Antenna Datasheet

Product OC: YETN010L1AM
Version: 1.0
Date: 2026-01-12
Status: Released

Product Name: NTN L-Band Screw Mount Low Profile Passive External Antenna

Key Features:

Frequency Band: TX: 1626.5–1660.5 MHz
RX: 1525–1559 MHz
Dimensions: 89.3 mm × 86.3 mm × 35.4 mm
Peak Gain: 5.4 dBi (Max)
RoHS and REACH Compliant
IP67

Overview

TheYETN010L1AM is a low-profile passive external antenna designed for reliable L-band satellite communication, specifically supporting transmit (TX) and receive (RX) frequencies for demanding positioning and data services. It features a compact screw-mount design with an IP67-rated housing, making it suitable for harsh outdoor, industrial, and mobile applications where durability and consistent performance are essential.

This antenna delivers stable electrical performance with low VSWR and excellent return loss across its specified bands. Its mechanical design ensures easy installation and long-term resilience against moisture, dust, and UV exposure. The YETN010L1AM is part of Quectel ’s comprehensive antenna portfolio, backed by full design support, testing, and customization services to meet specific project requirements.

- **Key Features:**

✓ Frequency Bands: TX: 1626.5–1660.5 MHz, RX: 1525–1559 MHz

✓ Compact Form Factor: 89.3 mm × 86.3 mm × 35.4 mm

✓ High Performance: Peak gain up to 5.4 dBi, directional radiation pattern, and right-hand circular polarization (RHCP) for improved signal quality

✓ Environmental Durability: IP67 ingress protection, operating temperature range of -40°C to +85°C, and compliance with RoHS, REACH, and UL standards

✓ Connector: SMA Male (standard), with options for waterproof customization

✓ Cable: 500 mm ALS302 black cable included

- **Compliance & Certifications:**

✓ RoHS & REACH compliant

✓ UL 94 V-0 flame rating

✓ UL 746c f1 UV resistance

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.

Contents

1 Specification

Test Condition: Free Space

1.1. Electrical

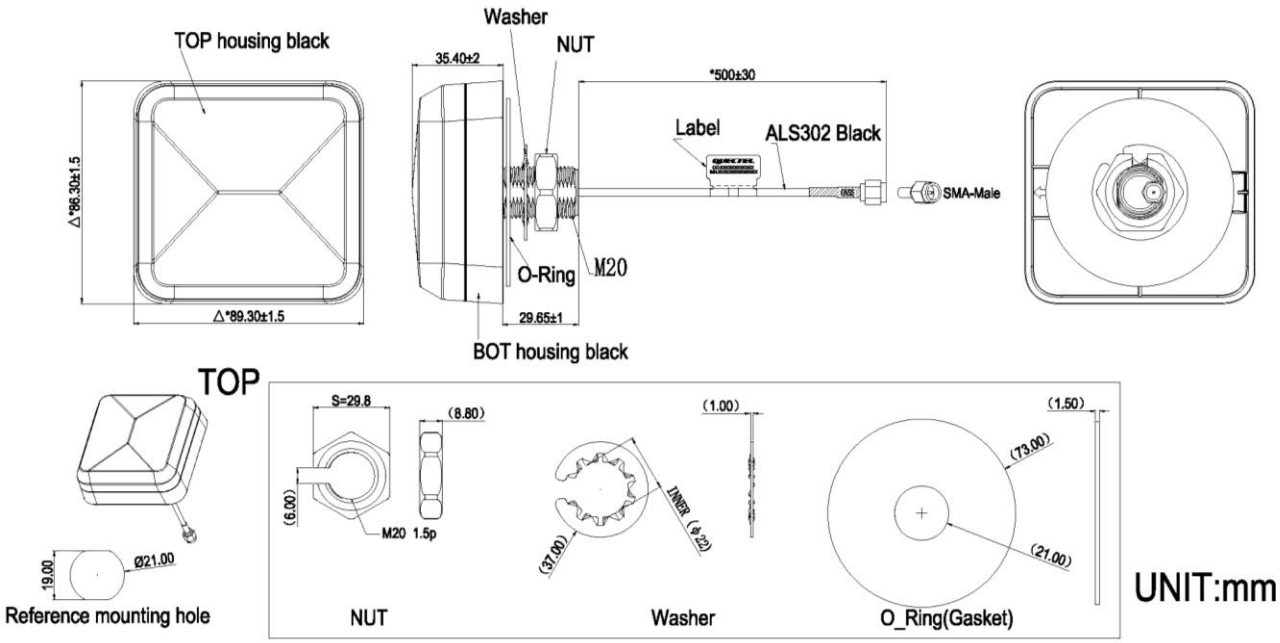
Electrical	
Frequency Range	TX: 1626.5–1660.5 MHz RX: 1525–1559 MHz
Impedance	50 Ω
Polarization	RHCP
Radiation Pattern	Directional

