



Antenna Datasheet

Product OC: Y0TBX00A2BA

Version: 1.0

Date: 2024-01-27

Status: Preliminary

Product Name: WIFI FPC Antenna

Key Features:

Frequency Band: 2400–2500 MHz

Dimensions: 22.6 * 11.9 mm

Efficiency: Up to 44.28%

RoHS and REACH Compliant

Contents

Contents	2
1 Specification.....	3
1.1. Electrical.....	3
1.2. Mechanical, Environmental.....	4
1.3. Antenna Assembly	5
2 Drawing	6
3 Detailed Performance	7
3.1. S-Parameter Test	7
3.1.1. VSWR.....	7
3.1.2. Return Loss	8
3.2. Radiation Performance Test.....	9
3.2.1. Efficiency	9
3.2.2. Average Gain	10
3.2.3. Peak Gain.....	11
3.2.4. 3D & 2D Radiation Pattern.....	12
4 Packaging	14
Contact US	16
Legal Notices	17
Revision History	19

1 Specification

Test Condition: Assembled in test device

1.1. Electrical

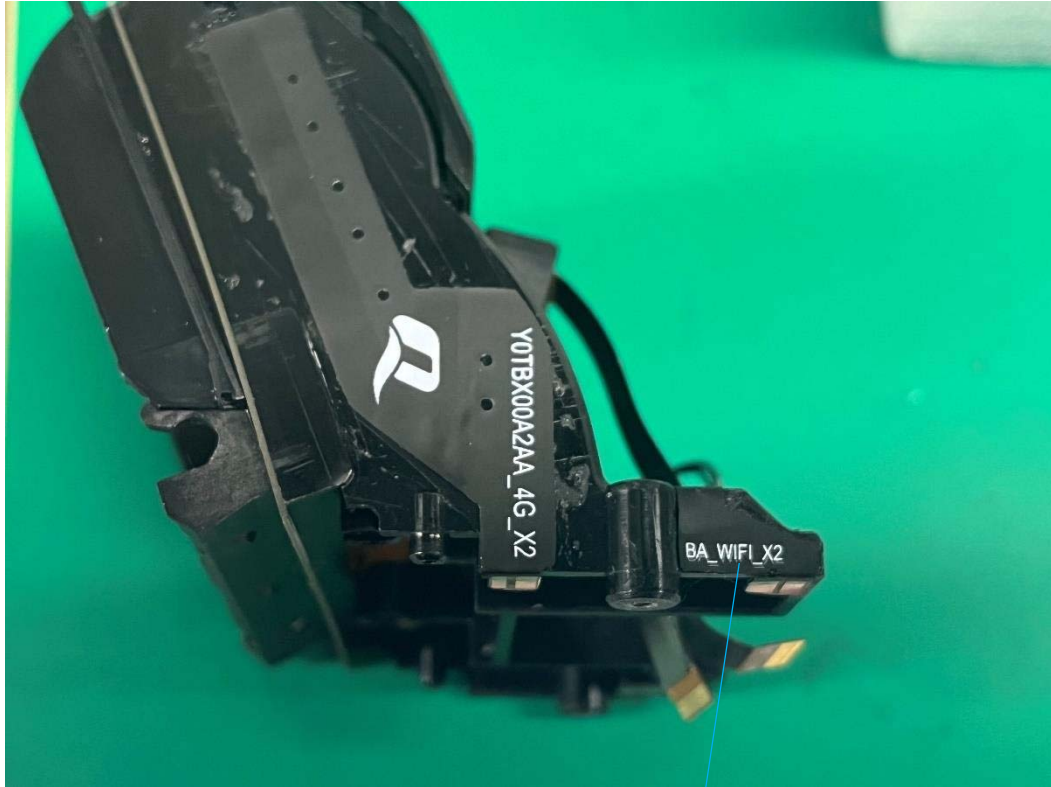
Electrical	
Frequency Range	2400–2500 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

