



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

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1 Specification

Test Condition: Assembled in test device

1.1. Electrical

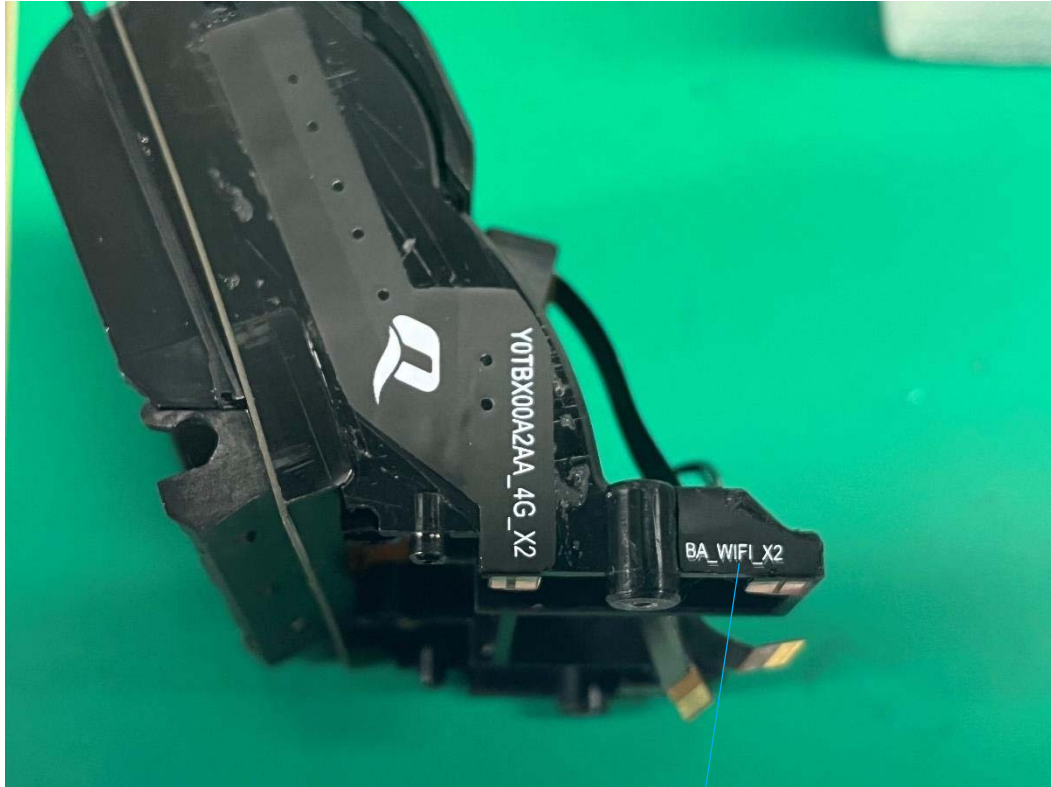
Electrical	
Frequency Range	2400–2500 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

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

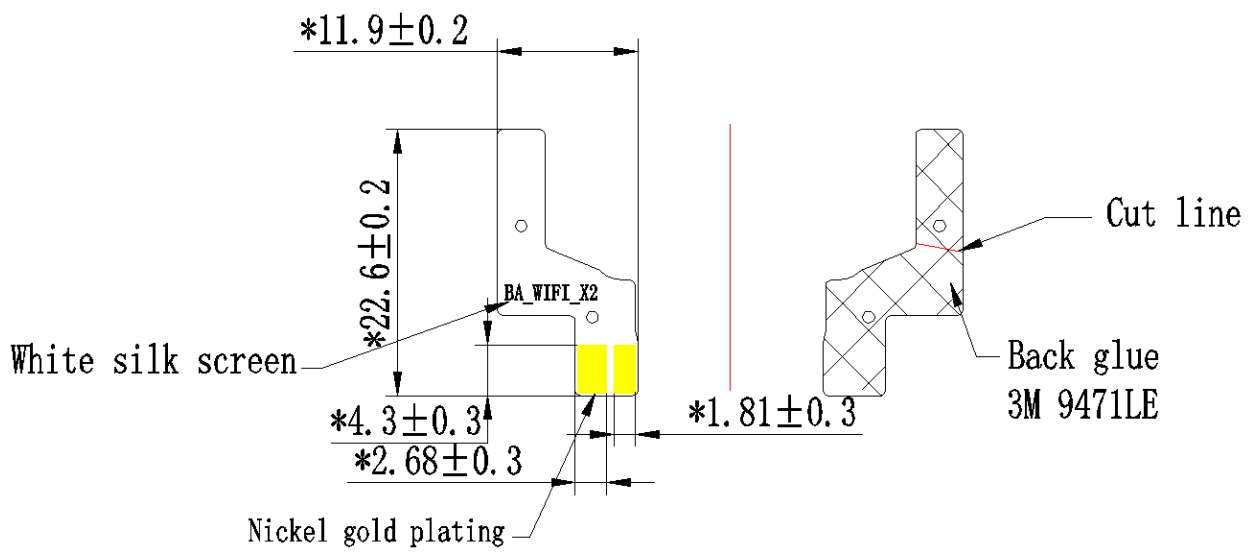
Mechanical	
Antenna Dimensions	22.6 * 11.9 mm
Material & Color	FPC & Black
Mounting Type	Adhesive
Weight	Typ. 0.01g
Environmental	
Operation Temperature	-20 °C to +60 °C
Storage Temperature	-20 °C to +60 °C
RoHS & REACH Compliant	Yes

