

# Antenna

# YEIN002AA Datasheet

**Antenna Services**

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Status: Preliminary



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# About the Document

## Revision History

Version	Date	Author	Note
-	2024-04-16	Aria CHU	Creation of the document
0.1	2024-04-16	Aria CHU	First official release

## Contents

About the Document .....	3
Contents .....	4
<b>1 Product Description.....</b>	<b>5</b>
<b>2 Product Features .....</b>	<b>5</b>
<b>3 Product Specifications .....</b>	<b>6</b>
<b>4 Overall Performance.....</b>	<b>7</b>
4.1. Test Environment .....	7
4.2. VSWR.....	8
4.3. Efficiency .....	9
4.4. Gain.....	9
4.5. Radiation Pattern .....	10

## 1 Product Description

This Quectel external LPWA antenna covers main LPWA bands and is compatible with 3G/2G bands as well. The external antenna is barely influenced by the internal environment of devices, giving a better performance in efficiency, radiation, gain whilst providing an optimized solution for a customer product. Quectel also offers flexible installation with custom cable length and connector options.

## 2 Product Features

- Cellular 863–928 MHz
- High efficiency
- Excellent performance

### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	863–928 MHz
Input Impedance	50 $\Omega$
VSWR	$\leq 2.0$
Gain	$\leq 2.5$ dBi
Polarization Type	Linear
Antenna Type	Dipole

#### Mechanical Specifications

Antenna Size	$\varnothing$ 13 mm x 195 mm
Casing	TPEE
Connector Type	SMA Male (Center Pin)
Working Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Radome Color	Black

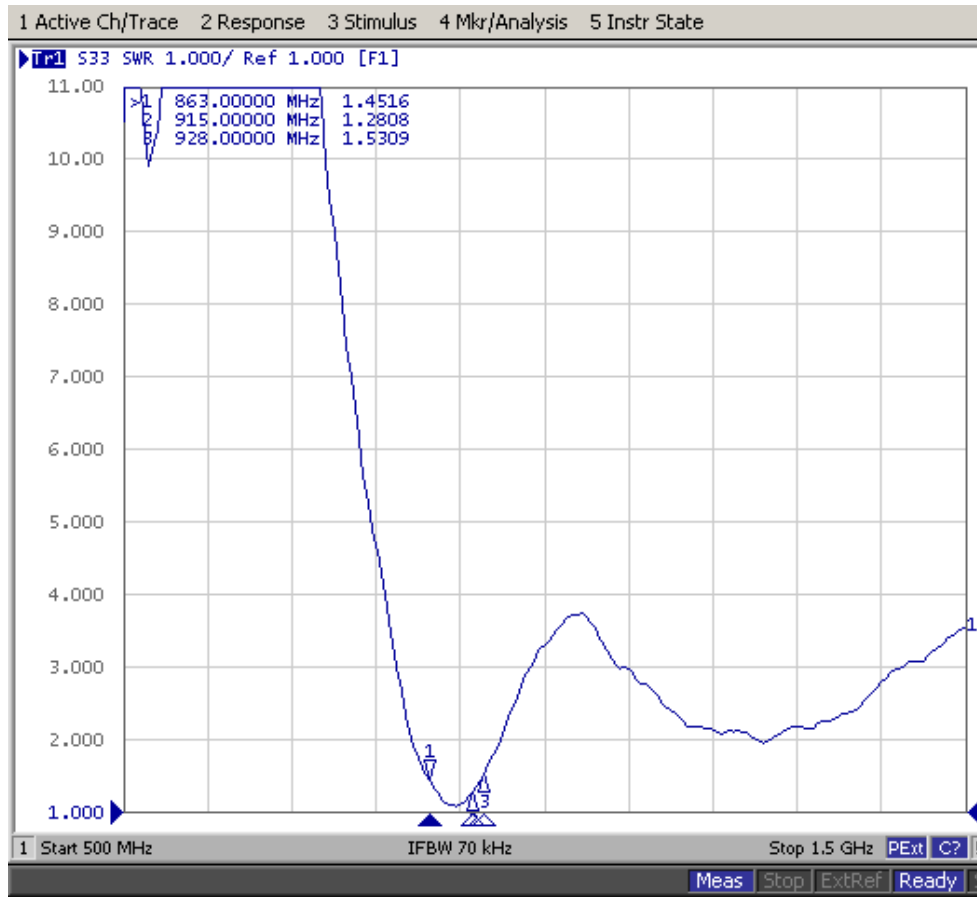
## 4 Overall Performance

### 4.1. Test Environment

- KEYSIGHT ENA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz
  
- Network Analyzer: Keysight E5071C (Device number: QTB6331E; Calibration date: 2023-12-27; Due date:2025-06-26)
- Chamber: OTA RayZone 2800 GTS (Device number: QTA0709; Calibration date: 2023-07-14; Due date:2024-07-13)
- Testing Software: Libra
- Test Engineer: Rainey LIAO