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		-	-	-	-	-	-	-	1.6	-	-	-	-
Max. Return Loss (dB)		-	-	-	-	-	-	-	-12.2	-	-	-	-
AVG Eff. (%)		-	-	-	-	-	-	-	42.9	-	-	-	-
AVG AVG Gain (dB)		-	-	-	-	-	-	-	-3.6	-	-	-	-
Max. Peak Gain (dBi)		-	-	-	-	-	-	-	3.7	-	-	-	-
VSWR							≤ 1.6						
Return Loss							≤ -12.2 dB						
Peak Gain							≤ 3.7 dBi						

1.2. Mechanical, Environmental

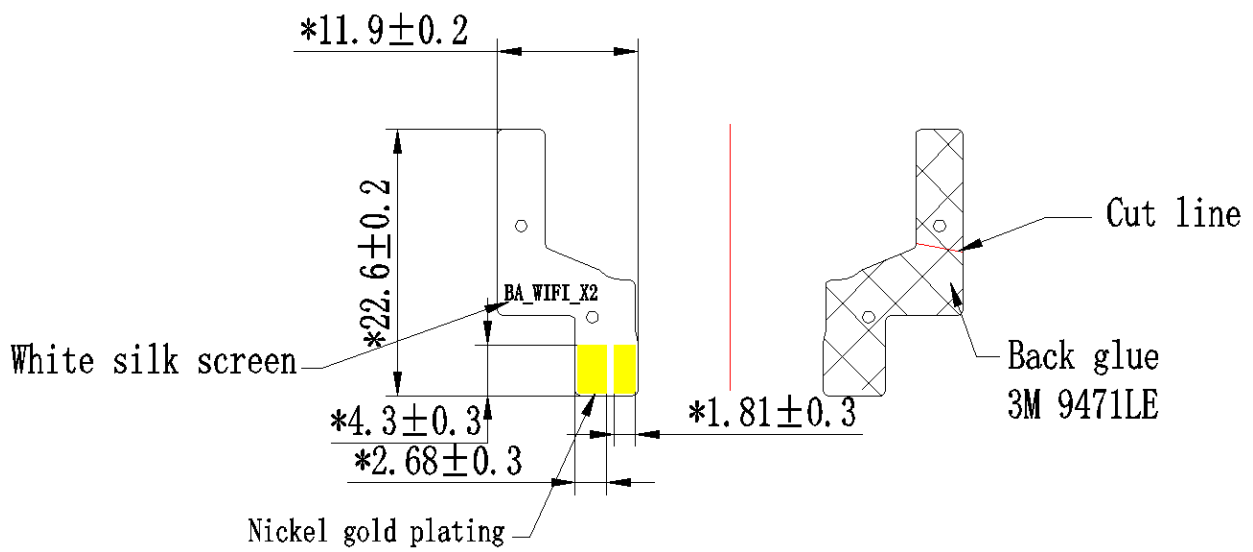
Mechanical	
Antenna Dimensions	22.6 * 11.9 mm
Material & Color	FPC & Black
Mounting Type	Adhesive
Weight	Typ. 0.01g
Environmental	
Operation Temperature	-20 °C to +60 °C
Storage Temperature	-20 °C to +60 °C
RoHS & REACH Compliant	Yes