Band / Frequency (MHz)	L-Band TX			L-Band RX		
	1626	**1643**	**1660**	**1525**	**1542**	**1559**
VSWR	1.31	1.36	1.51	1.07	1.06	1.09
Return Loss (dB)	-17.5	-16.2	-13.9	-30.1	-30.3	-27.2
Efficiency (%)	75.4	76.3	76.4	55.2	60.6	65.6
Peak Gain (dBi)	5.33	5.15	4.81	3.11	3.57	4.23
Axial Ratio (dB)	2.4	2.5	2.5	2	2	2

1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	89.3 mm × 86.3 mm × 35.4 mm
Casing Material & Color	PC & Black
Cable Type & Color & Length	ALS302 & Black & 500mm
Connector Type	SMA Male (The current state of the SMA connector is not waterproof. If a waterproof connector is required, it can be customized.)
Mounting Type	Screw
Weight	Typ. 275 g
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Ingress Protection (IP) Rating	IP67
RoHS & REACH Compliant	Yes
Housing Flame Rating	UL 94 V-0
Housing UV Resistant	UL 746c f1

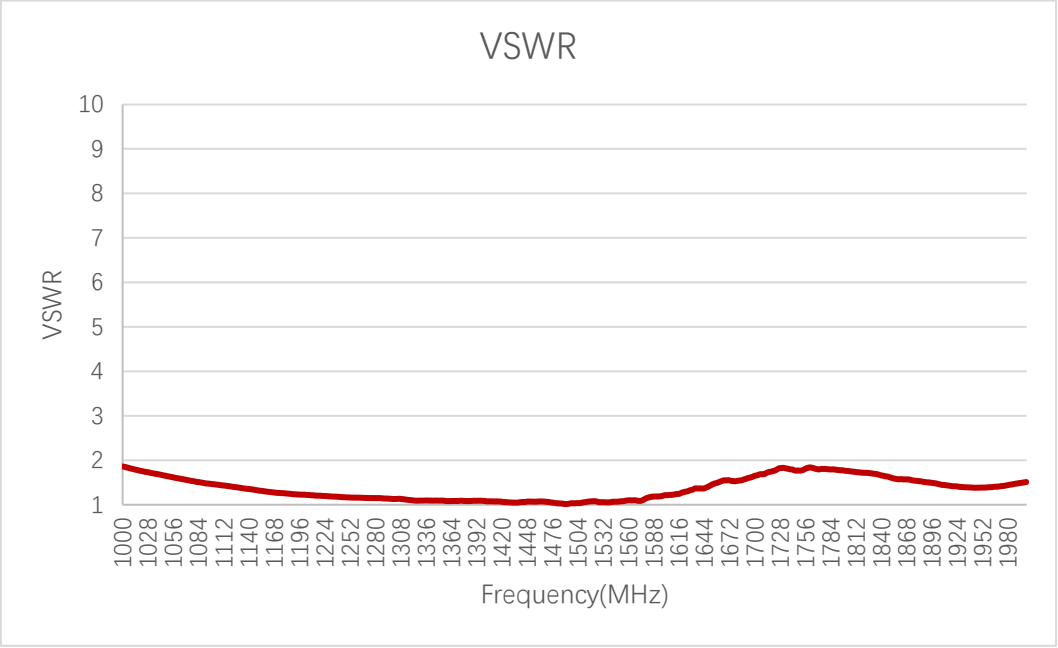
2 Drawing


TOP housing black
Washer
NUT
35.40±2
*500±30
Label
ALS302 Black
SMA-Male
△*86.30±1.5
△*89.30±1.5
O-Ring
M20
29.65±1
BOT housing black
TOP
S=29.8
(8.80)
(6.00)
M20 1.5p
(1.00)
INNER (ø22)
(37.00)
(1.50)
(73.00)
(21.00)
19.00
Ø21.00
Reference mounting hole
NUT
Washer
O_Ring(Gasket)
UNIT:mm

