



Antenna Datasheet

Product OC: YEMN312J1AH

Version: 1.0

Date: 2025-11-04

Status: Preliminary

Product Name: 5G & WIFI & GNSS 3in1 Screw + Adhesive Mount Combo
Antenna

Key Features:

Frequency Band: 5G: 617–960 MHz, 1420–2690 MHz, 3300–6000 MHz;
Wi-Fi: 2400–2500 MHz, 5150–5850 MHz, 5925–7125 MHz;
GNSS: 1565–1606 MHz

Dimensions: Φ 54 mm $\times$ 91.8 mm

Efficiency: Up to 73 %

GNSS LNA Gain: 17 $\pm$ 3 dB

RoHS & REACH Compliant

IP66

Overview

YEMN312J1AH is a 5G & WIFI & GNSS 3in1 combo antenna measuring Φ 54 mm $\times$ 91.8 mm. This ultra-wide-band 5G & WIFI & GNSS antenna provides broad coverage from 617–960 MHz, 1420–2690 MHz, 3300–6000 MHz, 2400–2500 MHz, 5150–5850 MHz, 5925–7125 MHz, 1565–1606 MHz, whilst offering backward-compatibility to support 4G/3G and 2G networks as well as LTE Cat-M and narrowband IoT (NB-IoT). Ideal for applications where the antenna is required to be discrete, the antenna is available screw & adhesive mount omni-directional antenna. It is easy to install with maximum durability assured and suitable for use in harsh outdoor environments thanks to its IP66 rated enclosure. It is compatible with Quectel's RM520x Series modules.

YEMN312J1AH has 1 $\times$ 5G LMH antennas, 1 $\times$ WIFI antennas and 1 $\times$ GNSS L1 antenna. It allows high efficiency, stable signal transmission and reception for 5G bands, WIFI and active GNSS. In the meantime, this product also offers high isolation between antennas to avoid self-interference. All in all, this unique product is designed to provide stable and high-speed data connection to 5G & WIFI & GNSS applications.

Typical applications include:

- Public safety
- HD Video Streaming
- Utilities and Smart Cities
- Fleet Management
- Automotive vehicle tracking

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

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1 Specification

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

1.1. Electrical

Electrical Specifications			
Frequency Range	5G	617–960 MHz, 1420–2690 MHz, 3300–6000 MHz	
	Wi-Fi	2400–2500 MHz, 5150–5850 MHz, 5925–7125 MHz	
	GNSS	1565–1606 MHz	
Radiation Pattern	5G	Omni-directional	
	Wi-Fi	Omni-directional	
	GNSS	Directional	
Polarization	5G	Linear	
	Wi-Fi	Linear	
	GNSS	RHCP	
Impedance		50 Ω	
Isolation	5G & Wi-Fi	FS	≤ -7.6 dB
		MP	≤ -7.3 dB

1.1.1.1. 5G

Electrical – Detail													
SPEC	Band	Band	B71	B12 /B13 /B28	B5 /B8 /B26	n74 /n75 /n76	B1 /B2 /B3	B40	Wi-Fi 2G	B38 /B41	B42 /B48 /n77	n79	Wi-Fi 5G
	Freq.	(MHz)	600– 700	700– 810	820– 960	1420– 1520	1700– 2170	2300– 2400	2400– 2500	2500– 2690	3300– 4200	4400– 5000	5150– 5850
Max. VSWR	FS		3.6	3.7	4.6	4.2	1.6	1.5	1.5	1.5	1.7	2.1	3.3
	MP		1.7	3.2	4.7	7.7	1.8	1.6	1.5	1.5	1.8	2.0	3.5
Max. Return Loss (dB)	FS		-5.0	-4.8	-3.8	-4.2	-12.8	-14.1	-14.4	-14.5	-11.5	-9.1	-5.4
	MP		-11.8	-5.6	-3.8	-2.3	-11.2	-13.2	-14.0	-13.9	-10.9	-9.3	-5.1
AVG Eff. (%)	FS		28.3	31.9	34.8	46.1	62.4	56.8	53.5	65.1	66.6	58.1	55.1
	MP		51.9	53.2	36.5	27.2	60.0	60.3	59.3	67.6	66.7	59.2	57.6
AVG AVG Gain (dB)	FS		-5.6	-5.1	-4.7	-3.4	-2.1	-2.5	-2.7	-1.9	-1.8	-2.4	-2.6
	MP		-2.9	-2.7	-4.5	-5.7	-2.2	-2.2	-2.3	-1.7	-1.8	-2.3	-2.4
Max. Peak Gain (dBi)	FS		-0.8 (600)	-1.2 (710)	0.1 (890)	2.6 (1520)	1.9 (2170)	1.2 (2310)	1.5 (2500)	3.0 (2650)	3.1 (4010)	2.2 (5000)	5.1 (5670)
	MP		1.2 (680)	0.3 (800)	-0.2 (890)	1.2 (1520)	3.9 (2070)	2.7 (2310)	2.5 (2500)	3.8 (2690)	5.4 (3420)	5.8 (5000)	7.3 (5330)
VSWR			FS				≤ 4.6						
			MP				≤ 7.7						
Return Loss			FS				≤ -4.2 dB						
			MP				≤ -2.3 dB						
Gain			FS				≤ 3.0 dBi						
			MP				≤ 7.3 dBi						

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

1.1.2. Wi-Fi

Electrical – Detail					
Specification	Band	Band	Wi-Fi 2G	Wi-Fi 5G	Wi-Fi 6G
		Freq. (MHz)	2400–2500	5150–5850	5925–7125
Max. VSWR	FS		1.9	1.7	2.2
	MP		1.8	1.7	2.0
Max. Return Loss (dB)	FS		-10.3	-11.7	-8.5
	MP		-11.1	-11.8	-9.7
AVG Eff. (%)	FS		47.2	62.9	53.2
	MP		52.9	64.5	54.9
AVG Gain (dB)	FS		-3.3	-2.0	-2.7
	MP		-2.8	-1.9	-2.6
Max. Peak Gain (dBi)	FS		2.4 (2450)	4.5 (5775)	4.5 (6025)
	MP		5.1 (2450)	7.9 (5575)	7.6 (6575)
VSWR	FS		≤ 2.2		
	MP		≤ 2.0		
Return Loss	FS		≤ -8.5 dB		
	MP		≤ -9.7 dB		
Peak Gain	FS		≤ 4.5 dBi		
	MP		≤ 7.9 dBi		

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

1.1.3. GNSS

Band Frequency (MHz)	Band	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
	Freq. (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
VSWR	FS	-	-	-	-	-	-	1.1	1.4
	MP	-	-	-	-	-	-	1.3	1.1
Return Loss (dB)	FS	-	-	-	-	-	-	-26	-16
	MP	-	-	-	-	-	-	-17.3	-24.2
Efficiency (%)	FS	-	-	-	-	-	-	52.4	51.8
	MP	-	-	-	-	-	-	51.5	59.2
Peak Gain (dBi)	FS	-	-	-	-	-	-	-1.07	-1.19
	MP	-	-	-	-	-	-	2.62	-0.18

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

LNA Electrical	
LNA Gain	17 ±3 dB
Output VSWR	< 2.0
Filter Out-of-Band Attenuation	39 dB f0 ±100 MHz f0 (1588 MHz)
Working Voltage	2.7–3.3 V
Working Current	7 ±1.5 mA @ 3 V
Impedance	50 Ω

1.2. Supported Bands

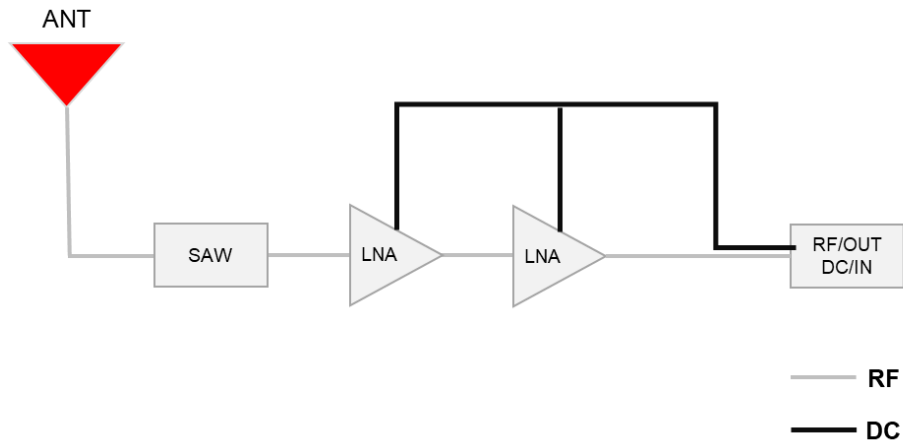
5G NR/ LTE/ LTE-Advanced/ WCDMA/ HSPA/ HSPA+/ GPRS/ GSM/ NB-IoT					
Band	Frequency (MHz)	Uplink (MHz)	Downlink (MHz)	MAIN	-
1	2100	1920–1980	2110–2170	√	-
2	1900	1850–1910	1930–1990	√	-
3	1800	1710–1785	1805–1880	√	-
4	1700	1710–1755	2110–2155	√	-
5	850	824–849	869–894	√	-
7	2600	2500–2570	2620–2690	√	-
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)	MAIN	-
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	-	√	-
71	600	663–698	-	√	-
74	1500	1427–1470	-	√	--
77	3500	3300–4200		√	-
78	3500	3300–3800		√	-
79	4500	4400–5000		√	-

1.3. Mechanical & Environmental

Mechanical		
Antenna Dimensions		Φ 54 mm × 91.8 mm
Antenna Material & Color		ABS (UV Resistant) & Black
Cable Type & Color & Length	5G	RG174 & Black & 300 ±10 mm
	Wi-Fi	RG174 & Black & 300 ±10 mm
	GNSS	RG174 & Black & 300 ±10 mm
Connector Type	5G	SMA Male (Center pin)
	Wi-Fi	SMA Male (Center pin)
	GNSS	SMA Male (Center pin)
Weight		Typ. 112.1 g
Mounting Type		Screw + Adhesive
Environmental		
Storage Temperature		-40 °C to +85 °C
Operation Temperature		-40 °C to +85 °C
Ingress Protection (IP) Rating		IP66
RoHS & REACH Compliant		Yes

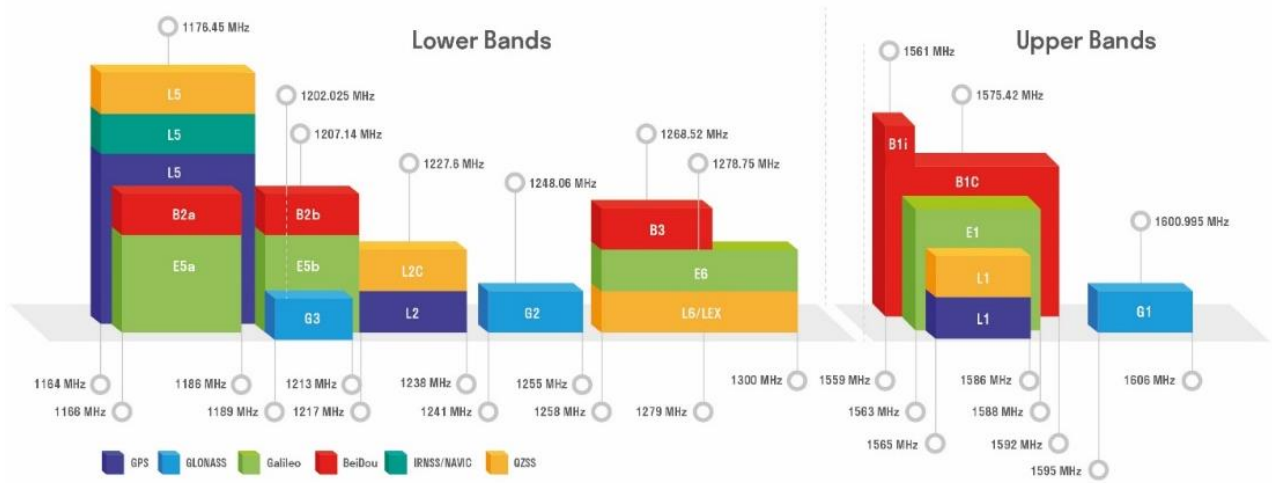
1.4. Block Diagram (Active Antenna)



