



Antenna Datasheet

Product OC: Y0REB0CA7AA

Version: 0.2

Date: 2025-01-02

Status: Released

Product Name: Wi-Fi Steel Antenna

Key Features:

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

Dimensions: 18 mm × 4 mm × 5.8 mm

Efficiency: Up to 52%

RoHS, REACH and HF Compliant

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1 Specification

Test Condition: Assembled in test device

1.1. Electrical

Electrical	
Frequency Range	2400–2500 MHz, 5150–5850 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional
VSWR	≤ 3.0
Peak Gain	1.83 dBi

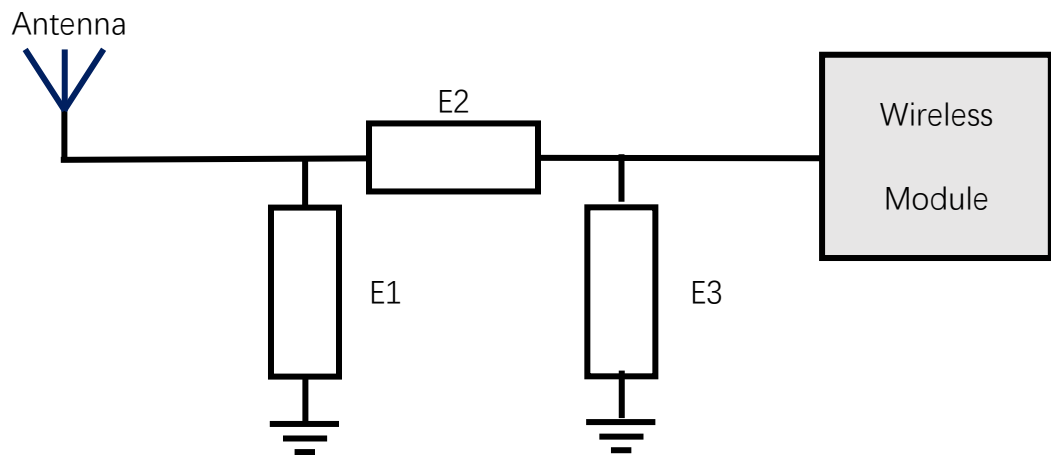
1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	18 mm × 4 mm × 5.8 mm
Material & Color	SUS304 & Natural
Weight	Typ. 0.5 g
Mounting Type	SMT
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
RoHS & REACH & HF Compliant	Yes

