

# Antenna

# YE0008BA Datasheet

## Antenna Services

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# About the Document

## Revision History

Version	Date	Author	Note
-	2022-07-08	Jason LONG	Creation of the document
1.0	2022-07-08	Jason LONG	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	698-960 MHz; 1710-2690 MHz
Input Impedence	50 $\Omega$
VSWR	$\leq 10.0$
Gain	$\leq 2$ dBi
Polarization Type	Linear

#### Detailed Passive Electrical Specifications

Frequency Range (MHz)	698–960	1176–1280	1400–1610	1710–2170	2450–2690	3300–4000	4000–5000	5000–6000
VSWR (Max.)	6.04	-	-	9.07	8.59	-	-	-
Average Efficiency (%)	20.73	-	-	33.27	24.78	-	-	-
Max. Peak Gain (dBi)	-2.54	-	-	1.59	0.02	-	-	-

#### Mechanical Specifications

Antenna Size (mm)	$\Phi 10.5 \times 53$
Casing	ABS + PC
Connector Type	SMA Male (Internal screw internal pin)
Working Temperature	-40 °C to +85 °C
Weight	Typical 5.8 g
Radome Color	Black
Mounting Type	Screw
IP Rating	IP65

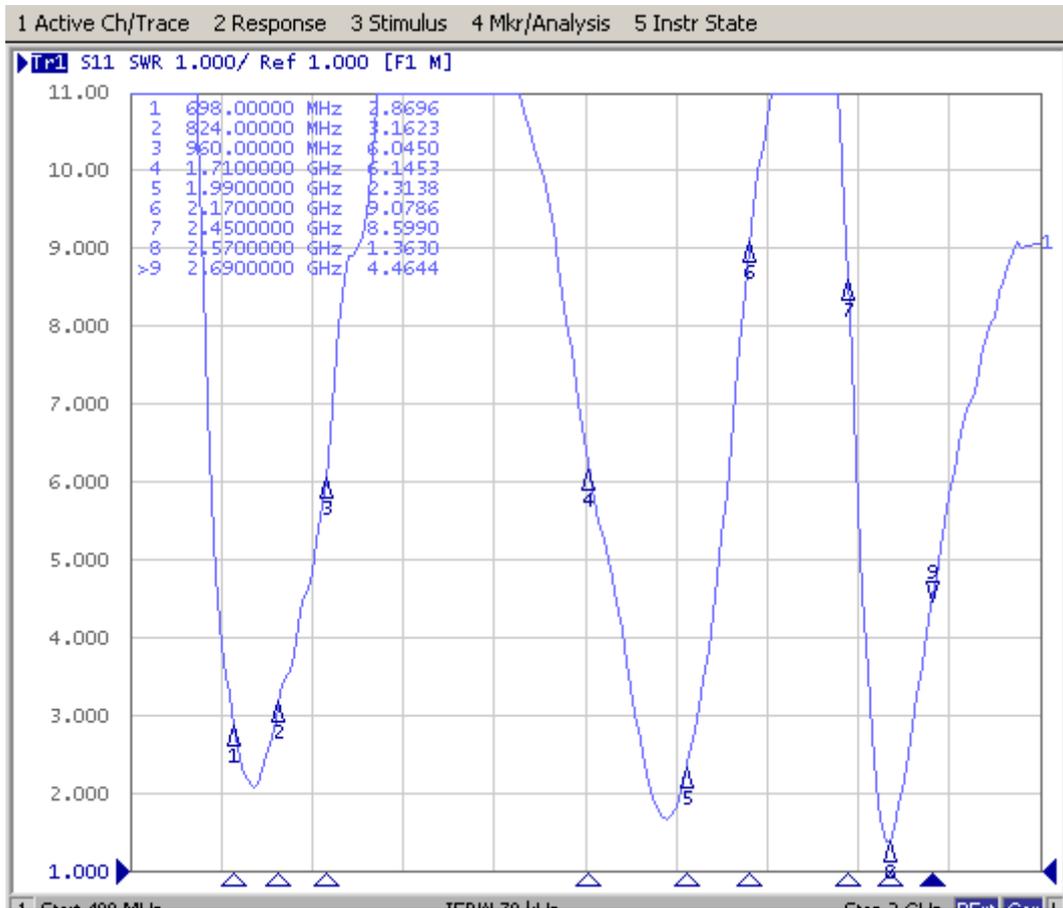
## 4 Overall Performance

### 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

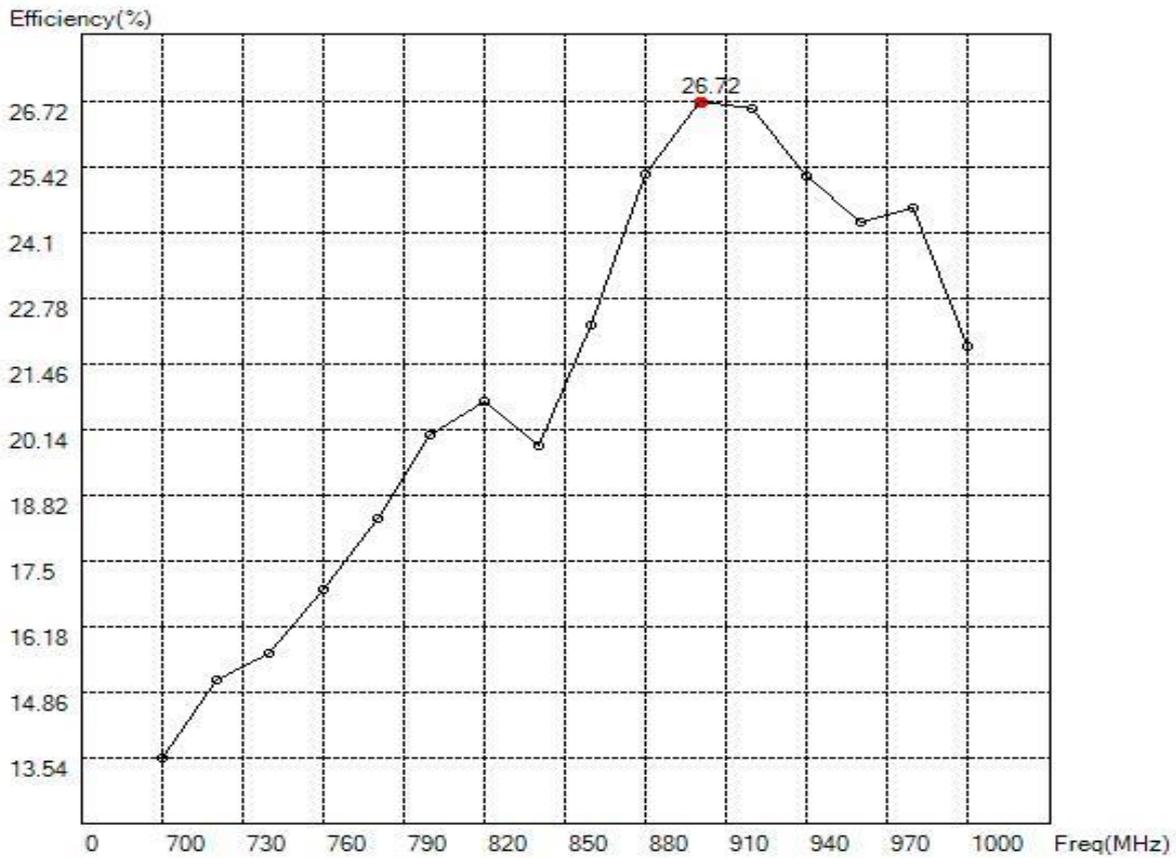


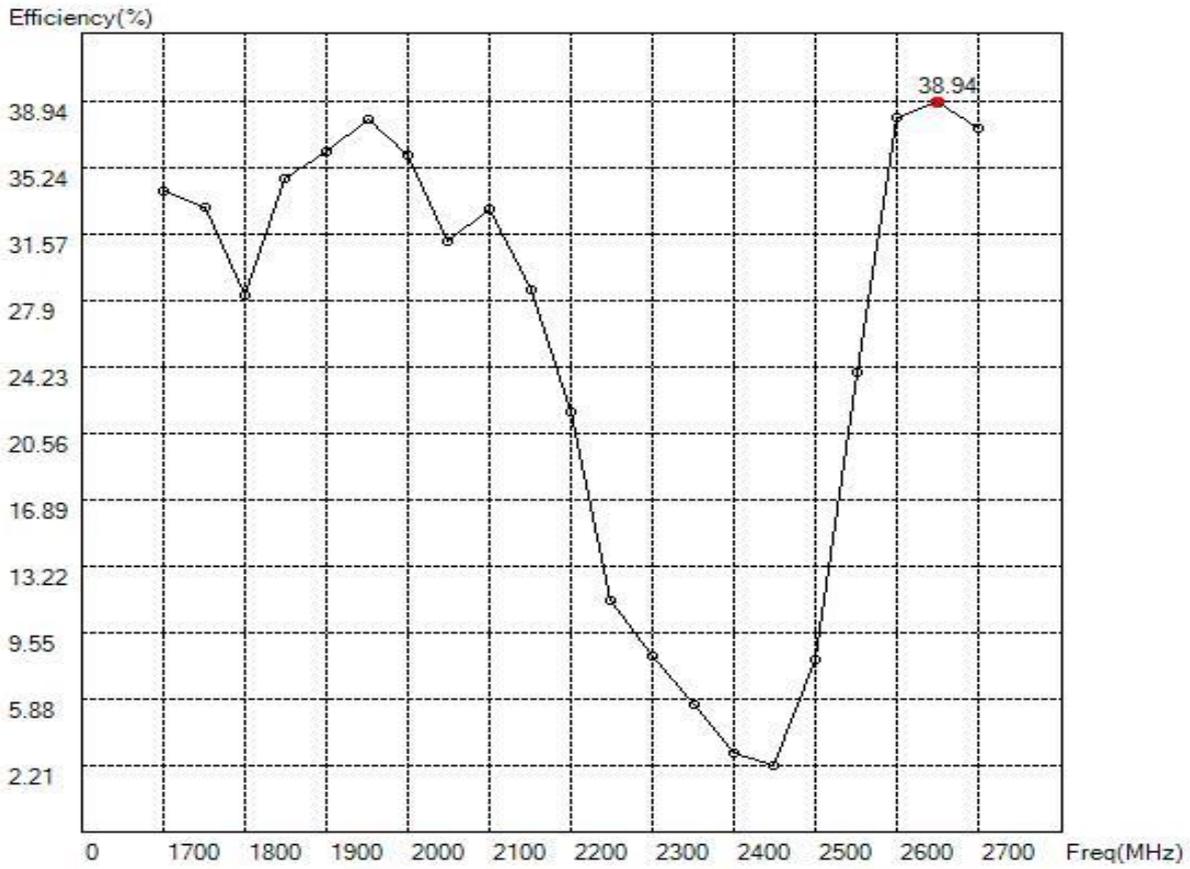
## 4.2. VSWR



Frequency (MHz)	698	824	960	1710	1990	2170	2450	2690
VSWR	2.86	3.16	6.04	6.14	2.31	9.07	8.59	4.46

