

# Antenna

# YECT003AA Datasheet

**Antenna Services**

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# About the Document

## Revision History

Version	Date	Author	Note
-	2021-06-02	Kenny YIN/ Aria CHU	Creation of the document
1.0	2021-06-02	Kenny YIN/ Aria CHU	First official release
1.1	2021-07-25	Kenny YIN/ Aria CHU	1. Updated working temperature (Chapter 3). 2. Added detailed passive electrical specifications (Chapter 3).
1.2	2021-11-27	Kenny YIN/ Aria CHU	Updated the product description in Chapter 1.
1.3	2022-10-17	Aria CHU	Deleted the IP rating.

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## 1 Product Description

This Quectel external 4G antenna covers main 4G LTE bands and is compatible with 3G/2G/LPWA bands as well. The external antenna is barely influenced by the internal environment of devices, giving a much better performance in efficiency, radiation and gain whilst providing an optimized solution for a customer product. Quectel also offers flexible installation with custom cable length and connector options.

We provide comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs.

## 2 Product Features

- Cellular 4G
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	690–2690 MHz
Input Impedence	50 Ω
VSWR	≤ 4.0
Gain	≤ 2.5 dBi
Polarization Type	Linear

#### Detailed Passive Electrical Specifications

Frequency Range (MHz)	698–960	1176–1280	1400–1610	1710–2170	2170–2690	3300–4000	4000–5000	5000–6000
VSWR (Max.)	3.69	-	-	2.81	1.61	-	-	-
Average Efficiency (%)	25	-	-	51	40	-	-	-
Max. Peak Gain (dBi)	-1.61	-	-	0.21	2.5	-	-	-

#### Mechanical Specifications

Antenna Size	113 mm x Φ 10 mm
Casing	TPEE
Connector Type	SMA Male (Center Pin)
Working Temperature	-40 °C to +85°C
Radome Color	Black

