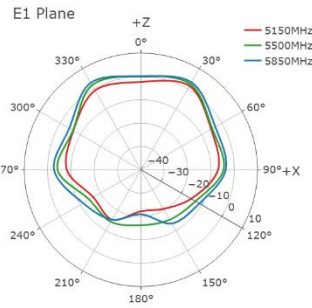
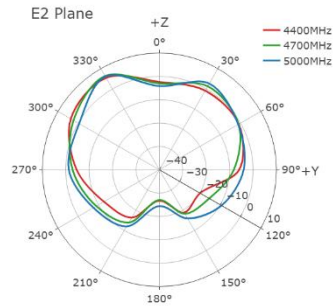
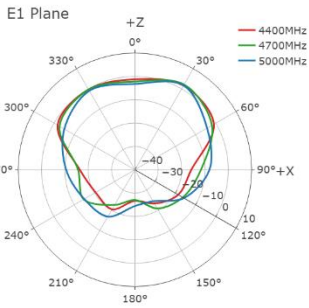
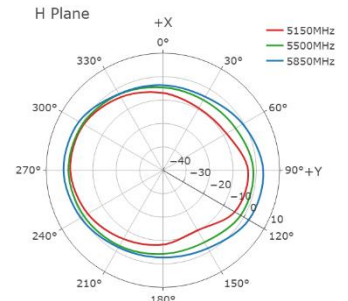
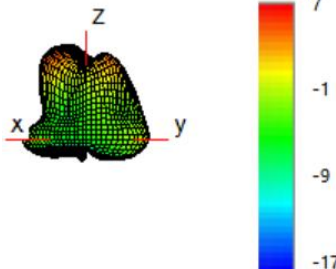
4000 MHz






4700 MHz

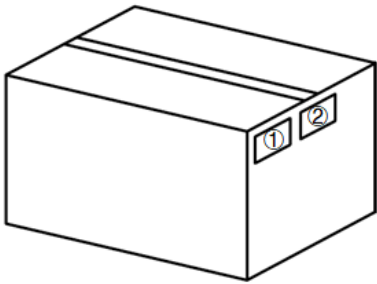
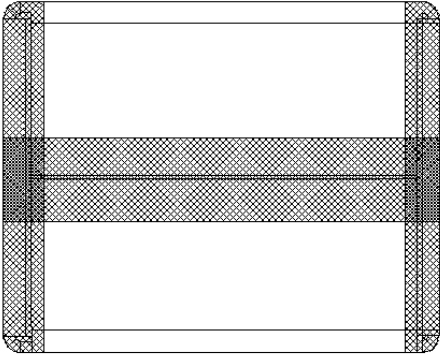


5500 MHz



4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		<p>Both the bottom and top of the product are wrapped with pearl cotton.</p>
2		<p>1 antenna product in an inner box. (1 Antenna / Inner Box)</p>
3		<p>(56 Inner Boxes / Carton Box) (56 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 = 550 × 350 × 405 mm</u></p>

4	 A 3D line drawing of a rectangular carton. On the front face, there are two small rectangular boxes labeled '1' and '2' positioned side-by-side near the bottom edge.	<p>Position for Attaching Labels</p> <ul style="list-style-type: none">① Carton Label② Quality Label
5	 A 3D line drawing of a rectangular carton with a shaded, H-shaped band around its middle. The band consists of two horizontal strips connected by two vertical strips, forming an 'H' shape.	<p>Sealing Cartons</p> <p>H-shaped sealing cartons</p>

Contact Us

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

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Revision History

Version	Date	Author	Note
-	2023-09-27	Sly Liu/ Lance Sun/ David Liu/ Aria Chu	Creation of the document
1.0	2023-09-27	Sly Liu/ Lance Sun/ David Liu/ Aria Chu	First official release
1.1	2023-12-18	Lance Sun/ Aria Chu	<ol style="list-style-type: none">1. Added a caution (chapter 2).2. Updated the drawing (Chapter 2).3. Updated antenna photos (Chapter 3).
1.2	2024-01-24	Lance Sun/	Added Housing UV Resistant (Chapter 1.2)
1.3	2025-04-09	Aria Chu	Updated the antenna image (Cover page and Chapter 3.2.4).
2.0	2025-07-28	Mayes Li/ Lance Sun	Numerous changes were made to this document. It should be read in its entirety.
2.1	2025-12-01	Strong Qiang	Updated the packaging (Chapter 4).
2.2	2026-01-19	Strong Qiang	Updated the packaging (Chapter 4).

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