



Antenna Datasheet

Product OC: YEMA200L1AH

Version: 1.1

Date: 2026-01-19

Status: Released

Product Name: 4G 2in1 Adhesive Mount Combo Antenna

Key Features:

Frequency Band: 4G × 2: 698–960 MHz, 1710–2690 MHz

Dimensions: 143.73 mm × 51.33 mm × 15 mm

Efficiency: Up to 56 % (LTE 1_FS)

RoHS and REACH Compliant

IP68 (1 meter of water depth, for 1 hour)

Overview

YEMA200L1AH is a 4G 2in1 Monopole antenna measuring 143.73 mm × 51.33 mm × 15 mm. This ultra-wide-band 4G antenna provides broad coverage from 698–960 MHz, 1710–2690 MHz whilst offering backward-compatibility to support 3G and 2G networks as well as LTE Cat-M and narrowband IoT (NB-IoT). The antenna is available with connection via 2 cable lengths from 1000 mm, terminated with SMA Male connectors. Ideal for applications where the antenna is required to be discrete, this low profile, screw mount omni-directional antenna is easy to install with maximum durability assured thanks to its IP68 rated enclosure. It is compatible with Quectel 's RM520x Series modules.

YEMA200L1AH has 2 × 4G antennas. It allows high efficiency, stable signal transmission and 4G bands from 698–960 MHz and 1710–2690 MHz. In the meantime, this product also offers high isolation between antennas to avoid self-interference. All in all, this unique product is designed to provide stable and high-speed data connection to 4G applications. YEMA200L1AH can be used in harsh environments thanks to its robust UV resistant (UL 746c f1) and flame resistant (UL 94 V-0) enclosure.

- **Typical Applications Include:**

- ✓ Telematics
- ✓ Transportation
- ✓ Remote monitoring applications.

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.

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1 Specification

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

1.1. Electrical

Electrical Specifications		
Frequency Range	LTE 1	698–960 MHz, 1710–2690 MHz
	LTE 2	698–960 MHz, 1710–2690 MHz
Radiation Pattern	LTE 1	Omni-directional
	LTE 2	Omni-directional
Polarization	LTE 1	Linear
	LTE 2	Linear
Impedance		50 Ω
Isolation	FS	≤ -6.6 dB
	MP	≤ -4.6 dB

Note:

FS: In Free Space

MP: On 300 mm × 300 mm Metal Plane

1.1.1. LTE 1

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	FS	-	3.2	3.7	-	2.0	1.9	2.0	2.1	-	-	-
	MP	-	1.8	4.8	-	3.3	2.1	2.1	2.8	-	-	-
Max Return Loss (dB)	FS	-	-5.6	-4.8	-	-9.5	-10.2	-9.7	-9.2	-	-	-
	MP	-	-10.9	-3.7	-	-5.4	-8.9	-9.1	-6.6	-	-	-
AVG Eff. (%)	FS	-	32.3	31.6	-	51.6	49.5	45.3	47.0	-	-	-
	MP	-	24.0	23.1	-	30.7	42.2	36.2	29.8	-	-	-
AVG.AVG Gain (dB)	FS	-	-5.0	-5.0	-	-2.9	-3.1	-3.4	-3.3	-	-	-
	MP	-	-6.3	-6.4	-	-5.3	-3.7	-4.4	-5.3	-	-	-
Max Peak Gain (dBi)	FS	-	-0.1 (810)	0.9 (930)	-	3.1 (1870)	1.6 (2310)	1.4 (2400)	1.3 (2640)	-	-	-
	MP	-	-0.5 (720)	0.7 (960)	-	2.4 (1860)	3.2 (2390)	3.2 (2400)	2.3 (2550)	-	-	-
VSWR	FS	≤ 3.7										
	MP	≤ 4.8										
Return Loss	FS	≤ -4.8 dB										
	MP	≤ -3.7 dB										
Peak Gain	FS	≤ 3.1 dBi										
	MP	≤ 3.2 dBi										

Note:

FS: In Free Space

MP: On 300 mm × 300 mm Metal Plane

1.1.2. LTE 2

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	FS	-	6.7	6.2	-	2.4	2.3	2.1	2.0	-	-	-
	MP	-	4.3	7.3	-	3.7	3.6	3.3	2.9	-	-	-
Max Return Loss (dB)	FS	-	-2.6	-2.8	-	-7.7	-7.9	-9.0	-9.6	-	-	-
	MP	-	-4.1	-2.4	-	-4.8	-5.0	-5.4	-6.4	-	-	-
AVG Eff. (%)	FS	-	16.2	21.1	-	42.9	39.6	39.7	42.4	-	-	-
	MP	-	11.9	3.8	-	17.5	19.1	21.8	34.2	-	-	-
AVG.AVG Gain (dB)	FS	-	-8.1	-7.5	-	-3.7	-4.0	-4.0	-3.7	-	-	-
	MP	-	-9.3	-16.1	-	-7.6	-7.2	-6.6	-4.7	-	-	-
Max Peak Gain (dBi)	FS	-	-0.9 (810)	-0.5 (870)	-	2.4 (1740)	1.9 (2320)	2.1 (2500)	2.4 (2530)	-	-	-
	MP	-	-4.8 (770)	-5.9 (820)	-	0.8 (1750)	1.7 (2400)	3.0 (2500)	5.4 (2620)	-	-	-
VSWR	FS	≤ 6.7										
	MP	≤ 7.3										
Return Loss	FS	≤ -2.6 dB										
	MP	≤ -2.4 dB										
Peak Gain	FS	≤ 2.4 dBi										
	MP	≤ 5.4 dBi										

Note:

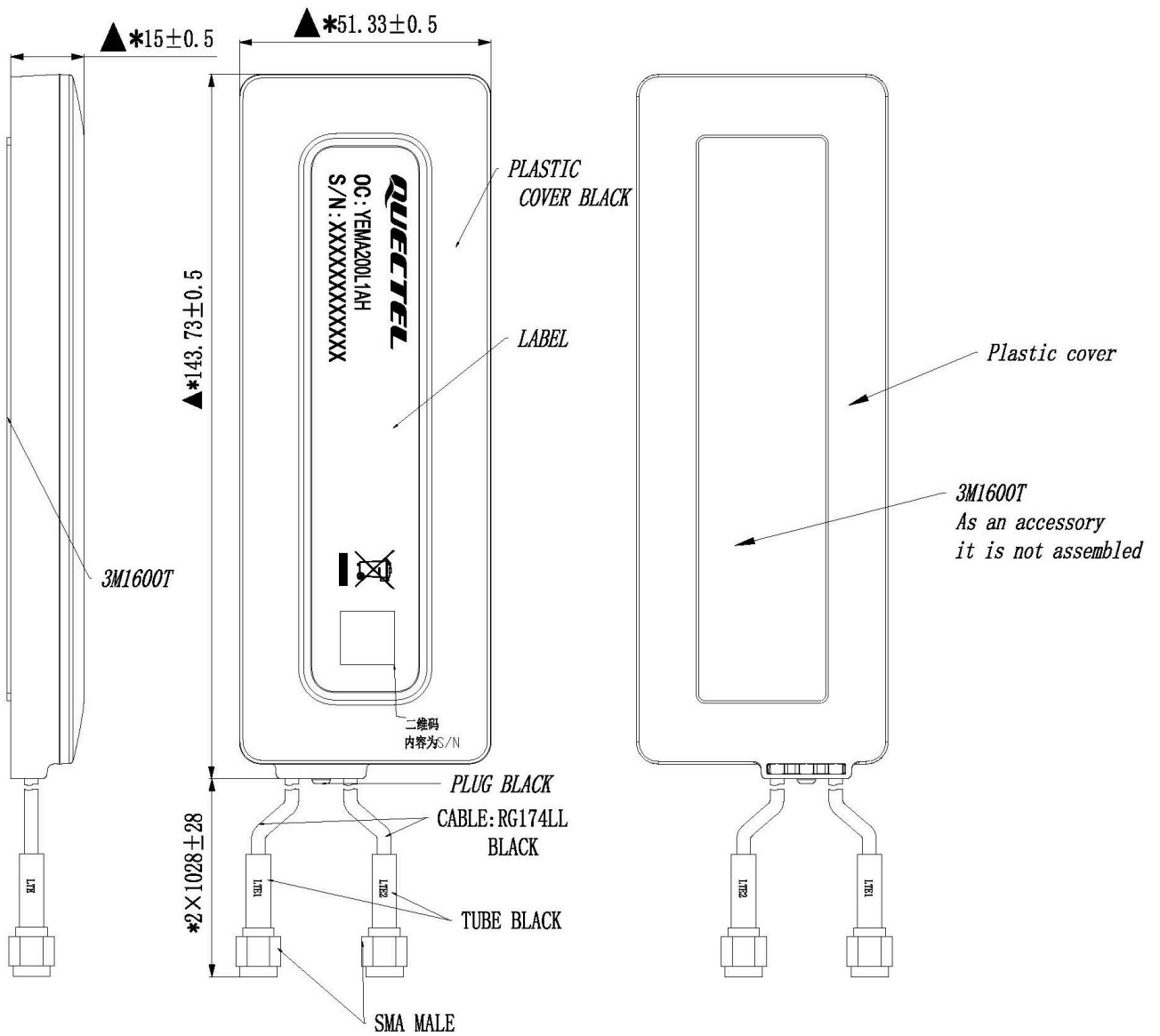
FS: In Free Space

MP: On 300 mm × 300 mm Metal Plane

1.2. Mechanical & Environmental

Mechanical		
Antenna Dimensions		143.73 mm × 51.33 mm × 15 mm
Casing Material & Color		PC & Black
Cable Type & Color & Length	LTE 1	RG174LL & Black & 1028 ±28 mm
	LTE 2	RG174LL & Black & 1028 ±28 mm
Connector Type	LTE1	SMA Male (The current state of the SMA connector is not waterproof. If a waterproof connector is required, it can be customized.)
	LTE2	SMA Male (The current state of the SMA connector is not waterproof. If a waterproof connector is required, it can be customized.)
Mounting Type		Adhesive
Weight		Typ. 92.6 g
Environmental		
Operation Temperature		-40 °C to +85 °C
Storage Temperature		-40 °C to +85 °C
Ingress Protection (IP) Rating		IP68 (1 meter of water depth, for 1 hour)
RoHS & REACH Compliant		Yes
Housing Flame Rating		UL 94 V-0
Housing UV Resistant		UL 746c f1

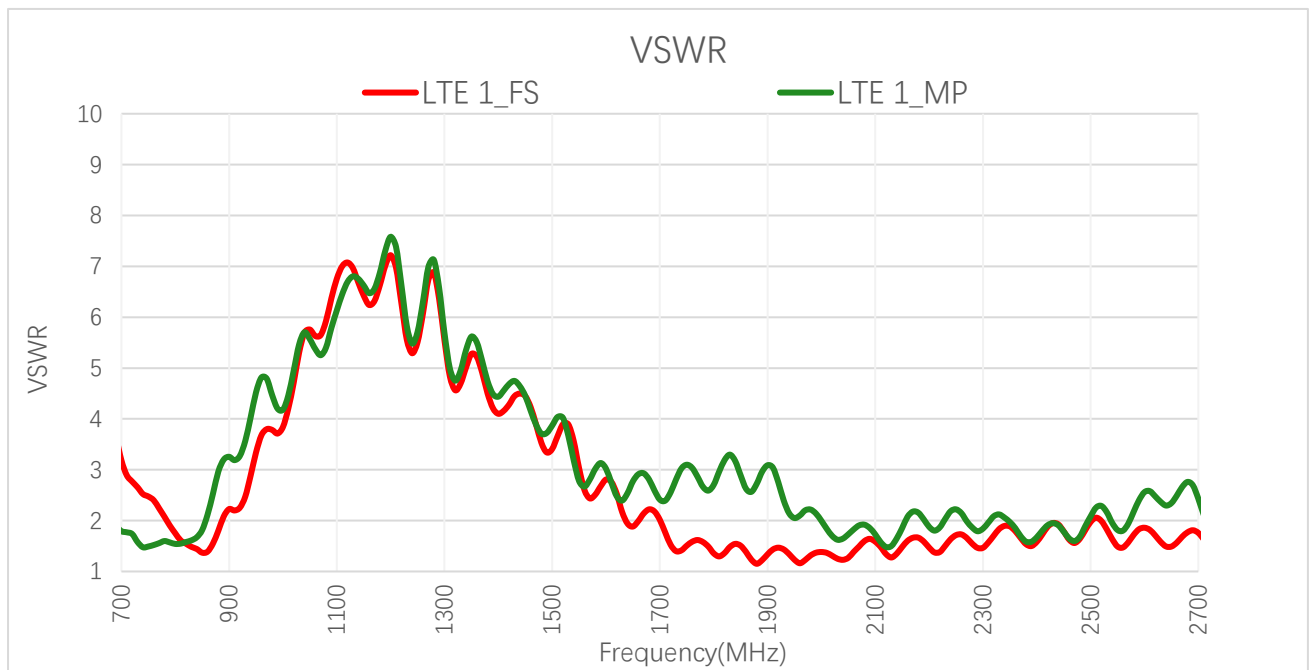
2 Drawing



3 Detailed Performance

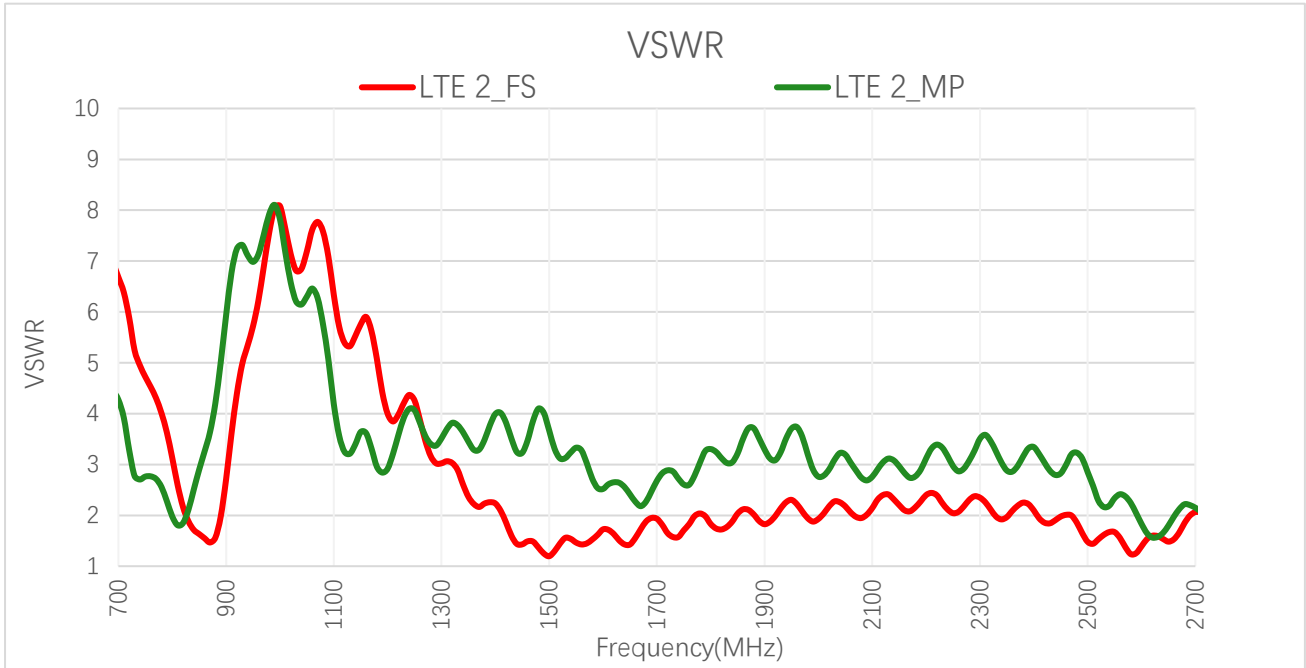
3.1. S-Parameter Test

3.1.1. VSWR



VSWR – LTE 1

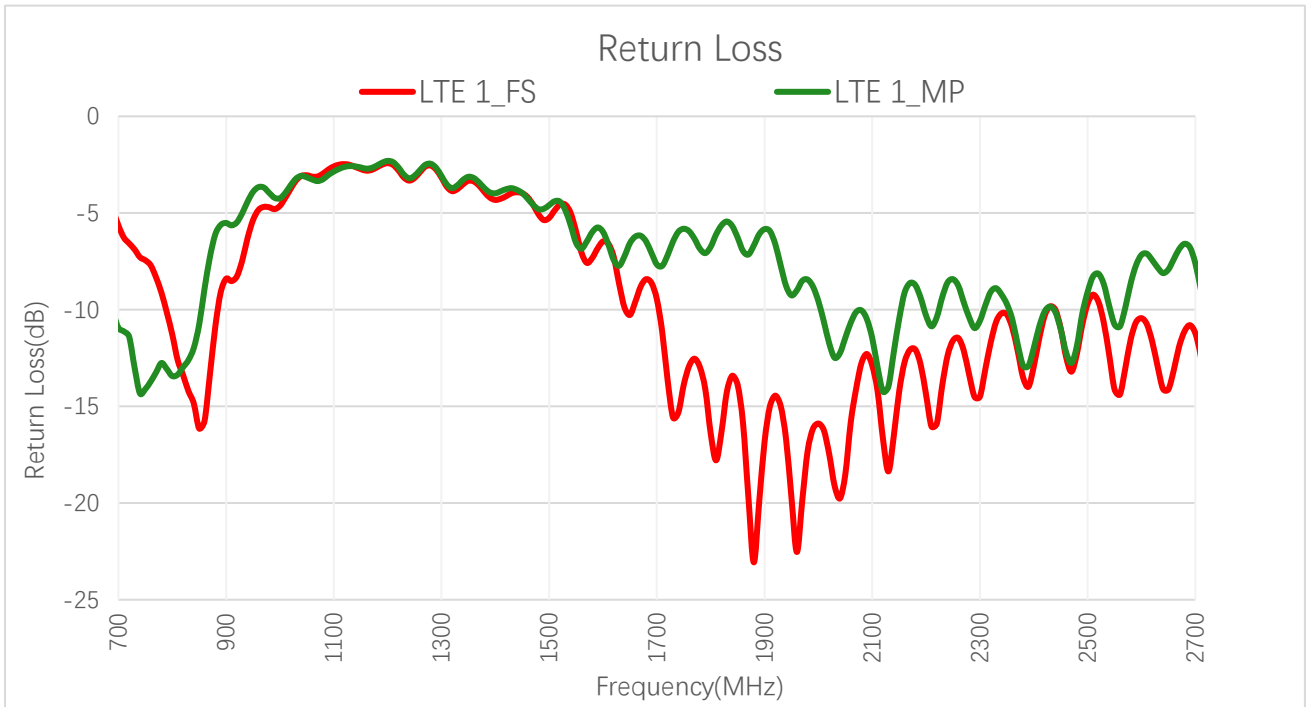
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
FS	-	-	2.9	1.5	2.2	3.7	-	1.8	1.4	1.2
MP	-	-	1.8	1.6	3.3	4.8	-	2.4	3.0	2.7
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
FS	1.2	1.4	1.9	1.8	1.9	1.8	-	-	-	-
MP	2.1	1.7	2.0	1.8	2.6	2.7	-	-	-	-