1.3. Antenna Assembly



Y0TBX00A2BA

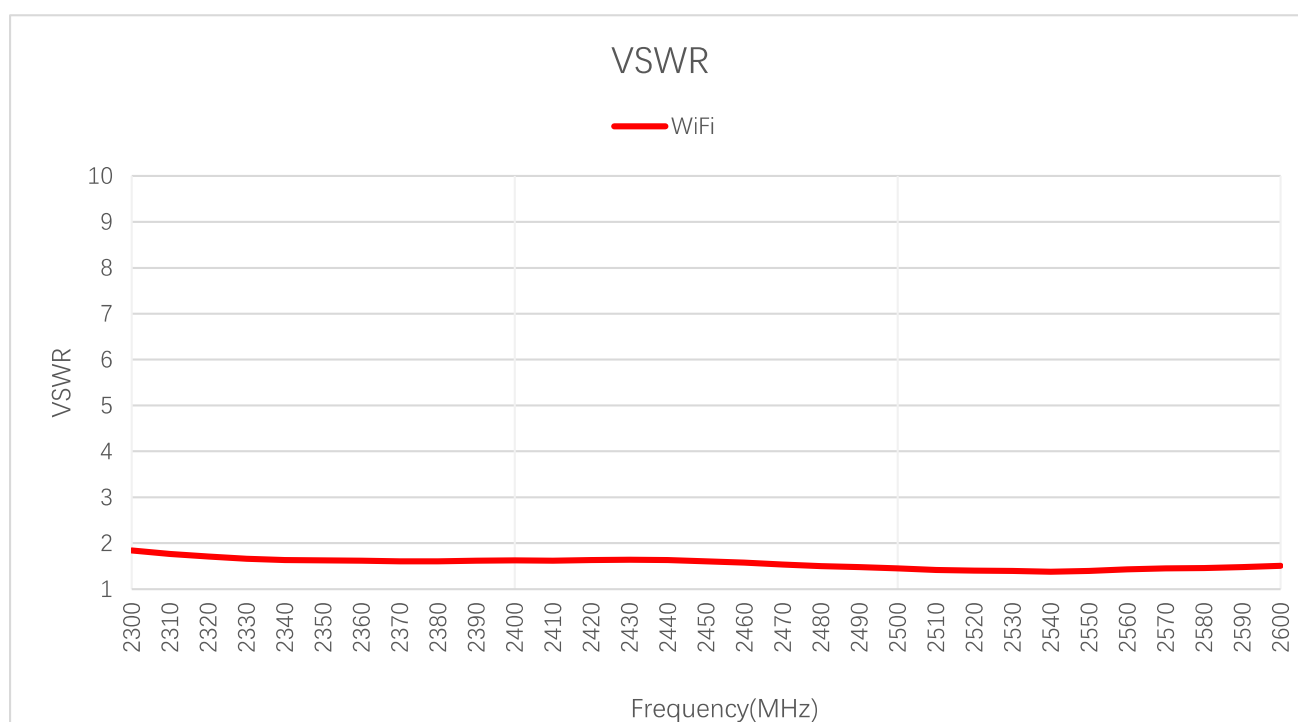
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

