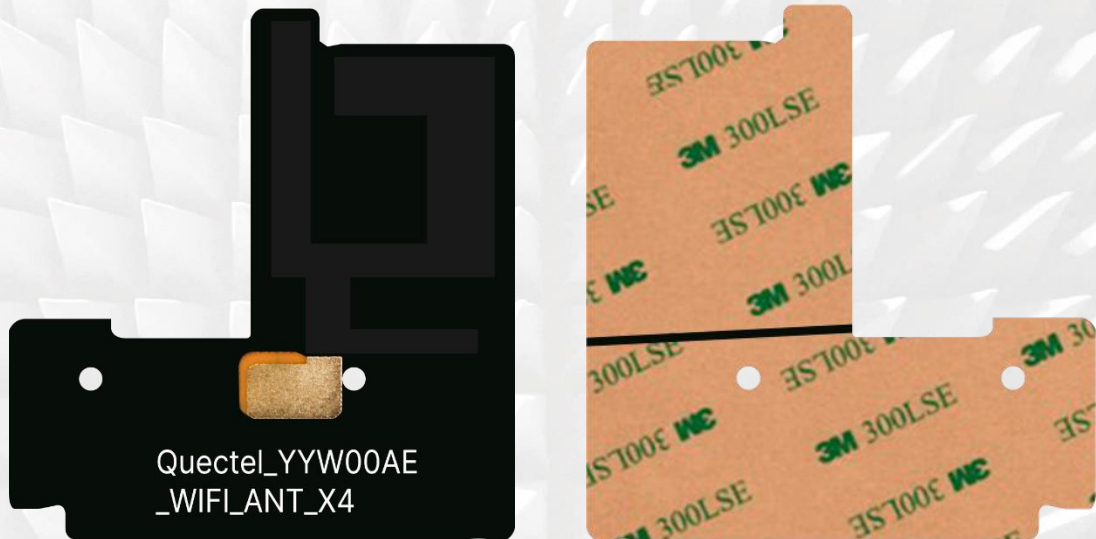




物料承认书

APPROVAL SHEET

项目	CV200				
料号	QK1027200299				
供应商名称	上海移远通信技术股份有限公司				
物料规格	YYW00AECA				
物料描述	WIFI 2.4/5.8G				
送样日期	2023.07.26				
主要性能 ☐	图纸 ☒	测量报告 ☐	关键材质 ☐	可靠性报告 ☐	包装信息 ☐
审核	研发部	项目部	采购部	质量部	
	上海移远通信技术股份有限公司 天线产品发行章				



Antenna Datasheet

Product OC: YYW00AECA

Version: 1.0

Date: 2023-07-21

Status: Released

Product Name: WIFI FPC Antenna

Key Features:

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

Dimensions: 26.28 × 24.98 × 0.11 mm

Efficiency: Up to 55.7%

RoHS Compliant

Overview

Quectel Wi-Fi antenna covers 2.4 GHz and 5 GHz dual-bands, fully satisfying customers' requirements for Wi-Fi 5 and Wi-Fi 6. There are various antenna types, including built-in FPC/PCB antenna, ceramic patch antenna, and other external antennas of different shapes or sizes. The antenna performance meets the customers' demands for efficiency, gain, and radiation and ensures the superior experience of the customers' products in use.

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1 Specification

Test Condition: Assembled in test device

1.1. Electrical

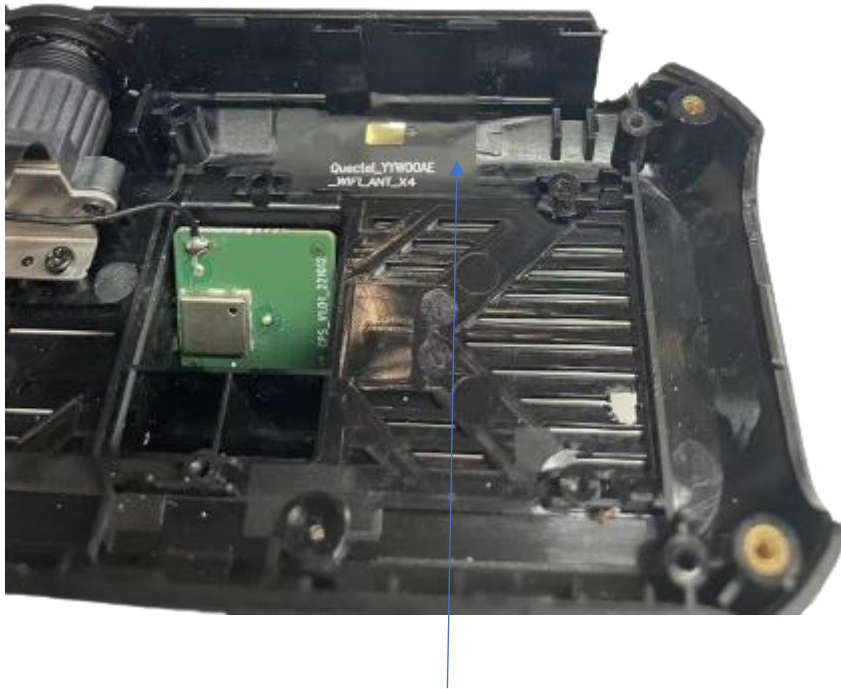
Electrical	
Frequency Range	2400-2500 MHz, 5150-5850 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