VSWR – LTE 2

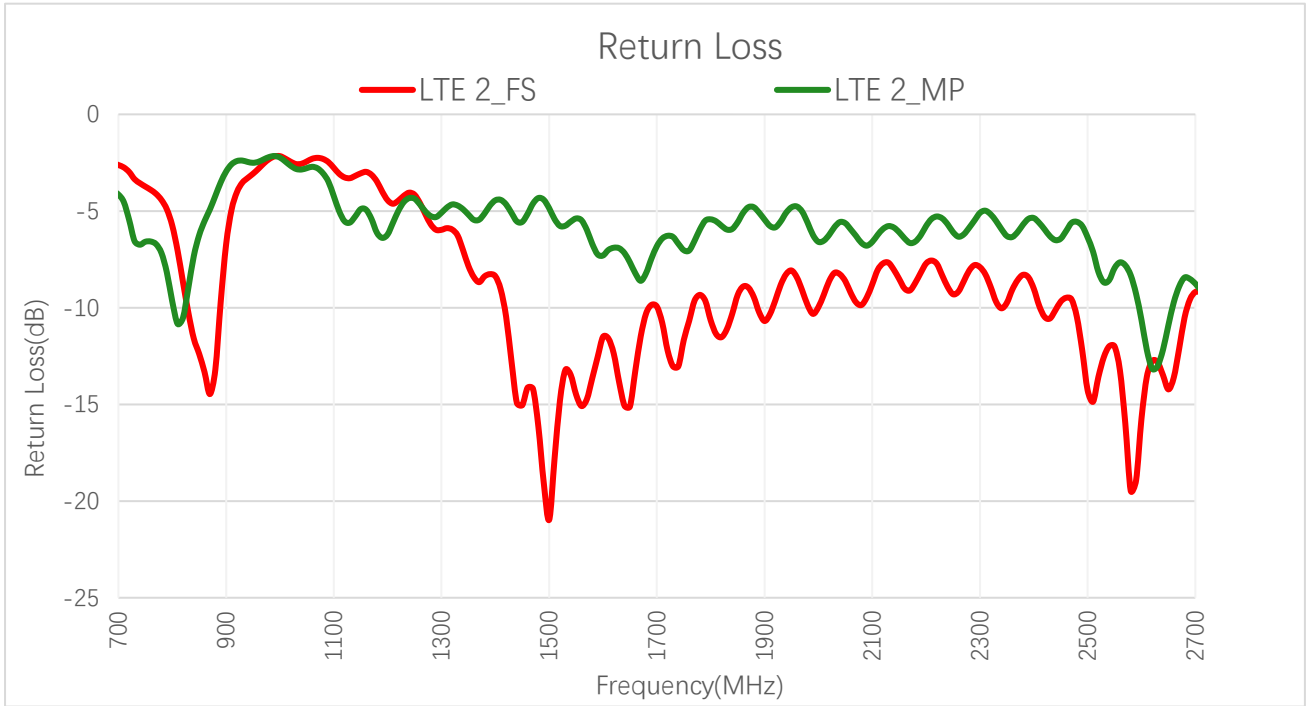
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
FS	-	-	6.4	1.9	2.7	6.2	-	1.8	1.6	2.0
MP	-	-	3.9	2.1	5.9	7.1	-	2.8	2.7	3.7
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
FS	2.3	2.3	2.0	2.0	1.4	2.0	-	-	-	-
MP	3.7	3.1	2.9	2.8	1.8	2.2	-	-	-	-

3.1.2. Return Loss



Return Loss (dB) – LTE 1

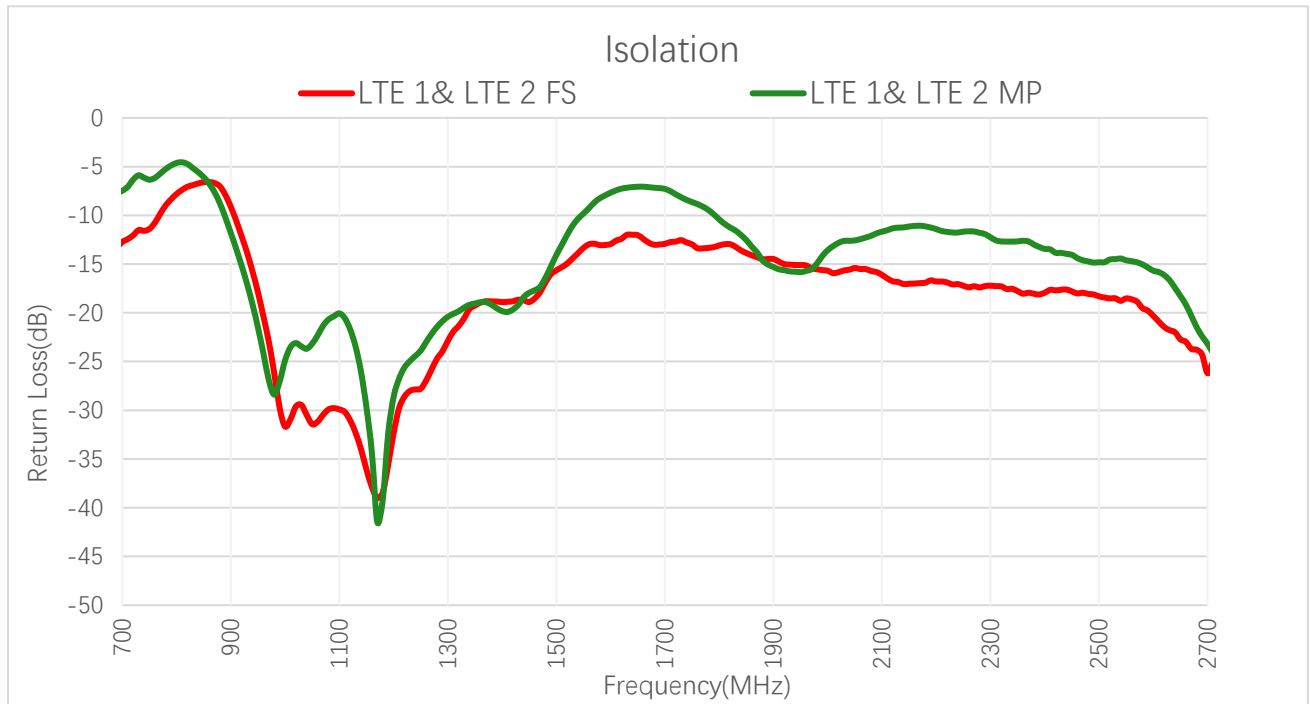
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
FS	-	-	-6.3	-14.2	-8.4	-4.8	-	-11.2	-15.3	-23.1
MP	-	-	-11.1	-12.6	-5.5	-3.7	-	-7.7	-6.0	-6.7
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
FS	-19.7	-16.5	-10.3	-11.0	-10.4	-10.8	-	-	-	-
MP	-9.3	-12.2	-9.7	-11.0	-7.2	-6.8	-	-	-	-



Return Loss (dB) – LTE 2

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
FS	-	-	-2.7	-10.3	-6.7	-2.8	-	-10.8	-13.0	-9.4
MP	-	-	-4.5	-9.0	-3.0	-2.5	-	-6.4	-6.7	-4.8
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
FS	-8.1	-8.0	-9.7	-9.7	-15.7	-9.6	-	-	-	-
MP	-4.8	-5.9	-6.3	-6.4	-10.6	-8.5	-	-	-	-

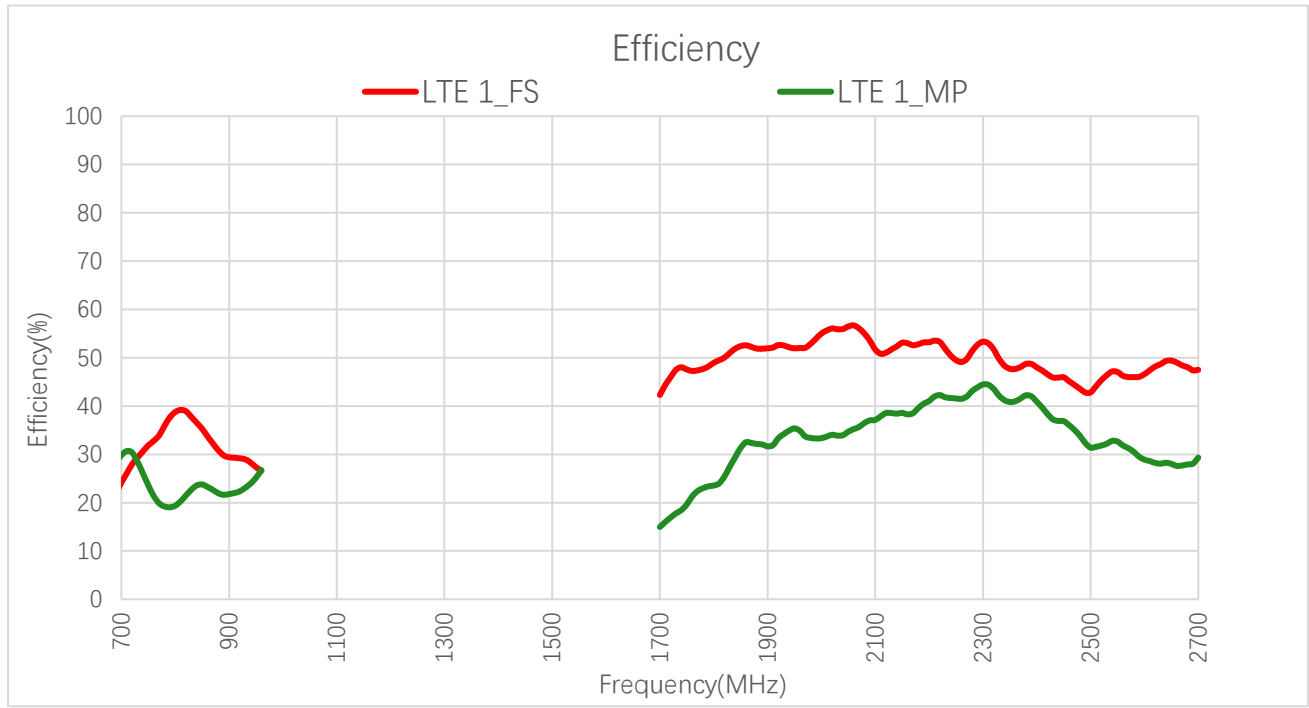
3.1.3. Isolation



Band	B71	B12/ B13/ B28	B5/ B8/ B26	n74/ n75/ n76	B1/ B2/ B3	B40	Wi-Fi 2G	B38/ B41	Wi-Fi 5G
Freq. (MHz)	600– 700	700– 810	820– 960	1420– 1520	1700– 2170	2300– 2400	2400– 2500	2500– 2690	5150– 5850
FS	-	-7.4	-6.6	-	-12.5	-17.2	-17.6	-18.3	-
MP	-	-4.6	-4.7	-	-7.3	-12.3	-13.4	-14.4	-

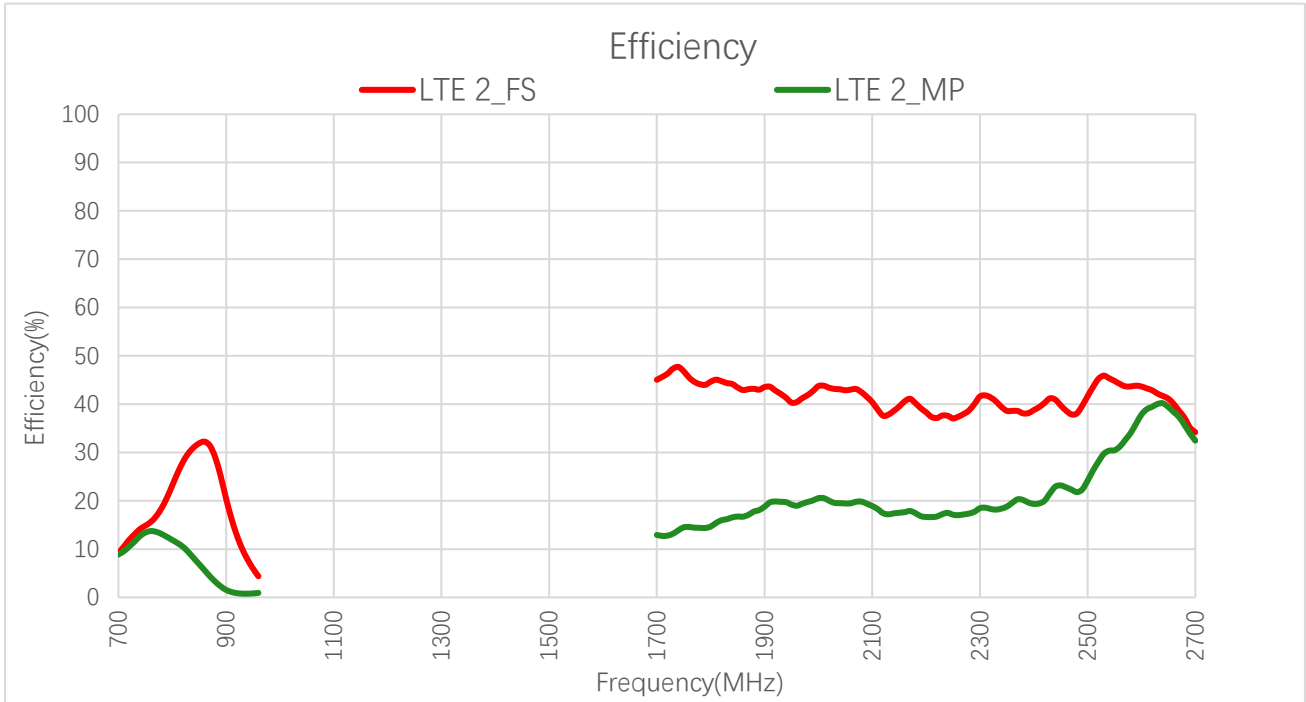
3.2. Radiation Performance Test

3.2.1. Efficiency



Efficiency (%) – LTE 1

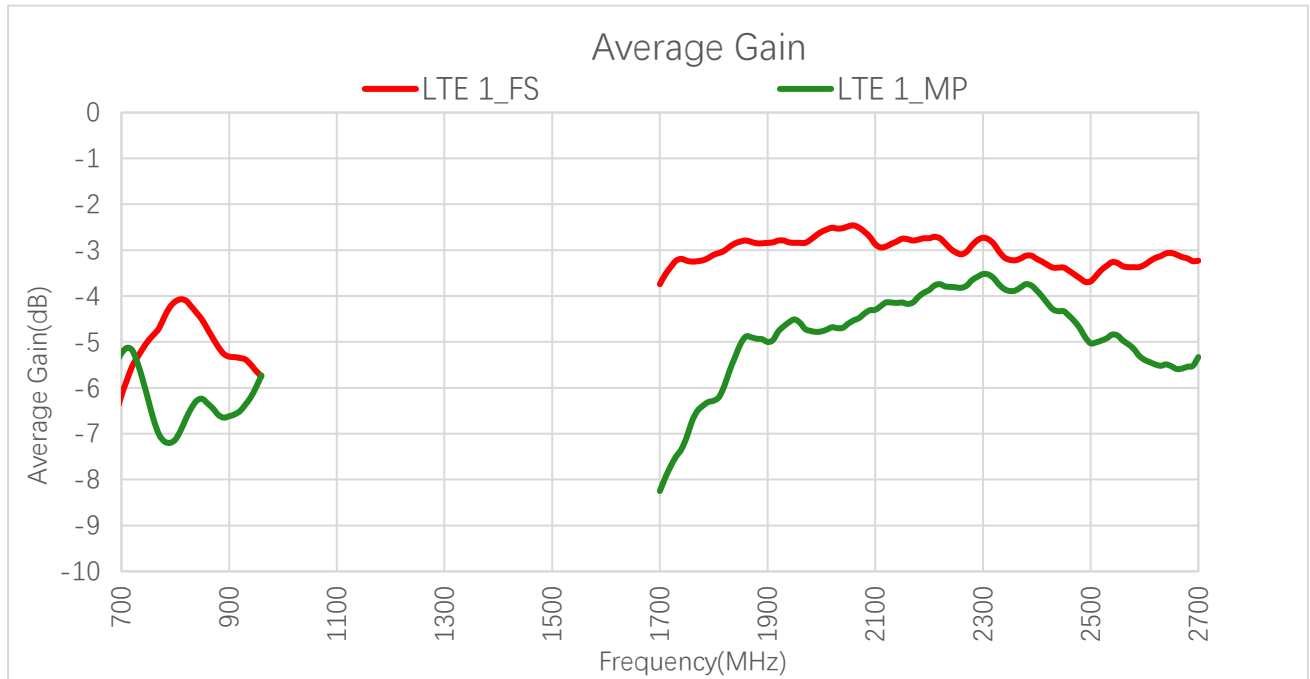
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
FS	-	-	26.1	37.7	29.4	26.6	-	44.3	48.0	51.9
MP	-	-	30.7	22.7	21.8	26.7	-	16.0	18.5	32.2
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
FS	52.0	52.3	47.7	45.9	46.6	47.4	-	-	-	-
MP	35.4	38.4	40.8	36.9	28.9	28.1	-	-	-	-



