



Antenna Datasheet

Product OC: YEMN703J1AH-2CZQHA0A

Version: 1.0

Date: 2026-01-22

Product Name: 5G & Wi-Fi & GNSS 7in1 Screw Mount Combo External Antenna

Key Features:

Optimized for 5G and 4G Networks, Wi-Fi, GNSS L1 & L5

Dimensions: Φ 167 mm $\times$ 57 mm

RoHS and REACH Compliant

IP67 & IP69K

Compatible with ECE-R118 cables under demand

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1 Specification

Test Condition: Assembled in test device

1.1. Electrical

Electrical Specifications		
Frequency Range	LMHs	600–960 MHz, 1400–6000 MHz
	Wi-Fis	2400–2500 MHz, 5150–5850 MHz, 5925–7125 MHz
	GNSS	1164–1189 MHz, 1559–1606 MHz
Radiation Pattern	LMHs & Wi-Fis	Omni-directional
	GNSS	Directional
Polarization	LMHs & Wi-Fis	Linear
	GNSS	RHCP
Impedance		50 Ω
Isolation		≤ -8.0 dB
Axial Ratio (GNSS)		< 3 dB

1.1.1. LMHs

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	LMH1	2.7	1.6	1.9	5.3	3.8	2.8	3.6	4.0	3.1	4.1	3.7
	LMH2	2.2	1.4	2.0	5.3	3.4	2.5	2.6	3.1	3.5	3.2	4.1
	LMH3	2.8	1.7	1.9	4.3	3.3	1.8	2.4	3.1	2.5	2.5	3.2
	LMH4	2.9	1.6	2.0	5.3	3.1	2.1	2.3	3.1	2.4	2.9	4.0
Max Return Loss (dB)	LMH1	-6.9	-13.2	-10.2	-3.3	-4.7	-6.5	-5.0	-4.5	-5.8	-4.3	-4.9
	LMH2	-8.7	-15.9	-9.3	-3.3	-5.2	-7.4	-7.1	-5.9	-5.2	-5.5	-4.3
	LMH3	-6.4	-11.6	-10.1	-4.1	-5.5	-11.2	-7.9	-5.9	-7.3	-7.2	-5.7
	LMH4	-6.3	-12.8	-9.6	-3.3	-5.8	-8.8	-8.2	-5.7	-7.9	-6.3	-4.5
AVG Eff. (%)	LMH1	41.6	47.1	47.4	23.2	44.8	43.6	34.9	36.9	41.2	32.6	29.5
	LMH2	42.9	45.2	41.7	18.6	41.0	41.3	34.0	32.0	37.6	26.8	22.3
	LMH3	42.0	47.2	41.7	24.9	45.9	48.7	41.0	36.3	41.0	35.0	27.4
	LMH4	36.1	48.7	45.1	19.5	44.9	49.7	40.4	32.7	42.5	38.6	33.1
AVG AVG Gain (dB)	LMH1	-3.9	-3.3	-3.3	-6.4	-3.5	-3.6	-4.6	-4.7	-3.9	-5.0	-5.3
	LMH2	-4.0	-3.5	-3.8	-7.4	-3.9	-3.9	-4.7	-5.1	-4.3	-5.9	-6.6
	LMH3	-4.0	-3.3	-3.8	-6.0	-3.4	-3.1	-3.9	-4.6	-3.9	-4.6	-5.7
	LMH4	-4.6	-3.2	-3.5	-7.2	-3.5	-3.1	-3.9	-5.1	-3.7	-4.2	-4.8
Max Peak Gain (dBi)	LMH1	1.5	2.7	2.1	-0.8	1.6	0.0	-0.2	0.2	0.9	0.6	0.9
	LMH2	0.3	0.6	0.9	0.3	3.4	0.2	-0.5	0.1	0.8	-0.8	-0.4
	LMH3	1.7	1.7	2.3	-1.3	1.1	-0.2	-0.1	-0.1	0.8	0.0	0.4
	LMH4	0.9	0.9	1.3	-0.3	0.8	0.1	0.1	0.0	0.8	-0.1	0.8
VSWR	LMH1	≤ 5.3										
	LMH2	≤ 5.3										
	LMH3	≤ 4.3										
	LMH4	≤ 5.3										
Return Loss	LMH1	≤ -3.3										
	LMH2	≤ -3.3										
	LMH3	≤ -4.1										
	LMH4	≤ -3.3										

Peak Gain	LMH1	≤ 2.7 dBi
	LMH2	≤ 3.4 dBi
	LMH3	≤ 2.3 dBi
	LMH4	≤ 1.3 dBi

- LMHs: LMH antennas (LMH1, LMH2, LMH3, LMH4)
- Wi-Fis: Wi-Fi antennas (Wi-Fi1, Wi-Fi2)

1.1.2. Wi-Fi

Specification \ Band	Band	WIFI 2G	WIFI 5G				WIFI 7G			
	Freq. (MHz)	2400–2483.5	5150–5250	5250–5350	5470–5725	5725–5885	5925–6425	6425–6525	6525–6875	6875–7125
Max. VSWR	Wi-Fi1	2.3	2.1	1.6	2.9	2.3	3.4	2.3	5.2	4.1
	Wi-Fi2	2.1	2.5	2.5	2.9	1.8	2.9	2.8	5.5	4.6
Max. Return Loss (dB)	Wi-Fi1	-8.0	-9.2	-12.7	-6.1	-8.2	-5.3	-8.3	-3.4	-4.3
	Wi-Fi2	-8.8	-7.2	-7.2	-6.3	-10.6	-6.2	-6.6	-3.2	-3.9
AVG Eff. (%)	Wi-Fi1	44.9	34.7	41.1	42.5	45.8	46.9	39.9	36.9	26.8
	Wi-Fi2	46.1	33.5	30.6	23.0	22.9	32.8	29.3	27.6	21.9
AVG AVG Gain (dB)	Wi-Fi1	-3.5	-4.6	-3.9	-3.8	-3.4	-3.3	-4.0	-4.4	-5.9
	Wi-Fi2	-3.4	-4.8	-5.1	-6.4	-6.4	-4.9	-5.3	-5.8	-6.7
Max. Peak Gain (dBi)	Wi-Fi1	1.6	0.8	1.3	2.2	3.4	4.3	2.2	2.5	3.3
	Wi-Fi2	1.7	1.3	0.7	-0.7	1.0	4.2	1.8	3.1	1.3
VSWR	Wi-Fi1	≤ 5.2								
	Wi-Fi2	≤ 5.5								
Return Loss	Wi-Fi1	≤ -3.4 dB								
	Wi-Fi2	≤ -3.2 dB								
Peak Gain	Wi-Fi1	≤ 4.3 dBi								
	Wi-Fi2	≤ 4.2 dBi								

- LMHs: LMH antennas (LMH1, LMH2, LMH3, LMH4)
- Wi-Fis: Wi-Fi antennas (Wi-Fi1, Wi-Fi2)

1.1.3. GNSS

Band Frequency (MHz)	GPS L5 GALILEO E5a BDS B2a- B2I QZSS L5 IRNSS L5	GALILEO E5b BDS B2b	GPS L2 QZSS L2C	GLONASS G2	BDS B3	BDS B1I	GPS L1 GALILEO E1 BDS B1C QZSS L1	GLONASS G1
	1176	1207	1227	1248	1268	1561	1575	1602
VSWR	1.48	-	-	-	-	1.63	1.54	1.42
Return Loss (dB)	-14.2	-	-	-	-	-12.3	-13.4	-15.2
Efficiency (%)	85	-	-	-	-	53	66	45.6
AVG Gain (dB)	-0.9	-	-	-	-	-3.37	-2.47	-4.03
Peak Gain (dBi)	4.67	-	-	-	-	2.85	3.82	2.25
Axial Ratio (dB)	2.44	-	-	-	-	1.2	0.79	0.77

LNA Electrical	
LNA Gain	22 ±3 dB
Noise Figure	≤ 2.5 dB
Output VSWR	< 2.0
Filter Out-of-Band Attenuation	60 dB f0 ±100 MHz f0 (1164–1189 MHz, 1559–1606 MHz)
Working Voltage	3–5 V
Working Current	18.8 ±4 mA
Impedance	50 Ω

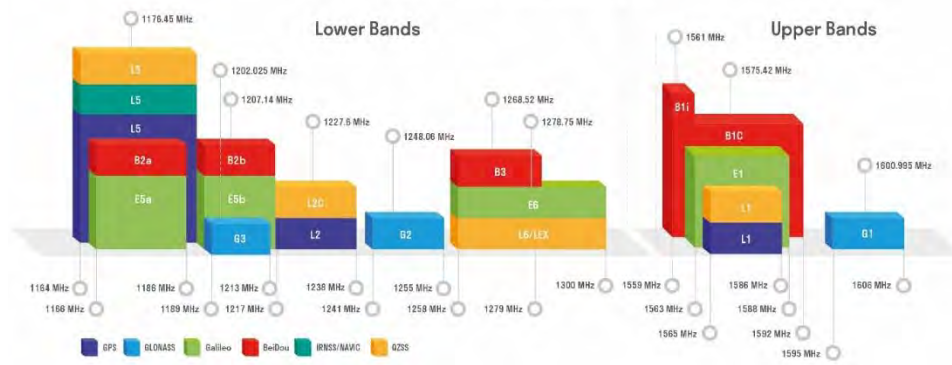
1.2. Supported Bands

5G NR/ LTE/ LTE-Advanced/ WCDMA/ HSPA/ HSPA+/ GPRS/ GSM/ NB-IoT				
Band	Frequency (MHz)	Uplink (MHz)	Downlink (MHz)	LMHs
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	√
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	√

5G NR/ LTE/ LTE-Advanced/ WCDMA/ HSPA/ HSPA+/ GPRS/ GSM/ NB-IoT				
Band	Frequency (MHz)	Uplink (MHz)	Downlink (MHz)	LMHs
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		√
78	3500	3300–3800		√
79	4500	4400–5000		√

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-L10C-L10F Centre 1601 (1595–1606)	G2-L20C-L20F Centre 1248.06 (1241–1255)	G3-L30C 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)	
	√	√	-	-	
BDS	B1I Centre 1561.098 (1559–1564)	B1C (BDS-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)				
	√				

GNSS Bands and Constellations

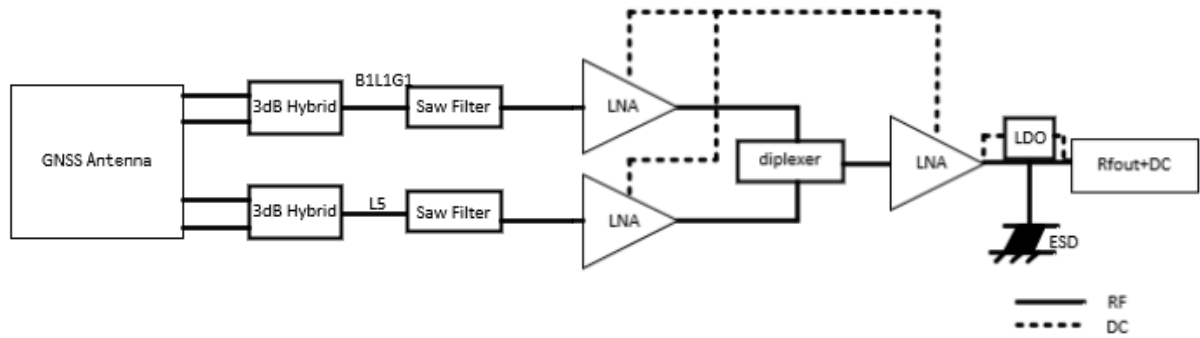


1.3. Mechanical & Environment

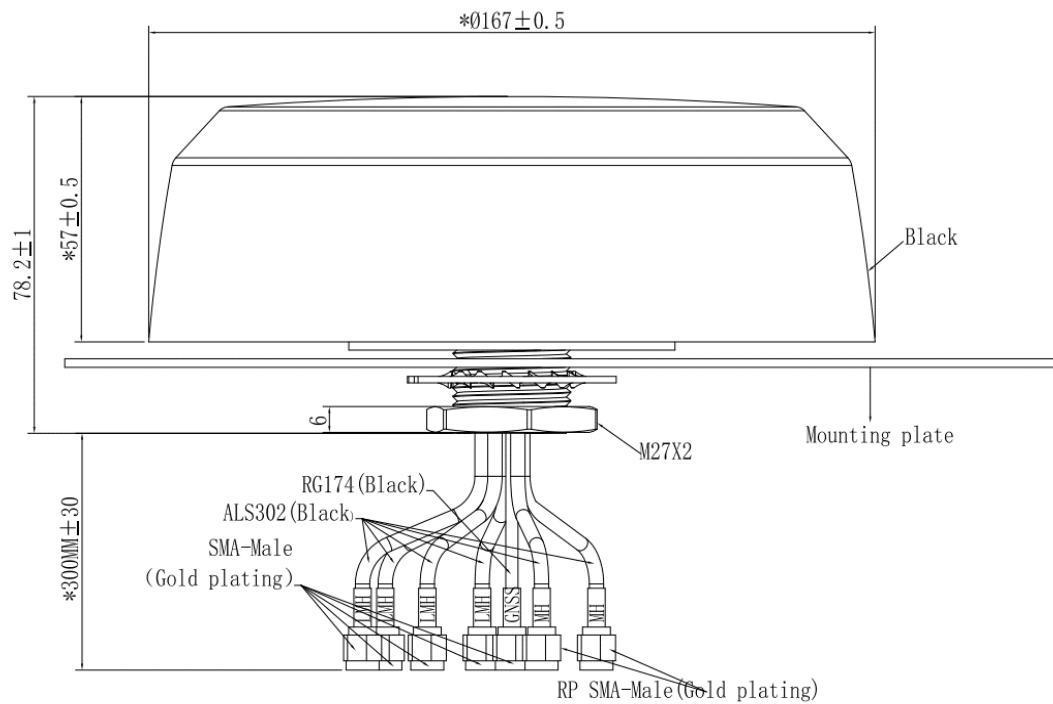
Mechanical		
Antenna Size		Φ 167 mm × 57 mm
Casing Material & Color		PC & Black
Cable Type & Length	LMHs & Wi-Fis	ALS302 Black & 300 mm
	GNSS	RG174 Black & 300 mm
Connector Type		SMA Male and RP SMA Male
Weight		Typ. 569 g
Mounting Type		Screw (M27 Nut)
Environmental		
Operation Temperature		-40 °C to +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
Housing Flame Rating		UL 94 V-0
Housing UV Resistant		UL 746c f1

- LMHs: LMH antennas (LMH1, LMH2, LMH3, LMH4)
- Wi-Fis: Wi-Fi antennas (Wi-Fi1, Wi-Fi2)

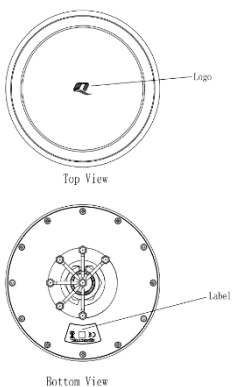
1.4. Block Diagram (Active Antenna)



2 Drawing



- 4 LMHs can be connected arbitrarily, and 2 MHs can be connected arbitrarily.
- Recommended assembly hole diameter: 28.0 mm.
- Recommended mounting plane thickness: 3.0 mm.

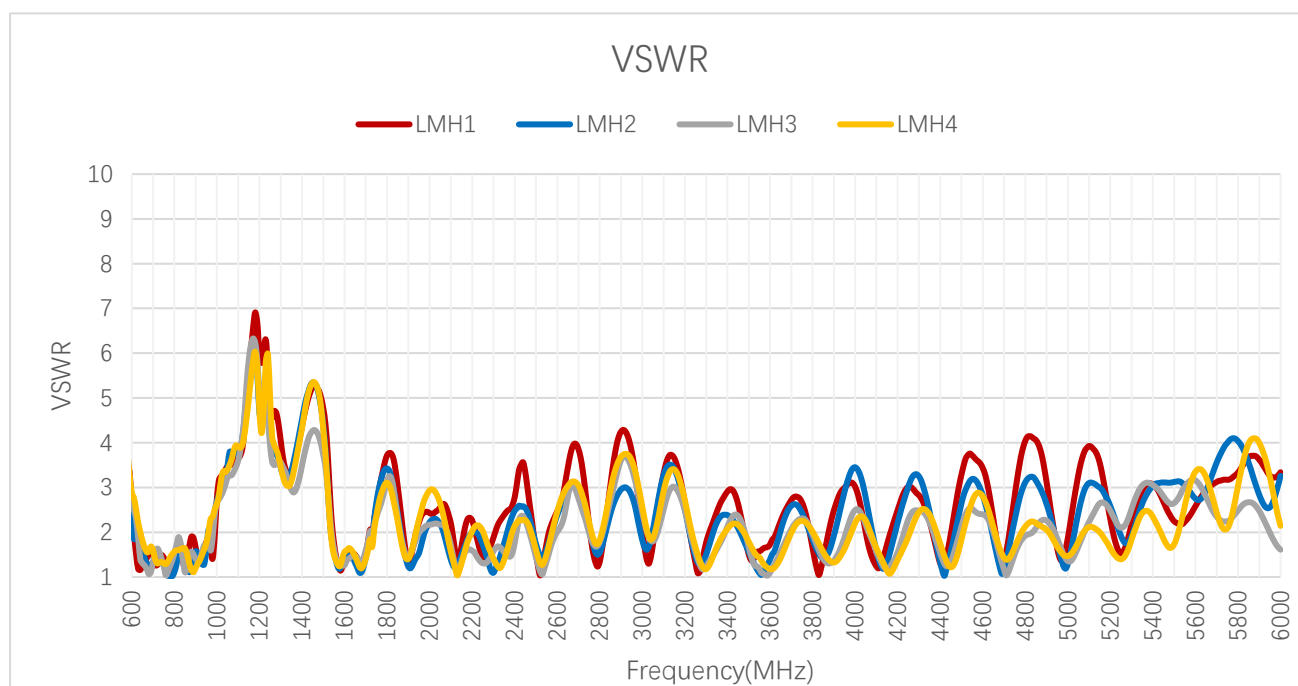


The current state of the SMA connector is not waterproof. If a waterproof connector is required, it can be customized, such as a waterproof FAKRA connector.

3 Detail Performance

3.1. S-Parameter Test

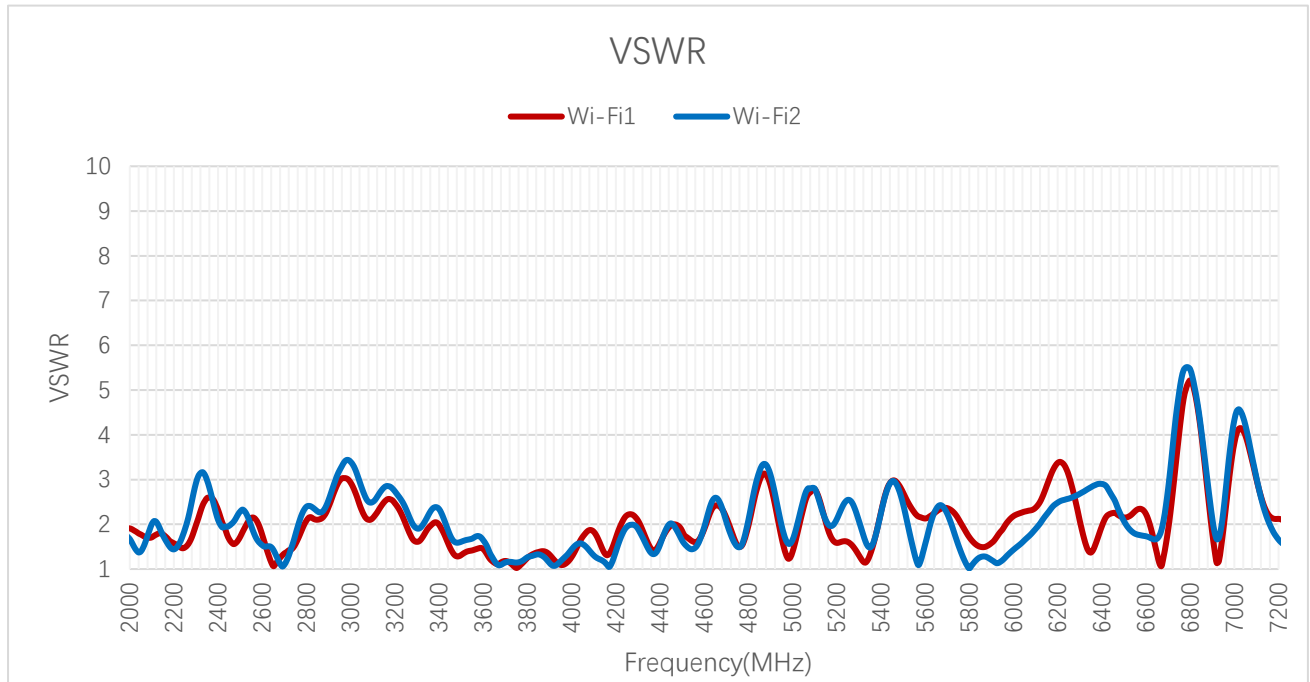
3.1.1. VSWR



VSWR – LMH

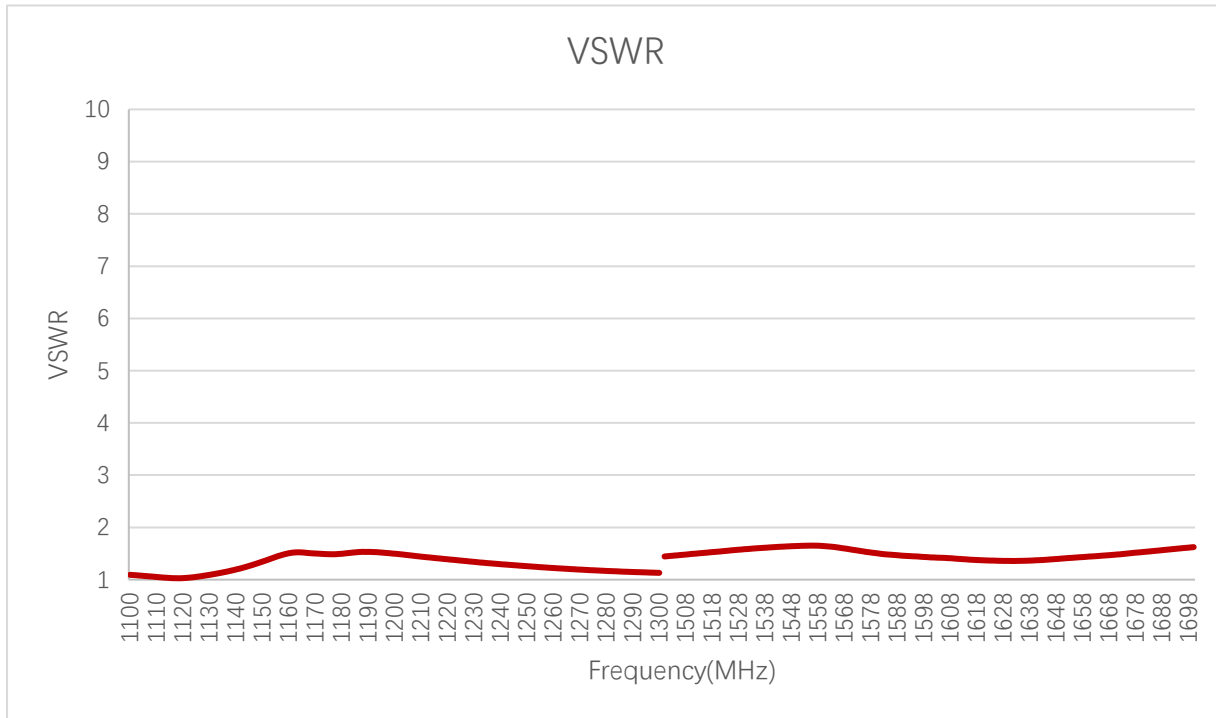
Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
LMH1	2.7	1.2	1.3	1.7	1.7	1.8	5.1	1.8	2.3	1.8
LMH2	2.2	1.8	1.4	1.6	1.6	2	5.3	1.7	2.3	1.6
LMH3	2.8	1.9	1.5	1.7	1.4	1.9	4.2	1.8	2.2	1.6
LMH4	2.9	2.2	1.4	1.6	1.2	2	5.3	1.6	2.1	1.5
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
LMH1	2.2	1.4	2.4	3.3	2.5	1.7	1.3	1.9	2.2	3.3

