

Antenna Datasheet

Product OC: Y4RYM0MA0CA

Version: 1.0

Date: 2024-11-18

Status: Preliminary

Product Name: Wi-Fi Adhesive Mount FPC Monopole Antenna

Key Features:

Frequency band: 2400–2500 MHz, 5150–5850 MHz

Peak efficiency: 71.3 % (EVB)

Dimensions: 22.9 × 11.7 mm

RoHS and REACH Compliant

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1 Specification

Test Condition: Stick to 3 mm thick ABS board & Stick to 3 mm thick ABS board on 130 mm × 130 mm EVB

1.1. Electrical

Electrical	
Frequency Range	2400–2500 MHz, 5150–5850 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

Specification	Band	Band	Wi-Fi 2G	Wi-Fi 5G
		Freq. (MHz)	2400–2500	5150–5850
Max. VSWR	ABS		2.2	2.0
	EVB		2.7	1.6
Max. Return Loss (dB)	ABS		-8.5	-9.5
	EVB		-6.8	-12.8
AVG Eff. (%)	ABS		58.2	63.6
	EVB		57.5	60.9
AVG Gain (dB)	ABS		-2.4	-2.0
	EVB		-2.4	-2.2
Max. Peak Gain (dBi)	ABS		2.1 (2480)	3.3 (5590)
	EVB		2.0 (2430)	3.2 (5240)

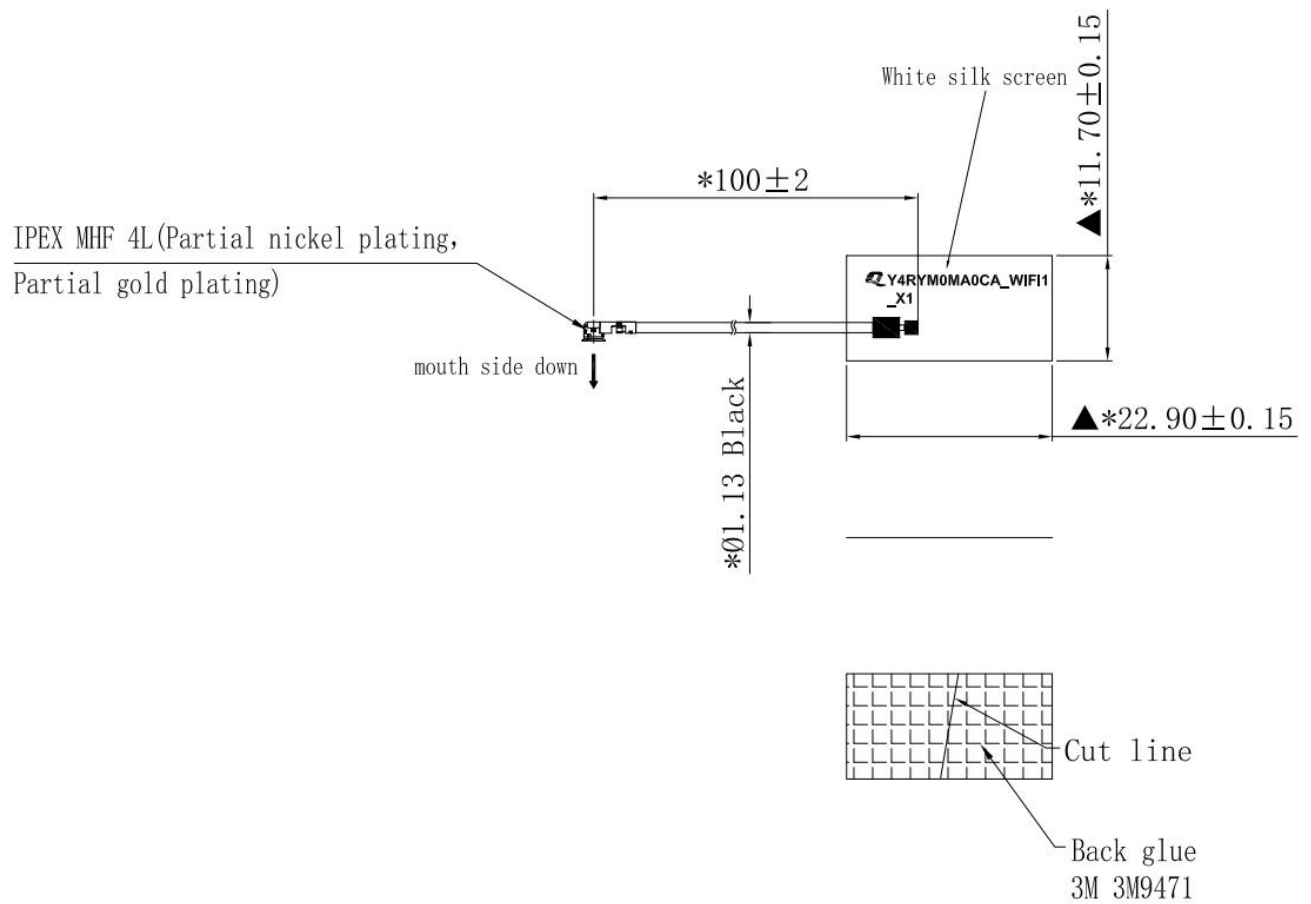
VSWR	ABS	≤ 2.2
	EVB	≤ 2.7
Return Loss	ABS	≤ -8.5 dB
	EVB	≤ -6.8 dB
Peak Gain	ABS	≤ 3.3 dBi
	EVB	≤ 3.2 dBi

- **ABS:** Stick to 3 mm thick ABS board
- **EVB:** Stick to 3 mm thick ABS board on 130 mm × 130 mm EVB

