



Antenna Datasheet

Product OC: Y0SRQ0MA0AA

Version: 1.0

Date: 2026-04-01

Product Name: 4in1 Combo Antenna

Key Features:

Frequency Band:

ANT 3: 600~960 MHz, 1420~2690 MHz, 3300~5925 MHz

Wi-Fi 1: 2400~2500 MHz, 5150~7125 MHz

Wi-Fi 2: 2400~2500 MHz, 5150~7125 MHz

GNSS: 1164~1189 MHz, 1559~1586 MHz

Dimensions: 118 mm × 63 mm × 28.65 mm

RoHS Compliant

IP52

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1 Specification

Test Condition: Free Space

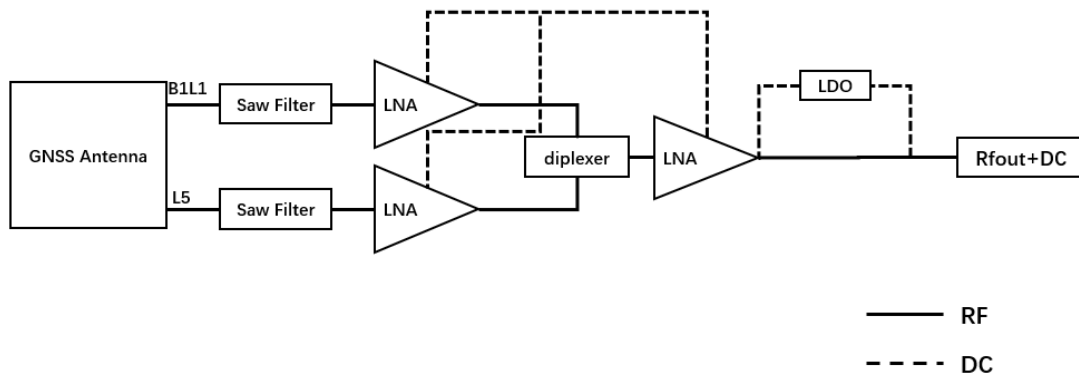
1.1. Electrical

Electrical		
Frequency Range	ANT 3	600~960 MHz, 1420~2690 MHz, 3300~5925 MHz
	Wi-Fi 1	2400~2500 MHz, 5150~7125 MHz
	Wi-Fi 2	2400~2500 MHz, 5150~7125 MHz
	GNSS	1164~1189MHz, 1559~1586 MHz
Radiation Pattern	ANT 3	Omni-directional
	Wi-Fi 1	Omni-directional
	Wi-Fi 2	Omni-directional
	GNSS	Directional
Polarization	ANT 3	Linear
	Wi-Fi 1	Linear
	Wi-Fi 2	Linear
	GNSS	RHCP
Impedance		50 Ω

1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	118 mm × 63 mm × 28.65 mm
Casing Material & Color	PC+ABS & Black
Cable Type & Color & Length	RG174 LL & Black & 150 mm
Connector Type	Mini fakra Male -C
Mounting Type	Screw
Weight	Typ. 87 g
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Ingress Protection (IP) Rating	IP52
RoHS Compliant	Yes

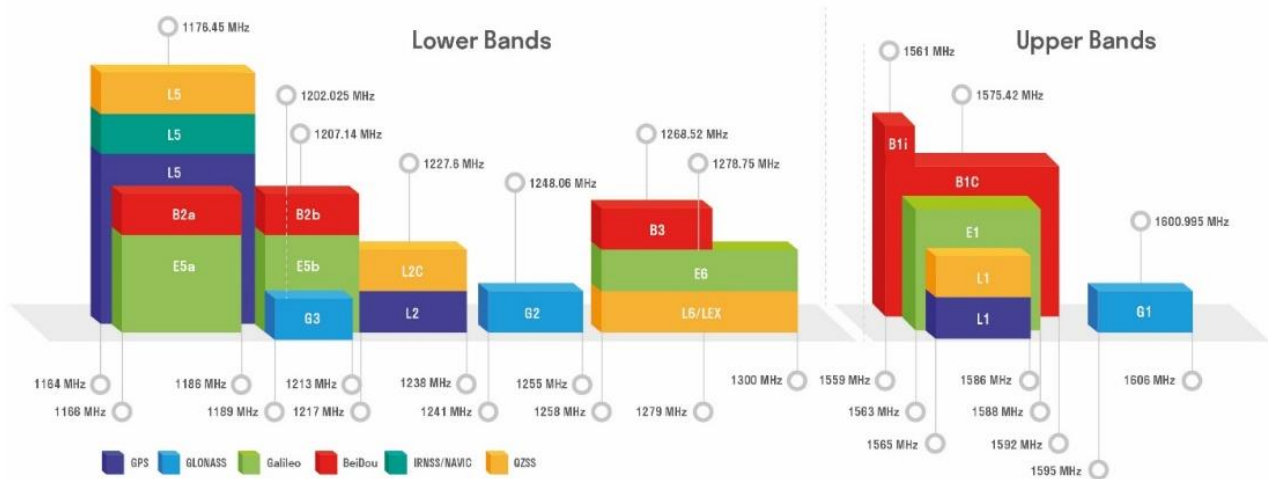
1.3. Block Diagram (Active Antenna)



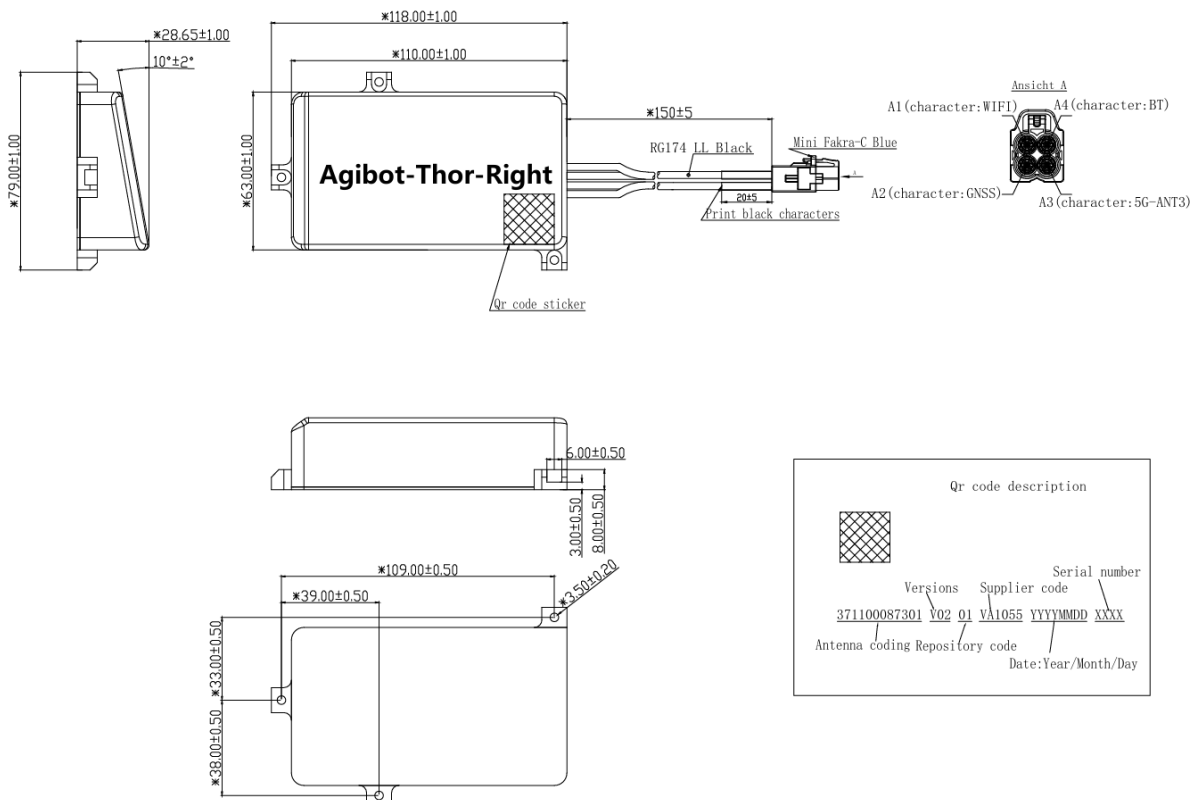
1.4. Supported GNSS Frequency Bands

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-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)	
	√	√	-	-	
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



