

# Antenna

# YF0023KA Datasheet

## Antenna Services

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# About the Document

## Revision History

Version	Date	Author	Note
-	2022-09-13	Kane LIU Toby WANG	Creation of the document
1.0	2022-09-13	Kane LIU Toby WANG	First official release

## Contents

About the Document .....	3
Contents .....	4
<b>1 Product Description.....</b>	<b>5</b>
<b>2 Product Features .....</b>	<b>5</b>
<b>3 Product Specifications .....</b>	<b>6</b>
<b>4 Overall Performance.....</b>	<b>7</b>
4.1. Test Environment .....	7
4.2. Return Loss.....	8
4.3. Efficiency .....	9
4.4. Gain.....	10
4.5. Radiation Pattern .....	10
4.5.1. 2400 MHz .....	10
4.5.2. 2500 MHz .....	11
4.5.3. 4900 MHz .....	12
4.5.4. 5850 MHz .....	12
4.5.5. 5925 MHz .....	13
4.5.6. 7125 MHz .....	13
<b>5 Product Size .....</b>	<b>14</b>

## 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.

## 2 Product Features

- Wi-Fi
- High efficiency
- Excellent performance



### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	2400–2500 MHz, 4900–5850 MHz, 5925–7125 MHz
Input Impedence	50 $\Omega$
Return Loss	$\leq -8.8$
Gain	$\leq 5$ dBi
Polarization Type	Linear

#### Mechanical Specifications

Antenna Size (mm)	22.90 × 11.70
Material	FPC
Cable Type& Length	$\Phi$ 1.13 Black & L=125 mm
Connector	IPEX MHF I
Color	Black
Weight	Typical 0.45 g
Mounting Type	Adhesive
Working Temperature	-40 °C to +85 °C