1.2. Mechanical & Environmental

Mechanical	
Antenna Size	22.9 × 11.7 mm
Antenna Material & Color	FPC & Black
Cable Type & Color & Length	Φ 1.13 & Black & 100 mm
Connector Type	IPEX MHF 4L
Mounting Type	Adhesive
Antenna Weight	Typ. 0.48 g
Environmental	
Operation Temperature	-20 °C to +85 °C
Storage Temperature	-20 °C to +85 °C
RoHS and REACH Compliant	Yes

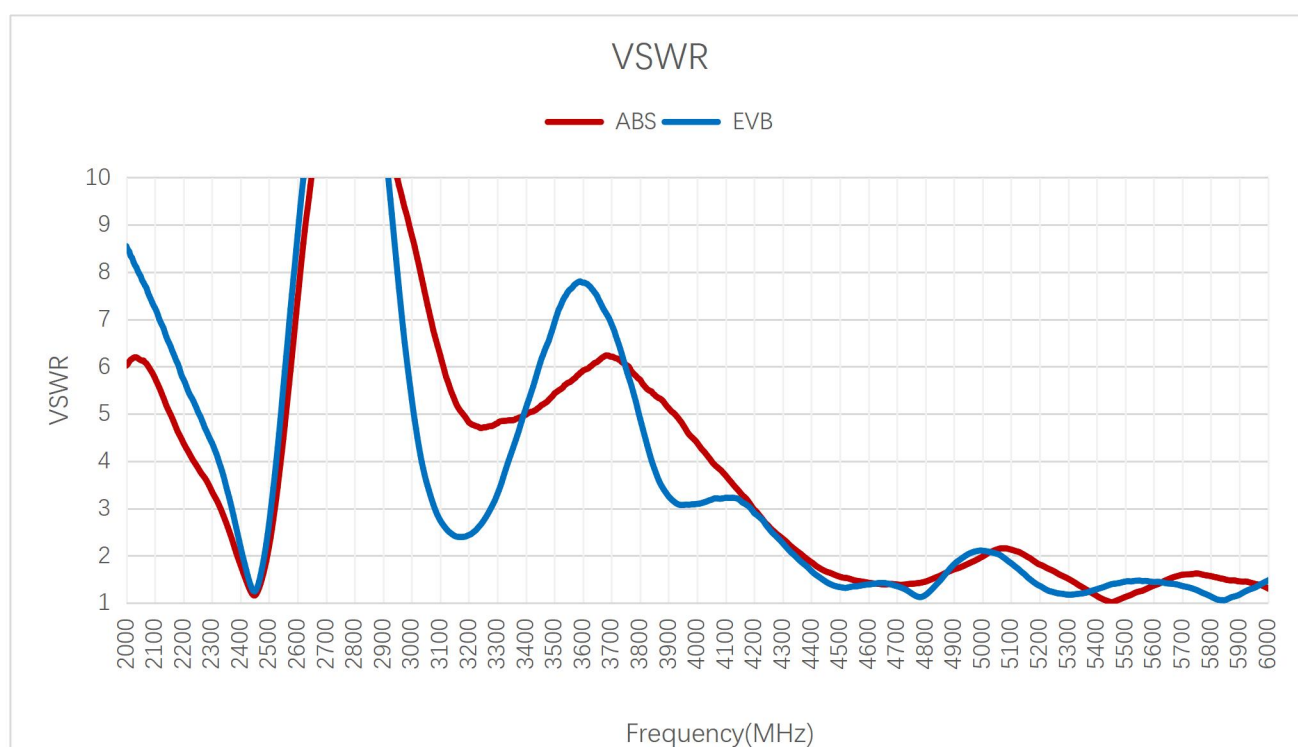
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

