



Quectel Antenna Datasheet

Product OC: Y0QUE00ABAA

Version: 1.0

Date: 2024-01-03

Status: Preliminary

Product Name: 5G PCB Antenna

Key Features:

Frequency band: 617-698 MHz, 1710-2200 MHz

Peak efficiency: 86.69%

Dimensions: 163.5mm * 61.5mm * 1mm

RoHS and REACH Compliant

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1 Specification

Test Condition: Free Space

1.1. Electrical

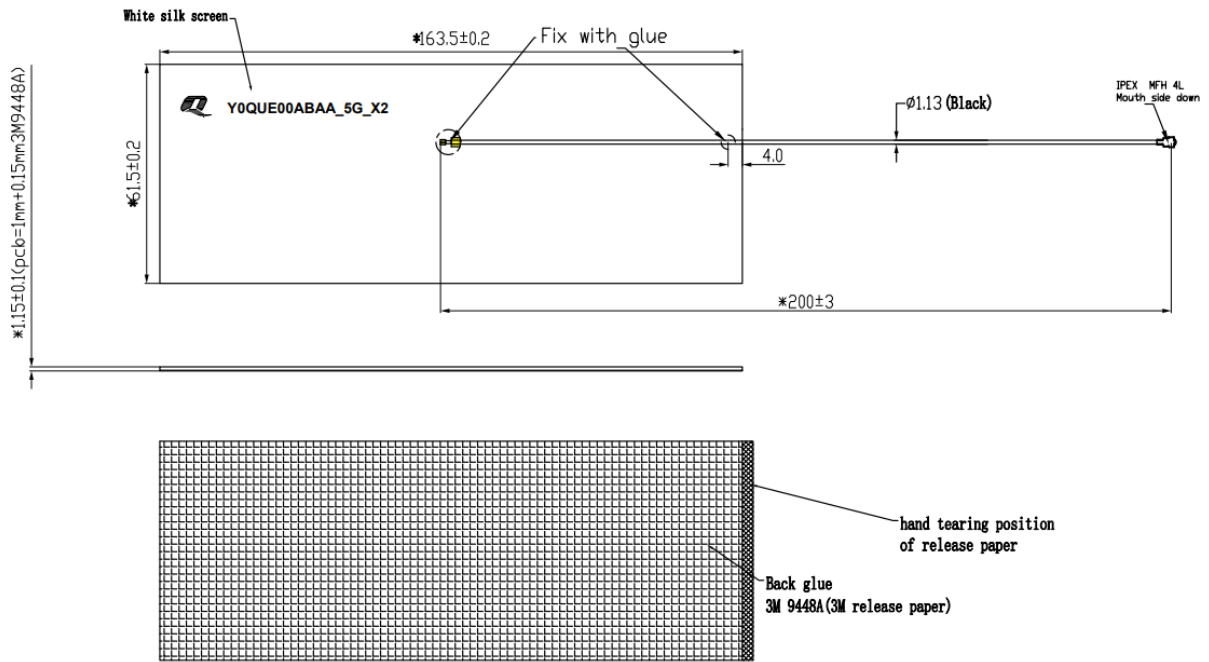
Electrical	
Frequency Range	617-698 MHz, 1710-2200 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional
Antenna Type	PIFA

1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	163.5 * 61.5 * 1mm
Material & Color	PCB & Green
Cable Type & Color & Length	Φ1.13 & Black & 200mm
Connector Type	IPEX MHF 4L
Mounting Type	Adhesive
Weight	Typ:26.3g
Environmental	
Operation Temperature	-40 °C to +85 °C
RoHS and REACH Compliant	Yes

Frequency Specification	663 – 698MHz	1710-1780MHz	1850-1920MHz
Max. VSWR	2.4	1.6	1.5
AVG Eff. (%)	79.1	75.9	74.4
AVG Gain (dB)	-1.0	-1.2	-1.3
Max. Peak Gain (dBi)	3.07	3.91	3.87
VSWR	≤ 2.4		
Peak Gain	≤ 3.91 dBi		

