

# Antenna

# YE0013CA Datasheet

## Antenna Services

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# About the Document

## Revision History

Version	Date	Author	Note
-	2022-06-10	Toby WANG/ Riona HAN	Creation of the document
1.0	2022-06-10	Toby WANG/ Riona HAN	First official release

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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.

## 2 Product Features

- Cellular 4G
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	700-960/1710-2170;2300-2700MHz
Input Impedence	50 Ω
VSWR	≤ 4.0
Gain	≤ 3 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.)	2.68	-	-	1.70	2.62	-	-	-
Average Efficiency (%)	37.93	-	-	52	45	-	-	-
Max. Peak Gain (dBi)	-0.03	-	-	2.35	2.59	-	-	-

#### Mechanical Specifications

Antenna Size	Φ 10.2 mm × 115.4 mm
Casing	TPEE
Connector Type	SMA Male (center pin)
Working Temperature	-40 °C to +85 °C
Weight	Typ. 16.7 g
Radome Color	Black
Mounting Type	Screw
IP Rating	IP66

## 4 Overall Performance

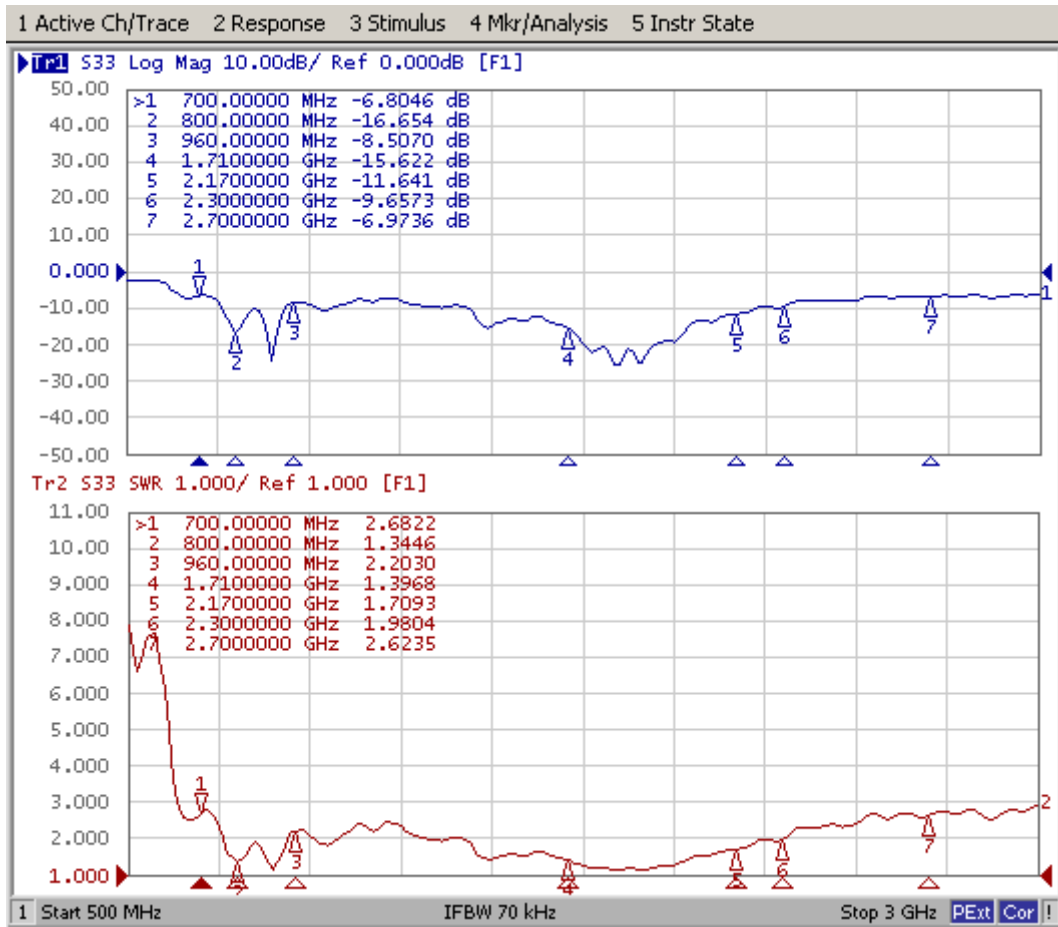
### 4.1. Test Environment

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



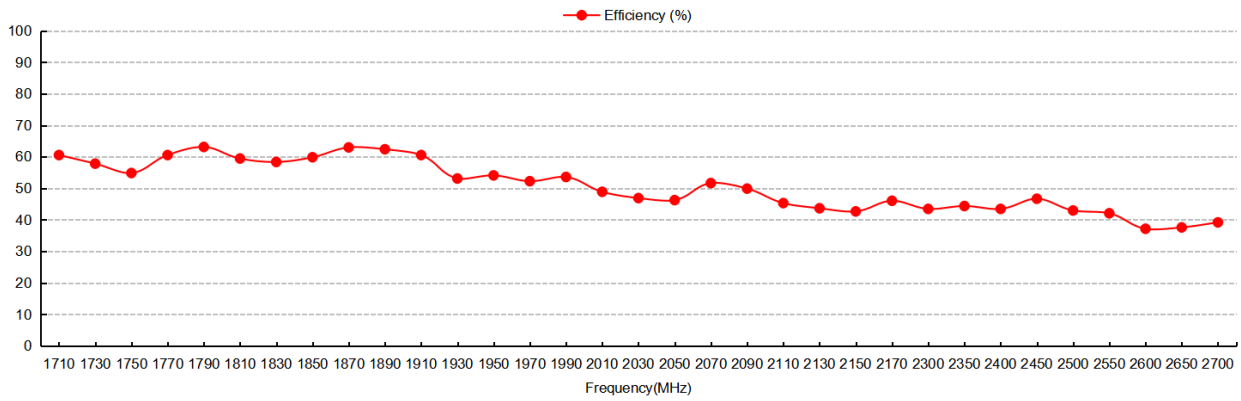
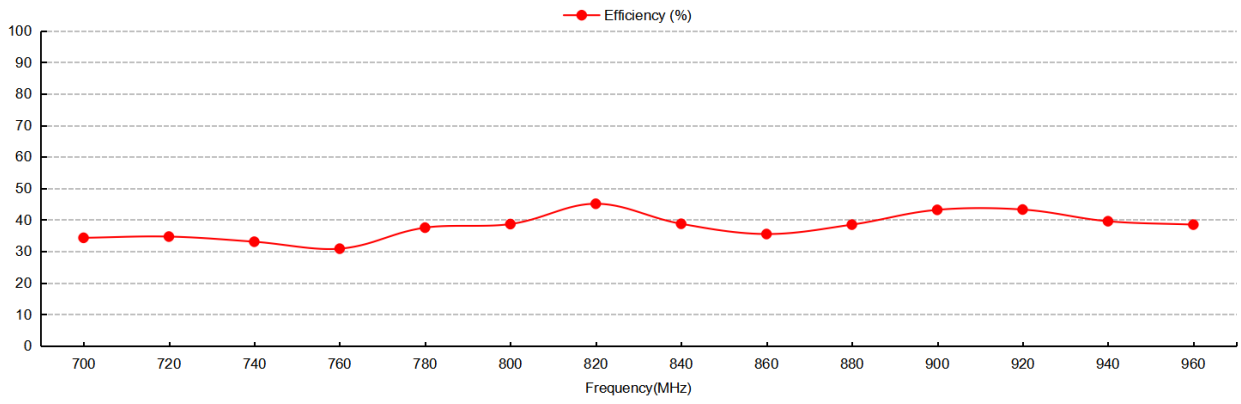


