



Antenna Datasheet

Product OC: YENT060W1AM

Version: 2.0

Date: 2025-12-08

Status: Released

Product Name: LPWA/ISM Terminal Mount Stubby Monopole External
Antenna

Key Features:

Frequency band: 863–930 MHz

Dimensions: Φ 9.4 mm \times 34.7 mm

Efficiency: Up to 72.1% (EVB)

RoHS & REACH Compliant

Overview

YENT060W1AM is a ISM antenna measuring Φ 9.4 mm \times 34.7 mm. This ISM antenna provides coverage from 863–930 MHz. The antenna terminated with SMA Male connector, and is available with customized connectors. This low profile, terminal mount omni-directional external antenna, ideal for applications where the antenna is required to be discrete, is easy to install with maximum durability assured. It is compatible with Quectel's ISM Series modules. It has been tested with EVB board.

It allows constant and reliable transmission and reception due to its omni-directional gain across all frequency bands. The YENT060W1AM 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 & Routers, Smart Metering, Vending Machines, Industrial IoT, Smart Home, Connected Enterprise, offering great performance with its high gain and efficiency.

Typical applications include:

- Security Alerts
- Wireless Data-transmission
- Automated Manufacturing
- Industrial IoT

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: Free Space & On 130mm × 130mm EVB

1.1. Electrical

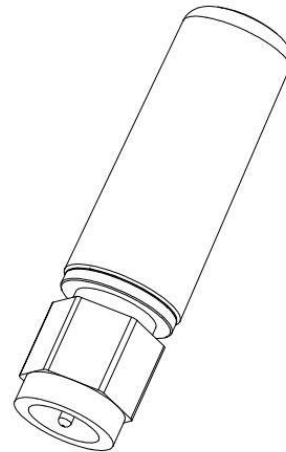
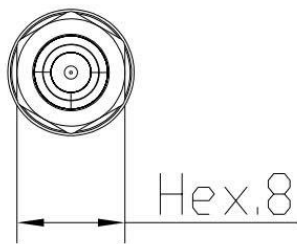
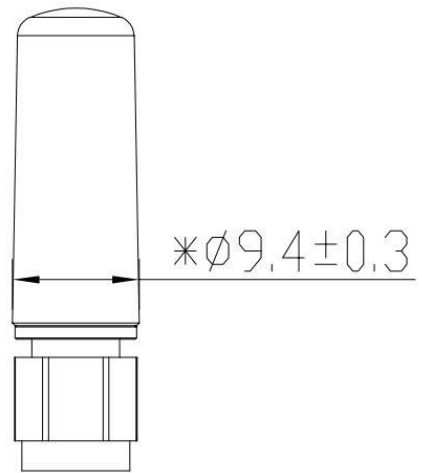
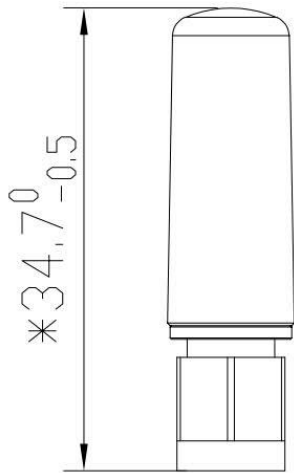
Electrical	
Frequency Range	863–930 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

Specification		Band	470–510 MHz	863–870 MHz	910–930 MHz
Max. VSWR	FS		-	3.9	2.4
	EVB		-	1.9	2.8
Max. Return Loss (dB)	FS		-	-4.5	-7.5
	EVB		-	-10.5	-6.5
AVG Eff. (%)	FS		-	25.0	31.5
	EVB		-	63.8	56.5
AVG AVG Gain (dB)	FS		-	-6.0	-5.0
	EVB		-	-2.0	-2.5
Max. Peak Gain (dBi)	FS		-	-1.7 (869)	-0.5 (930)
	EVB		-	1.1 (870)	1.6 (910)

1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	Φ 9.4 mm × 34.7 mm
Material & Color	TPE & Black
Connector Type	SMA Male
Mounting Type	Terminal
Weight	Typ. 4.55 g
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
RoHS & REACH Compliant	Yes