LMH2	1.5	1.4	1.7	2.5	2.4	1.4	1.1	1.3	3.1	3.3
LMH3	2	1.2	1.6	2.3	2	1.1	1.2	1.4	2.7	1.6
LMH4	2.3	1.1	1.4	2.3	2.5	1.2	1.4	1.5	1.7	2.1



VSWR – Wi-Fi

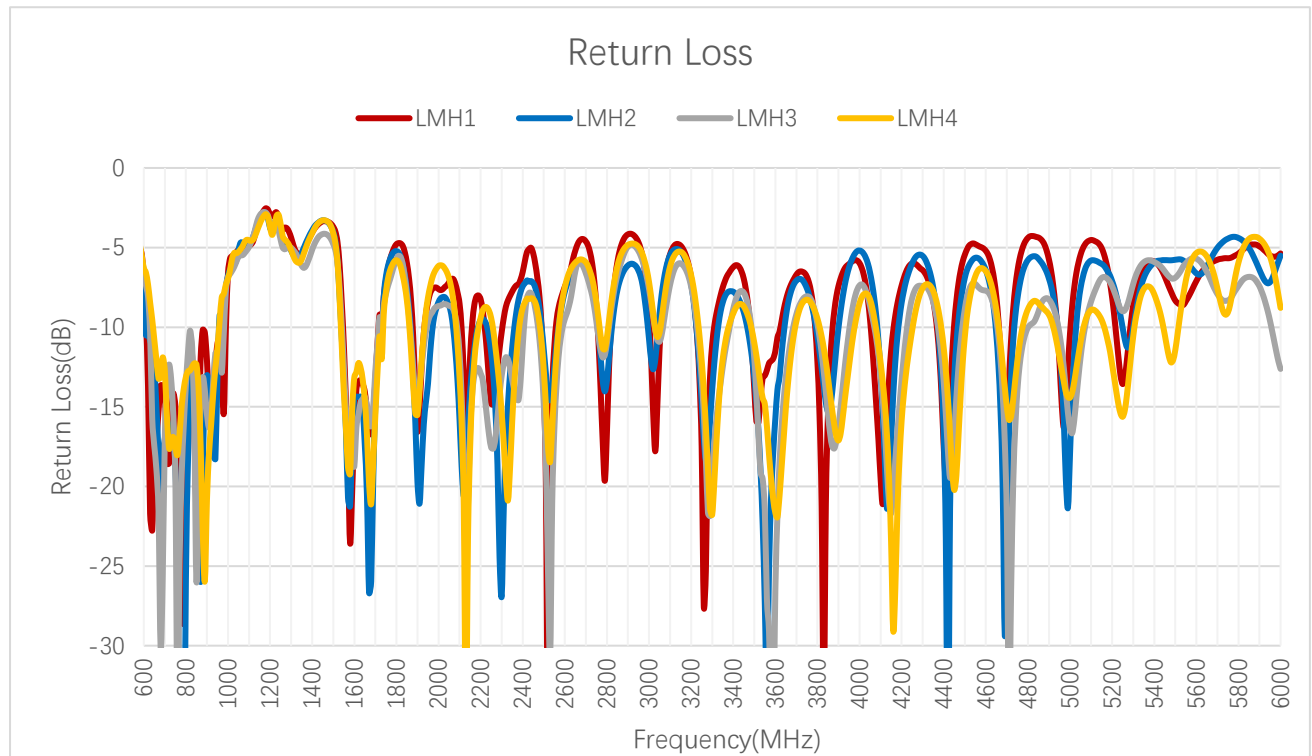
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Wi-Fi1	2.3	1.7	1.7	2.1	2.7	1.5	1.8	1.5	3.1	2.5
Wi-Fi2	2.1	2	2.3	2.1	2.5	1.3	1.1	2.8	4.2	2.4



VSWR – GNSS

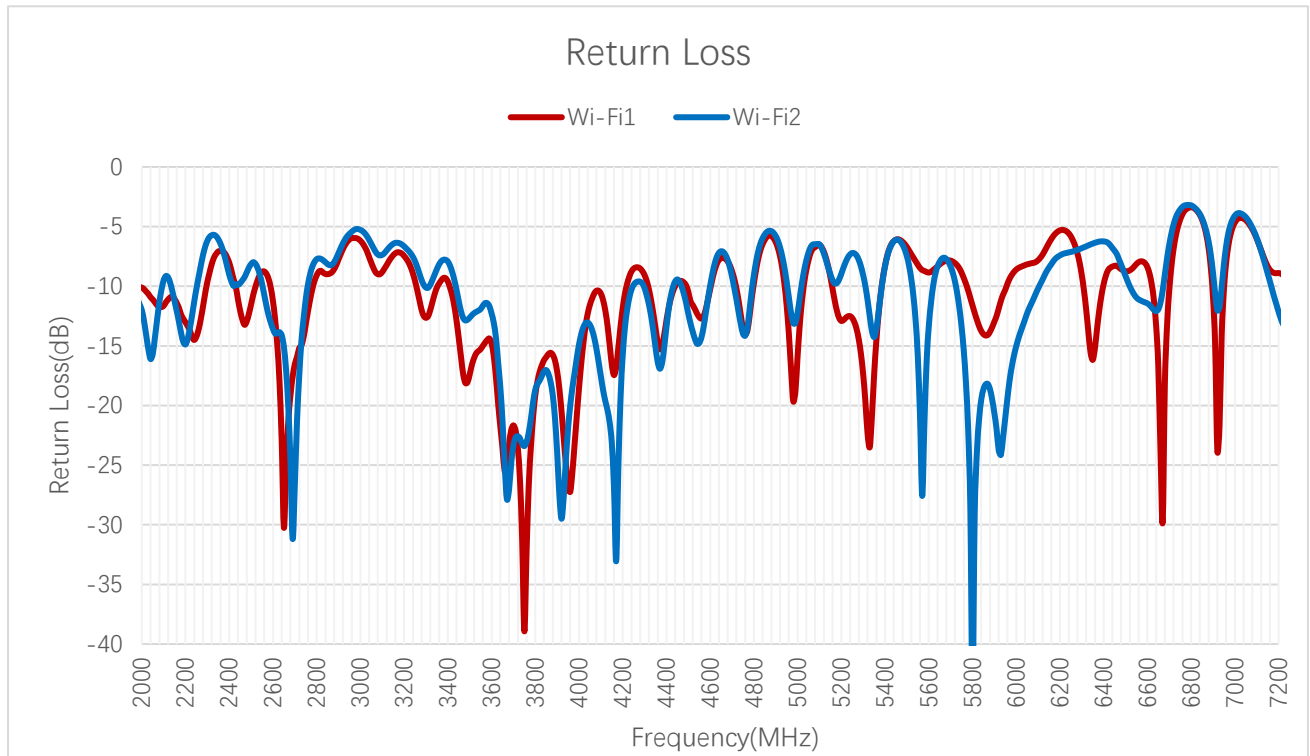
Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
VSWR	1.48	-	-	-	-	1.63	1.54	1.42

3.1.2. Return Loss



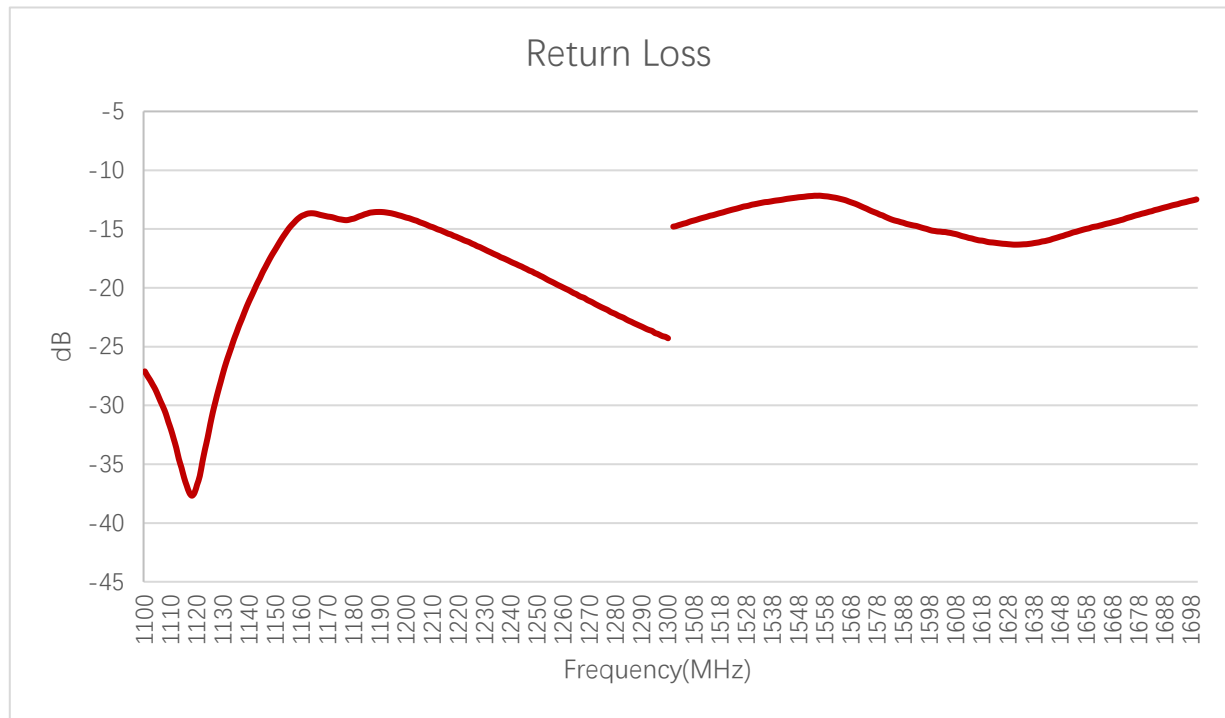
Return Loss (dB) – LMH

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
LMH1	-6.9	-21.7	-18.6	-11.9	-12.1	-10.7	-3.4	-11.1	-8.1	-10.7
LMH2	-8.7	-10.9	-15.9	-12.6	-13	-9.3	-3.3	-11.9	-8	-13.1
LMH3	-6.4	-10.3	-13.5	-11.3	-15.5	-10.1	-4.2	-11.1	-8.6	-12.6
LMH4	-6.3	-8.5	-15.7	-12.5	-20.8	-9.6	-3.3	-12.8	-9.1	-13.7
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
LMH1	-8.4	-15.2	-7.8	-5.4	-7.5	-11.5	-16.6	-10.4	-8.3	-5.4
LMH2	-13.5	-16.3	-11.3	-7.2	-7.8	-15.7	-23.4	-17.9	-5.8	-5.5
LMH3	-9.6	-21.1	-13.3	-8.2	-9.5	-26.6	-22.3	-16.4	-6.9	-12.6
LMH4	-8.1	-23.2	-15.9	-8.2	-7.5	-21.7	-15	-14.4	-11.4	-8.8



Return Loss (dB) – Wi-Fi

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Wi-Fi1	-8	-12.1	-11.5	-9.2	-6.7	-14	-11.2	-13.8	-5.8	-7.5
Wi-Fi2	-9	-9.7	-8.1	-9	-7.5	-18.6	-24.1	-6.6	-4.2	-7.6

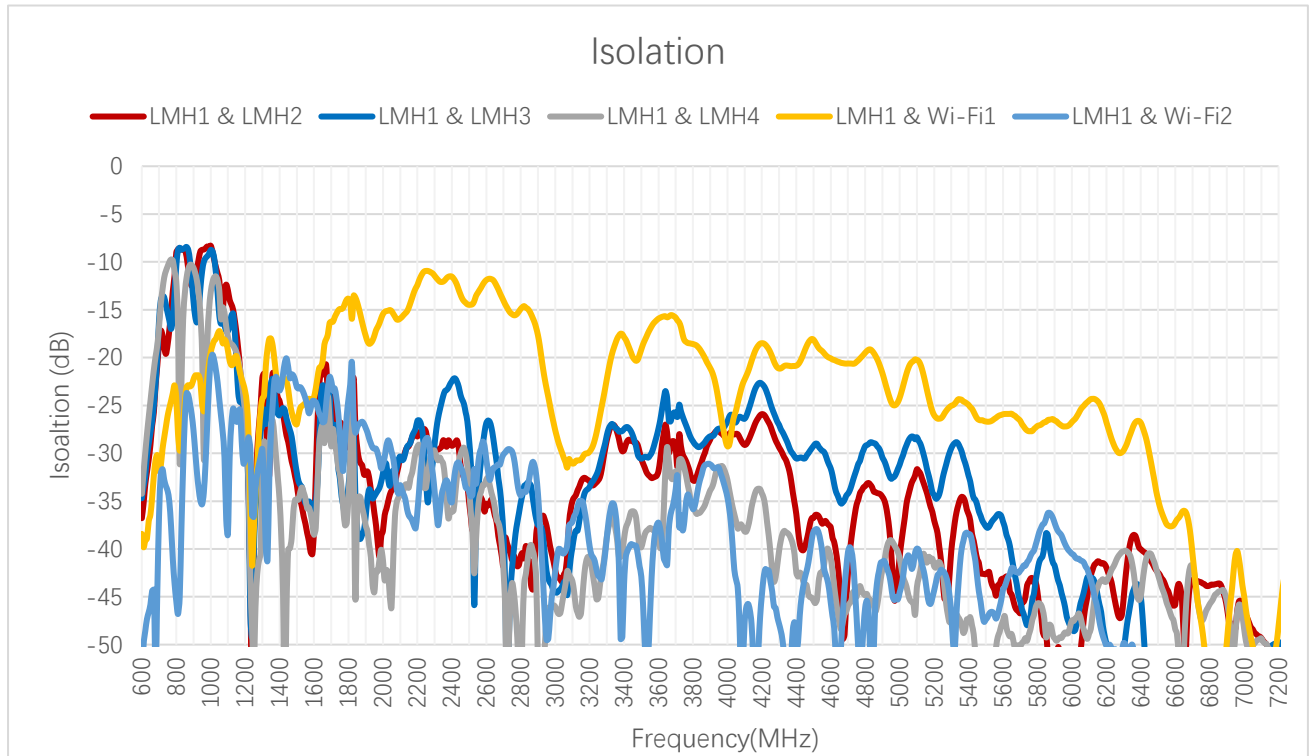


Return Loss (dB) – GNSS

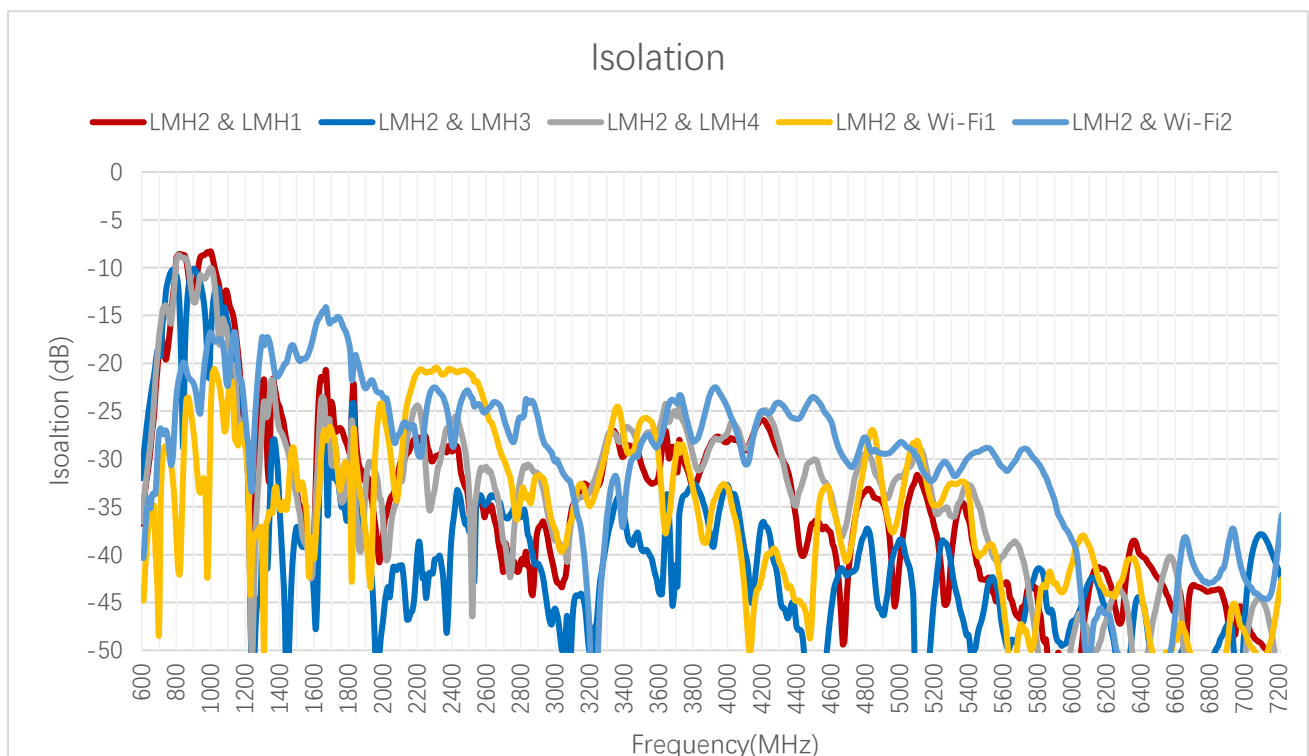
Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
Return Loss (dB)	-14.2	-	-	-	-	-12.3	-13.4	-15.2