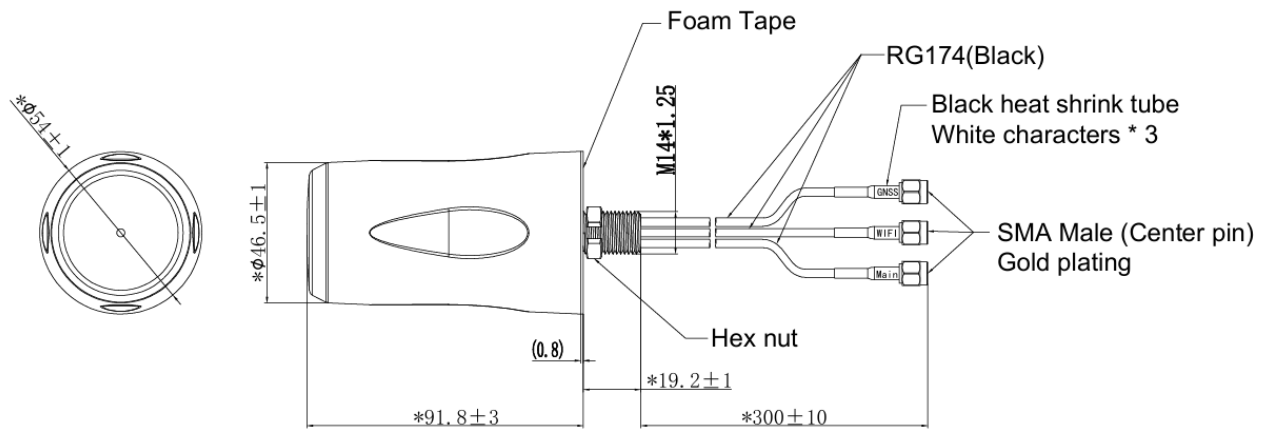
1.5. Supported GNSS Frequency Bands

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



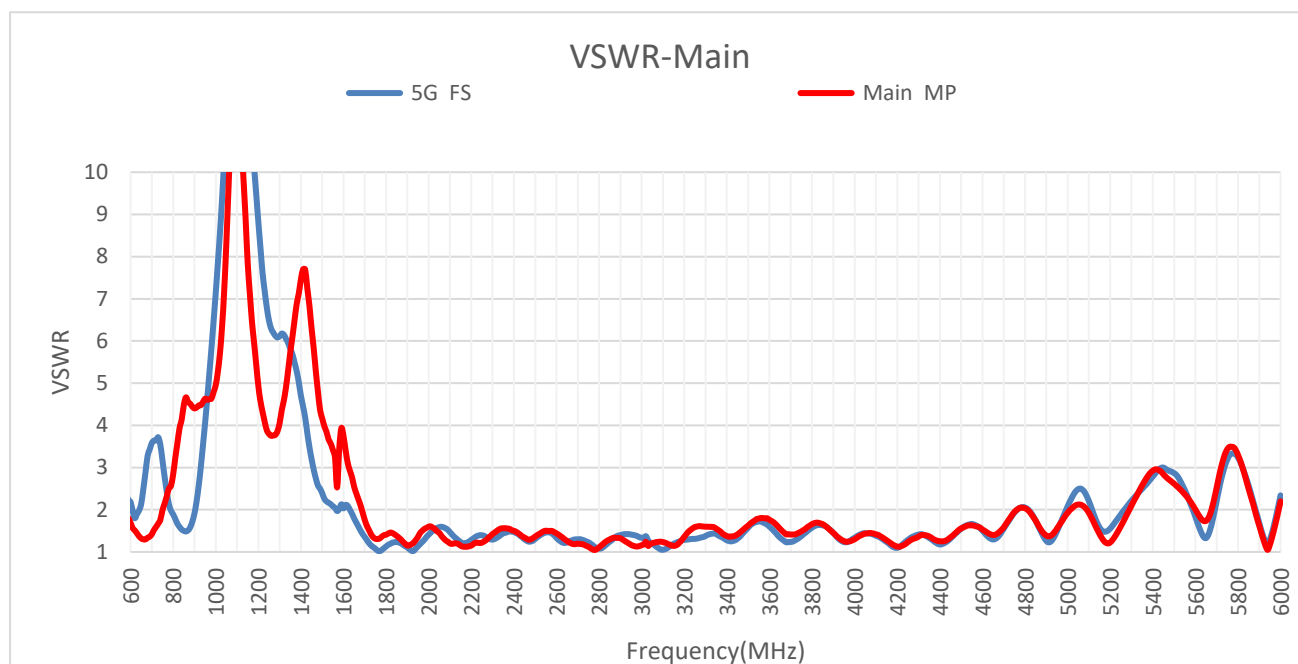
2 Drawing



3 Detailed Performance

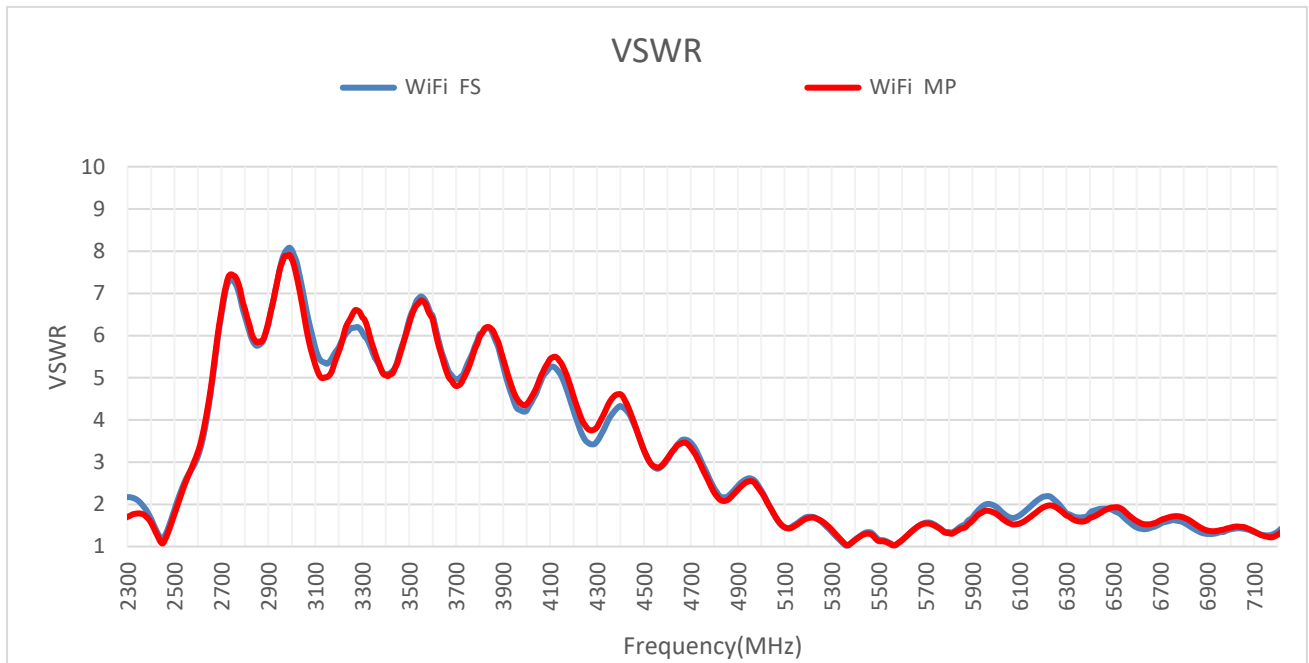
3.1. S-Parameter Test

3.1.1. VSWR



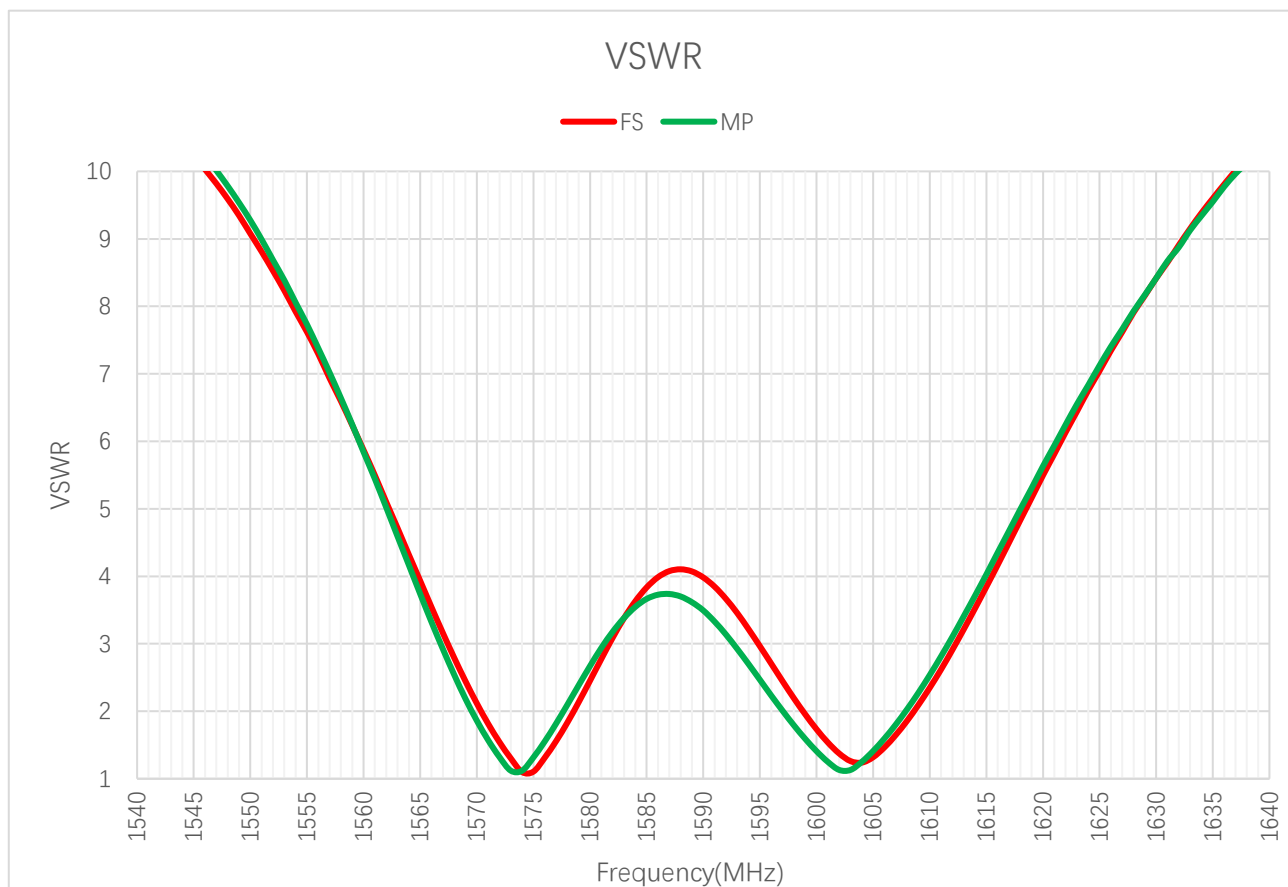
VSWR – 5G

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
5G	FS	2.2	1.9	3.6	1.6	1.9	4.6	3.5	1.3	1.1	1.2
	MP	1.7	1.4	1.5	3.9	4.4	4.6	6.8	1.6	1.3	1.2
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
5G	FS	1.1	1.3	1.4	1.3	1.3	1.6	1.5	2.1	2.9	2.3
	MP	1.4	1.2	1.6	1.3	1.4	1.8	1.6	1.9	2.6	2.2



VSWR – Wi-Fi

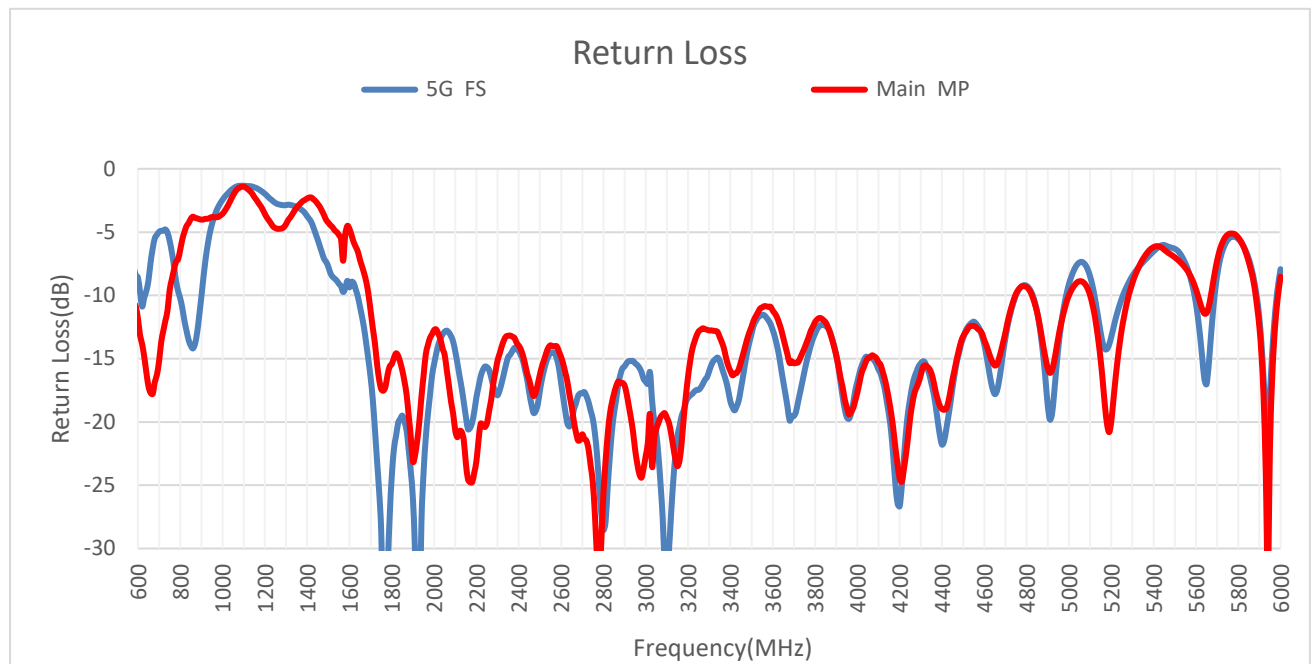
Frequency (MHz)		2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Wi-Fi	FS	1.7	1.2	1.9	1.5	1.2	1.5	1.8	1.7	1.6	1.3
	MP	1.6	1.1	1.8	1.5	1.1	1.4	1.7	1.7	1.7	1.3



VSWR – GNSS

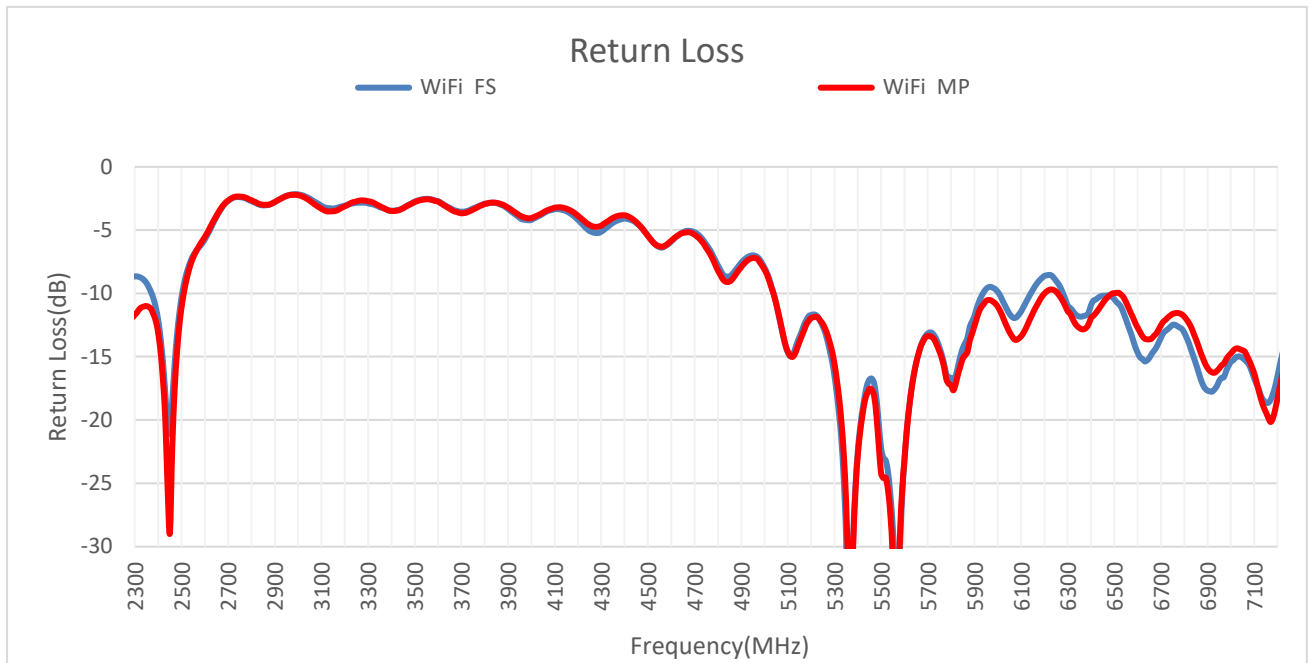
Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
FS	-	-	-	-	-	-	1.1	1.4
MP	-	-	-	-	-	-	1.3	1.1

3.1.2. Return Loss



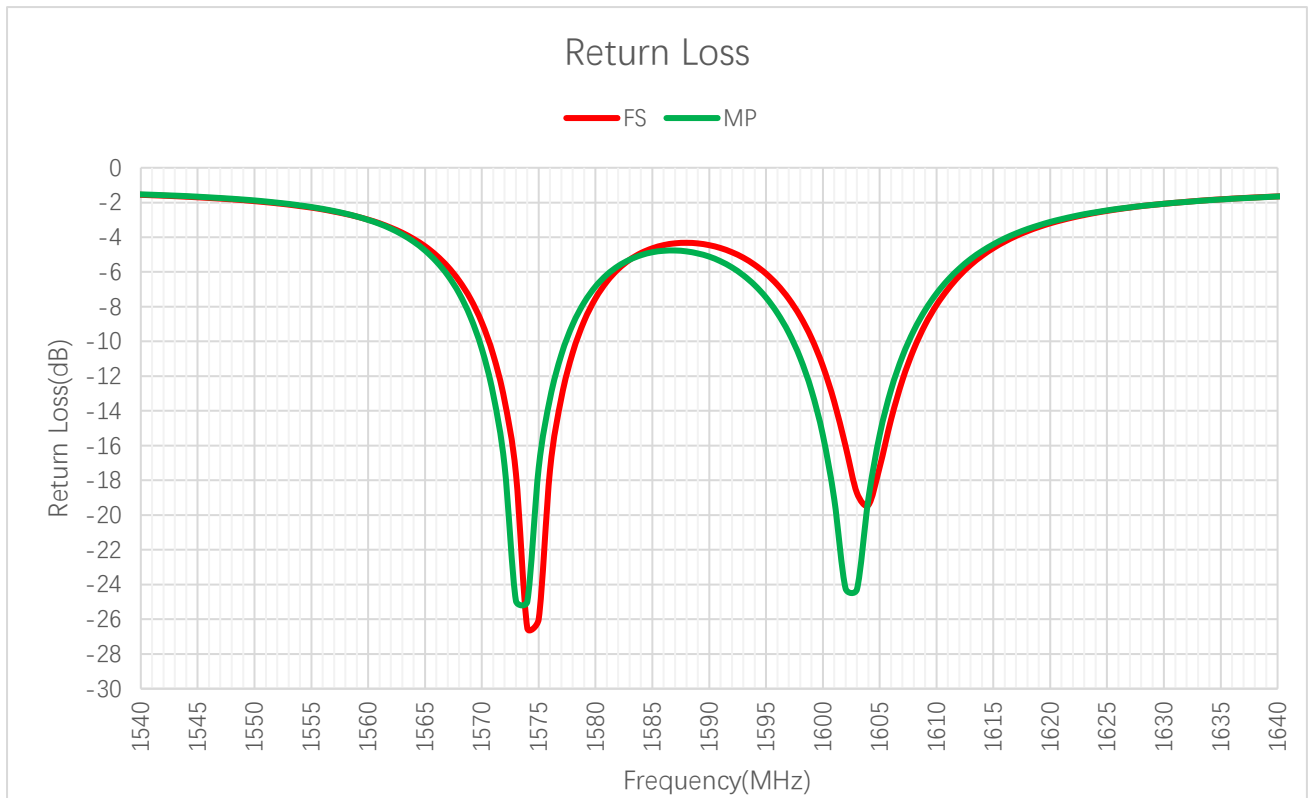
Return Loss (dB) – 5G

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
5G	FS	-8.6	-10.2	-4.9	-12.8	-10.1	-3.8	-5.1	-18.2	-25.5	-22.2
	MP	-11.8	-14.9	-13.7	-4.5	-4.0	-3.8	-2.6	-12.6	-16.6	-19.5
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
5G	FS	-24.0	-18.4	-14.9	-17.7	-16.9	-12.7	-13.4	-9.1	-6.3	-7.9
	MP	-16.4	-21.4	-13.2	-16.7	-14.9	-11.2	-12.9	-10.0	-7.0	-8.5



Return Loss (dB) – Wi-Fi

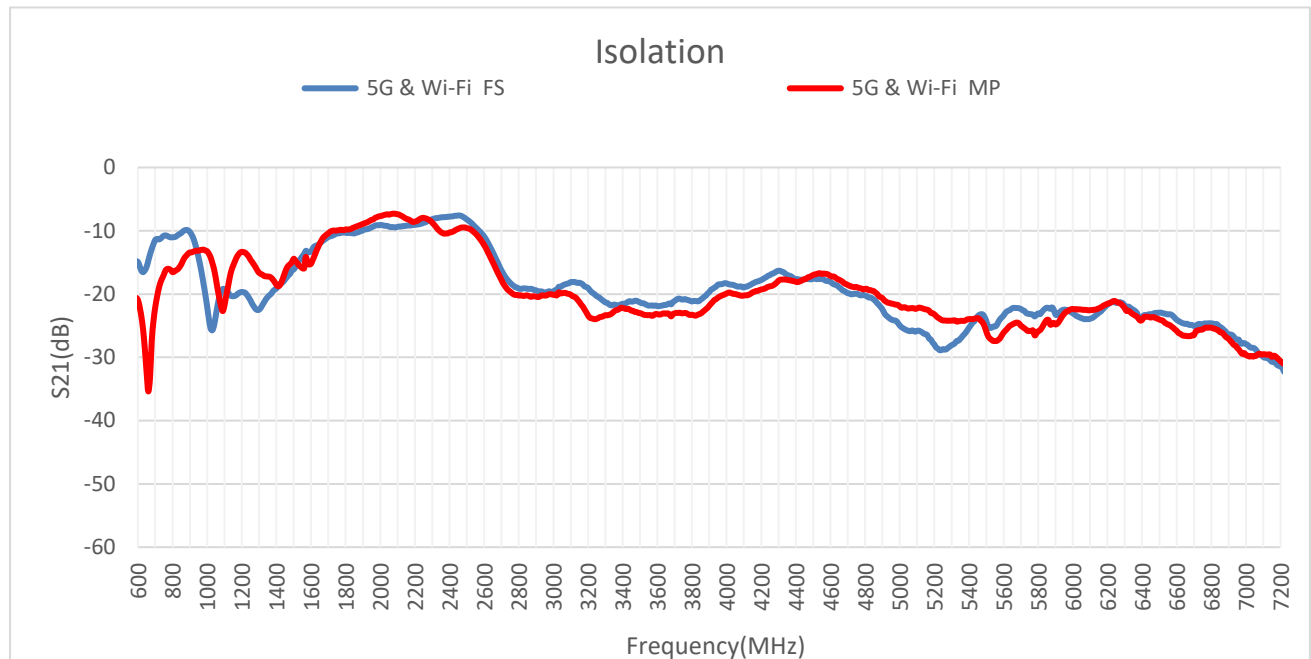
Frequency (MHz)		2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Wi-Fi	FS	-12.1	-21.1	-10.3	-13.4	-22.3	-14.3	-10.6	-11.3	-13.0	-17.6
	MP	-13.1	-29.0	-11.1	-13.8	-24.2	-15.2	-11.4	-12.0	-12.1	-17.7



