

Antenna Datasheet

Product OC: FGA66X

Version: 1.0

Date: 2026-03-20

Status: Released

Product Name: Wi-Fi PCB Antenna

Key Features:

Frequency band: 2400–2500 MHz, 5150–5850 MHz

Peak efficiency: 63.9 %

Dimensions: 29.50 mm × 11.00 mm × 0.75 mm

RoHS and REACH Compliant

Overview

The YF0011KA is a Wi-Fi FPC antenna measuring 38.9 mm × 9 mm. This Wi-Fi antenna provides coverage from 2400–2500 MHz, 5150–5850 MHz. The antenna has a 50.5 mm-long cable, terminated with IPEX MHF 1 connector, and is available with customized cable lengths and connectors. This adhesive mount omni-directional antenna, ideal for applications where the antenna is required to be mounted inside, is easy to install thanks to its flexible material. It is compatible with Quectel's Wi-Fi Series modules. It has been tested with ABS board.

It allows constant and reliable transmission and reception due to its omni-directional gain across all frequency bands. The YF0011KA is designed as a dipole antenna, which is to offer high efficiency in many different mounting scenarios. It is a perfect antenna product for customers that desire highest performance. This high-efficiency, high-gain omni-directional antenna is ideally suited for smart metering, remote monitoring, vehicle tracking and telematics, and many other IoT devices.

Quectel provides comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs. We have regional R & D centers to offer quick response to meet your requirements. Please contact our sales & FAEs if you have any requests.

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1 Specification

Test Condition: Assembled in test device

1.1. Electrical

Electrical	
Frequency Range	2400–2500 MHz, 5150–5850 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional

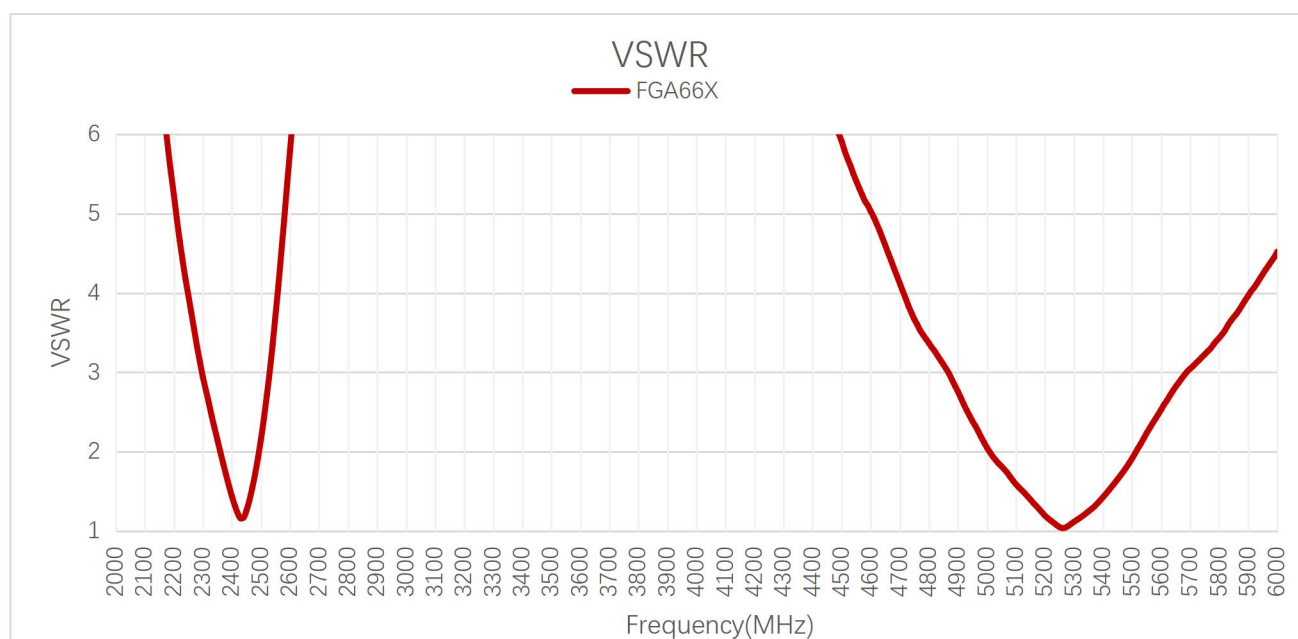
Specification \ Band	Band	Wi-Fi 2G	Wi-Fi 5G	Wi-Fi 6G
	Freq. (MHz)	2400–2500	5150–5850	5925–7125
Max. VSWR	FS	2.2	3.7	-
Max. Return Loss (dB)	FS	-8.7	-4.8	-
AVG Eff. (%)	FS	57.5	56.7	-
AVG. AVG Gain (dB)	FS	-2.4	-2.5	-
Max. Peak Gain (dBi)	FS	2.4	2.7	-
VSWR	FS	≤ 3.7		
Return Loss	FS	≤ -4.8 dB		
Peak Gain	FS	≤ 2.7 dBi		

