

# Antenna

# YECT007AA Datasheet

## Antenna Services

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Status: Released



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# About the Document

## Revision History

Version	Date	Author	Note
-	2021-09-22	Mordecai LIU/ Jason LONG	Creation of the document
1.0	2021-09-22	Mordecai LIU/ Jason LONG	First official release
2.0	2022-03-01	Mordecai LIU/ Jason LONG	Updated all test data in this datasheet.
2.1	2022-04-27	Mordecai LIU/ Jason LONG	Updated the mounting type (Chapter 6).

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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	698–960 MHz, 1710–2690 MHz
Input Impedence	50 Ω
VSWR	≤ 3.0
Gain	≤ 3.2 dBi
Polarization Type	Vertical

#### 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.)	2.3	-	-	2.3	1.8	-	-	-
Average Efficiency (%)	55	-	-	78	75	-	-	-
Max. Peak Gain (dBi)	1.1	-	-	3.2	3.0	-	-	-

#### Mechanical Specifications

Antenna Size	Φ 20 mm × 300 mm
Casing	Glass Fiber Reinforced Plastics
Cable Type & Length	-
Connector Type	N-J
Working Temperature	-40 °C to +85 °C
Weight	Typ. 146.2 g
Radome Color	Gray
IP Rating	IP65

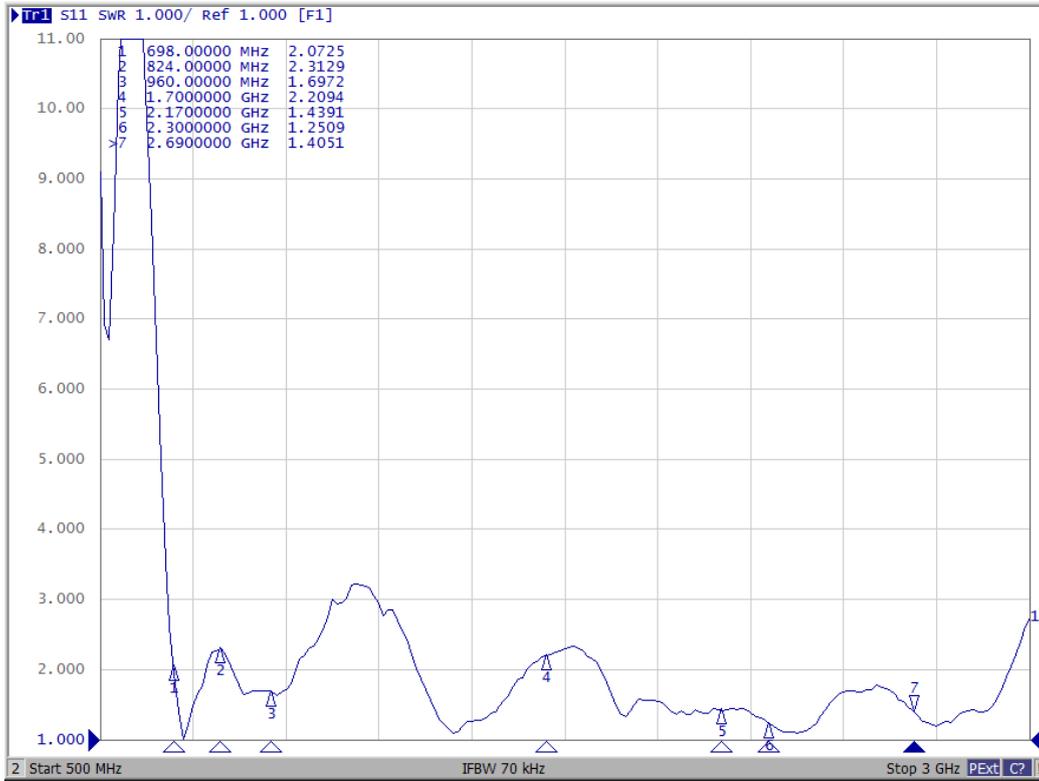
## 4 Overall Performance

### 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

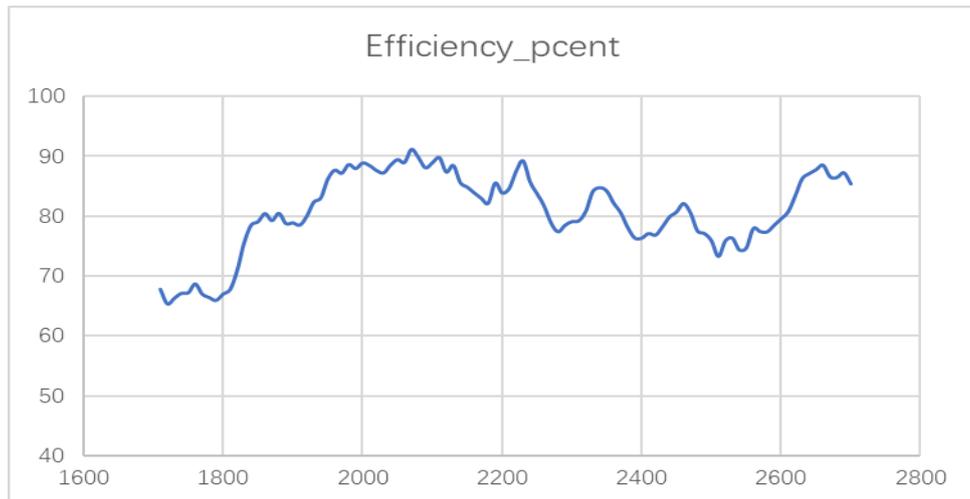
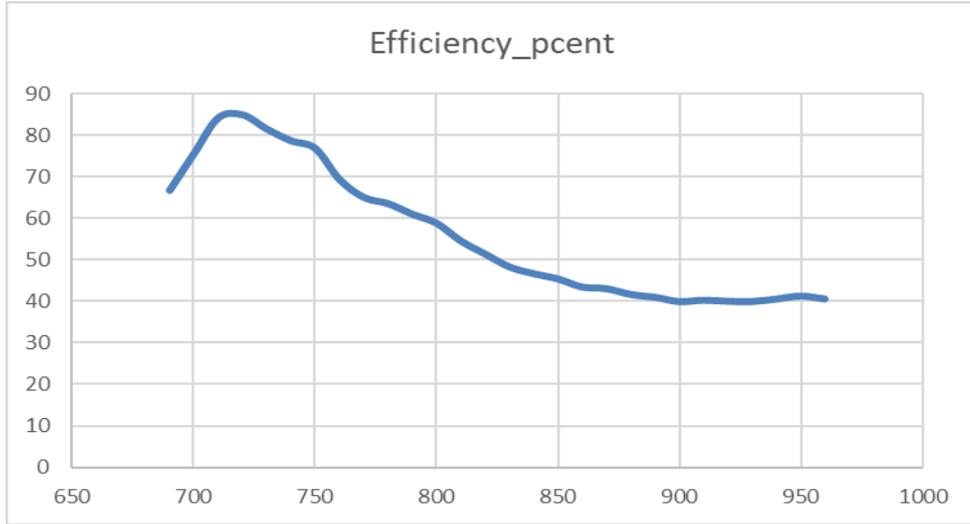


## 4.2. VSWR



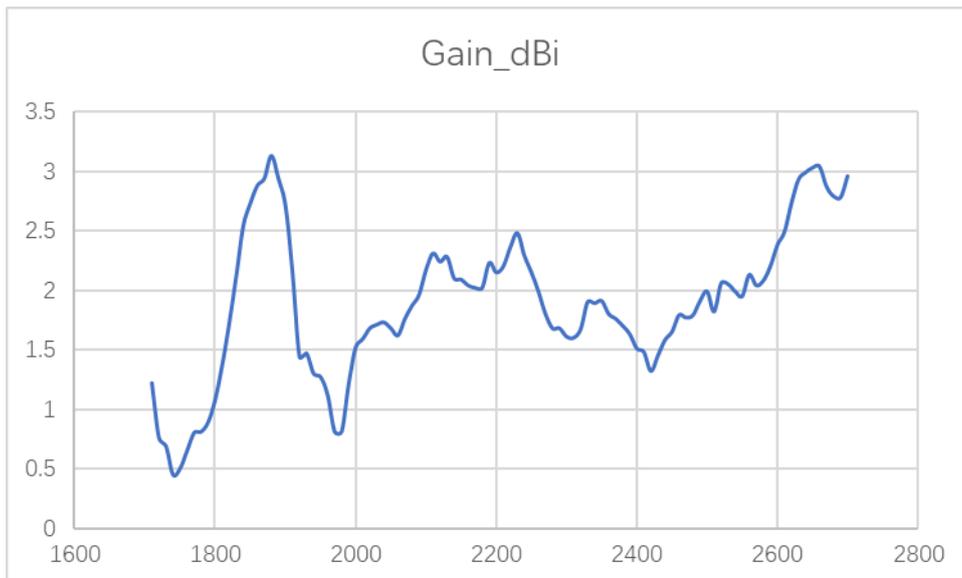
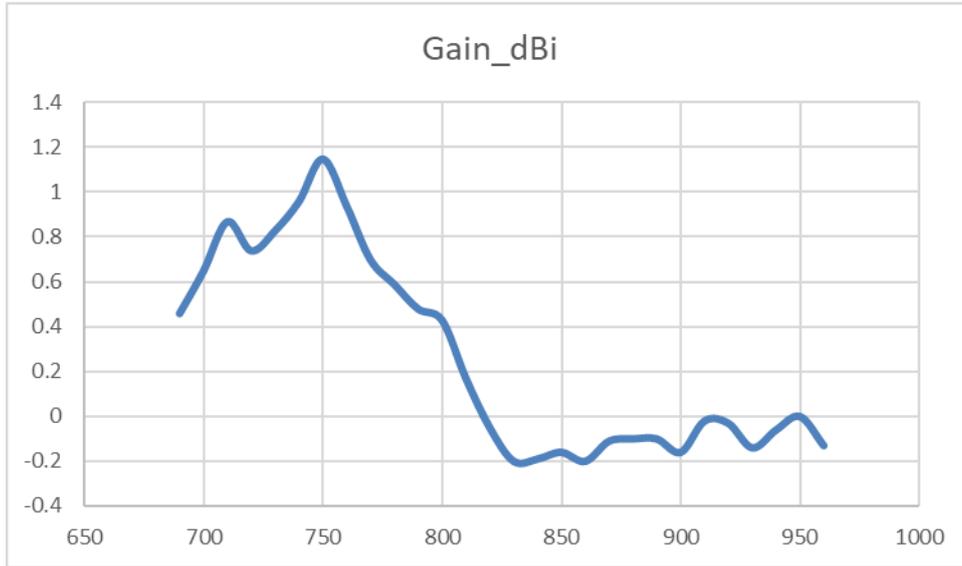
Frequency (MHz)	698	824	960	1710	2170	2300	2690
VSWR	2.07	2.31	1.69	2.20	1.43	1.25	1.40