Efficiency (%) – LTE 2

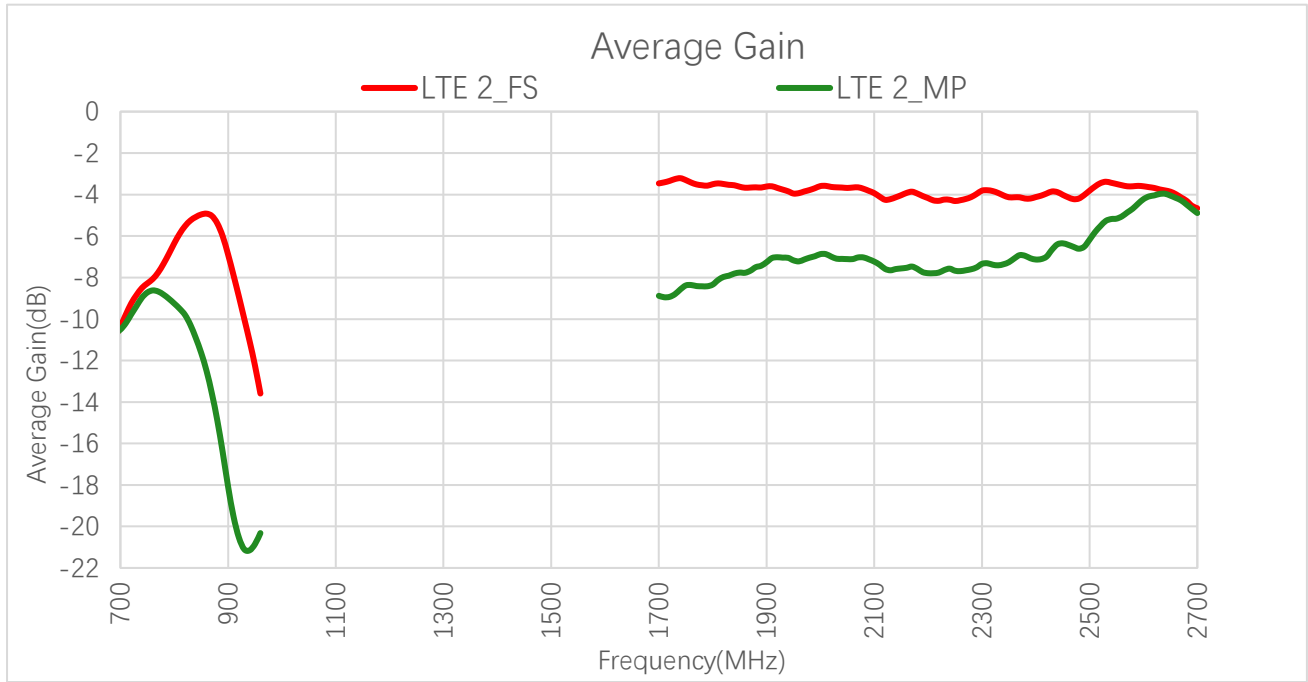
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
FS	-	-	10.5	29.8	20.5	4.4	-	45.6	47.7	43.2
MP	-	-	9.6	9.4	1.6	0.9	-	12.7	13.9	17.8
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
FS	40.3	38.6	38.6	39.8	43.7	35.2	-	-	-	-
MP	19.2	17.4	18.8	23.2	37.9	34.0	-	-	-	-

3.2.2. Average Gain



Average Gain (dB) – LTE 1

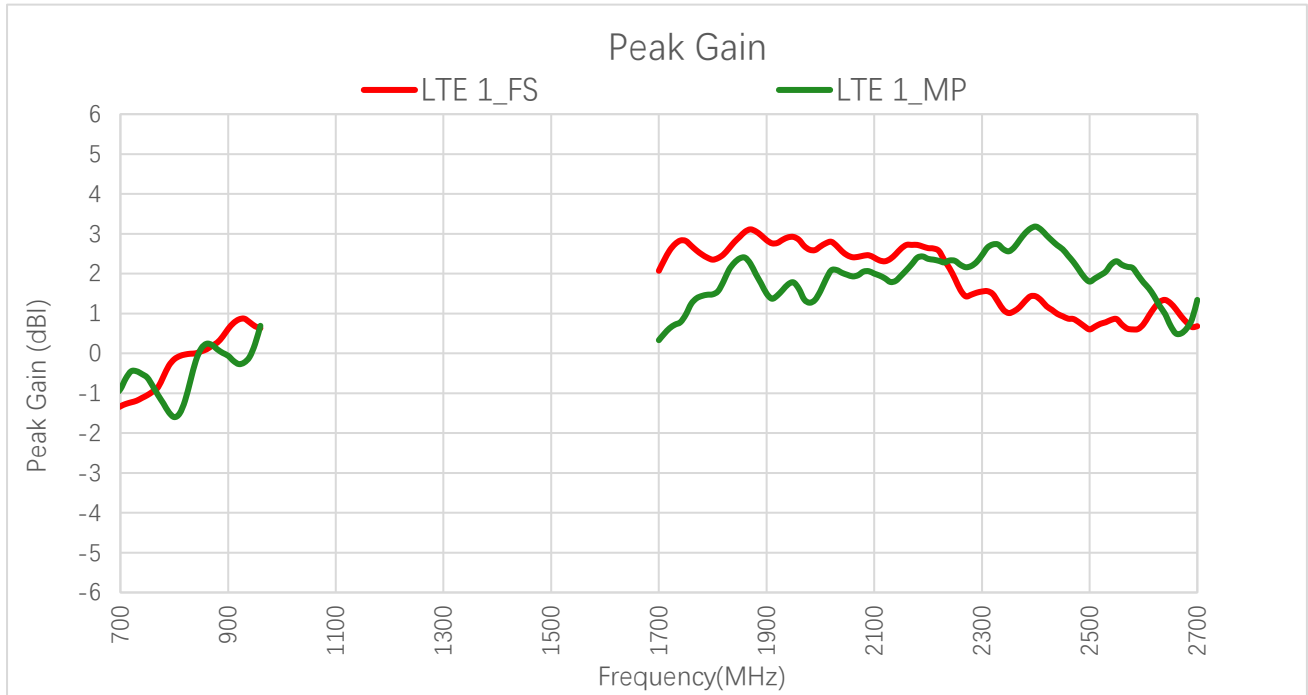
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
FS	-	-	-5.8	-4.2	-5.3	-5.8	-	-3.5	-3.2	-2.9
MP	-	-	-5.1	-6.4	-6.6	-5.7	-	-8.0	-7.3	-4.9
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
FS	-2.8	-2.8	-3.2	-3.4	-3.3	-3.2	-	-	-	-
MP	-4.5	-4.2	-3.9	-4.3	-5.4	-5.5	-	-	-	-



Average Gain (dB) – LTE 2

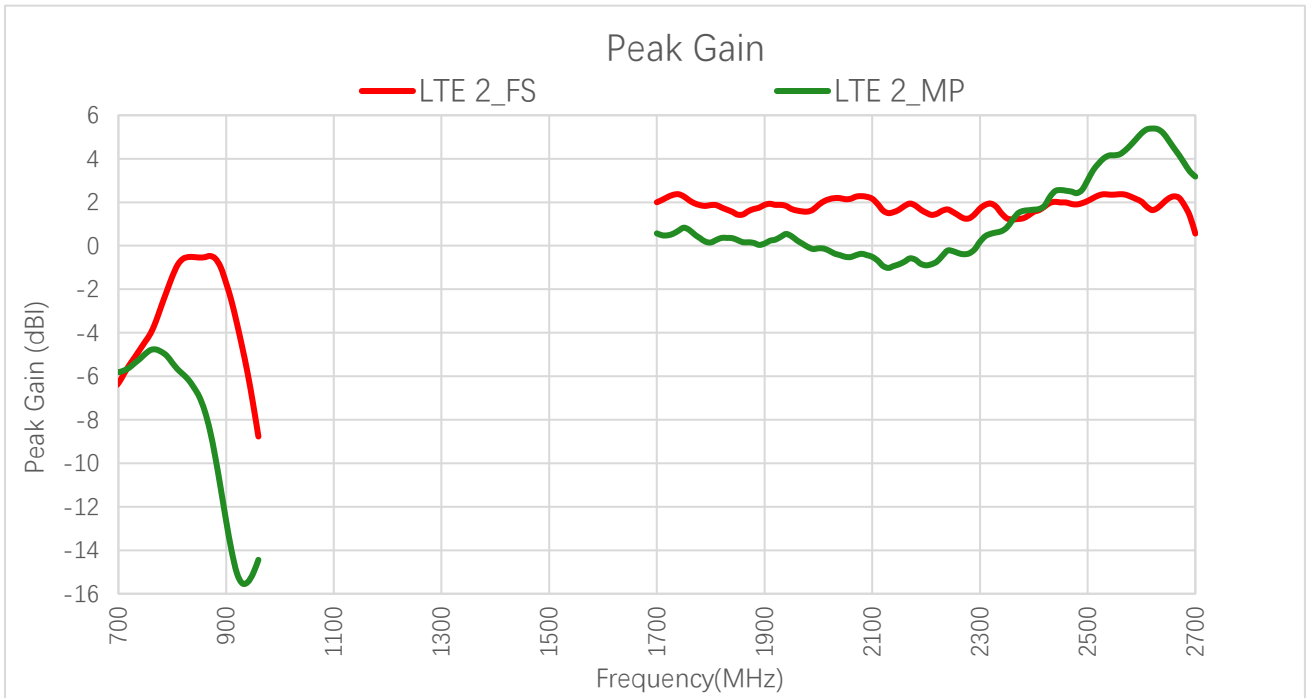
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
FS	-	-	-9.8	-5.3	-6.9	-13.6	-	-3.4	-3.2	-3.7
MP	-	-	-10.2	-10.3	-18.1	-20.3	-	-9.0	-8.6	-7.5
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
FS	-4.0	-4.1	-4.1	-4.0	-3.6	-4.5	-	-	-	-
MP	-7.2	-7.6	-7.3	-6.4	-4.2	-4.7	-	-	-	-

3.2.3. Peak Gain



Peak Gain (dBi) – LTE 1

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
FS	-	-	-1.3	0.0	0.6	0.6	-	2.3	2.8	3.1
MP	-	-	-0.6	-0.7	-0.1	0.7	-	0.5	0.8	2.0
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
FS	2.9	2.5	1.0	0.9	0.7	0.7	-	-	-	-
MP	1.8	1.8	2.6	2.6	1.8	0.9	-	-	-	-



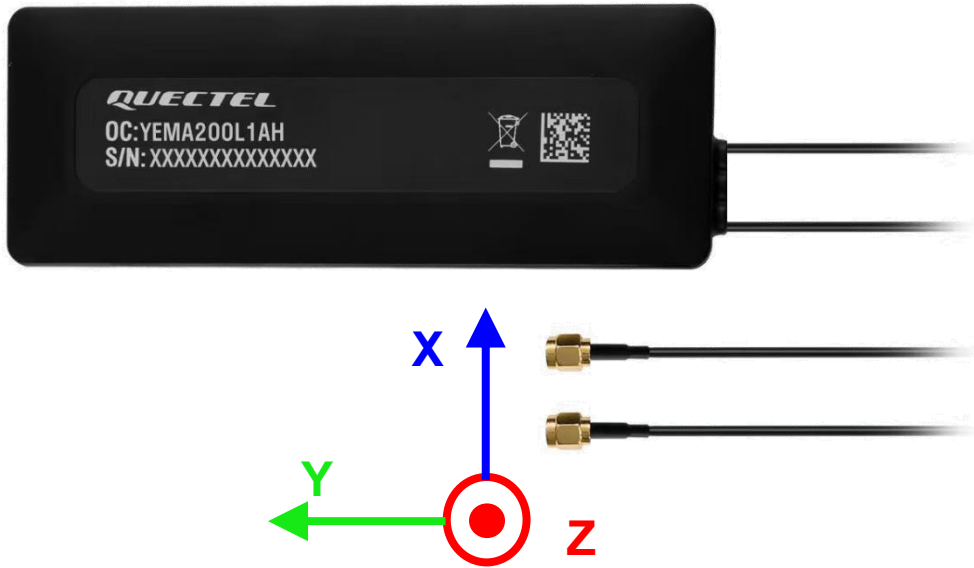
Peak Gain (dBi) – LTE 2

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
FS	-	-	-5.9	-0.5	-1.7	-8.8	-	2.1	2.4	1.7
MP	-	-	-5.7	-6.2	-12.6	-14.4	-	0.5	0.7	0.1
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
FS	1.7	1.6	1.3	2.0	2.0	1.4	-	-	-	-
MP	0.4	-0.9	0.8	2.6	5.2	3.4	-	-	-	-