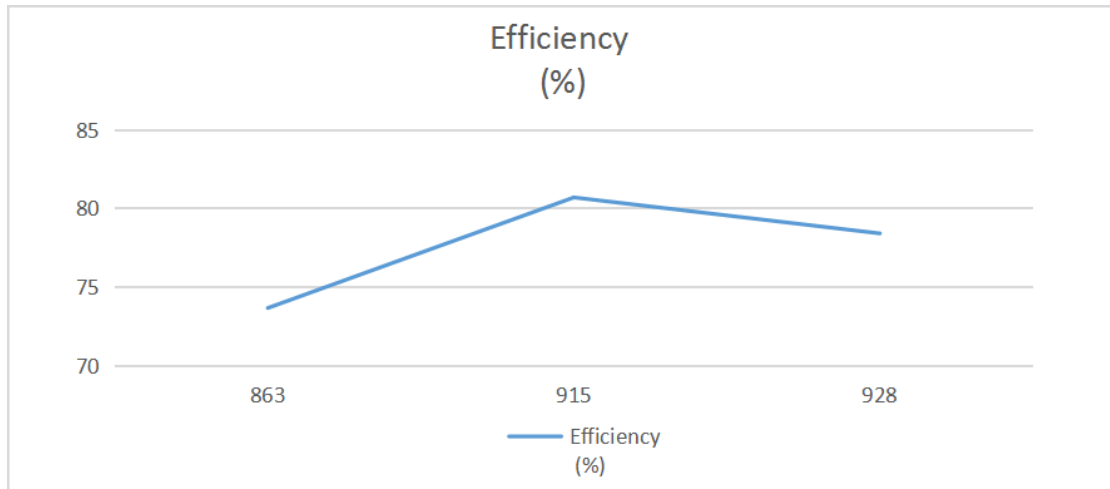


## 4.2. VSWR



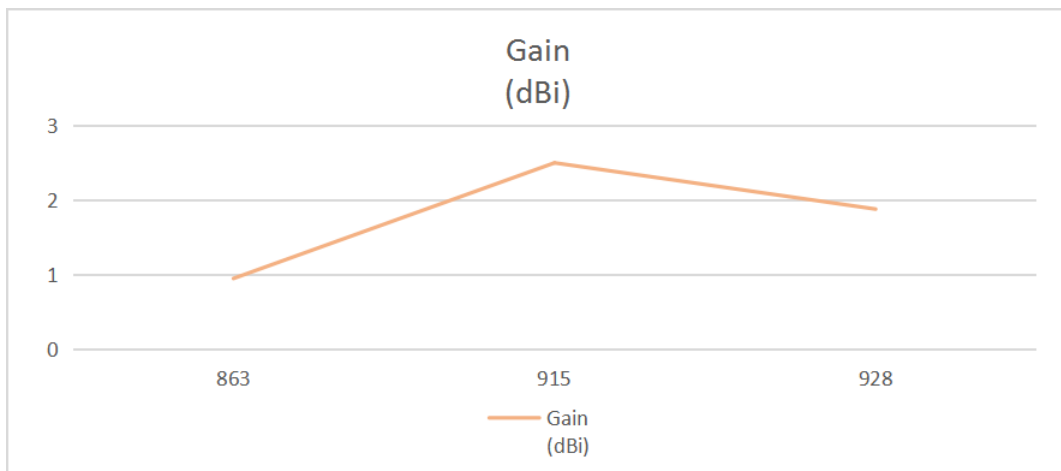
Frequency (MHz)	863	915	928
VSWR	1.45	1.28	1.53

### 4.3. Efficiency



<b>Frequency (MHz)</b>	863	915	928
<b>Efficiency (%)</b>	73.66	80.7	78.41

### 4.4. Gain

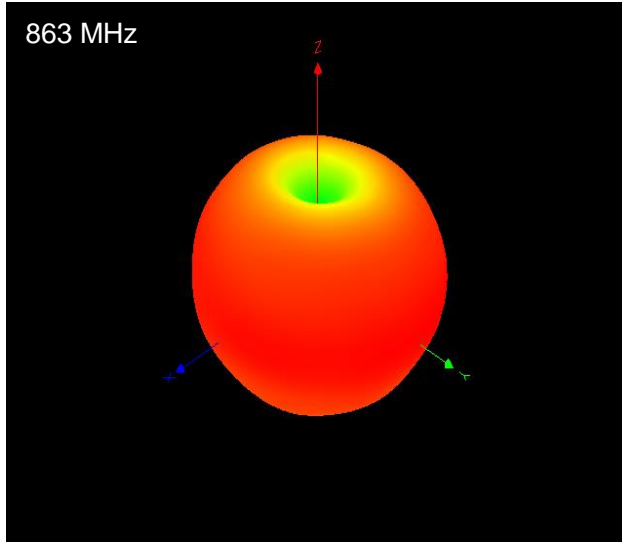


<b>Frequency (MHz)</b>	863	915	928
<b>Gain (dBi)</b>	0.95	2.5	1.88

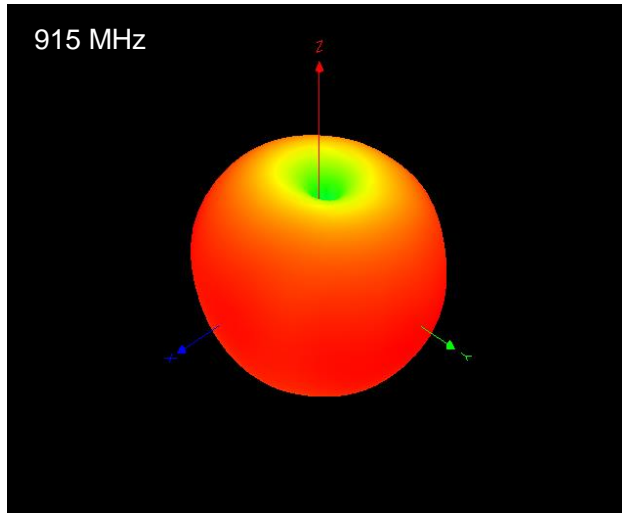
## 4.5. Radiation Pattern

- Test condition: free space.

863 MHz



915 MHz



928 MHz

