

# Antenna

# YPCA004AA Datasheet

**Antenna Services**

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**Quectel Wireless Solutions Co., Ltd.**

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

Tel: +86 21 5108 6236

Email: [info@quectel.com](mailto:info@quectel.com)

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

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# About the Document

## Revision History

Version	Date	Author	Note
-	2021-07-05	Jason LONG/ Aria CHU	Creation of the document
1.0	2021-07-05	Jason LONG/ Aria CHU	First official release
1.1	2021-11-27	Jason LONG/ Aria CHU	Updated the product description in Chapter 1.

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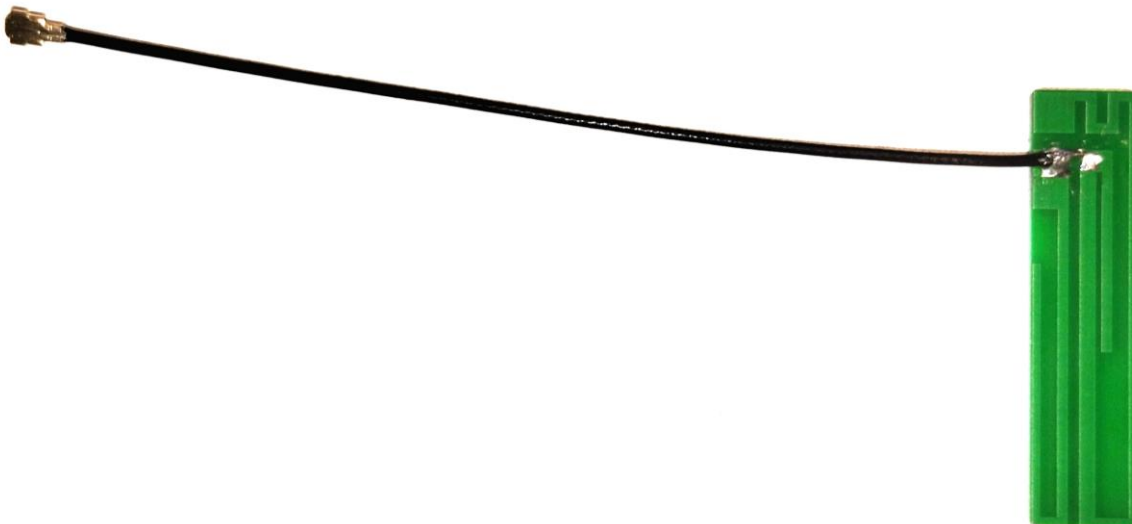
## 1 Product Description

This Quectel embedded 4G FPC antenna covers main 4G LTE bands and is compatible with 3G/2G/LPWA bands. Featuring high efficiency and gain, it is an ideal antenna for a smooth and stable connection with high-efficiency data transmission even under the influence of the device's internal structure. Ground plane independent, it's designed to be mounted directly to the underside of either a plastic or non-metallic enclosure. Ease of integration with a cable and connector which can be customized to meet your product design and RF module.

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 LTE
- Small and exquisite
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	700–960 MHz, 1710–2690 MHz
Input Impedance	50 $\Omega$
VSWR	$\leq 5.48$
Gain	$\leq -2.10$ dBi
Polarization Type	Linear

#### Mechanical Specifications

Antenna Size	40 mm $\times$ 10 mm $\times$ 1 mm
Casing	PCB
Connector Type	IPEX I
Working Temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Radome Color	Green
Mounting Type	Adhesive