3 Detailed Performance

3.1. S-Parameter Test

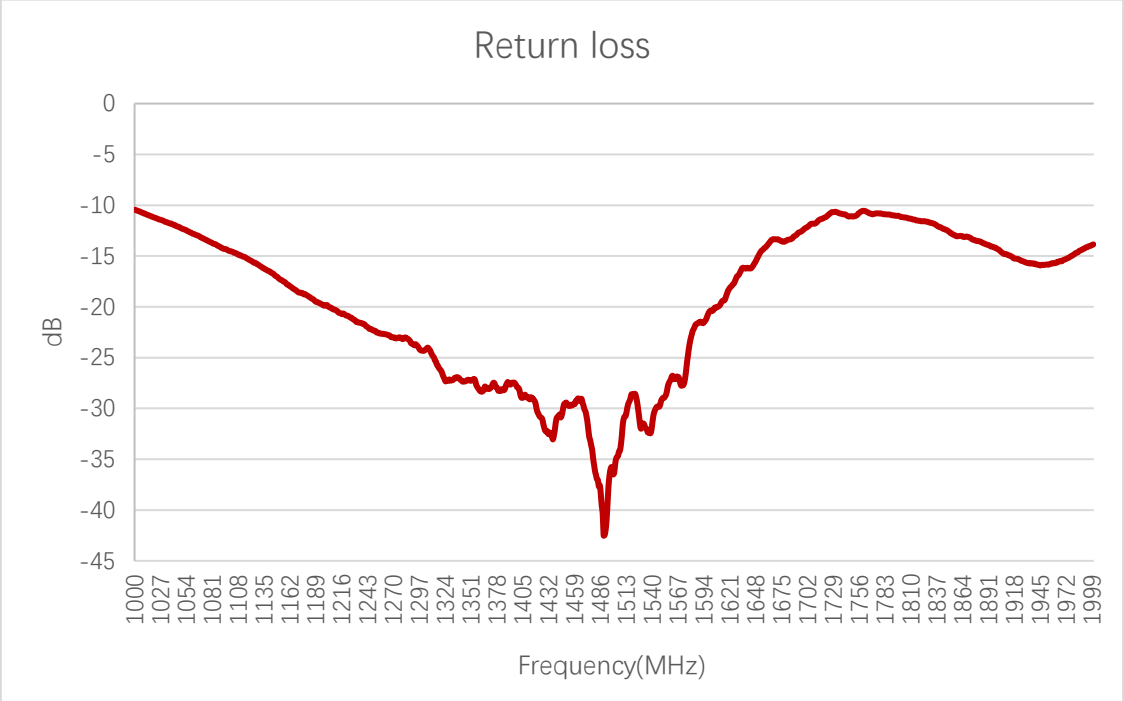
3.1.1. VSWR



VSWR

Frequency (MHz)	1525	1542	1559	1626	1643	1660
VSWR	1.07	1.06	1.09	1.31	1.36	1.51

3.1.2. Return Loss

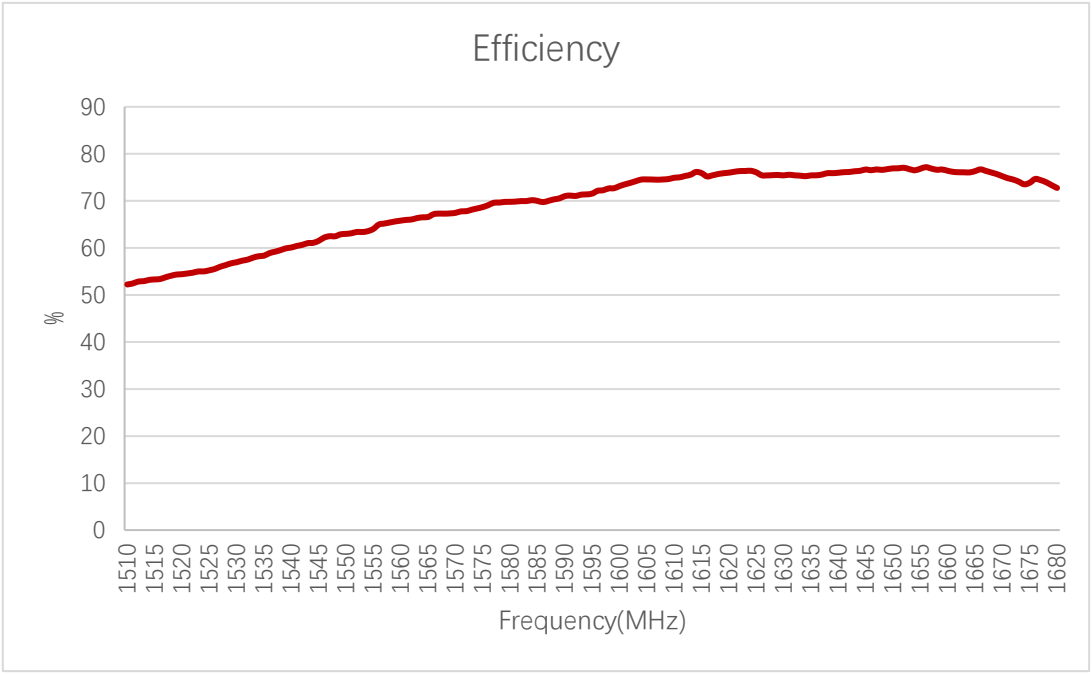


Return Loss (dB)

Frequency (MHz)	1525	1542	1559	1626	1643	1660
Return Loss (dB)	-30.1	-30.3	-27.2	-17.5	-16.2	-13.9