### 4.3. Efficiency



<b>Frequency (MHz)</b>	698	800	860	960	1710	2300	2500	2700
<b>Efficiency (%)</b>	75.63	58.83	43.45	40.57	67.79	79.06	75.88	85.33

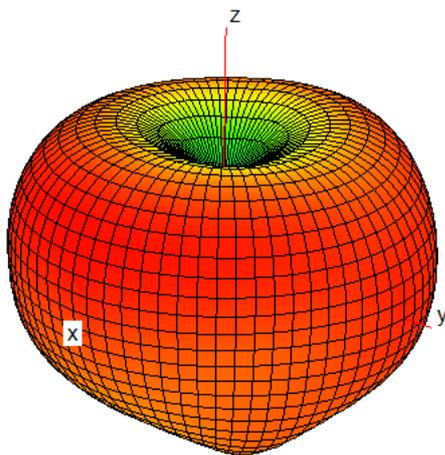
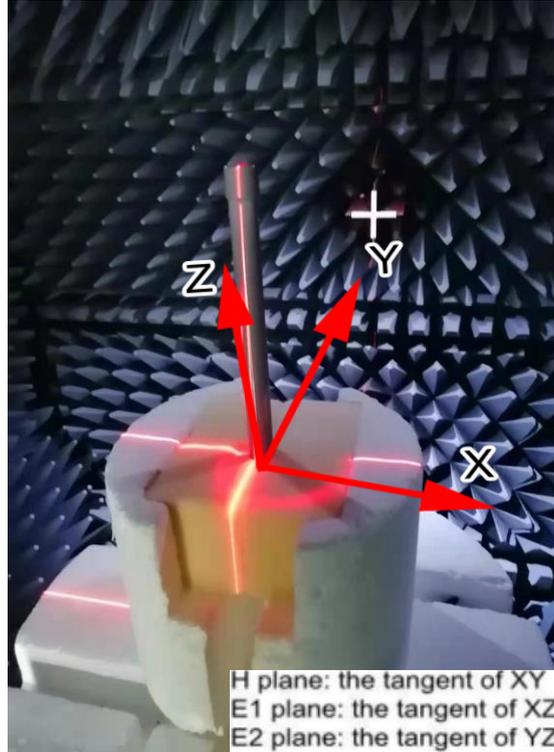
### 4.4. Gain



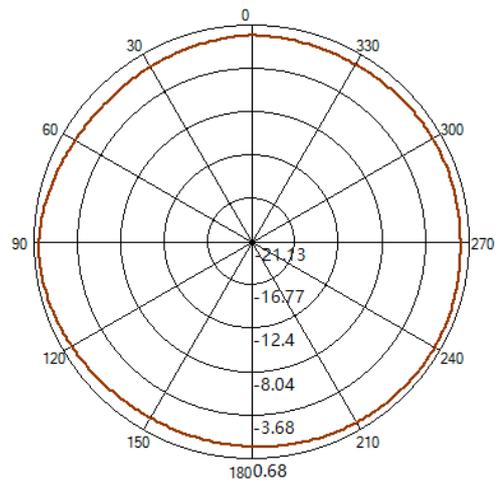
<b>Frequency (MHz)</b>	698	800	860	960	1710	2300	2500	2700
<b>Gain (dBi)</b>	0.65	0.43	-0.2	-0.13	1.22	1.61	1.99	2.96