## 4 Overall Performance

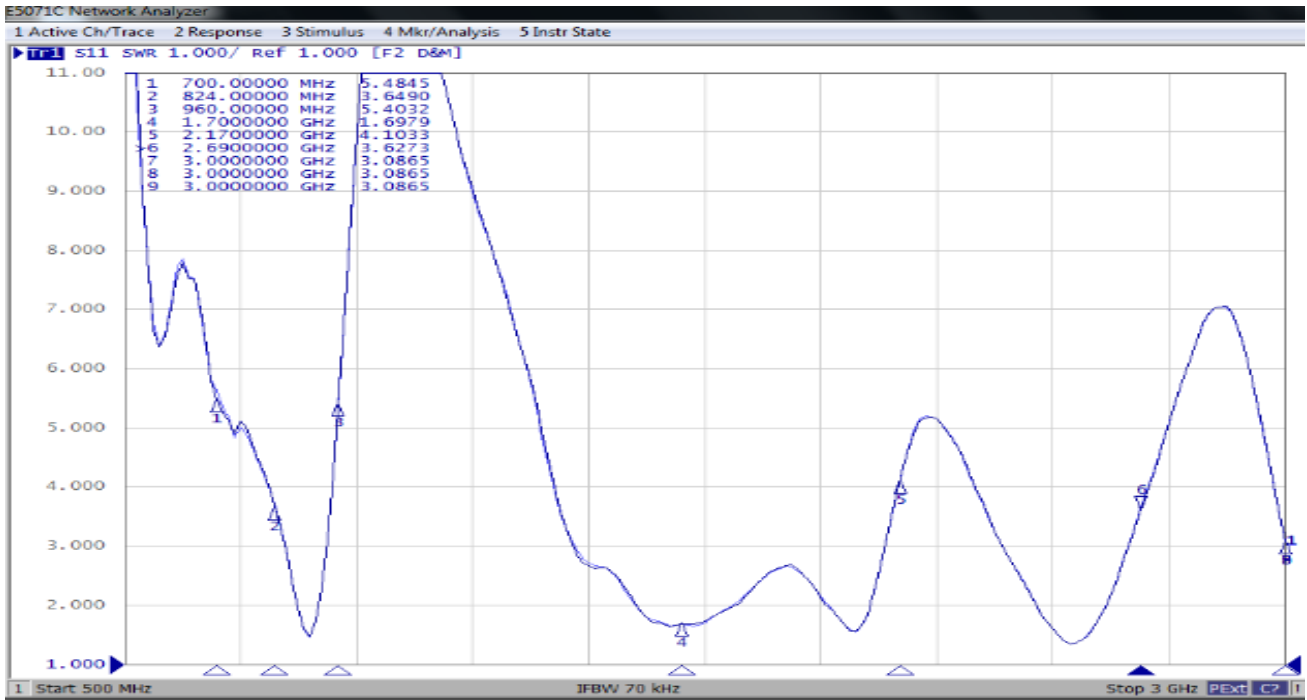
### 4.1. Test Environment

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