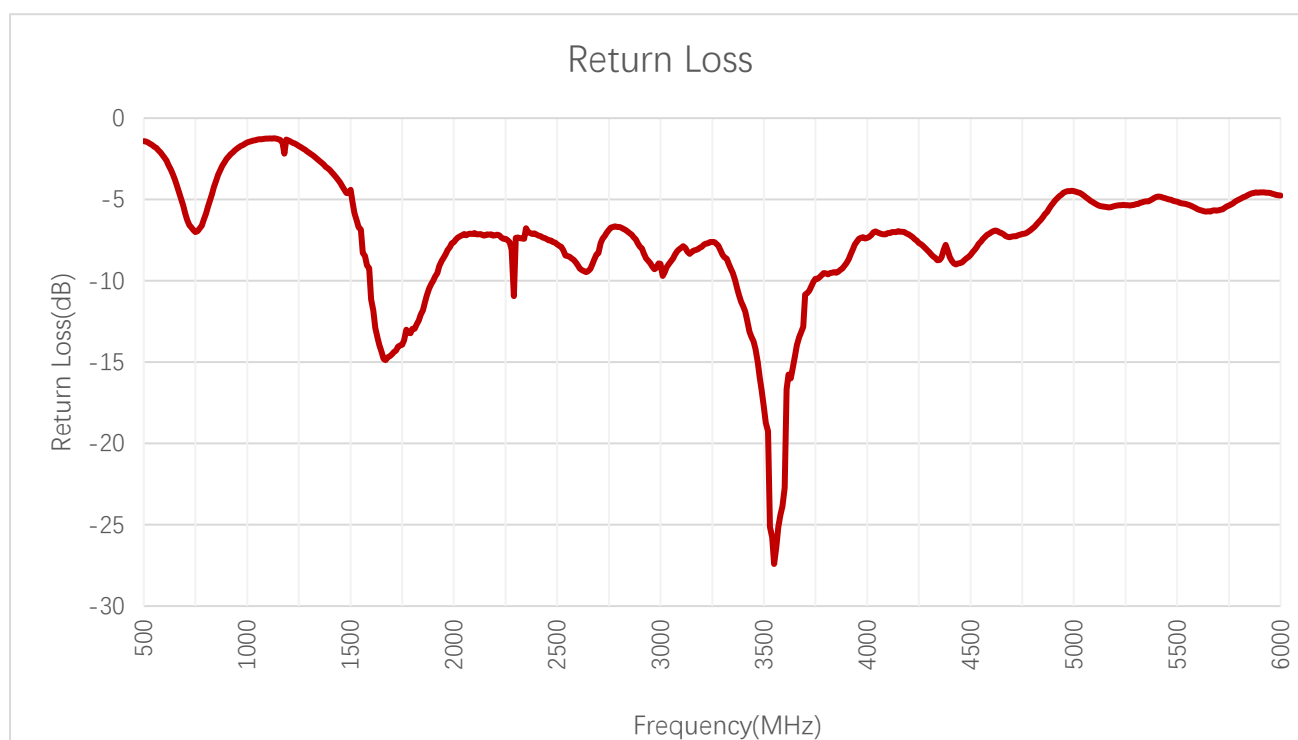
2 Drawing



3 Detailed Performance

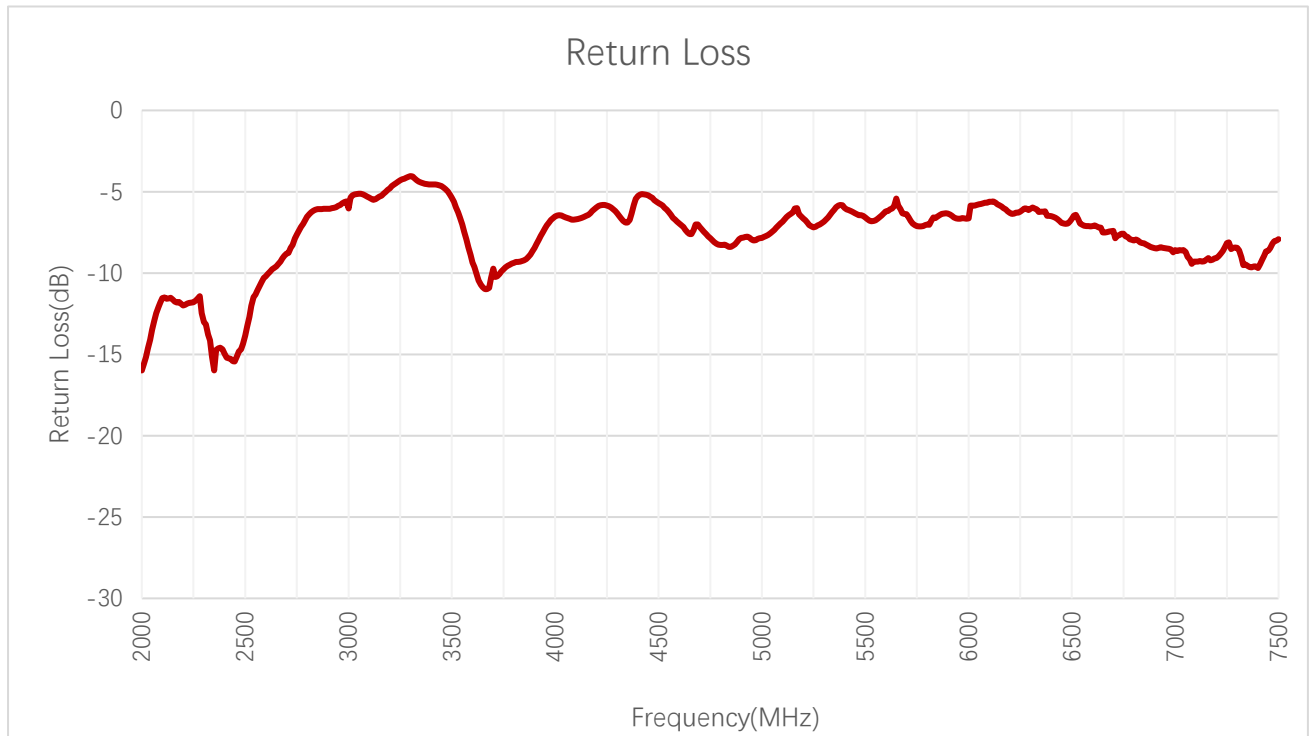
3.1. S-Parameter Test

3.1.1. Return Loss



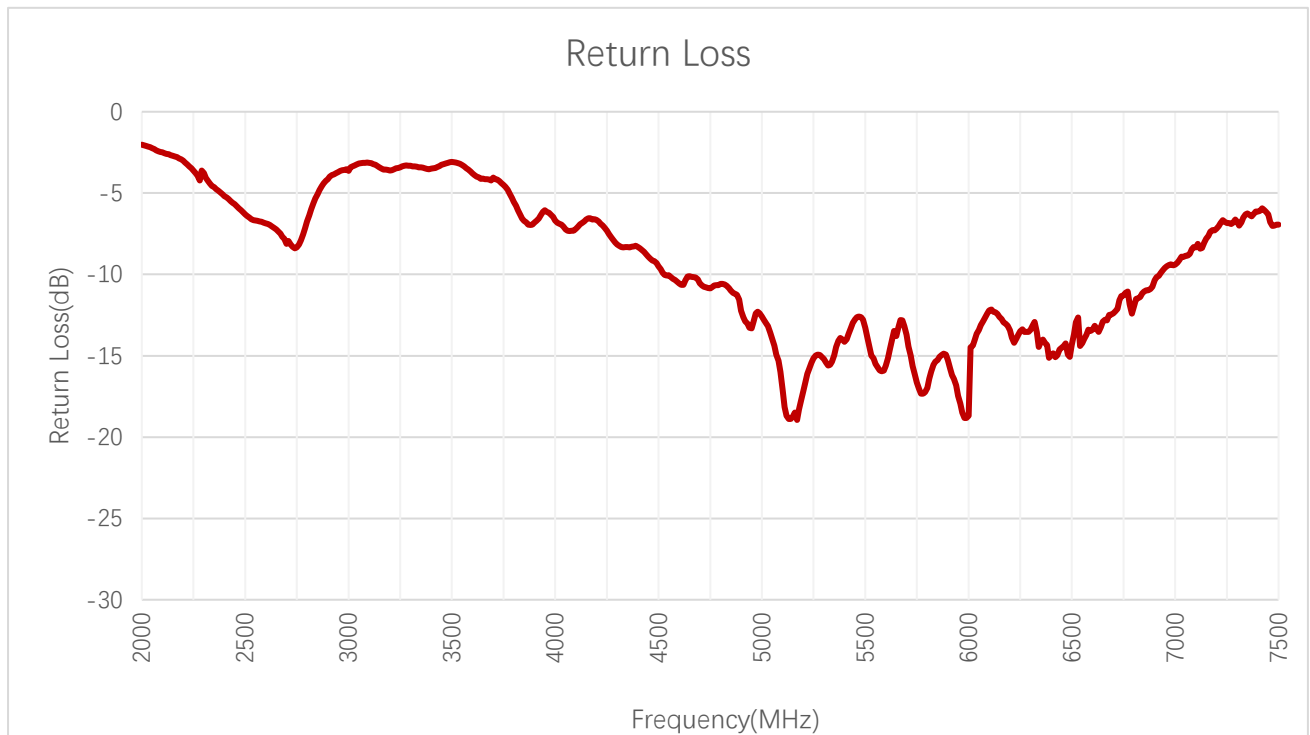
Return Loss (dB) – ANT 3

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Return Loss (dB)	-2.4	-3.1	-6.2	-4.7	-2.5	-1.8	-3.8	-14.4	-14.0	-10.5
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	5950
Return Loss (dB)	-8.6	-7.2	-6.8	-7.4	-9.0	-8.4	-7.3	-4.5	-5.1	-4.6

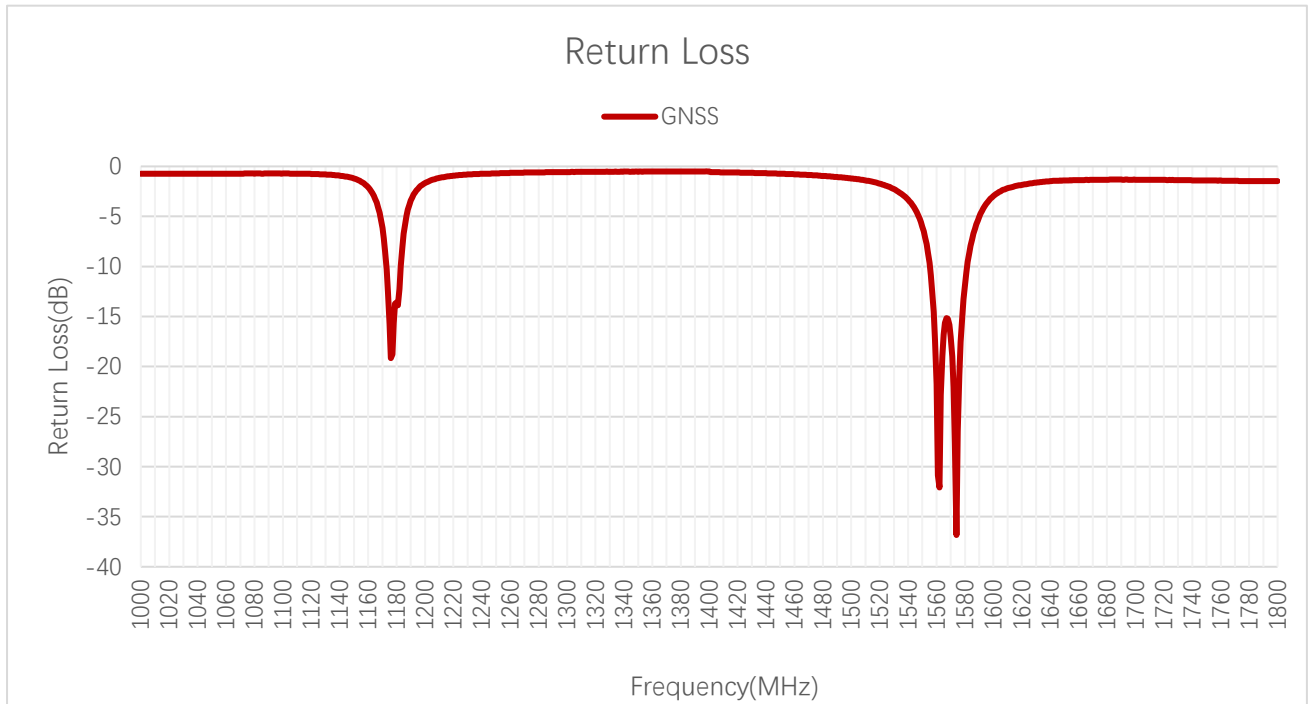


Return Loss (dB) – Wi-Fi 1

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5920	6000	6720	7120
Return Loss (dB)	-15.0	-15.4	-13.8	-6.3	-6.6	-6.5	-6.5	-6.6	-7.7	-9.2