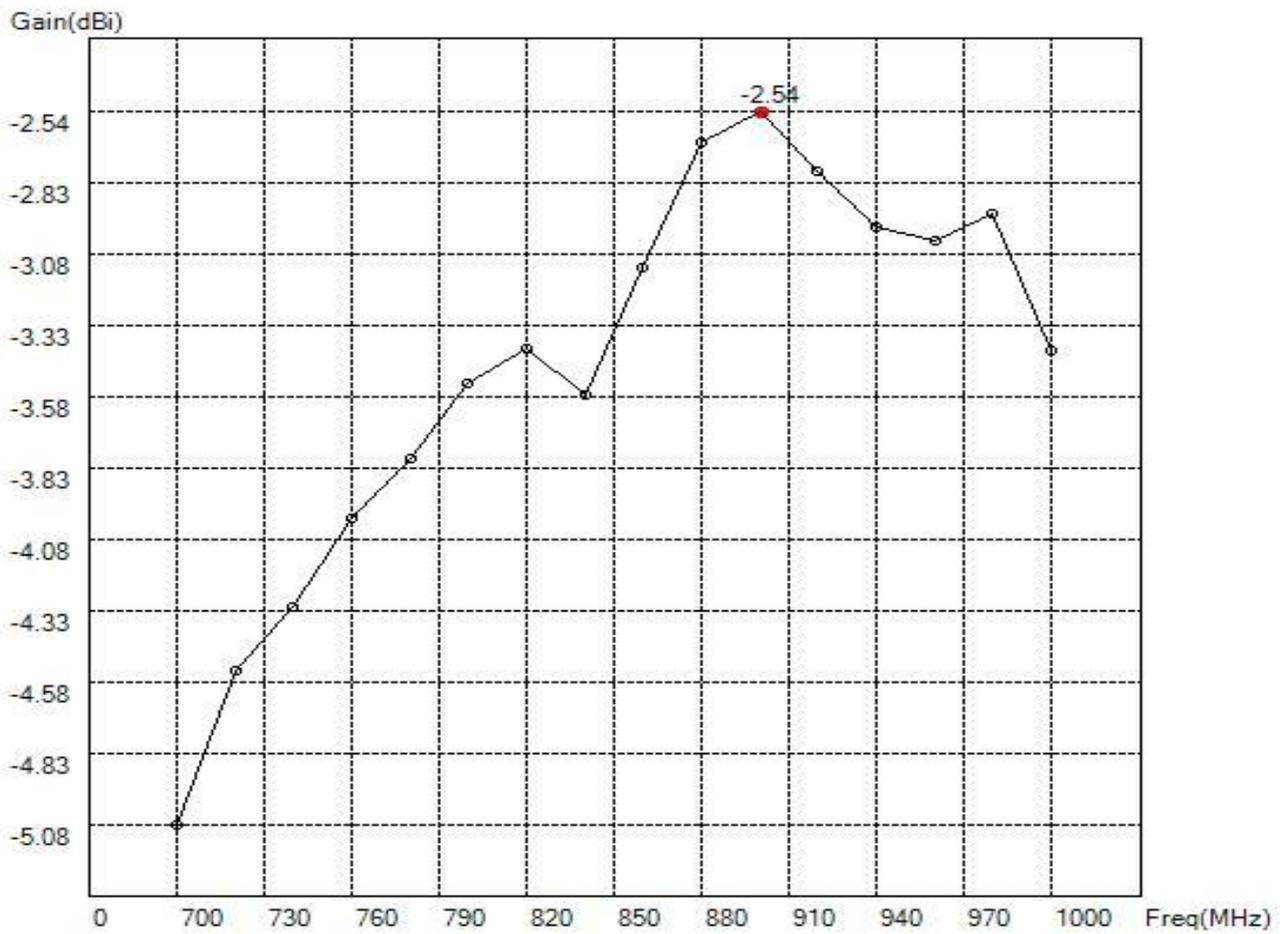
### 4.3. Efficiency

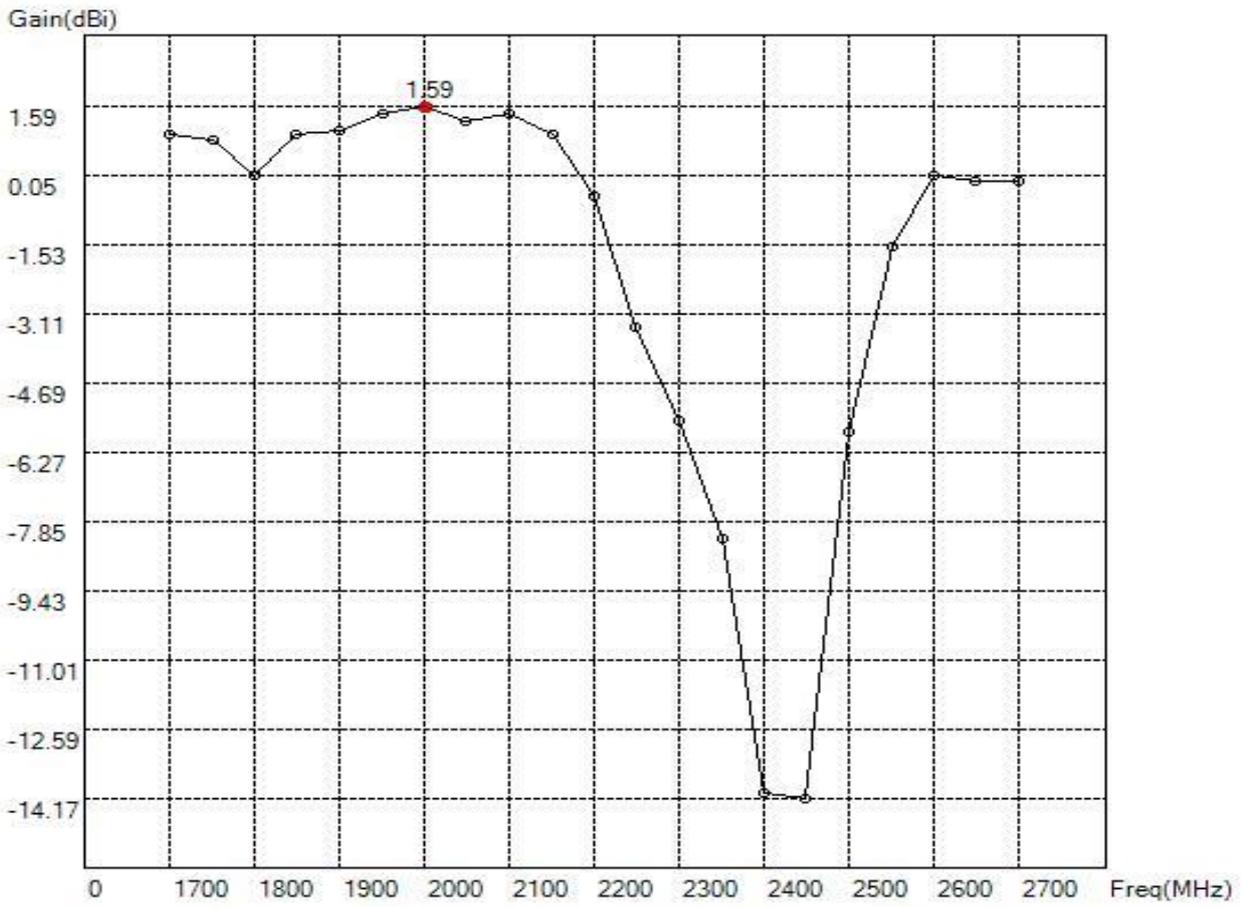




<b>Frequency (MHz)</b>	700	840	960	1700	1950	2150	2700
<b>Efficiency (%)</b>	13.54	19.81	24.28	33.93	37.93	28.51	37.49