1.3. Antenna Assembly



Y0TBX00A2BA

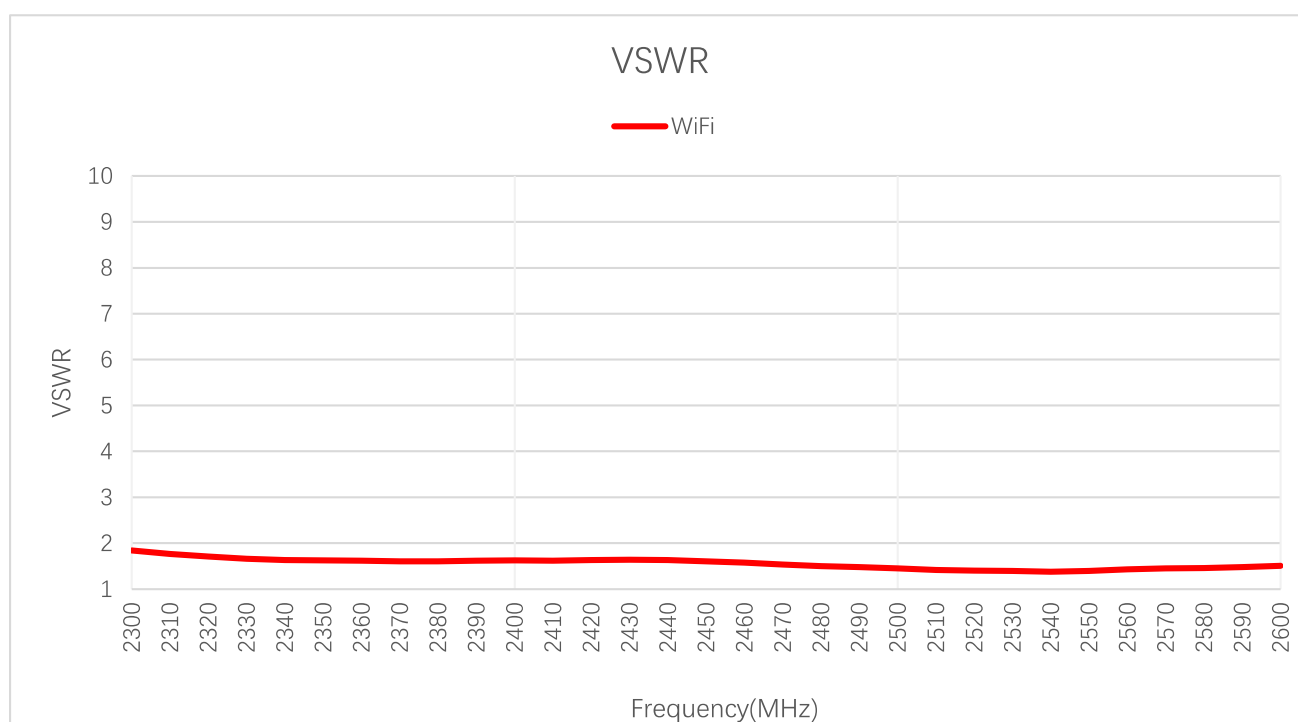
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