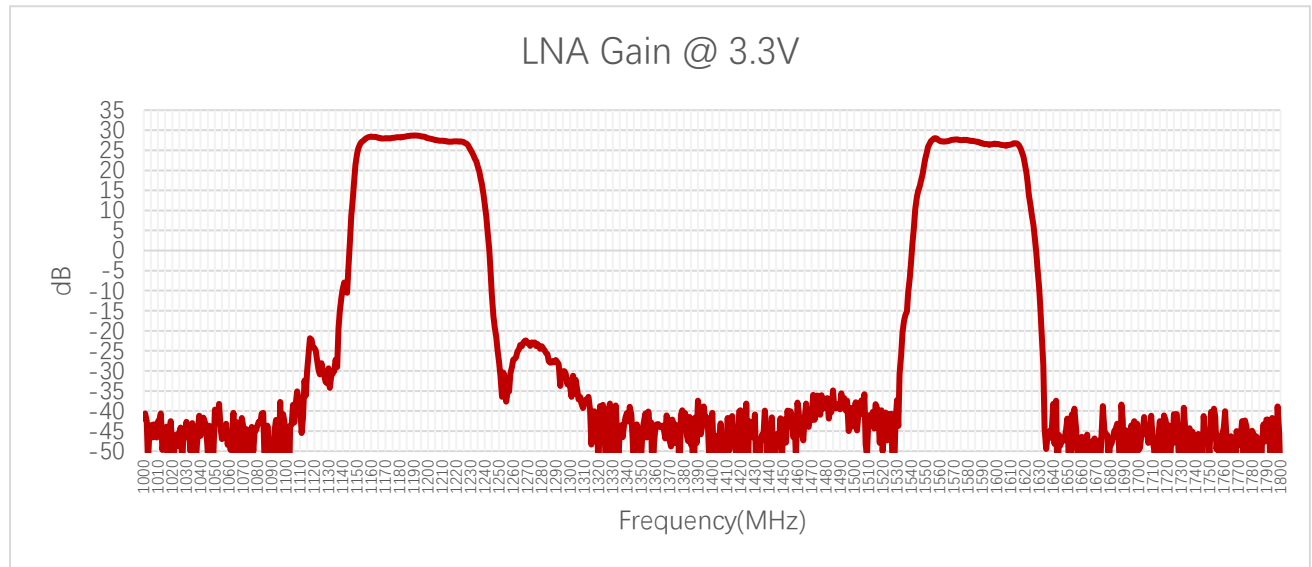
Return Loss (dB) – Wi-Fi 2										
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5920	6000	6720	7120
Return Loss (dB)	-5.2	-5.7	-6.3	-18.7	-13.3	-15.3	-16.2	-18.7	-12.1	-8.4



Return Loss (dB) – GNSS

Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
Return Loss (dB)	-19.1	-	-	-	-	-	-26.5	-

3.1.2. GNSS LNA Gain

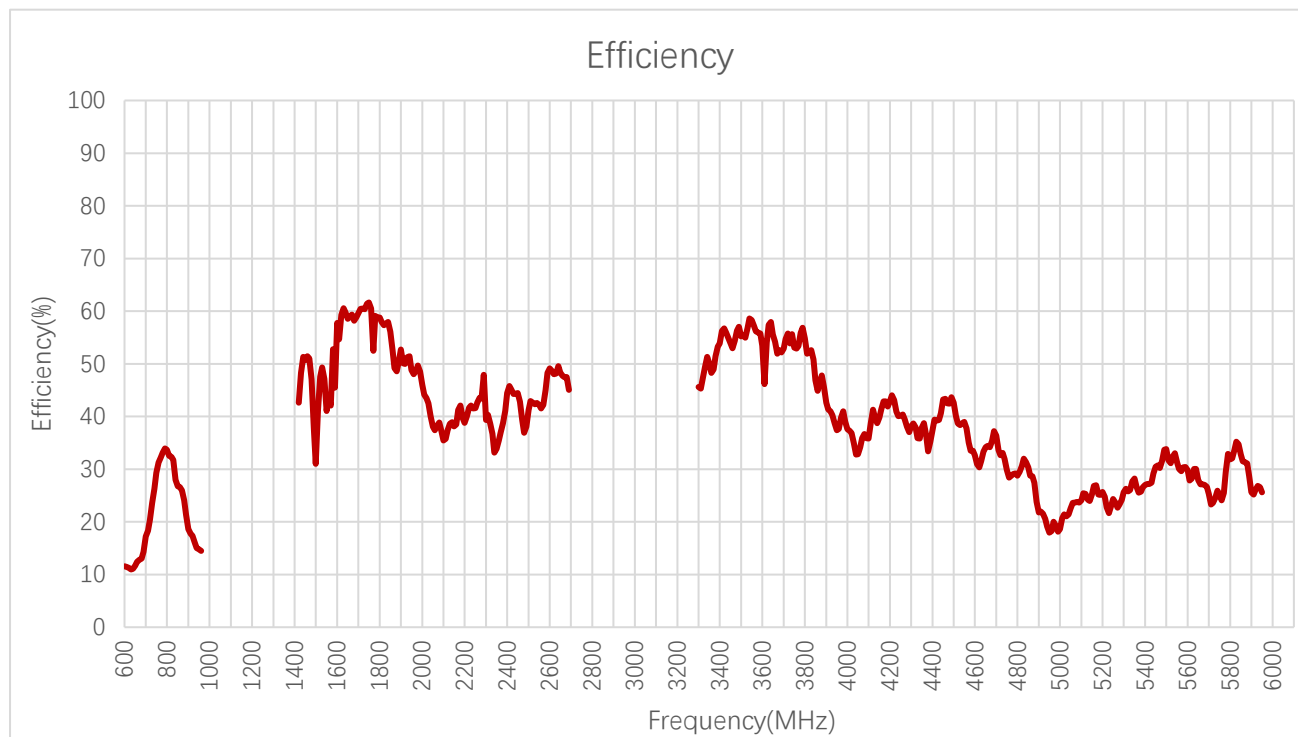


LNA Gain (dB)

Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
LNA Gain (dB)	28.1	-	-	-	-	-	27.6	-