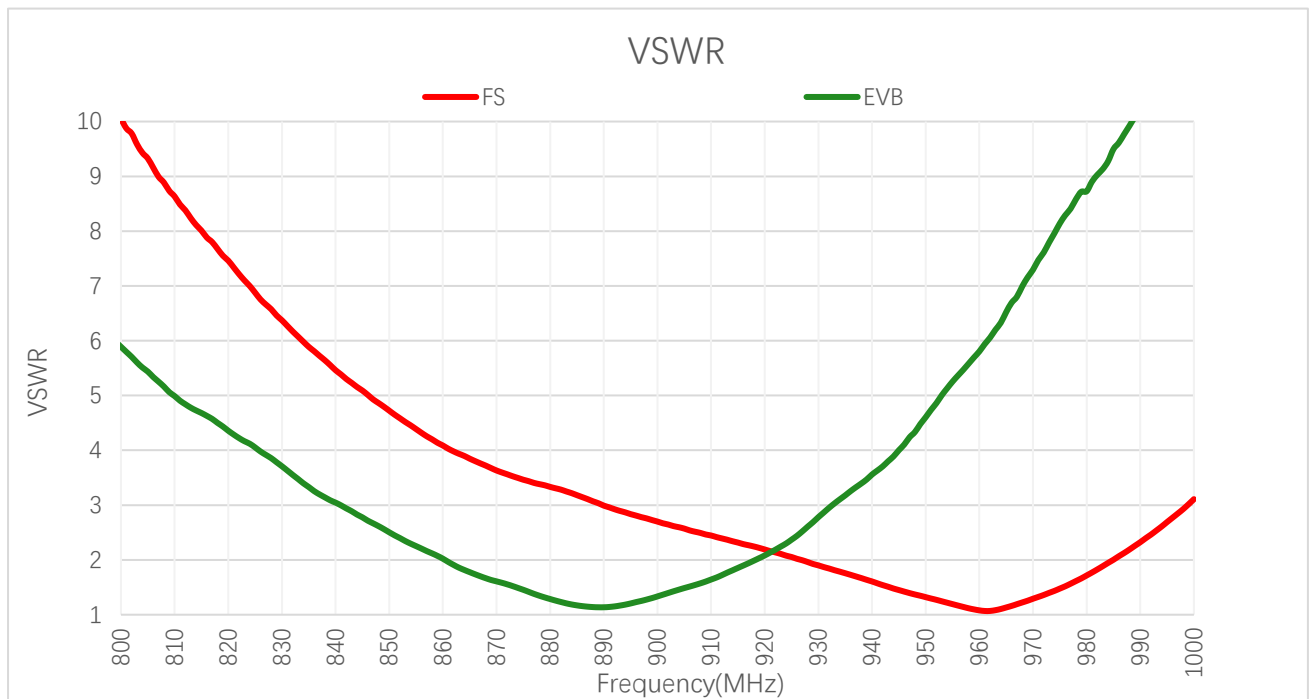
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