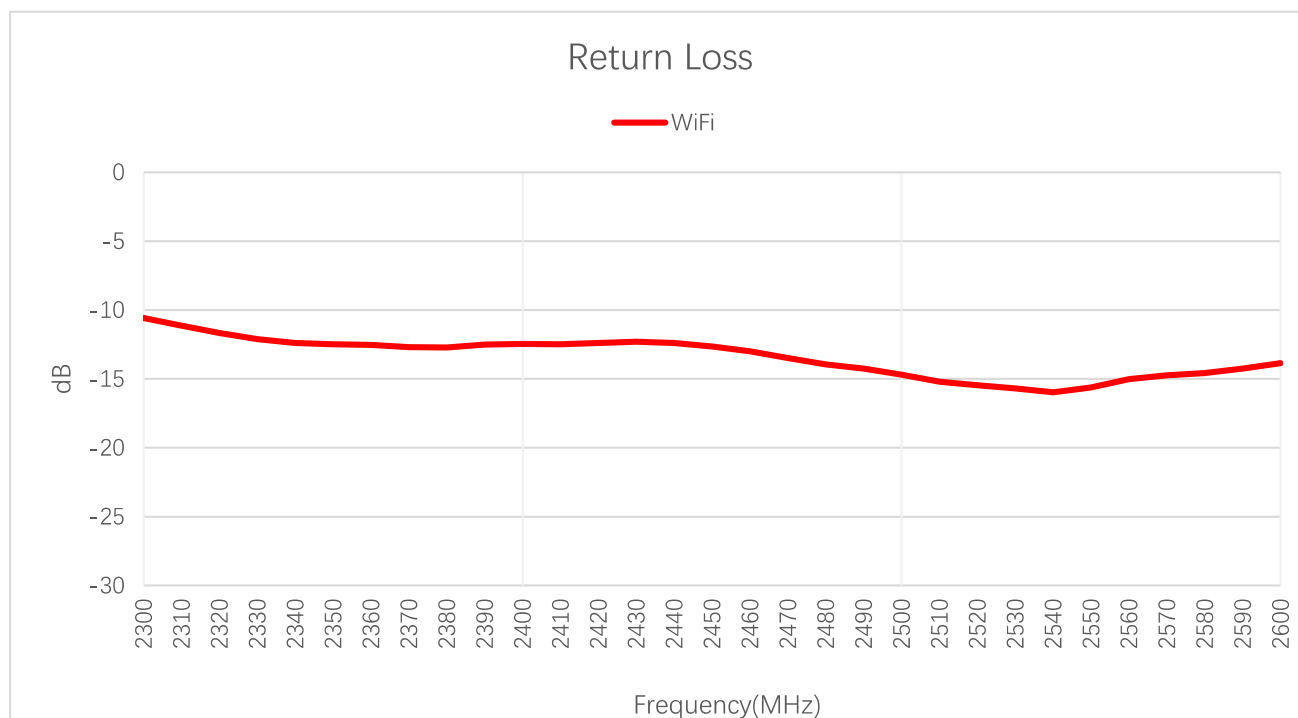
3.1.1. VSWR



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

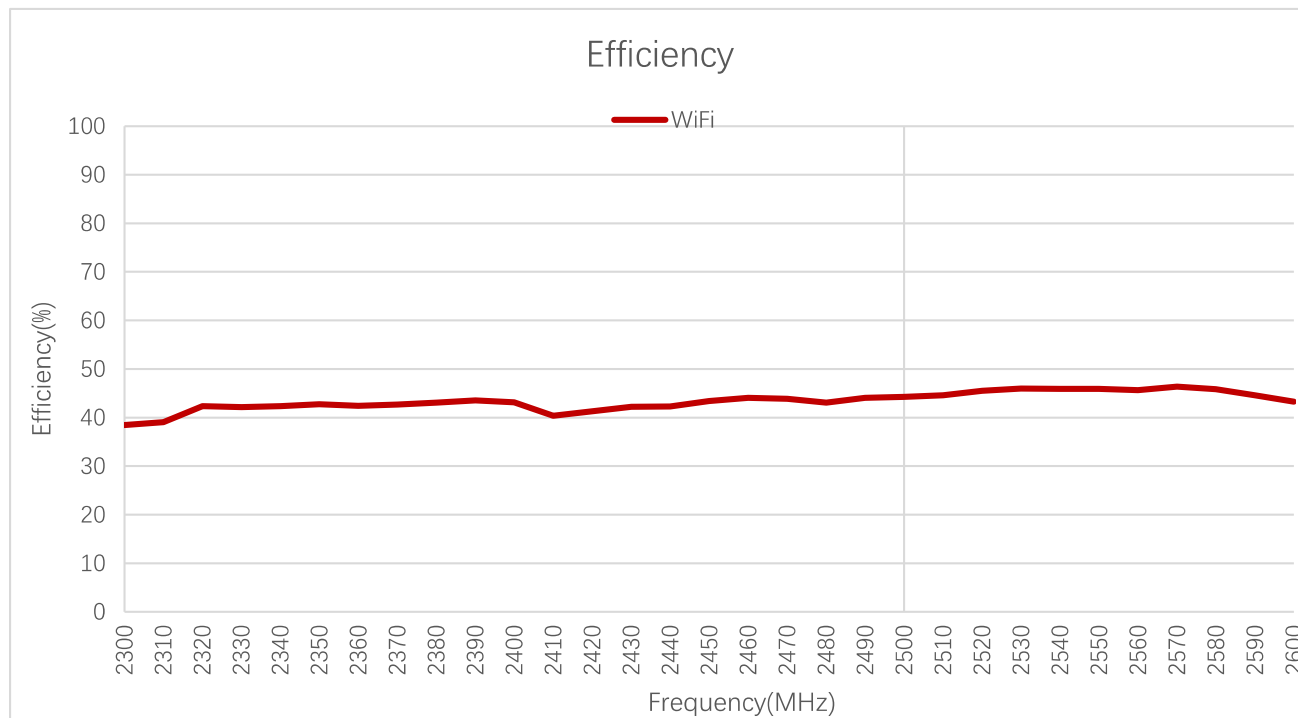


Return Loss (dB)

