



Antenna Datasheet

Product OC: YB0027AA

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Product Name: 5G & GNSS 9IN1 Combo Antenna

Key Features:

8 × 8 5G MIMO + GNSS L1 & L5

Optimized for 5G and 4G Networks

Screw Mount

SMA Male Connector

IP67 & IP69K

ASA Housing

Compatible with ECE-R118 cables under demand

Overview

This ultra-wide-band 5G/4G antenna box provides broad coverage from 600–6000 MHz whilst backward-compatible to support 3G/2G networks as well as Cat-M and NB-IoT. The antenna is designed to work with various GND plane sizes or in free space for ease of integration with connection via 9 various cable lengths from 300-5000mm, terminated with SMA connectors. This screw mount omnidirectional antenna is easy to install with maximum durability with its IP67/IP69K ASA enclosure. It is compatible with Quectel's RM520x Series modules. Quectel provides comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs.

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1 Specification

Test Condition: Free Space & On 300 × 400 mm metal plane

1.1. Electrical

Electrical Specifications		
Frequency Range	LMHs	600–960 MHz, 1400–6000 MHz
	MHs	1400–6000 MHz
	GNSS	1164–1189 MHz, 1559–1606 MHz
Radiation Pattern	LMHs & MHs	Omni-directional
	GNSS	Directional
Polarization	LMHs & MHs	Linear
	GNSS	RHCP
Impedance		50 Ω
Isolation		≤ -8 dB
Axial Ratio (GNSS)		< 3 dB

1.1.1. LMHs

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
	Band	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	2.7	2.3	2.5	3.7	3.2	1.9	1.9	2.6	3.2	2.3	1.8
	MP	2.8	2.8	2.4	3.4	2.6	1.8	1.8	2.5	3.0	2.4	1.6
Max Return Loss (dB)	FS	-6.8	-8.3	-7.2	-4.8	-5.7	-10.0	-10.3	-7.0	-5.6	-7.9	-10.9
	MP	-6.4	-6.6	-7.8	-5.3	-7.0	-11.0	-10.7	-7.4	-6.0	-7.8	-12.7
AVG Eff.	FS	32.7	44.5	43.0	31.8	43.1	57.6	59.3	56.4	47.4	56.1	55.9

(%)	MP	14.7	20.8	19.7	28.2	40.7	57.7	57.3	53.6	46.1	56.7	56.7
AVG Gain (dB)	FS	-4.9	-3.5	-3.7	-5.0	-3.7	-2.4	-2.3	-2.5	-3.3	-2.5	-2.5
	MP	-8.4	-6.9	-7.1	-5.5	-3.9	-2.4	-2.4	-2.7	-3.4	-2.5	-2.5
Max Peak Gain (dBi)	FS	-0.5	0.2	1.0	0.9	2.0	3.9	4.1	3.8	3.4	4.9	4.1
	MP	0.9	4.5	4.3	3.1	5.6	6.6	6.7	6.5	8.2	5.5	7.0
VSWR	FS	≤ 3.7										
	MP	≤ 3.4										
Return Loss	FS	≤ -4.8 dB										
	MP	≤ -5.3 dB										
Peak Gain	FS	≤ 4.9 dB										
	MP	≤ 8.2 dB										

- LMHs: LMH1, LMH2, LMH3, LMH4 Antennas
- MHs: MH1, MH2, MH3, MH4 Antennas
- FS: In Free Space
- MP: On 300 × 400 mm Metal Plane

1.1.2. MHs

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	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	-	-	-	4.3	2.7	1.5	2.2	2.6	3.6	3.1	2.8	
	MP	-	-	-	3.7	3.5	1.3	1.9	2.6	3.6	2.7	2.6	
Max Return Loss (dB)	FS	-	-	-	-4.1	-6.8	-13.4	-8.6	-7.0	-5.0	-5.8	-6.4	
	MP	-	-	-	-4.8	-5.1	-17.5	-10.3	-7.1	-4.9	-6.8	-7.0	
AVG Eff. (%)	FS	-	-	-	34.7	51.1	66.3	60.5	56.0	50.3	58.6	56.1	
	MP	-	-	-	26.7	40.9	60.0	55.8	54.7	44.3	56.0	54.5	
AVG Gain (dB)	FS	-	-	-	-4.6	-2.9	-1.8	-2.2	-2.5	-3.0	-2.3	-2.5	
	MP	-	-	-	-5.8	-4.1	-2.2	-2.5	-2.6	-3.6	-2.5	-2.6	
Max Peak Gain (dBi)	FS	-	-	-	2.7	3.5	3.2	2.8	2.6	3.1	3.9	4.1	
	MP	-	-	-	1.5	5.8	6.4	6.4	5.5	6.6	8.1	8.0	
VSWR	FS	≤ 4.3											
	MP	≤ 3.7											

Return Loss	FS	≤ -4.1 dB
	MP	≤ -4.8 dB
Peak Gain	FS	≤ 4.1 dB
	MP	≤ 8.1 dB

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- MHs: MH1, MH2, MH3, MH4 Antennas
- FS: In Free Space
- MP: On 300 × 400 mm Metal Plane

1.1.3. GNSS

Specification	Band	Band	GNSS L5	GNSS L2	GNSS L1
		Freq. (MHz)	1164 - 1189	1217 - 1238	1559 - 1606
Max VSWR	FS		2.0	-	2.1
	MP		2.1	-	2.0
Max Return Loss (dB)	FS		-9.7	-	-9.1
	MP		-8.8	-	-9.4
AVG Eff. (%)	FS		58.9	-	52.5
	MP		57.7	-	52.1
AVG Gain (dB)	FS		-2.3	-	-2.8
	MP		-2.4	-	-2.8
Max Peak Gain (dBi)	FS		2.8	-	4.5
	MP		4.0	-	6.3
VSWR	FS		≤ 2.1		
	MP		≤ 2.1		
Return Loss	FS		≤ -9.1 dB		
	MP		≤ -8.8 dB		
Peak Gain	FS		≤ 4.5 dBi		
	MP		≤ 6.3 dBi		

- LMHs: LMH1, LMH2, LMH3, LMH4 Antennas
- MHs: MH1, MH2, MH3, MH4 Antennas
- FS: In Free Space
- MP: On 300 × 400 mm Metal Plane

GNSS LNA Electrical	
LNA Gain	22 ±3 dB
Noise Figure	≤ 2.5 dB
Output VSWR	< 2.0
Input VSWR	< 2.0
Working Voltage	DC 2.8–5 V
Working Current	18.8±3 mA
Impedance	50 Ω

- LMHs: LMH1, LMH2, LMH3, LMH4 Antennas
- MHs: MH1, MH2, MH3, MH4 Antennas
- FS: In Free Space
- MP: On 300 × 400 mm Metal Plane

1.2. Supported Bands

5G NR/ LTE/ LTE-Advanced/ WCDMA/ HSPA/ HSPA+/ GPRS/ GSM/ NB-IoT					
Band	Frequency (MHz)	Uplink (MHz)	Downlink (MHz)	LMHs	MHs
1	2100	1920–1980	2110–2170	√	√
2	1900	1850–1910	1930–1990	√	√
3	1800	1710–1785	1805–1880	√	√
4	1700	1710–1755	2110–2155	√	√
5	850	824–849	869–894	√	-
7	2600	2500–2570	2620–2690	√	√
8	900	880–915	925–960	√	-
9	1800	1749.9–1784.9	1844.9–1879.9	√	√
11	1500	1427.9–1447.9	1475.9–1495.9	-	√
12	700	699–716	729–746	√	-
13	700	777–787	746–756	√	-

5G NR/ LTE/ LTE-Advanced/ WCDMA/ HSPA/ HSPA+/ GPRS/ GSM/ NB-IoT					
Band	Frequency (MHz)	Uplink (MHz)	Downlink (MHz)	LMHs	MHs
14	700	788–798	758–768	√	-
17	700	704–716	734–746	√	-
18	850	815–830	860–875	√	-
19	850	830–845	875–890	√	-
20	800	832–862	791–821	√	-
21	1500	1447.9–1462.9	1495.9–1510.9	-	√
22	3500	3410–3490	3510–3590	√	√
23	2100	2000–2020	2180–2200	√	√
24	1600	1626.5–1660.5	1525–1559		√
25	1900	1850–1915	1930–1995	√	√
26	850	814–849	859–894	√	-
28	700	703–748	758–803	√	-
31	450	452.5–457.5	462.5 - 467.5	-	-
34	2100	2010 – 2025		√	√
38	2600	2570 - 2620		√	√
39	1900	1880 - 1920		√	√
40	2300	2300 - 2400		√	√
41	2500	2496 - 2690		√	√
42	3500	3400 - 3600		√	√
48	3500	3550 - 3700		√	√
66	1700	1710 - 1780	2110 - 2200	√	√
71	600	663 - 698	617 - 652	√	-
74	1500	1427 - 1470	1475 - 1518	-	√
77	3500	3300 - 4200		√	√

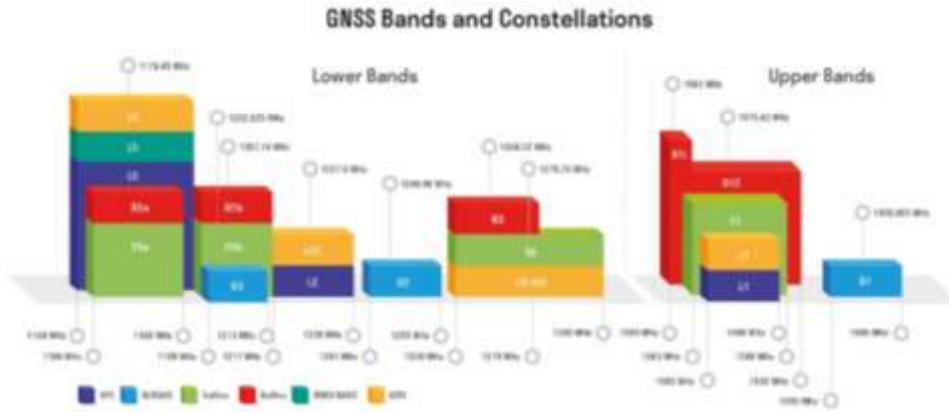
5G NR/ LTE/ LTE-Advanced/ WCDMA/ HSPA/ HSPA+/ GPRS/ GSM/ NB-IoT

Band	Frequency (MHz)	Uplink (MHz)	Downlink (MHz)	LMHs	MHs
78	3500	3300 - 3800		√	√
79	4500	4400 - 5000		√	√

Note: Covered √ means efficiency > 20%

GNSS Frequency Bands (MHz)

GPS	L1 Centre 1575.42 (1565–1586)	L2 Centre 1227.6 (1217–1238)	L5 Centre 1176.45 (1164–1189)		
	√	-	√		
GLONASS	G1-L1OC-L1OF Centre 1601 (1595–1606)	G2-L2OC-L2OF Centre 1248.06 (1241–1255)	G3-L3OC Centre 1202.025 (1189–1213)		
	√	-	-		
GALILEO	E1 Centre 1575.42 (1563–1588)	E5a Centre 1176.45 (1166–1187)	E5b Centre 1207.14 (1197–1218)	E6 Centre 1278.75 (1258–1300)	
	√	√	-	-	
BEIDOU	B1I Centre 1561.098 (1559–1564)	B1C (BeiDou-3) Centre 1575.42 (1559–1592)	B2a-B2I Centre 1176.45 (1166–1187)	B2b Centre 1207.14 (1197–1217)	B3 Centre 1268.52 (1258–1279)
	√	√	√	-	-
QZSS	L1 Centre 1575.42 (1573–1578)	L2C Centre 1227.6 (1226–1229)	L5 Centre 1176.45 (1166–1187)	L6 Centre 1278.75 (1257–1300)	
	√	-	√	-	
IRNSS	L5 Centre 1176.45 (1164–1189)				
	√				

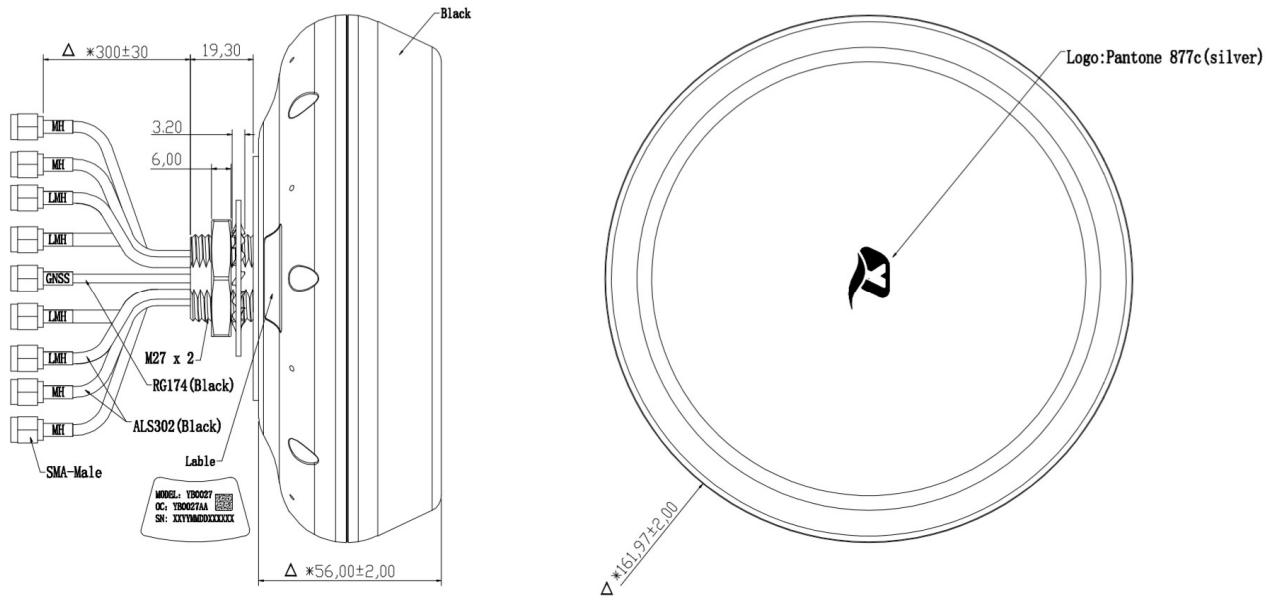


1.3. Mechanical & Environmental

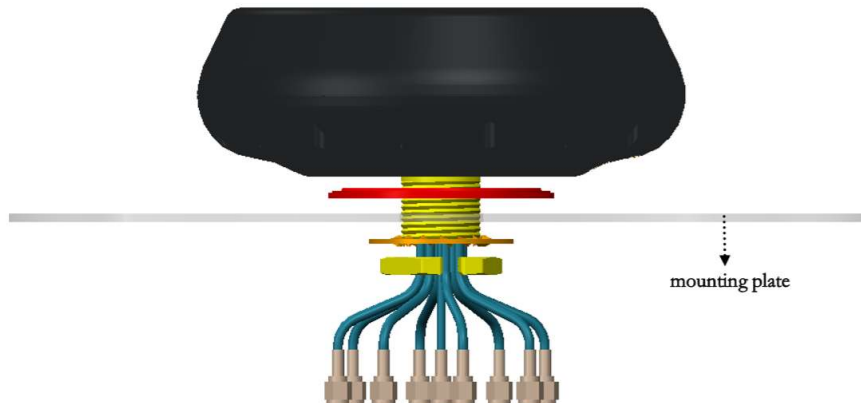
Mechanical		
Antenna Size	Φ 162 mm × 56 mm	
Casing Material & Color	ASA & Black	
Cable Type & Length	LMHs & MHs	ALS302 Black & 300 mm
	GNSS	RG174 Black & 300 mm
Connector Type	SMA Male (The current state of the SMA connector is not waterproof. If a waterproof connector is needed, it can be customized.)	
Weight	Typ. 535 g	
Mounting Type	Screw Mount	
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	IK09	
RoHS & REACH Compliant	Yes	

- LMHs: LMH1, LMH2, LMH3, LMH4 Antennas
- MHs: MH1, MH2, MH3, MH4 Antennas
- FS: In Free Space
- MP: On 300 × 400 mm Metal Plane

2 Drawing



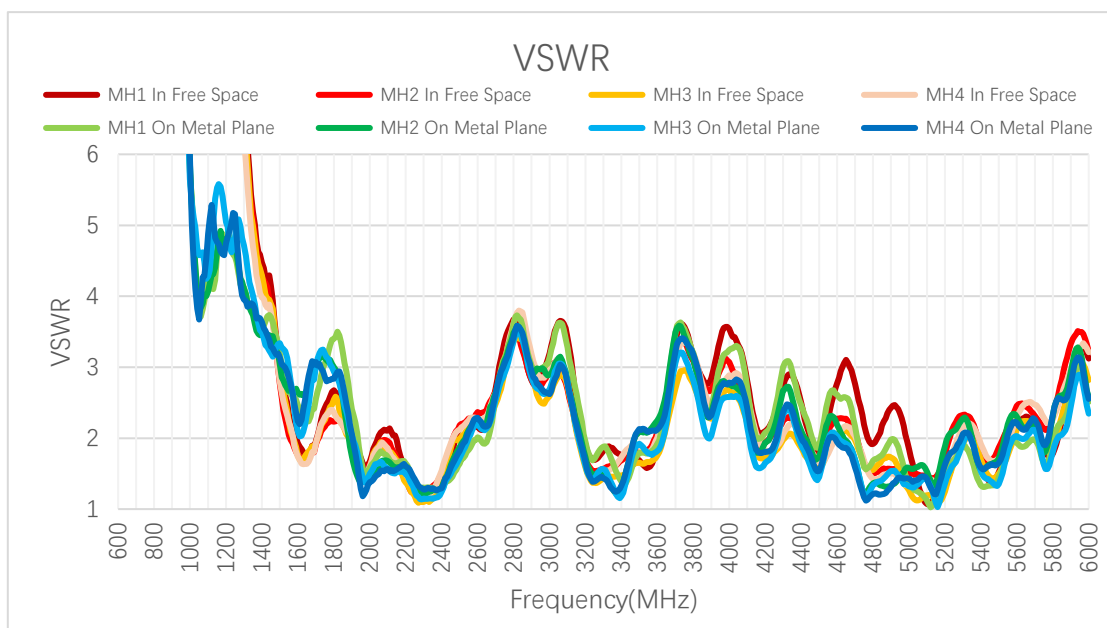
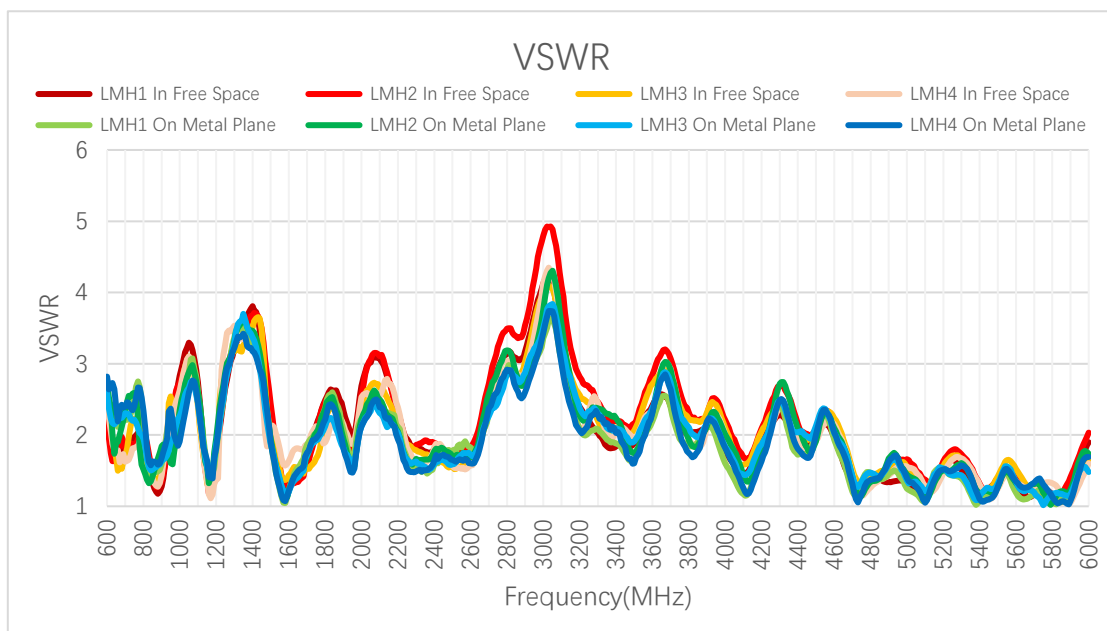
- Description of tube color and character color:
 - GNSS: Blue tube + White character
 - LMH: Red tube + White character
 - MH: Black tube + White character
- LMHs can be connected arbitrarily, and 4 MHs can be connected arbitrarily.
- Recommended assembly hole diameter: 28.0 mm.
- Recommended mounting plane thickness: 3.0 mm.

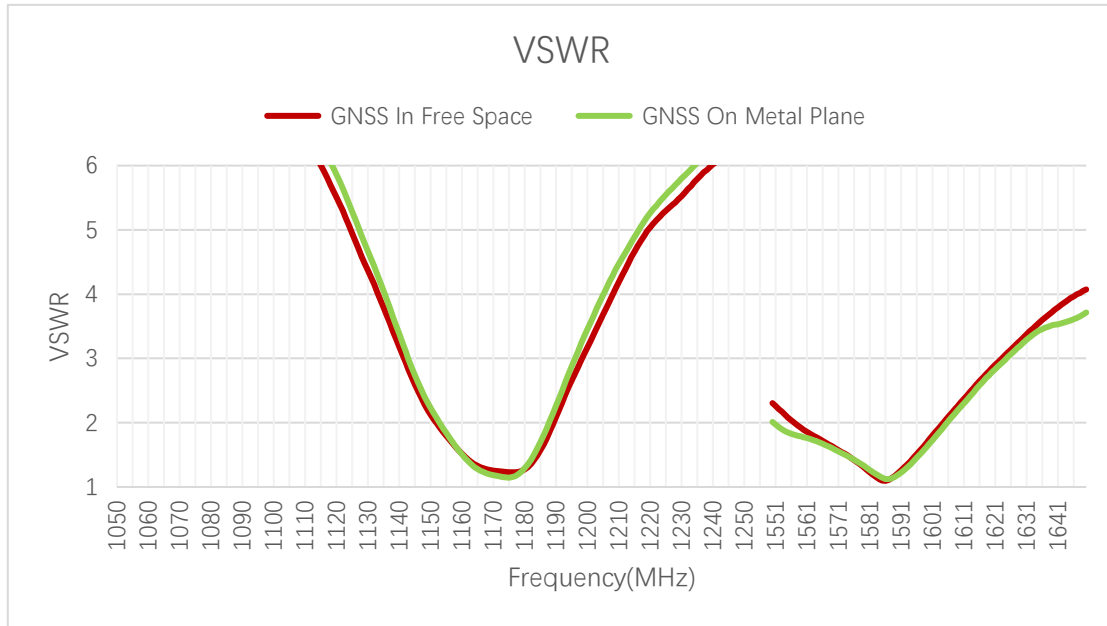


3 Detailed Performance

3.1. S-Parameter Test

3.1.1. VSWR





VSWR - LMH

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
LMH1	FS	2.4	1.8	1.8	1.6	1.3	2.3	3.5	1.8	2.1	2.5
	MP	2.6	2.4	2.2	1.5	1.6	2.1	3.0	1.9	2.0	2.3
LMH2	FS	2.3	1.6	1.8	1.7	1.4	2.3	3.6	1.7	1.9	2.2
	MP	2.7	2.0	2.5	1.3	1.8	1.6	3.2	1.8	2.0	2.2
LMH3	FS	2.7	2.0	1.8	1.4	1.5	2.4	3.6	1.5	1.6	2.2
	MP	2.6	2.2	2.3	1.5	1.6	1.9	2.9	1.8	1.9	1.9
LMH4	FS	2.6	1.9	1.6	1.6	1.4	2.2	3.0	1.9	2.1	2.3
	MP	2.8	2.7	2.5	1.6	1.7	2.2	2.9	1.8	1.9	2.1
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
LMH1	FS	2.0	2.8	1.8	1.8	1.8	2.4	1.3	1.3	1.4	1.9
	MP	1.6	2.3	1.5	1.7	1.8	2.2	1.2	1.2	1.3	1.7
LMH2	FS	1.8	2.9	1.9	1.8	1.8	2.8	1.5	1.7	1.4	2.0
	MP	1.5	2.3	1.7	1.8	1.7	2.3	1.4	1.4	1.3	1.7
LMH3	FS	1.6	2.5	1.7	1.6	1.7	2.7	1.5	1.6	1.4	1.6
	MP	1.6	2.1	1.6	1.7	1.7	2.4	1.4	1.4	1.3	1.5
LMH4	FS	1.9	2.8	1.6	1.8	1.6	2.3	1.5	1.6	1.2	1.6
	MP	1.5	2.2	1.5	1.7	1.6	2.3	1.3	1.4	1.3	1.7

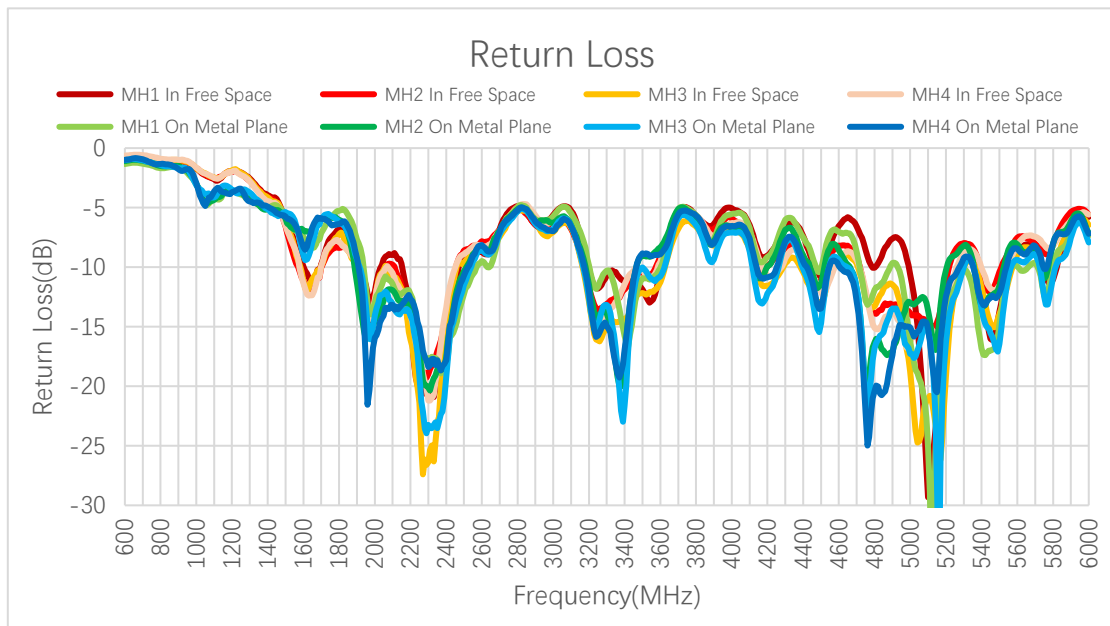
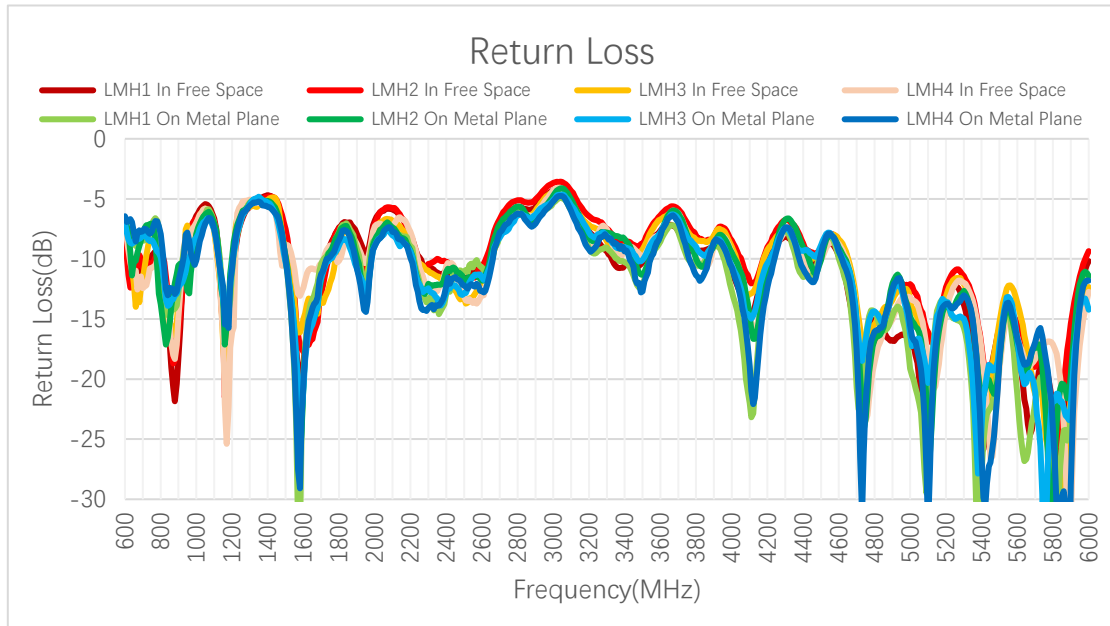
VSWR - MH

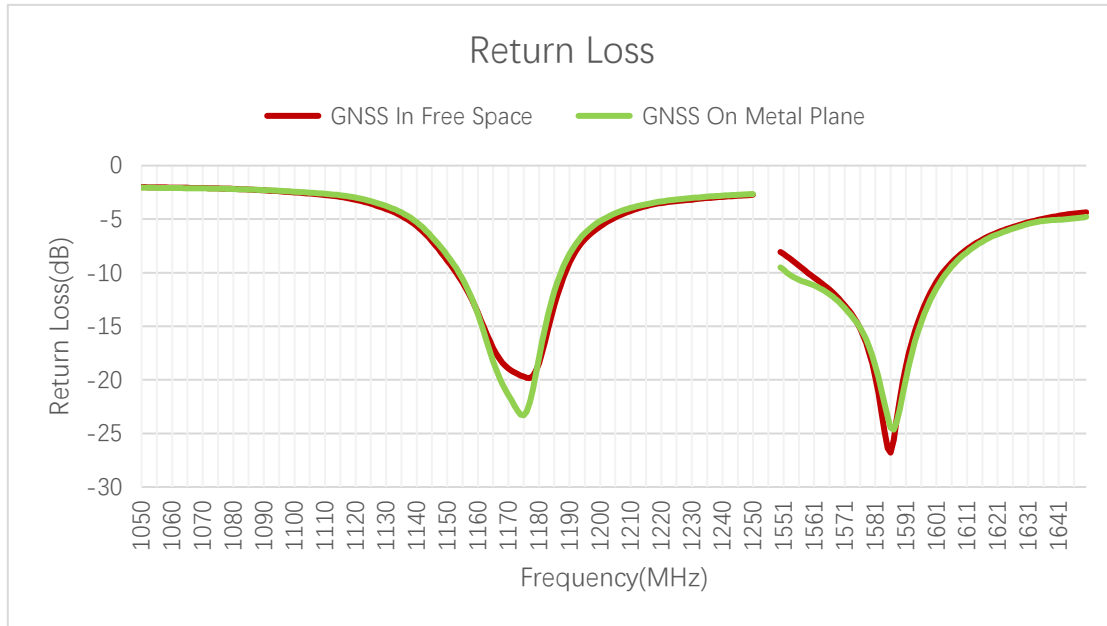
Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
MH1	FS	-	-	-	-	-	-	4.3	2.0	2.4	2.2
	MP	-	-	-	-	-	-	3.7	2.7	3.0	2.8
MH2	FS	-	-	-	-	-	-	4.0	2.0	2.1	2.1
	MP	-	-	-	-	-	-	3.5	3.1	3.1	2.0
MH3	FS	-	-	-	-	-	-	4.0	2.0	2.2	2.0
	MP	-	-	-	-	-	-	3.2	3.1	3.2	2.3
MH4	FS	-	-	-	-	-	-	3.9	2.0	2.2	2.1
	MP	-	-	-	-	-	-	3.4	3.0	2.9	2.3
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
MH1	FS	1.7	2.0	1.2	1.7	2.2	1.9	2.8	1.8	1.5	3.1
	MP	1.7	1.6	1.3	1.4	2.0	1.9	2.2	1.4	1.4	2.5
MH2	FS	1.5	1.8	1.3	1.9	2.4	2.1	2.1	1.5	1.9	3.2
	MP	1.4	1.6	1.3	1.6	2.2	2.2	1.7	1.6	1.7	2.6
MH3	FS	1.5	1.7	1.2	1.9	2.3	1.8	2.0	1.3	1.5	2.8
	MP	1.6	1.5	1.1	1.5	2.2	1.8	1.7	1.3	1.4	2.3
MH4	FS	1.6	1.7	1.3	1.9	2.3	2.0	2.0	1.4	1.7	3.2
	MP	1.3	1.5	1.3	1.6	2.3	2.1	1.6	1.4	1.7	2.6

VSWR

Frequency (MHz)		1176	1227	1561	1575	1602
GNSS	FS	1.2	-	1.9	1.5	1.9
	MP	1.2	-	1.8	1.5	1.8

3.1.2. Return Loss





Return Loss (dB)

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
LMH1	FS	-7.6	-11.0	-11.2	-13.2	-18.3	-8.2	-5.1	-10.7	-9.3	-7.4
	MP	-7.0	-7.6	-8.5	-13.7	-12.8	-8.8	-6.0	-10.1	-9.5	-8.0
LMH2	FS	-8.0	-12.4	-11.0	-11.4	-16.3	-7.9	-4.9	-12.2	-9.9	-8.5
	MP	-6.7	-9.4	-7.5	-17.1	-10.6	-12.9	-5.7	-11.0	-9.6	-8.6
LMH3	FS	-6.8	-9.8	-10.8	-15.3	-13.7	-7.8	-4.9	-13.7	-12.5	-8.7
	MP	-7.0	-8.7	-8.1	-13.4	-12.4	-9.9	-6.2	-11.1	-10.2	-9.9
LMH4	FS	-7.2	-10.3	-12.3	-12.3	-14.9	-8.5	-6.0	-10.2	-9.0	-8.3
	MP	-6.4	-6.7	-7.5	-12.5	-11.9	-8.5	-6.2	-11.0	-9.9	-9.2
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
LMH1	FS	-9.8	-6.4	-11.1	-11.3	-10.8	-7.6	-17.7	-17.3	-15.8	-10.2
	MP	-12.5	-8.0	-14.0	-11.5	-10.7	-8.5	-20.7	-19.1	-17.6	-11.6
LMH2	FS	-10.9	-6.3	-10.0	-11.2	-10.7	-6.4	-14.3	-12.1	-15.9	-9.4
	MP	-14.1	-8.2	-12.1	-10.8	-11.8	-8.0	-15.3	-14.8	-18.5	-11.4
LMH3	FS	-12.2	-7.3	-11.5	-12.6	-12.0	-6.7	-13.8	-13.3	-15.3	-12.3
	MP	-13.0	-9.0	-13.3	-12.2	-11.5	-7.8	-15.3	-16.3	-17.1	-14.2
LMH4	FS	-10.3	-6.5	-12.7	-11.0	-13.0	-8.0	-14.7	-13.2	-19.1	-12.7
	MP	-14.4	-8.4	-13.9	-11.5	-12.7	-8.0	-17.6	-15.5	-18.3	-11.8

Return Loss (dB)

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
MH1	FS	-	-	-	-	-	-	-9.3	-7.8	-8.4	-8.4
	MP	-	-	-	-	-	-	-6.9	-6.0	-6.6	-6.6
MH2	FS	-	-	-	-	-	-	-9.7	-8.8	-8.9	-8.9
	MP	-	-	-	-	-	-	-5.9	-5.7	-9.3	-9.3
MH3	FS	-	-	-	-	-	-	-9.6	-8.4	-9.4	-9.4
	MP	-	-	-	-	-	-	-5.8	-5.5	-8.3	-8.3
MH4	FS	-	-	-	-	-	-	-9.4	-8.3	-9.2	-9.2
	MP	-	-	-	-	-	-	-6.0	-6.2	-7.9	-7.9
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
MH1	FS	-9.3	-19.7	-11.6	-8.7	-10.3	-6.6	-10.6	-13.7	-5.8	-5.8
	MP	-12.4	-17.8	-15.0	-9.5	-10.0	-8.7	-16.2	-14.8	-7.3	-7.3
MH2	FS	-11.1	-17.1	-10.3	-7.8	-9.1	-9.2	-13.8	-10.4	-5.6	-5.6
	MP	-12.9	-18.6	-12.6	-8.3	-8.3	-11.9	-13.0	-11.6	-7.1	-7.1
MH3	FS	-11.5	-23.0	-10.4	-8.2	-11.2	-9.7	-18.7	-13.9	-6.4	-6.4
	MP	-14.0	-23.5	-14.0	-8.6	-10.8	-11.7	-17.3	-16.5	-7.9	-7.9
MH4	FS	-11.8	-18.8	-10.0	-8.2	-9.5	-9.4	-16.3	-11.5	-5.6	-5.6
	MP	-13.4	-17.8	-12.9	-8.1	-8.9	-12.9	-15.0	-12.2	-7.2	-7.2

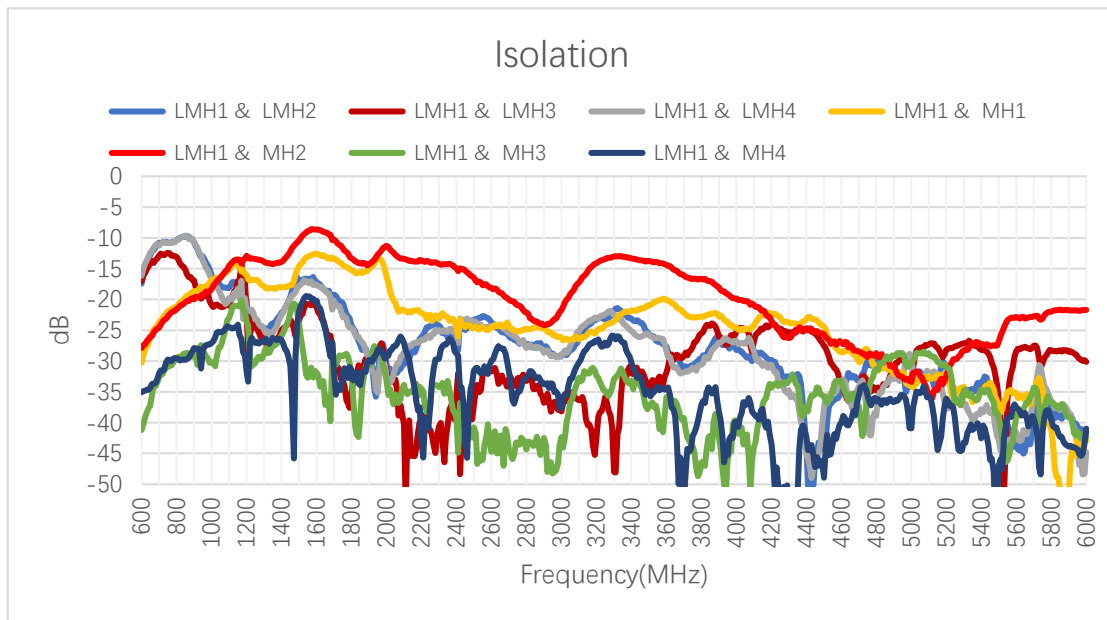
Return Loss (dB)

Frequency (MHz)		1176	1227	1561	1575	1602
GNSS	FS	-19.8	-	-10.5	-14.6	-10.4
	MP	-23.0	-	-11.2	-14.7	-11.0