Electrical - Detail												
SPEC	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		-	-	-	-	-	-	2.7	-	-	-	2.7
Max. Return Loss (dB)		-	-	-	-	-	-	-6.7	-	-	-	-6.8
AVG Eff. (%)		-	-	-	-	-	-	26.6	-	-	-	46.4
AVG Gain (dB)		-	-	-	-	-	-	-5.8	-	-	-	-3.4
Max. Peak Gain (dBi)		-	-	-	-	-	-	-1.5	-	-	-	2.6
VSWR						≤ 2.7						
Return Loss						≤ -6.7 dB						
Peak Gain						≤ 2.6 dBi						

1.2. Mechanical, Environmental & Storage

Mechanical	
Antenna Dimensions	26.28 × 24.98 × 0.11 mm
Material & Color	FPC & Black
Weight	Typ. 0.29 g
Mounting Type	Adhesive
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
RoHS Compliant	Yes

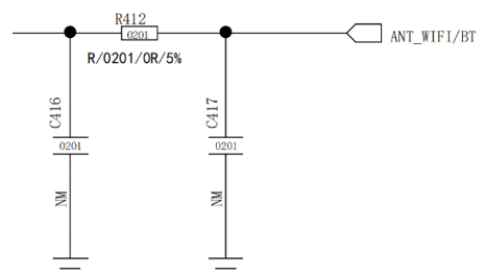
1.3. Antenna Assembly



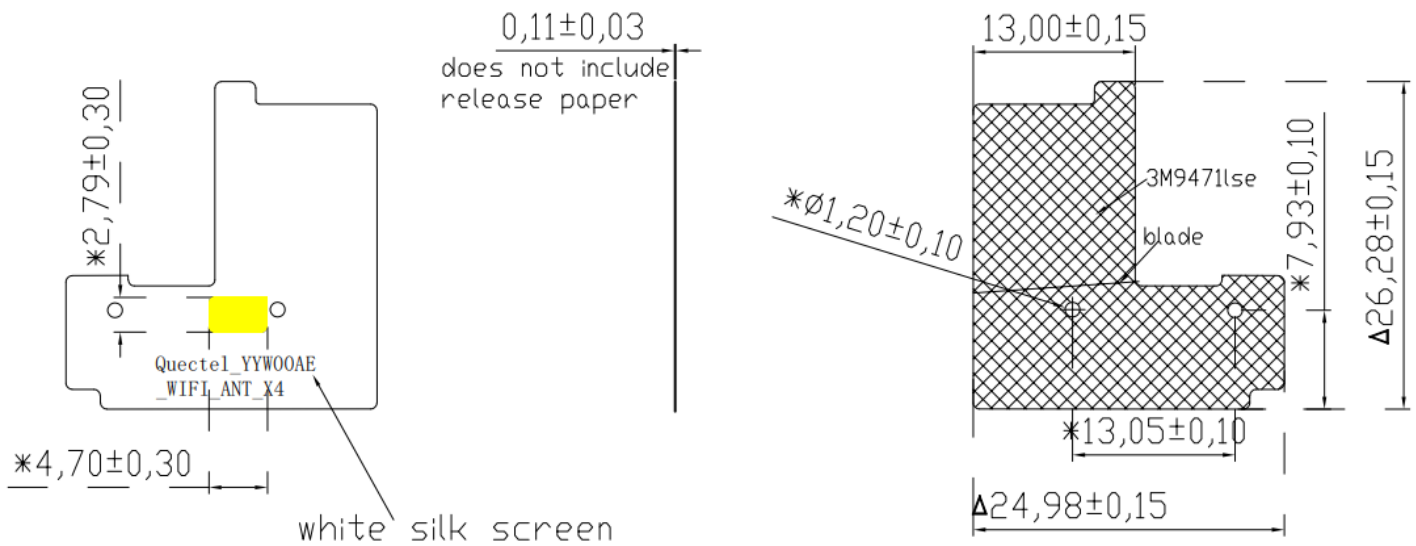
Antenna installation

1.4. Matching Circuit

C416	R412	C417		
NC	1pF	NC		



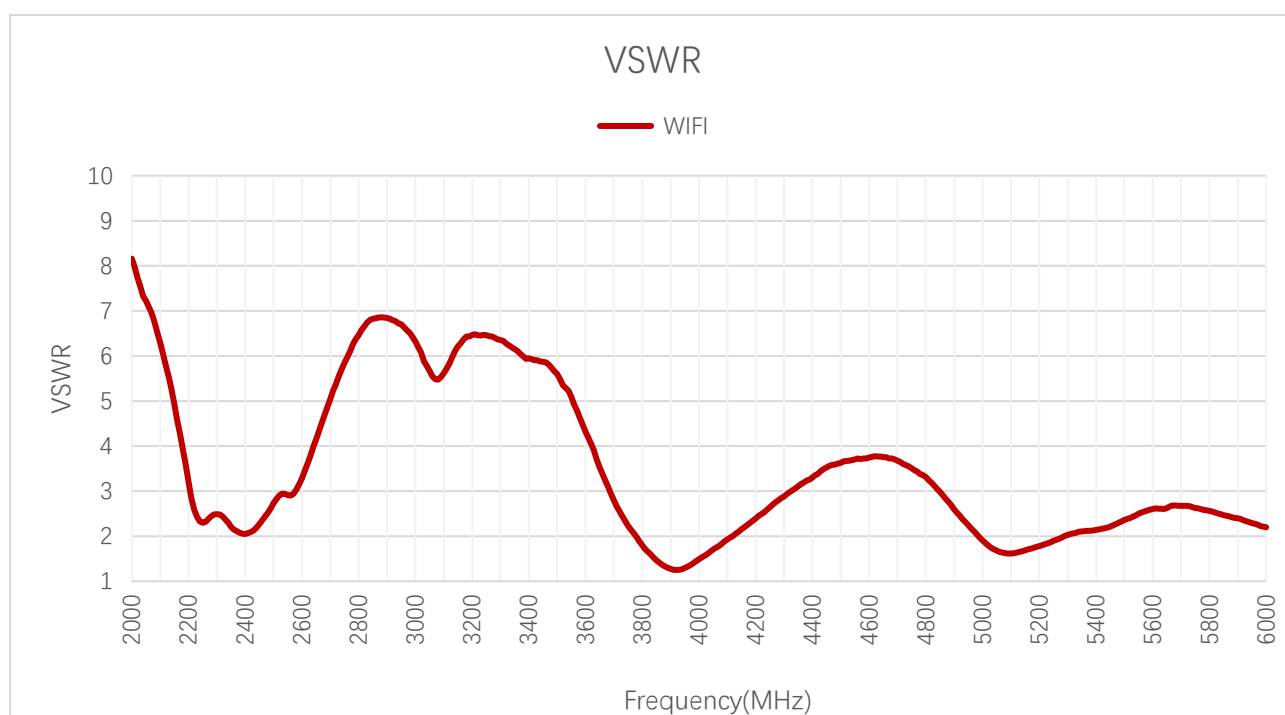
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

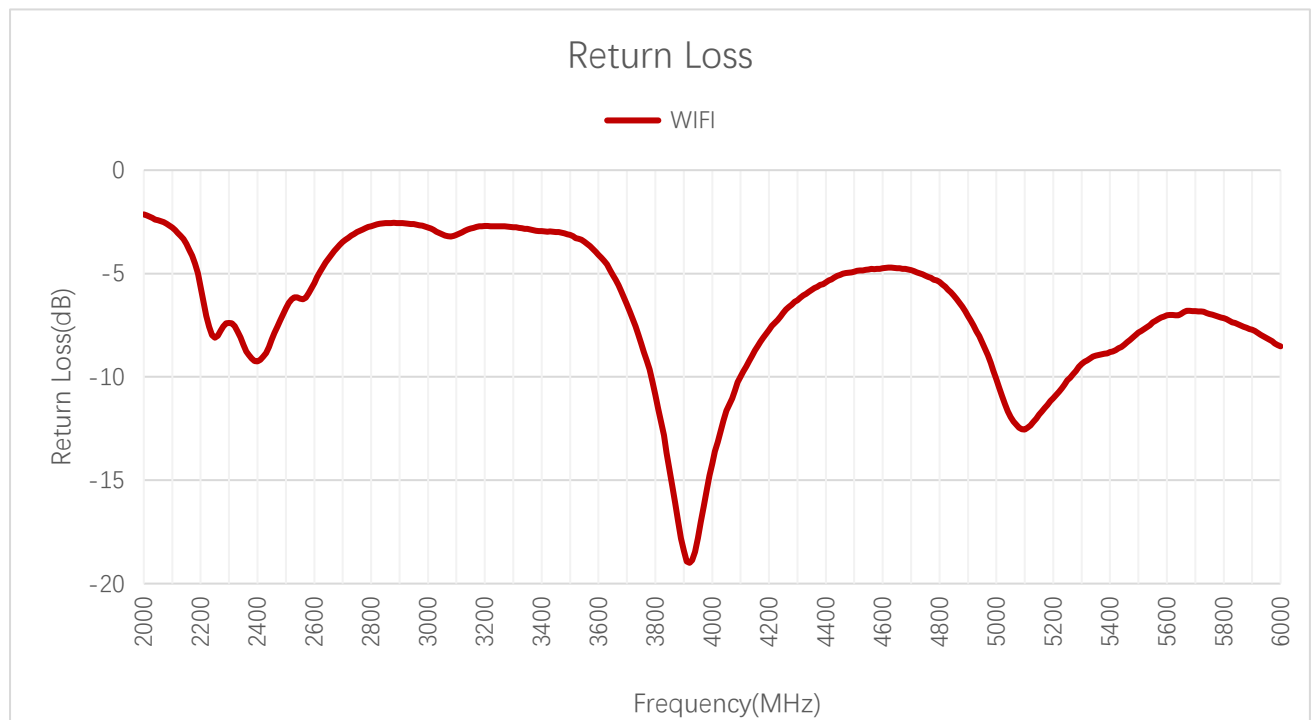
3.1.1. VSWR



VSWR

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
VSWR	2.1	2.3	2.7	1.7	2.4	2.5	-	-	-	-