3.1.3. Isolation

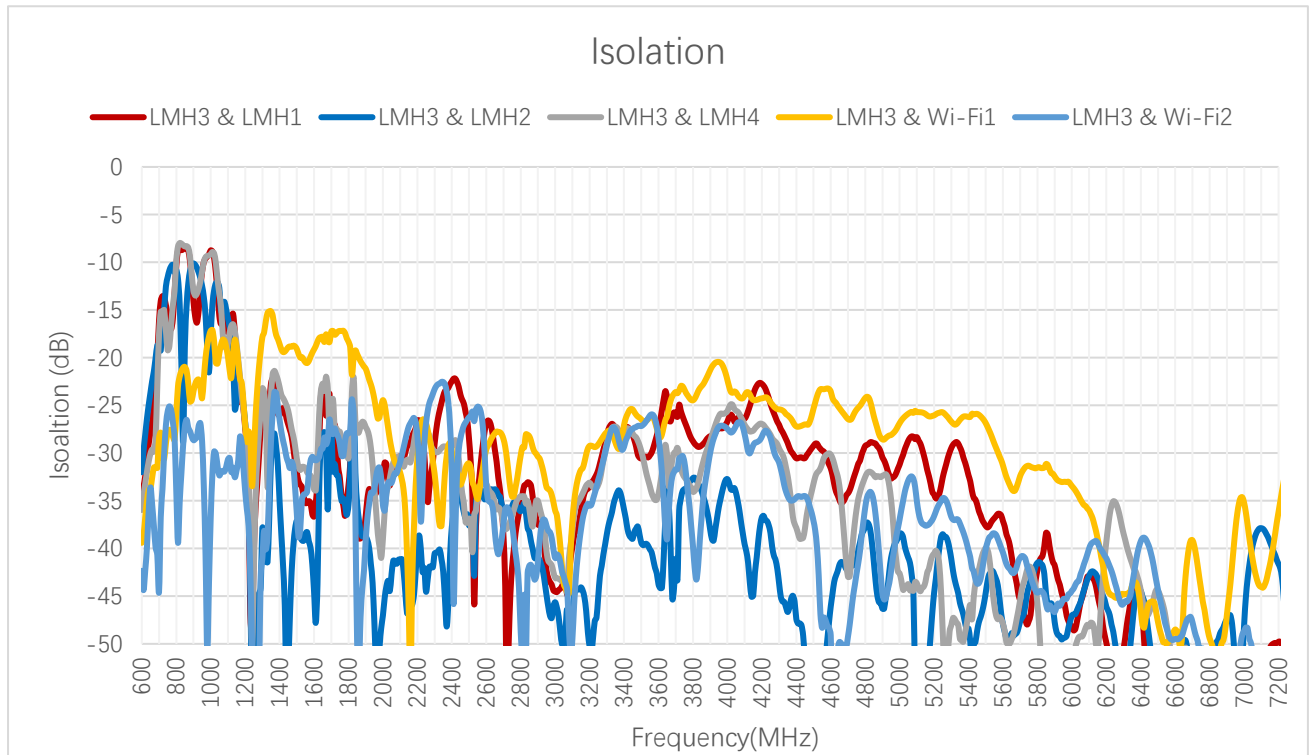
3.1.3.1. LMH1



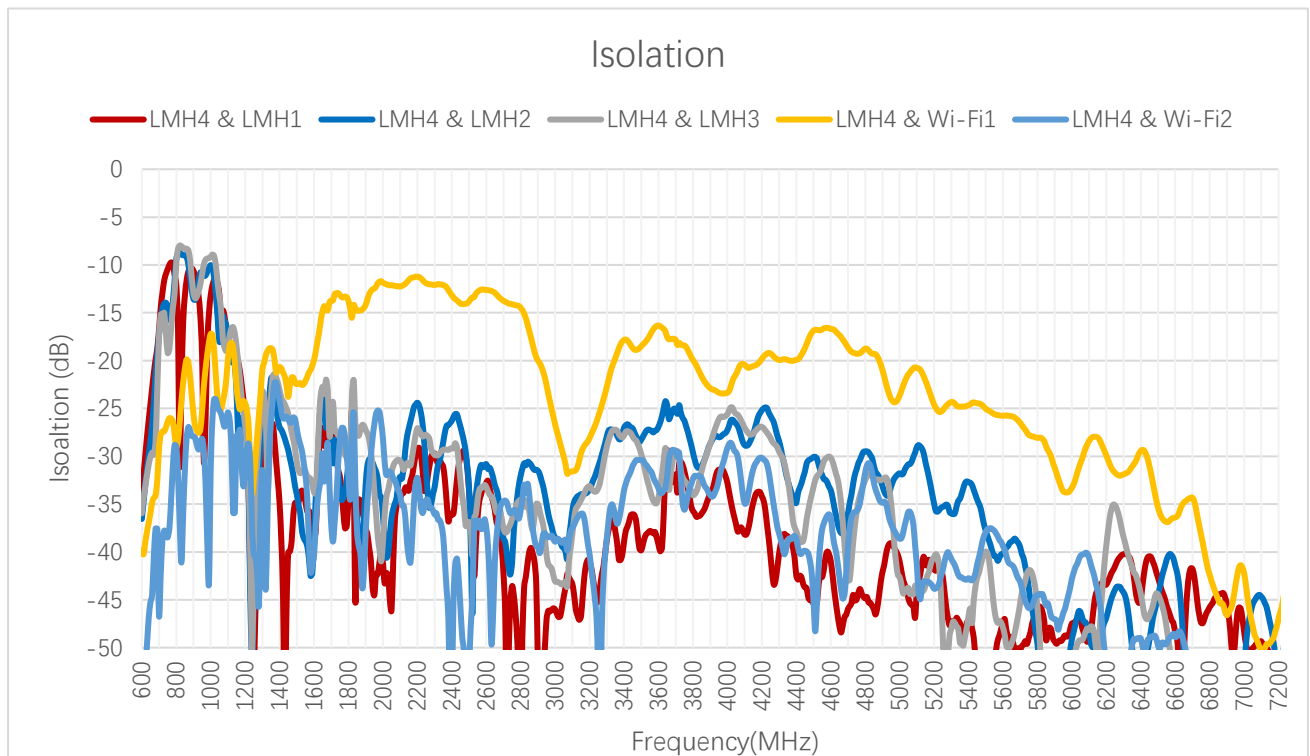
3.1.3.2. LMH2



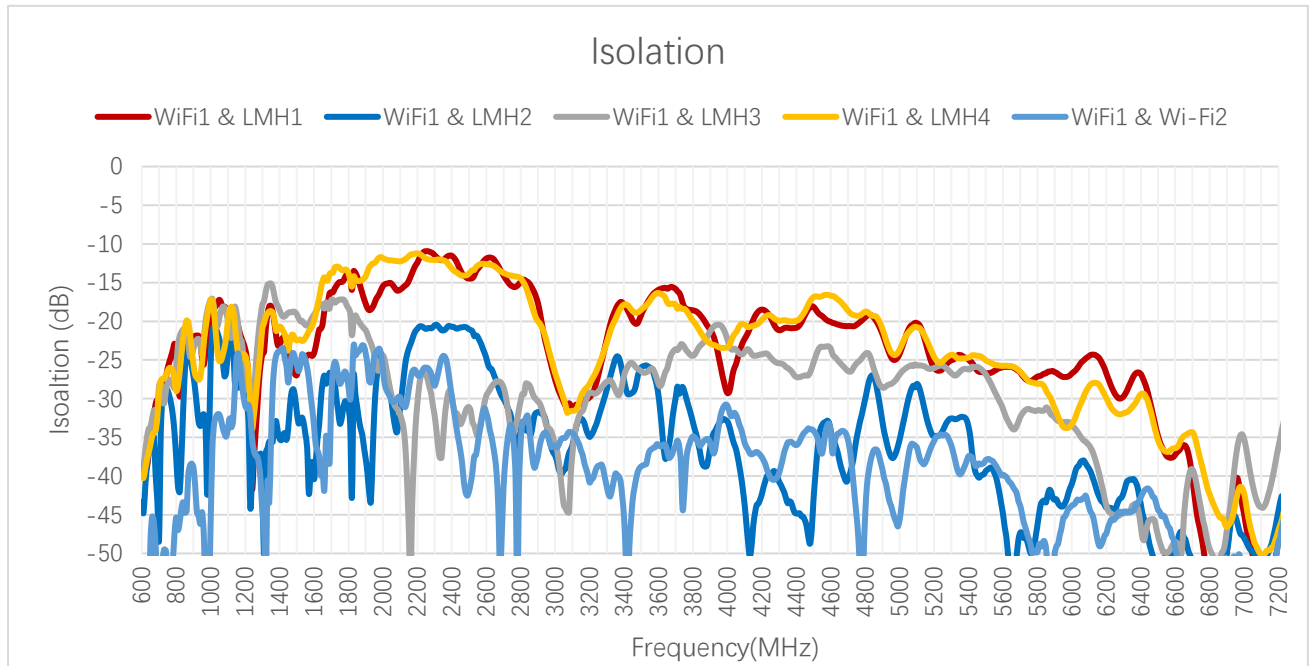
3.1.3.3. LMH3



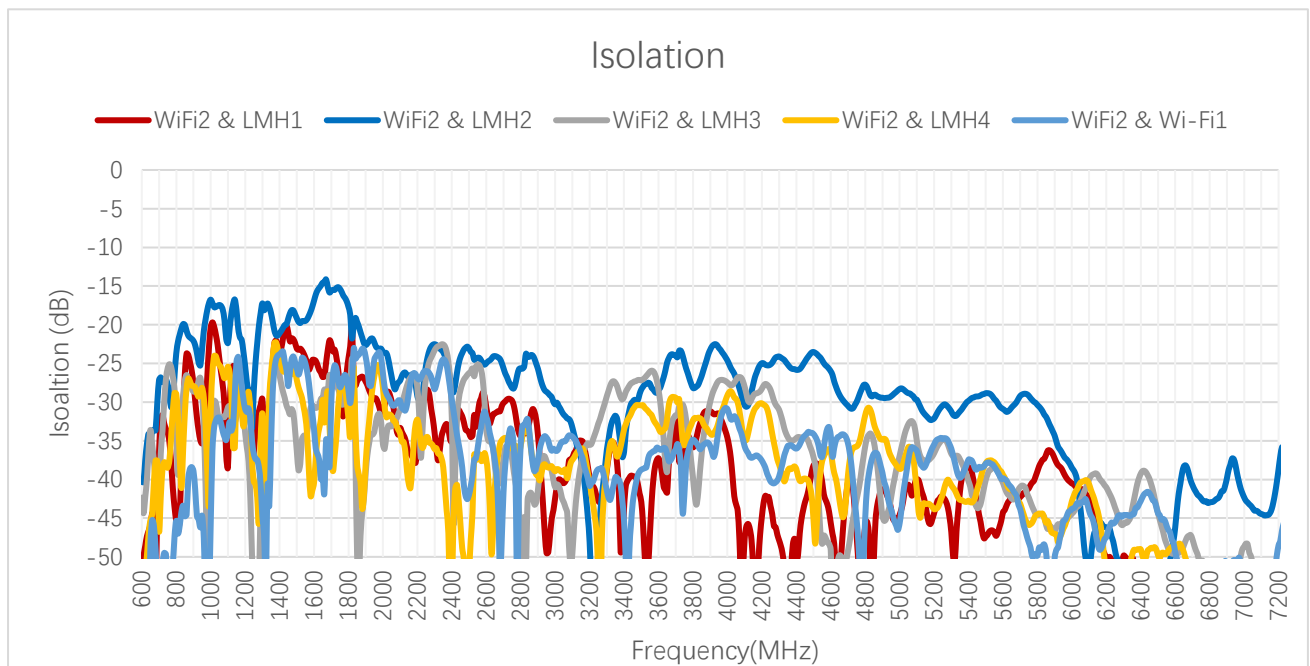
3.1.3.4. LMH4



3.1.3.5. Wi-Fi1



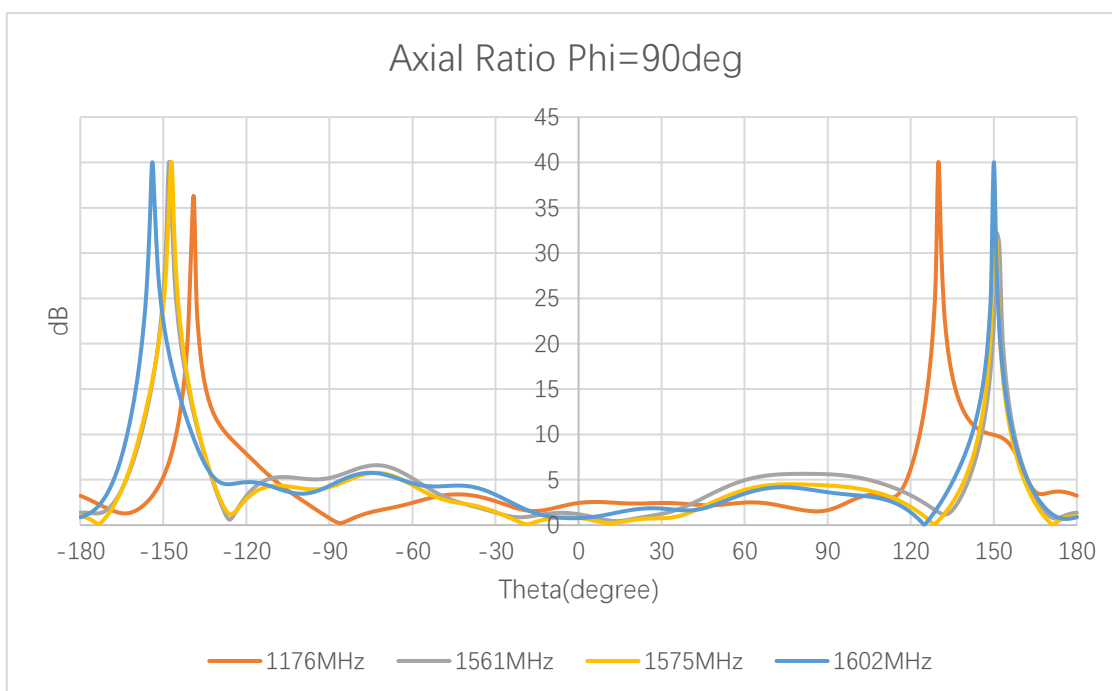
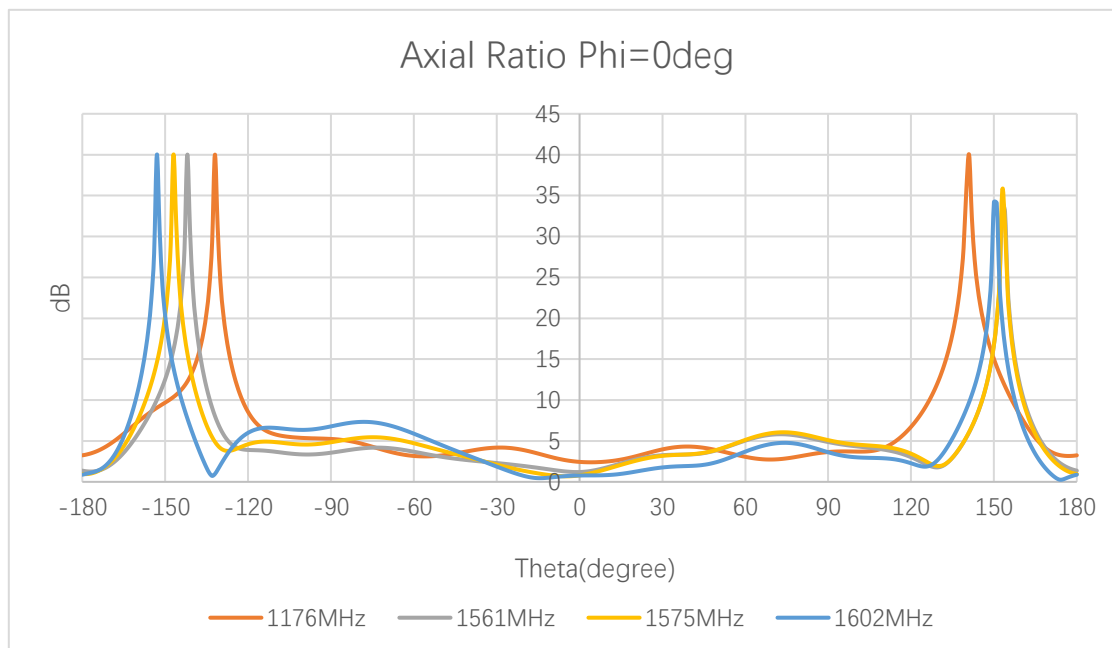
3.1.3.6. Wi-Fi2



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	Wi-Fi 6e
Freq. (MHz)	600– 700	700– 810	820– 960	1420– 1520	1700– 2170	2300– 2400	2400– 2500	2500– 2690	3300– 4200	4400– 5000	5150– 5850	5925– 7125
LMH1	-16.1	-8.7	-8.4	-20.1	-13.5	-11.4	-11.5	-11.8	-15.6	-18.1	-22.7	-24.3
LMH2	-17.3	-8.7	-8.6	-18.1	-15.1	-20.4	-20.7	-21	-22.5	-23.5	-28.8	-36.1
LMH3	-16.1	-8.3	-8	-18.7	-17.2	-22.5	-22.2	-25.1	-20.4	-23.2	-25.7	-33
LMH4	-16.8	-8.3	-8	-21.2	-11.3	-12	-13.2	-12.6	-16.3	-16.6	-22.1	-28
Wi-Fi1	-28.4	-22.9	-19.9	-18.7	-11.3	-11.4	-11.5	-11.8	-15.6	-16.6	-22.1	-24.3
Wi-Fi2	-27.2	-22.2	-19.9	-18.1	-15.1	-22.5	-22.8	-23.1	-22.5	-23.5	-28.8	-36.1

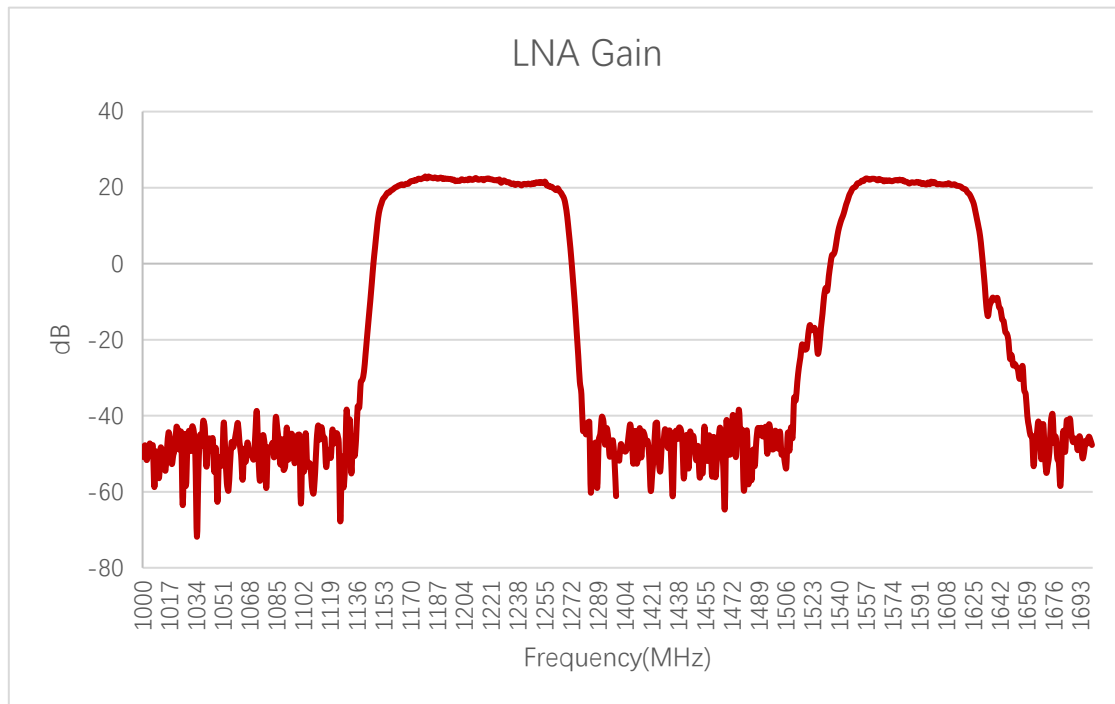
3.1.4. GNSS Axial Ratio



Axial Ratio (dB)

Frequency (MHz)		1176	1207	1227	1248	1268	1561	1575	1602
Axial Ratio (dB)	Phi = 0 (deg) Theta = 0 (deg)	2.44	-	-	-	-	1.2	0.79	0.77
	Phi = 90 (deg) Theta = 0 (deg)	2.44	-	-	-	-	1.2	0.79	0.77

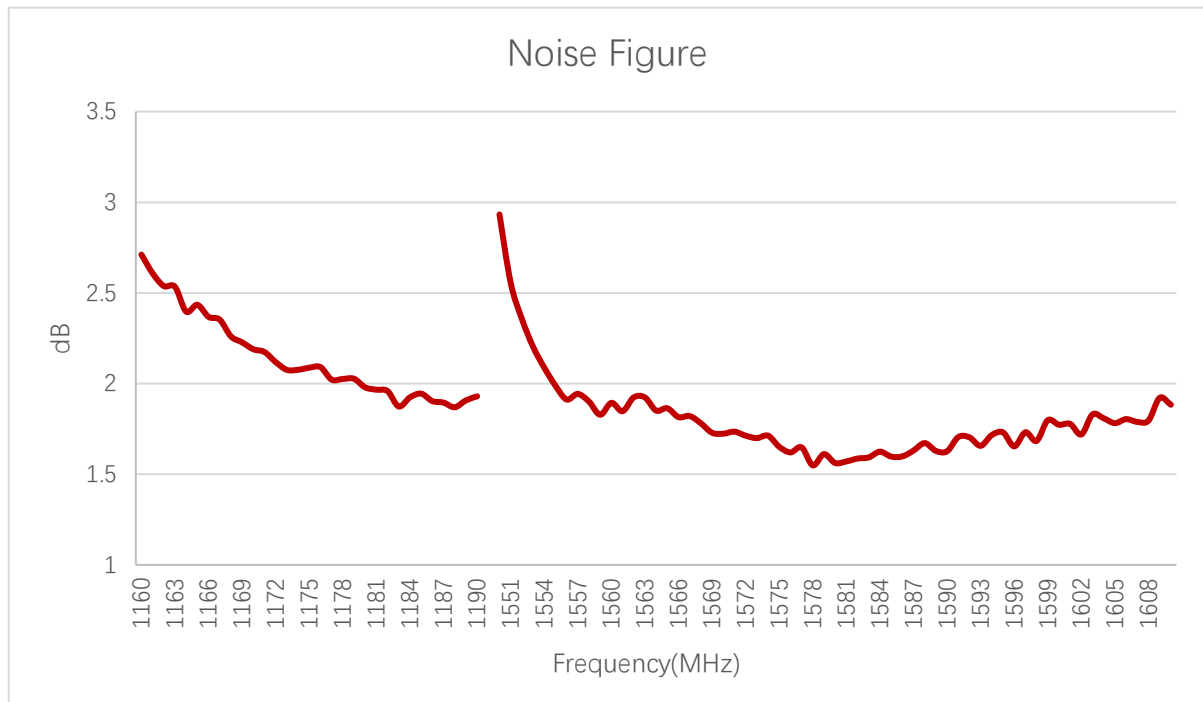
3.1.5. GNSS LNA Gain



LNA Gain (dB)

Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
LNA Gain (dB)	22.2	-	-	-	-	22.3	21.9	20.8

3.1.6. GNSS Noise Figure

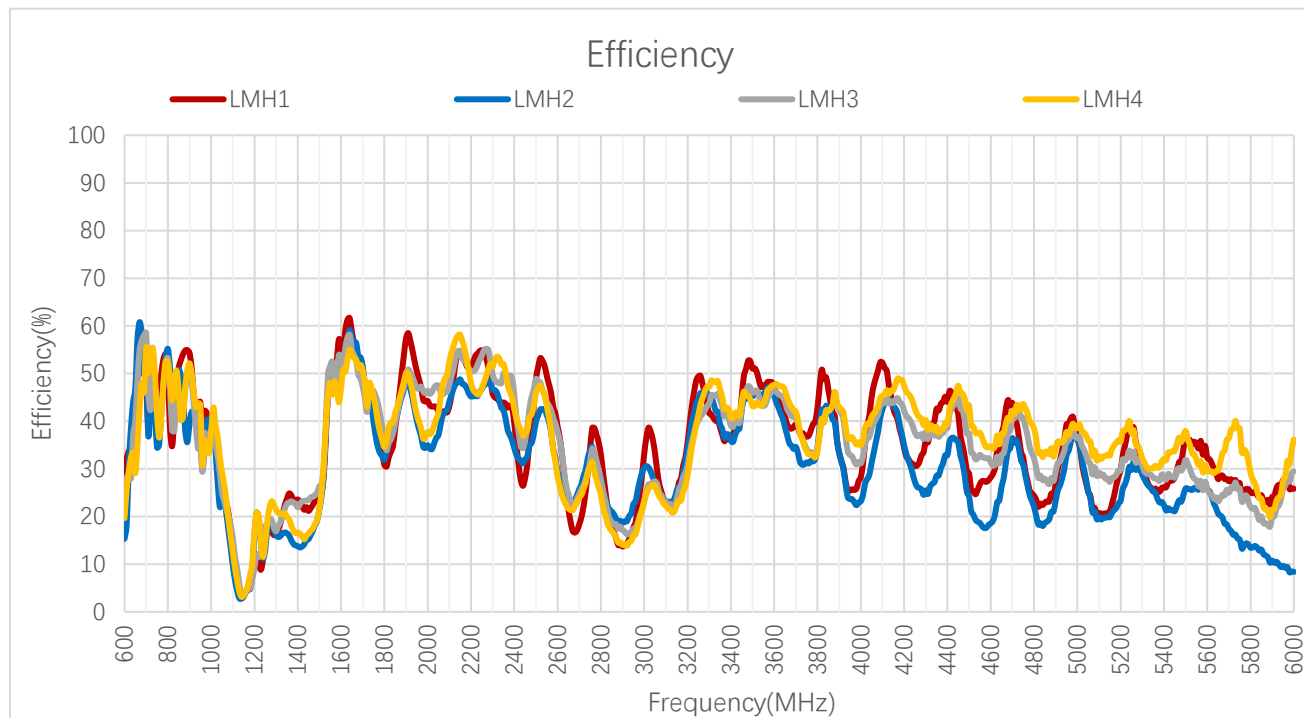


Noise Figure (dB)

Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
Noise Figure (dB)	2.09	-	-	-	-	1.84	1.65	1.71

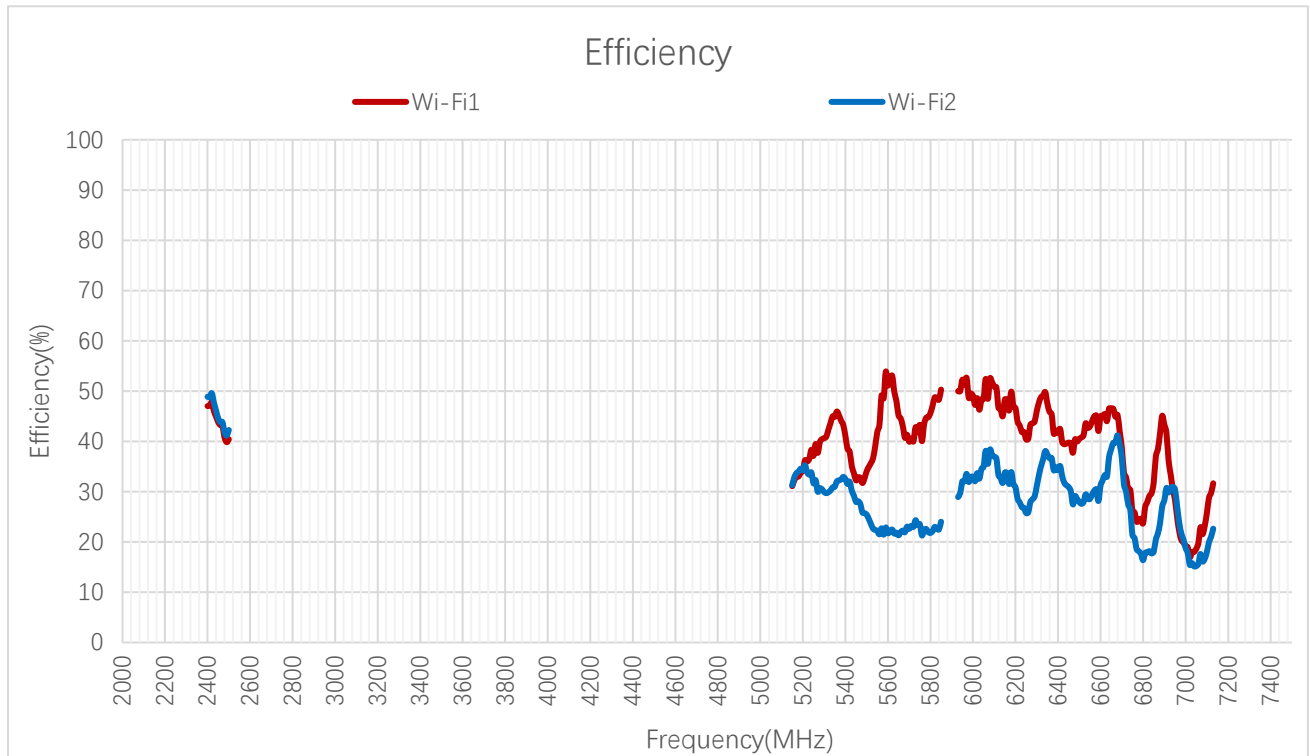
3.2. Radiation Performance Test

3.2.1. Efficiency

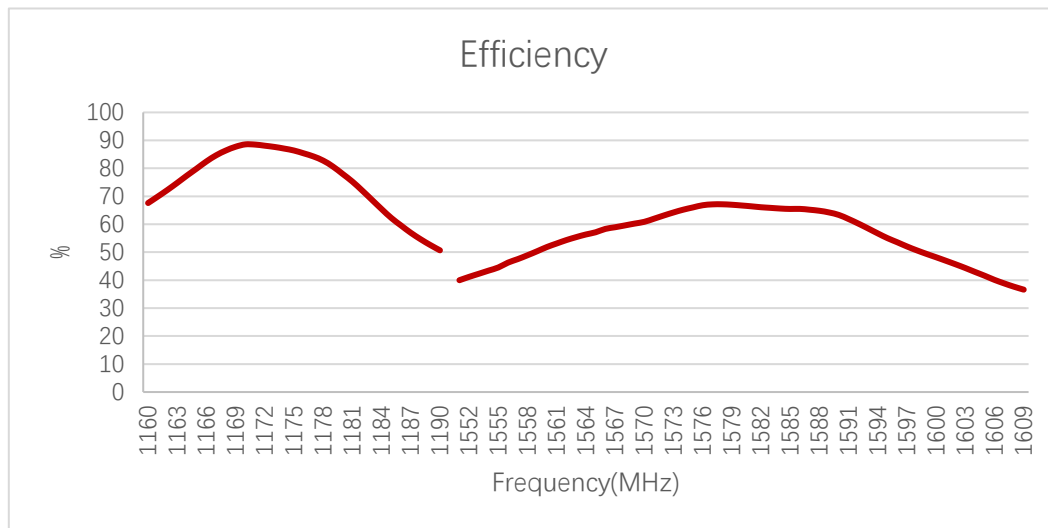


Efficiency (%) – LMH

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
LMH1	23.8	34.5	39.1	41	54.3	38.9	22	46.3	43.5	50
LMH2	15.3	38.7	37	42.9	39.4	29.8	15.1	47.7	43.3	45.2
LMH3	22	28	46	37.9	50.8	29.4	23.4	44.8	46.5	45.8
LMH4	19.6	32.4	50.1	48	52.2	30.9	16	47.8	47.2	46.5
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
LMH1	50.5	54.1	43.9	28.1	38.8	47.5	43.8	36.5	36.8	25.8
LMH2	40.1	48.3	42.3	32	29.4	45.4	36.4	36	25.9	8.4
LMH3	46.9	54.7	50.1	35.9	37.7	46.5	40.8	36.5	31.9	29.5
LMH4	41.4	58	52	37.5	28.3	47.6	42.2	38.5	38	36.2