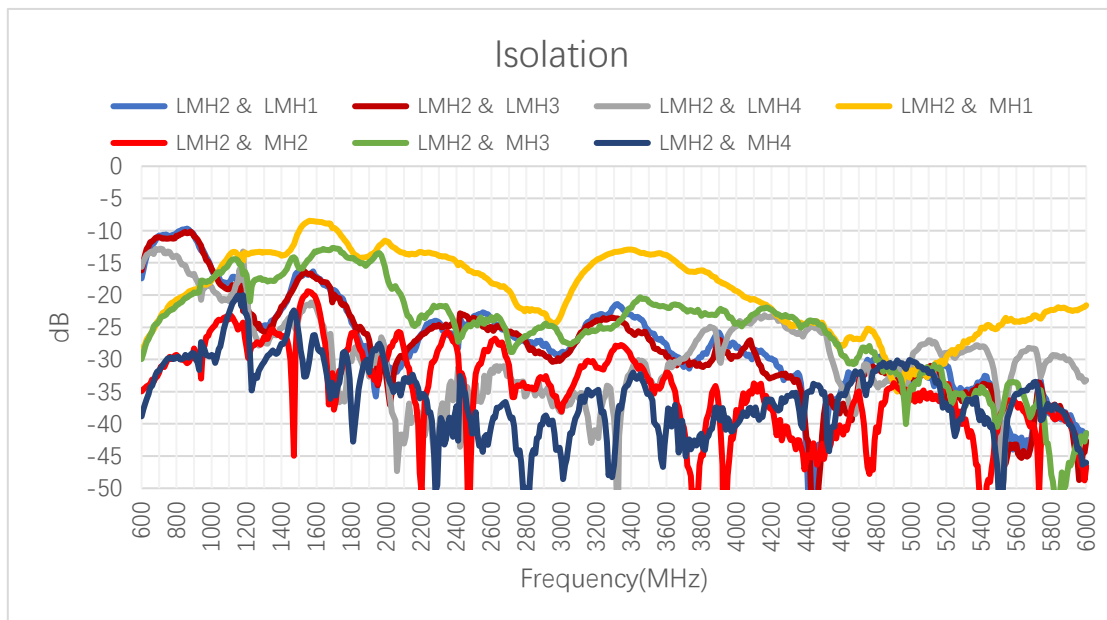
3.1.3. Isolation

3.1.3.1. Test Status: In Free Space

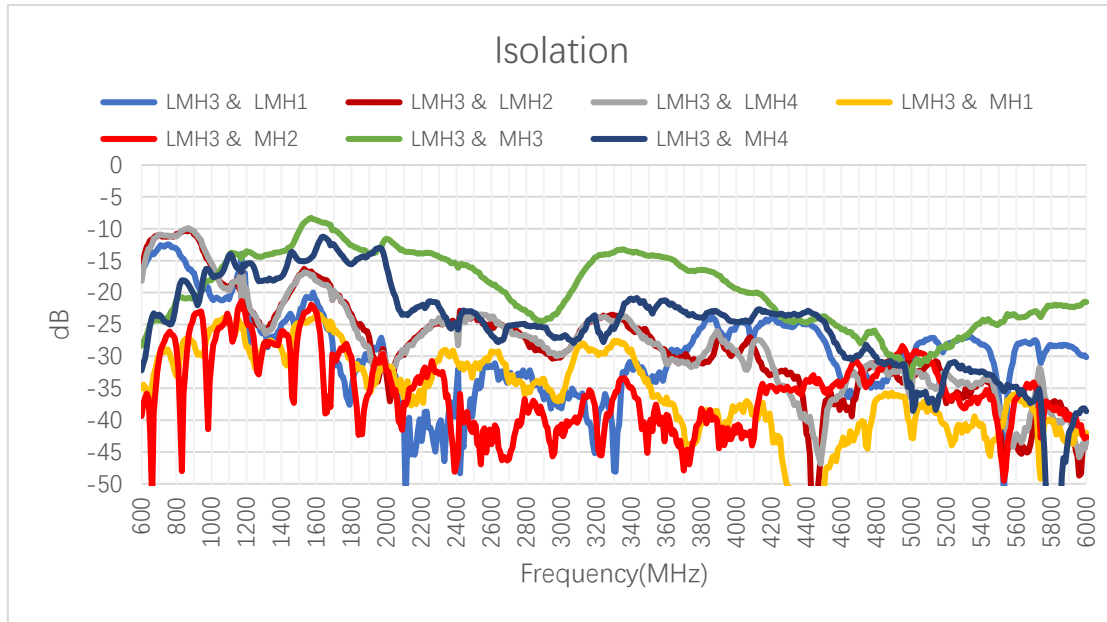
3.1.3.1.1. LMH1



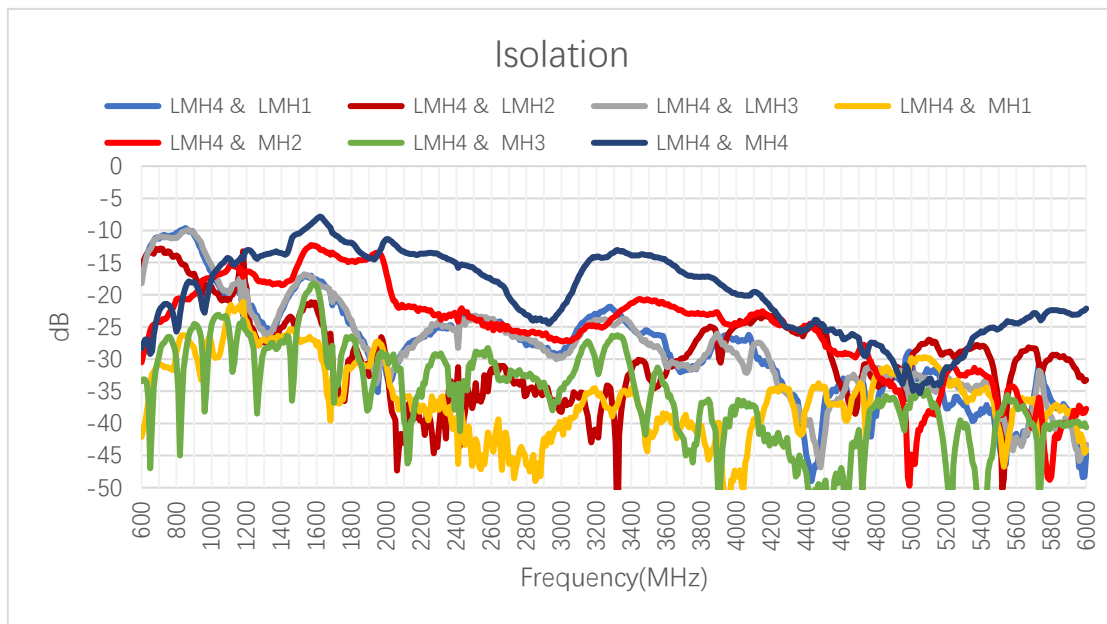
3.1.3.1.2. LMH2



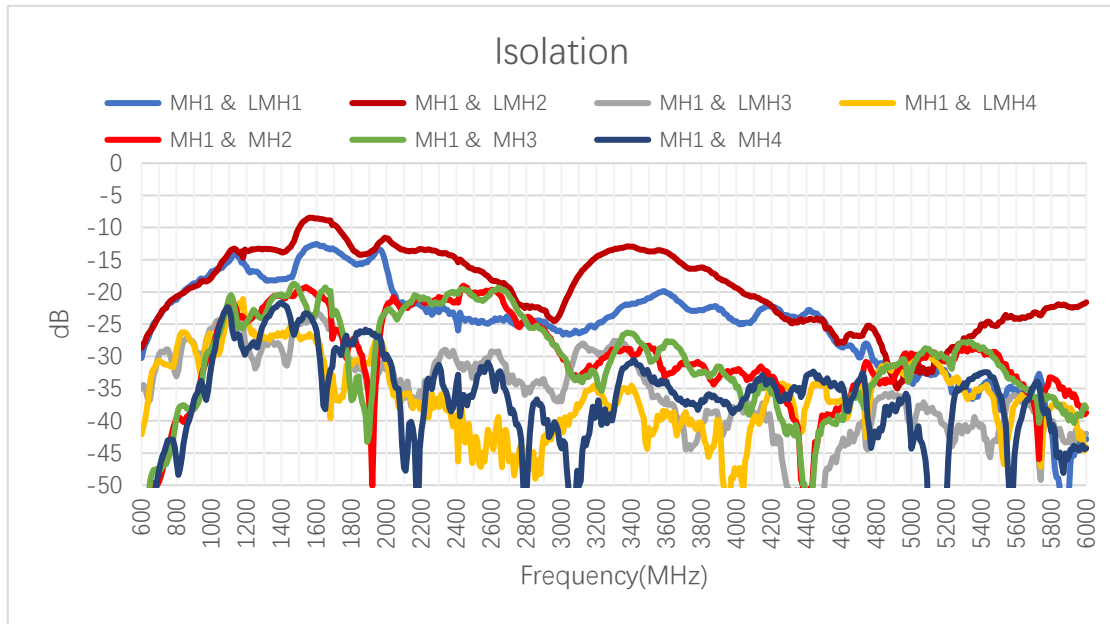
3.1.3.1.3. LMH3



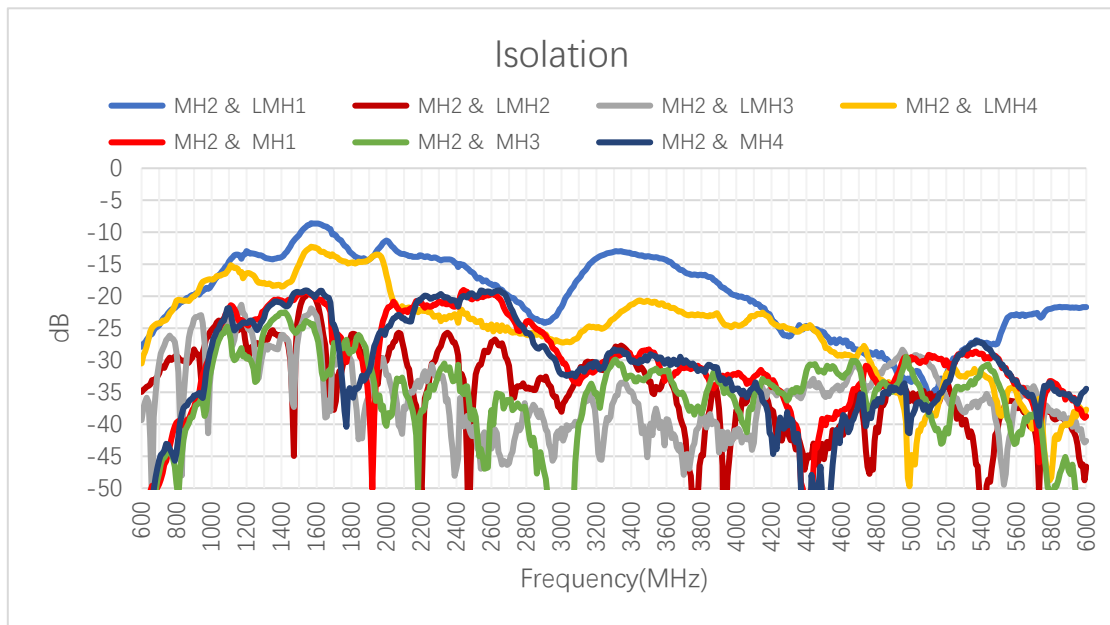
3.1.3.1.4. LMH4



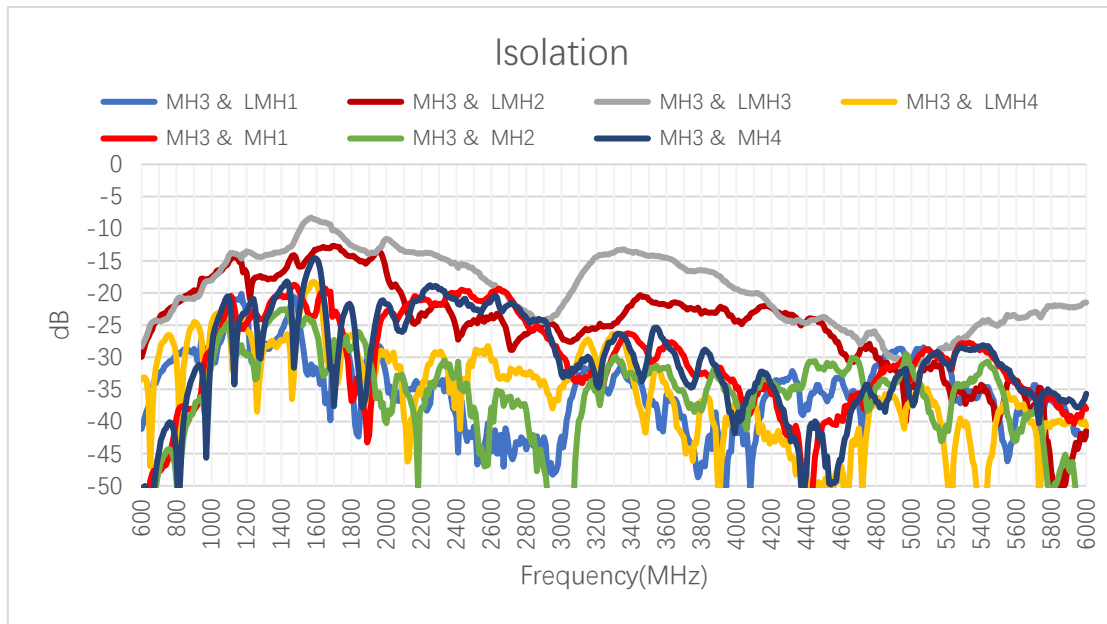
3.1.3.1.5. MH1



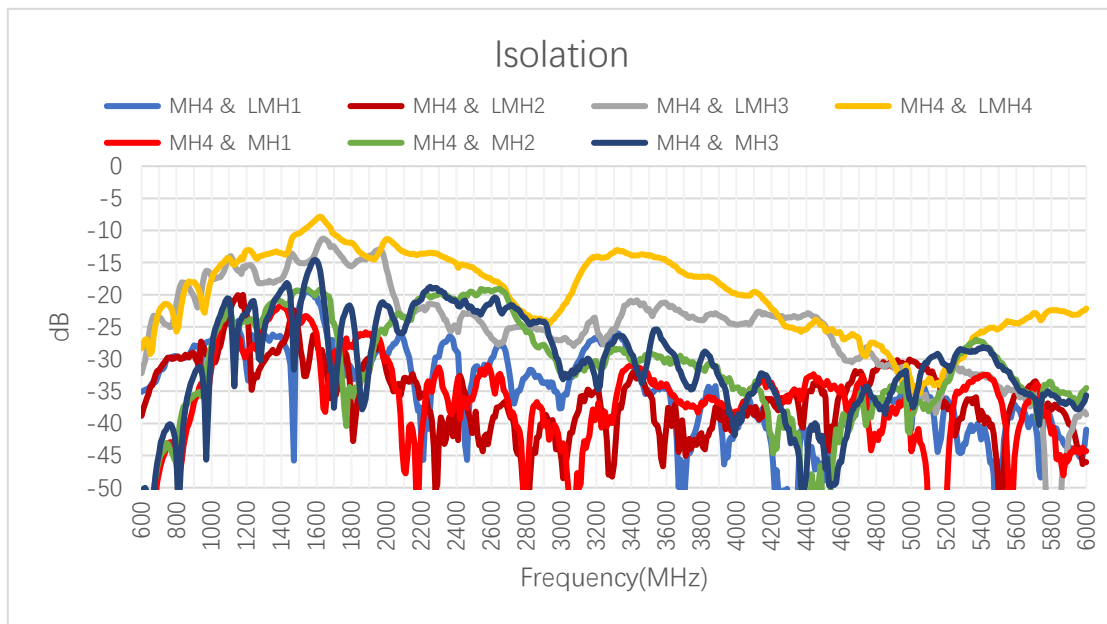
3.1.3.1.6. MH2



3.1.3.1.7. MH3

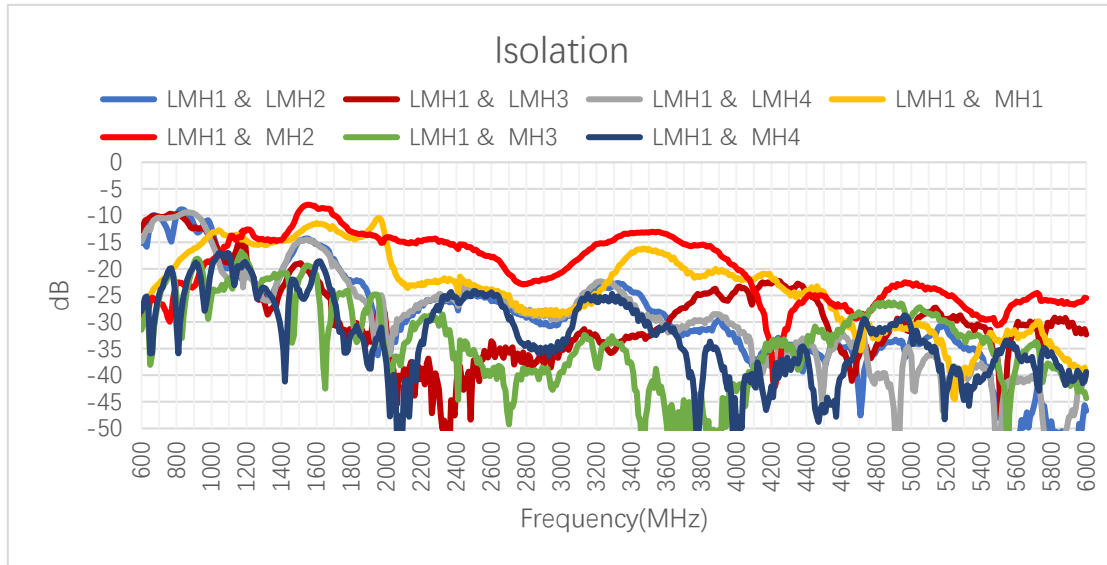


3.1.3.1.8. MH4

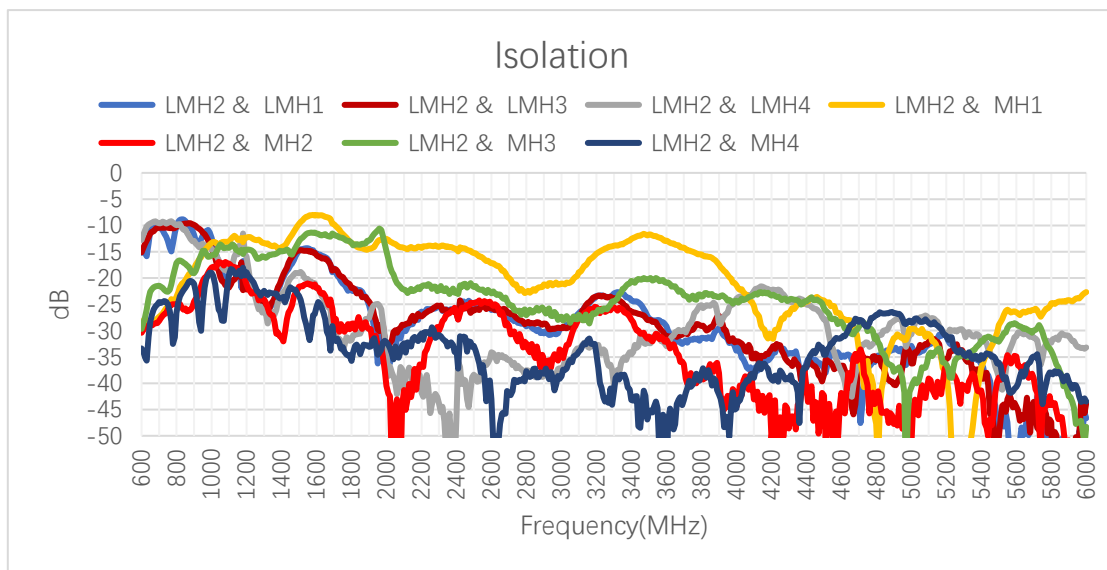


3.1.3.2. Test Status: On 300 mm x 400 mm Metal Plane

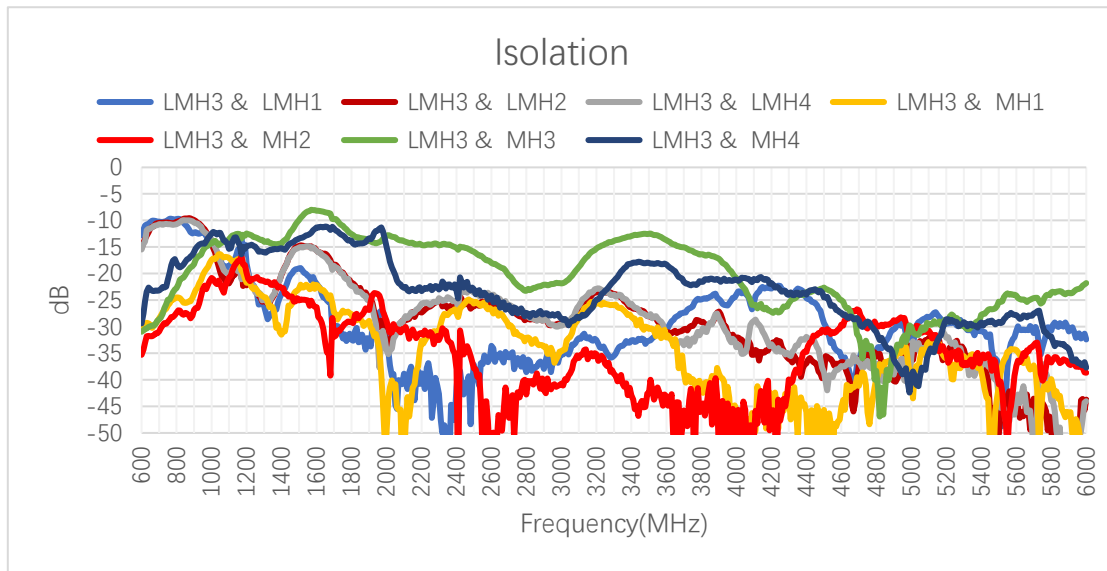
3.1.3.2.1. LMH1



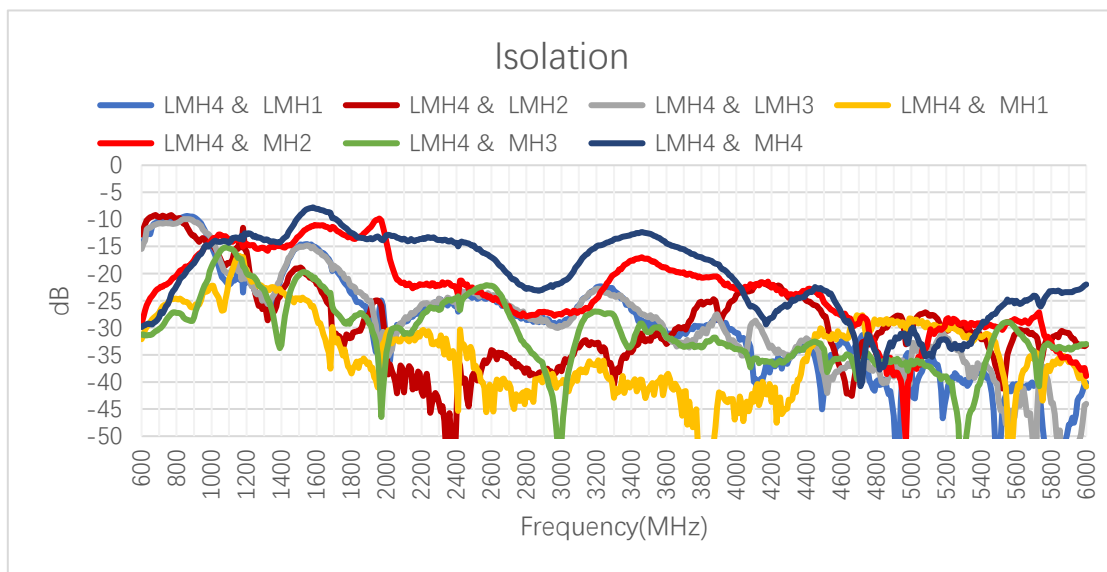
3.1.3.2.2. LMH2



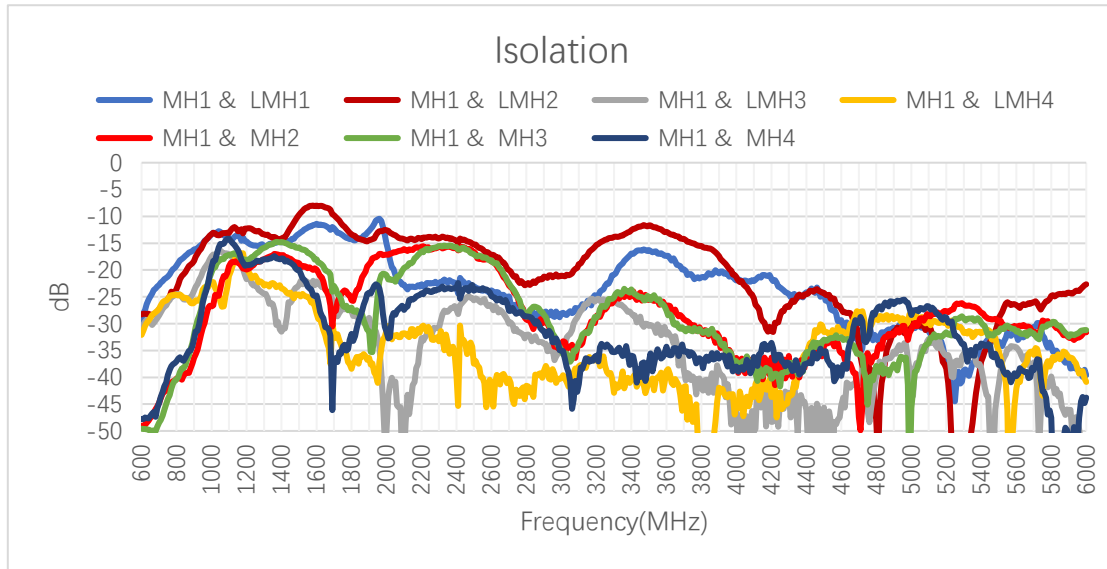
3.1.3.2.3. LMH3



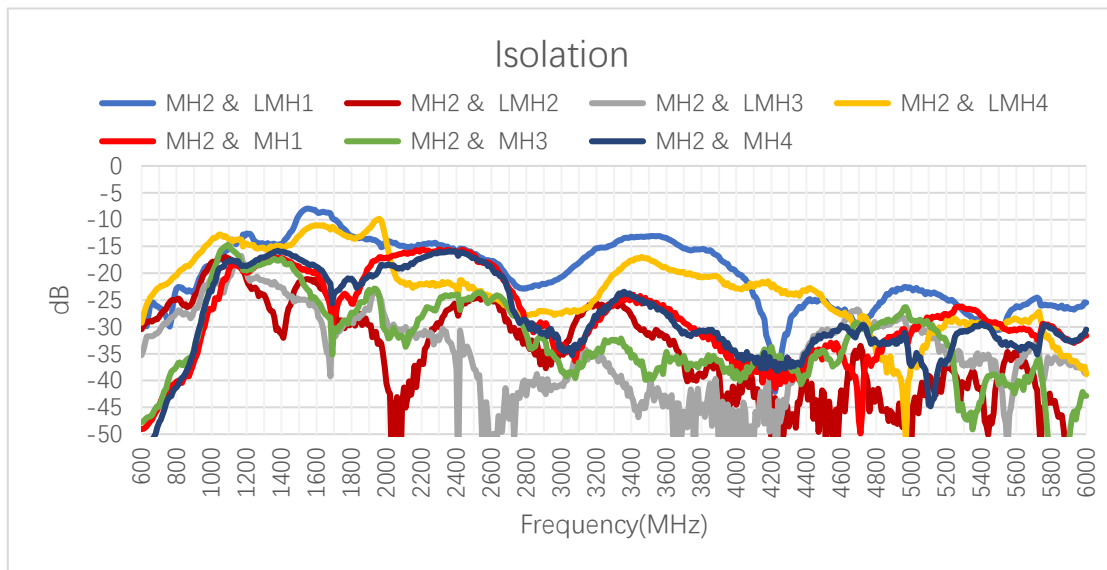
3.1.3.2.4. LMH4



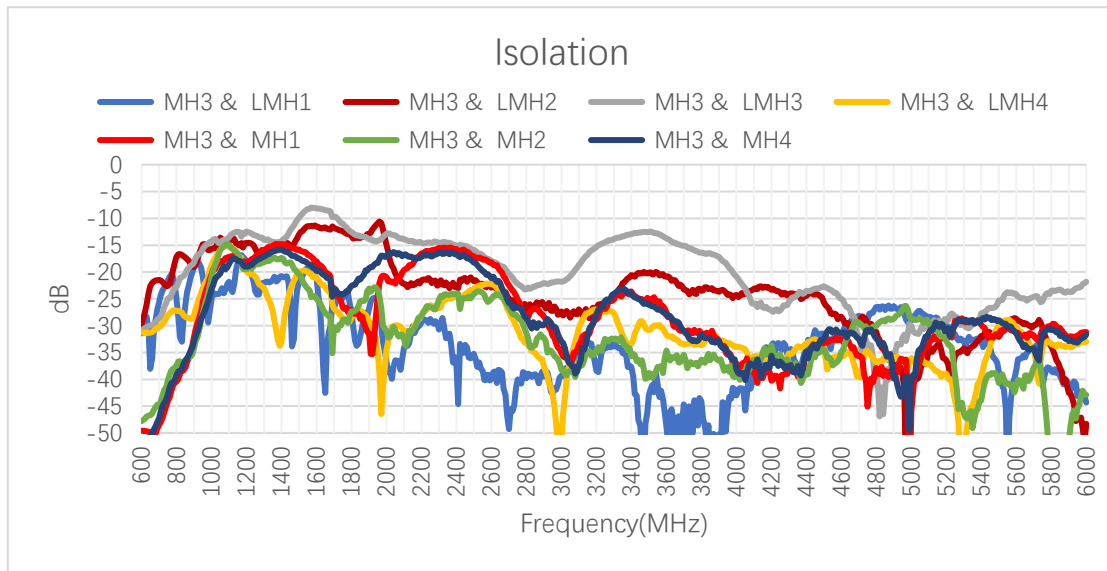
3.1.3.2.5. MH1



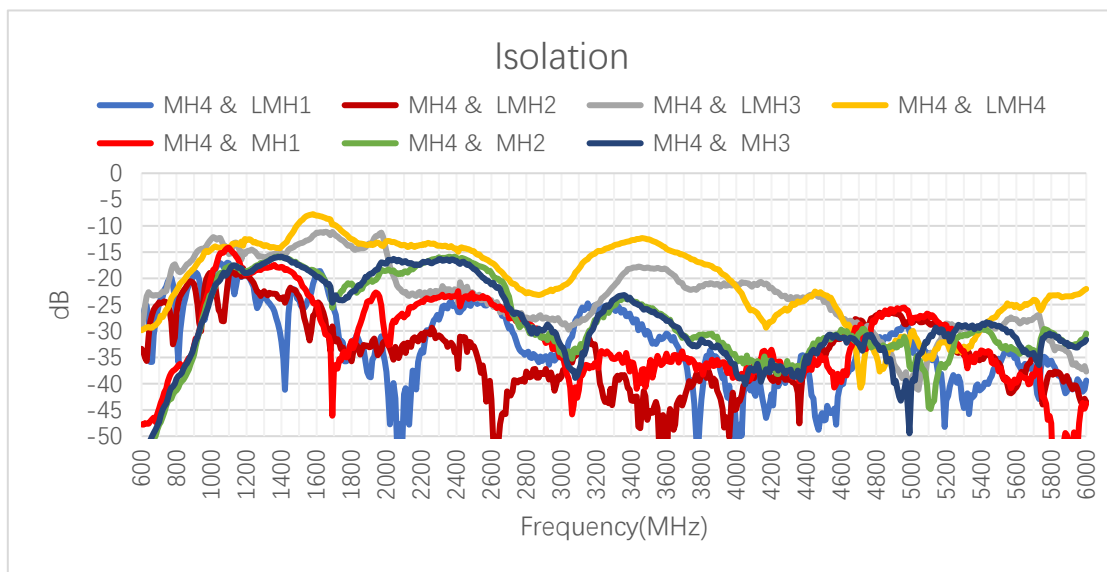
3.1.3.2.6. MH2



3.1.3.2.7. MH3



3.1.3.2.8. MH4



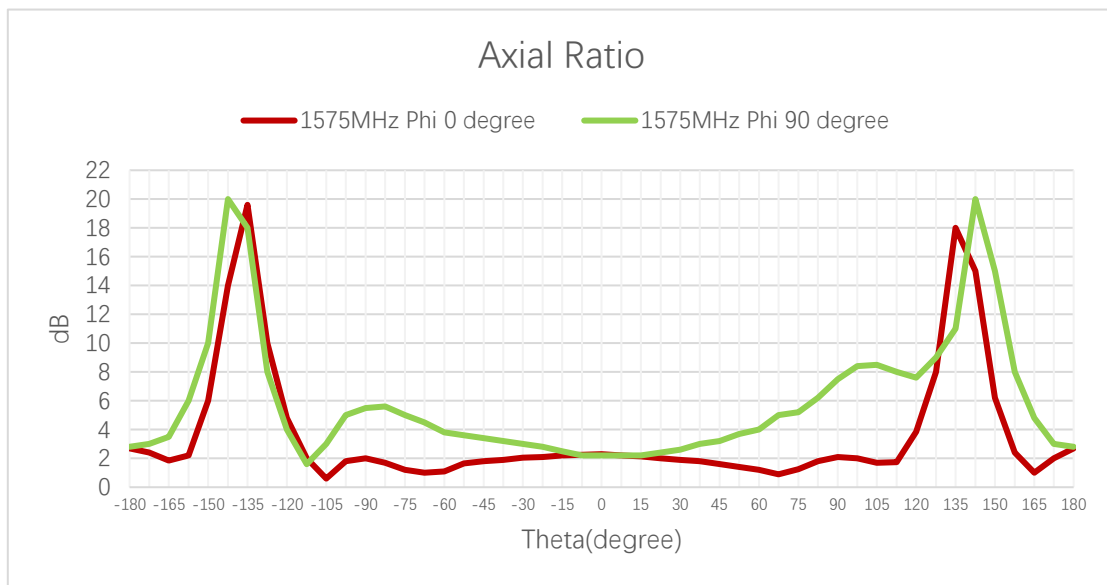
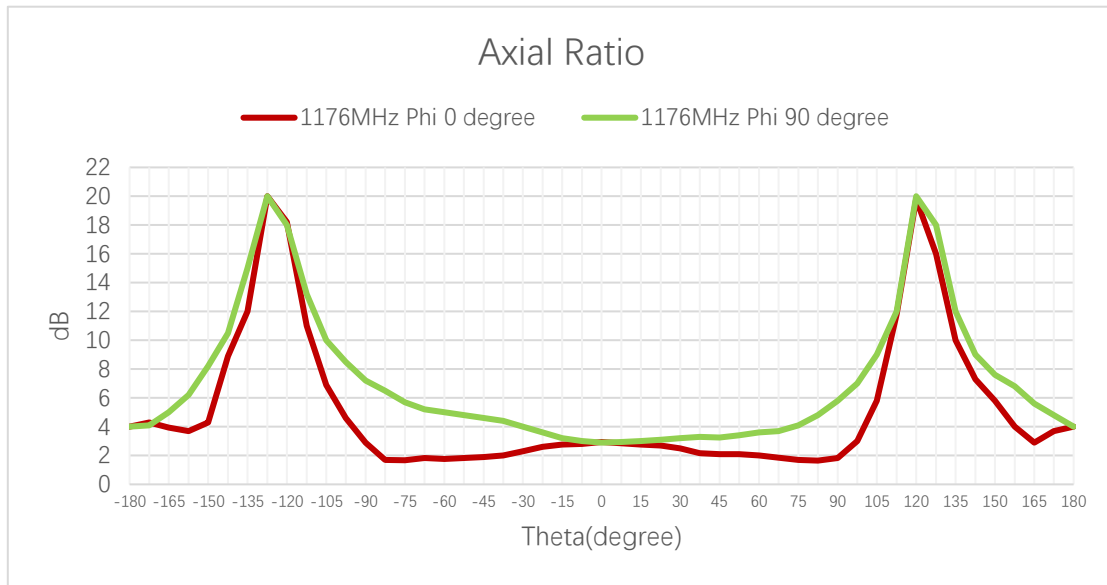
Max Isolation (dB)

	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
LMH1	FS	-10.8	-10.1	-9.6	-9.7	-10.3	-14.2	-14.9	-16.4	-13.0	-22.8	-21.7

	MP	-9.9	-9.3	-8.8	-8.4	-10.0	-14.7	-15.4	-16.4	-13.1	-22.6	-24.0
LMH2	FS	-10.8	-10.1	-9.7	-9.2	-9.6	-13.9	-14.9	-16.6	-12.9	-23.9	-21.9
	MP	-9.2	-9.2	-8.8	-9.0	-9.8	-13.8	-14.1	-15.3	-11.6	-23.6	-24.4
LMH3	FS	-11.0	-10.8	-9.9	-9.4	-10.2	-14.4	-15.5	-16.4	-13.2	-22.8	-21.9
	MP	-10.0	-9.7	-9.6	-9.1	-9.7	-14.4	-14.9	-15.9	-12.5	-22.7	-23.3
LMH4	FS	-11.0	-10.3	-9.6	-10.0	-10.6	-13.8	-15.1	-15.9	-13.0	-23.9	-22.4
	MP	-9.2	-9.2	-9.4	-8.8	-9.7	-13.8	-14.1	-14.8	-12.3	-22.5	-23.2
MH1	FS	-23.7	-20.5	-17.9	-9.2	-9.6	-13.9	-14.9	-16.6	-12.9	-22.8	-21.9
	MP	-22.8	-18.6	-14.5	-9.0	-9.8	-13.8	-14.1	-15.3	-11.6	-23.3	-24.4
MH2	FS	-24.2	-20.5	-17.6	-9.7	-10.3	-14.2	-14.9	-16.4	-13.0	-24.5	-21.7
	MP	-22.7	-19.9	-15.1	-8.4	-9.8	-14.7	-15.4	-16.4	-13.1	-22.6	-24.0
MH3	FS	-24.0	-20.8	-17.7	-9.4	-10.2	-14.4	-15.5	-16.4	-13.2	-23.7	-21.9
	MP	-21.5	-16.7	-14.8	-9.1	-9.7	-14.4	-14.9	-15.9	-12.5	-22.7	-23.3
MH4	FS	-22.5	-19.8	-16.8	-10.0	-10.6	-13.8	-15.1	-15.9	-13.0	-22.8	-22.4
	MP	-22.6	-17.3	-14.3	-8.8	-9.7	-13.8	-14.1	-14.8	-12.3	-22.5	-23.2

- FS: In Free Space
- MP: On 300 mm × 400 mm Metal Plane

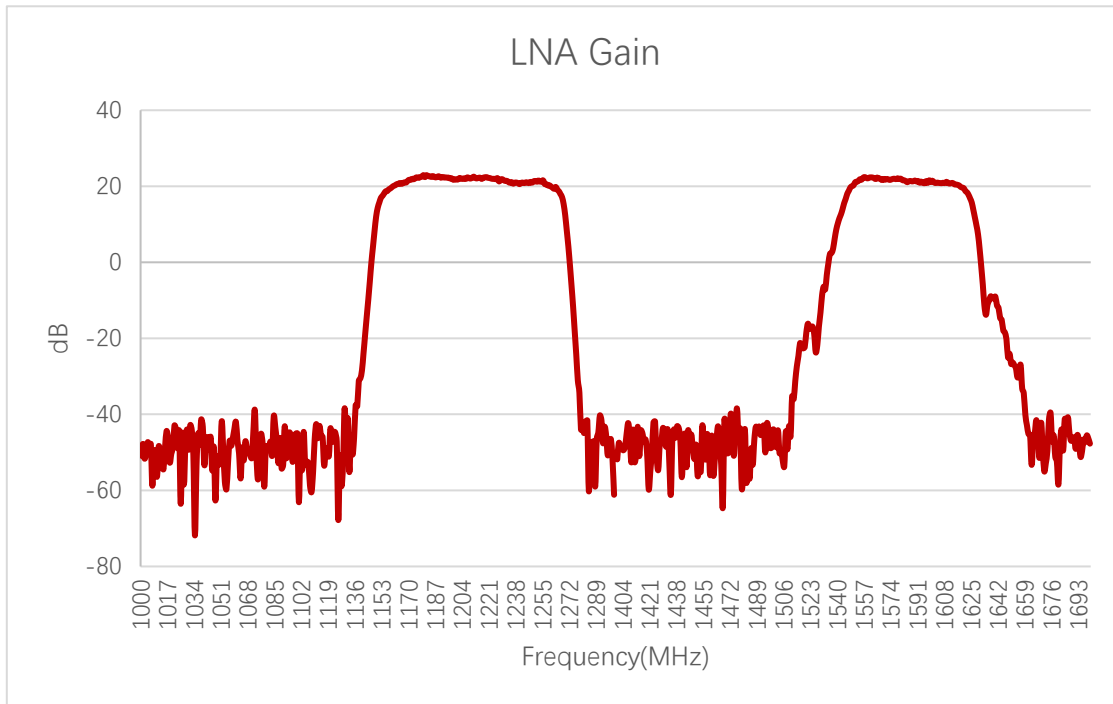
3.1.4. GNSS Axial Ratio



Axial Ratio (dB)

Frequency (MHz)		1176	1227	1575
GNSS	Phi = 0 (deg) Theta = 0 (deg)	2.8	-	2.2
	Phi = 90 (deg) Theta = 0 (deg)	2.8	-	2.2

3.1.5. GNSS LNA Gain

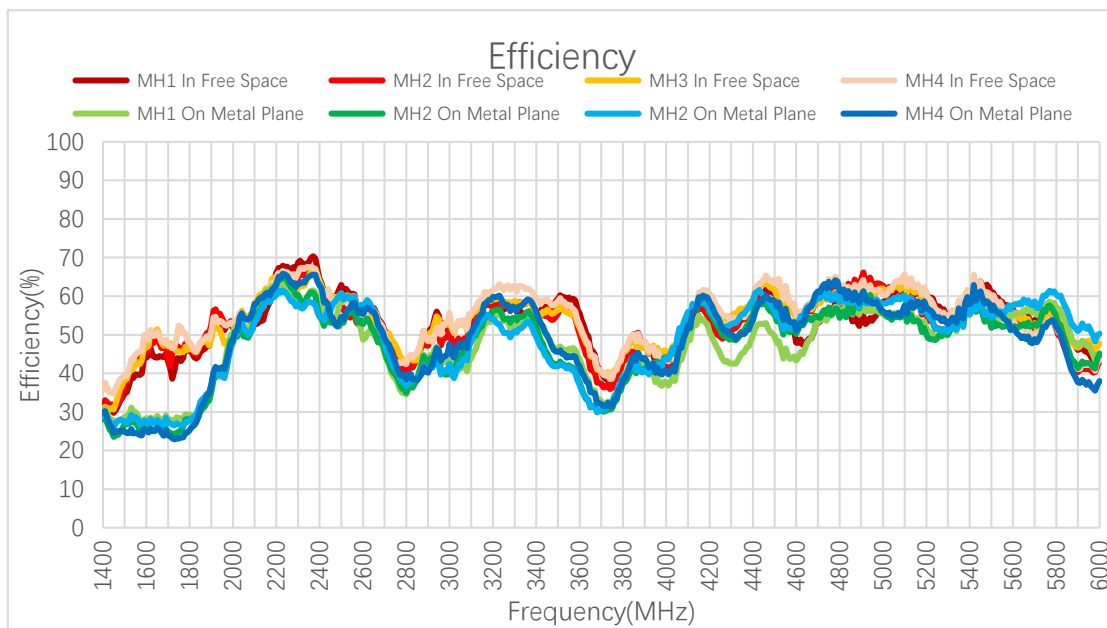
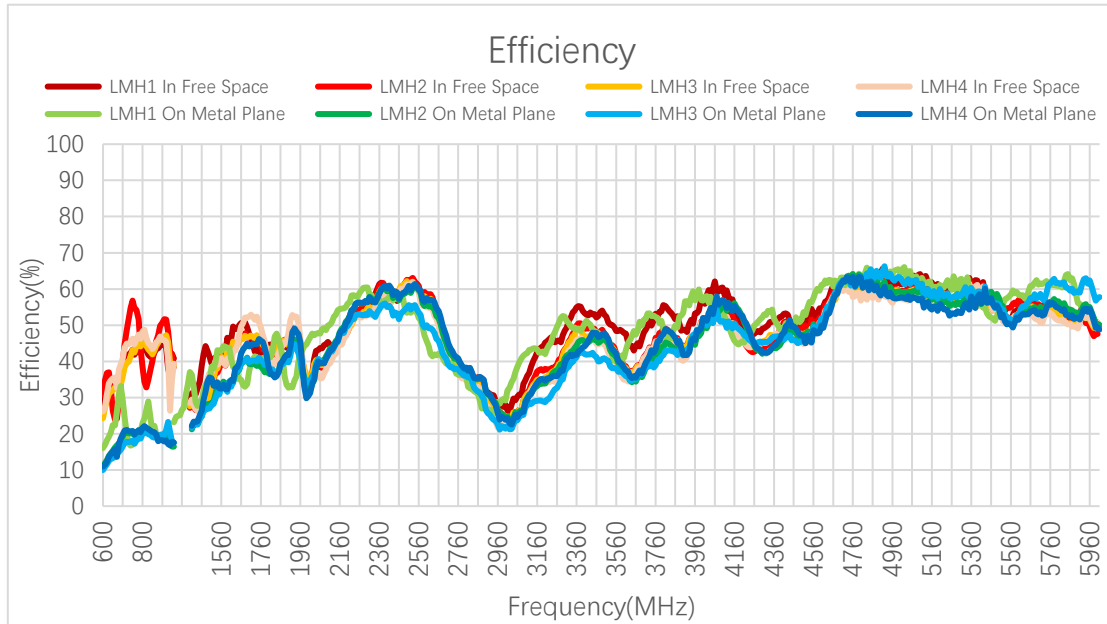


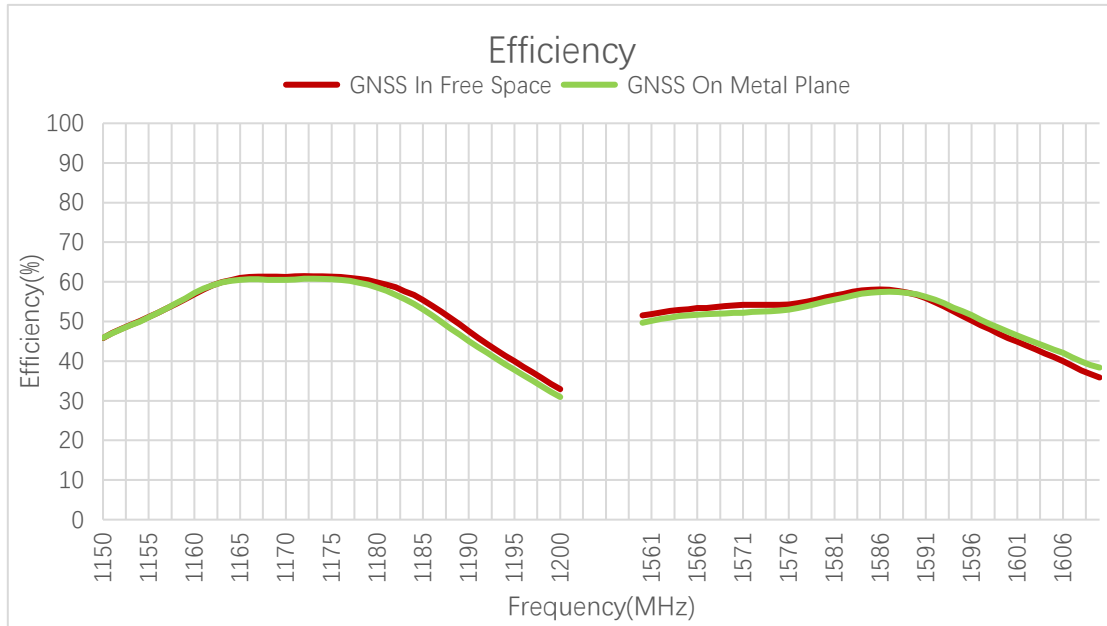
LNA Gain (dB)

Frequency (MHz)	1176	1227	1561	1575	1602
GNSS	22.2	-	22.3	21.9	20.8

3.2. Radiation Performance Test

3.2.1. Efficiency





Efficiency (%)

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
LMH1	FS	28.6	34.5	40.6	41.9	44.7	40.7	32.6	46.7	43.6	45.3
	MP	11.1	17.3	18.2	16.7	24.2	19.8	26.5	37.7	35.0	41.8
LMH2	FS	30.7	37.0	44.8	34.8	50.7	38.5	26.6	46.9	47.0	46.0
	MP	10.9	13.9	20.2	20.1	18.8	16.4	24.1	39.4	39.4	41.1
LMH3	FS	24.4	31.2	38.4	43.3	46.4	38.8	27.9	47.1	47.2	45.8
	MP	10.0	12.6	17.5	19.9	19.8	17.6	24.1	40.2	41.0	40.2
LMH4	FS	26.2	34.0	43.7	45.0	45.9	39.4	26.3	52.9	52.3	45.3
	MP	11.0	13.7	20.9	21.4	18.2	17.5	25.1	44.9	46.1	41.8
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
LMH1	FS	43.7	43.5	60.1	56.7	55.7	47.9	62.6	61.4	55.2	50.6
	MP	41.0	47.7	59.6	55.1	53.4	45.7	62.4	63.9	54.8	55.0
LMH2	FS	45.4	43.4	59.1	57.5	58.4	38.8	61.6	59.2	54.3	47.6
	MP	41.8	46.2	59.0	56.8	55.2	36.3	62.3	58.9	55.2	50.1
LMH3	FS	44.8	43.7	57.7	57.8	57.1	38.5	60.6	58.8	52.5	49.6
	MP	40.3	45.4	54.4	51.6	49.2	35.9	62.6	62.3	54.0	57.7

LMH4	FS	50.7	42.1	56.6	57.2	54.9	34.9	60.4	57.6	52.4	50.7
	MP	45.3	45.7	58.7	57.3	56.8	37.5	62.2	57.7	52.2	48.8

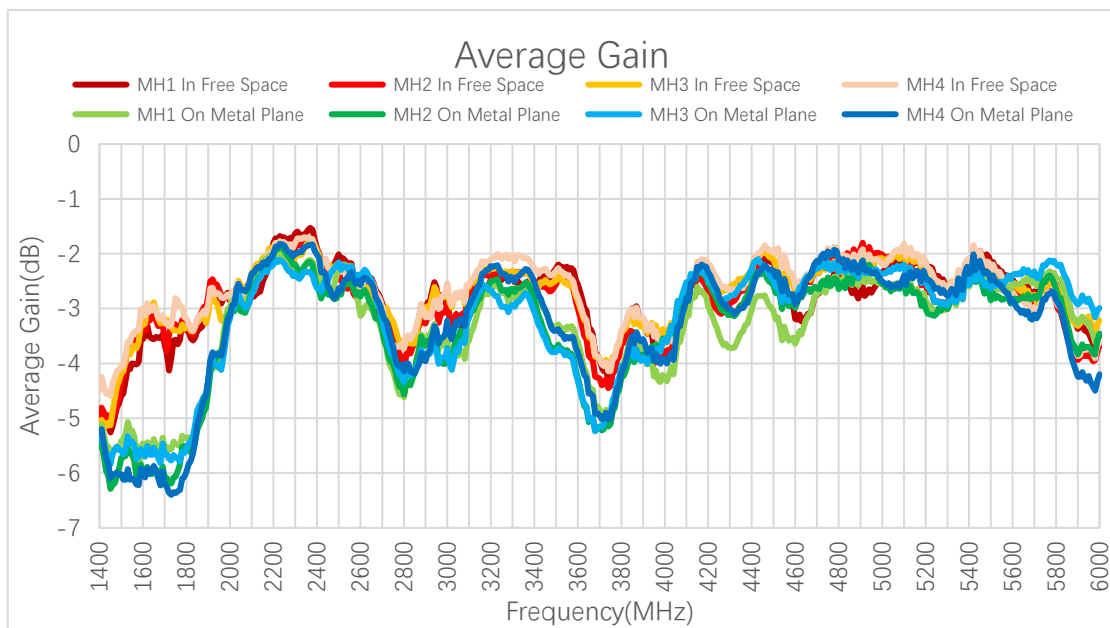
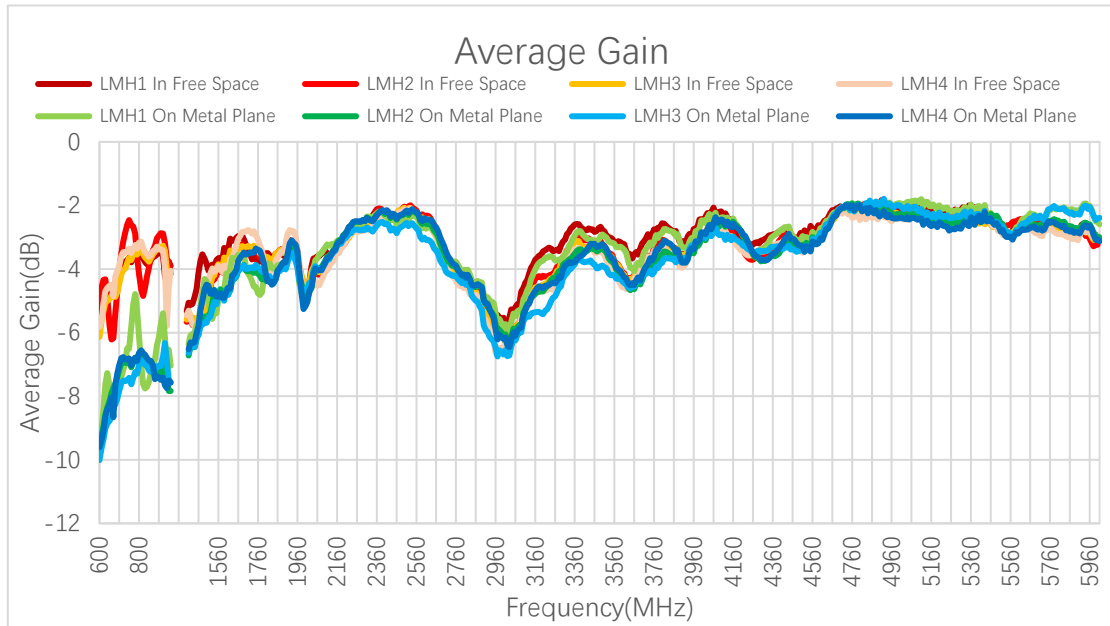
Efficiency (%)

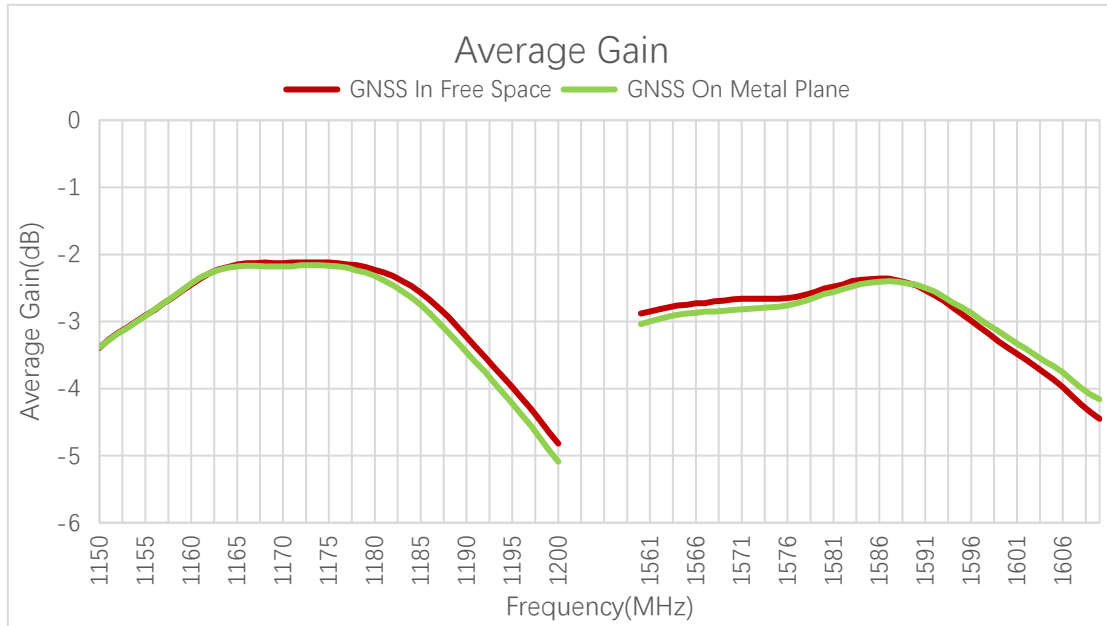
Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
MH1	FS	-	-	-	-	-	-	30.7	41.5	43.9	47.3
	MP	-	-	-	-	-	-	28.1	28.1	28.7	34.7
MH2	FS	-	-	-	-	-	-	32.0	41.9	47.1	50.4
	MP	-	-	-	-	-	-	24.9	24.6	24.6	32.5
MH3	FS	-	-	-	-	-	-	31.1	47.8	45.7	48.1
	MP	-	-	-	-	-	-	27.1	27.2	27.1	34.6
MH4	FS	-	-	-	-	-	-	35.2	47.2	49.4	49.6
	MP	-	-	-	-	-	-	26.1	23.7	23.2	34.2
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
MH1	FS	51.4	53.8	68.9	59.3	56.1	55.4	53.1	58.4	60.5	44.8
	MP	40.2	59.7	60.6	54.0	48.7	43.6	53.3	55.8	54.6	45.1
MH2	FS	54.3	58.1	66.8	58.7	53.0	50.2	58.8	62.8	56.4	43.1
	MP	41.7	57.3	60.4	53.1	52.7	37.5	54.5	55.6	51.8	45.1
MH3	FS	49.6	60.6	65.3	59.7	56.1	51.8	58.5	62.0	57.6	47.7
	MP	39.2	56.9	58.4	56.1	57.0	37.0	59.3	58.1	54.5	50.3
MH4	FS	53.3	58.0	67.5	59.6	54.6	52.5	61.1	60.3	59.0	43.4
	MP	41.4	59.5	65.0	54.9	55.4	41.7	61.2	56.1	56.3	38.0

Efficiency (%)

Frequency (MHz)		1176	1227	1561	1575	1602
GNSS	FS	61.2	-	51.9	54.2	43.9
	MP	60.5	-	50.1	52.8	45.6

3.2.2. Average Gain





Average Gain (dB)

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
LMH1	FS	-5.4	-4.6	-3.9	-3.8	-3.5	-3.9	-4.9	-3.3	-3.6	-3.4
	MP	-9.6	-7.6	-7.4	-7.8	-6.2	-7.0	-5.8	-4.2	-4.6	-3.8
LMH2	FS	-5.1	-4.3	-3.5	-4.6	-3.0	-4.2	-5.8	-3.3	-3.3	-3.4
	MP	-9.6	-8.6	-6.9	-7.0	-7.3	-7.8	-6.2	-4.0	-4.0	-3.9
LMH3	FS	-6.1	-5.1	-4.2	-3.6	-3.3	-4.1	-5.5	-3.3	-3.3	-3.4
	MP	-10.0	-9.0	-7.6	-7.0	-7.0	-7.6	-6.2	-4.0	-3.9	-4.0
LMH4	FS	-5.8	-4.7	-3.6	-3.5	-3.4	-4.1	-5.8	-2.8	-2.8	-3.4
	MP	-9.6	-8.6	-6.8	-6.7	-7.4	-7.6	-6.0	-3.5	-3.4	-3.8
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
LMH1	FS	-3.6	-3.6	-2.2	-2.5	-2.5	-3.2	-2.0	-2.1	-2.6	-3.0
	MP	-3.9	-3.2	-2.3	-2.6	-2.7	-3.4	-2.1	-2.0	-2.6	-2.6
LMH2	FS	-3.4	-3.6	-2.3	-2.4	-2.3	-4.1	-2.1	-2.3	-2.7	-3.2
	MP	-3.8	-3.4	-2.3	-2.5	-2.6	-4.4	-2.1	-2.3	-2.6	-3.0
LMH3	FS	-3.5	-3.6	-2.4	-2.4	-2.4	-4.1	-2.2	-2.3	-2.8	-3.1
	MP	-4.0	-3.4	-2.6	-2.9	-3.1	-4.4	-2.0	-2.1	-2.7	-2.4

LMH4	FS	-3.0	-3.8	-2.5	-2.4	-2.6	-4.6	-2.2	-2.4	-2.8	-3.0
	MP	-3.4	-3.4	-2.3	-2.4	-2.5	-4.3	-2.1	-2.4	-2.8	-3.1

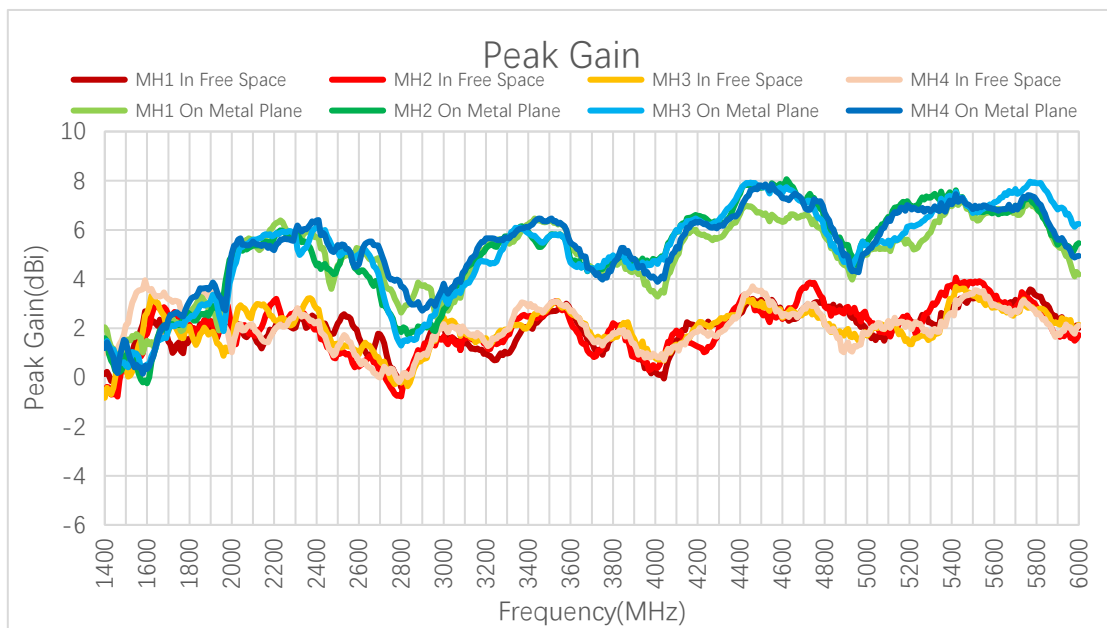
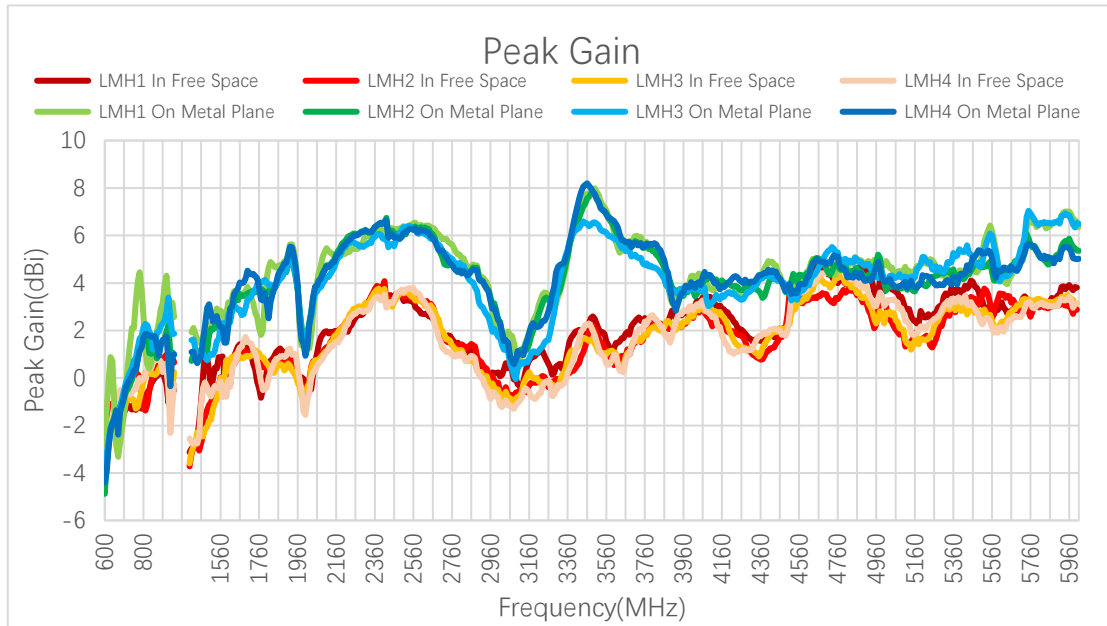
Average Gain (dB)

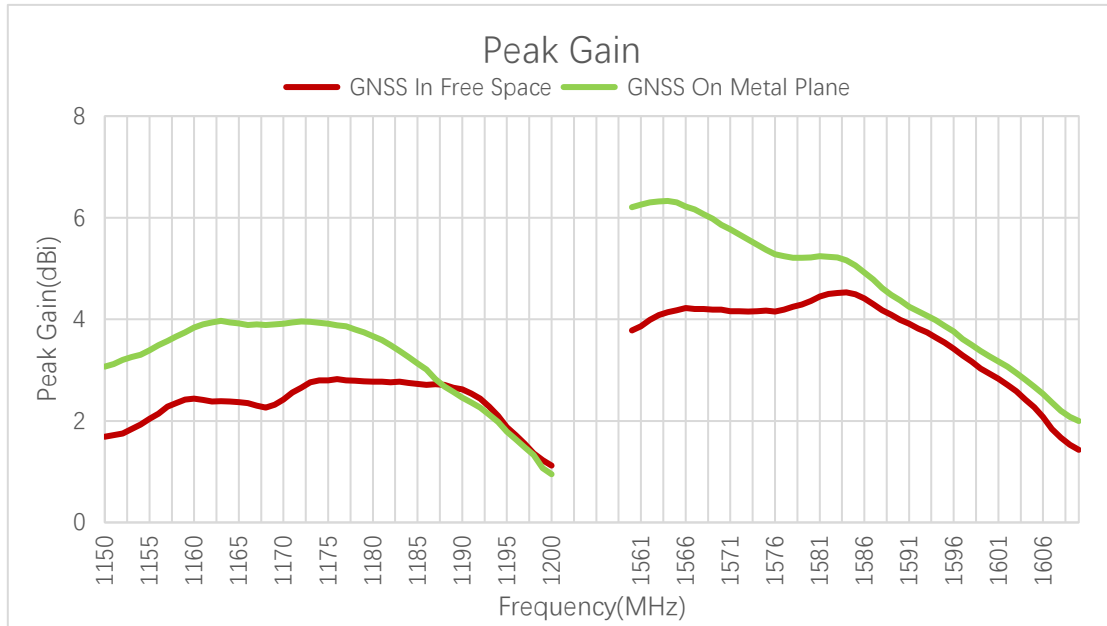
Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
MH1	FS	-	-	-	-	-	-	-5.1	-3.8	-3.6	-3.3
	MP	-	-	-	-	-	-	-5.5	-5.5	-5.4	-4.6
MH2	FS	-	-	-	-	-	-	-5.0	-3.8	-3.3	-3.0
	MP	-	-	-	-	-	-	-6.1	-6.1	-6.1	-4.9
MH3	FS	-	-	-	-	-	-	-5.1	-3.2	-3.4	-3.2
	MP	-	-	-	-	-	-	-5.7	-5.7	-5.7	-4.6
MH4	FS	-	-	-	-	-	-	-4.5	-3.3	-3.1	-3.0
	MP	-	-	-	-	-	-	-5.8	-6.3	-6.4	-4.7
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
MH1	FS	-2.9	-2.7	-1.6	-2.3	-2.5	-2.6	-2.8	-2.3	-2.2	-3.5
	MP	-4.0	-2.2	-2.2	-2.7	-3.1	-3.6	-2.7	-2.5	-2.6	-3.5
MH2	FS	-2.7	-2.4	-1.8	-2.3	-2.8	-3.0	-2.3	-2.0	-2.5	-3.7
	MP	-3.8	-2.4	-2.2	-2.8	-2.8	-4.3	-2.6	-2.6	-2.9	-3.5
MH3	FS	-3.1	-2.2	-1.9	-2.2	-2.5	-2.9	-2.3	-2.1	-2.4	-3.2
	MP	-4.1	-2.5	-2.3	-2.5	-2.4	-4.3	-2.3	-2.4	-2.6	-3.0
MH4	FS	-2.7	-2.4	-1.7	-2.3	-2.6	-2.8	-2.1	-2.2	-2.3	-3.6
	MP	-3.8	-2.3	-1.9	-2.6	-2.6	-3.8	-2.1	-2.5	-2.5	-4.2

Average Gain (dB)

Frequency (MHz)		1176	1227	1561	1575	1602
GNSS	FS	-2.1	-	-2.9	-2.7	-3.6
	MP	-2.2	-	-3.0	-2.8	-3.4

3.2.3. Peak Gain





Peak Gain (dBi)

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
LMH1	FS	-5.4	-4.6	-3.9	-3.8	-3.5	-3.9	-4.9	-3.3	-3.6	-3.4
	MP	-9.6	-7.6	-7.4	-7.8	-6.2	-7.0	-5.8	-4.2	-4.6	-3.8
LMH2	FS	-5.1	-4.3	-3.5	-4.6	-3.0	-4.2	-5.8	-3.3	-3.3	-3.4
	MP	-9.6	-8.6	-6.9	-7.0	-7.3	-7.8	-6.2	-4.0	-4.0	-3.9
LMH3	FS	-6.1	-5.1	-4.2	-3.6	-3.3	-4.1	-5.5	-3.3	-3.3	-3.4
	MP	-10.0	-9.0	-7.6	-7.0	-7.0	-7.6	-6.2	-4.0	-3.9	-4.0
LMH4	FS	-5.8	-4.7	-3.6	-3.5	-3.4	-4.1	-5.8	-2.8	-2.8	-3.4
	MP	-9.6	-8.6	-6.8	-6.7	-7.4	-7.6	-6.0	-3.5	-3.4	-3.8
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
LMH1	FS	-3.6	-3.6	-2.2	-2.5	-2.5	-3.2	-2.0	-2.1	-2.6	-3.0
	MP	-3.9	-3.2	-2.3	-2.6	-2.7	-3.4	-2.1	-2.0	-2.6	-2.6
LMH2	FS	-3.4	-3.6	-2.3	-2.4	-2.3	-4.1	-2.1	-2.3	-2.7	-3.2
	MP	-3.8	-3.4	-2.3	-2.5	-2.6	-4.4	-2.1	-2.3	-2.6	-3.0
LMH3	FS	-3.5	-3.6	-2.4	-2.4	-2.4	-4.1	-2.2	-2.3	-2.8	-3.1
	MP	-4.0	-3.4	-2.6	-2.9	-3.1	-4.4	-2.0	-2.1	-2.7	-2.4

LMH4	FS	-3.0	-3.8	-2.5	-2.4	-2.6	-4.6	-2.2	-2.4	-2.8	-3.0
	MP	-3.4	-3.4	-2.3	-2.4	-2.5	-4.3	-2.1	-2.4	-2.8	-3.1

Peak Gain (dBi)

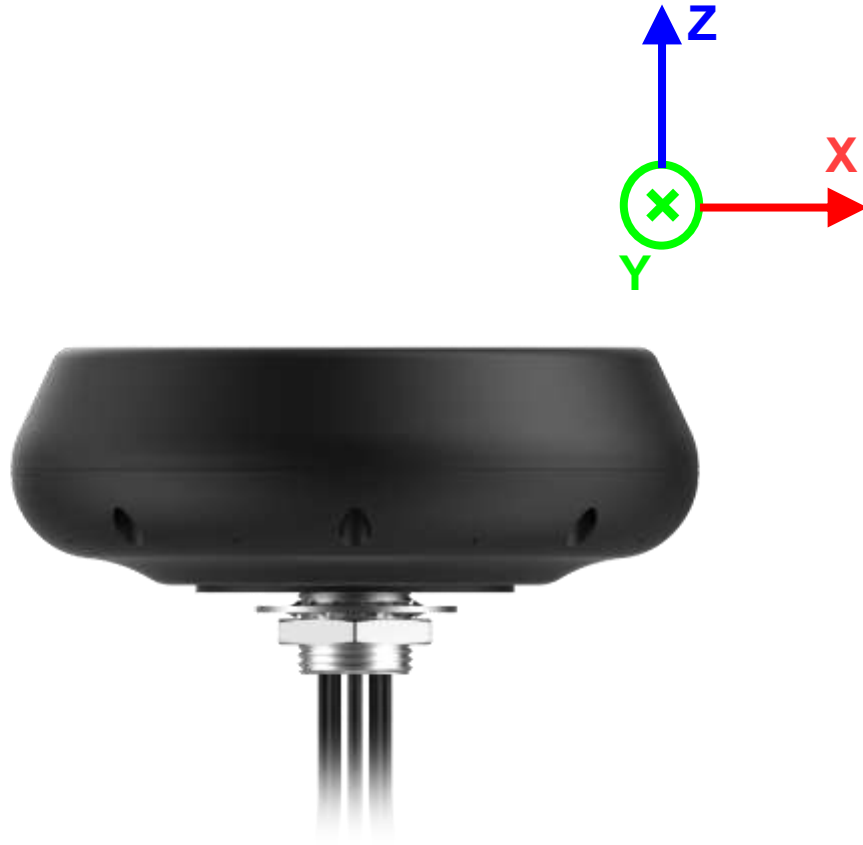
Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
MH1	FS	-	-	-	-	-	-	-5.1	-3.8	-3.6	-3.3
	MP	-	-	-	-	-	-	-5.5	-5.5	-5.4	-4.6
MH2	FS	-	-	-	-	-	-	-5.0	-3.8	-3.3	-3.0
	MP	-	-	-	-	-	-	-6.1	-6.1	-6.1	-4.9
MH3	FS	-	-	-	-	-	-	-5.1	-3.2	-3.4	-3.2
	MP	-	-	-	-	-	-	-5.7	-5.7	-5.7	-4.6
MH4	FS	-	-	-	-	-	-	-4.5	-3.3	-3.1	-3.0
	MP	-	-	-	-	-	-	-5.8	-6.3	-6.4	-4.7
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
MH1	FS	-2.9	-2.7	-1.6	-2.3	-2.5	-2.6	-2.8	-2.3	-2.2	-3.5
	MP	-4.0	-2.2	-2.2	-2.7	-3.1	-3.6	-2.7	-2.5	-2.6	-3.5
MH2	FS	-2.7	-2.4	-1.8	-2.3	-2.8	-3.0	-2.3	-2.0	-2.5	-3.7
	MP	-3.8	-2.4	-2.2	-2.8	-2.8	-4.3	-2.6	-2.6	-2.9	-3.5
MH3	FS	-3.1	-2.2	-1.9	-2.2	-2.5	-2.9	-2.3	-2.1	-2.4	-3.2
	MP	-4.1	-2.5	-2.3	-2.5	-2.4	-4.3	-2.3	-2.4	-2.6	-3.0
MH4	FS	-2.7	-2.4	-1.7	-2.3	-2.6	-2.8	-2.1	-2.2	-2.3	-3.6
	MP	-3.8	-2.3	-1.9	-2.6	-2.6	-3.8	-2.1	-2.5	-2.5	-4.2

Peak Gain (dBi)

Frequency (MHz)		1176	1227	1561	1575	1602
GNSS	FS	2.8	-	3.9	4.2	2.7
	MP	3.9	-	6.3	5.4	3.1

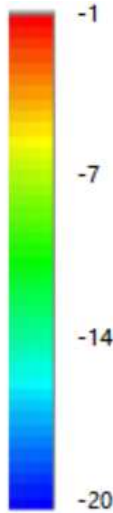
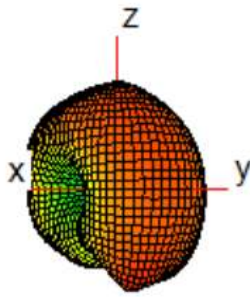
3.2.4. 3D & 2D Radiation Pattern

3.2.4.1. Test Status: In Free Space

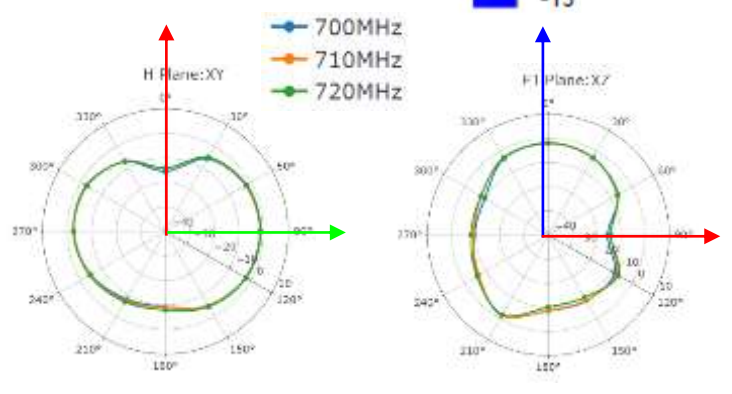
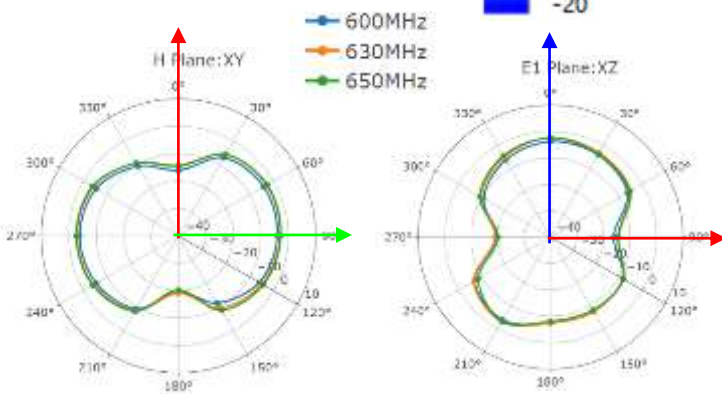
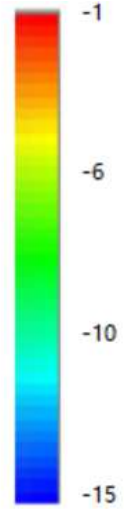
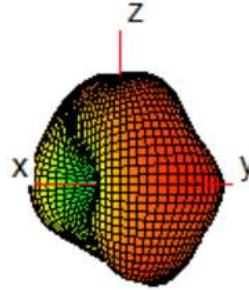


