



Antenna Datasheet

Product OC: YEBT002E3AM

Version: 1.0

Date: 2025-07-21

Status: Released

Product Name: Wi-Fi Terminal Mount Rubber + Cable Monopole External
Antenna

Key Features:

Frequency Band: 2400–2500 MHz, 5150–5850 MHz, 5925–7125 MHz

Dimensions: 15.6 mm × 13 mm × 130 mm

Efficiency: Up to 64.7 %

RoHS & REACH Compliant

Overview

YEBT002E3AM is a Wi-Fi antenna measuring 15.6 mm × 13 mm × 130 mm. This ultra-wide-band antenna provides broad coverage from 2400–2500 MHz, 5150–5850 MHz, 5925–7125 MHz. The antenna is available with connection via cable lengths from 100 mm, terminated with IPEX MHF 1 connector. This low profile, terminal mount omni-directional antenna, ideal for applications where the antenna is required to be discrete, is easy to install with maximum durability assured thanks to its PC + ABS enclosure. It is compatible with Quectel's Wi-Fi Series modules.

It allows constant and reliable transmission and reception due to its omni-directional gain across all frequency bands. YEBT002E3AM is designed as a monopole antenna, which needs to be mounted on a ground plane to offer high efficiency in all working bands. It is a perfect antenna product for customers that desire highest performance. This high-efficiency, high-gain omni-directional antenna is ideally suited for gateways and routers, IoT Sensors, public safety and security, point of sales terminals, smart home automation, robotics / autonomous.

Typical applications include:

- Gateways and Routers
- IoT Sensors
- Public Safety and Security
- Point of Sales Terminals
- Smart Home Automation
- Robotics / Autonomous

Quectel provides comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs. We have regional R & D centers to offer quick response to meet your requirements. Please contact our sales & FAEs if you have any requests.

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1 Specification

Test Condition: On 130 mm × 130 mm EVB

1.1. Electrical

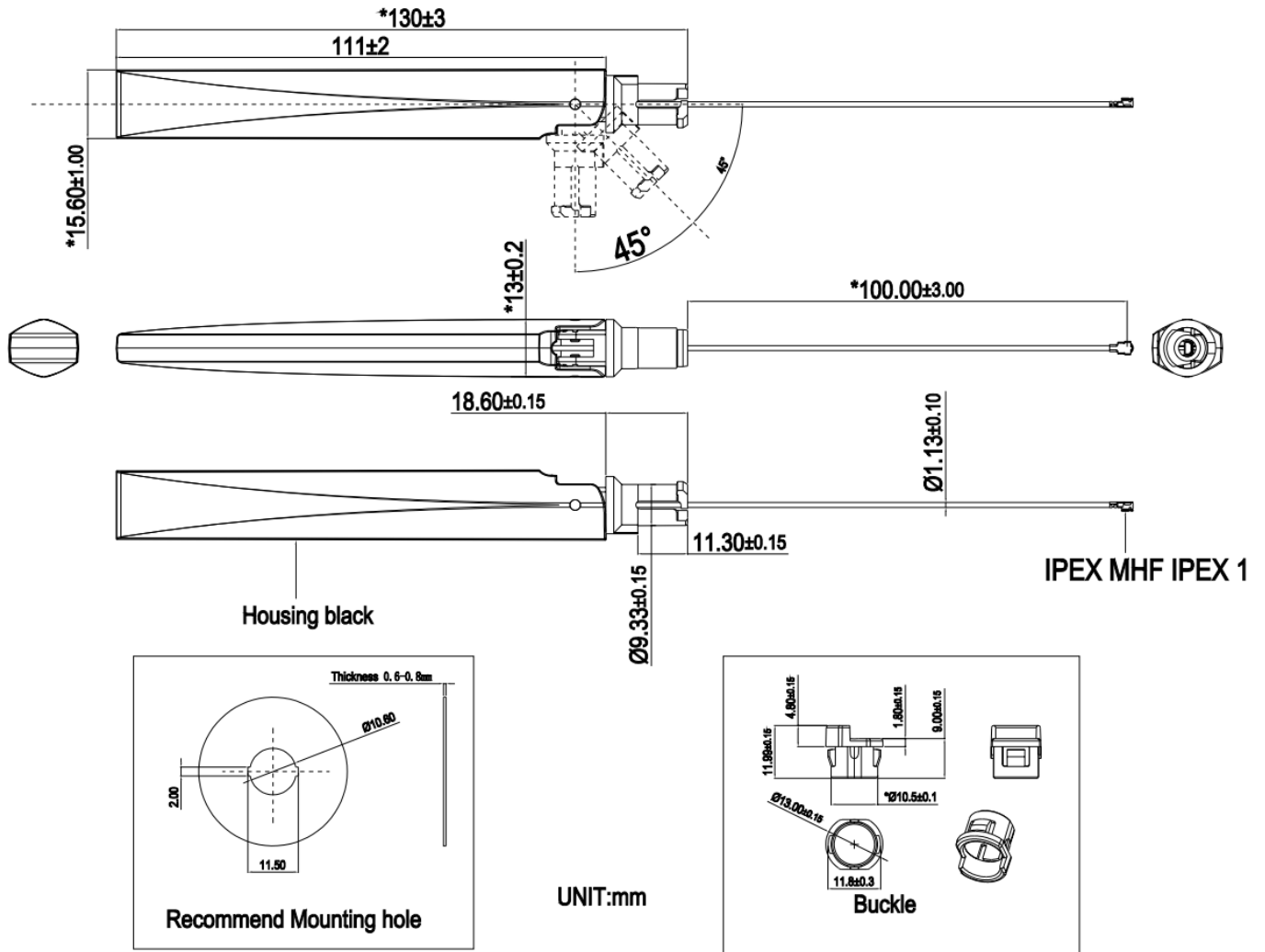
Electrical	
Frequency Range	2400–2500 MHz, 5150–5850 MHz, 5925–7125 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional
Antenna Type	Monopole