## 4 Overall Performance

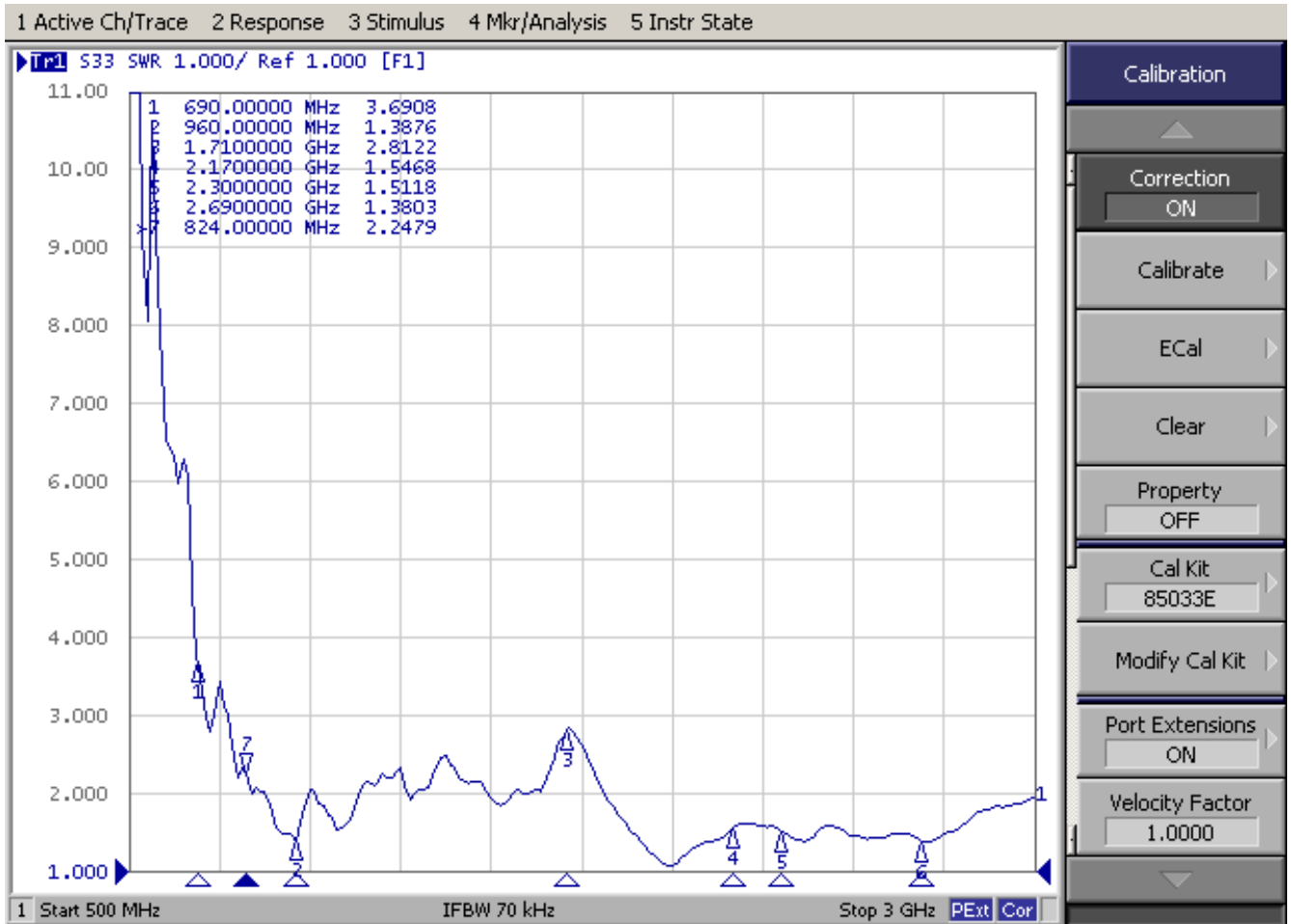
### 4.1. Test Environment

- KEYSIGHT VNA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone®2800 Chamber 5G (FR1) SISO/MIMO, 400 MHz – 8.0 GHz