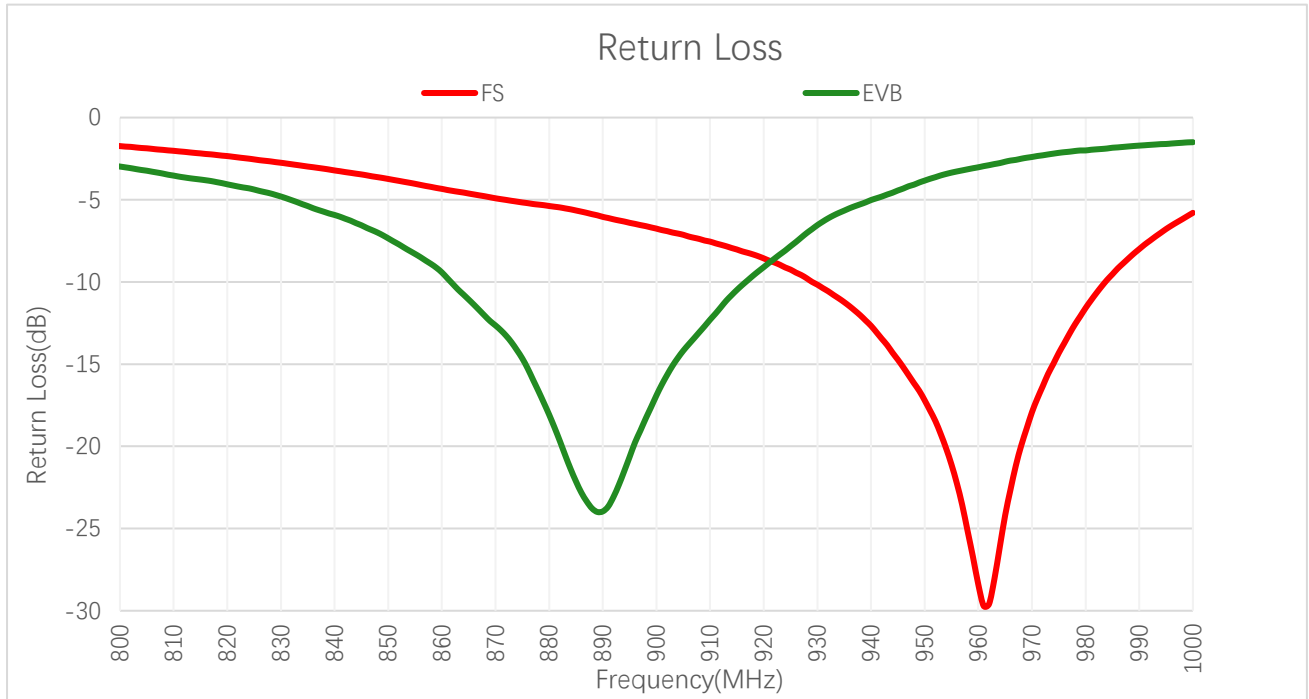
3.1.1. VSWR



VSWR

Frequency (MHz)	433	470	490	510	860	865	868	910	915	930
FS	-	-	-	-	4.1	3.8	3.7	2.4	2.3	1.9
EVB	-	-	-	-	2.0	1.8	1.7	1.6	1.9	2.8

3.1.2. Return Loss

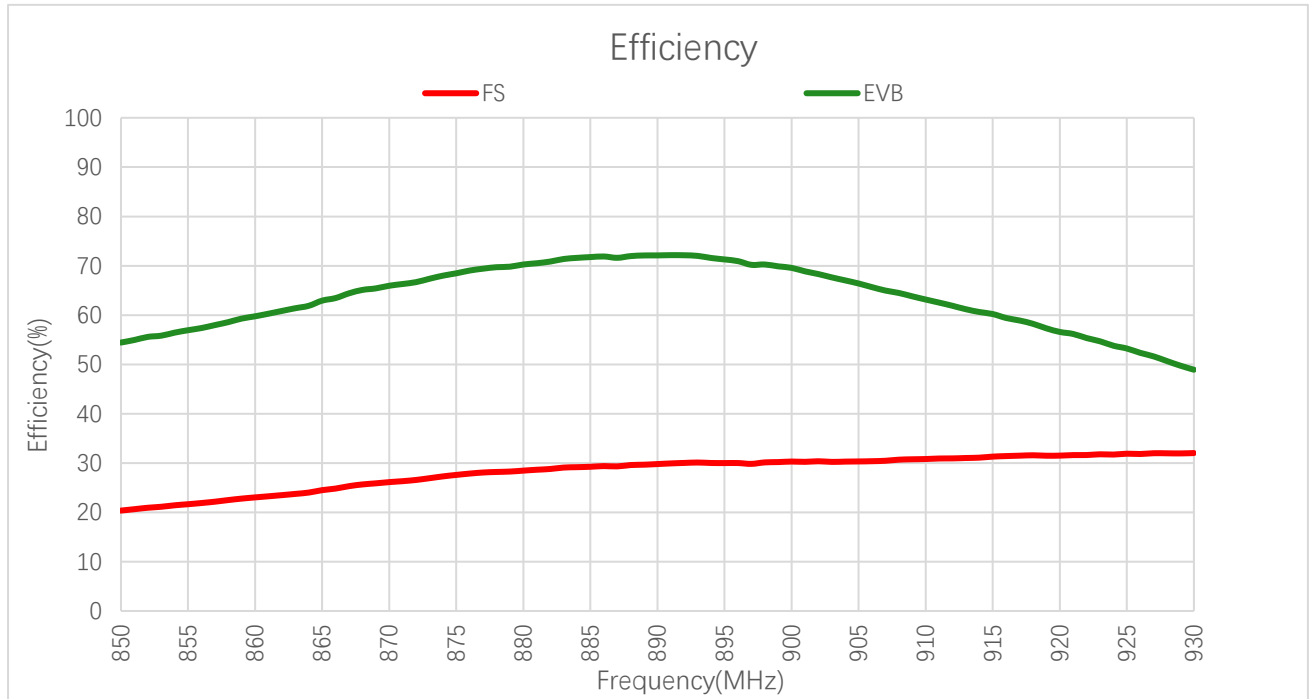


Return Loss (dB)

Frequency (MHz)	433	470	490	510	860	865	868	910	915	930
FS	-	-	-	-	-4.3	-4.6	-4.8	-7.5	-8.0	-10.2
EVB	-	-	-	-	-9.4	-11.1	-12.1	-12.3	-10.5	-6.5