- FS: Free Space

2 Detailed Performance

2.1. S-Parameter Test

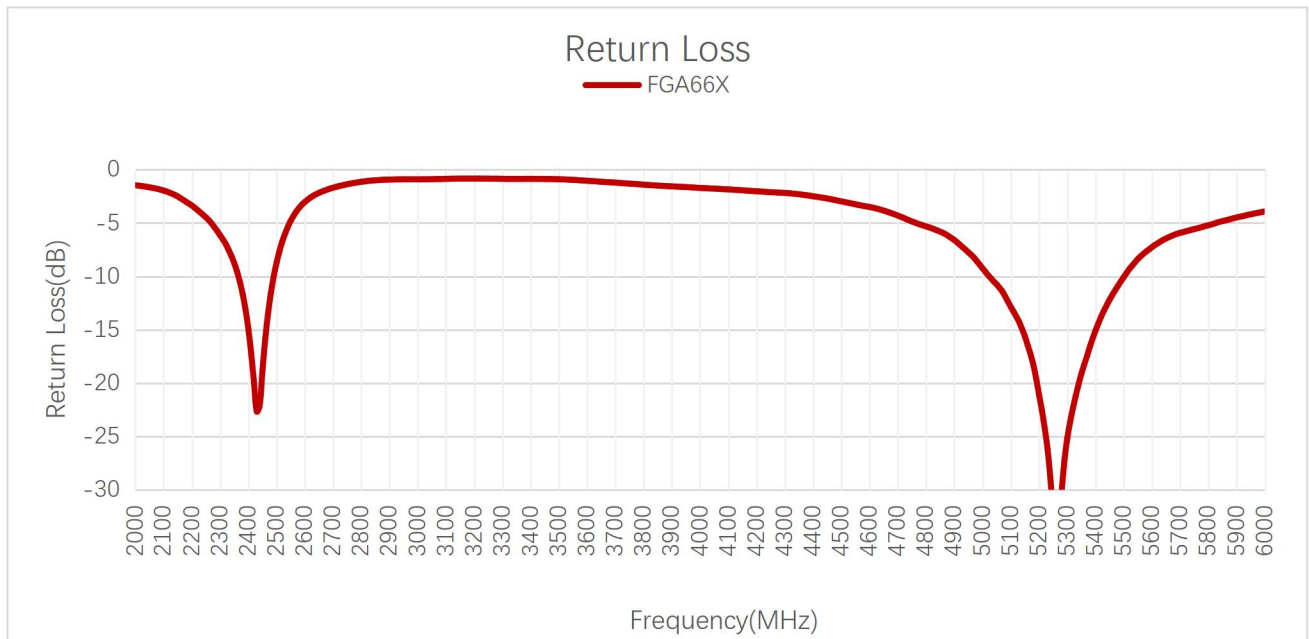
2.1.1. VSWR



VSWR

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
FS	1.4	1.3	2.2	1.4	1.9	3.7	-	-	-	-

