

# Antenna

# YE0038AA Datasheet

## Antenna Services

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# About the Document

## Revision History

Version	Date	Author	Note
-	2020-11-24	Kenny YIN	Creation of the document
1.0	2020-11-24	Kenny YIN	First official release
1.1	2021-01-27	Kenny YIN	Added IP rating description.
2.0	2021-04-28	Aria CHU	Updated all test data in the datasheets.
2.1	2021-07-25	Aria CHU	Updated working temperature (Chapter 3).
2.2	2021-11-16	Aria CHU	Updated the information of product features (Chapter 3).
2.3	2021-11-30	Aria CHU	Updated the product description in Chapter 1.
2.4	2022-01-18	Kenny YIN	Updated the drawing (Chapter 5).
2.3	2022-12-28	Aria CHU	Deleted the IP rating (Chapter 3).

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## 1 Product Description

Quectel Wi-Fi antenna covers 2.4 GHz, 5 GHz, and up to 7 GHz bands, fully satisfying customers' requirements for Wi-Fi 5, Wi-Fi 6, and Wi-Fi 6E. There are various antenna types, including built-in FPC antenna, ceramic patch antenna, and other external antennas of different shapes or sizes. The antenna performance meets the customers' demands for efficiency, gain, and radiation and ensures the superior experience of the customers' products in use.

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 Wi-Fi
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	2.4–2.5 GHz, 5.15–5.85 GHz
Input Impedance	50 $\Omega$
VSWR	$\leq 2.0$
Gain	$\leq 2.0$ dBi
Polarization Type	Linear

#### Mechanical Specifications

Antenna Size	195 mm x $\Phi$ 13 mm
Casing	ABS
Connector Type	SMA Male (Center Pin)
Working Temperature	-40 °C to +85 °C
Radome Color	Black