3.2. Radiation Performance Test

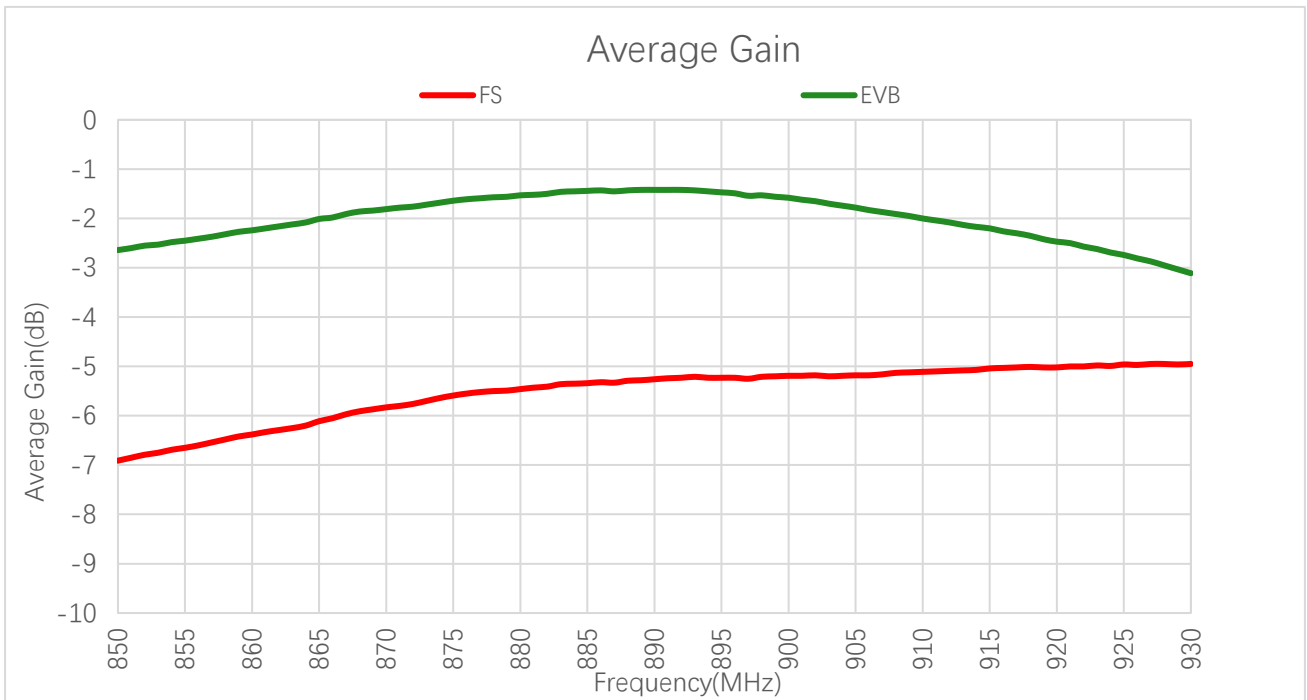
3.2.1. Efficiency



Efficiency (%)

Frequency (MHz)	433	470	490	510	860	865	868	910	915	930
FS	-	-	-	-	23.0	24.5	25.7	30.8	31.3	32.0
EVB	-	-	-	-	59.8	62.9	65.1	63.2	60.2	48.9