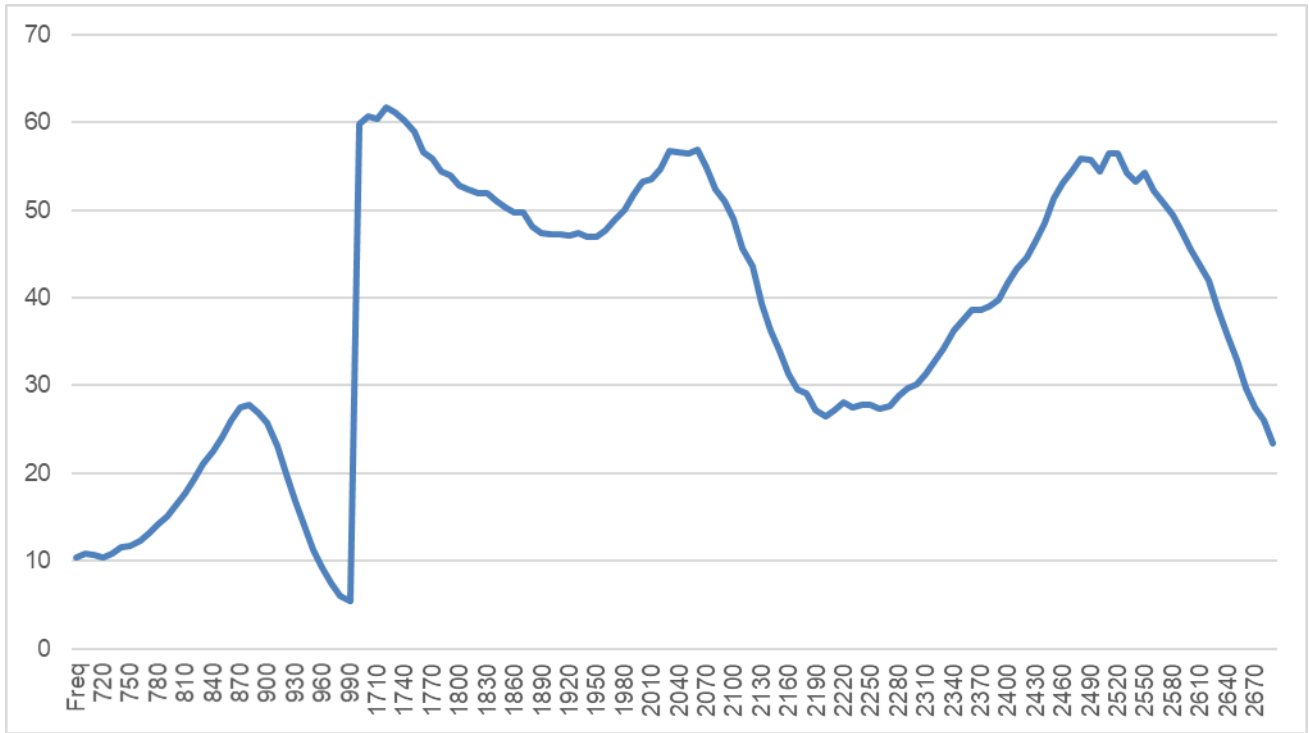


## 4.2. VSWR



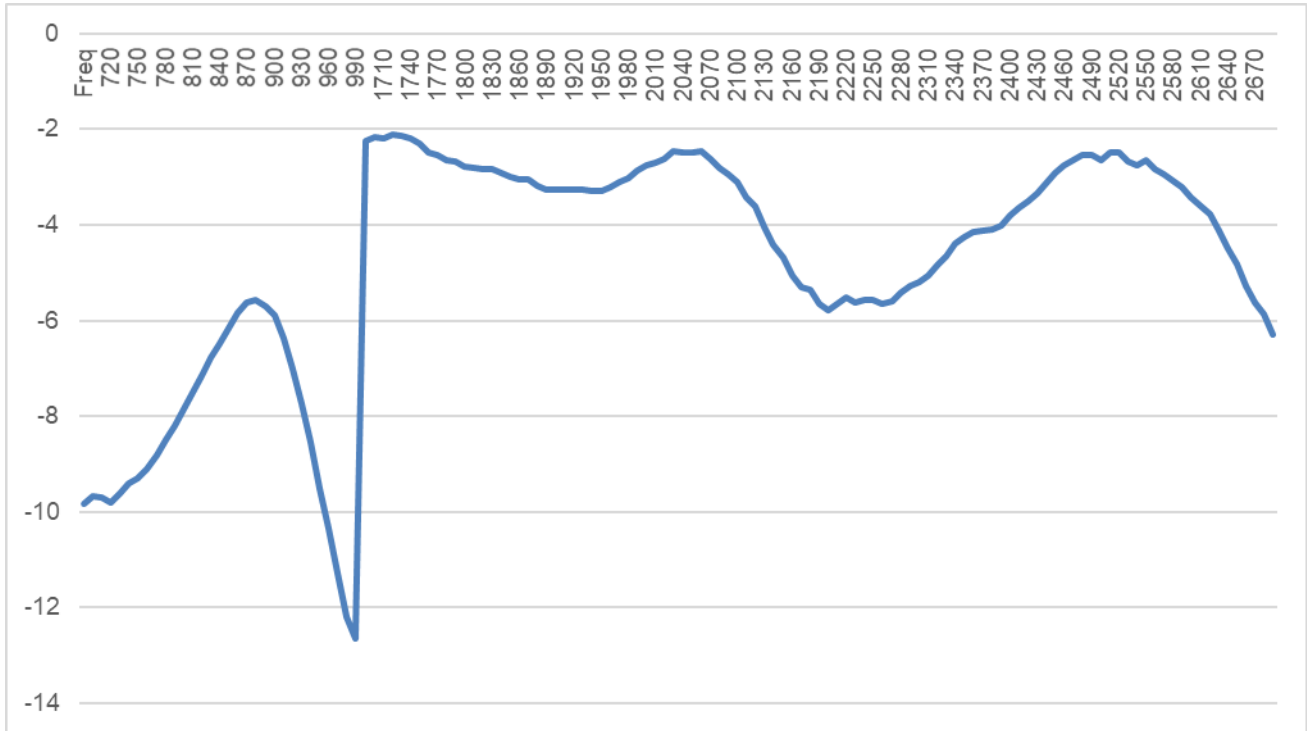
Frequency (MHz)	700	824	960	1700	2170	2690
VSWR	5.48	1.64	5.40	1.69	4.10	1.62