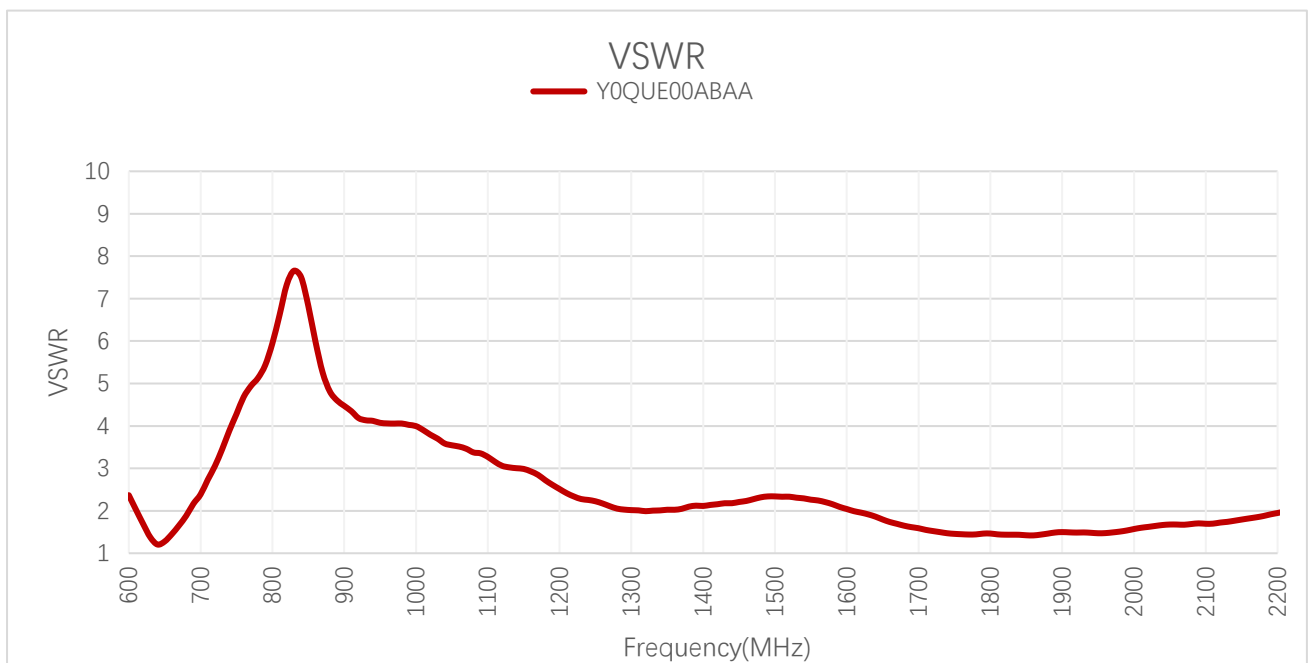
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

3.1.1. VSWR



VSWR

Frequency (MHz)	660	680	700	1710	1770	1780	1850	1870	1910
VSWR	1.5	1.9	2.4	1.6	1.4	1.4	1.4	1.4	1.5

3.2. Radiation Performance Test

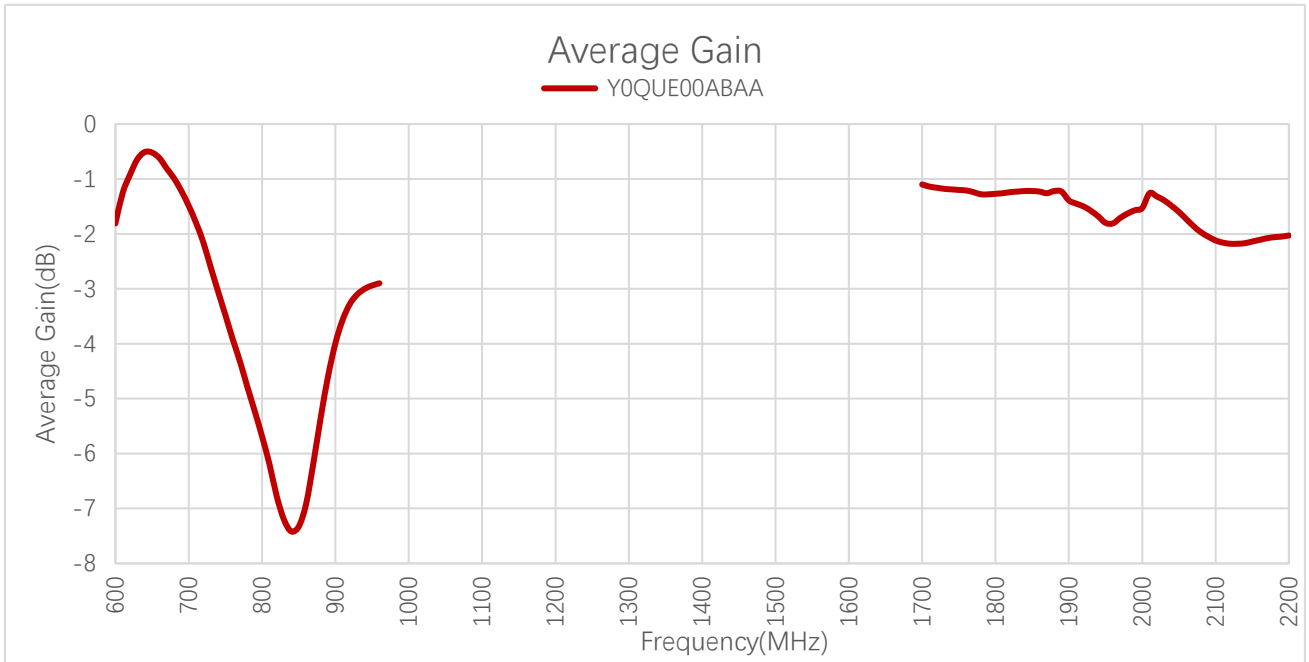
3.2.1. Efficiency



Efficiency (%)