3.2. Radiation Performance Test

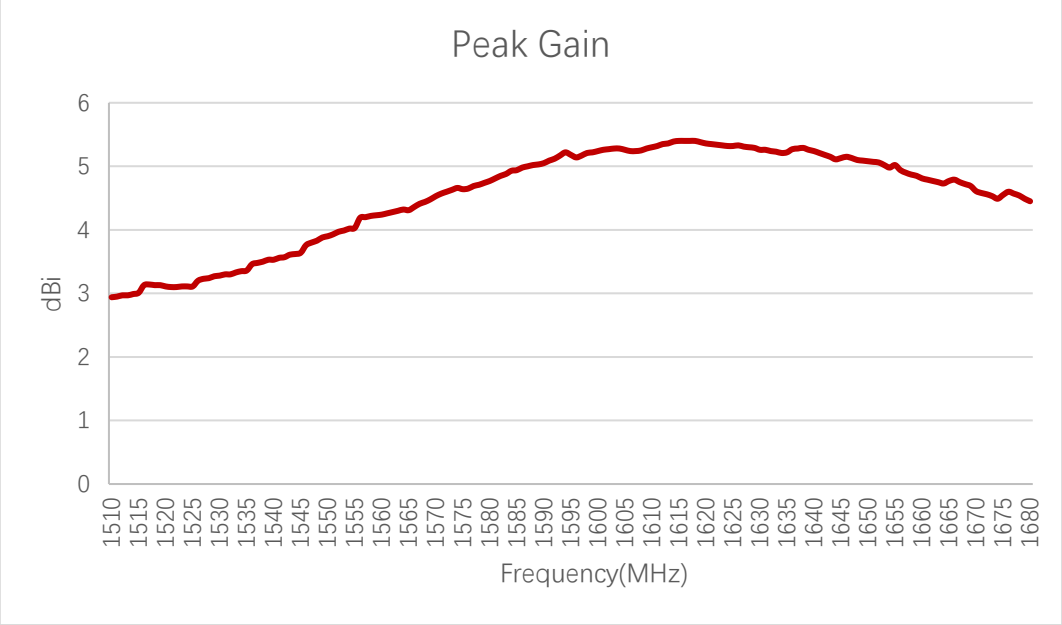
3.2.1. Efficiency



Efficiency (%)

Frequency (MHz)	1525	1542	1559	1626	1643	1660
Efficiency (%)	55.2	60.6	65.6	75.4	76.3	76.4