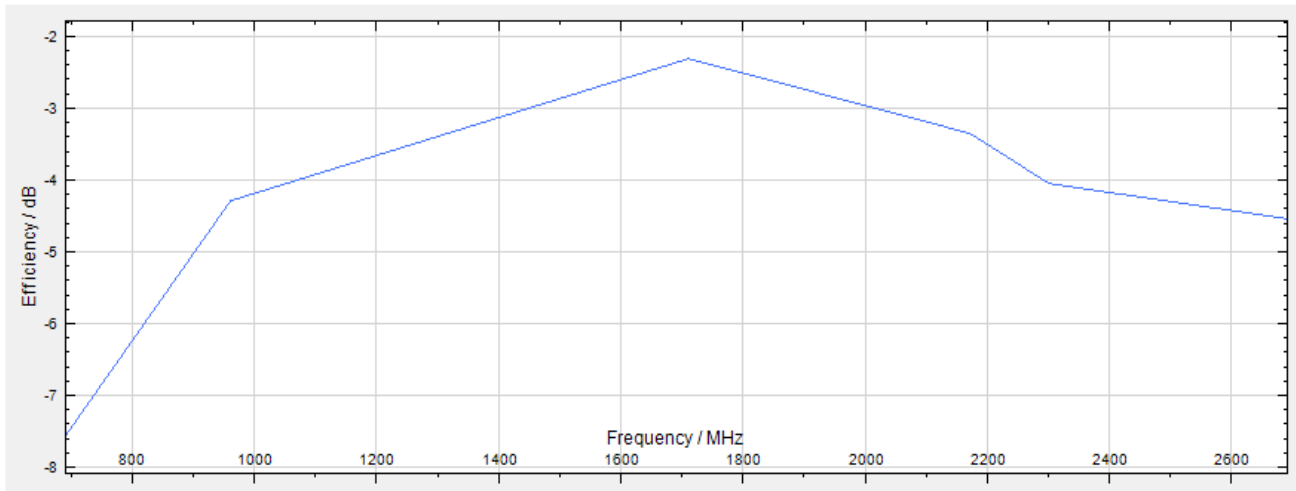


## 4.2. VSWR



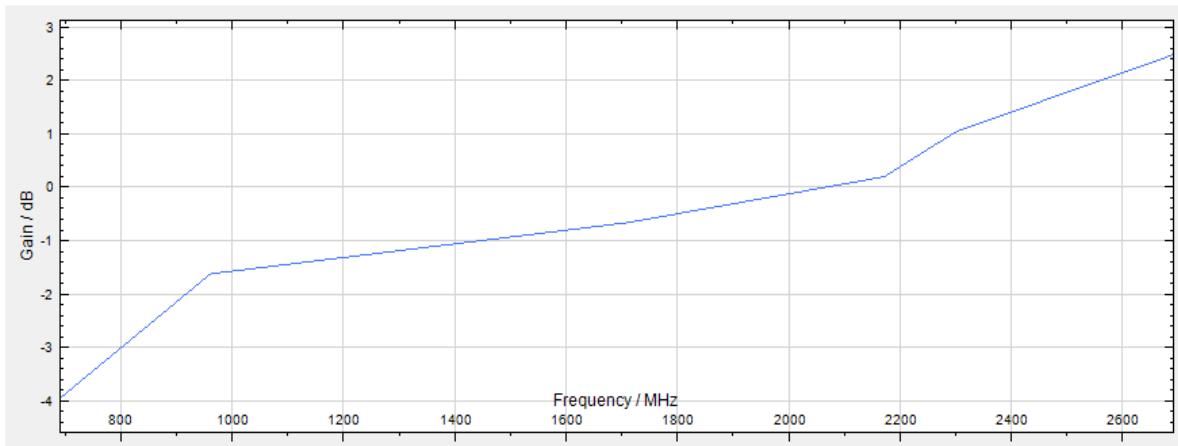
Frequency (MHz)	690	960	1710	2170	2300	2690
VSWR	3.69	1.38	2.81	1.54	1.51	1.38