1.3. Antenna Assembly

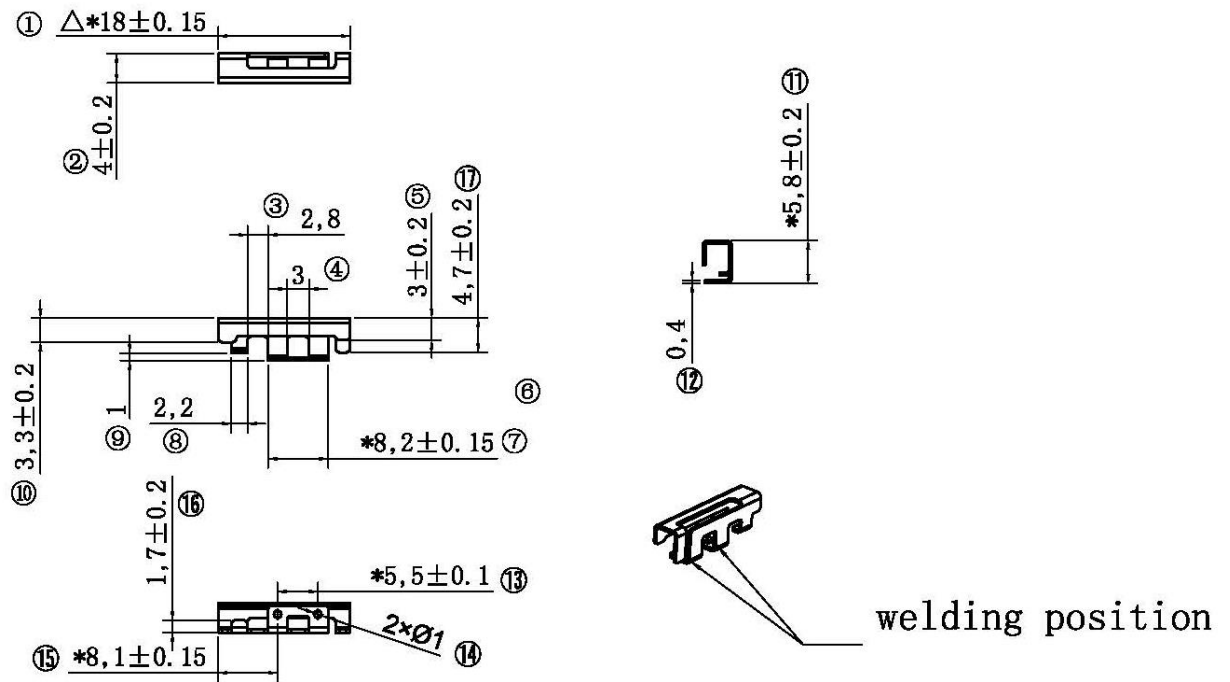


1.4. Matching Circuit



		E1	E2	E3
WIFI	Default Matching	NA	0 ohm	NA
	Tolerance	NA	NA	NA

2 Drawing

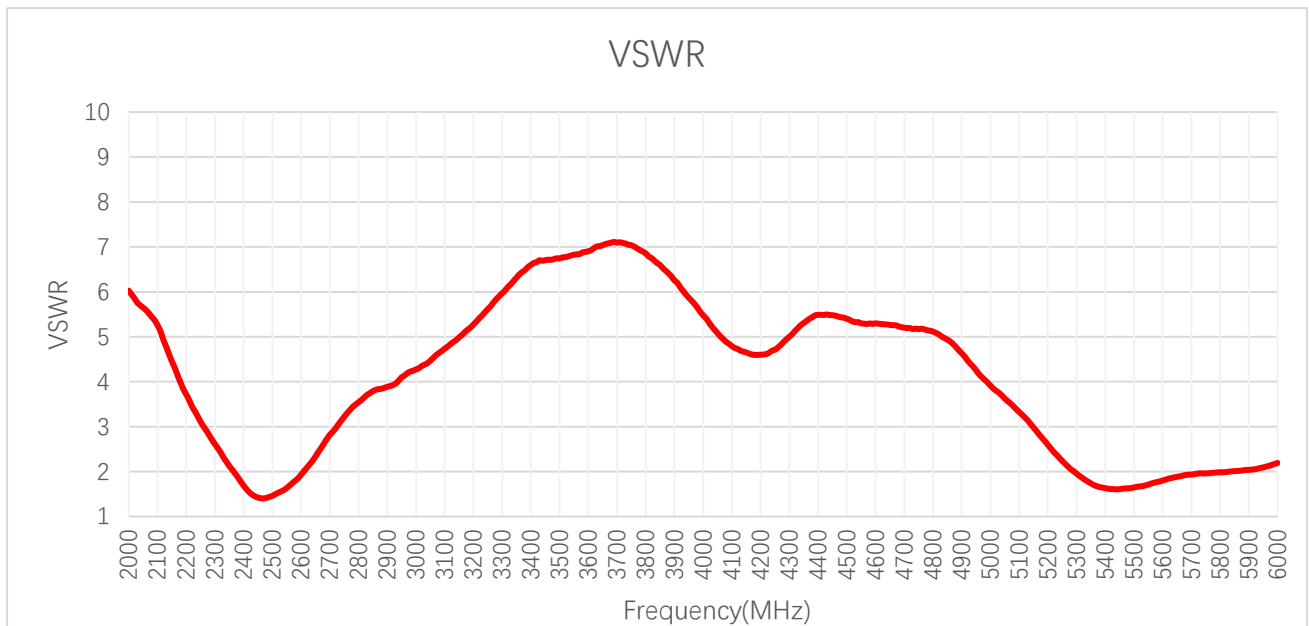


3 Detailed Performance

- Network Analyzer: Keysight E5071C (Device number: QTB6331E; Calibration date: 2024-08-27; Due date:2025-04-26)
- Chamber: OTA RayZone 2800 GTS (Device number: QTA0709; Calibration date: 2024-07-14; Due date:2025-07-13)
- Testing Software: Libra
- Antenna type: Wi-Fi Steel Antenna
- Test Engineer: *Damon Zhang*

3.1. S-Parameter Test

3.1.1. VSWR



VSWR

Frequency (MHz)	2400	2450	2500	5150	5300	5400	5500	5700	5850
VSWR	1.7	1.4	1.5	3.0	2.0	1.6	1.7	1.9	2.0

