

Antenna

YF0027CA Datasheet

Antenna Services

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About the Document

Revision History

Version	Date	Author	Note
-	2022-08-18	Sly LIU/ Lucky FENG	Creation of the document
1.0	2023-01-15	Sly LIU/ Lucky FENG	First official release

Contents

About the Document.....	3
Contents	4
1 Product Description.....	5
2 Product Features	5
3 Product Specifications	6
4 Overall Performance.....	7
4.1. Test Environment	7
4.2. VSWR.....	8
4.3. Efficiency	9
4.4. Gain.....	10
4.5. Radiation Pattern	11
5 Product Size	13

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

- 2.4G & 5G & 7.15G 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	≤ 2.0
Gain	≤ 6.5 dBi
Polarization Type	Linear

Mechanical Specifications

Antenna Size	38 × 7mm
Casing	FPC
Cable Type & Length	Φ 1.13 Black & L = 100 mm
Connector Type	IPEX MHF IV
Color	Black
Weight	Typ. 0.45 g
Mounting Type	Adhesive & Soldering
Working Temperature	-40 °C to +85 °C

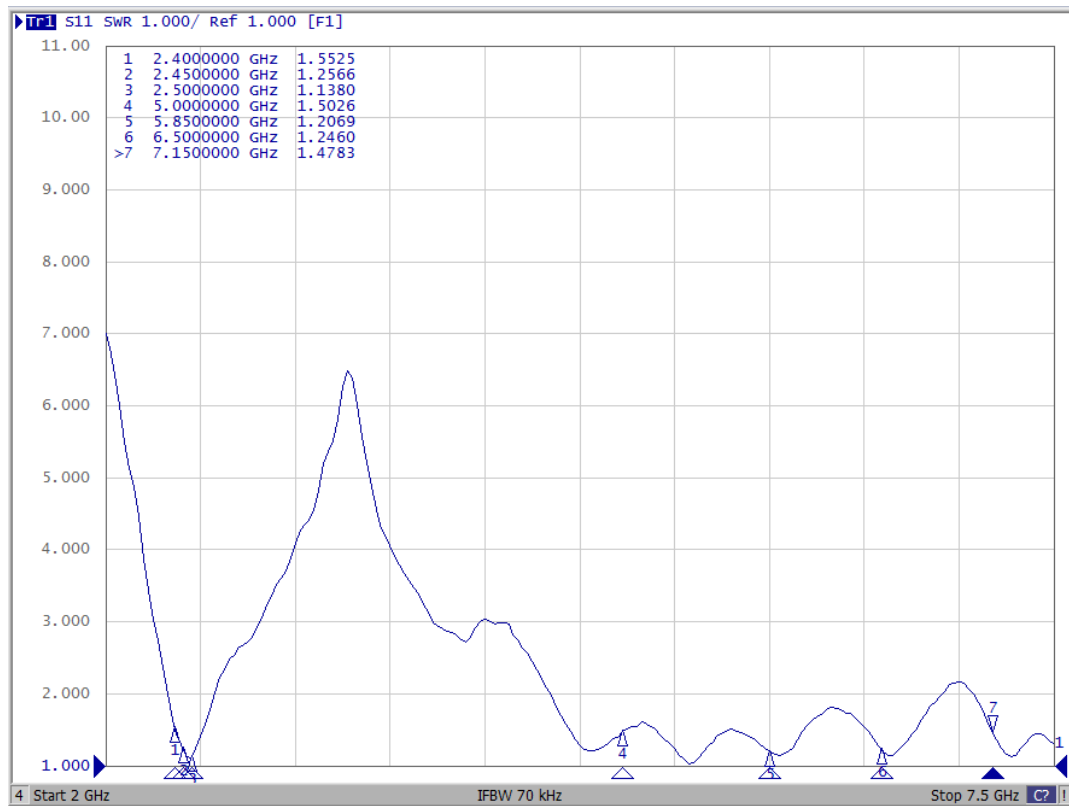
4 Overall Performance

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



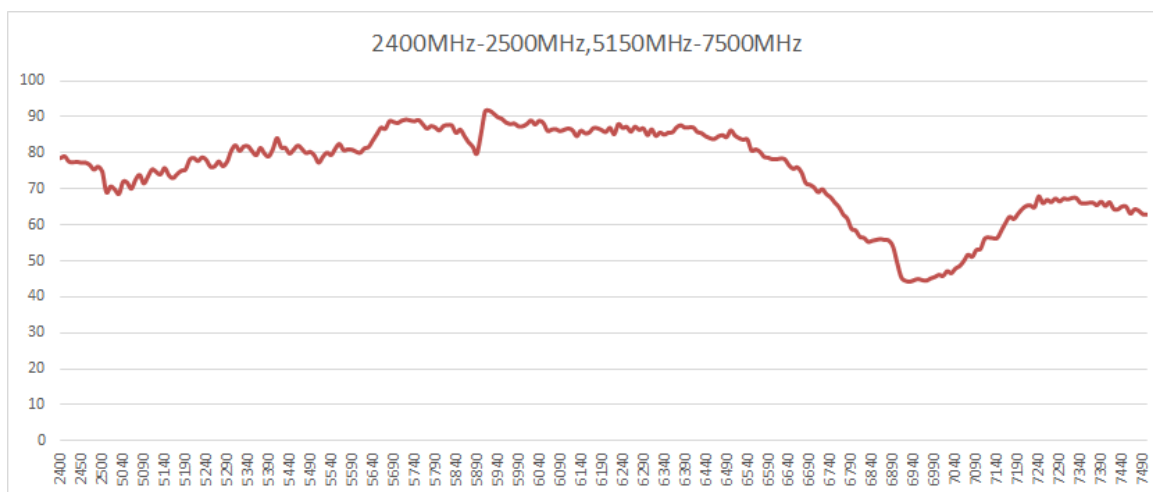
4.2. VSWR



Frequency (MHz)	2400	2450	2500	5000	5850	6500	7150
VSWR	1.55	1.25	1.13	1.50	1.20	1.24	1.47

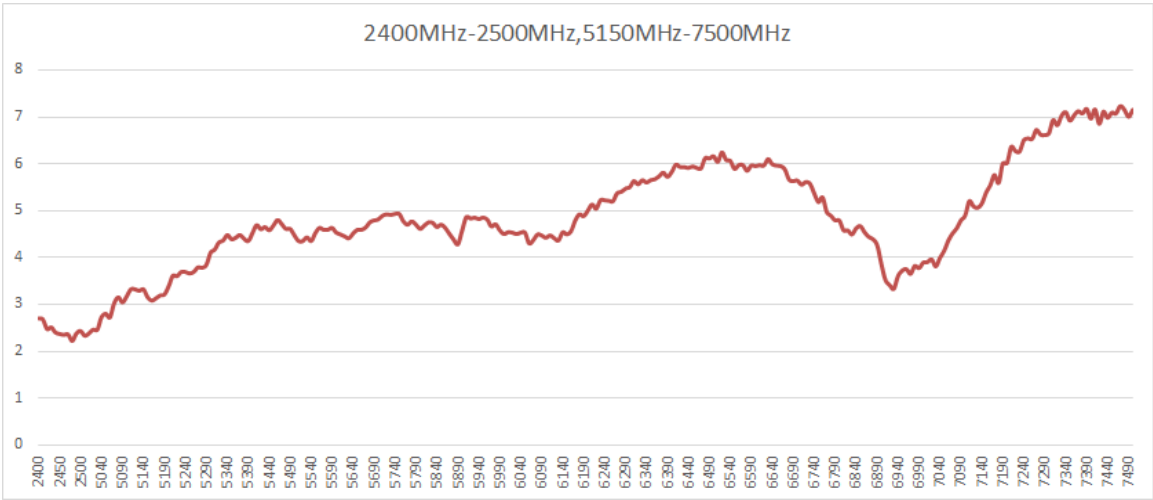
Note: stick on a 3 mm thick ABS board.