● **LMH1**

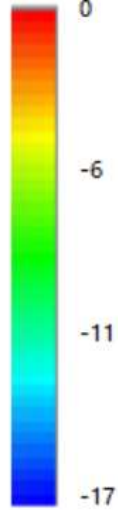
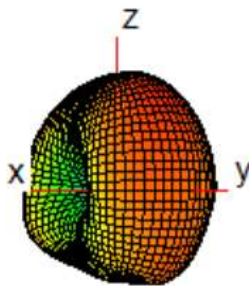
630 MHz



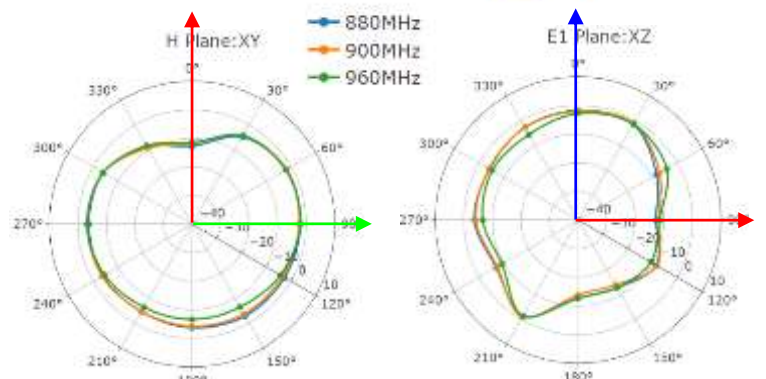
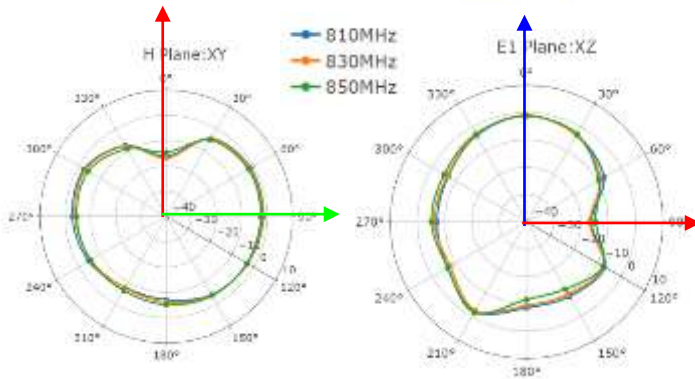
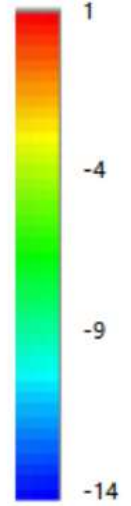
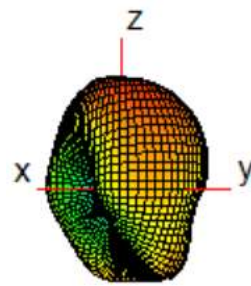
710 MHz



830 MHz

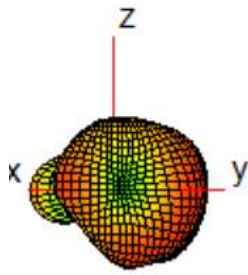
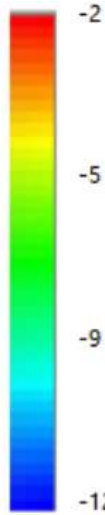


900 MHz

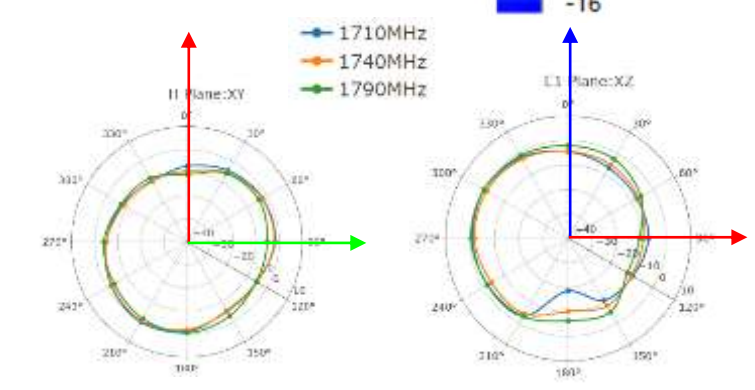
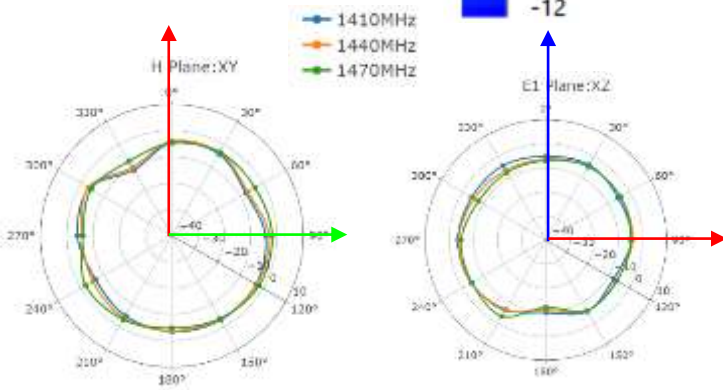
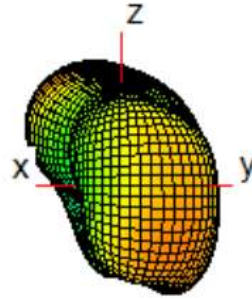


● **LMH1**

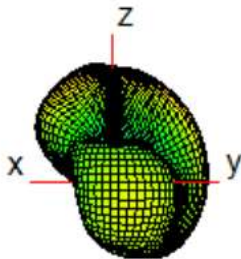
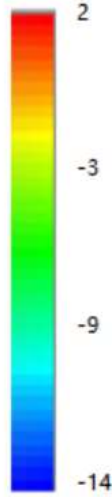
1440 MHz



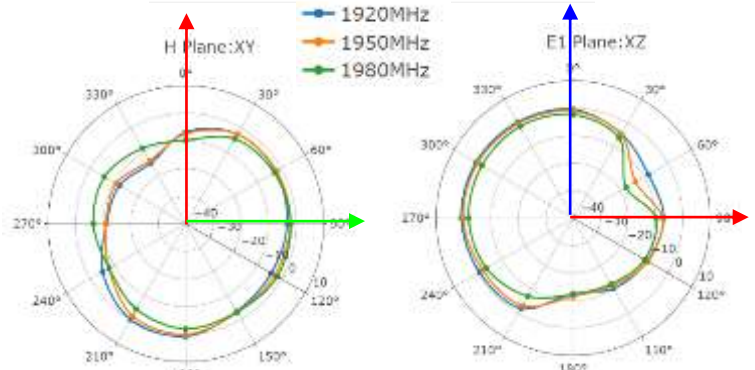
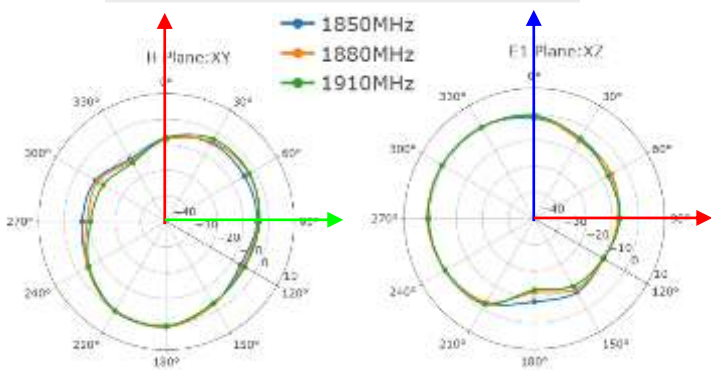
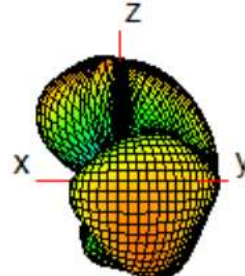
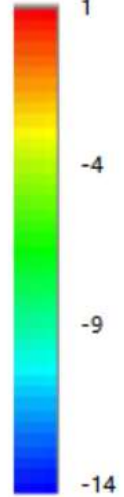
1740 MHz



1880 MHz

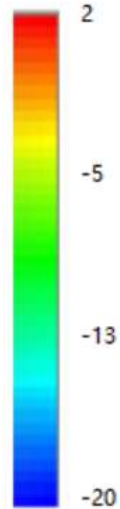
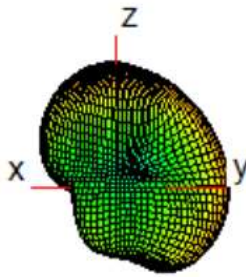


1950 MHz

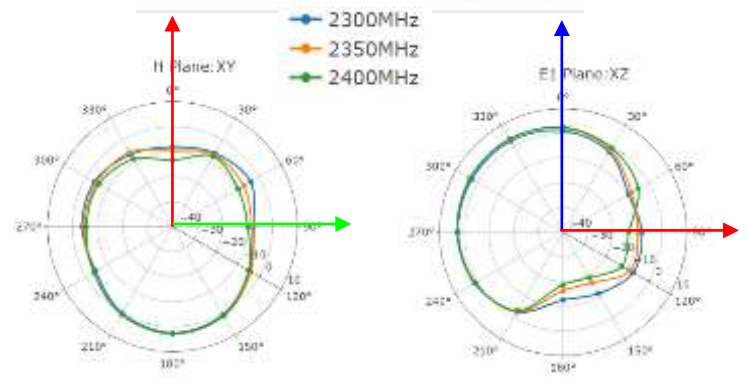
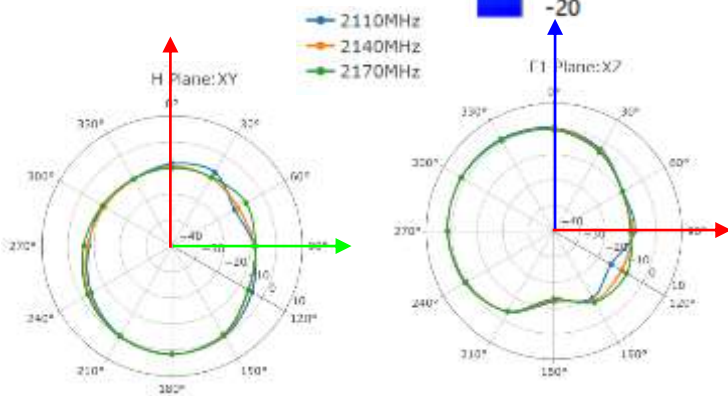
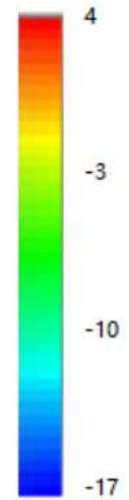
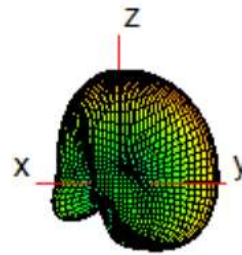


● **LMH1**

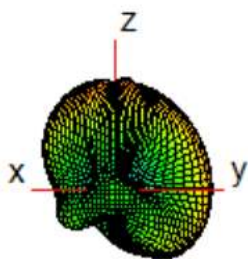
2140 MHz



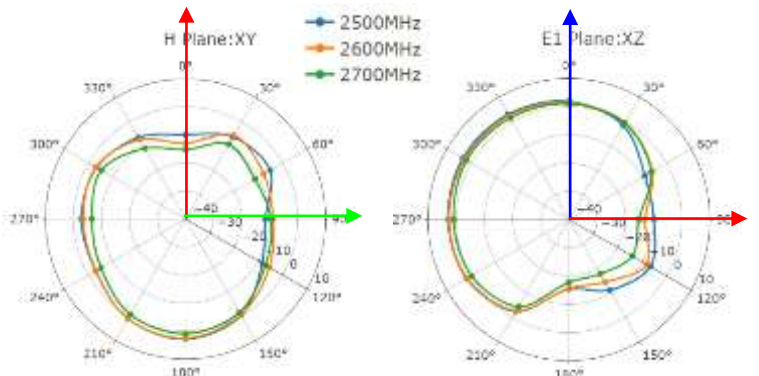
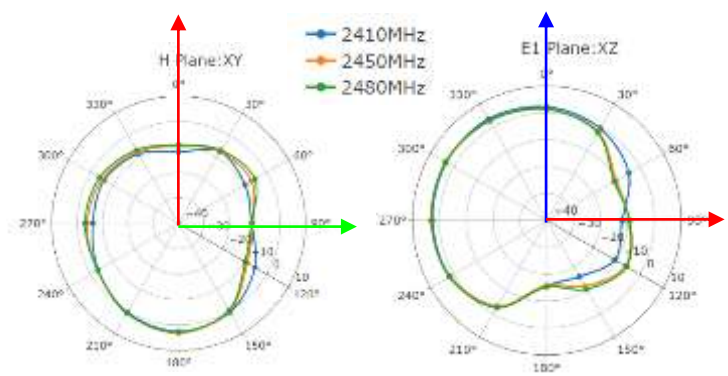
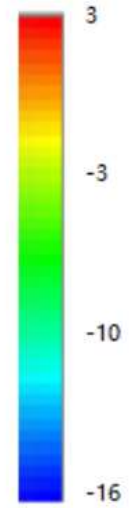
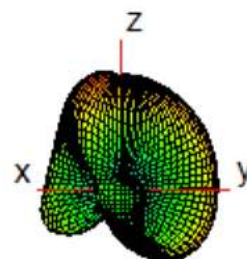
2350 MHz



2450 MHz

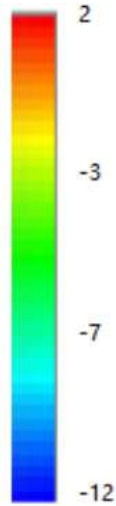
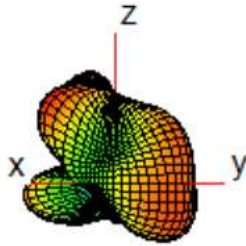


2600 MHz

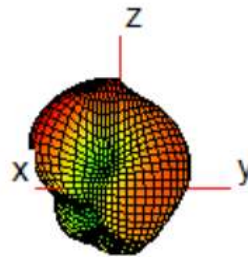


● **LMH1**

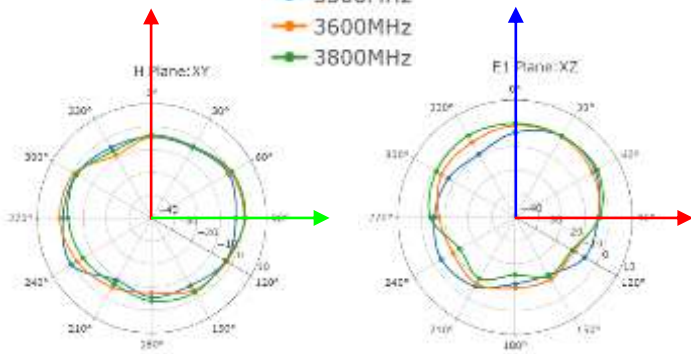
3600 MHz



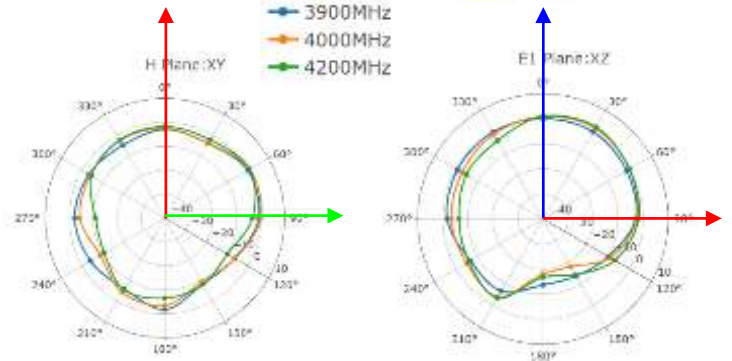
4000 MHz



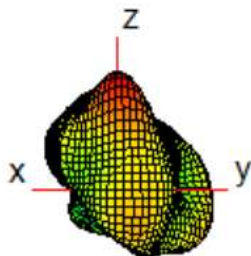
— 3300MHz
— 3600MHz
— 3800MHz



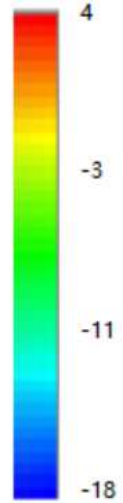
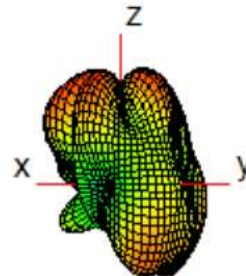
— 3900MHz
— 4000MHz
— 4200MHz



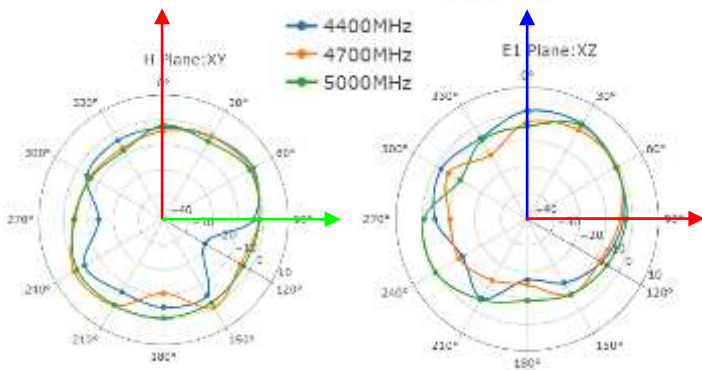
4700 MHz



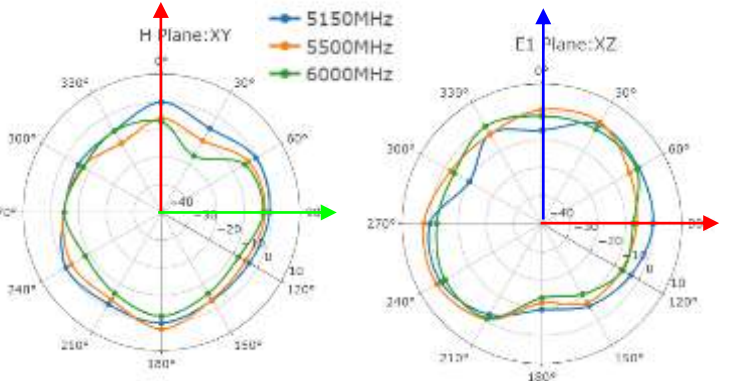
5500 MHz



— 4400MHz
— 4700MHz
— 5000MHz

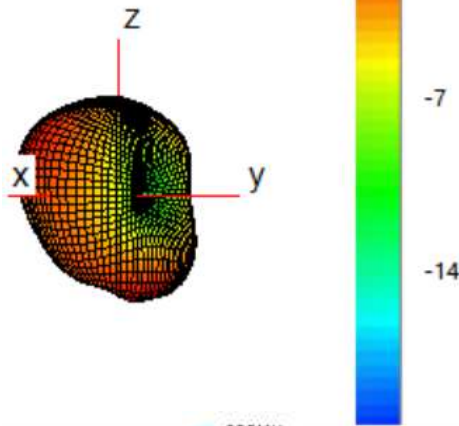


— 5150MHz
— 5500MHz
— 6000MHz

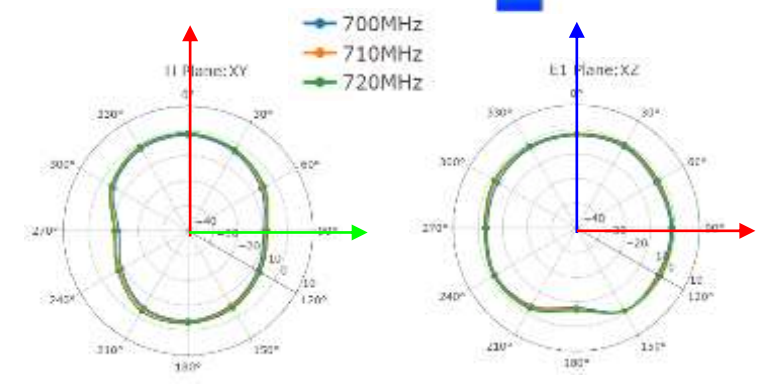
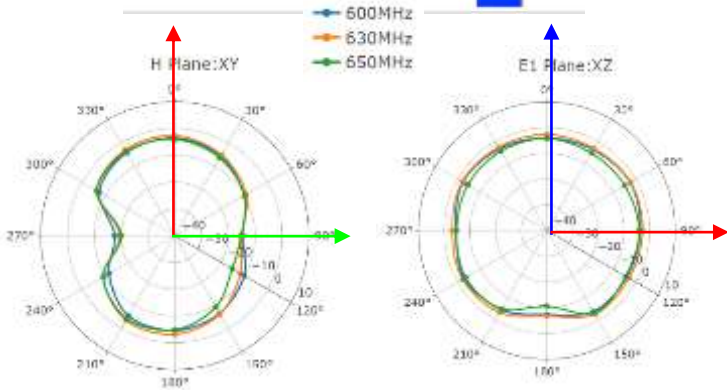
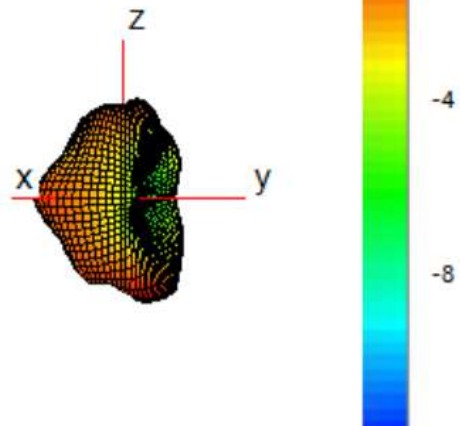


● **LMH2**

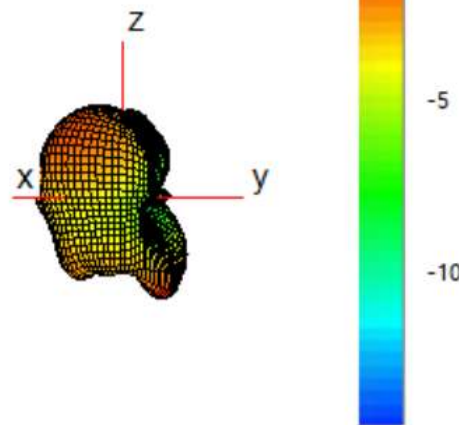
630 MHz



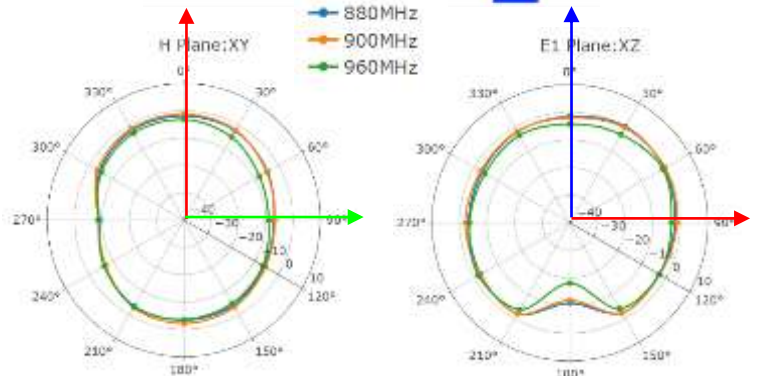
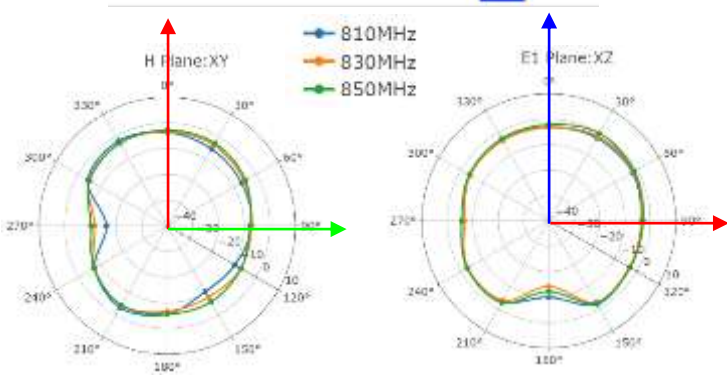
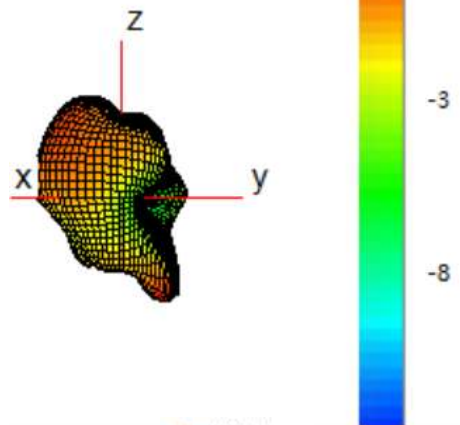
710 MHz



830MHz

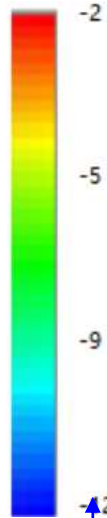
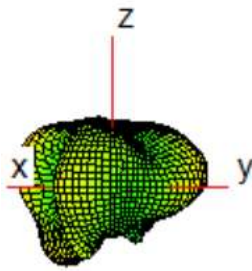


900MHz

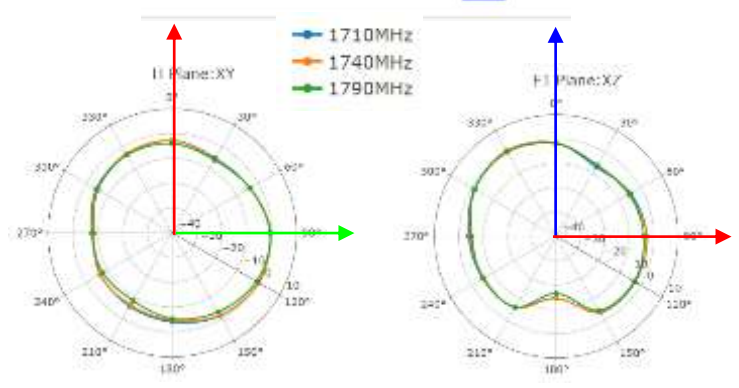
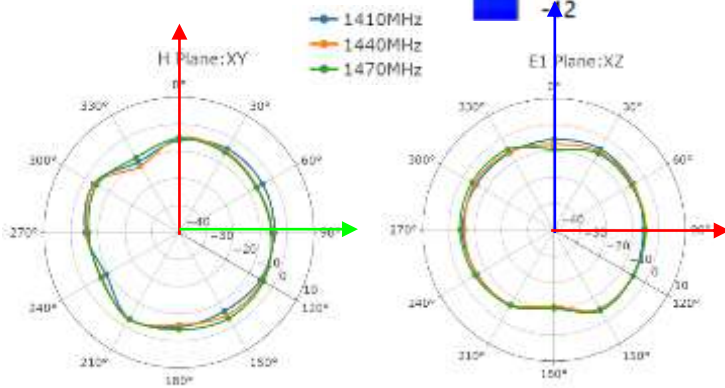
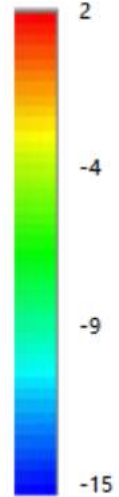
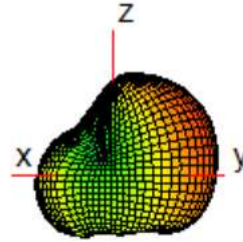


● **LMH2**

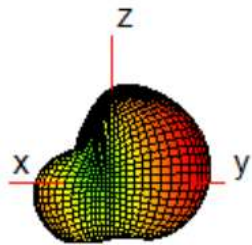
1440 MHz



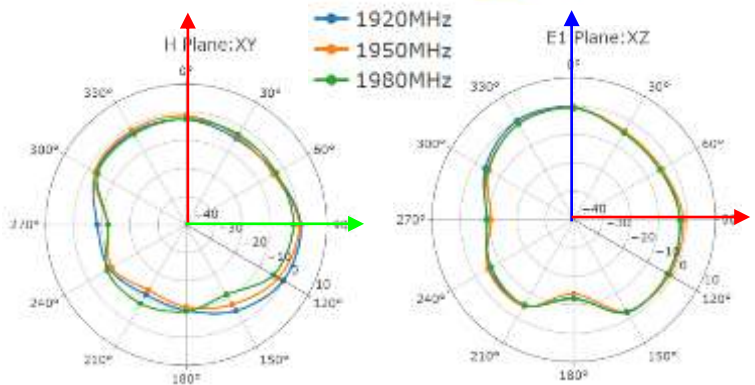
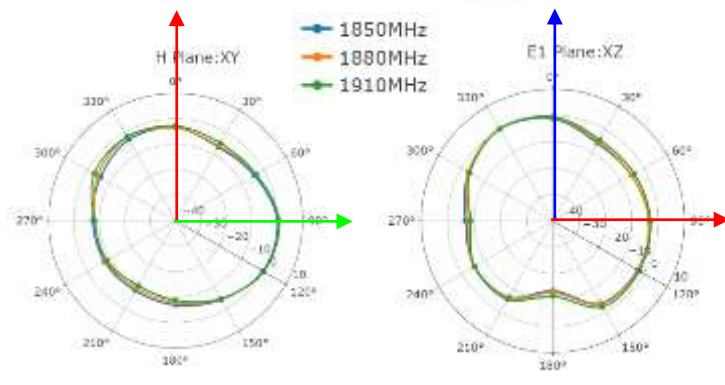
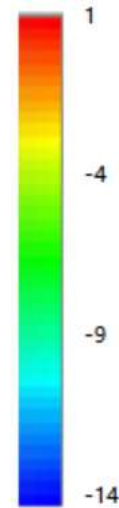
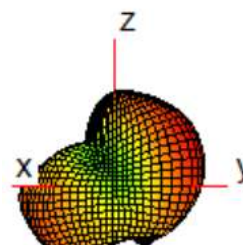
1740 MHz



1880 MHz

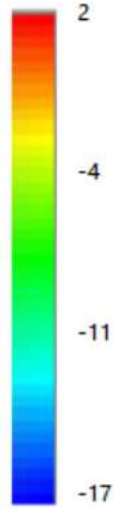
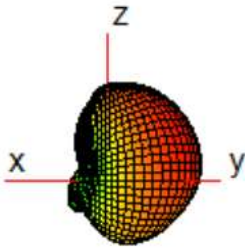


1950 MHz

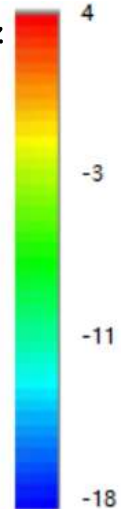
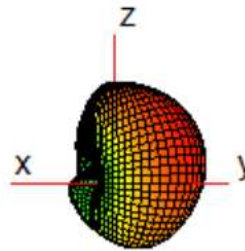


● **LMH2**

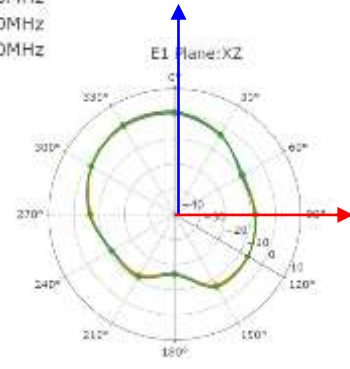
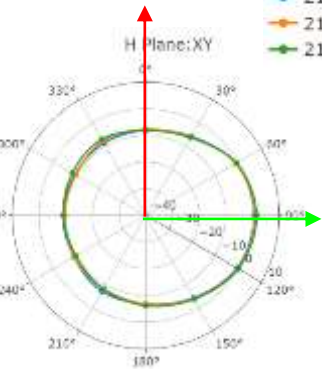
2140 MHz



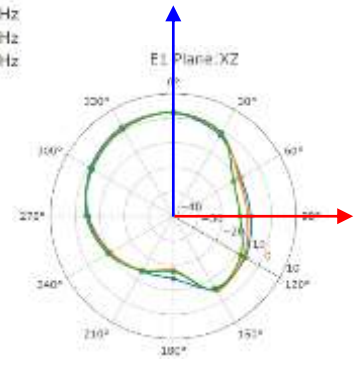
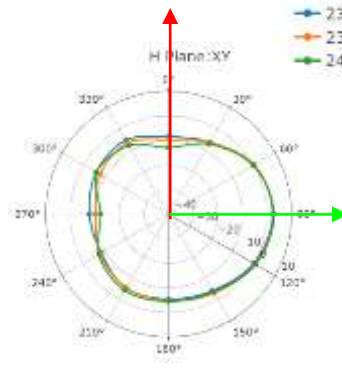
2350 MHz



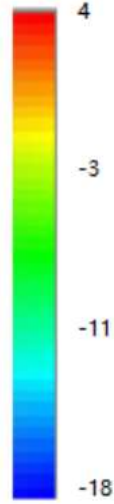
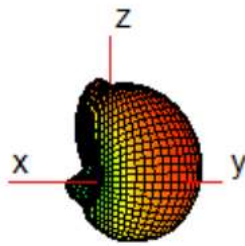
- 2110MHz
- 2140MHz
- 2170MHz



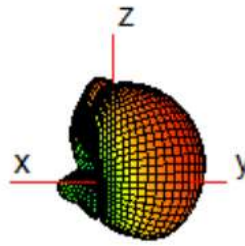
- 2300MHz
- 2350MHz
- 2400MHz



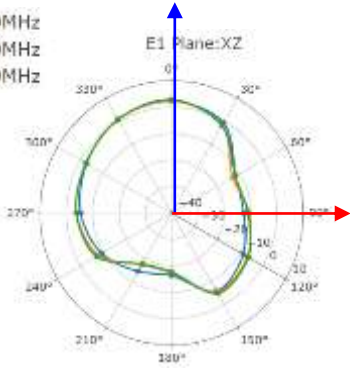
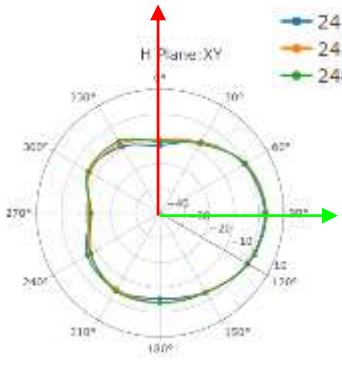
2450 MHz



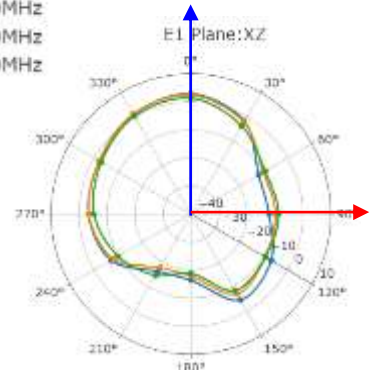
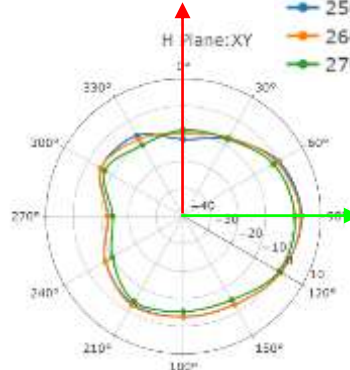
2600 MHz



- 2410MHz
- 2450MHz
- 2480MHz

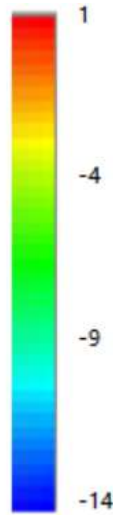
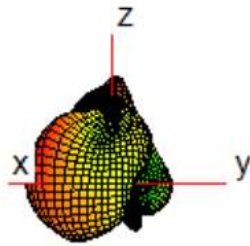


- 2500MHz
- 2600MHz
- 2700MHz

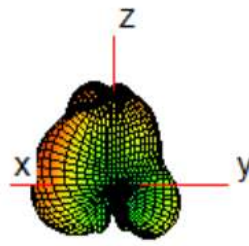


● **LMH2**

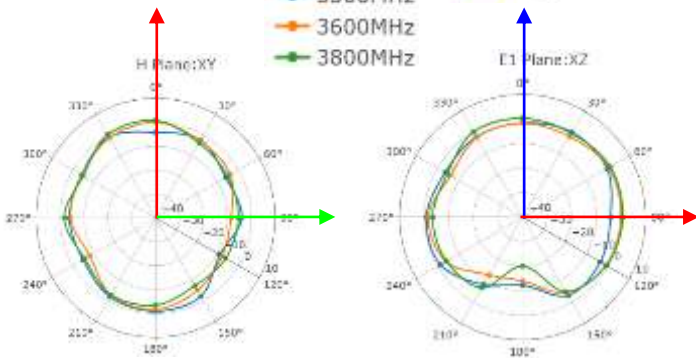
3600 MHz



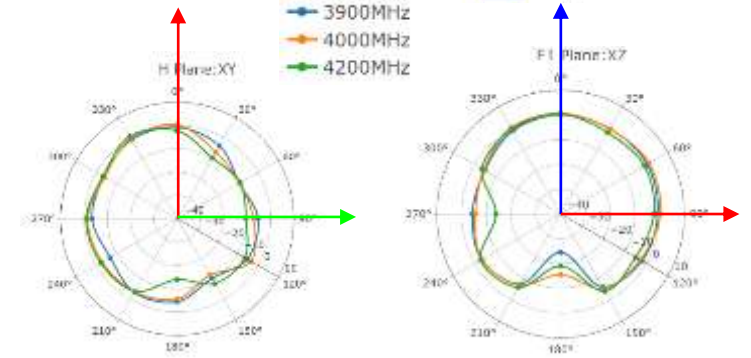
4000 MHz



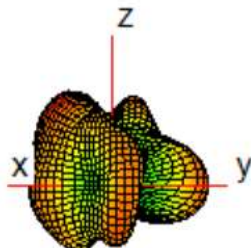
— 3300MHz
— 3600MHz
— 3800MHz



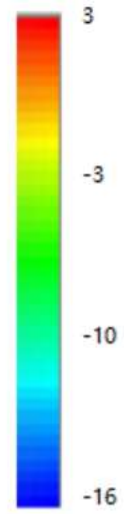
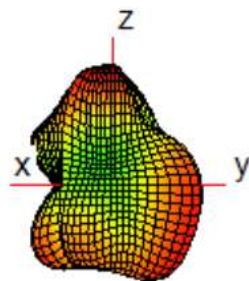
— 3900MHz
— 4000MHz
— 4200MHz



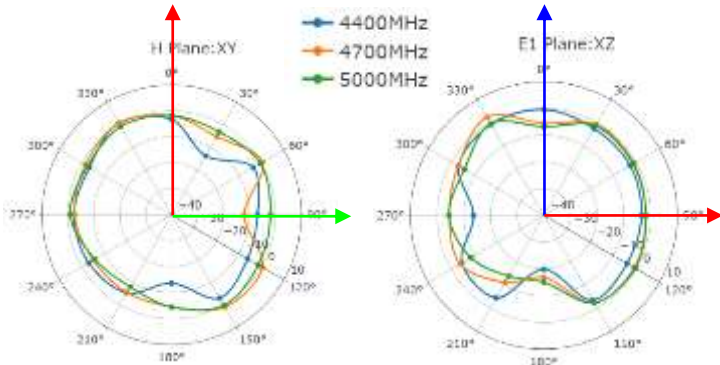
4700 MHz



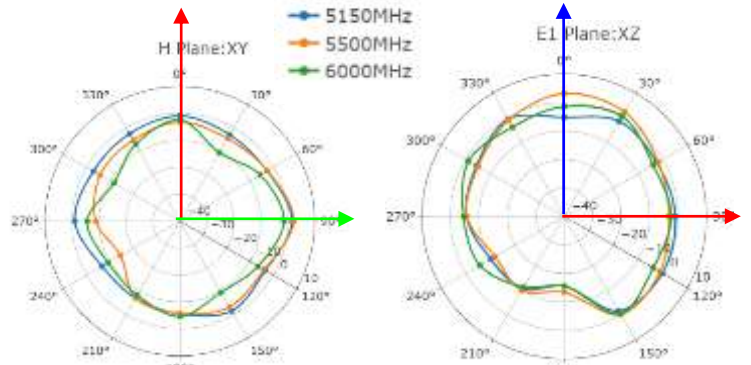
5500 MHz



— 4400MHz
— 4700MHz
— 5000MHz

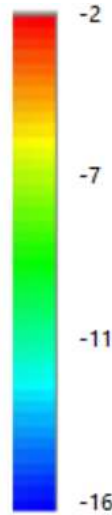
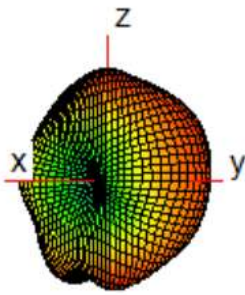


— 5150MHz
— 5500MHz
— 6000MHz

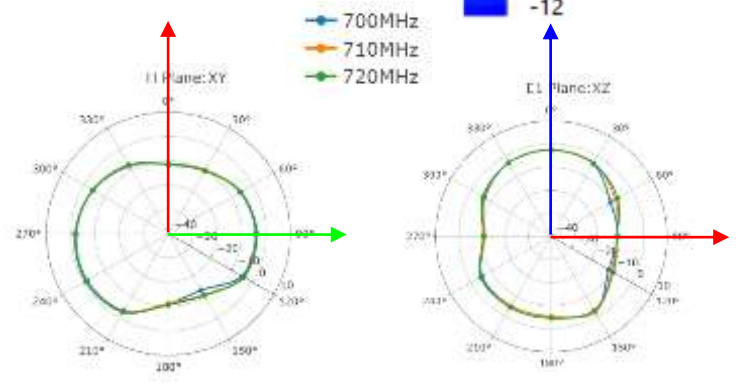
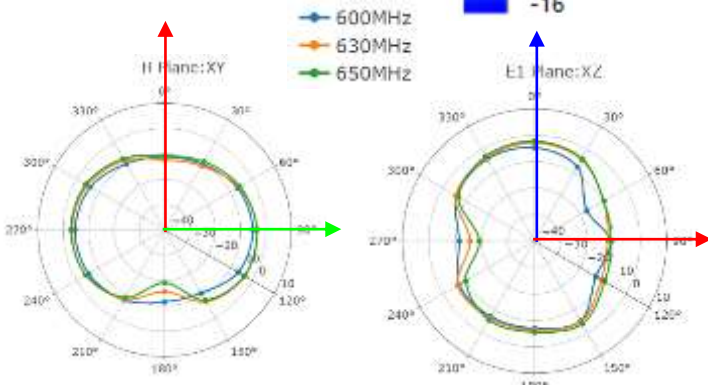
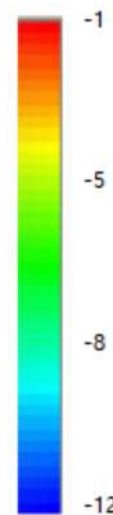
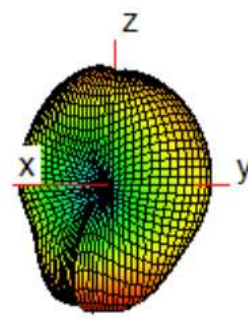


● **LMH3**

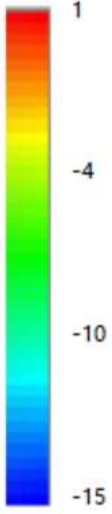
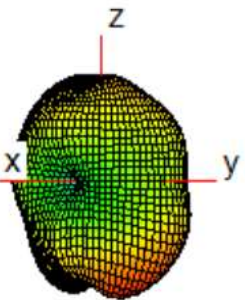
630 MHz



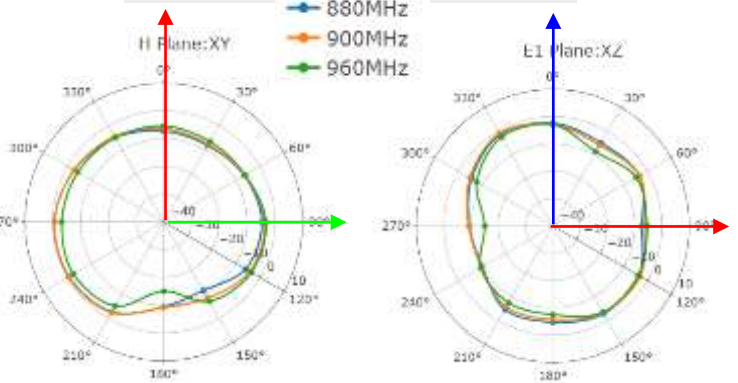
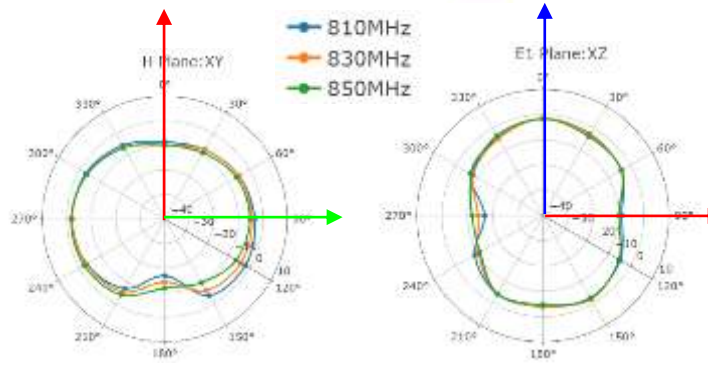
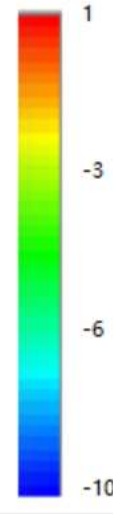
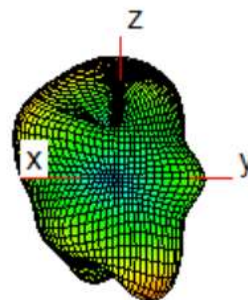
710 MHz



830 MHz

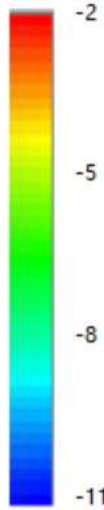
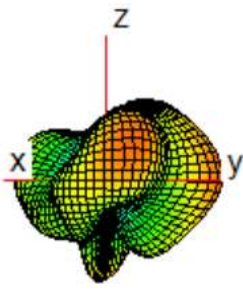


900 MHz

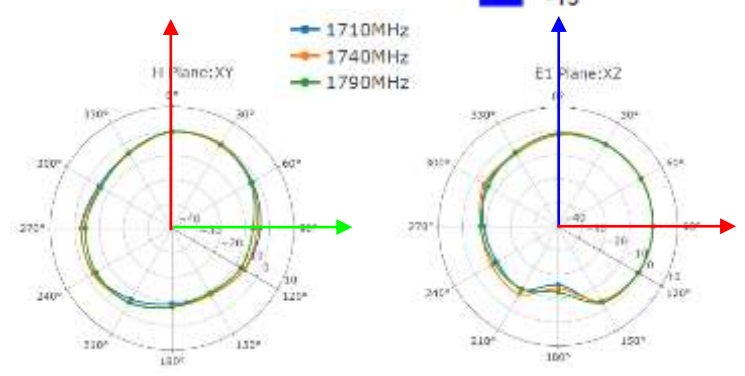
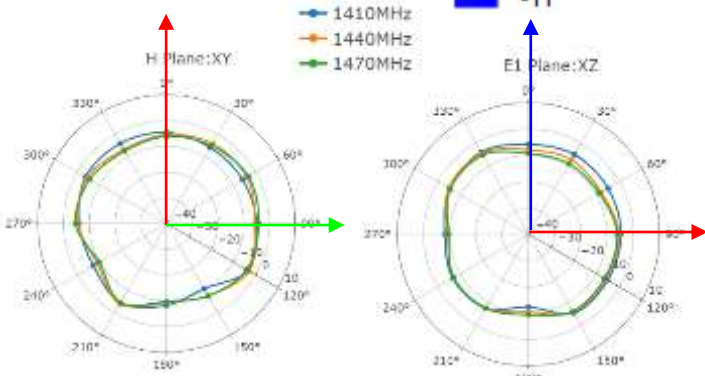
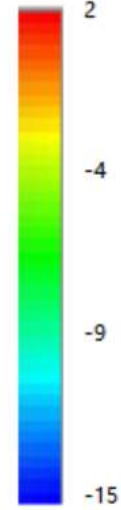
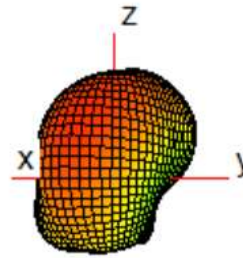


● **LMH3**

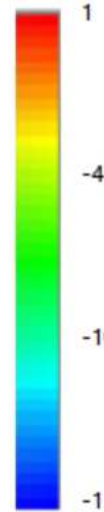
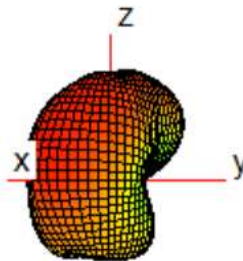
1440 MHz



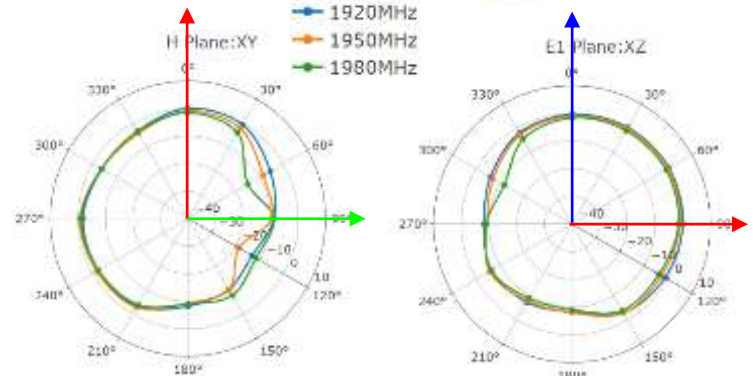
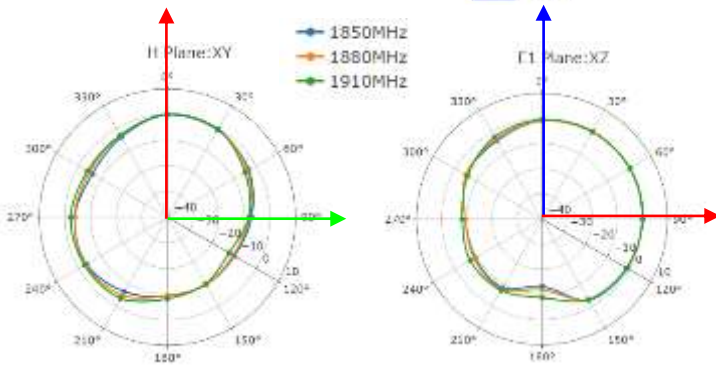
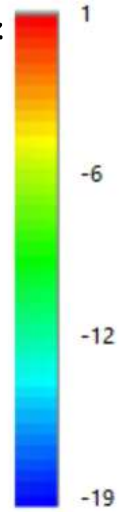
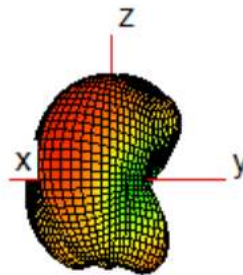
1740 MHz



1880 MHz

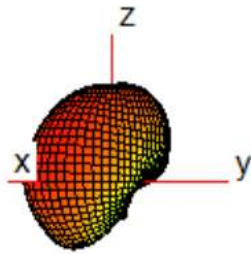


1950 MHz

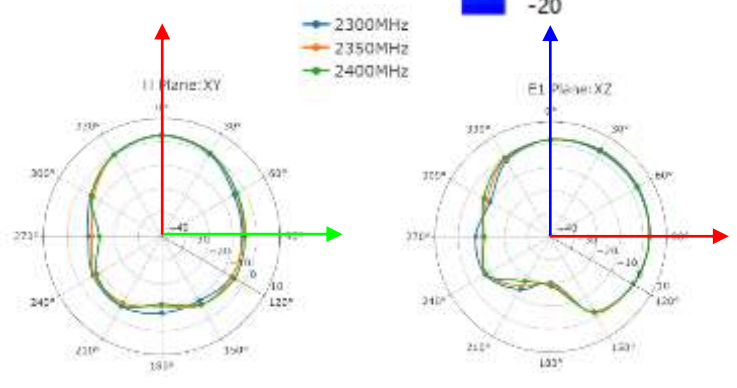
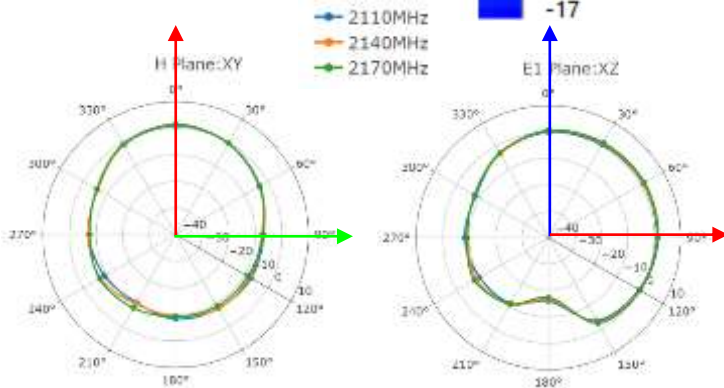
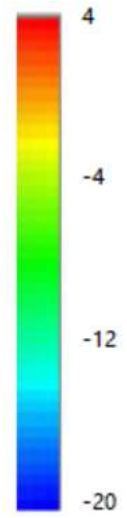
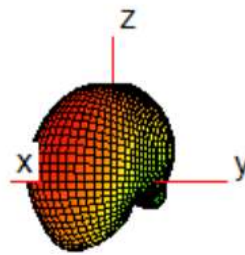


● **LMH3**

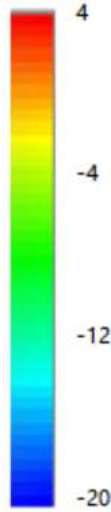
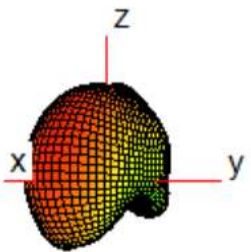
2140 MHz



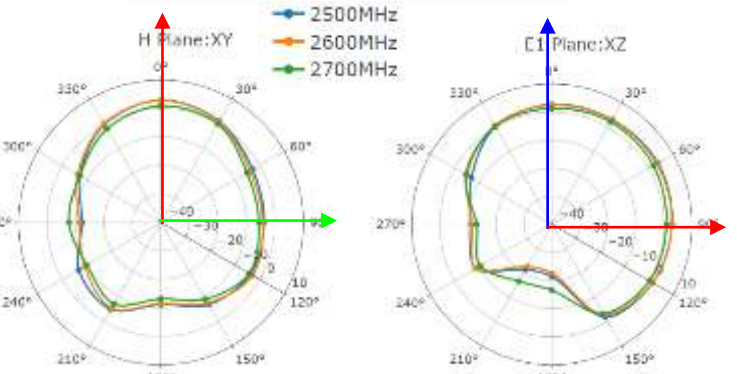
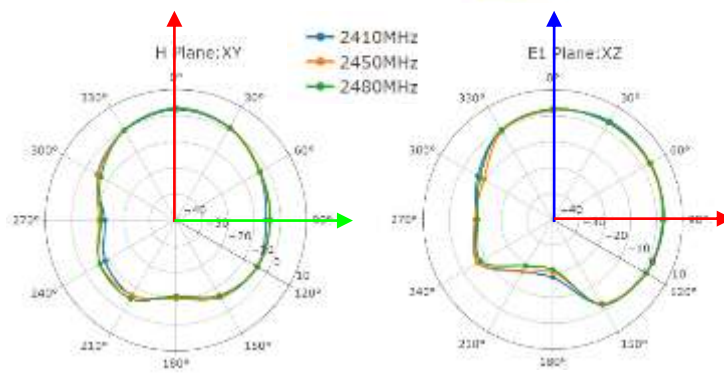
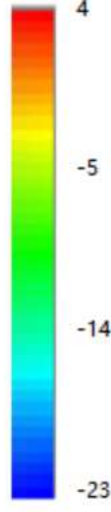
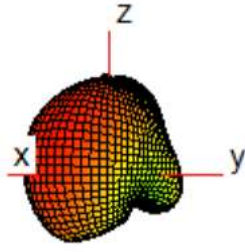
2350 MHz



2450 MHz

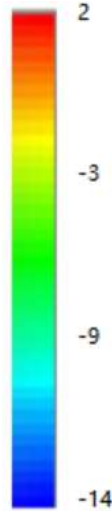
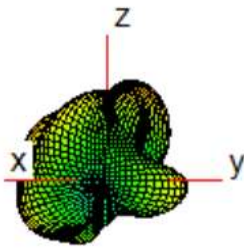


2600 MHz

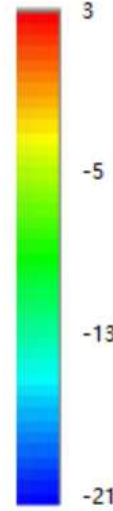
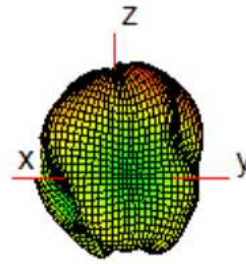


● **LMH3**

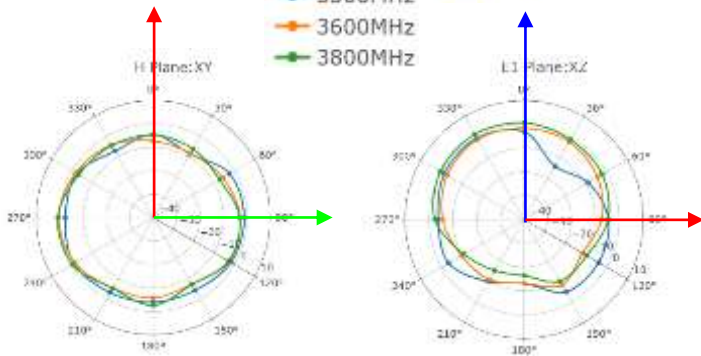
3600 MHz



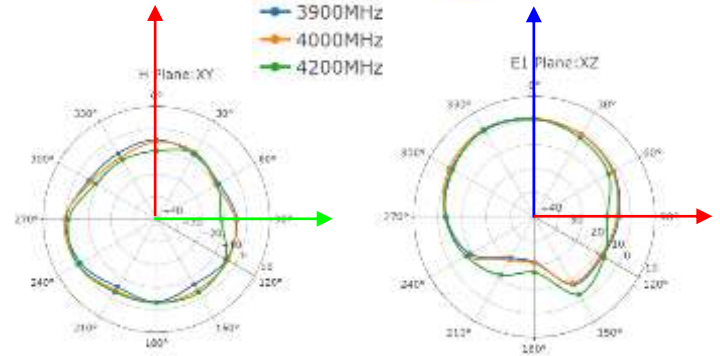
4000 MHz



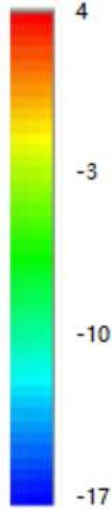
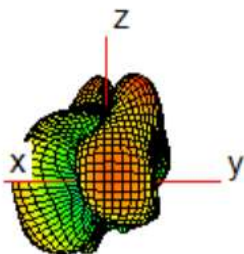
— 3300MHz
— 3600MHz
— 3800MHz