## 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



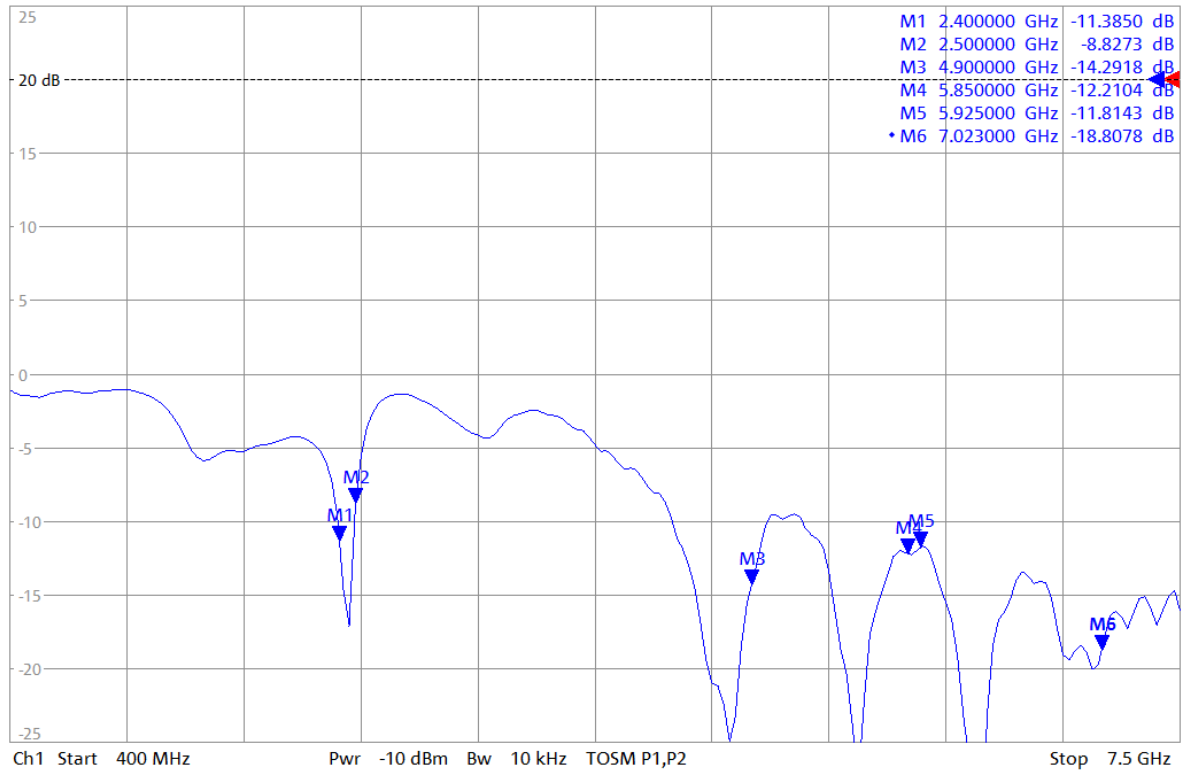


## 4.2. Return Loss

1/18/2021 1:22:01 AM  
1311.6010K44-103612-kz

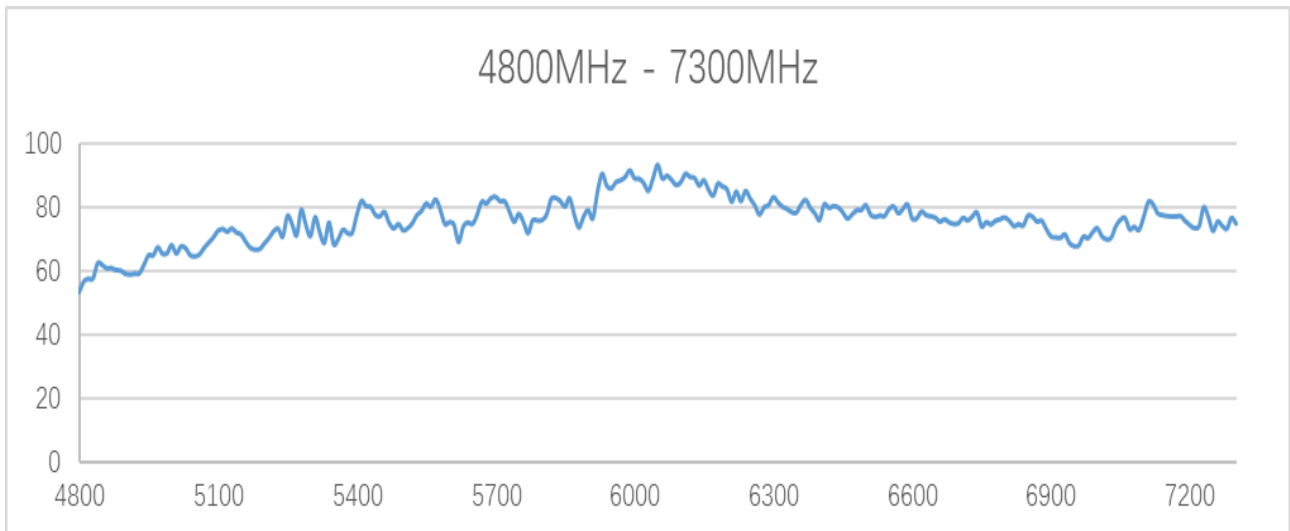
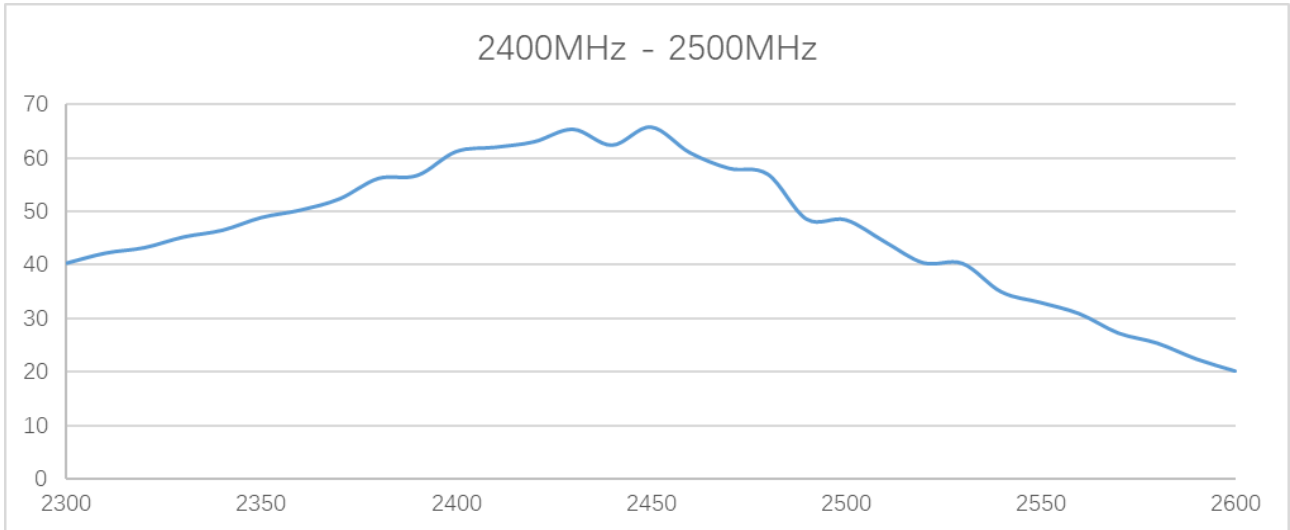
Trc1 — S11 dB Mag 5 dB/ Ref 20 dB Cal  
Mem2[Trc1] — S11 dB Mag 5 dB/ Ref 20 dB Invisible