### 4.4. Gain

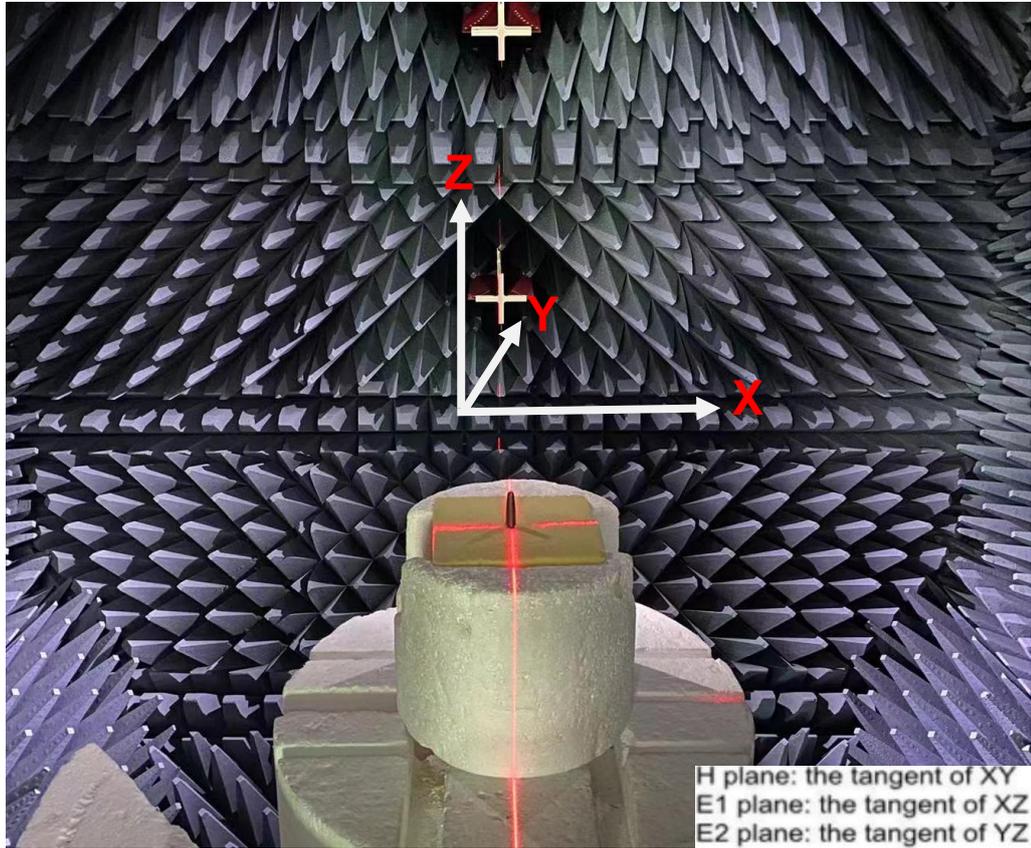




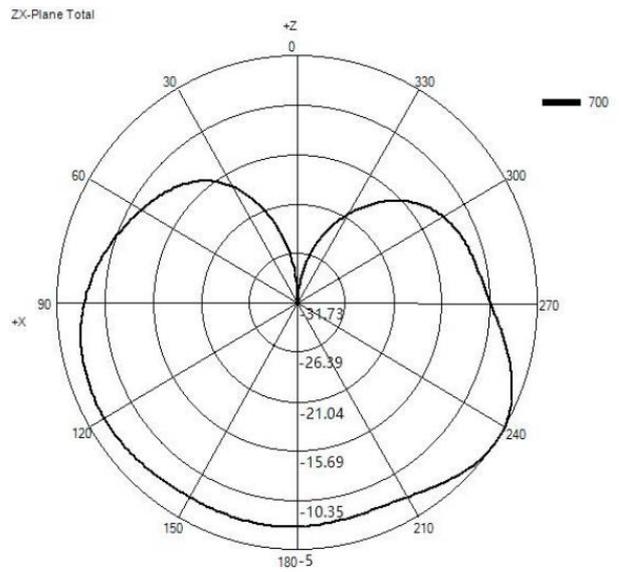
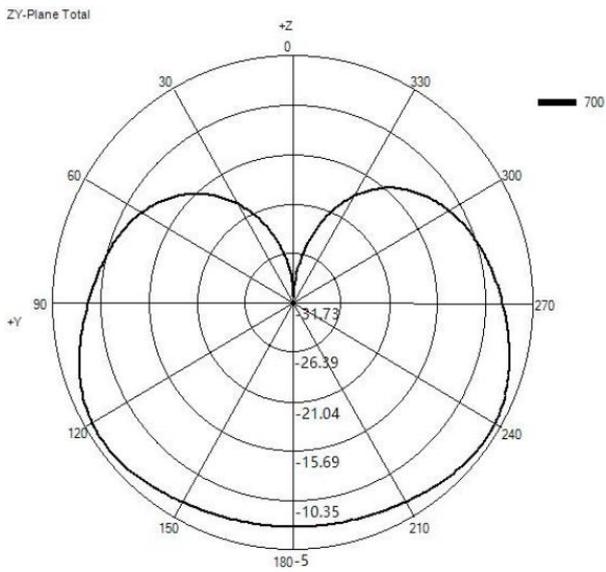
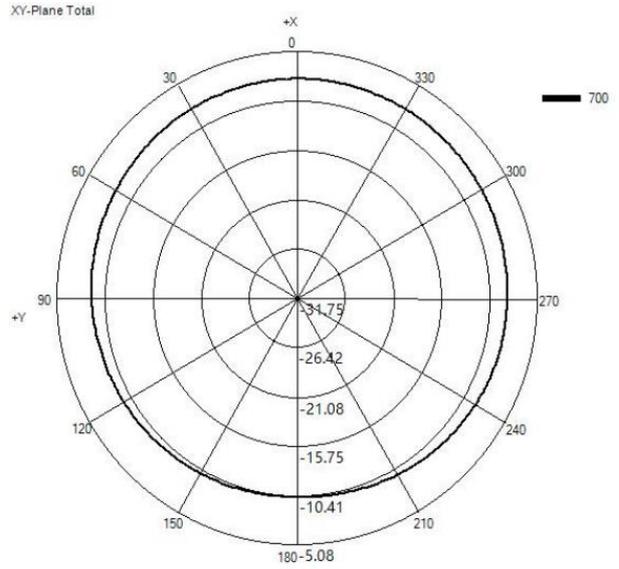
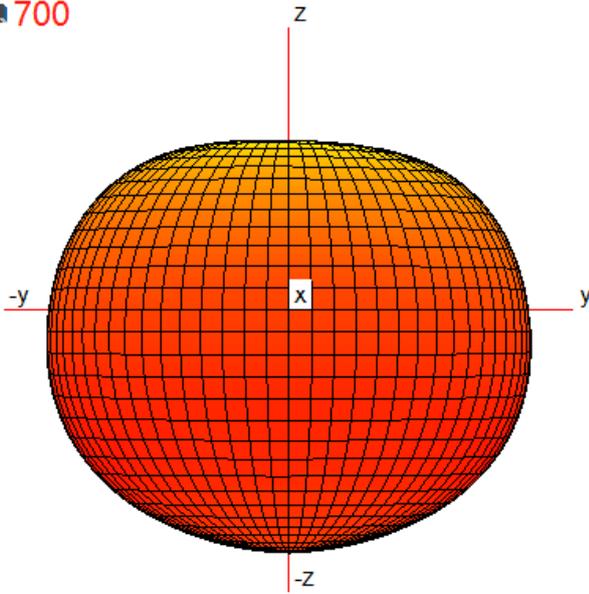
<b>Frequency (MHz)</b>	700	840	960	1700	1950	2150	2700
<b>Gain (dBi)</b>	-5.08	-3.55	-3.00	0.97	1.42	0.96	-0.10