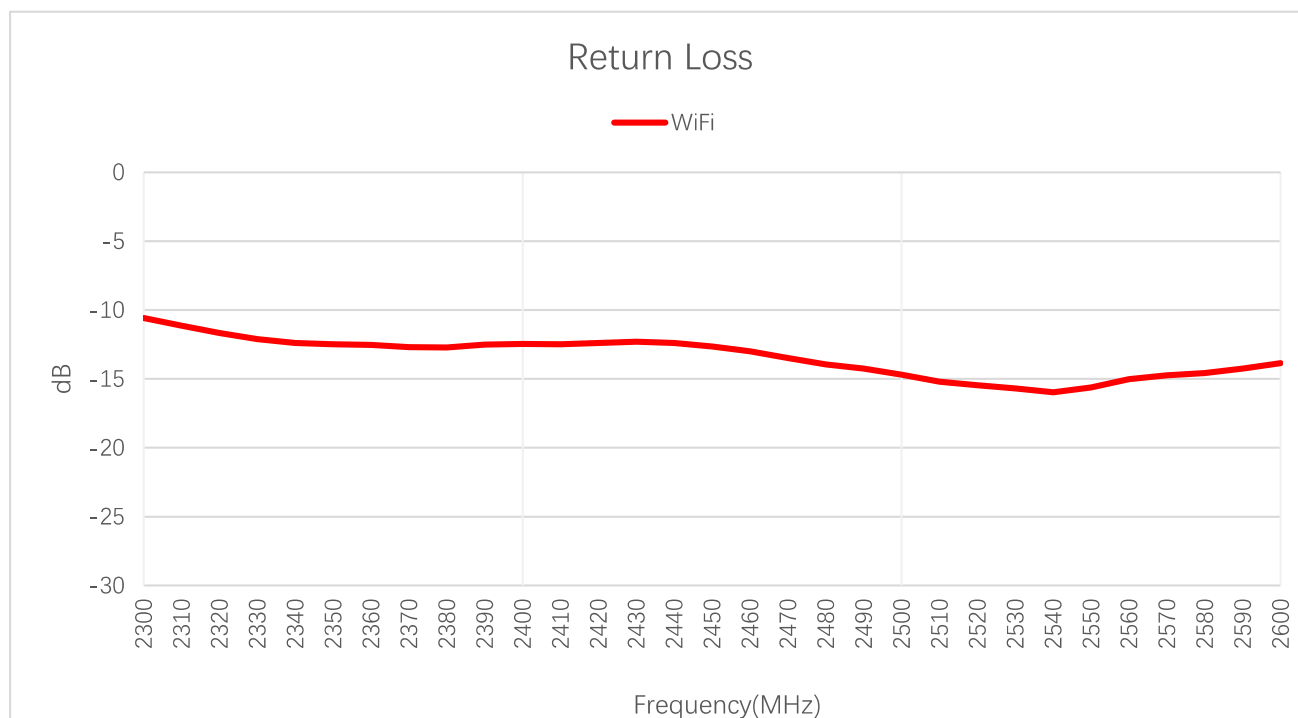
3.1.1. VSWR



VSWR

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
VSWR	-	-	-	-	-	-	-	-	-	-
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
VSWR	-	-	-	1.6	-	-	-	-	-	-

3.1.2. Return Loss

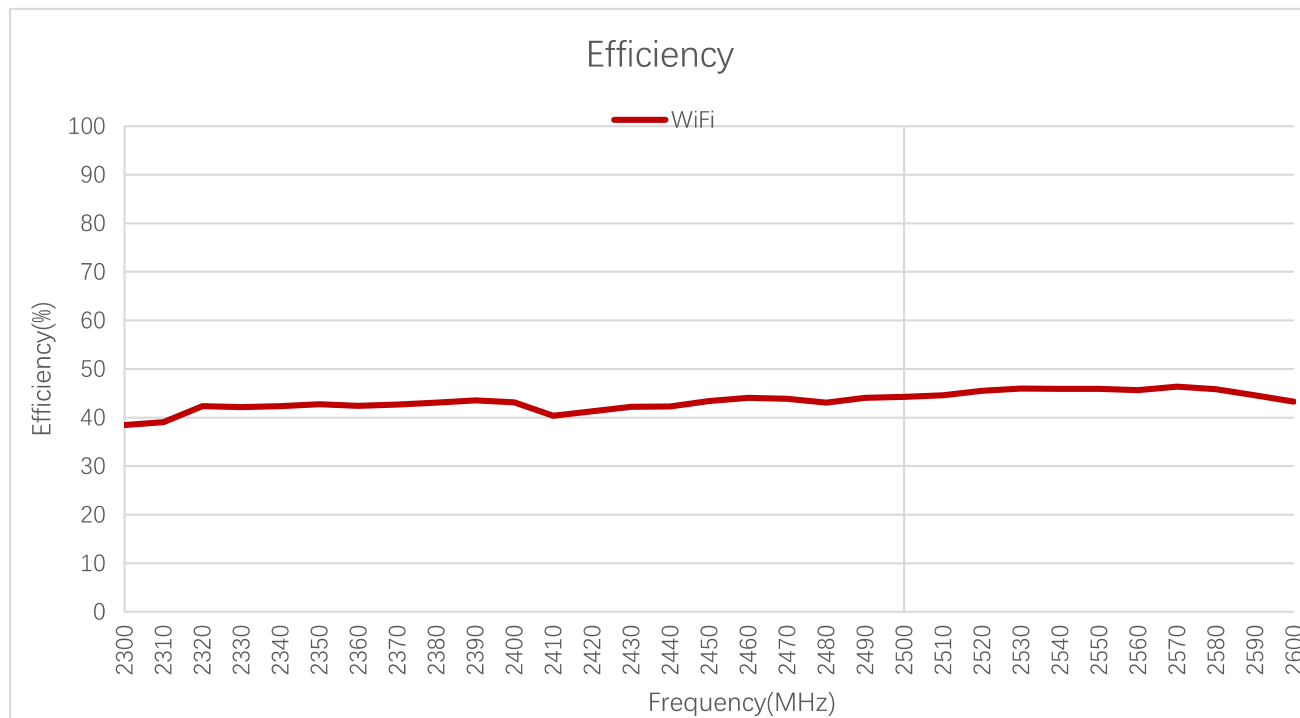


Return Loss (dB)