1 ▾



Frequency (MHz)	2400	2500	4900	5850	5925	7125
Return Loss (dB)	-11.38	-8.83	-14.29	-12.21	-11.81	-18.81

### 4.3. Efficiency



<b>Frequency (MHz)</b>	2400	2500	4900	5850	5925	7125
<b>Efficiency (%)</b>	61.26	48.51	59.43	80.27	86.34	80.33

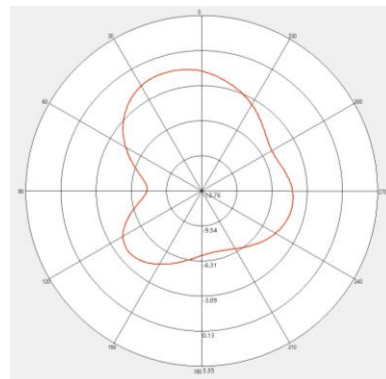
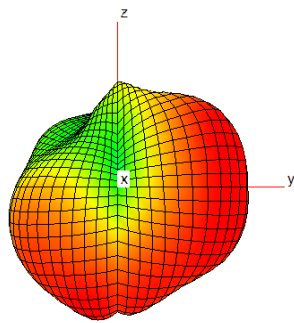
### 4.4. Gain

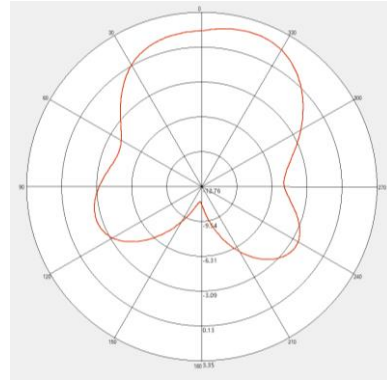
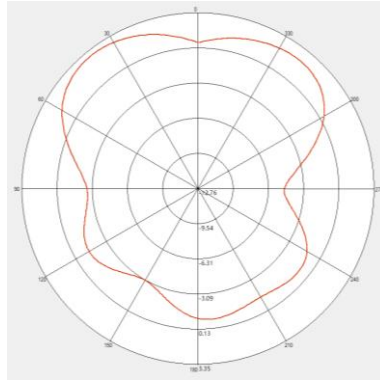


Frequency (MHz)	2400	2500	4900	5850	5925	7125
Gain (dBi)	2.73	1.56	2.35	3.54	4.31	4.49

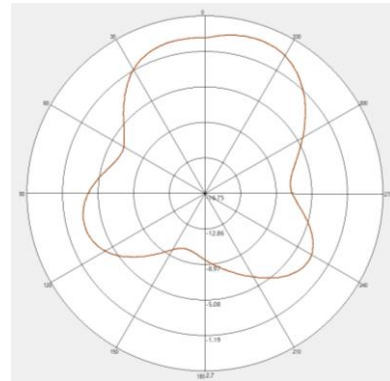
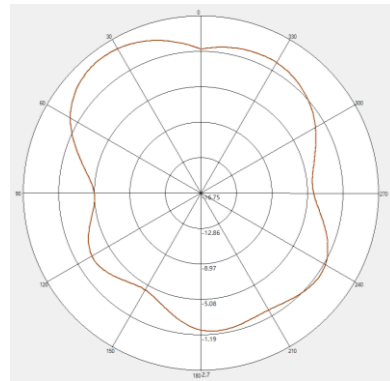
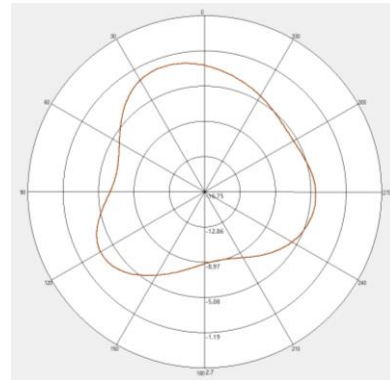
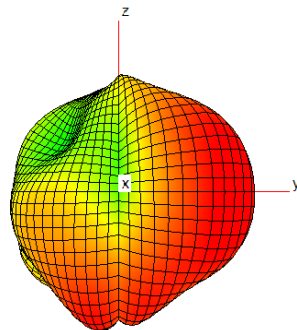
### 4.5. Radiation Pattern