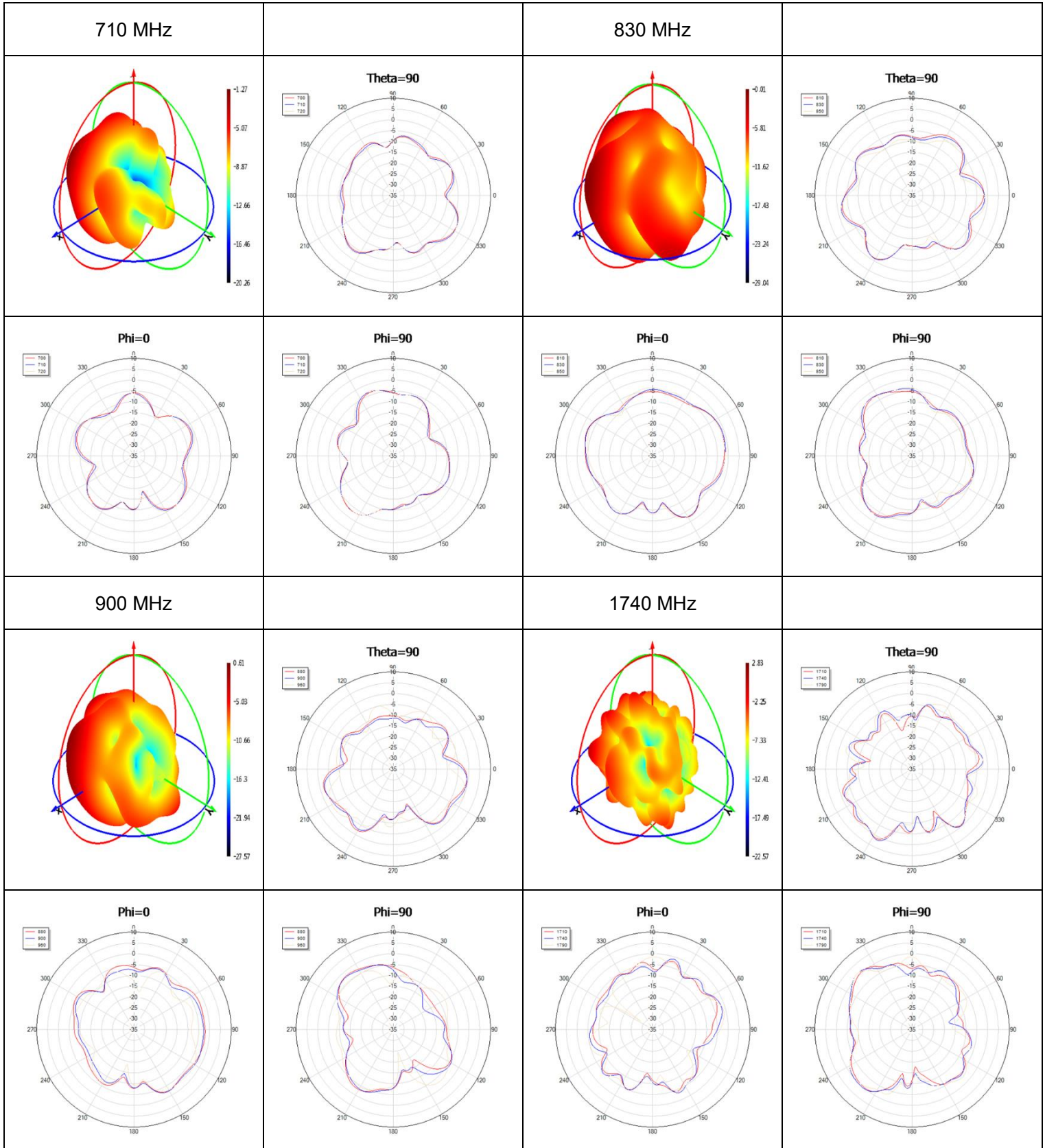
3.2.4. 3D &2D Radiation Pattern

3.2.4.1 Test Status: In Free Space

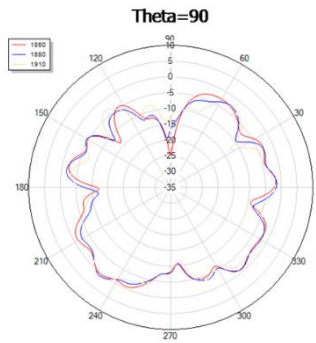
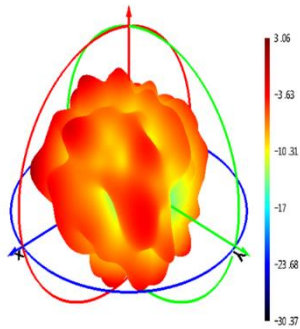
- Test Chamber: HF-S-1



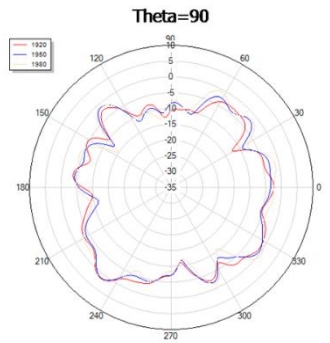
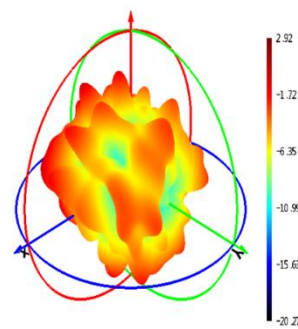
● **LTE 1**



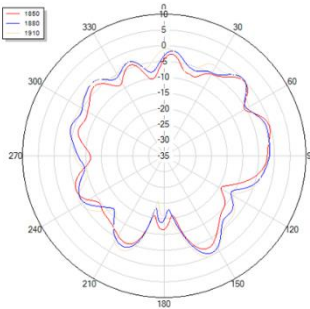
1880 MHz



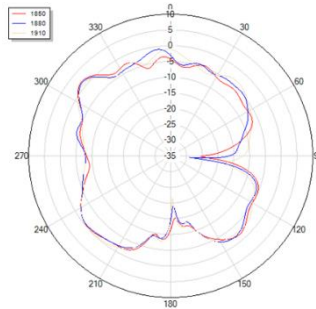
1950 MHz



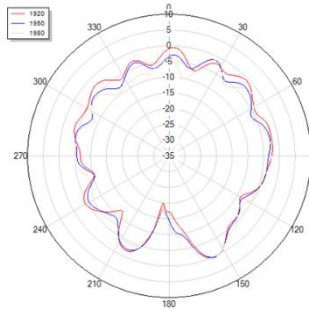
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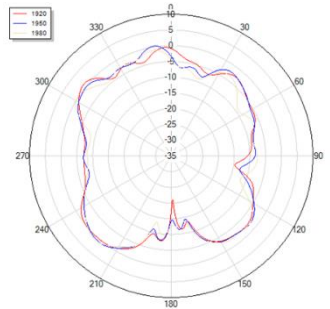
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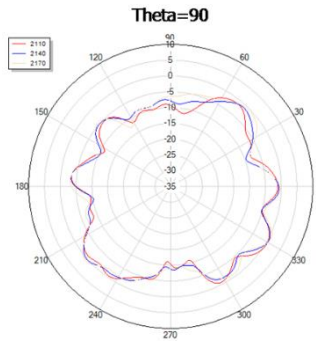
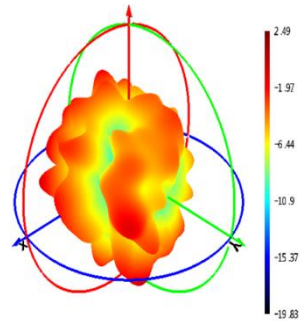
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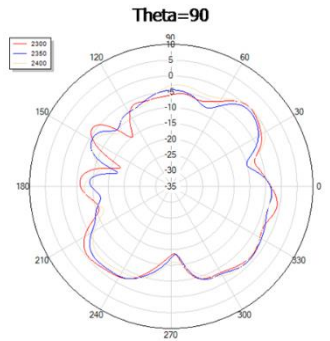
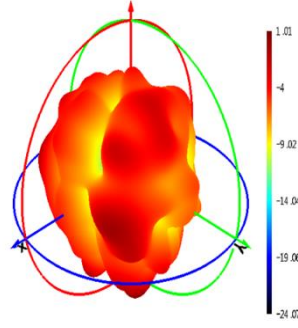
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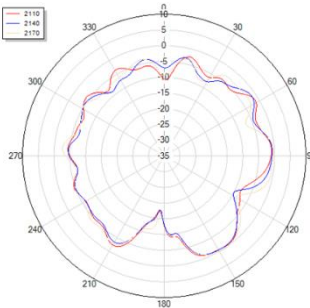
2140 MHz



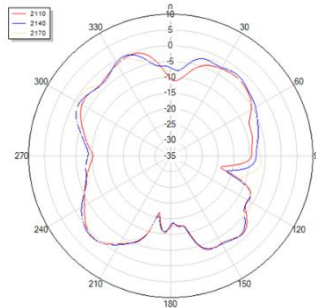
2350 MHz



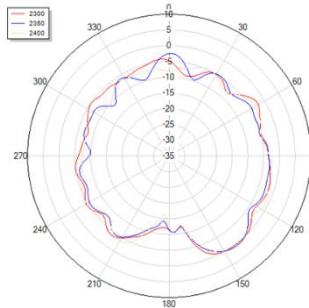
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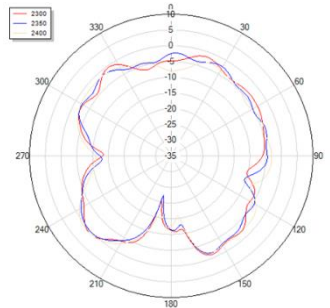
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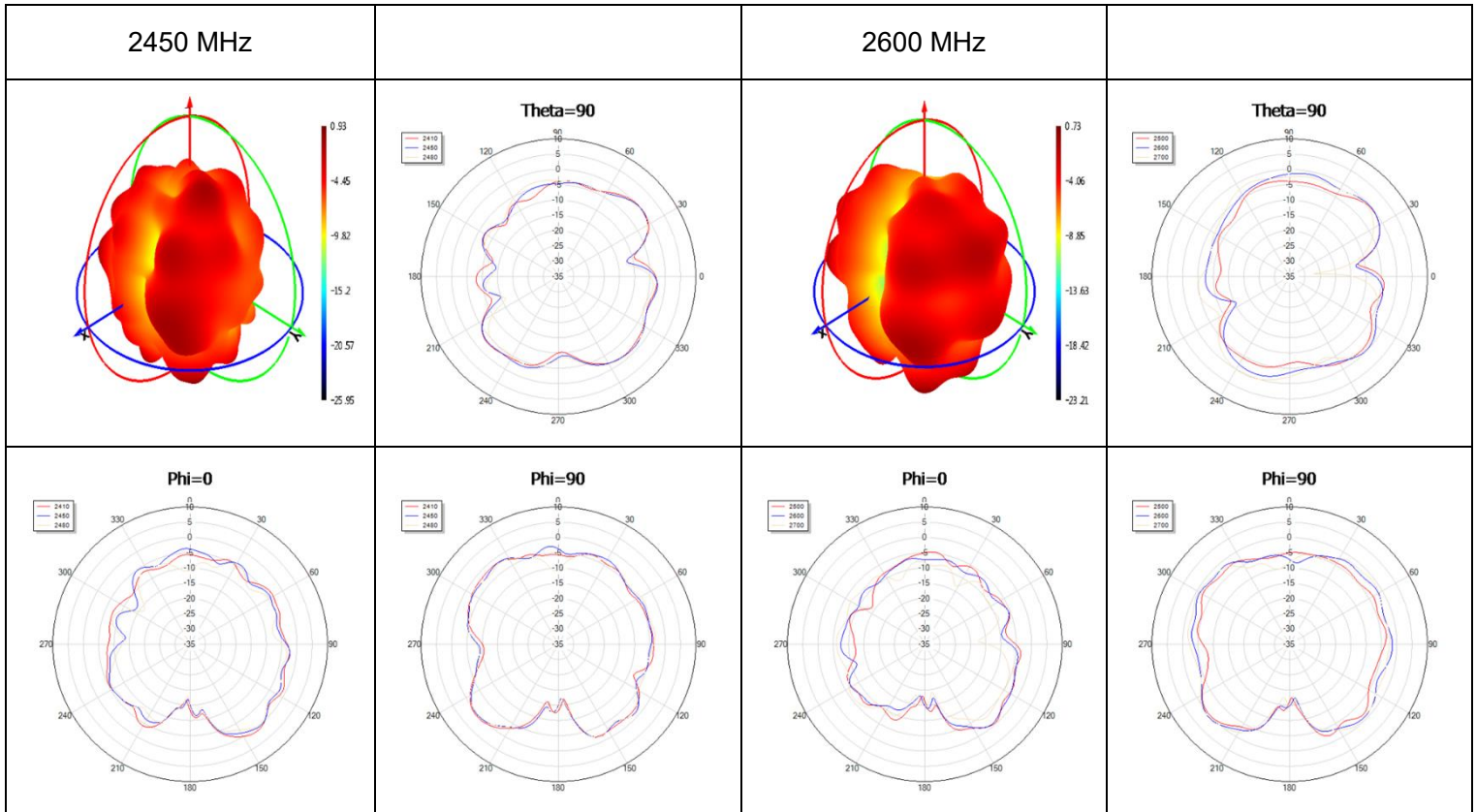