Specification	Band	Band	Wi-Fi 2G	Wi-Fi 5G	Wi-Fi 6G
		Freq. (MHz)	2400–2500	5150–5850	5925–7125
Max. VSWR			2.1	2.5	1.8
Max. Return Loss(dB)			-8.9	-7.4	-11.1
AVG Eff. (%)			62.7	55.1	47.7
AVG AVG Gain (dB)			-2.0	-2.6	-3.2
Max. Peak Gain (dBi)			1.4 (2475)	2.8 (5840)	2.7 (5925)
VSWR			≤ 2.5		
Return Loss			≤ -7.4 dB		
Peak Gain			≤ 2.8 dBi		

1.2. Mechanical & Environmental

Mechanical	
Casing Antenna Dimensions	15.6 mm × 13 mm × 130 mm
Material & Color	PC + ABS & Black
Connector Type	IPEX MHF 1
Cable Type & Length	Φ 1.13 Black & 100 mm
Mounting Type	Terminal
Weight	Typ. 13 g
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
RoHS & REACH Compliant	Yes

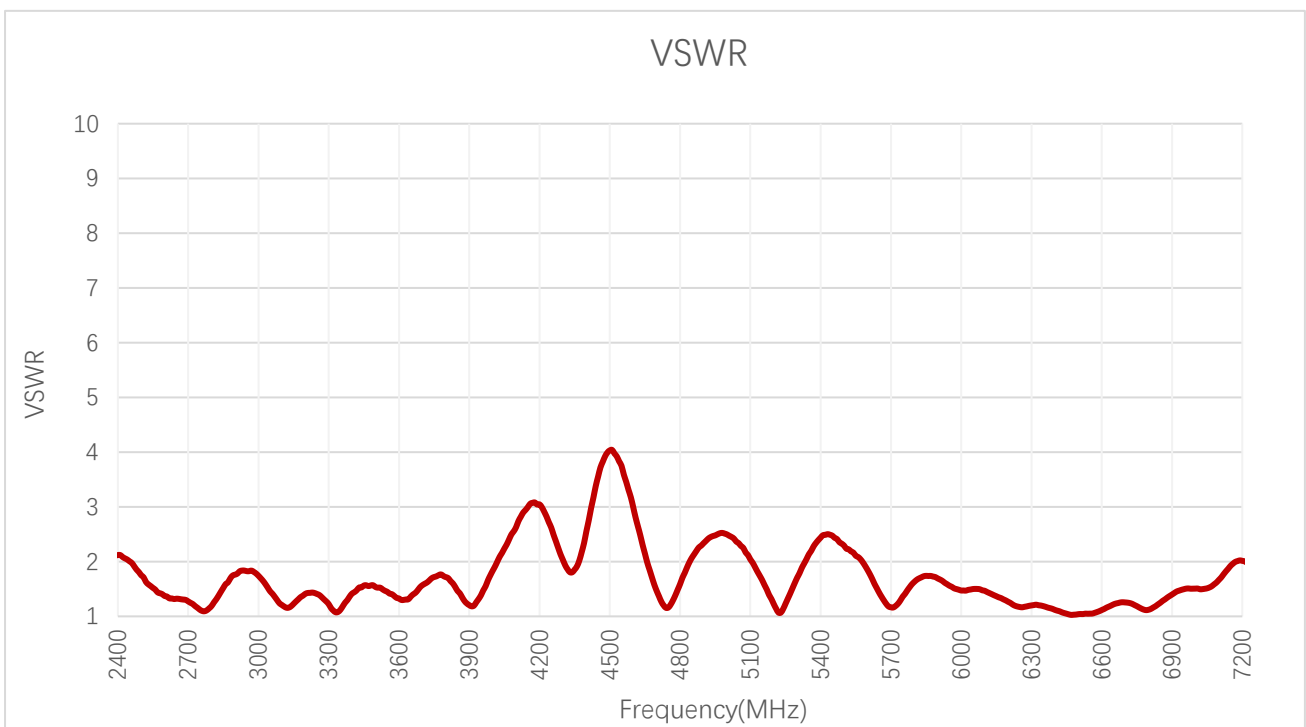
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

