

# Antenna

# YEIN002AA Datasheet

## Antenna Services

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# About the Document

## Revision History

Version	Date	Author	Note
-	2021-12-20	Kenny YIN/ Jan GAO	Creation of the document
1.0	2022-01-14	Kenny YIN/ Jan GAO	First official release
1.1.	2024-02-22	Aria CHU	<ol style="list-style-type: none"><li>1. Updated the gain value, deleted the table about “Storage” and added the storage temperature (Chapter 3).</li><li>2. Updated the coordinate axis (Chapter 4.5).</li></ol>

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## 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

#### Mechanical Specifications

Antenna Size	$\varnothing 13$ mm $\times$ 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

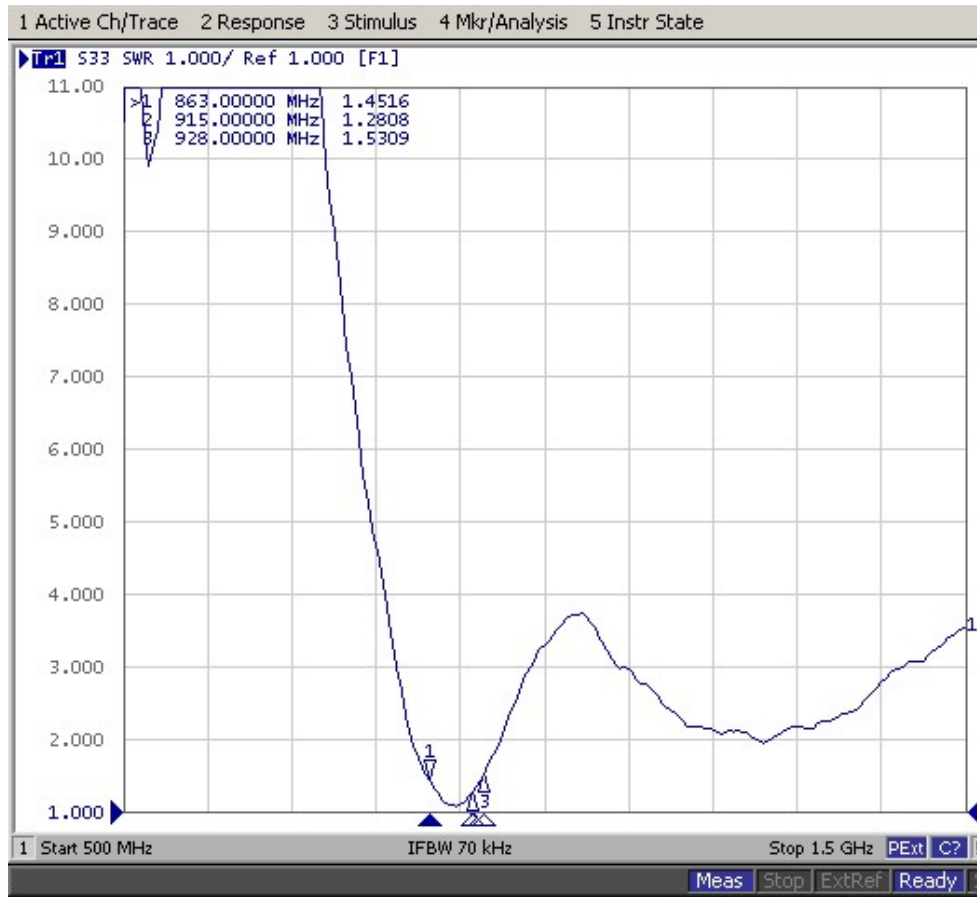
### 4.1. Test Environment

- KEYSIGHT ENA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz



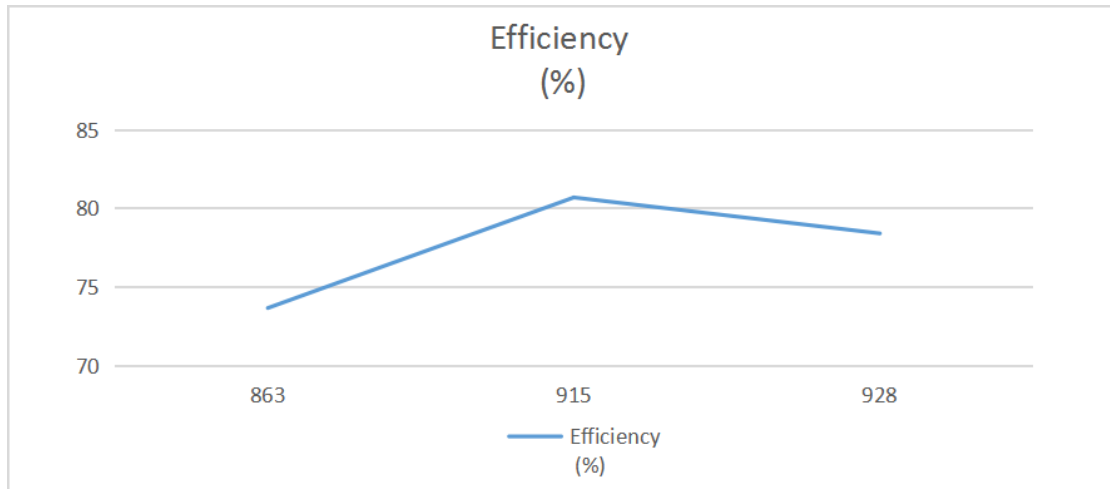


## 4.2. VSWR



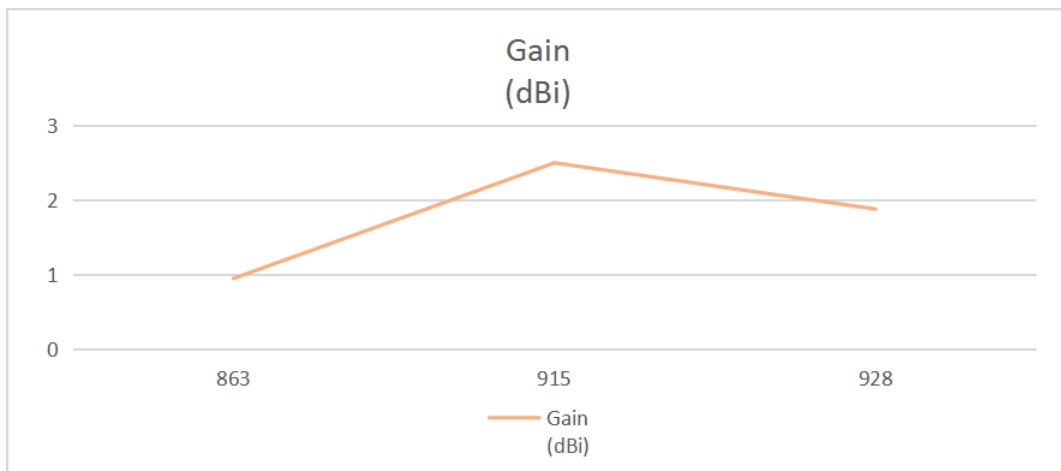
Frequency (MHz)	863	915	928
VSWR	1.45	1.28	1.53