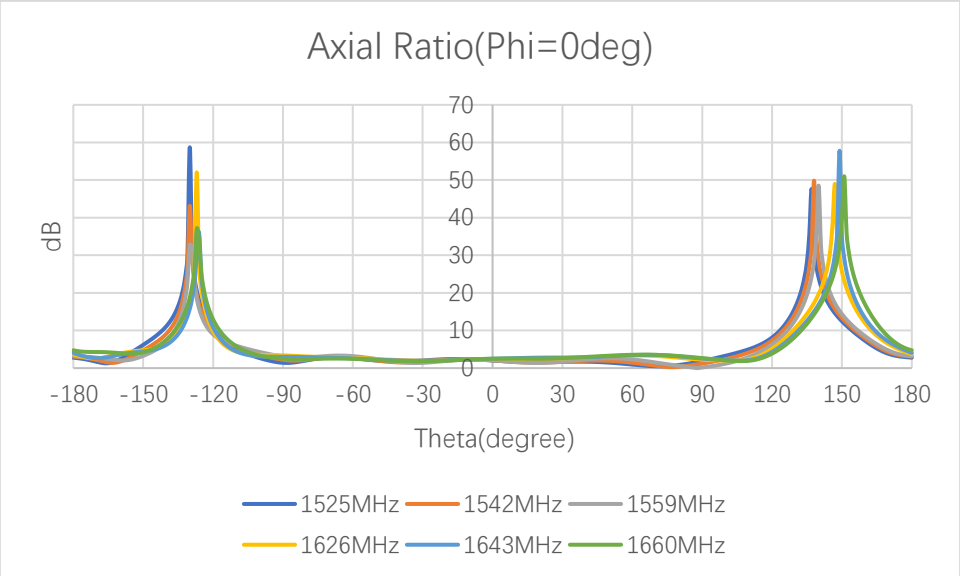
3.2.2. Peak Gain

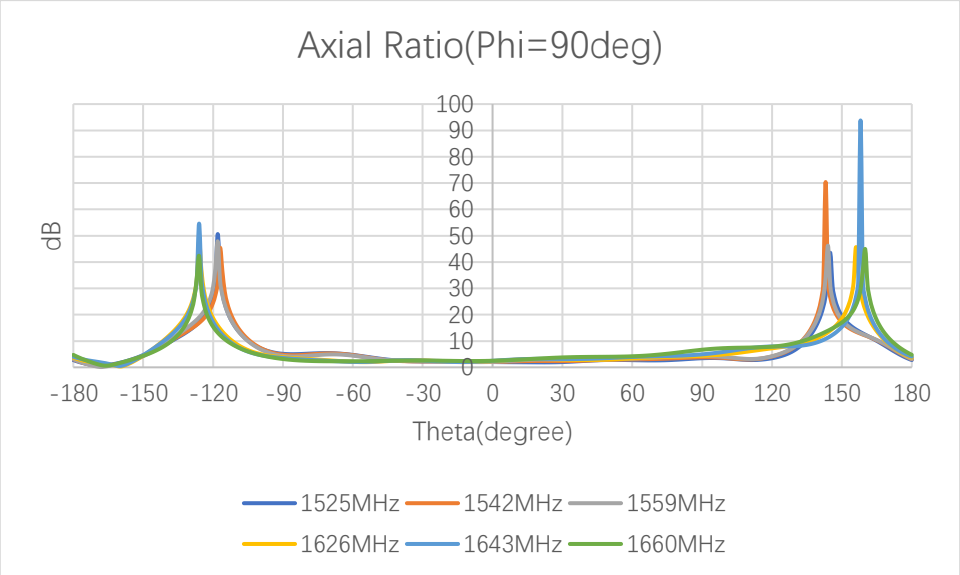


Peak Gain (dBi)

Frequency (MHz)	1525	1542	1559	1626	1643	1660
Peak Gain (dBi)	3.11	3.57	4.23	5.33	5.15	4.81

