



# Antenna Datasheet

**Product OC:** YEBT010W1AM

**Version:** 1.1

**Date:** 2025-07-09

**Status:** Released

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

**Key Features:**

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

Efficiency: Up to 64.9 % (Straight)

Dimensions:  $\Phi$  10.22 mm  $\times$  69.5 mm

RoHS Compliant

# Overview

The YEBT010W1AM is a WIFI rubber external antenna measuring  $\Phi$  10.22 mm  $\times$  69.5 mm. This ultra-wide-band Wi-Fi antenna provides broad coverage from 2400–2500 MHz, 5150–5850 MHz, 5925–7125 MHz. The antenna is terminated with RP SMA Male connectors. 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 POM 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. The YECT010W1AM 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 highly performance antenna is ideally suited for remote monitoring, vehicle tracking and telematics systems, routers and POS devices.

Typical applications include:

- remote monitoring
- vehicle tracking and telematics systems
- routers
- POS devices

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

Specification	Band	Band	Wi-Fi 2G	Wi-Fi 5G	Wi-Fi 6G
		Freq. (MHz)	2400–2500	5150–5850	5925–7125
Max. VSWR	Straight		2.8	2.8	3.0
	Bent		2.9	2.6	2.7
Max. Return Loss (dB)	Straight		-6.4	-6.4	-6.1
	Bent		-6.4	-7.1	-6.8
AVG Eff. (%)	Straight		53.8	59.5	44.7
	Bent		52.5	56.3	45.6
AVG AVG Gain (dB)	Straight		-2.7	-2.3	-3.5
	Bent		-2.8	-2.5	-3.4
Max. Peak Gain (dBi)	Straight		3.3 (2460)	3.7 (5340)	4.0 (6455)
	Bent		3.9 (2470)	4.2 (5330)	2.1 (5975)

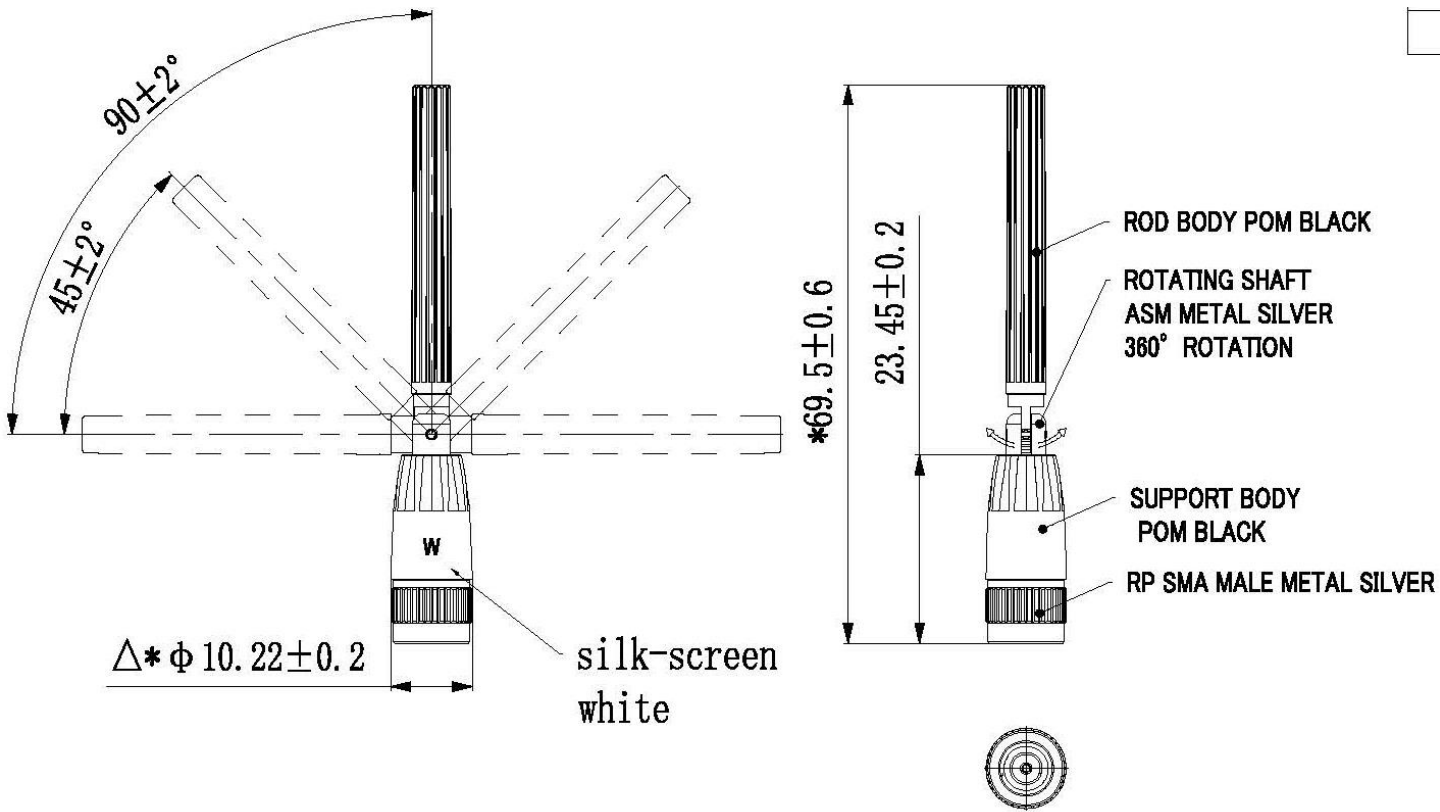
<b>VSWR</b>	<b>Straight</b>	$\leq 3.0$
	<b>Bent</b>	$\leq 2.9$
<b>Return Loss</b>	<b>Straight</b>	$\leq -6.1$ dB
	<b>Bent</b>	$\leq -6.4$ dB
<b>Peak Gain</b>	<b>Straight</b>	$\leq 4.0$ dBi
	<b>Bent</b>	$\leq 4.2$ dBi

- **Straight:** The connector is vertical.
- **Bent:** The connector is bend.