## 4.5. Radiation Pattern

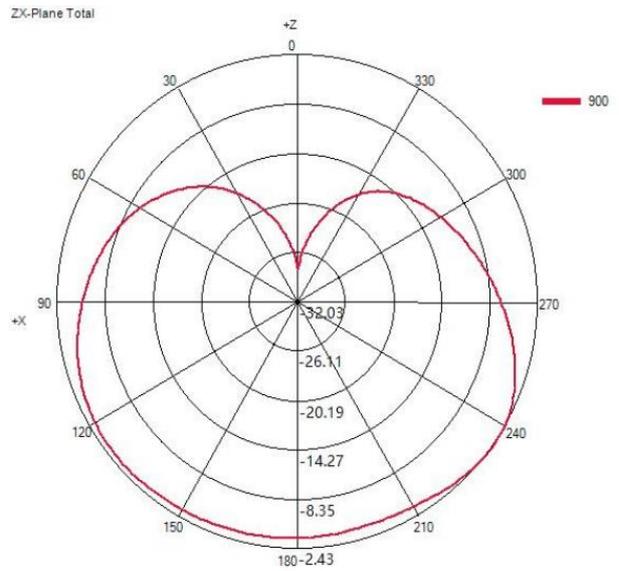
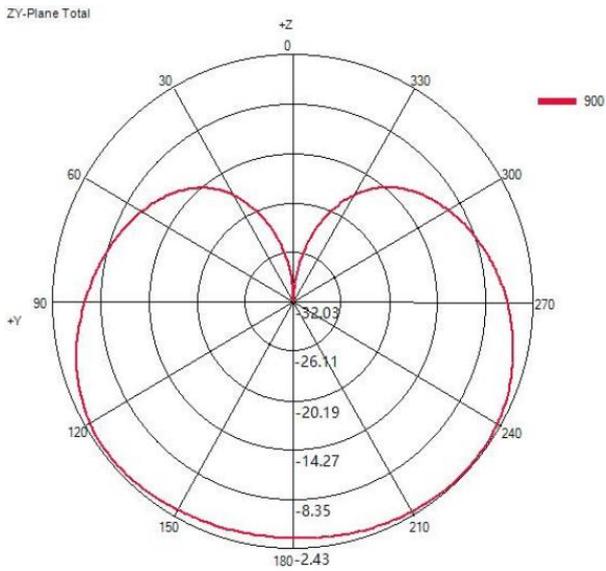
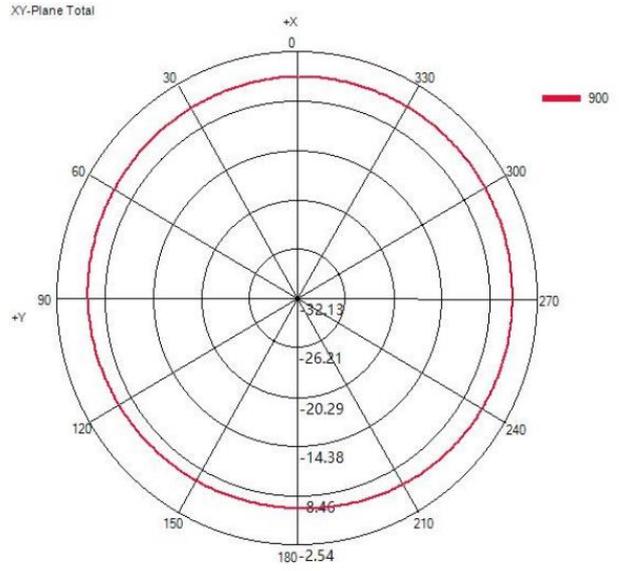
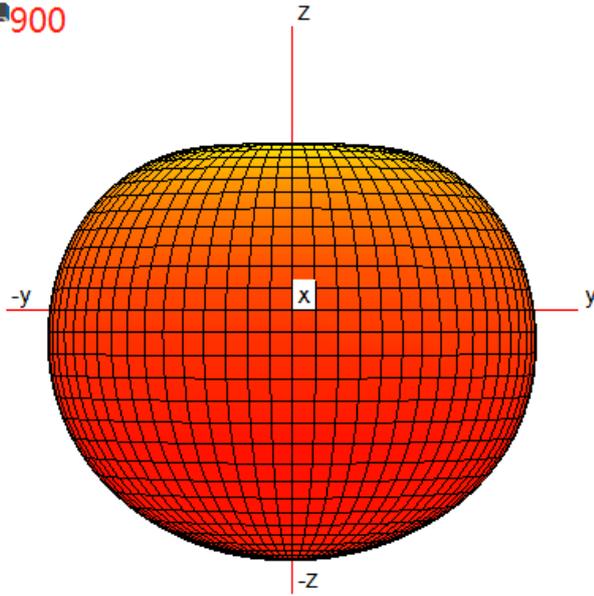