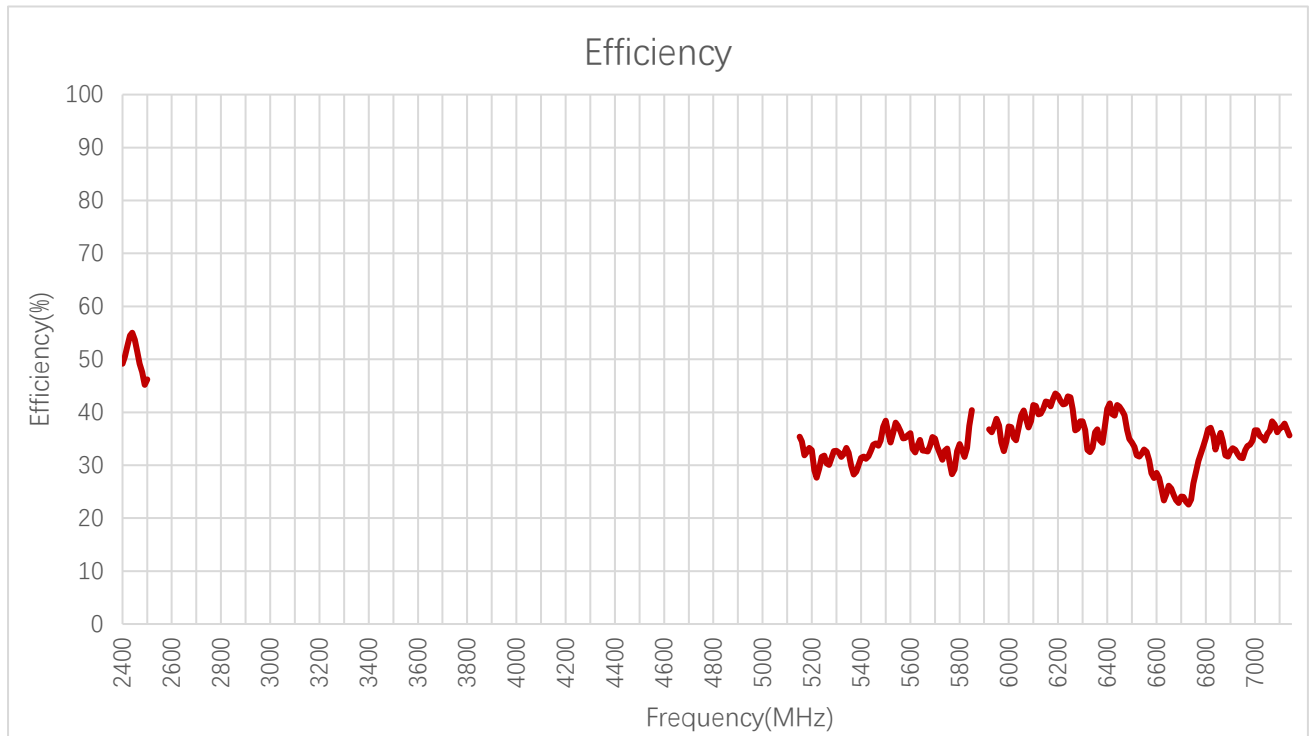
3.2. Radiation Performance Test

3.2.1. Efficiency



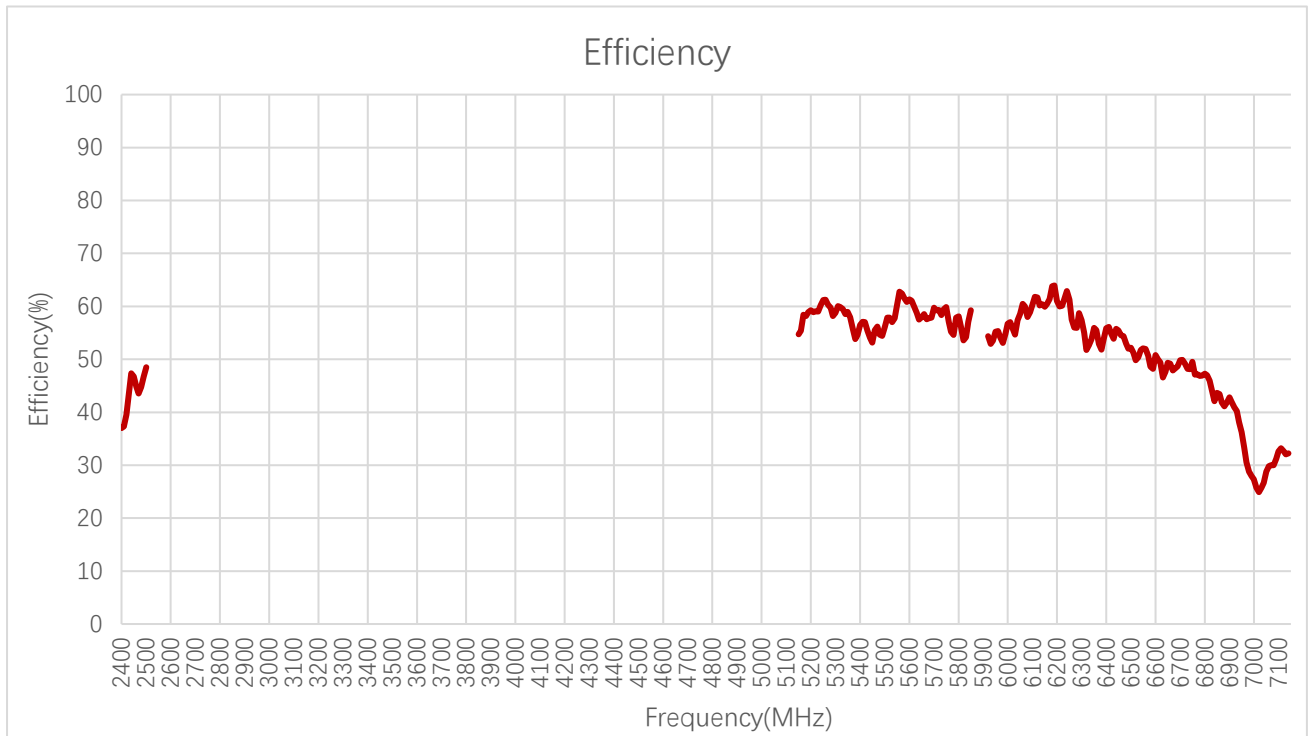
Efficiency (%) – ANT 3

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Efficiency (%)	11.6	11.0	18.3	31.8	18.6	14.5	51.3	60.5	61.4	48.6
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	5920
Efficiency (%)	48.9	38.9	33.9	44.4	49.1	45.1	36.4	18.7	33.8	26.1

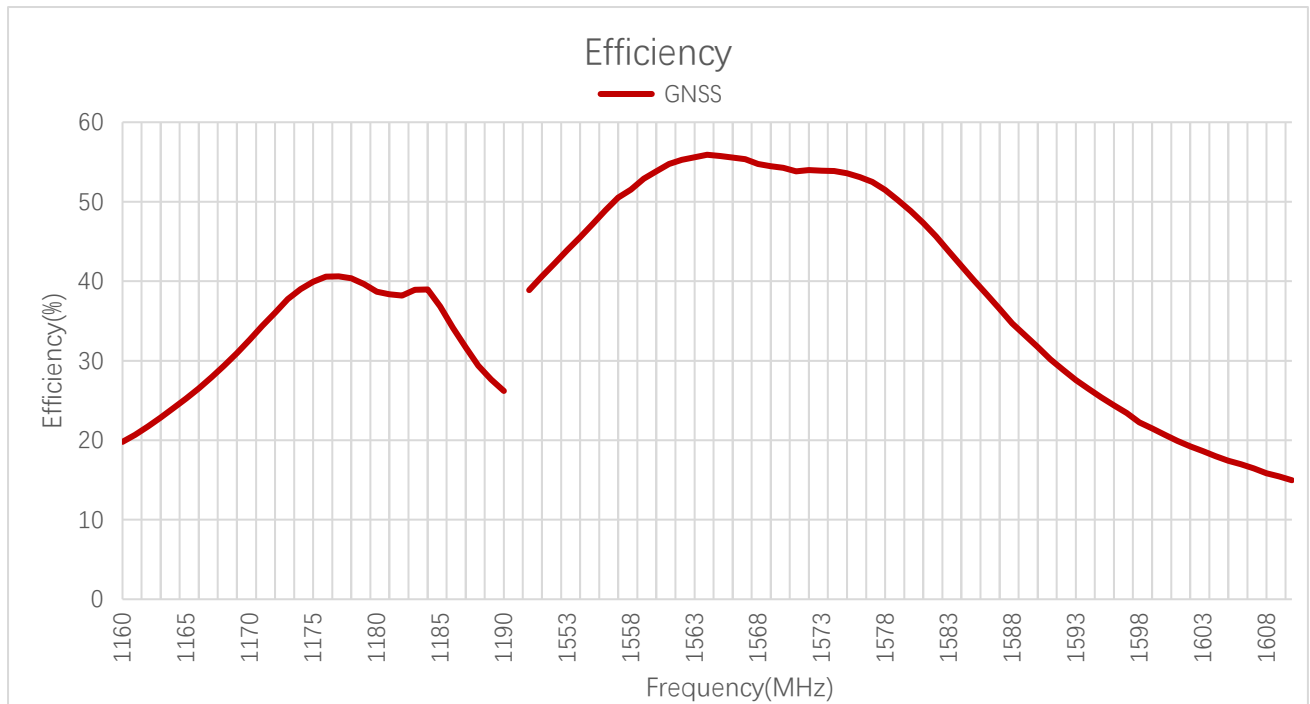


Efficiency (%) – Wi-Fi 1

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5920	6000	6720	7120
Efficiency (%)	49.2	53.7	46.2	35.4	38.4	40.4	36.8	37.3	23.1	37.9



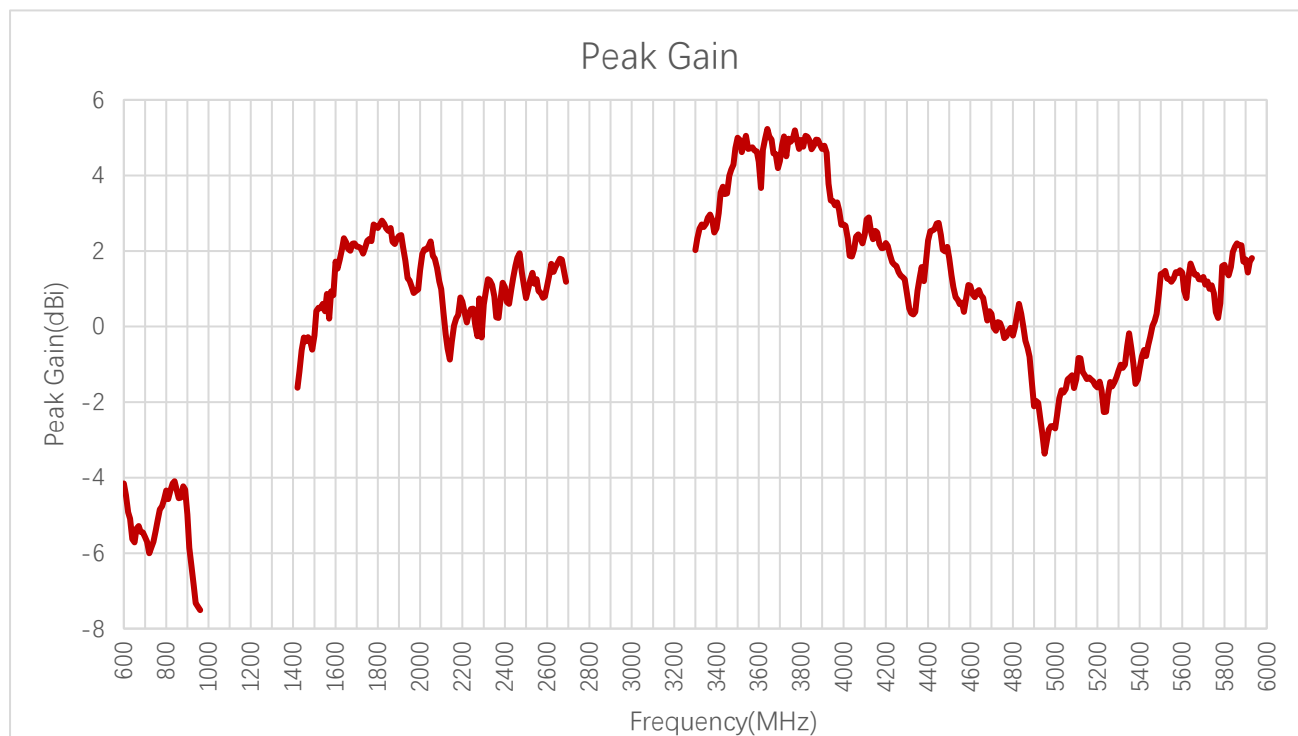
Efficiency (%) – Wi-Fi 2										
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5920	6000	6720	7120
Efficiency (%)	37.0	46.8	48.5	54.7	56.1	59.3	54.4	56.7	49.2	32.7