## 1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	Φ 10.22 mm × 69.5 mm
Casing Material & Color	POM & Black
Connector Type	RP SMA Male
Weight	Typ. 8.9 g
Mounting Type	Terminal (Connector)
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
RoHS Compliant	Yes

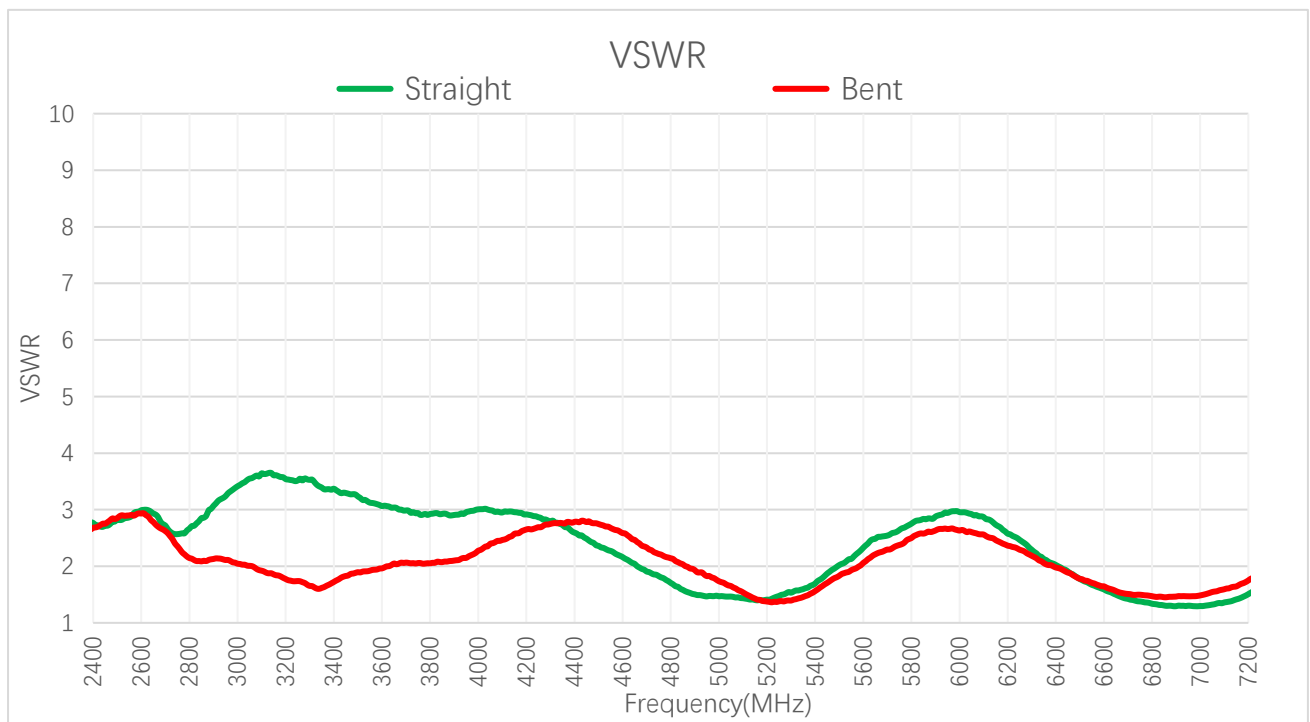
# 2 Drawing



# 3 Detailed Performance

## 3.1. S-Parameter Test

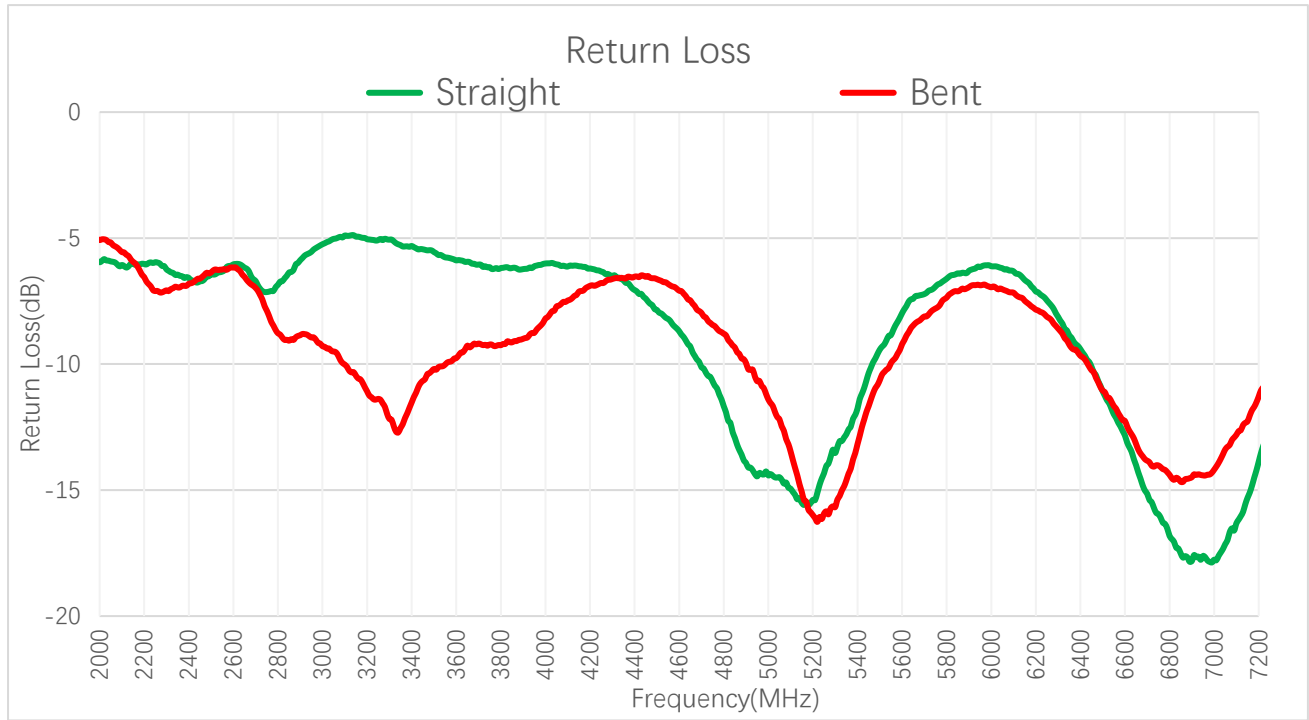