3.2.3. Axial Ratio

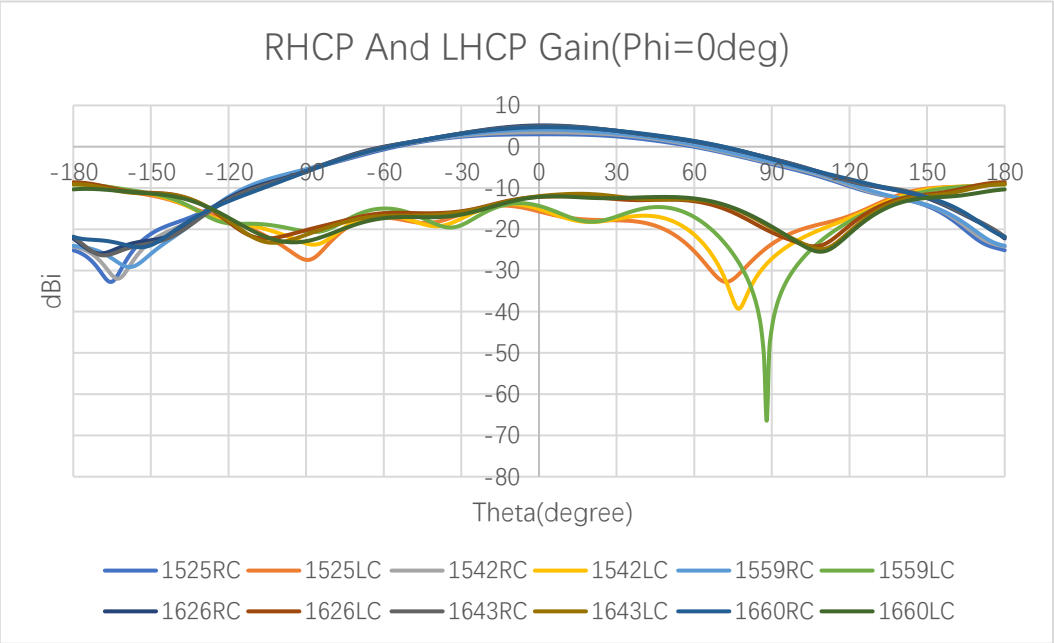


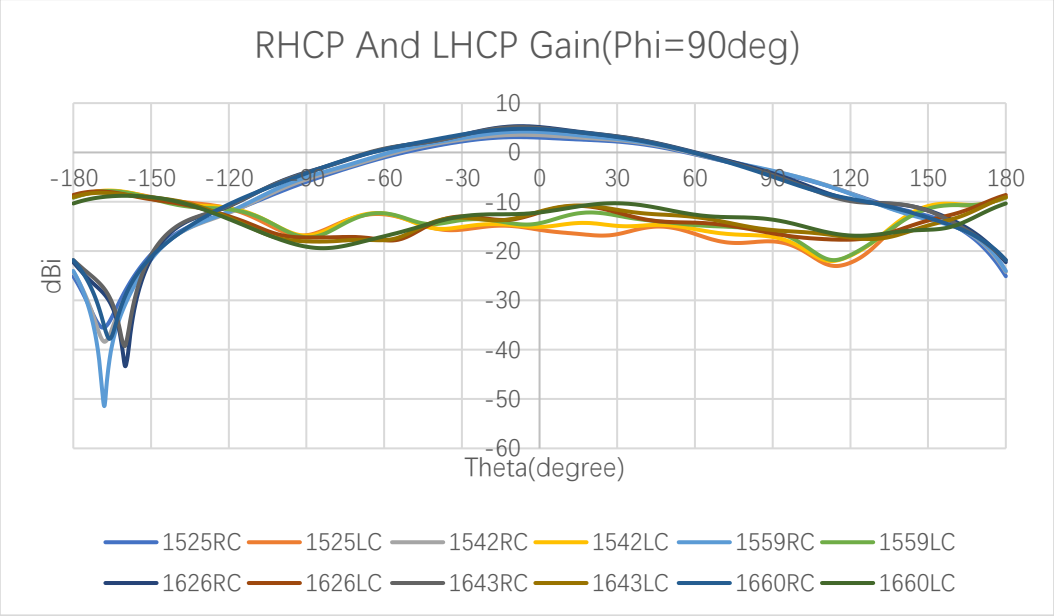


Axial Ratio (dB)

Frequency (MHz)		1525	1542	1559	1626	1643	1660
Axial Ratio (dB)	Phi=0 (deg) Theta=0 (deg)	2	2	2	2.4	2.5	2.5
	Phi=90 (deg) Theta=0 (deg)	2	2	2	2.4	2.5	2.5