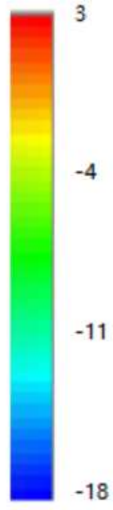
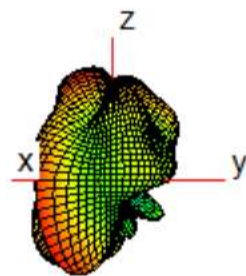
— 3900MHz
— 4000MHz
— 4200MHz



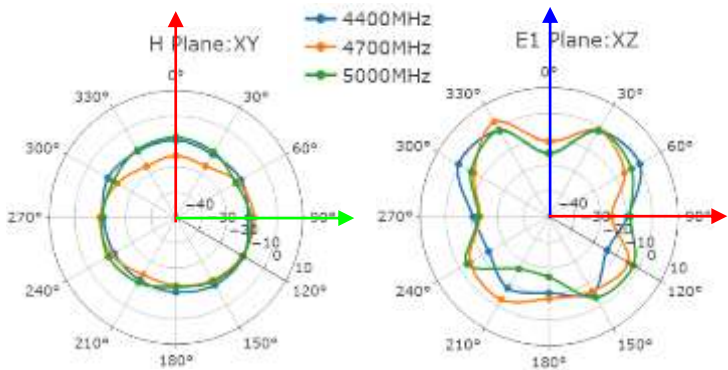
4700 MHz



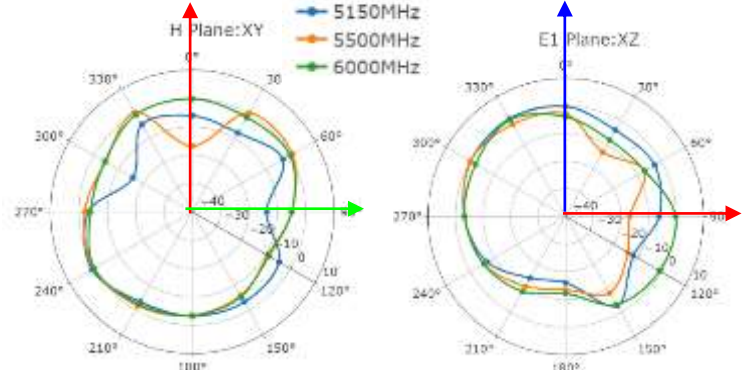
5500 MHz



— 4400MHz
— 4700MHz
— 5000MHz

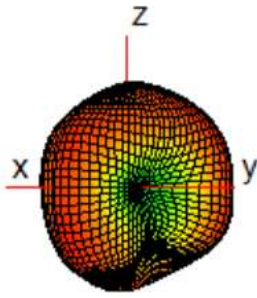


— 5150MHz
— 5500MHz
— 6000MHz

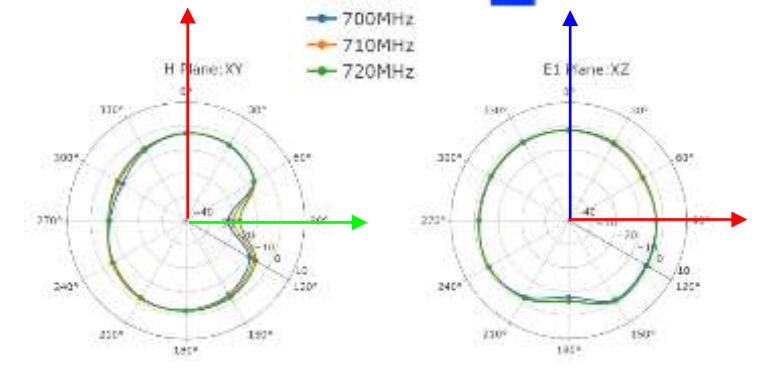
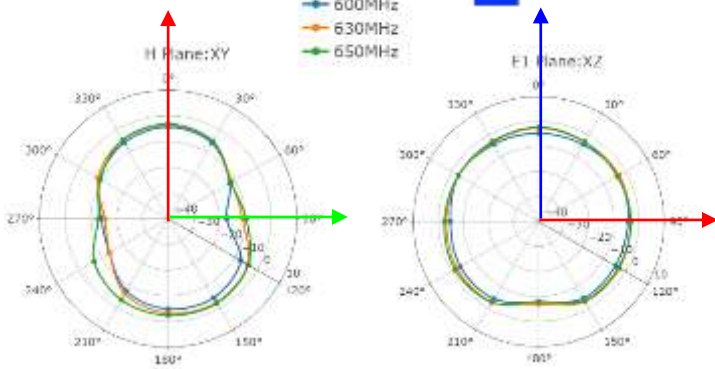
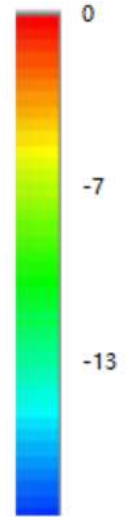
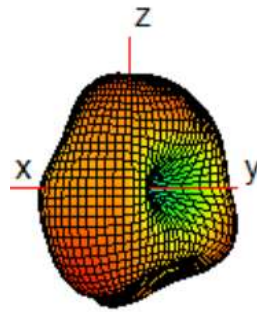


● **LMH4**

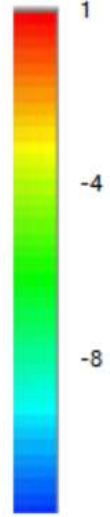
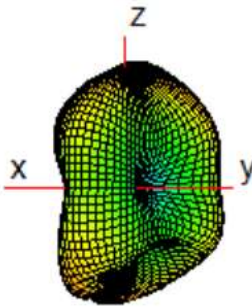
630 MHz



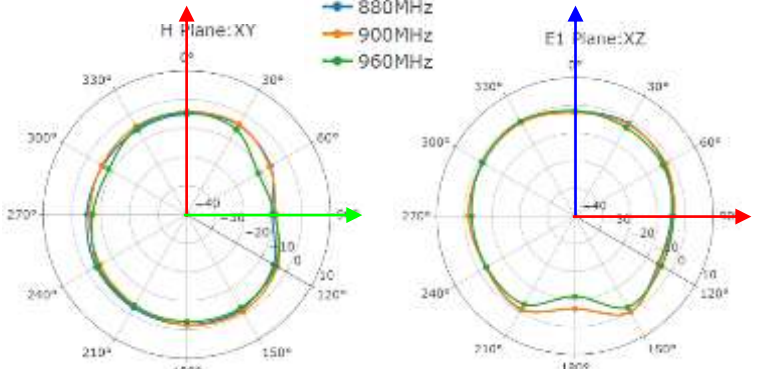
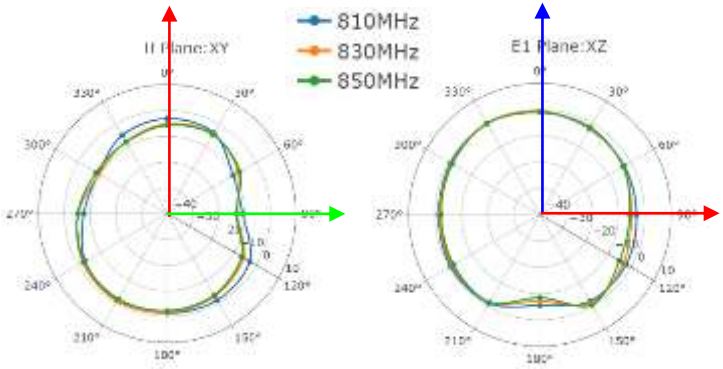
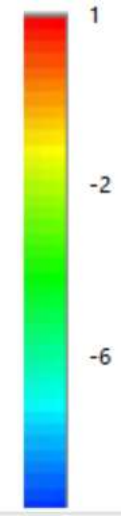
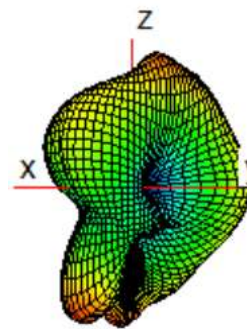
710 MHz



830 MHz

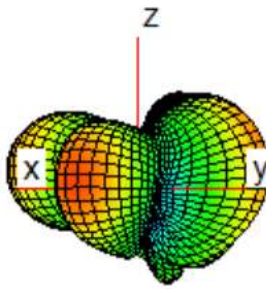


900 MHz

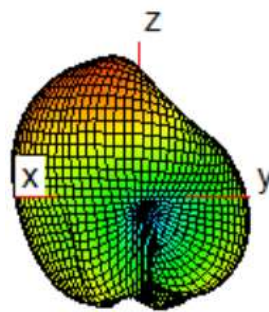


● **LMH4**

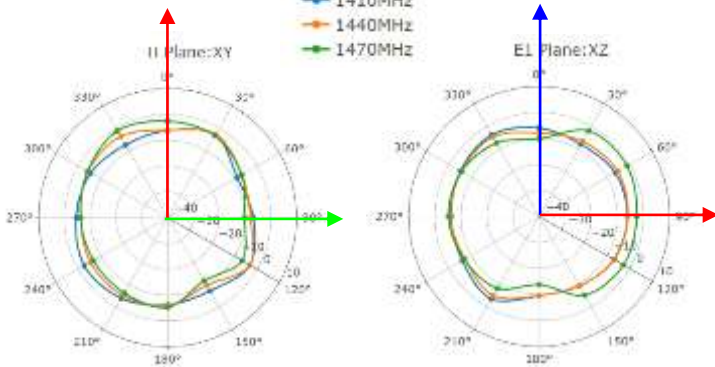
1440 MHz



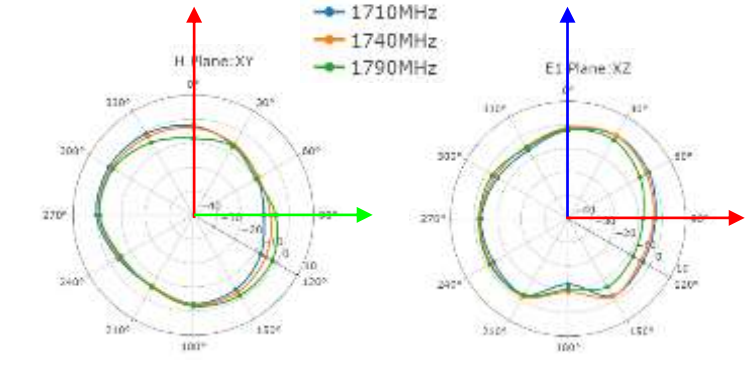
1740 MHz



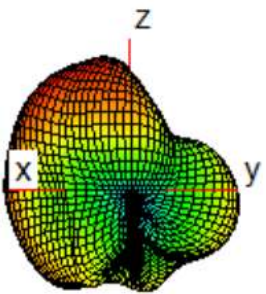
- 1410MHz
- 1440MHz
- 1470MHz



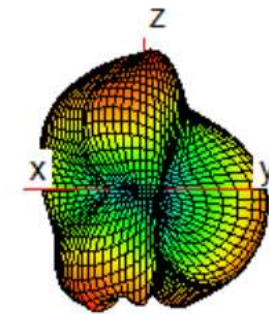
- 1710MHz
- 1740MHz
- 1790MHz



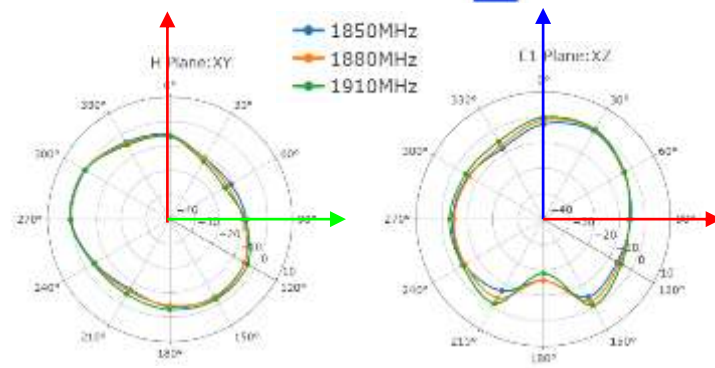
1880 MHz



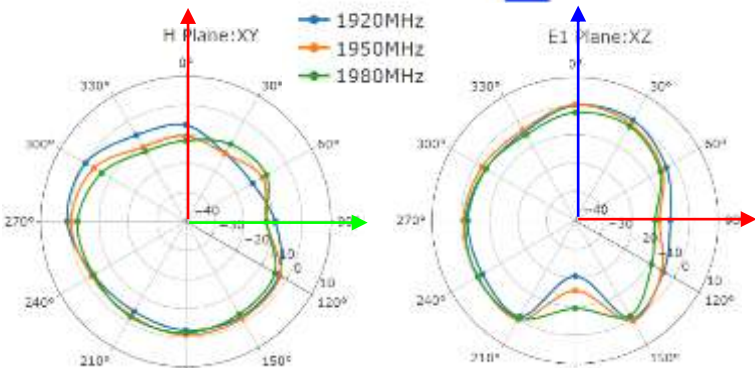
1950 MHz



- 1850MHz
- 1880MHz
- 1910MHz

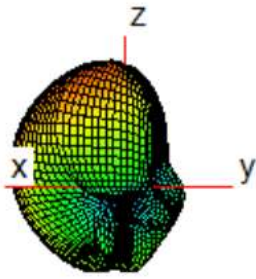


- 1920MHz
- 1950MHz
- 1980MHz

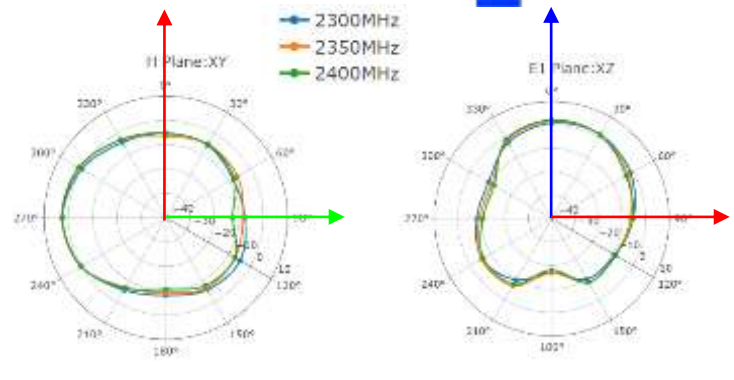
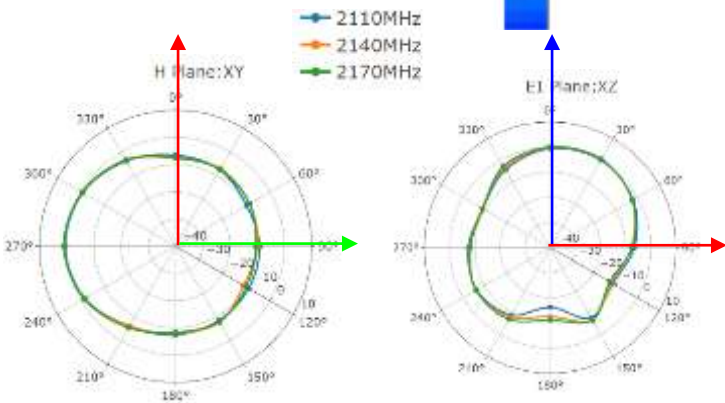
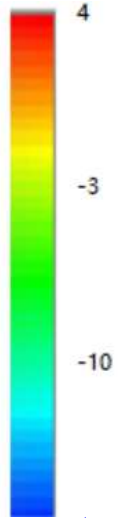
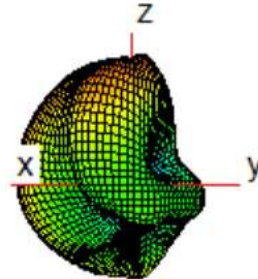


● **LMH4**

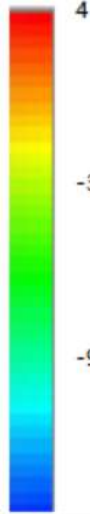
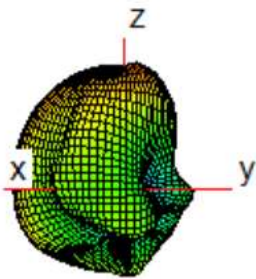
2140 MHz



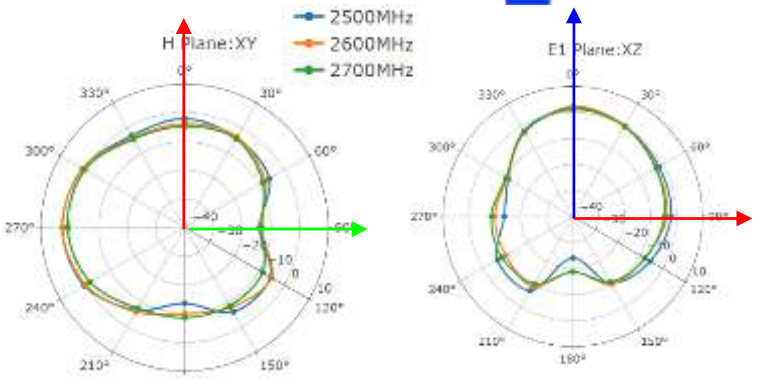
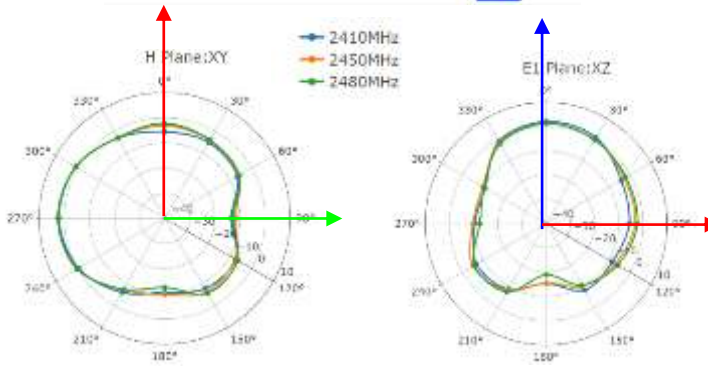
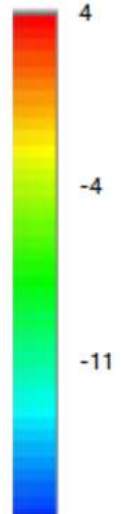
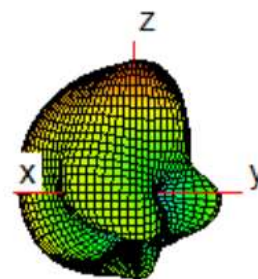
2350 MHz



2450 MHz

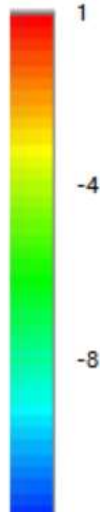
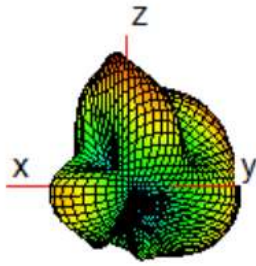


2600 MHz

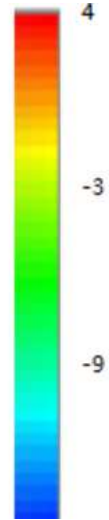
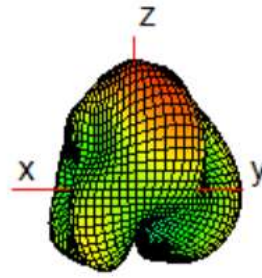


● **LMH4**

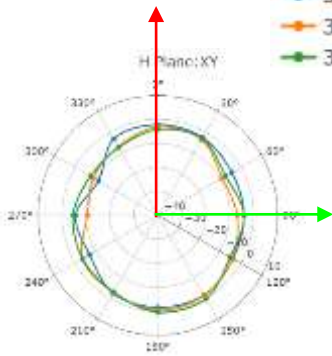
3600 MHz



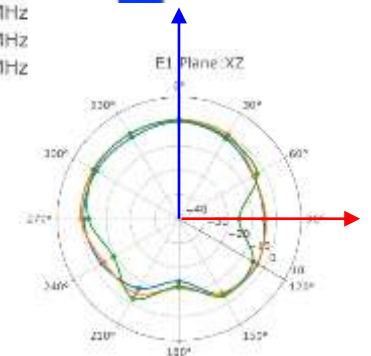
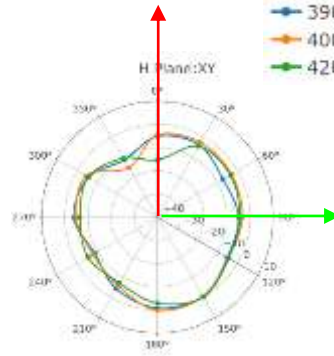
4000 MHz



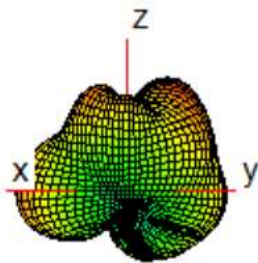
- 3300MHz
- 3600MHz
- 3800MHz



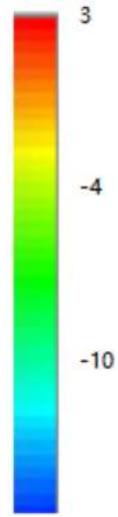
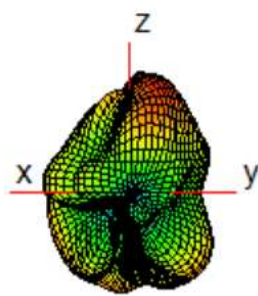
- 3900MHz
- 4000MHz
- 4200MHz



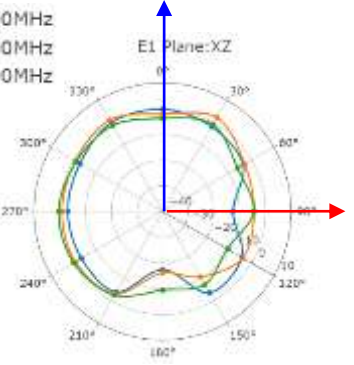
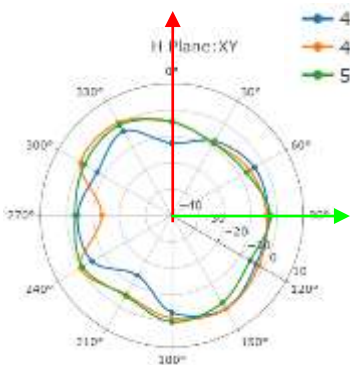
4700 MHz



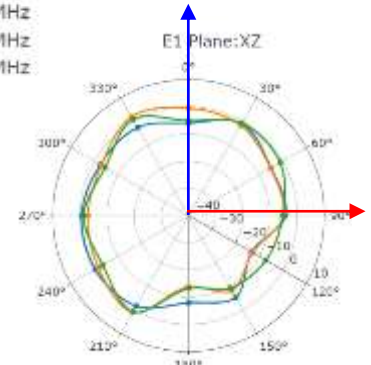
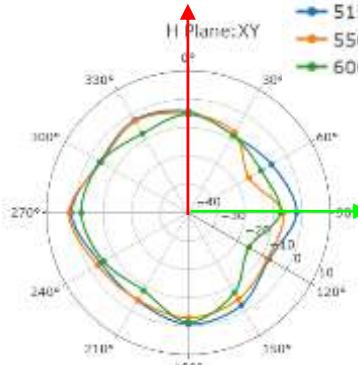
5500 MHz



- 4400MHz
- 4700MHz
- 5000MHz

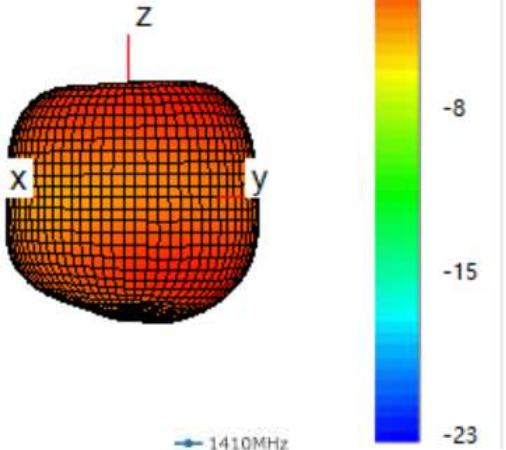


- 5150MHz
- 5500MHz
- 6000MHz

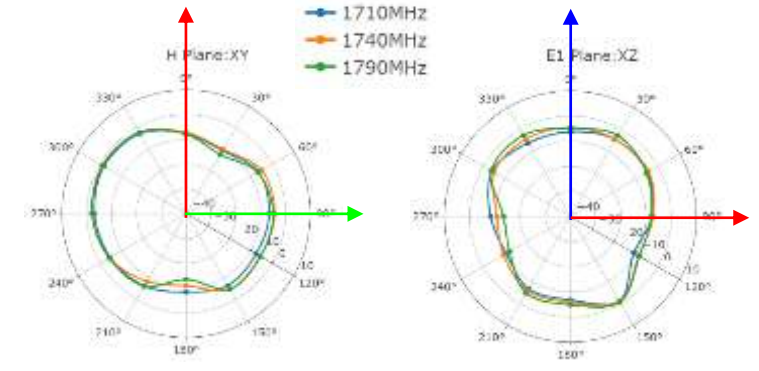
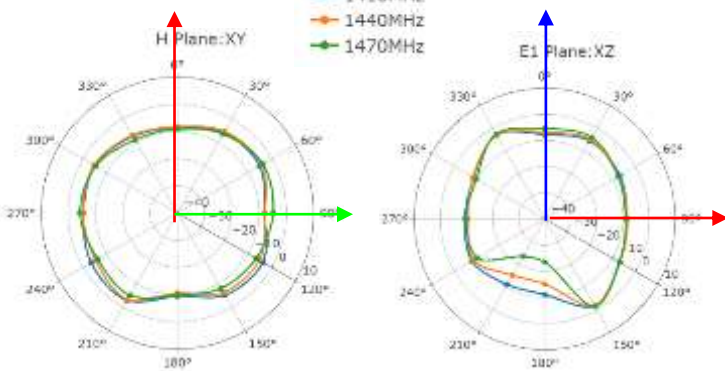
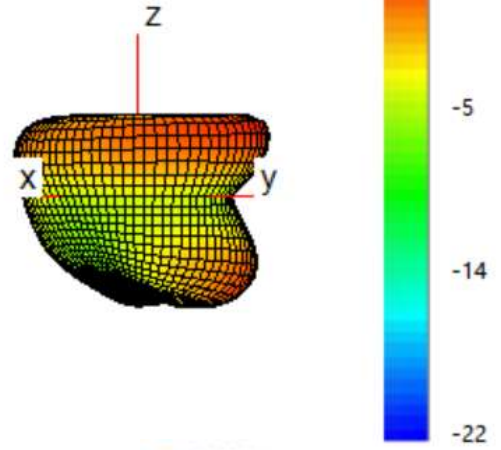


● **MH1**

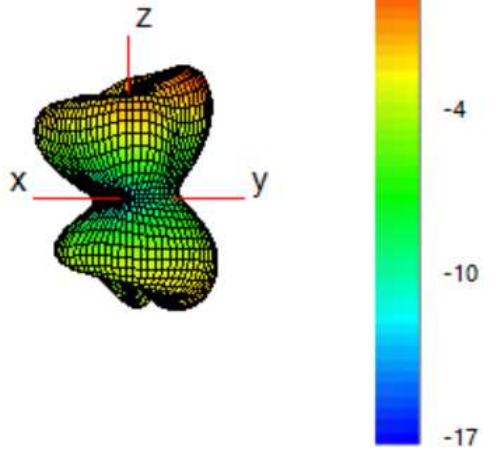
1440 MHz



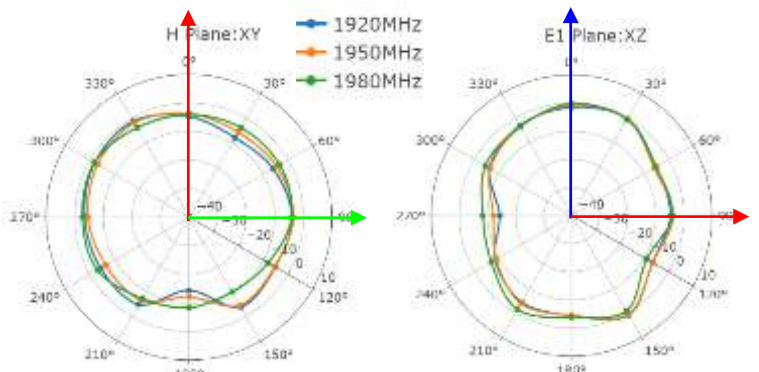
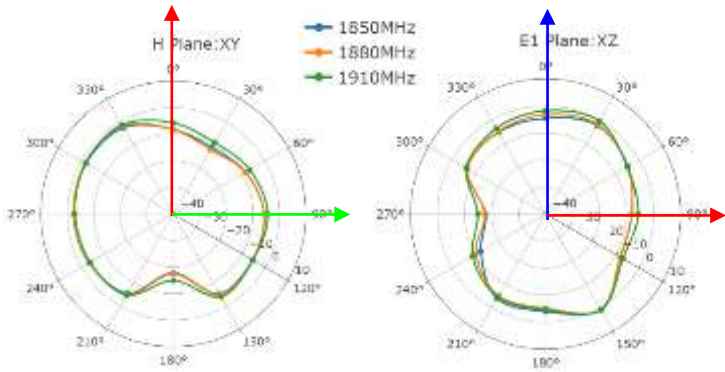
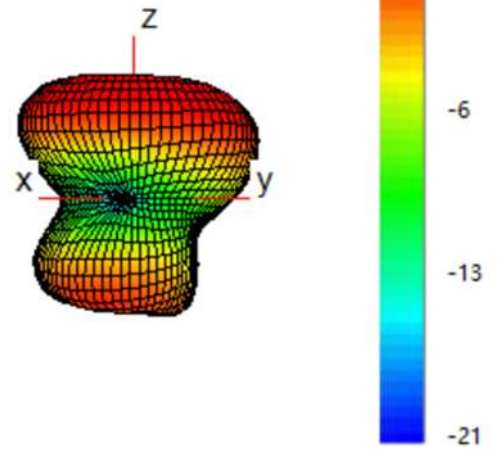
1740 MHz



1880 MHz

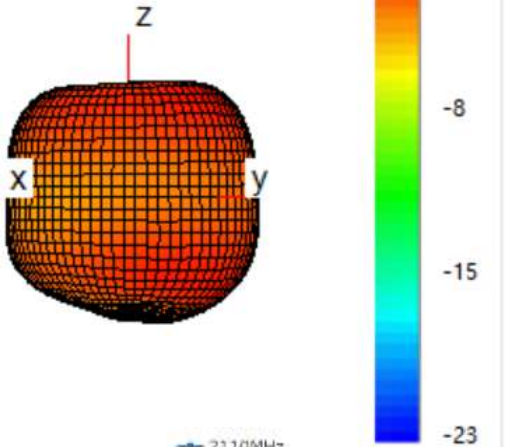


1950 MHz

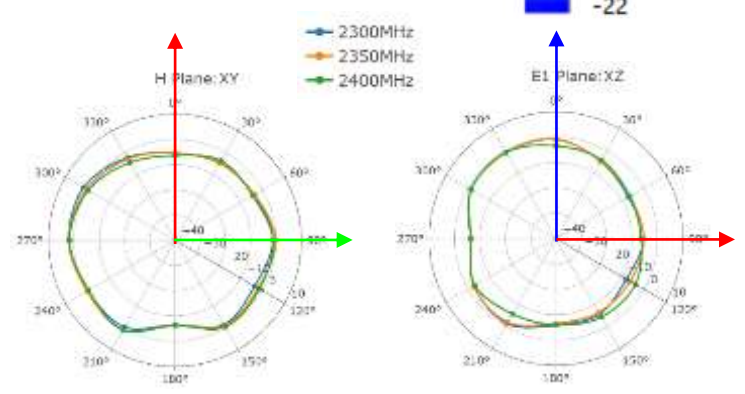
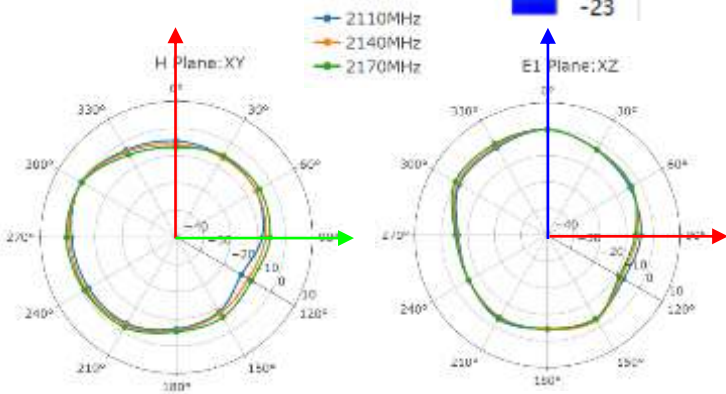
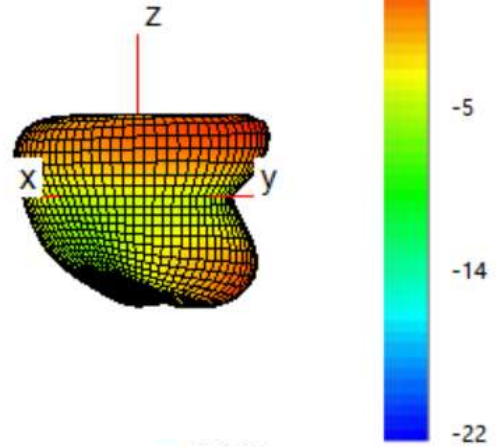


● **MH1**

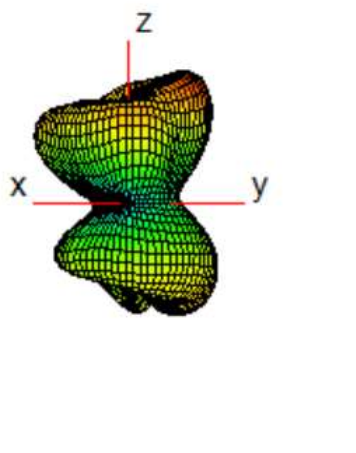
2140 MHz



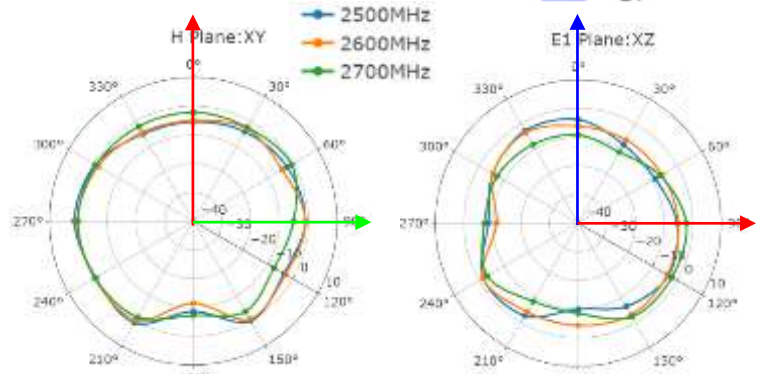
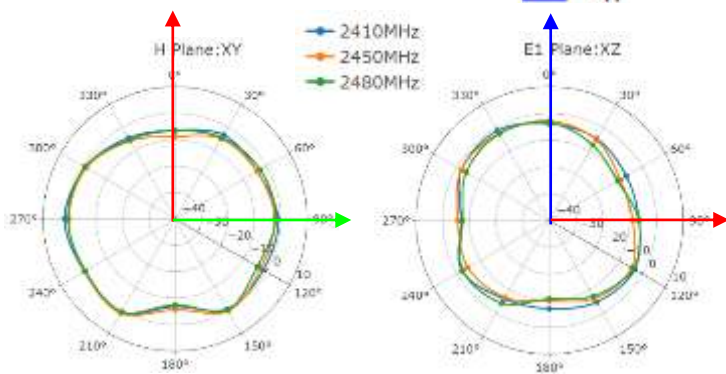
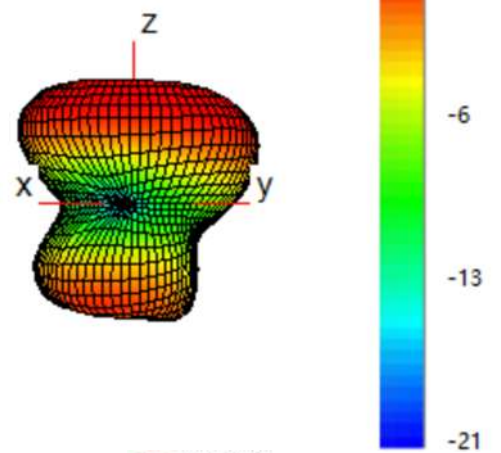
2350 MHz



2450 MHz

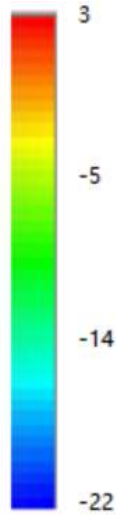
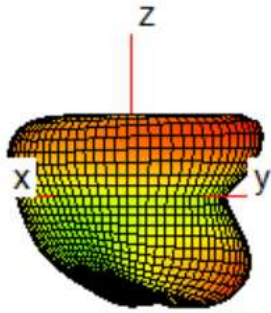


2600 MHz

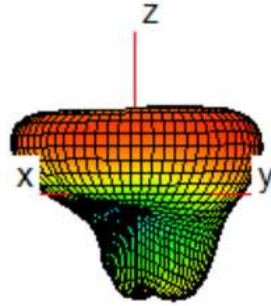


MH1

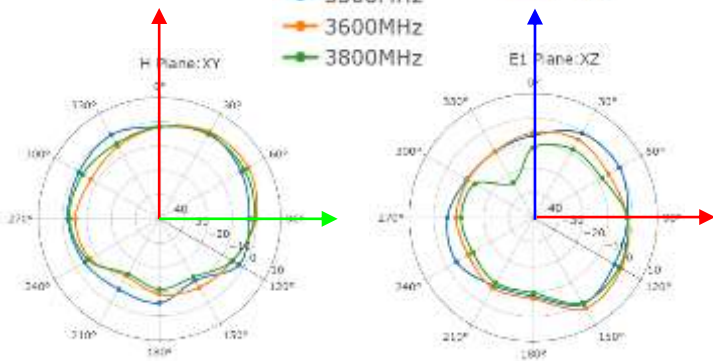
3600 MHz



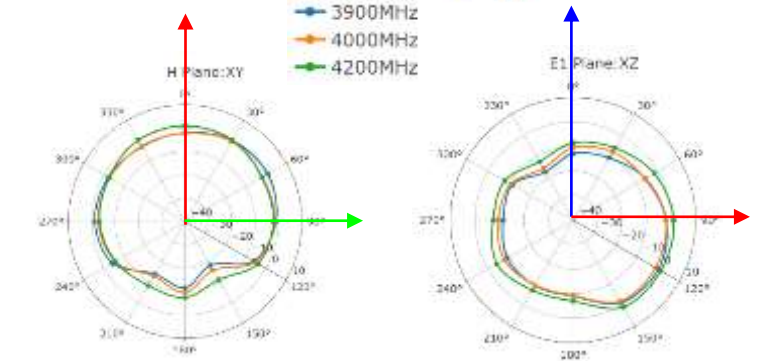
4000 MHz



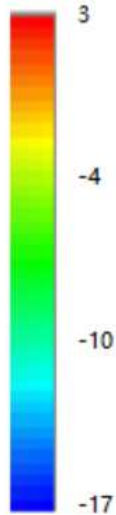
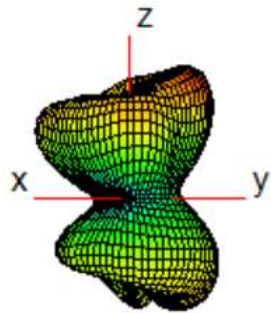
— 3300MHz
— 3600MHz
— 3800MHz



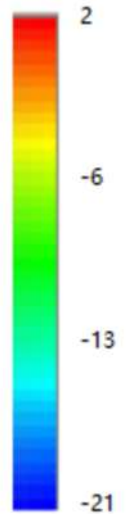
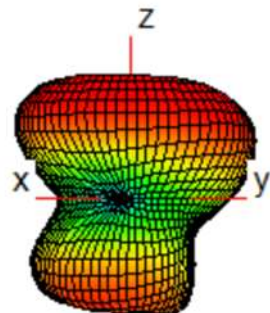
— 3900MHz
— 4000MHz
— 4200MHz



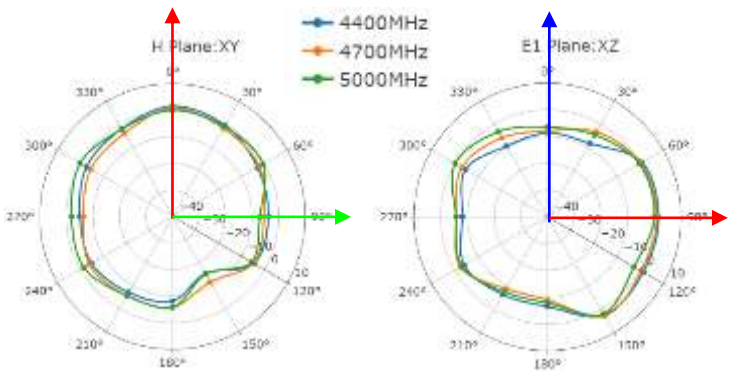
4700 MHz



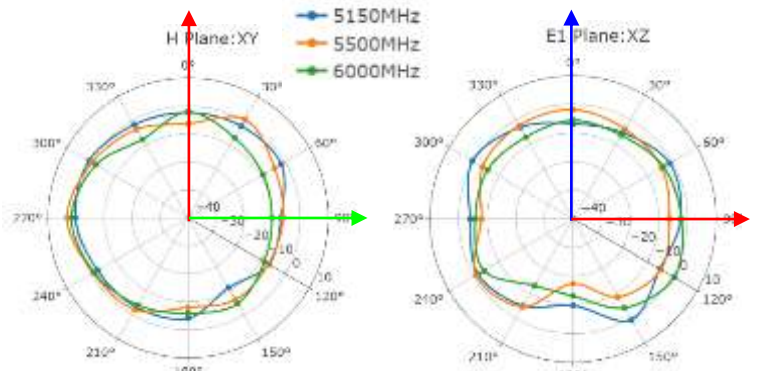
5500 MHz



— 4400MHz
— 4700MHz
— 5000MHz

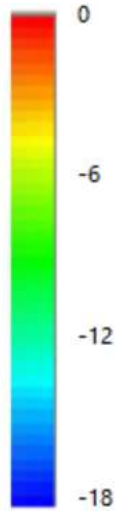
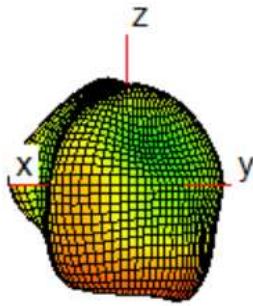


— 5150MHz
— 5500MHz
— 6000MHz

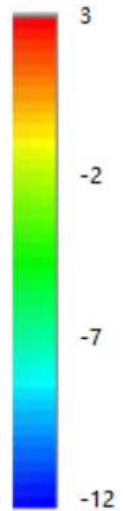
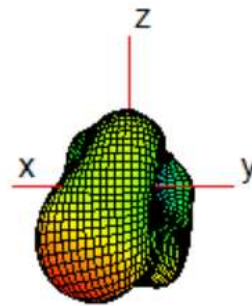


● **MH2**

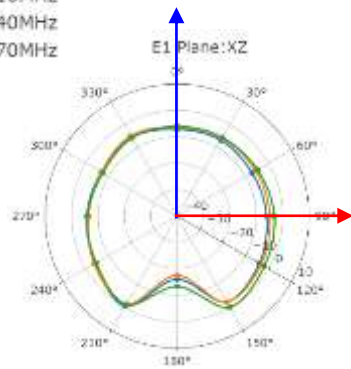
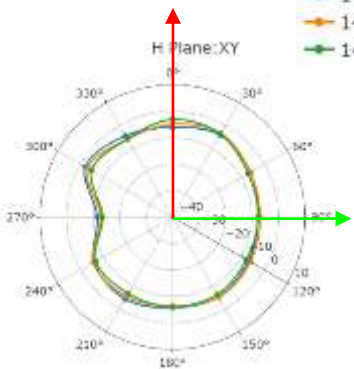
1440 MHz



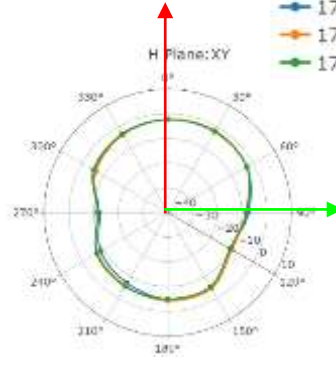
1740 MHz



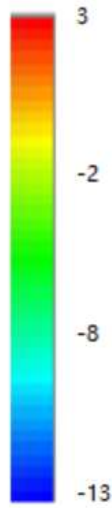
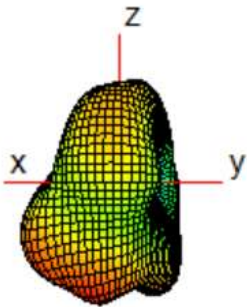
— 1410MHz
— 1440MHz
— 1470MHz



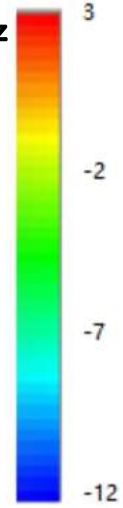
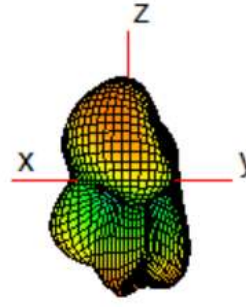
— 1710MHz
— 1740MHz
— 1790MHz



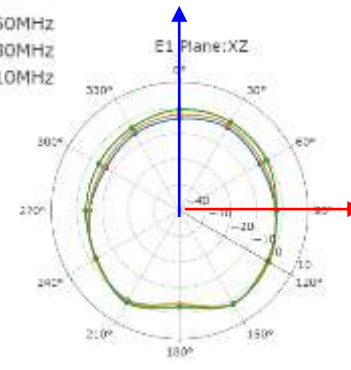
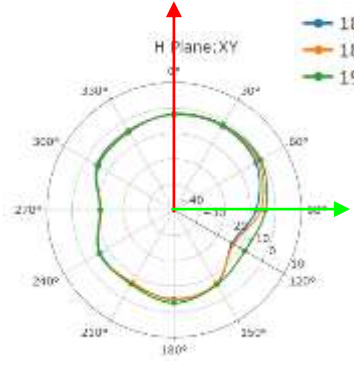
1880 MHz



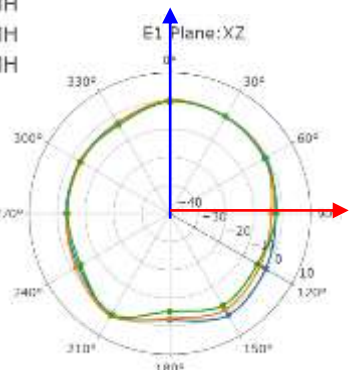
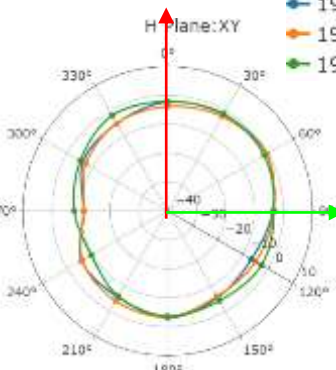
1950 MHz



— 1850MHz
— 1880MHz
— 1910MHz

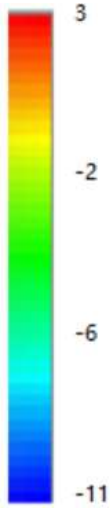
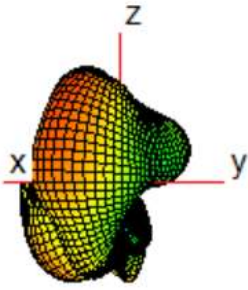


— 1920MHz
— 1950MHz
— 1980MHz

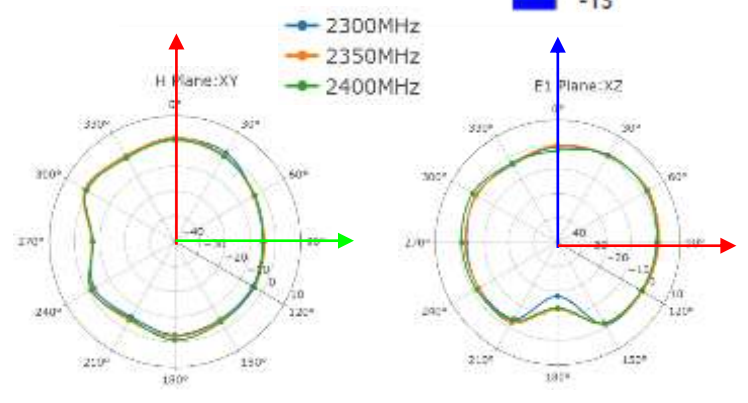
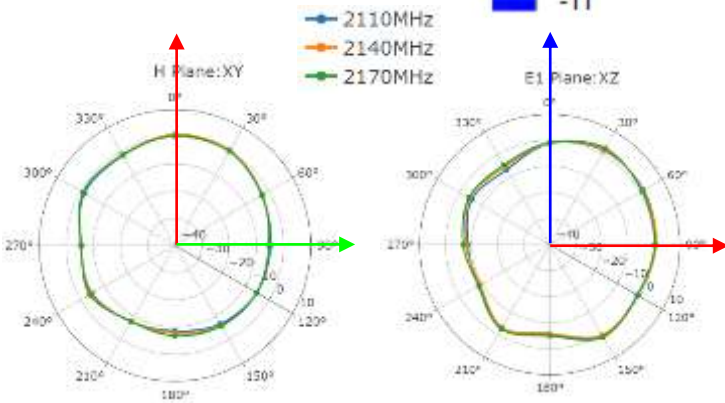
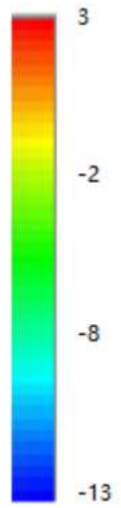
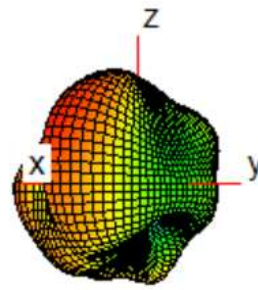


MH2

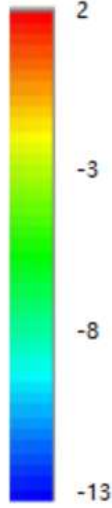
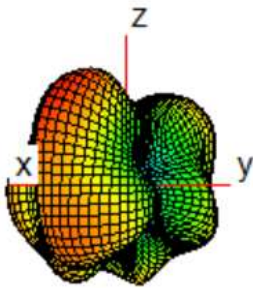
2140 MHz



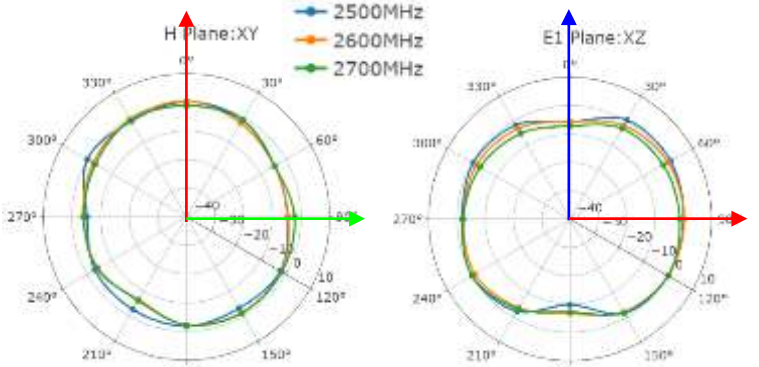
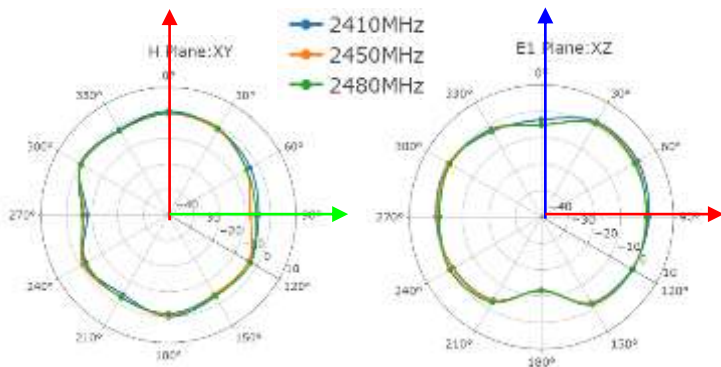
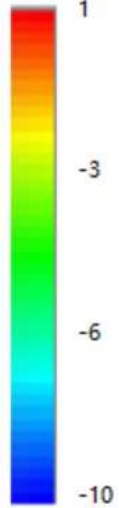
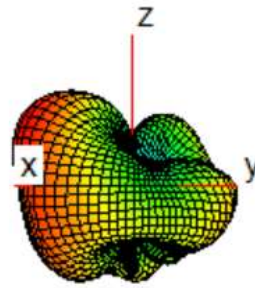
2350 MHz



2450 MHz

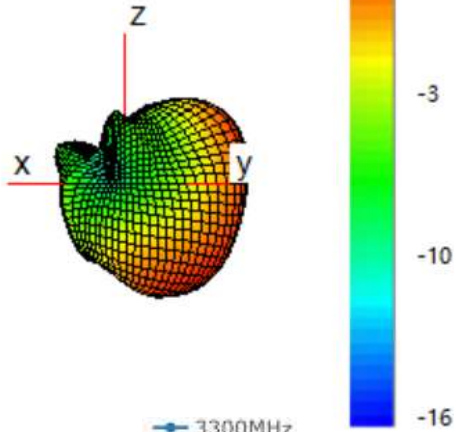


2600 MHz

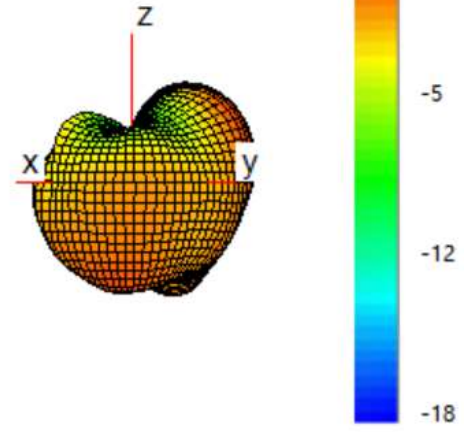


● **MH2**

3600 MHz

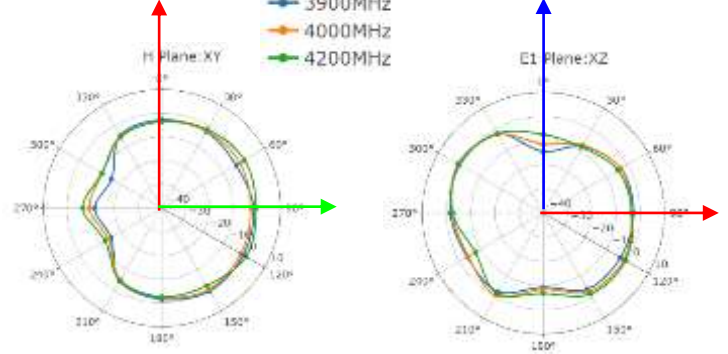
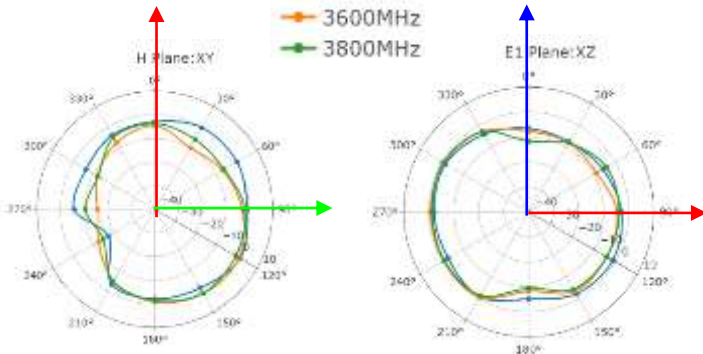


4000 MHz

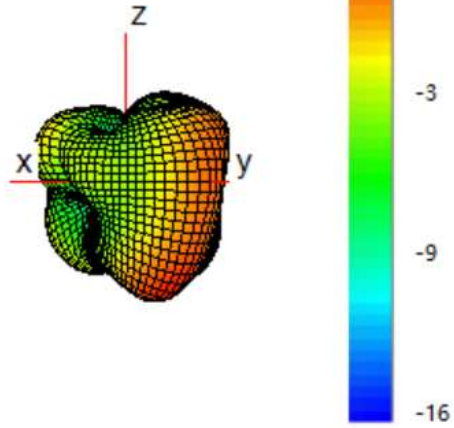


— 3300MHz
— 3600MHz
— 3800MHz

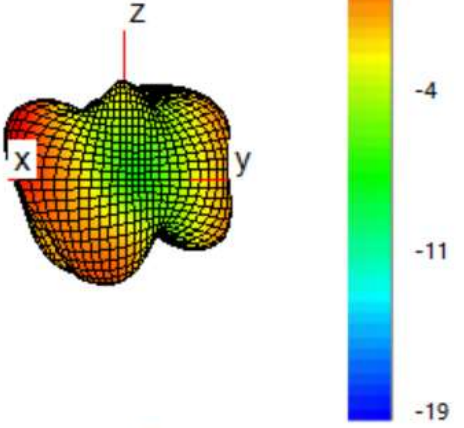
— 3900MHz
— 4000MHz
— 4200MHz



4700 MHz

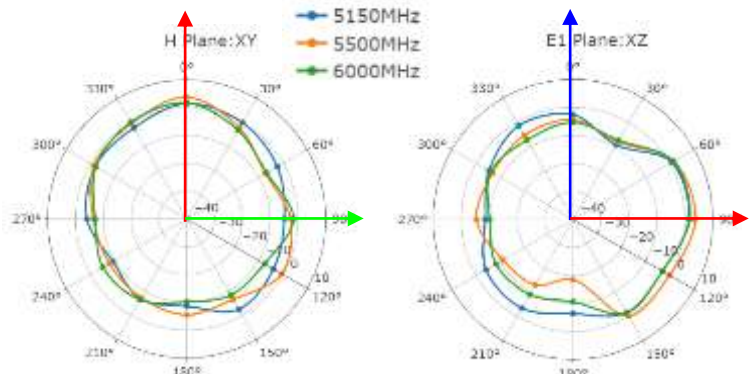
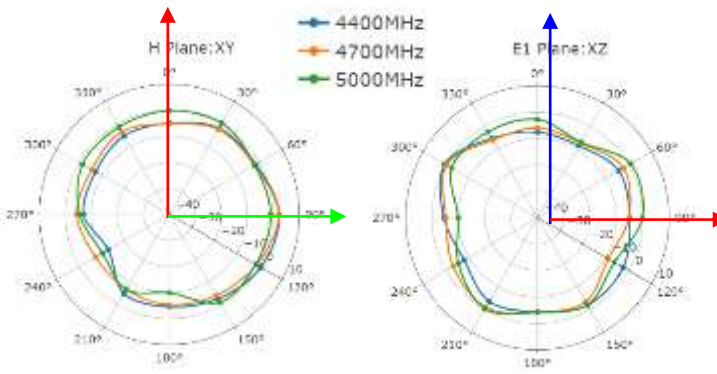