3.2. Radiation Performance Test

3.2.1. Efficiency & Peak Gain

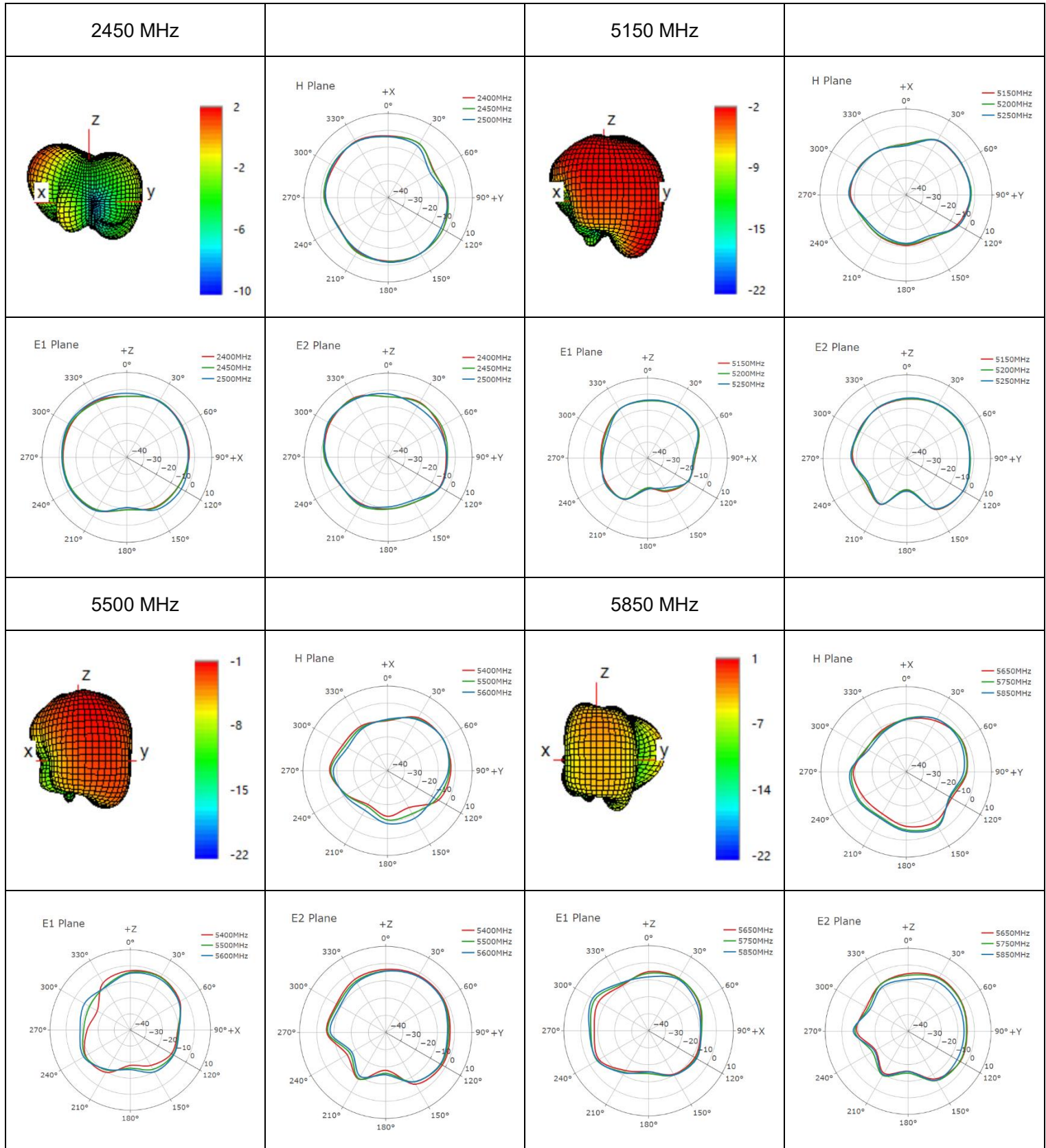
Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)	Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)
2400	1.39	46.88	5150	-1.07	31.65
2410	1.38	47.03	5200	-1.13	30.56
2420	1.52	47.59	5250	-0.93	31.34
2430	1.4	47.97	5300	-0.95	31.98
2440	1.21	48.3	5350	-0.98	32.83
2450	1.27	49.68	5400	-0.75	30.15
2460	1.5	50.47	5450	-0.25	30.34
2470	1.65	51.69	5500	-0.14	32.36
2480	1.78	51.17	5550	-0.03	33.19
2490	1.83	51.01	5600	-0.01	35.23
2500	1.79	51.22	5650	0.24	35.96
MAX	1.83		5700	0.32	38.16
			5750	0.46	43.01
			5800	0.41	41.54
			5850	0.42	42.57
			MAX	0.46	

Antenna Type : PIFA Antenna

3.2.2. 3D & 2D Radiation Pattern

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

● **WIFI**



Contact US

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Revision History

Version	Date	Author	Note
-	2024-12-26	Damon ZHANG/ Rojin LUO/ Rainey LIAO	Creation of the document
0.1	2024-12-26	Damon ZHANG/ Rojin LUO/ Rainey LIAO	First official release
0.2	2025-01-02	Damon ZHANG/ Rojin LUO/ Rainey LIAO	Add test lab information



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NFC Antenna

NFC Frequency Band : 13.553 - 13.567 MHz

Modulation Type : ASK

Supported Card Type : A / B

NFC Antenna Type : Loop Antenna

NFC Antenna size : 96.15*69.8*0.5 mm