



Antenna Datasheet

Product OC: YEBT062W1AM

Version: 1.0

Date: 2025-09-04

Status: Released

Product Name: Wi-Fi & V2X Terminal Mount Rubber Monopole Antenna

Key Features:

Frequency Band: Wi-Fi: 2400–2500 MHz, 5150–5850 MHz, 5925–7125 MHz; V2X: 5850–5925 MHz

Dimensions: 52.6 mm × 18.6 mm × 9 mm

Efficiency: Up to 71.8 %

RoHS & REACH Compliant

IP54

Overview

YEBT062W1AM is a Wi-Fi & V2X rubber antenna measuring 52.6 mm × 18.6 mm × 9 mm. This ultra-wide-band antenna provides broad coverage from 2400–2500 MHz, 5150–7125 MHz. The antenna is terminated with 90°-SMA Male 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 TPE enclosure meets IP54. It is compatible with Quectel's Wi-Fi and V2X series modules.

It allows constant and reliable transmission and reception due to its omni-directional gain across all frequency bands. YEVT062W1AM 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, V2X mesh networks system.

Typical applications include:

- Gateways and Routers
- IoT Sensors
- Public Safety and Security
- Point of Sales Terminals
- Smart Home Automation
- Robotics / Autonomous
- V2X mesh networks system

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 × 70 mm EVB

1.1. Electrical

| Electrical | | |
|--------------------------|------------------|---|
| Frequency Range | Wi-Fi | 2400–2500 MHz, 5150–5850 MHz, 5925–7125 MHz |
| | V2X | 5850–5925 MHz |
| Impedance | 50 Ω | |
| Polarization | Linear | |
| Radiation Pattern | Omni-directional | |

1.1.1. Wi-Fi

| Specification | Band | Band | Wi-Fi 2G | Wi-Fi 5G | Wi-Fi 6G |
|------------------------------|------|----------------|-----------|-----------|-----------|
| | | Freq. (MHz) | 2400–2500 | 5150–5850 | 5925–7125 |
| Max. VSWR | | | 1.5 | 6.3 | 6.3 |
| Max. Return Loss (dB) | | | -14.1 | -2.8 | -2.8 |
| AVG Eff. (%) | | | 67.7 | 46.9 | 51.3 |
| AVG AVG Gain (dB) | | | -1.7 | -3.4 | -3.1 |
| Max. Peak Gain (dBi) | | | 3.4 | 3.2 | 4.1 |
| VSWR | | | ≤ 6.3 | | |
| Return Loss | | | ≤ -2.8 dB | | |
| Peak Gain | | | ≤ 4.1 dBi | | |

1.1.2. V2X

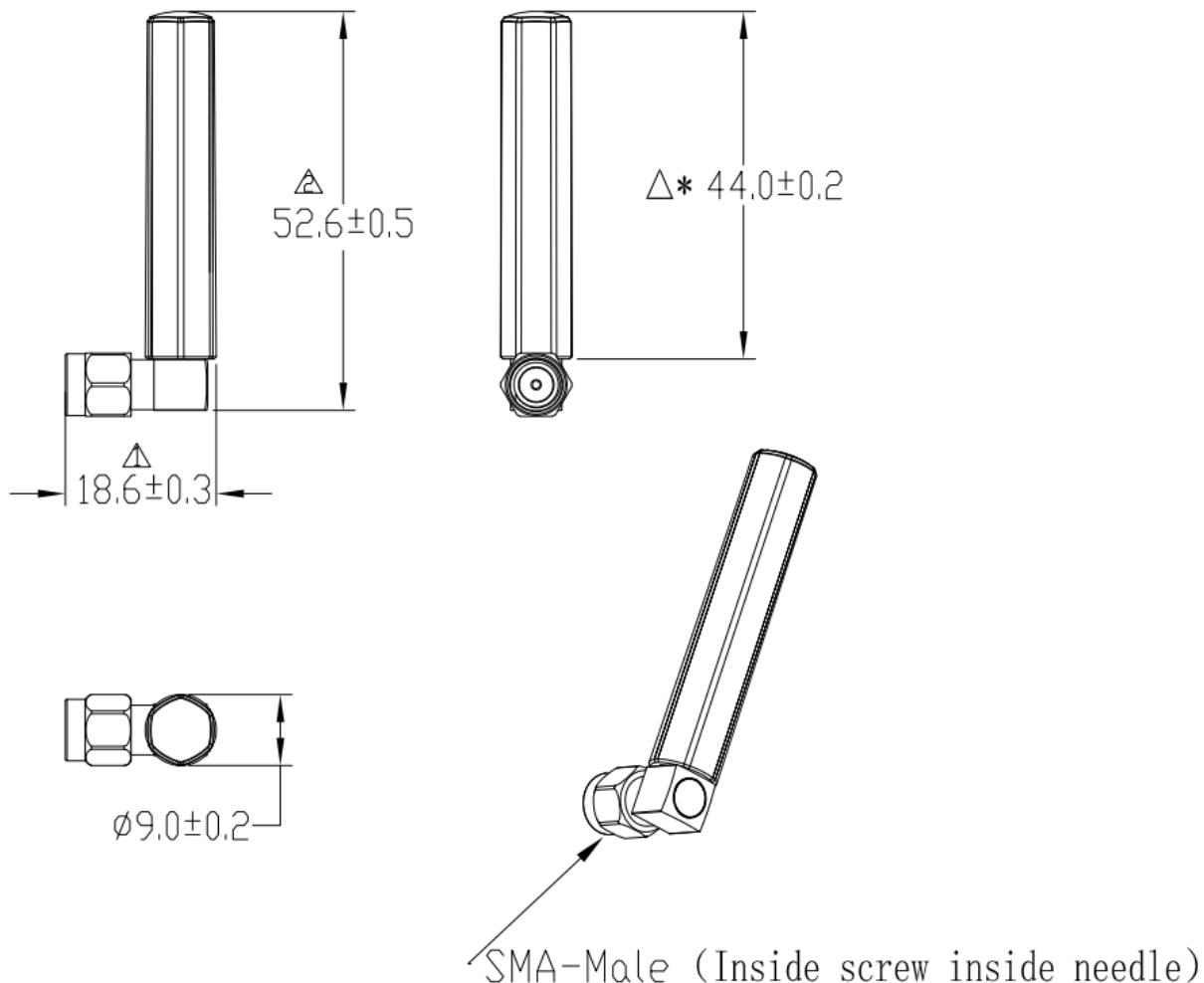
| Specification | Band | V2X |
|-----------------------|----------------|-----------|
| | Freq. (MHz) | 5850–5925 |
| Max. VSWR | | 2.9 |
| Max. Return Loss (dB) | | -6.3 |
| AVG Eff. (%) | | 58.7 |
| AVG AVG Gain (dB) | | -2.3 |
| Max. Peak Gain (dBi) | | 3.4 |
| VSWR | | ≤ 2.9 |
| Return Loss | | ≤ -6.3 dB |
| Peak Gain | | ≤ 3.4 dBi |