Return Loss(dB) – GNSS

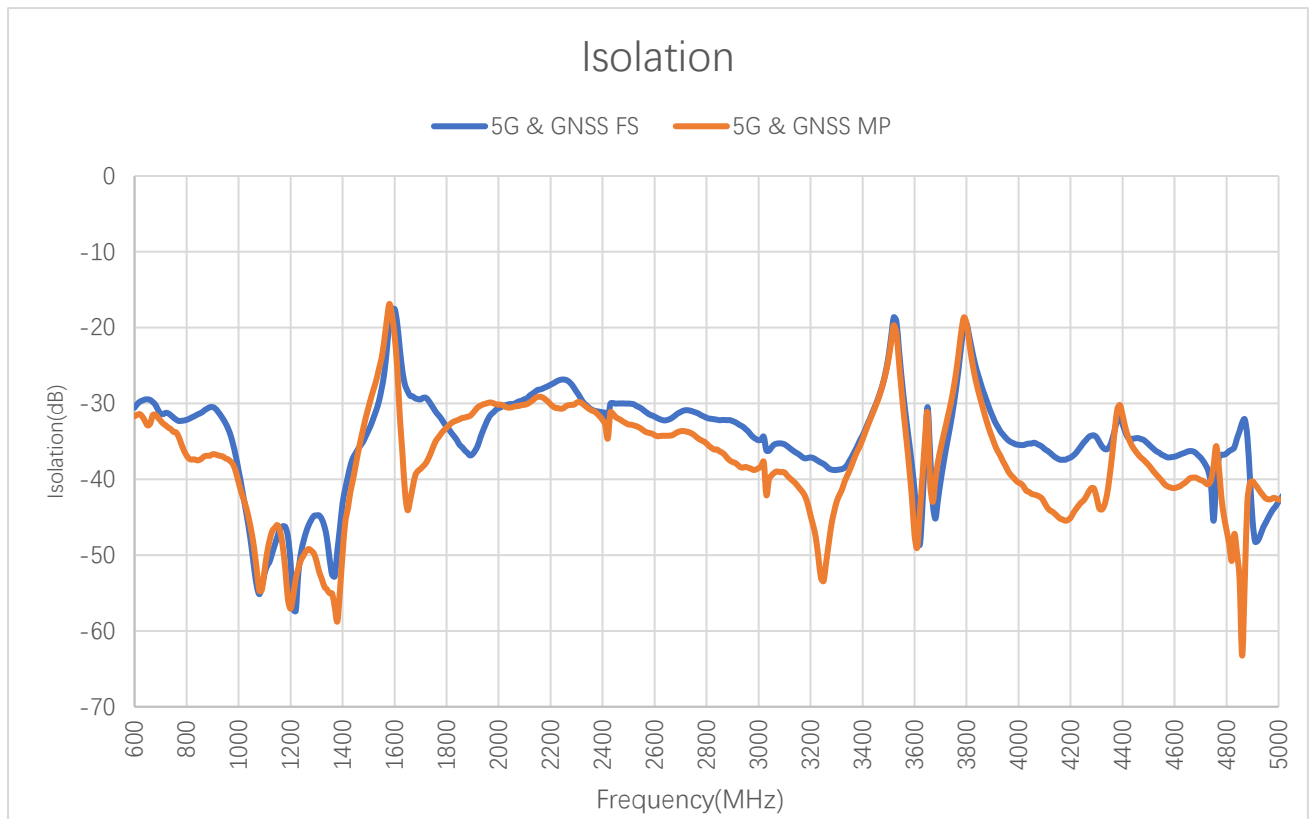
Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
FS	-	-	-	-	-	-	-26	-16
MP	-	-	-	-	-	-	-17.3	-24.2

3.1.3. Isolation



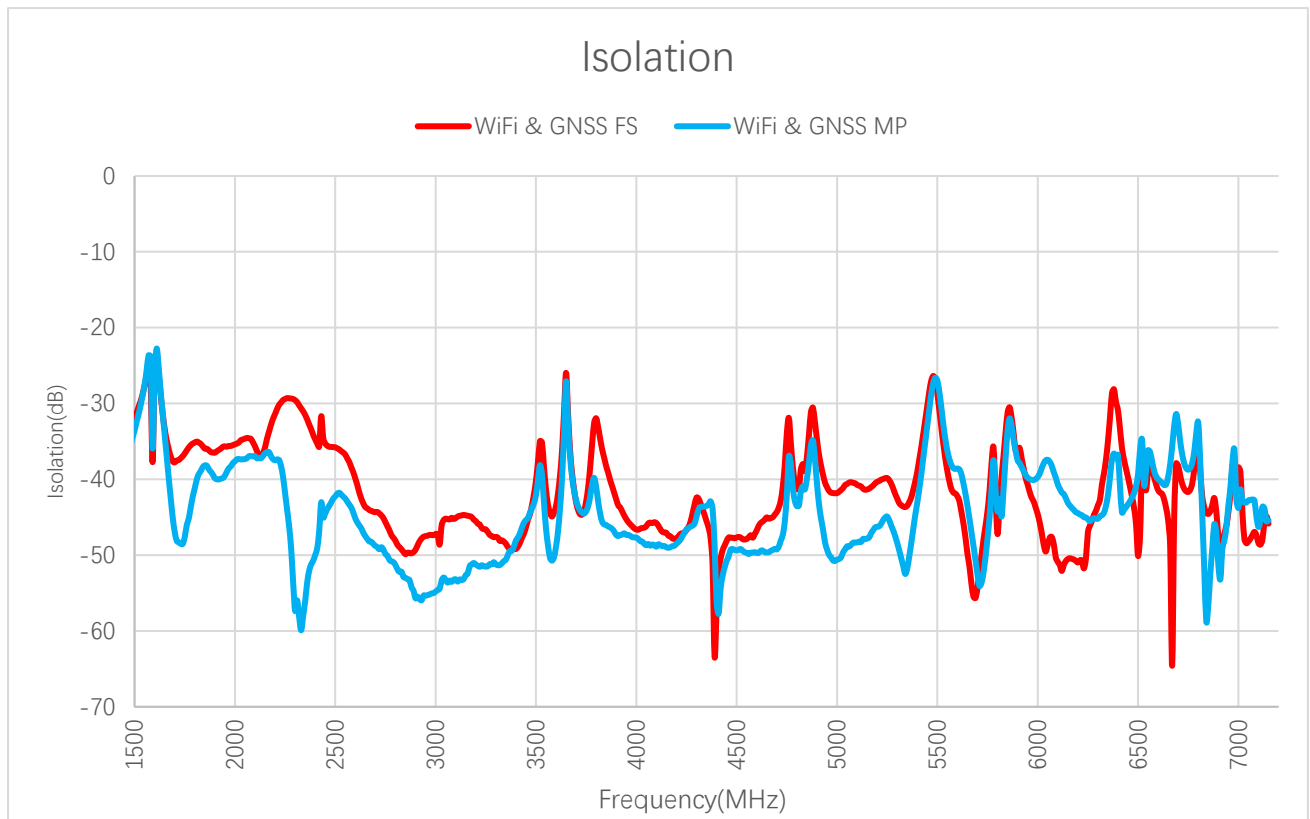
Max Isolation (dB)

Band		B71	B12/ B13/ B28	B5/ B8/ B26	n74/ n75/ n76	B1/ B2/ B3	B40	Wi-Fi 2G	B38/ B41	B42 /B48 /n77/n 79	Wi-Fi 5G	Wi-Fi 6G
Freq. (MHz)		600– 700	700– 810	820– 960	1420– 1520	1700– 2170	2300– 2400	2400– 2500	2500– 2690	3300– 5000	5150– 5850	5925– 7125
5G & Wi-Fi	FS	-11.5	-10.7	-9.9	-15.2	-9.1	-7.8	-7.6	-8.2	-16.3	-22.2	-21.2
	MP	-20.9	-16.0	-13.1	-14.4	-7.3	-8.7	-9.5	-9.6	-16.7	-22.4	-21.1



Max Isolation (dB)

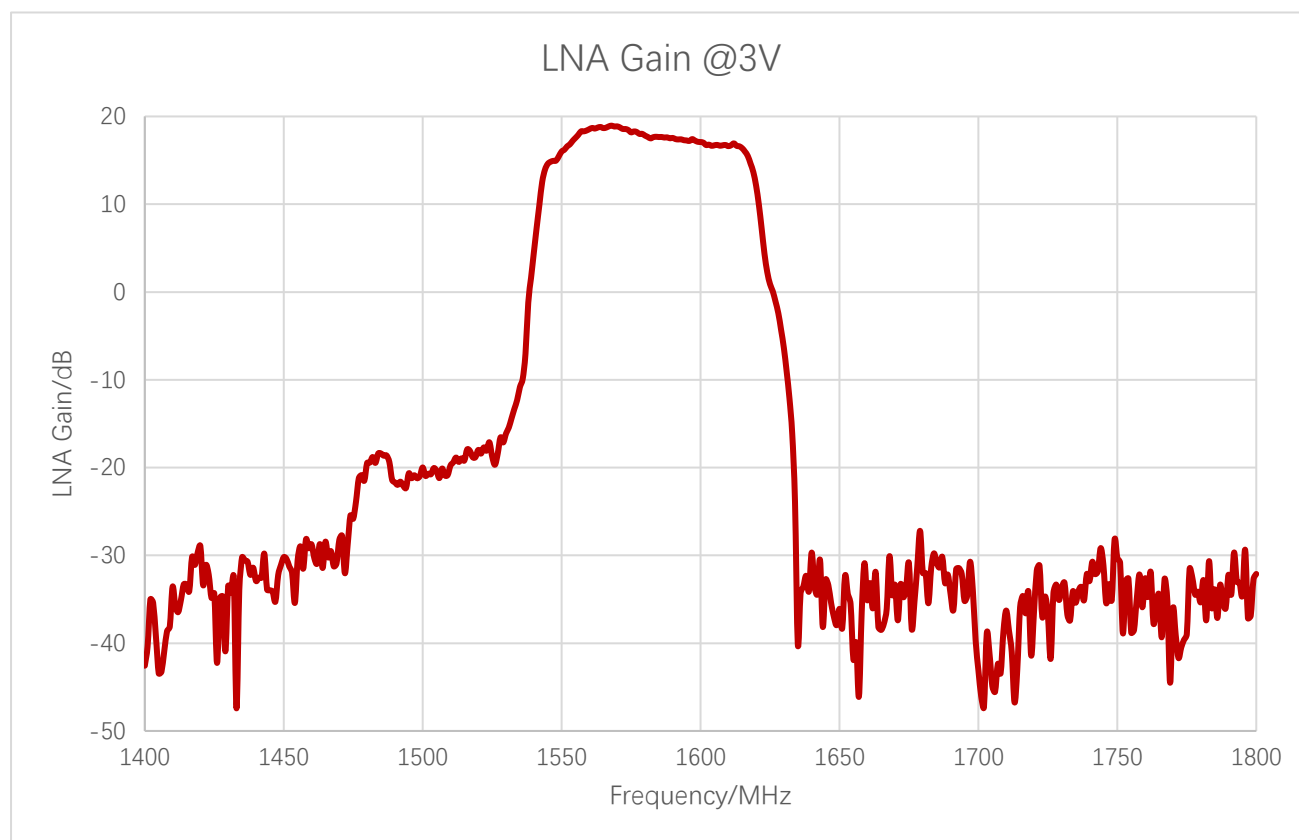
Band		B71	B12/ B13/ B28	B5/ B8/ B26	n74/ n75/ n76	B1/ B2/ B3	B40	B38/ B41	B42/ B48/ n77	BDS B1I	GPS L1
Freq. (MHz)		600– 700	700– 810	820– 960	1420– 1520	1700– 2170	2300– 2400	2500– 2690	3300– 4200	1559– 1564	1565– 1586
5G & GNSS	FS	-29.4	-31.2	-30.5	-31.8	-28	-28.5	-30	-18.6	-26.1	-19.4
	MP	-31.4	-32.3	-36.7	-28.1	-29.1	-29.8	-32.8	-18.6	-21.8	-16.9



Max Isolation (dB)

Band		Wi-Fi 2G	Wi-Fi 5G	Wi-Fi 6G	BDS B1I	GPS L1
Freq. (MHz)		2400–2500	5150–5850	5925–7125	1559–1564	1565–1586
Wi-Fi & GNSS	FS	-31.7	-26.4	-28.1	-26.4	-25.1
	MP	-42.2	-26.6	-31.4	-25.6	-23.6

3.1.4. GNSS LNA Gain

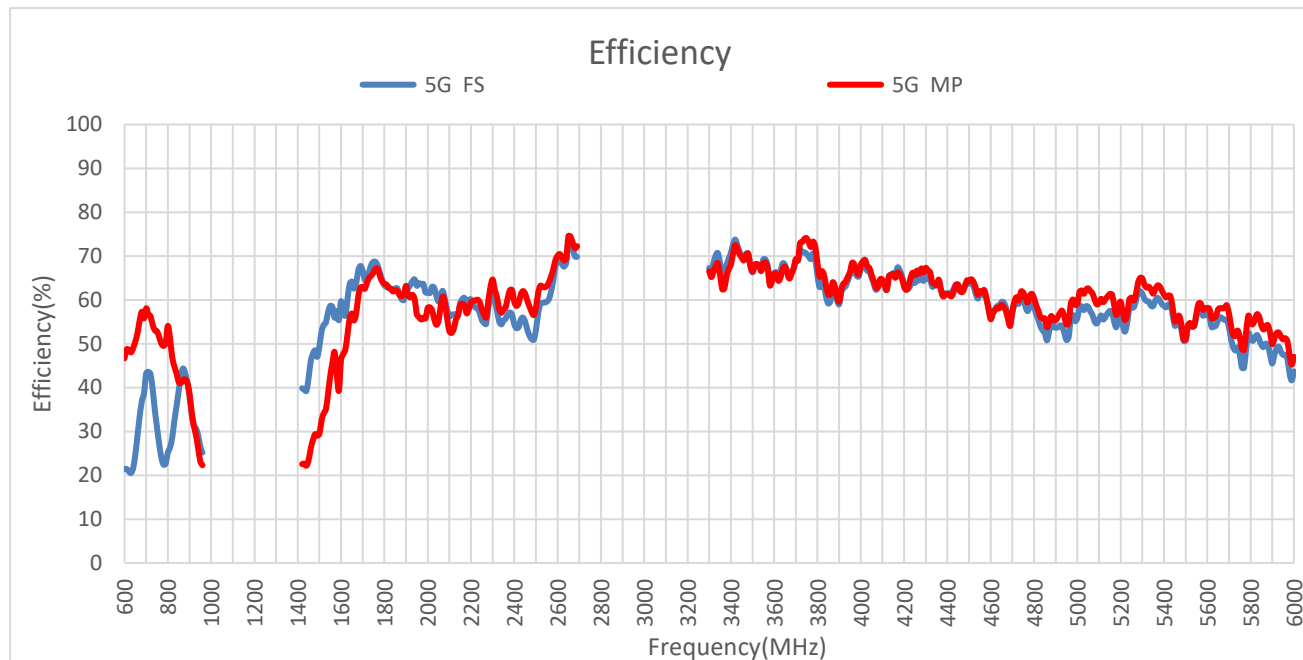


LNA Gain (dB)

Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
LNA Gain (dB)	-	-	-	-	-	-	18.2	16.7