#### 4.5.1. 2400 MHz

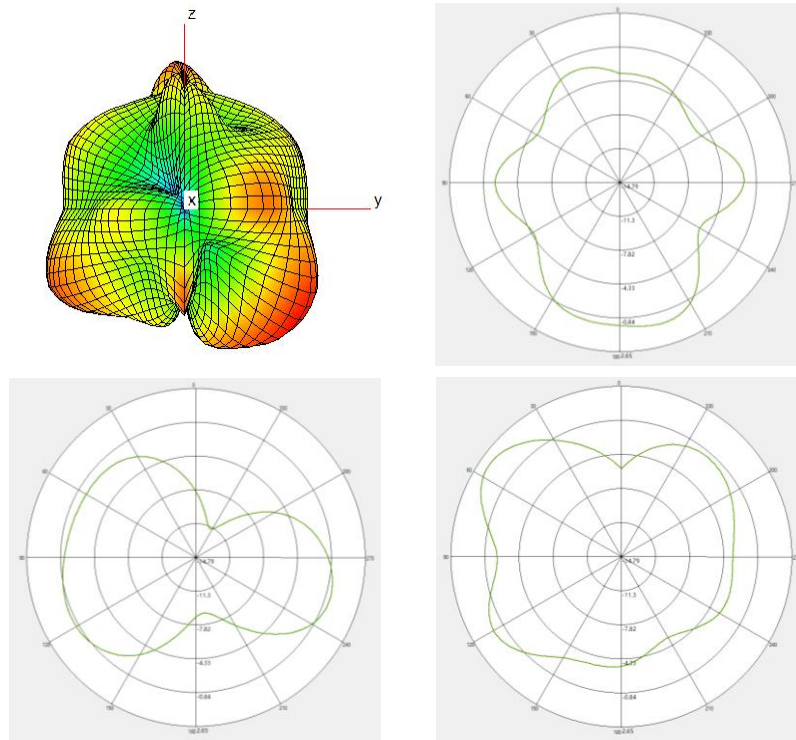




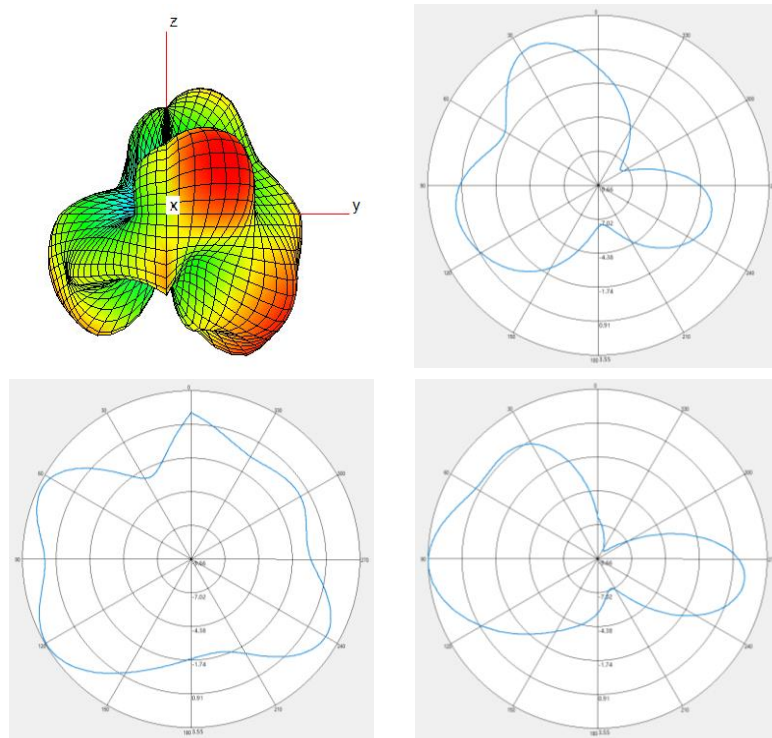
**4.5.2. 2500 MHz**



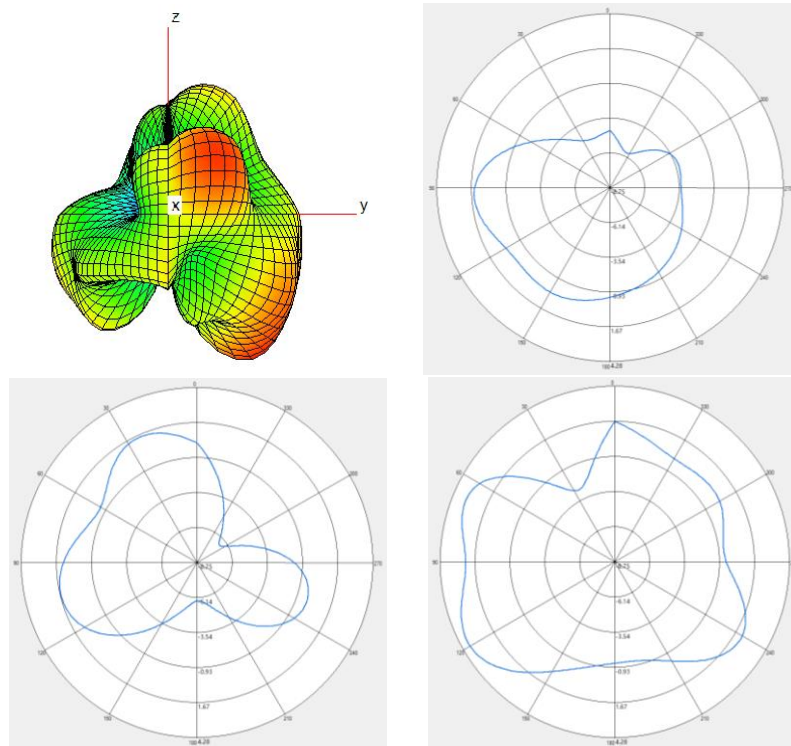