### 4.5. Radiation Pattern

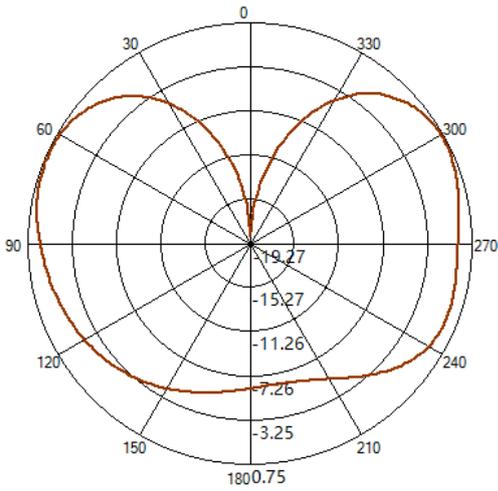
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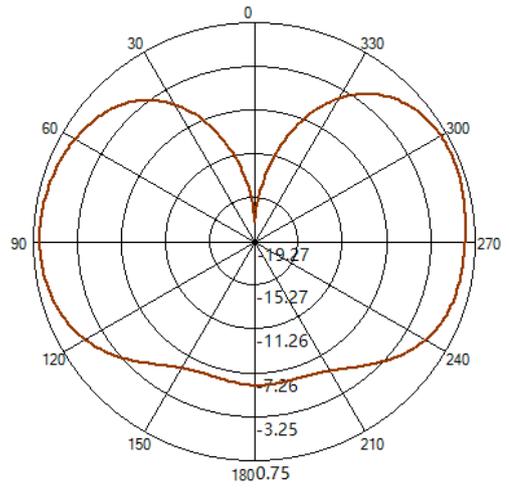
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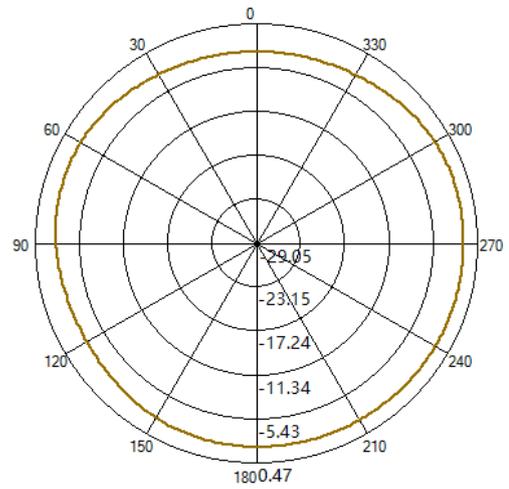
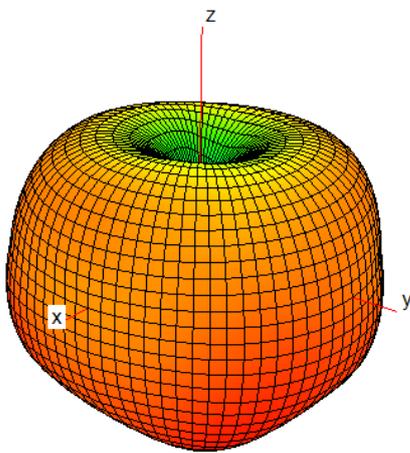
700-H



700-E1

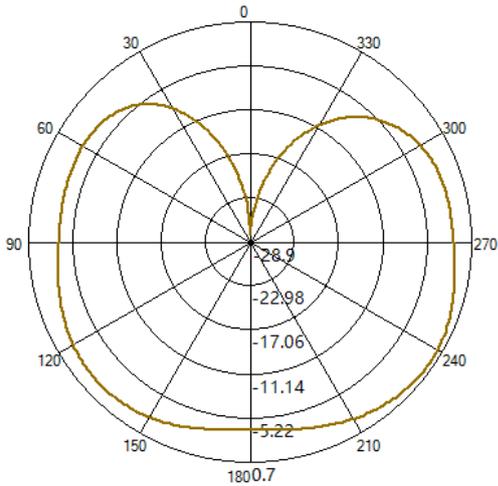


700-E2

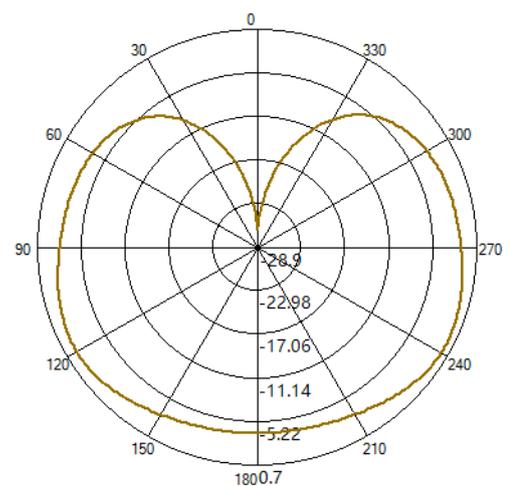


800

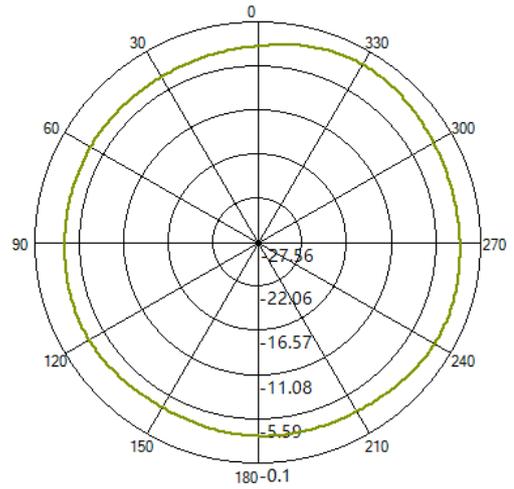
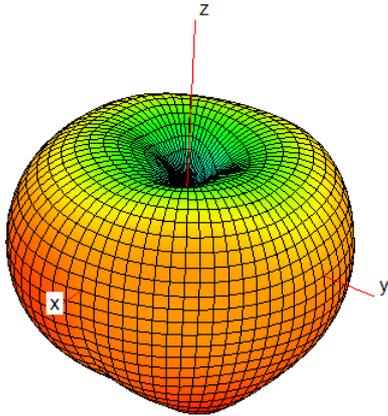
800-H