1.2. Mechanical & Environmental

| Mechanical | |
|----------------------------------|--------------------------|
| Casing Antenna Dimensions | 52.6 mm × 18.6 mm × 9 mm |
| Material & Color | TPE & Black |
| Connector Type | 90° - SMA Male |
| Mounting Type | Terminal |
| Weight | Typ. 7.4 g |

| Environmental | |
|---------------------------------------|------------------|
| Operation Temperature | -40 °C to +85 °C |
| Storage Temperature | -40 °C to +85 °C |
| Ingress Protection (IP) Rating | IP54 |
| RoHS &REACH Compliant | Yes |

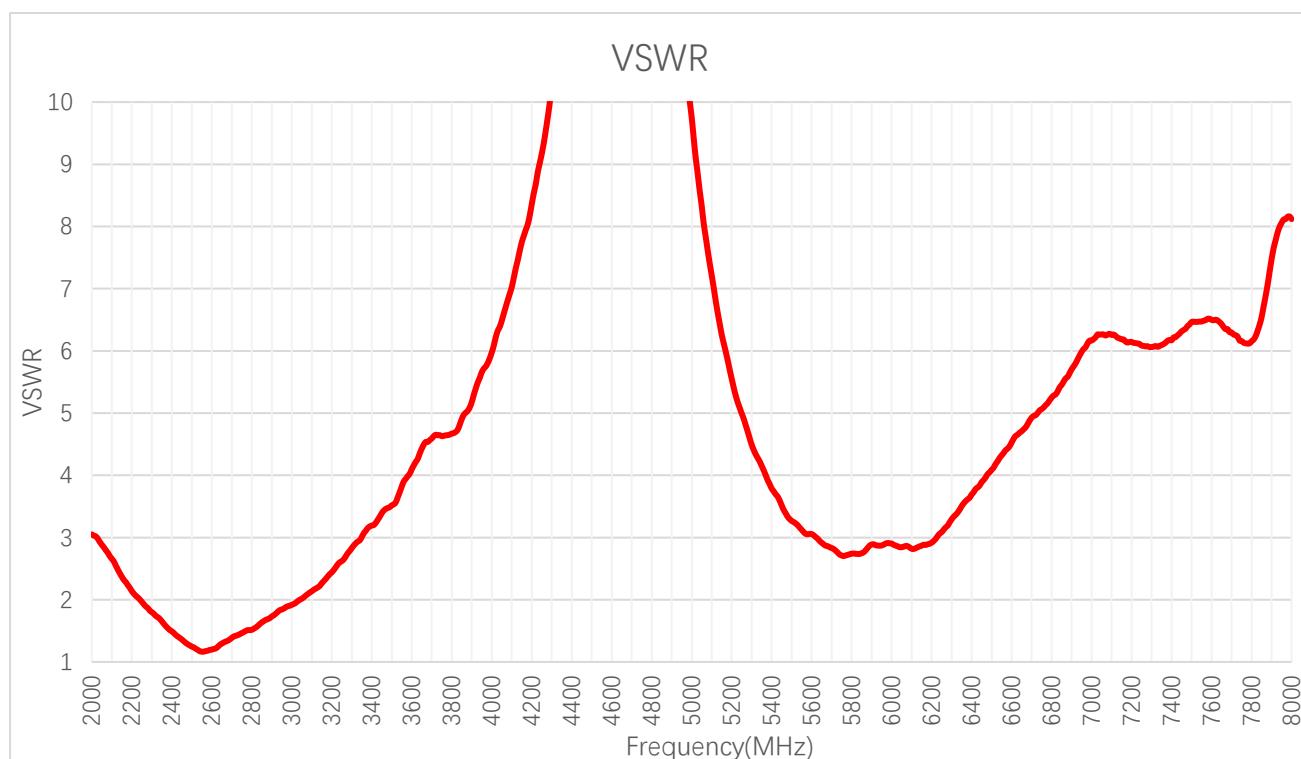
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

