

# Antenna

# YF0011SA Datasheet

## Antenna Services

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# About the Document

## Revision History

Version	Date	Author	Note
-	2023-05-15	Lucky FENG/ Sly LIU	Creation of the document
1.0	2023-05-15	Lucky FENG/ Sly LIU	First official release

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## 1 Product Description

Quectel Wi-Fi antenna covers 2.4 GHz and 5 GHz dual-bands, fully satisfying customers' requirements for Wi-Fi 5 and Wi-Fi 6. There are various antenna types, including built-in FPC/PCB 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.

## 2 Product Features

- 2.4 & 5.8 GHz Wi-Fi
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	2400–2500 MHz, 5150–5850 MHz
Input Impedance	50 $\Omega$
VSWR	$\leq 2.0$
Gain	$\leq 7.0$ dBi
Polarization Type	Linear

#### Mechanical Specifications

Antenna Size	38.9 × 9 mm
Casing	FPC
Cable Type& Length	$\Phi$ 1.13 Black & L = 100 mm
Connector Type	IPEX MHF 4L
Color	Black
Weight	Typ. 0.5 g
Working Temperature	-40 °C to +85 °C
Mounting Type	Adhesive

## 4 Overall Performance

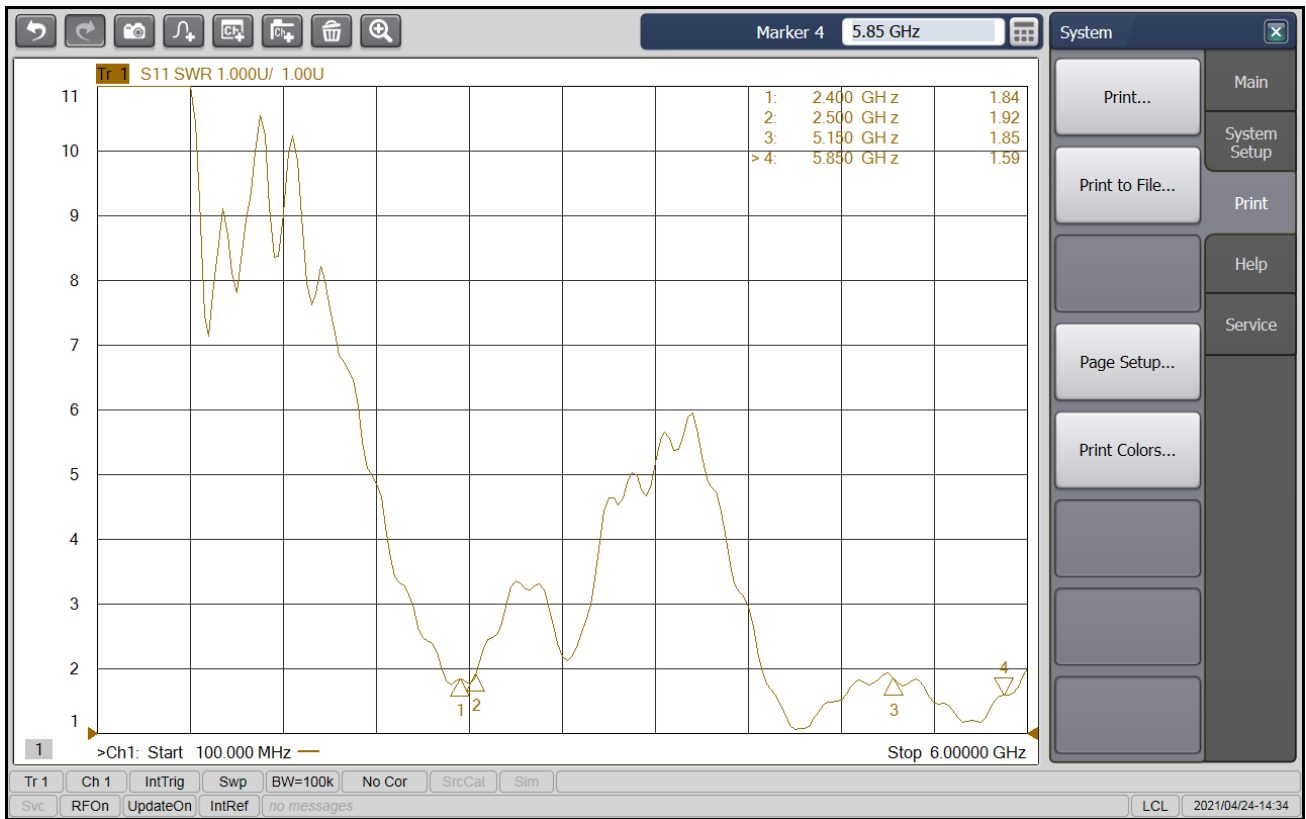
### 4.1. Test Environment

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



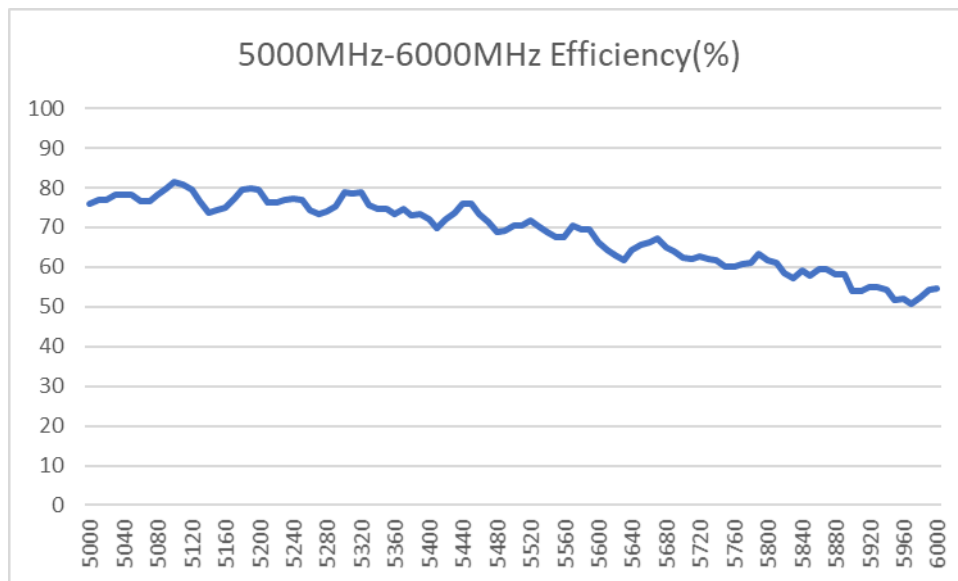
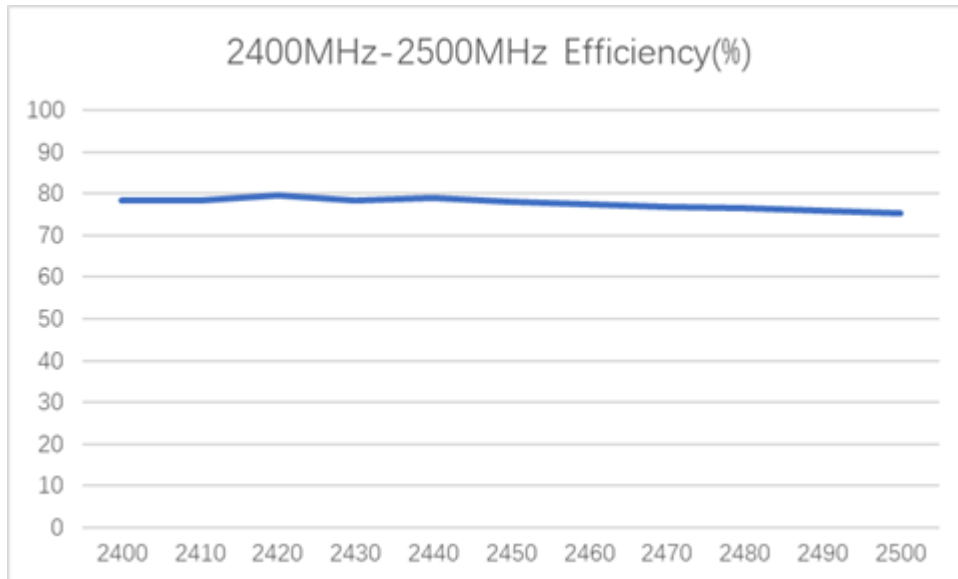