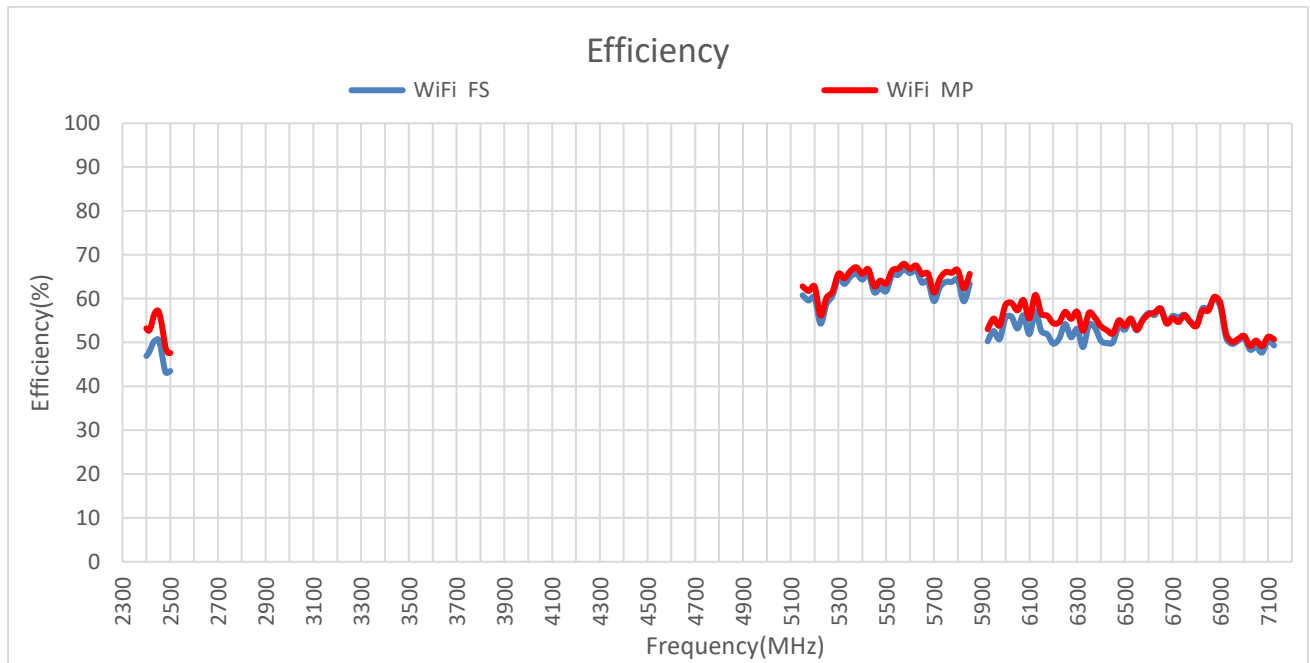
3.2. Radiation Performance Test

3.2.1. Efficiency



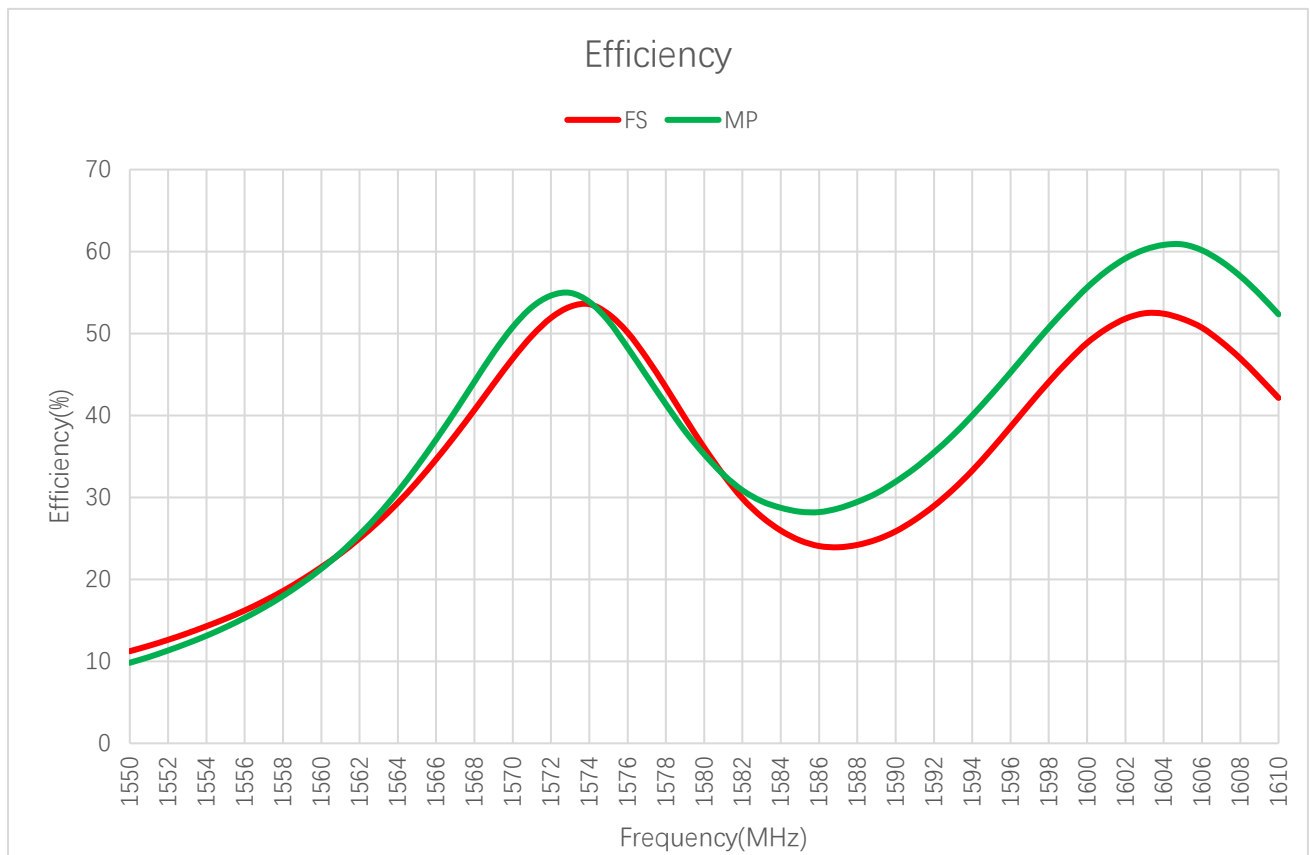
Efficiency (%) – 5G

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
5G	FS	21.4	20.5	43.6	32.3	38.1	25.2	39.3	64.6	68.1	60.1
	MP	46.7	48.0	56.7	44.9	38.7	22.3	22.2	62.5	65.6	60.8
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
5G	FS	63.2	56.6	55.3	55.1	68.9	66.2	57.1	55.9	50.7	43.7
	MP	56.7	56.5	57.8	61.4	70.1	65.9	57.5	59.2	51.0	47.0



Efficiency (%) – Wi-Fi

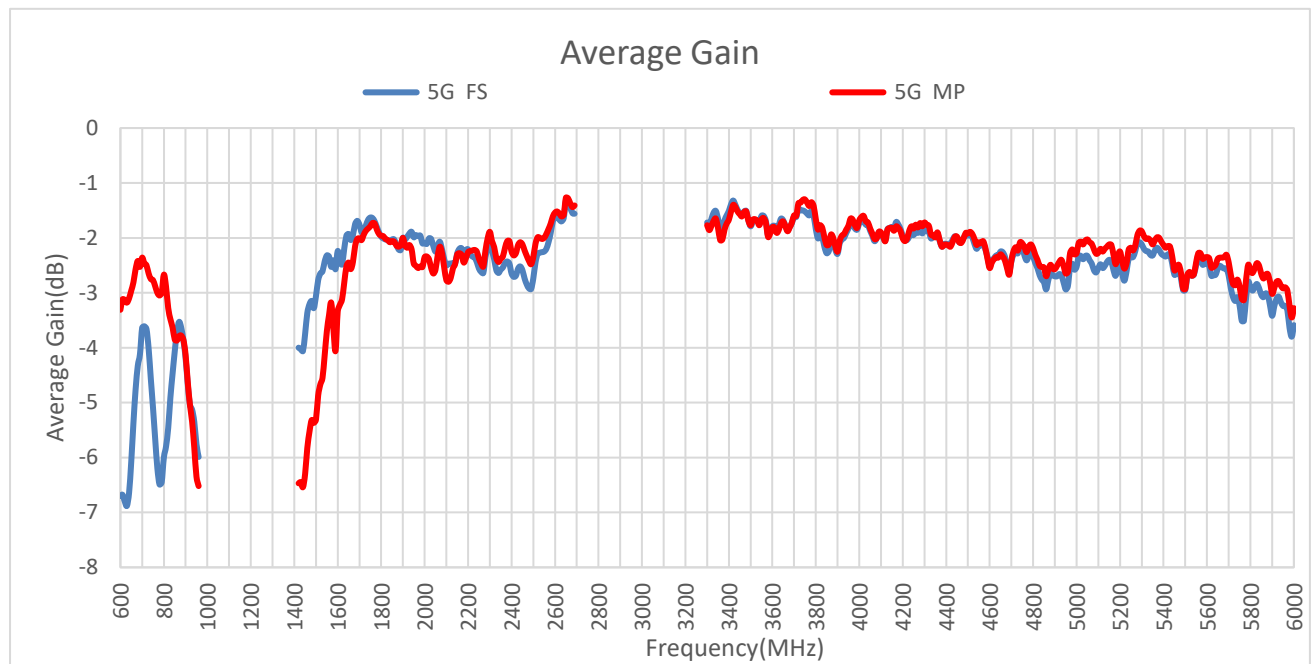
Frequency (MHz)		2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Wi-Fi	FS	46.9	50.7	43.5	60.8	61.7	63.4	50.3	49.0	55.7	49.3
	MP	53.2	57.2	47.6	62.8	63.4	65.7	53.1	52.7	54.7	50.7



Efficiency (%) – GNSS

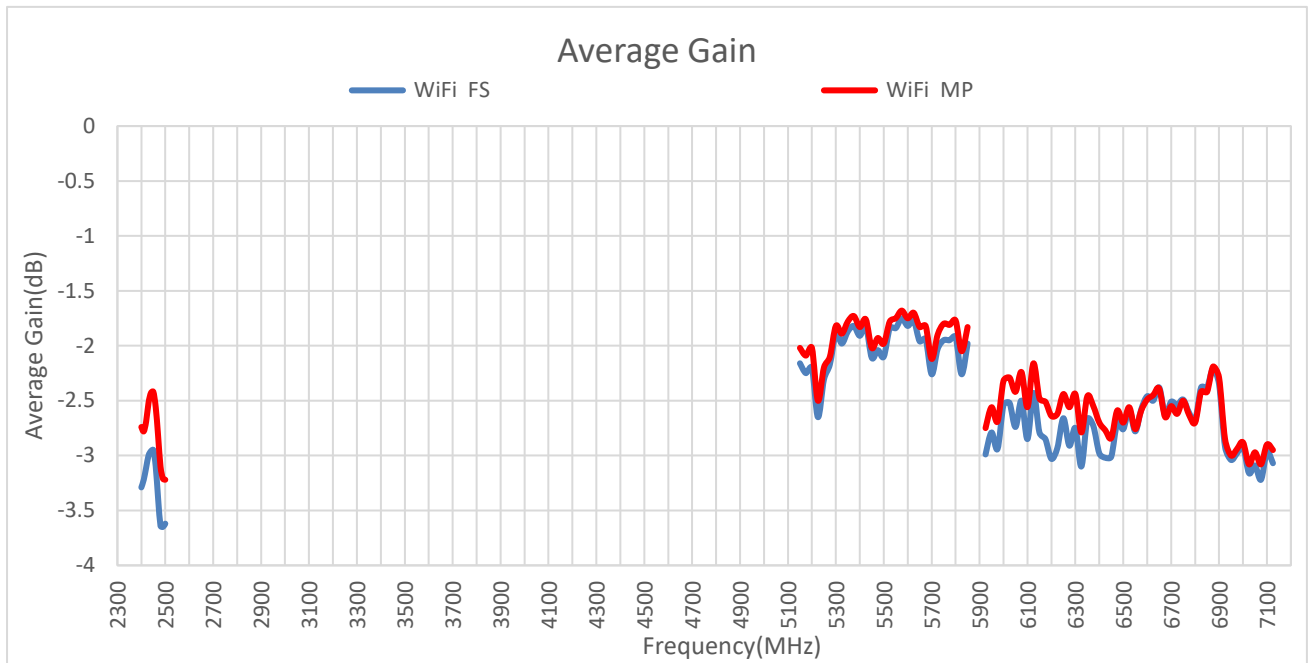
Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
FS	-	-	-	-	-	-	52.4	51.8
MP	-	-	-	-	-	-	51.5	59.2

3.2.2. Average Gain



Average Gain (dB) – 5G

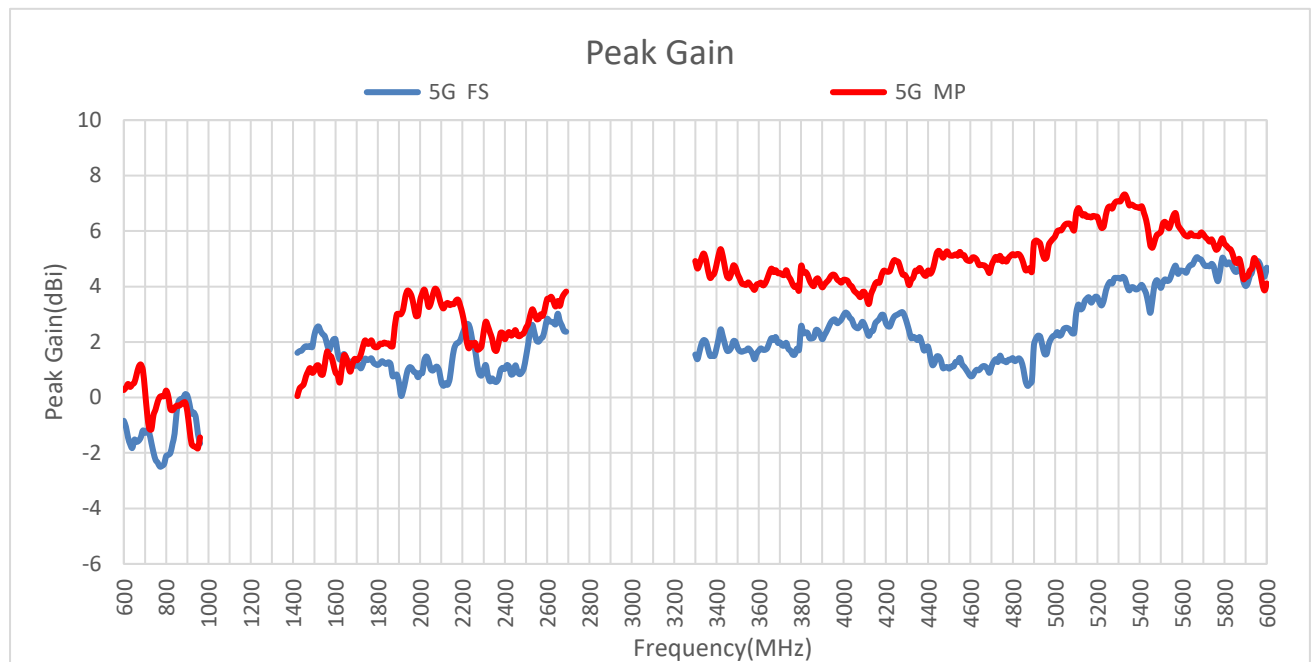
Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
5G	FS	-6.7	-6.9	-3.6	-4.9	-4.2	-6.0	-4.1	-1.9	-1.7	-2.2
	MP	-3.3	-3.2	-2.5	-3.5	-4.1	-6.5	-6.5	-2.0	-1.8	-2.2
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
5G	FS	-2.0	-2.5	-2.6	-2.6	-1.6	-1.8	-2.4	-2.5	-3.0	-3.6
	MP	-2.5	-2.5	-2.4	-2.1	-1.5	-1.8	-2.4	-2.3	-2.9	-3.3



Average Gain (dB) – Wi-Fi

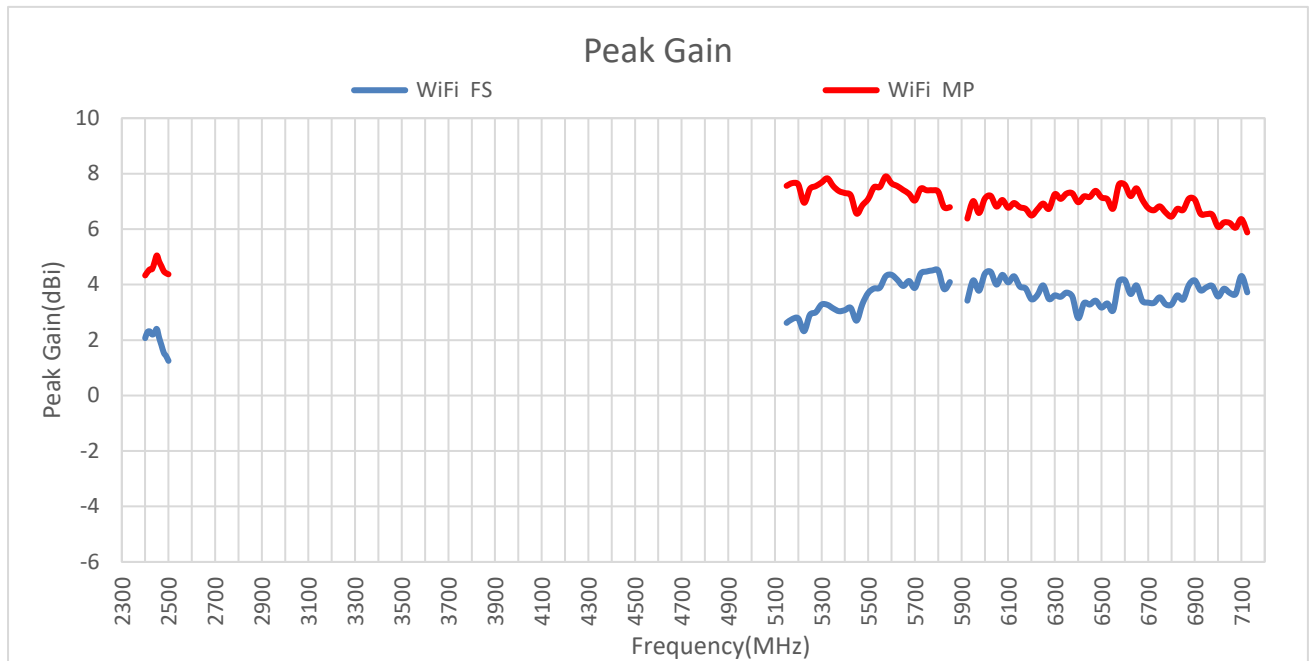
Frequency (MHz)		2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Wi-Fi	FS	-3.3	-3.0	-3.6	-2.2	-2.1	-2.0	-3.0	-3.1	-2.5	-3.1
	MP	-2.7	-2.4	-3.2	-2.0	-2.0	-1.8	-2.8	-2.8	-2.6	-3.0