3.1.1. VSWR



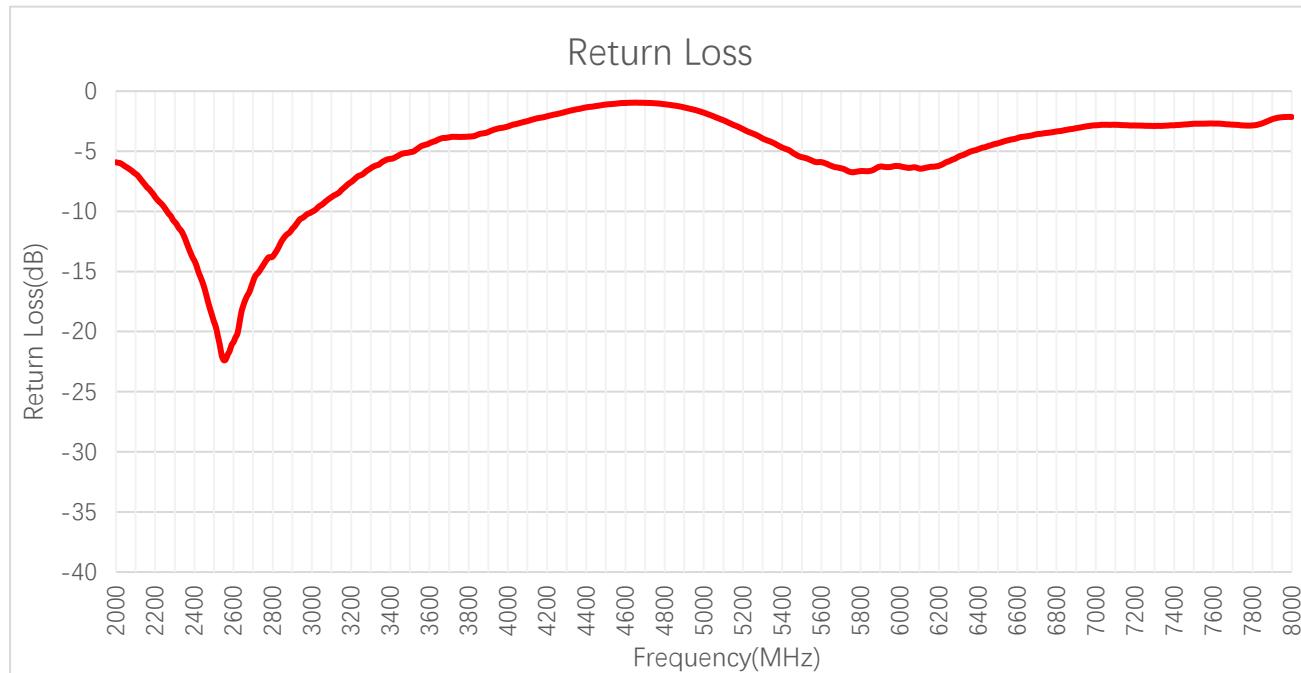
VSWR – Wi-Fi

| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6325 | 6725 | 7125 |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| VSWR | 1.5 | 1.4 | 1.2 | 6.3 | 3.3 | 2.7 | 2.9 | 3.4 | 5.0 | 6.2 |

VSWR – V2X

| Frequency (MHz) | 5860 | 5880 | 5900 |
|-----------------|------|------|------|
| VSWR | 2.8 | 2.8 | 2.9 |