### 4.3. Efficiency



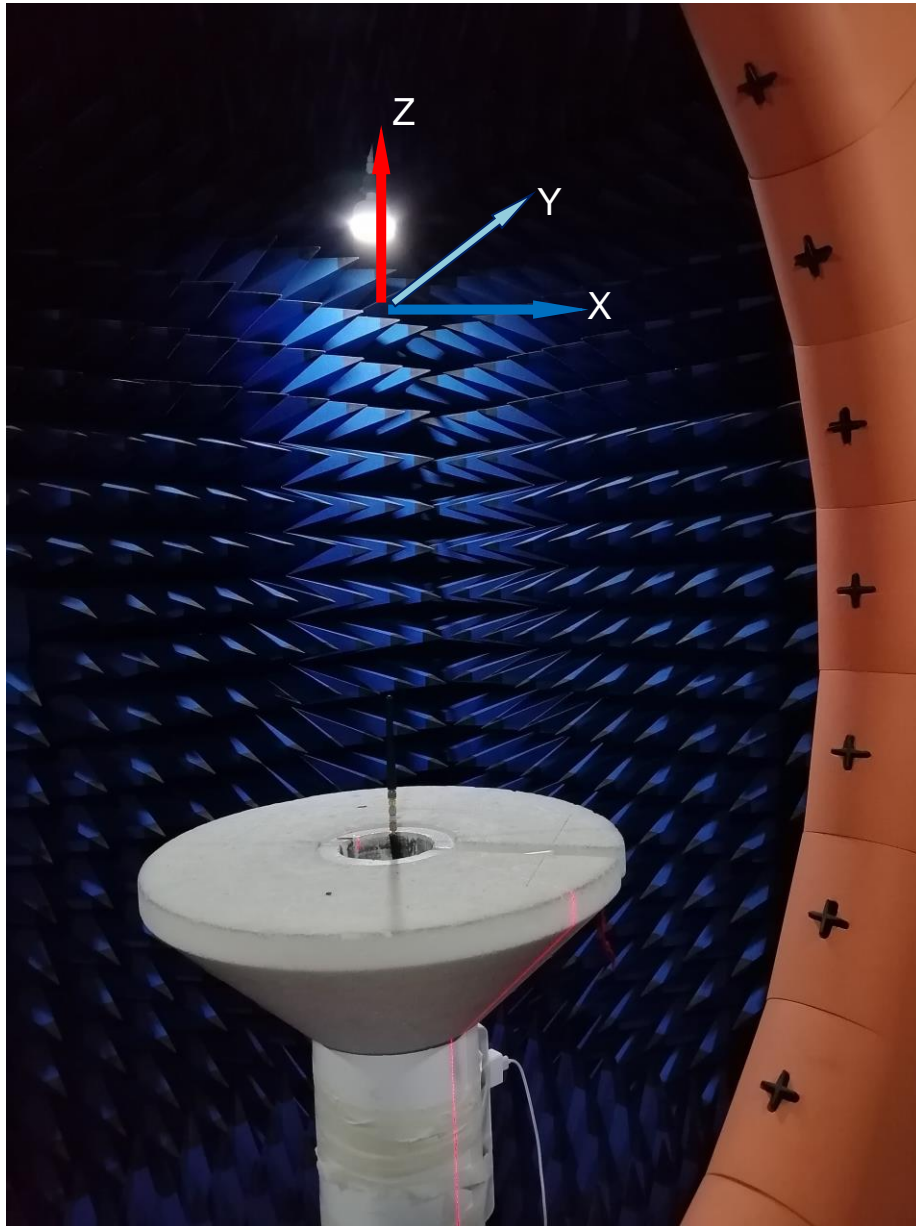
<b>Frequency (MHz)</b>	690	960	1710	2170	2300	2690
<b>Efficiency (%)</b>	17.58	37.33	58.88	46.34	39.45	35.24