2.1.2. Return Loss

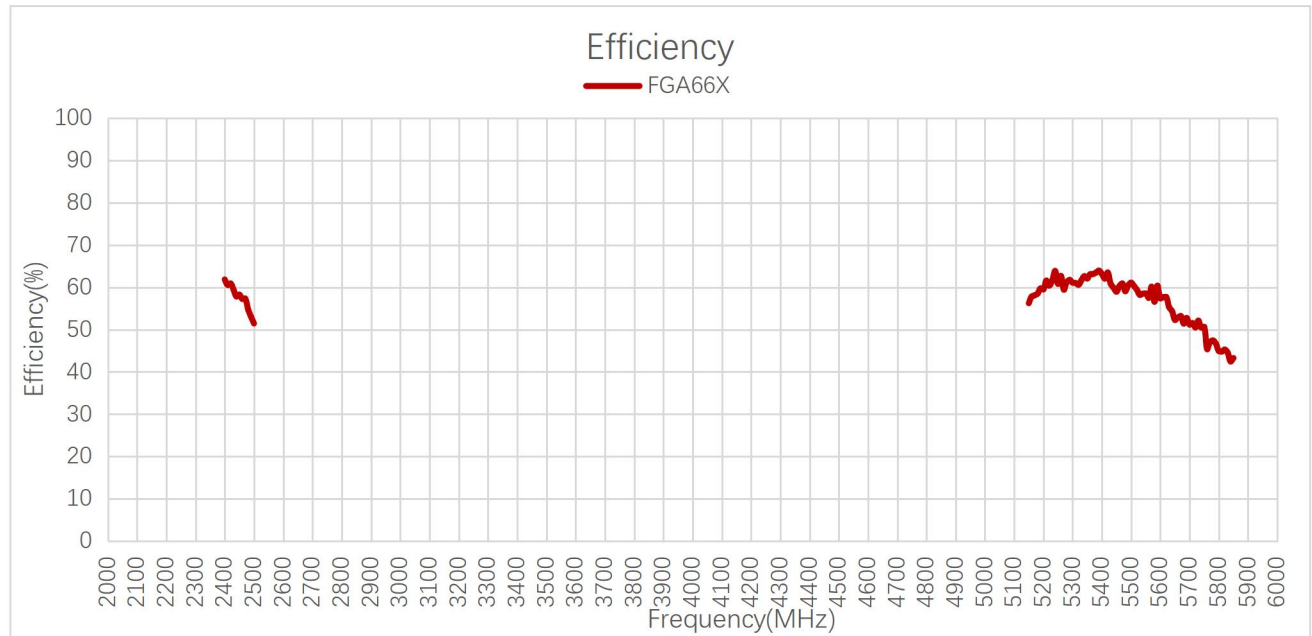


Return Loss (dB)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
FS	-14.9	-18.8	-8.7	-15.6	-10.1	-4.8	-	-	-	-