## 4 Overall Performance

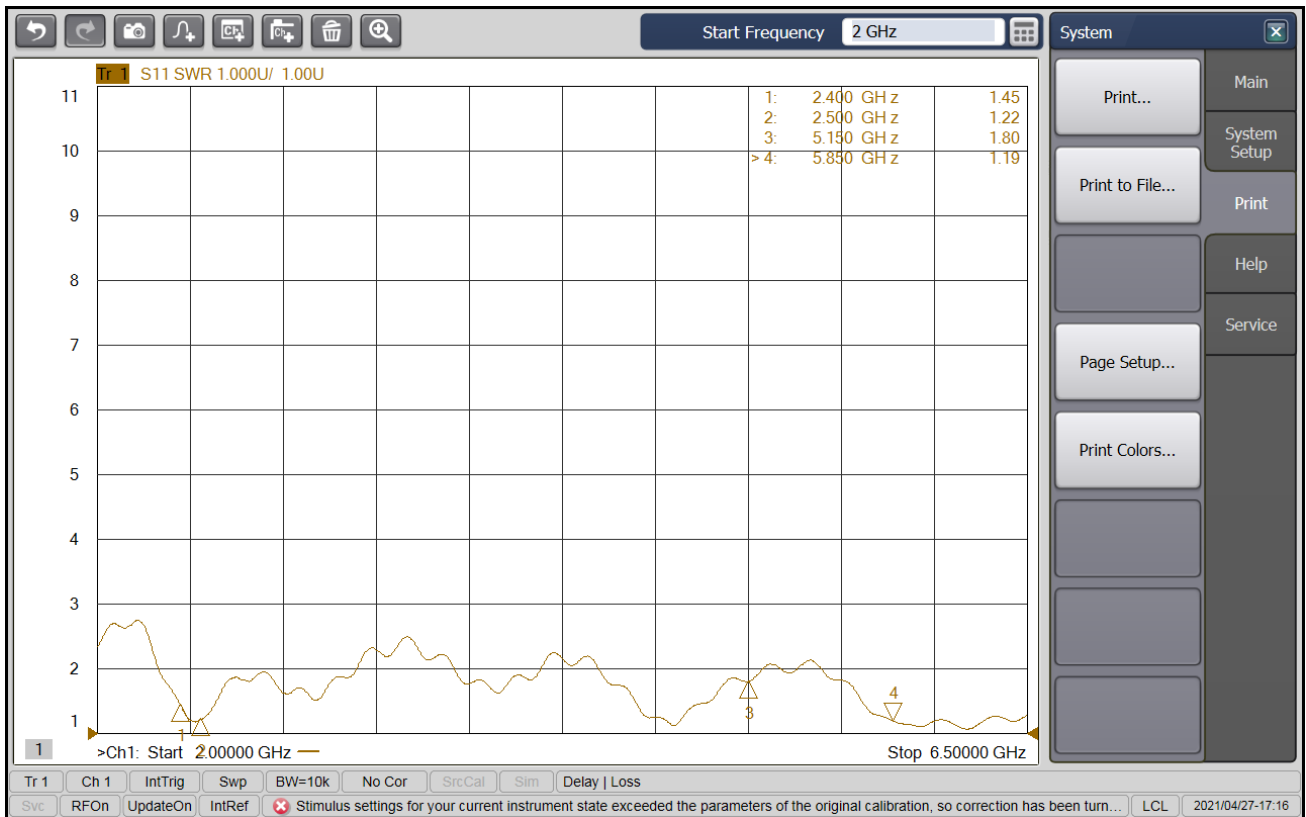
### 4.1. Test Environment

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



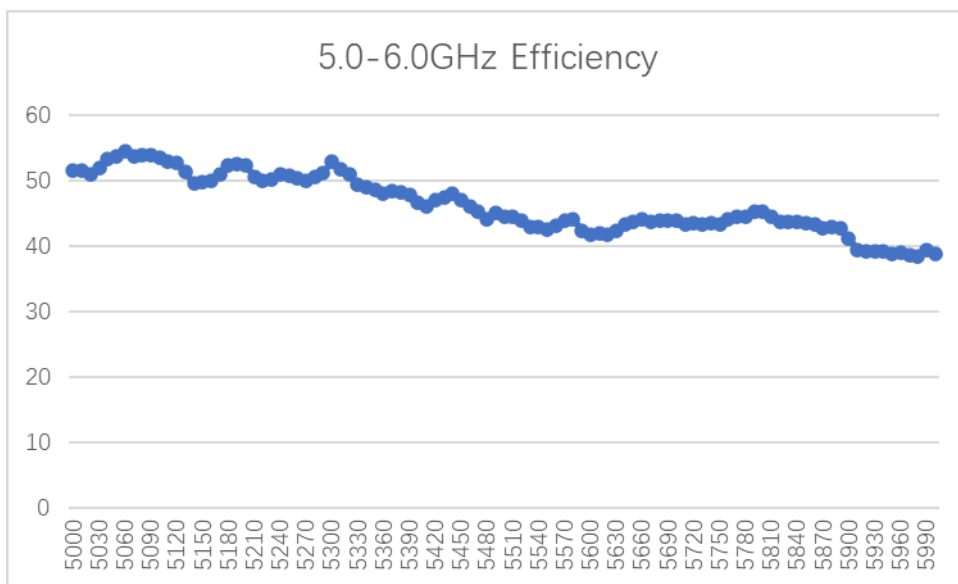
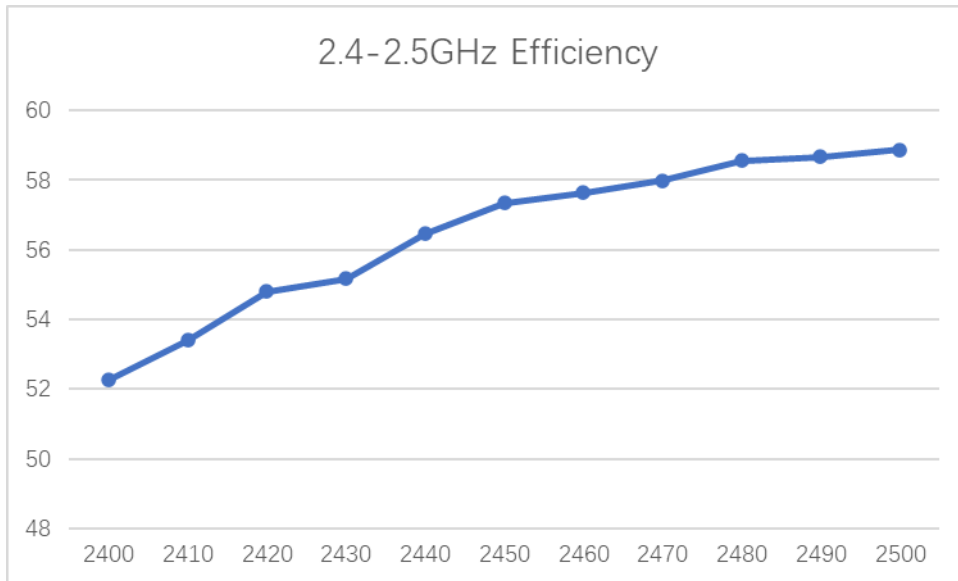