## 4.2. VSWR



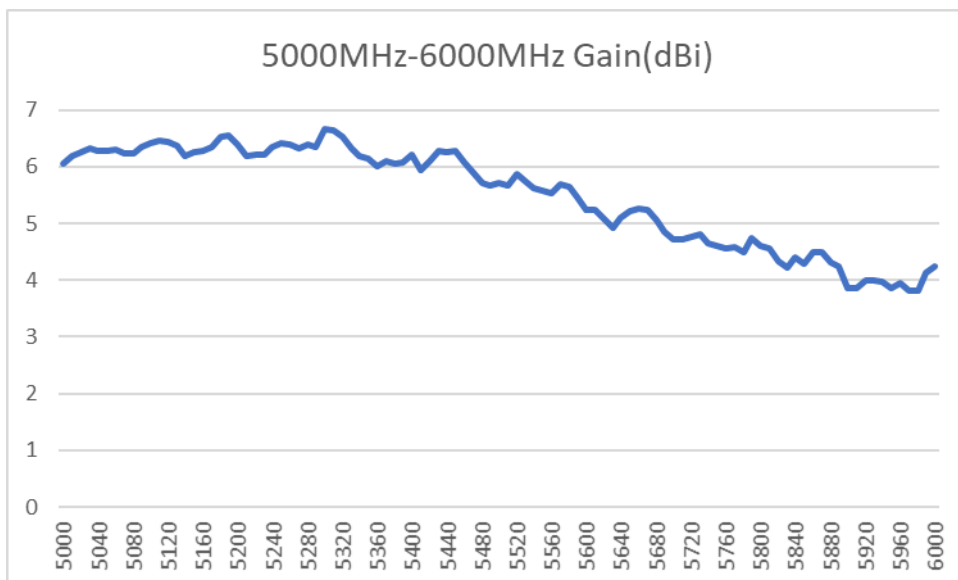
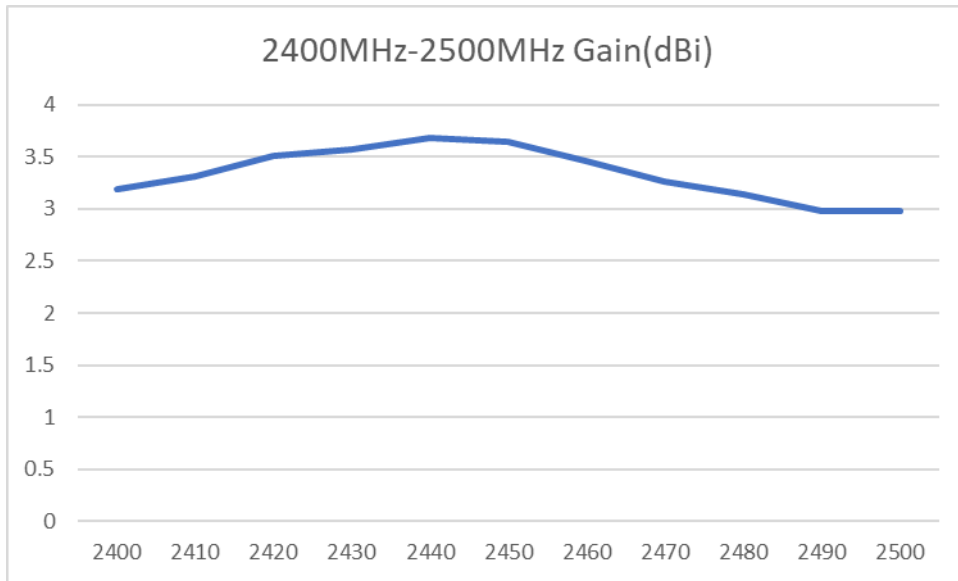
Frequency (MHz)	2400	2500	5150	5850
VSWR	1.85	1.92	1.85	1.59

### 4.3. Efficiency



<b>Frequency (MHz)</b>	2400	2450	2500	5150	5550	5850
<b>Efficiency (%)</b>	78.49	78.11	75.30	74.32	65.70	57.84