### 3.1.1. VSWR



**VSWR**

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6525	7125
<b>Straight</b>	2.8	2.7	2.8	1.4	2.0	2.8	2.9	1.7	1.4
<b>Bent</b>	2.7	2.8	2.9	1.4	1.8	2.6	2.7	1.7	1.6

**3.1.2. Return Loss**

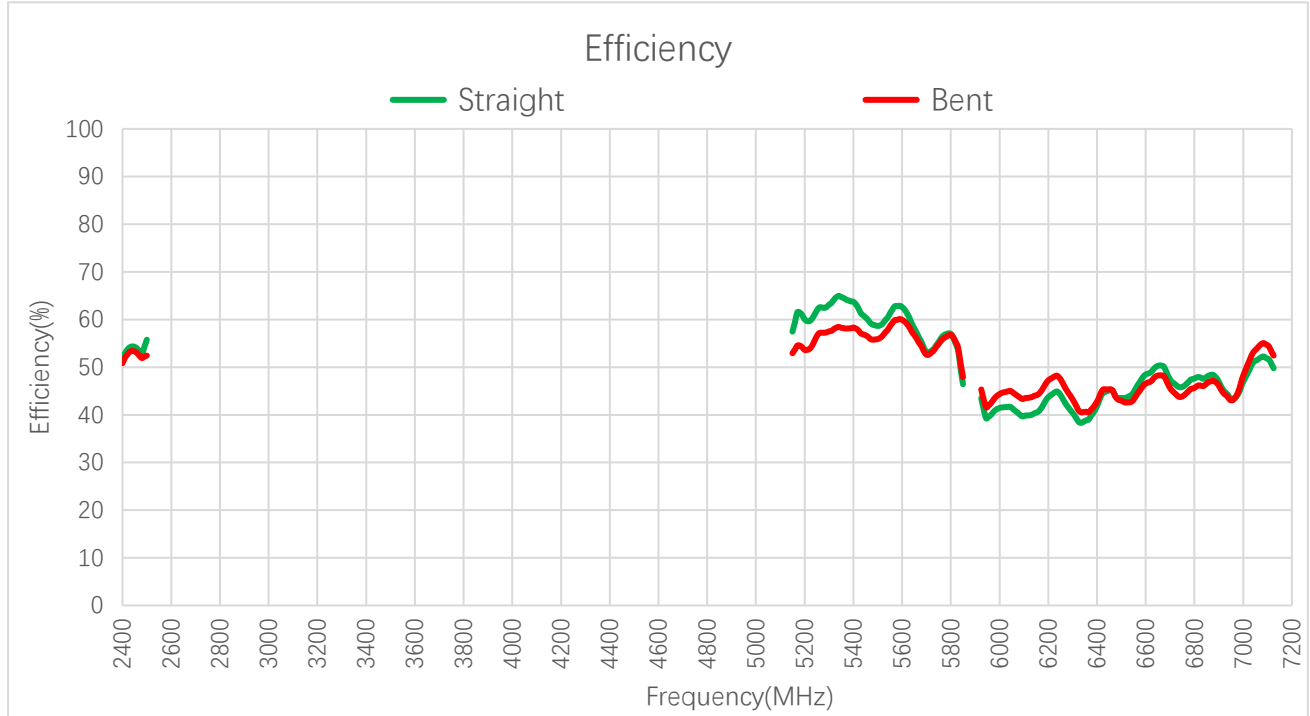


**Return Loss (dB)**

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6525	7125
<b>Straight</b>	-6.6	-6.7	-6.4	-15.5	-9.4	-6.4	-6.2	-11.6	-16.0
<b>Bent</b>	-6.8	-6.6	-6.4	-15.1	-10.6	-7.1	-6.9	-11.3	-12.6