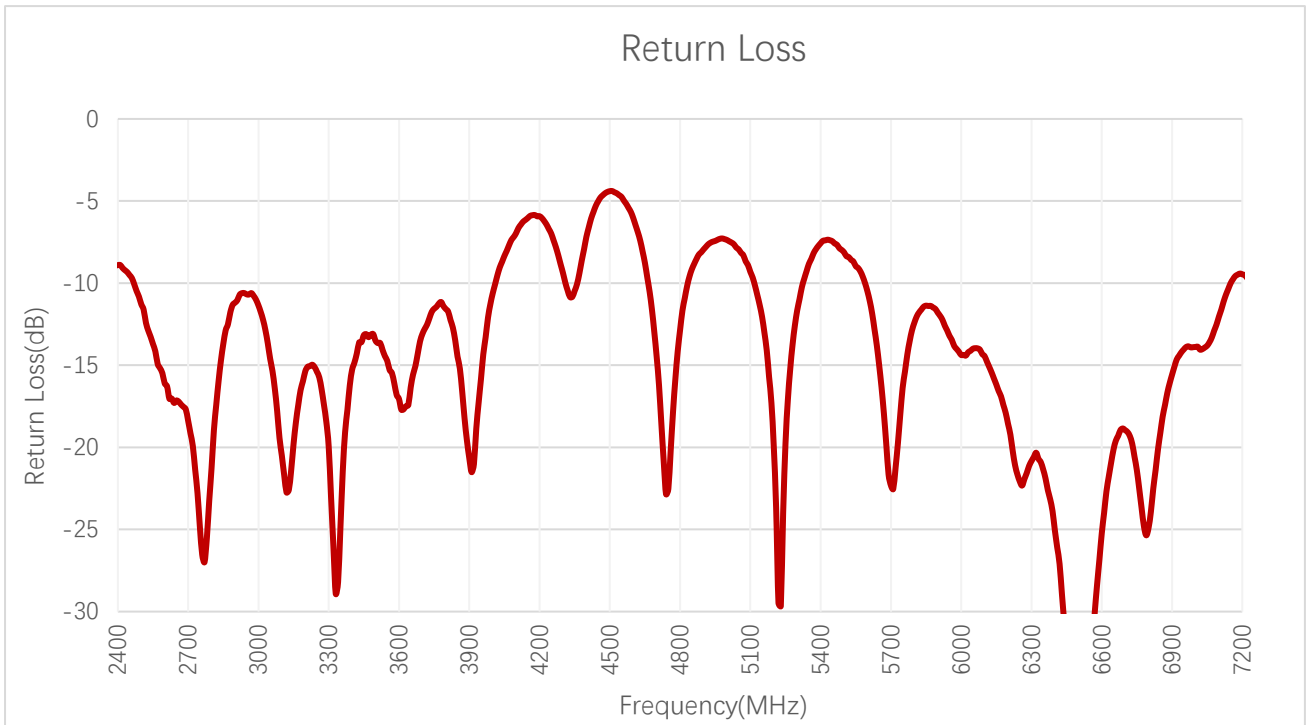
3.1.1. VSWR



VSWR

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
VSWR	2.1	2.0	1.7	1.7	2.3	1.7	1.6	1.2	1.2	1.8