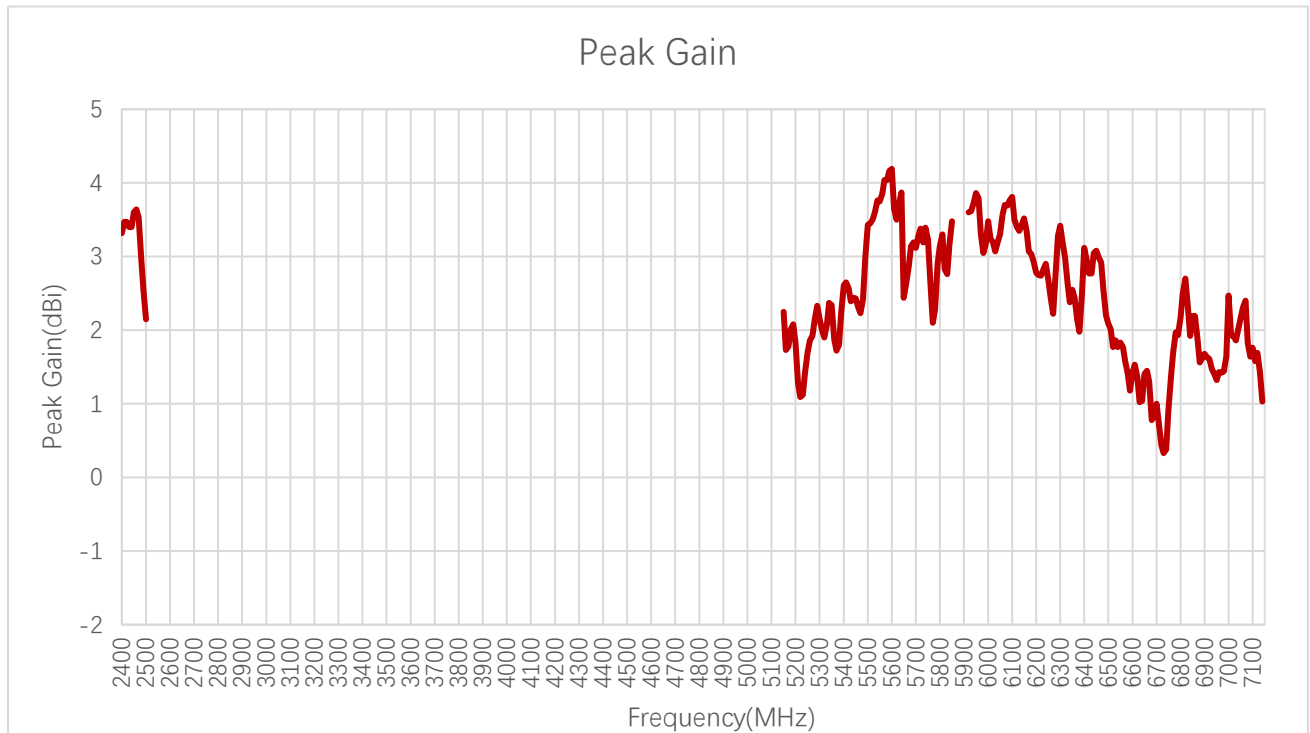


Efficiency (%) – GNSS

Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
Efficiency (%)	40.6	-	-	-	-	-	53.6	-

3.2.2. Peak Gain



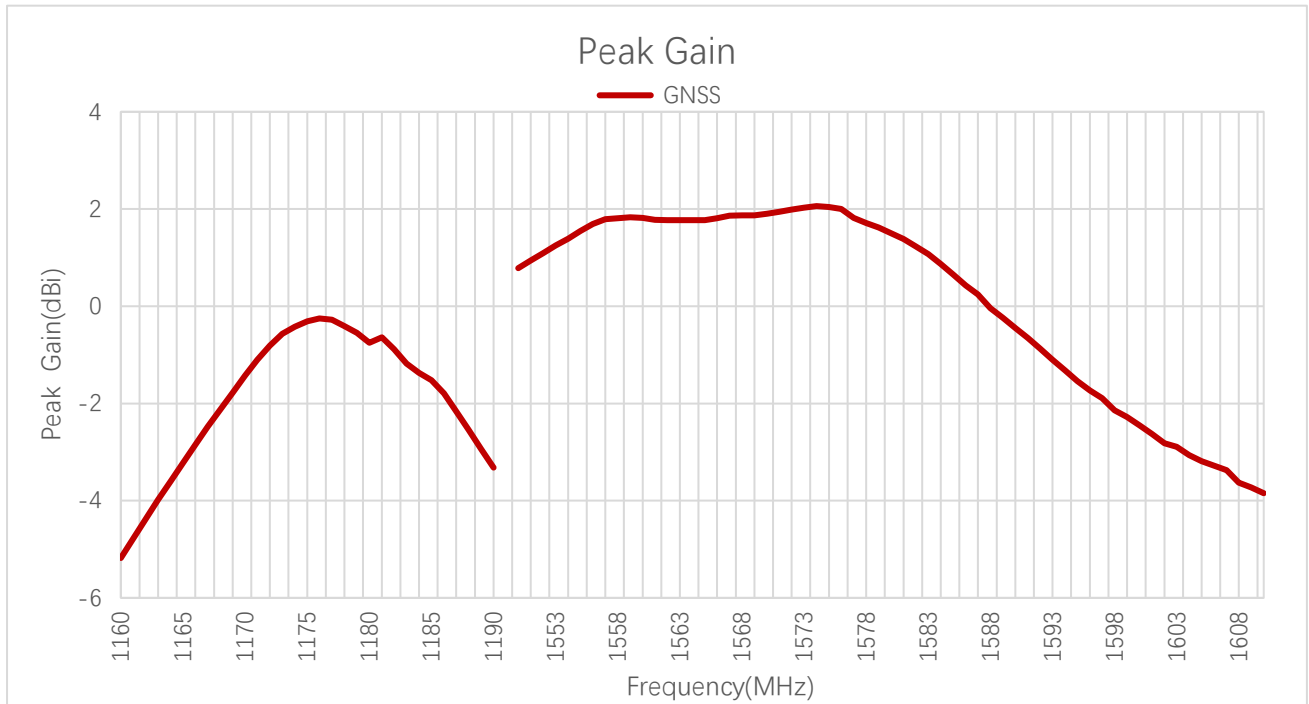


Peak Gain (dBi) – Wi-Fi 1

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5920	6000	6720	7120
Peak Gain (dBi)	3.3	3.6	2.2	2.3	3.4	3.5	3.6	3.5	0.4	1.7



Peak Gain (dBi) – Wi-Fi 2										
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6000	6720	7120
Peak Gain (dBi)	2.3	2.7	1.8	3.1	4.4	3.5	3.7	4.0	2.9	1.0

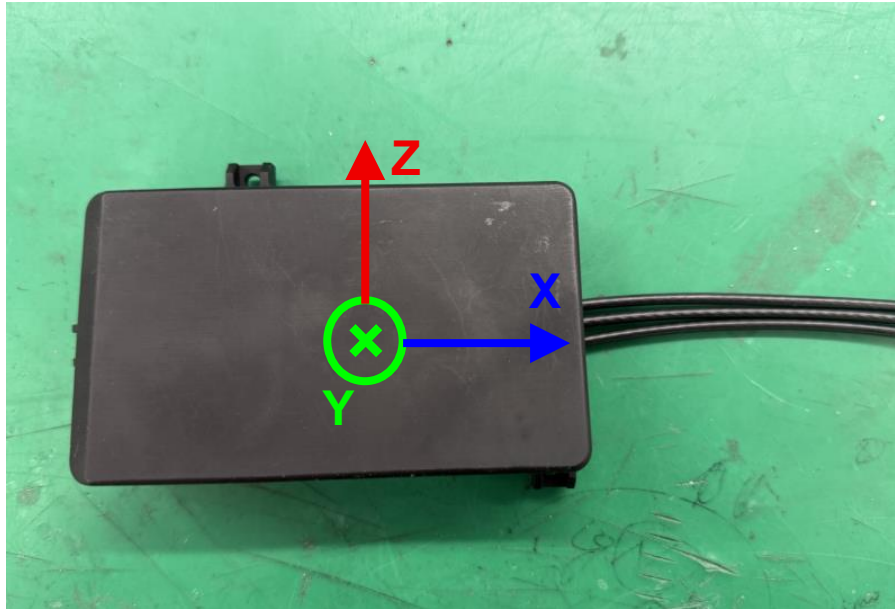


Peak Gain (dBi) – GNSS

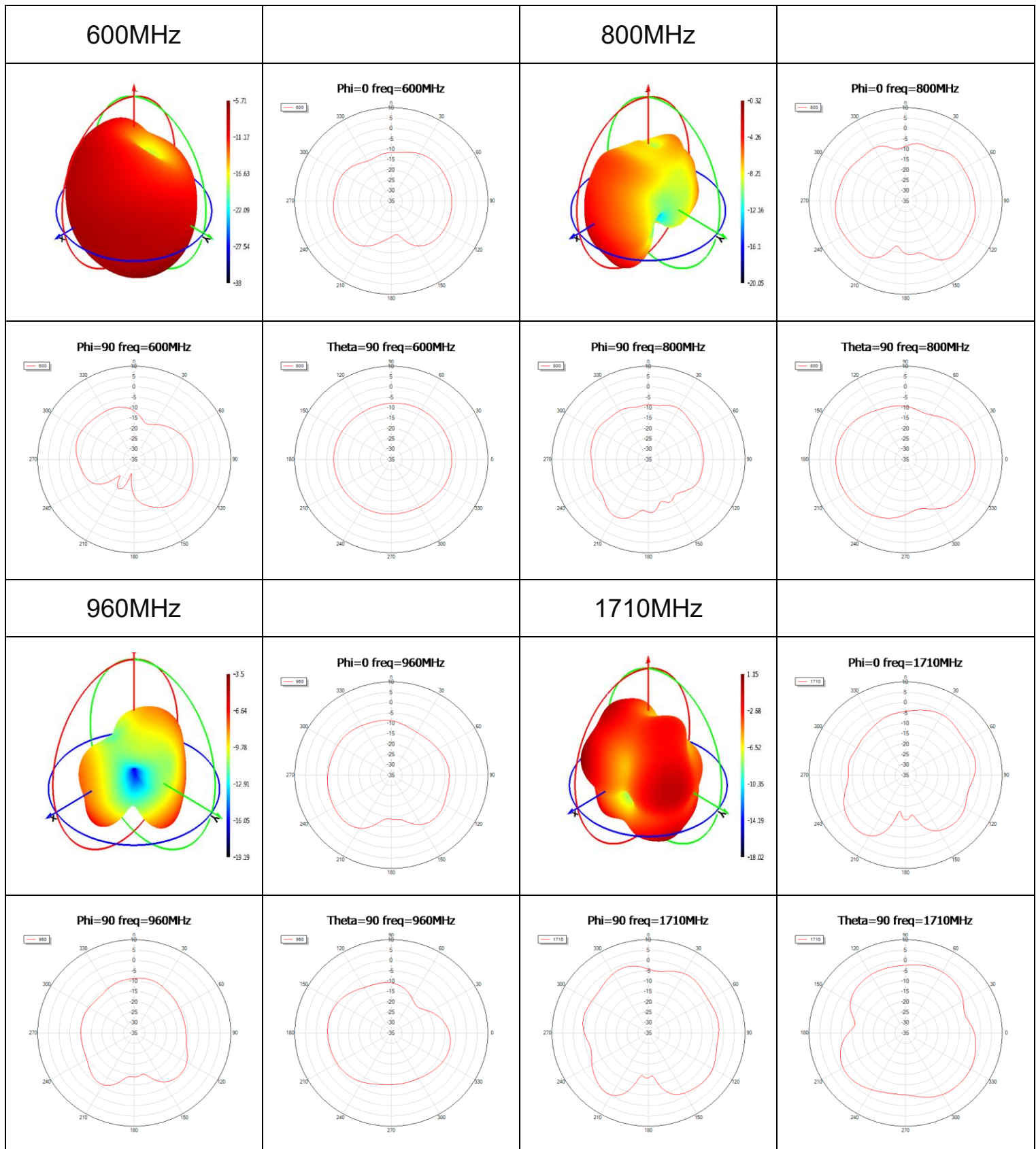
Frequency (MHz)	1176	1207	1227	1248	1268	1561	1575	1602
Peak Gain (dBi)	-0.25	-	-	-	-	-	2.04	-