- Test condition: free space.



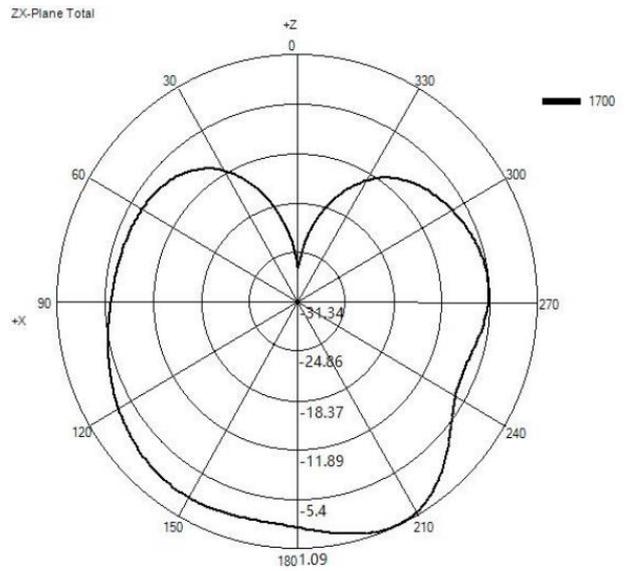
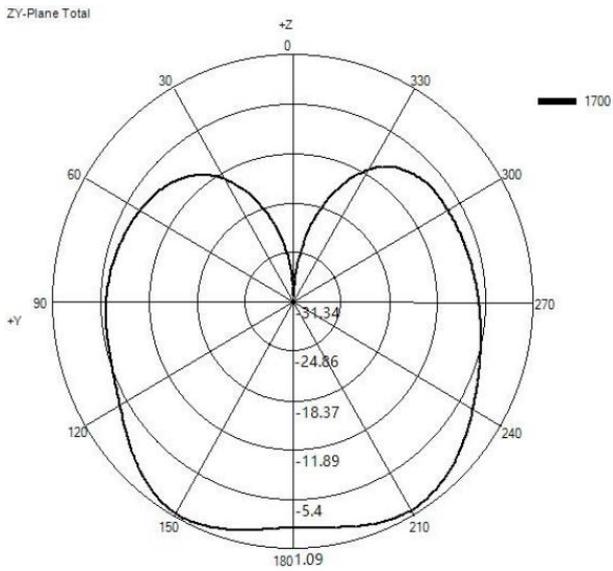
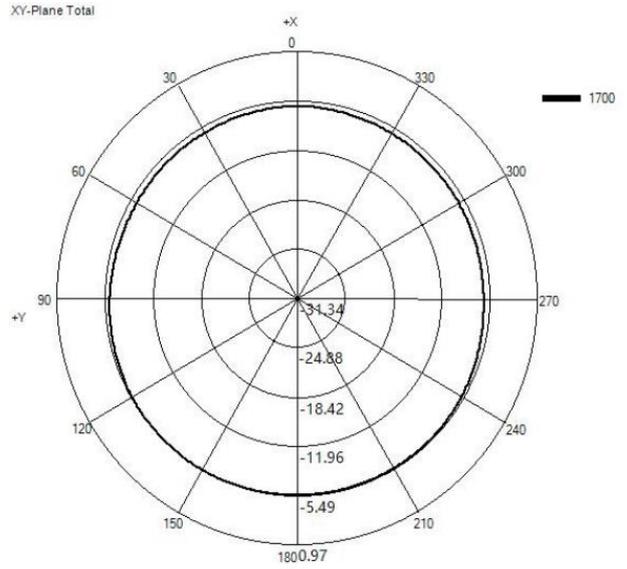
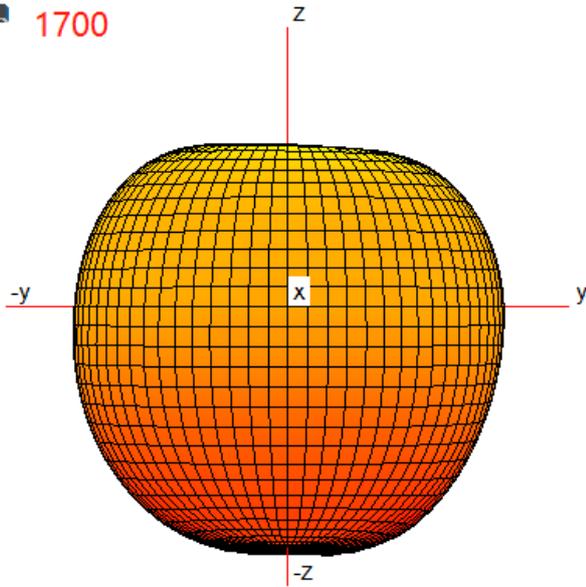
700