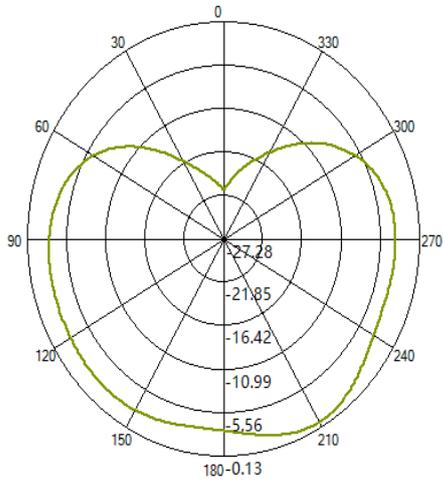
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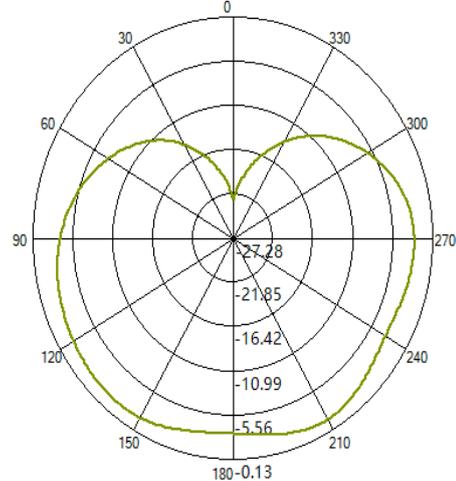
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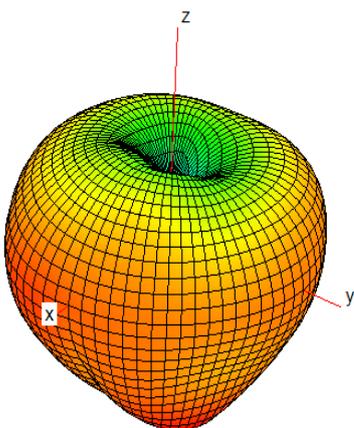
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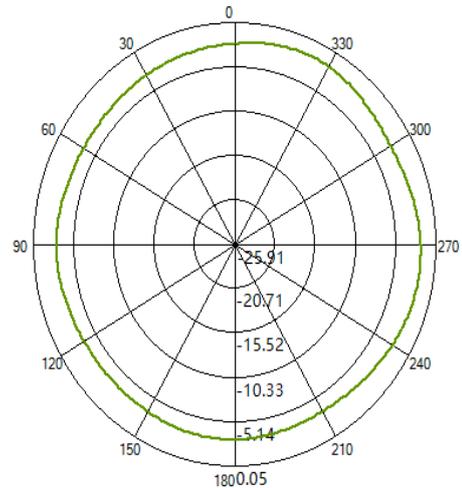
860-H



860-E1

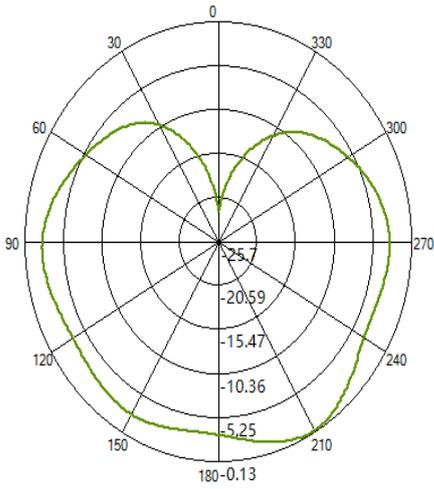


860-E2

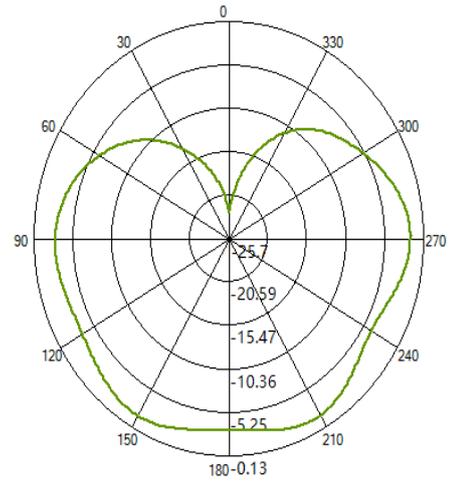


960

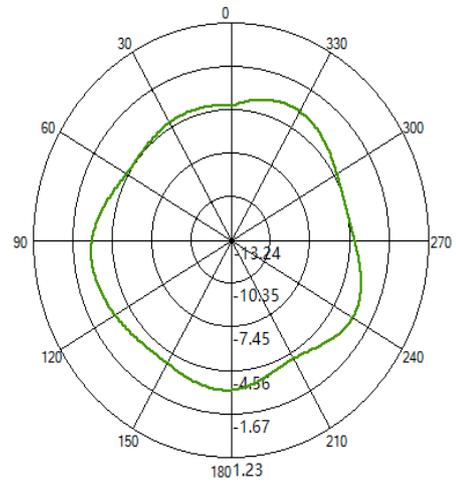
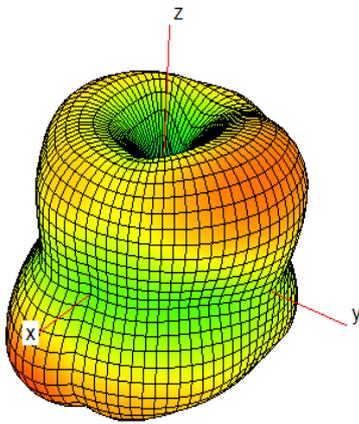
960-H