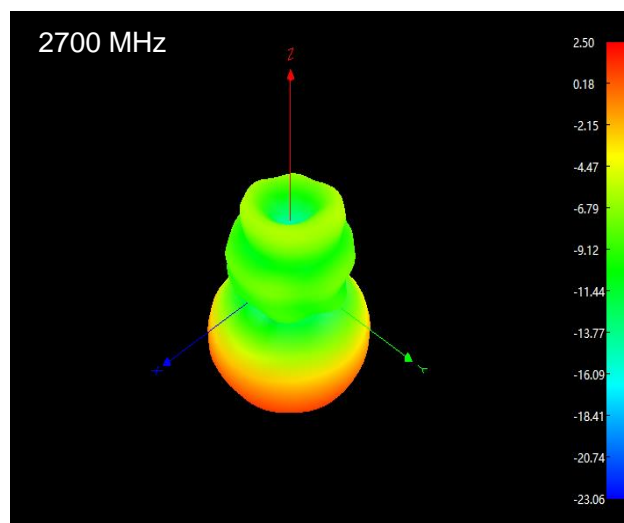
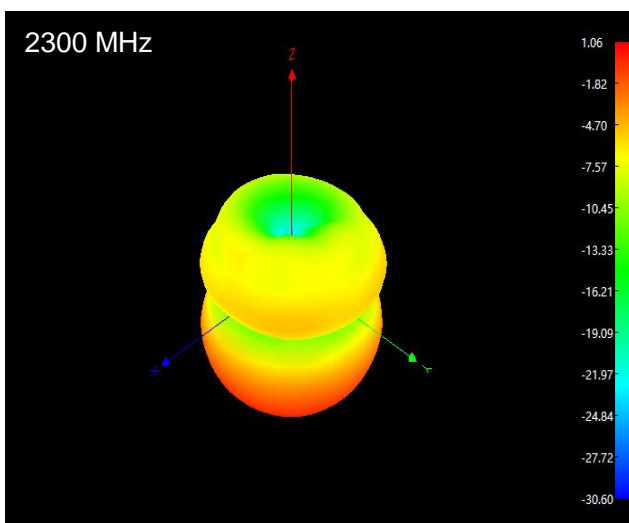
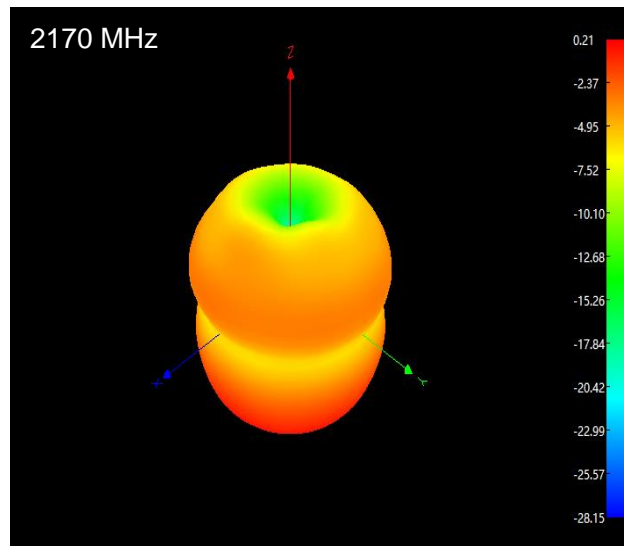
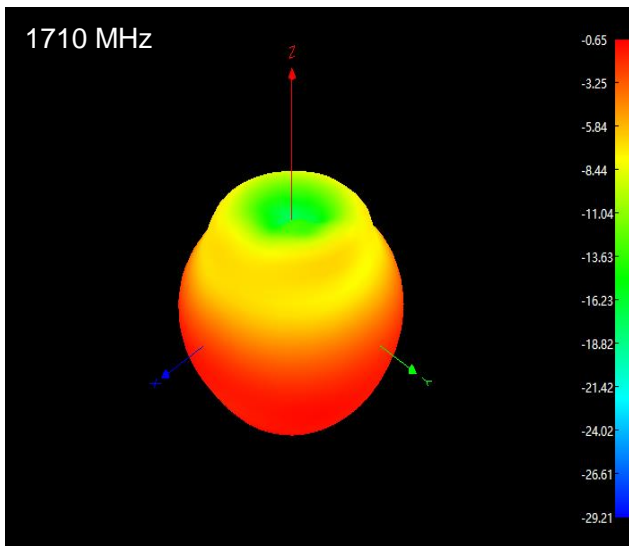
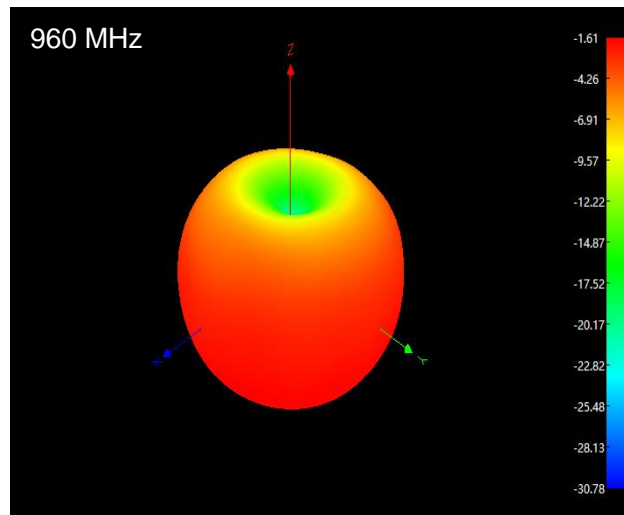
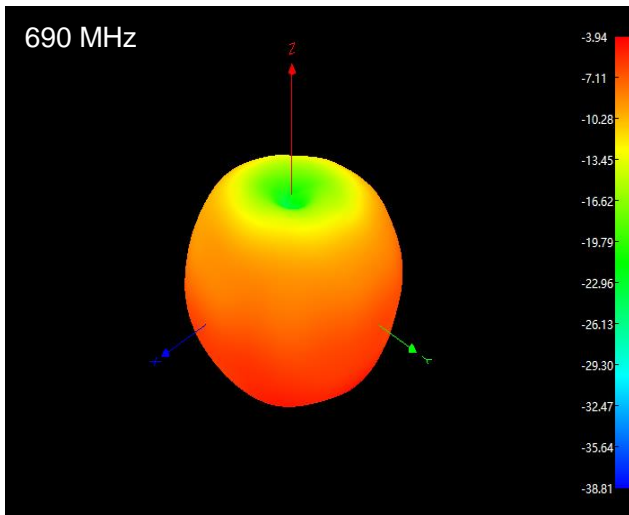
### 4.4. Gain