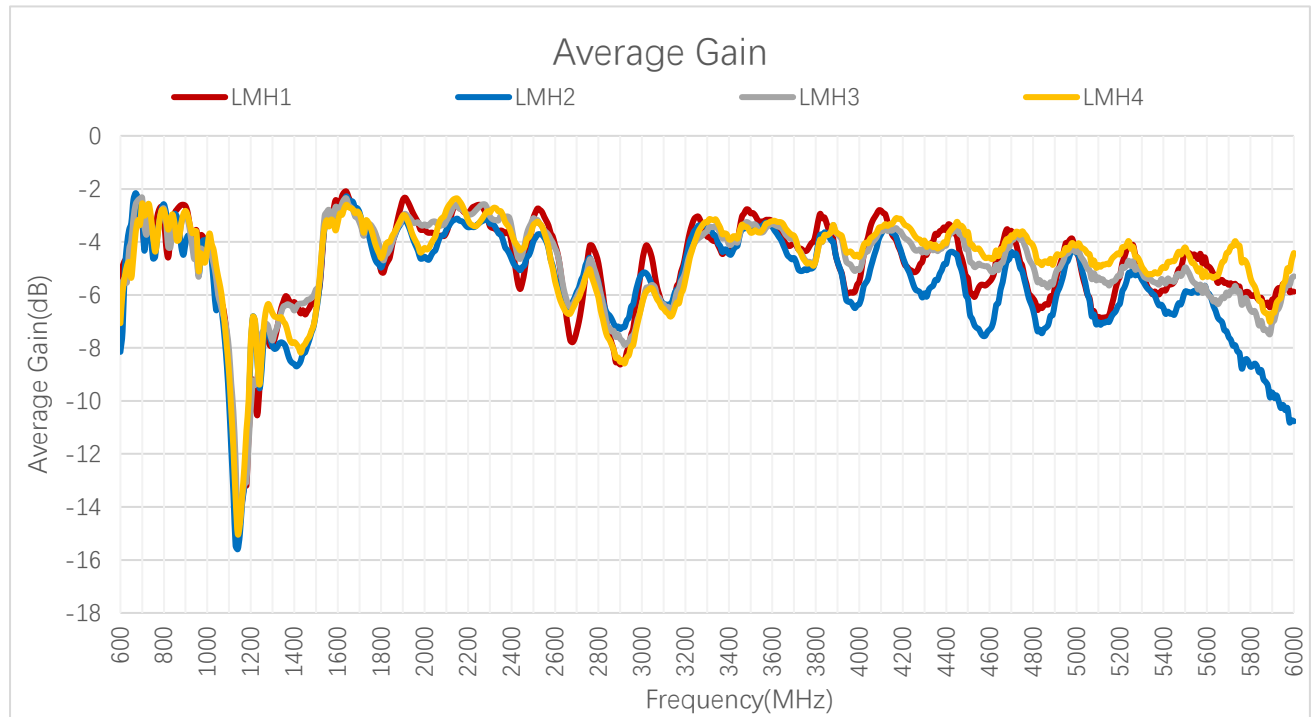
Efficiency (%) – Wi-Fi										
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Wi-Fi1	47	43.9	40.4	31.1	34.1	50.3	50	49.1	30.6	31.7
Wi-Fi2	48.9	44.6	42.3	31.3	25.4	24	28.9	36.5	27.5	22.6



Efficiency (%) – GNSS

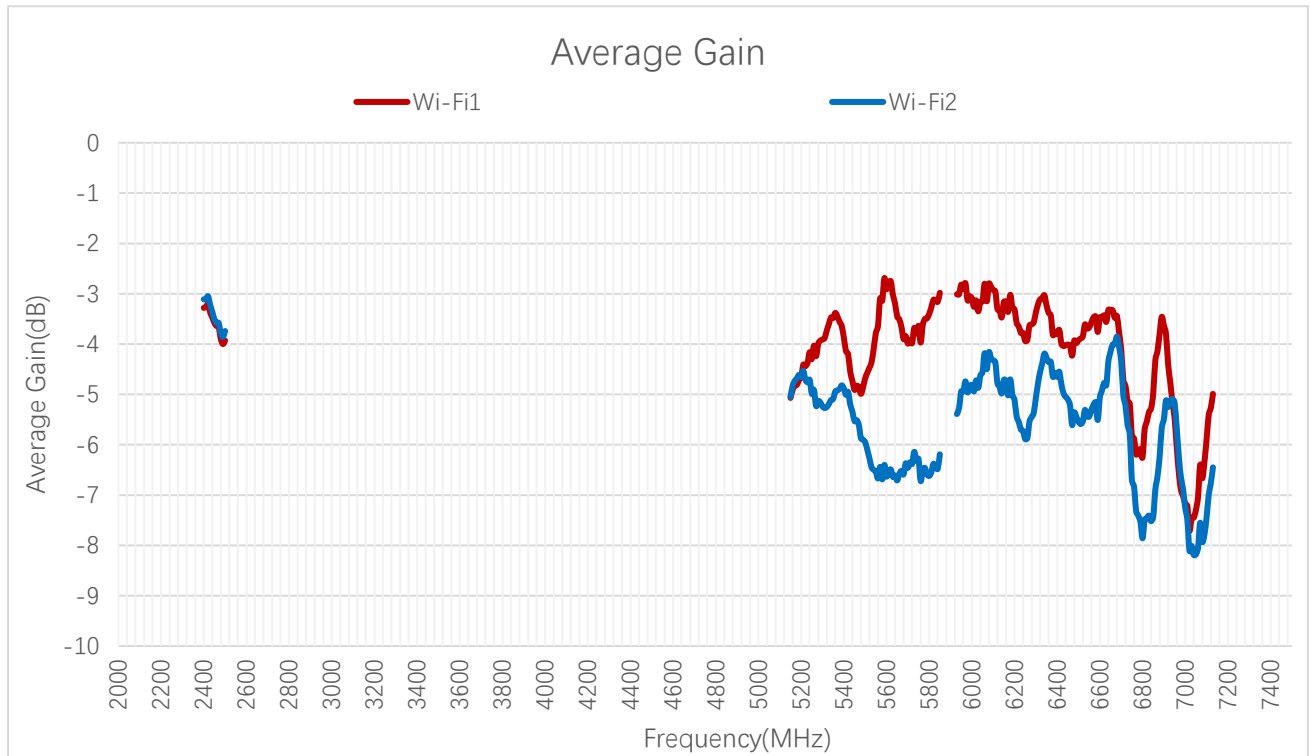
Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
Efficiency (%)	85	-	-	-	-	53	66	45.7

3.2.2. Average Gain



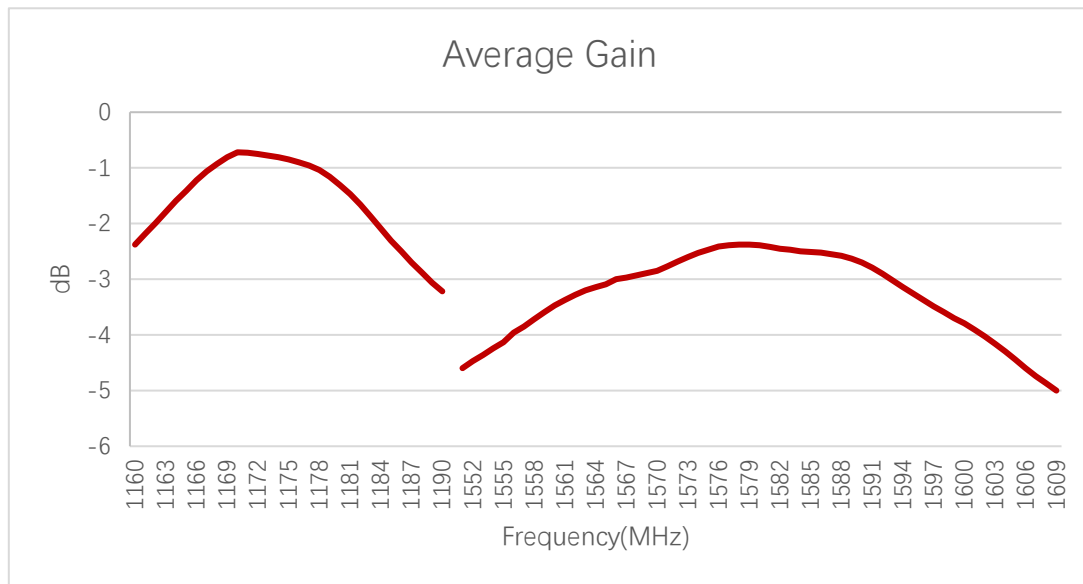
Average Gain (dB) – LMH

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
LMH1	-6.2	-4.6	-4.1	-3.9	-2.7	-4.1	-6.6	-3.4	-3.6	-3
LMH2	-8.2	-4.1	-4.3	-3.7	-4.1	-5.3	-8.2	-3.2	-3.6	-3.5
LMH3	-6.6	-5.5	-3.4	-4.2	-2.9	-5.3	-6.3	-3.5	-3.3	-3.4
LMH4	-7.1	-4.9	-3	-3.2	-2.8	-5.1	-8	-3.2	-3.3	-3.3
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
LMH1	-3	-2.7	-3.6	-5.5	-4.1	-3.2	-3.6	-4.4	-4.4	-5.9
LMH2	-4	-3.2	-3.7	-5	-5.3	-3.4	-4.4	-4.4	-5.9	-10.8
LMH3	-3.3	-2.6	-3	-4.5	-4.2	-3.3	-3.9	-4.4	-5	-5.3
LMH4	-3.8	-2.4	-2.8	-4.3	-5.5	-3.2	-3.8	-4.1	-4.2	-4.4



Average Gain (dB) – Wi-Fi

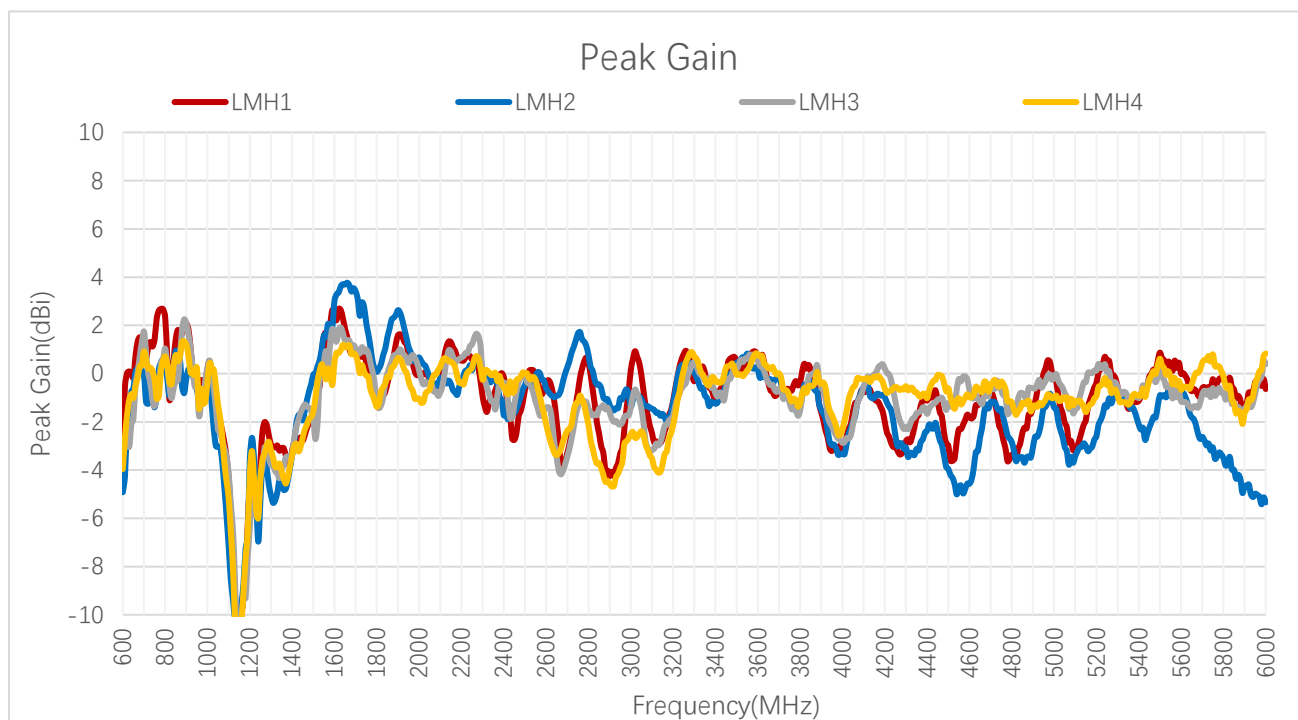
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Wi-Fi1	-3.3	-3.6	-3.9	-5.1	-4.7	-3	-3	-3.1	-5.1	-5
Wi-Fi2	-3.1	-3.5	-3.7	-5.1	-6	-6.2	-5.4	-4.4	-5.6	-6.5



Average Gain(dB) – GNSS

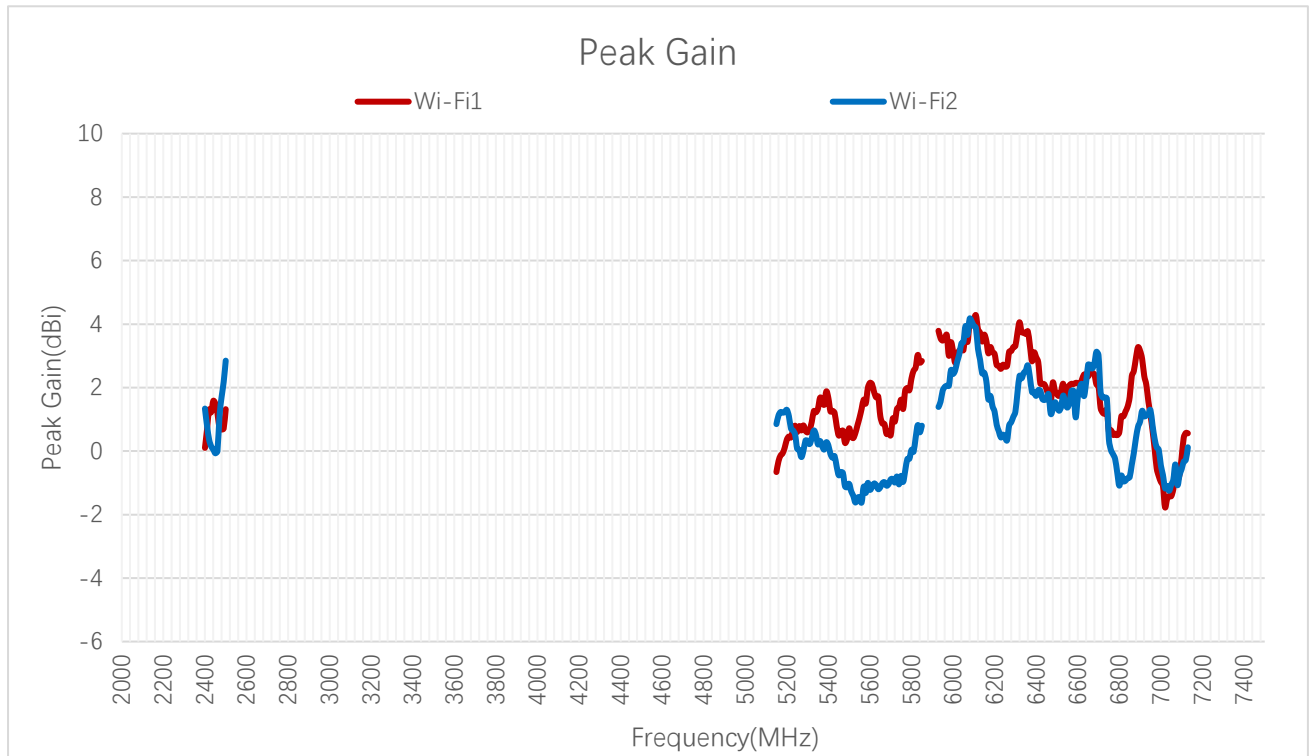
Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
Average Gain (dB)	-0.9	-	-	-	-	-3.37	-2.47	-4.03

3.2.3. Peak Gain



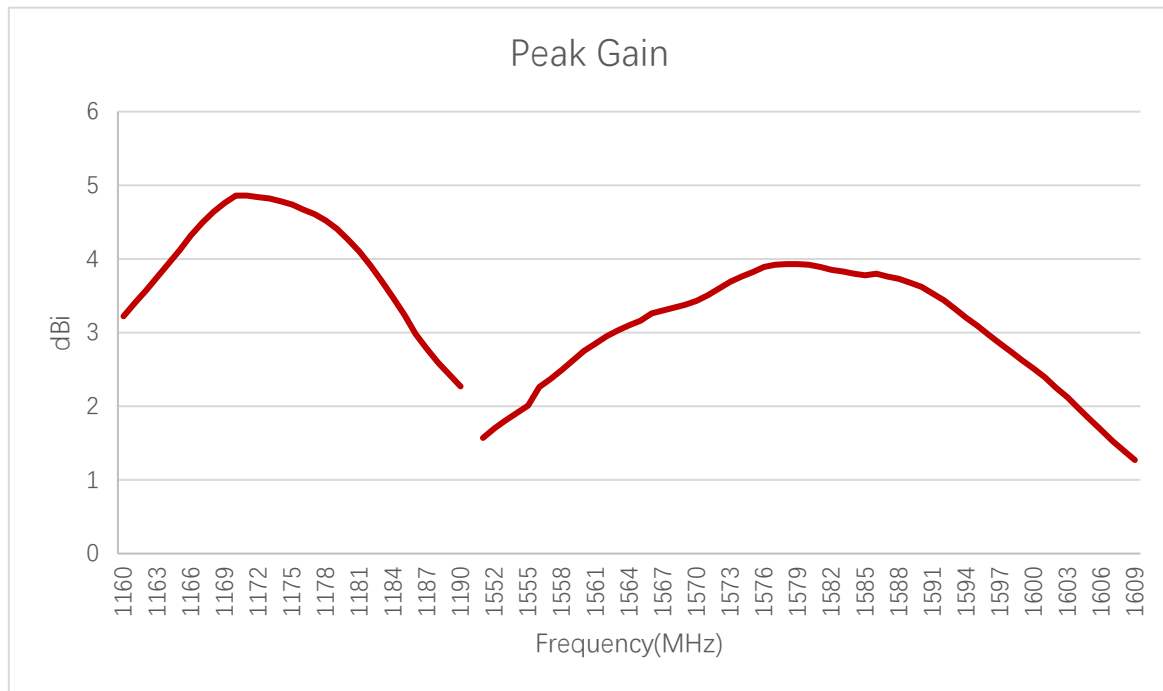
Peak Gain (dBi) – LMH

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
LMH1	-2.7	0.1	0.7	-0.7	2.1	-1.2	-2.6	0.9	0.7	0.7
LMH2	-4.9	-1.4	-1.2	-0.2	-0.2	-1	-1.7	3.1	2.8	2.3
LMH3	-3.5	-3	0.9	-1	2.1	-1.8	-1.6	0.9	0.9	0.8
LMH4	-4	-1.1	0.6	-0.4	1.2	-1.5	-3	0.5	0.1	0.3
Frequency (MHz)	1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
LMH1	0.8	1.3	-0.9	-2.8	-0.4	0.7	-0.6	-0.1	0.9	-0.6
LMH2	1.1	-0.3	-0.2	-1.6	-0.6	0.2	-1.2	-1.4	-0.9	-5.3
LMH3	0.4	1	-1.2	-1.3	-1.4	0.5	-0.5	-0.1	0.1	0.4
LMH4	-0.3	0.5	0	-0.7	-2.1	0.8	-0.5	-1	0.6	0.8