3.2.3. Peak Gain



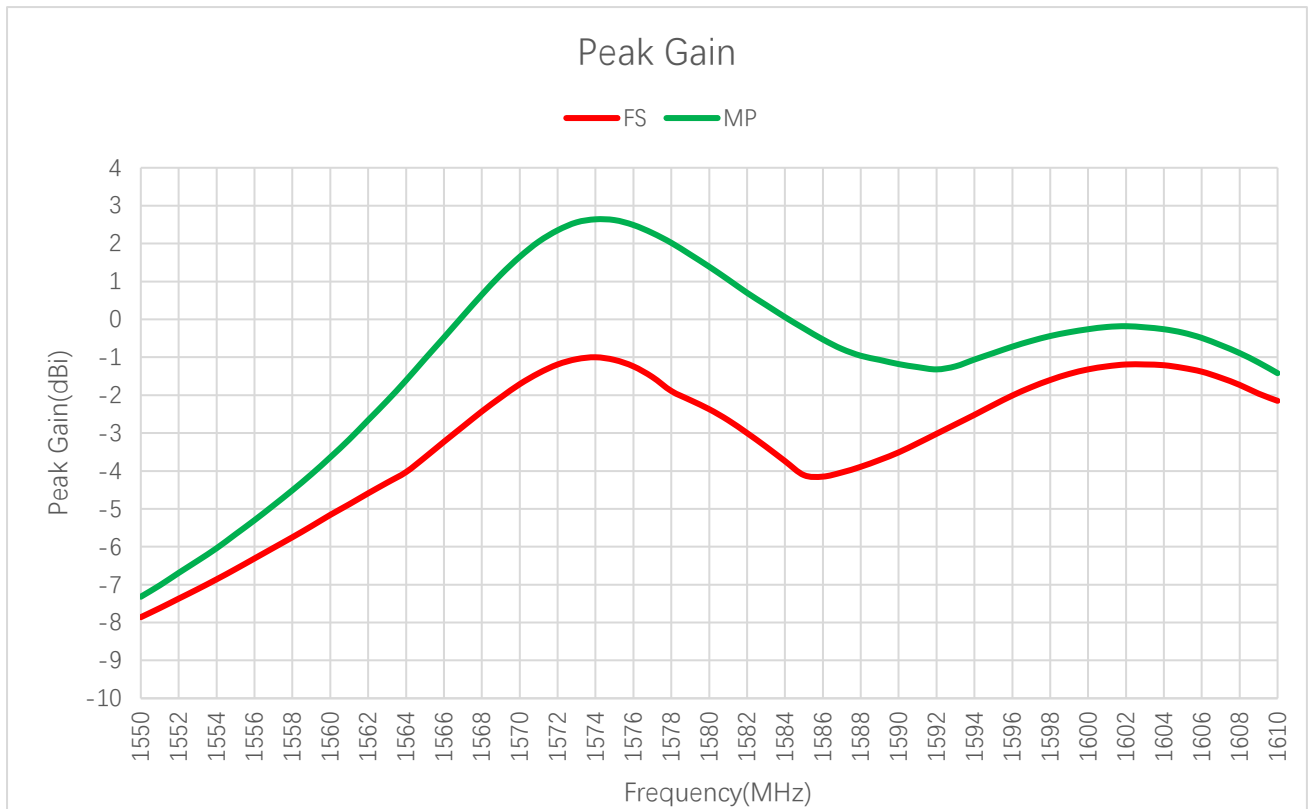
Peak Gain (dBi) – 5G

Frequency (MHz)		600	630	710	830	900	960	1440	1710	1740	1880
5G	FS	-0.8	-1.7	-1.2	-1.7	0.1	-1.7	1.7	1.2	1.4	0.8
	MP	0.3	0.4	-0.6	-0.5	-0.5	-1.4	0.4	1.4	2.1	2.6
Frequency (MHz)		1950	2140	2350	2450	2600	3600	4700	5000	5500	6000
5G	FS	1.1	0.7	0.6	1.2	2.8	1.7	1.1	2.2	4.0	4.7
	MP	3.8	3.3	1.8	2.4	3.6	4.1	4.8	5.8	6.0	4.1



Peak Gain (dBi) – Wi-Fi

Frequency (MHz)		2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Wi-Fi	FS	2.1	2.4	1.3	2.6	3.7	4.1	3.4	3.6	3.3	3.7
	MP	4.3	5.1	4.4	7.6	7.1	6.8	6.4	7.1	6.7	5.9

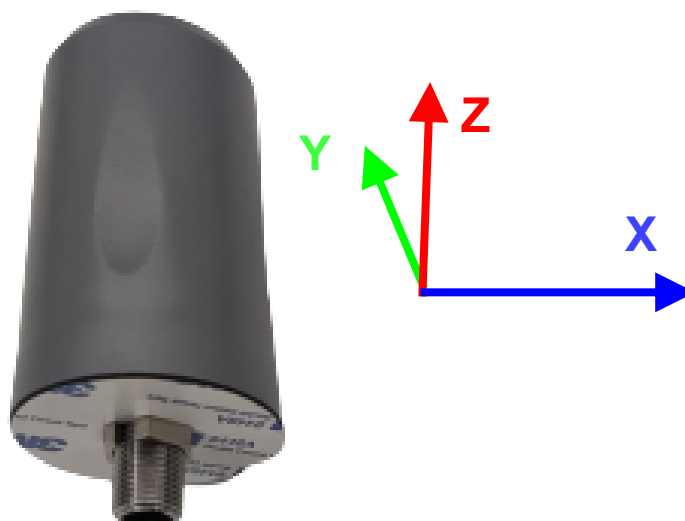


Peak Gain (dBi) – GNSS

Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
FS	-	-	-	-	-	-	-1.07	-1.19
MP	-	-	-	-	-	-	2.62	-0.18

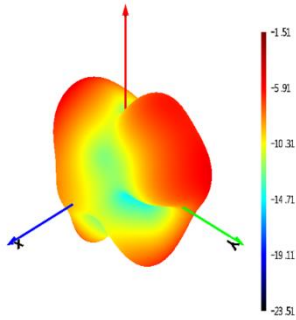
3.2.4. 3D & 2D Radiation Pattern

- Test Condition: Free space
- Test Chamber: HF-S-1 (5G & Wi-Fi)
- Test Chamber: GL-S-1 (GNSS)

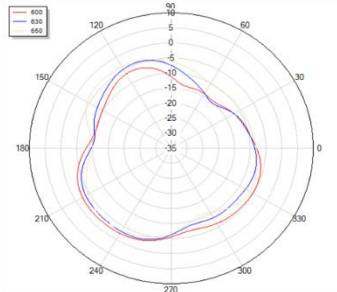


● **5G**

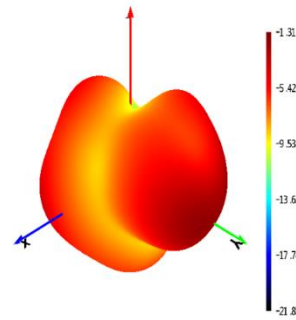
630 MHz



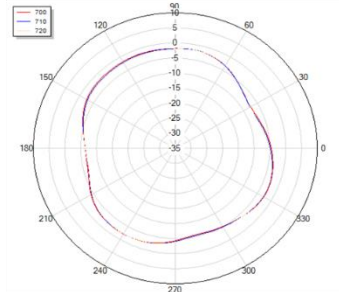
Theta=90



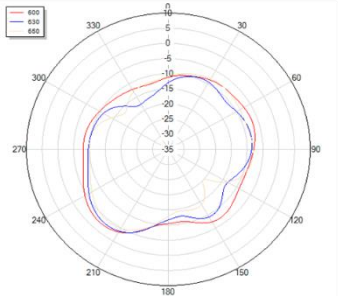
710 MHz



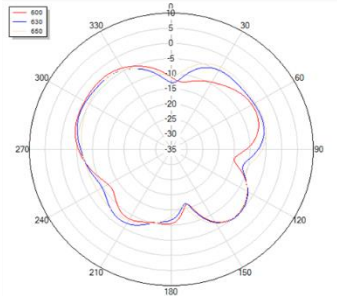
Theta=90



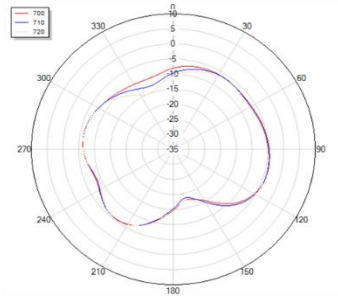
Phi=0



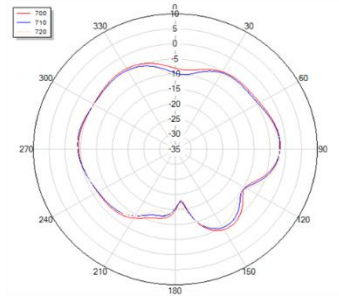
Phi=90



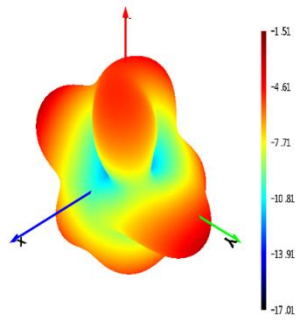
Phi=0



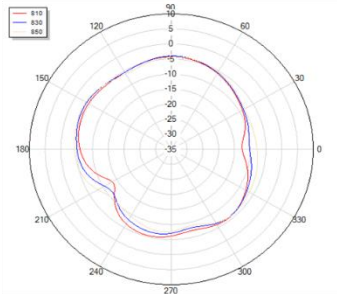
Phi=90



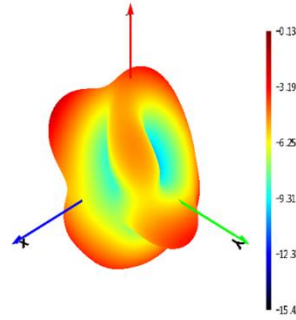
830 MHz



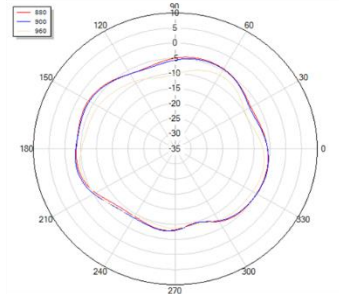
Theta=90



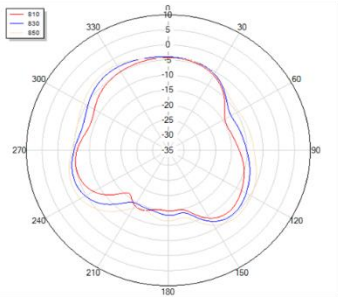
900 MHz



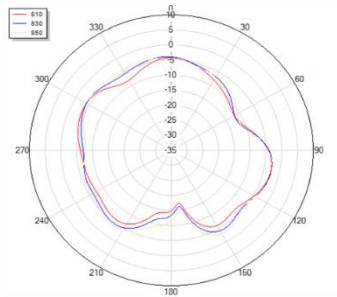
Theta=90



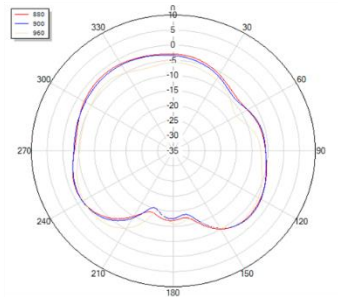
Phi=0



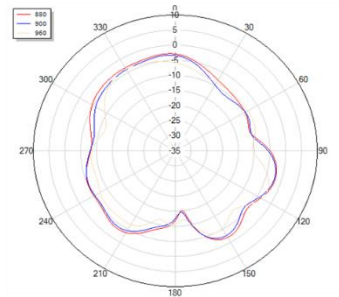
Phi=90



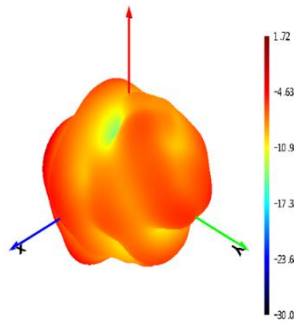
Phi=0



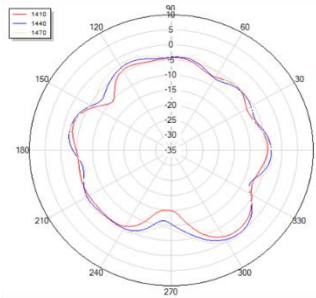
Phi=90



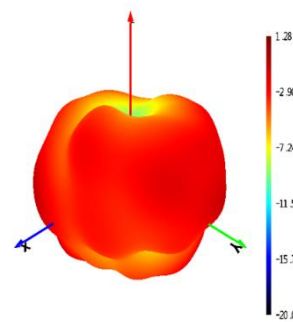
1440 MHz



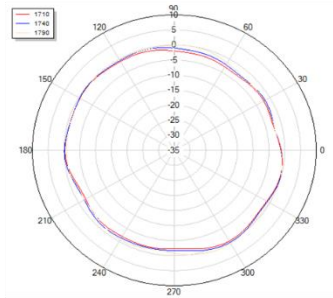
Theta=90



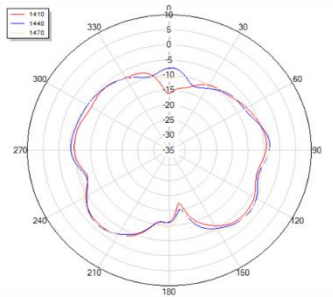
1740 MHz



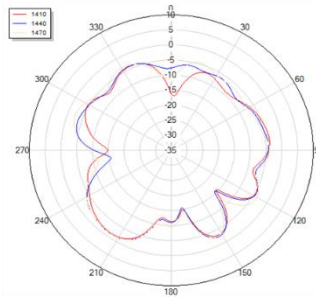
Theta=90



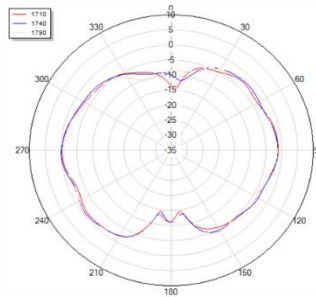
Phi=0



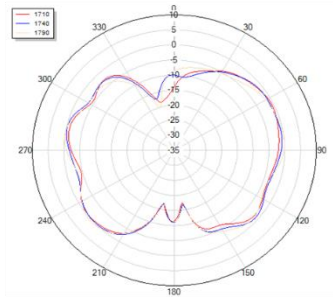
Phi=90



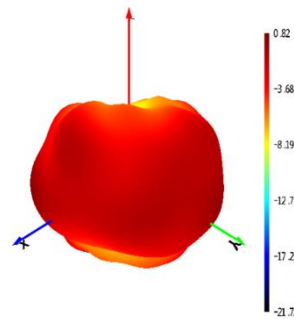
Phi=0



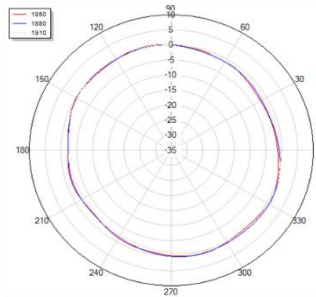
Phi=90



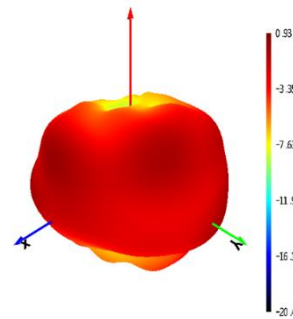
1880 MHz



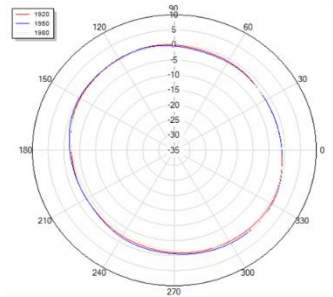
Theta=90



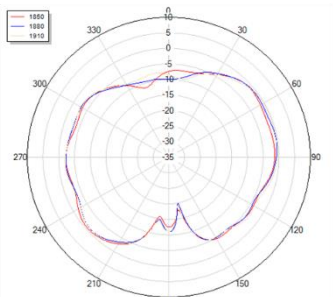
1950 MHz



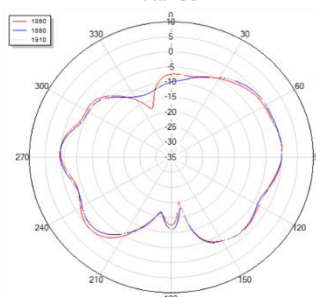
Theta=90



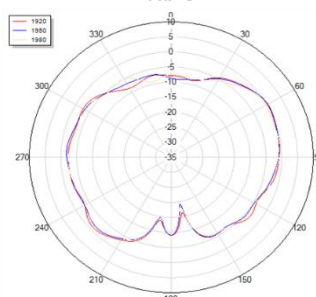
Phi=0



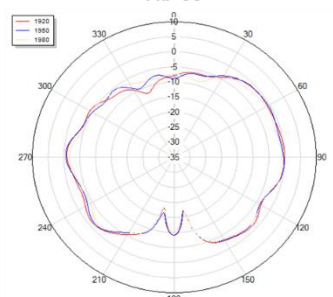
Phi=90



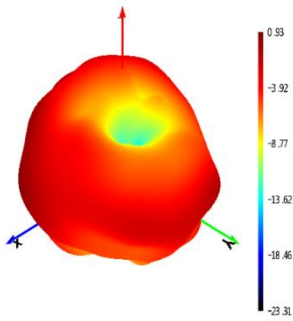
Phi=0



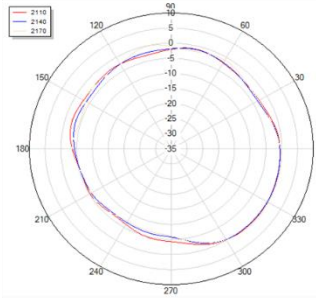
Phi=90



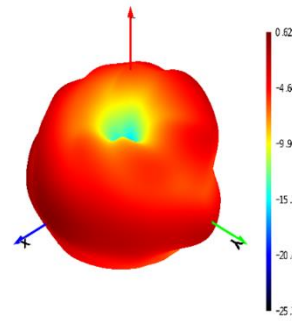
2140 MHz



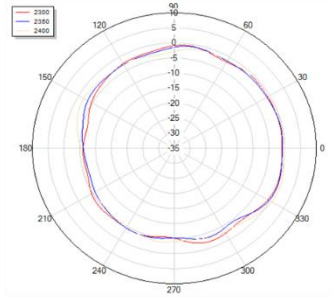
Theta=90



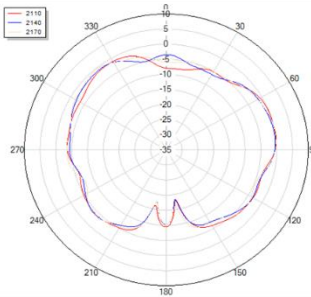
2350 MHz



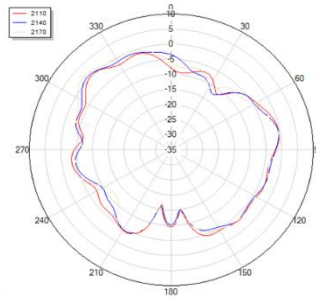
Theta=90



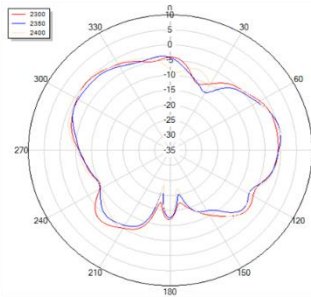
Phi=0



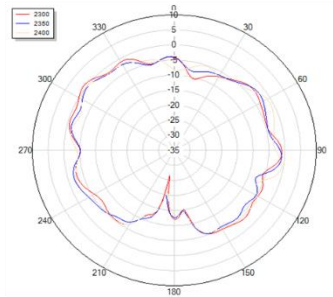
Phi=90



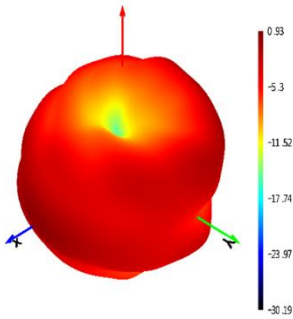
Phi=0



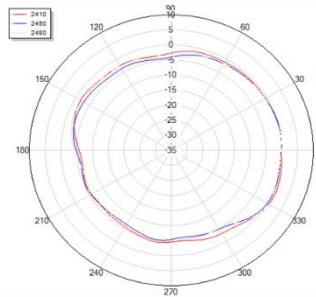
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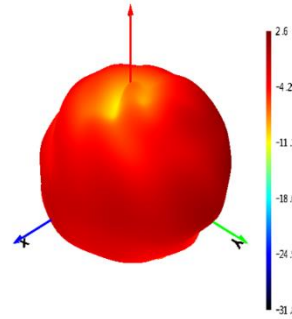
2450 MHz