Phi=0

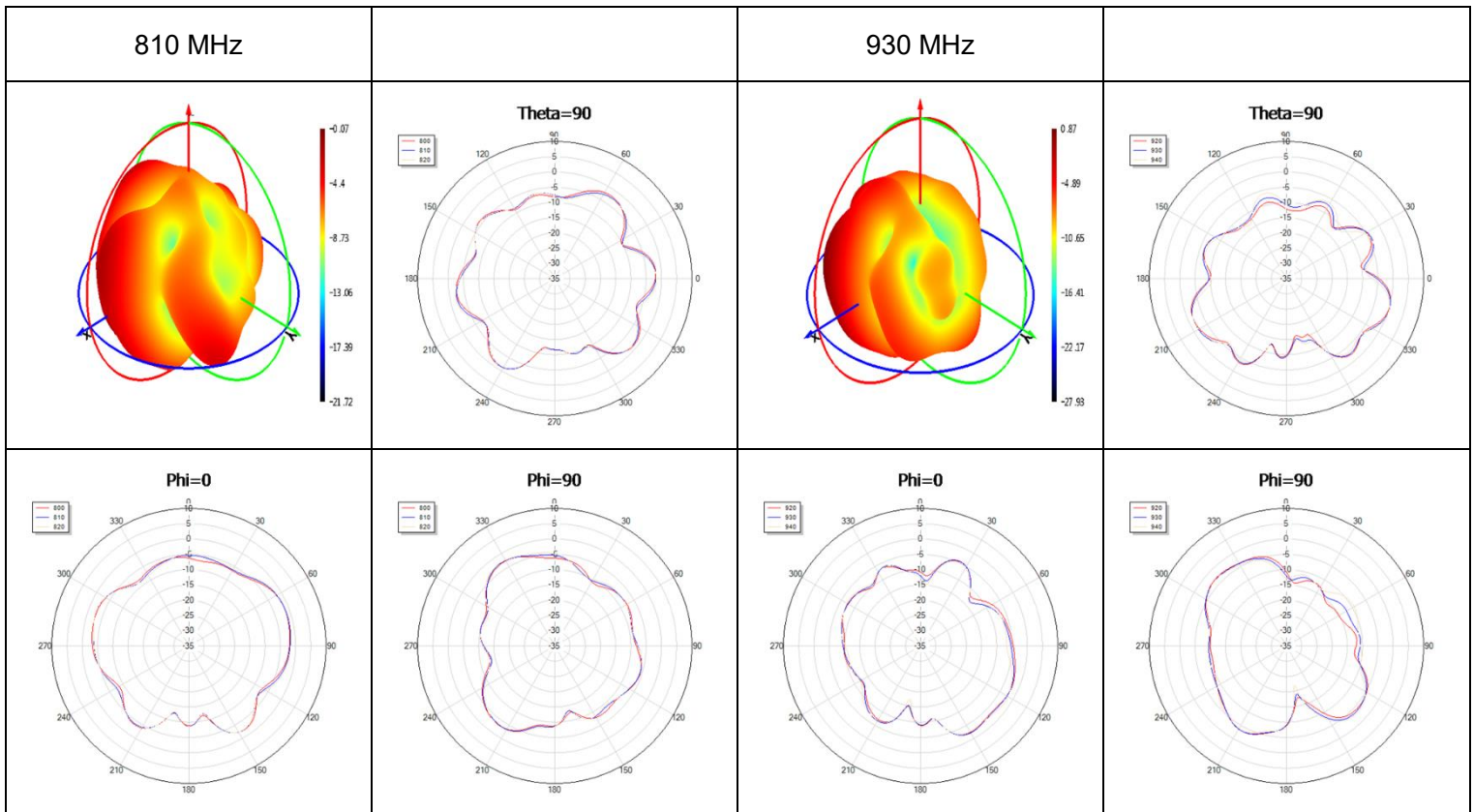


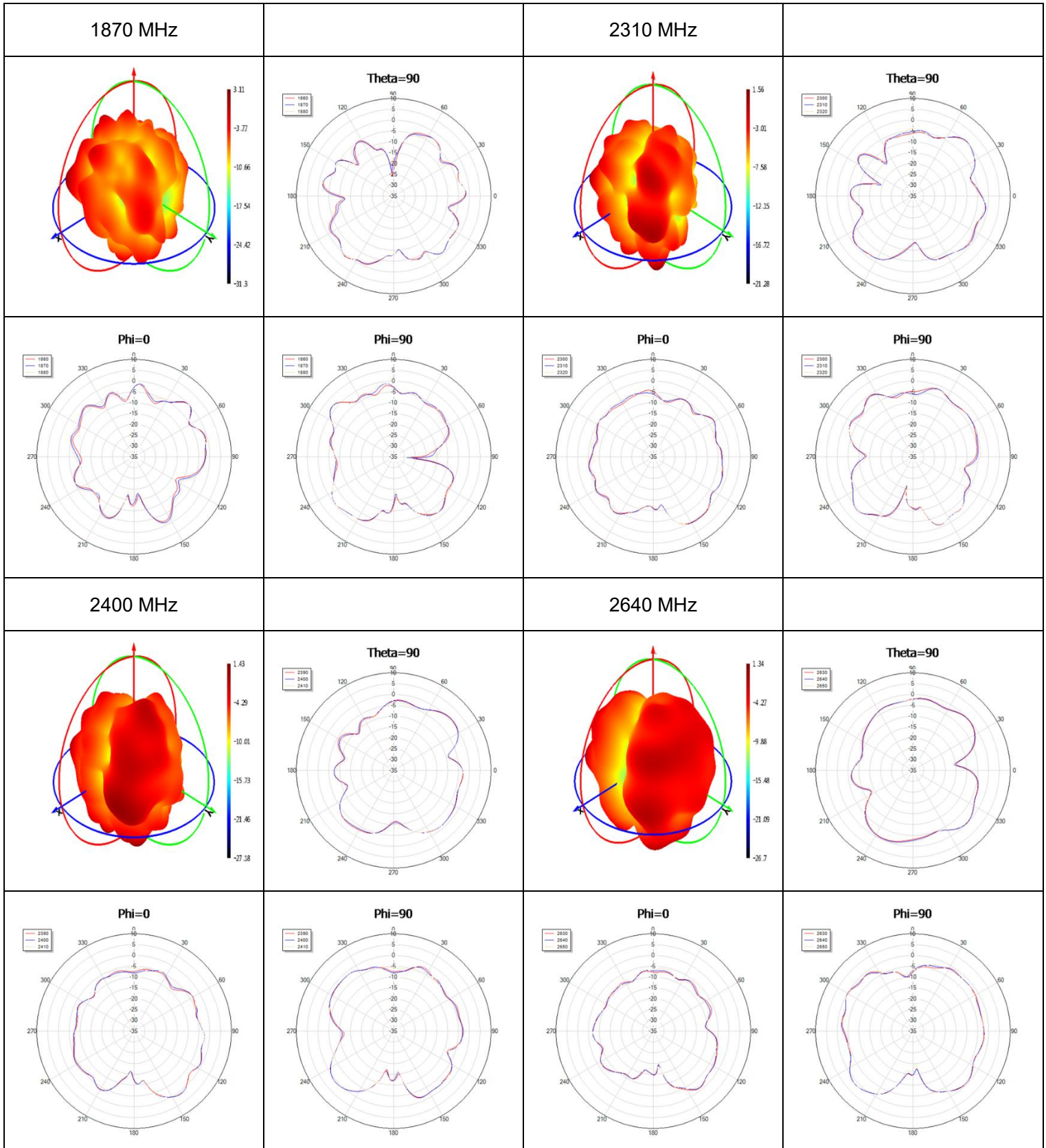
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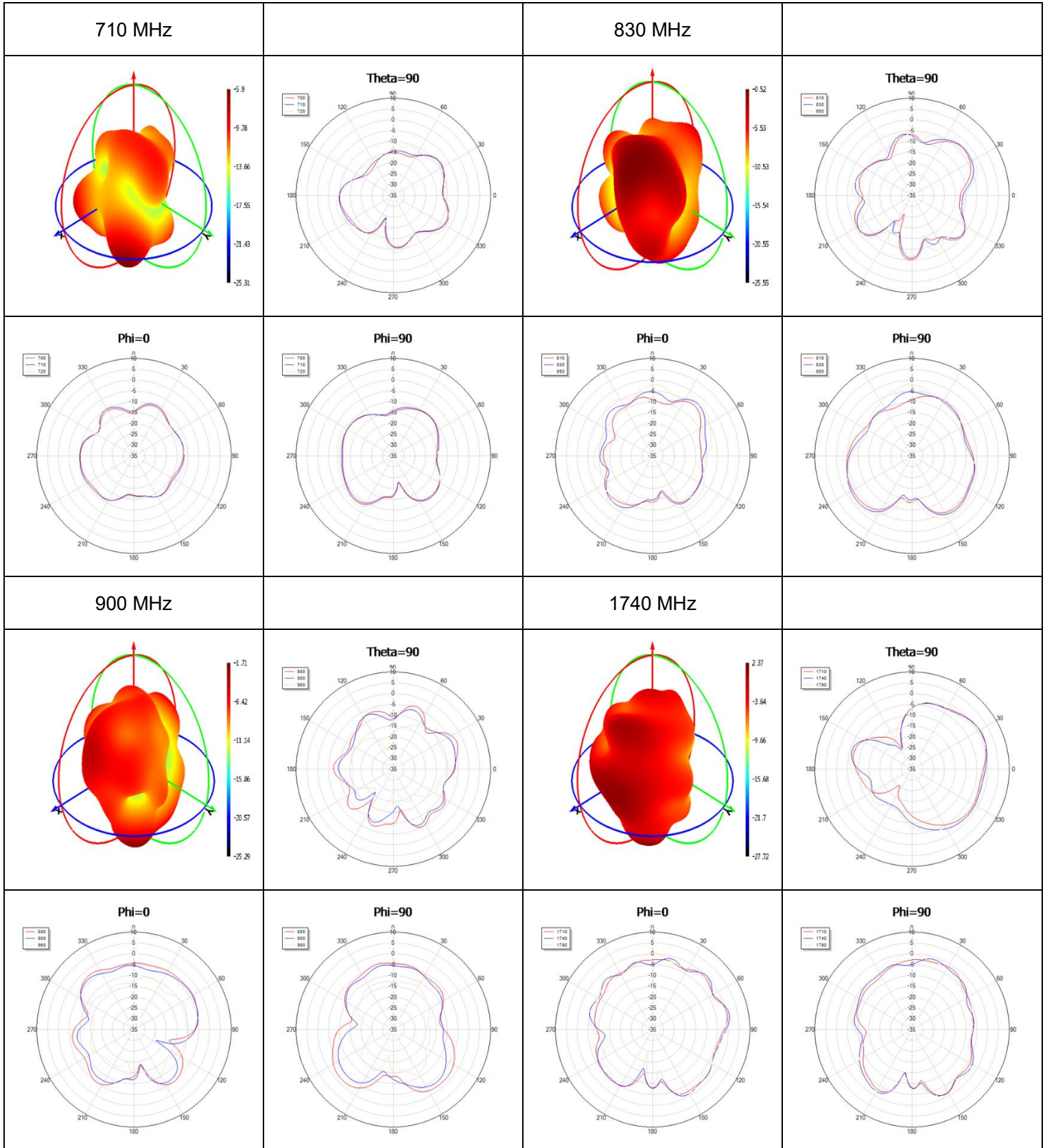


