

# Antenna

# YEIN002AA Datasheet

**Antenna Services**

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Status: Preliminary



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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	2021-12-20	Kenny YIN /Jan GAO	First official release

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## 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
<b>5 Product Size .....</b>	<b>13</b>

## 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 863-928MHz
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	863-928 MHz
Input Impedance	50 $\Omega$
VSWR	$\leq 2.0$
Gain	$\leq 3$ dBi
Polarization Type	Linear

#### Mechanical Specifications

Antenna Size	$\varnothing 13\text{mm} \times 195\text{mm}$
Casing	TPEE
Connector Type	SMA Male (center pin)
Working Temperature	-20 °C to +65 °C
Radome Color	Black

## 4 Overall Performance

### 4.1. Test Environment

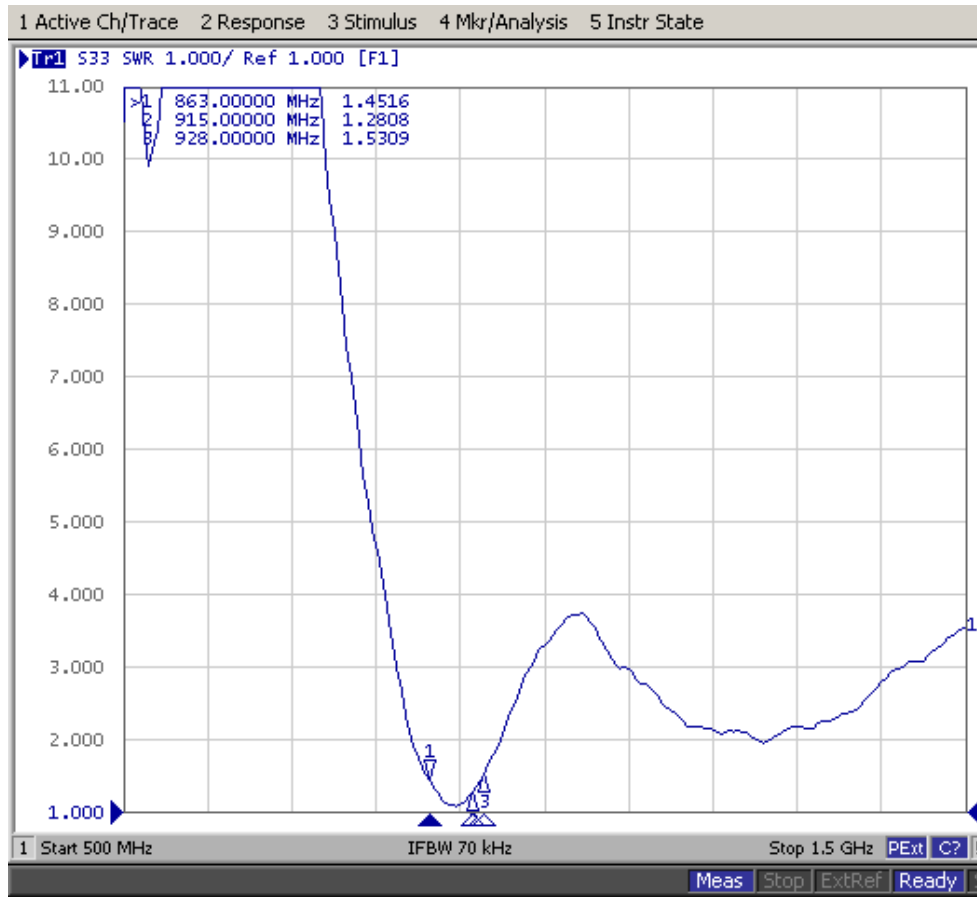
- KEYSIGHT VNA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz



Other description:

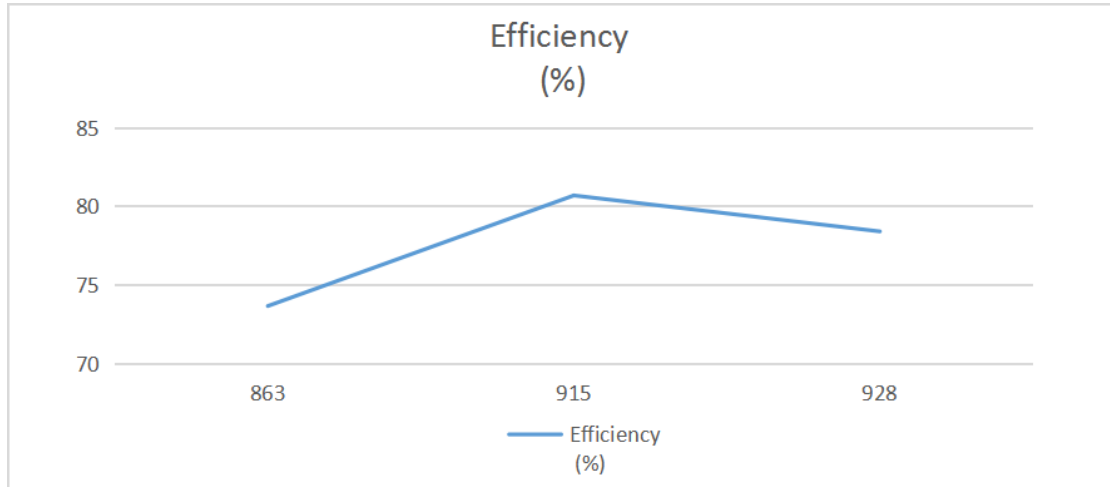


## 4.2. VSWR



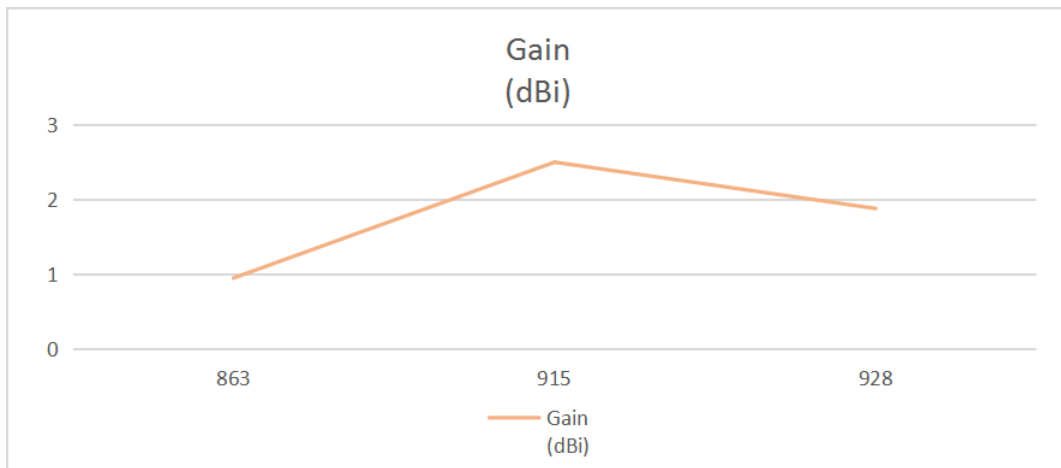
Frequency (MHz)	863	915	928
VSWR	1.45	1.28	1.53