3.1.2. Return Loss



Return Loss (dB) – Wi-Fi

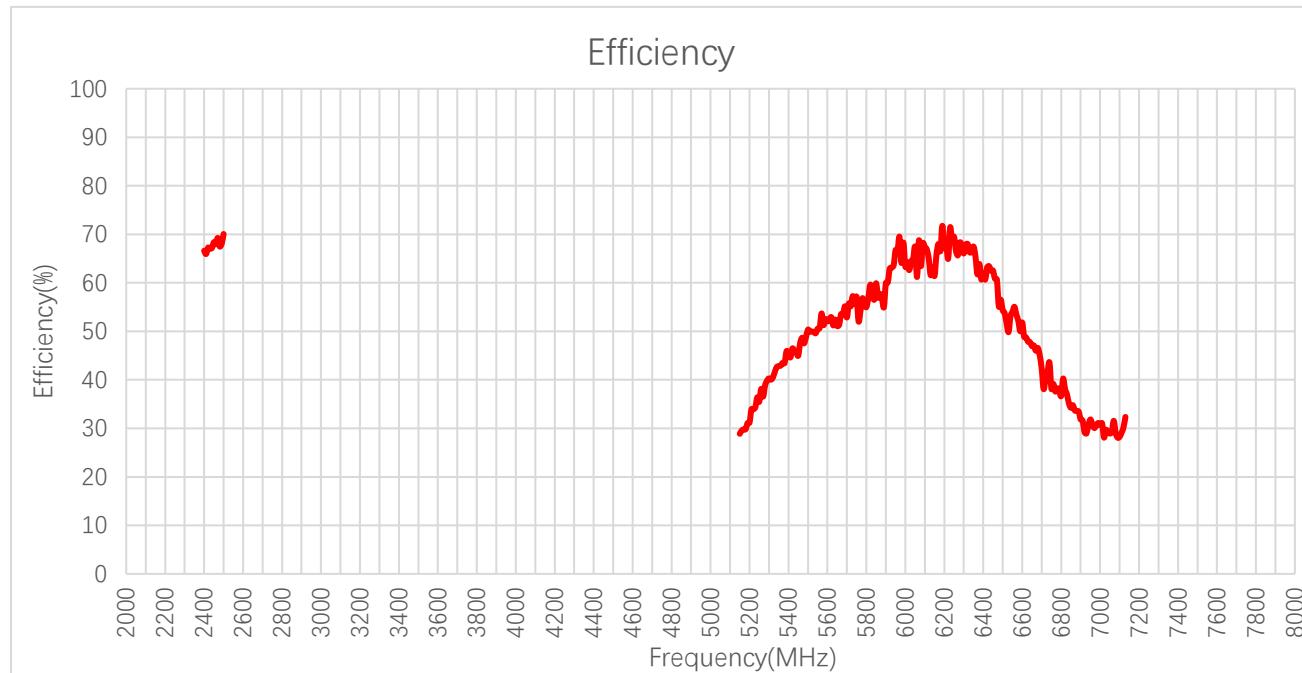
| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6325 | 6725 | 7125 |
|------------------|-------|-------|-------|------|------|------|------|------|------|------|
| Return Loss (dB) | -14.1 | -16.3 | -19.2 | -2.8 | -5.5 | -6.6 | -6.3 | -5.3 | -3.5 | -2.8 |

Return Loss (dB) – V2X

| Frequency (MHz) | 5860 | 5880 | 5900 |
|------------------|------|------|------|
| Return Loss (dB) | -6.6 | -6.4 | -6.3 |