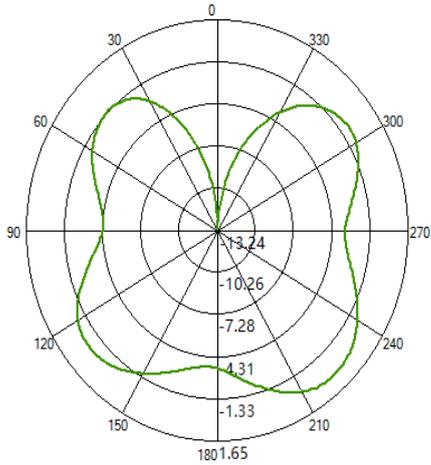
960-E1



960-E2

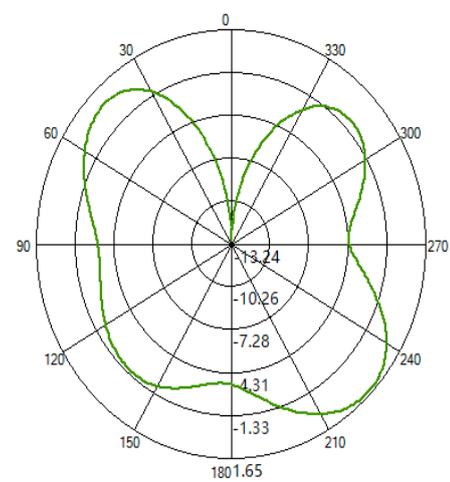


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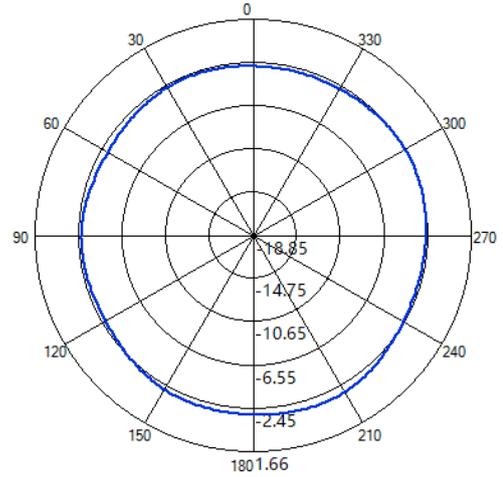
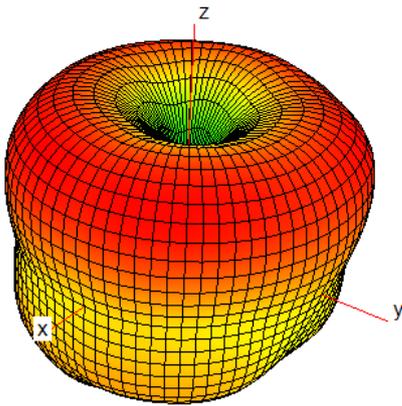