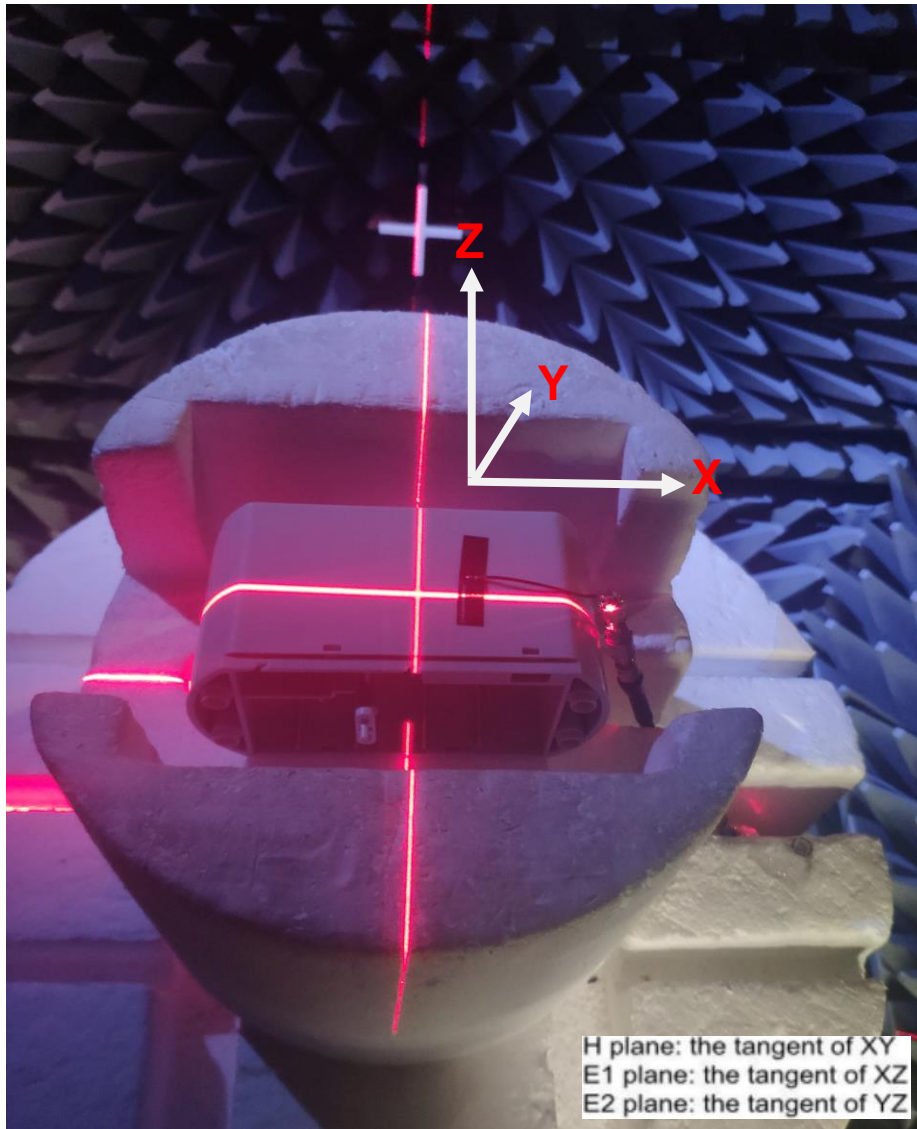
### 4.4. Gain



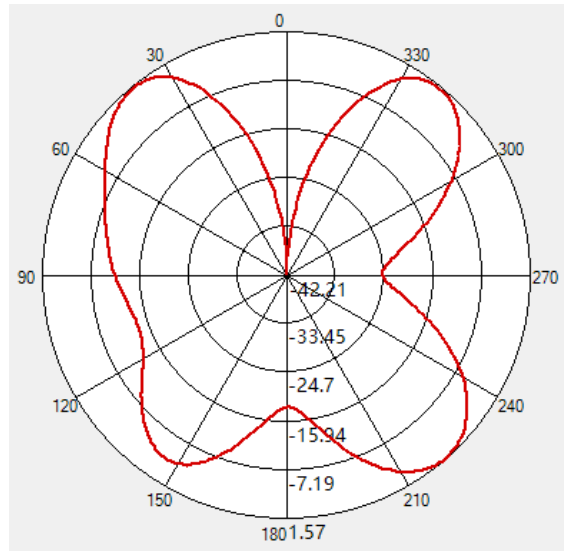
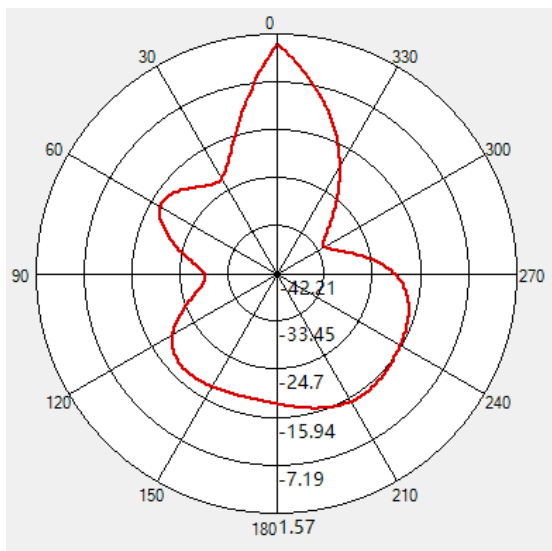
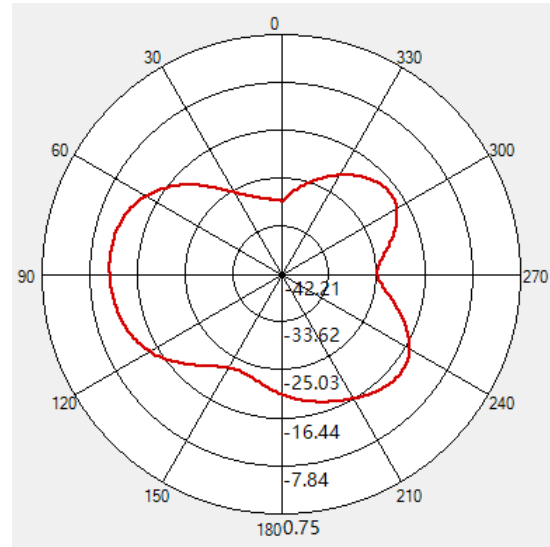
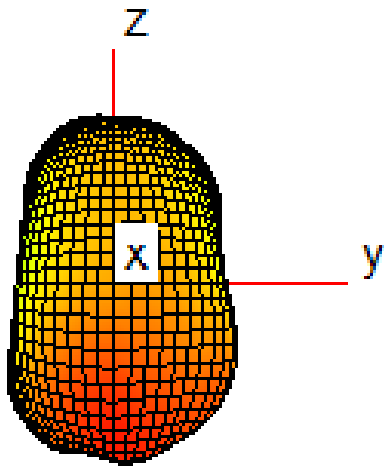
<b>Frequency (MHz)</b>	2400	2450	2500	5150	5550	5850
<b>Gain (dBi)</b>	3.18	3.65	2.98	6.29	5.57	4.28