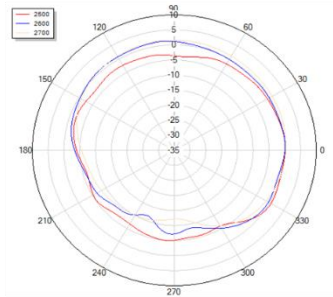
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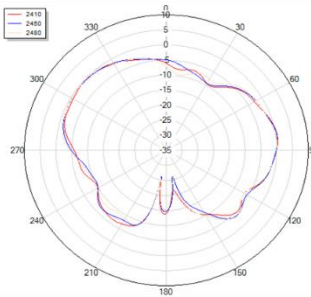
2600 MHz



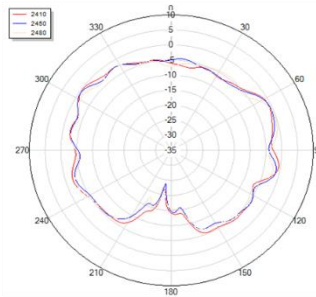
Theta=90



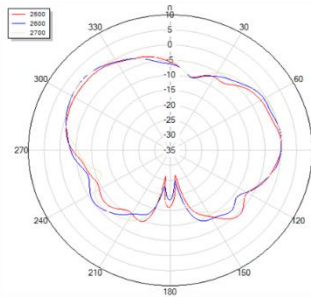
Phi=0



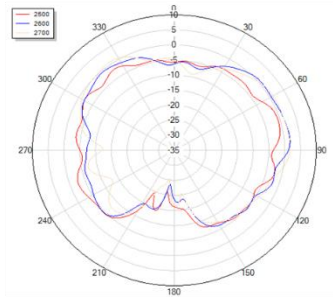
Phi=90



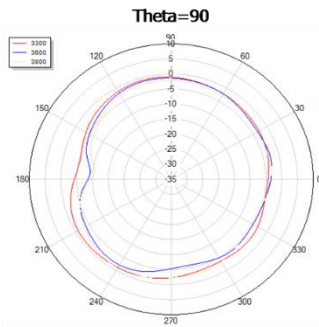
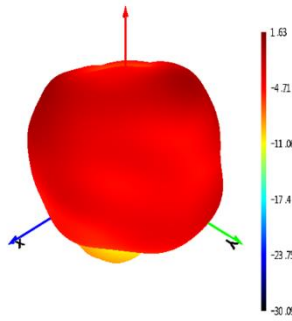
Phi=0



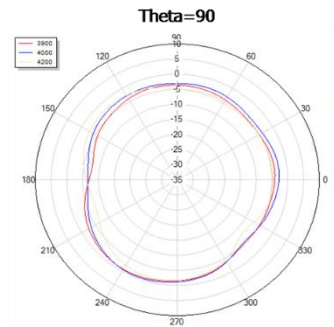
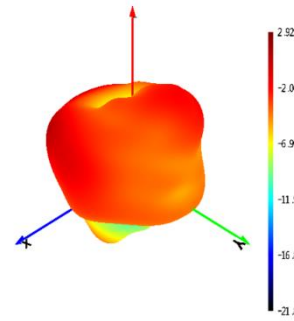
Phi=90



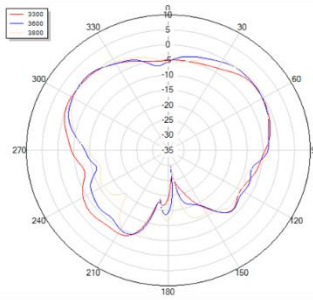
3600 MHz



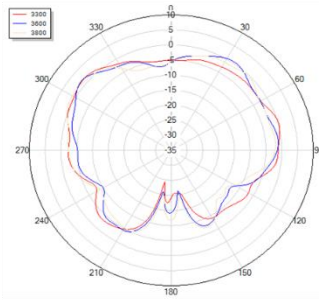
4000 MHz



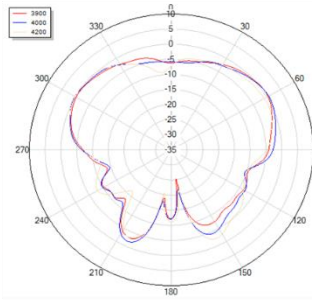
Phi=0



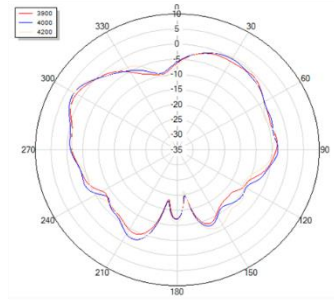
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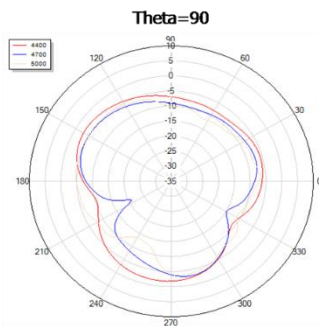
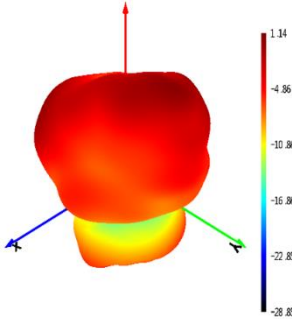
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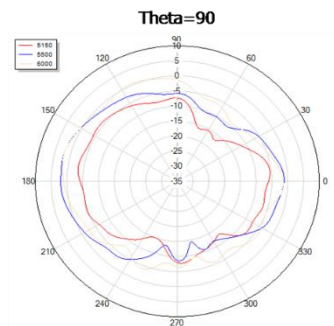
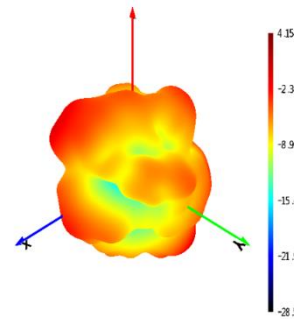
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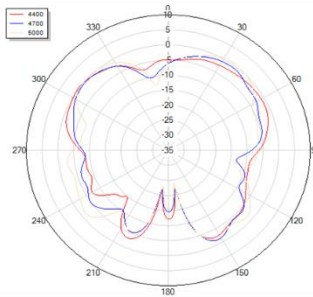
4700 MHz



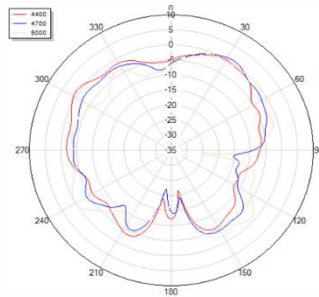
5500 MHz



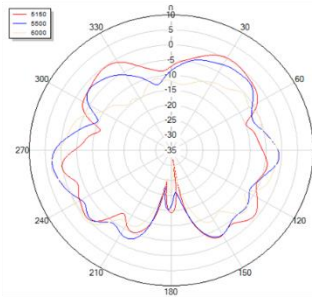
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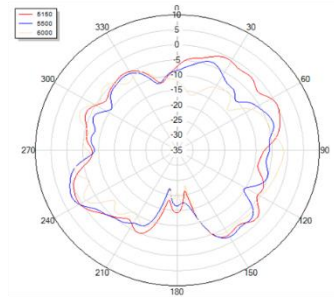
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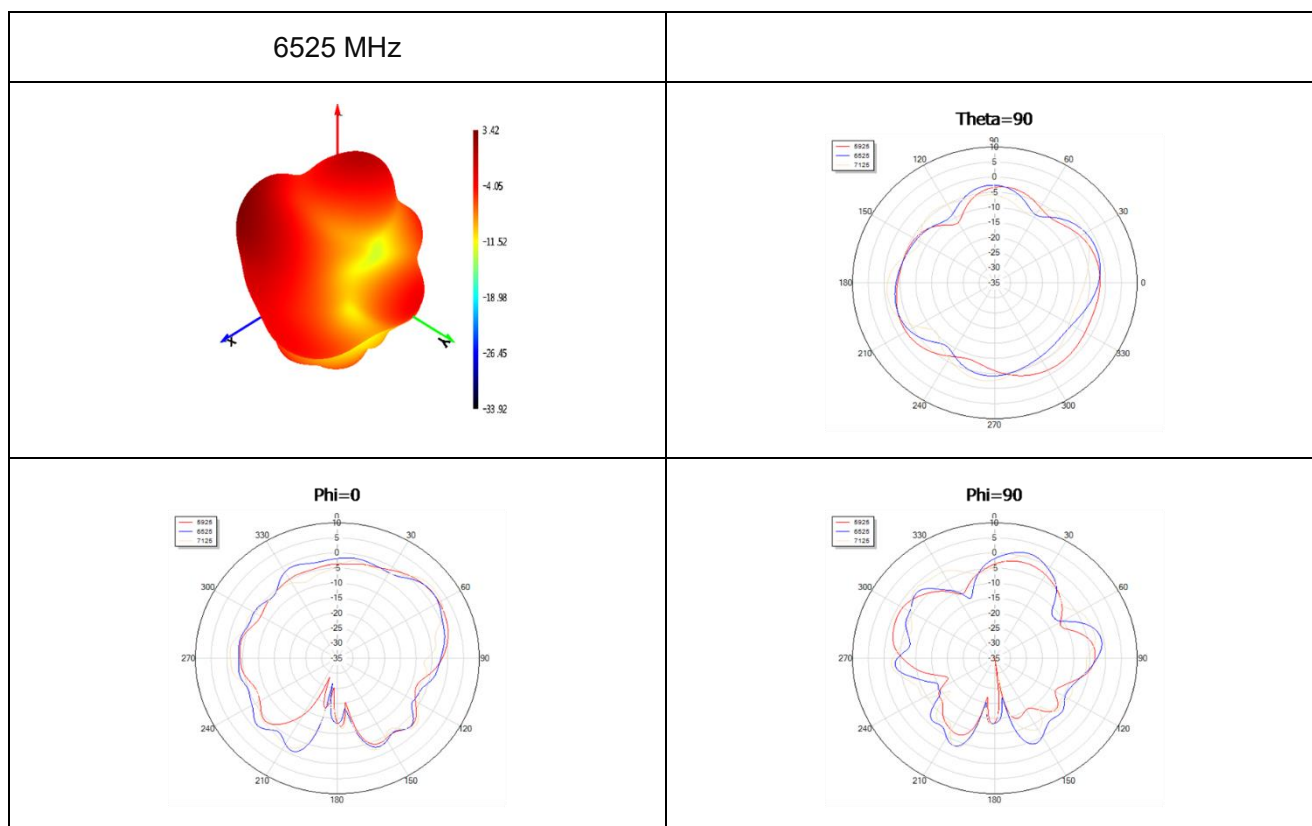
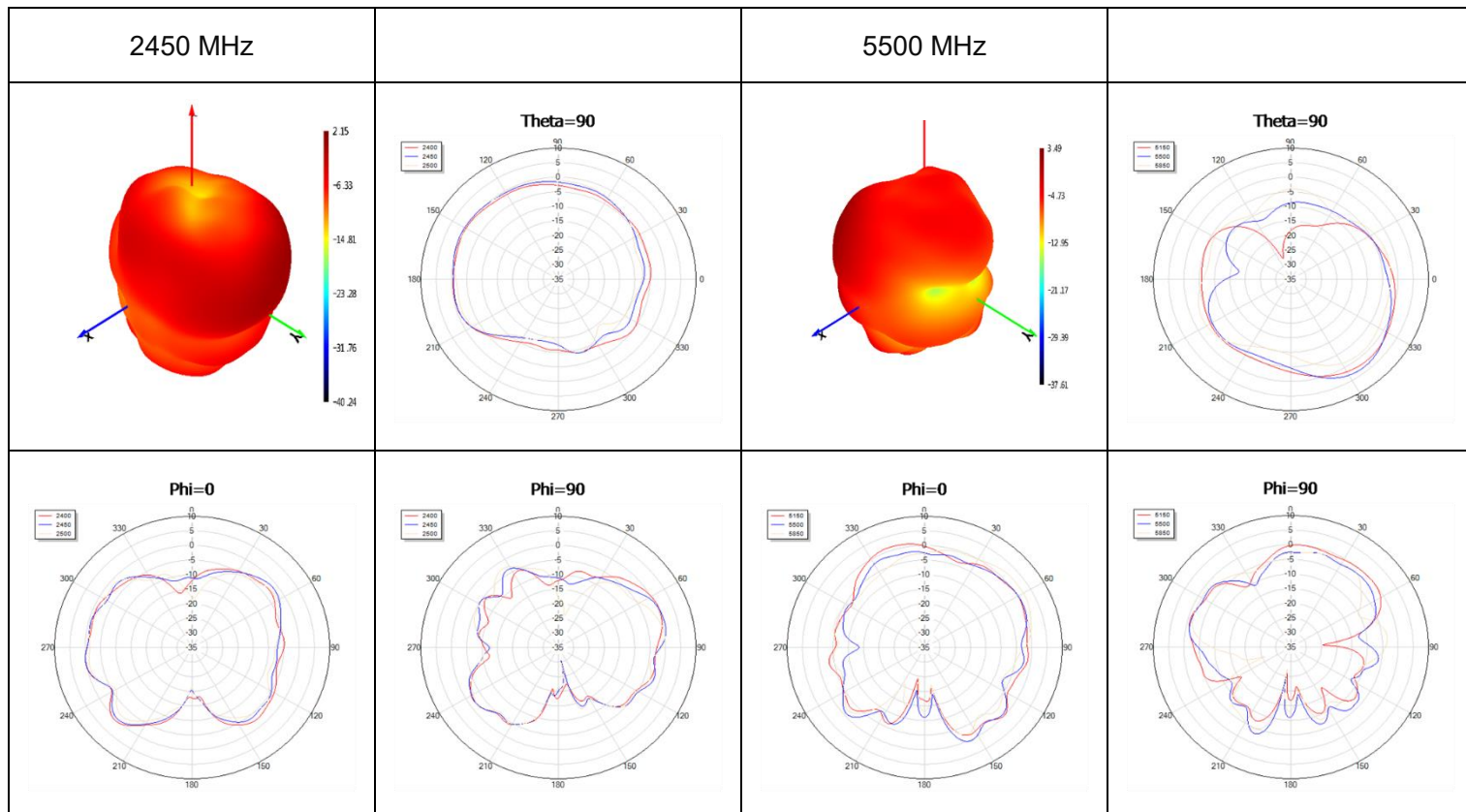
Phi=0



Phi=90

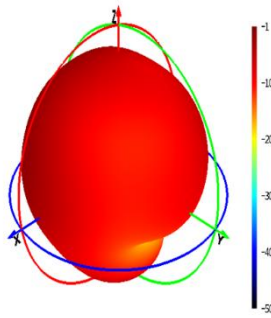


● **Wi-Fi**

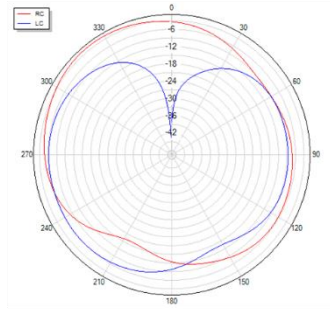


● **GNSS**

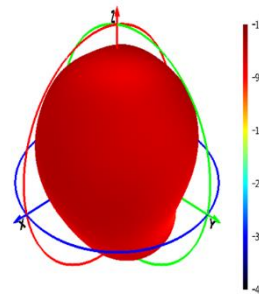
1575 MHz



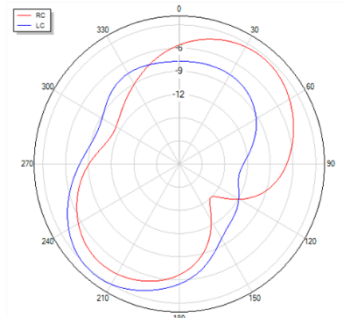
Theta=90 freq=1575MHz



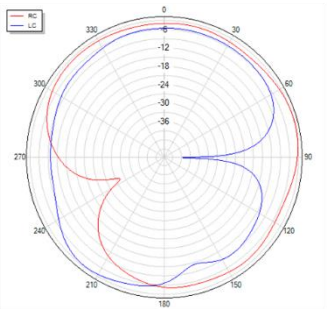
1602 MHz



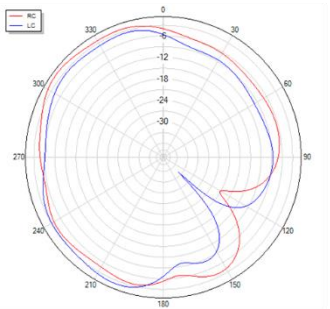
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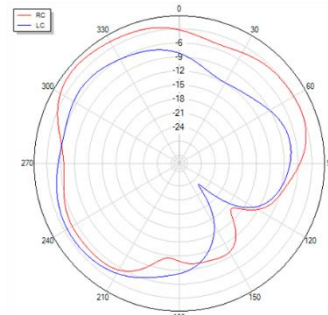
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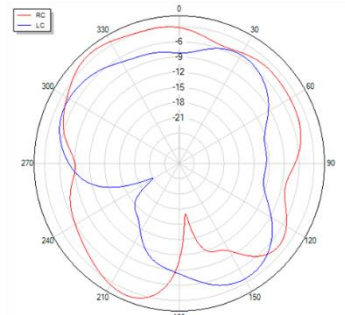
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Phi=0 freq=1602MHz