## 4.2. VSWR



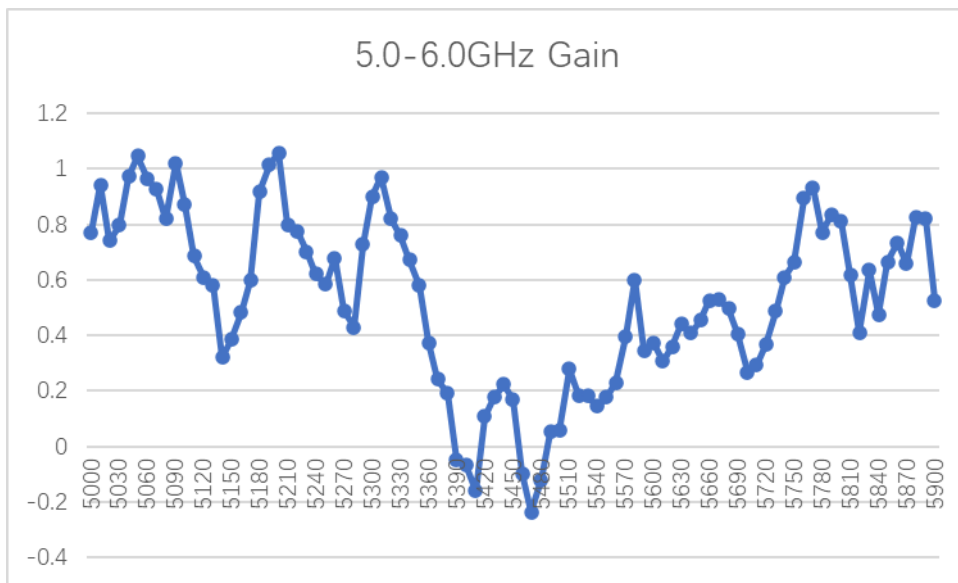
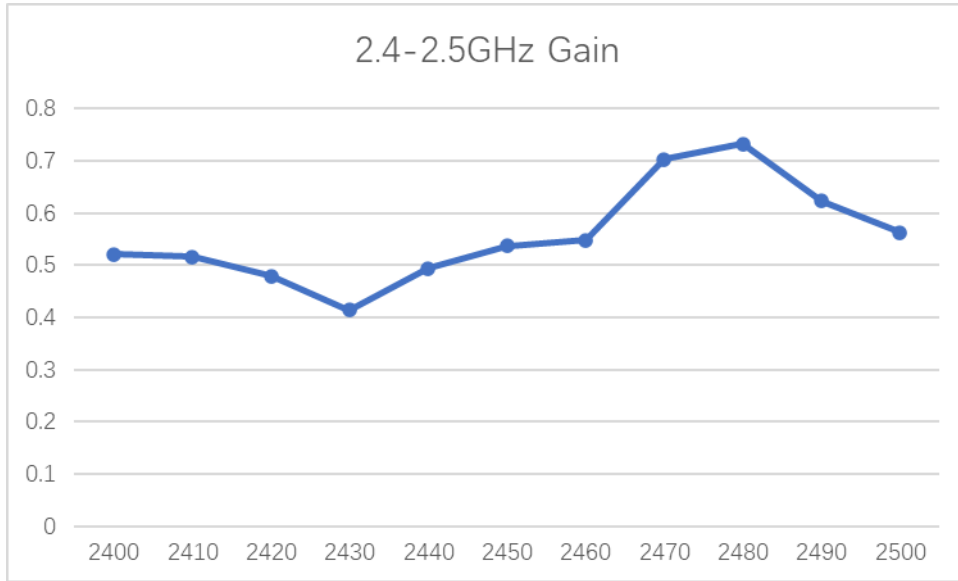
Frequency (MHz)	2400	2500	5150	5850
VSWR	1.45	1.22	1.80	1.19