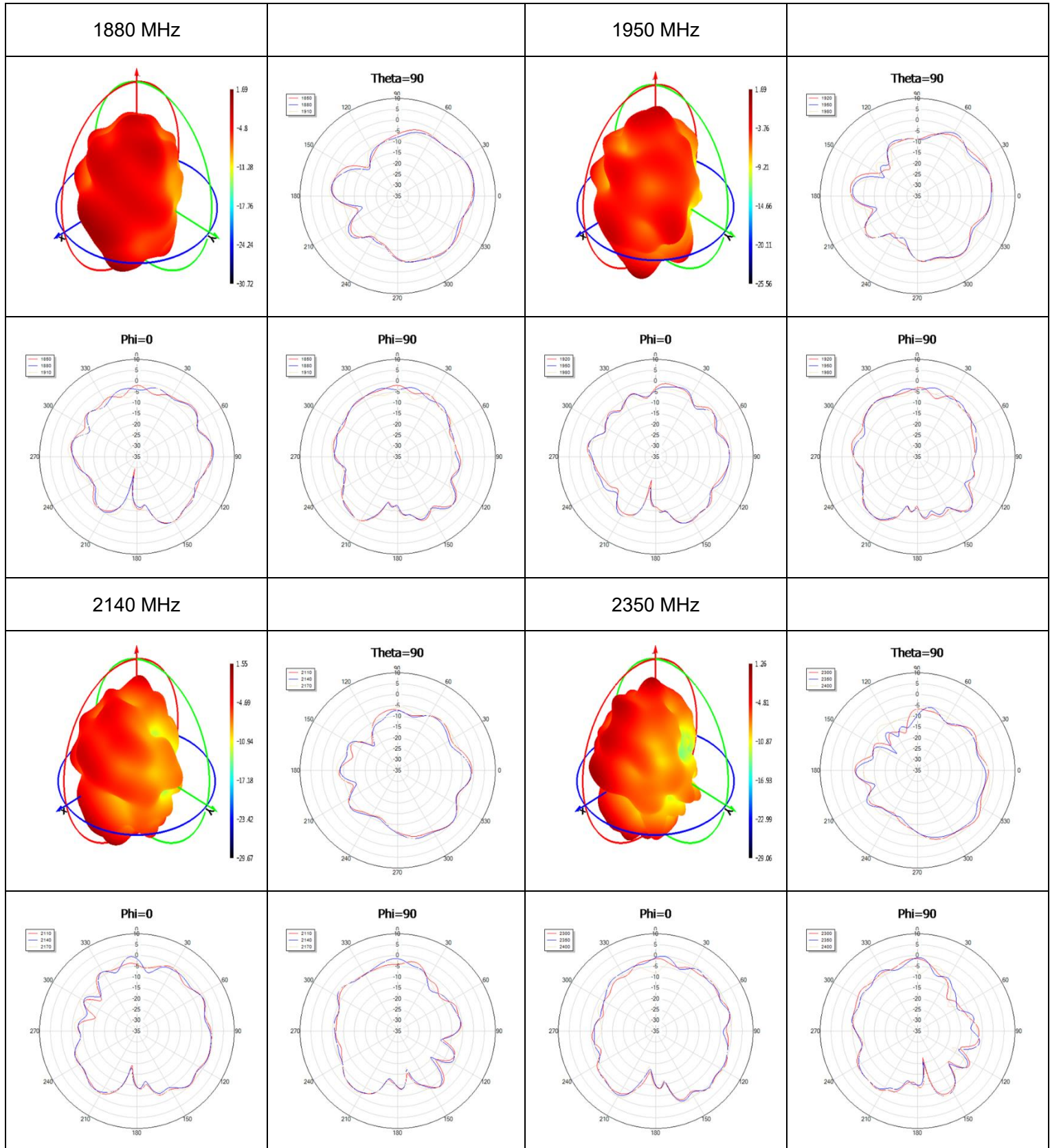
● **LTE 1 Max Peak Gain**

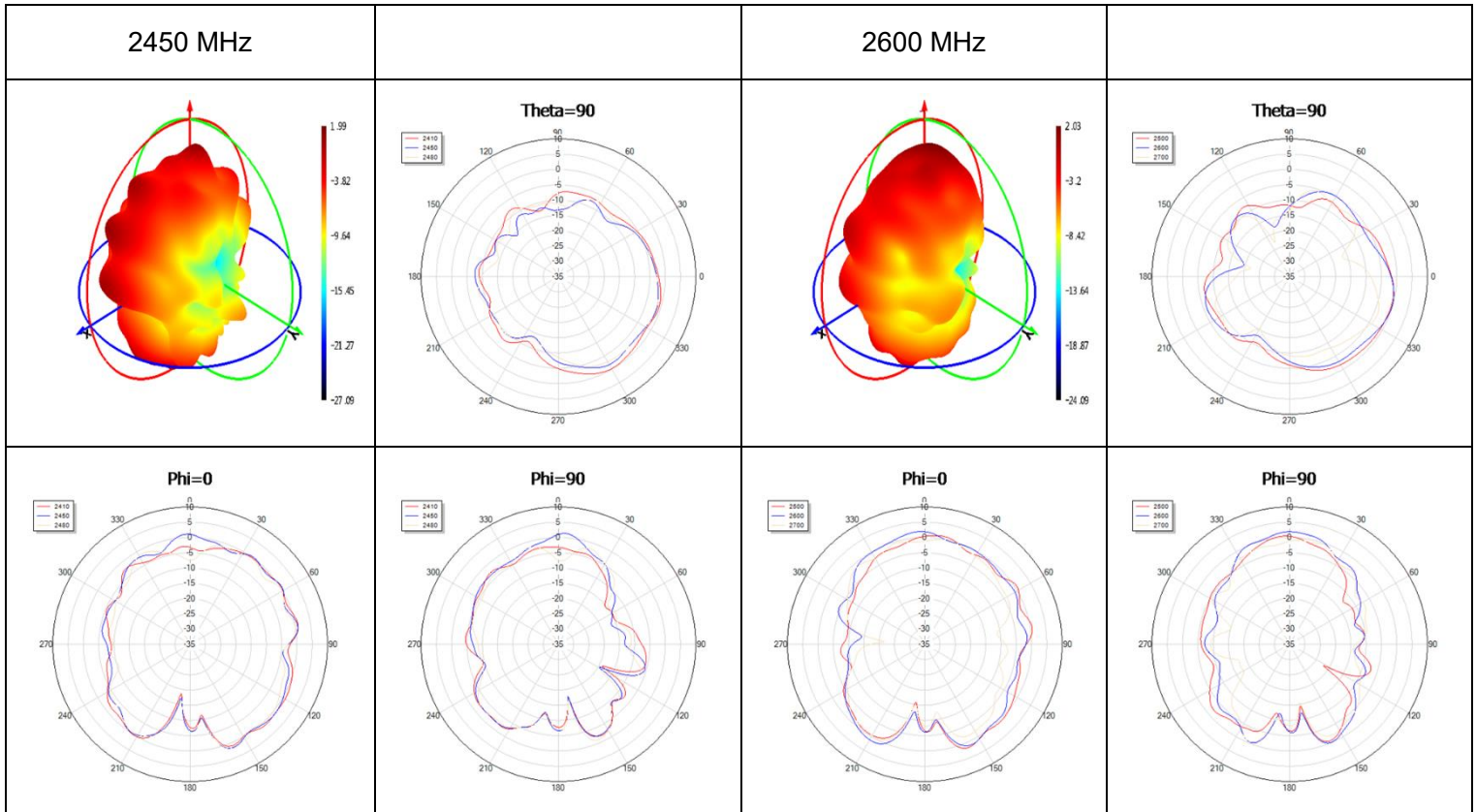




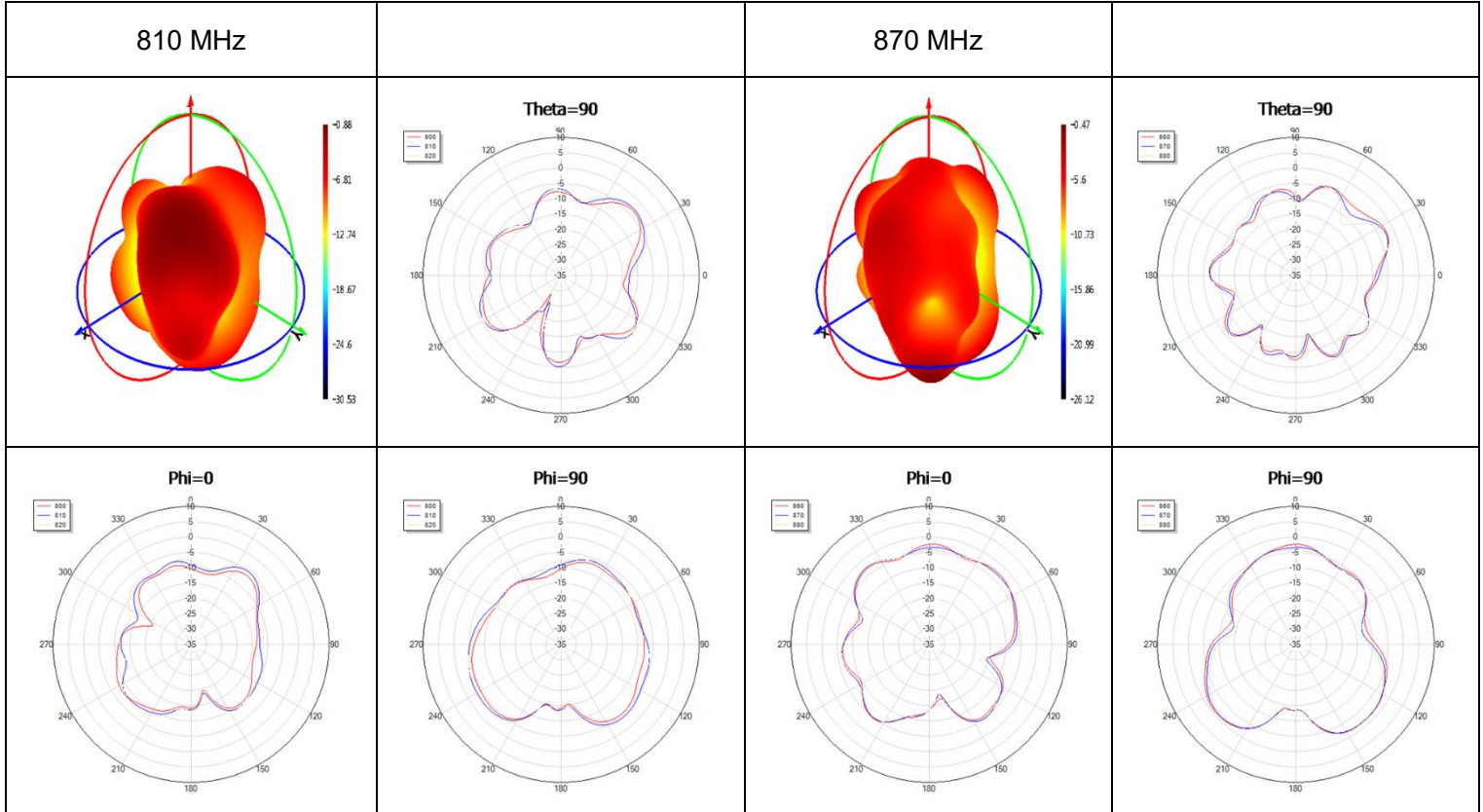
● **LTE 2**

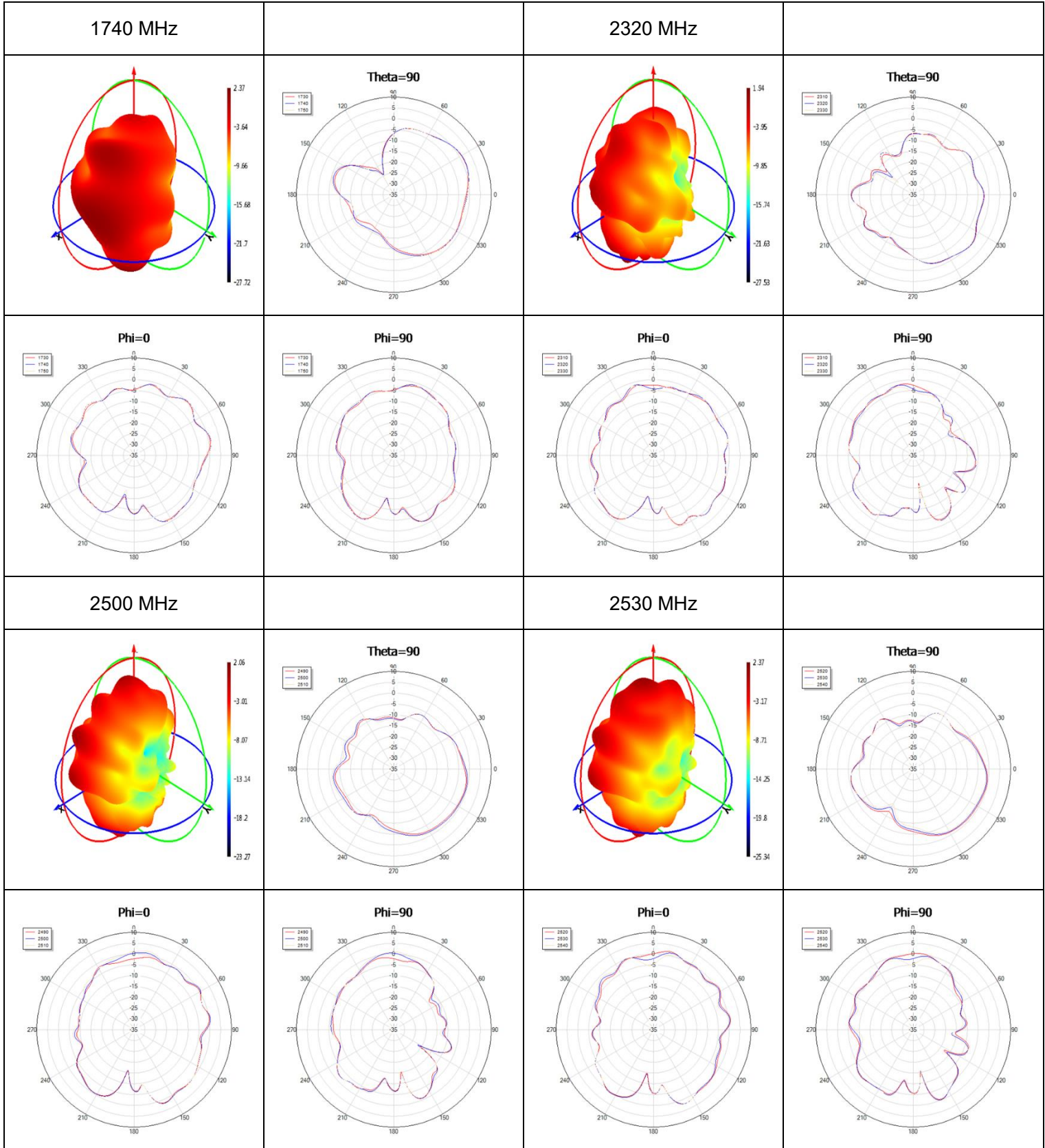






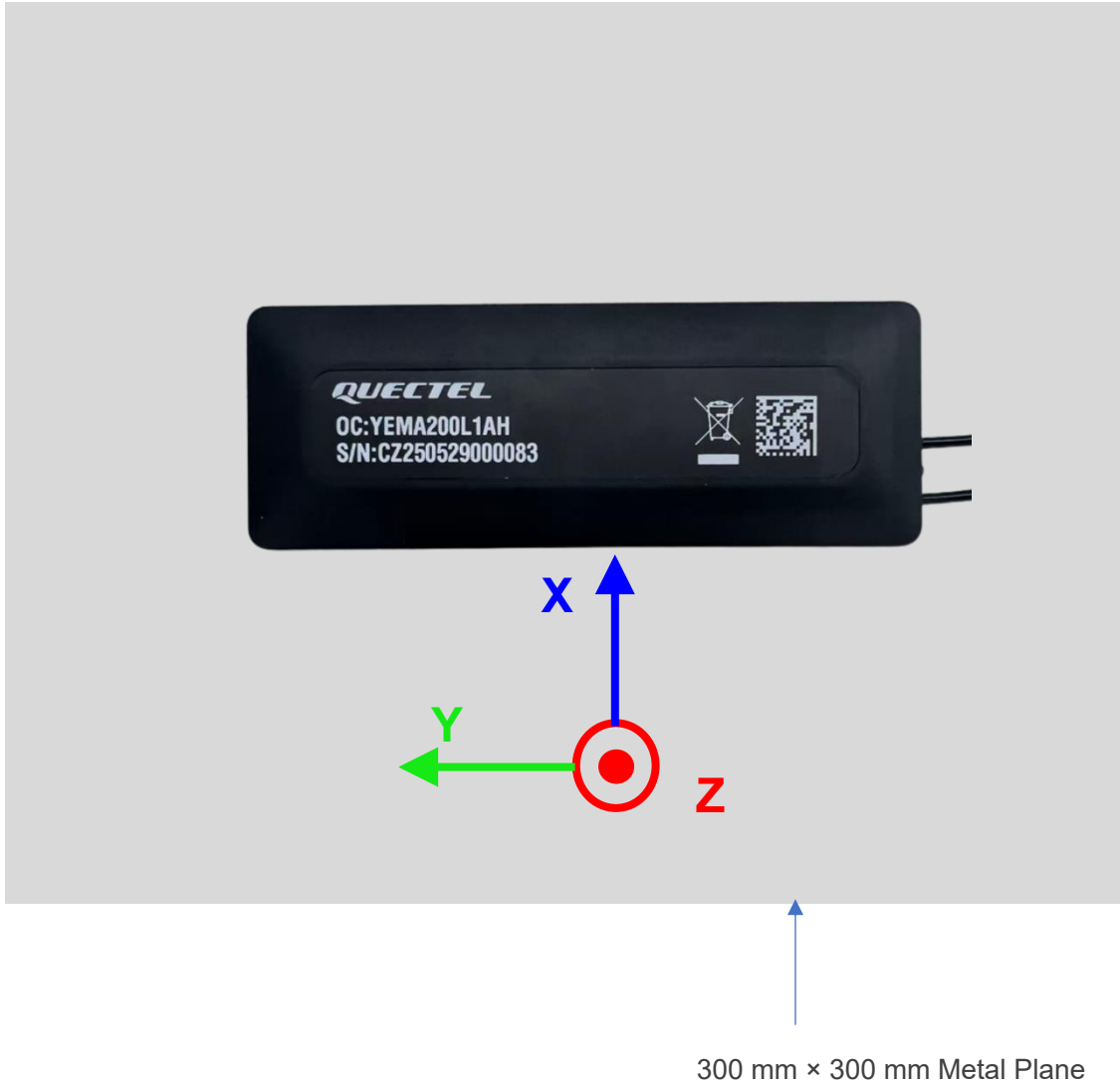
● **LTE 2 Max Peak Gain**



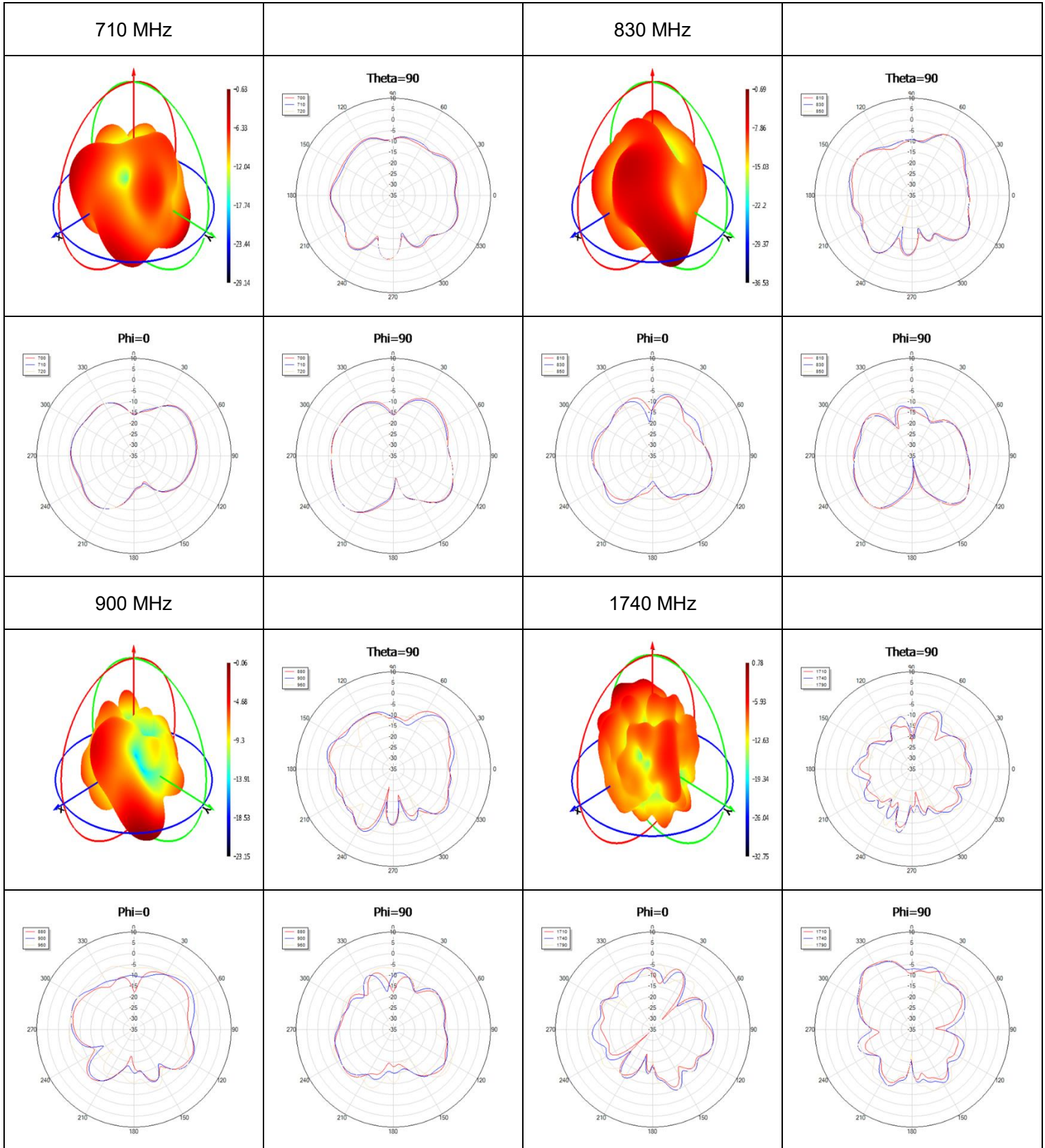


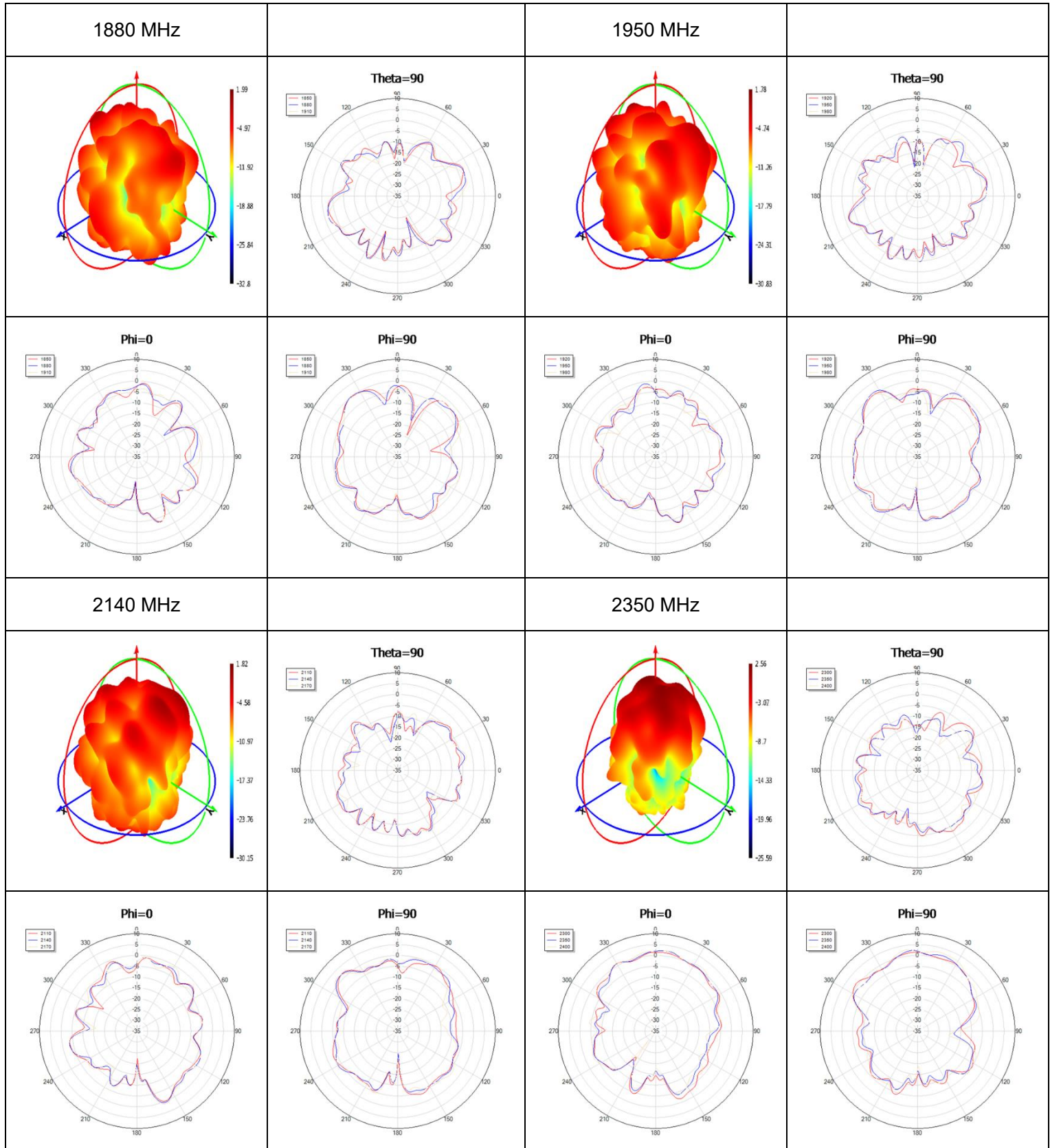
3.2.4.2 Test Status: On 300 mm × 300 mm Metal Plane