3.2. Radiation Performance Test

3.2.1. Efficiency



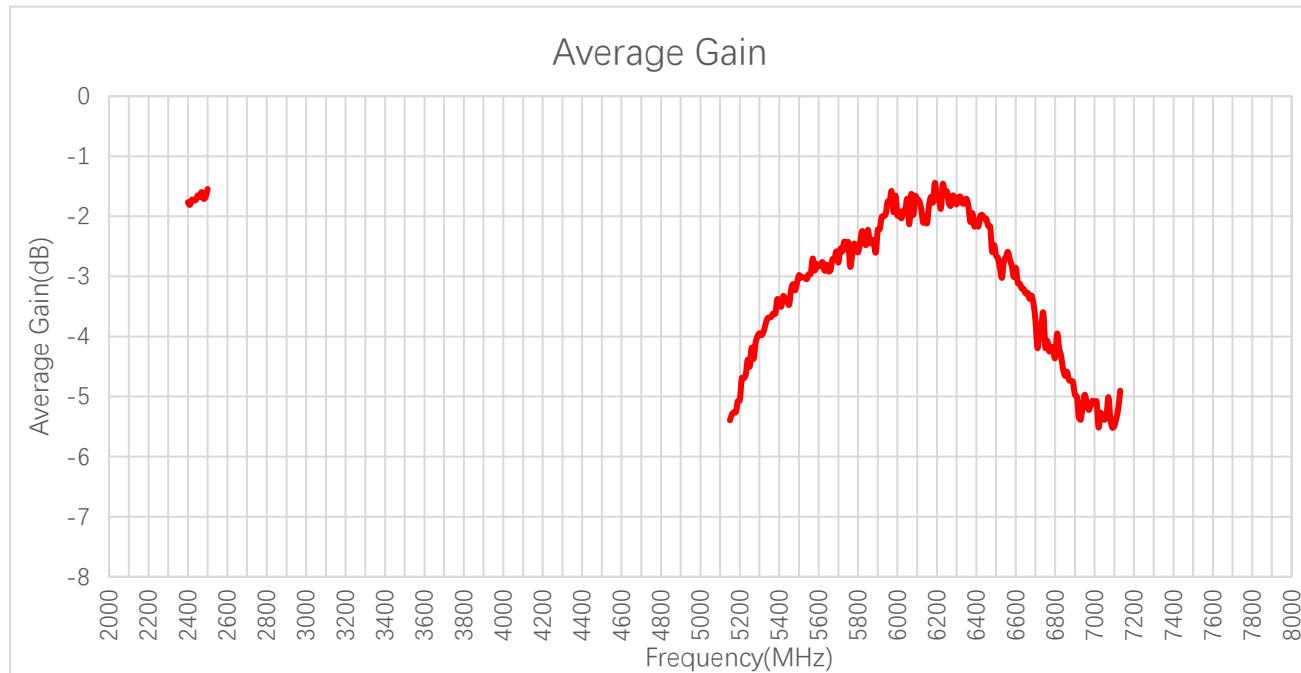
Efficiency (%) – Wi-Fi

| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6325 | 6725 | 7125 |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| Efficiency (%) | 66.6 | 68.4 | 70.1 | 28.9 | 50.3 | 59.9 | 63.1 | 66.3 | 41.7 | 32.4 |

Efficiency (%) – V2X

| Frequency (MHz) | 5860 | 5880 | 5900 |
|-----------------|------|------|------|
| Efficiency (%) | 57.0 | 56.8 | 60.0 |

3.2.2. Average Gain



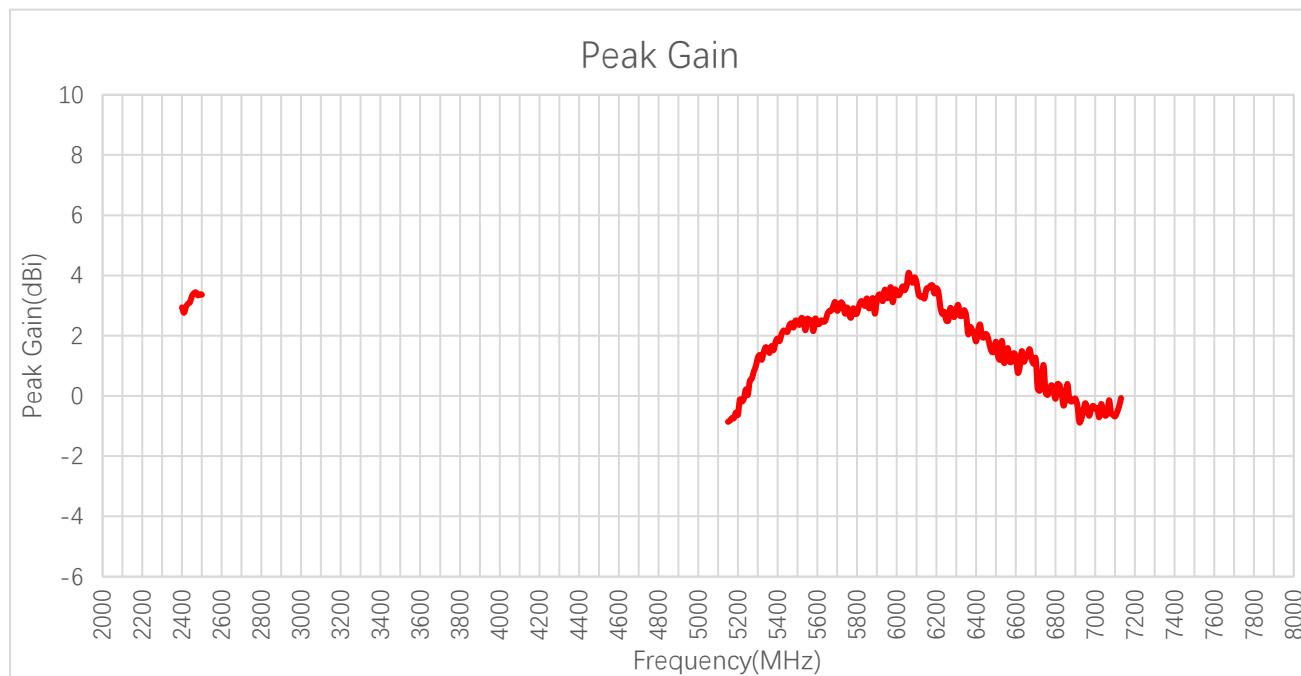
Average Gain (dB) – Wi-Fi

| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6325 | 6725 | 7125 |
|-------------------|------|------|------|------|------|------|------|------|------|------|
| Average Gain (dB) | -1.8 | -1.7 | -1.5 | -5.4 | -3.0 | -2.2 | -2.0 | -1.8 | -3.8 | -4.9 |