### 3.2. Radiation Performance Test

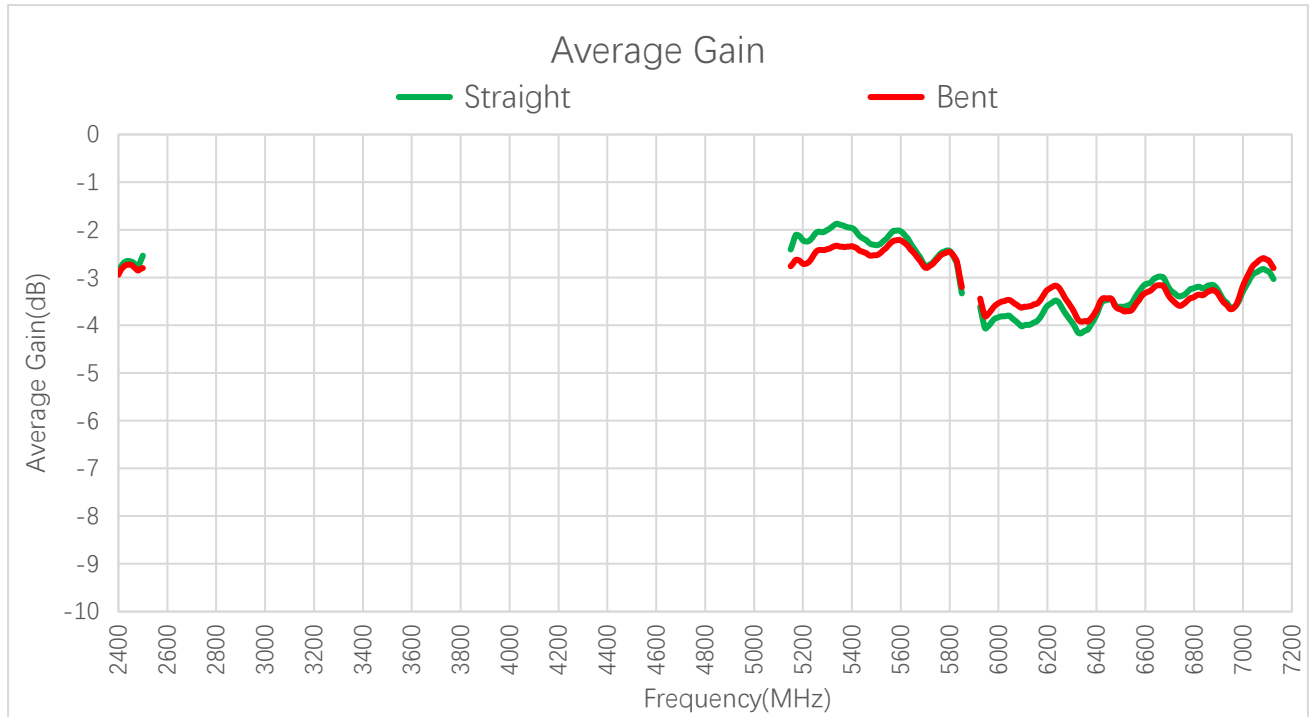
#### 3.2.1. Efficiency



**Efficiency (%)**

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6525	7125
<b>Straight</b>	52.2	54.3	55.8	57.5	58.7	46.4	43.5	43.8	49.8
<b>Bent</b>	50.8	53.3	52.4	52.9	55.9	47.9	45.3	42.6	52.4

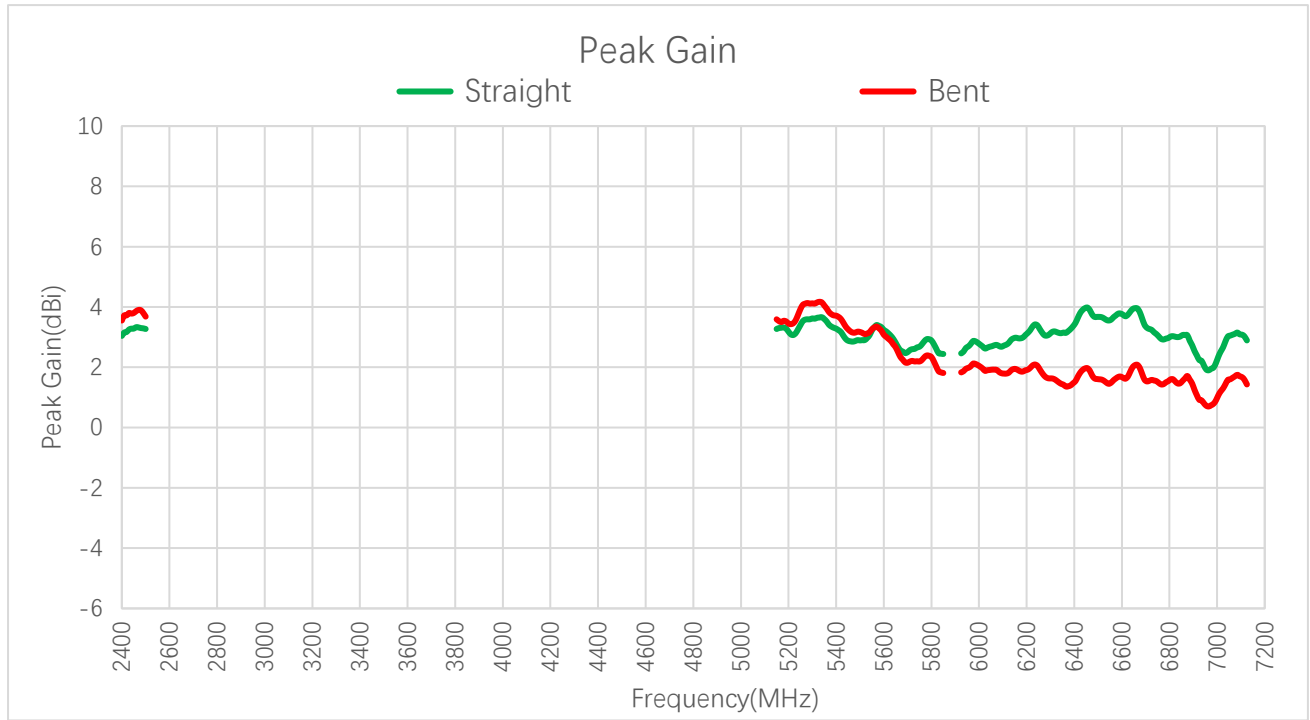
**3.2.2. Average Gain**



**Average Gain (dB)**

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6525	7125
<b>Straight</b>	-2.8	-2.7	-2.5	-2.4	-2.3	-3.3	-3.6	-3.6	-3.0
<b>Bent</b>	-2.9	-2.7	-2.8	-2.8	-2.5	-3.2	-3.4	-3.7	-2.8