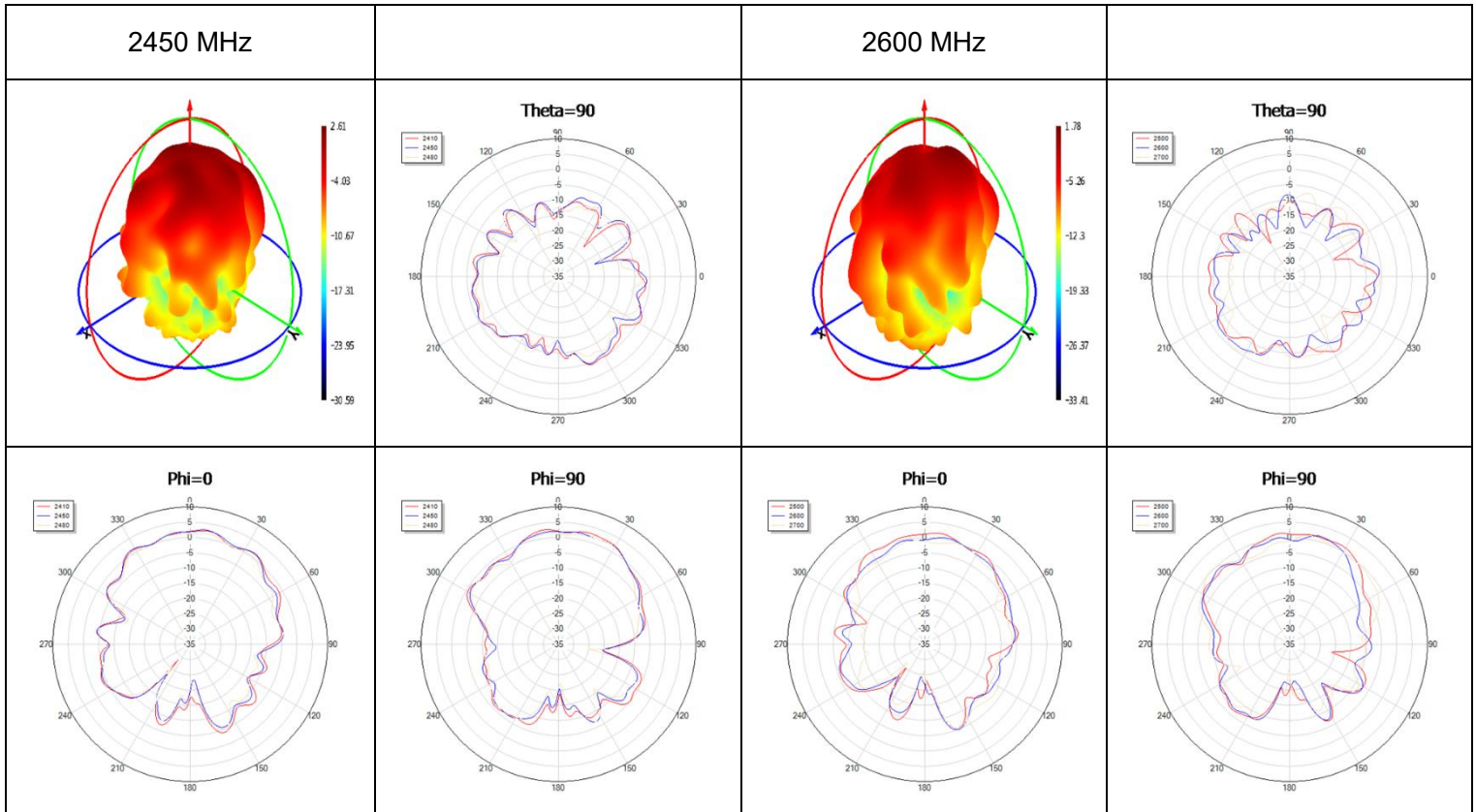
- Test Chamber: HF-S-1



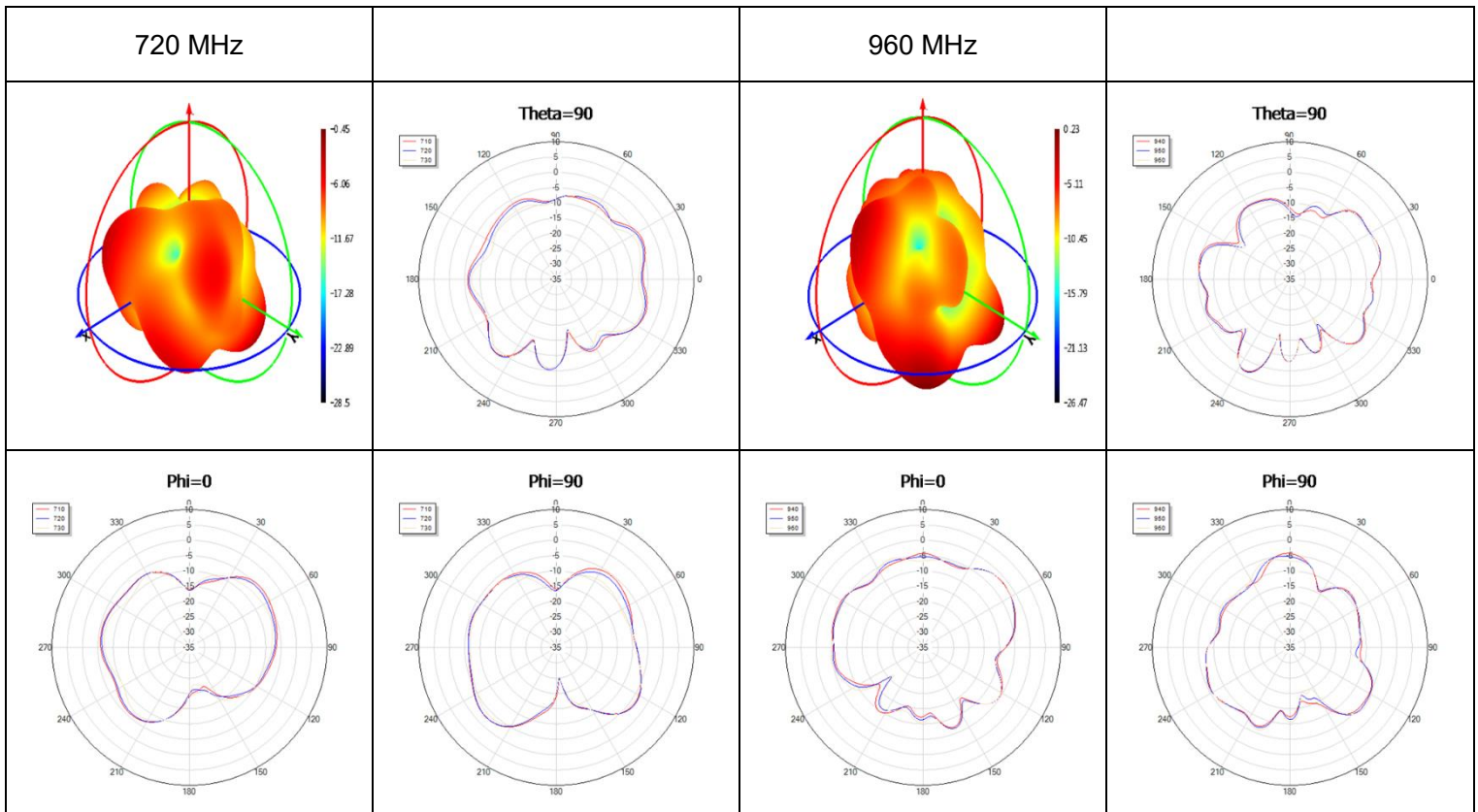
● **LTE 1**

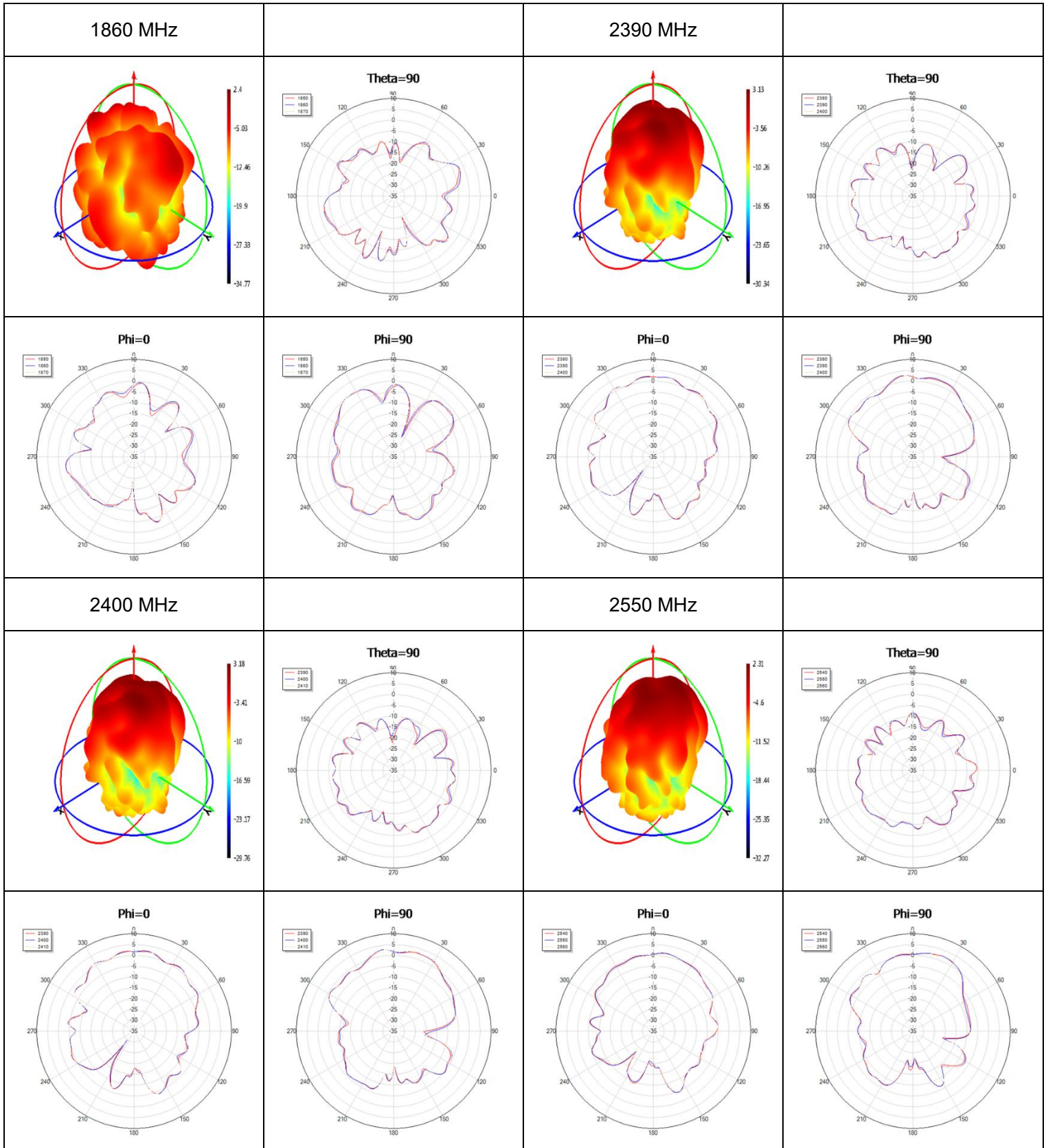




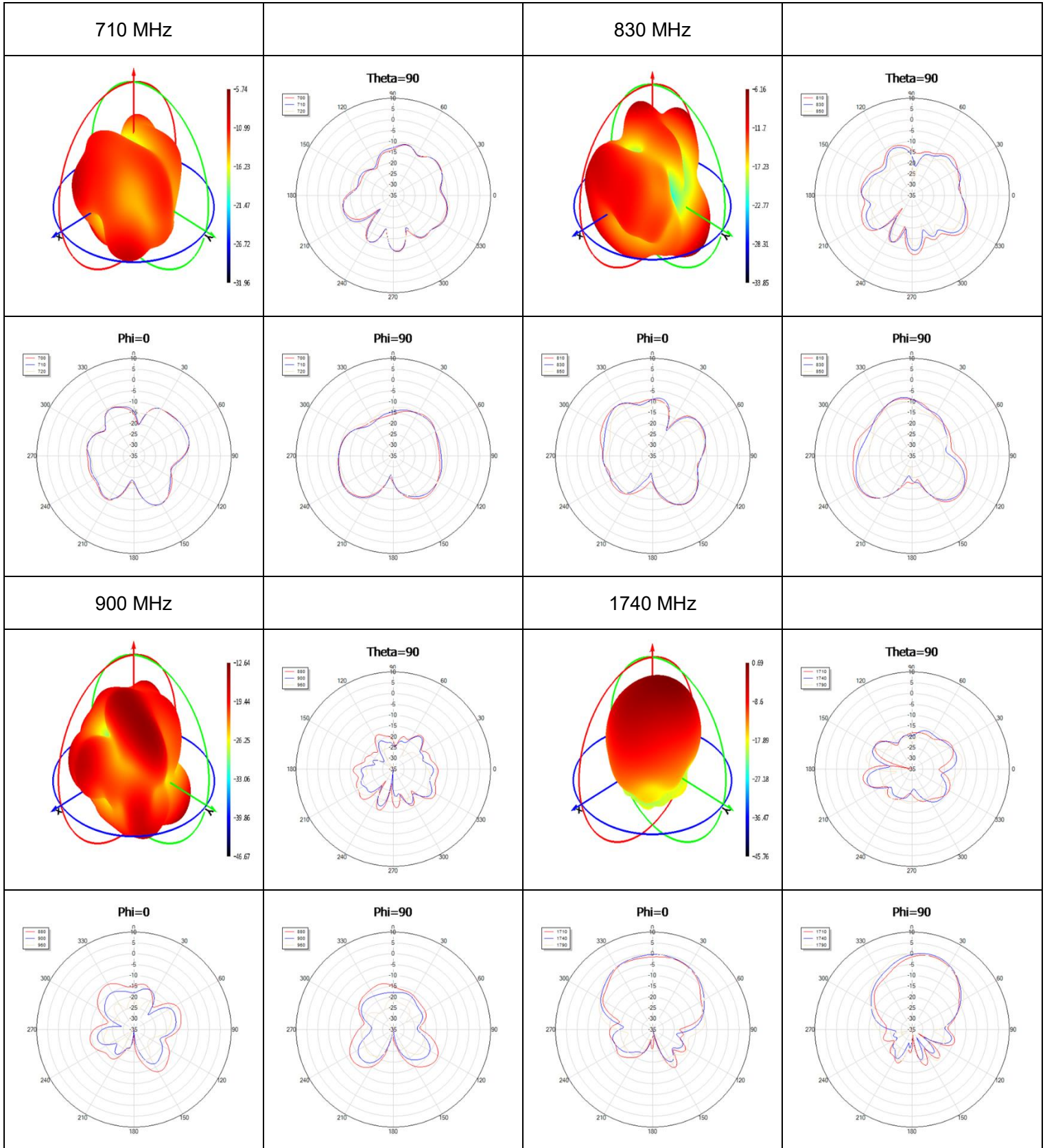


● **LTE 1 Max Peak Gain**

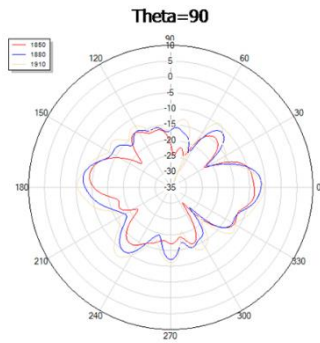
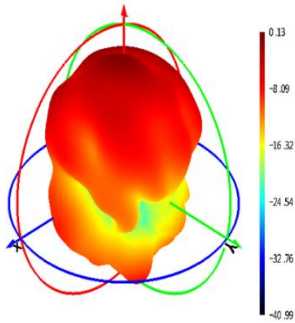




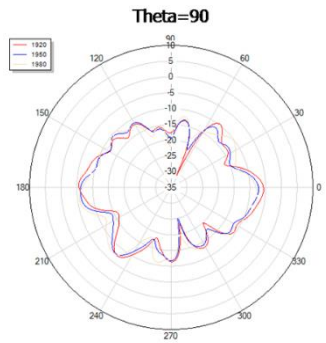
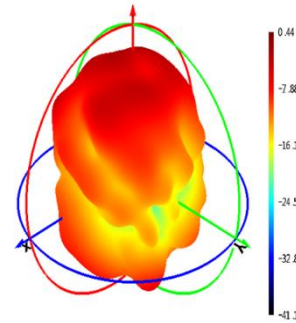
● **LTE 2**



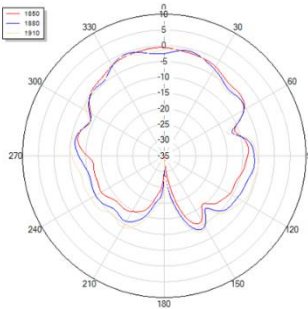
1880 MHz



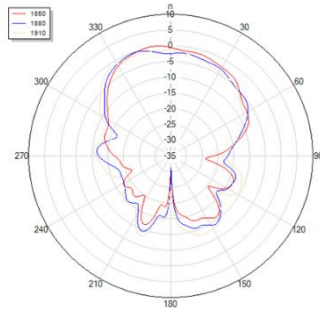
1950 MHz



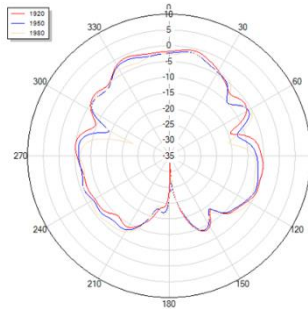
Phi=0



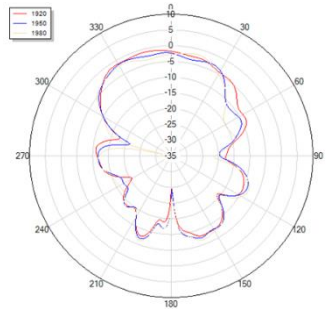
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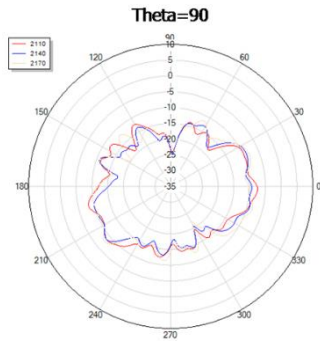
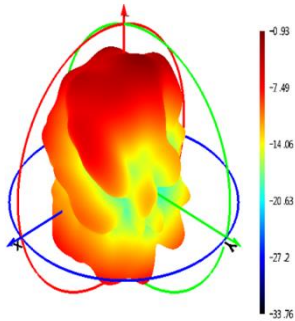
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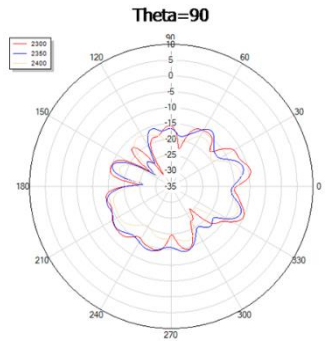
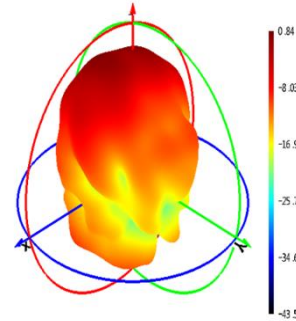
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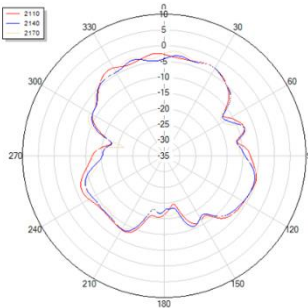
2140 MHz