### 4.3. Efficiency



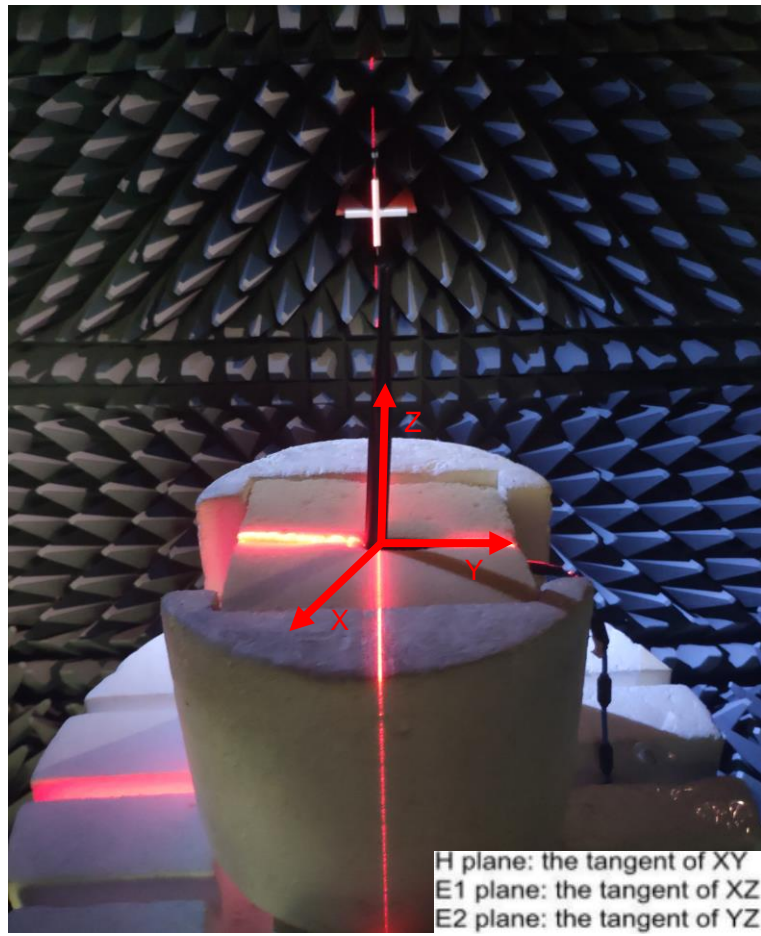
<b>Frequency (MHz)</b>	2400	2500	5150	5850
<b>Efficiency (%)</b>	52.26	59.64	49.76	43.45