Average Gain (dB) – V2X

| Frequency (MHz) | 5860 | 5880 | 5900 |
|-------------------|------|------|------|
| Average Gain (dB) | -2.4 | -2.5 | -2.2 |

3.2.3. Peak Gain



Peak Gain (dBi) – Wi-Fi

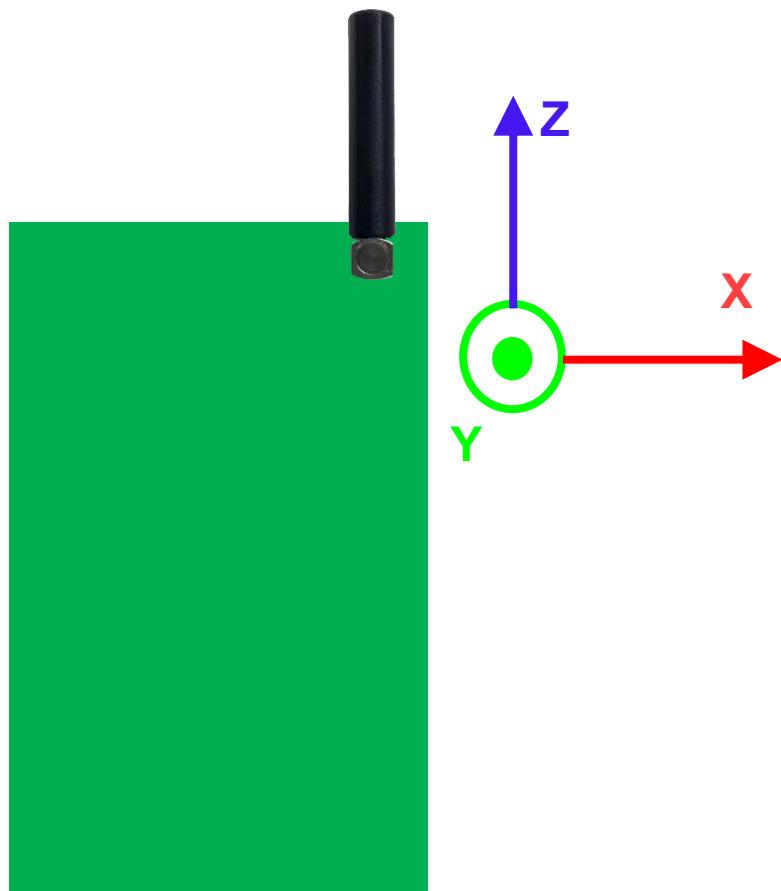
| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6325 | 6725 | 7125 |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| Peak Gain (dBi) | 2.9 | 3.3 | 3.4 | -0.9 | 2.5 | 3.2 | 3.2 | 2.7 | 0.6 | -0.1 |