2.2. Radiation Performance Test

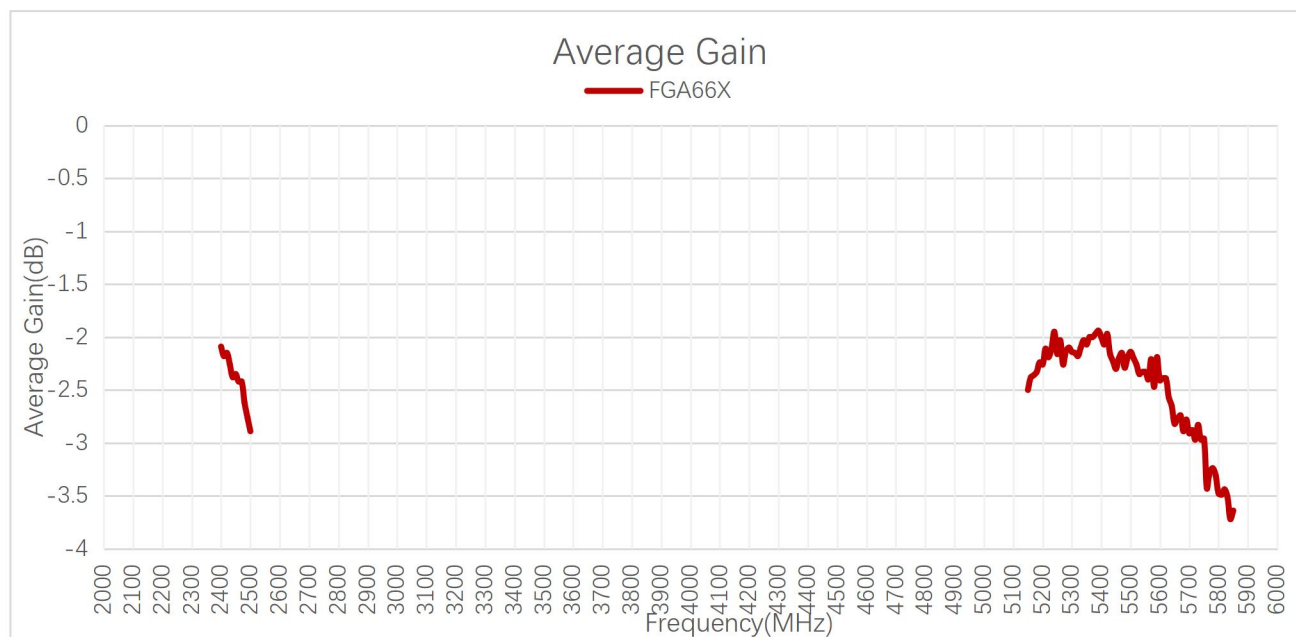
2.2.1. Efficiency



Efficiency (%)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
FS	61.8	58.3	51.4	56.2	61.1	43.3	-	-	-	-