3.1.2. Return Loss

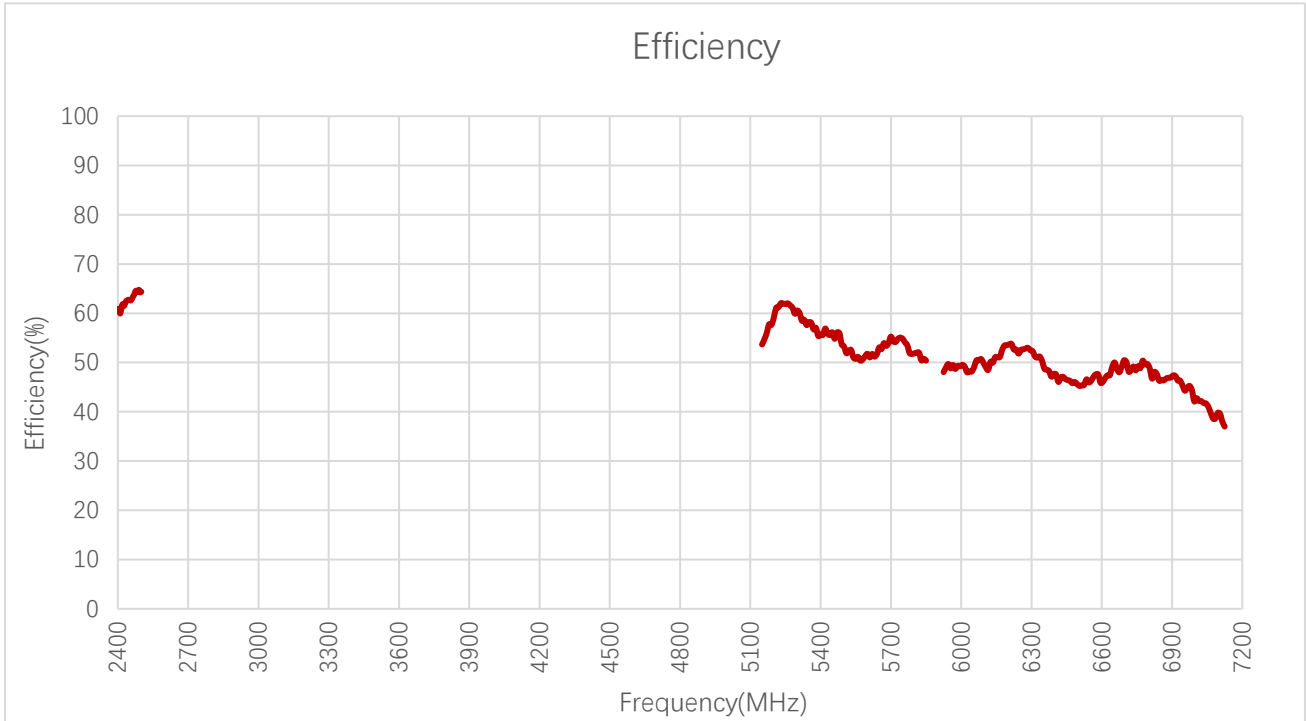


Return Loss (dB)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Return Loss (dB)	-8.9	-9.5	-11.3	-12.1	-8.1	-11.4	-12.6	-20.7	-19.8	-11.1