### 4.3. Efficiency



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

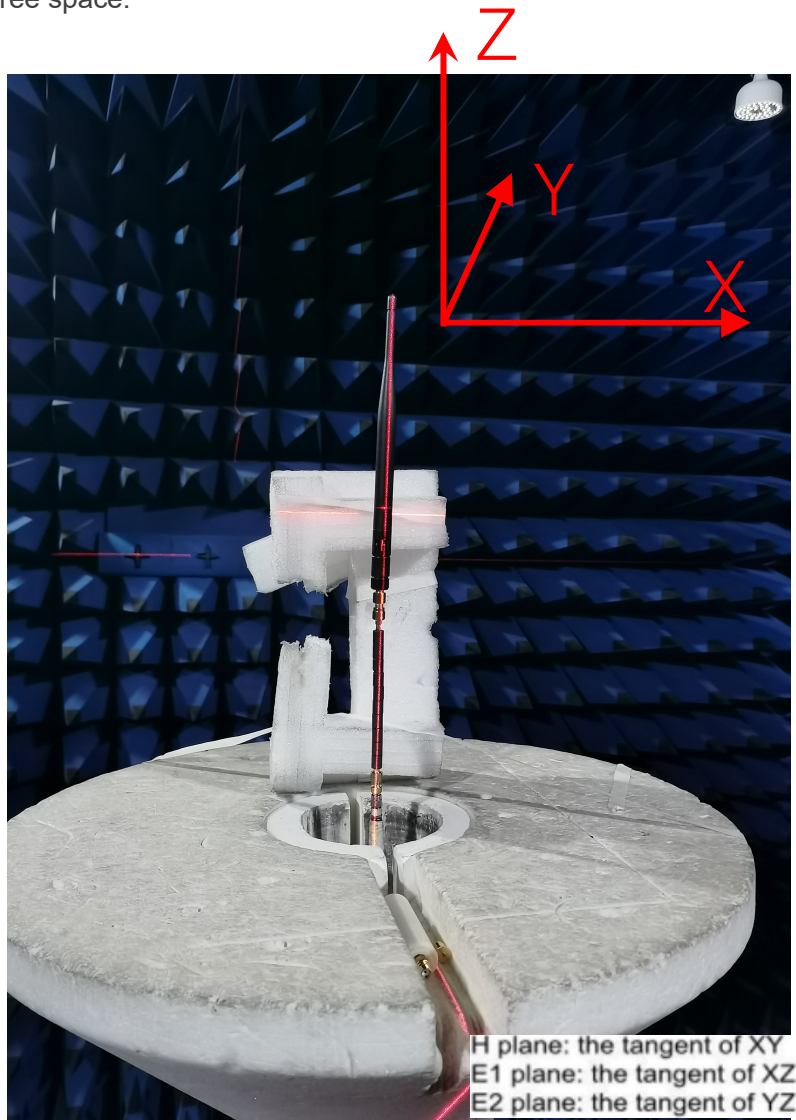
### 4.4. Gain



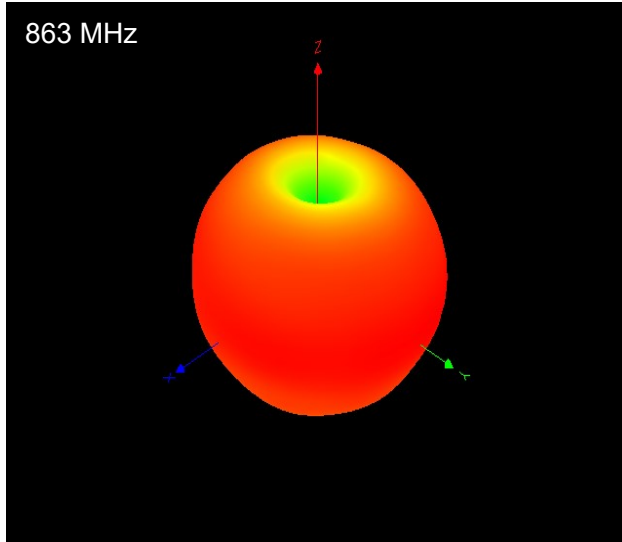
<b>Frequency (MHz)</b>	863	915	928
<b>Gain (dBi)</b>	0.95	2.5	1.88

