

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 \times 130 mm EVB

1.1. Electrical

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

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

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Vewp	ABS	≤ 2.2
VSWR	EVB	≤ 2.7
Potum I and	ABS	≤ -8.5 dB
Return Loss	EVB	≤ -6.8 dB
Peak Gain	ABS	≤ 3.3 dBi
reak Galli	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

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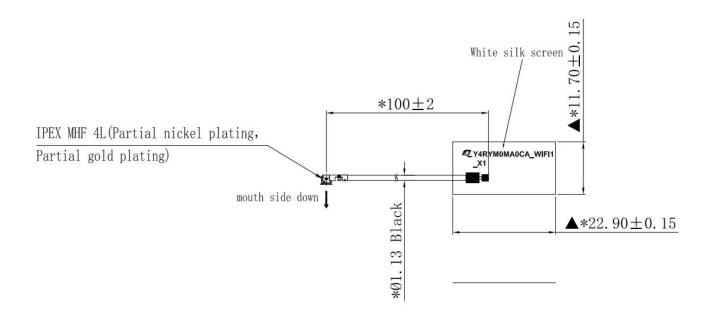
1.2. Mechanical & Environmental

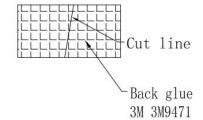
Mechanical				
Antenna Size	22.9 × 11.7 mm			
Antenna Material & Color	FPC & Black			
Cable Type & Color & Length	Ф 1.13 & Black & 100 mm			
Connector Type	IPEX MHF 4L			
Mounting Type	Adhesive			
Antenna Weight	Тур. 0.48 g			
Environmental				
Operation Temperature	-20 °C to +85 °C			
Storage Temperature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

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2 Drawing



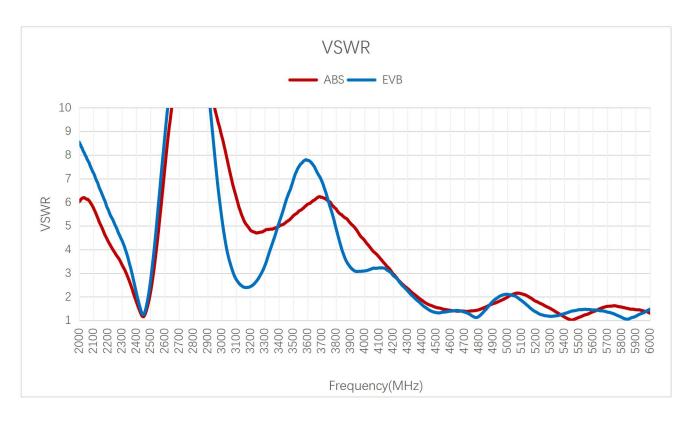




3 Detailed Performance

3.1. S-Parameter Test

3.1.1. VSWR



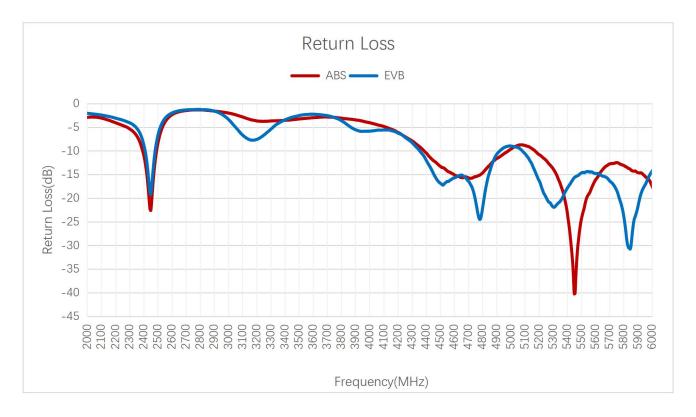
VSWR

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

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3.1.2. Return Loss



Return Loss (dB)

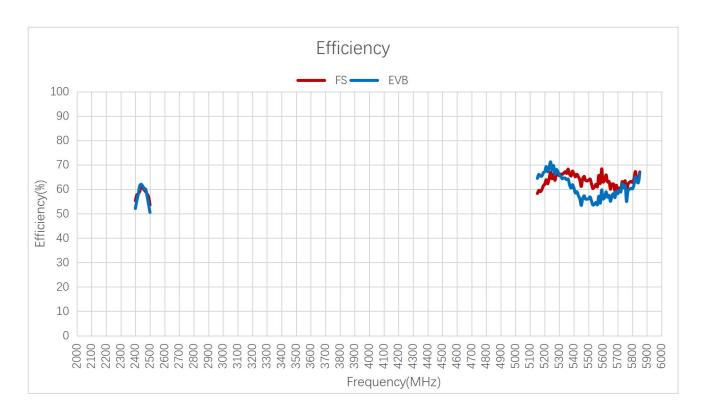
Frequency (MHz)	2400	2450	2500	5150	5500	5850
ABS	-10.8	-22.6	-8.5	-9.5	-24.4	-14.0
EVB	-8.6	-19.2	-6.8	-12.8	-14.7	-30.3