## 4.2. VSWR



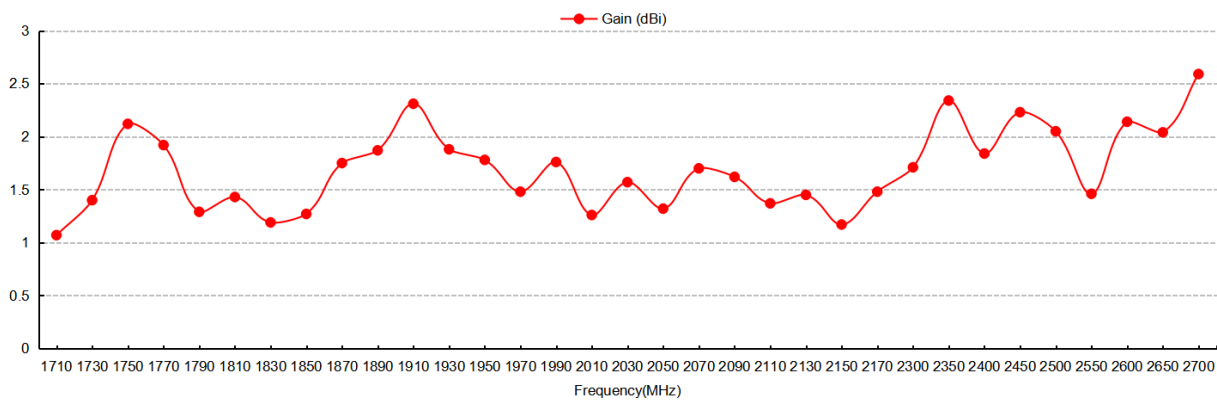
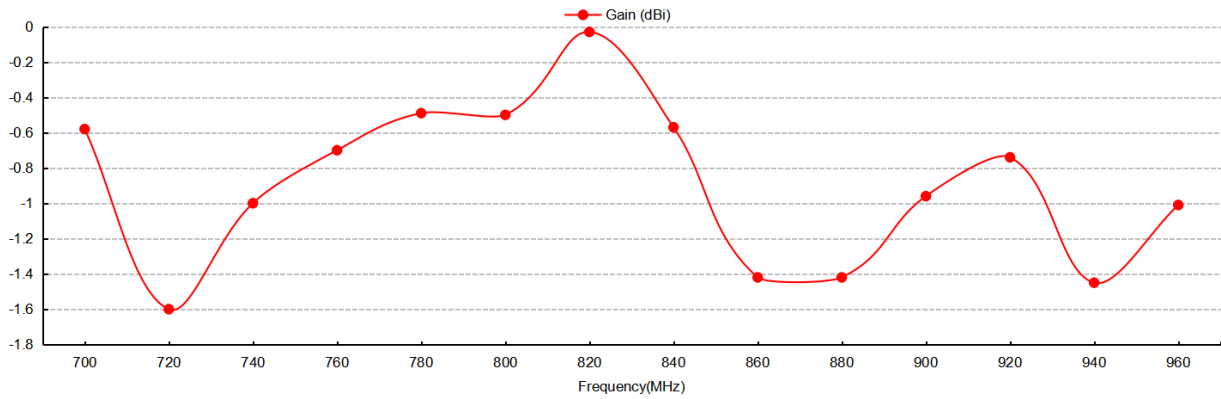
Frequency (MHz)	700	800	960	1710	2170	2300	2700
VSWR	2.68	1.34	2.20	1.39	1.70	1.98	2.62

### 4.3. Efficiency



<b>Frequency (MHz)</b>	700	800	960	1710	2170	2300	2700
<b>Efficiency (%)</b>	34.28	38.64	38.46	60.53	46.03	43.45	39.17