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

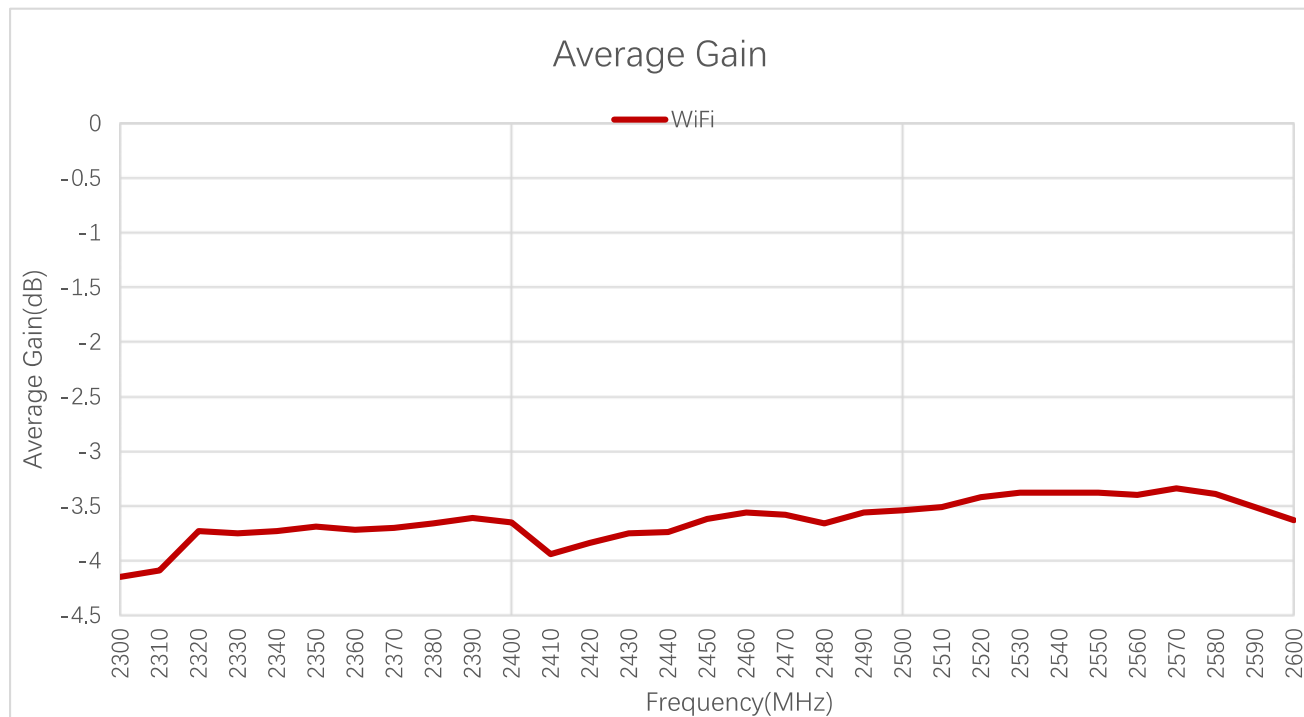
3.2.1. Efficiency



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	-	-	-	-	-	-

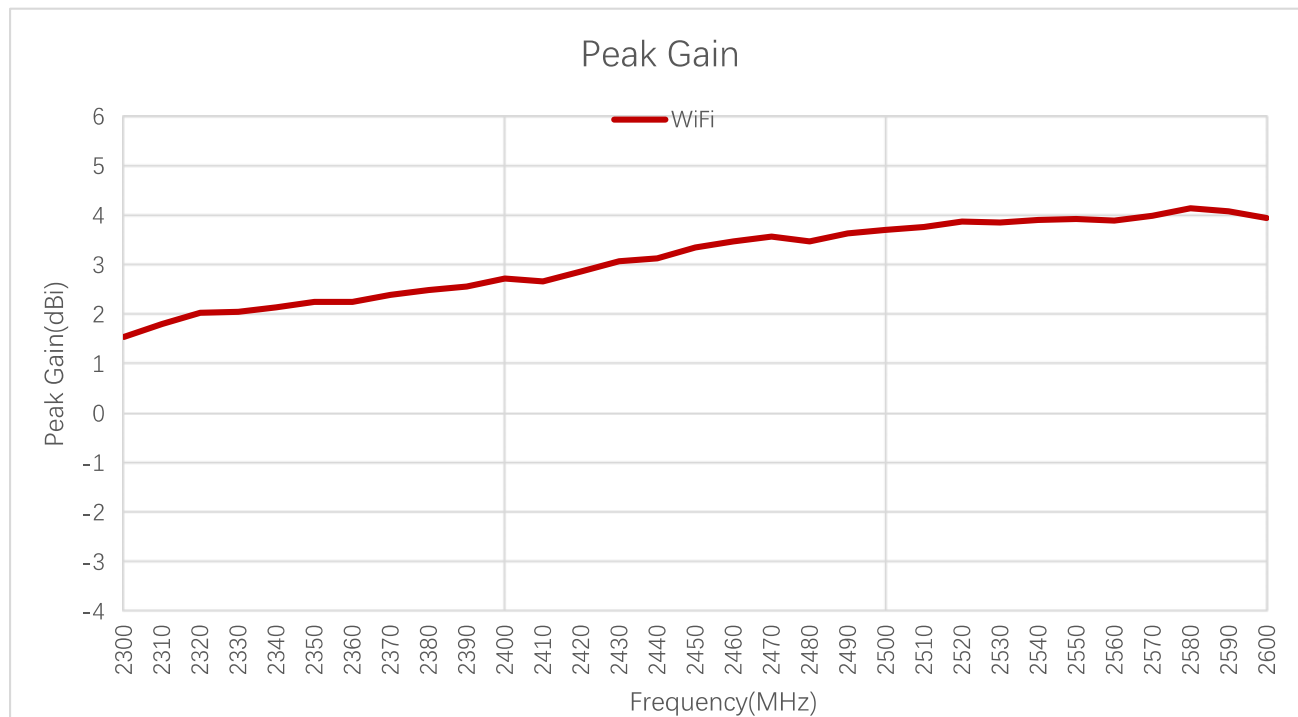
3.2.2. Average Gain



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



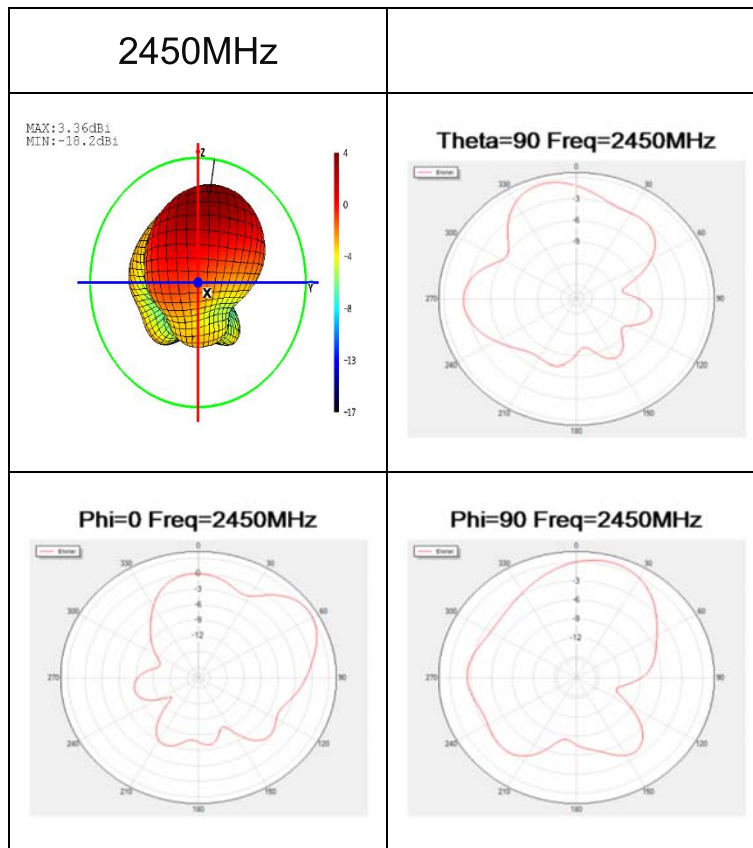
Peak Gain (dBi)

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	-	-	-	-	-	-