3.2.3. 2D & 3D Radiation Pattern

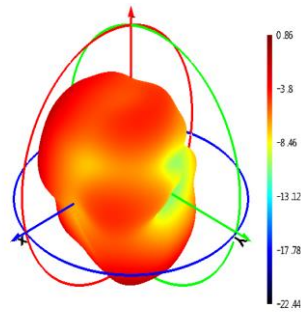
- Test Condition: Free Space
- Test Chamber: HF-G-1



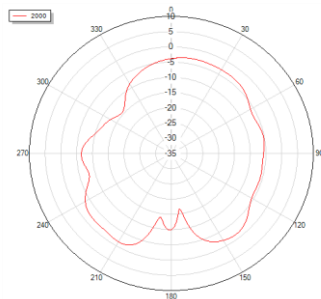
● ANT 3



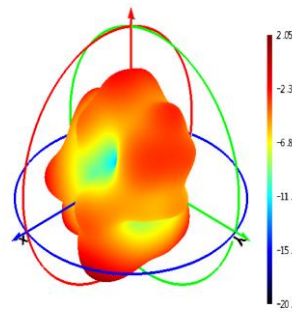
2000MHz



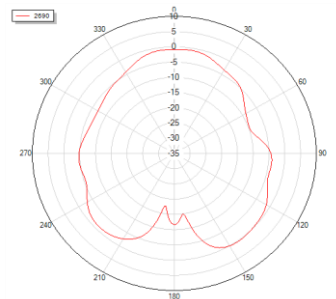
Phi=0 freq=2000MHz



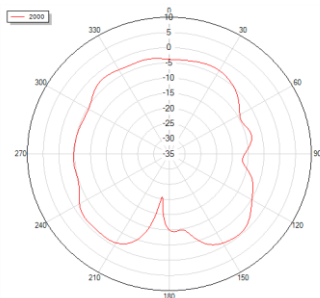
2690MHz



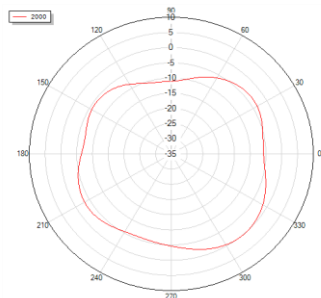
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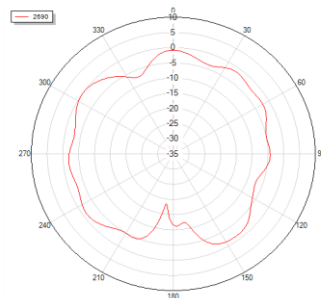
Phi=90 freq=2000MHz