3.1.2. Return Loss

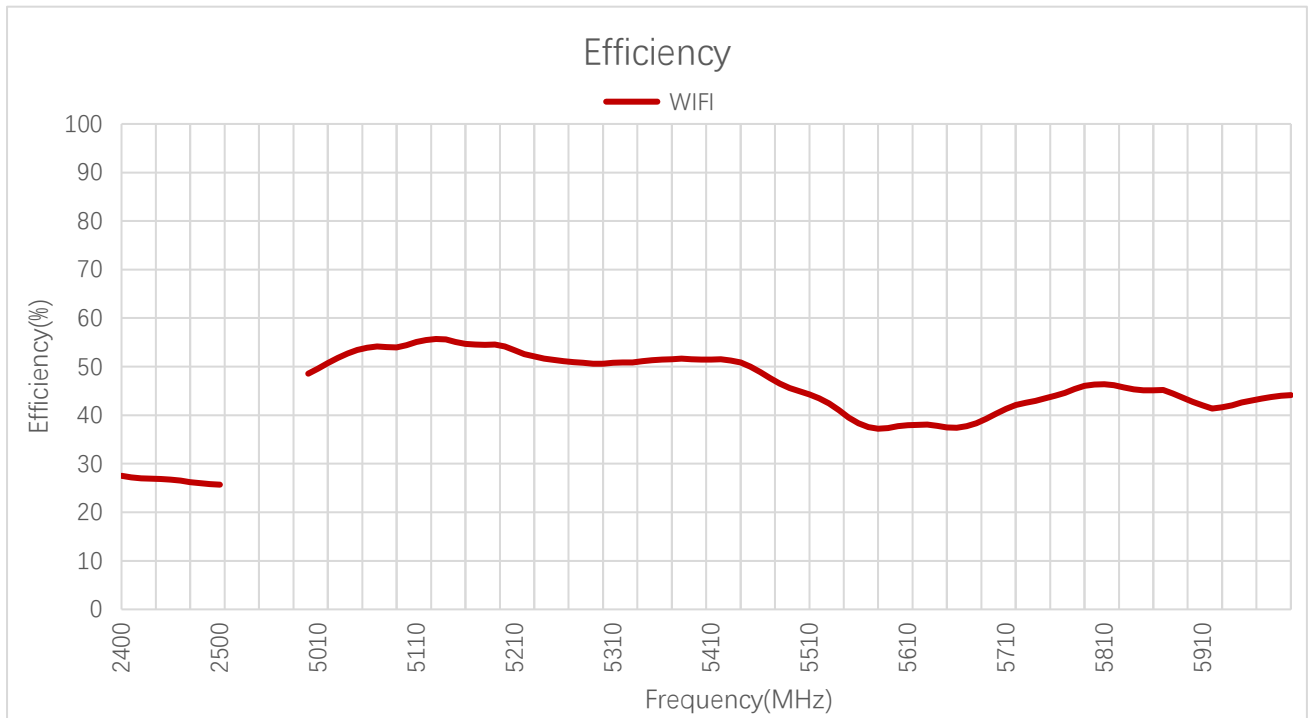


Return Loss (dB)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Return Loss (dB)	-9.2	-8.2	-6.7	-11.8	-7.9	-7.5	-	-	-	-

3.2. Radiation Performance Test

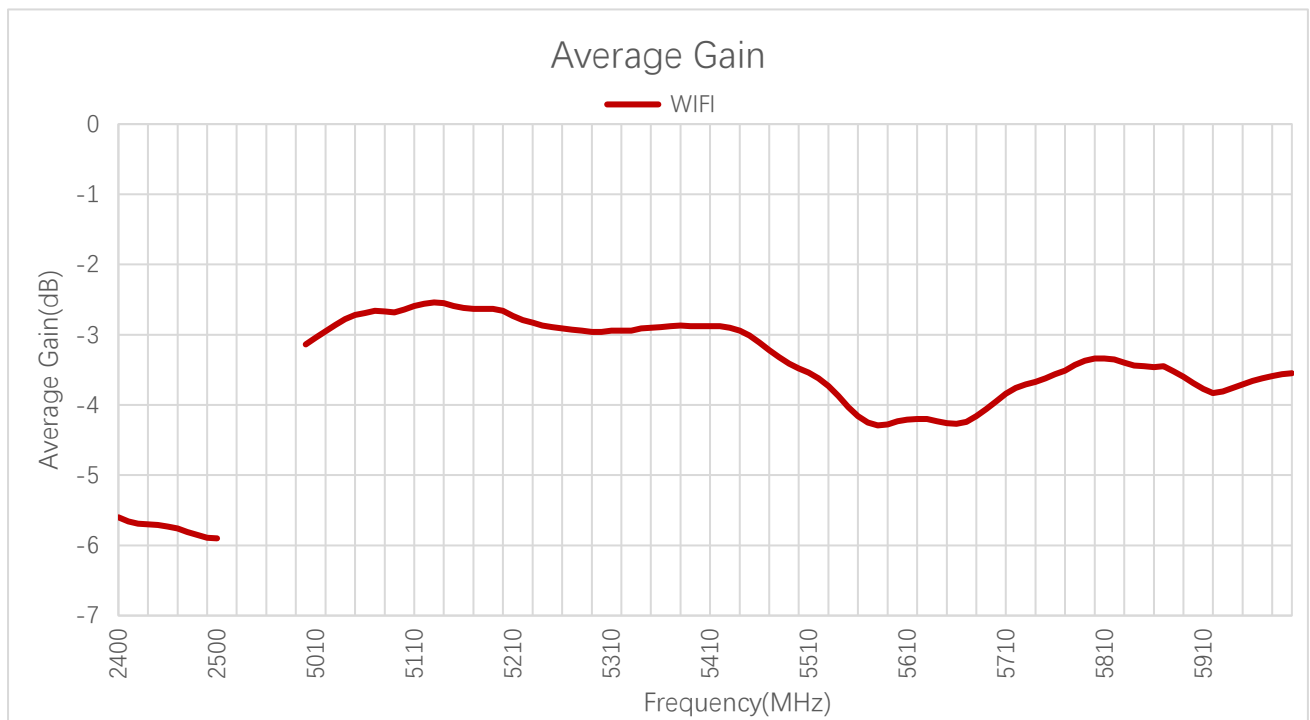
3.2.1. Efficiency



Efficiency (%)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Efficiency (%)	27.5	26.7	25.7	55.1	44.9	45.1	-	-	-	-