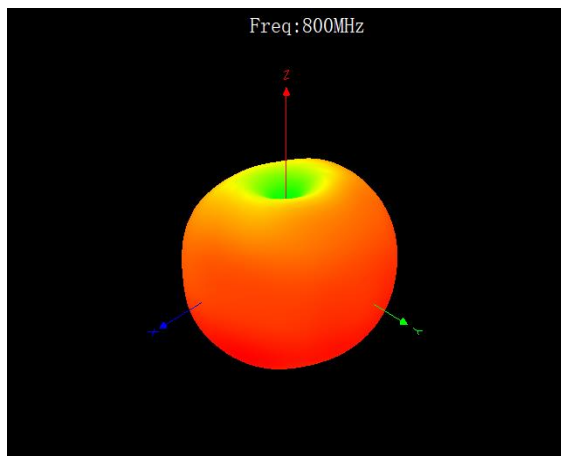
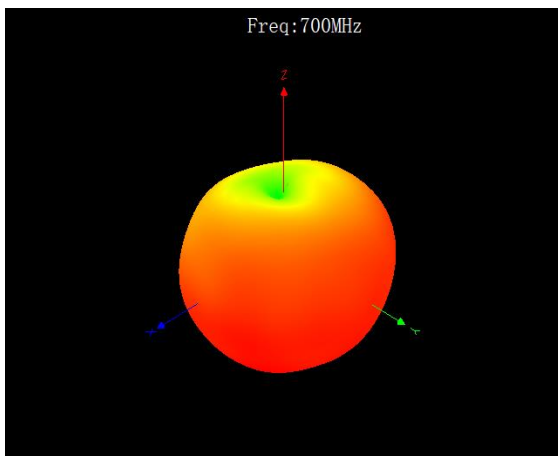
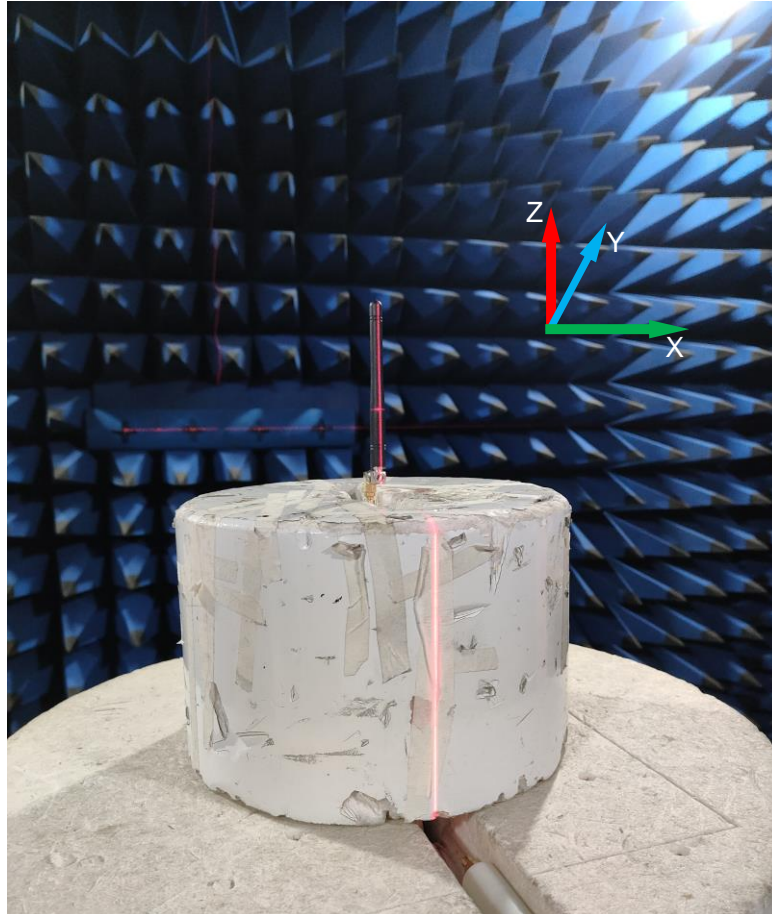
### 4.4. Gain