## 4.5. Radiation Patterns

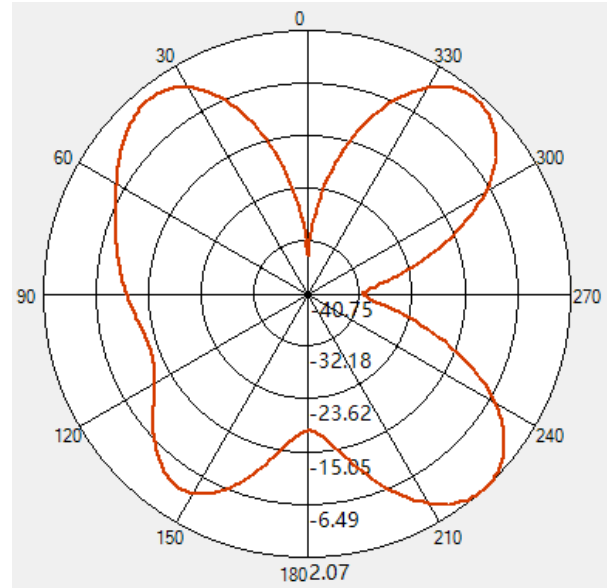
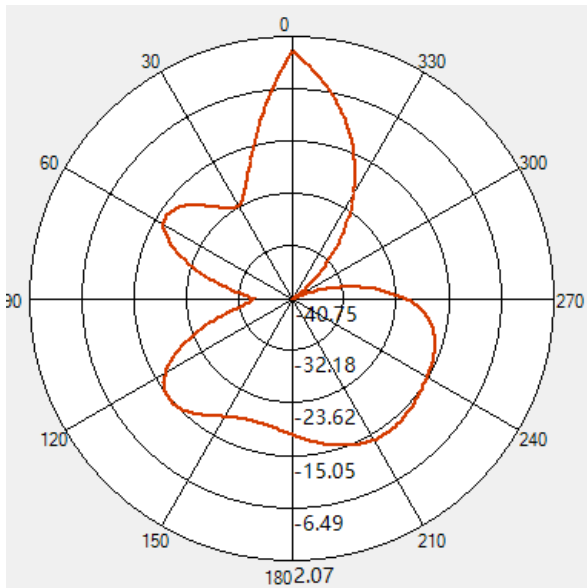
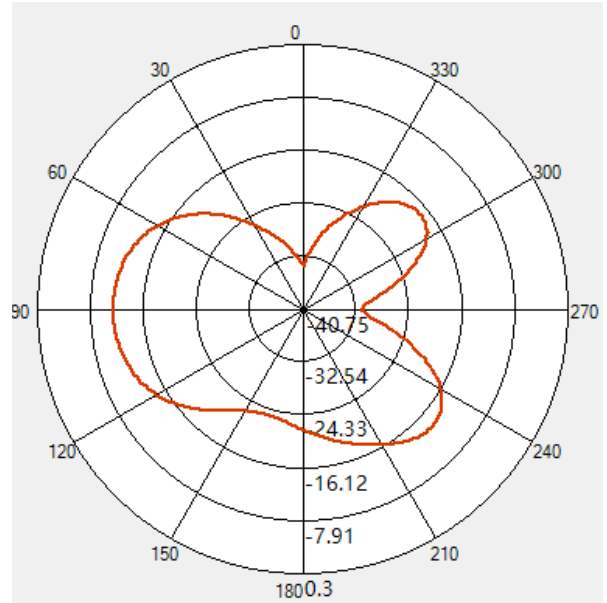
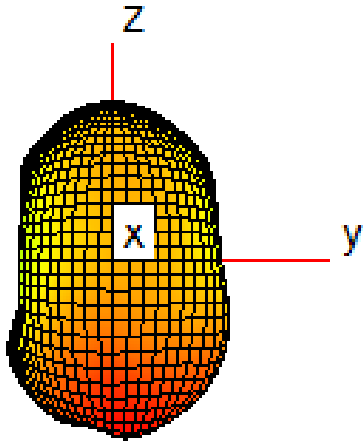
- Test condition: assembled in test device