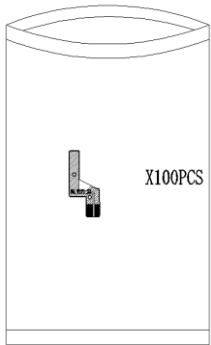
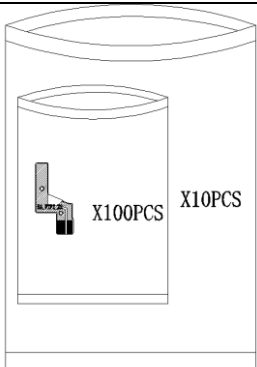
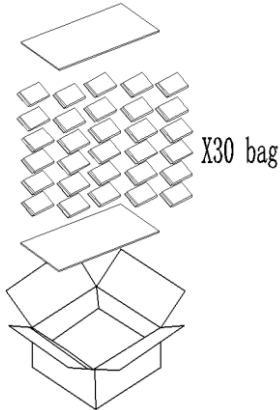
3.2.4. 3D & 2D Radiation Pattern

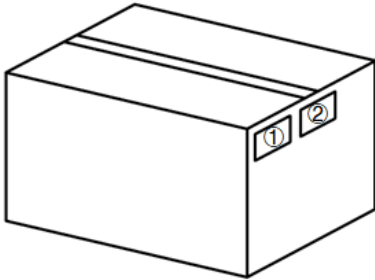
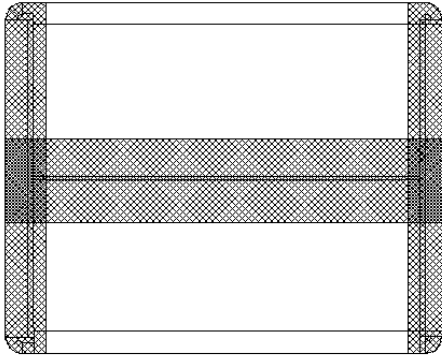
- Test Condition: Assembled in test device
- Test Chamber: FS-S-1





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		<p>Position for Attaching Labels---</p> <p>① Carton Label</p> <p>② Quality Label</p>
5		<p>Sealing Cartons---</p> <p>“Ⅰ” type sealing cartons</p>
6	<p>The initial packaging method described above is for reference only, and the final actual packaging method shall be subject to the actual shipping packaging.</p>	

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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