3.2. Radiation Performance Test

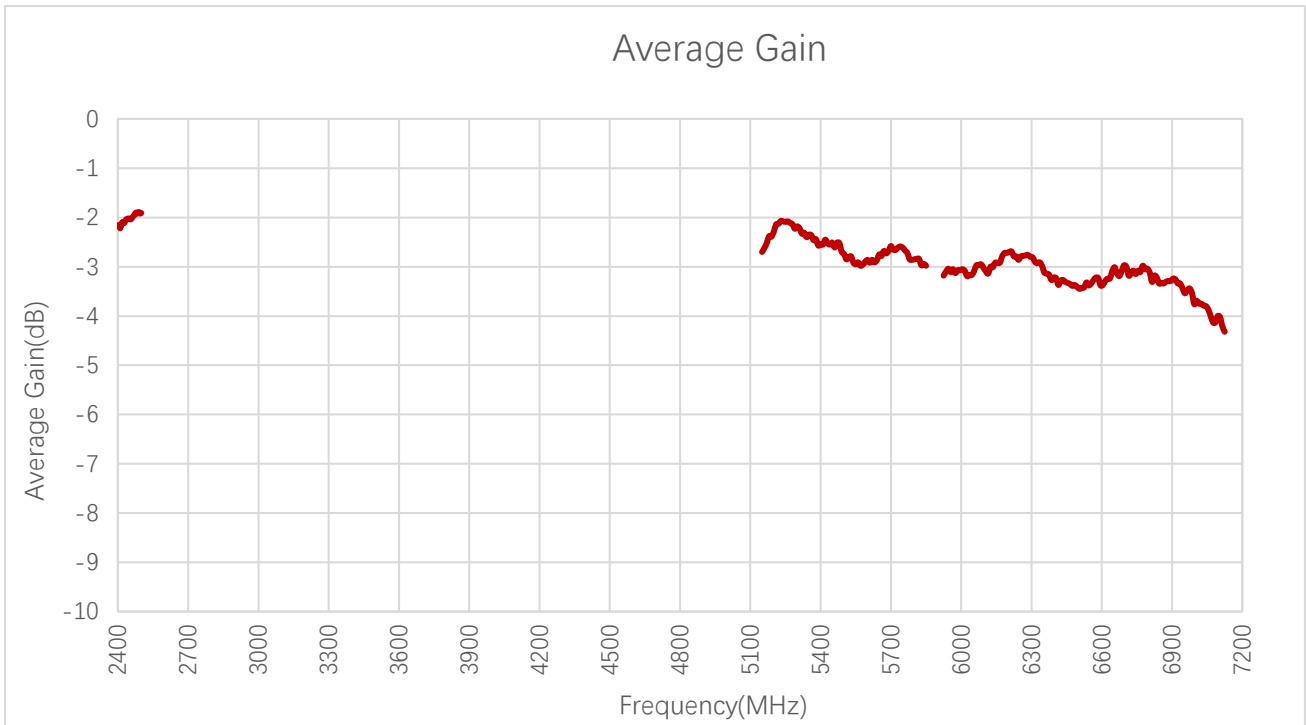
3.2.1. Efficiency



Efficiency (%)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Efficiency (%)	60.8	62.7	64.4	53.7	53.2	50.4	48.1	51.0	48.5	37.0