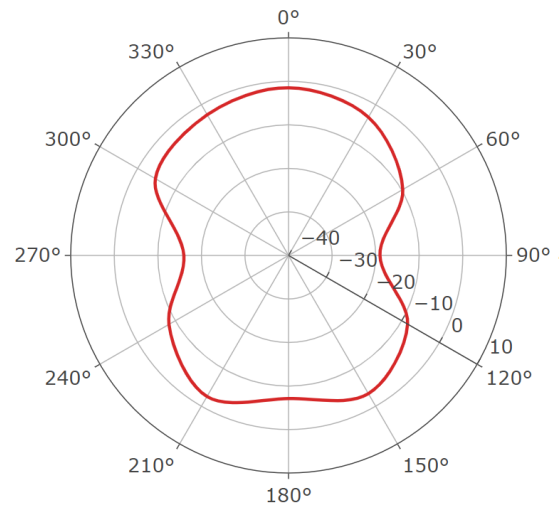
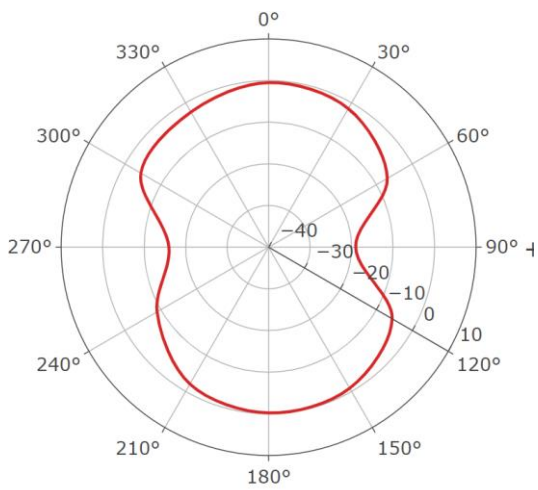
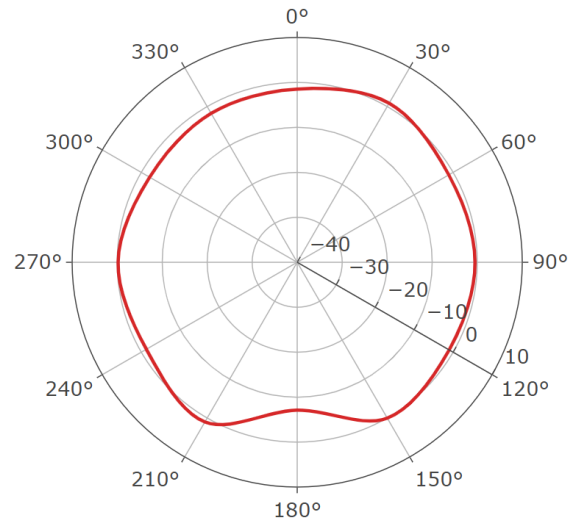
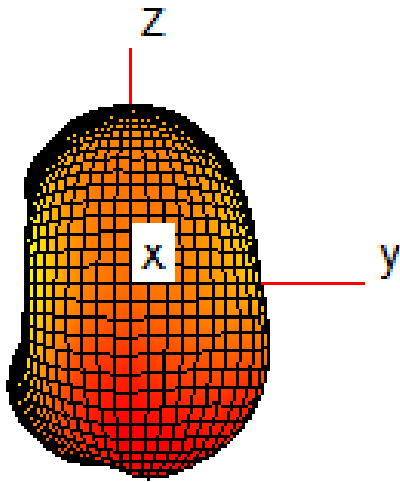
4.5.1. 2400 MHz