Peak Gain (dBi) – V2X

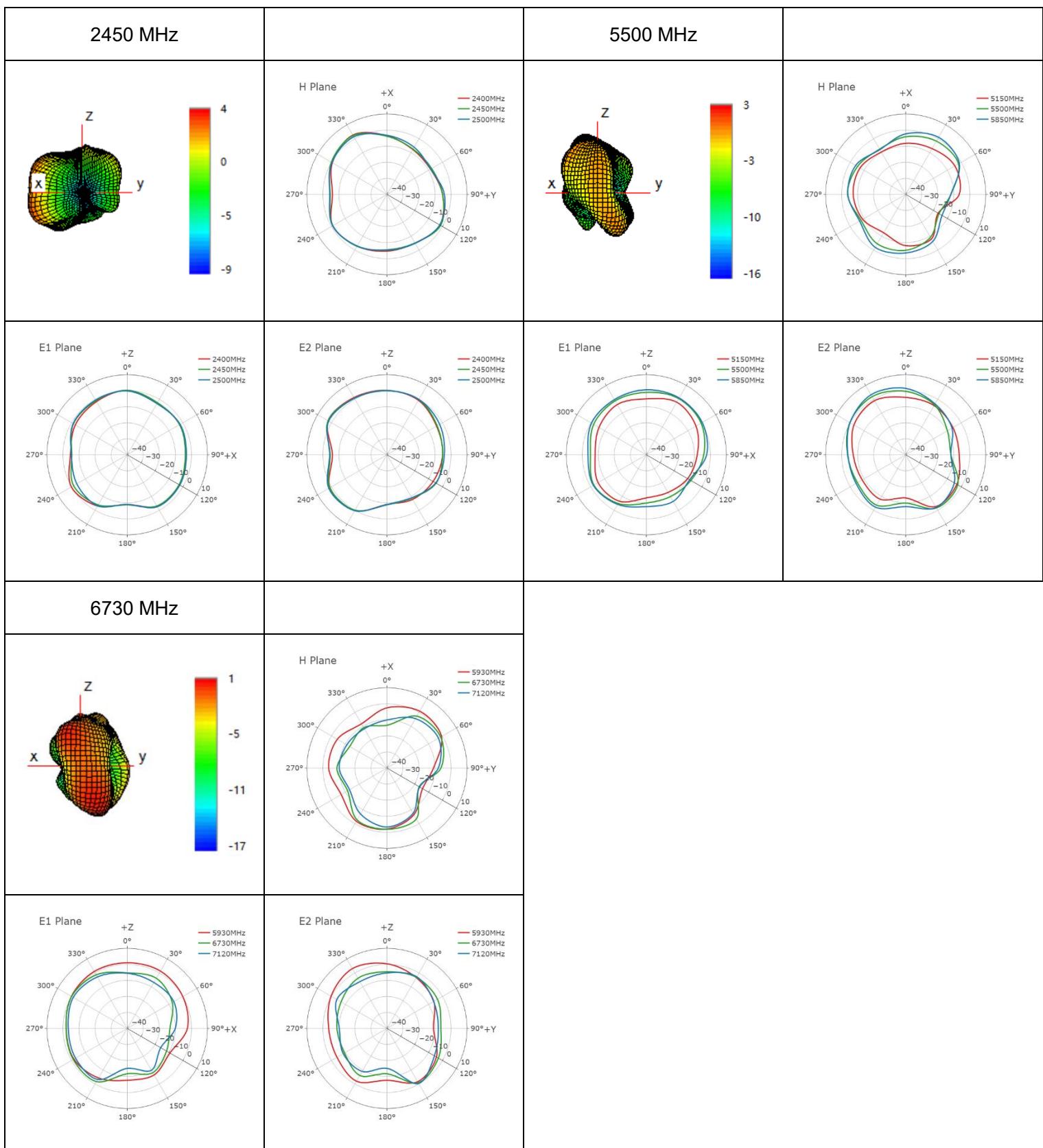
| Frequency (MHz) | 5860 | 5880 | 5900 |
|-----------------|------|------|------|
| Peak Gain (dBi) | 2.9 | 3.2 | 3.2 |

3.2.4. 3D & 2D Radiation Pattern

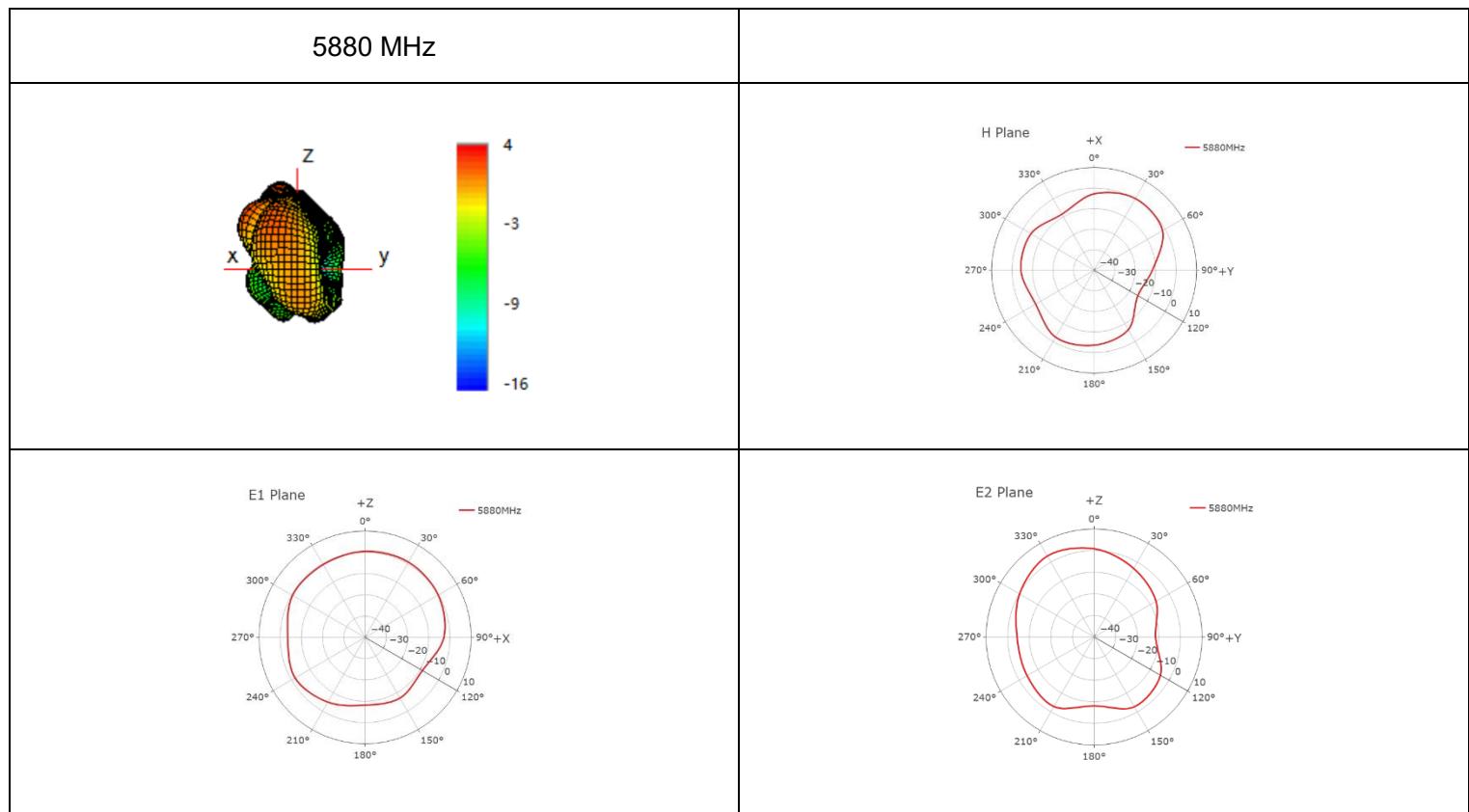
- Test Condition: On 130 mm × 70 mm EVB
- Test Chamber: GL-G-1