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Return Loss (dB)	-	-	-	-	-	-	-	-	-	-
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
Return Loss (dB)	-	-	-	-12.7	-	-	-	-	-	-

3.2. Radiation Performance Test

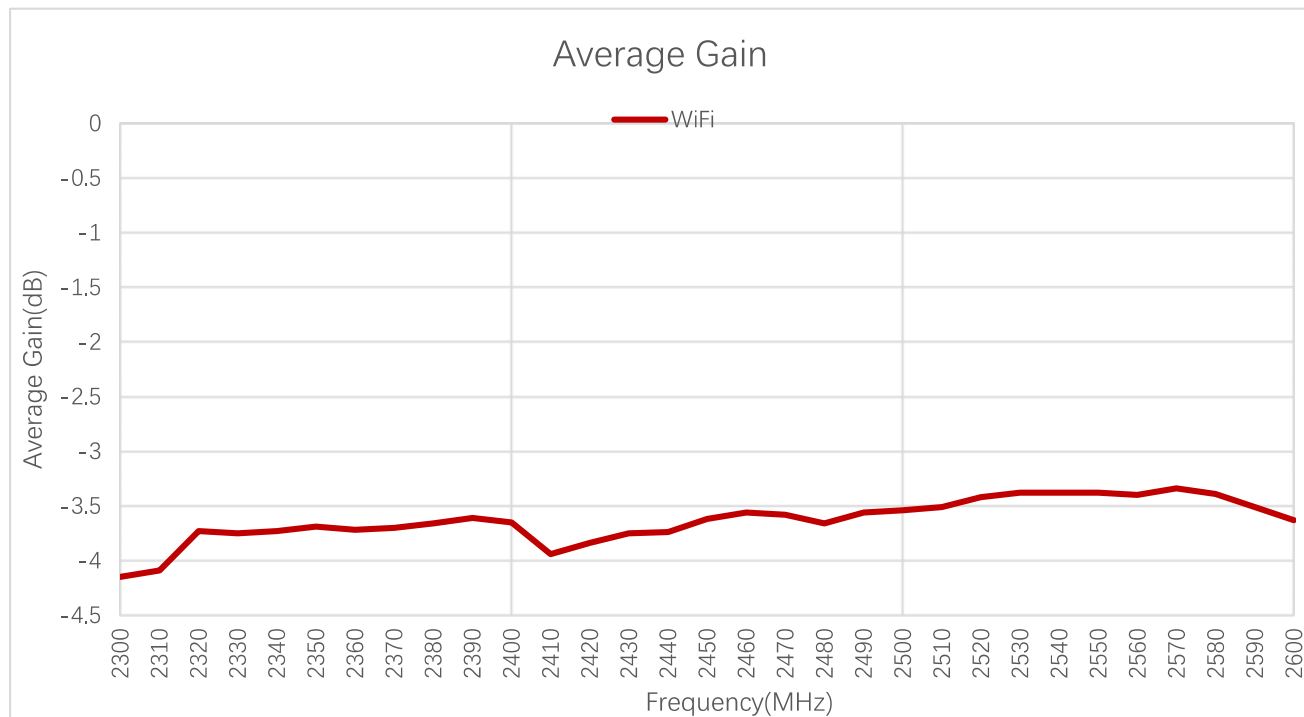
3.2.1. Efficiency



Efficiency (%)

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Efficiency (%)	-	-	-	-	-	-	-	-	-	-
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
Efficiency (%)	-	-	-	43.4	-	-	-	-	-	-