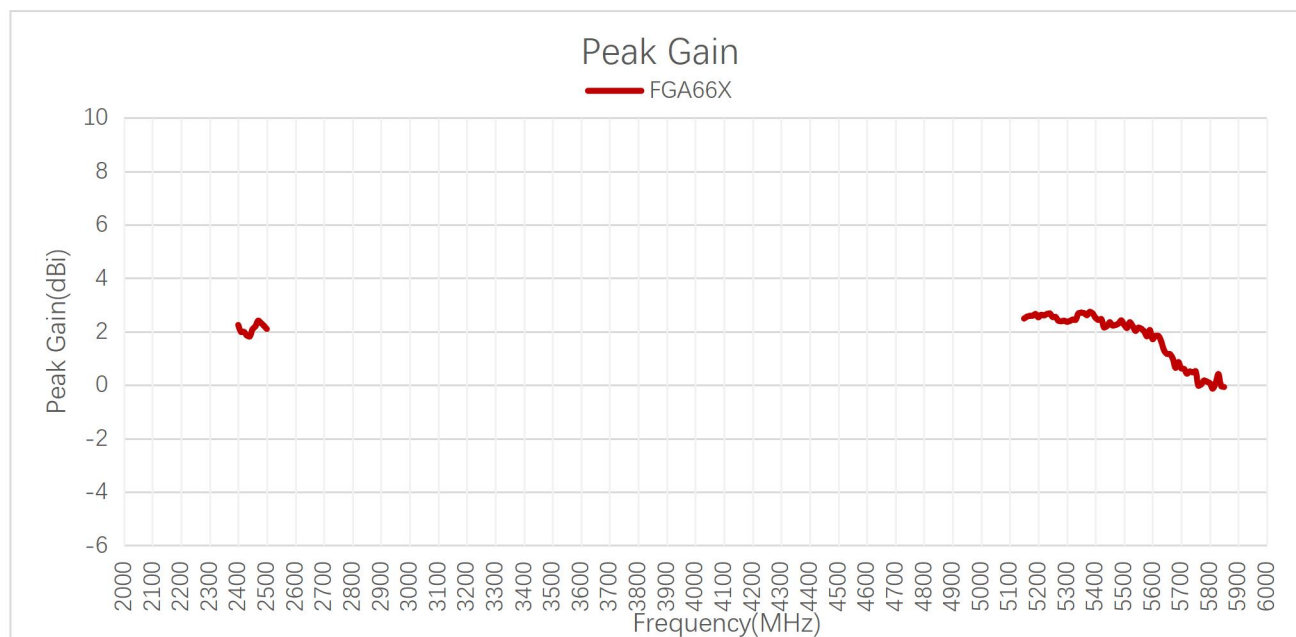
2.2.2. Average Gain



Average Gain (dB)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
FS	-2.1	-2.4	-2.9	-2.5	-2.1	-3.6	-	-	-	-

2.2.3. Peak Gain



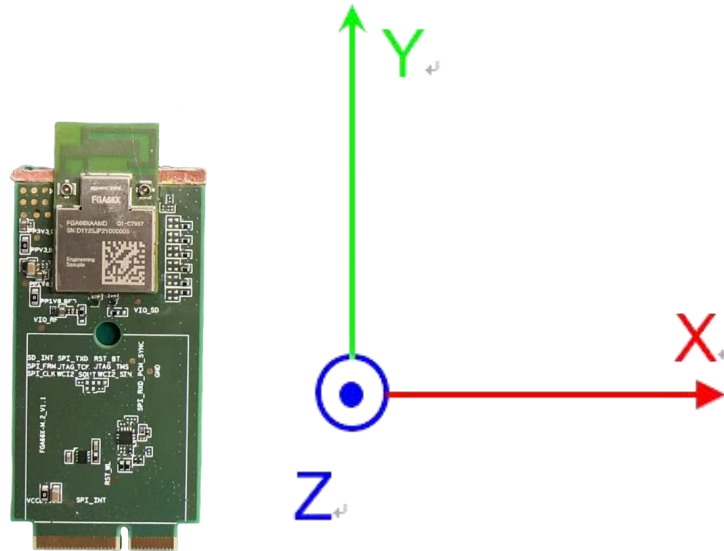
Peak Gain (dBi)