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3.2. Radiation Performance Test

3.2.1. Efficiency



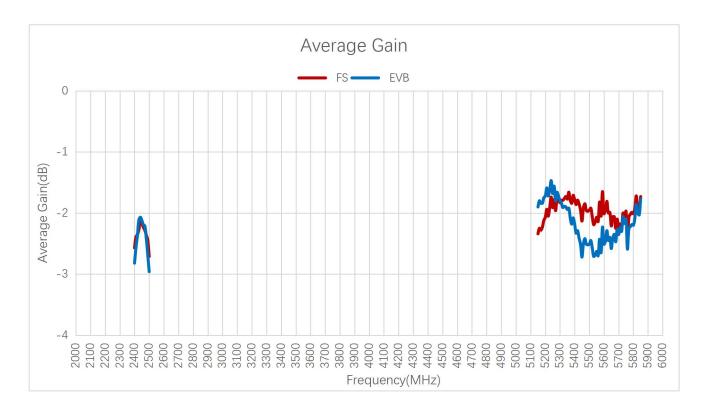
Efficiency (%)

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

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3.2.2. Average Gain



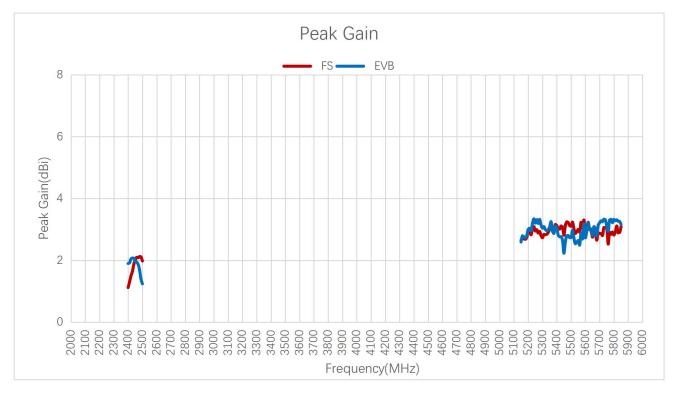
Average Gain (dB)

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

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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

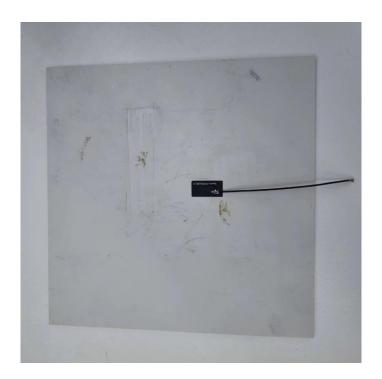
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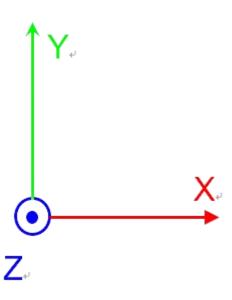