Peak Gain (dBi) – Wi-Fi

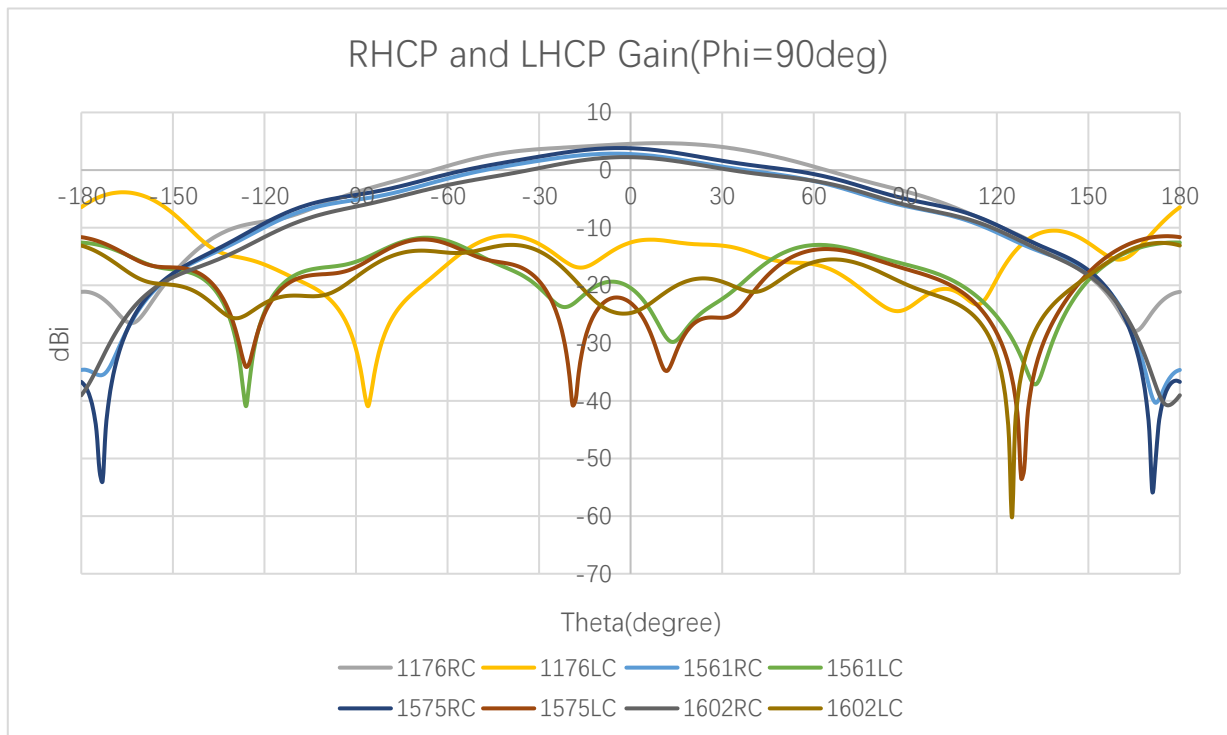
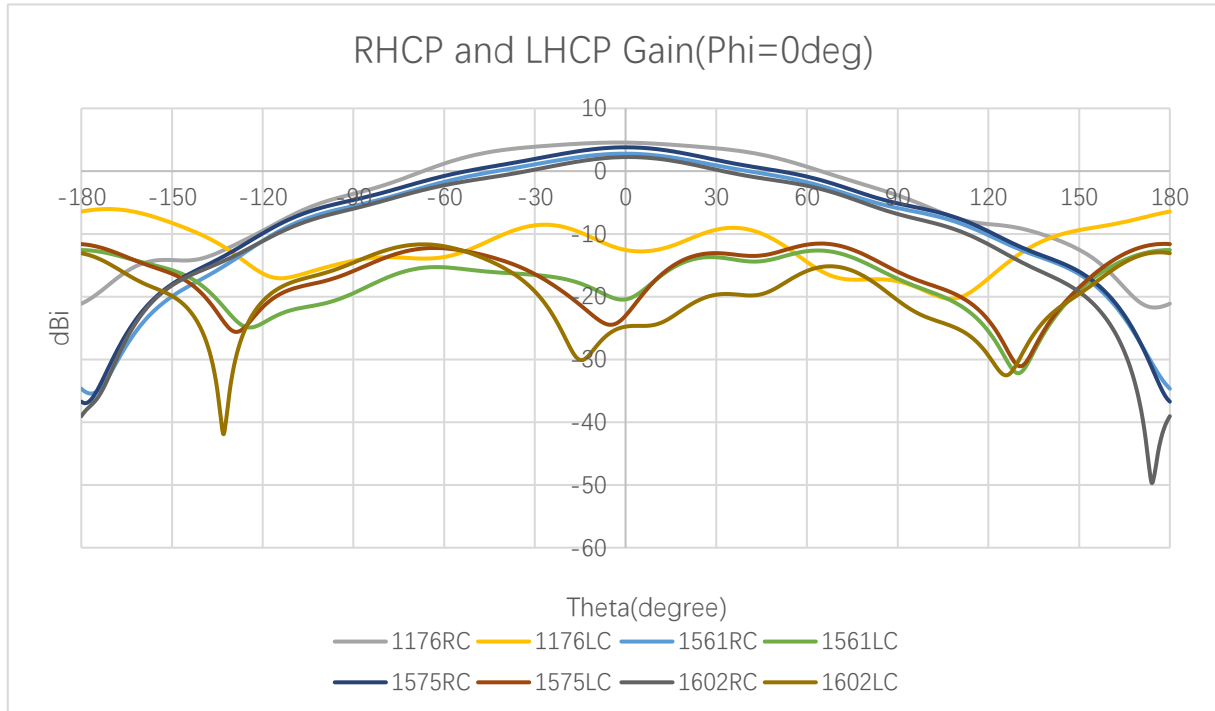
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Wi-Fi1	0.1	1.5	1.3	-0.7	0.7	2.8	3.8	3.8	1.2	0.6
Wi-Fi2	1.3	-0.1	2.9	0.9	-1	0.8	1.4	2.3	1.7	0.1



Peak Gain (dBi) – GNSS

Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
Peak Gain (dBi)	4.67	-	-	-	-	2.85	3.82	2.25

3.2.4. GNSS 2D RHCP and LHCP Gain

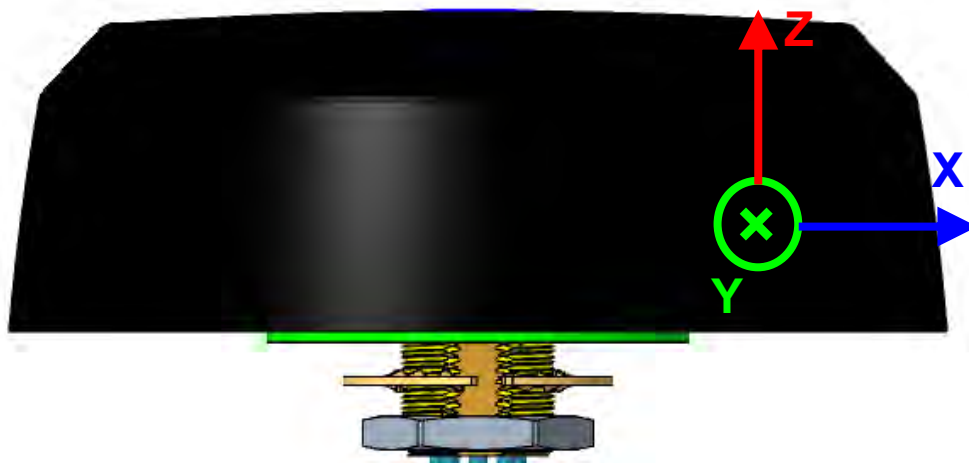


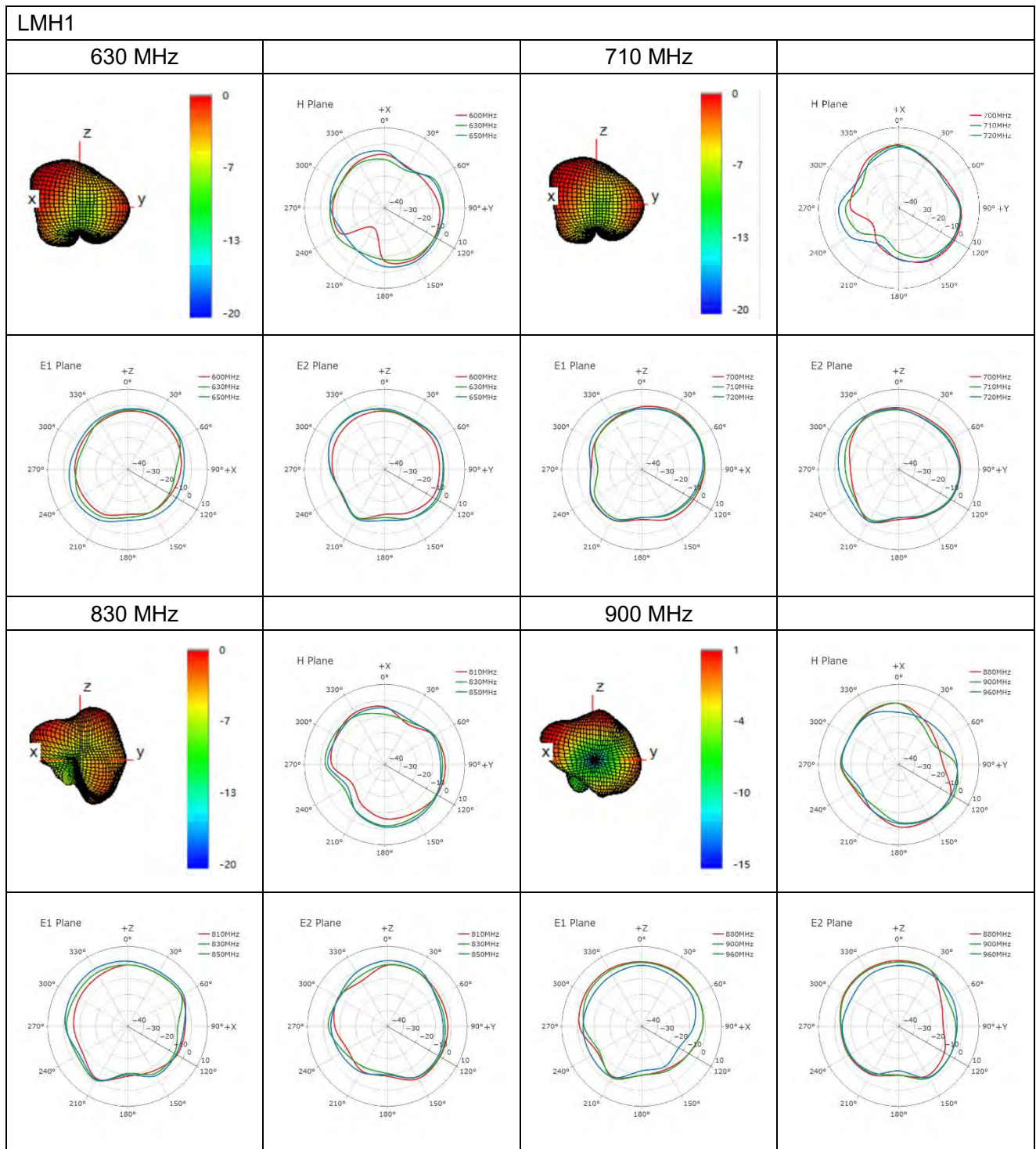
2D RHCP and LHCP Gain (dBi)

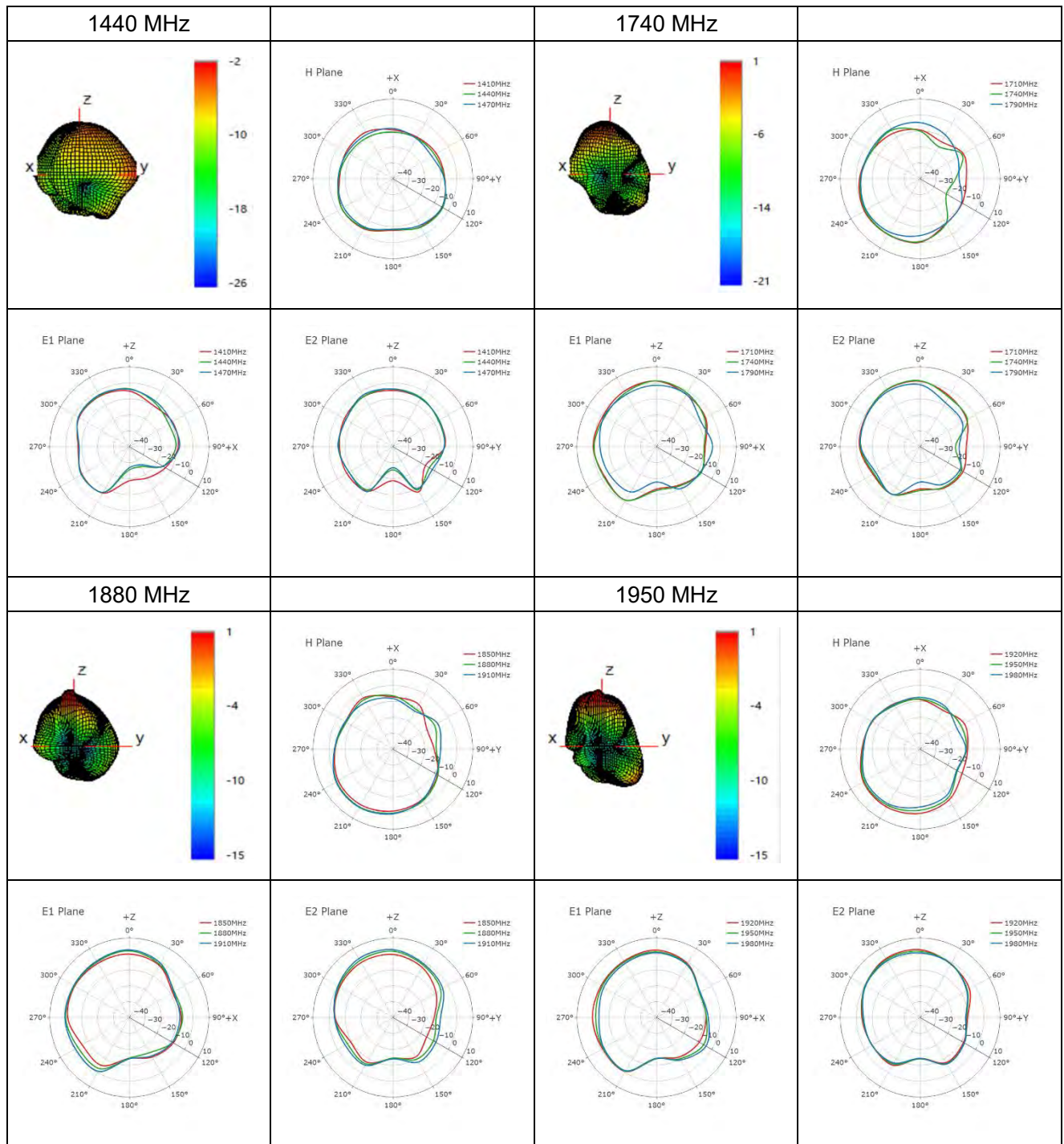
Frequency (MHz)		1176	1207	1227	1248	1268	1561	1575	1602
RC Gain (dBi)	Phi = 0 (deg) Theta = 0 (deg)	4.55	-	-	-	-	2.78	3.79	2.24
	Phi = 90 (deg) Theta = 0 (deg)	4.55	-	-	-	-	2.78	3.79	2.24
LC Gain (dBi)	Phi = 0 (deg) Theta = 0 (deg)	-12.56	-	-	-	-	-20.4	-23	-24.7
	Phi = 90 (deg) Theta = 0 (deg)	-12.56	-	-	-	-	-20.4	-23	-24.7

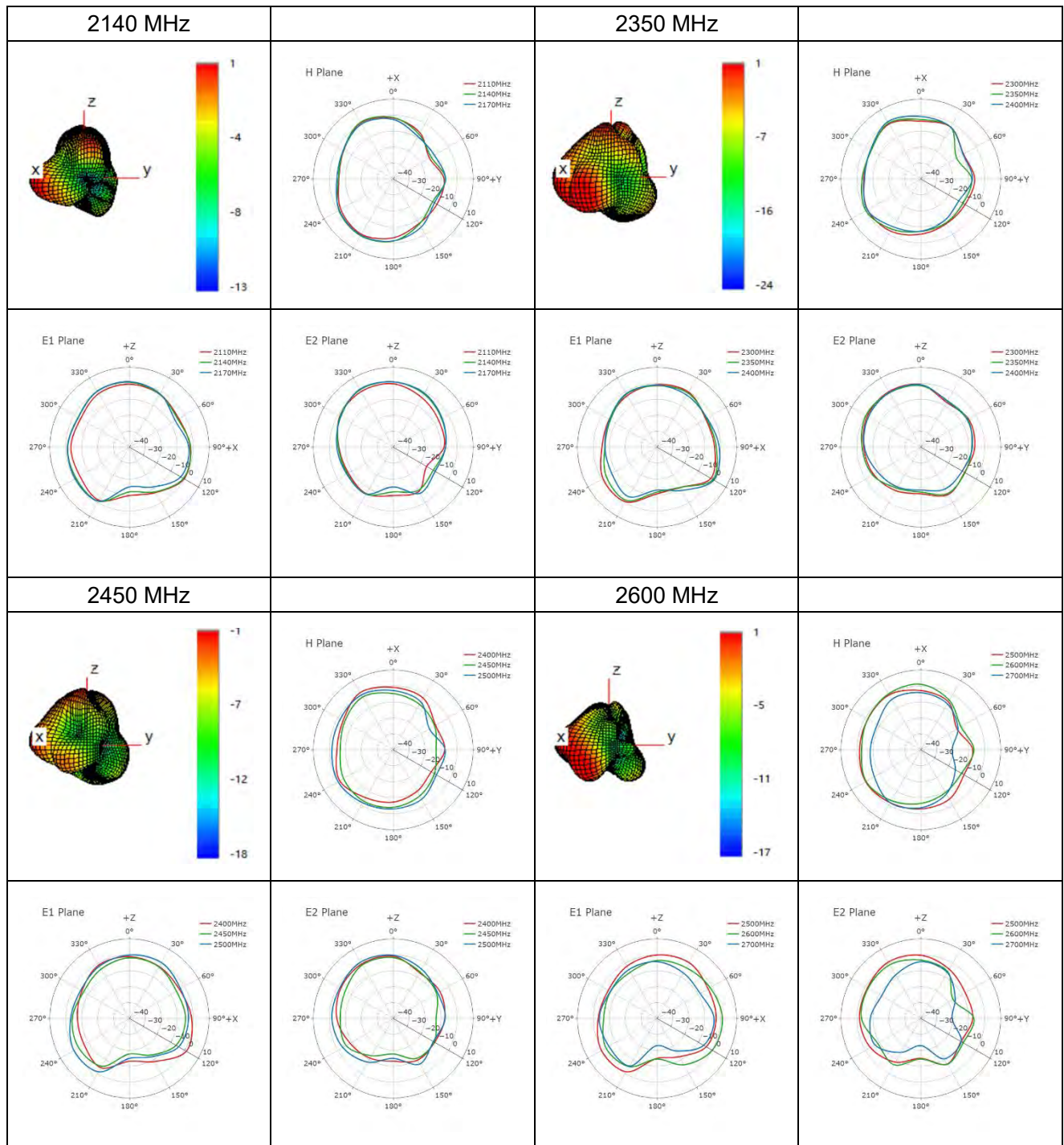
3.2.5. 3D & 2D Radiation Pattern

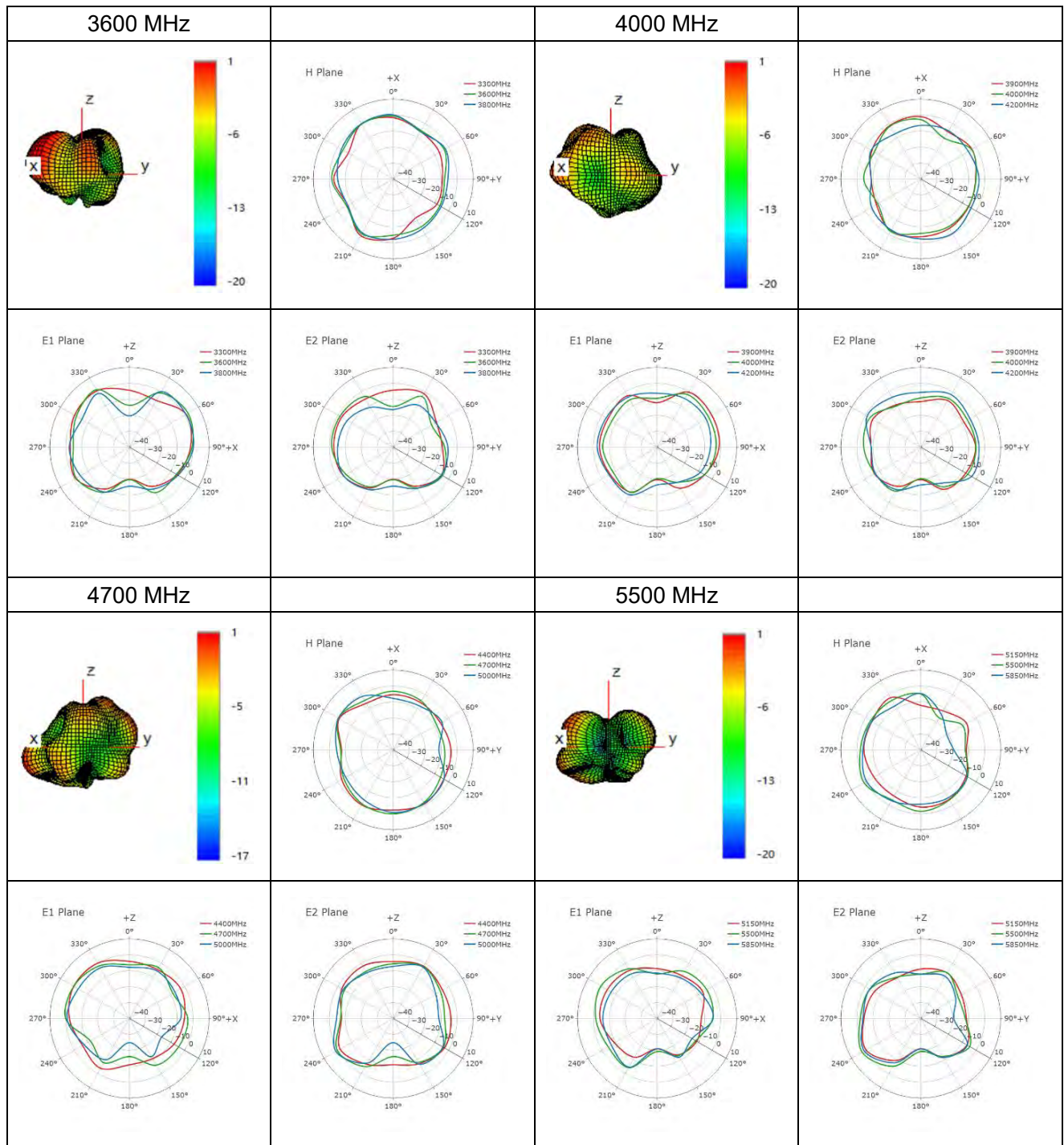
- Test Condition: Assembled in test device
- Test Chamber: GL-G-1, GL-S-1