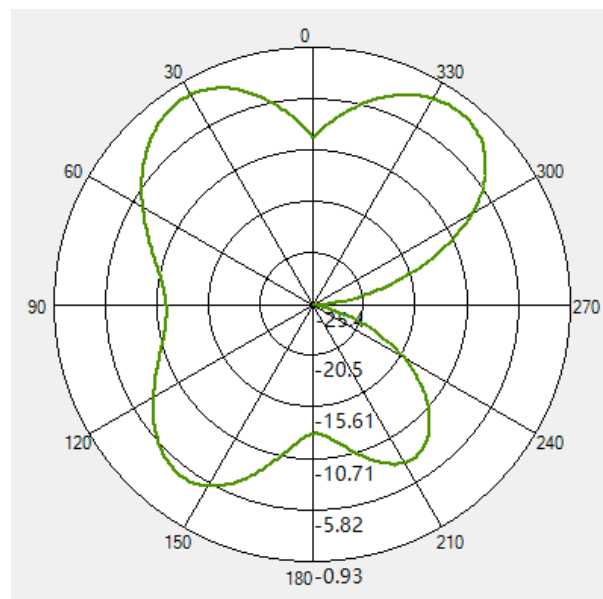
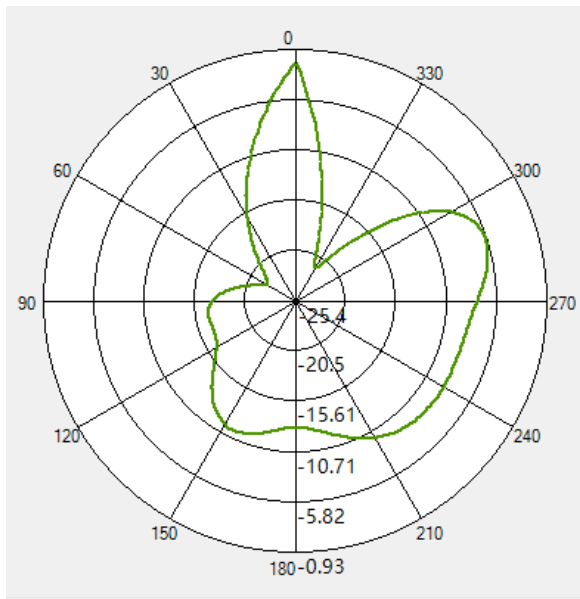
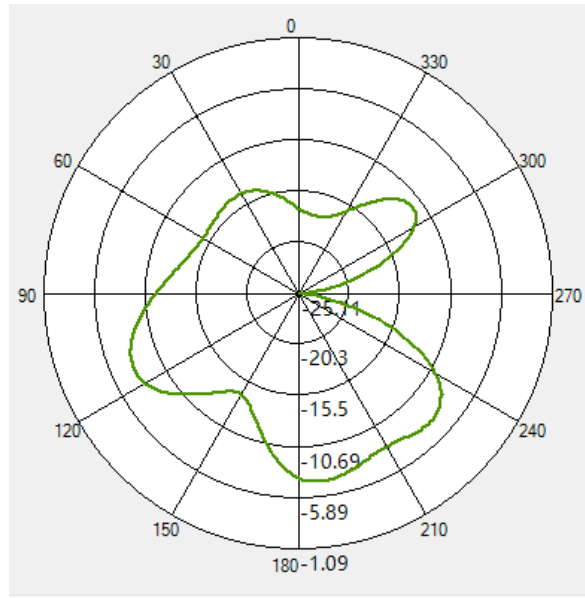
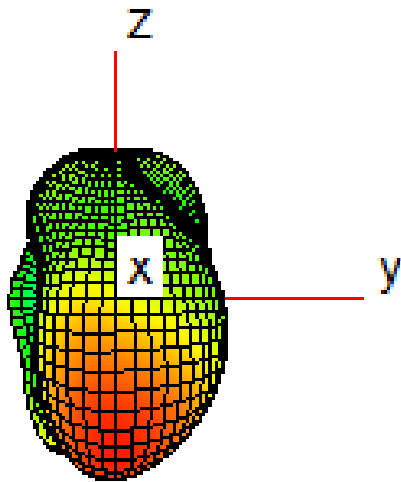
4.5.2. 2450 MHz



**4.5.3. 2500 MHz**

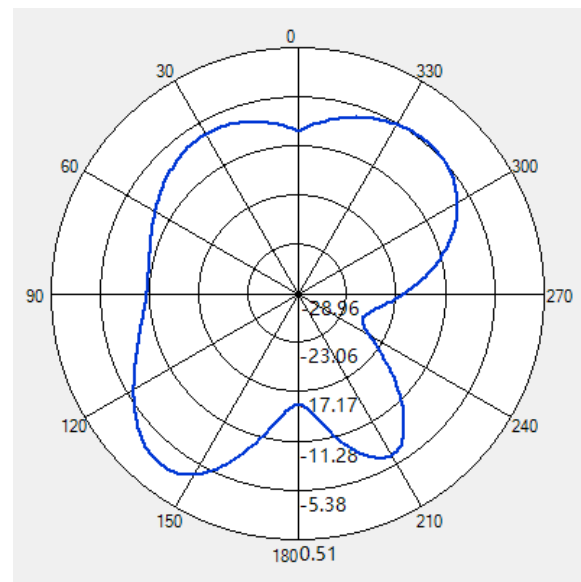
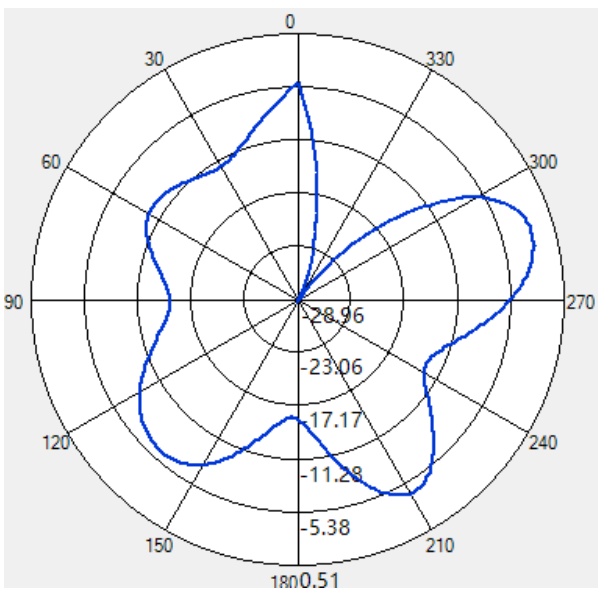
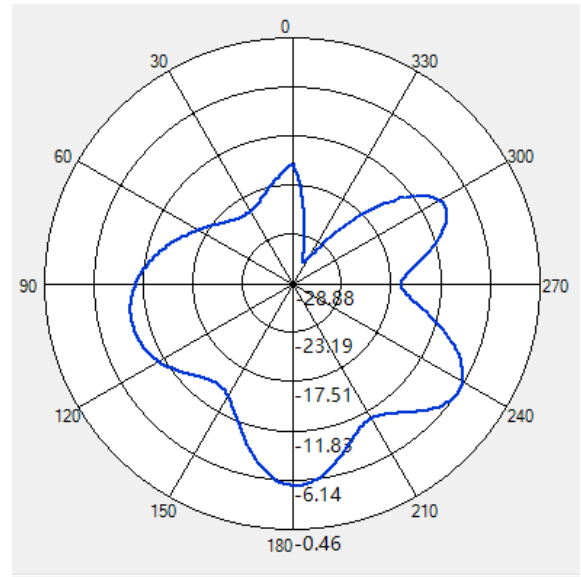
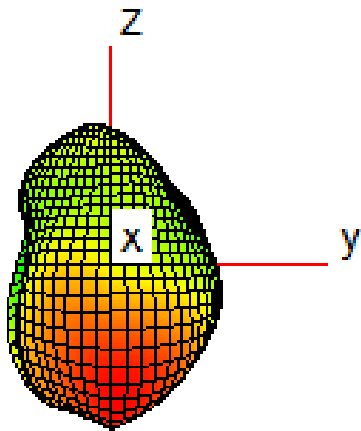