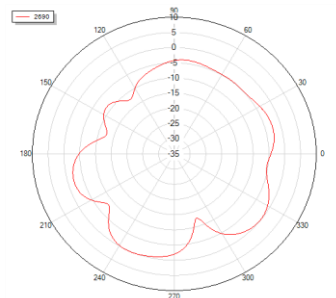
Theta=90 freq=2000MHz



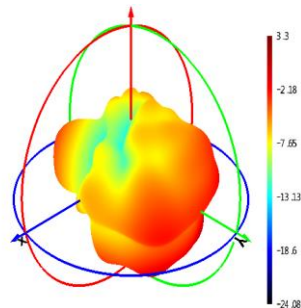
Phi=90 freq=2690MHz



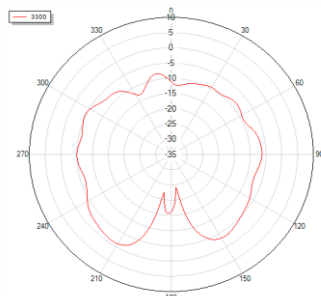
Theta=90 freq=2690MHz



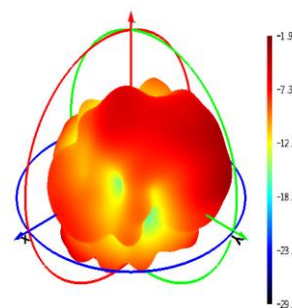
3300MHz



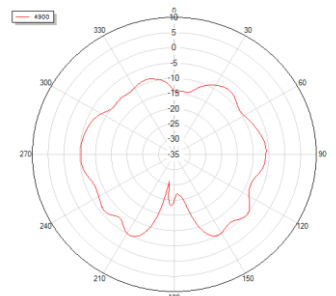
Phi=0 freq=3300MHz



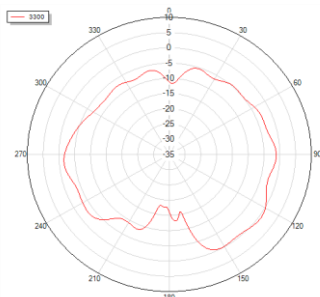
4900MHz



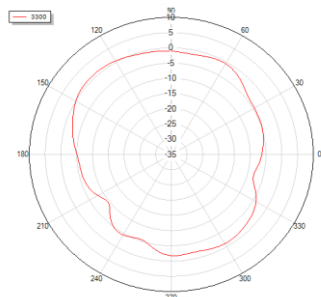
Phi=0 freq=4900MHz



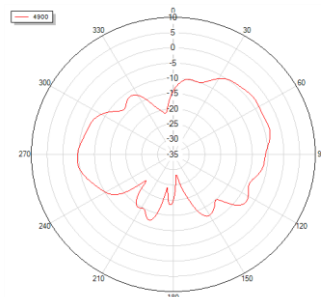
Phi=90 freq=3300MHz



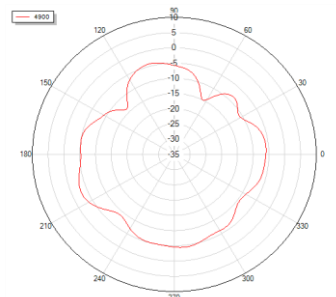
Theta=90 freq=3300MHz

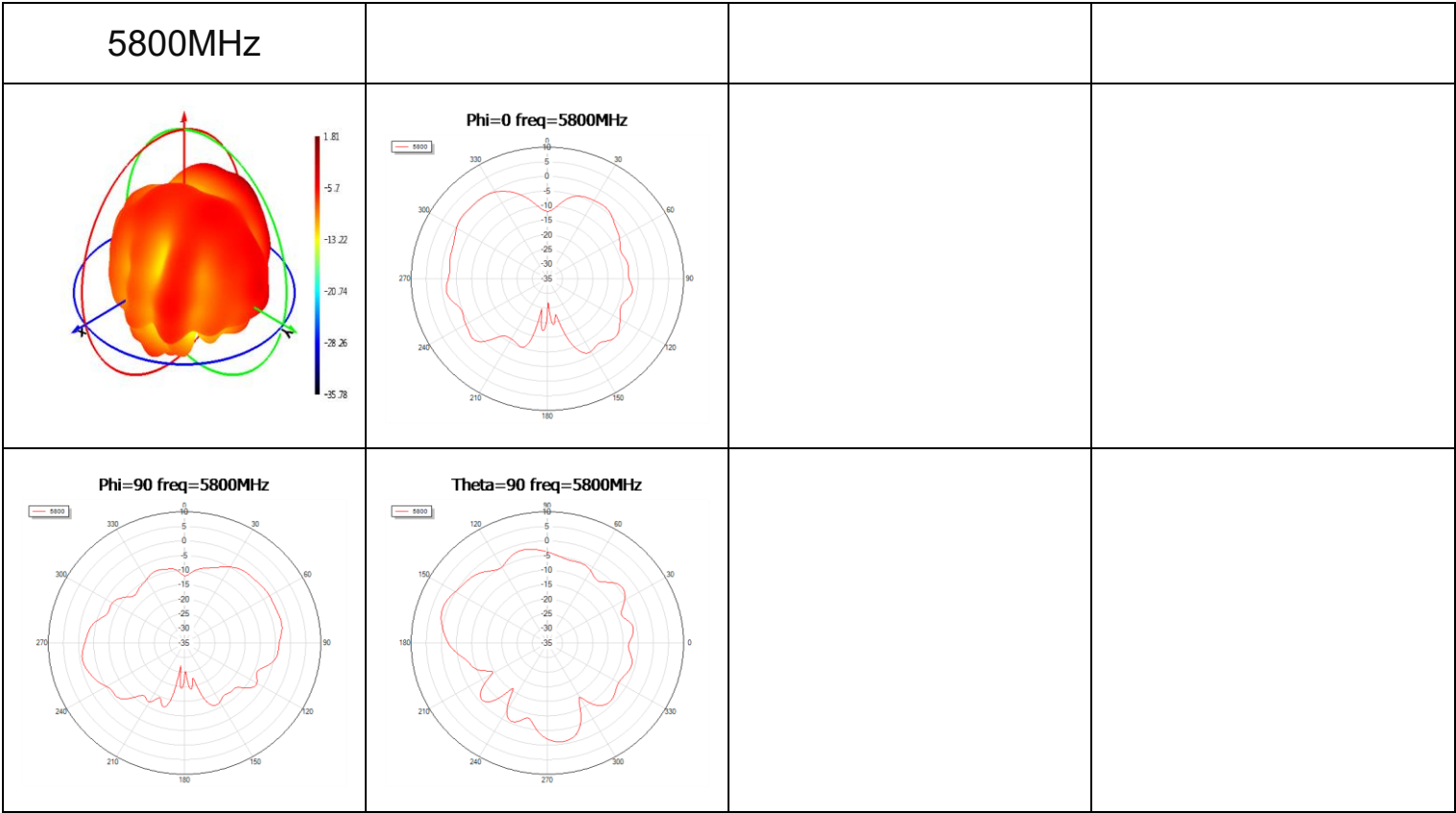


Phi=90 freq=4900MHz

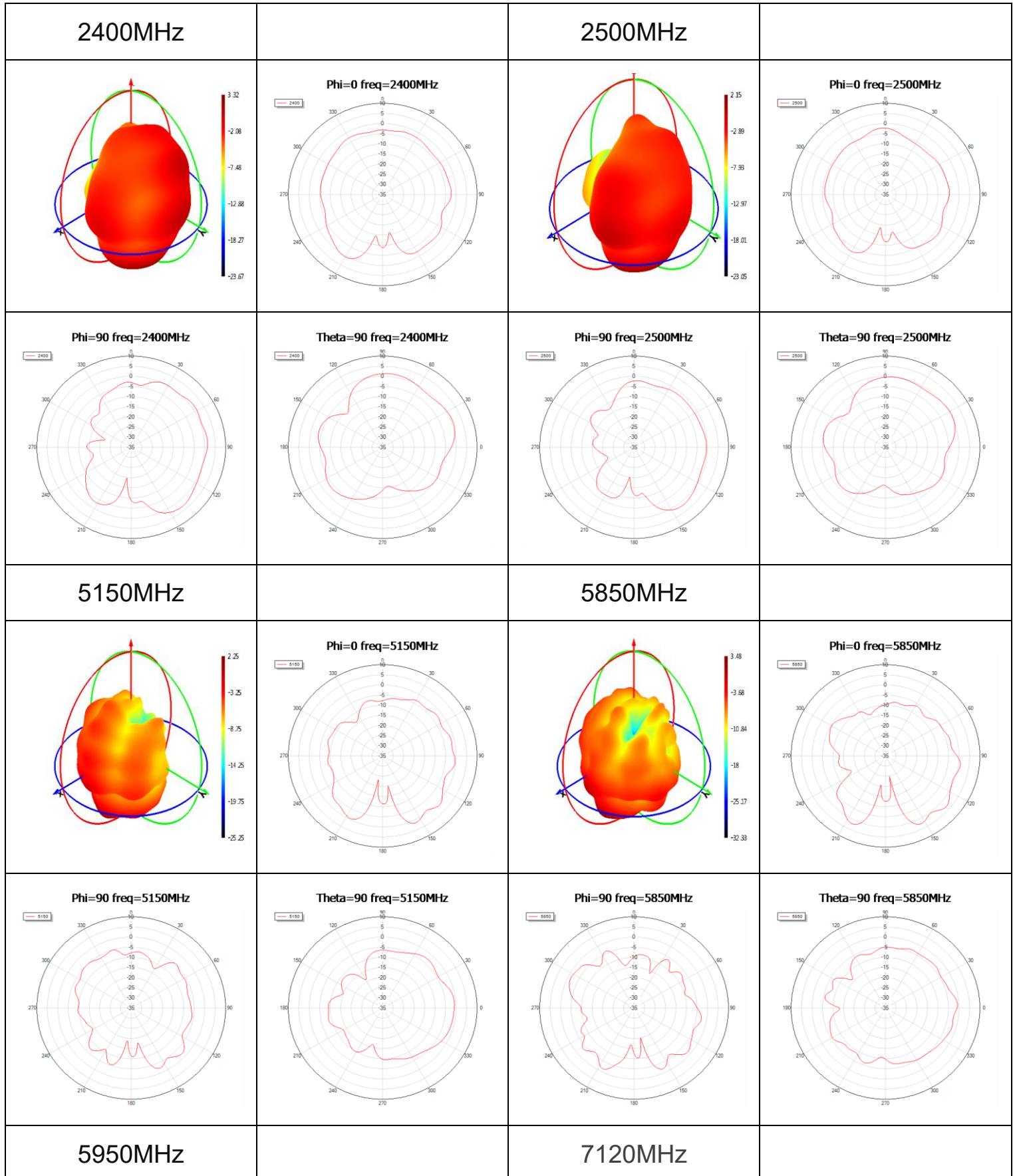


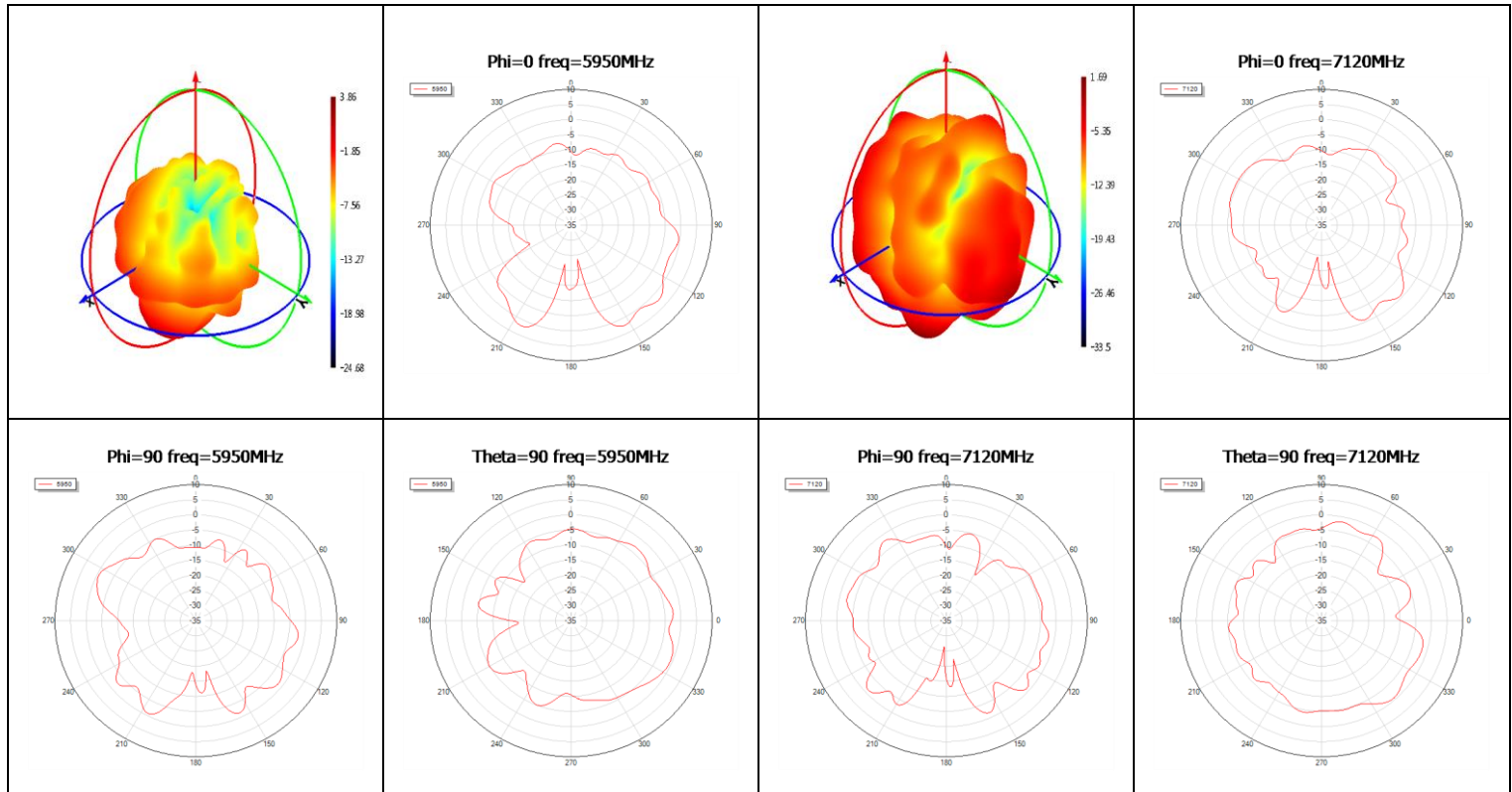
Theta=90 freq=4900MHz



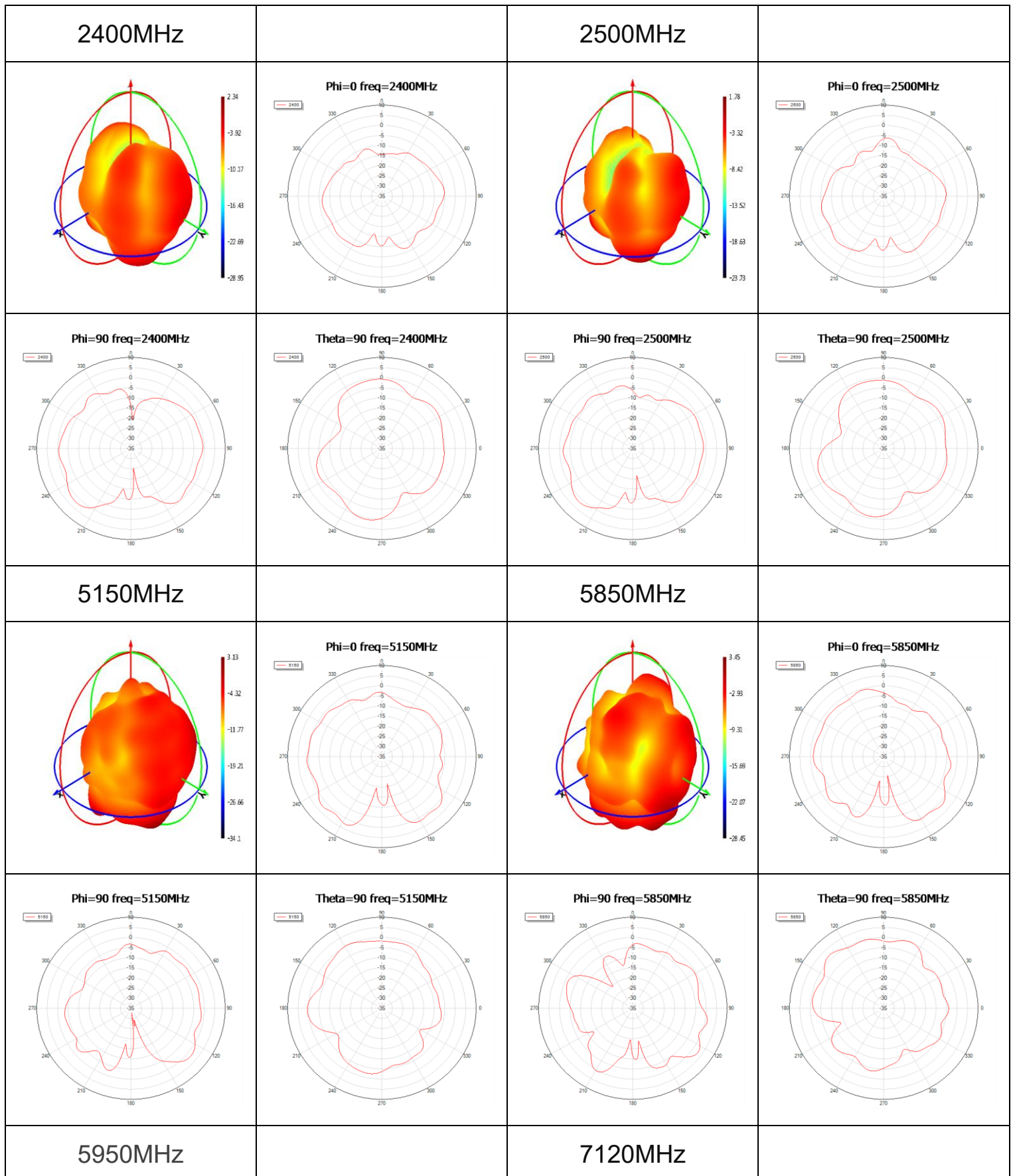