**3.2.3. Peak Gain**



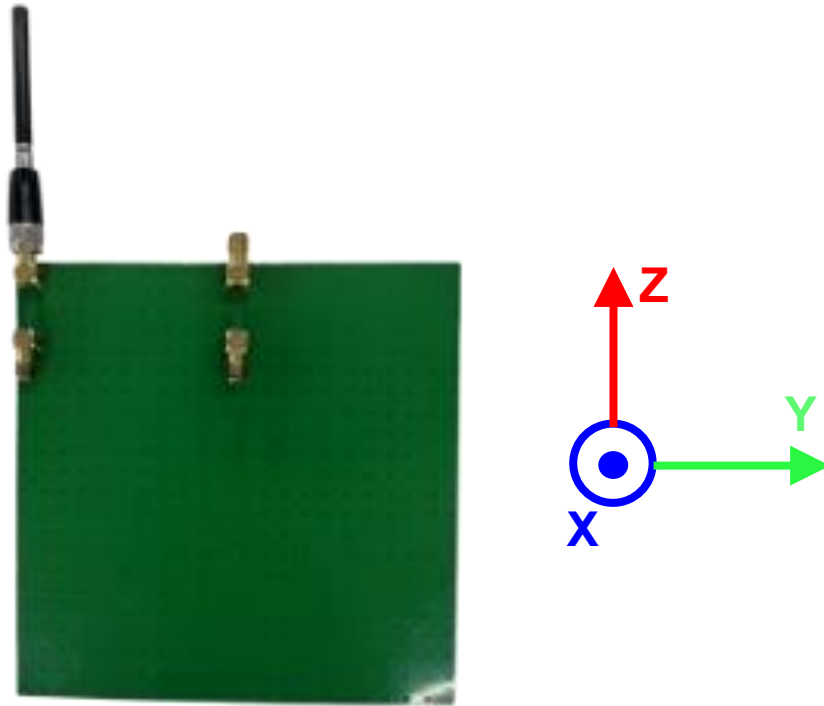
**Peak Gain (dBi)**

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6525	7125
<b>Straight</b>	3.0	3.3	3.3	3.3	2.9	2.4	2.5	3.6	2.9
<b>Bent</b>	3.6	3.8	3.7	3.6	3.2	1.8	1.8	1.6	1.4