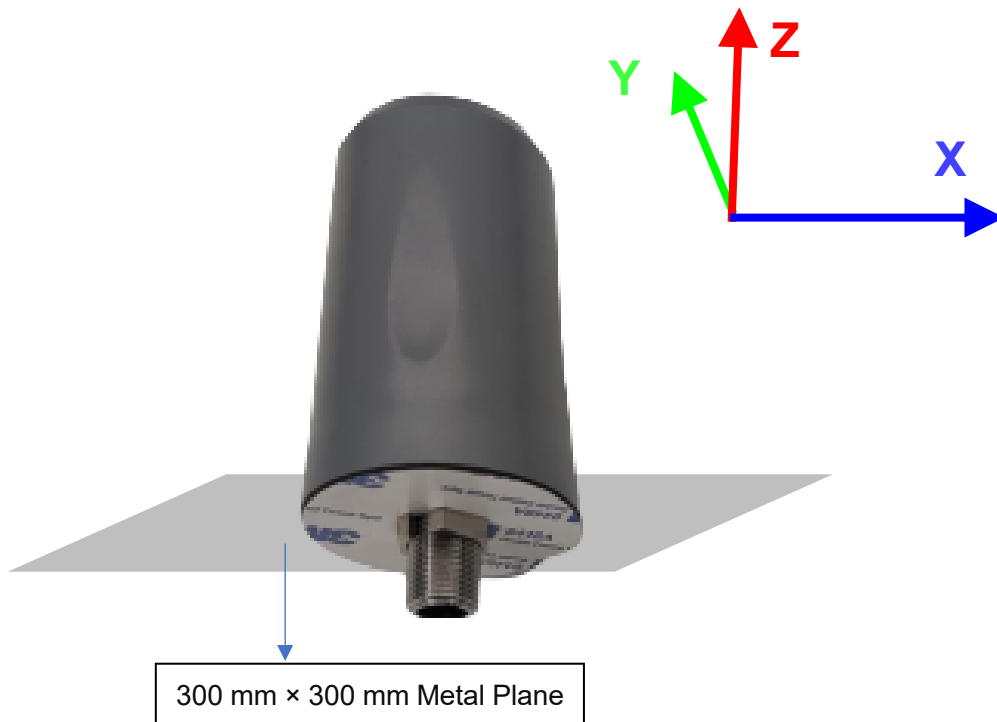


Phi=90 freq=1602MHz



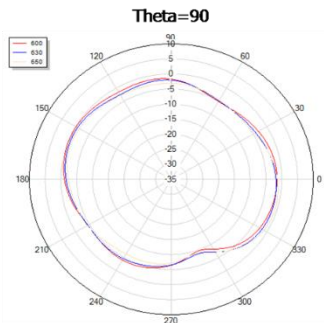
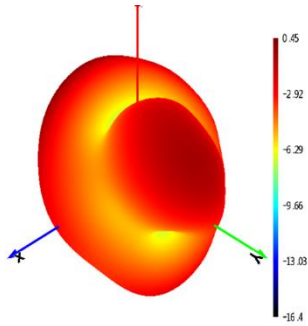
3.2.5. 3D & 2D Radiation Pattern

- Test Condition: On 300 mm × 300 mm Metal Plane
- Test Chamber: HF-S-1(5G & Wi-Fi)
- Test Chamber: GL-S-1 (GNSS)

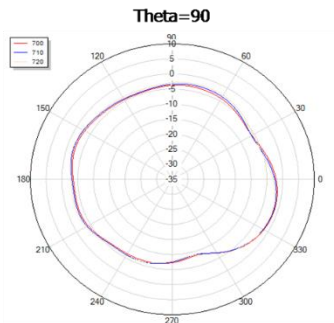
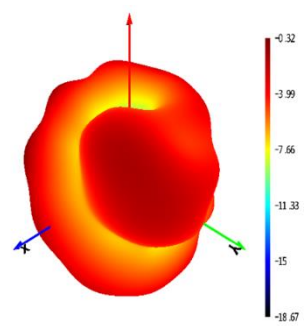


● **5G**

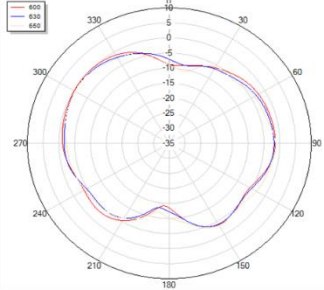
630 MHz



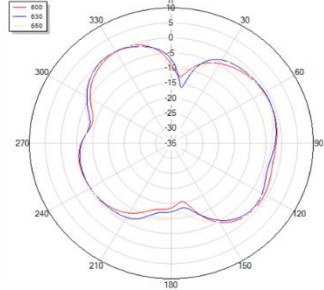
710 MHz



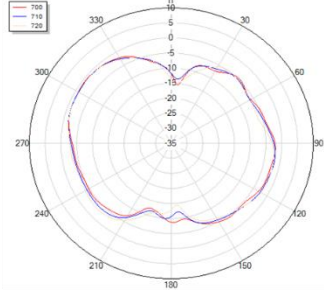
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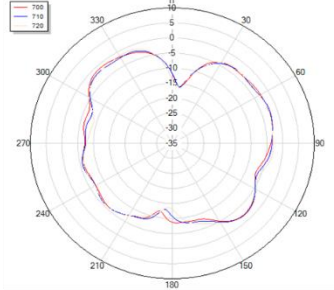
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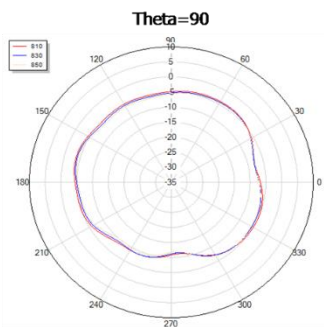
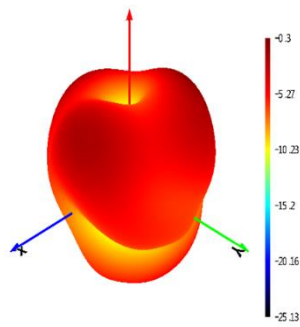
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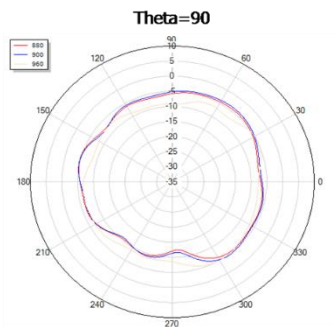
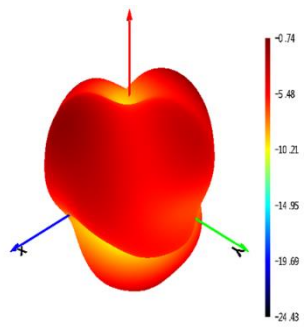
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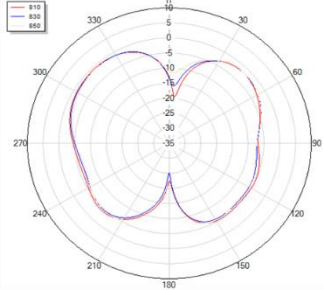
830 MHz



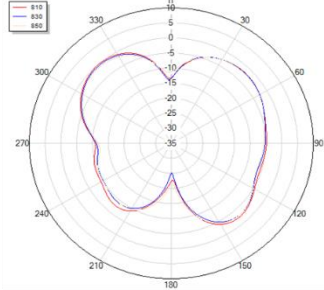
900 MHz



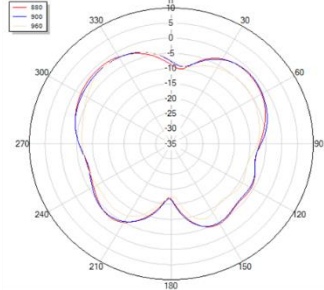
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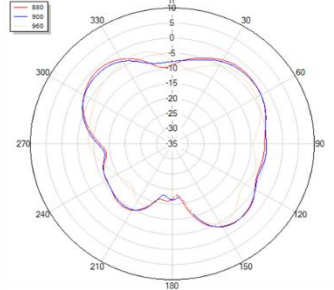
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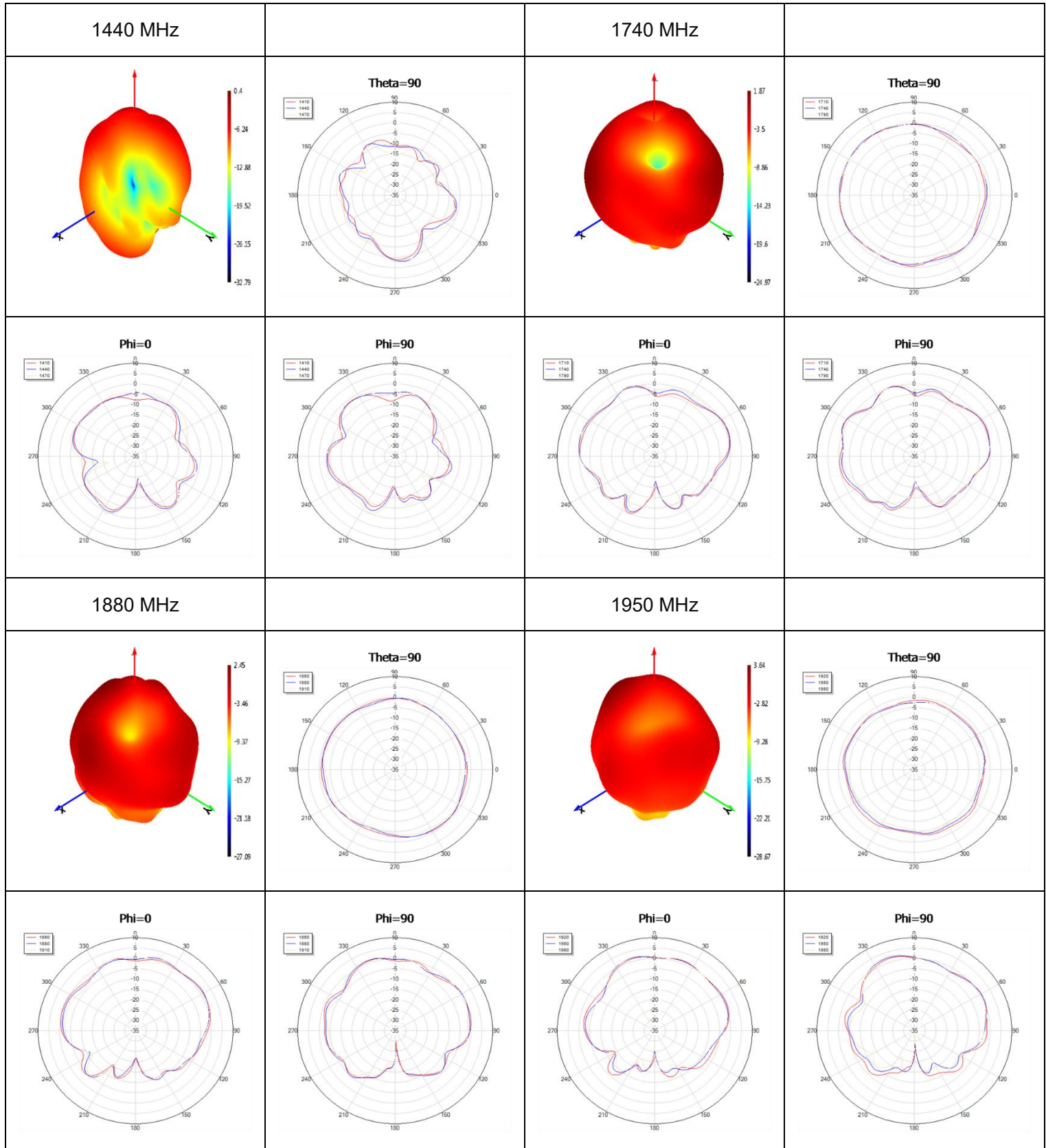


Phi=0

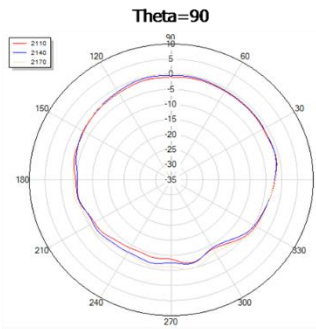
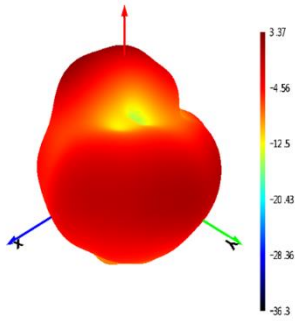


Phi=90

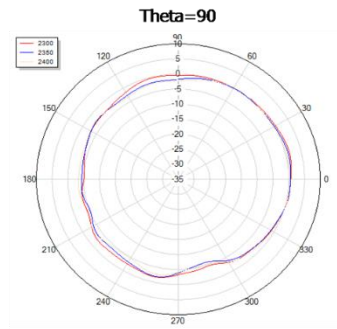
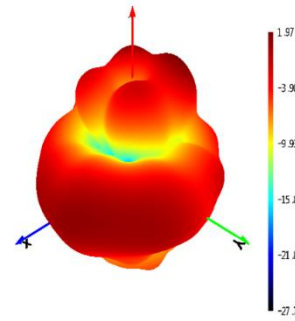




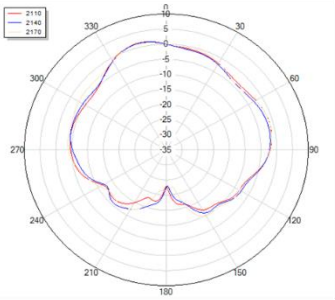
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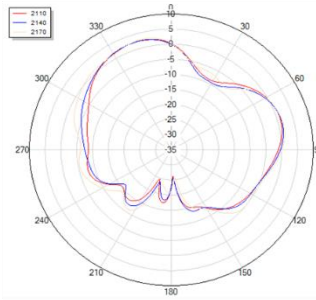
2350 MHz



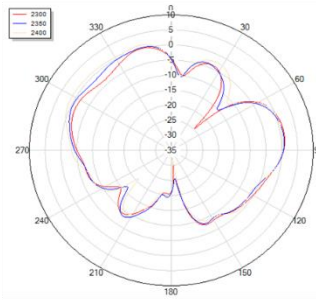
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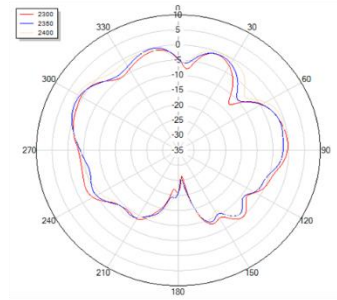
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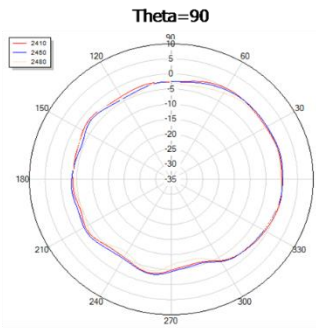
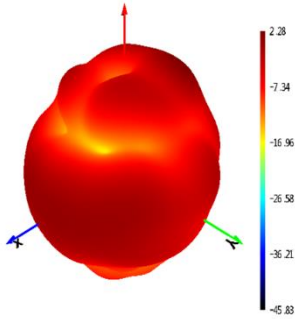
Phi=0



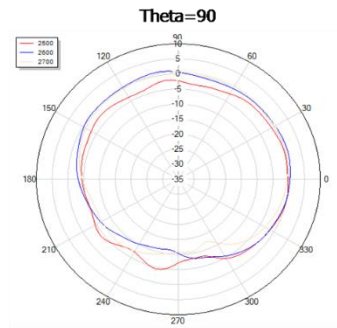
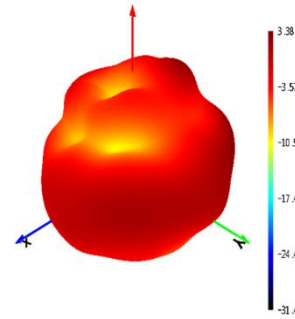
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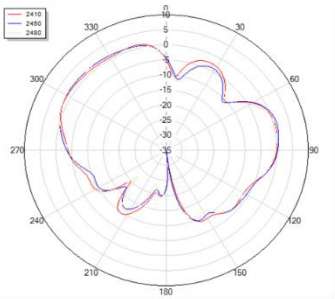
2450 MHz