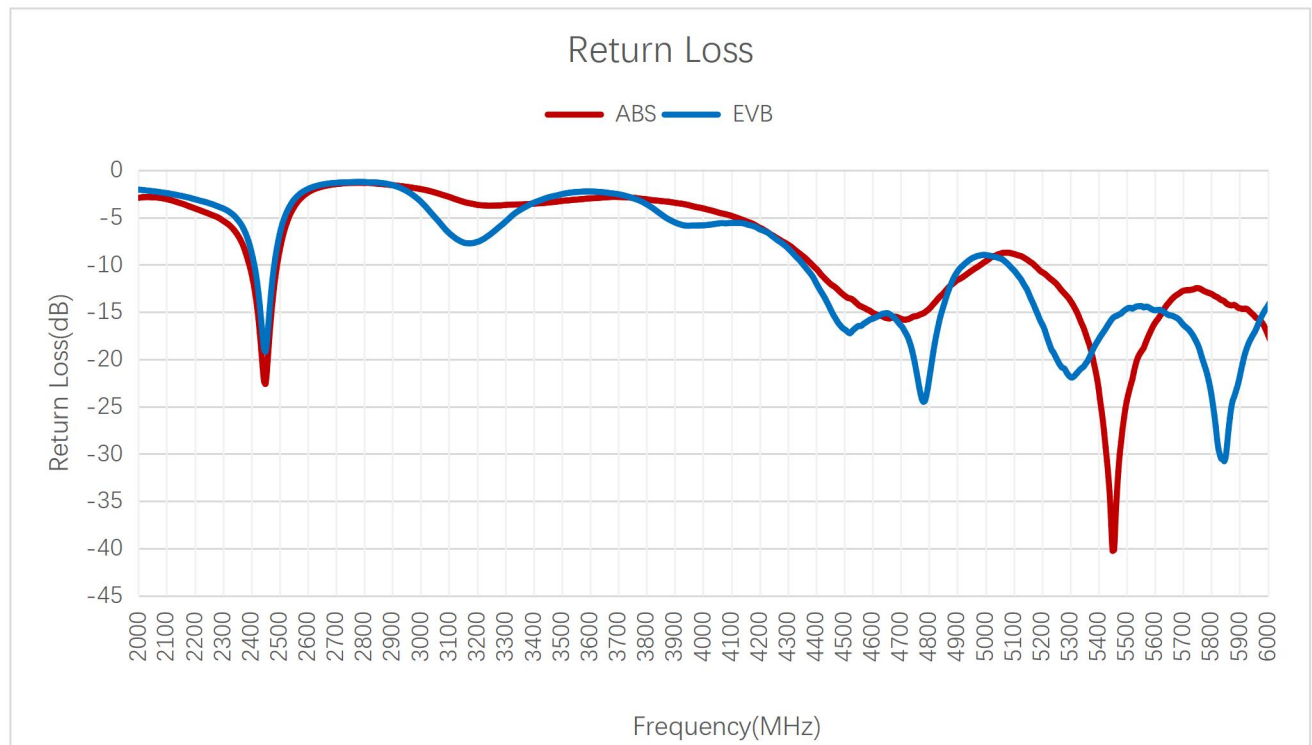
3.1.1. VSWR



VSWR

Frequency (MHz)	2400	2450	2500	5150	5500	5850
ABS	1.8	1.2	2.2	2.0	1.1	1.5
EVB	2.2	1.2	2.7	1.6	1.5	1.1

3.1.2. Return Loss

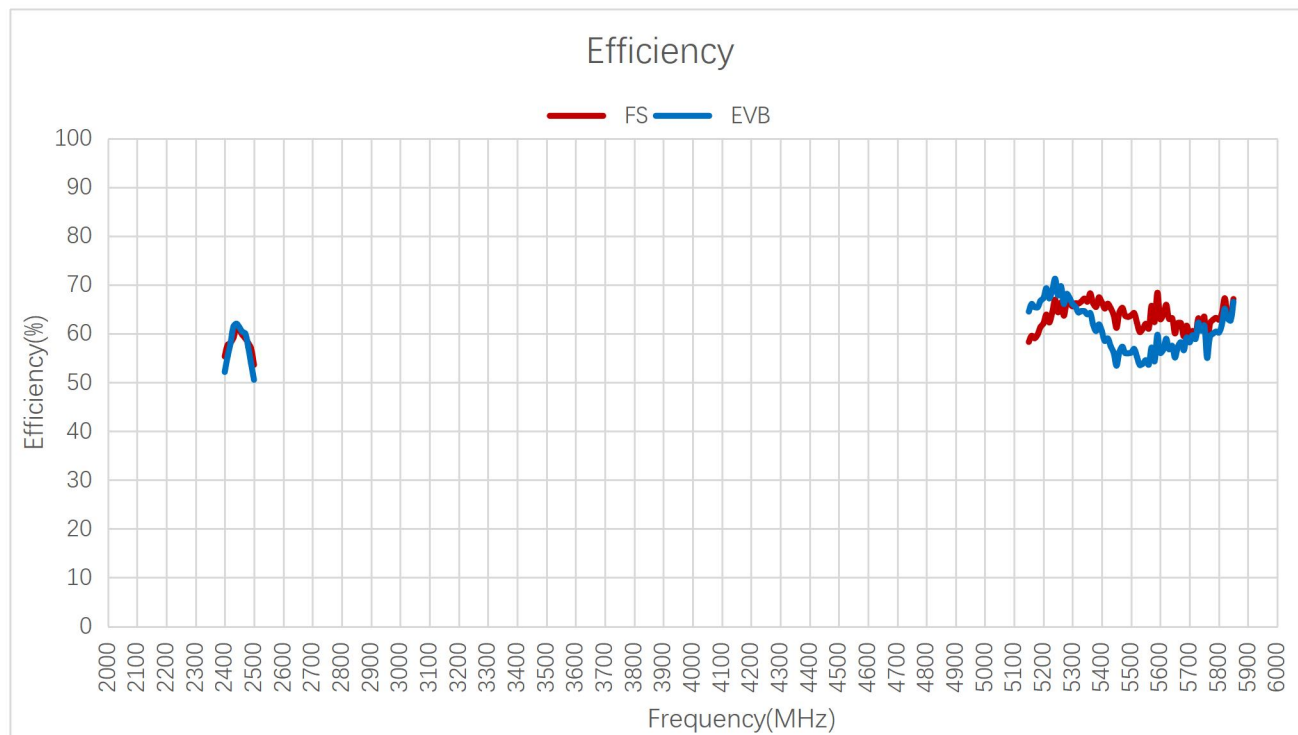


Return Loss (dB)

Frequency (MHz)	2400	2450	2500	5150	5500	5850
ABS	-10.8	-22.6	-8.5	-9.5	-24.4	-14.0
EVB	-8.6	-19.2	-6.8	-12.8	-14.7	-30.3