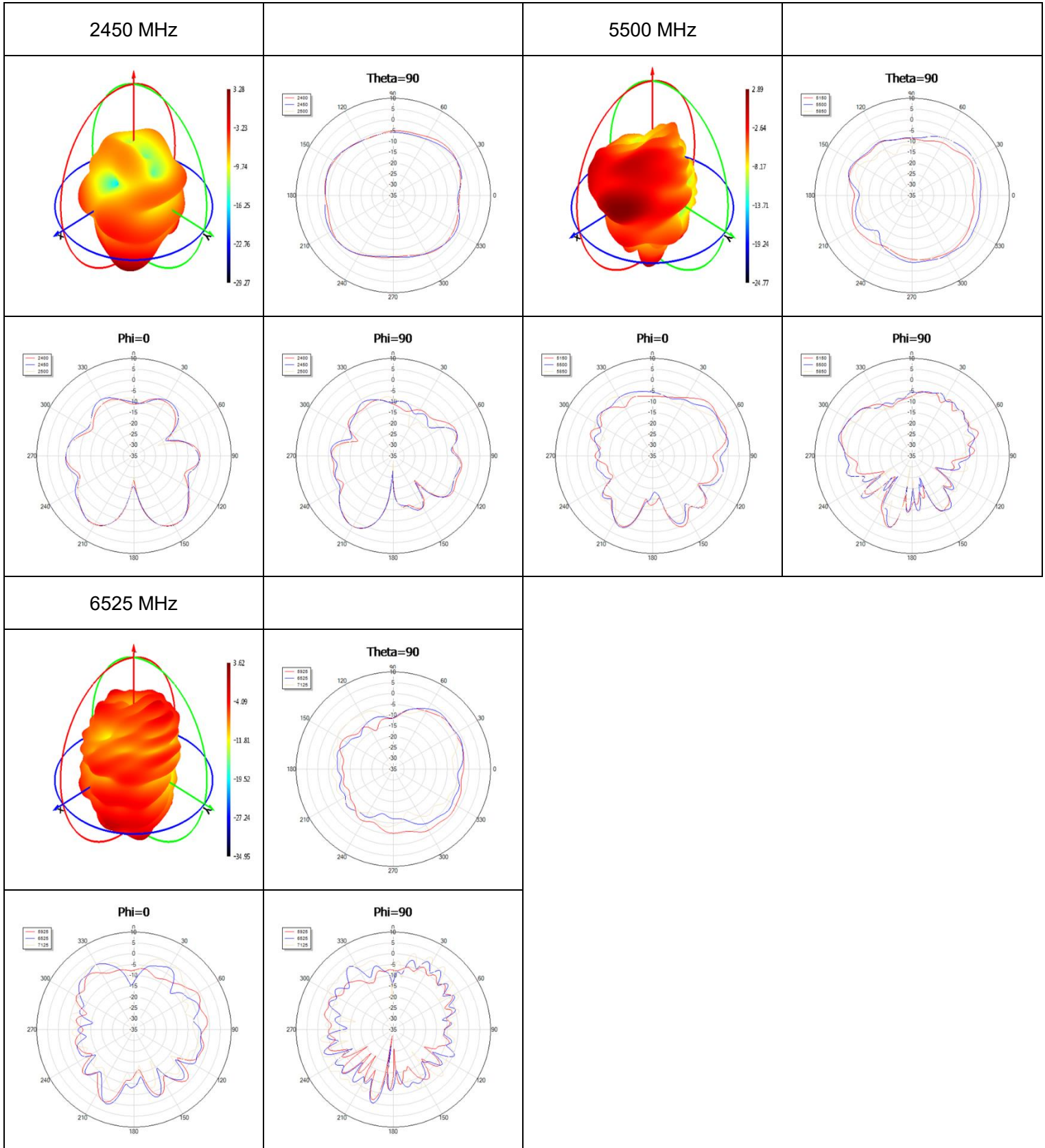
### 3.2.4. 3D & 2D Radiation Pattern

#### 3.2.4.1. Test state: Straight

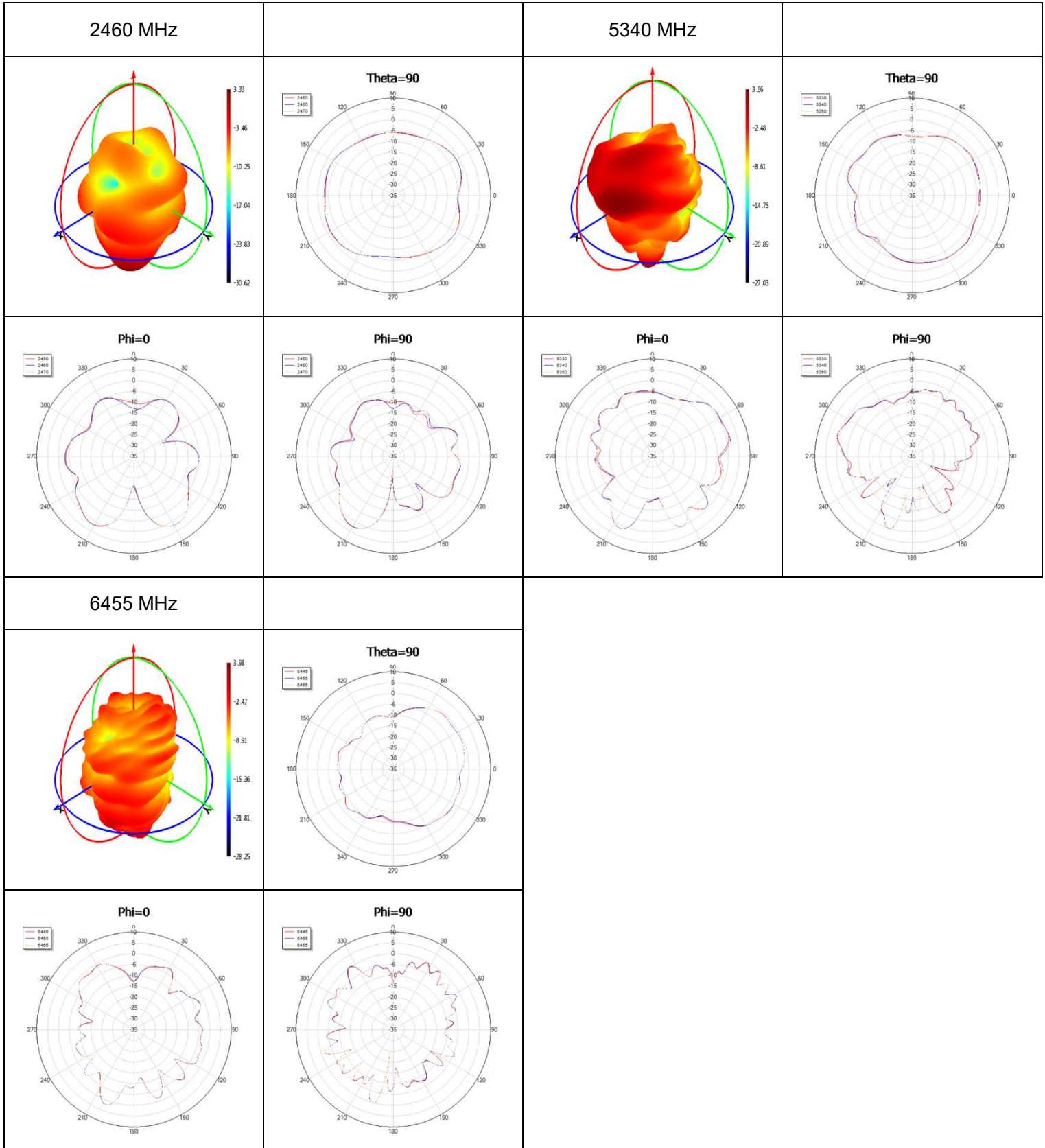
- Test Condition: On 130 mm × 130 mm EVB
- Test Chamber: HF-S-1