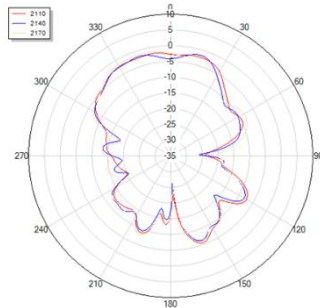
2350 MHz



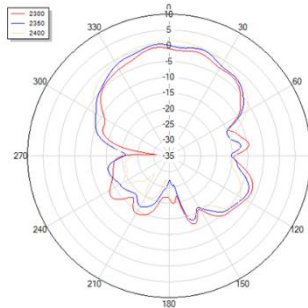
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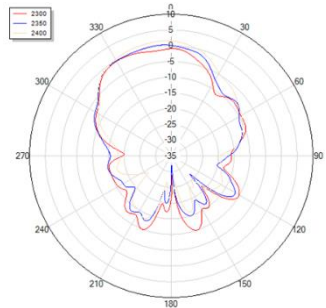
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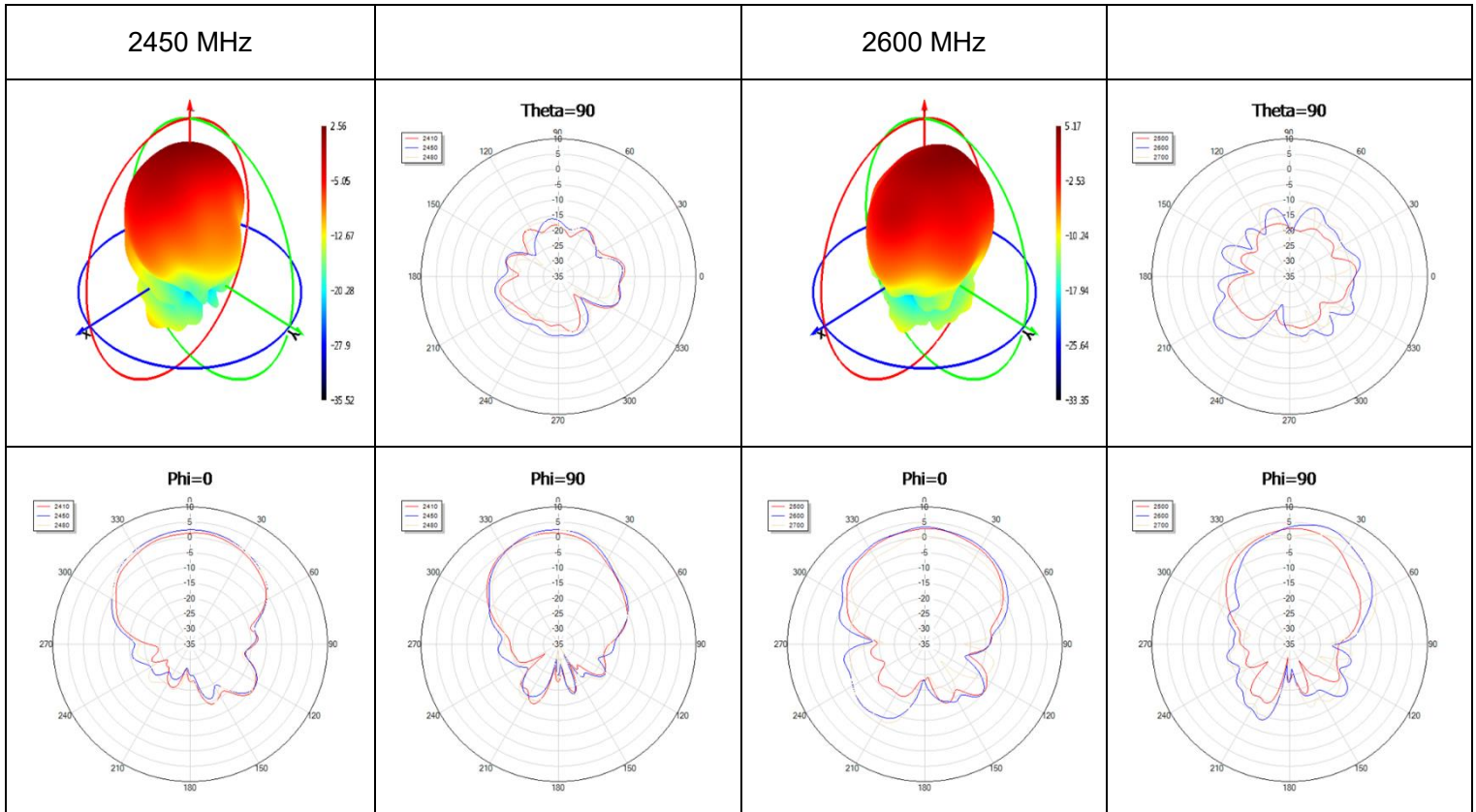


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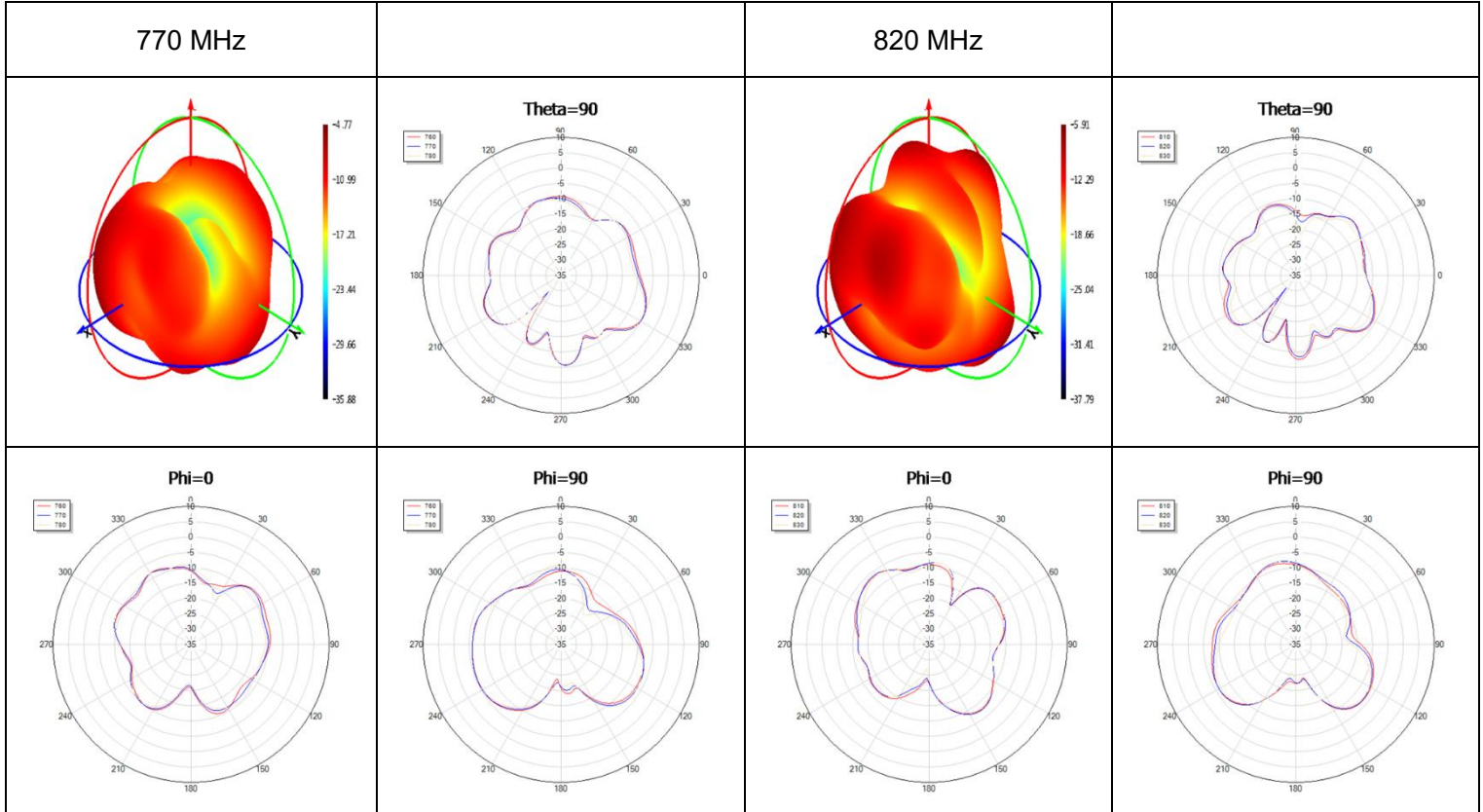


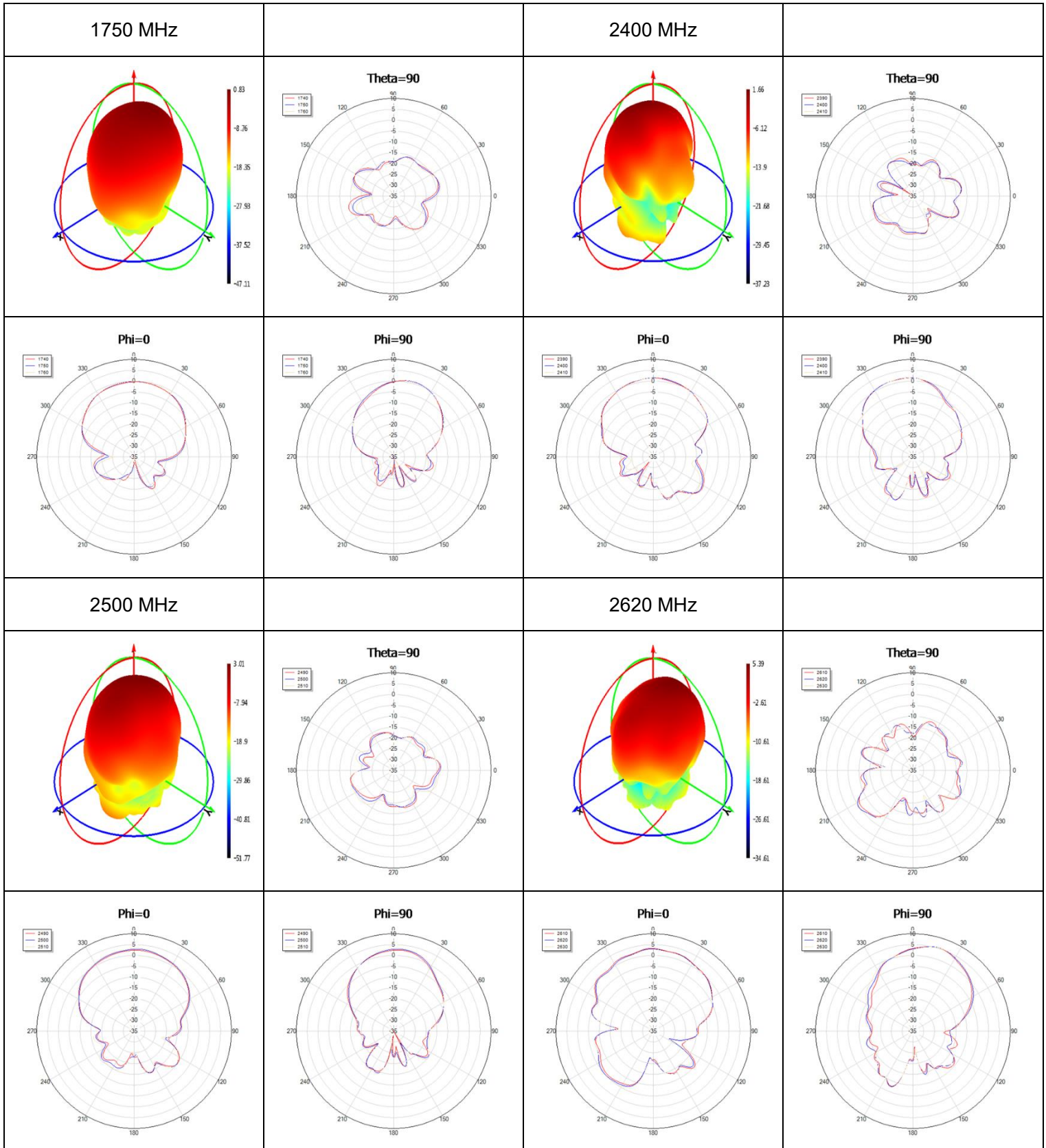
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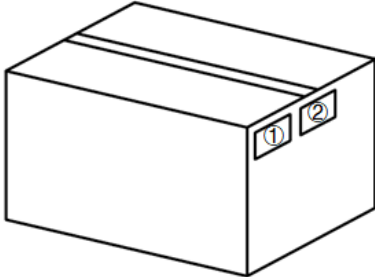


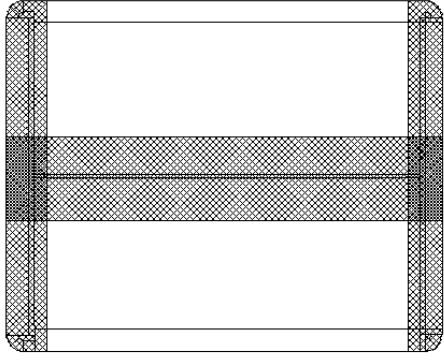
● **LTE 2 Max Peak Gain**





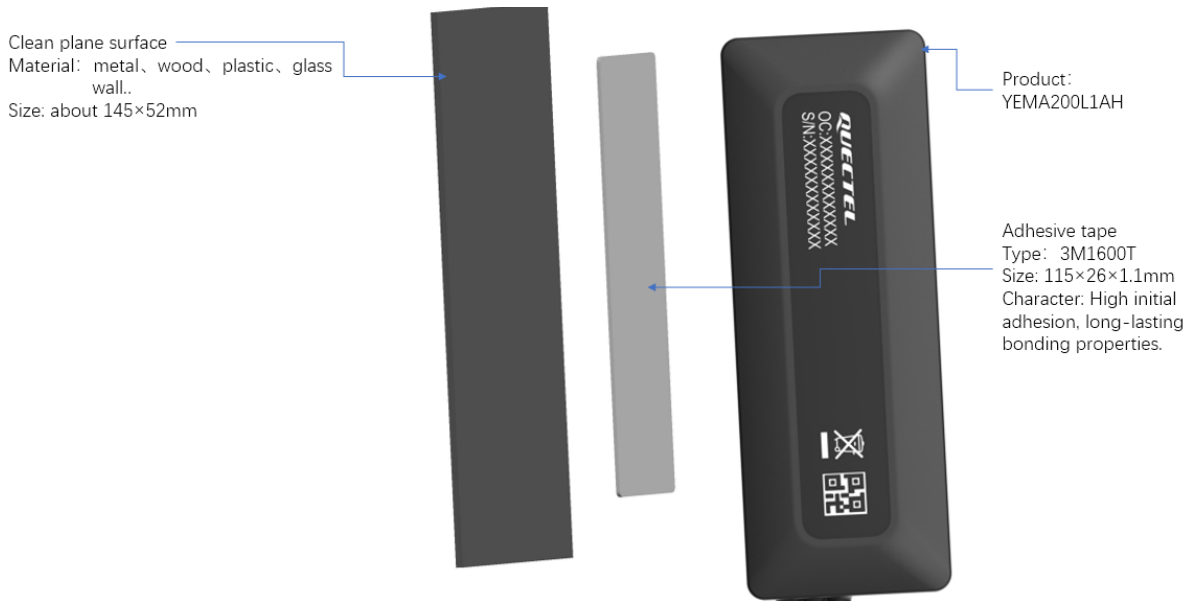
4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		<p>1 antenna product in a small PE bag. (1 Antenna / Small PE Bag)</p>
2		<p>8 antenna products in a big PE bag. (8 Antennas / Big PE Bag)</p>
3		<p>(10 PE Bags / Carton Box) (80 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></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.	

5 Installation

- Recommended clean surface size and material as below view (adhesive).



Installation Instructions					
Tube Mark	Tube Color	Cable	Connector	Frequency (MHz)	Technology
LTE1	Black	RG174LL	SMA Male	698–960 MHz, 1710–2690 MHz	LTE
LTE2	Black	RG174LL	SMA Male	698–960 MHz, 1710–2690 MHz	LTE

Contact Us

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Revision History

Version	Date	Author	Note
-	2025-10-15	Christopher Yao/ Rojin Luo/ Riva Ren/ Rainey Liao	Creation of the document
1.0	2025-10-15	Christopher Yao/ Rojin Luo/ Riva Ren/ Rainey Liao	First official release
1.1	2026-01-19	Strong Qiang	Updated the packaging (Chapter 4).

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