4.3. Efficiency



Frequency (MHz)	2400	2450	2500	5000	5850	6500	7150
Efficiency (%)	78	77	75	69	86	86	58

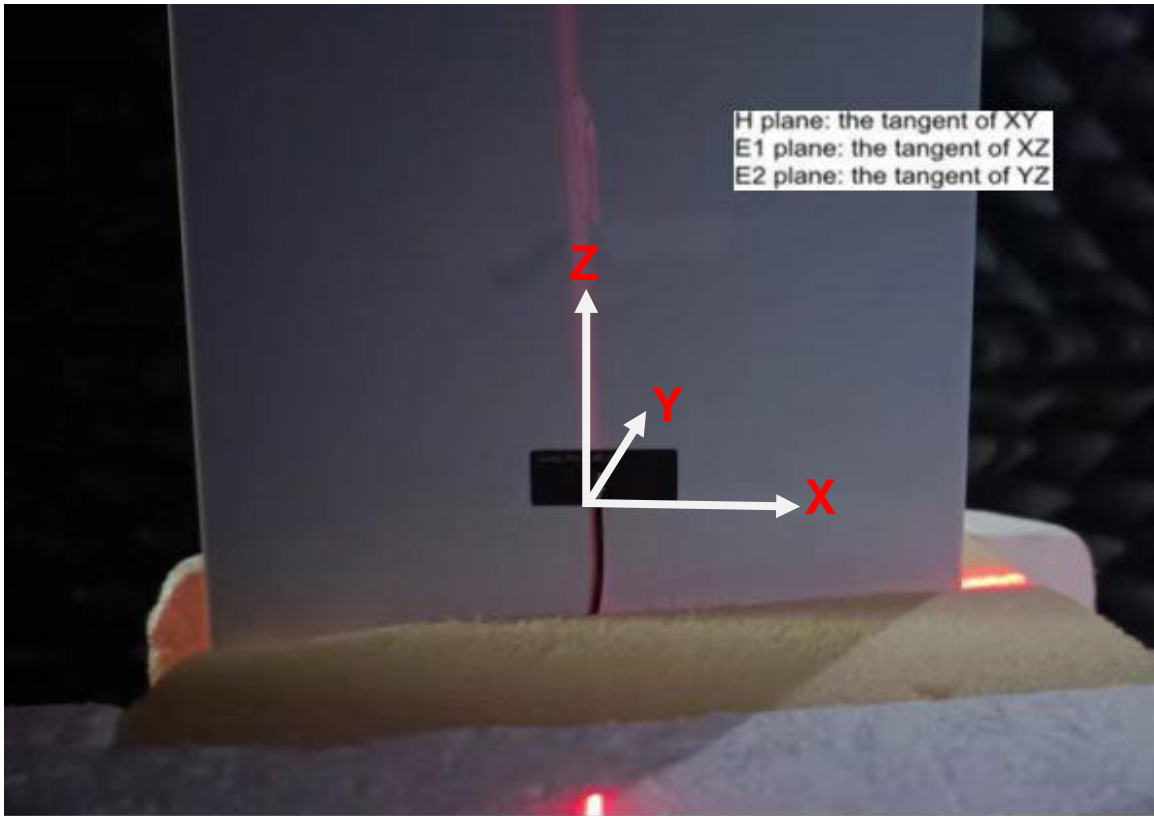
4.4. Gain



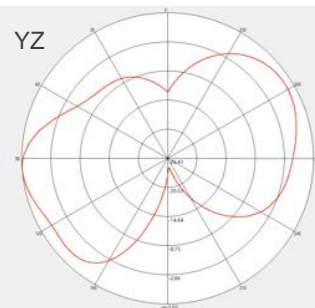
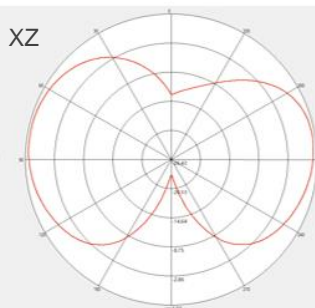
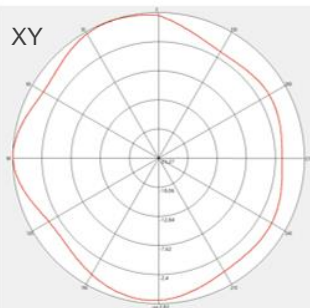
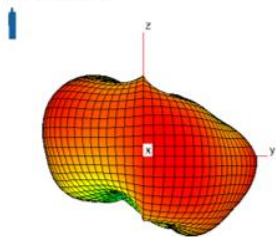
Frequency (MHz)	2400	2450	2500	5000	5850	6500	7150
Gain (dBi)	2.7	2.4	2.4	2.3	4.7	6.1	5.4