5500 MHz



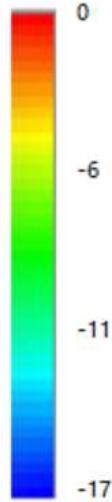
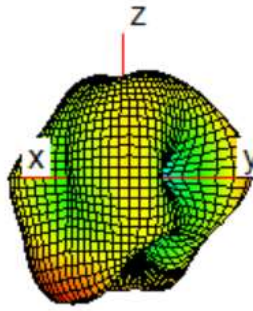
— 4400MHz
— 4700MHz
— 5000MHz

— 5150MHz
— 5500MHz
— 6000MHz

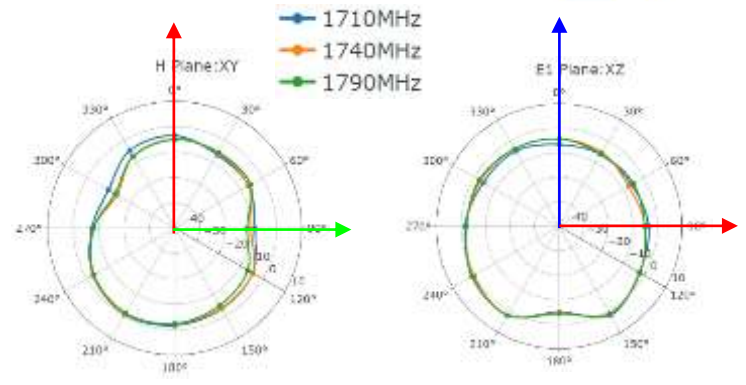
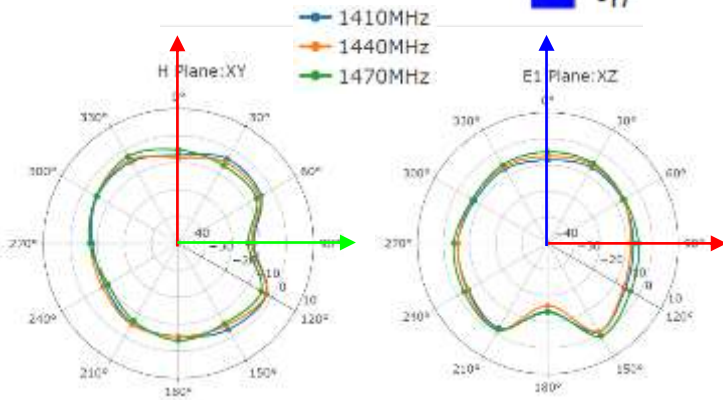
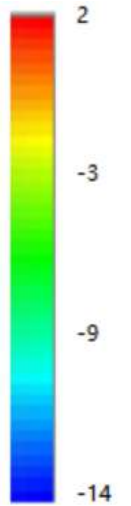
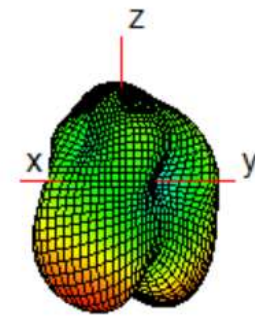


MH3

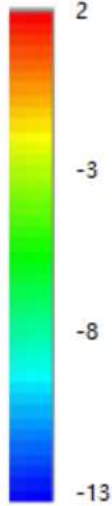
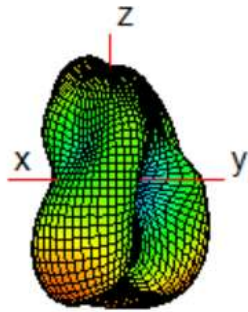
1440 MHz



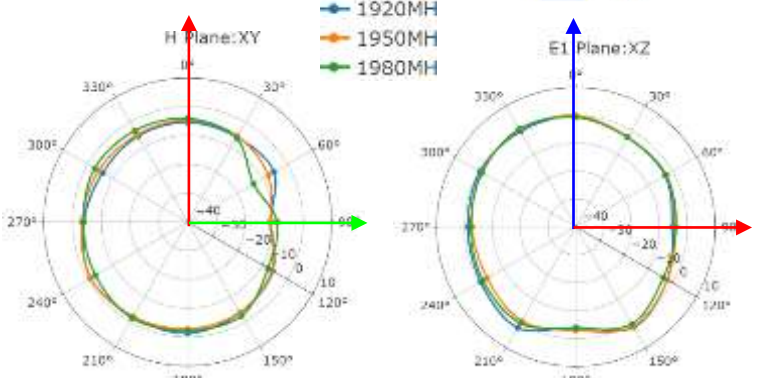
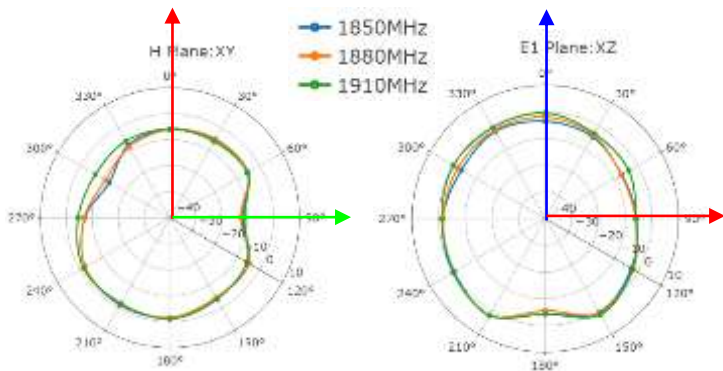
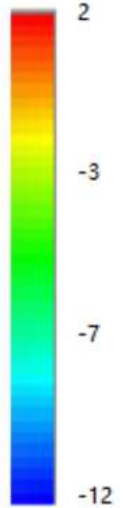
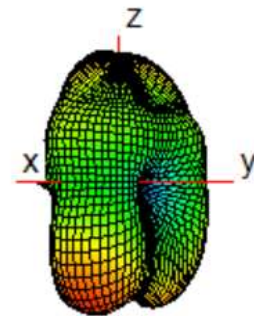
1740 MHz



1880 MHz

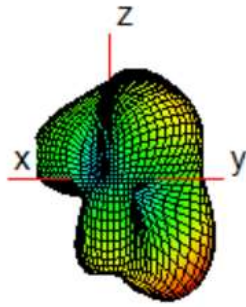


1950 MHz

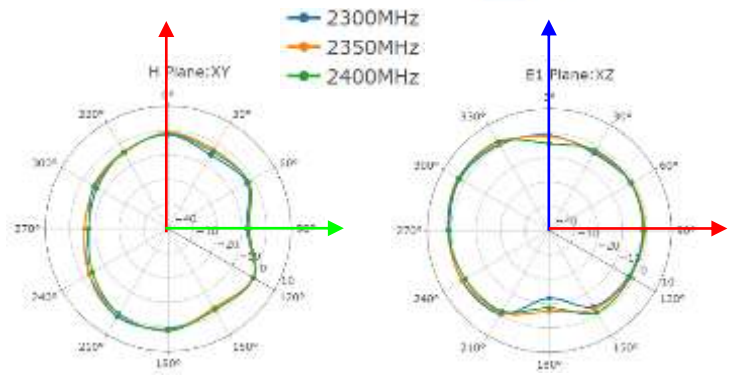
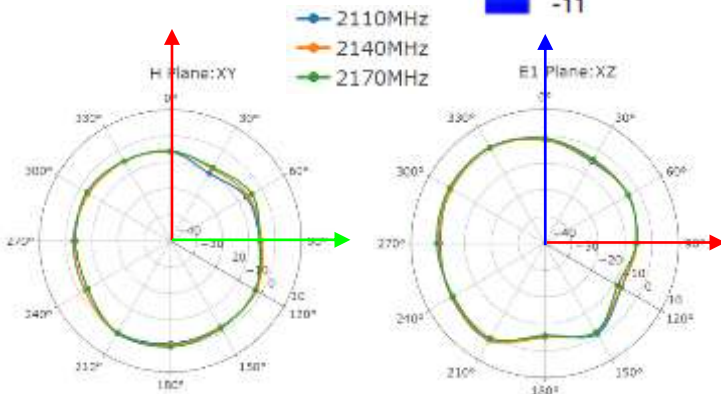
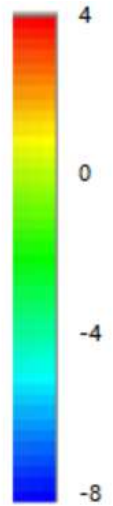
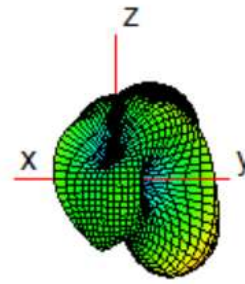


● **MH3**

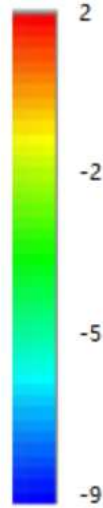
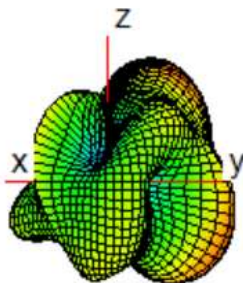
2140 MHz



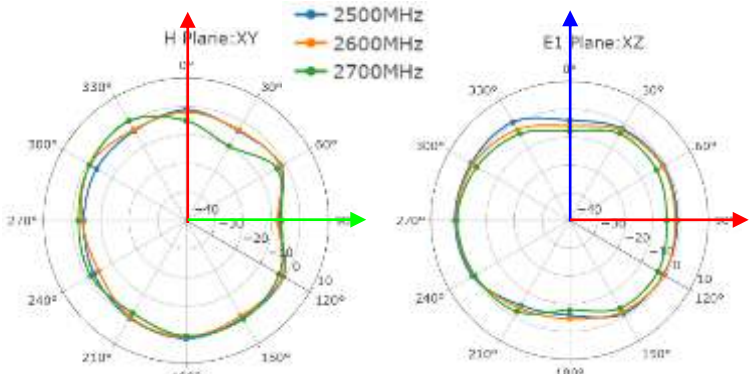
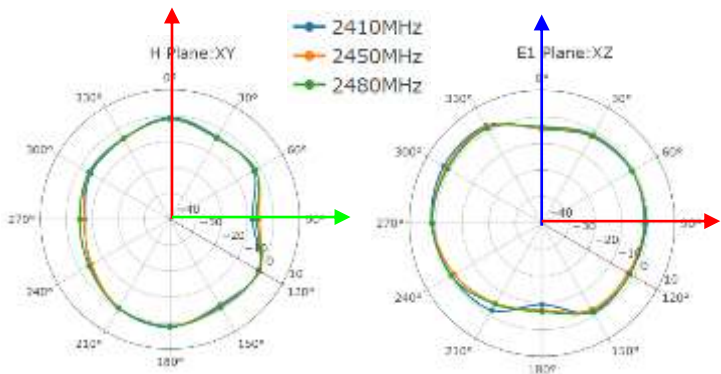
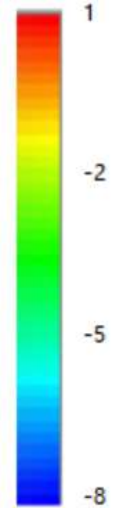
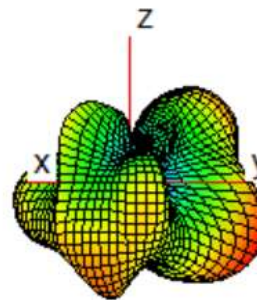
2350 MHz



2450 MHz

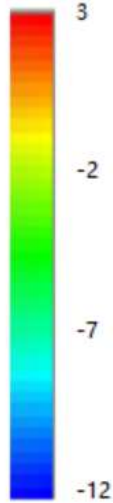
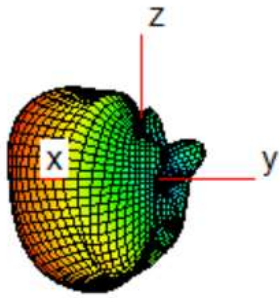


2600 MHz

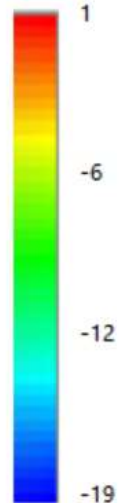
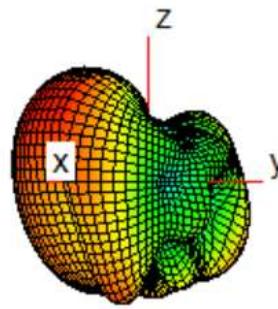


● **MH3**

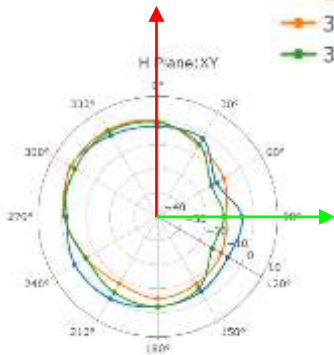
3600 MHz



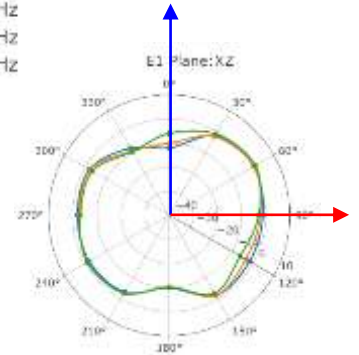
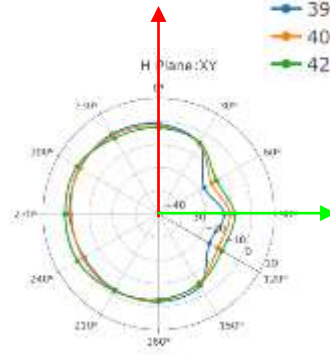
4000 MHz



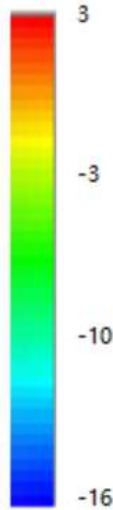
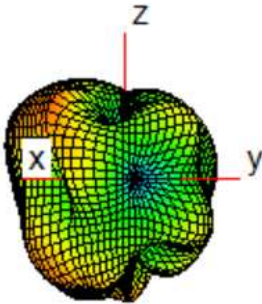
— 3300MHz
— 3600MHz
— 3800MHz



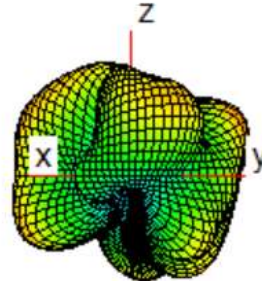
— 3900MHz
— 4000MHz
— 4200MHz



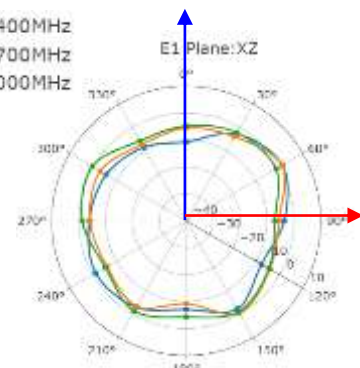
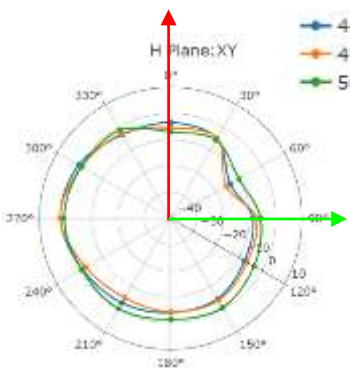
4700 MHz



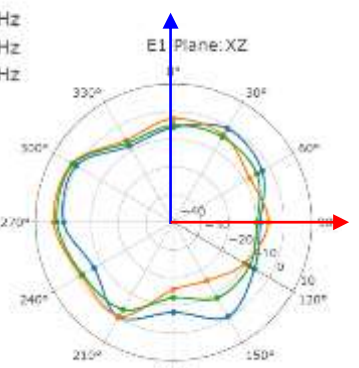
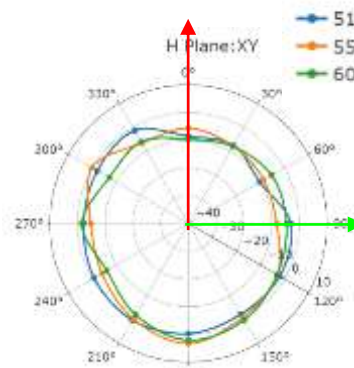
5500 MHz



— 4400MHz
— 4700MHz
— 5000MHz

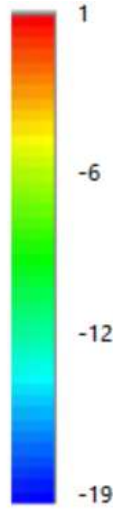
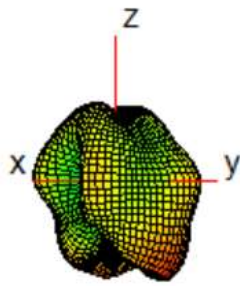


— 5150MHz
— 5500MHz
— 6000MHz

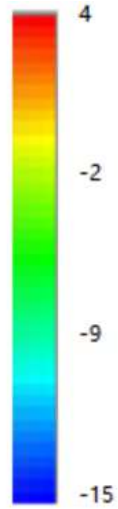
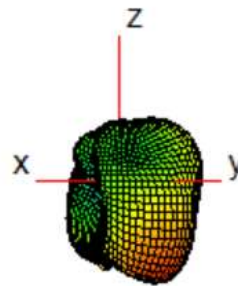


● **MH4**

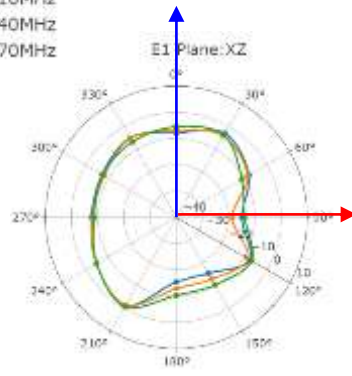
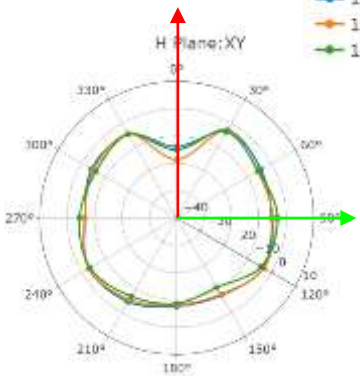
1440 MHz



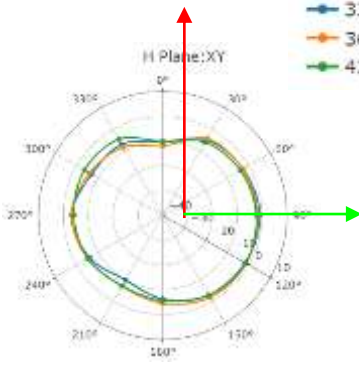
1740 MHz



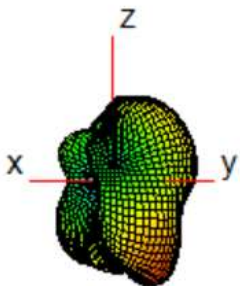
- 1410MHz
- 1440MHz
- 1470MHz



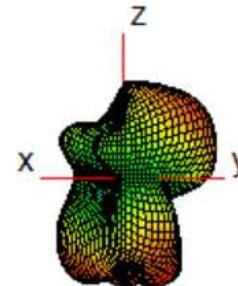
- 3300MHz
- 3600MHz
- 4200MHz



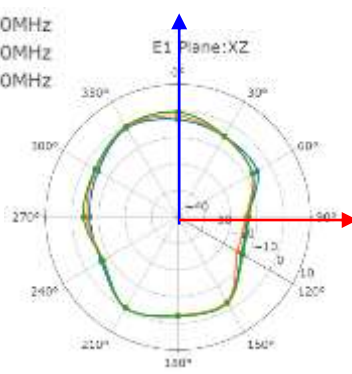
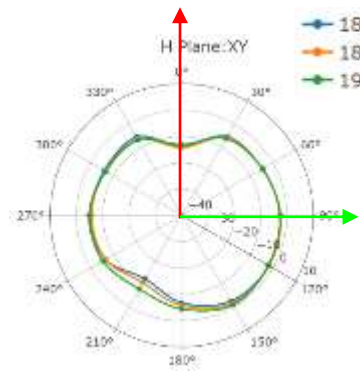
1880 MHz



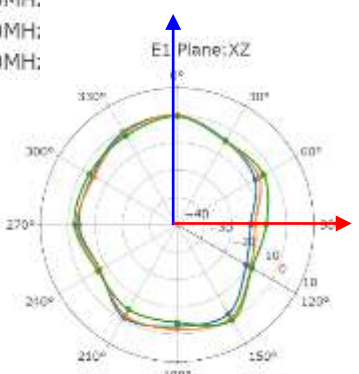
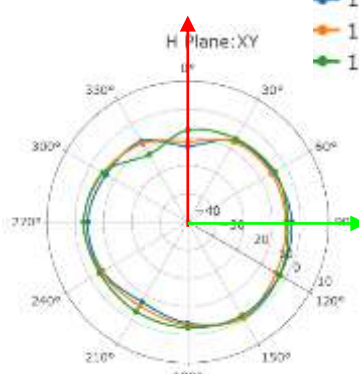
1950 MHz



- 1850MHz
- 1880MHz
- 1910MHz

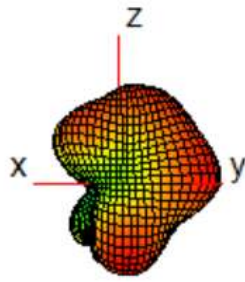


- 1920MHz
- 1950MHz
- 1980MHz

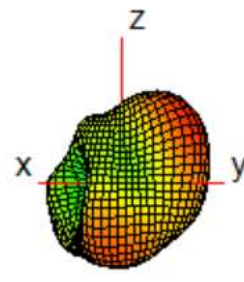


MH4

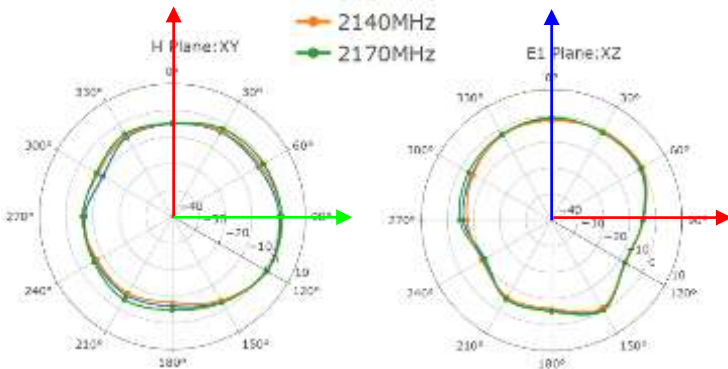
2140 MHz



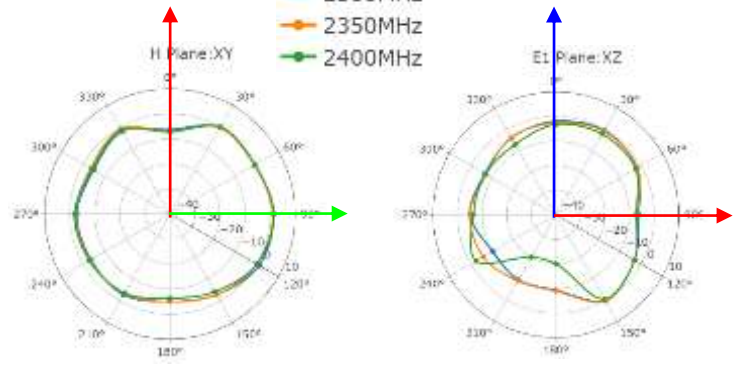
2350 MHz



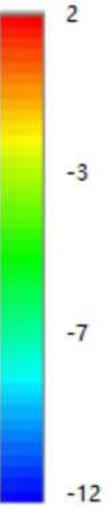
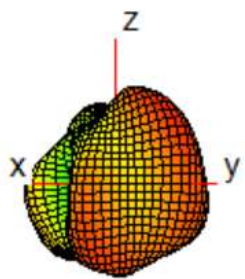
- 2110MHz
- 2140MHz
- 2170MHz



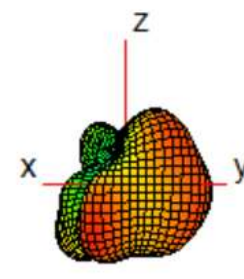
- 2300MHz
- 2350MHz
- 2400MHz



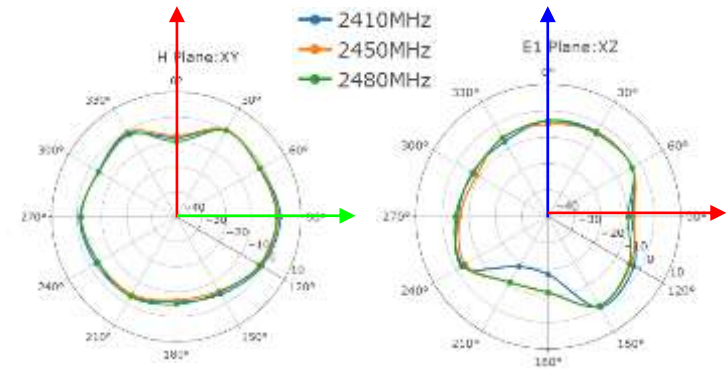
2450 MHz



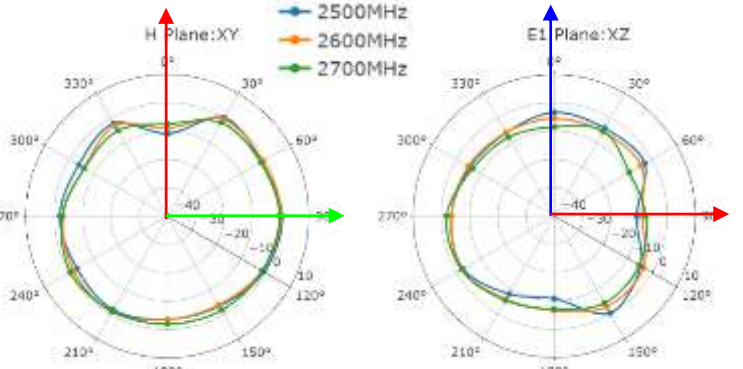
2600 MHz



- 2410MHz
- 2450MHz
- 2480MHz

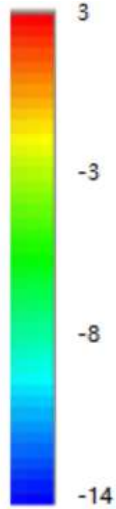
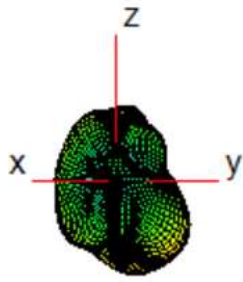


- 2500MHz
- 2600MHz
- 2700MHz

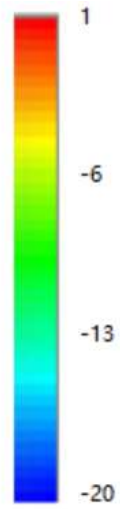
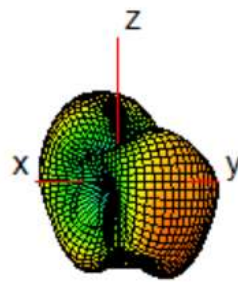


● **MH4**

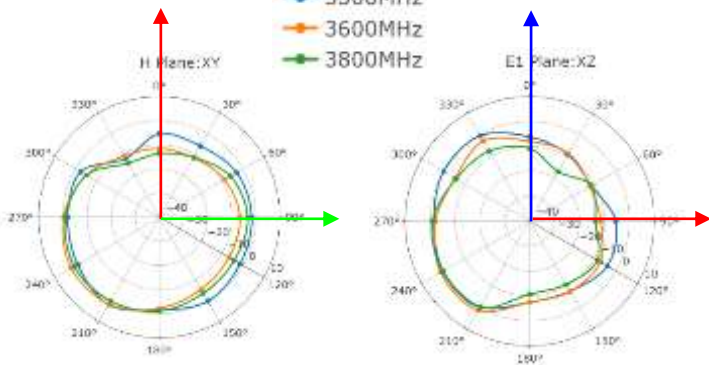
3600 MHz



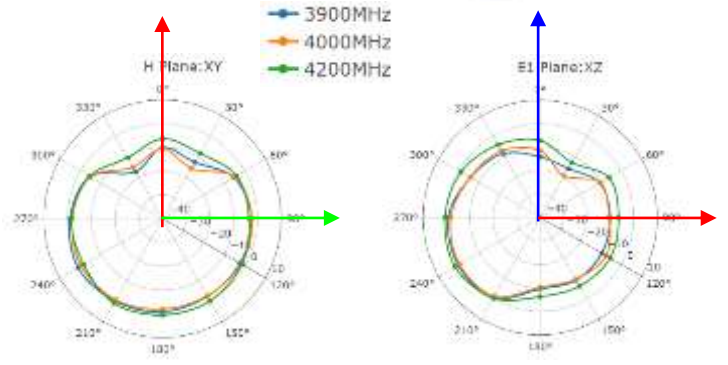
4000 MHz



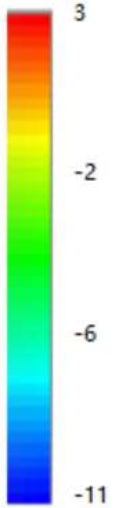
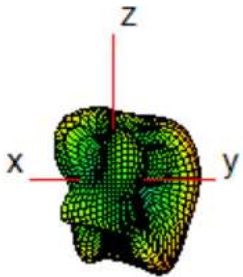
— 3300MHz
— 3600MHz
— 3800MHz



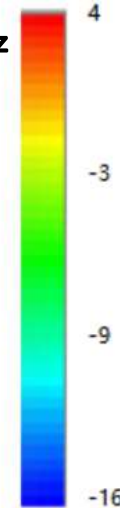
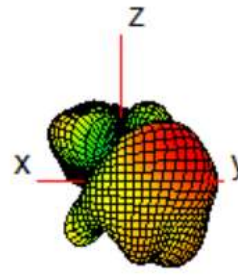
— 3900MHz
— 4000MHz
— 4200MHz



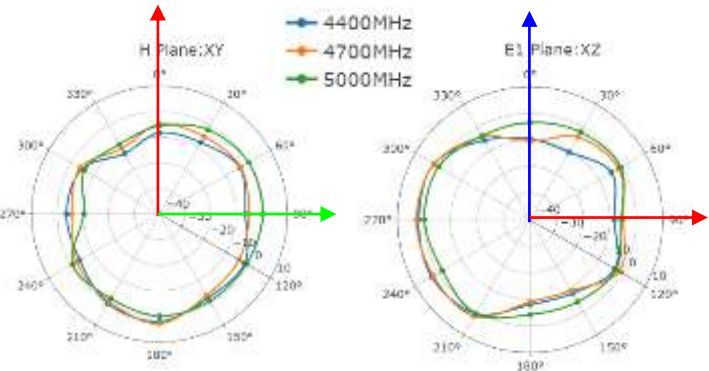
4700 MHz



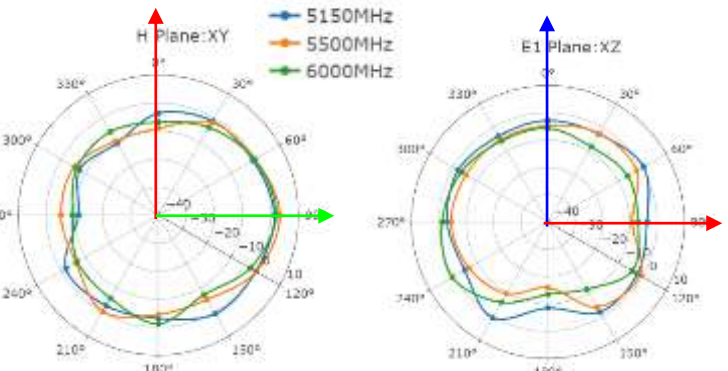
5500 MHz



— 4400MHz
— 4700MHz
— 5000MHz

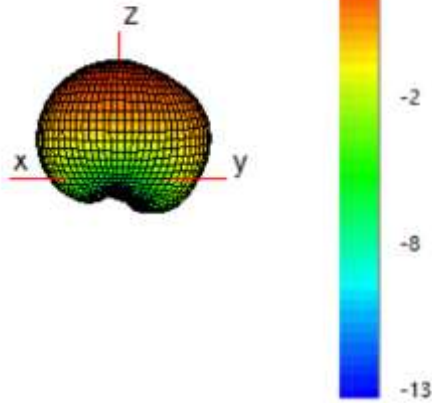


— 5150MHz
— 5500MHz
— 6000MHz

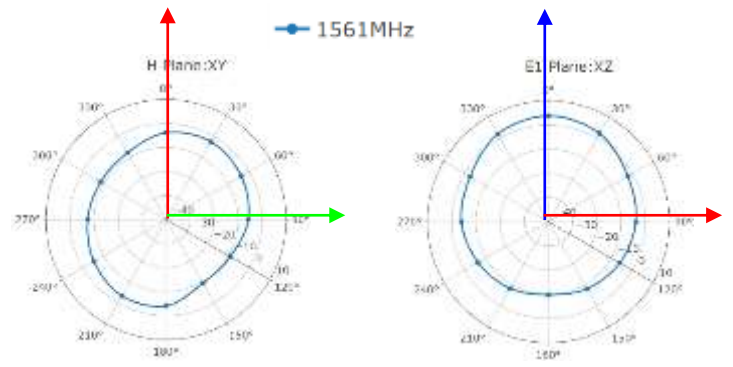
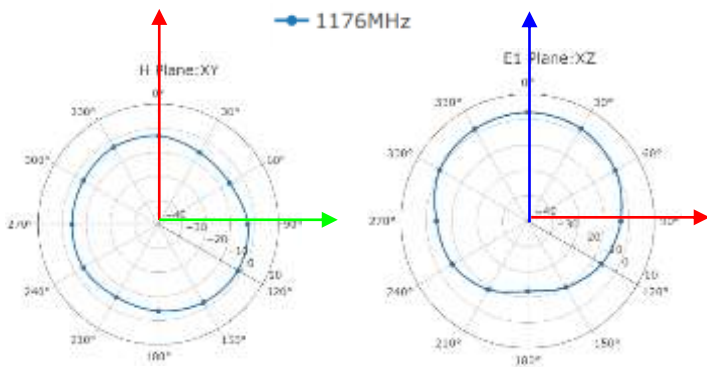
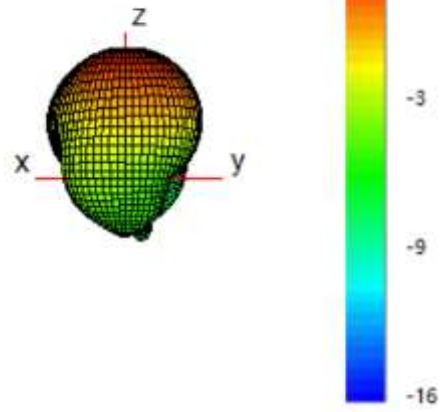


● GNSS

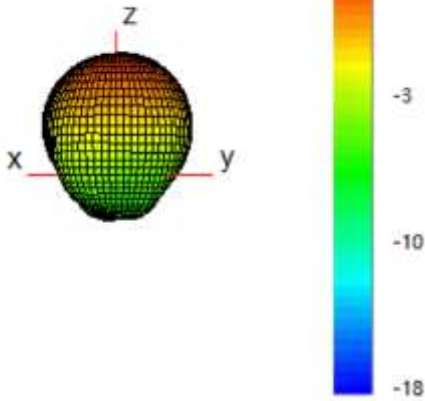
1176 MHz



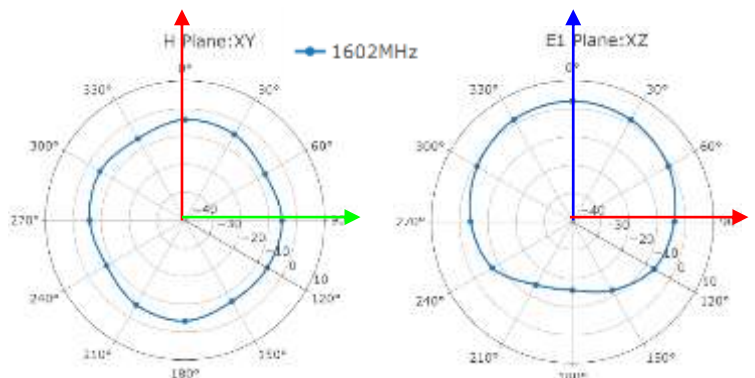
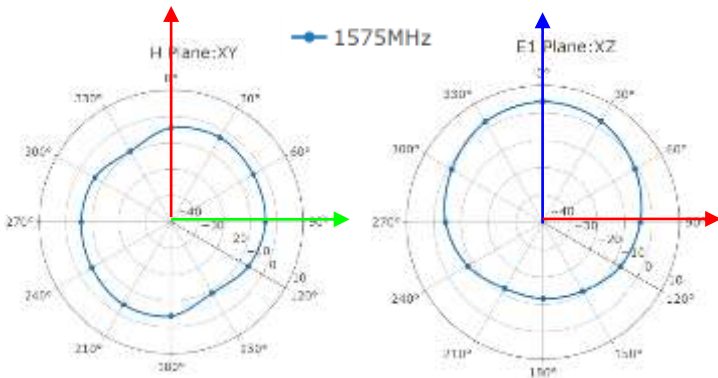
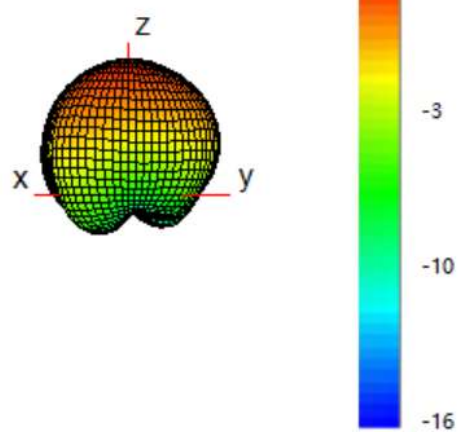
1561 MHz



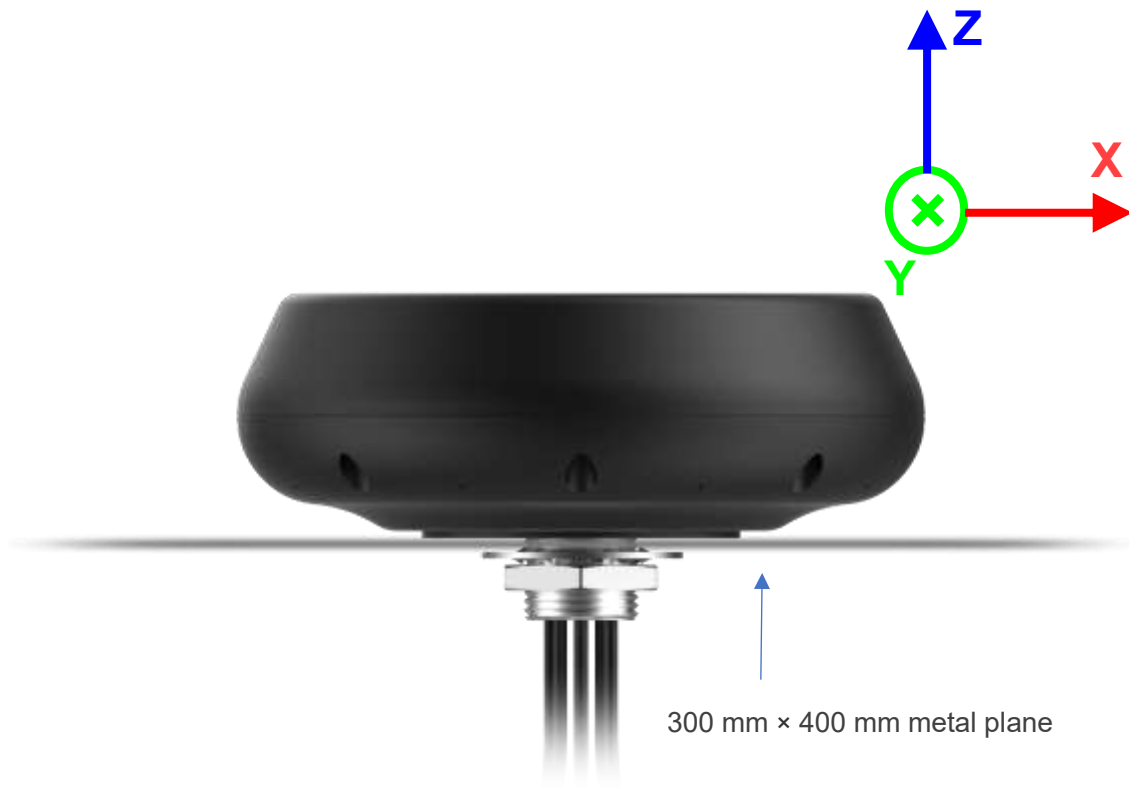
1575 MHz



1602 MHz

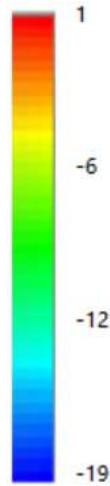
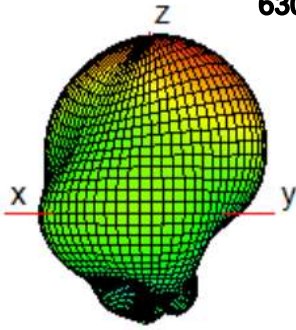


3.2.4.2. Test Status: On 300 mm × 400 mm Metal Plane

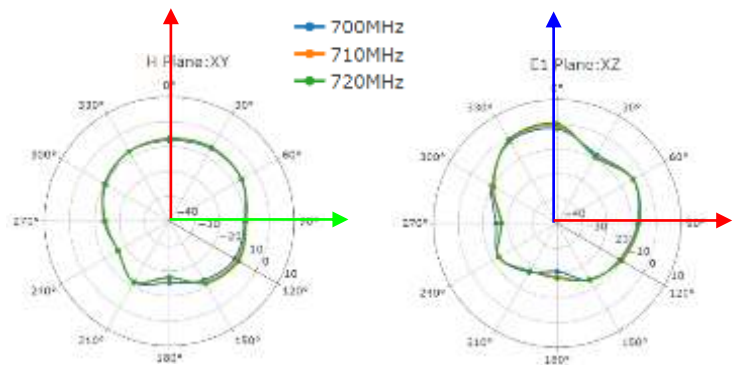
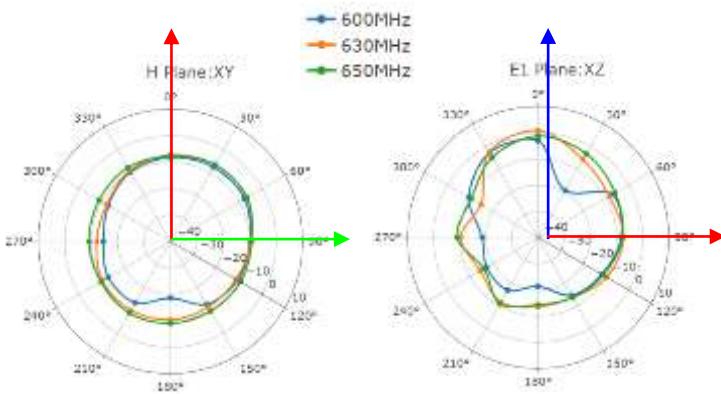
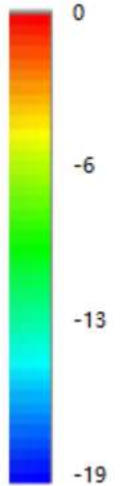
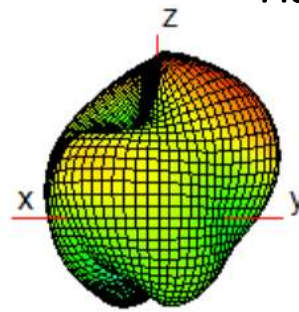


● **LMH1**

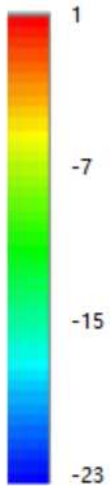
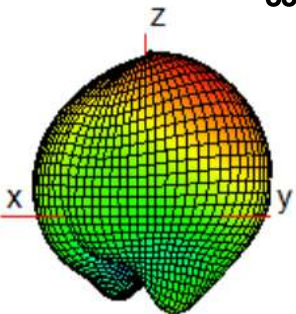
630 MHz



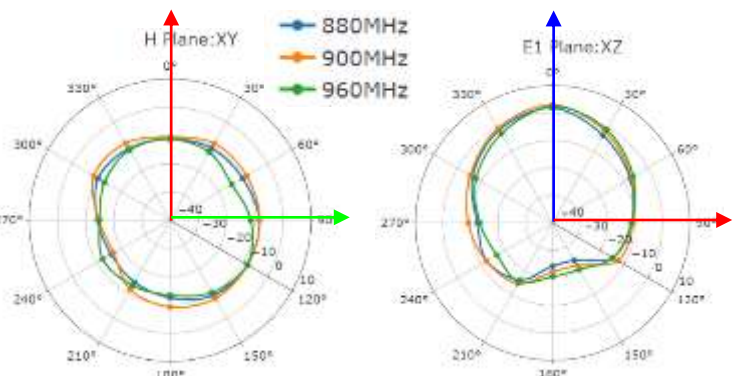
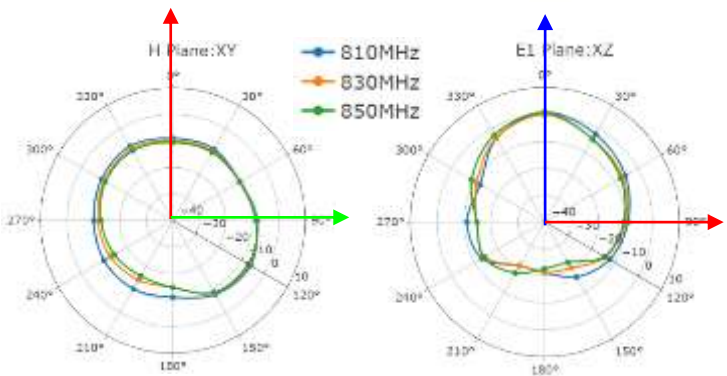
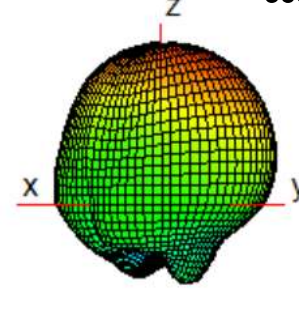
710 MHz



830 MHz

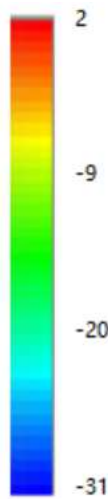


900 MHz

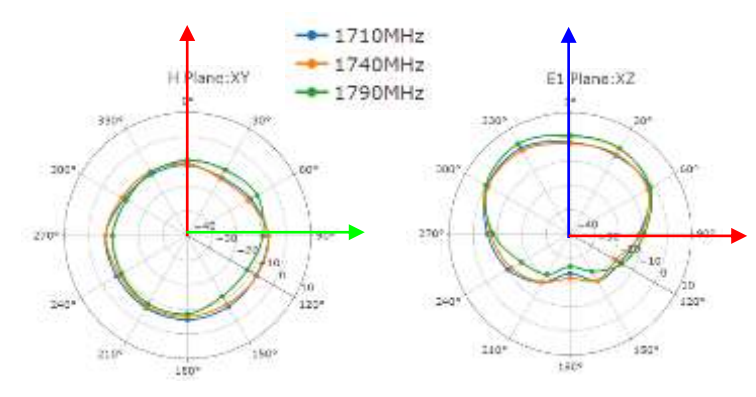
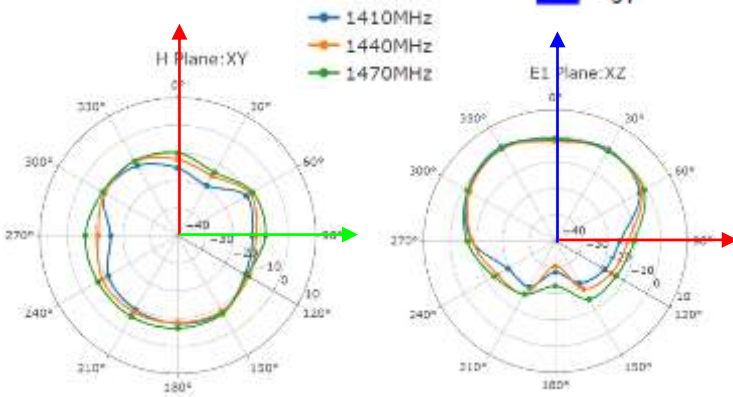
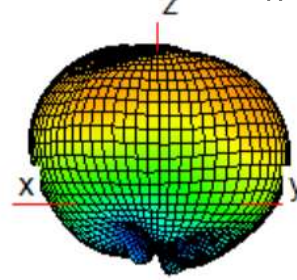
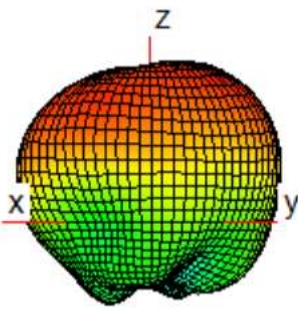
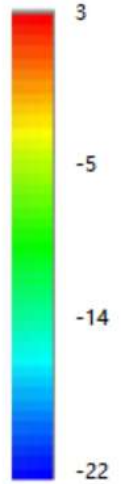


● **LMH1**

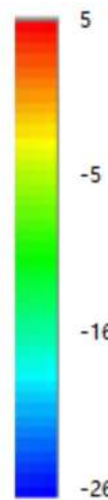
1440 MHz



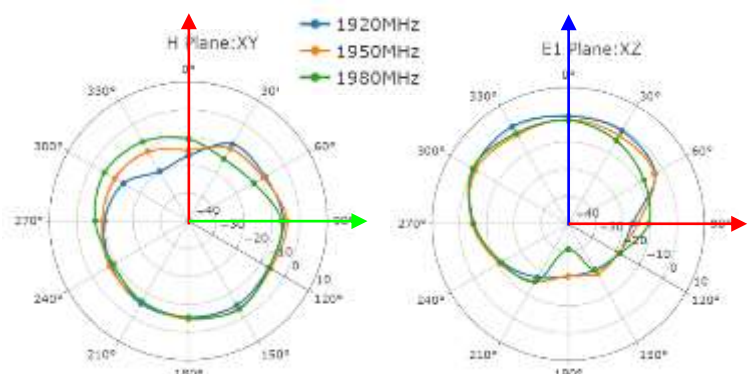
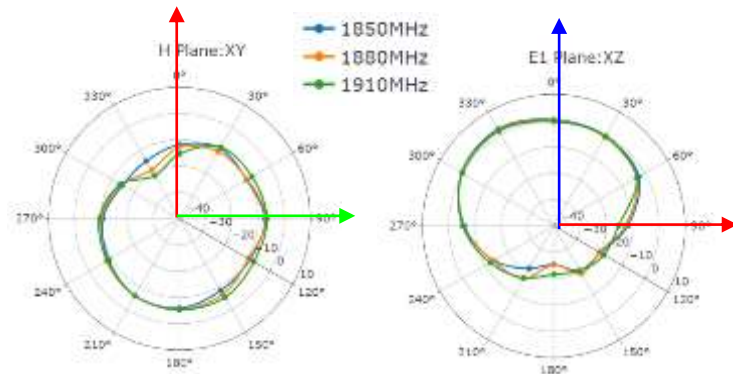
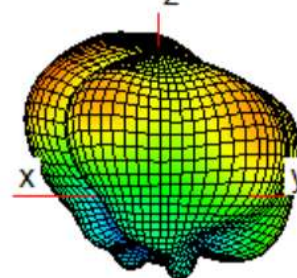
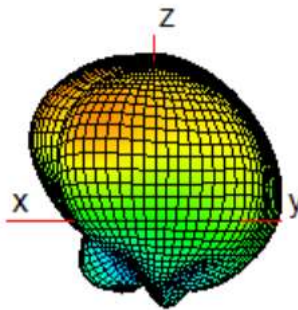
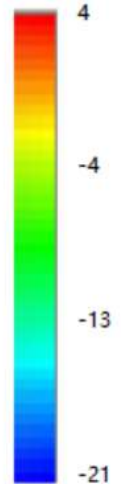
1740 MHz



1880 MHz

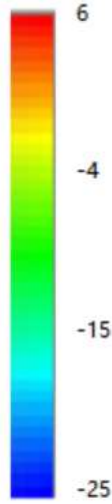


1950 MHz

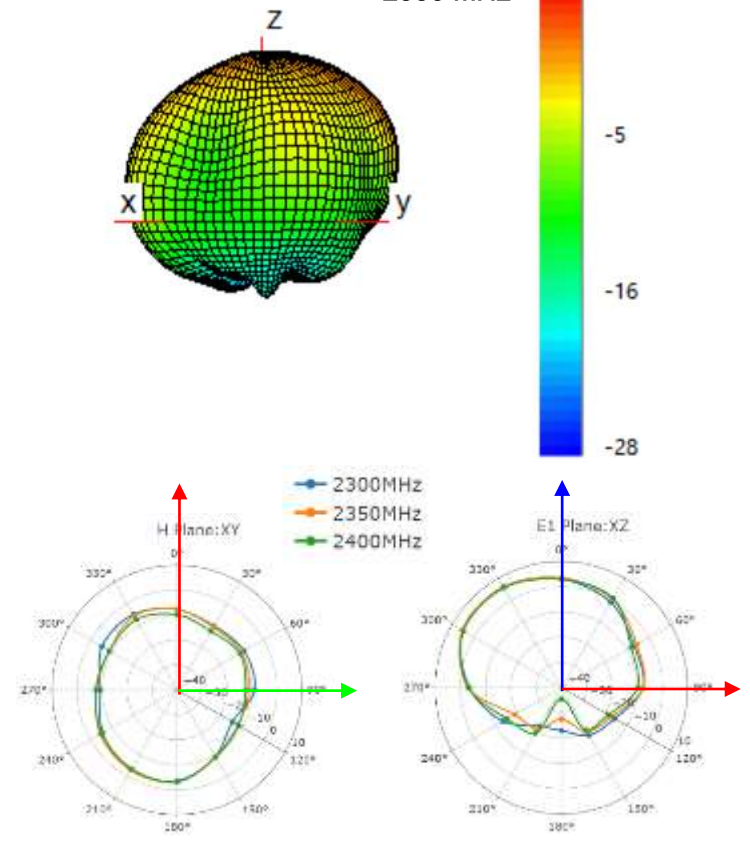
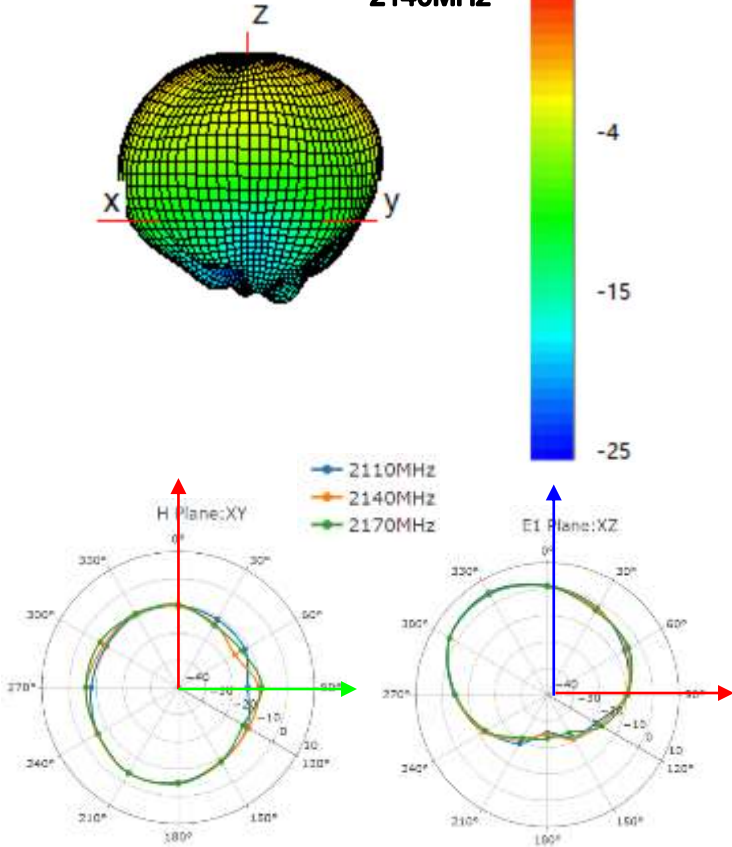
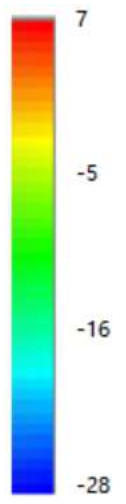