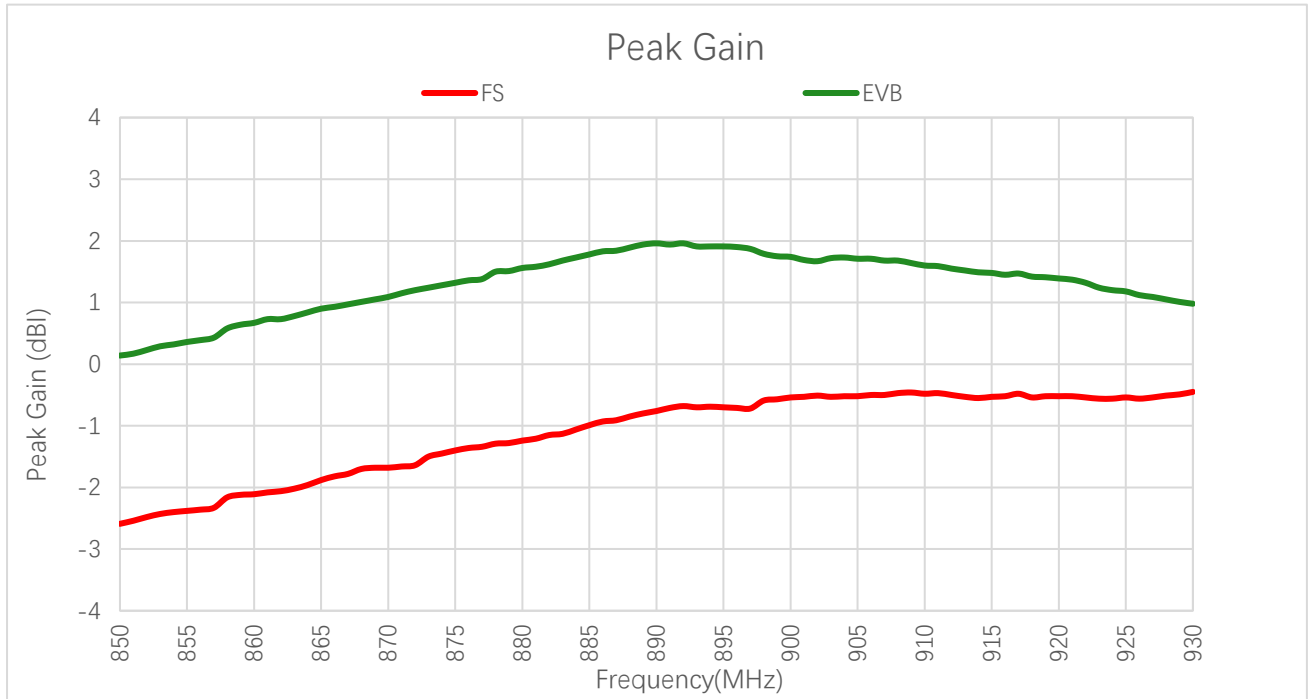
3.2.2. Average Gain



Average Gain (dB)

Frequency (MHz)	433	470	490	510	860	865	868	910	915	930
FS	-	-	-	-	-6.4	-6.1	-5.9	-5.1	-5.0	-5.0
EVB	-	-	-	-	-2.2	-2.0	-1.9	-2.0	-2.2	-3.1

3.2.3. Peak Gain

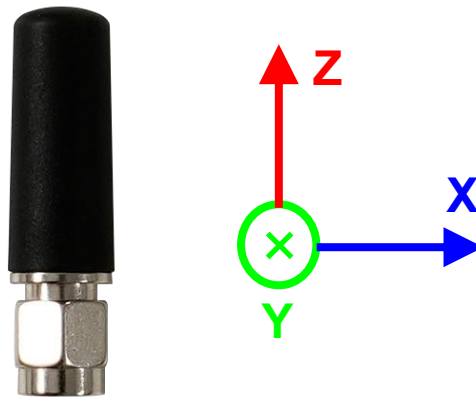


Peak Gain (dBi)

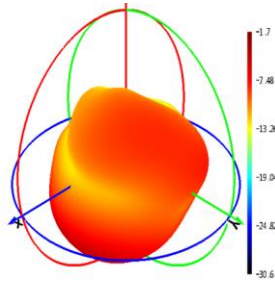
Frequency (MHz)	433	470	490	510	860	865	868	910	915	930
FS	-	-	-	-	-2.1	-1.9	-1.7	-0.5	-0.5	-0.5
EVB	-	-	-	-	0.7	0.9	1.0	1.6	1.5	1.0

3.2.4. 3D & 2D Radiation Pattern

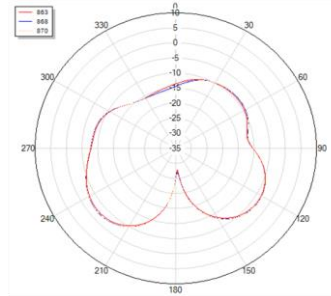
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- Test Chamber: HF-SY-1



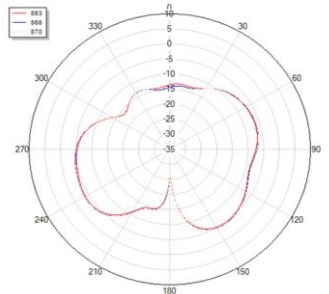
868 MHz



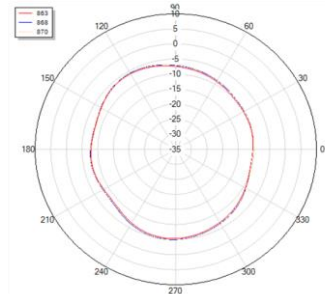
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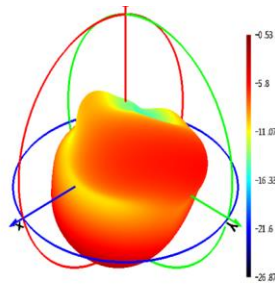
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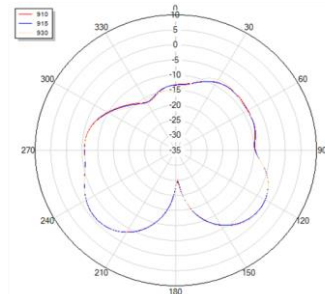
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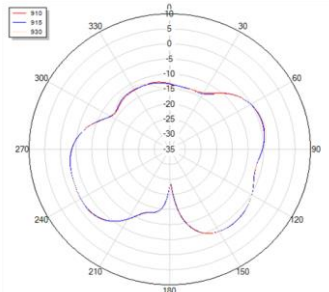
915 MHz