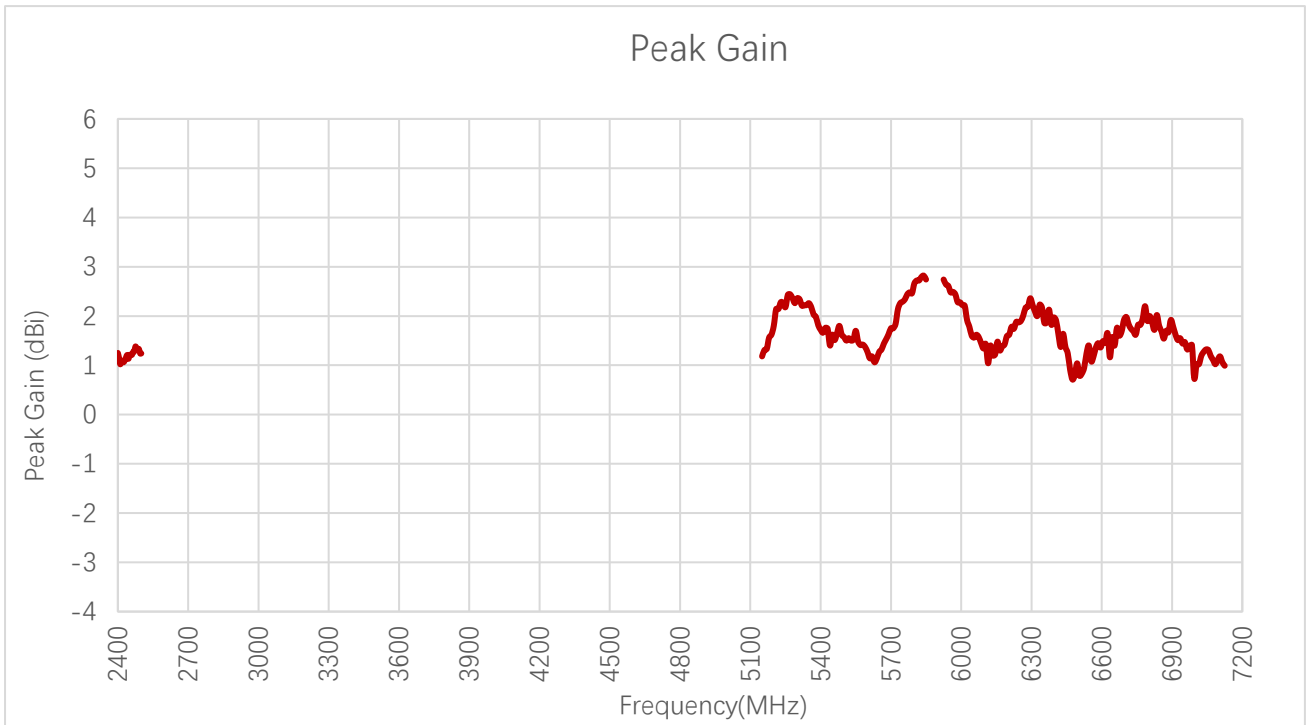
3.2.2. Average Gain



Average Gain (dB)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Average Gain (dB)	-2.2	-2.0	-1.9	-2.7	-2.7	-3.0	-3.2	-2.9	-3.1	-4.3

3.2.3. Peak Gain

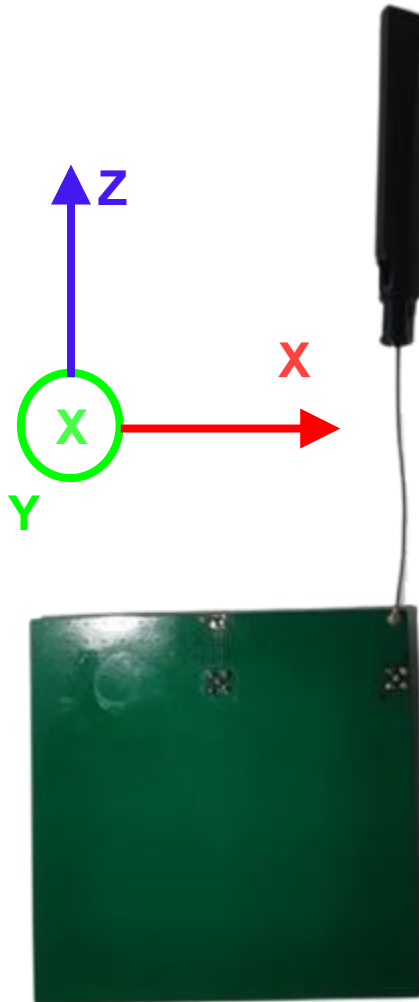


Peak Gain (dBi)

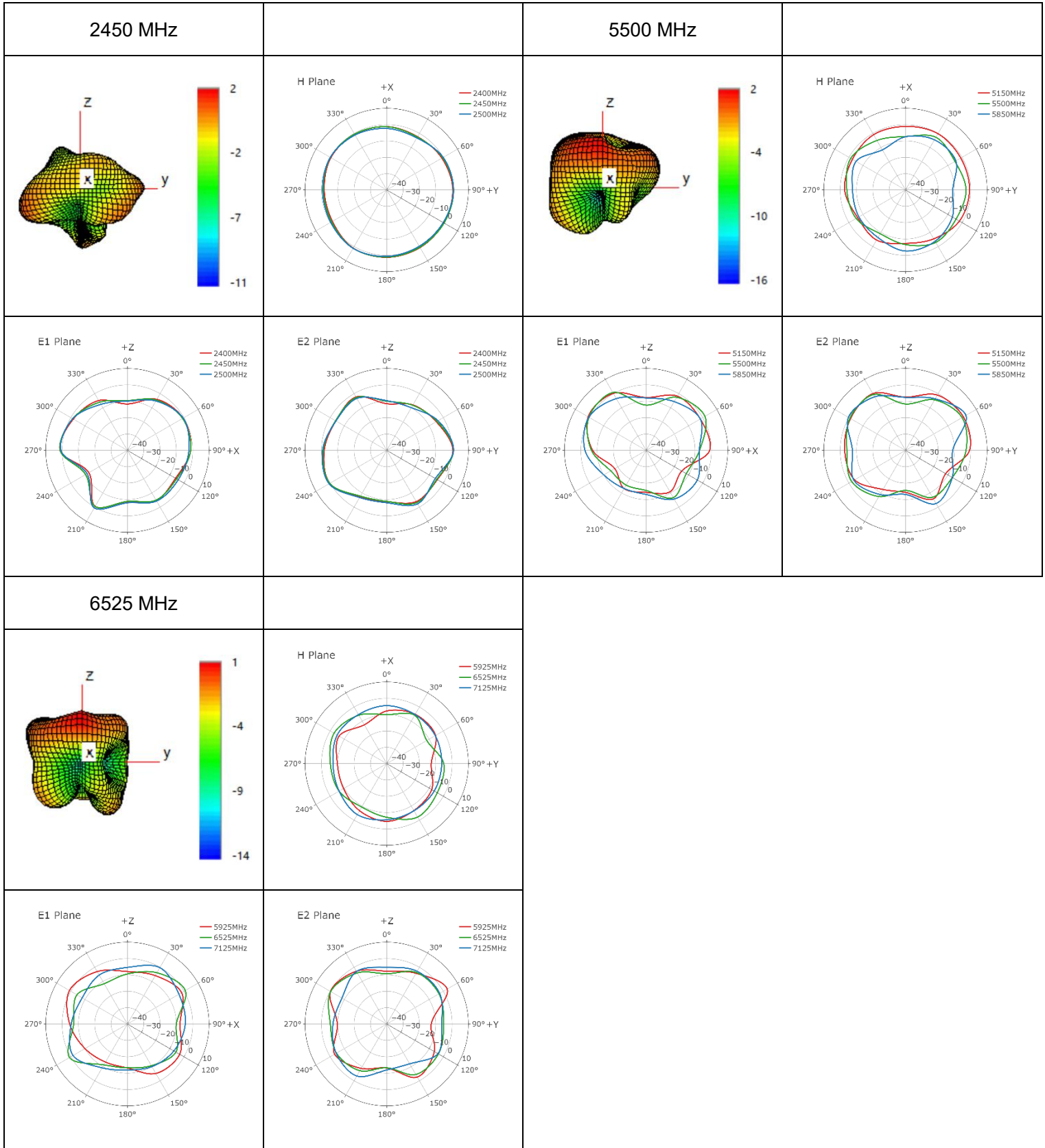
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Peak Gain (dBi)	1.3	1.2	1.2	1.2	1.6	2.7	2.7	2.0	1.7	1.0