● **LMH1**

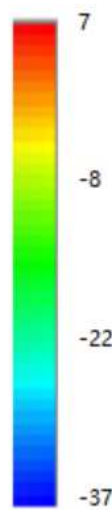
2140MHz



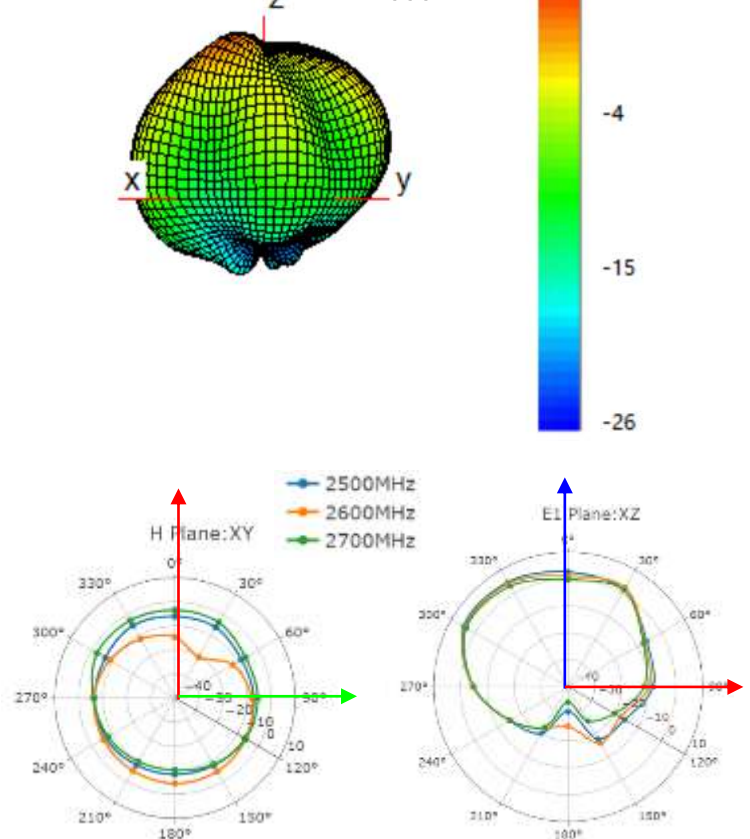
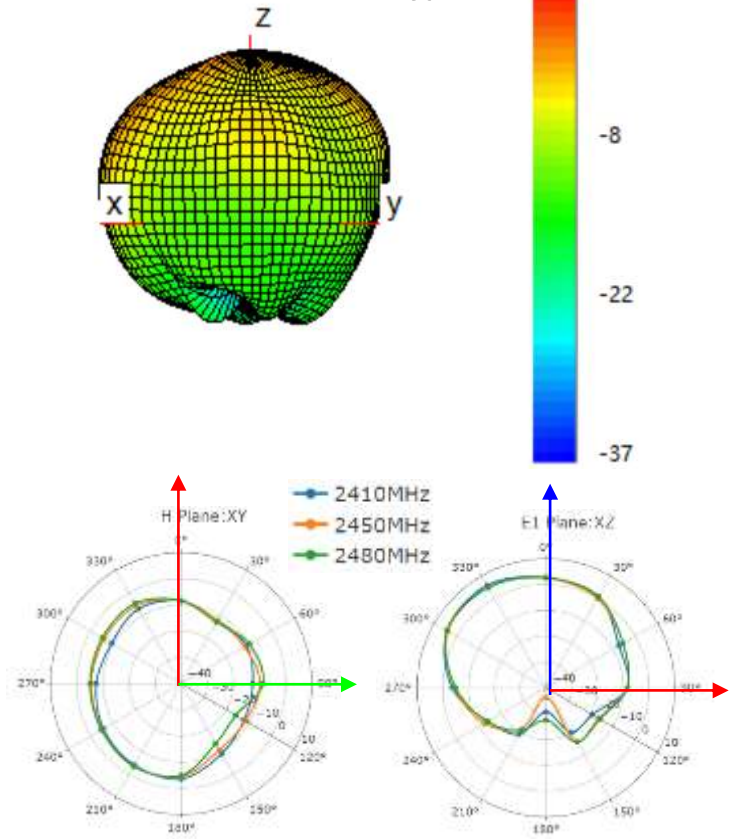
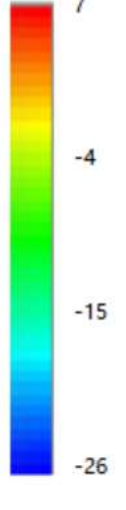
2350 MHz



2450 MHz

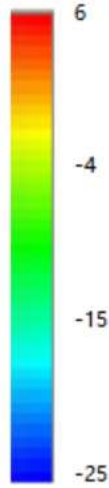
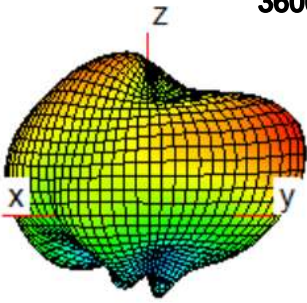


2600 MHz

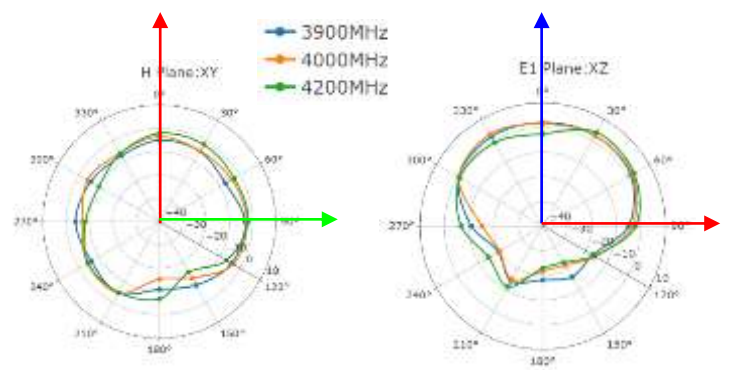
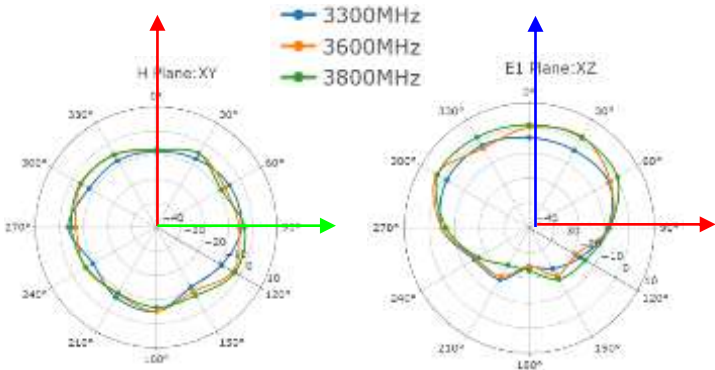
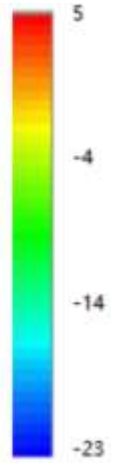
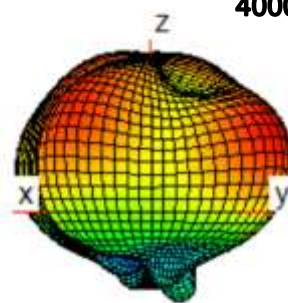


● **LMH1**

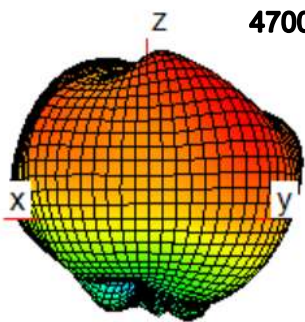
3600 MHz



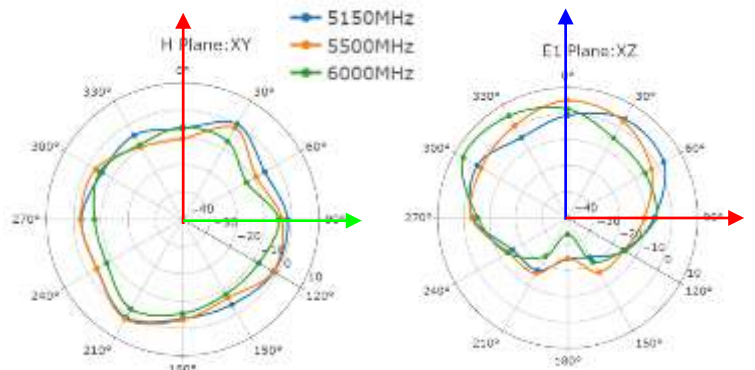
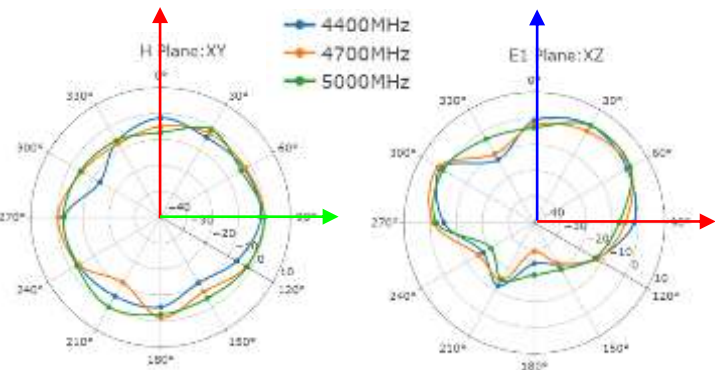
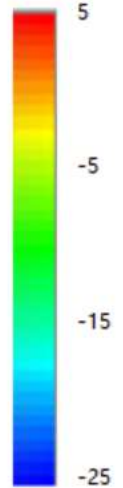
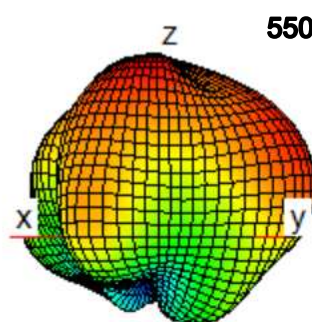
4000 MHz



4700 MHz

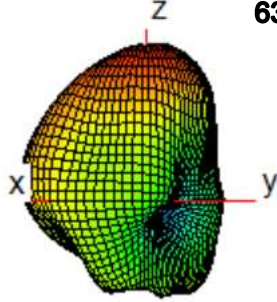


5500 MHz

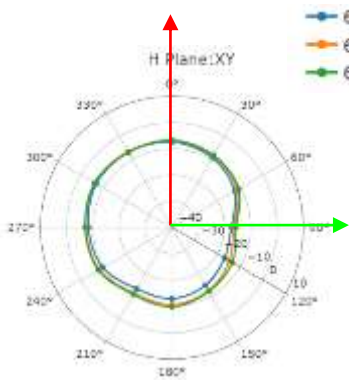
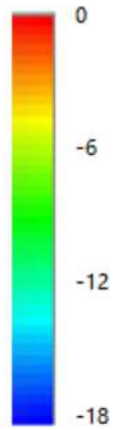
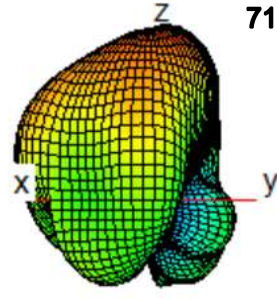


● **LMH2**

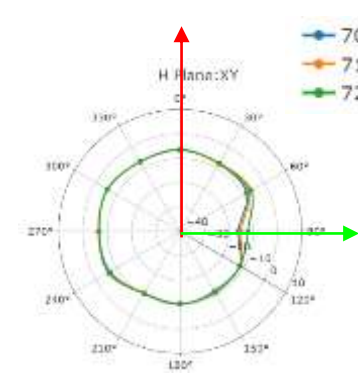
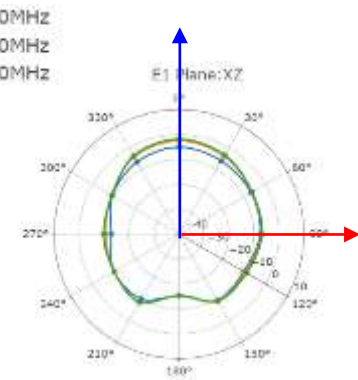
630 MHz



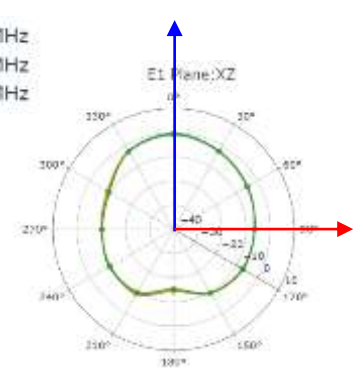
710 MHz



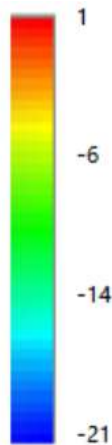
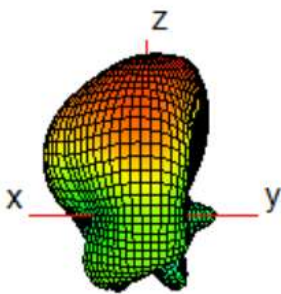
— 600MHz
— 630MHz
— 650MHz



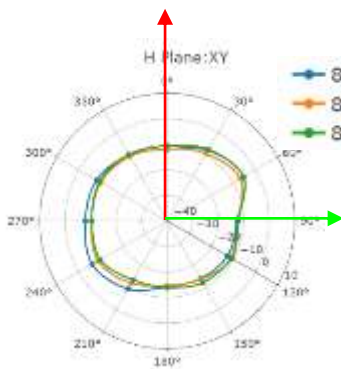
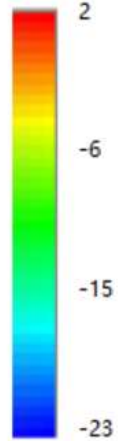
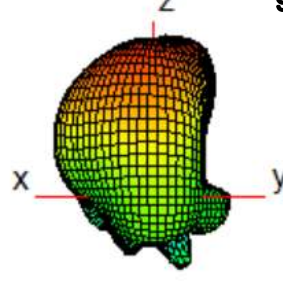
— 700MHz
— 710MHz
— 720MHz



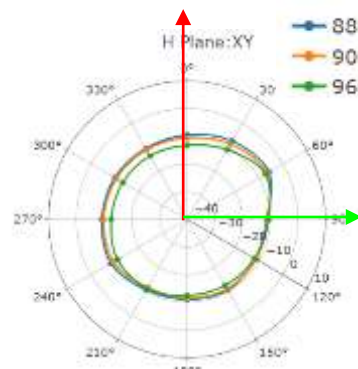
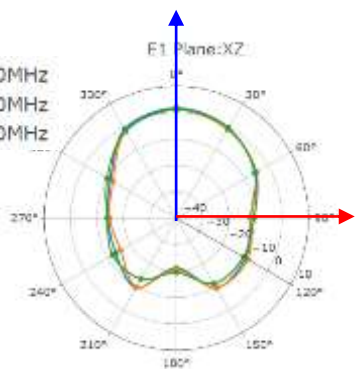
830 MHz



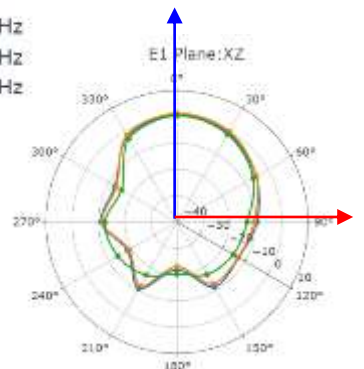
900 MHz



— 810MHz
— 830MHz
— 850MHz

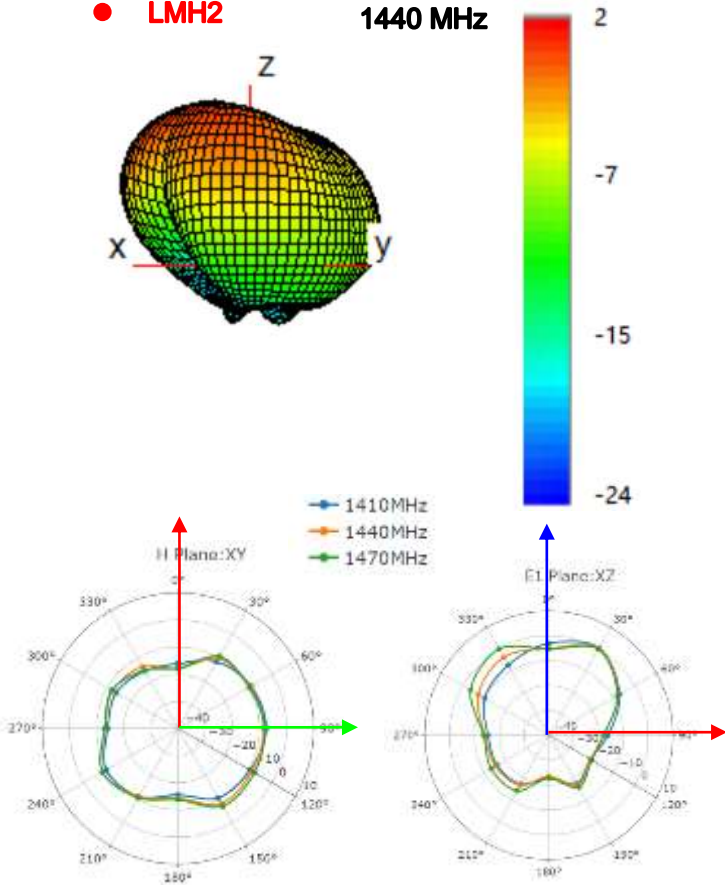


— 880MHz
— 900MHz
— 960MHz

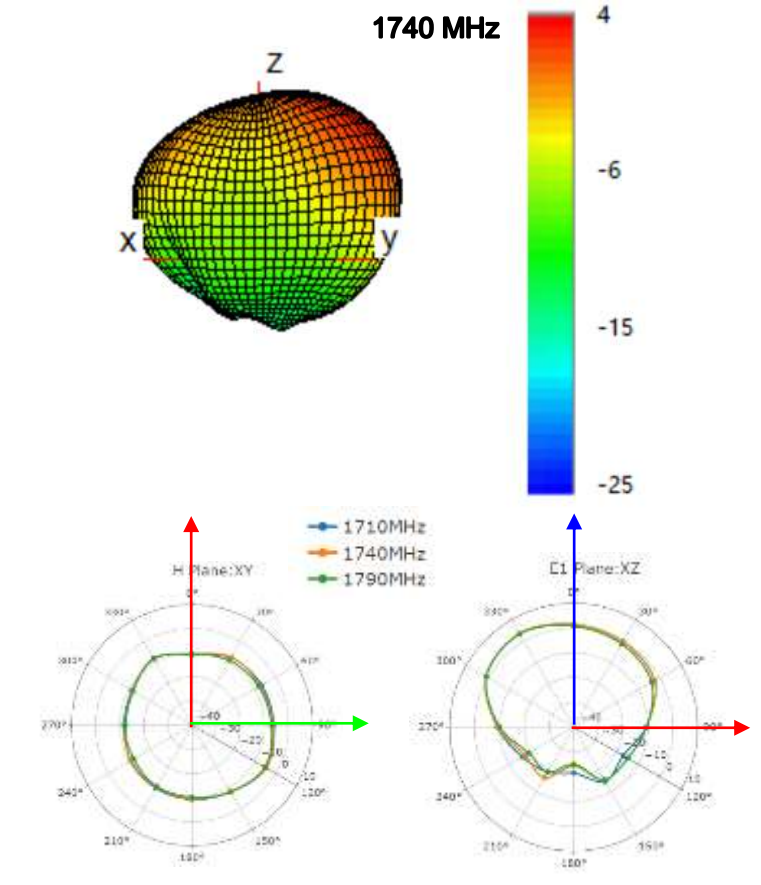


LMH2

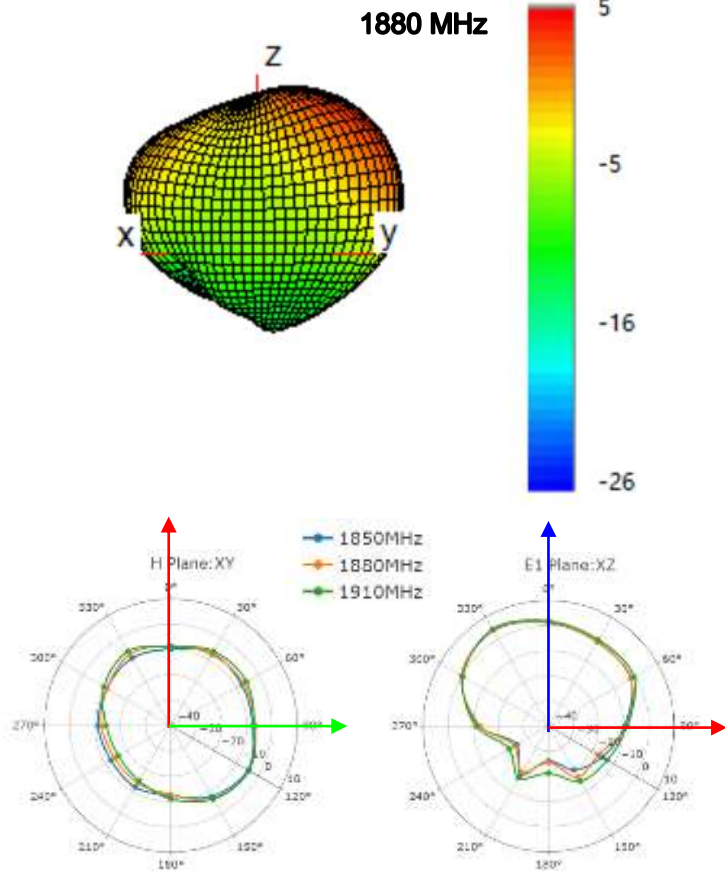
1440 MHz



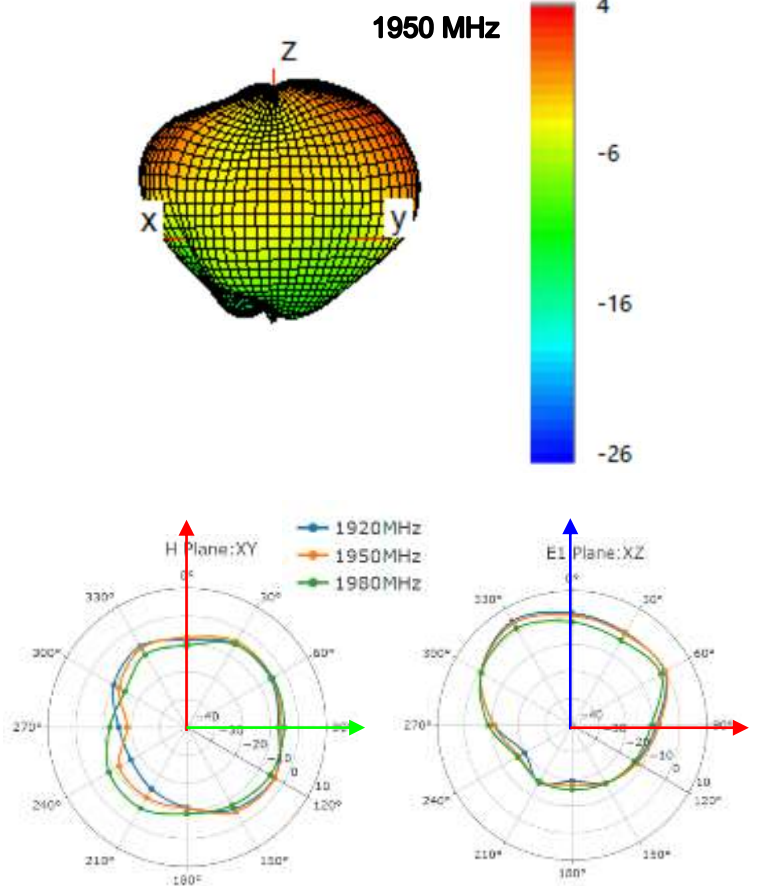
1740 MHz



1880 MHz

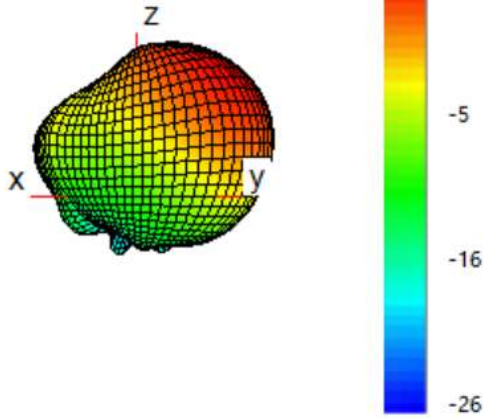


1950 MHz

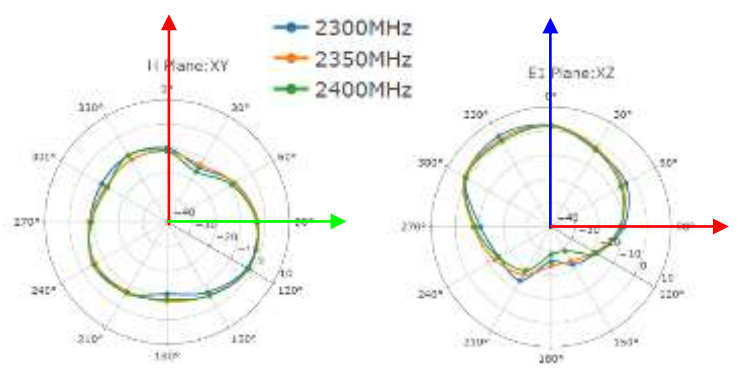
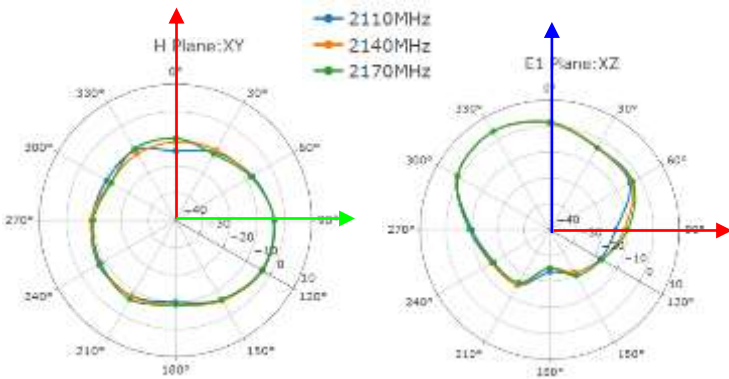
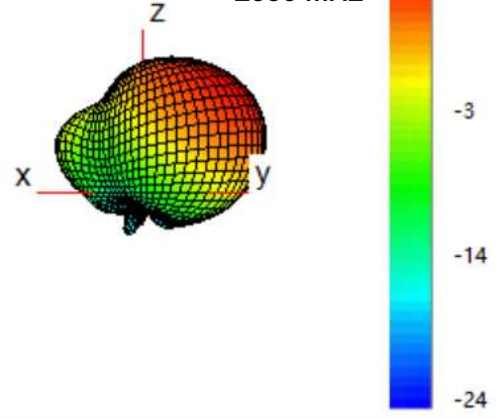


● **LMH2**

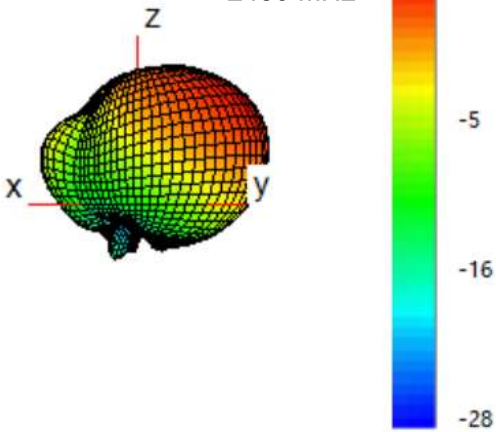
2140 MHz



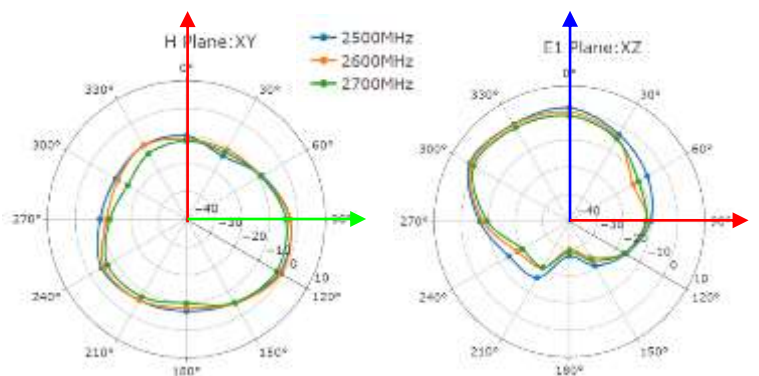
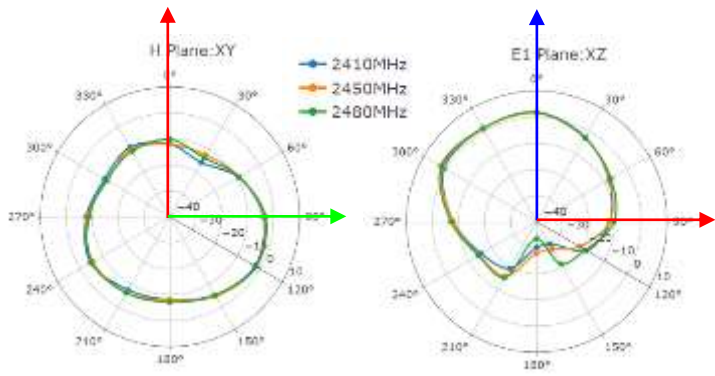
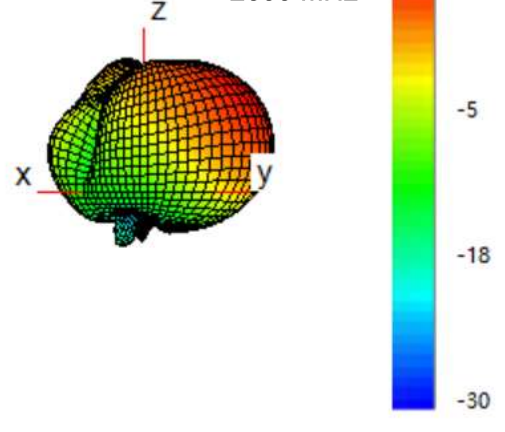
2350 MHz



2450 MHz

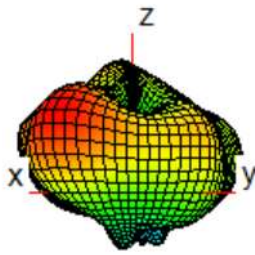


2600 MHz

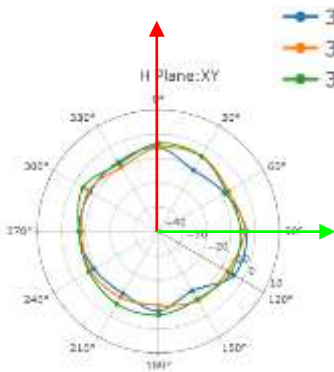
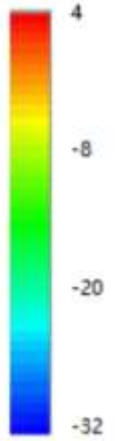
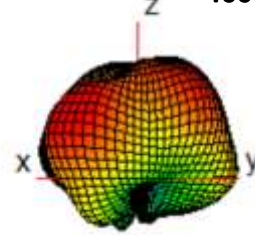


● **LMH2**

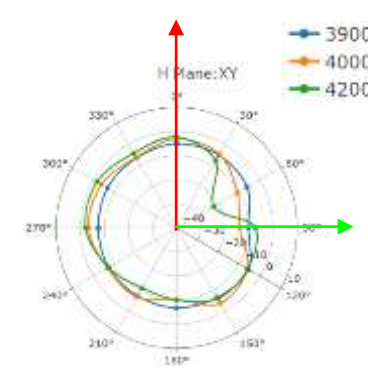
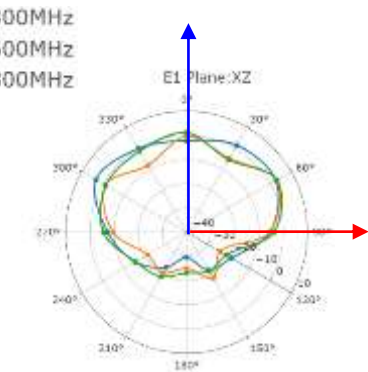
3600 MHz



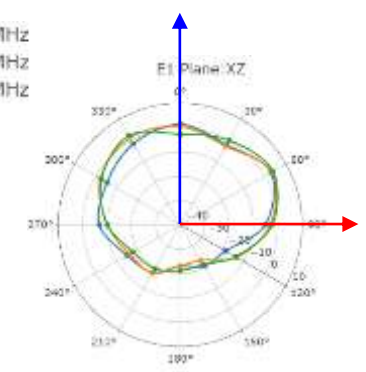
4000 MHz



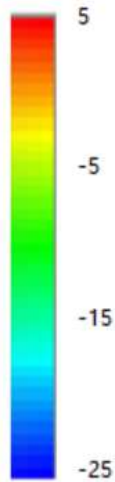
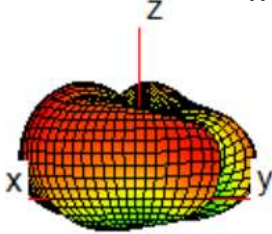
— 3300MHz
— 3600MHz
— 3800MHz



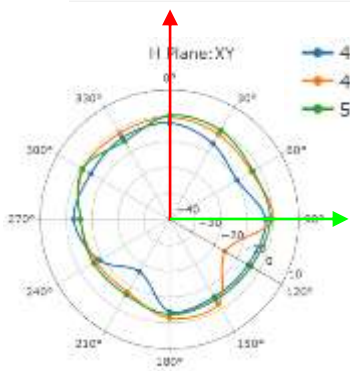
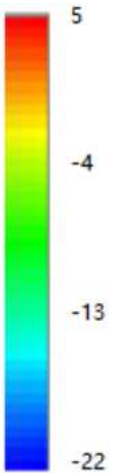
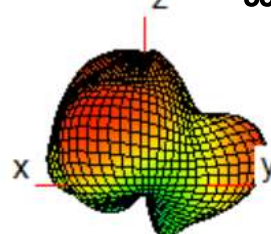
— 3900MHz
— 4000MHz
— 4200MHz



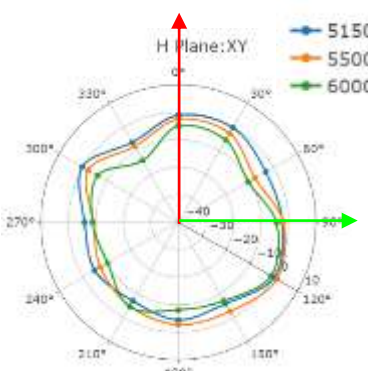
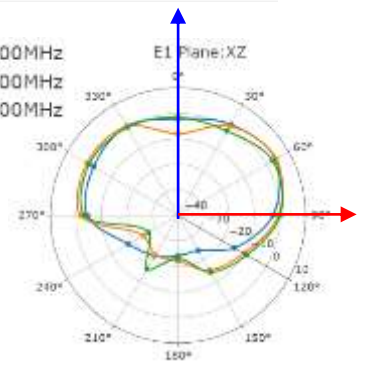
4700 MHz



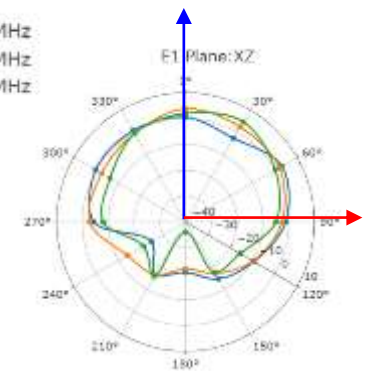
5500 MHz



— 4400MHz
— 4700MHz
— 5000MHz

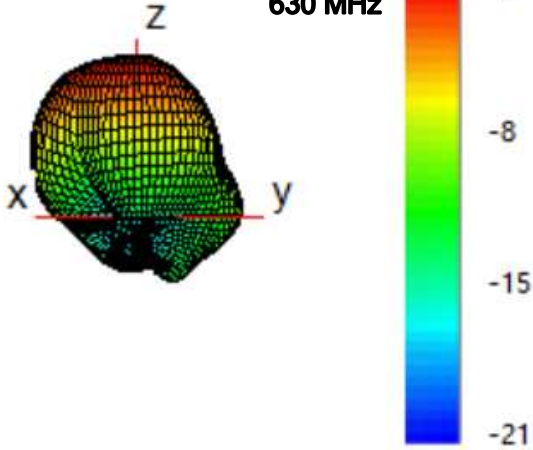


— 5150MHz
— 5500MHz
— 6000MHz

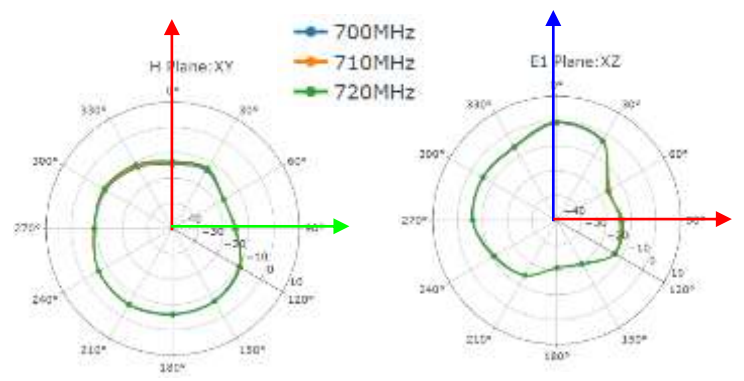
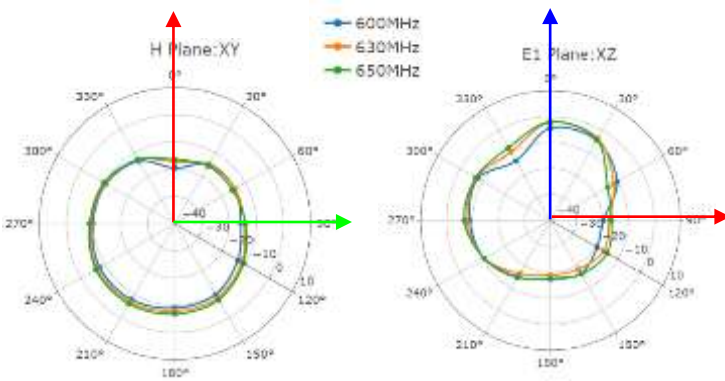
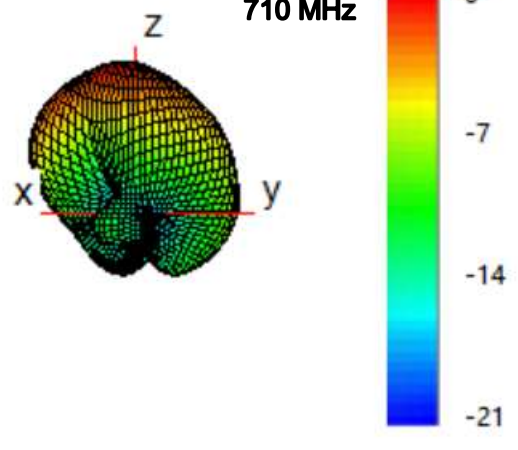


LMH3

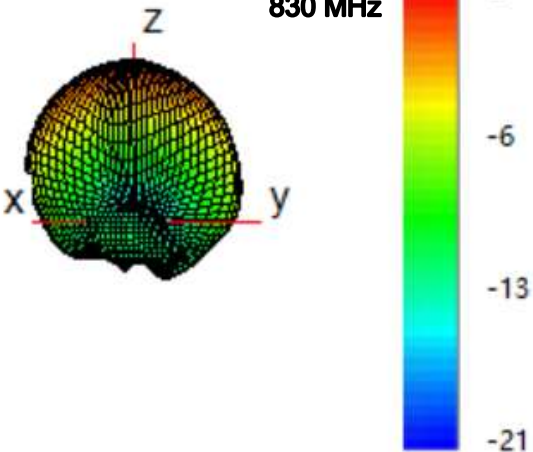
630 MHz



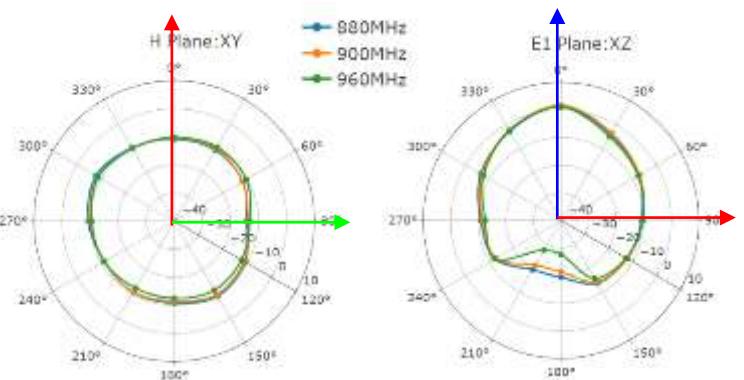
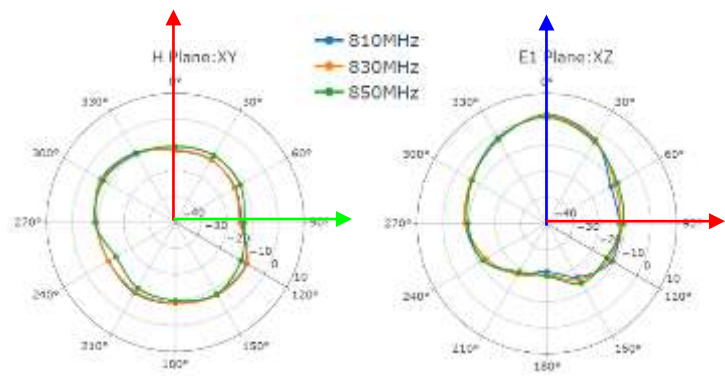
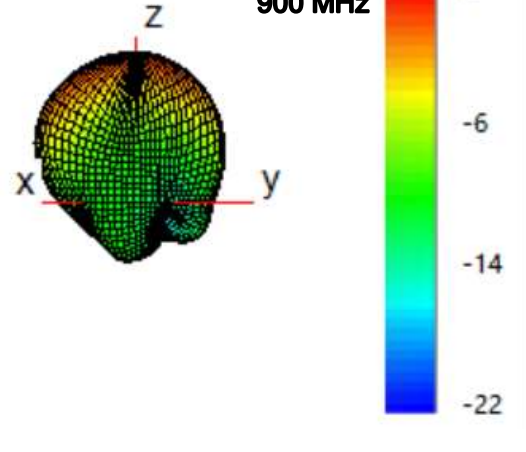
710 MHz



830 MHz

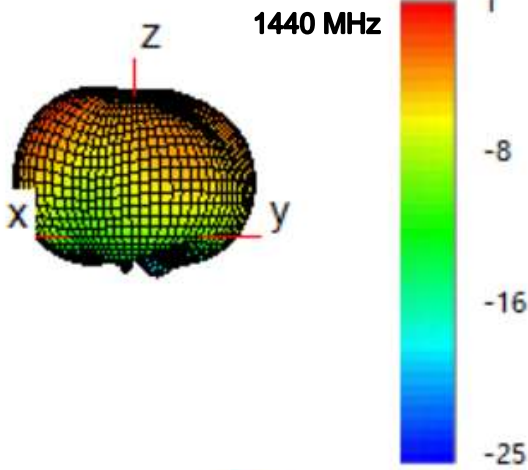


900 MHz

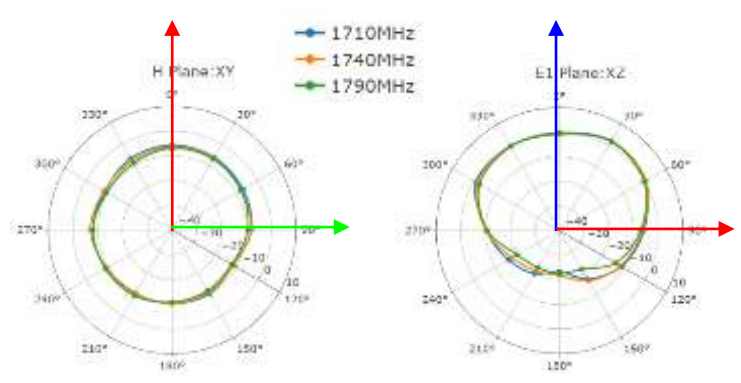
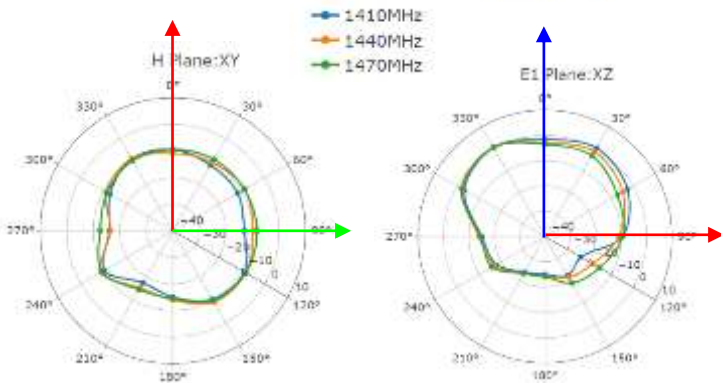
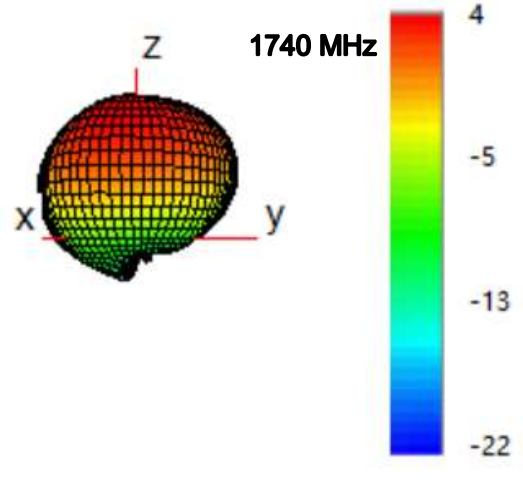


● **LMH3**

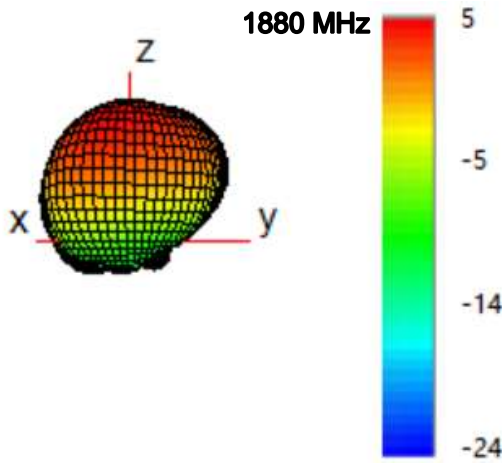
1440 MHz



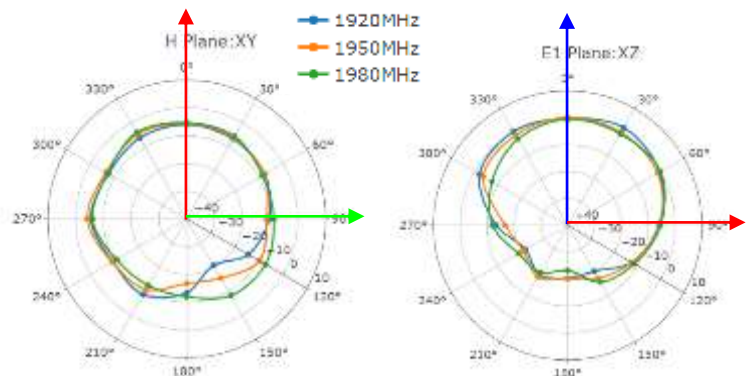
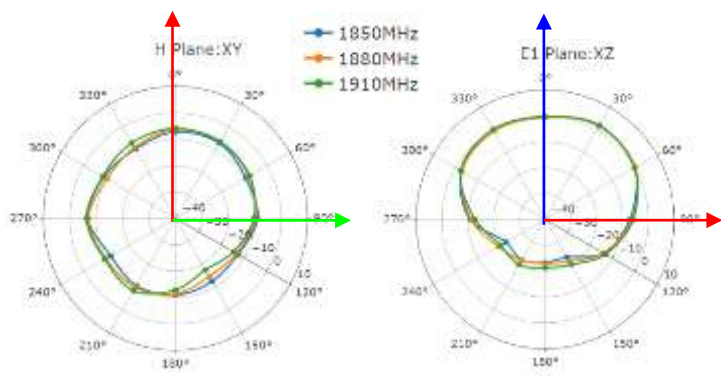
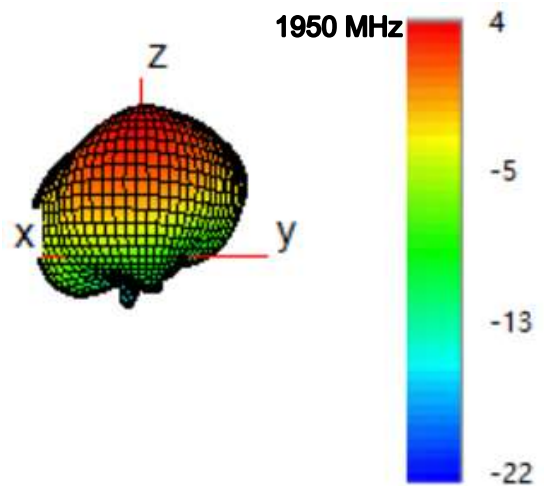
1740 MHz



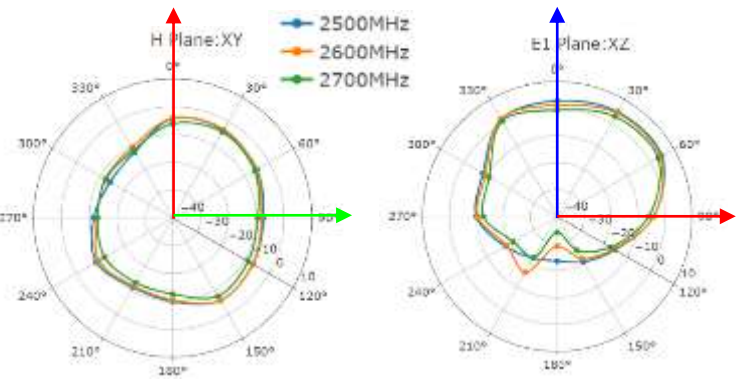
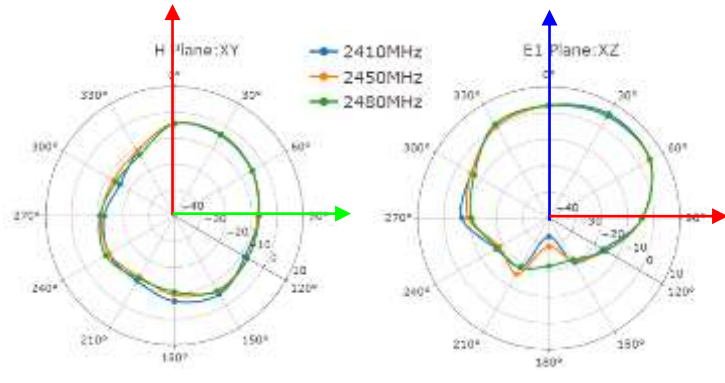
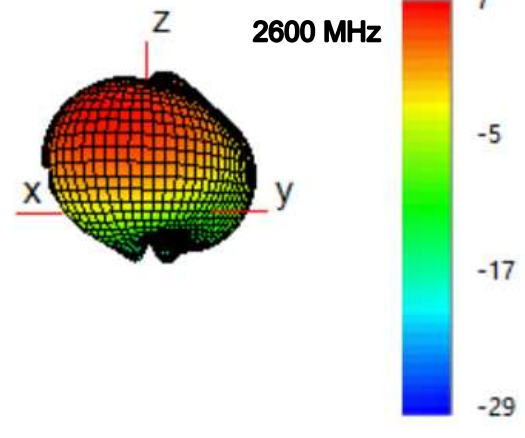
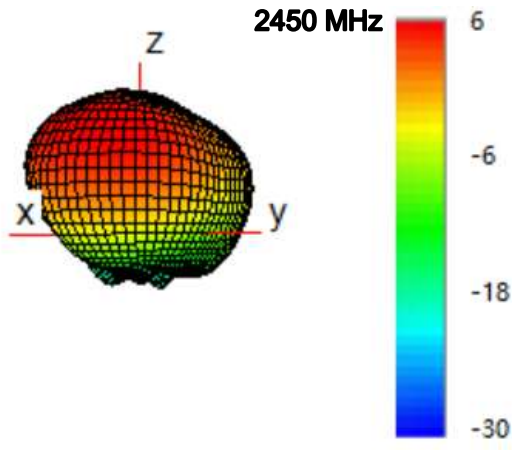
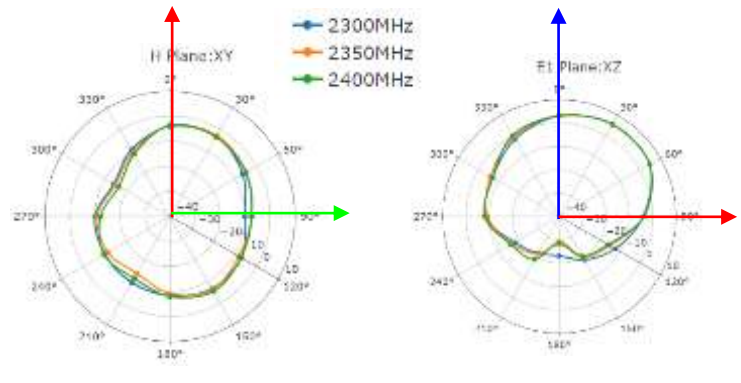
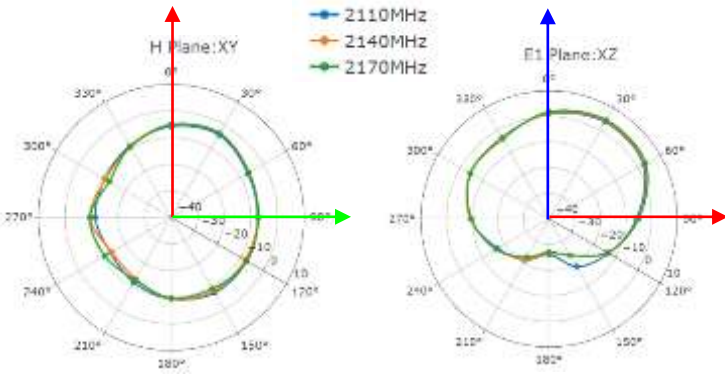
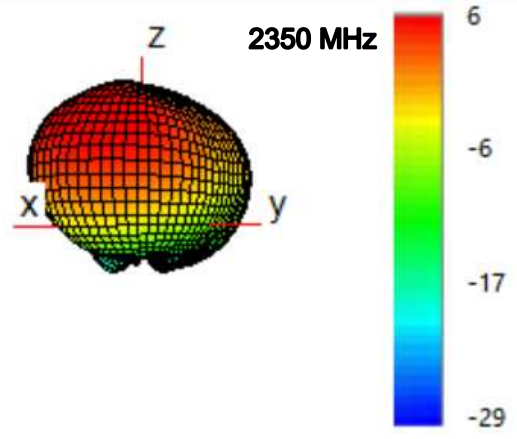
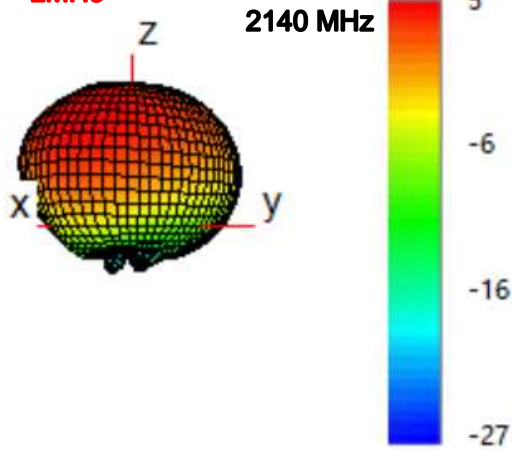
1880 MHz



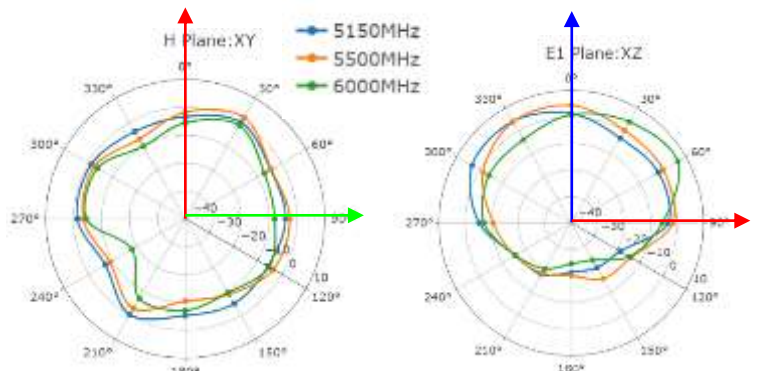
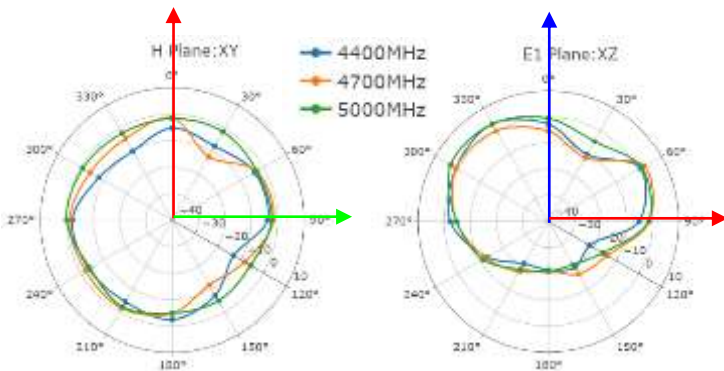
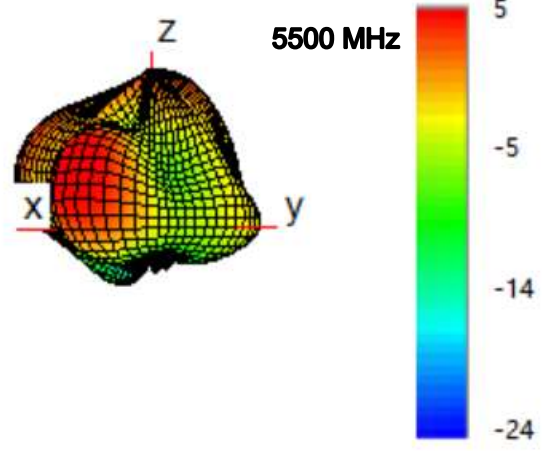
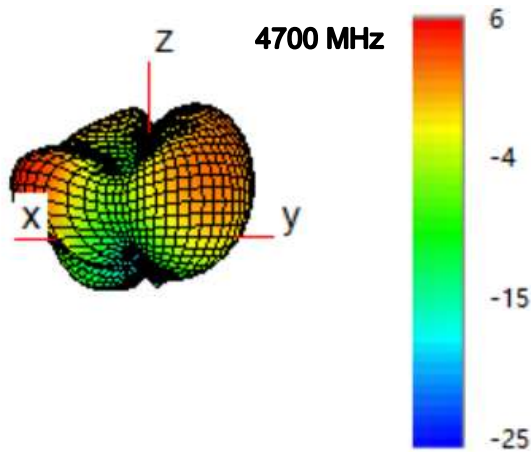
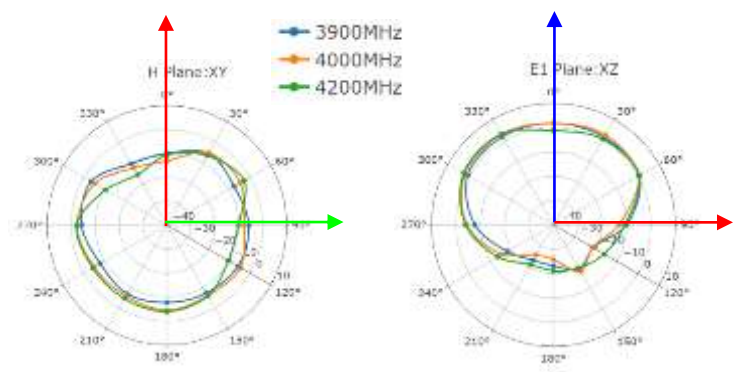
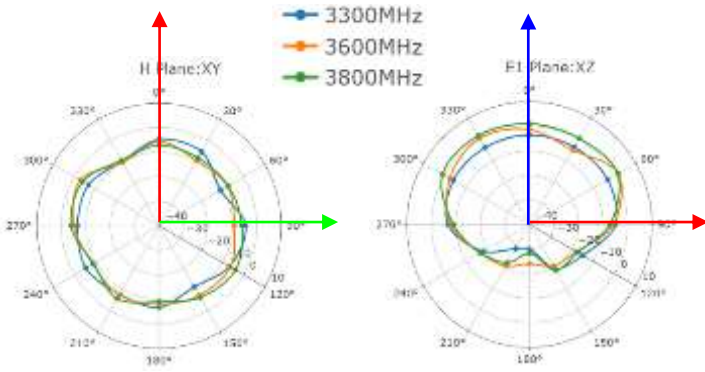
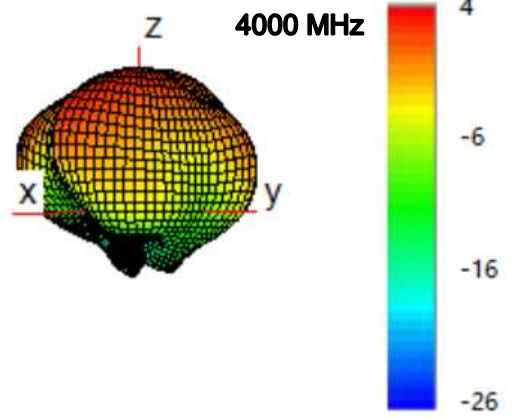
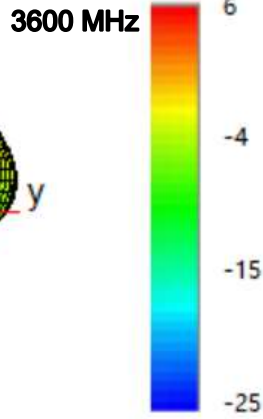
1950 MHz