## 4.5. Radiation Pattern

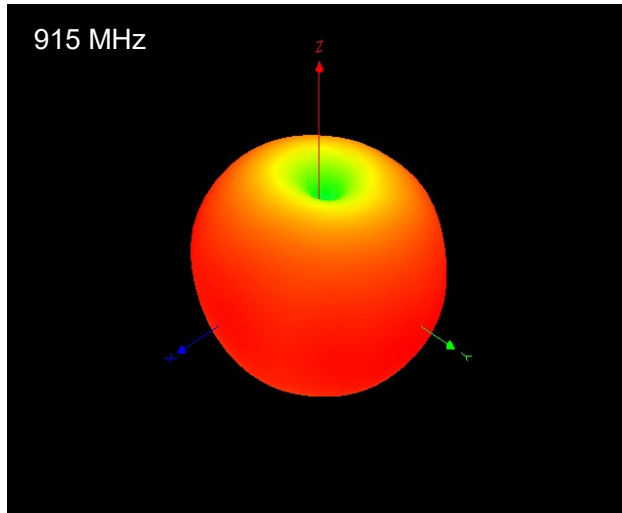
- Test condition: free space.



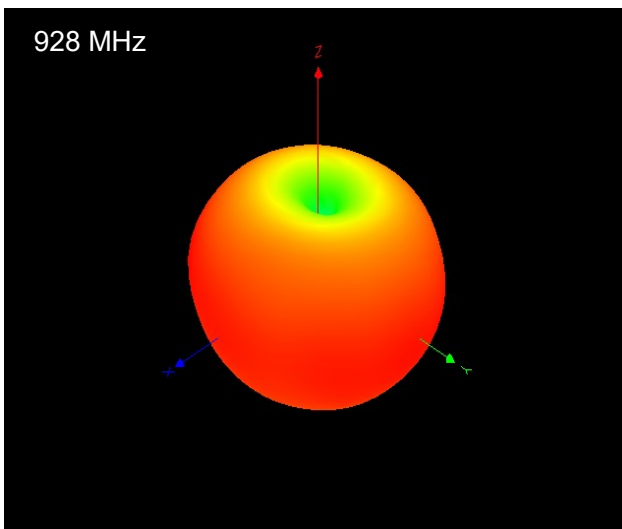
863 MHz

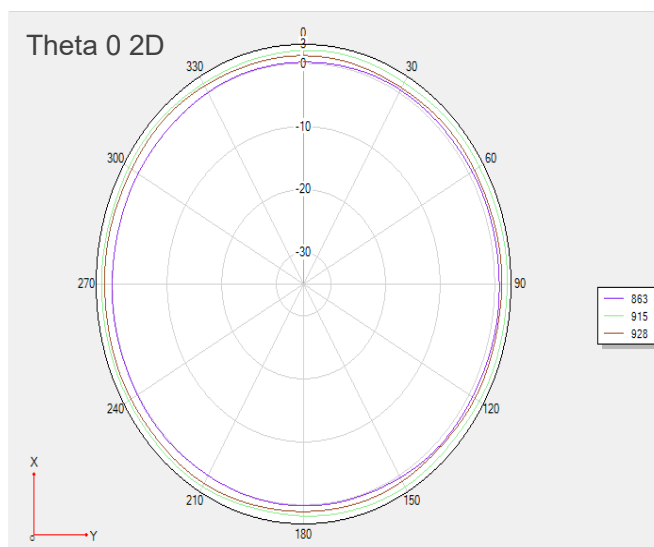


915 MHz



928 MHz





## 5 Product Size

RoHS