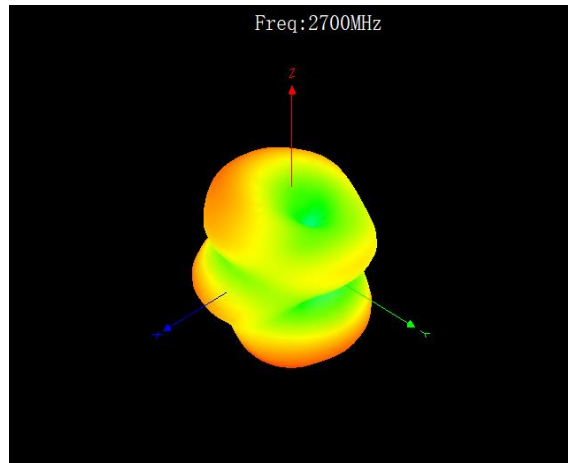
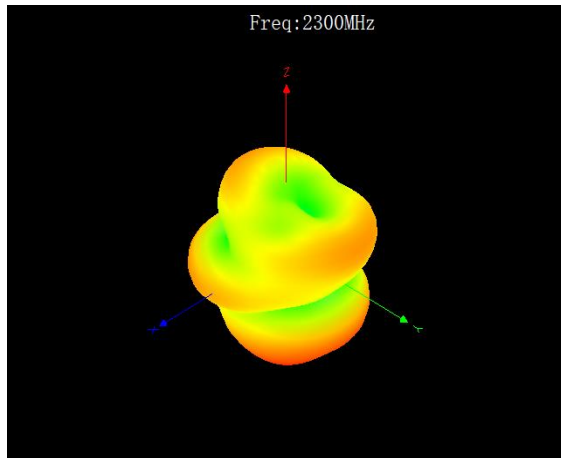
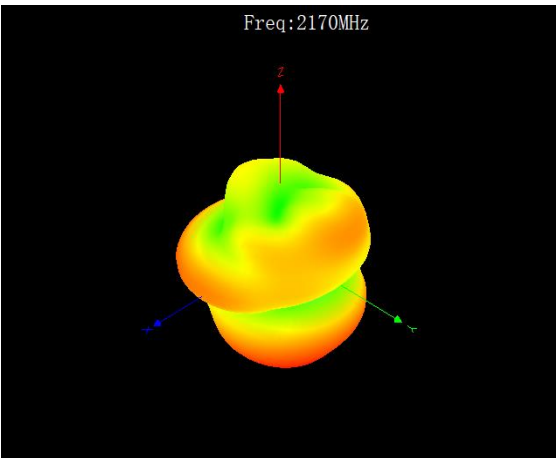
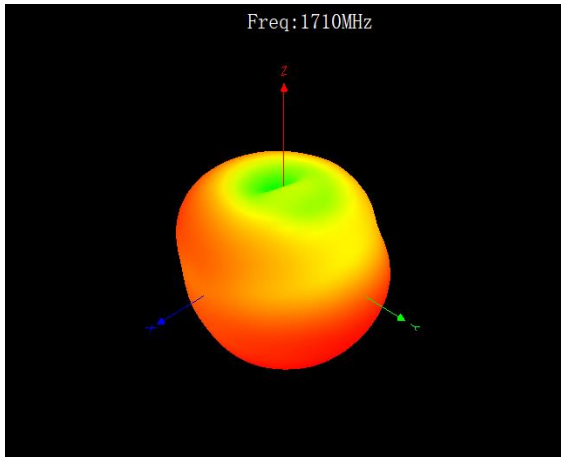
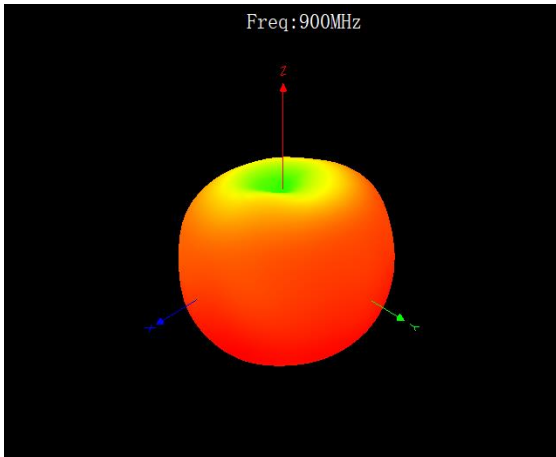