3.2. Radiation Performance Test

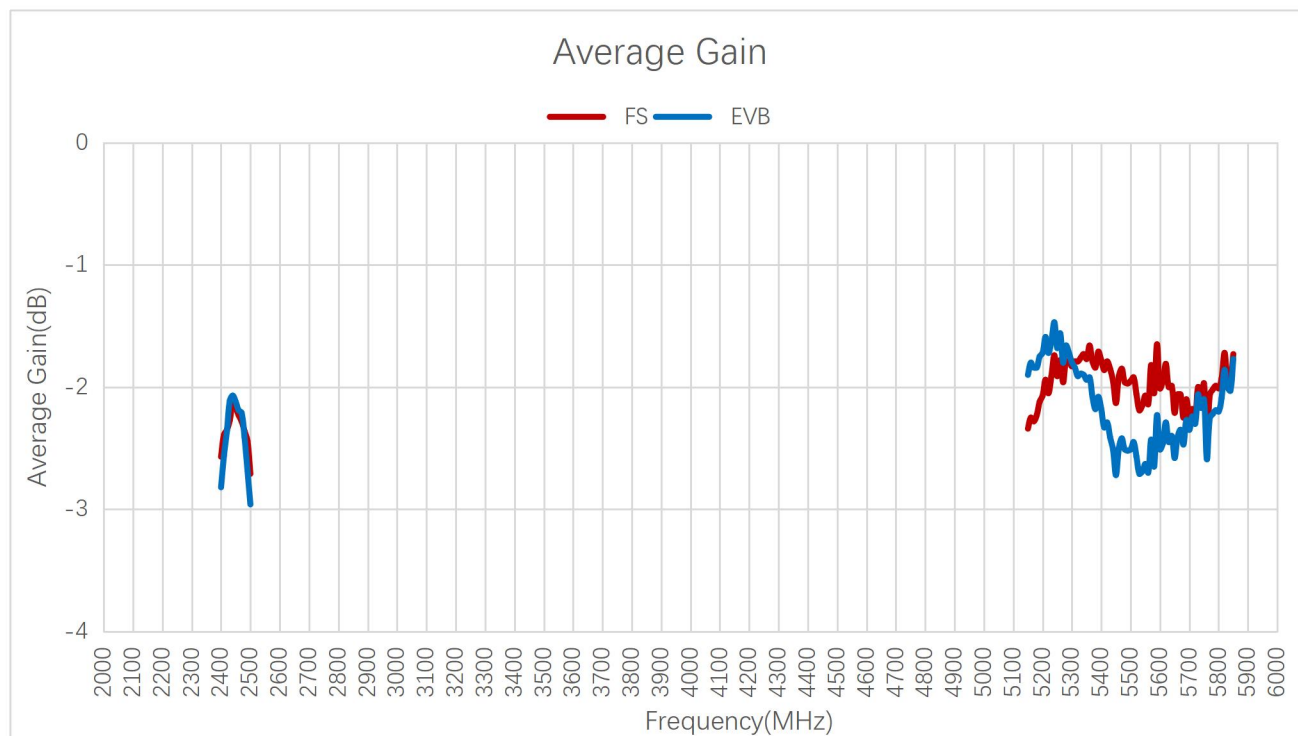
3.2.1. Efficiency



Efficiency (%)

Frequency (MHz)	2400	2450	2500	5150	5500	5850
ABS	55.4	60.7	53.6	58.3	63.8	67.1
EVB	52.2	61.3	50.6	64.6	56.2	66.6

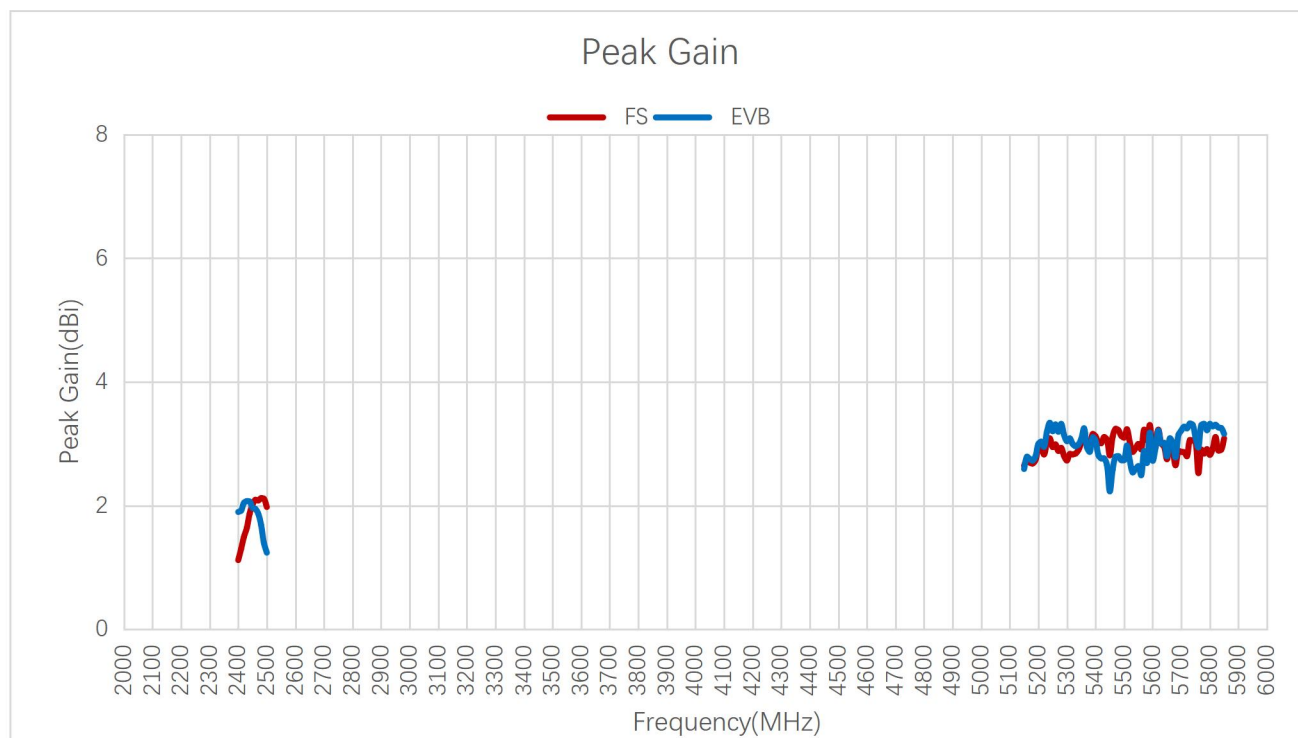
3.2.2. Average Gain



Average Gain (dB)