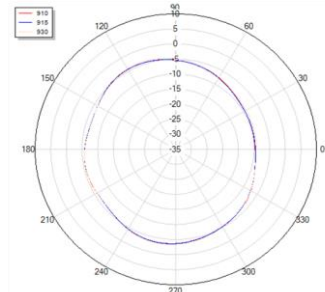
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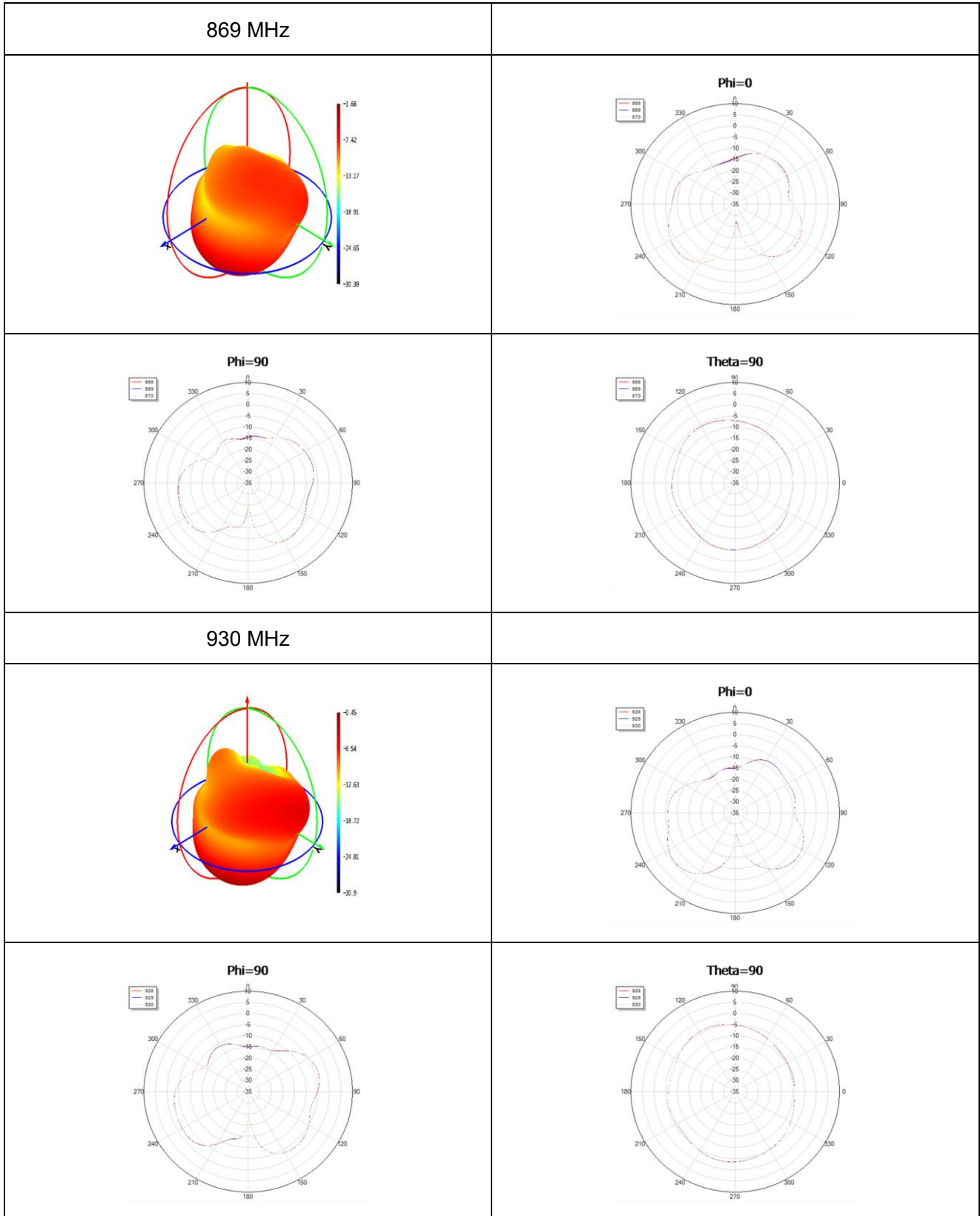
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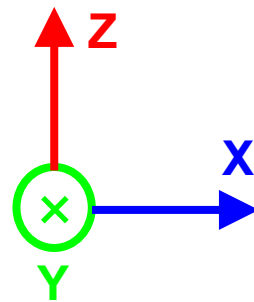
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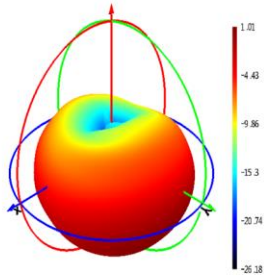
● Max Peak Gain



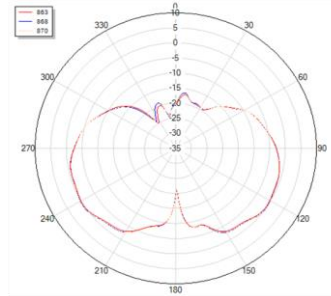
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- Test Chamber: HF-SY-1