### 4.3. Efficiency



Frequency (MHz)	863	915	928
Efficiency (%)	73.66	80.7	78.41

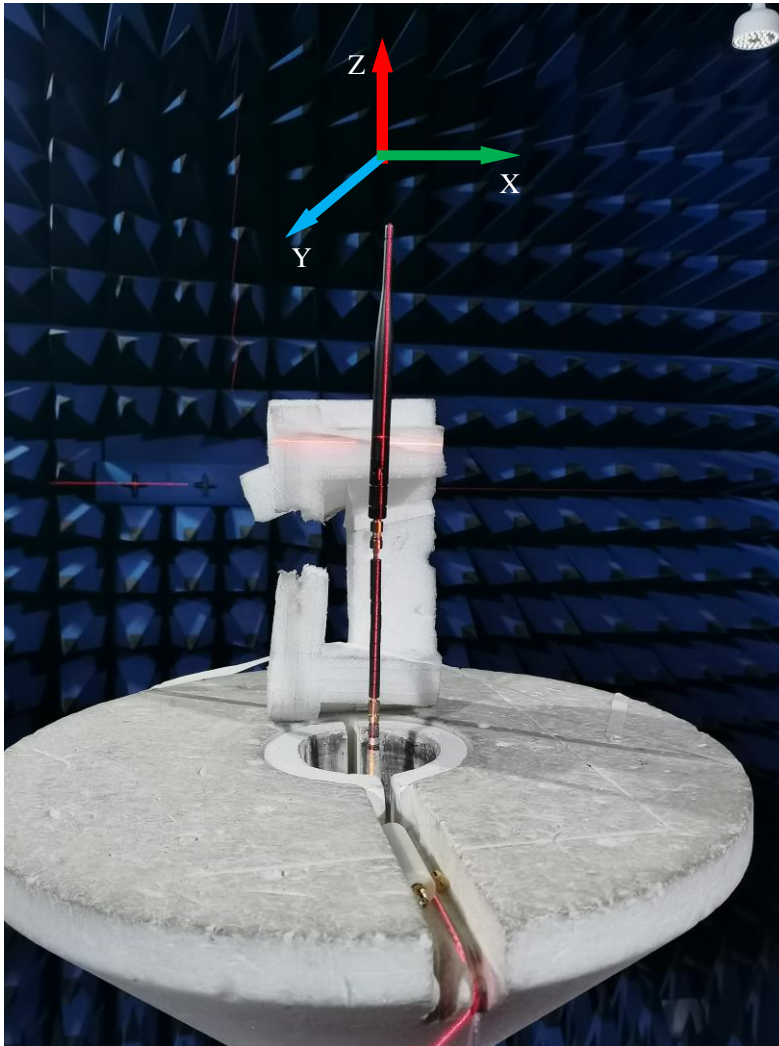
### 4.4. Gain



Frequency (MHz)	863	915	928
Gain (dBi)	0.95	2.5	1.88

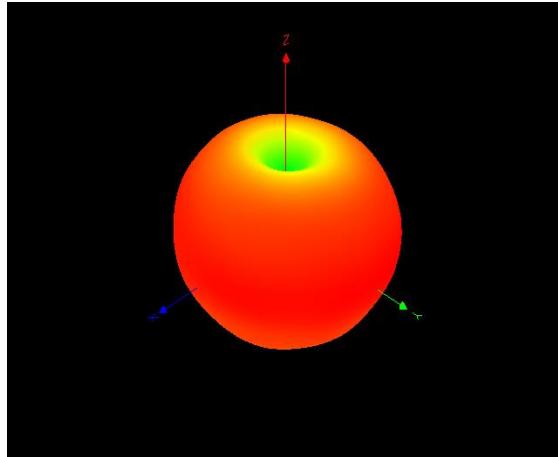
## 4.5. Radiation Pattern

- Test condition: free space

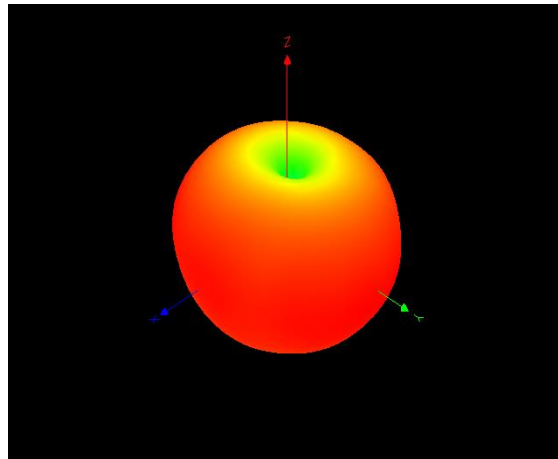


H plane: the tangent of XY  
 E1 plane: the tangent of XZ  
 E2 plane: the tangent of YZ