1710-E1

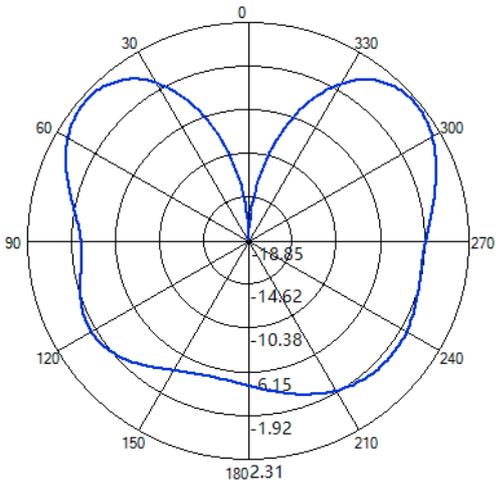
1710-H



1710-E2

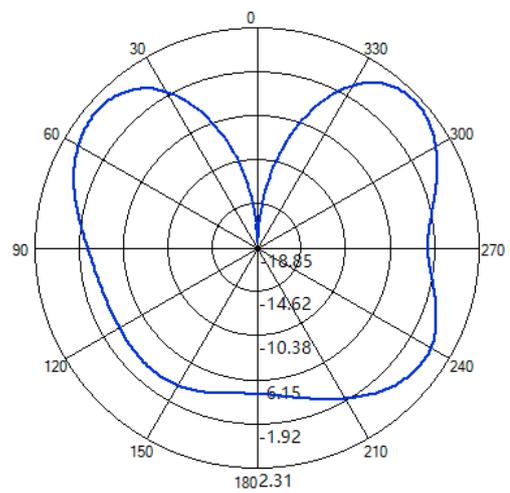


2300

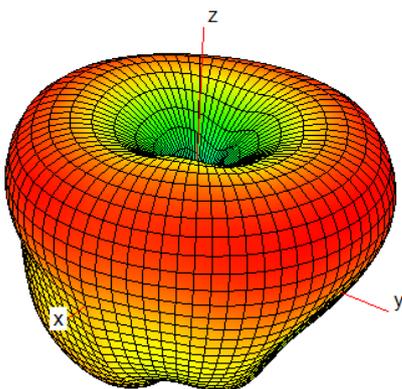


2300-E1

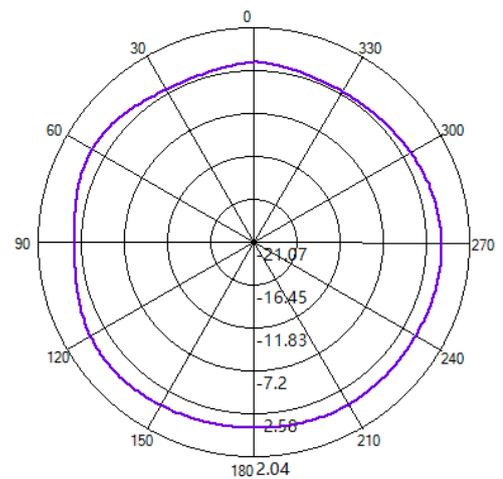
2300-H



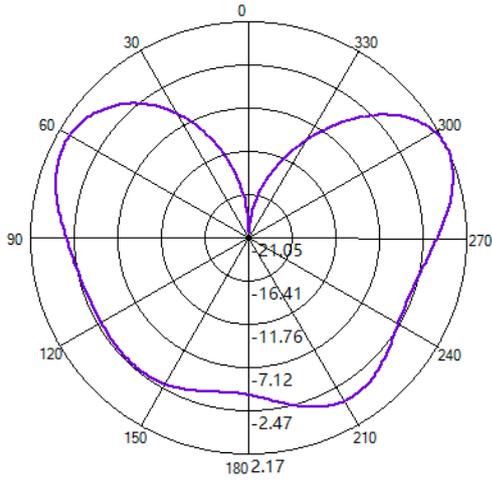
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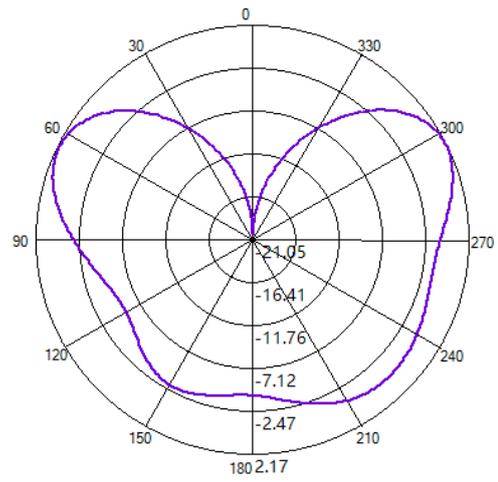
2500



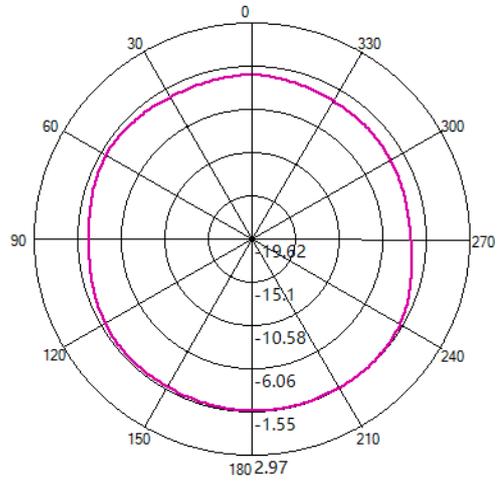
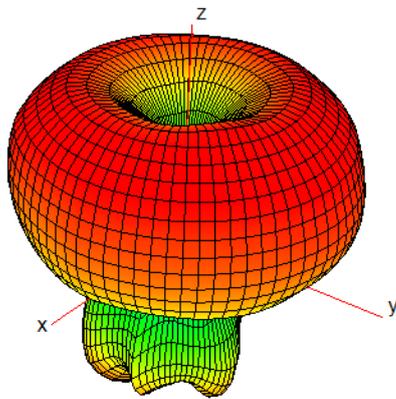
2500-H