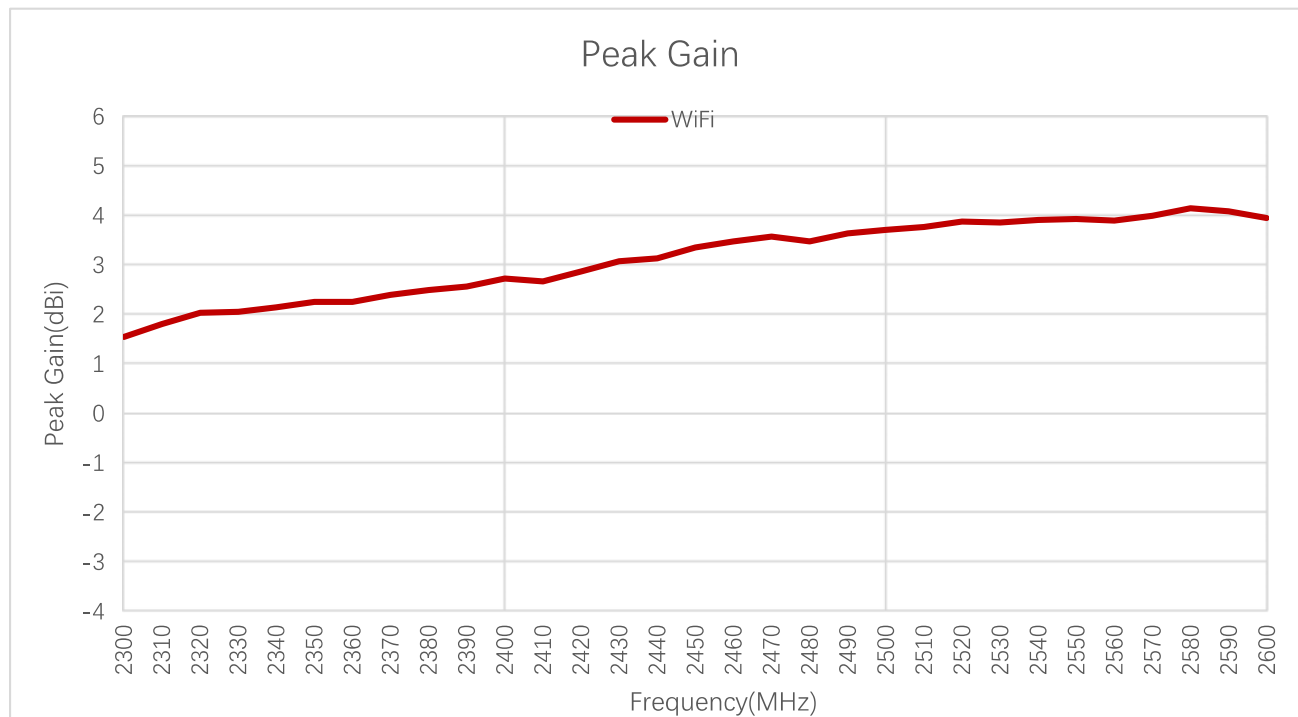
3.2.2. Average Gain



Average Gain (dB)

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Average Gain (dB)	-	-	-	-	-	-	-	-	-	-
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
Average Gain (dB)	-	-	-	-3.6	-	-	-	-	-	-

3.2.3. Peak Gain



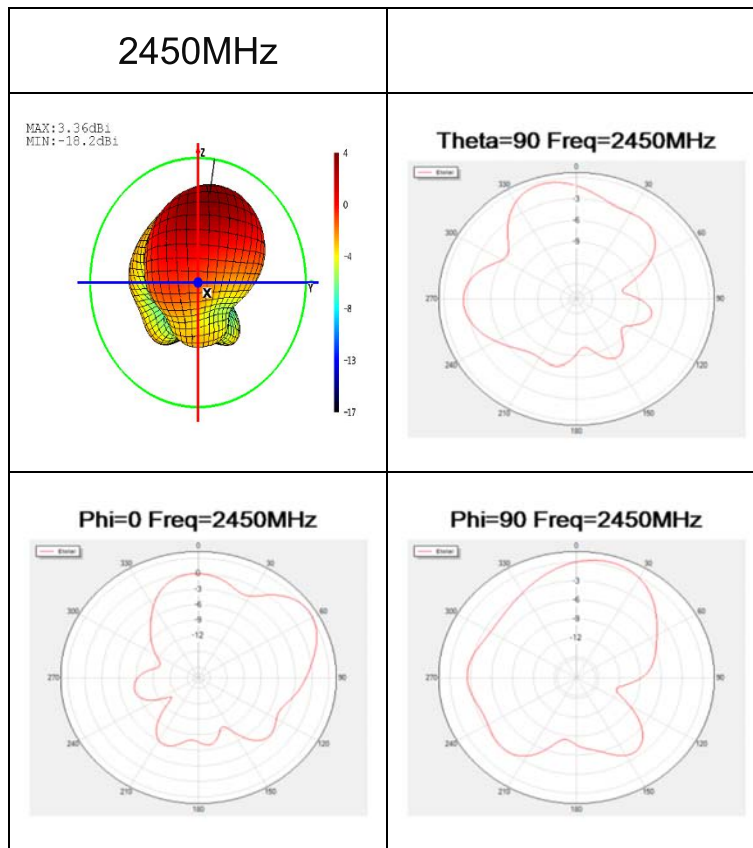
Peak Gain (dBi)