### 4.4. Gain

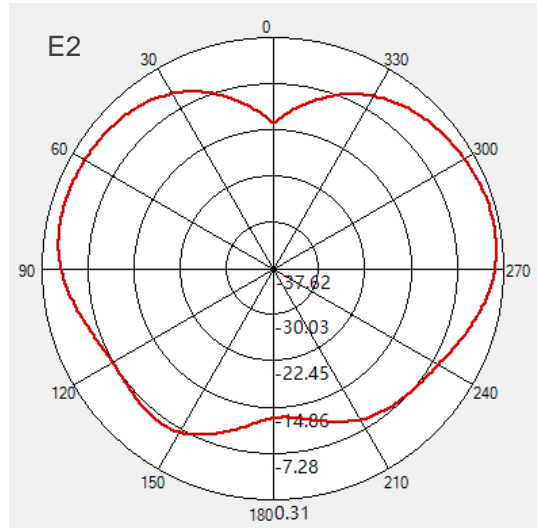
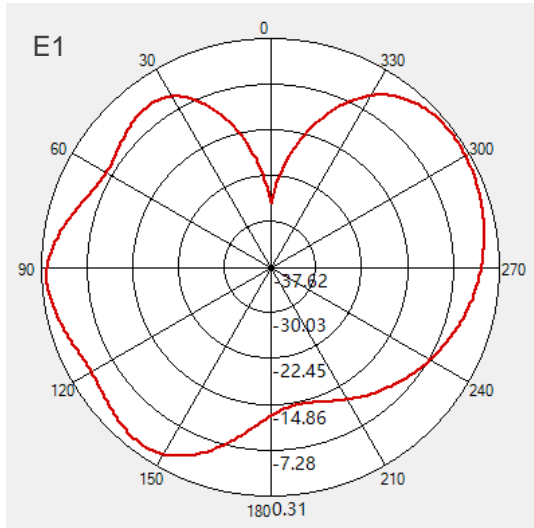
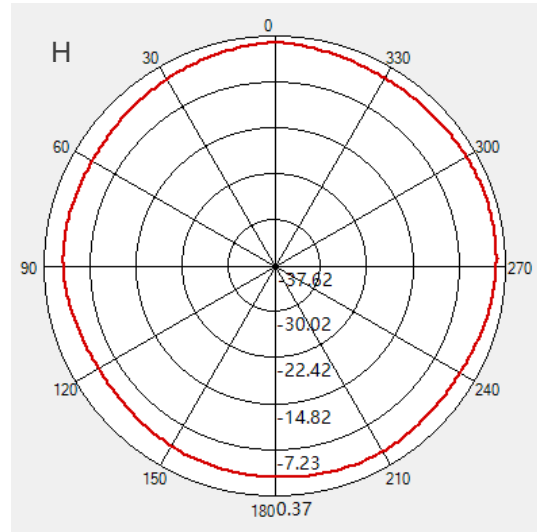
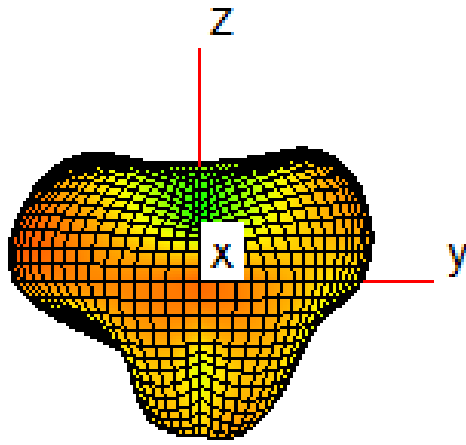