2500-E1

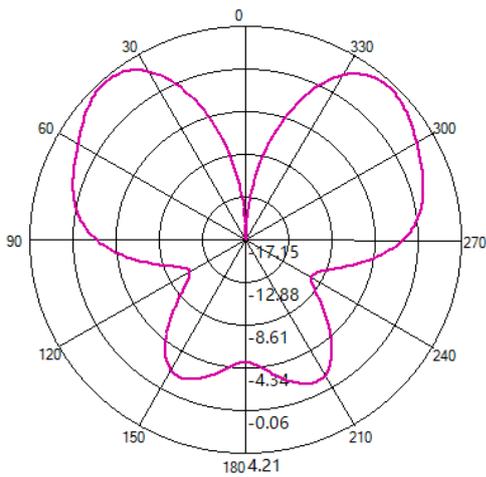


2500-E2

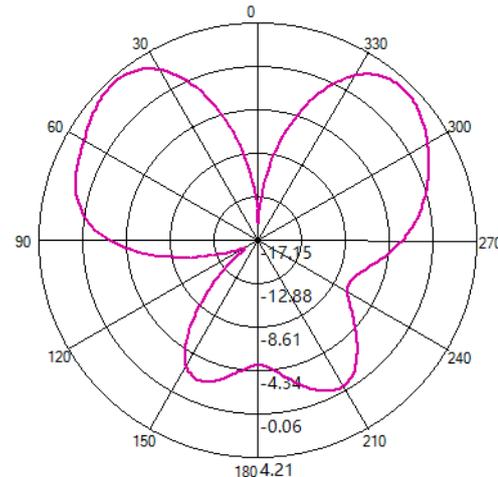


2700

2700-H

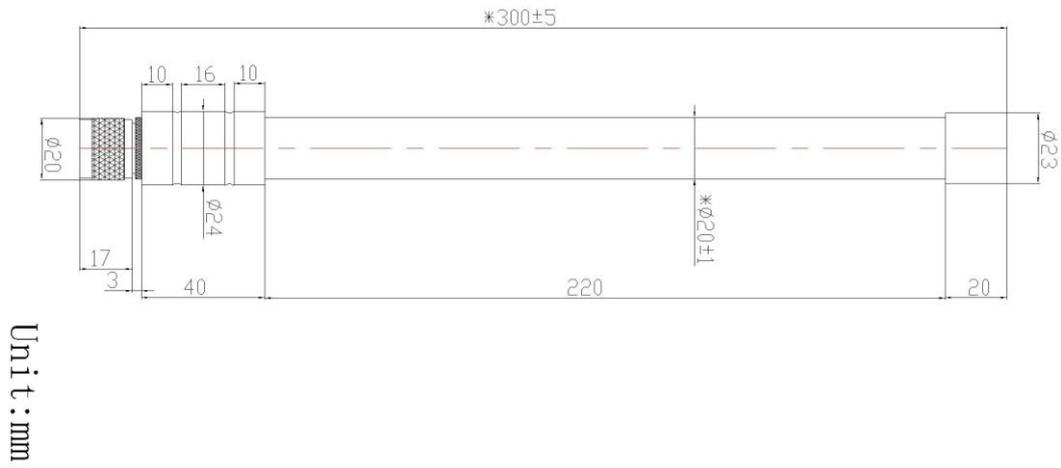


2700-E1



2700-E2

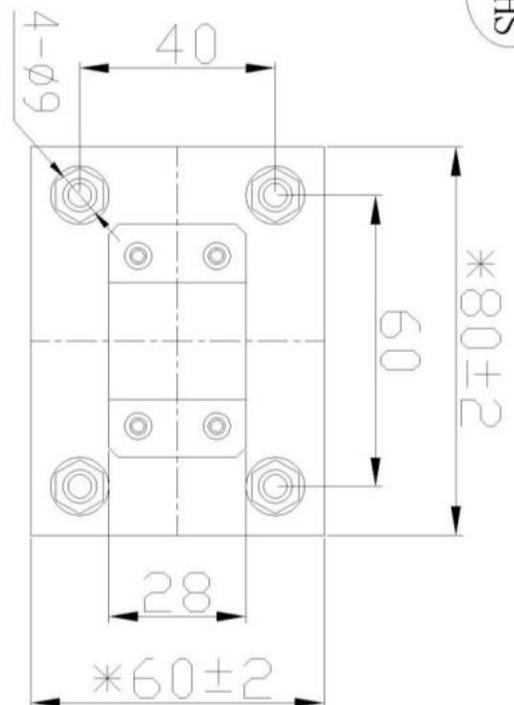
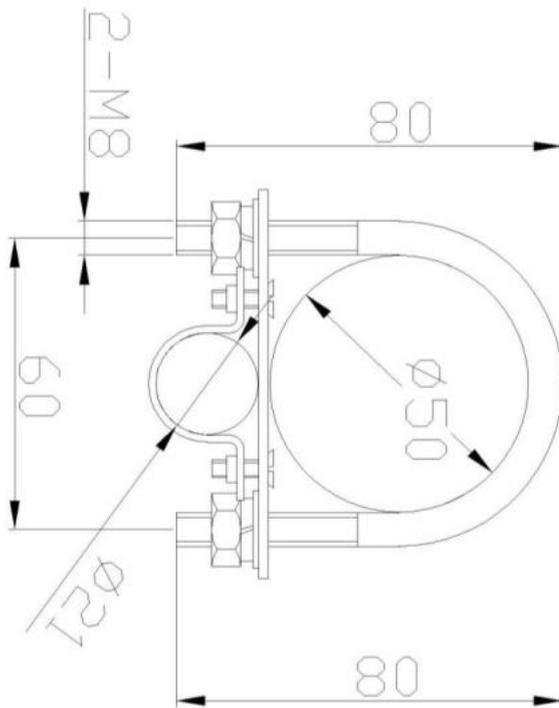
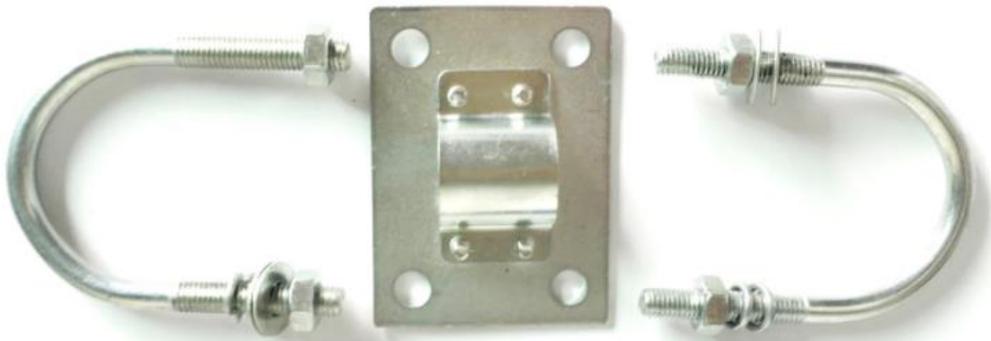
### 5 Product Size



N-J

## 6 Mounting Type

This antenna can use the YBY00A0IA bracket



RoHS

Unit: mm