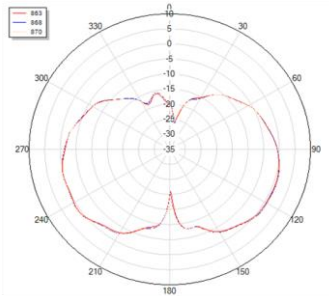
868 MHz



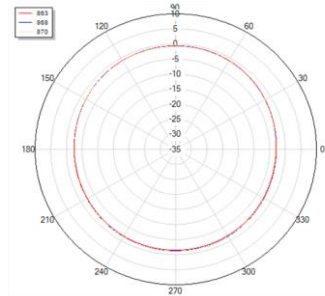
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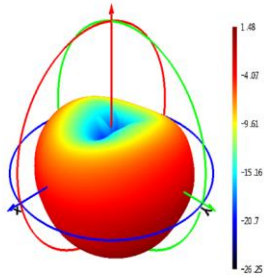
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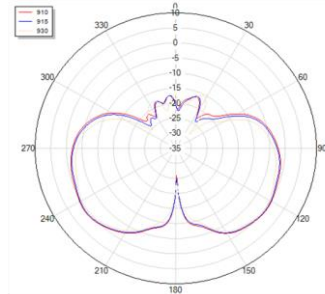
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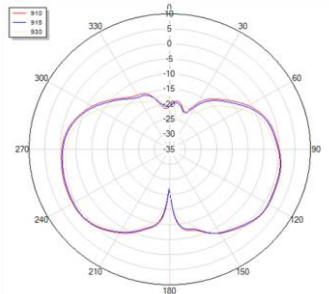
915 MHz