Frequency (MHz)	660	680	700	1710	1770	1780	1850	1870
Efficiency (%)	86.7	79.6	70.9	77.0	75.2	74.5	75.5	74.9

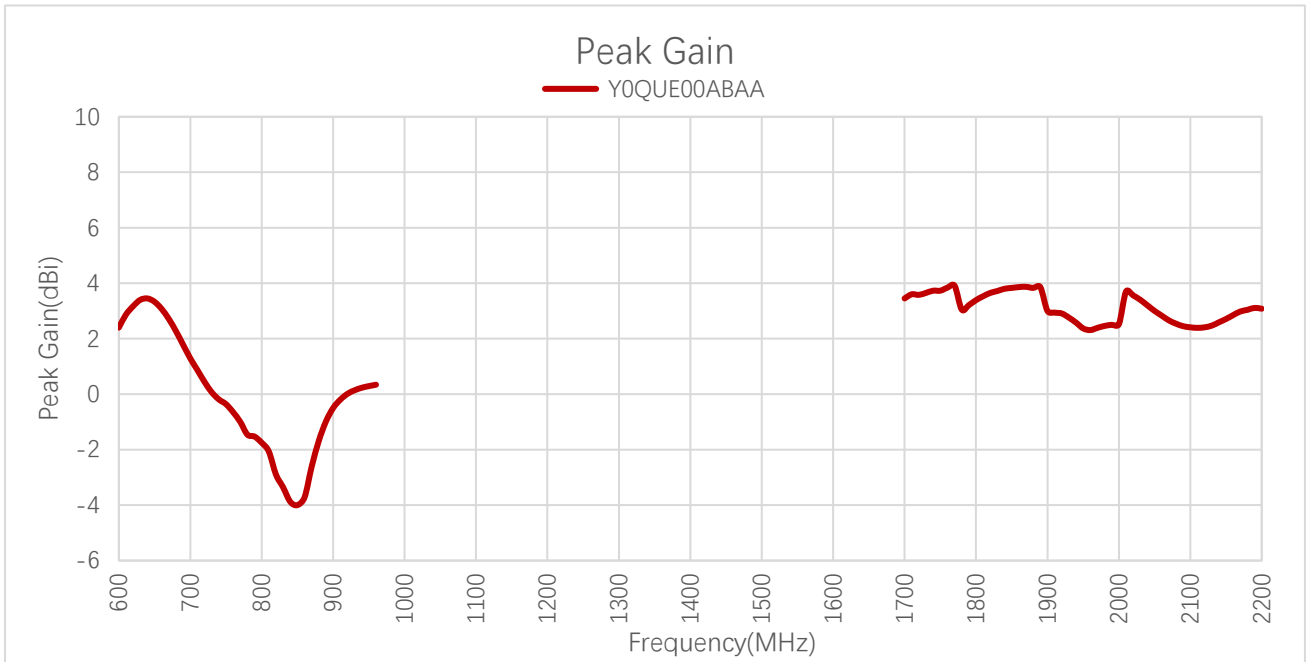
3.2.2. Average Gain



Average Gain (dB)

Frequency (MHz)	660	680	700	1710	1770	1780	1850	1870	1910
Average Gain (dB)	-0.6	-1.0	-1.5	-1.1	-1.2	-1.3	-1.2	-1.3	-1.5