3.2.4. 3D & 2D Radiation Pattern

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

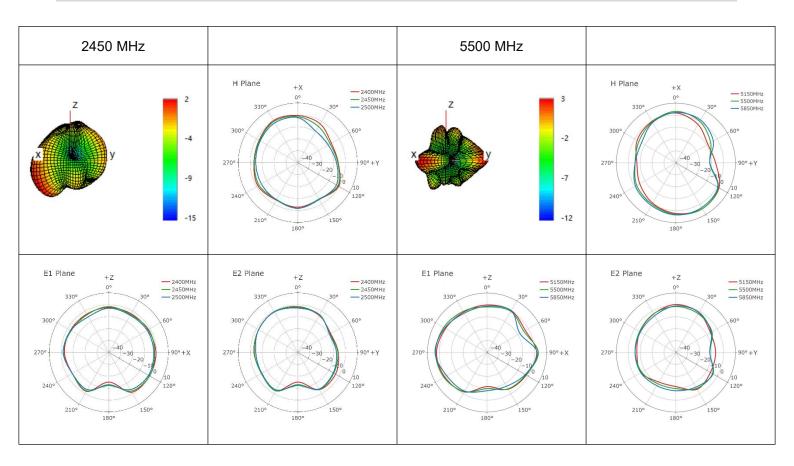
• Test Chamber: GL-G-1



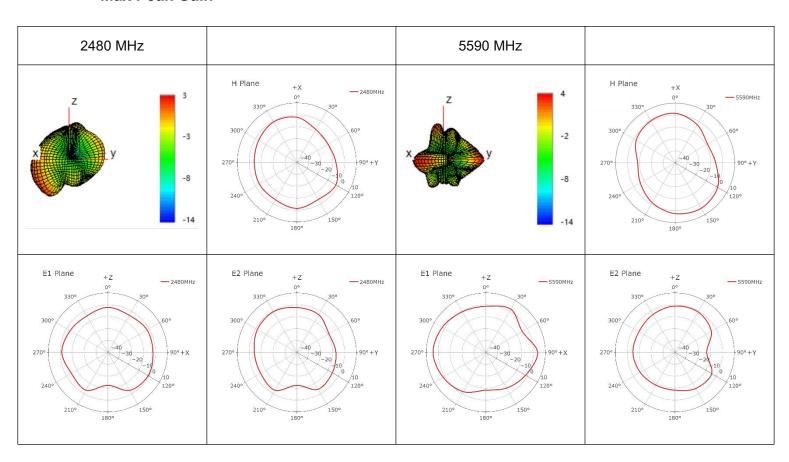


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Max Peak Gain

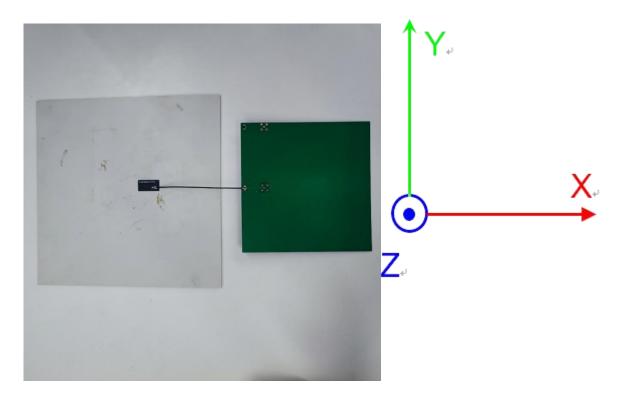


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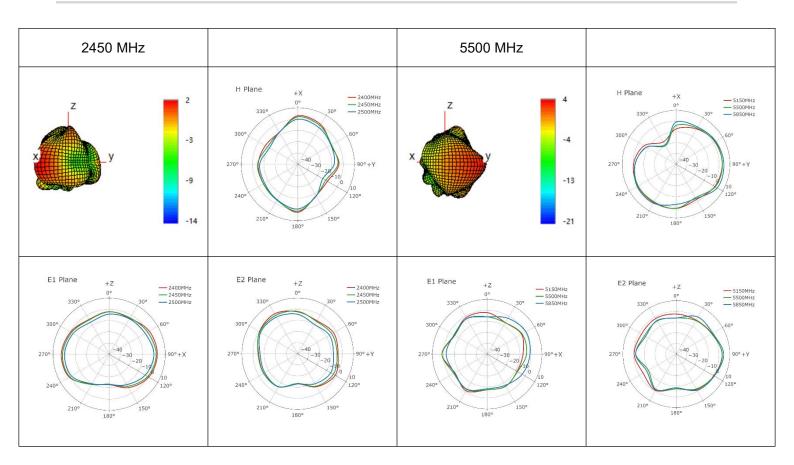
3.2.4.2. Test Condition: Stick to 3 mm Thick ABS board on 130 mm × 130 mm EVB

Test Chamber: GL-G-1

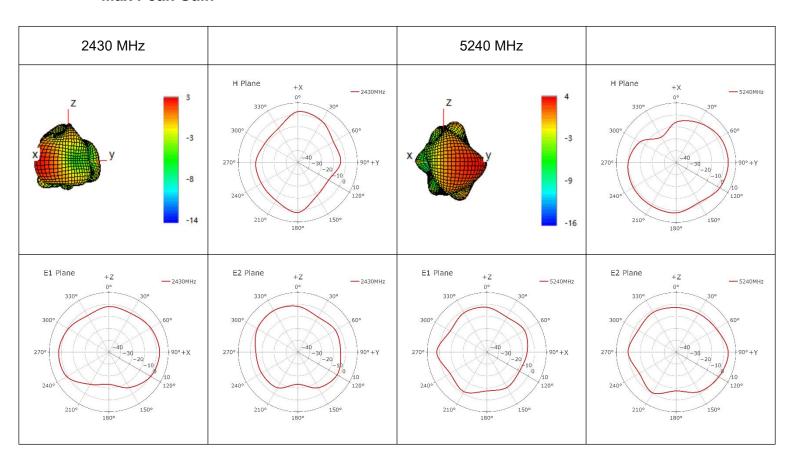


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Max Peak Gain



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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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