3.2.4. 3D & 2D Radiation Pattern

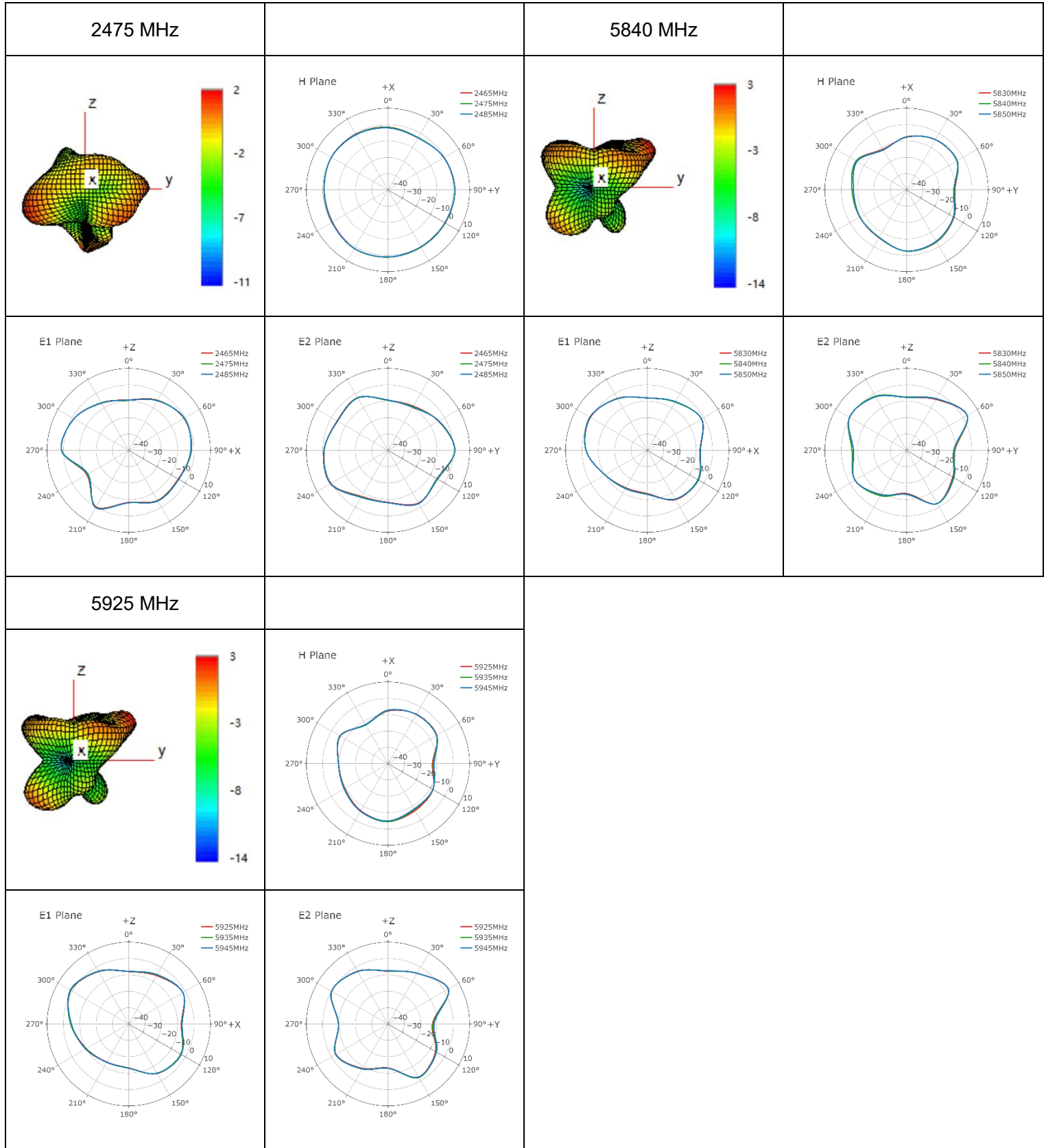
- Test Condition: On 130 mm × 130 mm EVB
- Test Chamber: HF-G-1