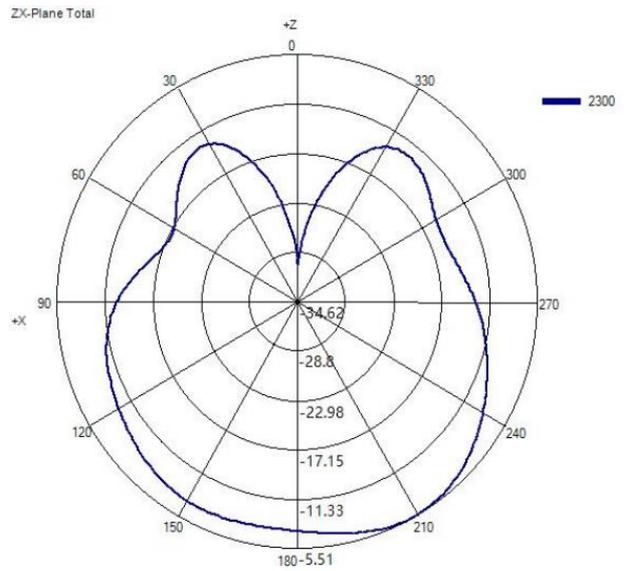
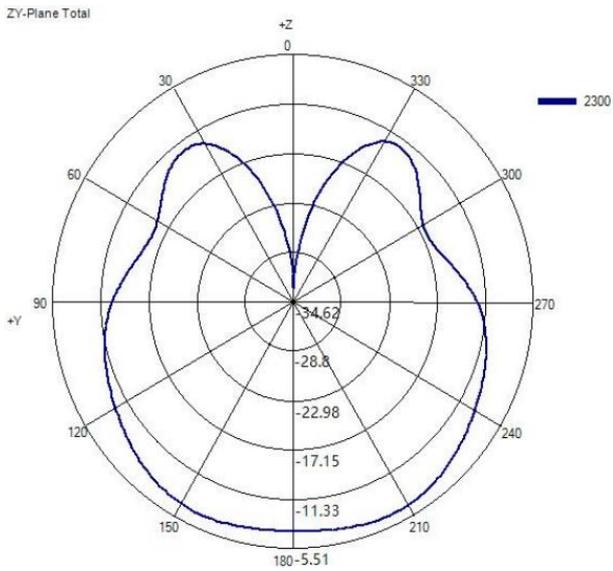
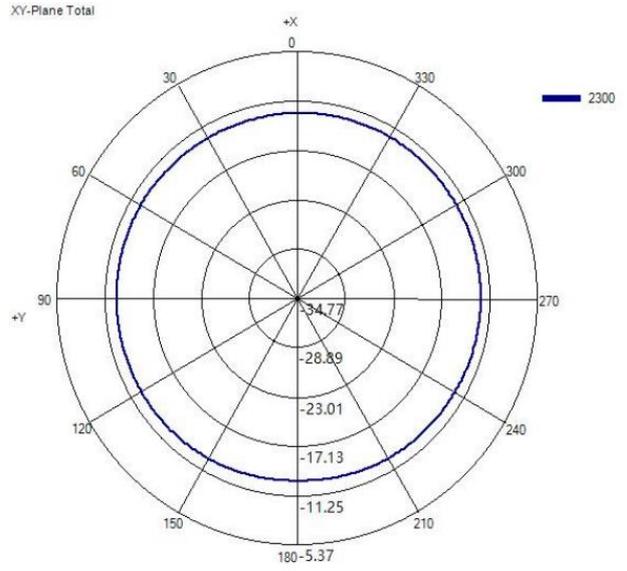
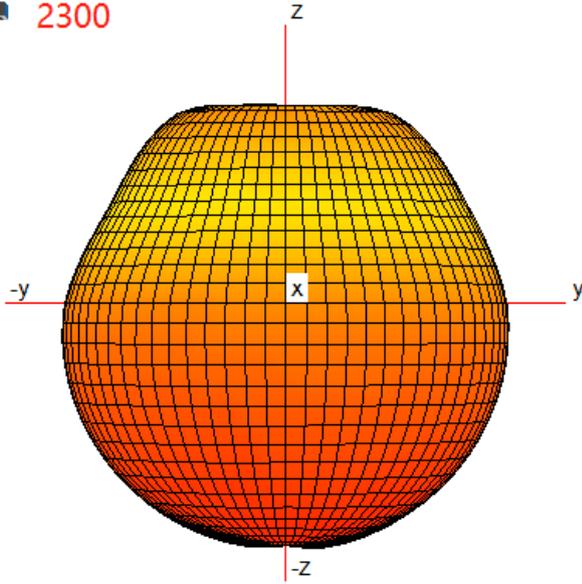
900