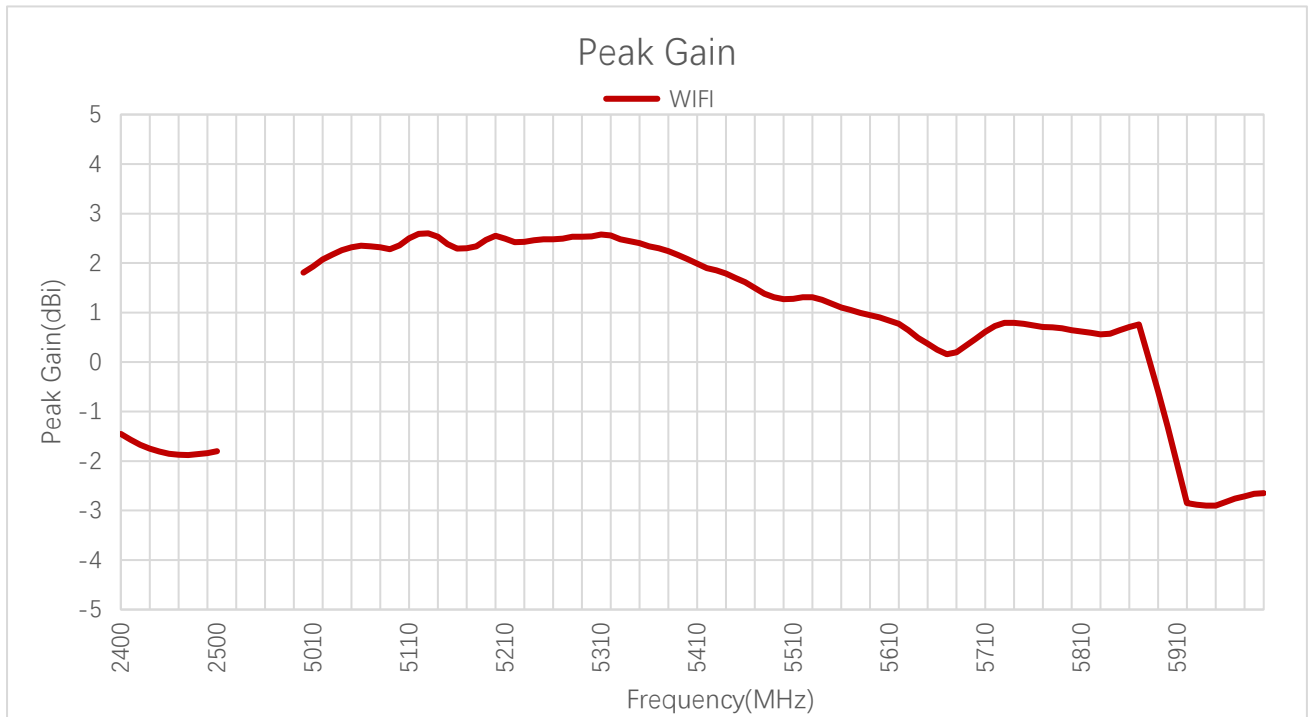
3.2.2. Average Gain



Average Gain (dB)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Average Gain (dB)	-5.6	-5.7	-5.9	-2.6	-3.5	-3.5	-	-	-	-

3.2.3. Peak Gain

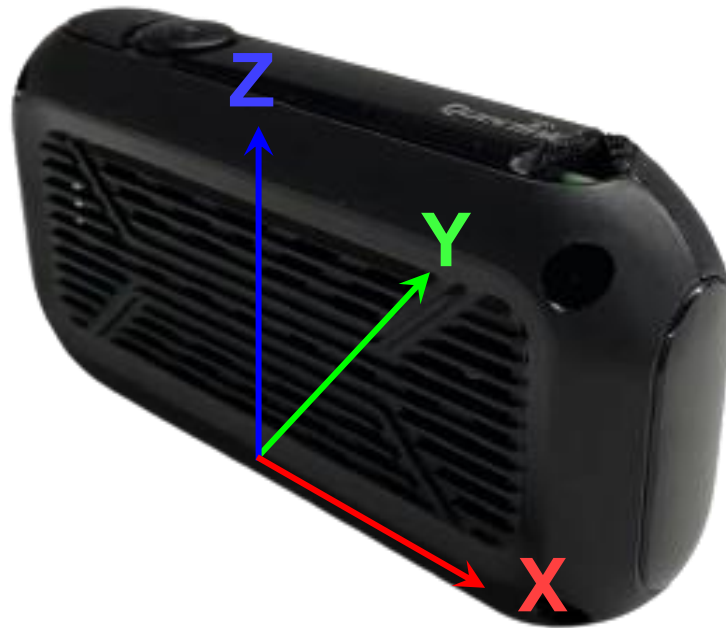


Peak Gain (dBi)