<b>Frequency (MHz)</b>	2400	2500	5150	5850
<b>Gain (dBi)</b>	0.52	0.50	0.38	0.66

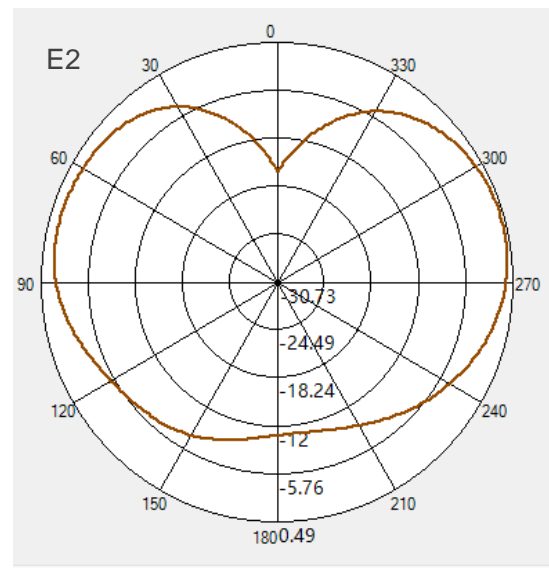
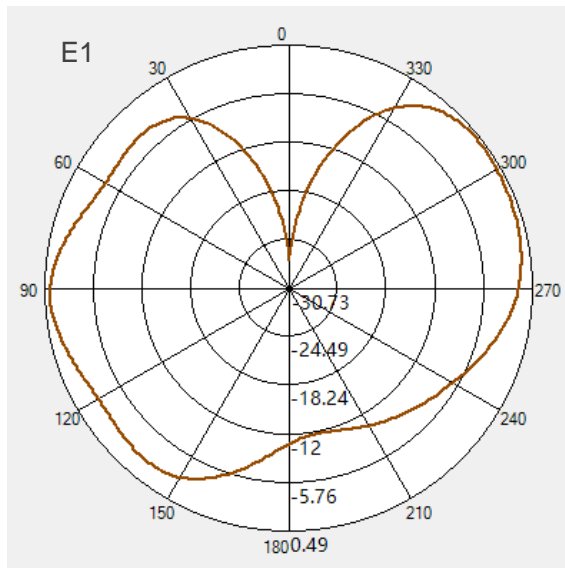
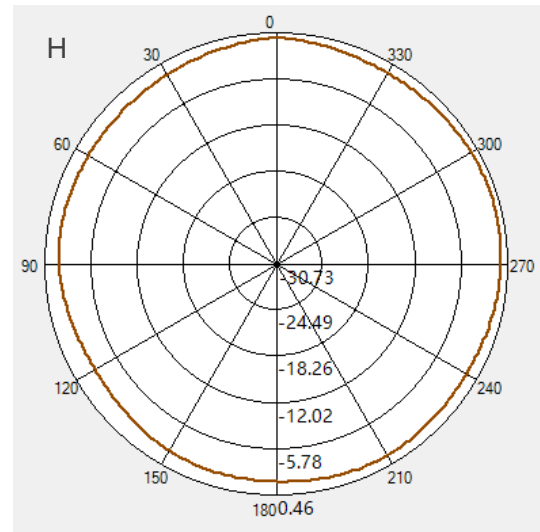
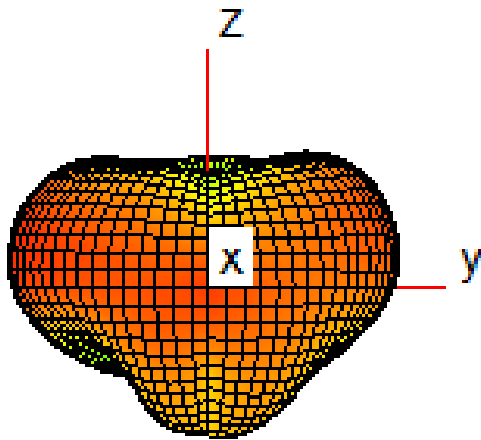
## 4.5. Radiation Pattern



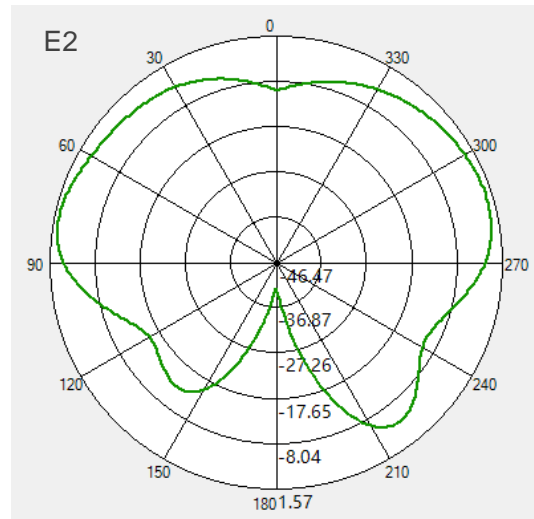
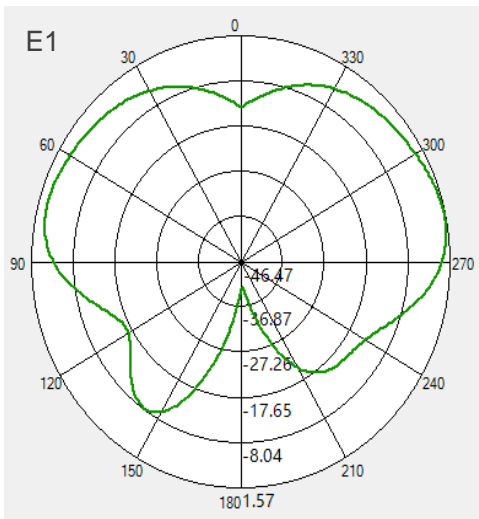
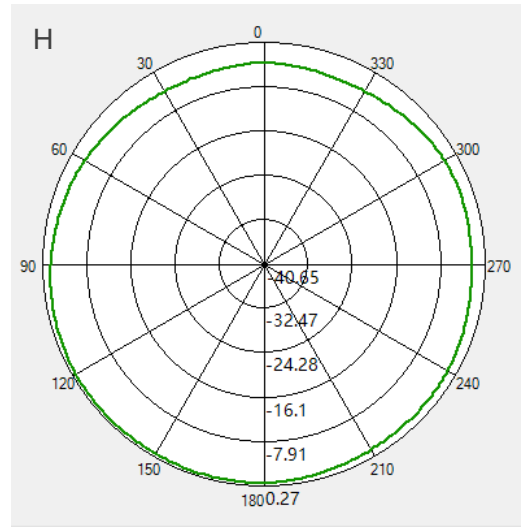
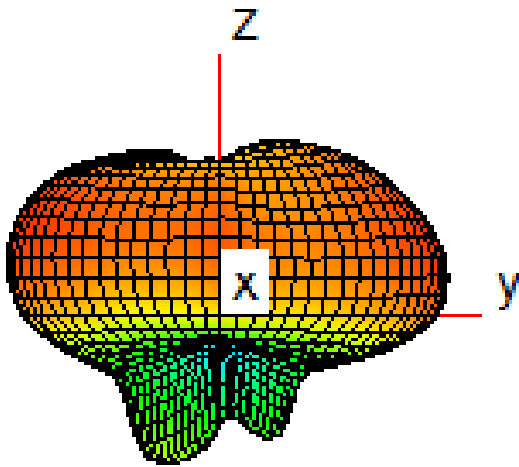
4.5.1. 2400 MHz



