

Antenna

YF0029AA Datasheet

Antenna Services

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About the Document

Revision History

Version	Date	Author	Note
-	2021-04-01	Kenny YIN	Creation of the document
1.0	2021-04-01	Kenny YIN	First official release
1.1	2021-11-30	Kenny YIN	Updated the product description in Chapter 1.

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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

- 2.4–7.15 GHz Wi-Fi Tri-Band
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	2400–2500 MHz; 5150–5850 MHz; 5925–7125 MHz
Input Impedance	50 Ω
VSWR	≤ 2.3
Gain	≤ 6.64 dBi
Polarization Type	Linear

Mechanical Specifications

Antenna Size	29.98 mm \times 30.85 mm
Casing	FPC
Connector Type	IPEX MHF I
Working Temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Radome Color	Black

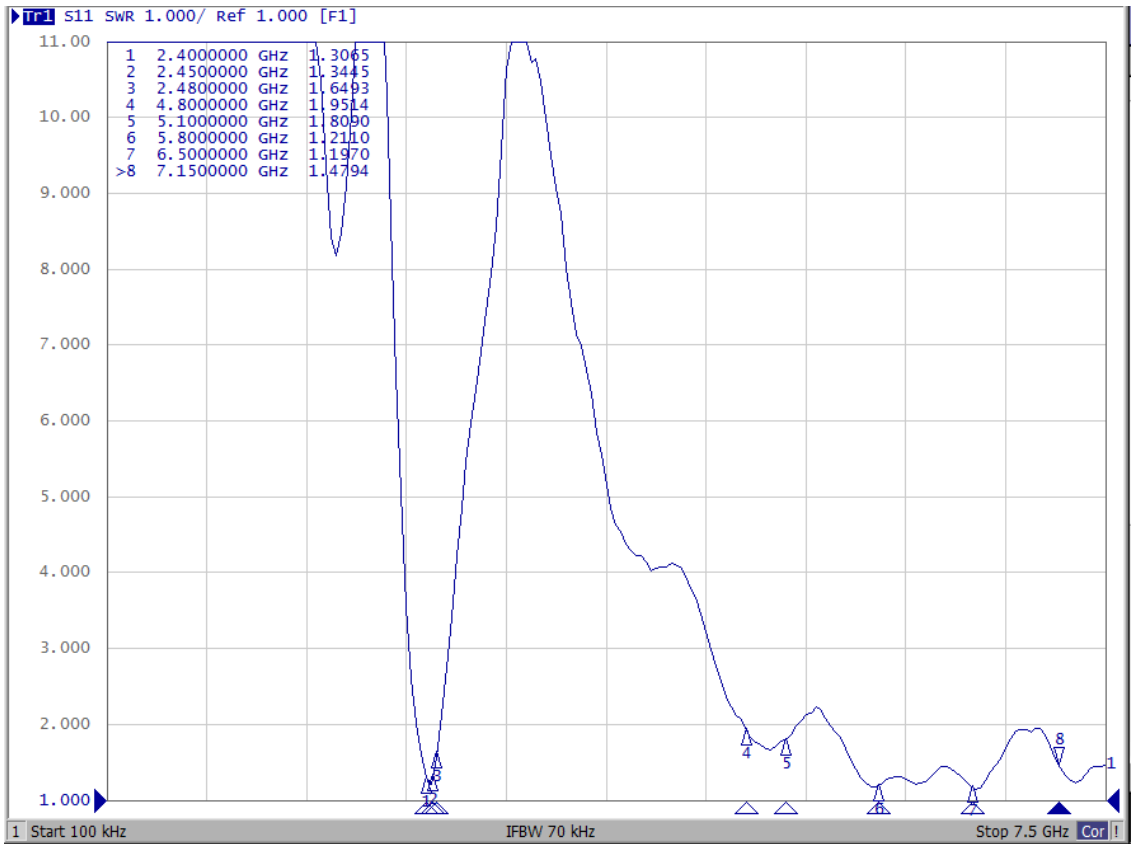
4 Overall Performance

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

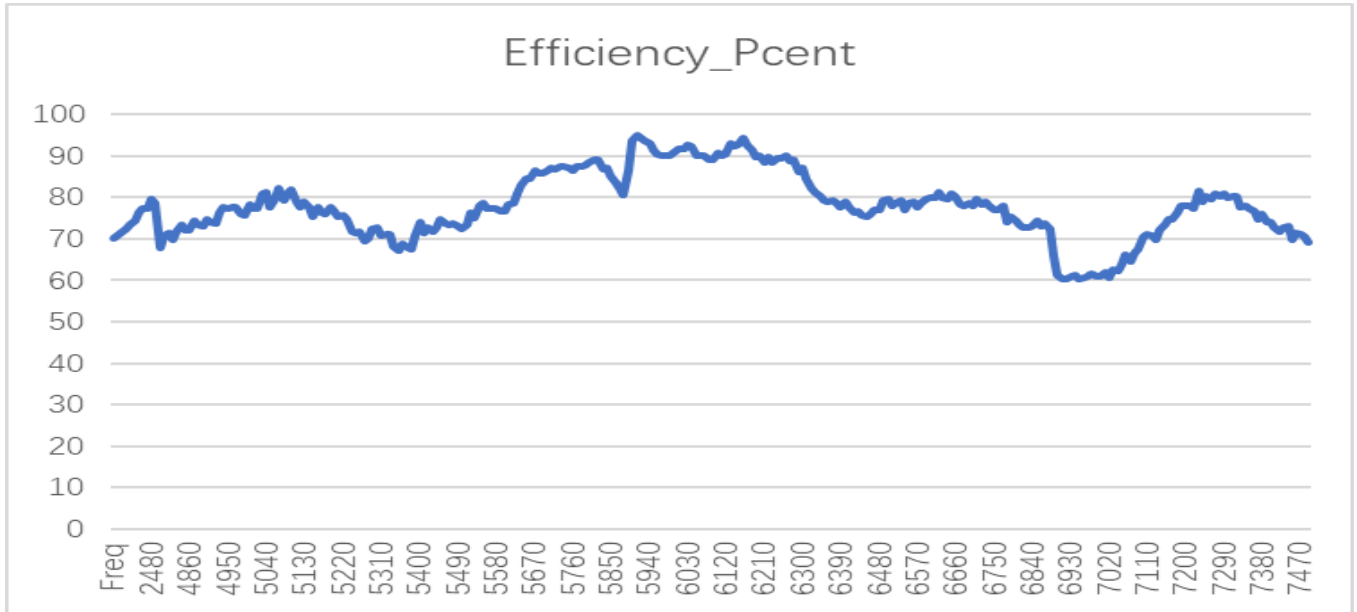


Frequency (MHz)	2400	2450	2480	4800	5100	5800	6500	7150
VSWR	1.55	1.25	1.64	1.95	1.80	1.21	1.19	1.27

Note: test on 3mm ABS.

4.3. Efficiency

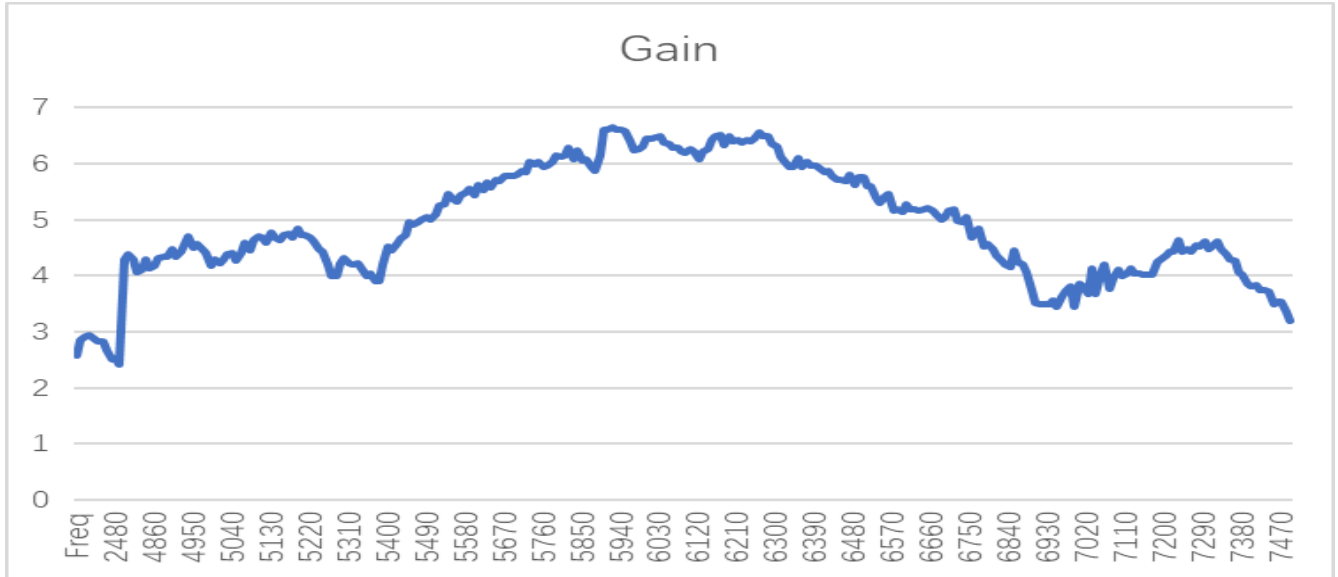
2400–2500 MHz; 5150–5850 MHz; 5925–7125 MHz