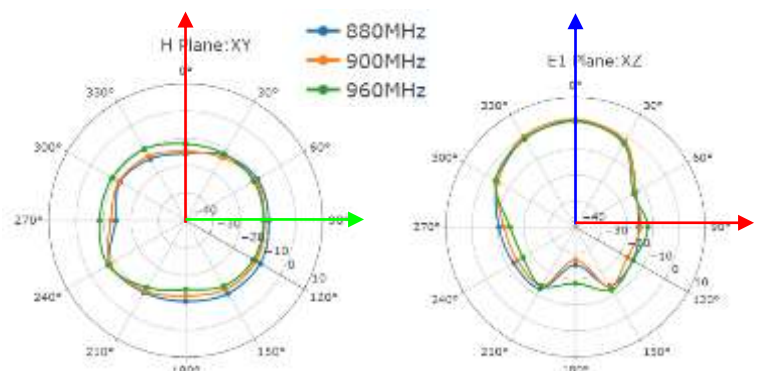
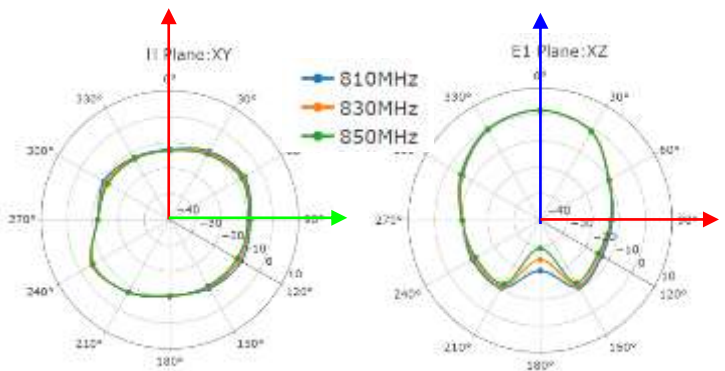
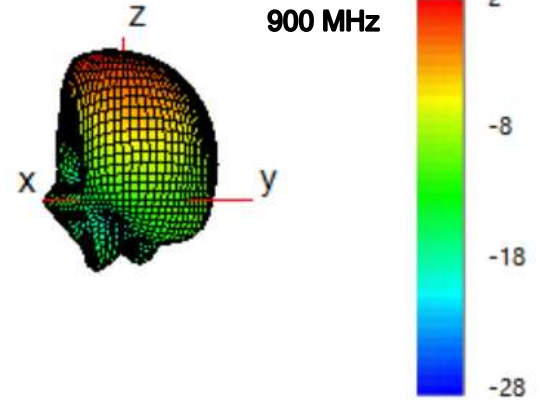
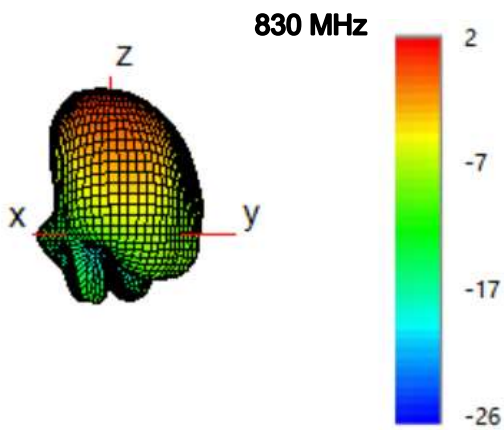
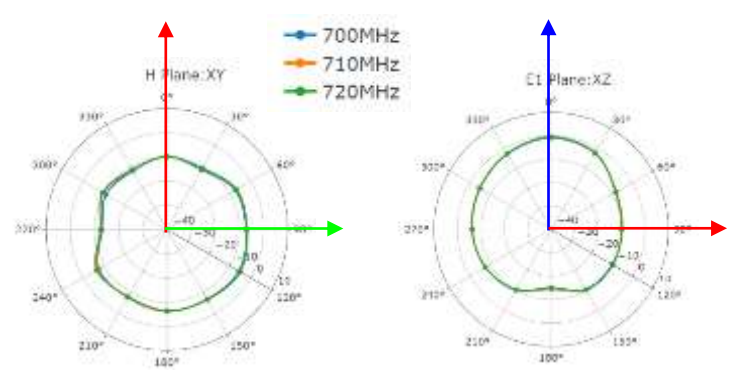
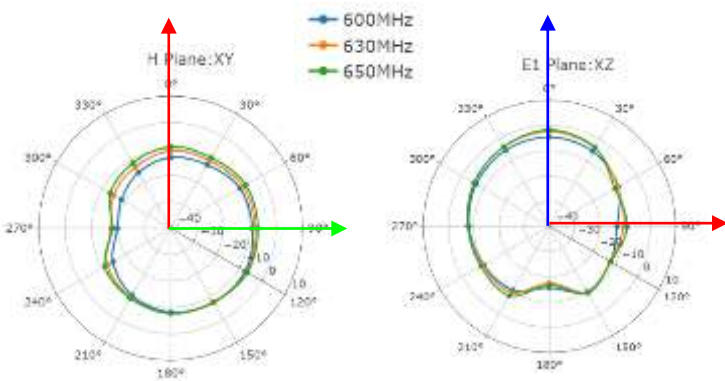
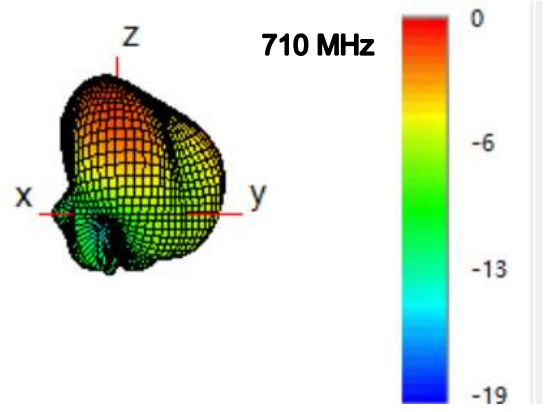
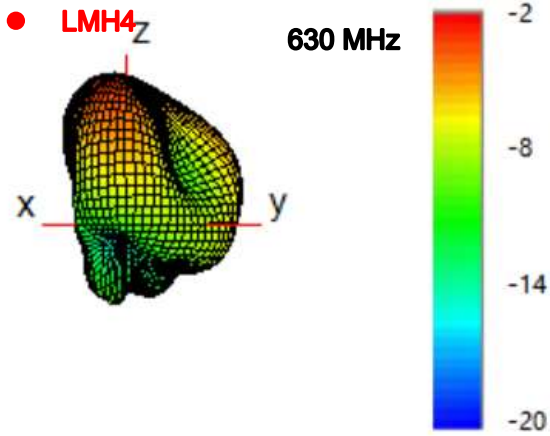


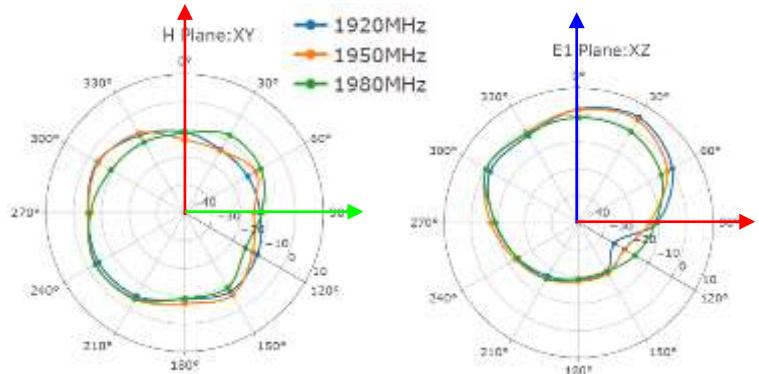
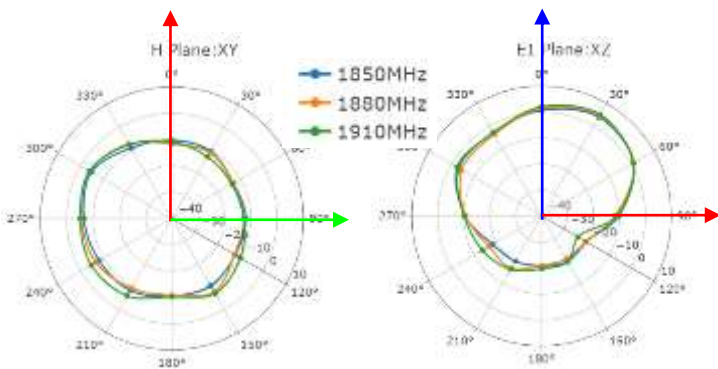
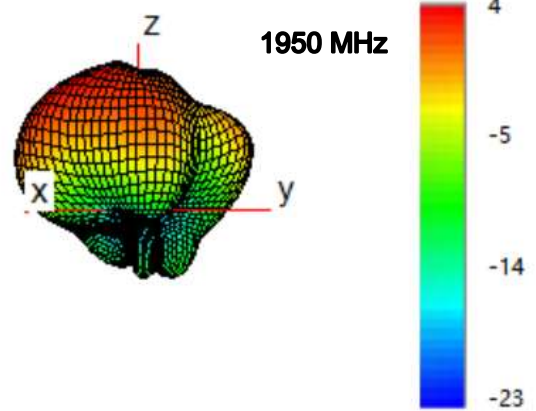
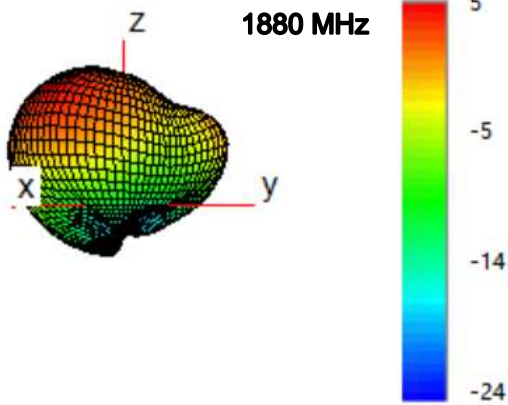
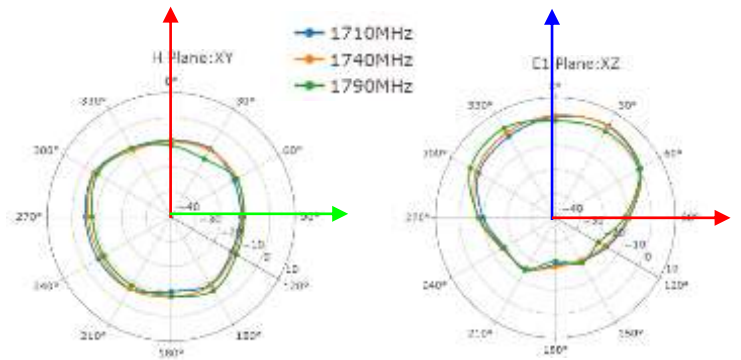
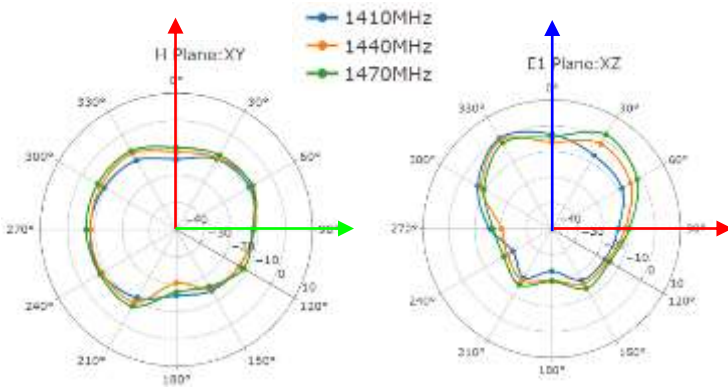
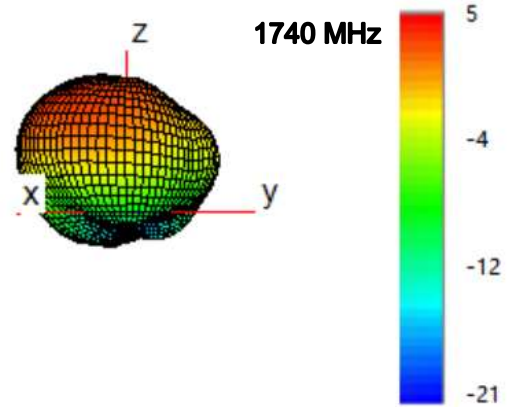
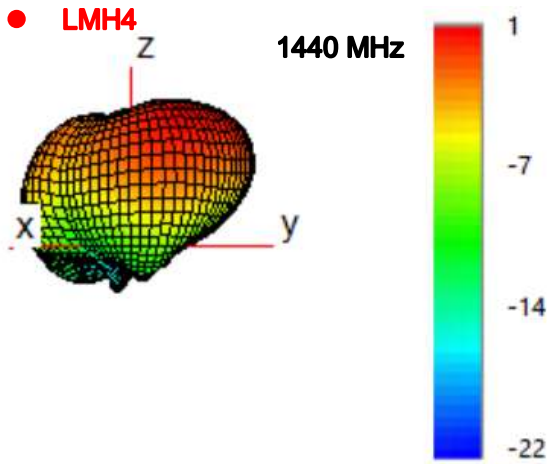
● **LMH3**



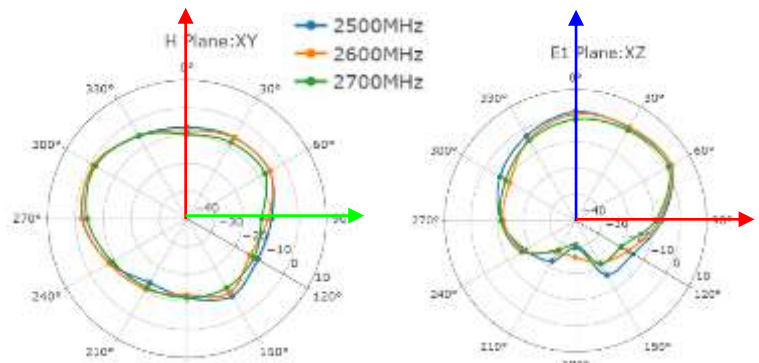
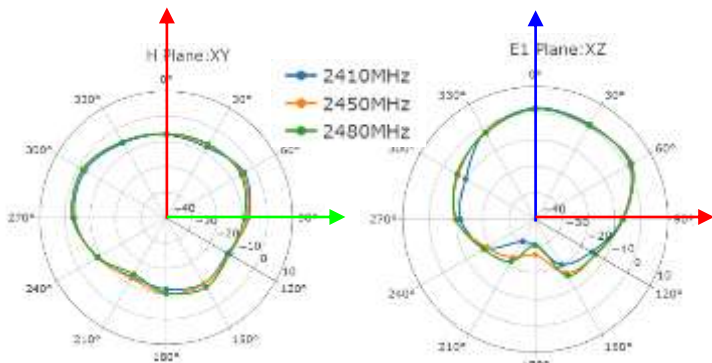
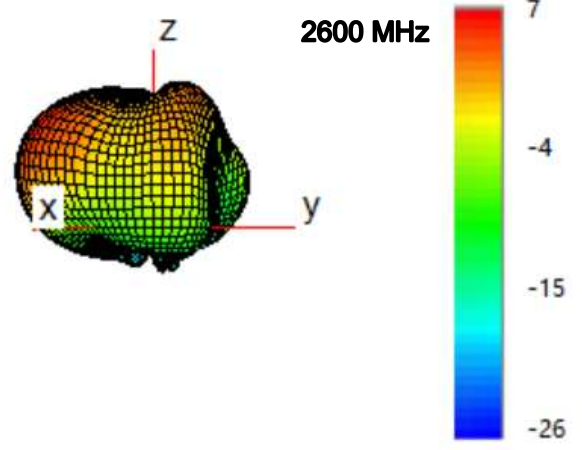
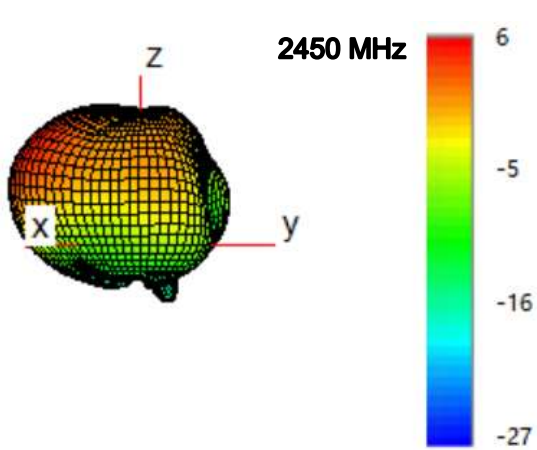
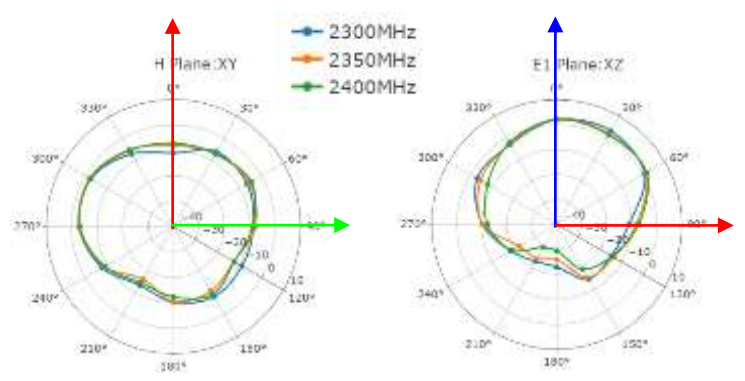
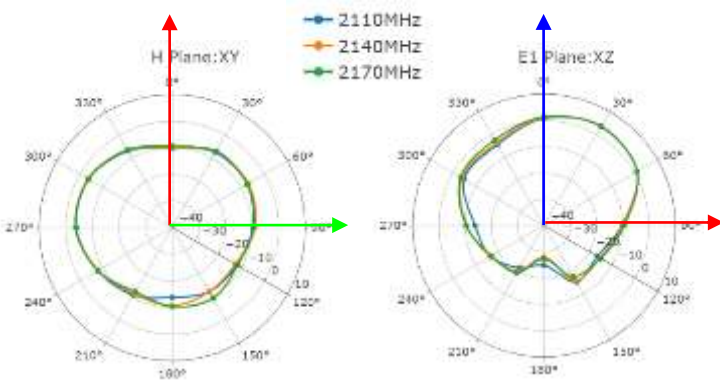
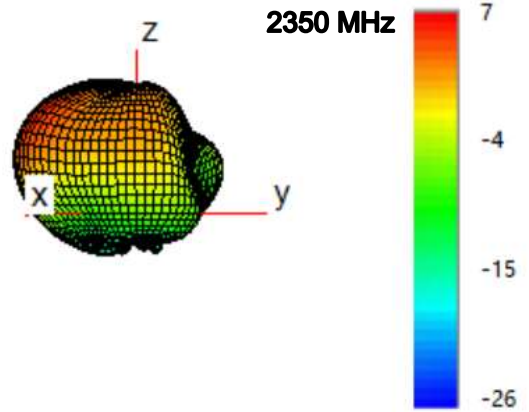
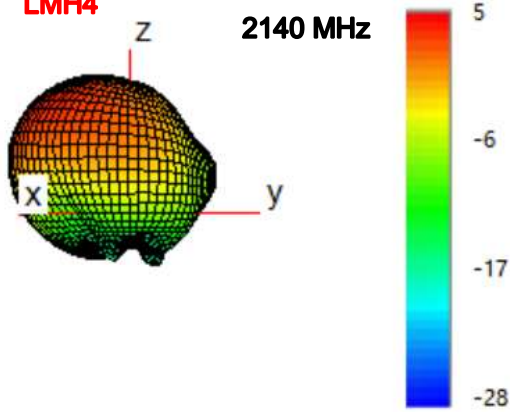
● **LMH3**



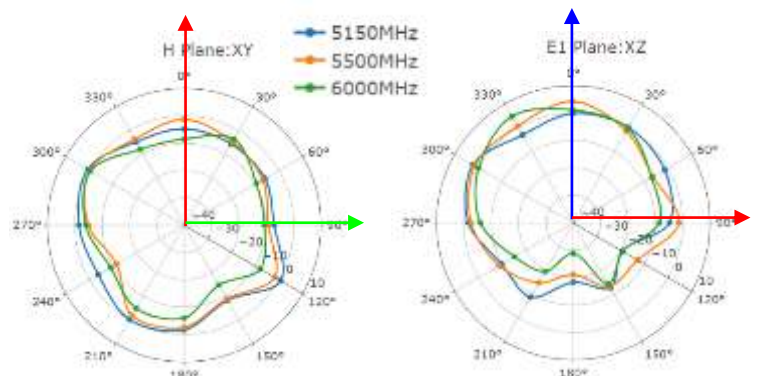
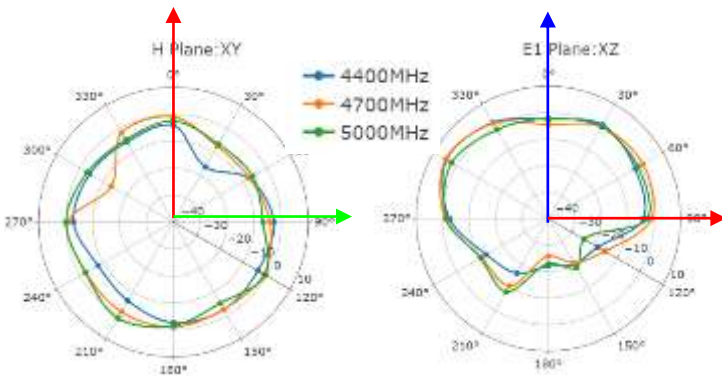
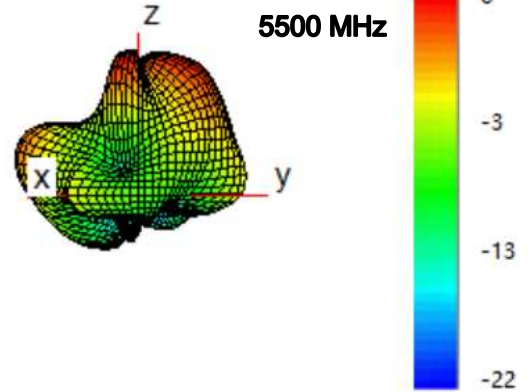
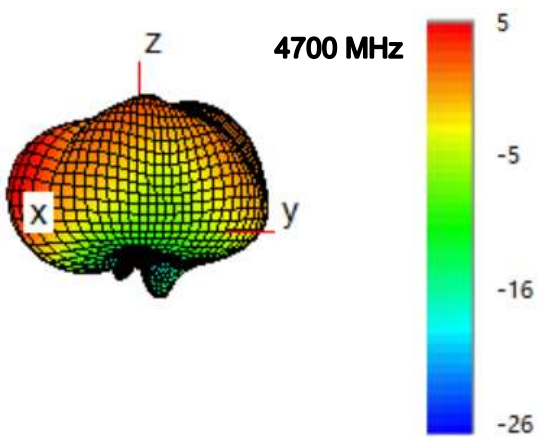
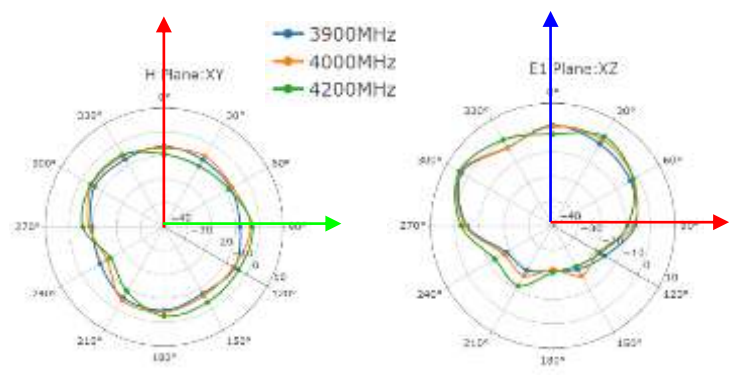
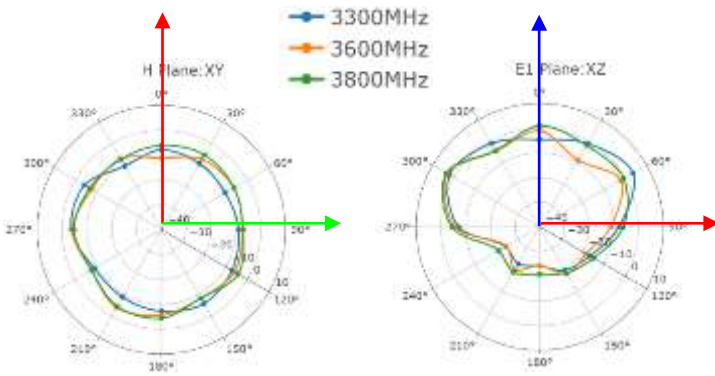
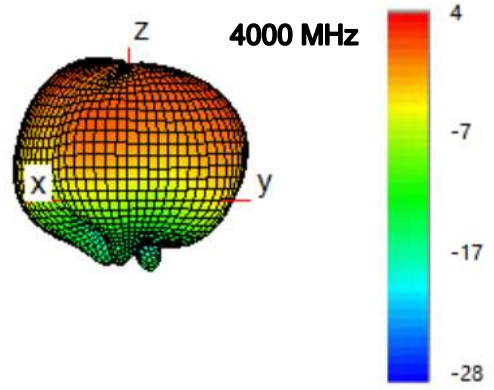
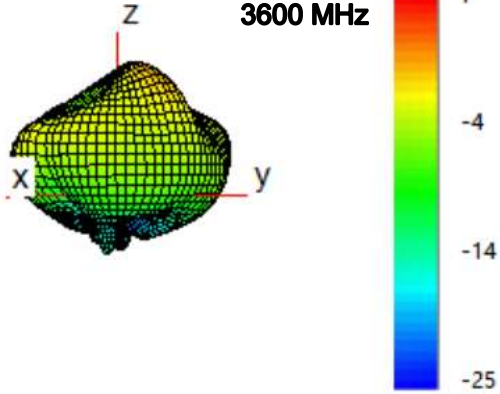


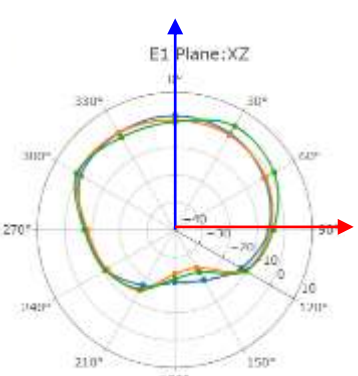
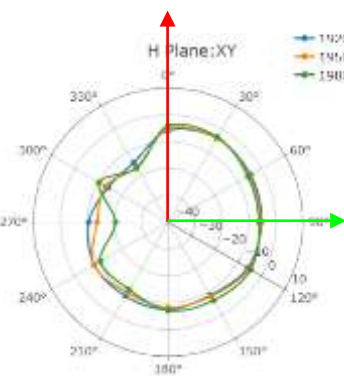
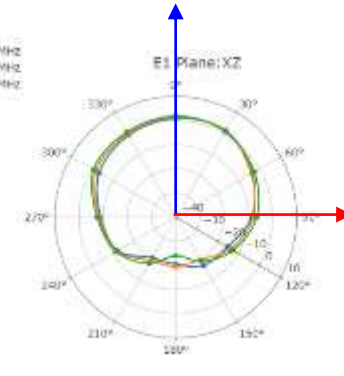
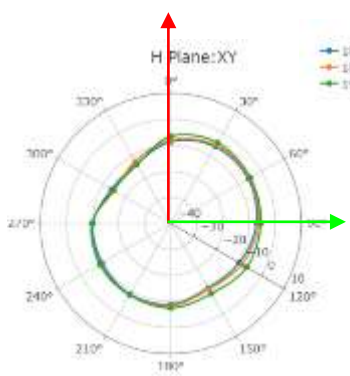
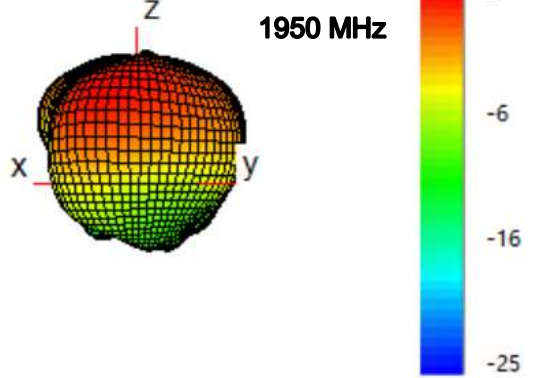
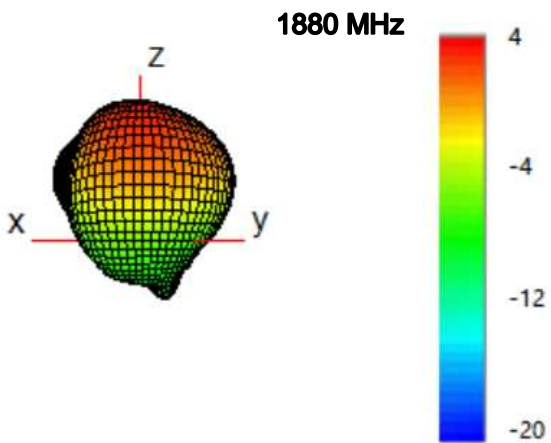
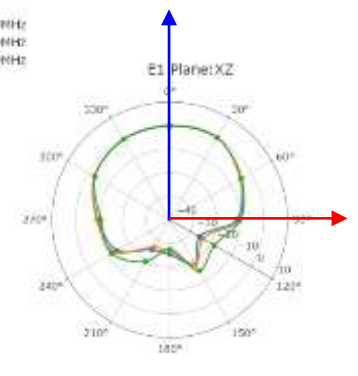
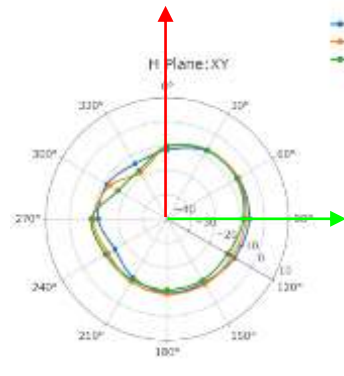
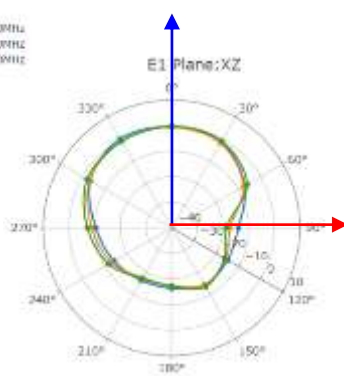
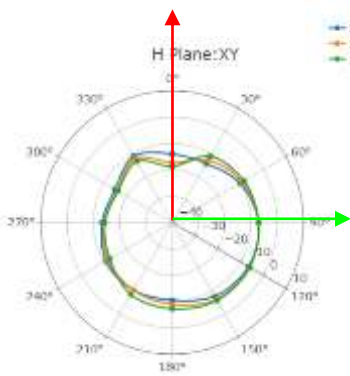
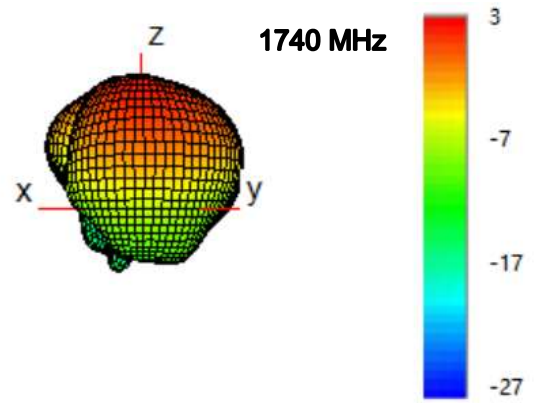
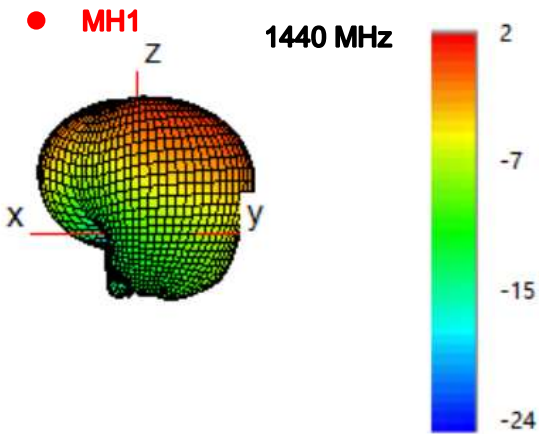


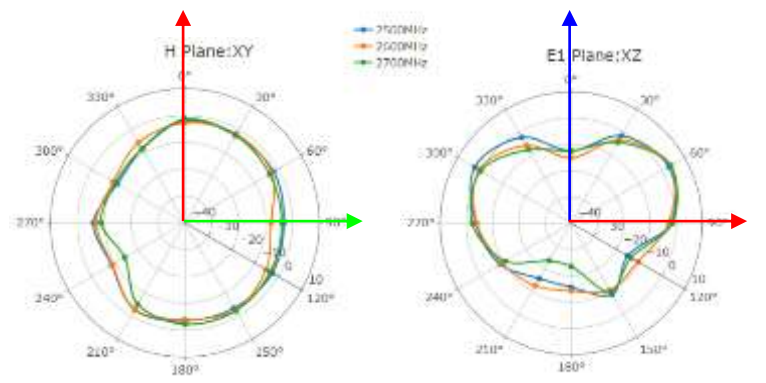
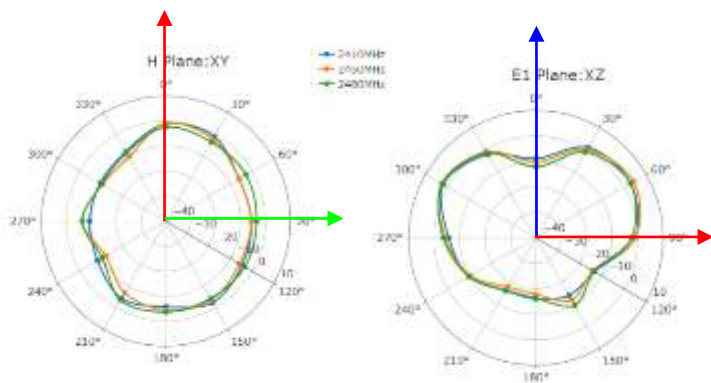
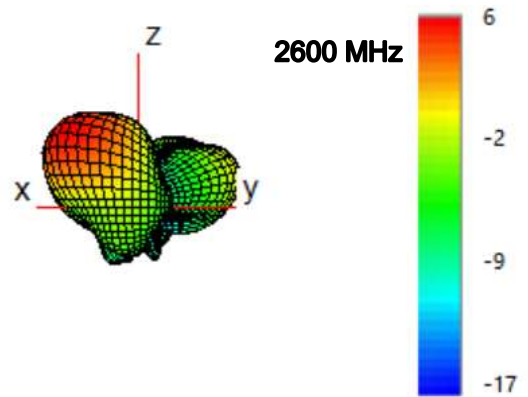
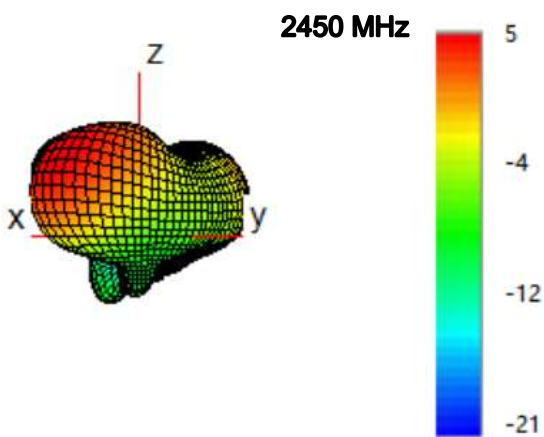
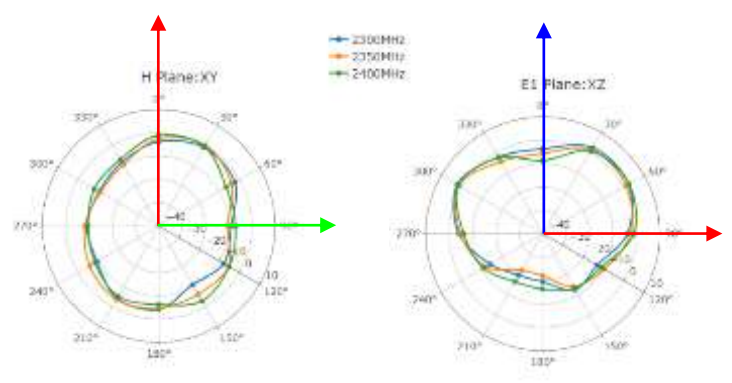
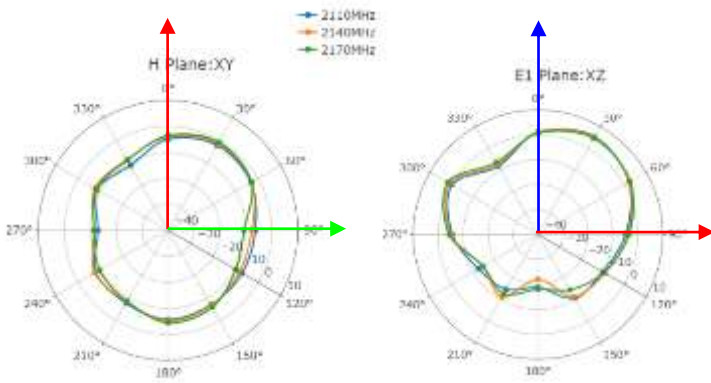
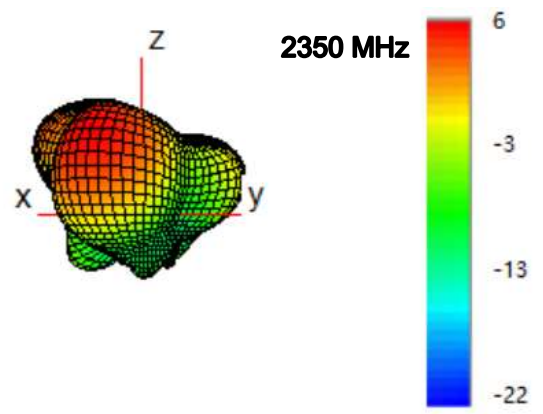
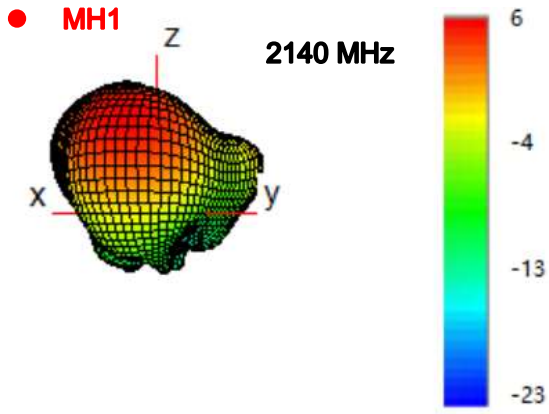
● **LMH4**



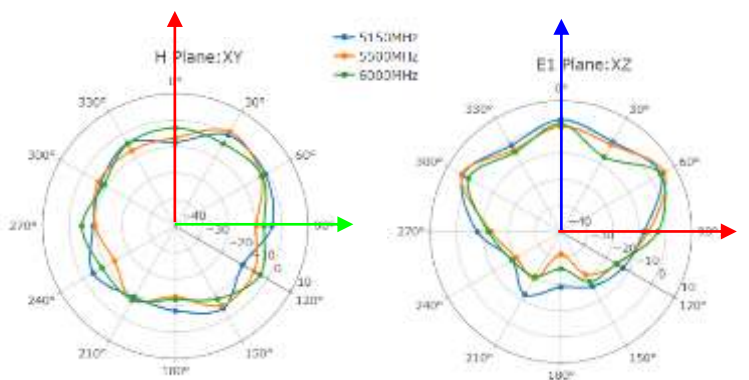
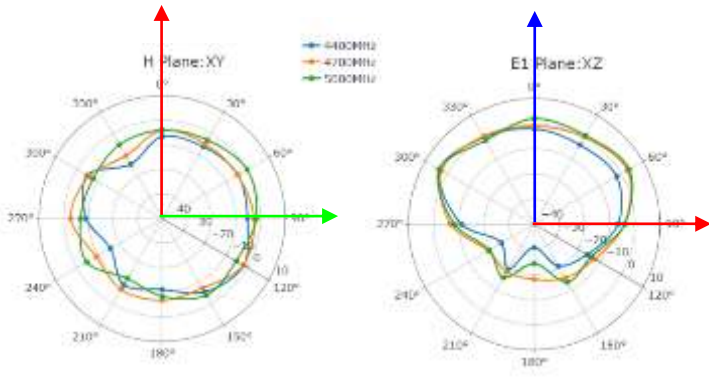
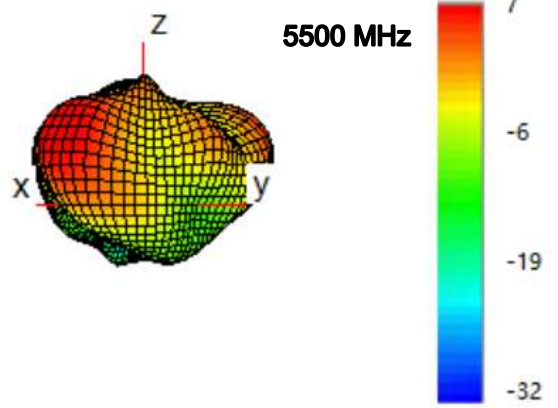
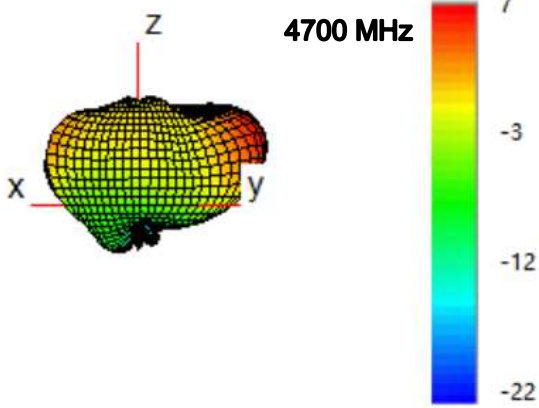
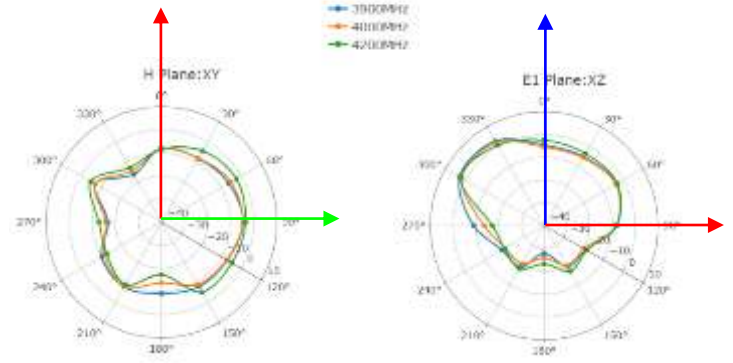
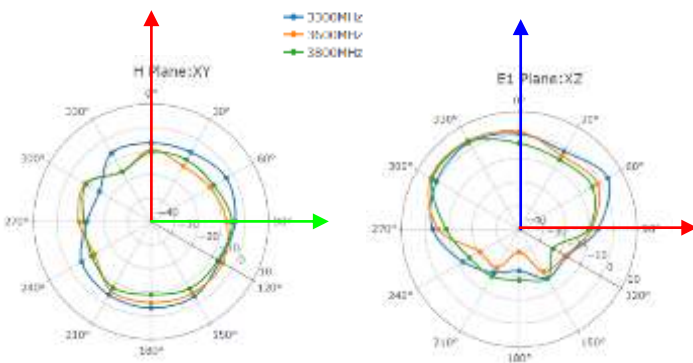
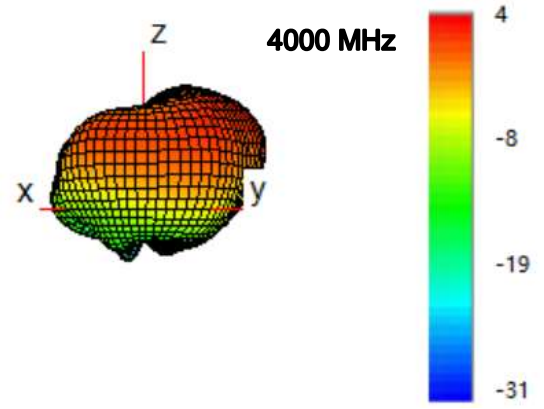
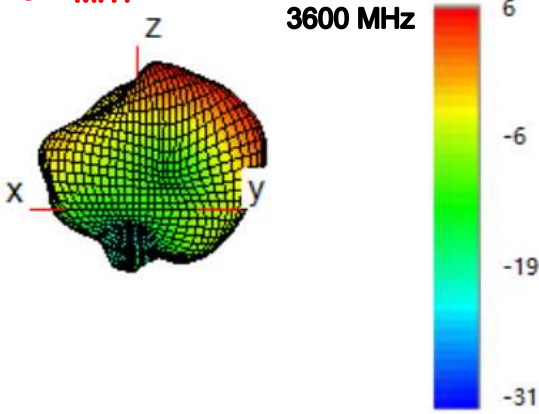
● **LMH4**





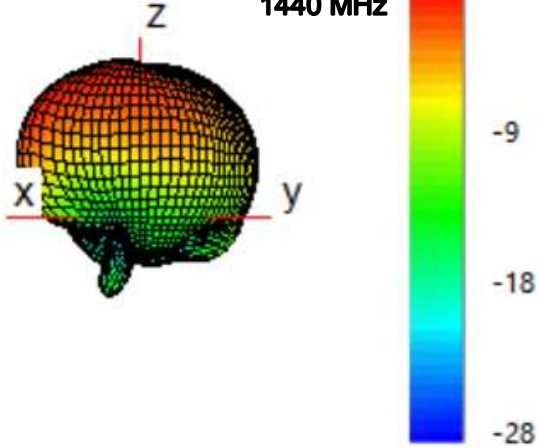


● **MH1**

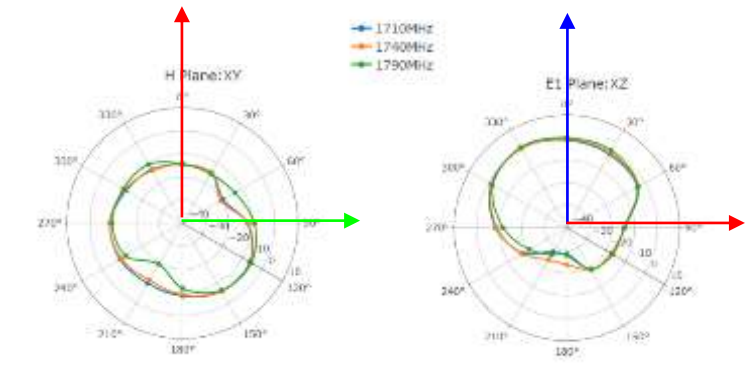
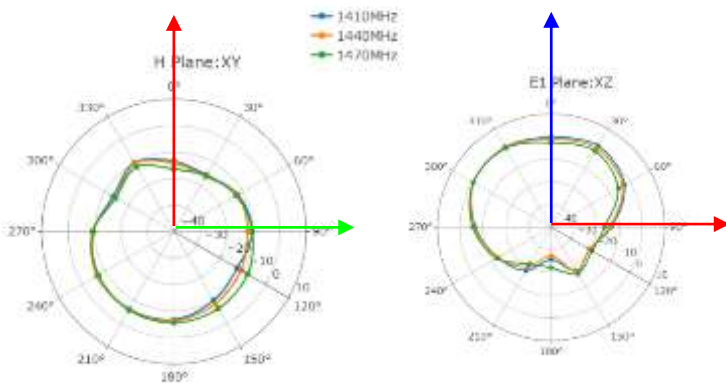
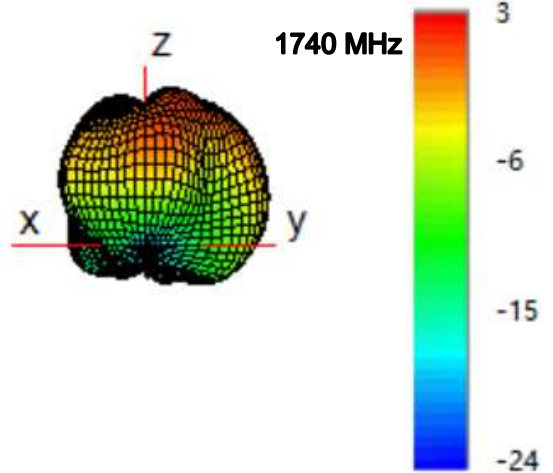


● **MH2**

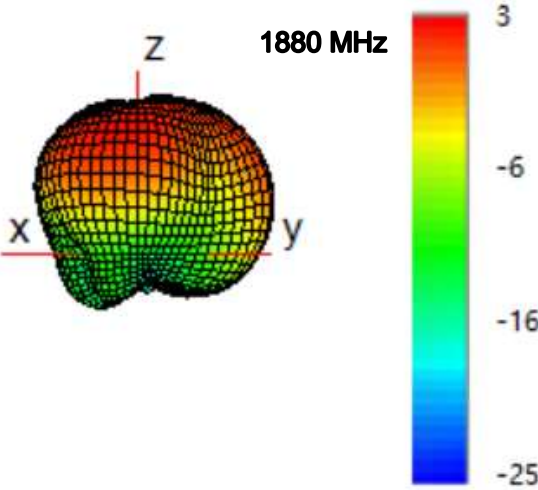
1440 MHz



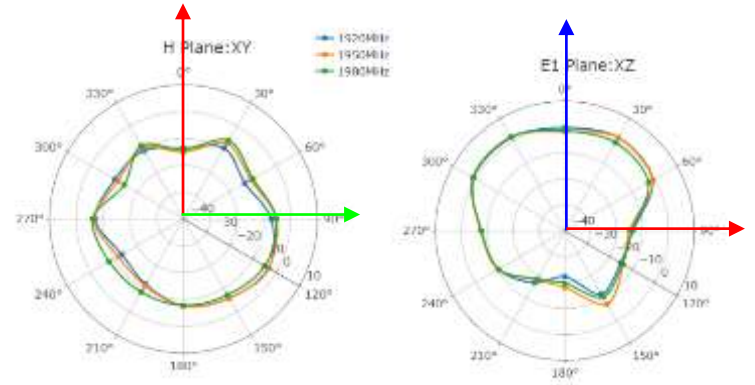
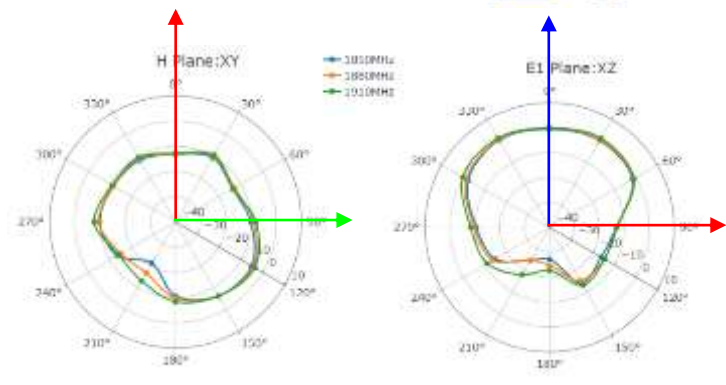
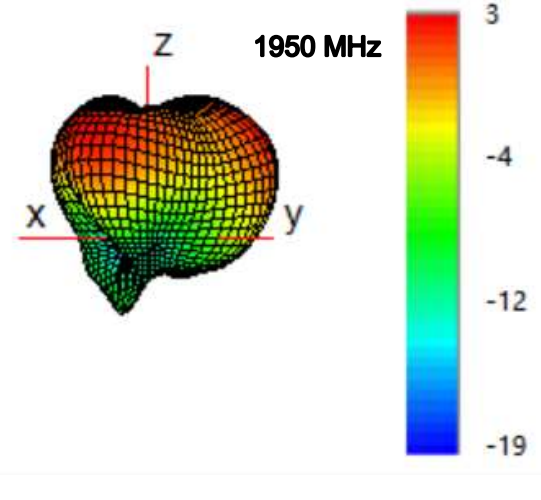
1740 MHz



1880 MHz

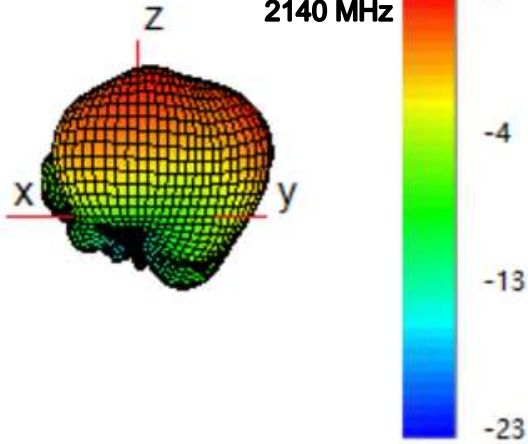


1950 MHz

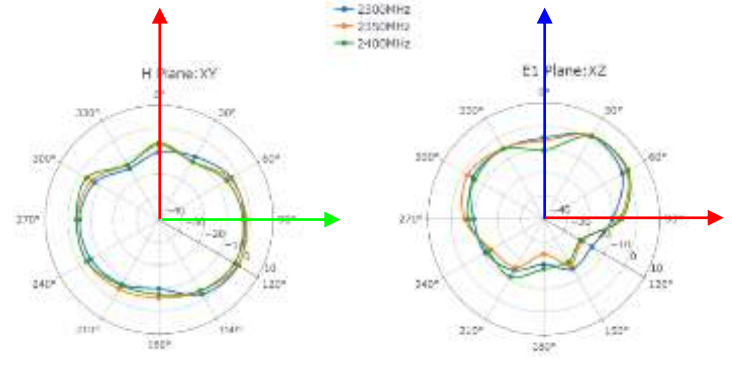
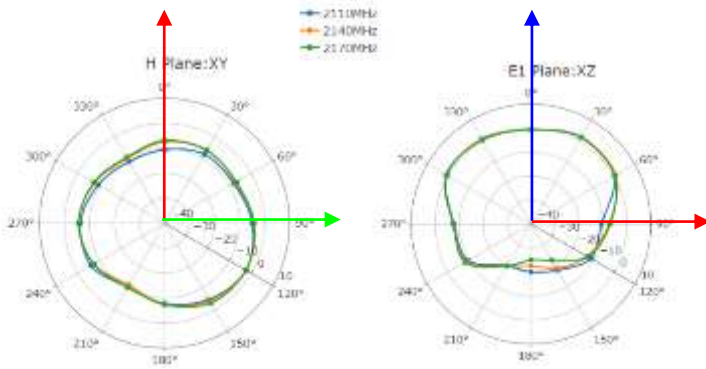
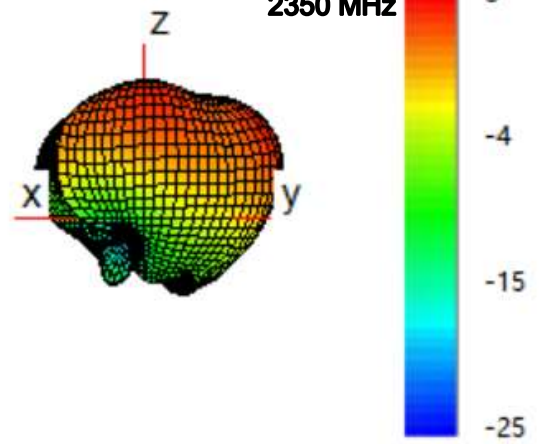