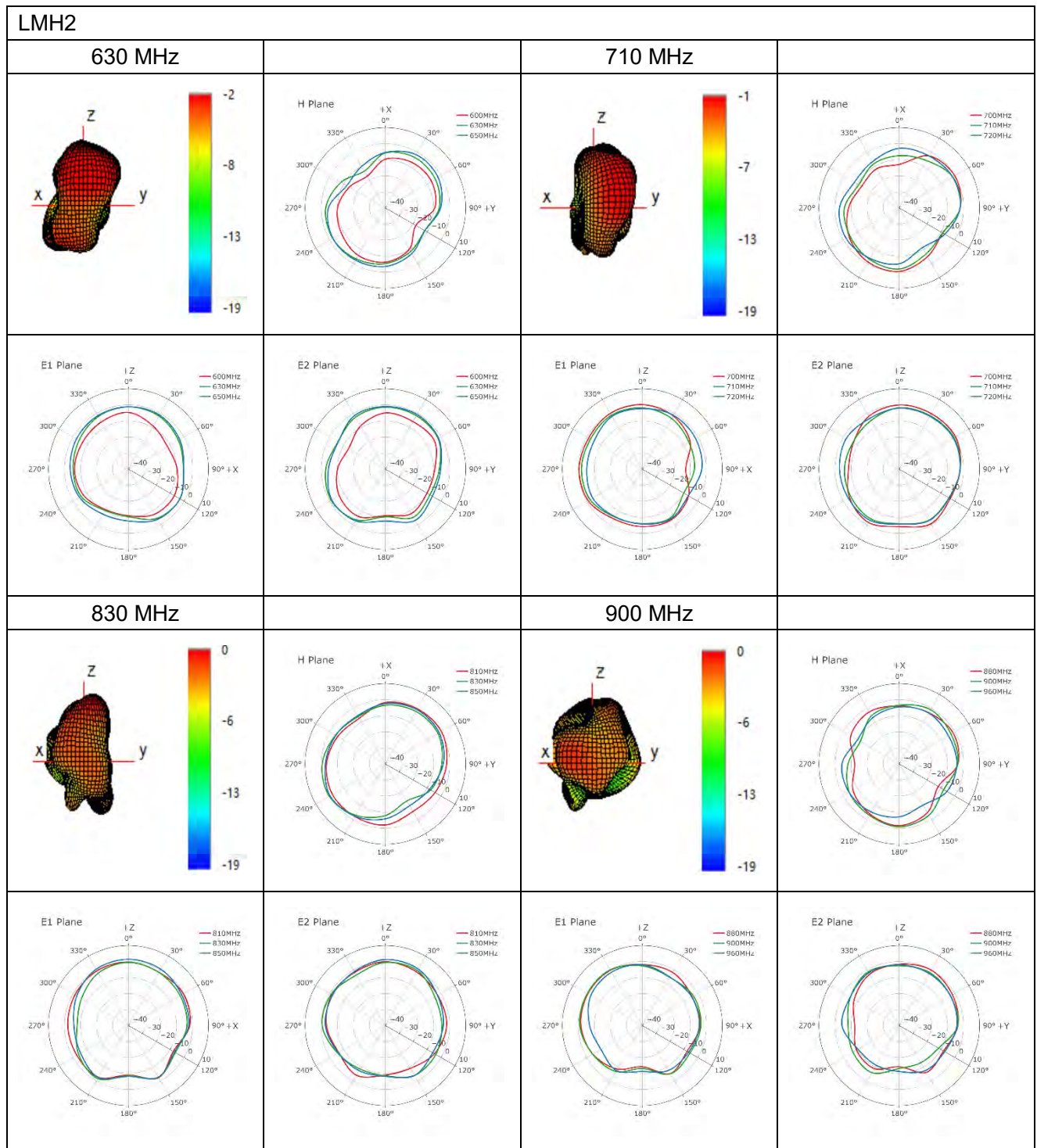


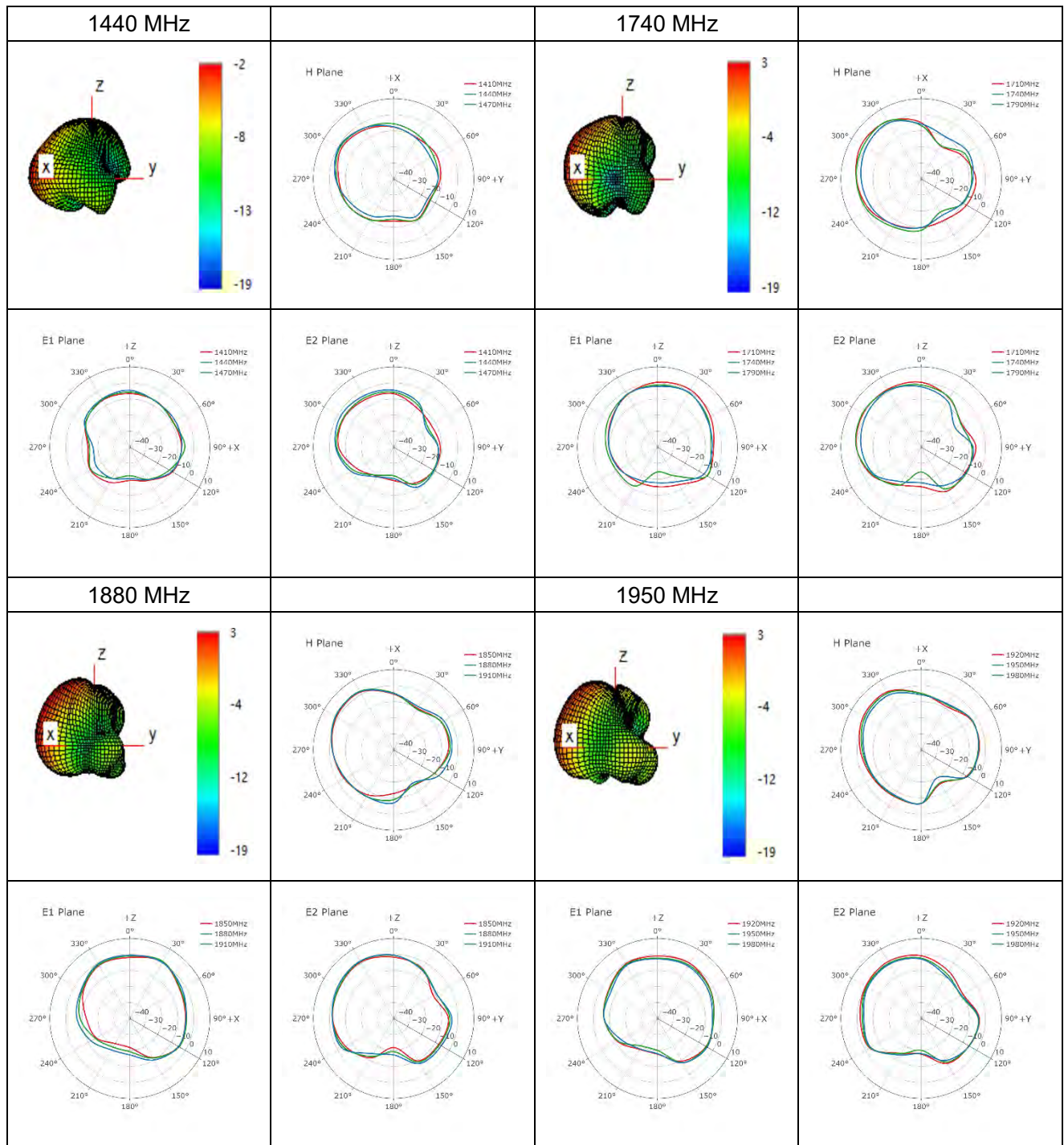


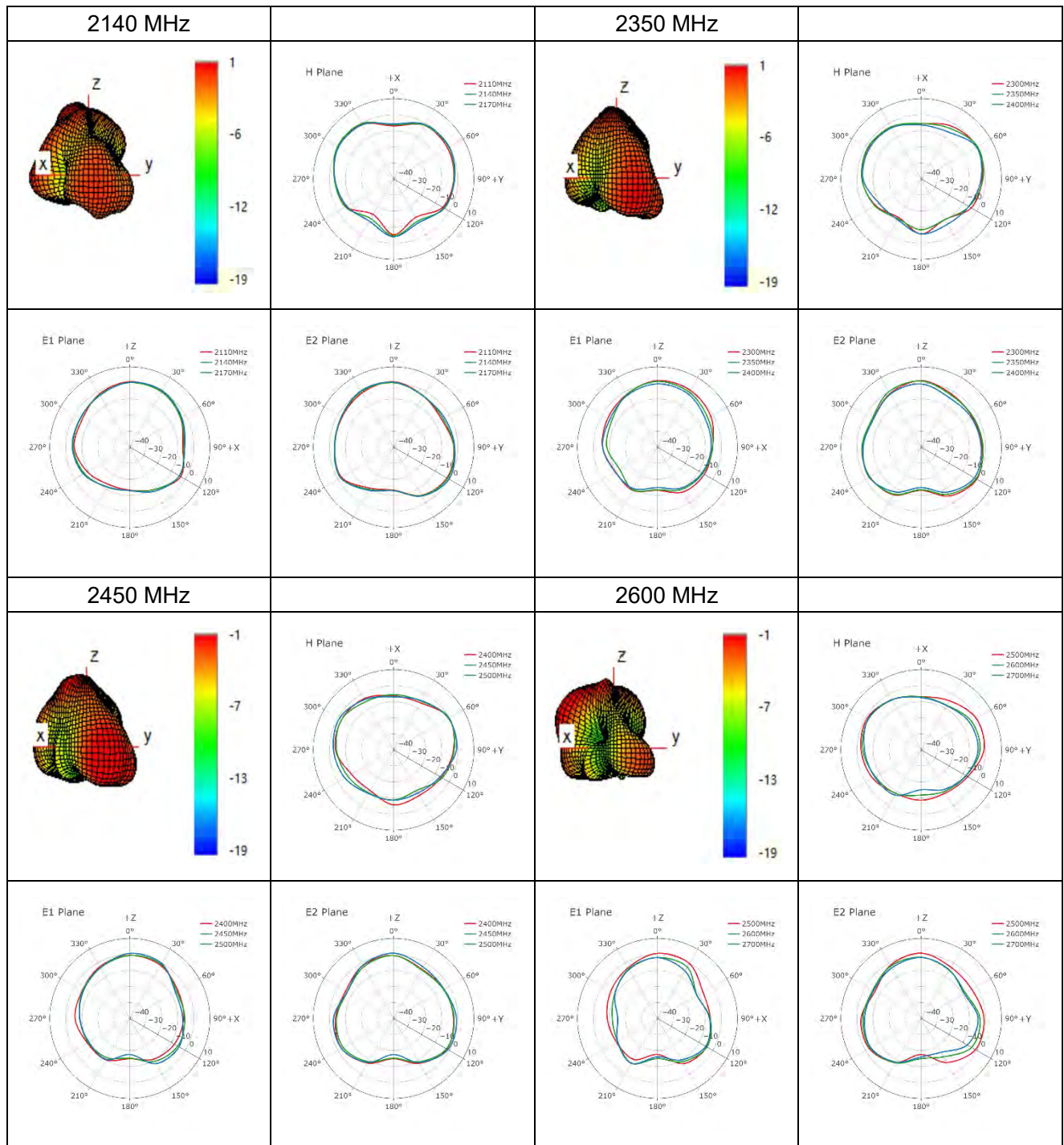


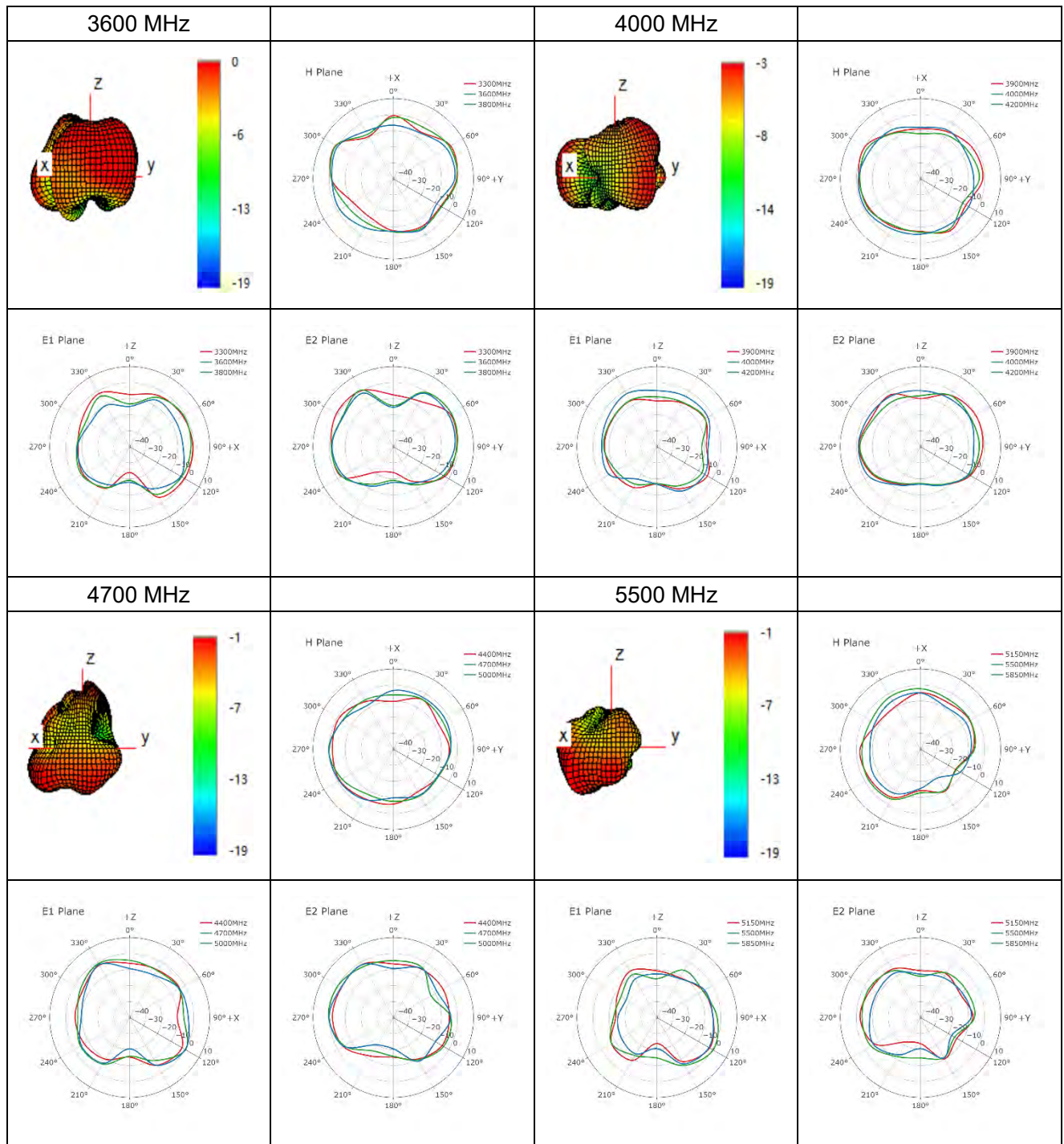


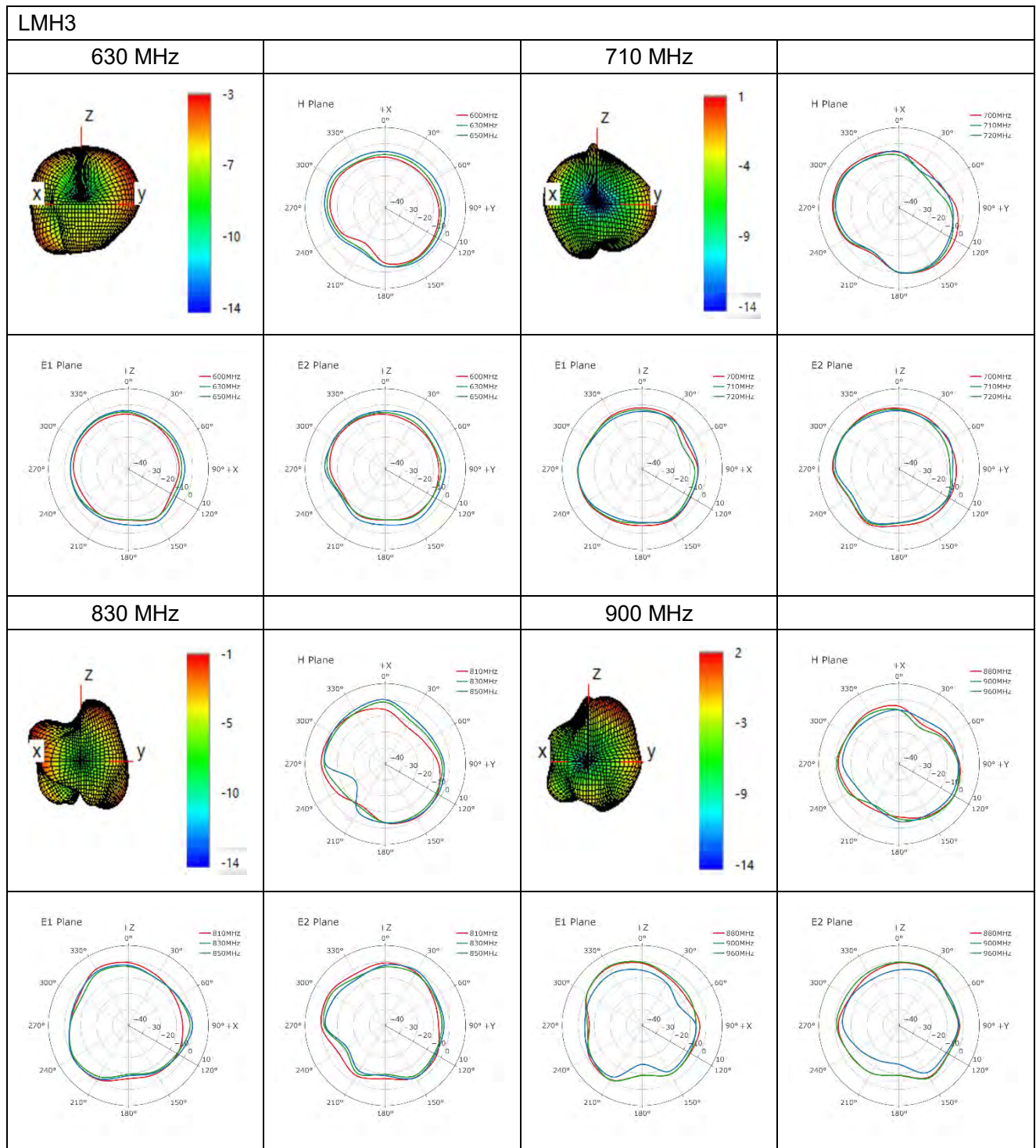


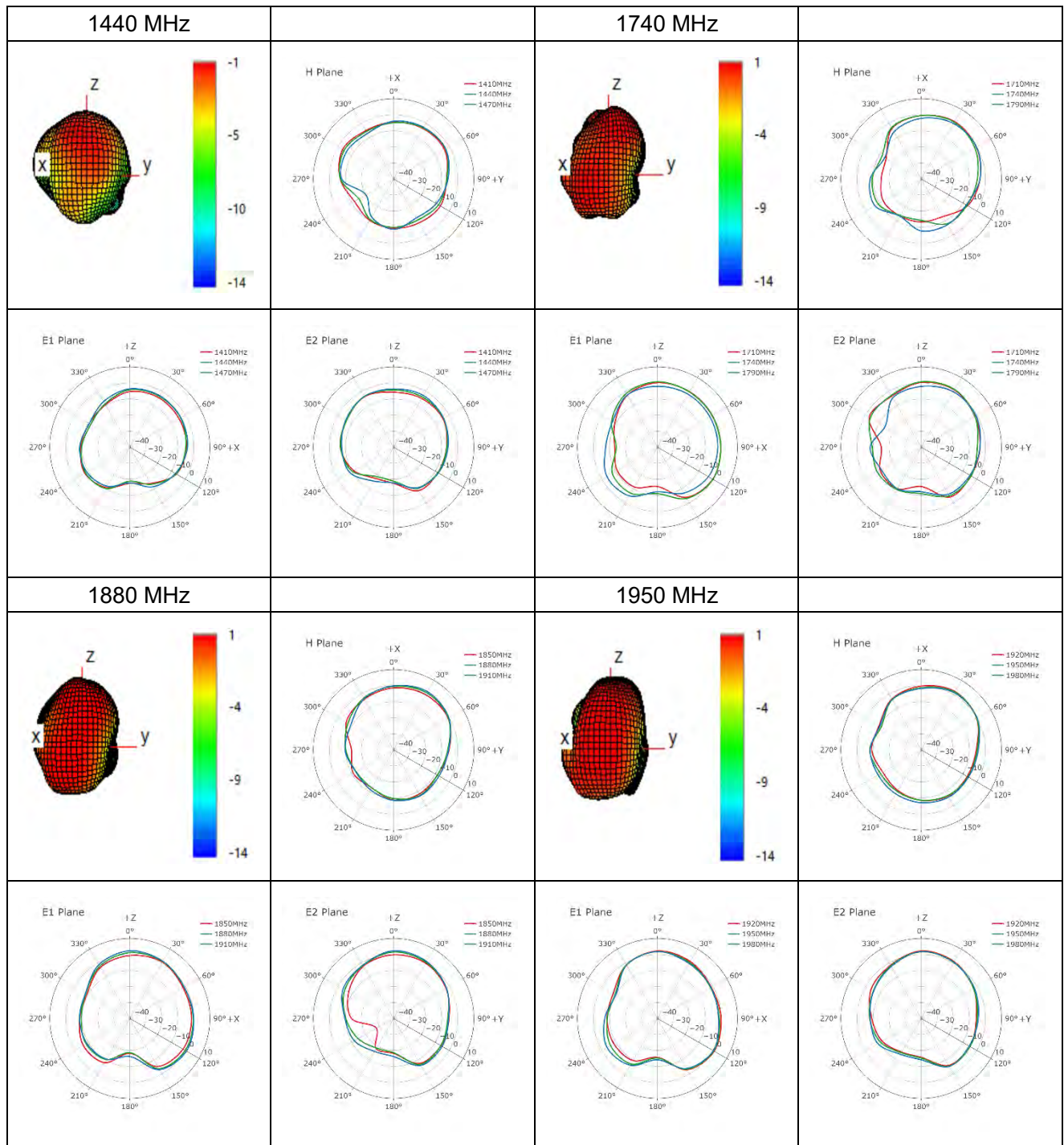


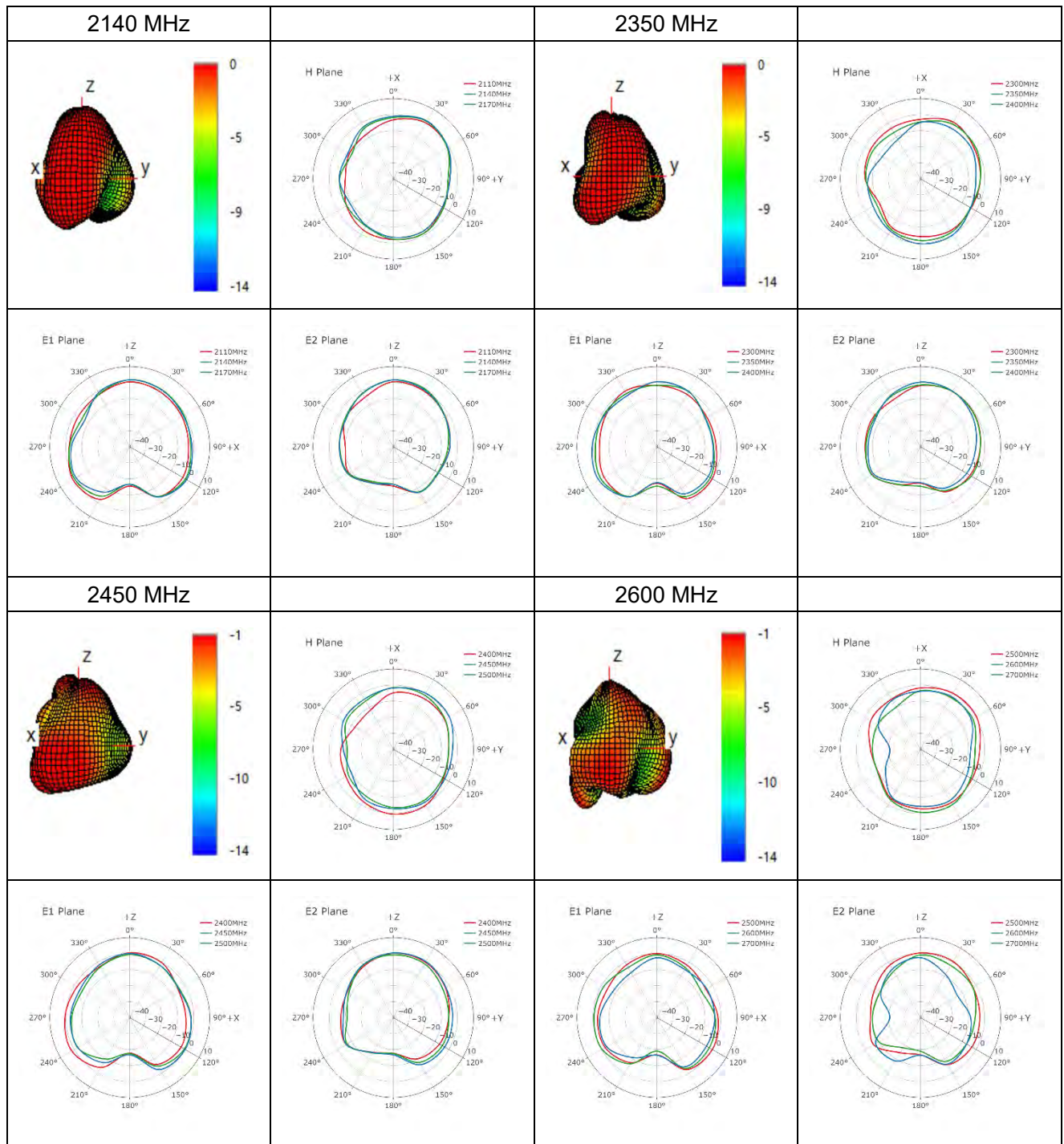


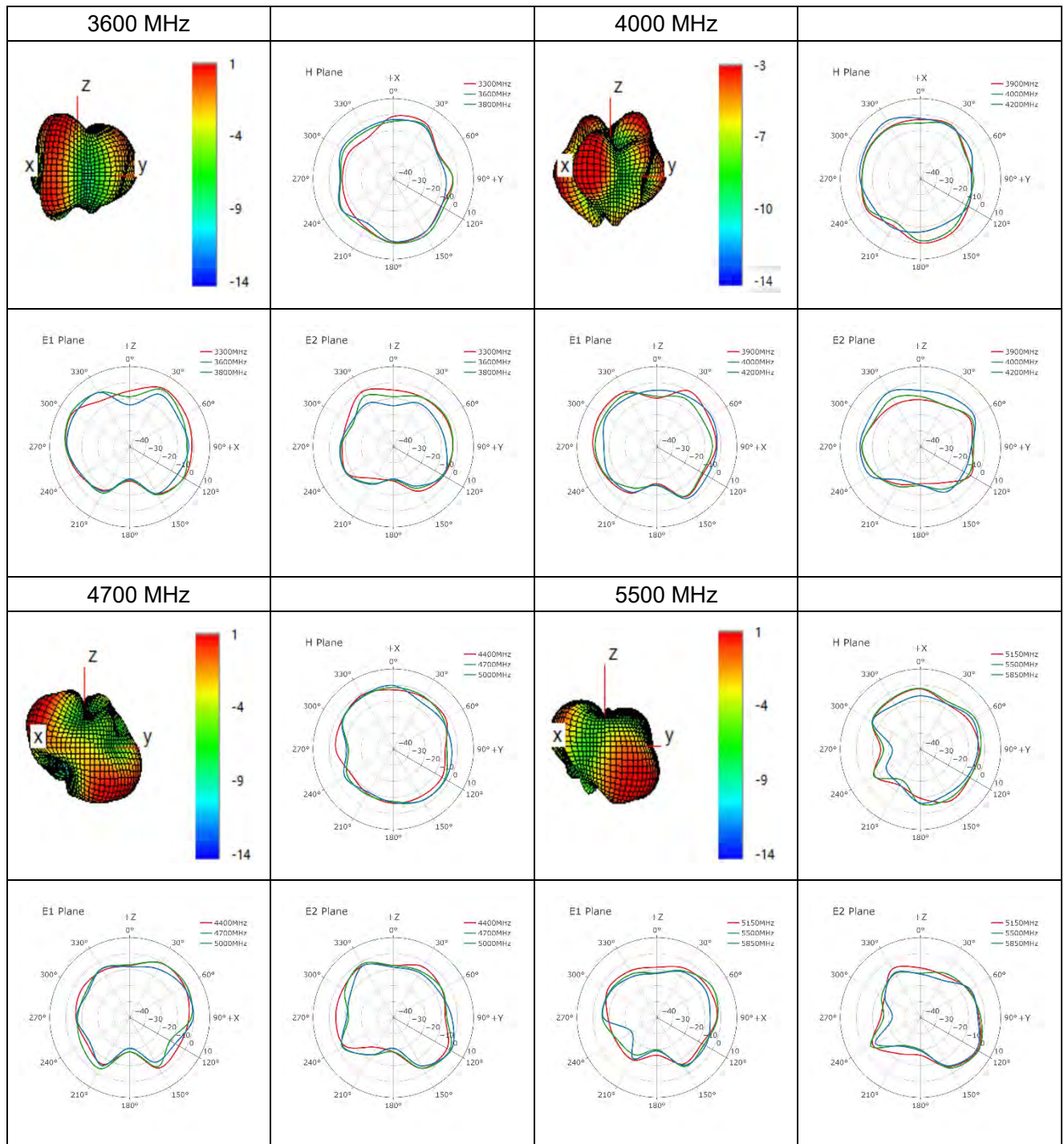


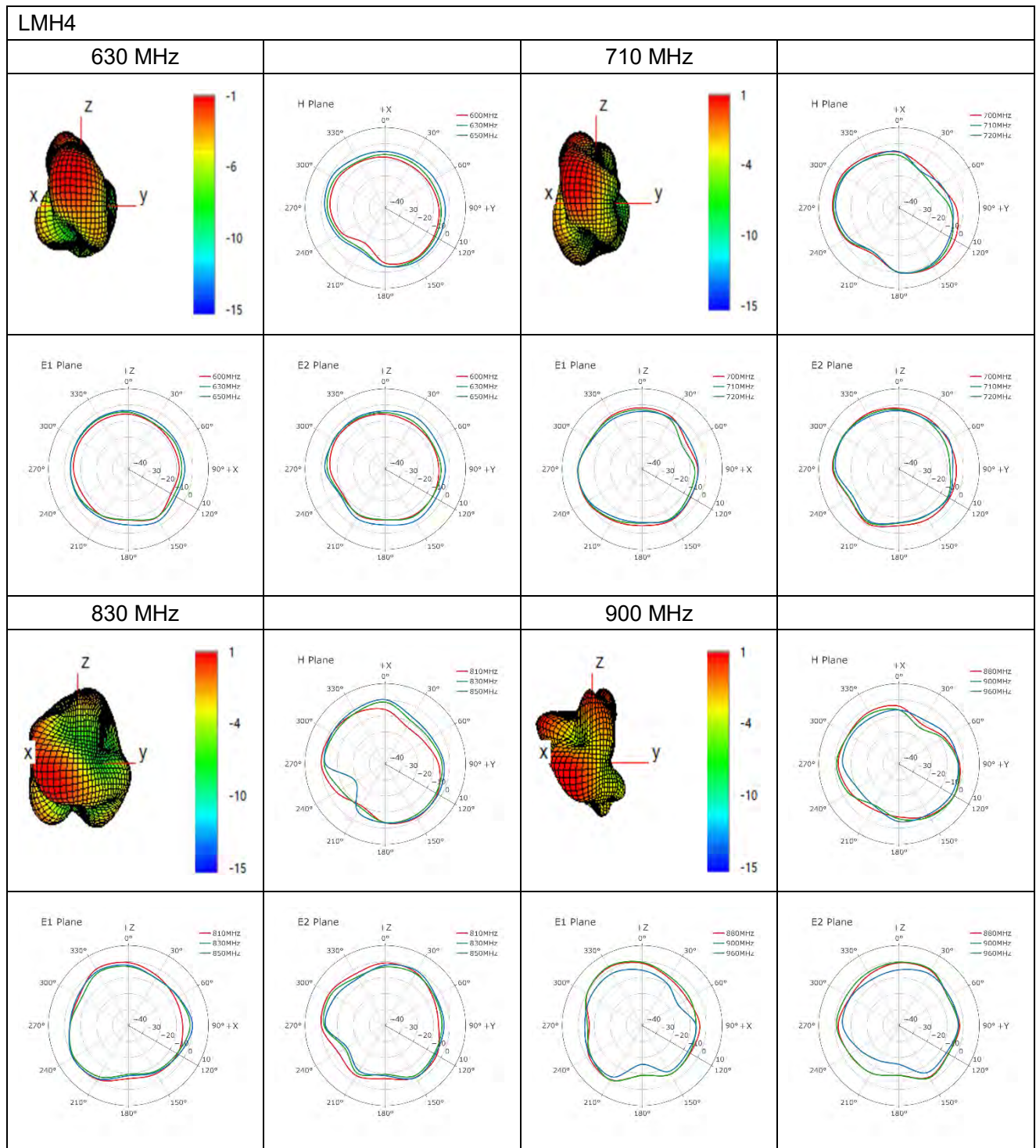


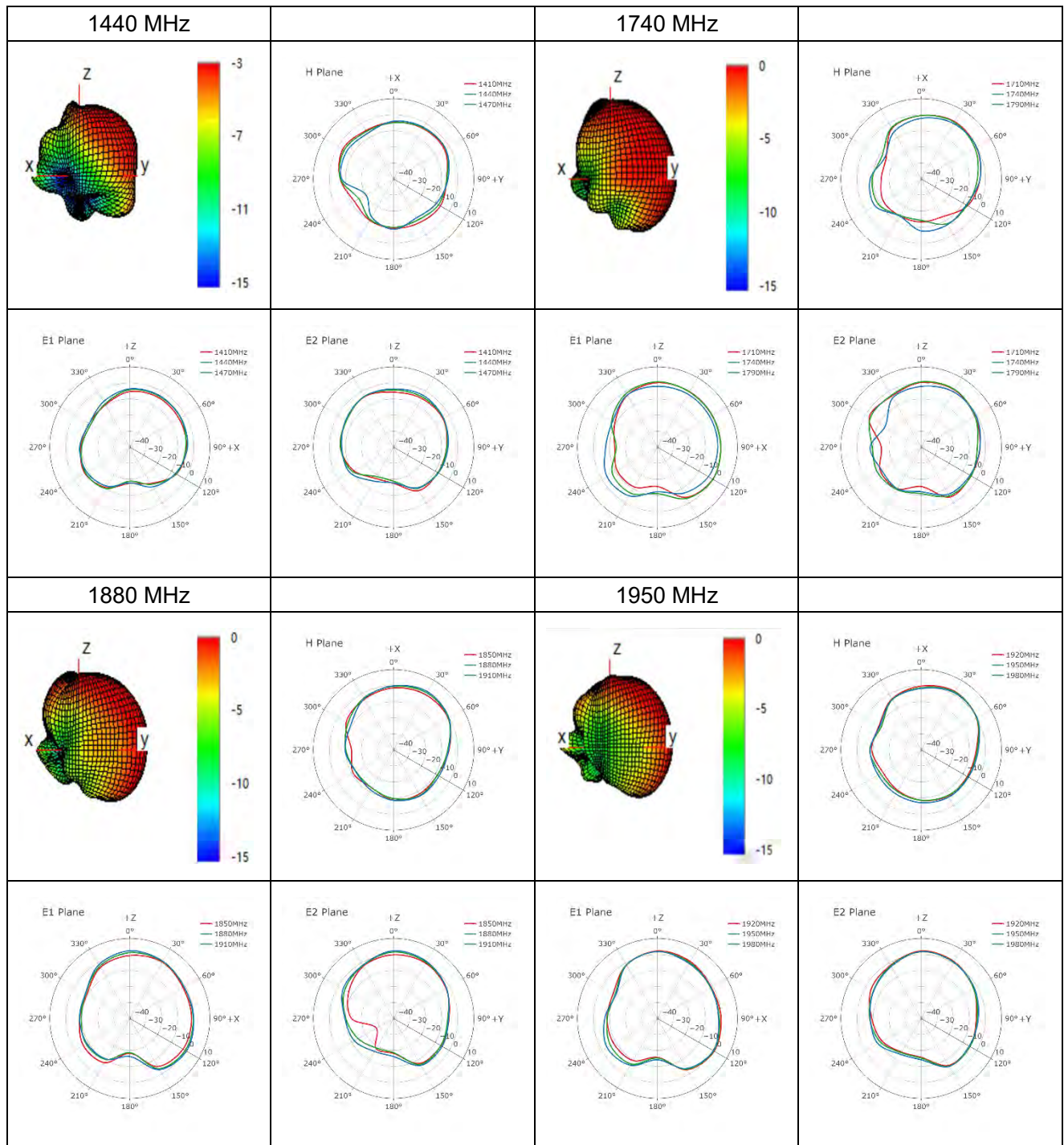


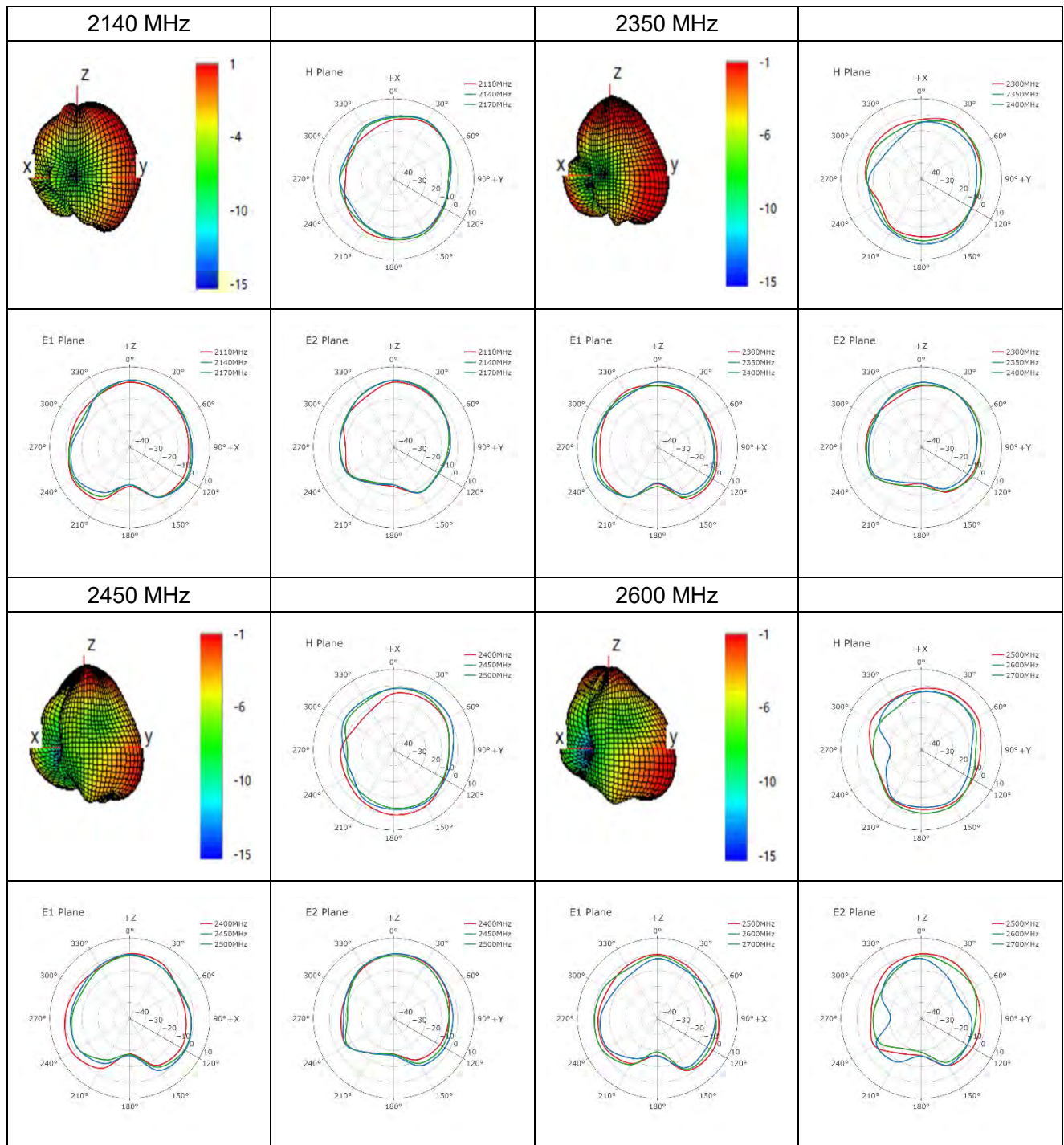


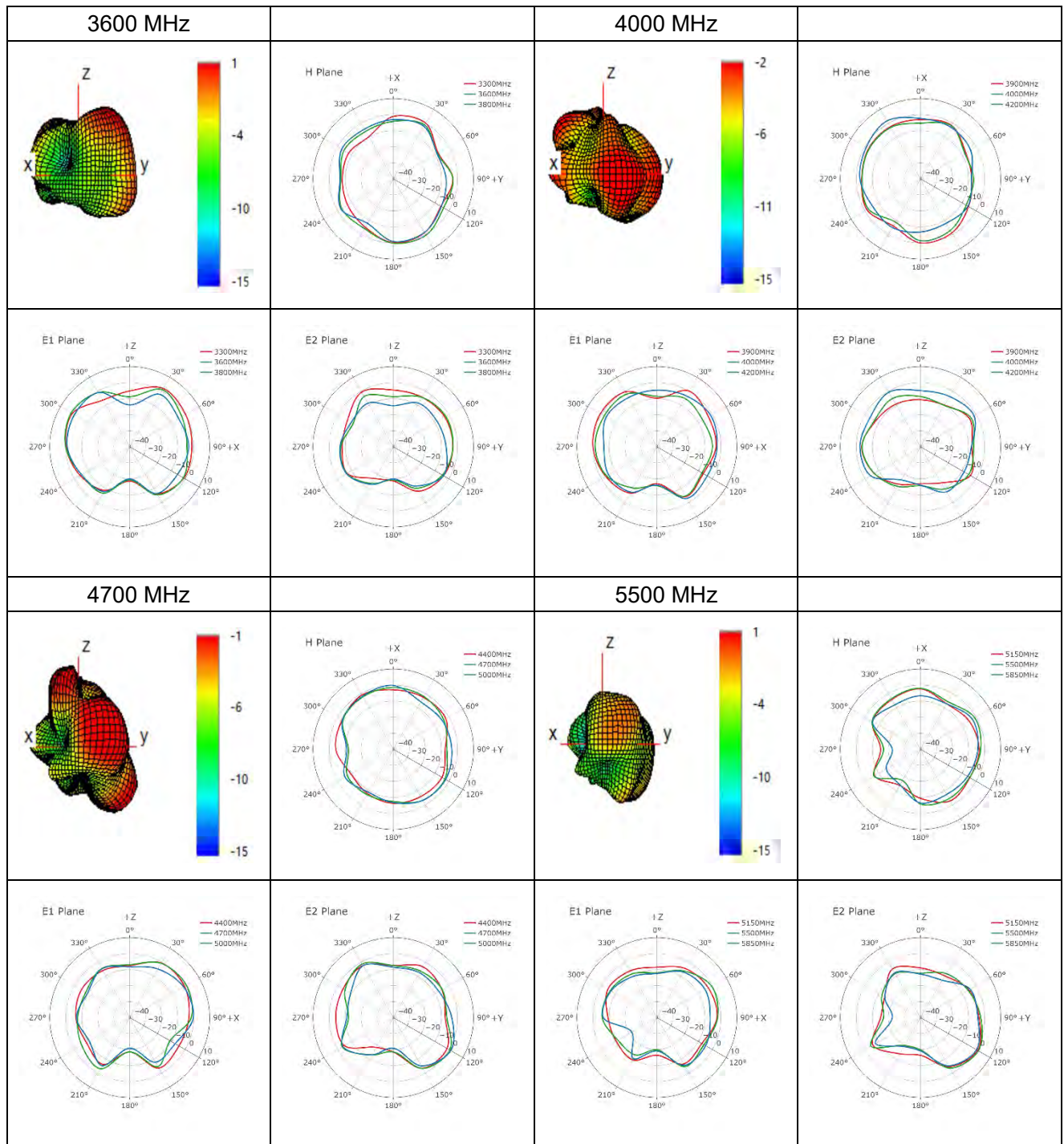




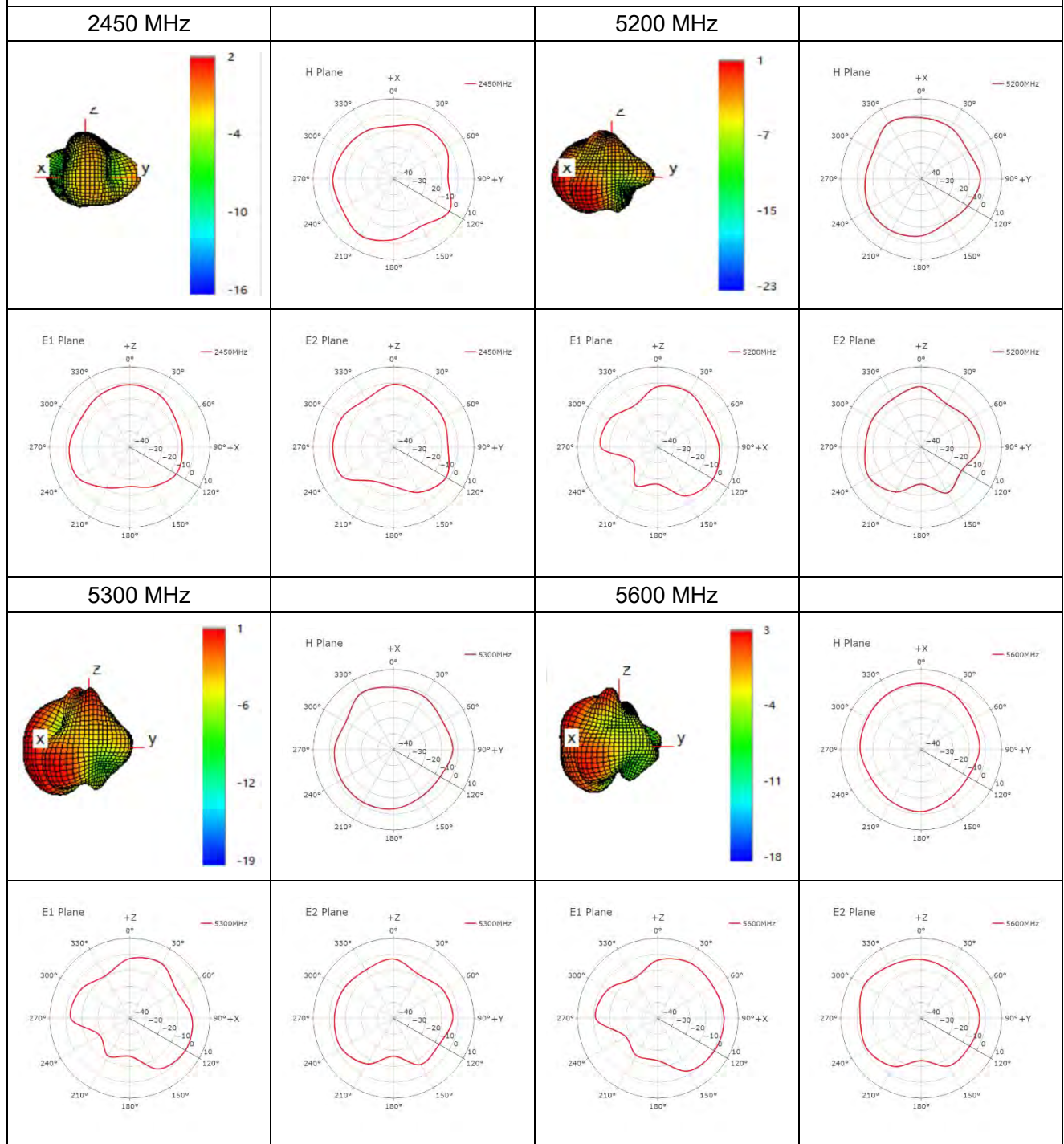


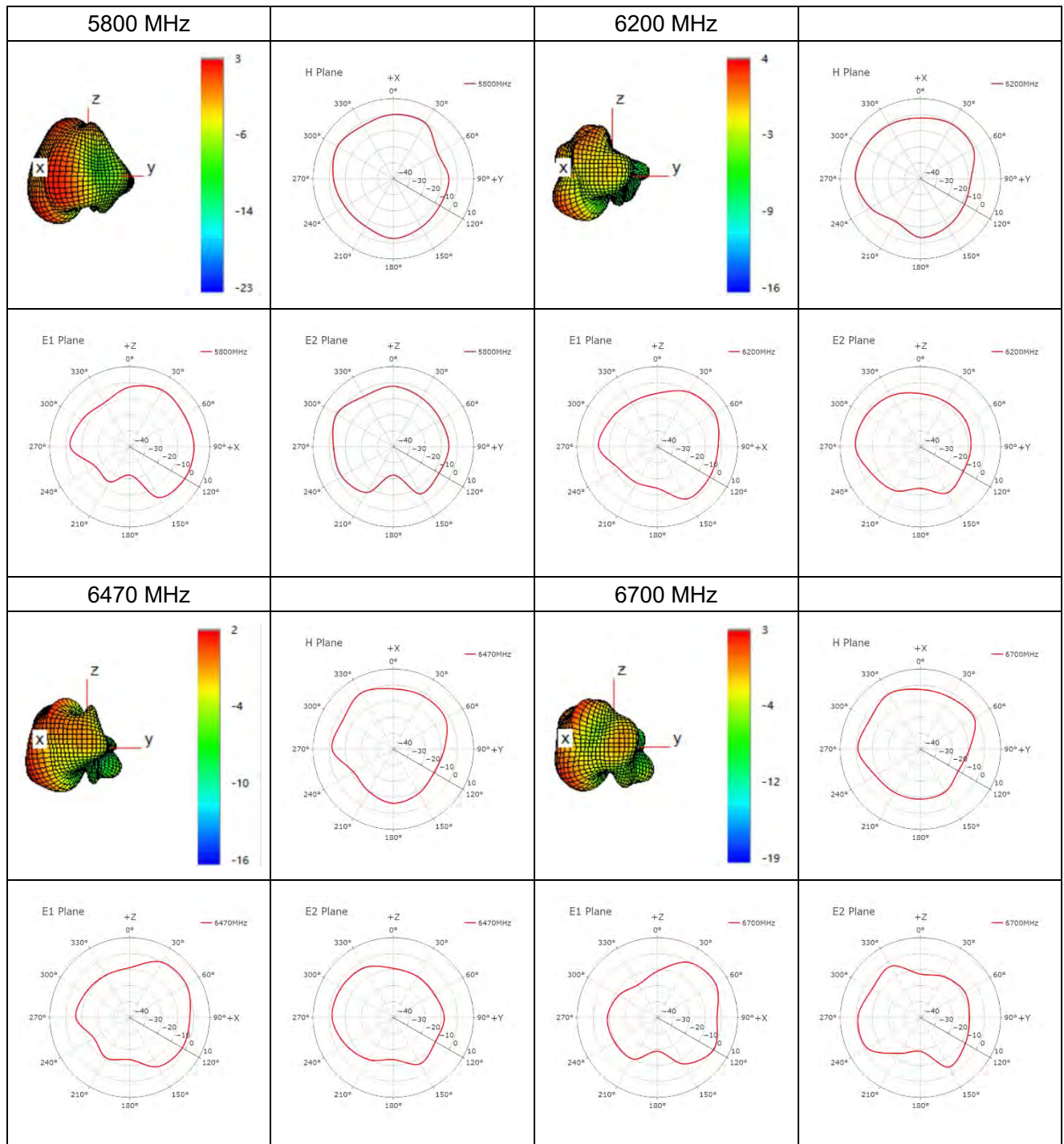


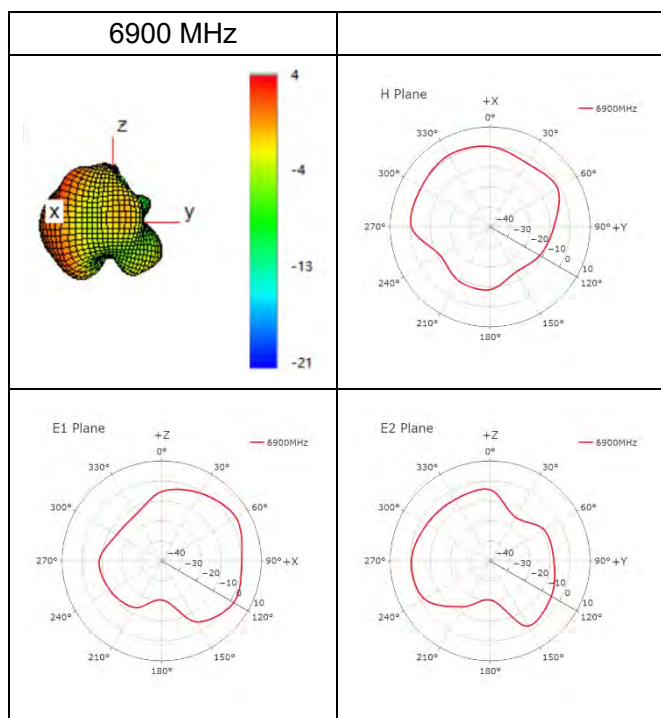




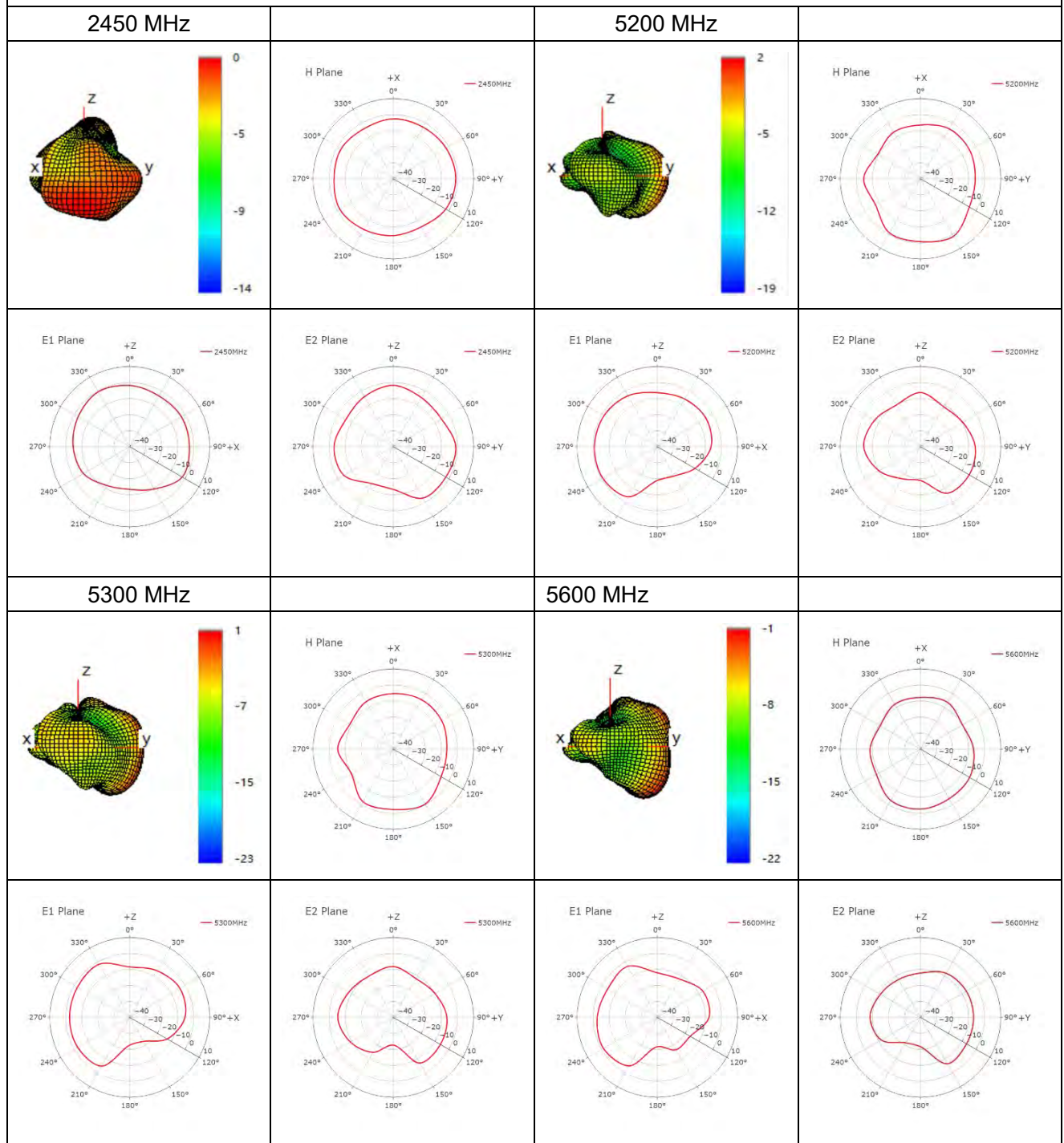
Wi-Fi1

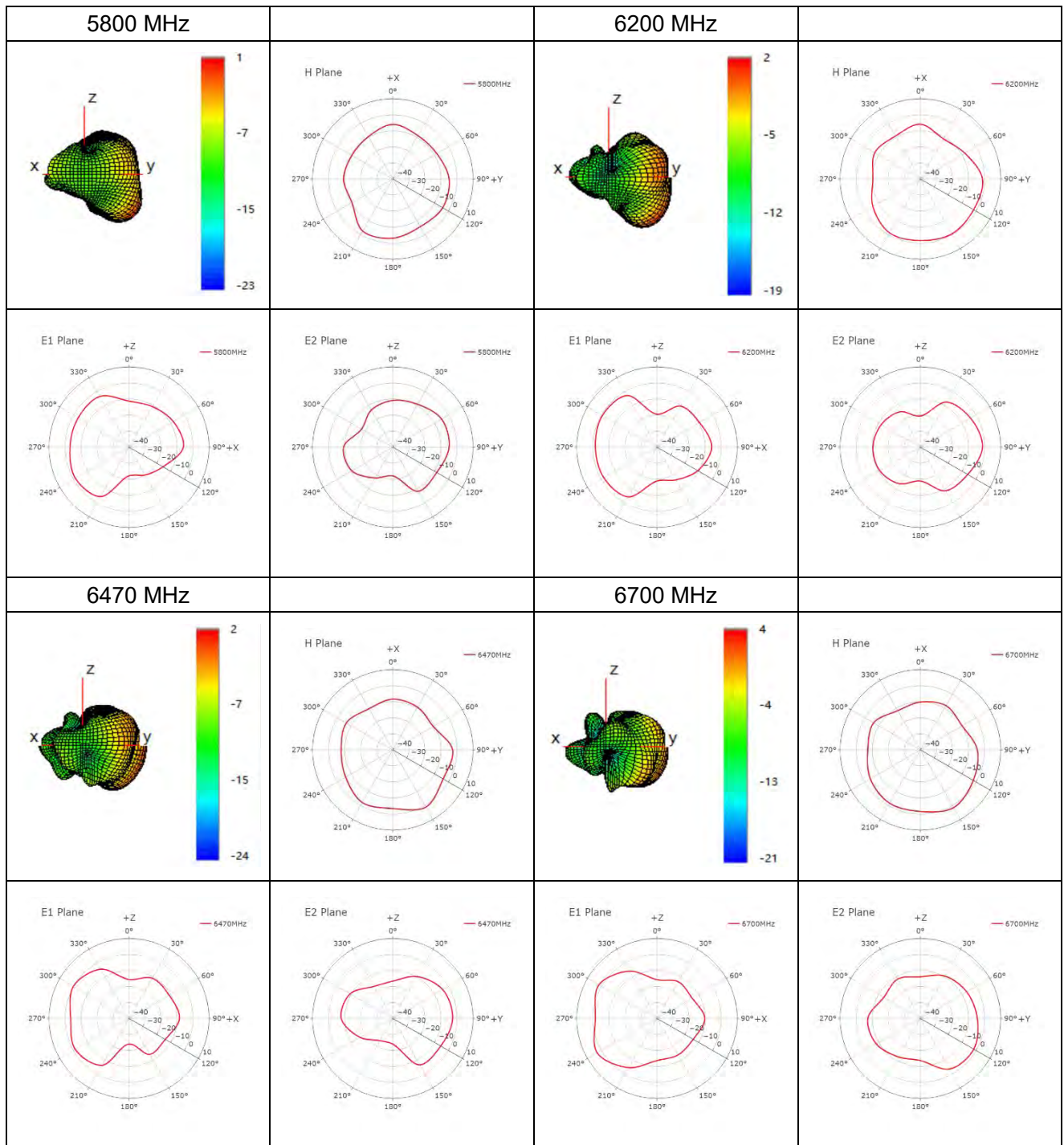


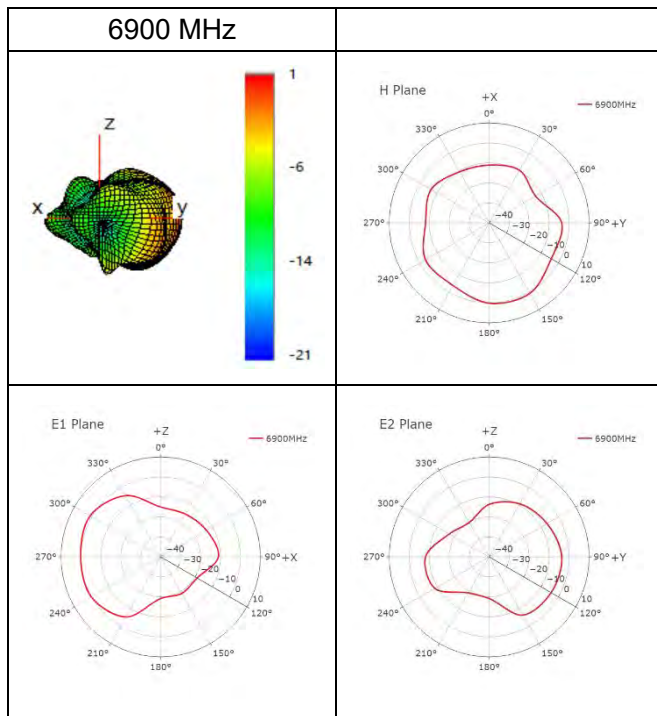




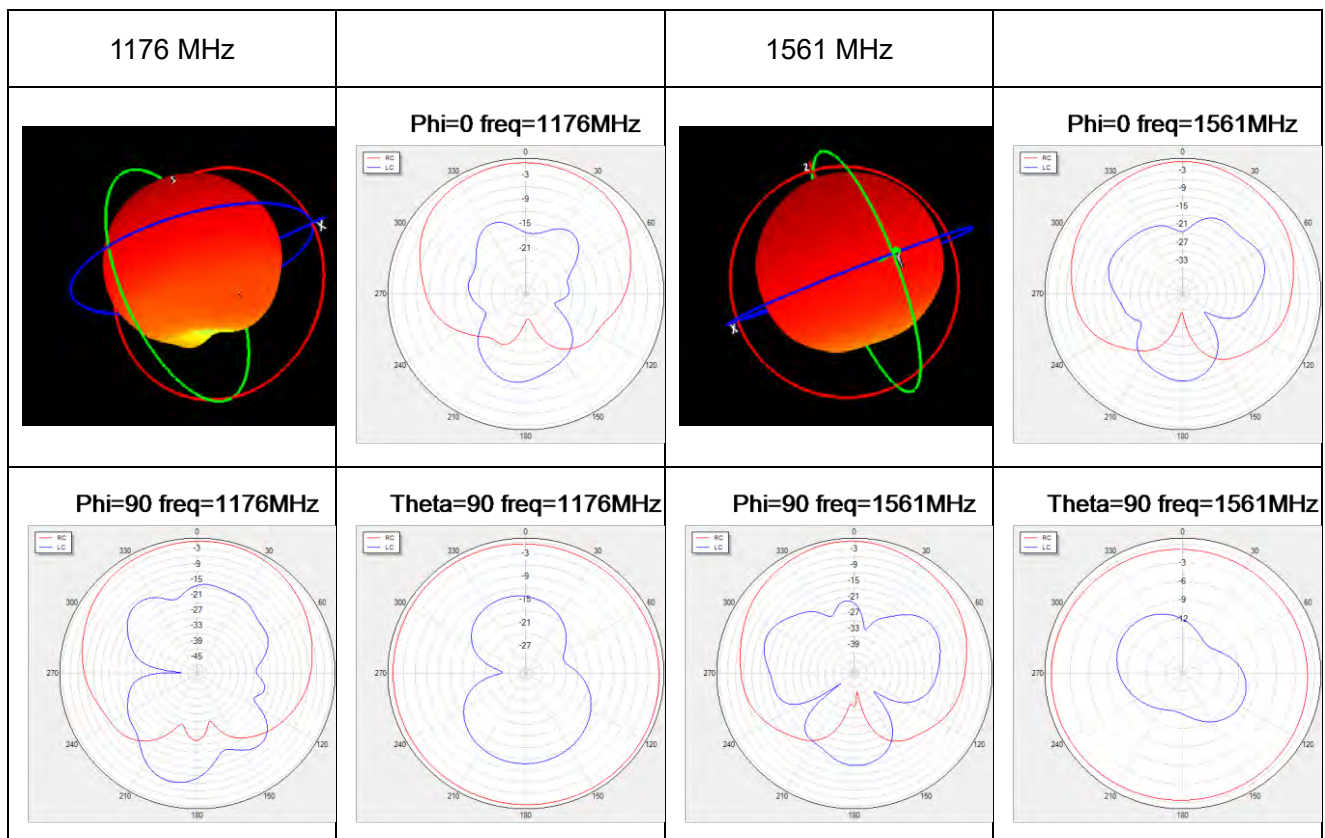
Wi-Fi2

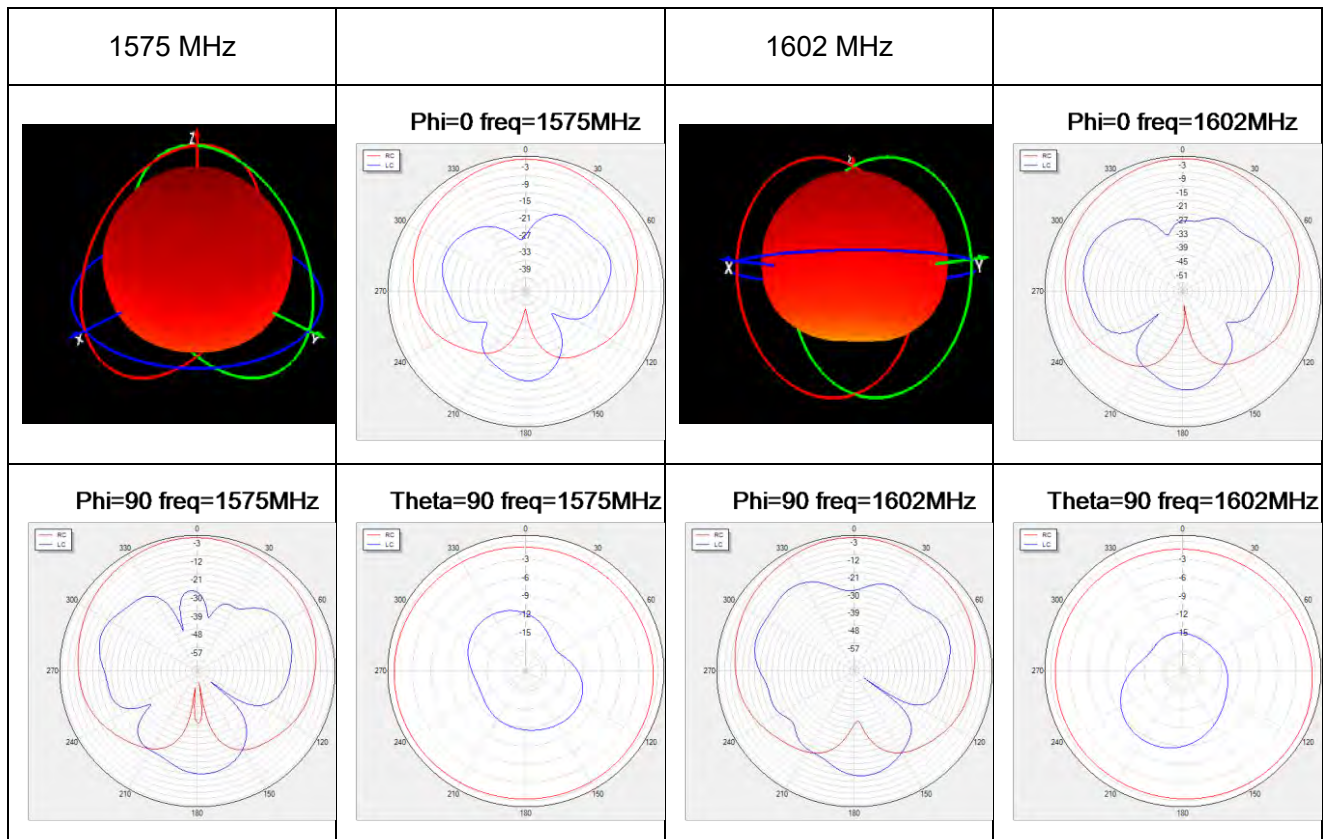






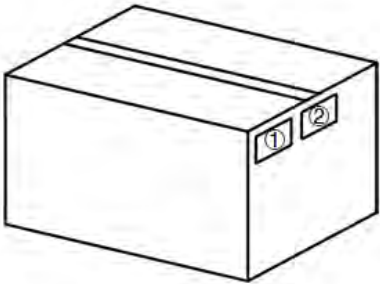