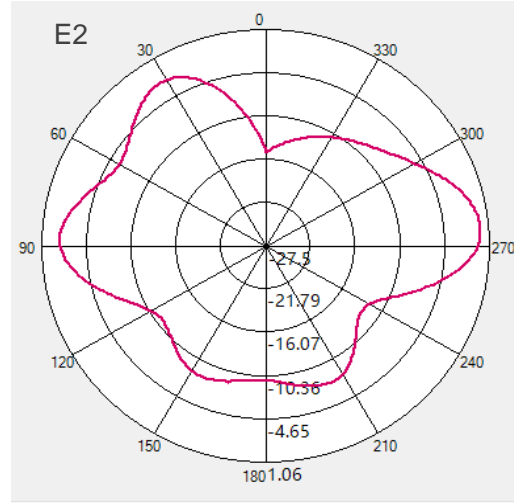
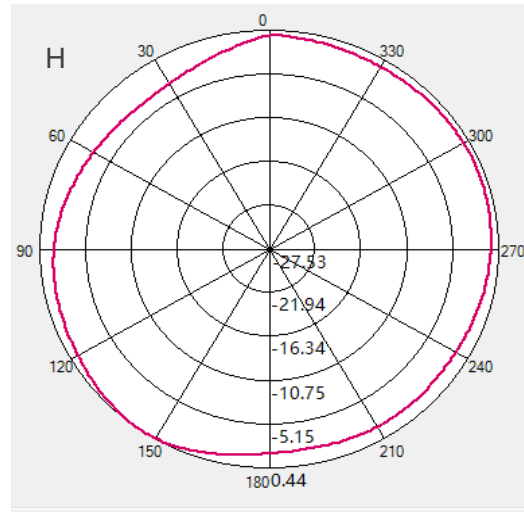
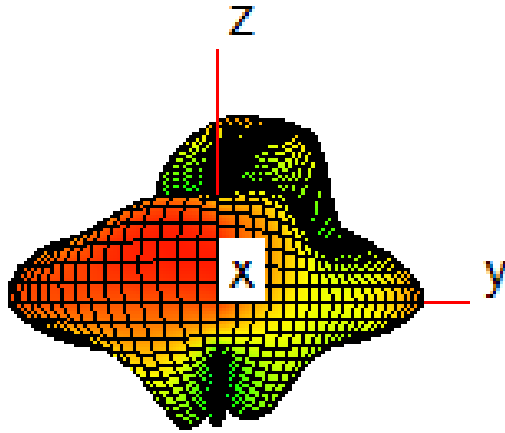
4.5.2. 2500 MHz



4.5.3. 5150 MHz



**4.5.4. 5850 MHz**





## 5 Product Size