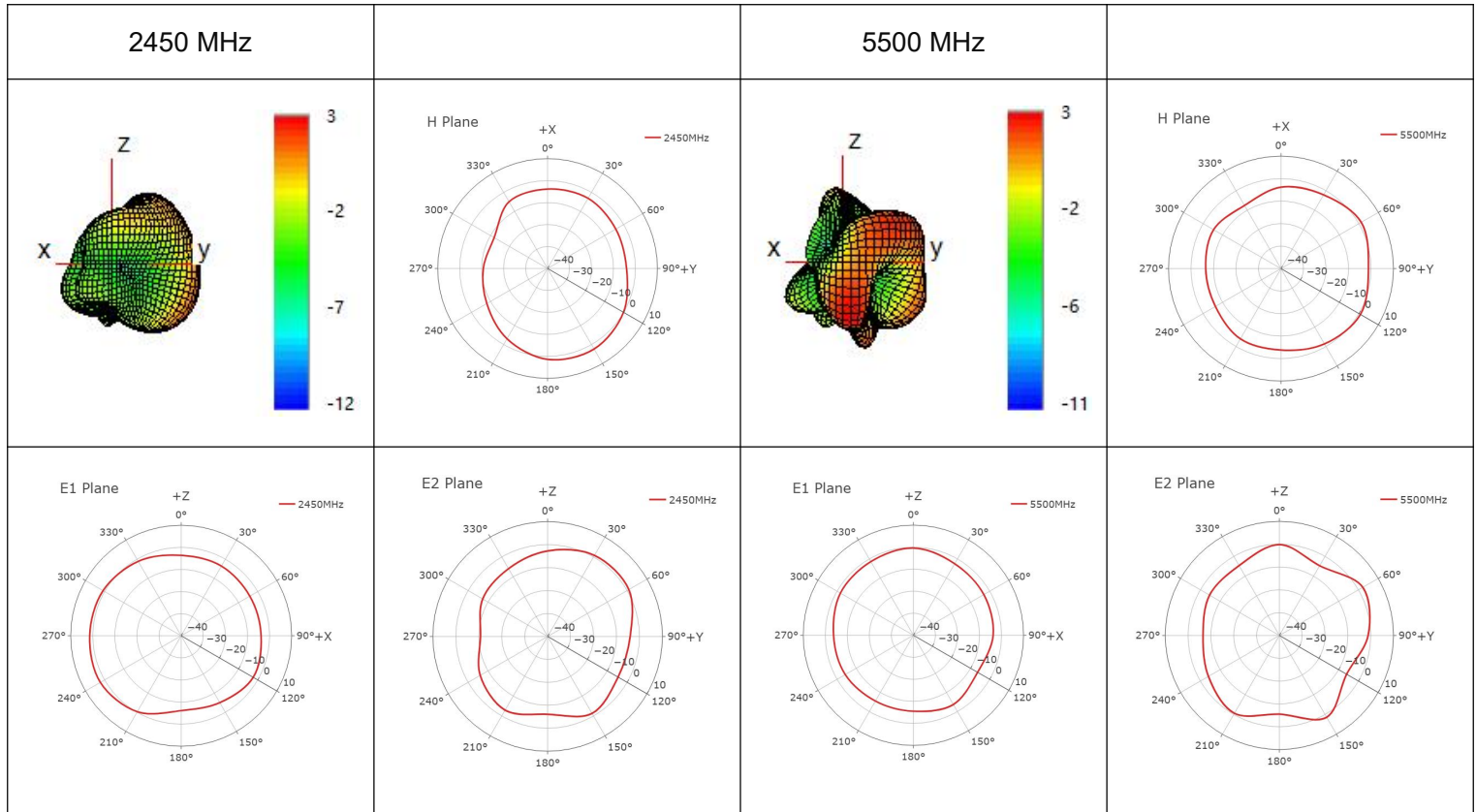
Frequency (MHz)	2400	2450	2470	2480	2500	5150	5220	5250	5320	5380
FS	2.3	2.1	2.4	2.3	2.1	2.5	2.6	2.6	2.5	2.7
Frequency (MHz)	5470	5475	5725	5820	5850	5925	6325	6725	7125	-
FS	2.3	2.3	0.4	0.1	-0.1	-	-	-	-	-

2.2.4. 3D & 2D Radiation Pattern

2.2.4.1. Test Condition: Assembled in test device

- Test Chamber: GL-G-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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Or our local offices. For more information, please visit:

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- Network Analyzer: Keysight E5071C (Device number: QTB6331E; Calibration date: 2025-07-04; Due date: 2027-01-03)
- Chamber: OTA RayZone 2800 GTS (Device number: QTA0709; Calibration date: 2025-07-14; Due date: 2027-07-13)
- Testing Software: Libra
- Test Engineer: Damon Zhang
- Manufacturer: Quectel Wireless Solutions (Changzhou) Co., Ltd. Address: No.8 Nanhu West Road, Wujin District, Changzhou City, Jiangsu Province, China

Revision History

Version	Date	Author	Note
-	2026-03-20	Jacob.MO/	Creation of the document
1.0	2026-03-20	Jacob.MO/	First official release



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