Frequency (MHz)	2400	2450	2500	5150	5500	5850
ABS	-2.6	-2.2	-2.7	-2.3	-2.0	-1.7
EVB	-2.8	-2.1	-3.0	-1.9	-2.5	-1.8

3.2.3. Peak Gain



Peak Gain (dBi)

Frequency (MHz)	2400	2450	2500	5150	5500	5850
ABS	1.1	2.1	2.0	2.6	3.1	3.1
EVB	1.9	2.0	1.2	2.6	2.7	3.2

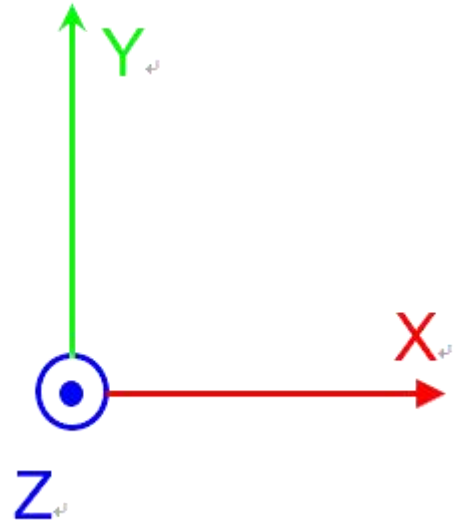
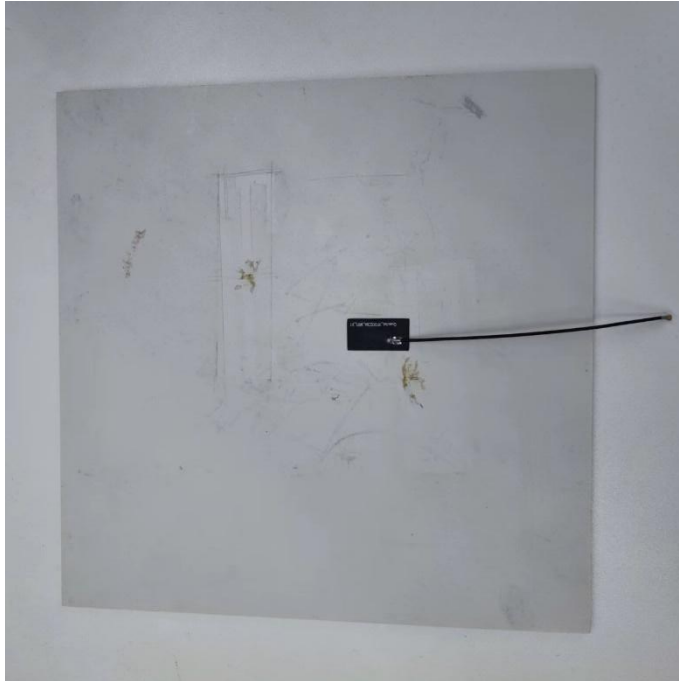
Max Peak Gain (dBi)

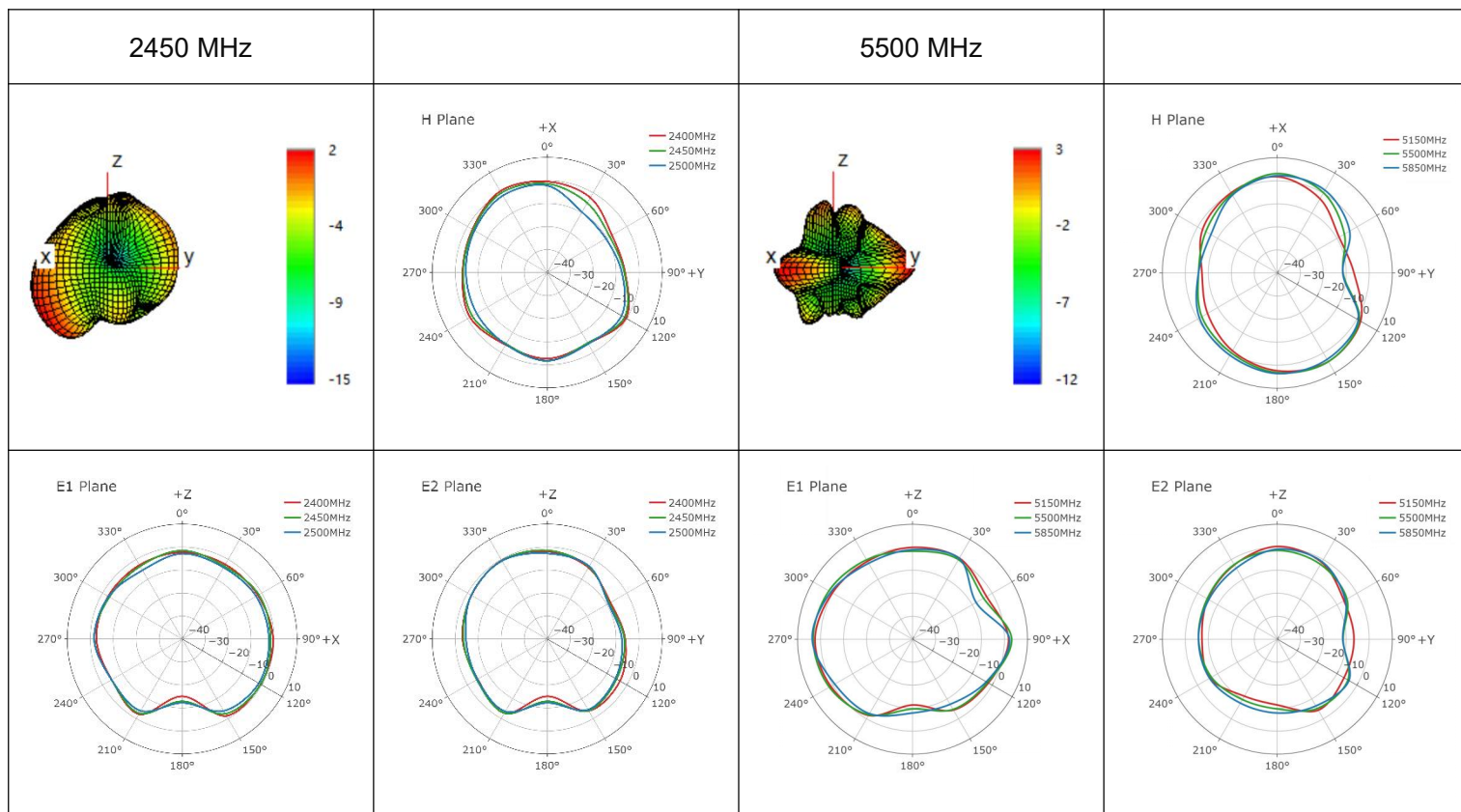
Band	Wi-Fi 2G ABS	Wi-Fi 5G ABS	Wi-Fi 2G EVB	Wi-Fi 5G EVB
Frequency (MHz)	2480	5590	2430	5240
Max Peak Gain (dBi)	2.1	3.3	2.0	3.2