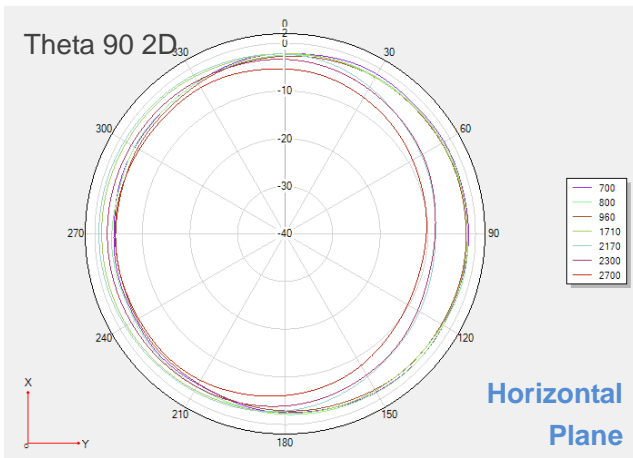
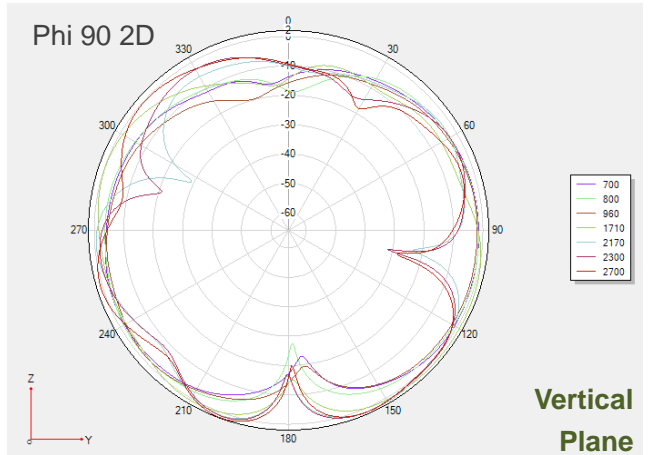
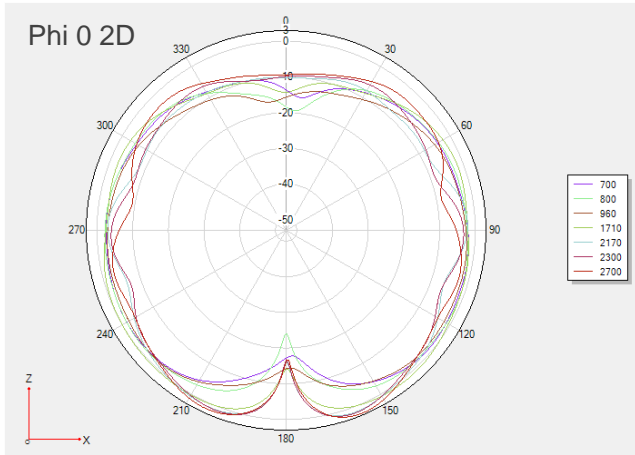
<b>Frequency (MHz)</b>	700	800	960	1710	2170	2300	2700
<b>Gain (dBi)</b>	-0.58	-0.5	-1.01	1.07	1.48	1.71	2.59

### 4.5. Radiation Pattern

- Test condition: free space.







## 5 Product Size

RoHS