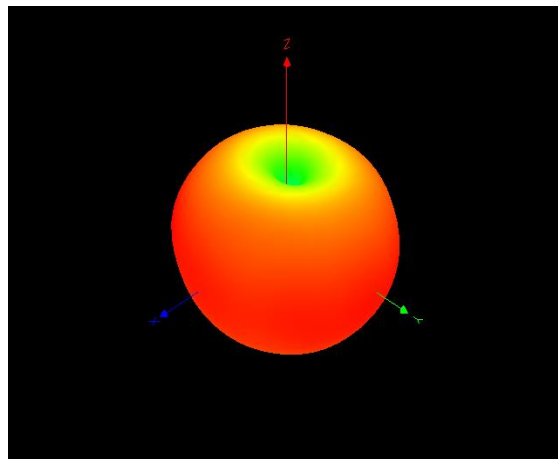
863MHz



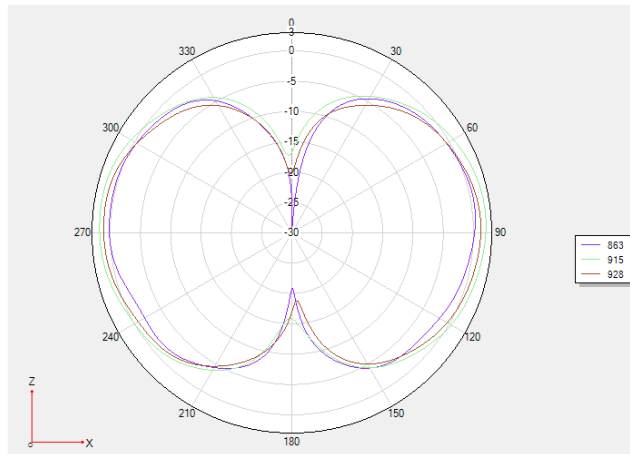
915MHz



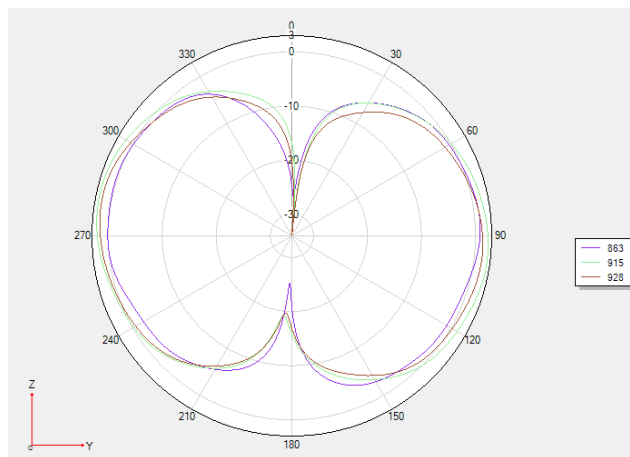
928MHz



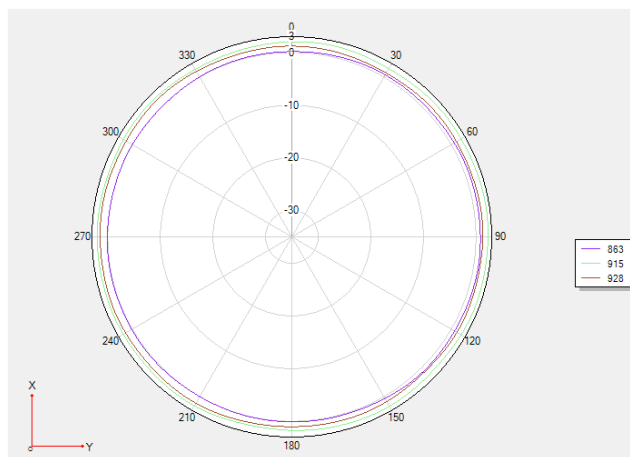
Phi 0 2D



Phi 90 2D



Theta 90 2D



## 5 Product Size

ROHS