4.5.4. 5150 MHz

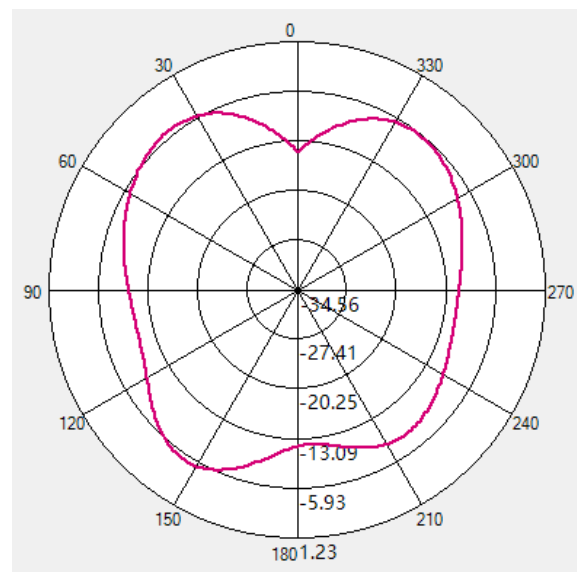
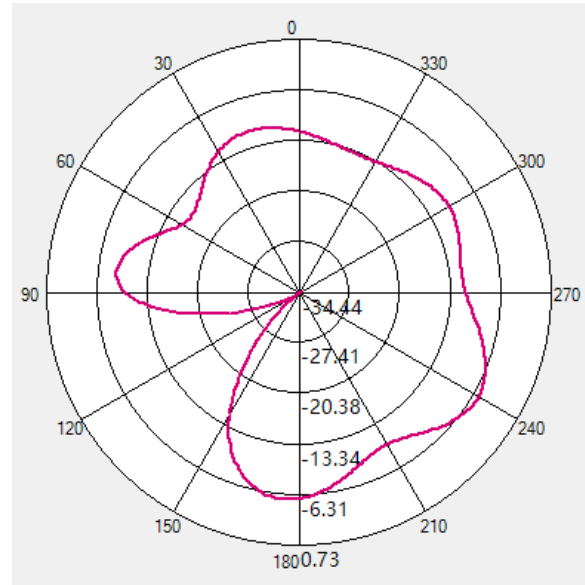
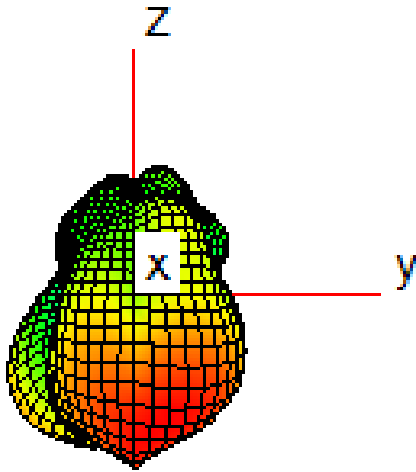




4.5.5. 5550 MHz



4.5.6. 5850 MHz



## 5 Product Size