Frequency (MHz)	600	630	710	830	900	960	1440	1710	1740	1880
Peak Gain (dBi)	-	-	-	-	-	-	-	-	-	-
Frequency (MHz)	1950	2140	2350	2450	2600	2690	4700	5000	5500	6000
Peak Gain (dBi)	-	-	-	3.7	-	-	-	-	-	-

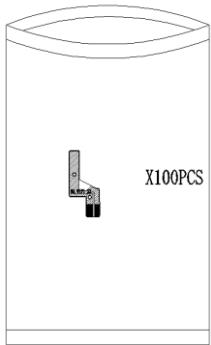
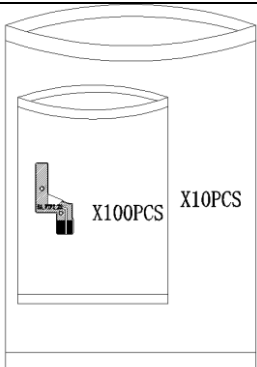
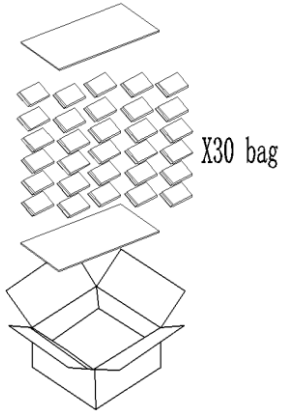
3.2.4. 3D & 2D Radiation Pattern

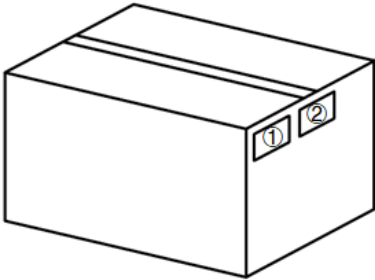
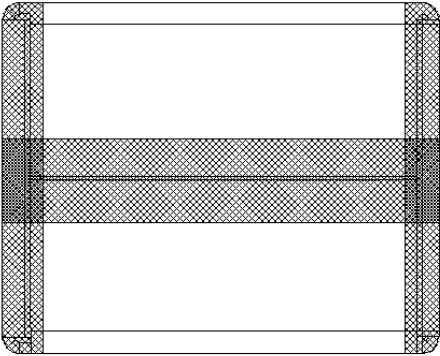
- Test Condition: Assembled in test device
- Test Chamber: FS-S-1





4 Packaging

Step	Packaging picture / 2D picture	Description
1		100 pcs Antenna products in a small PE bags; 100 pcs Antenna / Per small PE Bag
2		1000 pcs Antenna products in a big PE bags; 1000 pcs Antenna / Per big PE Bag
3		30 PE Bag / Per Carton Box (30000 pcs Antenna / Per Carton Box) Estimated quantity Products that are not full will be packaged in suitable cardboard boxes <u>Carton Size:L*W*H=370*370*295mm</u>

4		Position for Attaching Labels--- ① Carton Label ② Quality Label
5		Sealing Cartons--- “⊥” type sealing cartons
6	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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Revision History

Version	Date	Author	Note
-	2024-01-27	Charming YANG Bill MO David LIU Aria CHU	Creation of the document
1.0	2024-01-27	Charming YANG Bill MO David LIU Aria CHU	First official release



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