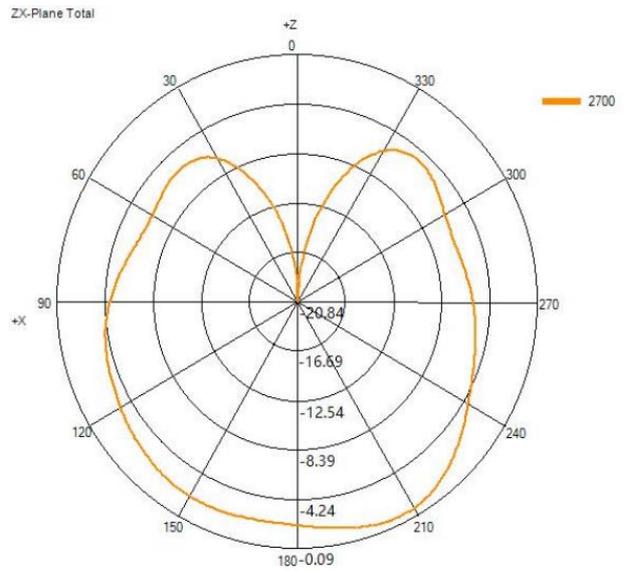
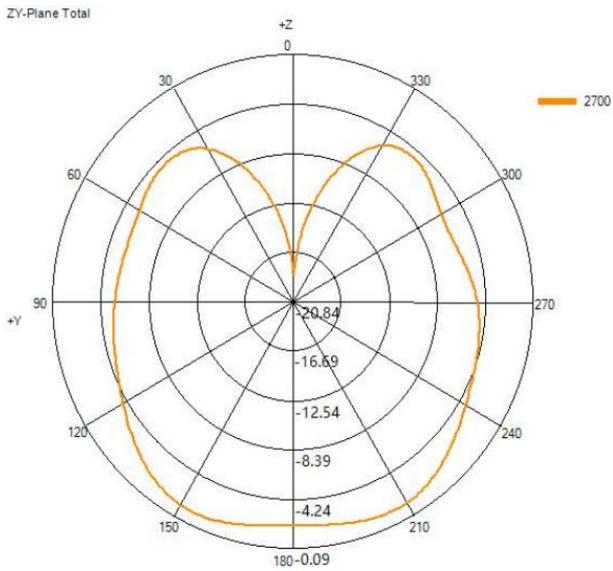
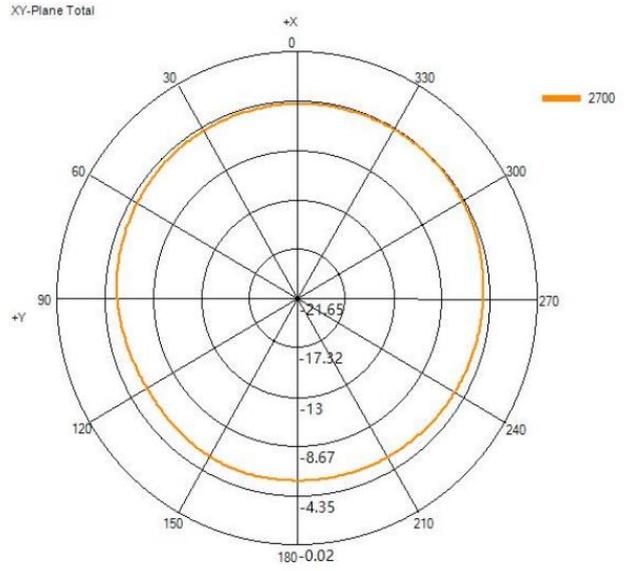
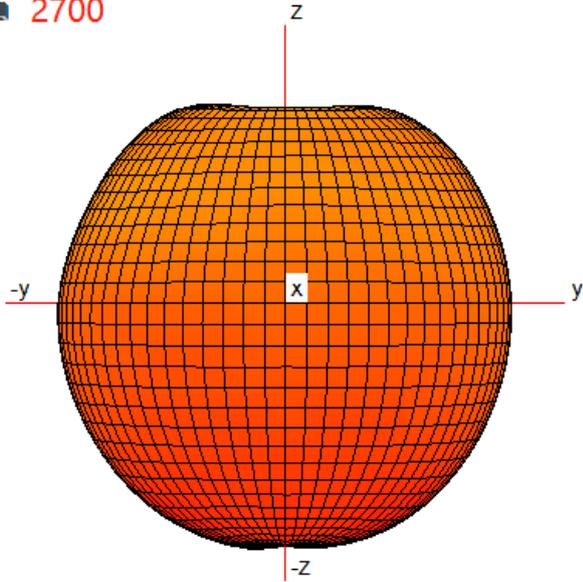
1700



2300



**2700**



### 5 Product Size