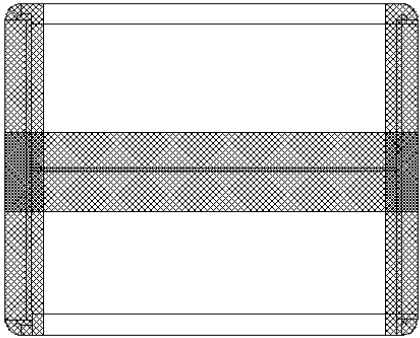
● **GNSS**





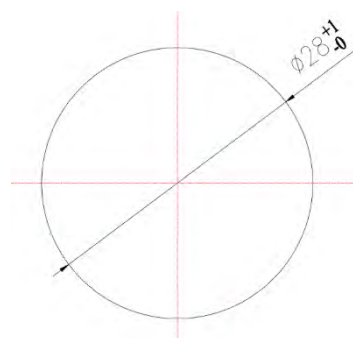
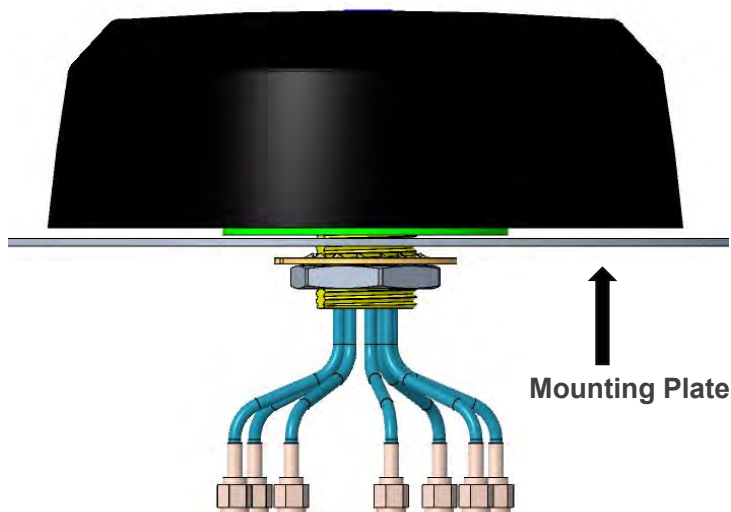
4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		Put the product in a PE bag inside the inner box.
2		Top the product with the pearl cotton.
3		<u>Inner Box Size:</u> <u>L × W × H = 191 × 191 × 135 mm</u>
4		(12 Inner Boxes / Carton Box) (12 Antennas / Carton Box) Estimated quantity Products that cannot fill the entire carton box are packed in a suitable size carton box. <u>Carton Size:</u> <u>L × W × H = 600 × 405 × 300 mm</u>

5		Position for Attaching Labels ① Carton Label ② Quality Label
6		Sealing Cartons H-shaped sealing cartons

5 Installation

- Recommended hole dimensions as below view.
- Recommended mounting plate thickness: 2–10 mm.



Recommended Hole

Installation Instructions					
Tube Mark	Tube Color	Cable	Connector	Frequency (MHz)	Technology
LMHs	Red	ALS302	SMA Male	600–960 MHz, 1400–6000 MHz	5G/4G/3G/2G
Wi-Fis	Black	ALS302	SMA Male	2400–2500 MHz, 5150–5850 MHz	WIFI
GNSS	Blue	RG174	SMA Male	1164–1189 MHz, 1559–1606 MHz	GPS/GLONASS/GALILEO/BDS/QZSS/IRNSS

Contact Us

At Quectel, our aim is to provide timely and comprehensive services to our customers. If you require any assistance, please contact our headquarters:

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Tel: +86 21 5108 6236

Email: info@quectel.com

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

<https://www.quectel.com/contact/>.

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Revision History

Version	Date	Author	Note
-	2026-01-22	Tina Gan/ Rhone Wei/ Lucky Feng/ Riva Ren/ Rainey Liao	Creation of the document
1.0	2026-01-22	Tina Gan/ Rhone Wei/ Lucky Feng/ Riva Ren/ Rainey Liao	First official release



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