3.2.4. 3D & 2D Radiation Pattern

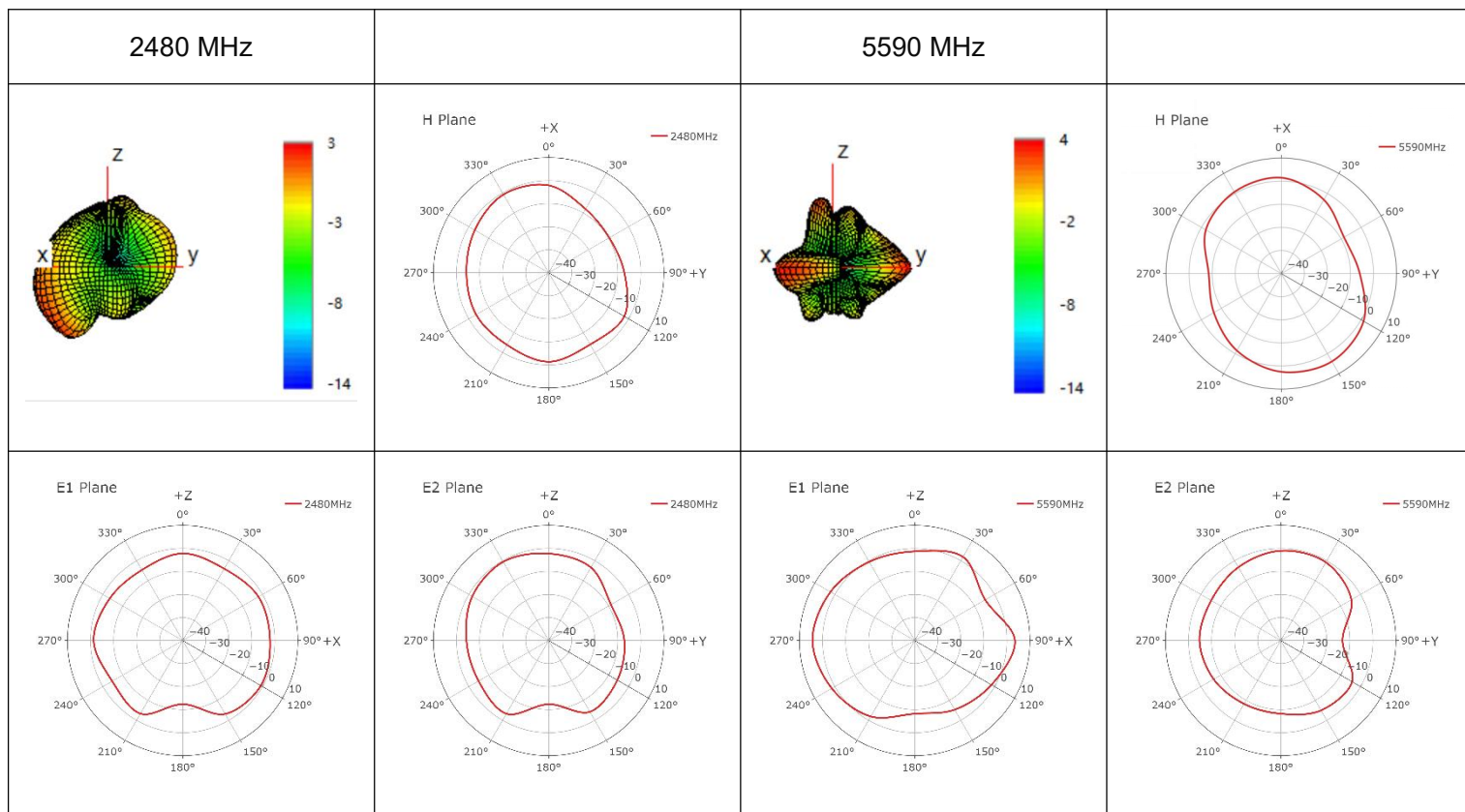
3.2.4.1. Test Condition: Stick to 3 mm Thick ABS board