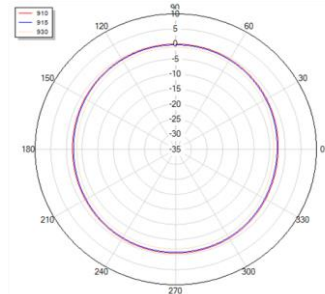
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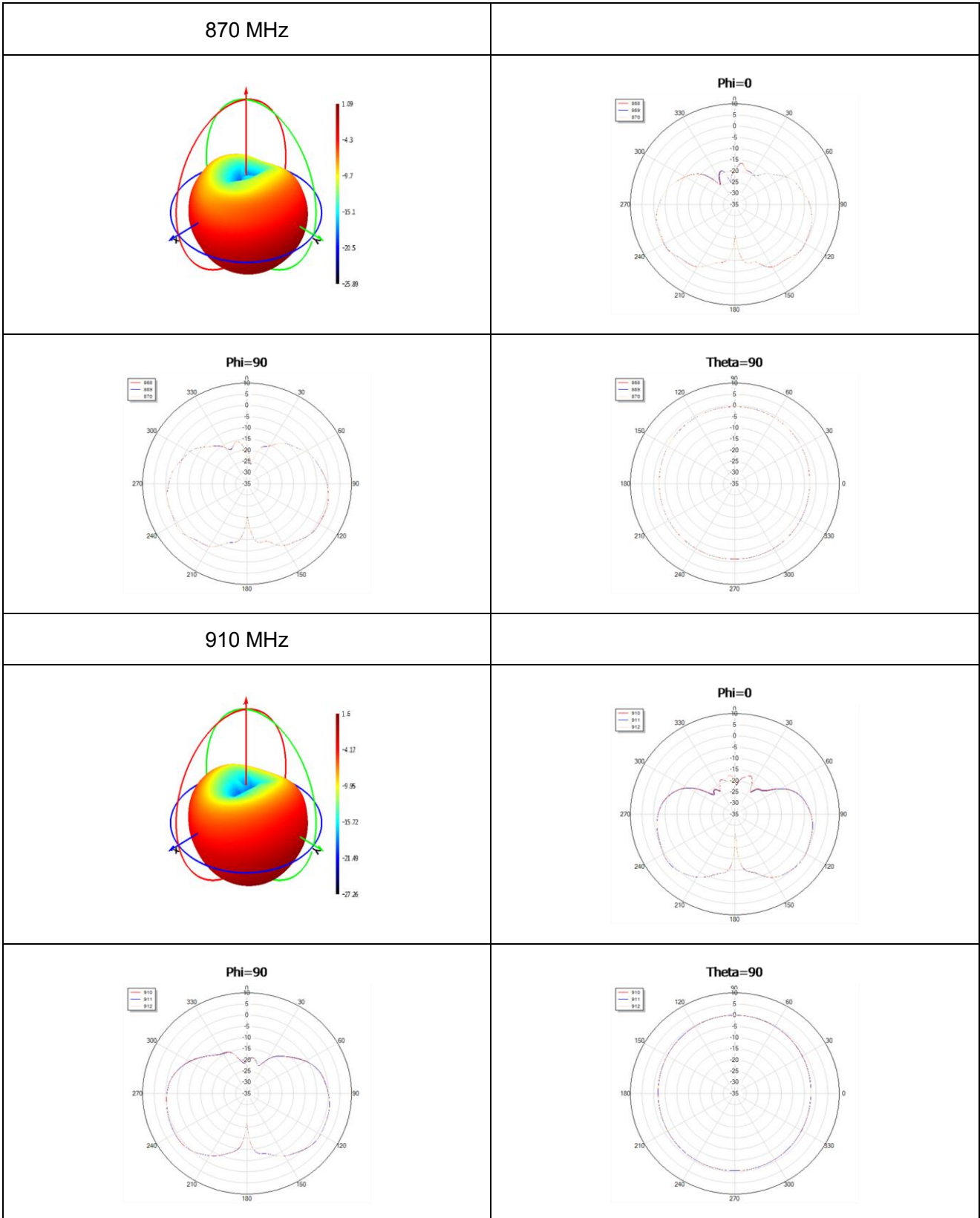
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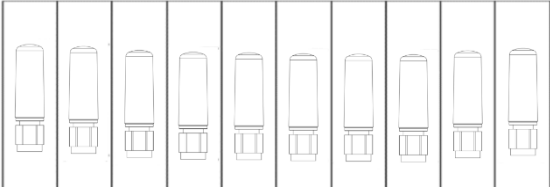
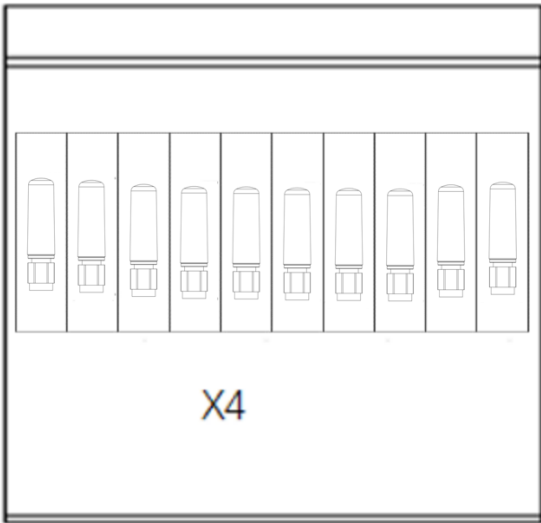
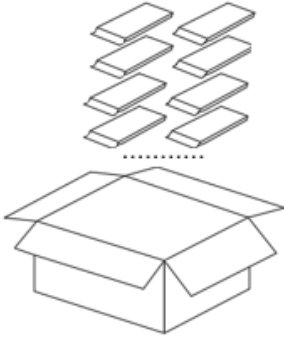
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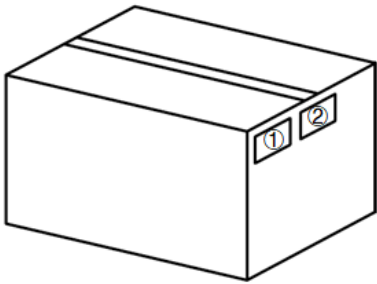
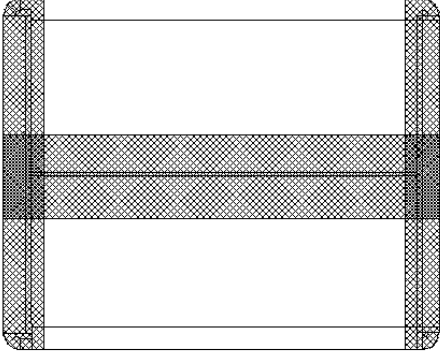


● Max Peak Gain



4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		<p>10 antenna products in a one-piece bag. (10 Antennas / One-piece Bag)</p>
2		<p>40 antenna products in a PE bag. (40 Antennas / PE Bag)</p>
3		<p>(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 × W × H = 405 × 293 × 185 mm</u></p>

<p>4</p>		<p>Position for Attaching Labels</p> <ul style="list-style-type: none"> ① Carton Label ② Quality Label
<p>5</p>		<p>Sealing Cartons H-shaped sealing cartons</p>
<p>Note</p>	<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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Or our local offices. For more information, please visit:

<https://www.quectel.com/contact/>.

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Revision History

Version	Date	Author	Note
-	2025-09-28	Simon Sheng/ Toby Wang/ Strong Qiang/ Rainey Liao	Creation of the document
1.0	2025-09-28	Simon Sheng/ Toby Wang/ Strong Qiang/ Rainey Liao	First official release
2.0	2025-12-08	Christopher Yao	Updated all RF test data.

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