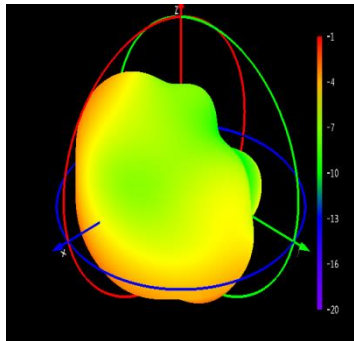
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Peak Gain (dBi)	-1.5	-1.9	-1.8	2.4	1.3	0.64	-	-	-	-

3.2.4. 3D & 2D Radiation Pattern

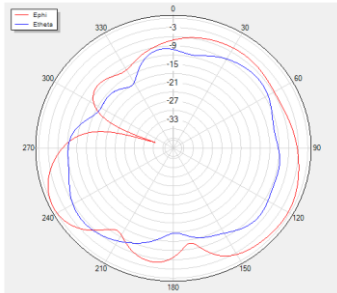
- Test Condition: Assembled in test device
- Test Chamber: SZ-S-1



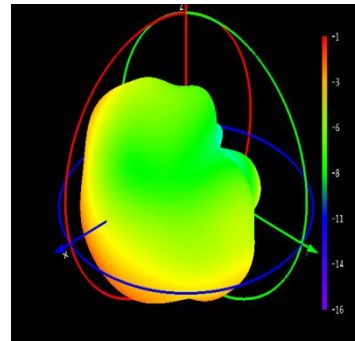
2400MHz



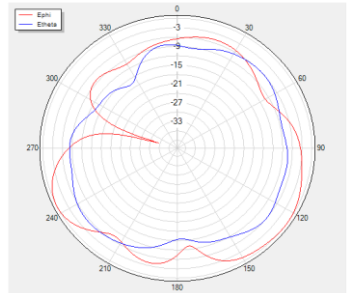
Phi=0 freq=2400MHz



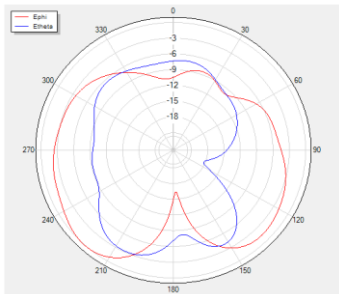
2450MHz



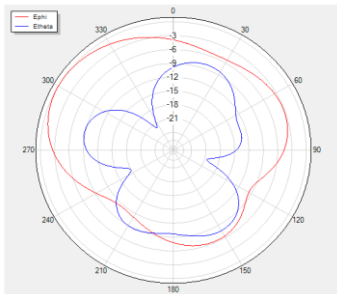
Phi=0 freq=2450MHz



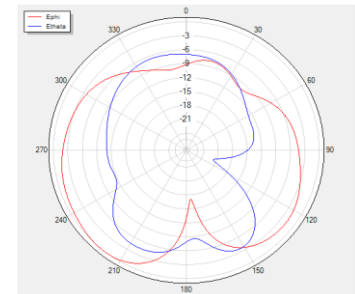
Phi=90 freq=2400MHz



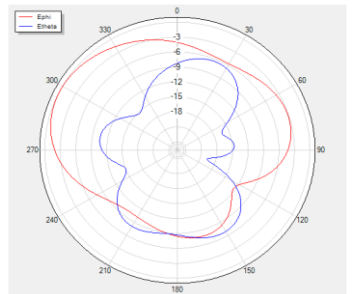
Theta=90 freq=2400MHz



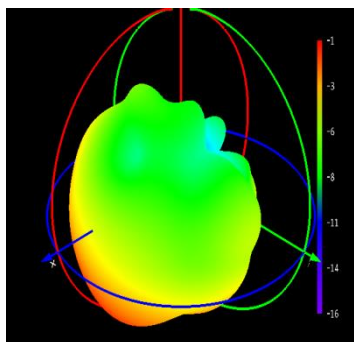
Phi=90 freq=2450MHz



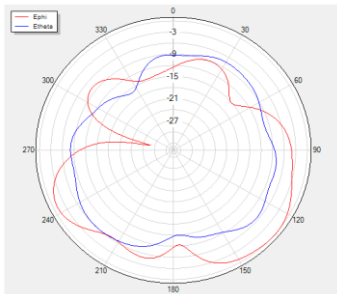
Theta=90 freq=2450MHz



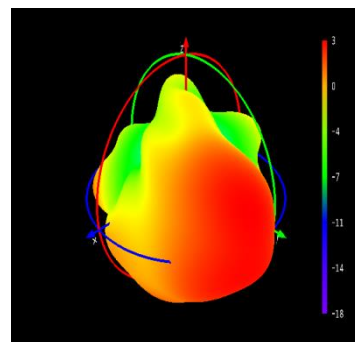
2500MHz



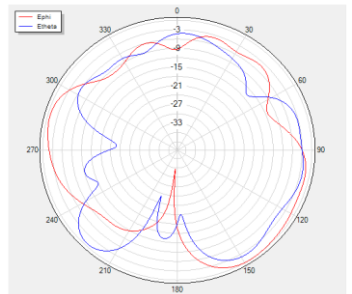
Phi=0 freq=2500MHz



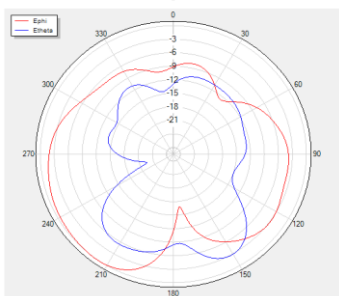
5150MHz



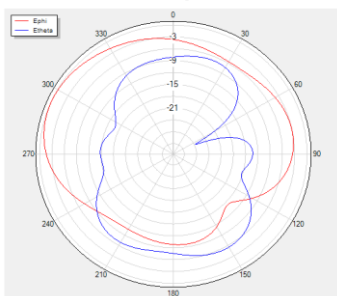
Phi=0 freq=5150MHz



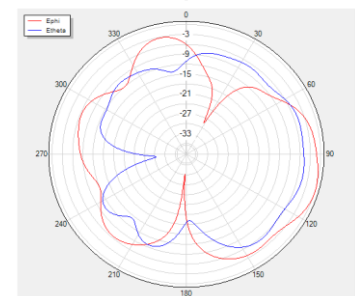
Phi=90 freq=2510MHz



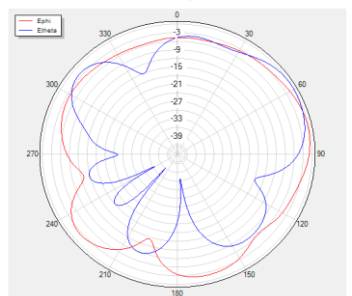
Theta=90 freq=2500MHz



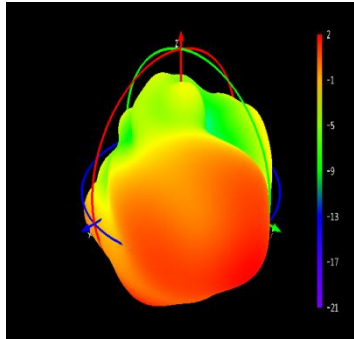
Phi=90 freq=5150MHz



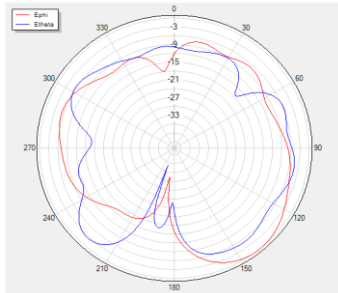
Theta=90 freq=5150MHz



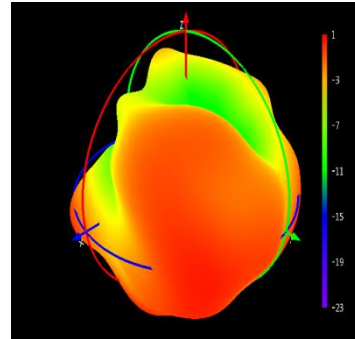
5500MHz



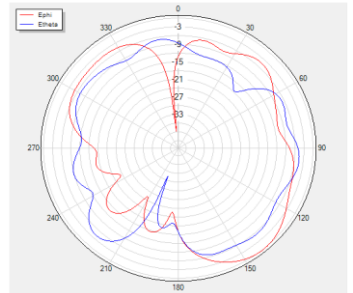
Phi=0 freq=5500MHz



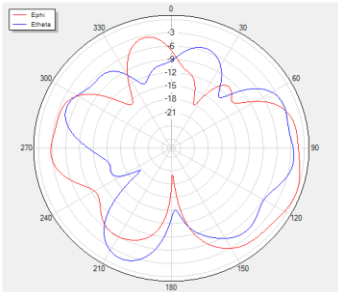
5850MHz



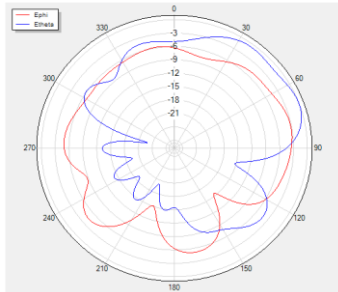
Phi=0 freq=5850MHz



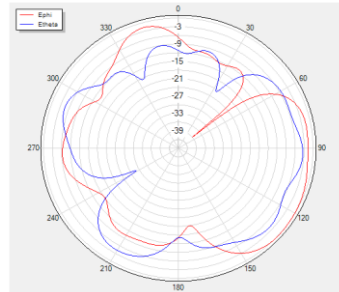