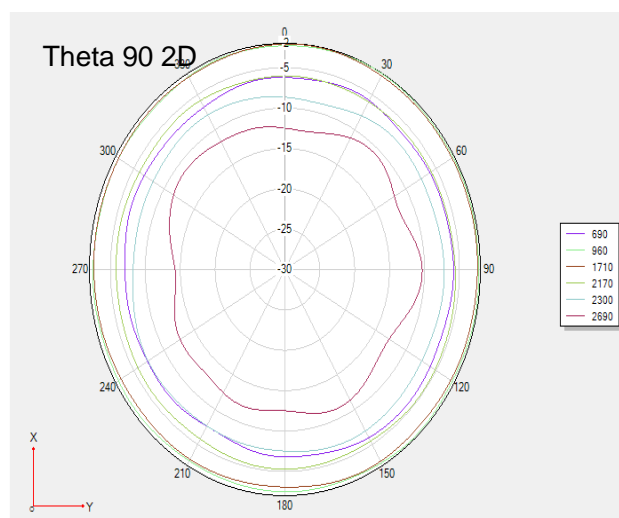
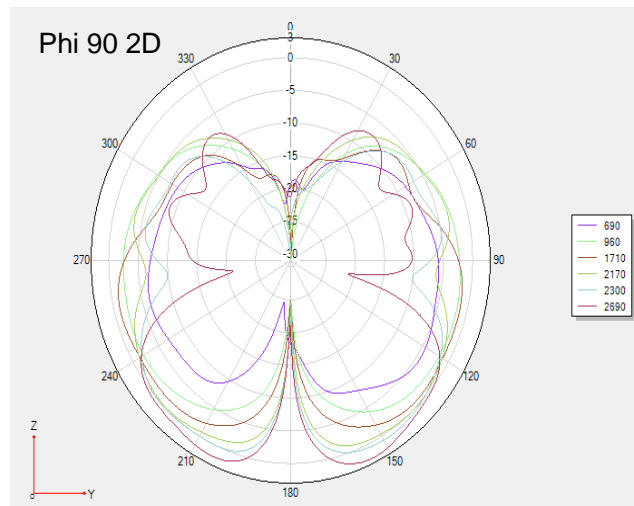
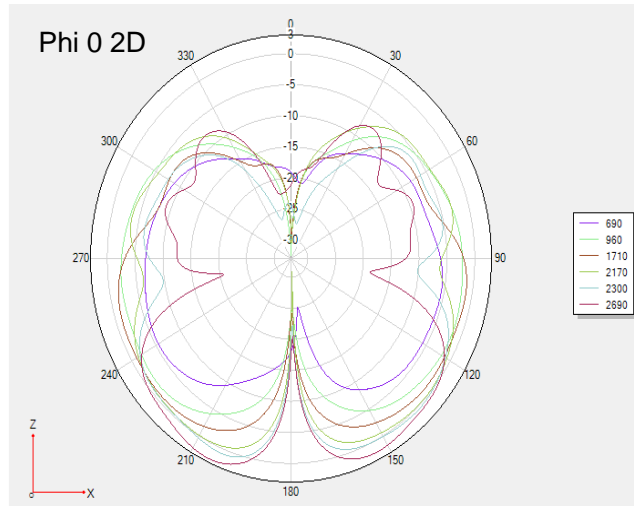


<b>Frequency (MHz)</b>	690	960	1710	2170	2300	2690
<b>Gain (dBi)</b>	-3.94	-1.61	-0.65	0.21	1.06	2.5

### 4.5. Radiation Pattern







## 5 Product Size

RoHS