- Test Chamber: GL-G-1



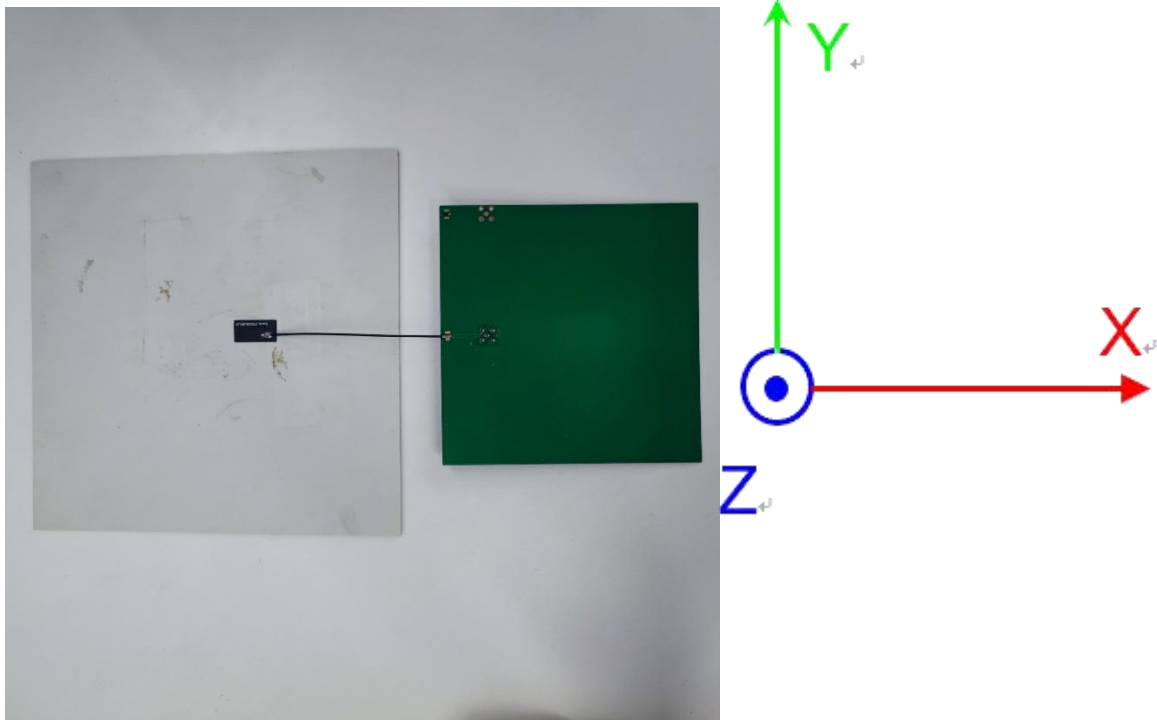


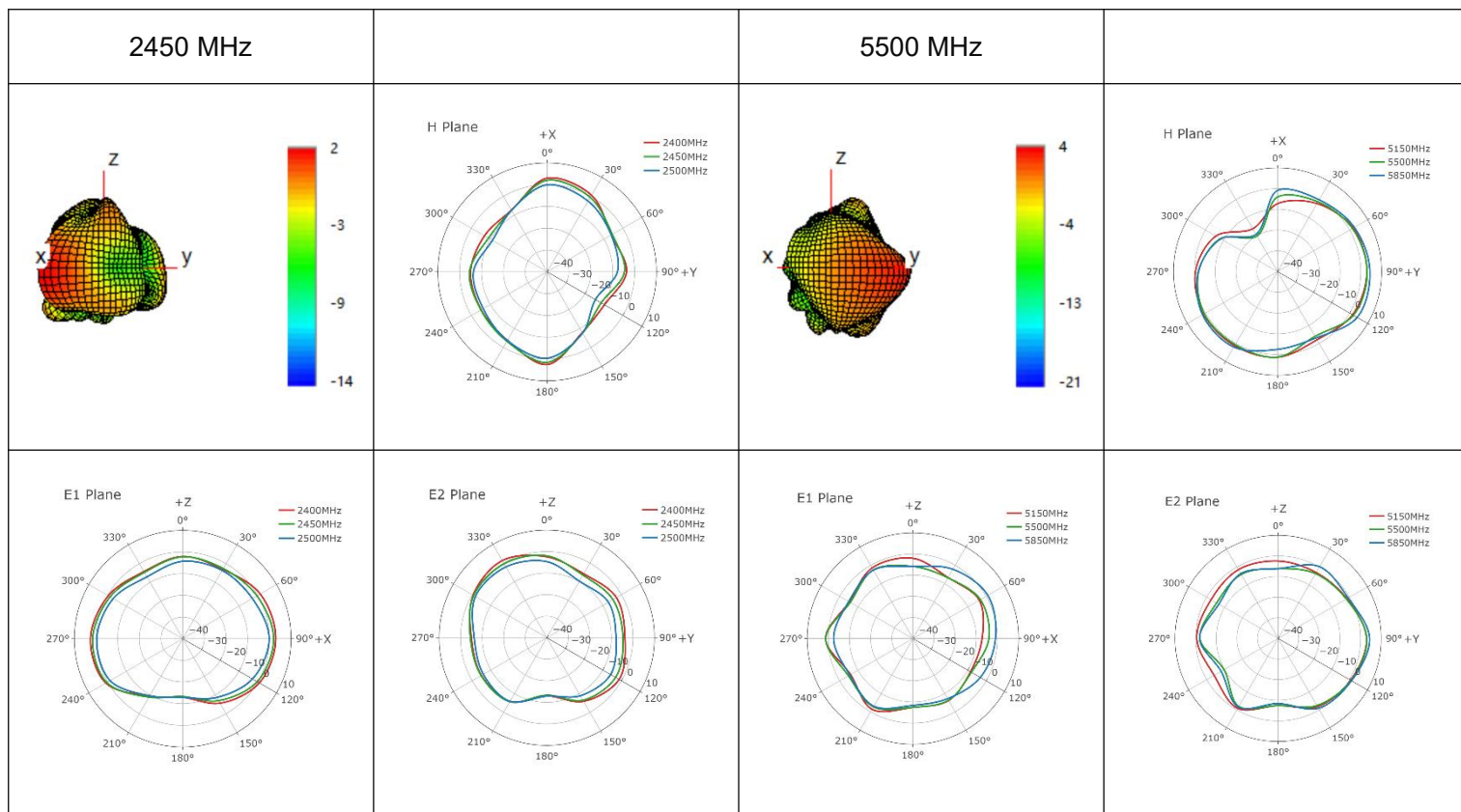
● **Max Peak Gain**



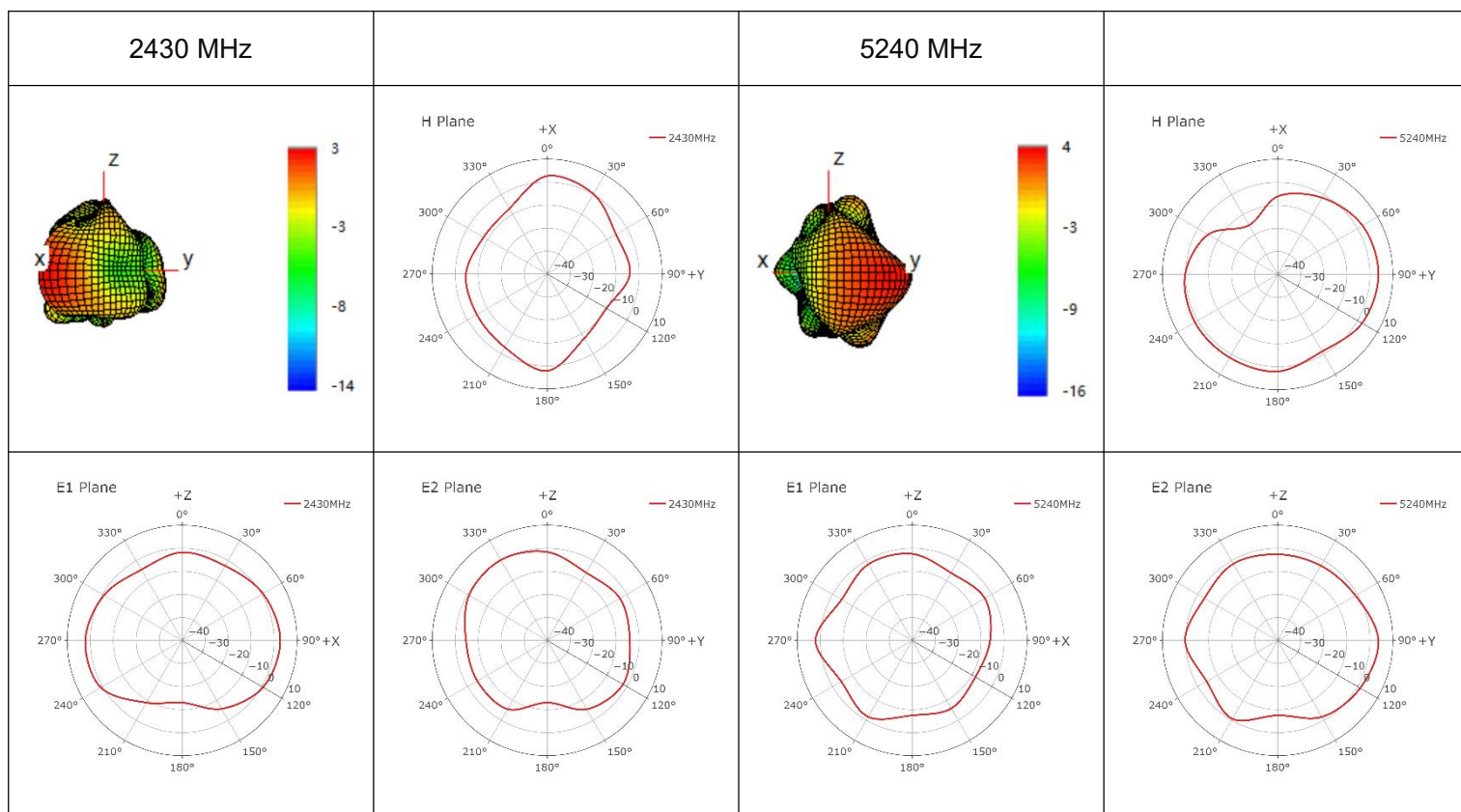
3.2.4.2. Test Condition: Stick to 3 mm Thick ABS board on 130 mm × 130 mm EVB

- Test Chamber: GL-G-1





● **Max Peak Gain**



Contact Us

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Revision History

Version	Date	Author	Note
-	2024-11-18	Edwin XIAO/ Steven MO/ Rainey LIAO	Creation of the document
1.0	2024-11-18	Edwin XIAO/ Steven MO/ Rainey LIAO	First official release



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