Frequency (MHz)	2400	2450	2500	5150	5550	5850	6500	7150
Efficiency (%)	70.14	74.49	79.34	77.73	77.94	87.23	76.84	72.24

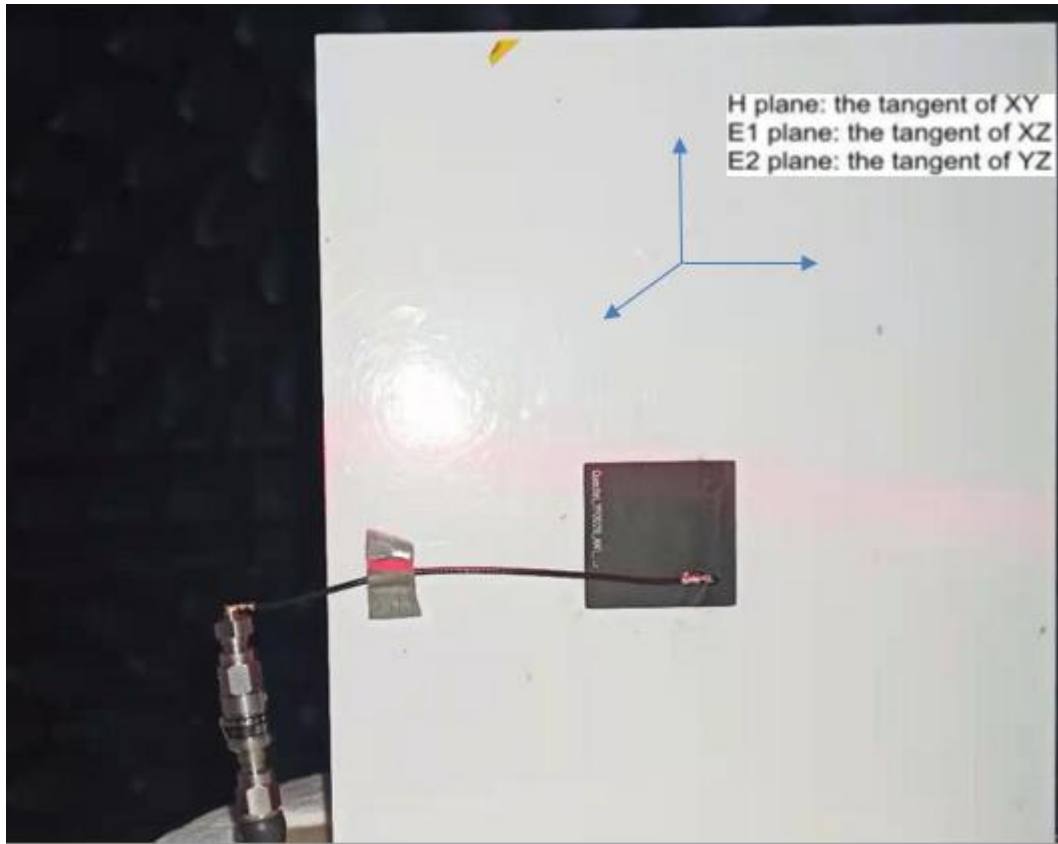
4.4. Gain

2400–2500 MHz; 5150–5850 MHz; 5925–7125 MHz

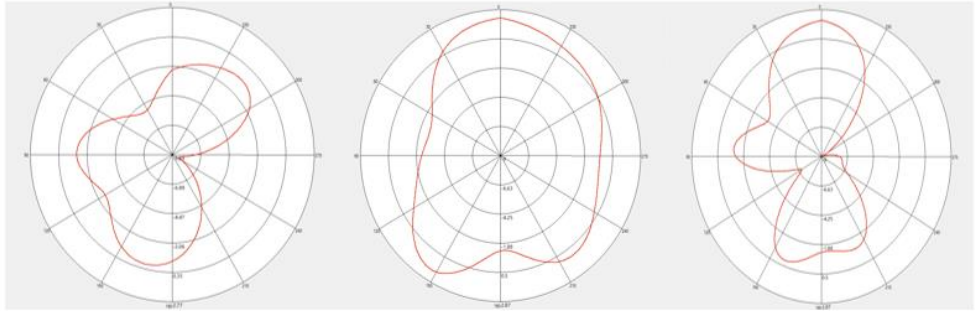
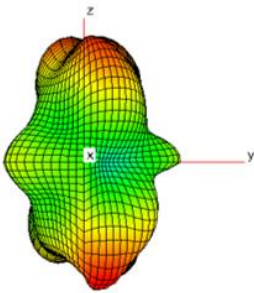