3.2.4. 2D RHCP and LHCP Gain



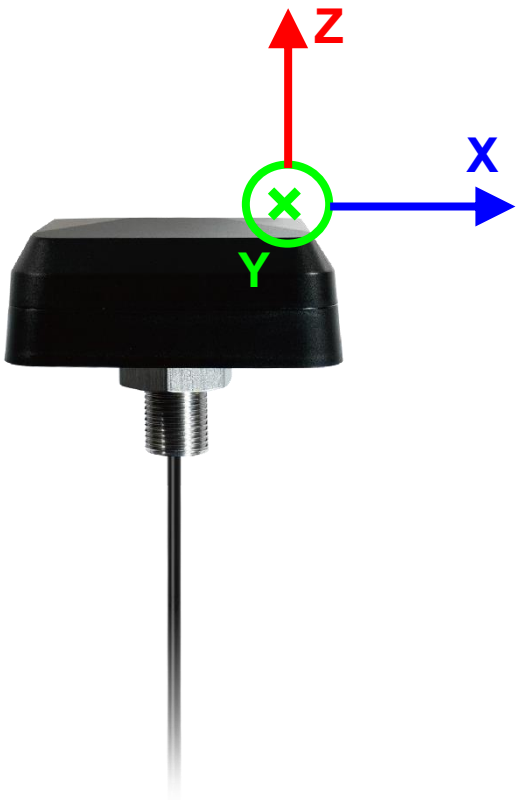


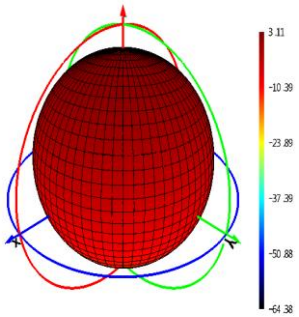
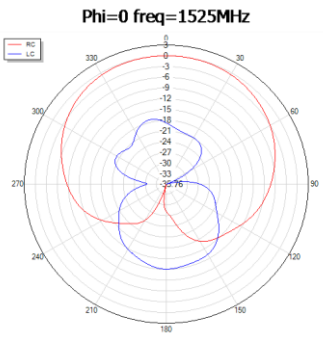
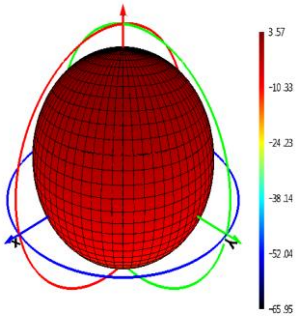
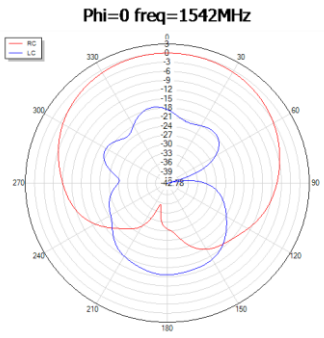
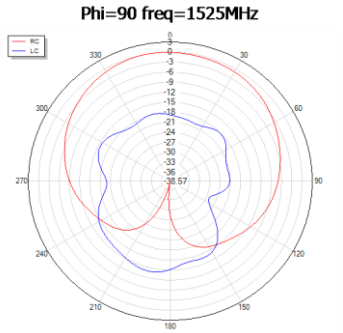
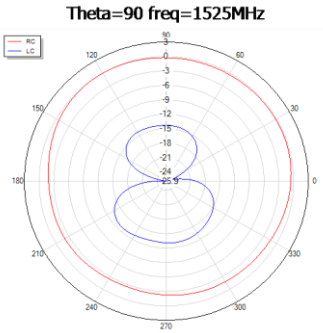
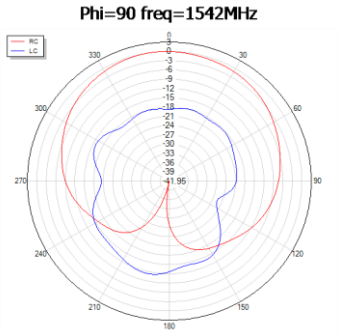
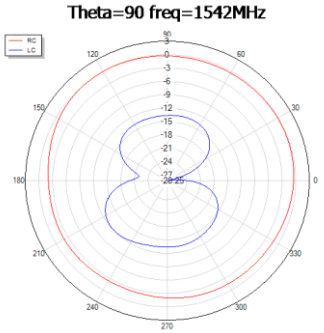
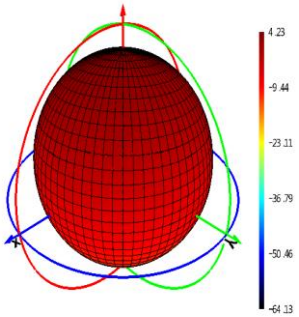
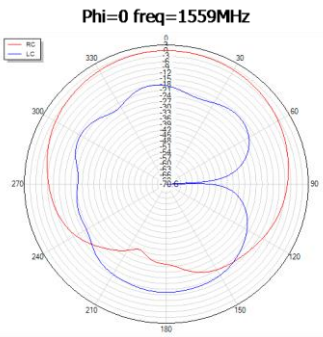
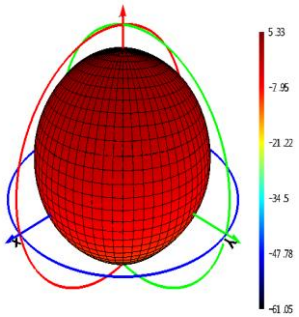
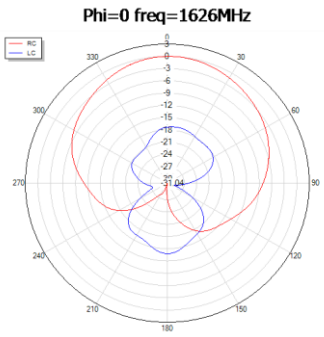
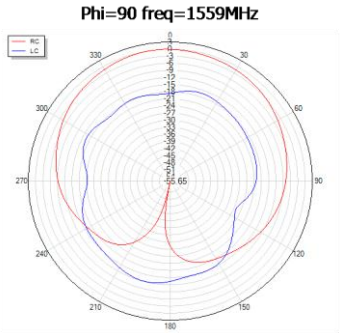
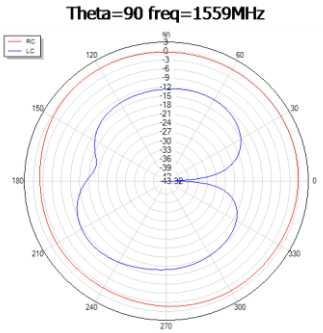
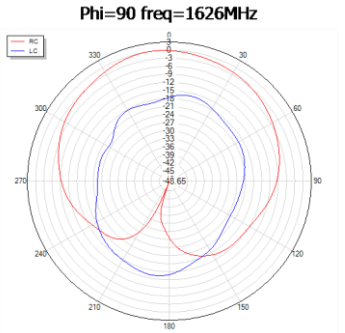
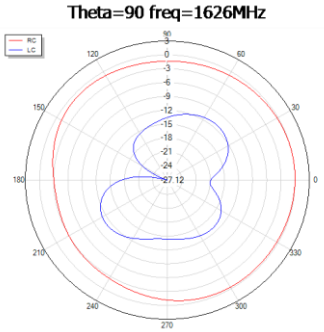
2D RHCP and LHCP Gain (dBi)