**4.5.3. 4900 MHz**



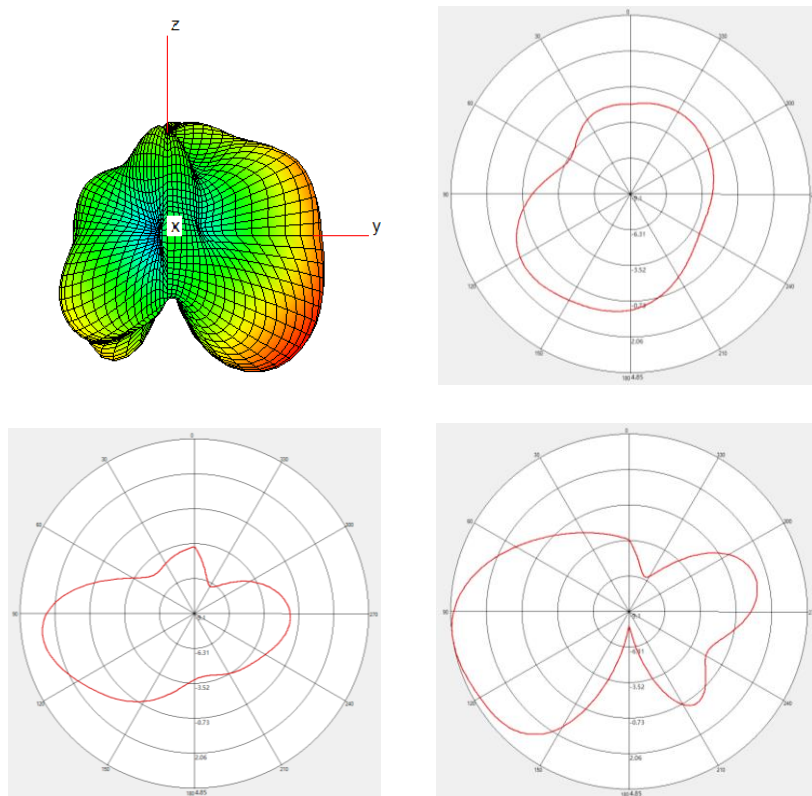
**4.5.4. 5850 MHz**



**4.5.5. 5925 MHz**



**4.5.6. 7125 MHz**



## 5 Product Size