### 4.3. Efficiency



<b>Frequency (MHz)</b>	700	820	960	1700	2170	2690
<b>Efficiency (%)</b>	10.38	17.13	11.21	59.77	31.29	25.97

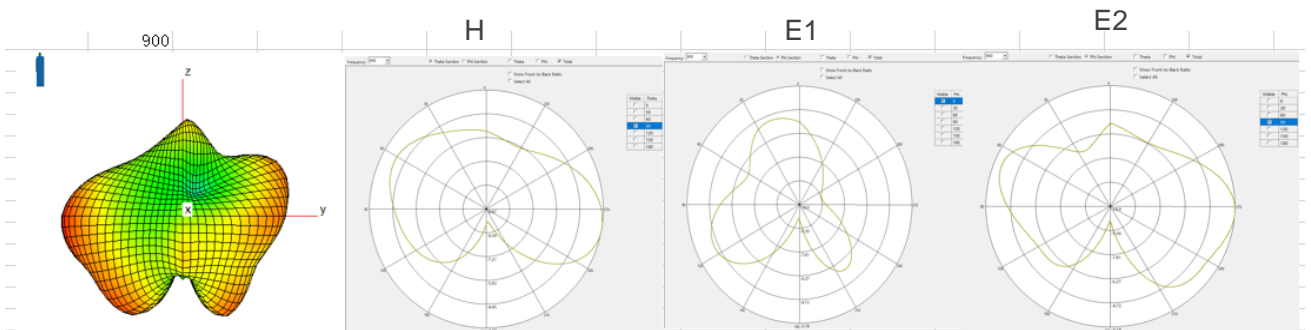
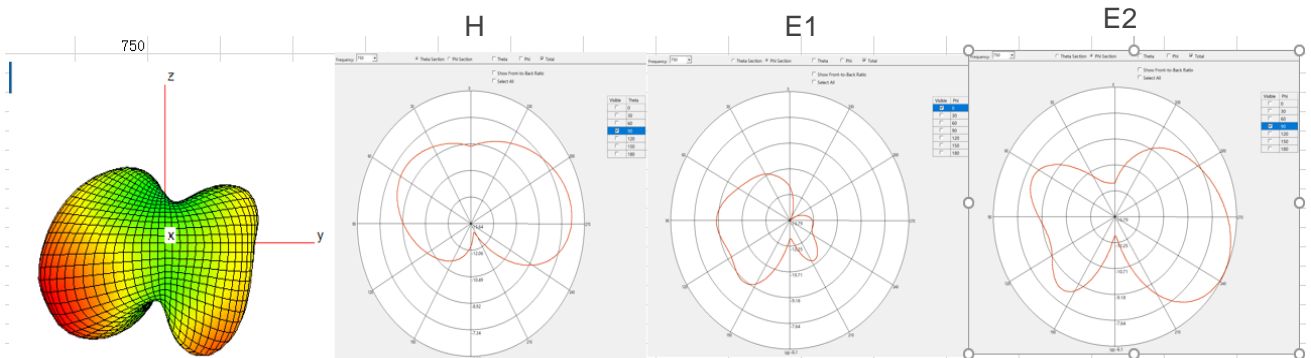
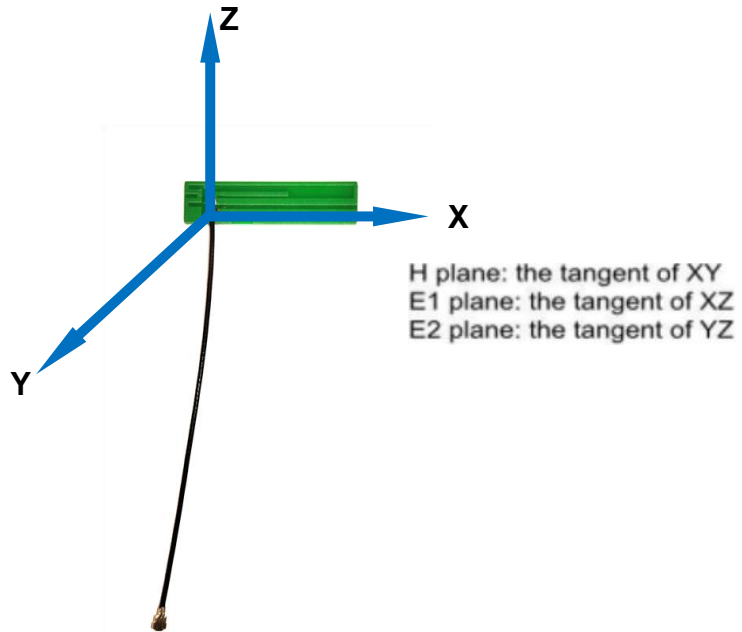
### 4.4. Gain