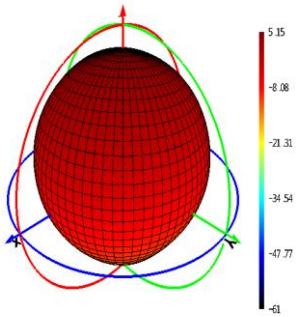
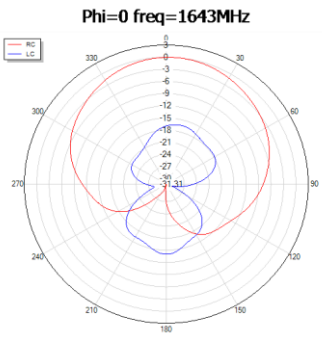
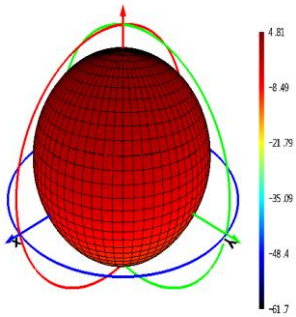
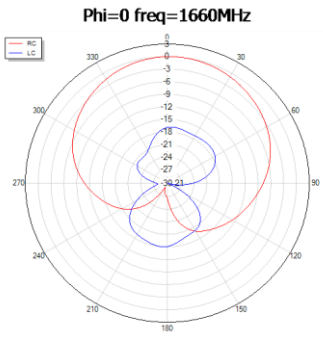
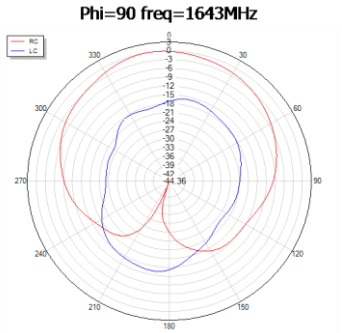
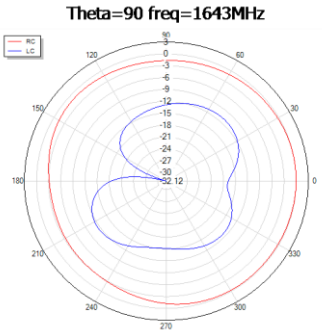
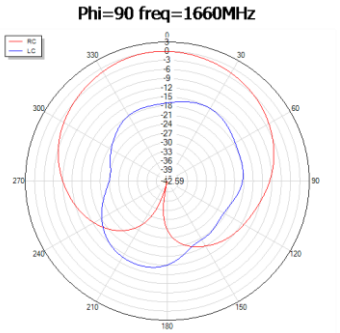
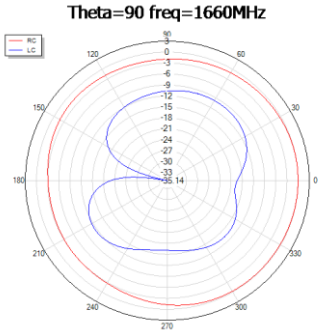
Frequency (MHz)		1525	1542	1559	1626	1643	1660
RHCP Gain (dBi)	Phi = 0 (deg) Theta = 0 (deg)	3	3.49	4.15	5.15	4.95	4.73
	Phi = 90 (deg) Theta = 0 (deg)	3	3.49	4.15	5.15	4.95	4.73
LHCP Gain (dBi)	Phi = 0 (deg) Theta = 0 (deg)	-15.7	-15.1	-14.3	-12.2	-12	-12.2
	Phi = 90 (deg) Theta = 0 (deg)	-15.7	-15.1	-14.3	-12.2	-12	-12.2

3.2.5. 3D & 2D Radiation Pattern

- Test Condition: Free Space
- Test Chamber: SH-SY-16M

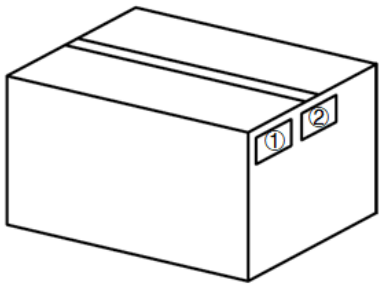
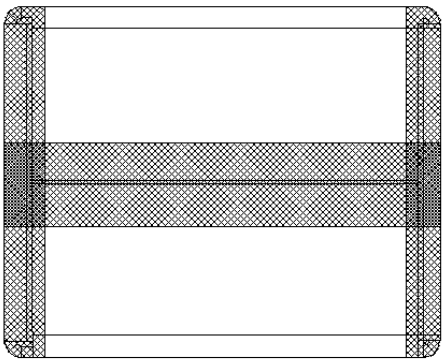


1525 MHz		1542 MHz	
			
			
1559 MHz		**1626 MHz**	
			
			

1643 MHz		1660 MHz	
			
			

4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		Put the product in a PE bag inside the inner box.
2		Top the product with the pearl cotton.
3		Inner box diagram Inner Box Size: L × W × H = 165 × 165 × 135 mm

4		(18 Inner Boxes / Carton Box) (18 Antennas / Carton Box) Estimated quantity Products that cannot fill the entire carton box are packed in a suitable size carton box. Carton Size: L × W × H = 525 × 525 × 305 mm
5		**Position for Attaching Labels** ① Carton Label ② Quality Label
6		**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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Email: info@quectel.com

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

Version	Date	Author	Note
-	2026-01-12	Junsen Li/ Rojin Luo/ Strong Qiang/ Rainey Liao	Creation of the document
1.0	2026-01-12	Junsen Li/ Rojin Luo/ Strong Qiang/ Rainey Liao	First official release

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