Phi=90 freq=5500MHz



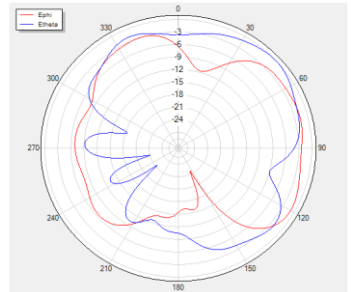
Theta=90 freq=5500MHz



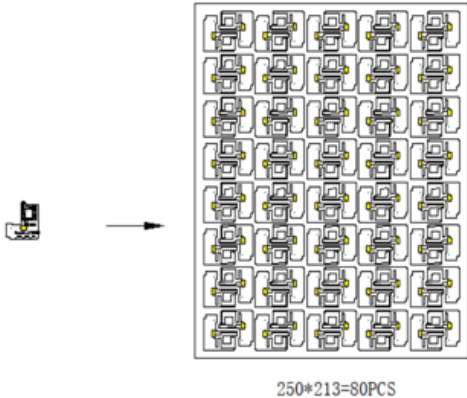
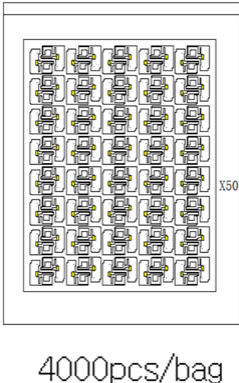
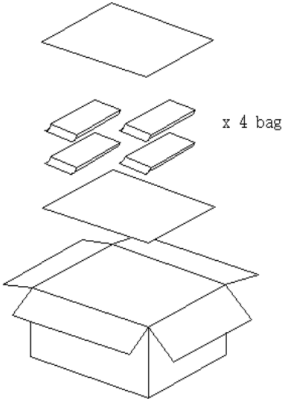
Phi=90 freq=5850MHz

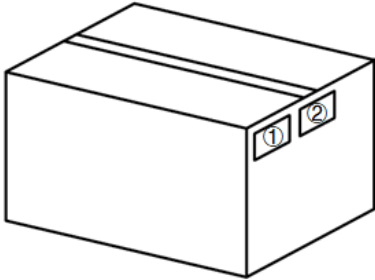
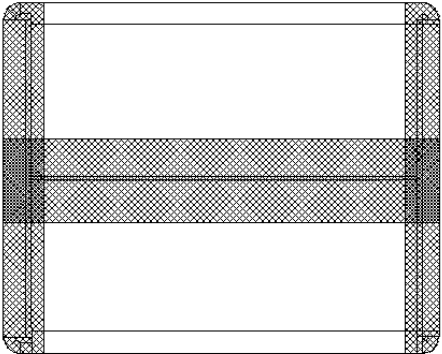


Theta=90 freq=5850MHz



4 Packaging

Step	Packaging Picture / 2D Picture	Description
1	 250*213=80PCS	80 pcs Antenna products in Micromucosa (80 pcs Antenna / Per Micromucosa) <u>Micromucosa Size: L*W=250X213mm</u>
2	 4000pcs/bag	4000 pcs Antenna products in a big PE bags; (4000 pcs Antenna / Per PE Bag) <u>Big Pe bag Size: L*W=220X330mm</u>
3	 x 4 bag	Place a clapboard at the bottom and top, 4 Big PE Bags / Per Carton Box) (16000pcs Antenna / Per Carton Box) <u>Carton Size: L*W*H=325*325*200mm</u>

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

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:

Quectel Wireless Solutions Co., Ltd.

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

Tel: +86 21 5108 6236

Email: info@quectel.com

Or our local offices. For more information, please visit:

<http://www.quectel.com/support/sales.htm>.

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Revision History

Version	Date	Author	Note
-	2023-03-31	Jialin Chen/ Shea Li/ David Liu/ Bunny Zhang	Creation of the document
1.0	2023-07-21	Jialin Chen/ Shea Li/ David Liu/ Bunny Zhang	First official release



www.quectel.com



Quectel Wireless Solutions Co.,Ltd.
Inspection Report : First Article/ Vendor Sample Evaluation