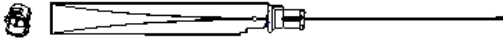
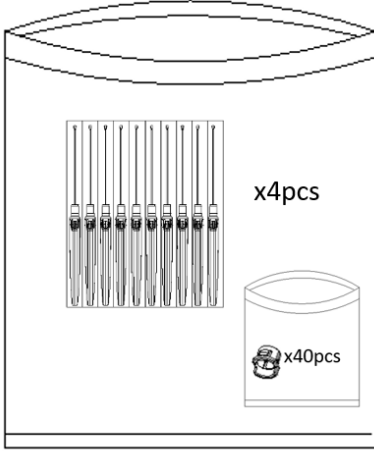
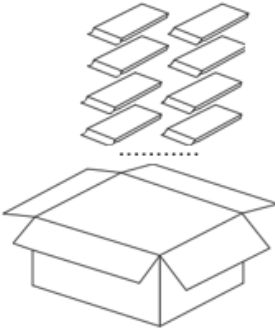
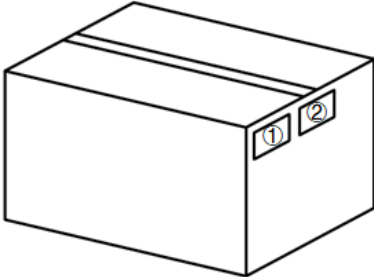
● **Wi-Fi**

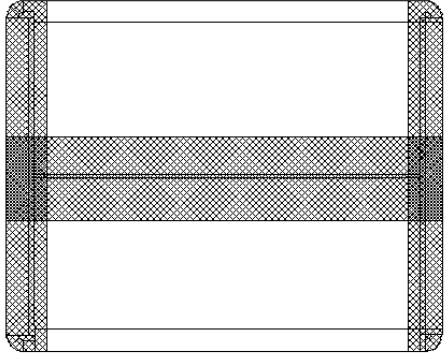


● **Max Peak Gain**



4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		Product drawing
2		40 antenna products in a PE bag. (40 Antennas / PE Bag)
3		(5 PE Bags / Carton Box) (200 Antennas / Carton Box) Estimated quantity Products that cannot fill the entire carton box are packed in a suitable size carton box. <u>Carton Size:</u> $L \times W \times H = 325 \times 325 \times 200 \text{ mm}$
4		Position for Attaching Labels ① Carton Label ② Quality Label

5	 A technical drawing of an H-shaped sealing carton. It consists of a central horizontal rectangular section with a cross-hatched texture, flanked by two vertical rectangular sections, also with a cross-hatched texture. The corners of the vertical sections are rounded. The entire structure is shown in a perspective view.	Sealing Cartons H-shaped sealing cartons
Note	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:

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:

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Revision History

Version	Date	Author	Note
-	2025-07-21	Christopher YAO/ Lance SUN/ Riva REN/ Rainey LIAO	Creation of the document
1.0	2025-07-21	Christopher YAO/ Lance SUN/ Riva REN/ Rainey LIAO	First official release

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