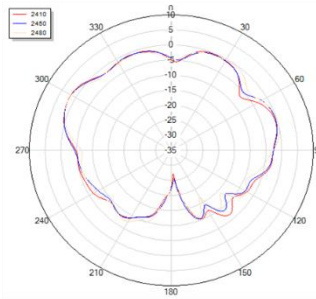
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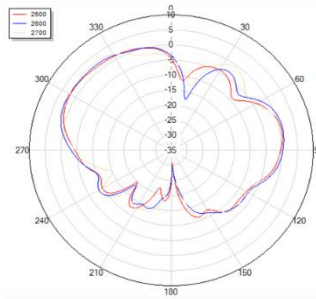
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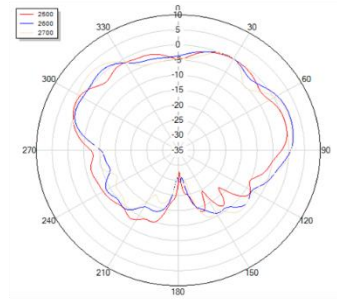
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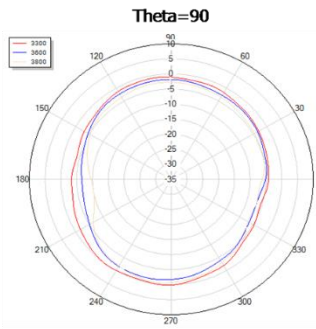
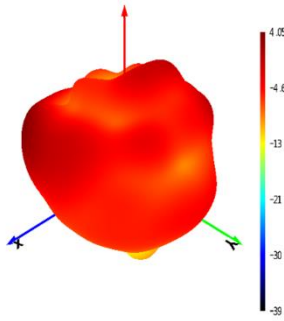
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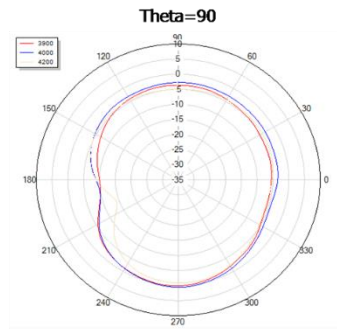
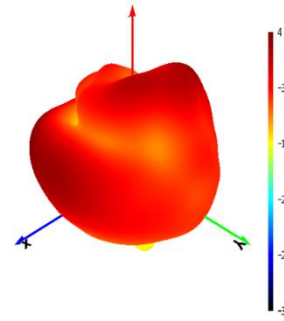
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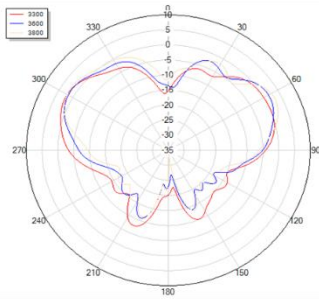
3600 MHz



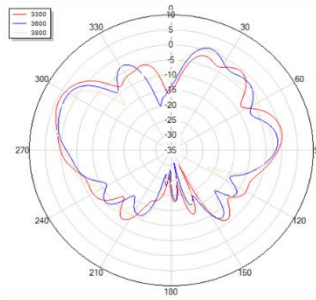
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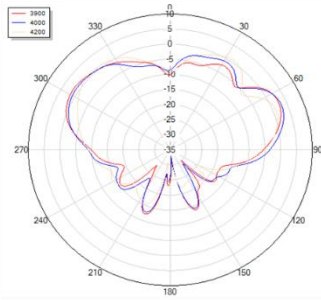
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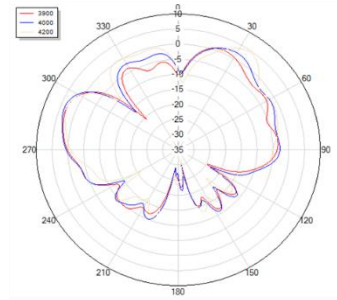
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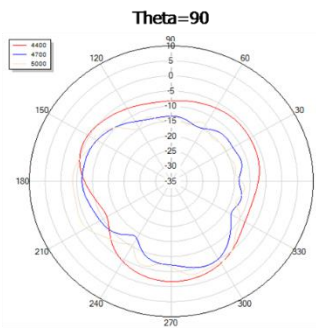
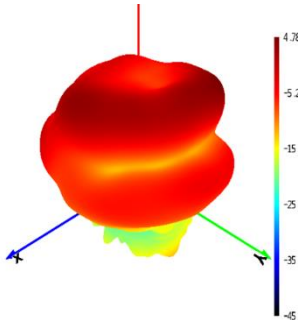
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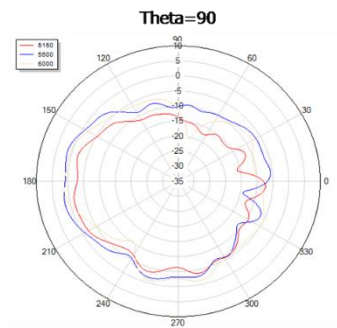
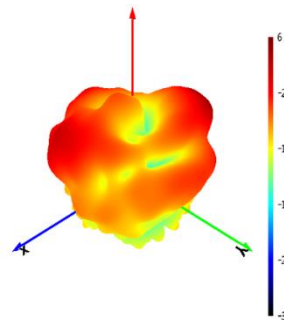
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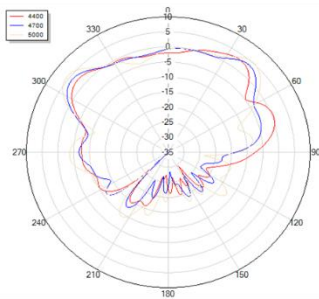
4700 MHz



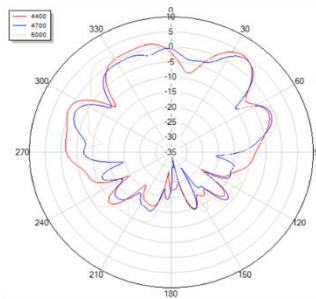
5500 MHz



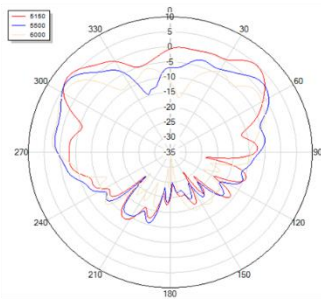
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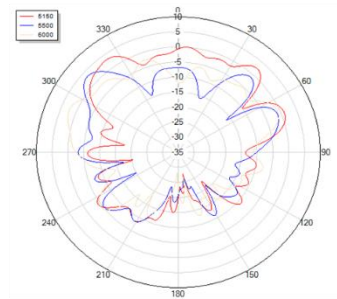
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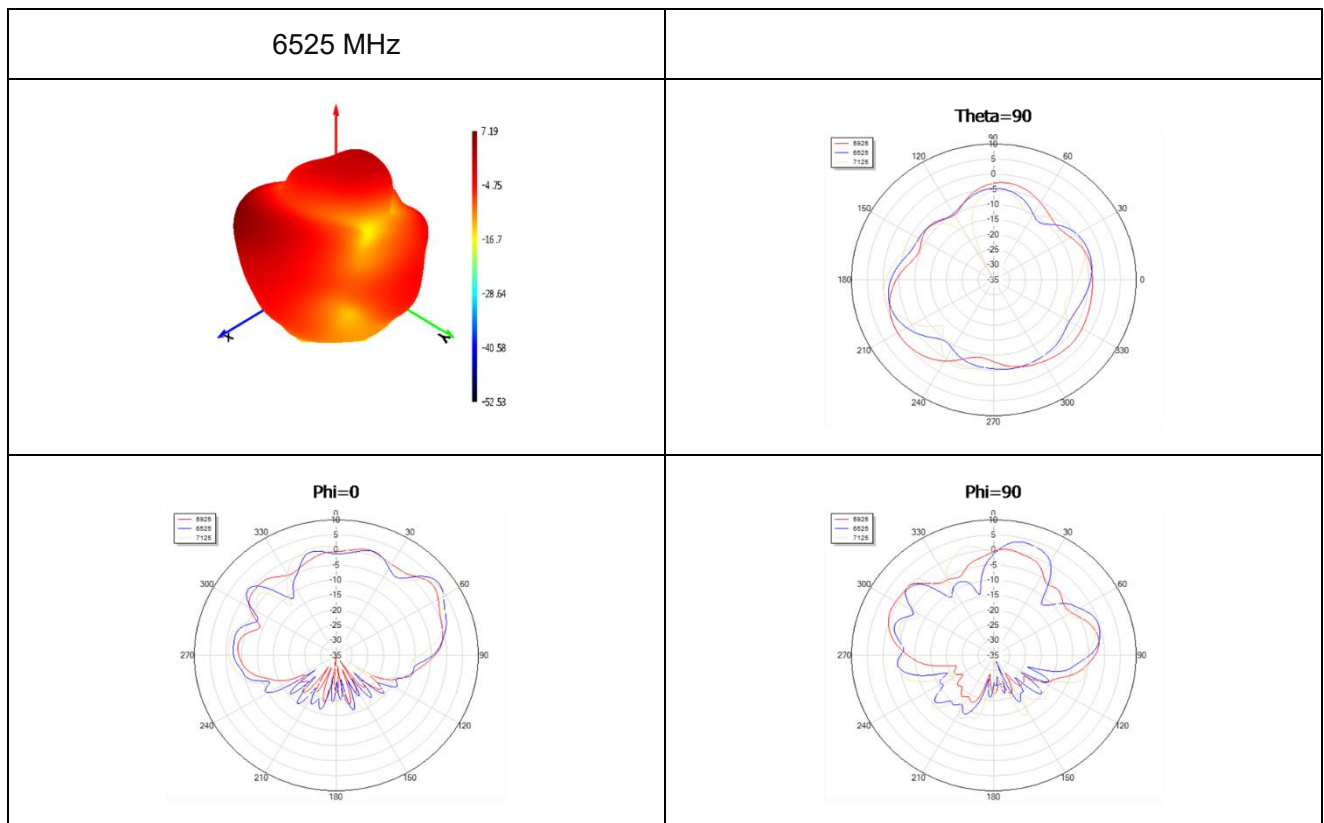
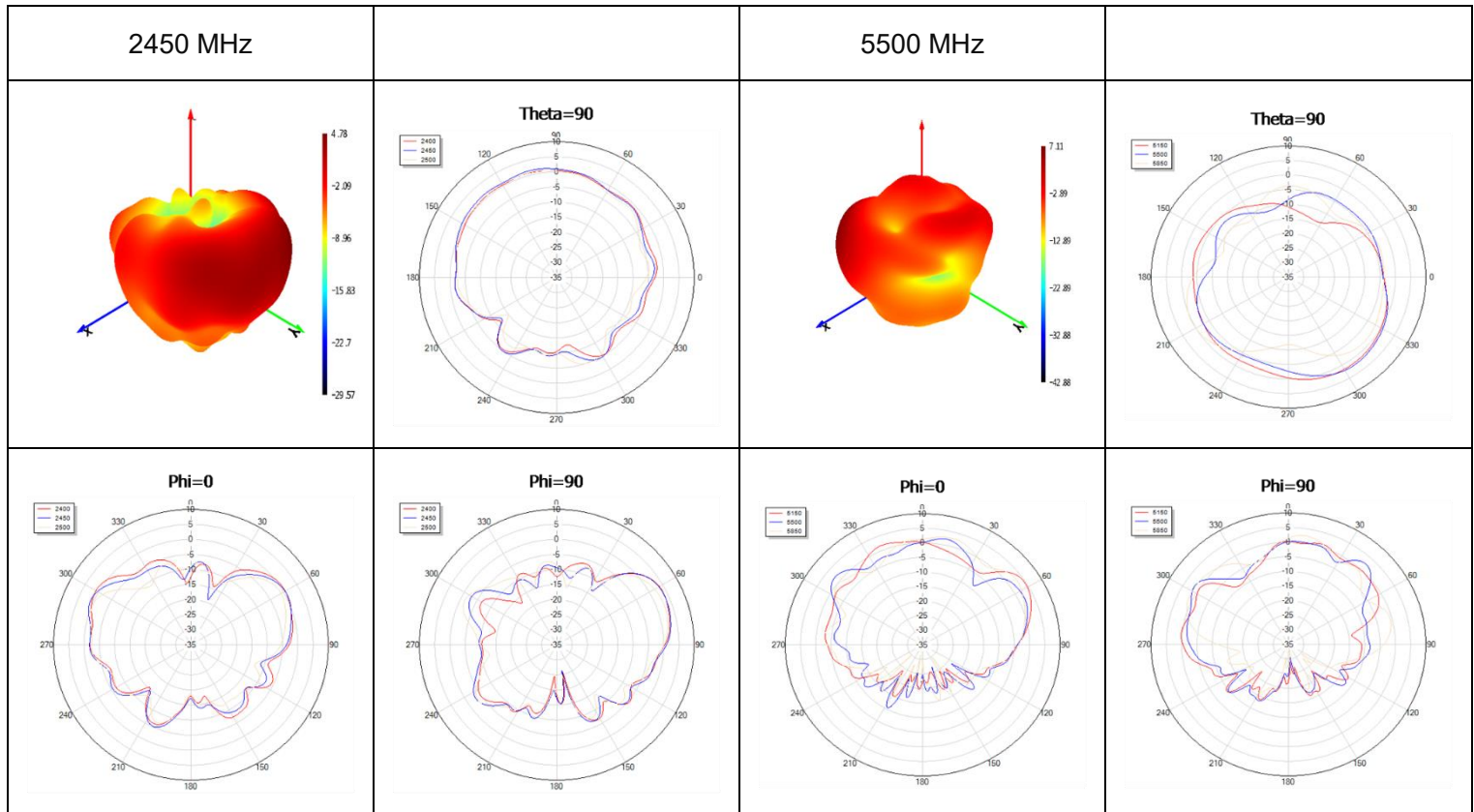
Phi=0



Phi=90



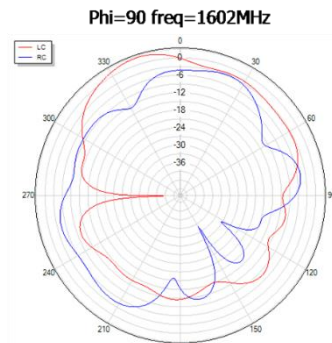
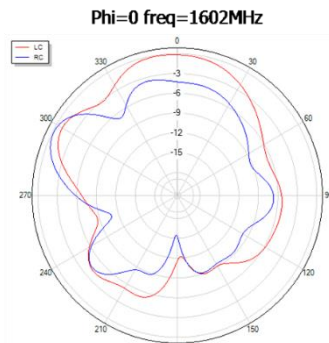
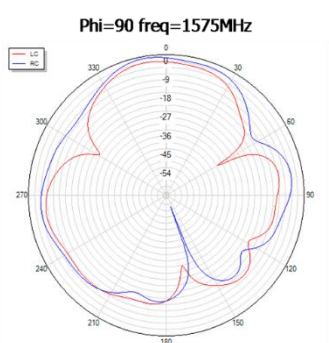
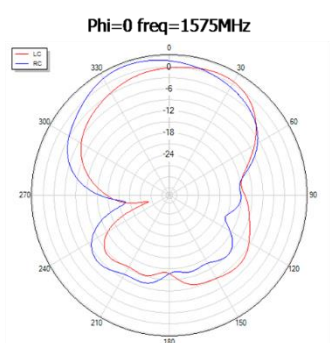
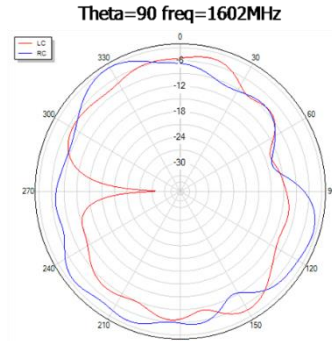
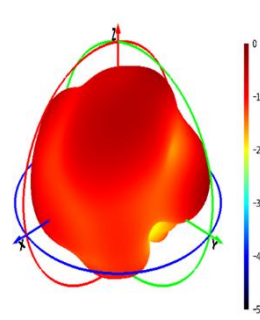
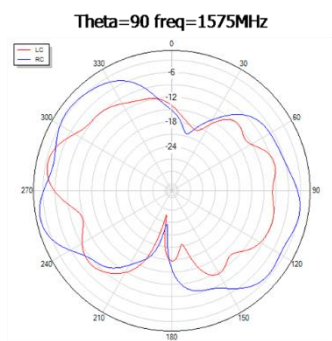
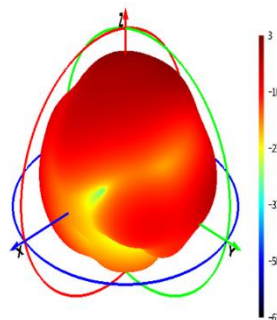
● **Wi-Fi**



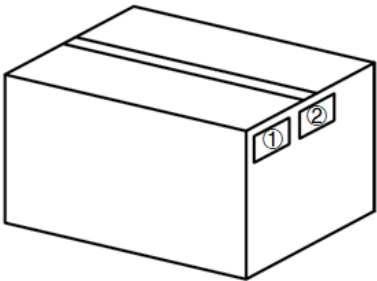
● **GNSS**

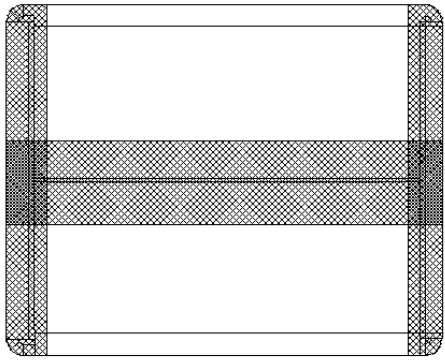
1575 MHz

1602 MHz



4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		1 antenna product in a PE bag. (1 Antenna / PE Bag)
2		Then put it into the bubble bag. 1 antenna product in a bubble bag. (1 Antenna / Bubble Bag)
3		Put the product in the knife card slot, 2 products in each card slot 12 antenna products on a layer. (36 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 = 500 × 340 × 250 mm</u>
4		Position for Attaching Labels ① Carton Label ② Quality Label

5		Sealing Cartons H-shaped sealing cartons
Note	The initial packaging method described above is for reference only, and the final actual packaging method shall be subject to the actual shipping packaging.	

Contact Us

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

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Email: info@quectel.com

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Revision History

Version	Date	Author	Note
-	2025-11-04	Morrie Du/ Rhone Wei/ Blake Xiang/ Riva Ren/ Rainey Liao	Creation of the document
1.0	2025-11-04	Morrie Du/ Rhone Wei/ Blake Xiang/ Riva Ren/ Rainey Liao	First official release



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