Frequency (MHz)	2400	2450	2500	5150	5550	5850	6500	7150
Gain (dBi)	2.57	2.82	2.42	4.68	5.45	6.23	5.30	4.04

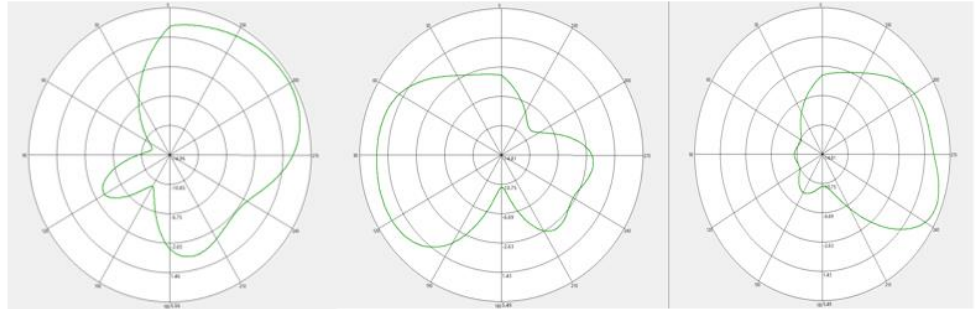
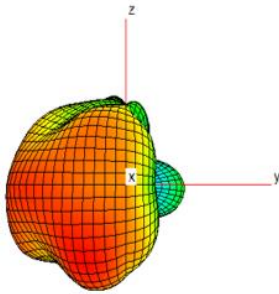
4.5. Radiation Patterns



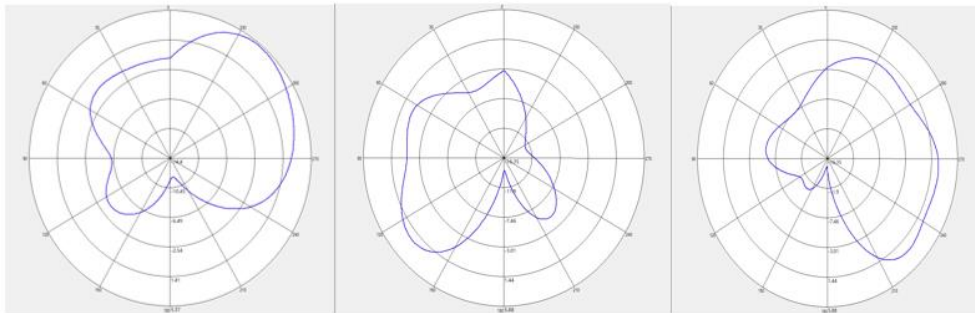
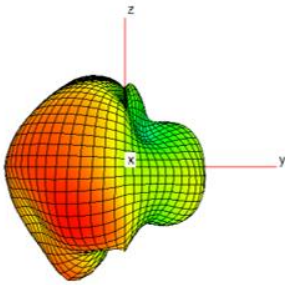
2450MHz



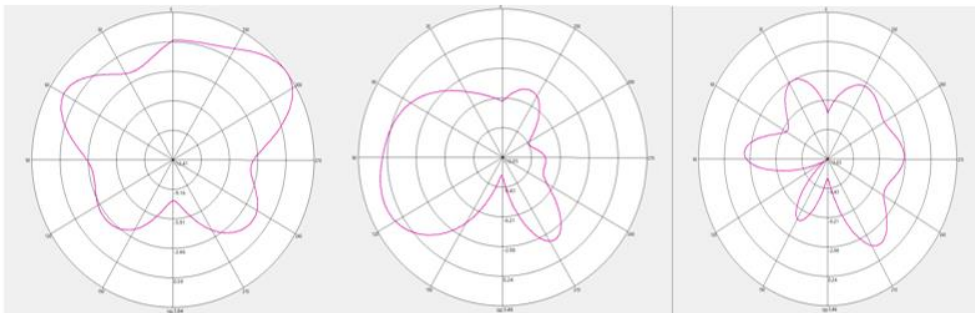
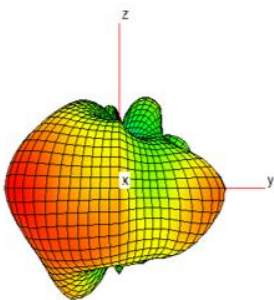
5550MHz



6550MHz



7000MHz



5 Product Size