3.2.3. Peak Gain



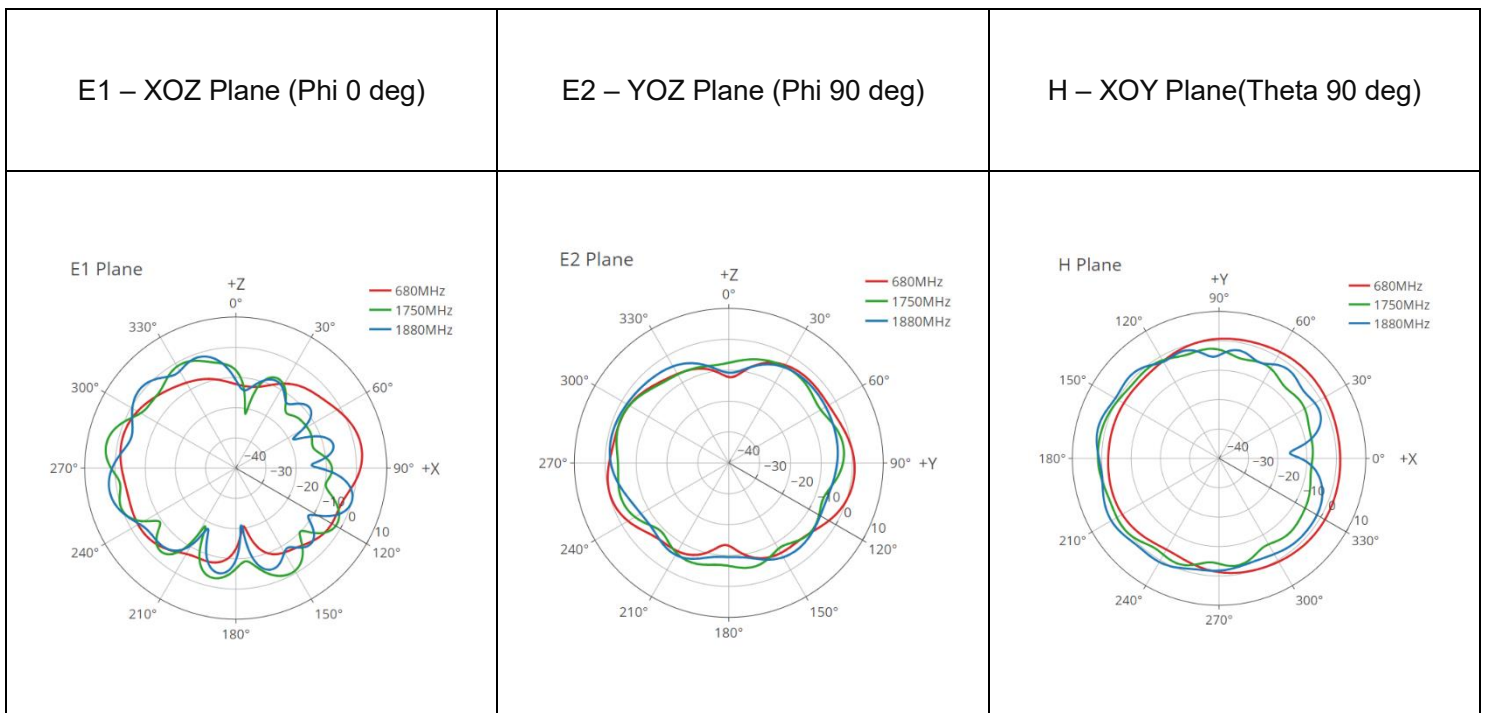
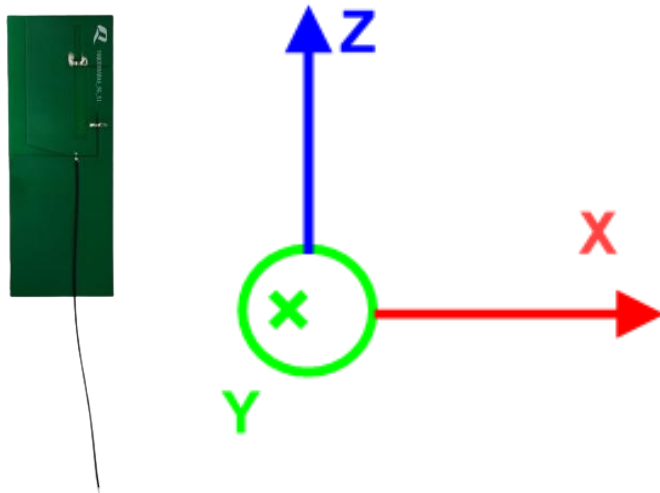
Peak Gain (dBi)

Frequency (MHz)	660	680	700	1710	1770	1780	1850	1870	1910
Peak Gain (dBi)	3.07	2.27	1.29	3.60	3.91	3.05	3.83	3.87	2.94

3.2.4. 3D & 2D Radiation Pattern

3.2.4.1. Test Condition: Free Space

- Test Chamber: GL-S-1



Contact Us

At Quectel, our aim is to provide timely and comprehensive services to our customers. If you require any assistance, please contact our headquarters:

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Revision History

Version	Date	Author	Note
-	2023-12-19	Sly Liu/Lucky Feng	Creation of the document
1.0	2023-12-19	Sly Liu/Lucky Feng	First official release

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