Part Name: YYW00AECA Part No.: _____ Mold No.: N/A Material Type: N/A Rev NO.: _____
☐ Customer ☐ Supplier _____ Project Name: _____ Color: N/A Sub. No. 1 Page 1 of 1

Dimensional Inspection

No.	Specification					Shot No.											Disposition			Remark
	Print Zone	Sign	Nominal	+	-		01 PATTERN RF Golden (After cutting)	01 PATTERN	02 PATTER N	03 PATTER N	04 PATTER N	05 PATTER N	/	/	EQPT	Acc	Con. Acc	Rej		
1		CPK	26.28	0.15	0.15			26.240	26.370	26.290	26.220	26.310			OMM	√				
2		CPK	24.98	0.15	0.15			25.100	25.090	25.020	25.030	25.020			OMM	√				
3			13.00	0.15	0.15			13.080	13.010	13.000	12.970	13.020			OMM	√				
4		*	13.05	0.10	0.10			13.090	13.050	13.010	12.990	13.060			OMM	√				
5			7.93	0.10	0.10			7.960	7.920	7.880	7.910	7.930			OMM	√				
6		*	Ø1.2	0.10	0.10			1.230	1.250	1.190	1.220	1.160			OMM	√				
7			0.11	0.03	0.03			0.120	0.121	0.109	0.110	0.109			OMM	√				
8		*	2.79	0.30	0.30			2.790	2.850	2.710	2.680	2.810			OMM	√				
9		*	4.70	0.30	0.30			4.850	4.760	4.680	4.730	4.620			OMM	√				
10															OMM					
11															OMM					
12															OMM					
13															OMM					
14															OMM					
15															OMM					

Equipment ID:

DC-"Digital Caliper"

DI-"Dial Indicator"

PLG - "Plug Gauge"

PLG - "Plug Gauge"

LG - "Loop Gauge"

PG-"Pin Gauge"

RG-"Radii Gauge"

PP-"Profile Projector"

OMM-"Objective Measuring Machine"

Disposition:

Acc - "Accept"

Rej - "Reject"

Con. Acc - "Conditional Accept
(faulty, but accept)"

ME Engineer: Shea LI

Inspector _____ Date _____

QA Approval _____ Date 2023/7/10