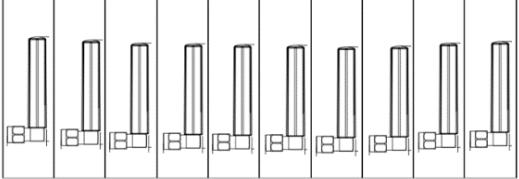
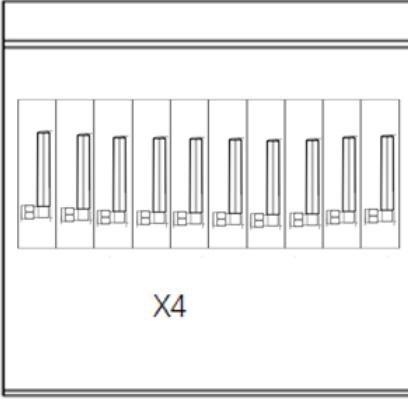
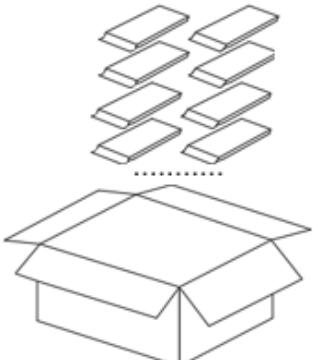
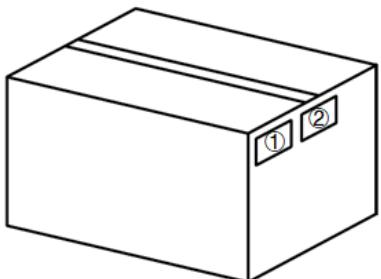
● Wi-Fi

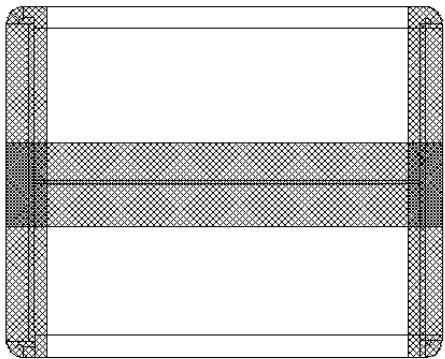


● V2X



4 Packaging

| Step | Packaging Picture / 2D Picture | Description |
|------|---|---|
| 1 |  | 10 antennas products in a one-piece bag. (10 Antennas / PE Bag) |
| 2 |  | 40 antennas products in a PE bag. (40 Antennas / PE Bag) |
| 3 |  | (25 PE Bags / Carton Box) (1000 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> <u>$L \times W \times H = 405 \times 293 \times 185 \text{ mm}$</u> |
| 4 |  | Position for Attaching Labels ① Carton Label ② Quality Label |

| | | |
|------|--|--|
| 5 |  | 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:

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

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Revision History

| Version | Date | Author | Note |
|---------|------------|---|--------------------------|
| - | 2025-09-04 | Mayes Li/ Steven Mo/ Riva Ren/ Rainey Liao | Creation of the document |
| 1.0 | 2025-09-04 | Mayes Li/ Steven Mo/ Riva Ren/ Rainey Liao | First official release |



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