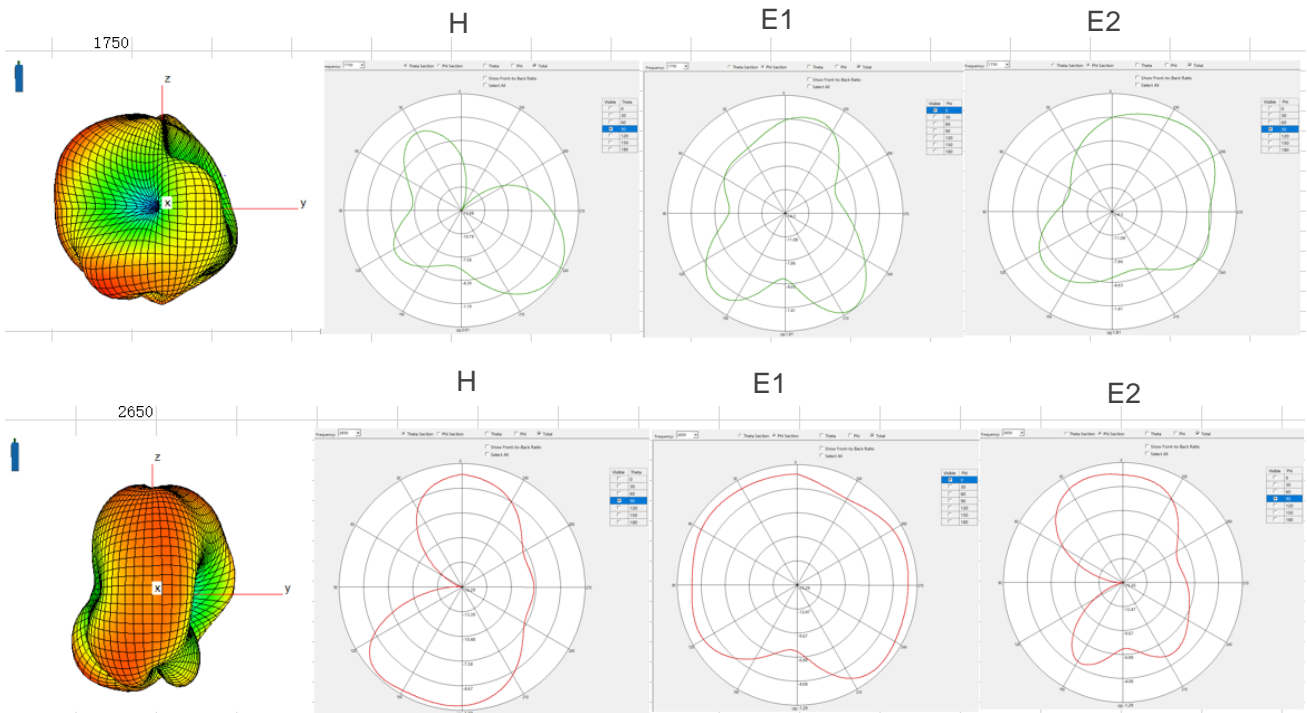


Frequency (MHz)	700	820	960	1700	2170	2690
Gain (dBi)	-9.84	-7.51	-9.50	-2.24	-5.05	-5.86

### 4.5. Radiation Pattern

- Test condition: free space status.





## 5 Product Size