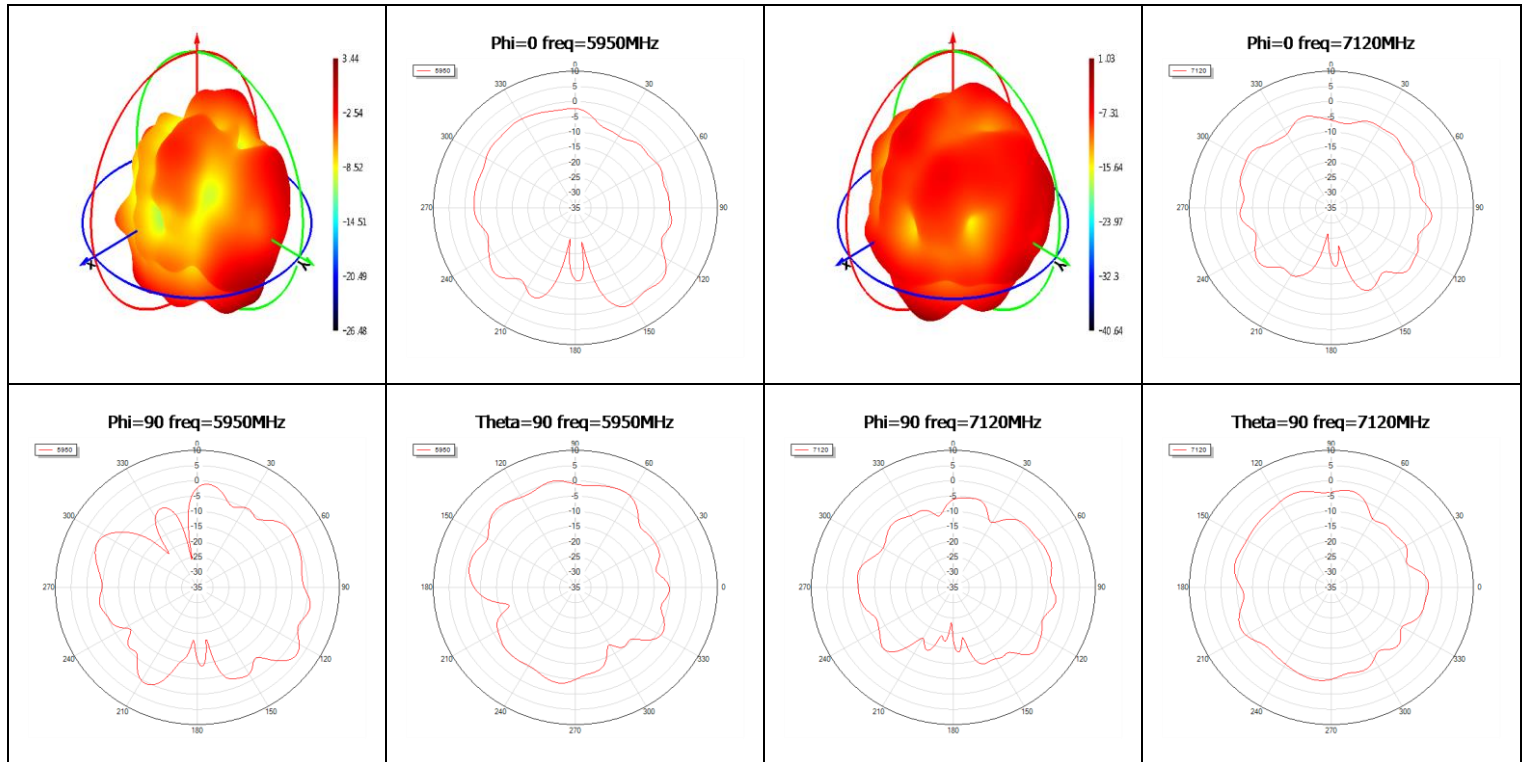
● Wi-Fi 1



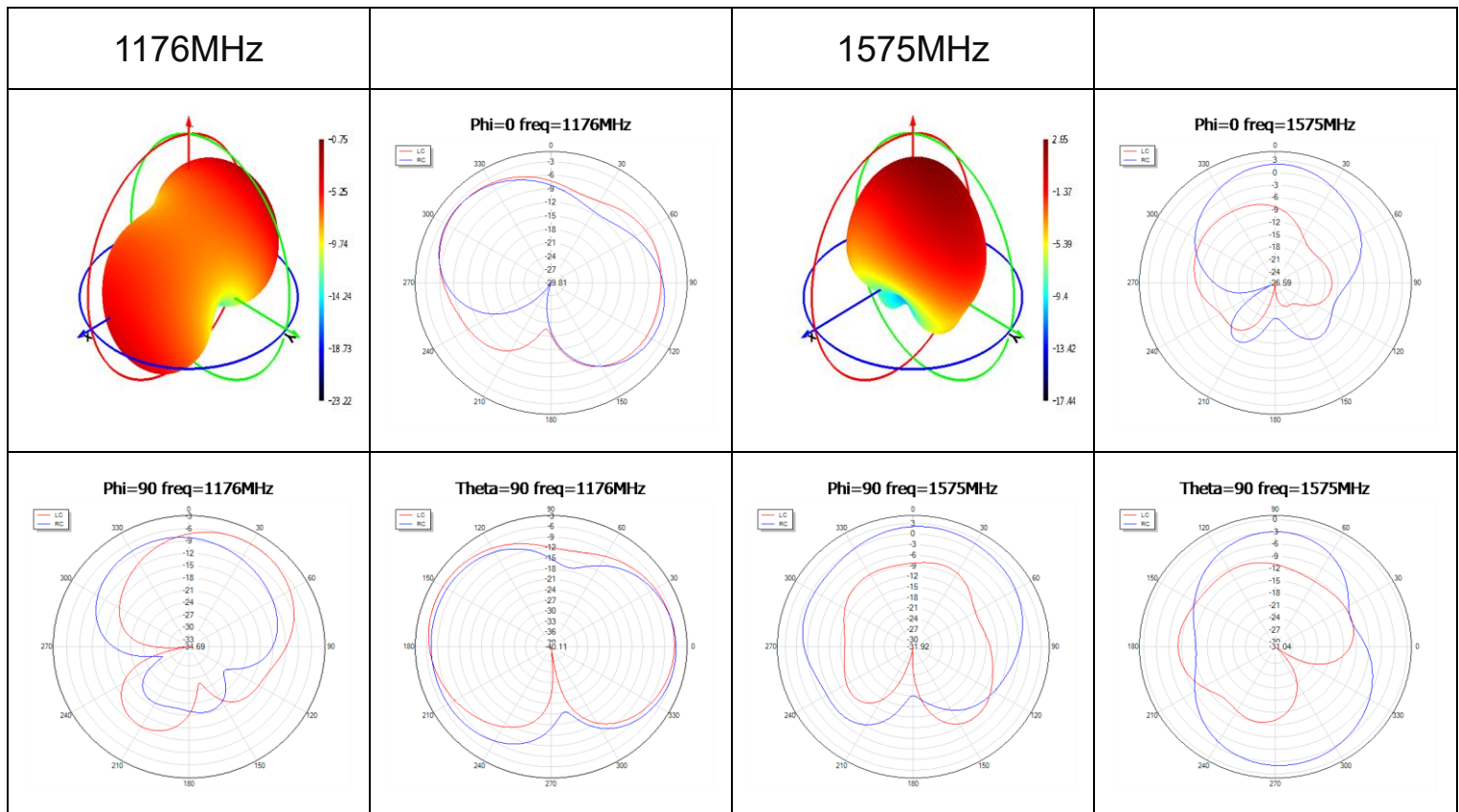


● Wi-Fi 2

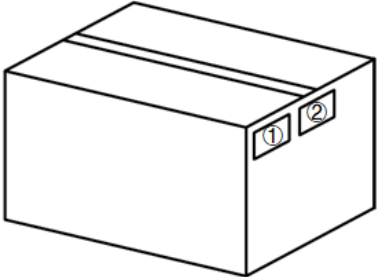


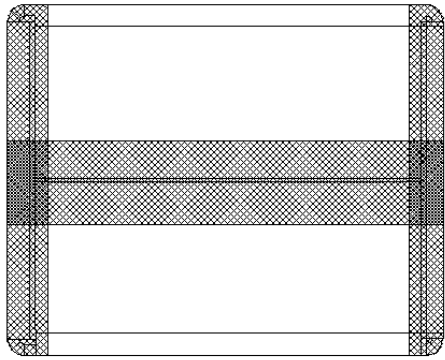


● GNSS



4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		Place 1 product in a bubble bag 1 Antenna / Bubble Bag
2		2 antenna products in a PE bag 2 Antennas / PE Bag
3	 ×44	44 PE Bag / Carton Box (88 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 = 370 × 370 × 295 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
-	2026-04-01	Aslan Chen/ Faber Shen/ Joye Wang/ Allow Xu/ Aria Chu	Creation of the document
1.0	2026-04-01	Aslan Chen/ Faber Shen/ Joye Wang/ Allow Xu/ Aria Chu	First official release



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