● **MH2**

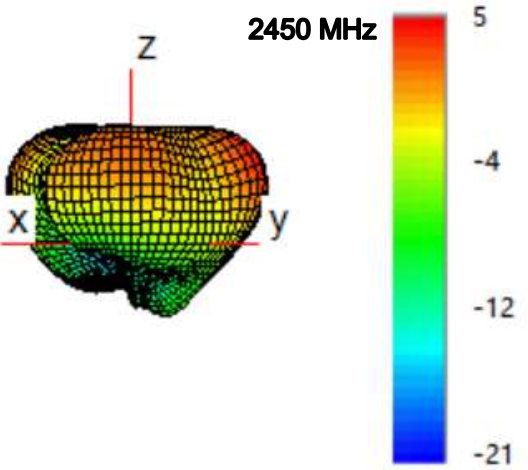
2140 MHz



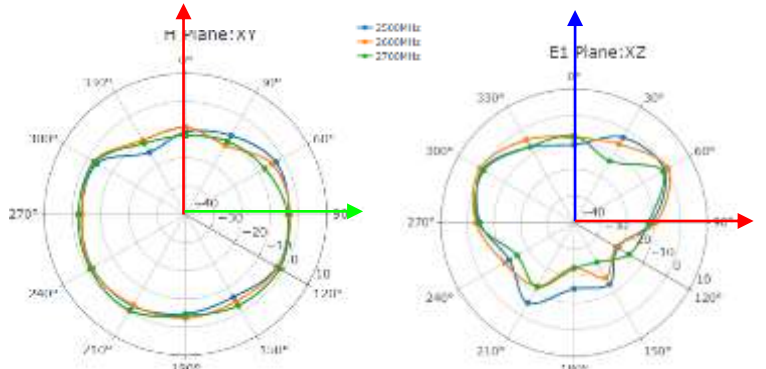
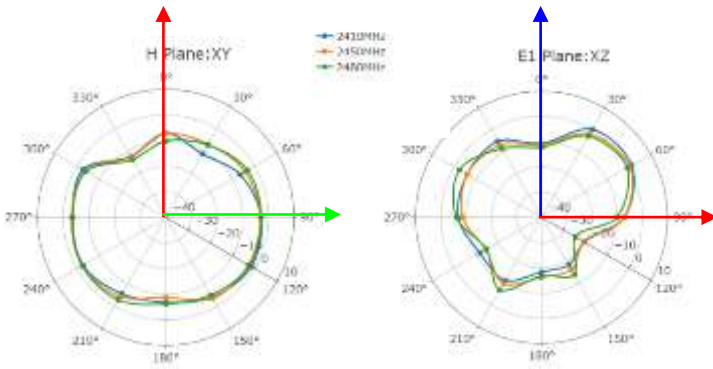
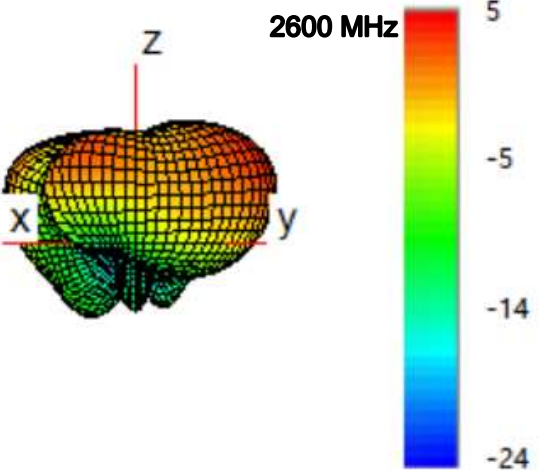
2350 MHz



2450 MHz

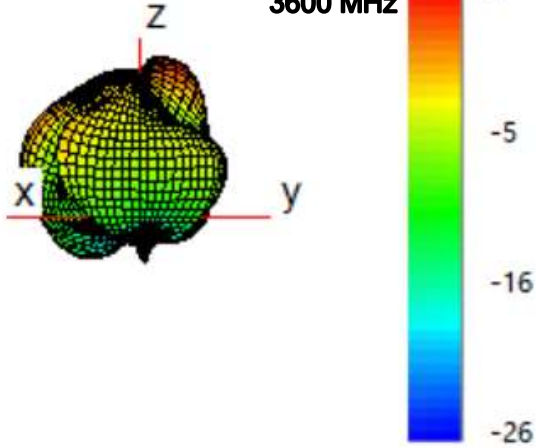


2600 MHz

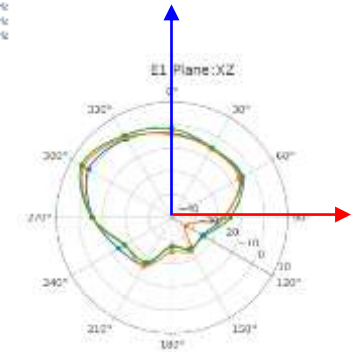
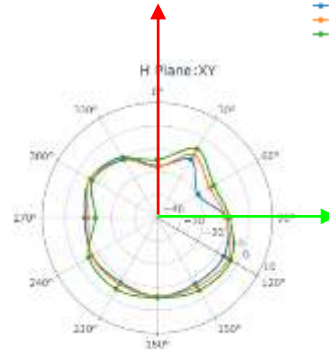
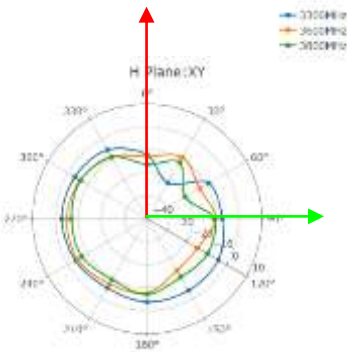
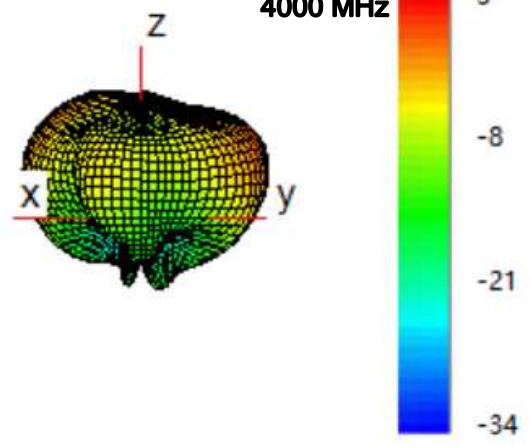


● **MH2**

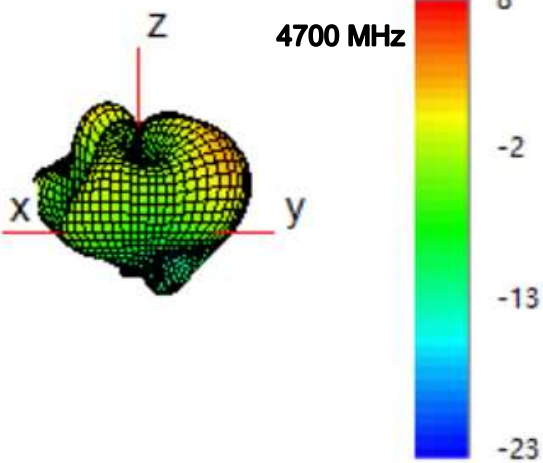
3600 MHz



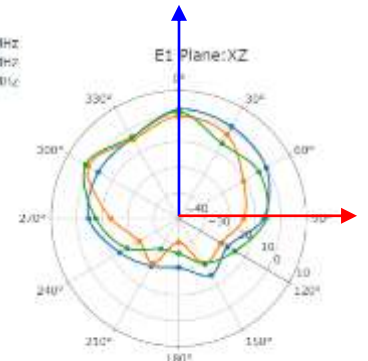
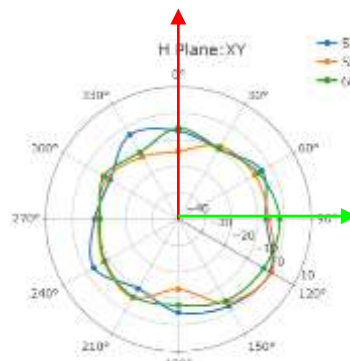
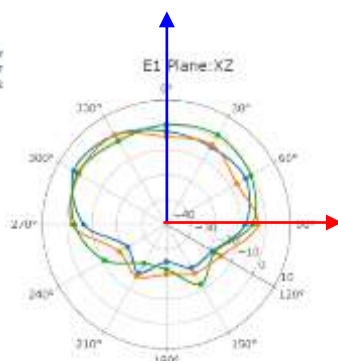
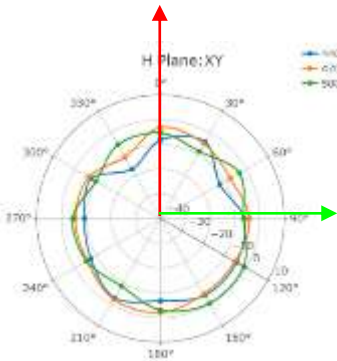
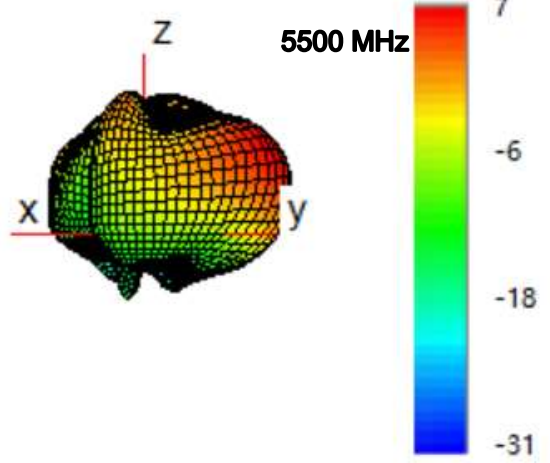
4000 MHz



4700 MHz

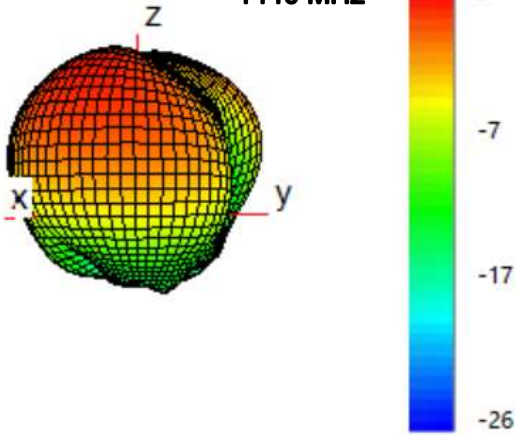


5500 MHz

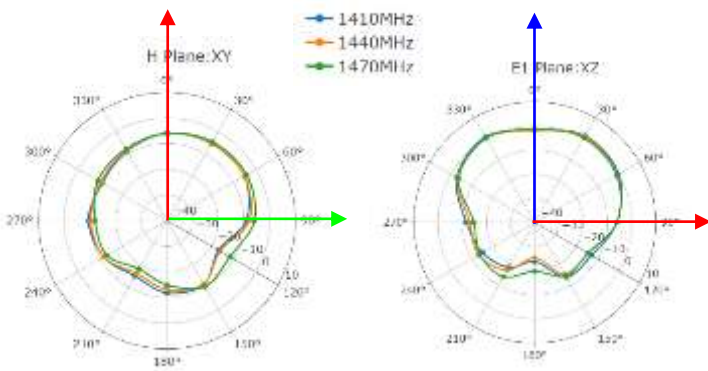
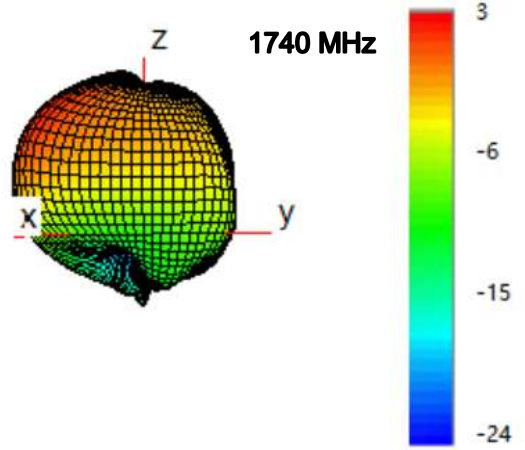


● **MH3**

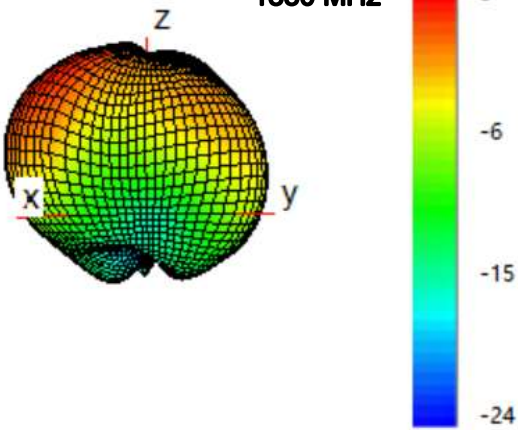
1440 MHz



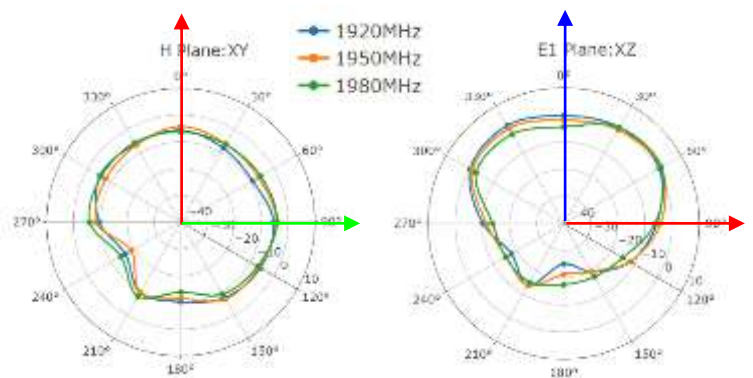
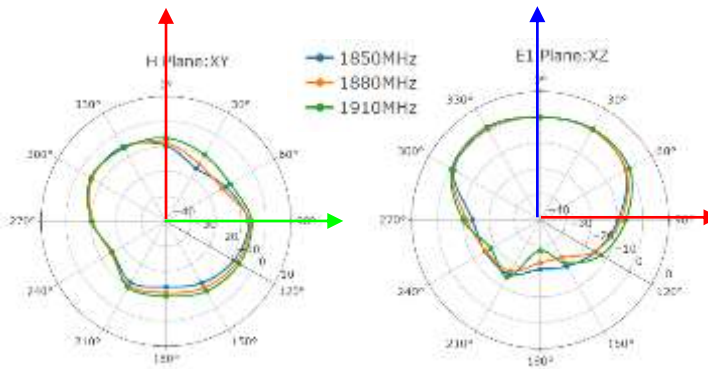
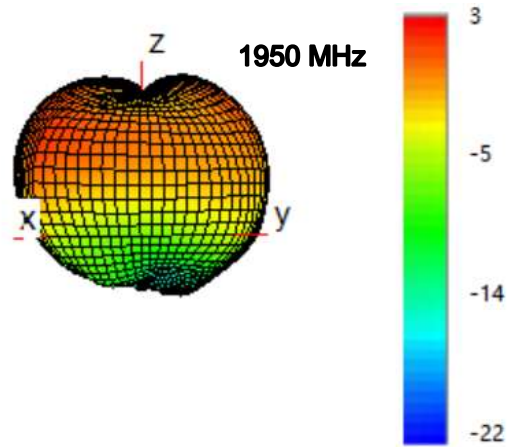
1740 MHz



1880 MHz

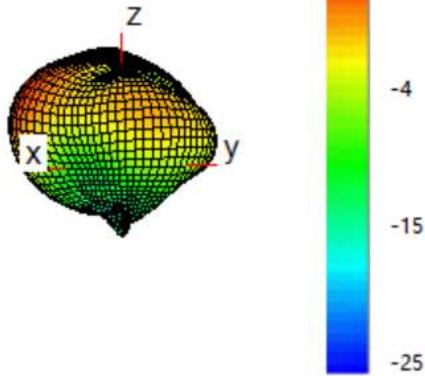


1950 MHz

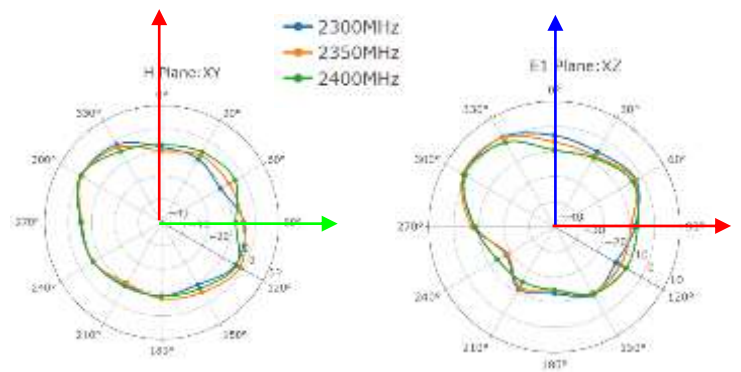
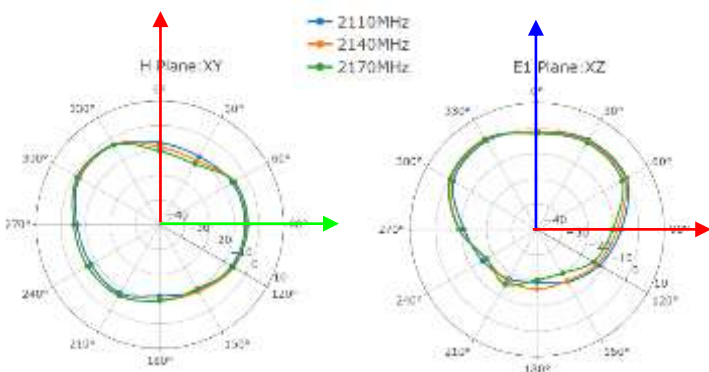
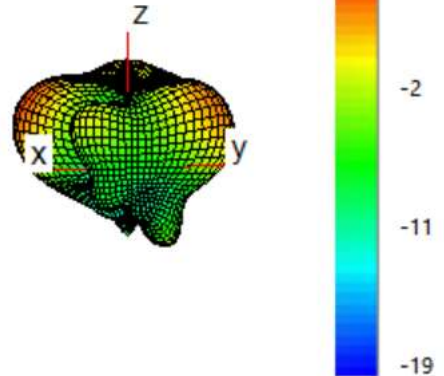


● **MH3**

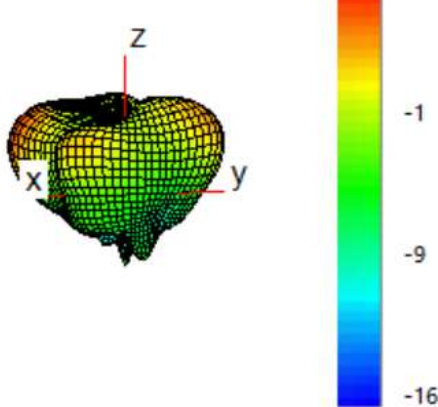
2140 MHz



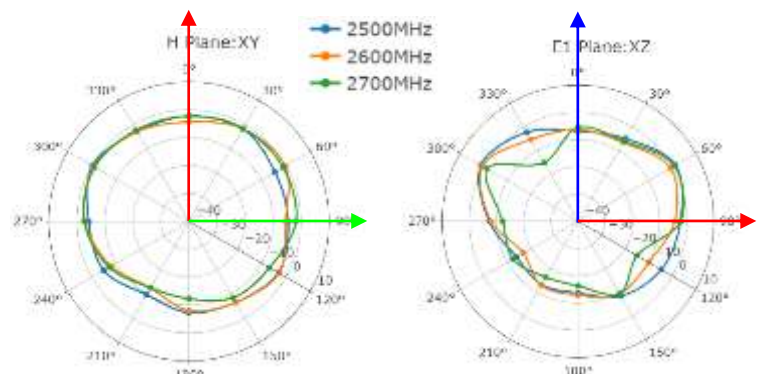
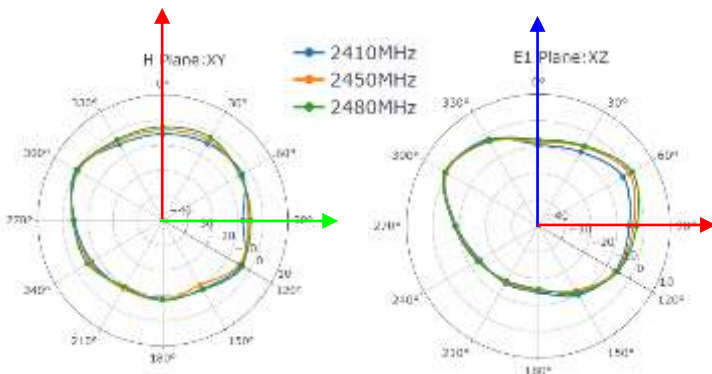
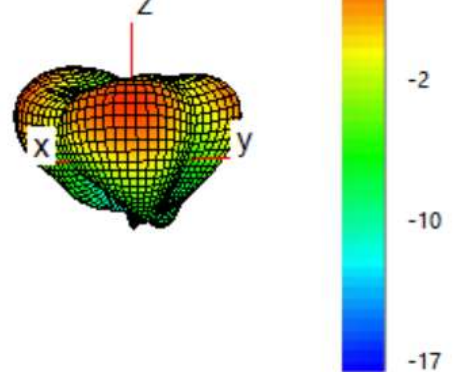
2350 MHz



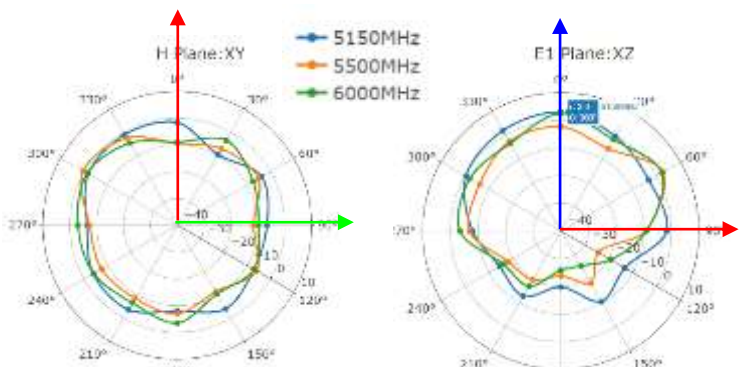
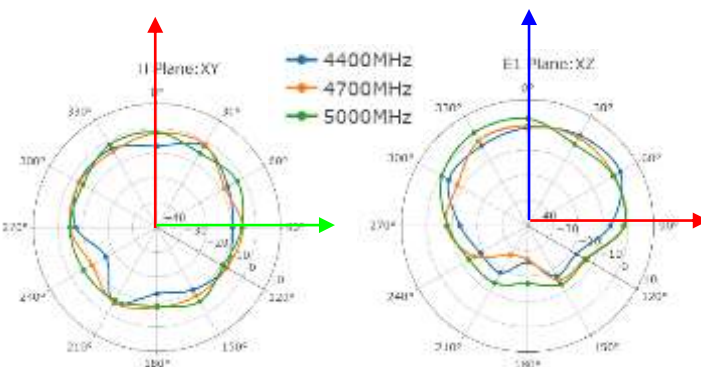
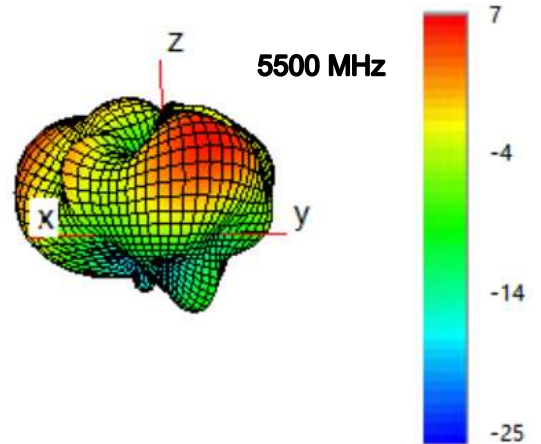
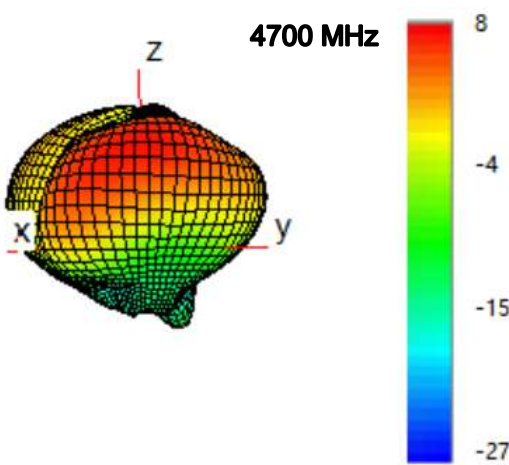
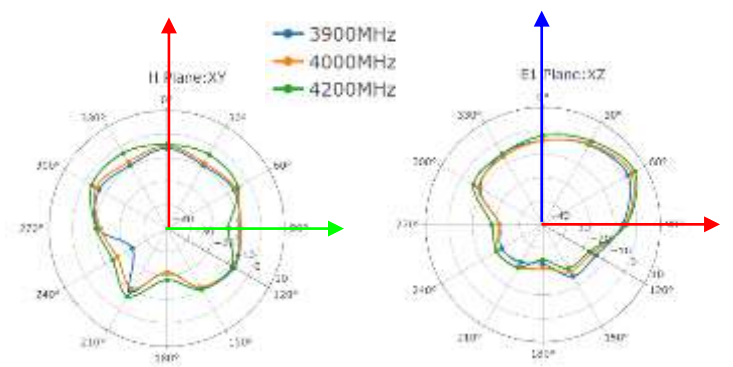
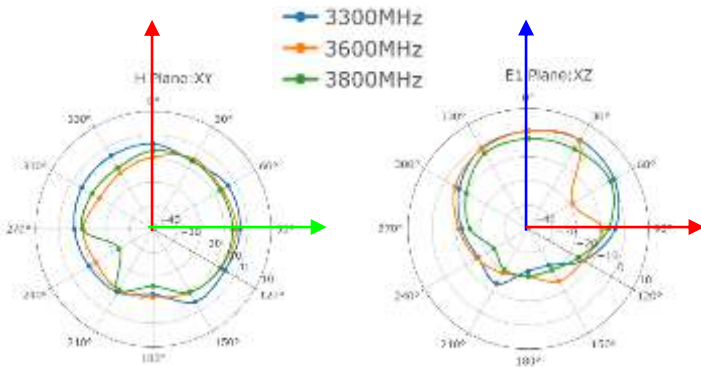
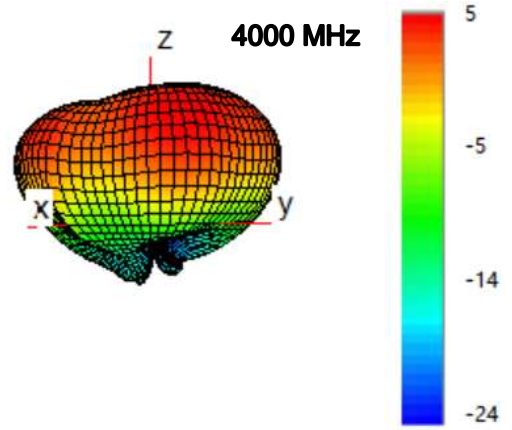
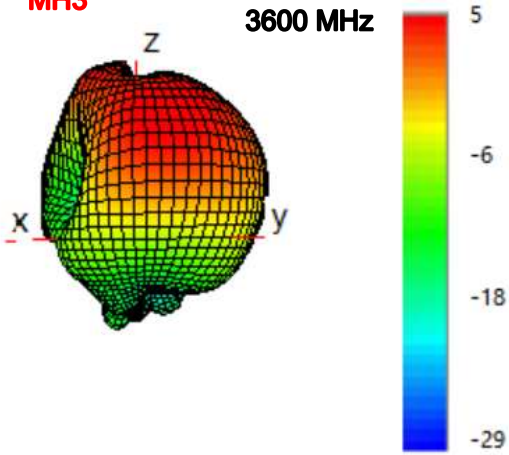
2450 MHz



2600 MHz

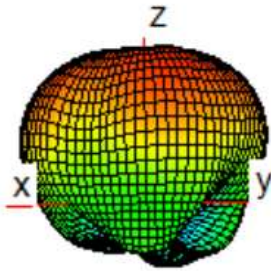


MH3

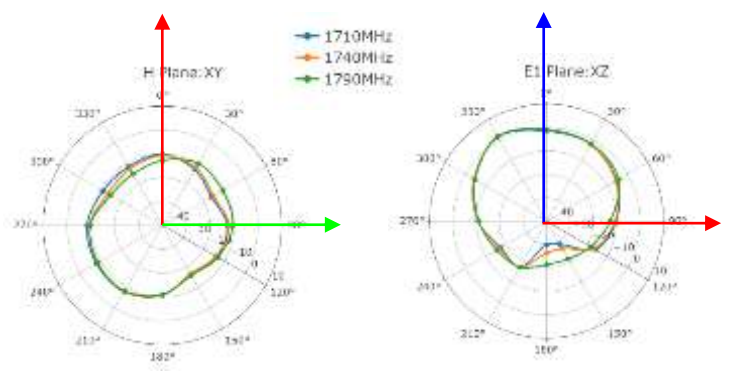
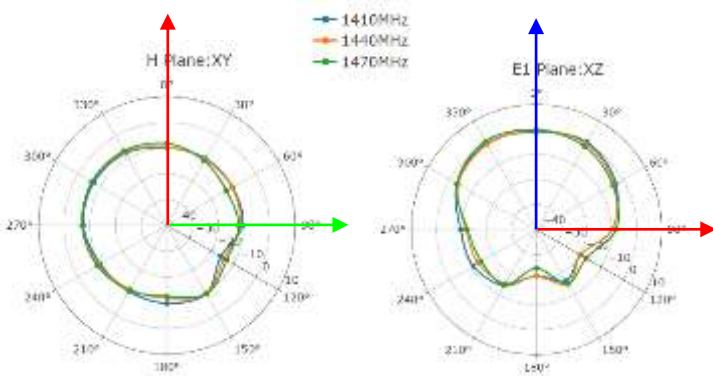
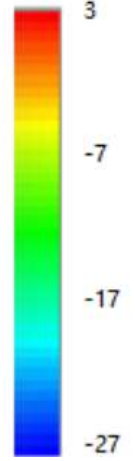
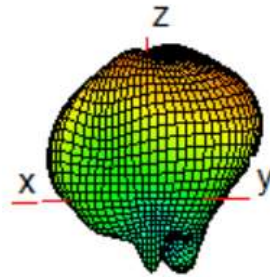


● **MH4**

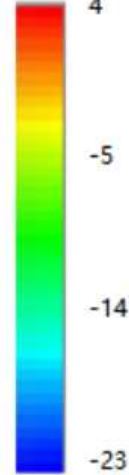
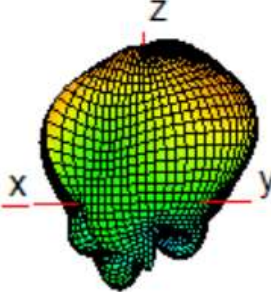
1440 MHz



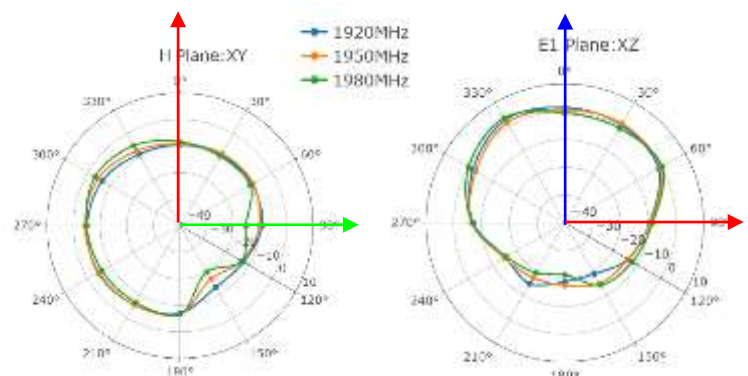
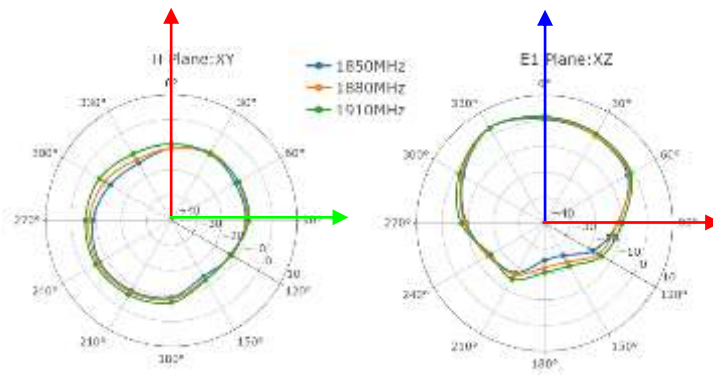
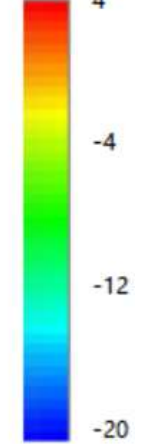
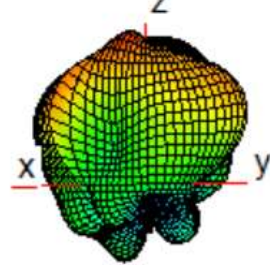
1740 MHz



1880 MHz

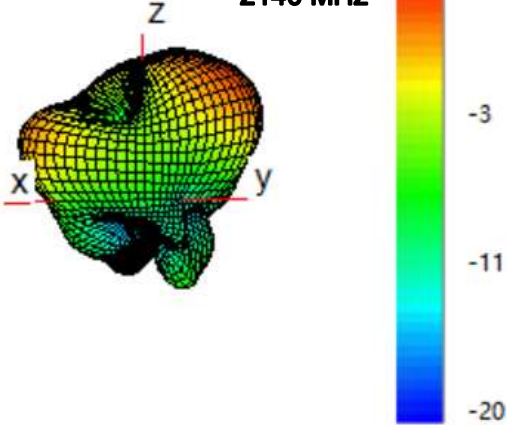


1950 MHz

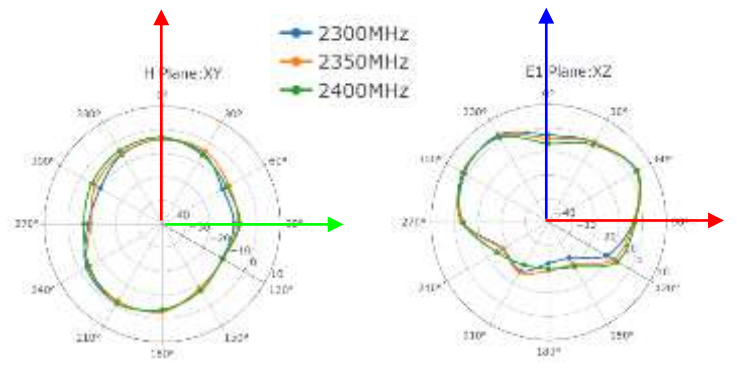
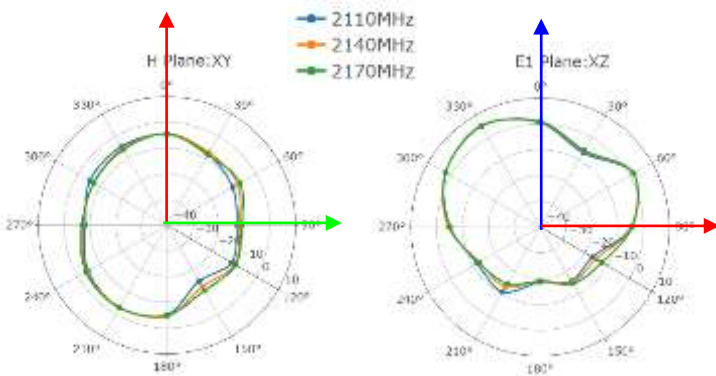
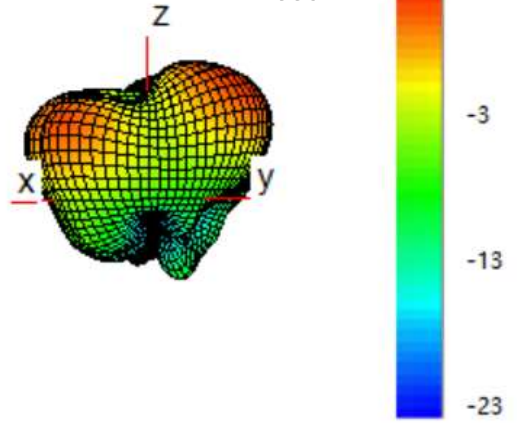


● **MH4**

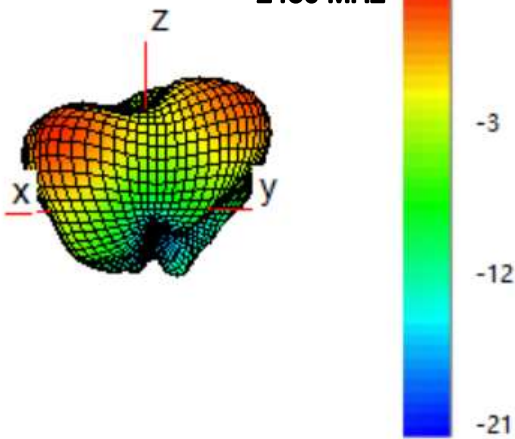
2140 MHz



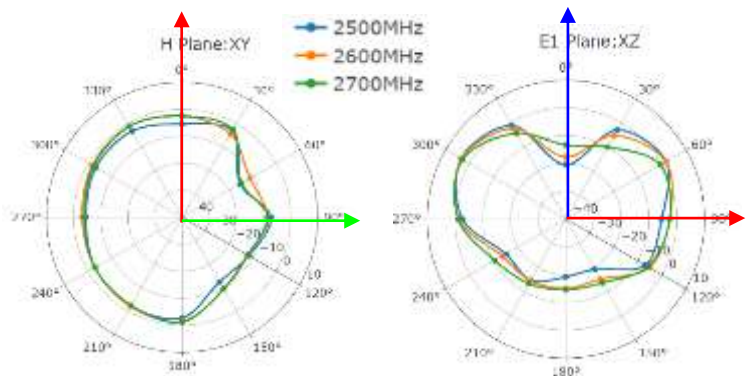
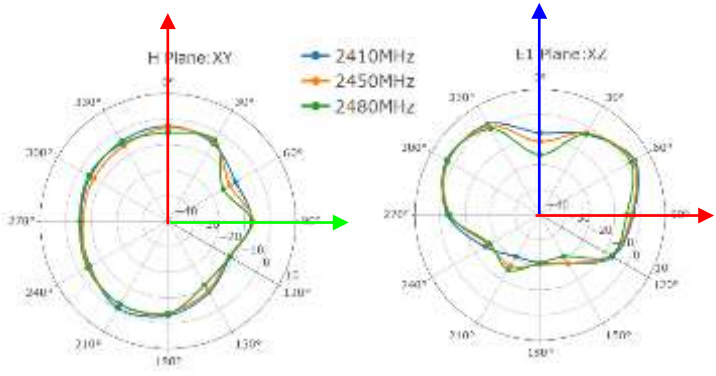
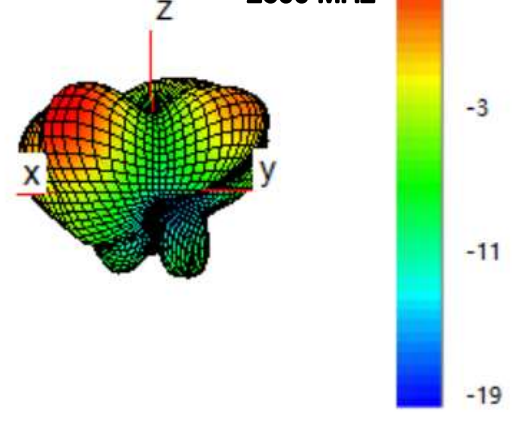
2350 MHz



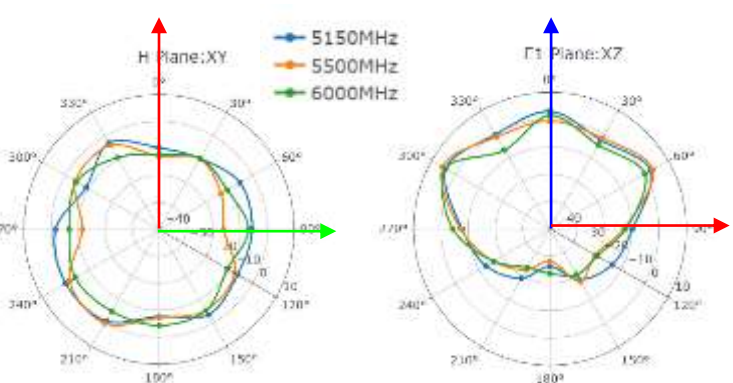
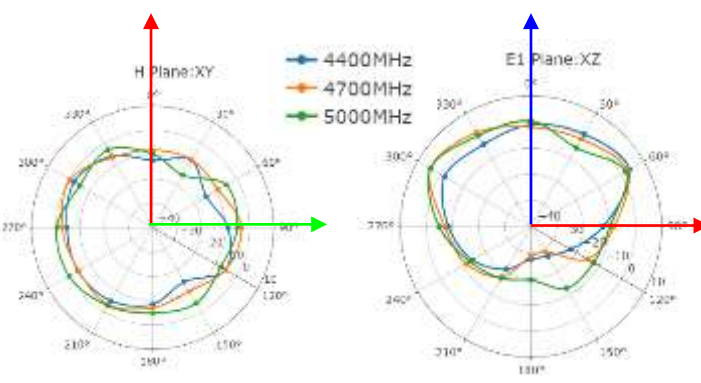
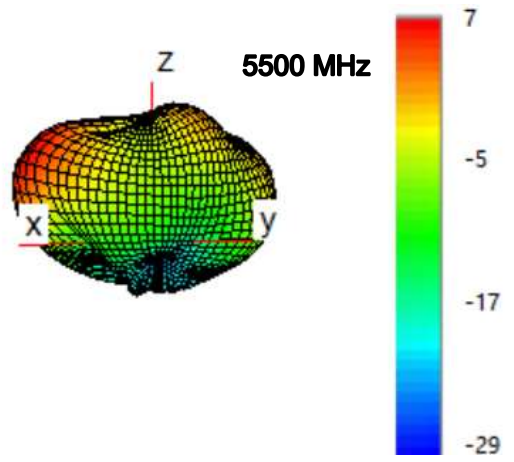
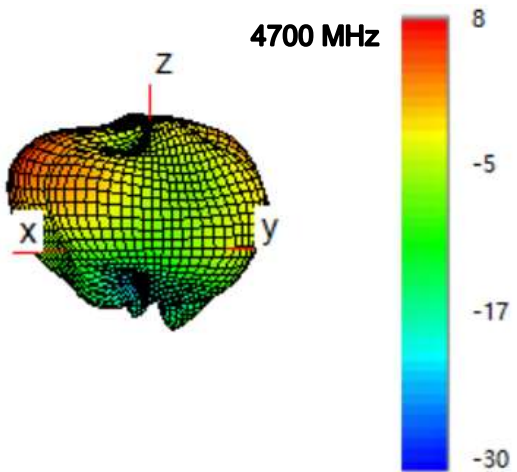
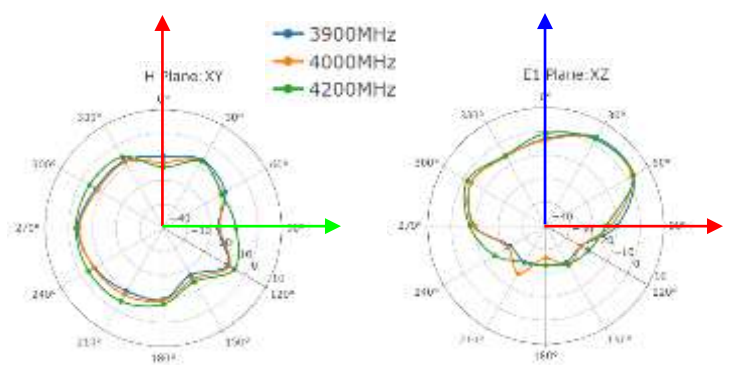
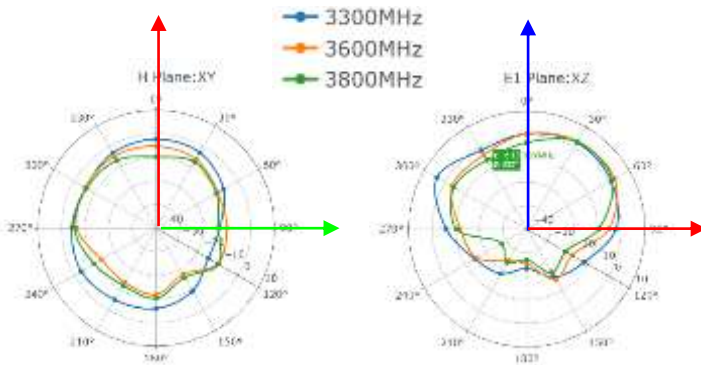
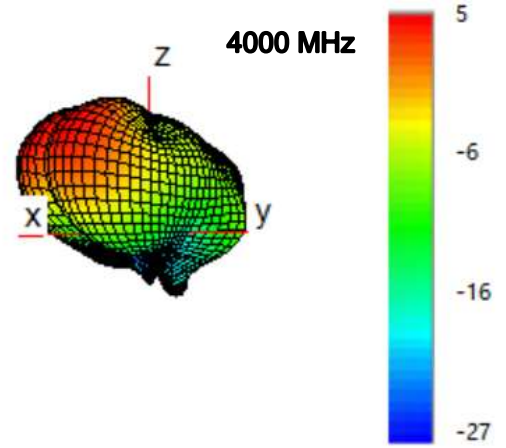
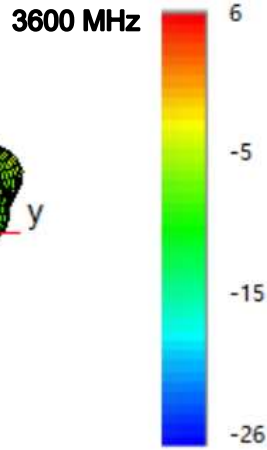
2450 MHz



2600 MHz

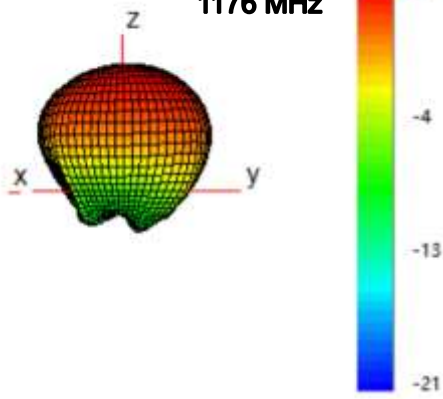


● **MH4**

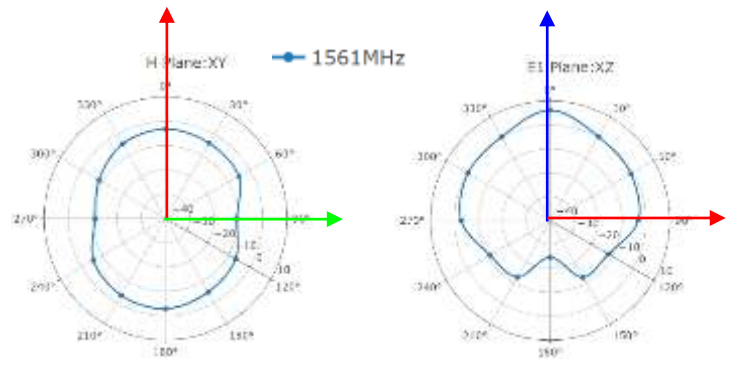
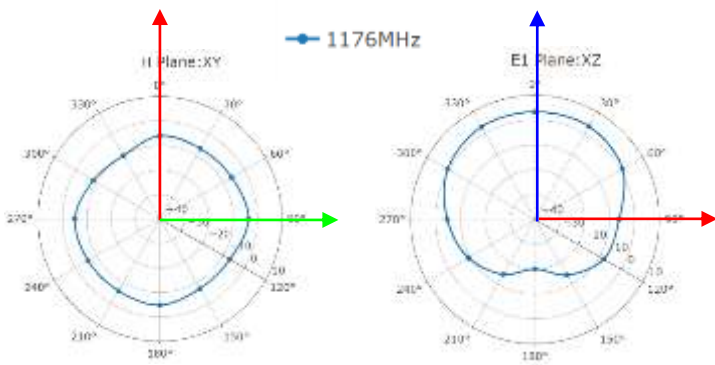
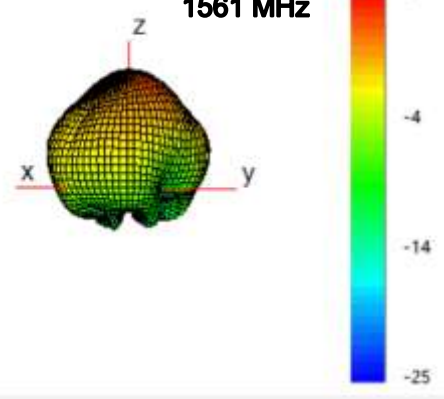


● **GNSS**

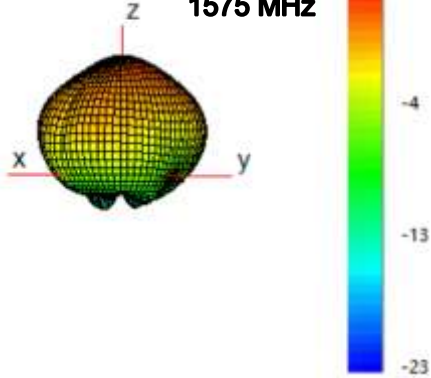
1176 MHz



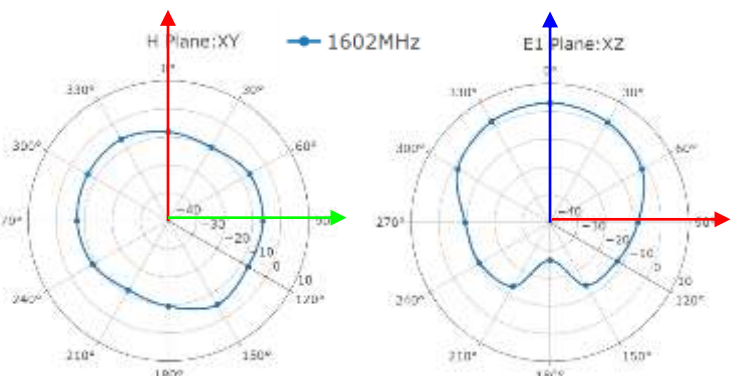
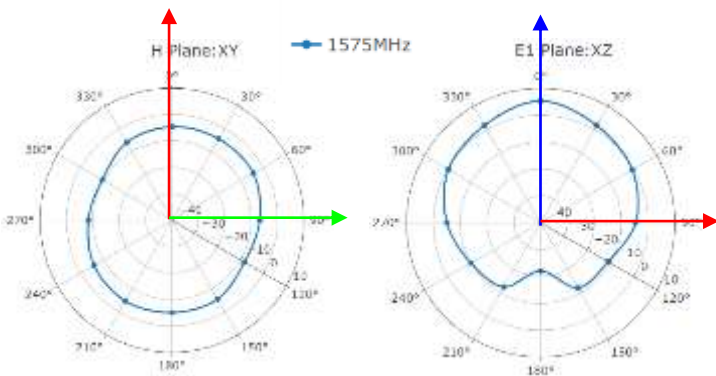
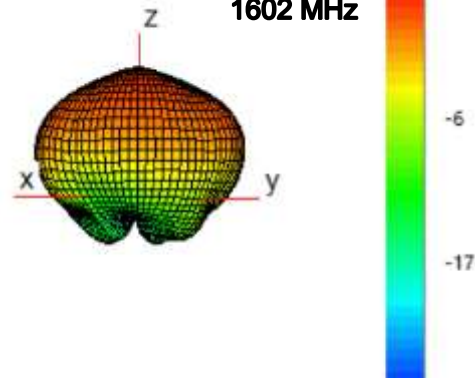
1561 MHz



1575 MHz



1602 MHz



3.3. Active OTA Test

- Based on Module: RG502Q-EA & RG500L-NA
- Test Status: In Free Space.

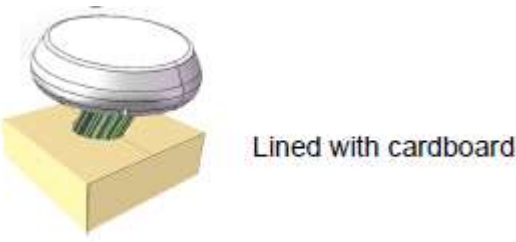
Band		Channel	TRP (dBm)	Channel	TIS (dBm)
LTE	B1 (10M)	18050	20.2	50	-102.7
		18350	19.9	350	-101.7
		18550	19.6	550	-102.1
	B2 (10M)	18650	19.0	650	-101.4
		18900	19.6	900	-101.8
		19150	19.8	1150	-101.4
	B3 (10M)	19250	21.1	1250	-100.4
		19575	20.1	1575	-100.9
		19900	20.7	1900	-100.1
	B4 (10M)	20000	20.5	2000	-102.7
		20175	20.6	2175	-102.6
		20350	20.9	2350	-102.0
	B5 (10M)	20450	19.3	2450	-96.8
		20525	19.4	2525	-96.6
		20600	19.2	2600	-96.9
	B7 (10M)	20800	19.1	2800	-98.3
		21100	20.0	3100	-99.8
		21400	20.7	3400	-100.8
	B8 (10M)	21500	20.0	3500	-97.4
		21625	20.3	3625	-97.7
		21750	20.2	3750	-98.2

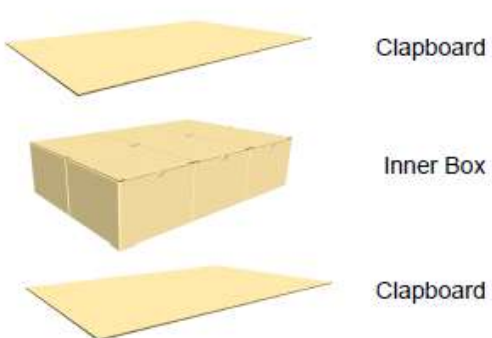
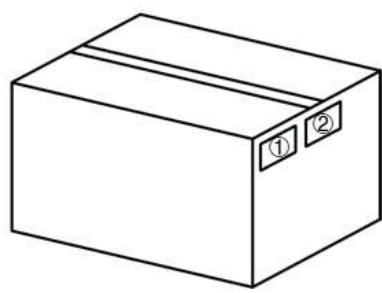
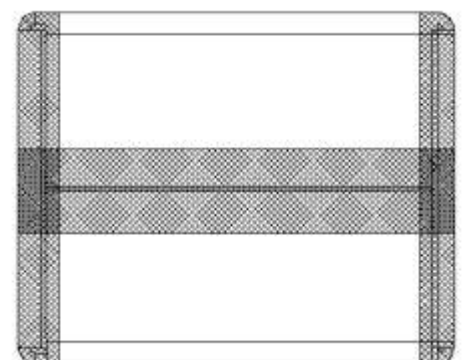
Band		Channel	TRP (dBm)	Channel	TIS (dBm)
	B12 (5M)	23035	19.0	5035	-98.5
		23095	19.2	5095	-97.3
		23155	19.9	5155	-96.1
	B13 (10M)	-	-	-	-
		23230	19.3	5230	-96.2
		-	-	-	-
	B14 (10M)	-	-	-	-
		23330	19.0	5330	-95.0
		-	-	-	-
	B17 (10M)	23780	18.4	5780	-95.9
		23790	18.6	5790	-95.7
		23800	18.6	5800	-95.3
	B18 (10M)	23900	20.4	5900	-97.9
		23925	19.7	5925	-97.8
		23950	19.1	5950	-97.7
	B19 (10M)	24050	19.7	6050	-97.0
		24075	20.4	6075	-97.3
		24100	20.2	6100	-97.3
	B20 (10M)	24200	20.0	6200	-96.9
		24300	19.6	6300	-97.2
		24400	19.7	6400	-97.3
	B25 (10M)	26090	19.4	8090	-100.2
		26365	19.7	8365	-99.8
		26640	19.0	8640	-99.4
	B26 (10M)	26740	18.9	8740	-99.1

Band		Channel	TRP (dBm)	Channel	TIS (dBm)
		26865	19.3	8865	-97.6
		26990	20.6	8990	-98.9
	B28 (10M)	27260	19.2	9260	-96.1
		27335	19.6	9335	-96.6
		27410	18.8	9410	-97.1
	B38 (20M)	37850	20.1	37850	-97.6
		38000	21.7	38000	-97.5
		38150	22.3	38150	-97.6
	B39 (20M)	38350	20.1	38350	-98.3
		38450	20.2	38450	-98.3
		38550	20.2	38550	-98.6
	B40 (20M)	38750	21.4	38750	-97.9
		39150	21.0	39150	-98.4
		39550	20.3	39550	-98.2
	B41 (20M)	40340	20.5	40340	-97.3
		40620	20.9	40620	-97.4
		41140	20.1	41140	-97.2
	B66 (10M)	132022	20.4	66486	-101.8
		132322	20.1	66886	-102.1
		132622	19.5	67086	-101.7
	B71 (10M)	133172	19.9	68636	-96.0
		133297	19.5	68761	-95.1
		133422	19.3	68886	-95.5
	5G	N41 (100M)	509202	21.77	509202
518598			21.46	518598	-89.72

Band	Channel	TRP (dBm)	Channel	TIS (dBm)	
	528000	22.00	528000	-90.44	
	N77 (100M)	623334	22.03	623334	-89.77
		650000	22.60	650000	-90.89
		676666	22.48	676666	-90.11
	N78 (100M)	623334	22.20	623334	-90.01
		636666	22.41	636666	-90.59
		650000	22.58	650000	-91.25
	N79 (100M)	697094	20.67	697094	-89.76
		713990	20.23	713990	-89.48
		729468	19.78	729468	-89.10

4 Packaging

Step	Packaging Picture - 2D Picture	Description
1		<p>1 PC: Antenna 1 PC: Lined with Cardboard Size: 185 × 185 × 60 mm</p> <p>Arrange the antenna and put it in the lined cardboard.</p>
2		<p>1 PC: EPE Pearl Foam Size: 186 × 186 × 40 mm</p> <p>After placing the product, use EPE Pearl Foam on the upper layer.</p>
3		<p>1 PC: Inner Box Size: 191 × 191 × 135 mm</p> <p>Place the antenna and lining cardboard in the inner Box.</p>

<p>4</p>	 <p>Clapboard</p> <p>Inner Box</p> <p>Clapboard</p>	<p>1 PC: Carton Size: 600 × 404 × 164 mm Antenna: 6 PCS / Carton 2 PCS: Clapboard Size: 588 × 392 mm</p> <p>Place 1 clapboard on the bottom. Then 6 PCS antennas in the middle. Then 1 PC clapboard on the top.</p>
<p>5</p>		<p>Labeling</p> <p>① Carton label ② Quality label</p>
<p>6</p>		<p>Sealing Cartons</p> <p>“I” type sealing cartons</p>

Contact Us

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For technical support, or to report documentation errors, please visit:

[http: www.quectel.com-support-technical.htm](http://www.quectel.com-support-technical.htm)

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Revision History

Version	Date	Author	Note
-	2022-04-08	Boris WANG/ Kenny YIN	Creation of the document
1.0	2022-05-26	Boris WANG/ Kenny YIN	First official release
1.1	2022-06-07	Boris WANG	Updated the data (Chapter 3)
1.2	2022-09-13	Boris WANG	Updated the electrical performance data.
2.0	2022-11-11	Wilson BAO	Updated the whole content based on the new datasheet format.
2.1	2023-05-23	Wilson Bao	Update the cover and second page and some other small points
2.2	2023-07-20	Boris WANG/ Kenny YIN	Updated some details
2.3	2023-11-15	Kenny YIN	Updated the drawing (Chapter 2).
2.4	2023-12-07	Junsen LI/ Aria CHU	Updated GNSS LNA data (Chapters 1.1.3 and 3.1.5).

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