4.5. Radiation Pattern

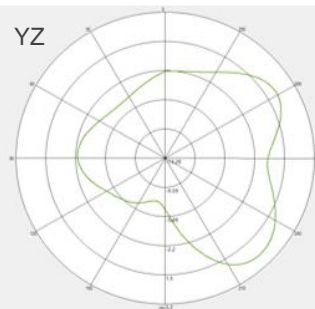
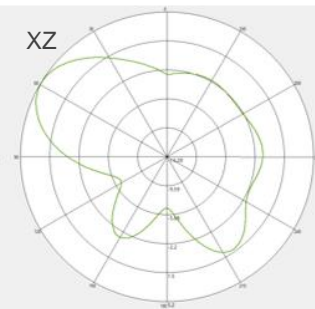
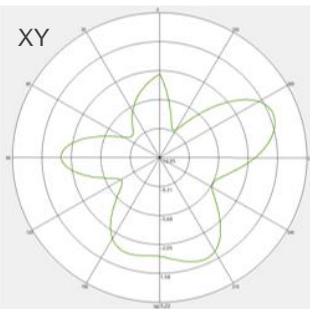
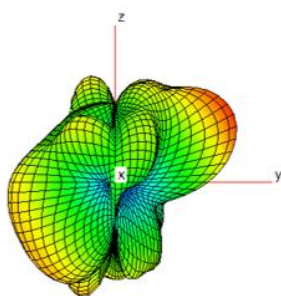
- Test condition: stick on a 3 mm thick ABS board.



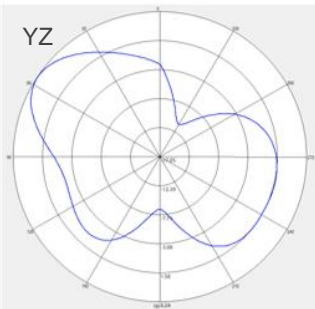
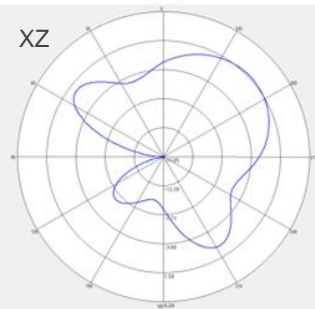
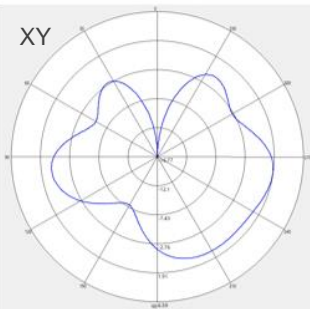
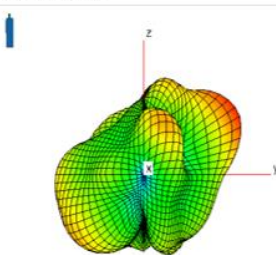
2450MHz



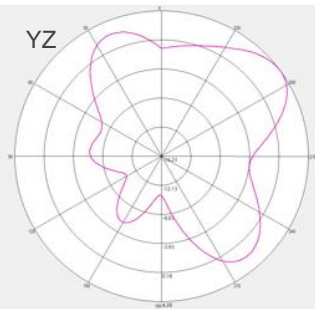
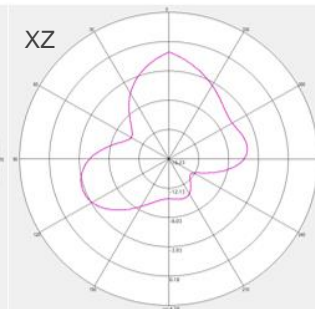
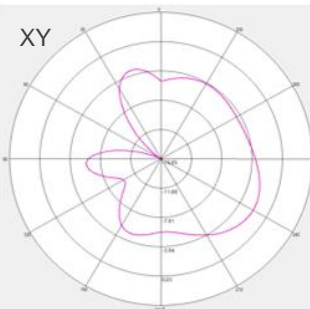
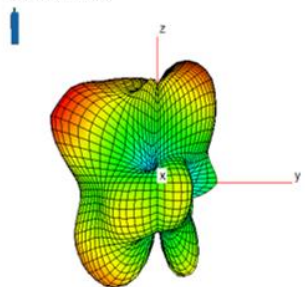
5500MHz