● **Wi-Fi**

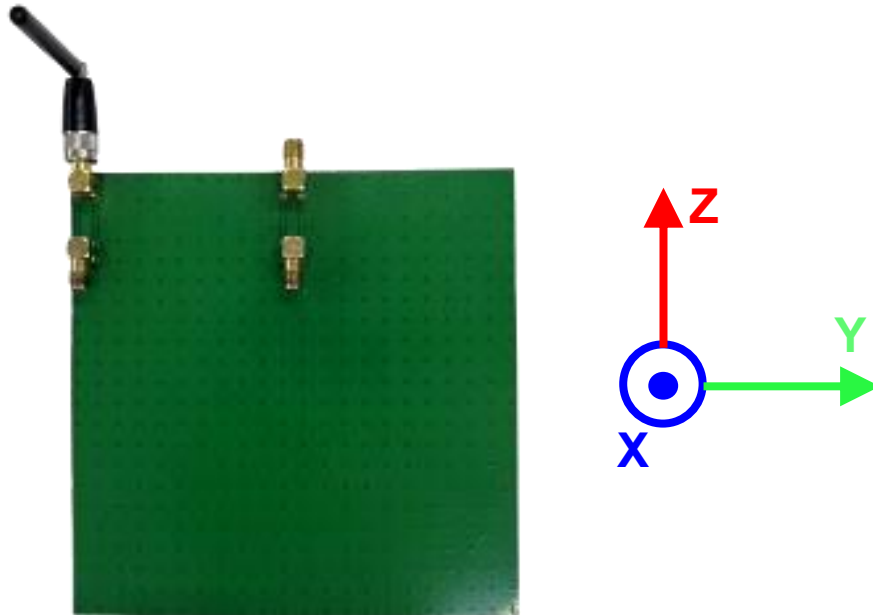


● **Max Peak Gain**

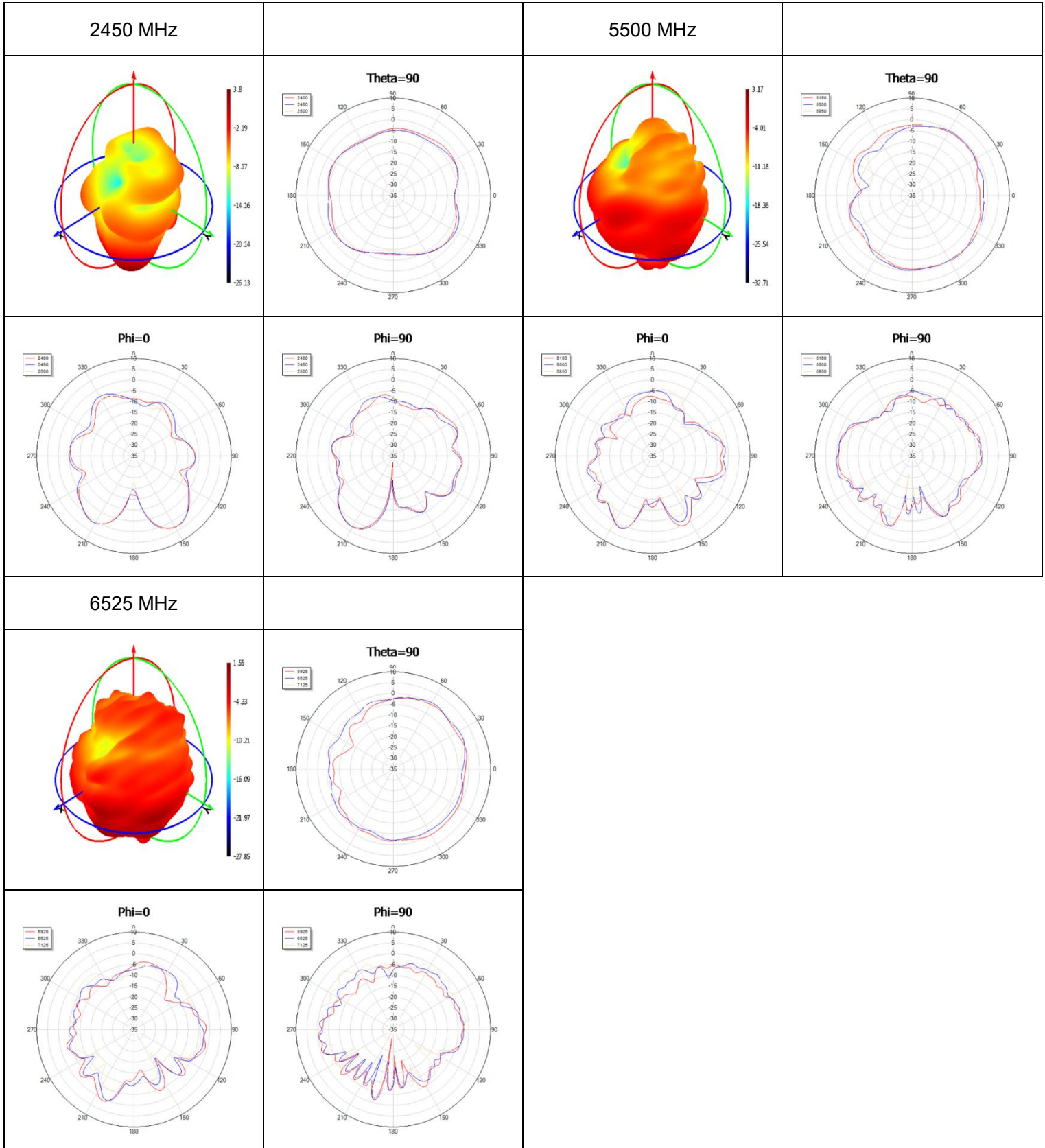


**3.2.4.2. Test state: Bent**

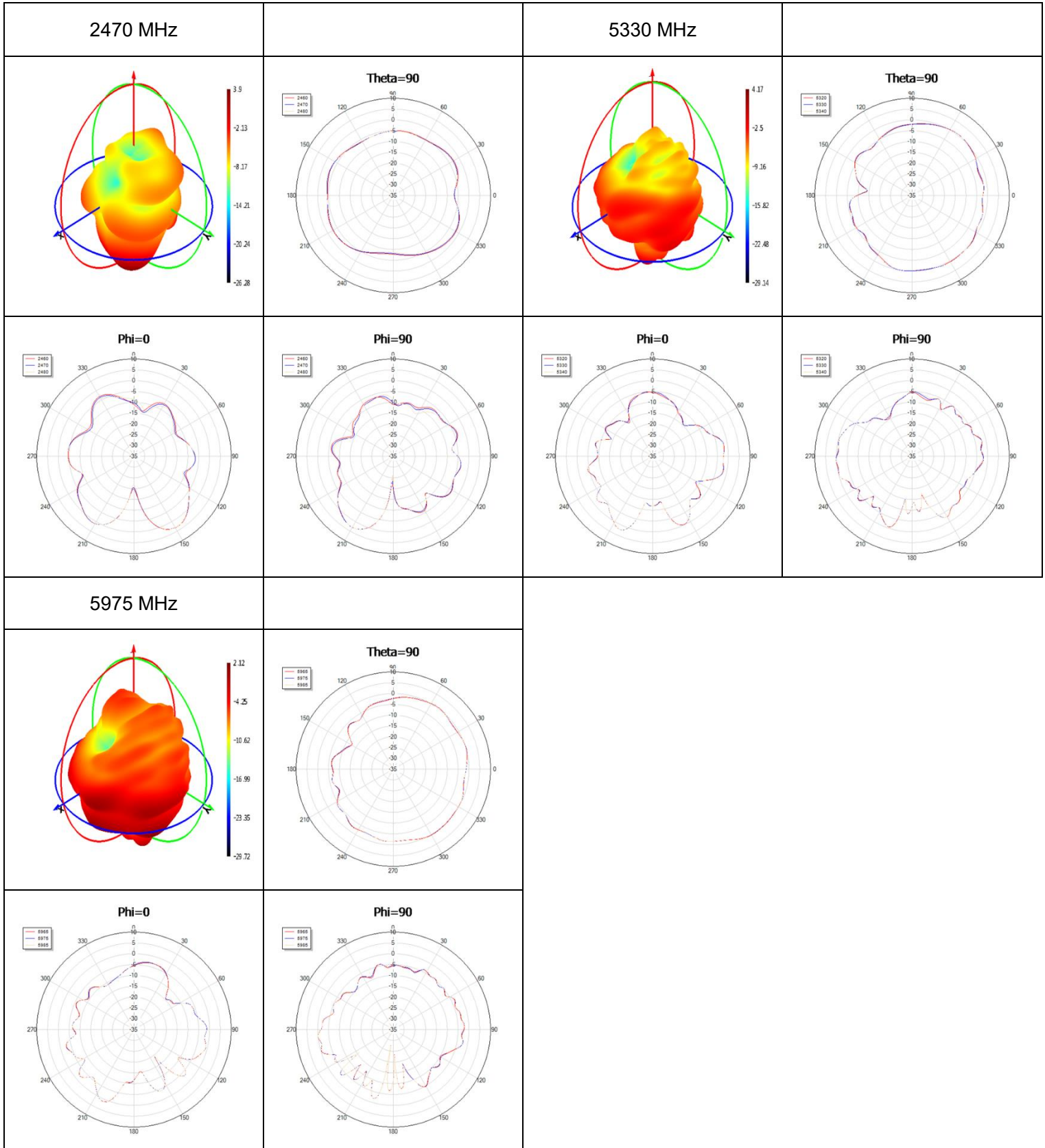
- Test Condition: On 130 mm × 130 mm EVB
- Test Chamber: HF-S-1



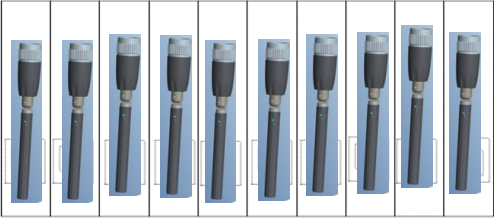
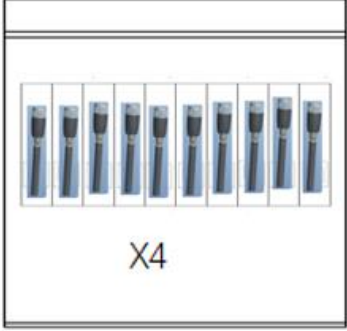
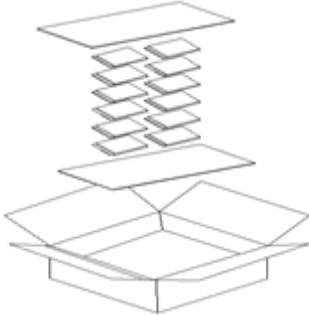
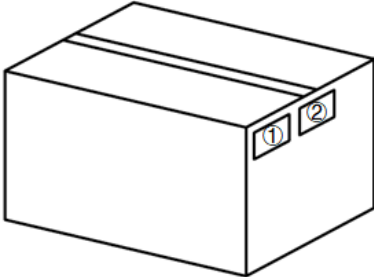
● **Wi-Fi**

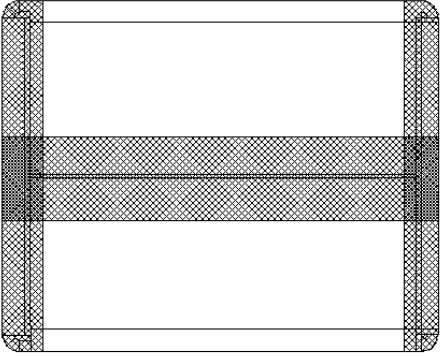


● **Max Peak Gain**



# 4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		<p>10 antenna products in a one-piece bag. (10 Antennas / PE Bag)</p>
2		<p>40 antenna products in a PE bag. (40 Antennas / PE Bag)</p>
3		<p>(20 PE Bags / Carton Box) (800 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 × W × H = 300 × 250 × 200 mm</u></p>
4		<p><b>Position for Attaching Labels</b></p> <ul style="list-style-type: none"> <li>① Carton Label</li> <li>② Quality Label</li> </ul>

5		<b>Sealing Cartons</b> 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
-	2025-05-19	Christopher YAO/ Rojin LUO/ Riva REN/ Rainey LIAO	Creation of the document
1.0	2025-05-19	Christopher YAO/ Rojin LUO/ Riva REN/ Rainey LIAO	First official release
1.1	2025-07-09	Rojin LUO/ Rainey LIAO	1. Updated the antenna image (Cover page). 2. Updated the drawing (Chapter 2).

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