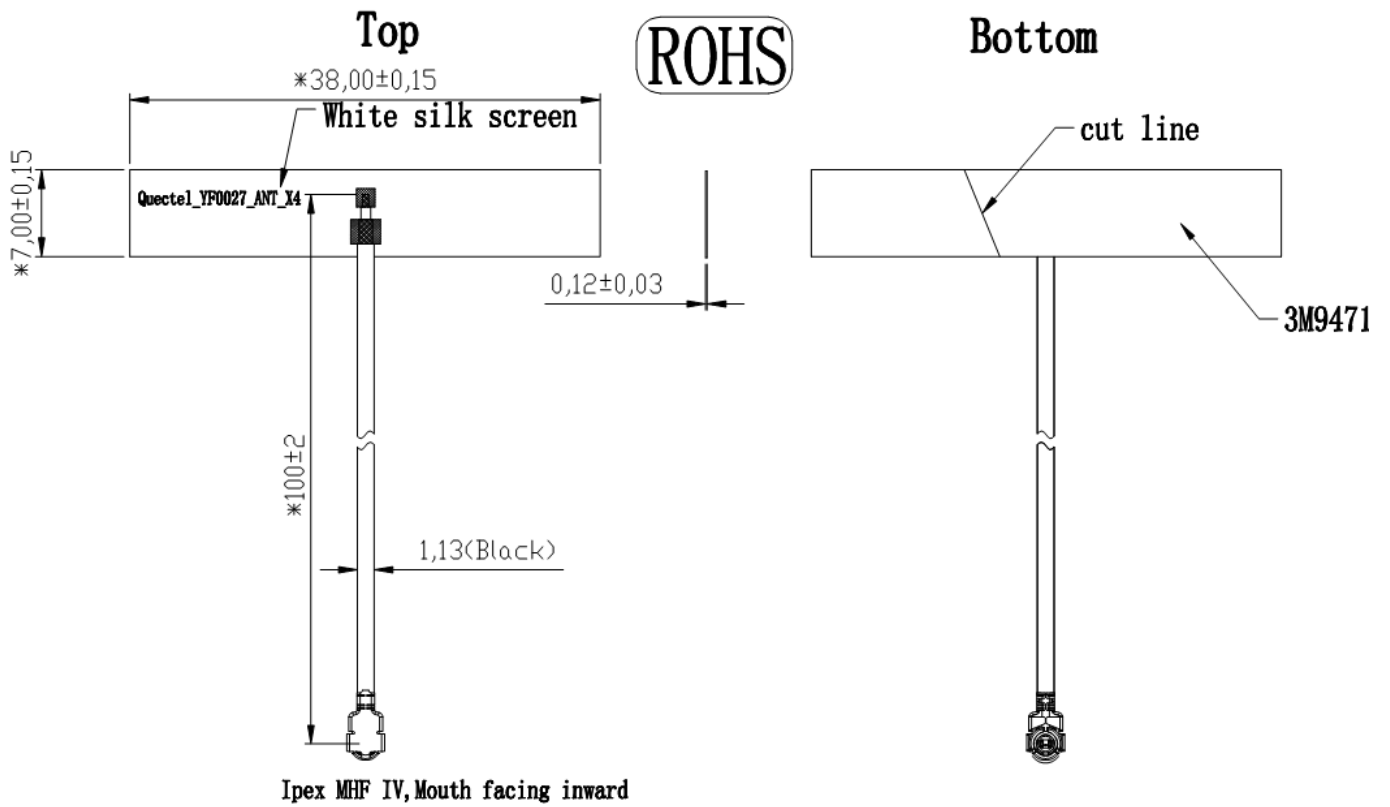
6500MHz



7000MHz



5 Product Size



Mouser Electronics

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