

# Antenna

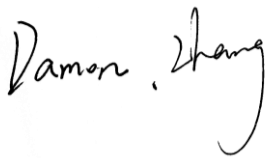
# **HCM511S** Datasheet

**Antenna Services**

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Status: Preliminary

A handwritten signature in black ink that reads "Damon Zhang". The signature is written in a cursive style with a large, stylized "Z".

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**Quectel Wireless Solutions Co., Ltd.**

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

Tel: +86 21 5108 6236

Email: [info@quectel.com](mailto:info@quectel.com)

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# About the Document

## Revision History

Version	Date	Author	Note
-	2023-11-01	Damon Zhang	Creation of the document
1.0	2023-11-01	Damon Zhang	First official release

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## 1 Product Description

The antenna is designed for superior performance, and can be widely used for wireless applications.

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

- BT&WIFI
- High efficiency
- Excellent performance

### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	2400–2500 MHz
Input Impedance	50 $\Omega$
VSWR	$\leq 2.0$
Gain	$\leq -0.5$ dBi
Polarization Type	Linear
Antenna type	PCB Printed Antenna

#### Mechanical Specifications

Antenna Size(mm)	11.2 × 5.22
Material	FR4
Color	Green
Working Temperature	-40 °C to +105 °C

## 4 Overall Performance

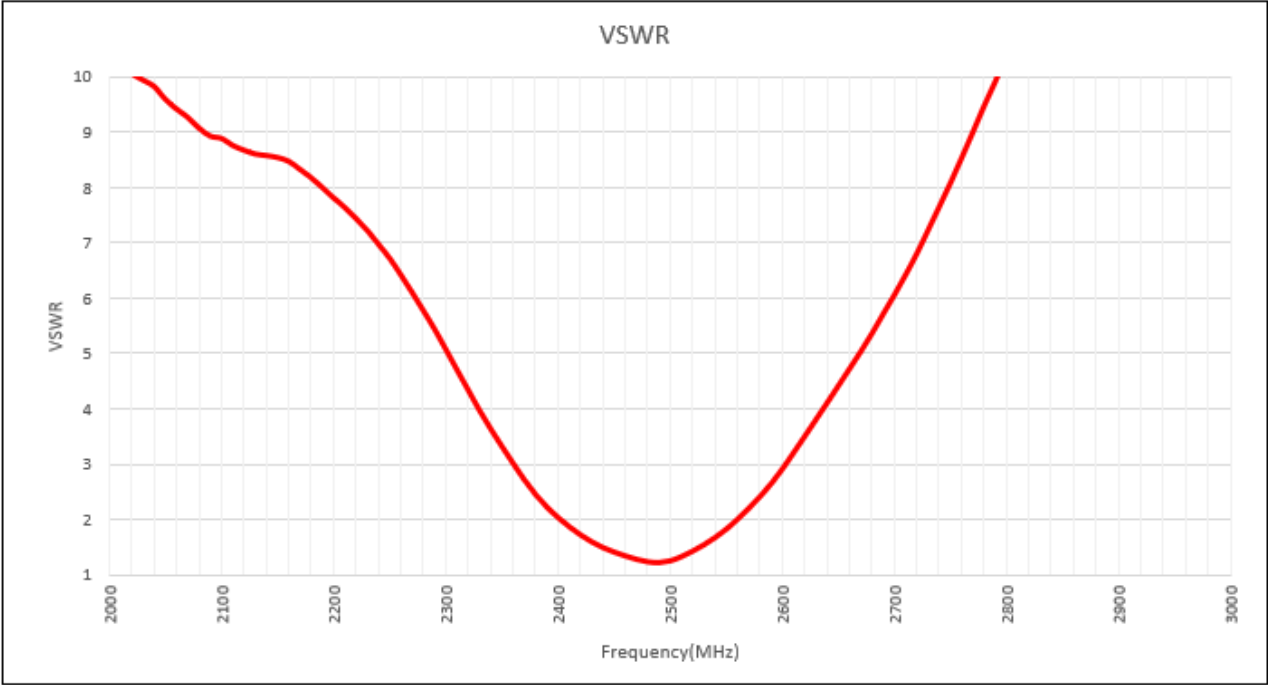
### 4.1. Test Environment

- KEYSIGHT ENA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz



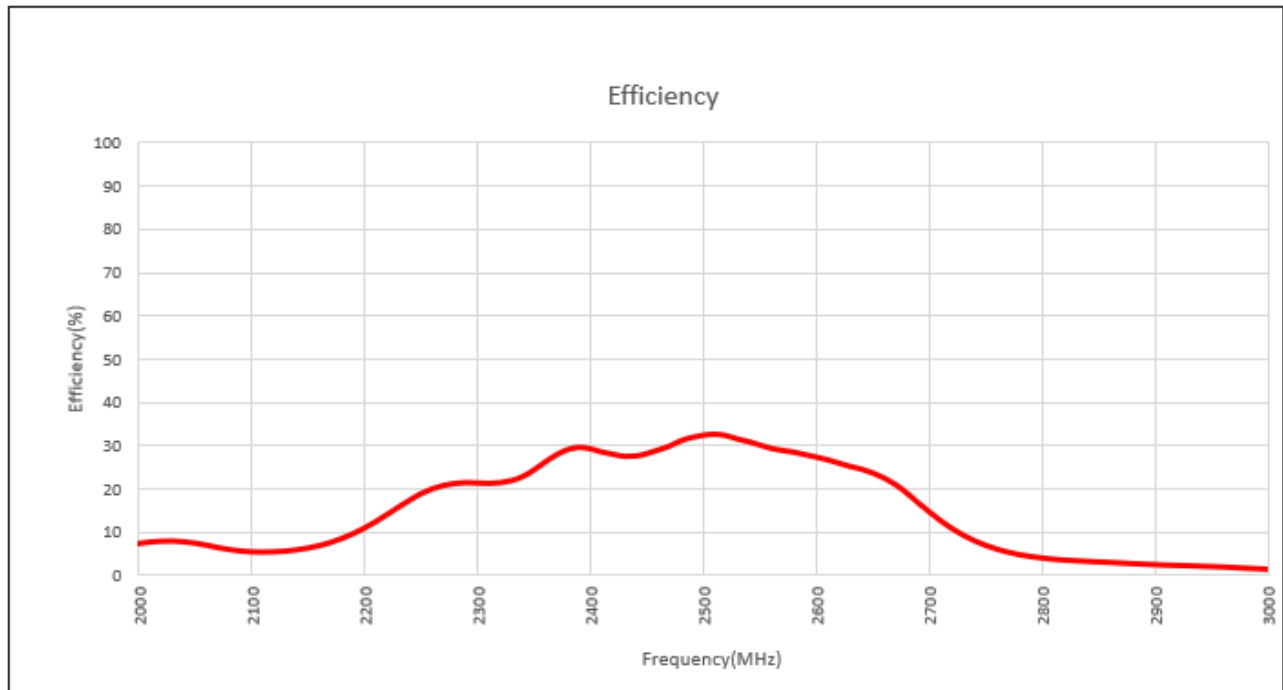


4.2. VSWR



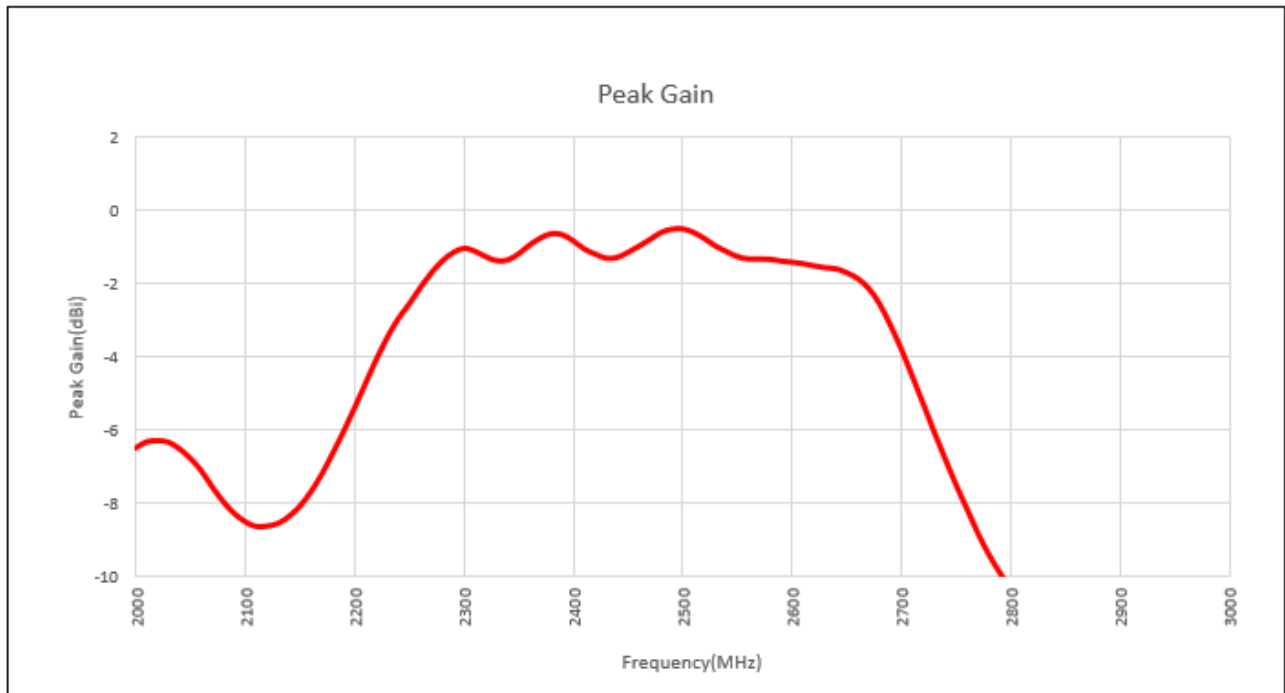
Frequency (MHz)	2400	2450	2500
VSWR	2.0	1.4	1.3

### 4.3. Efficiency



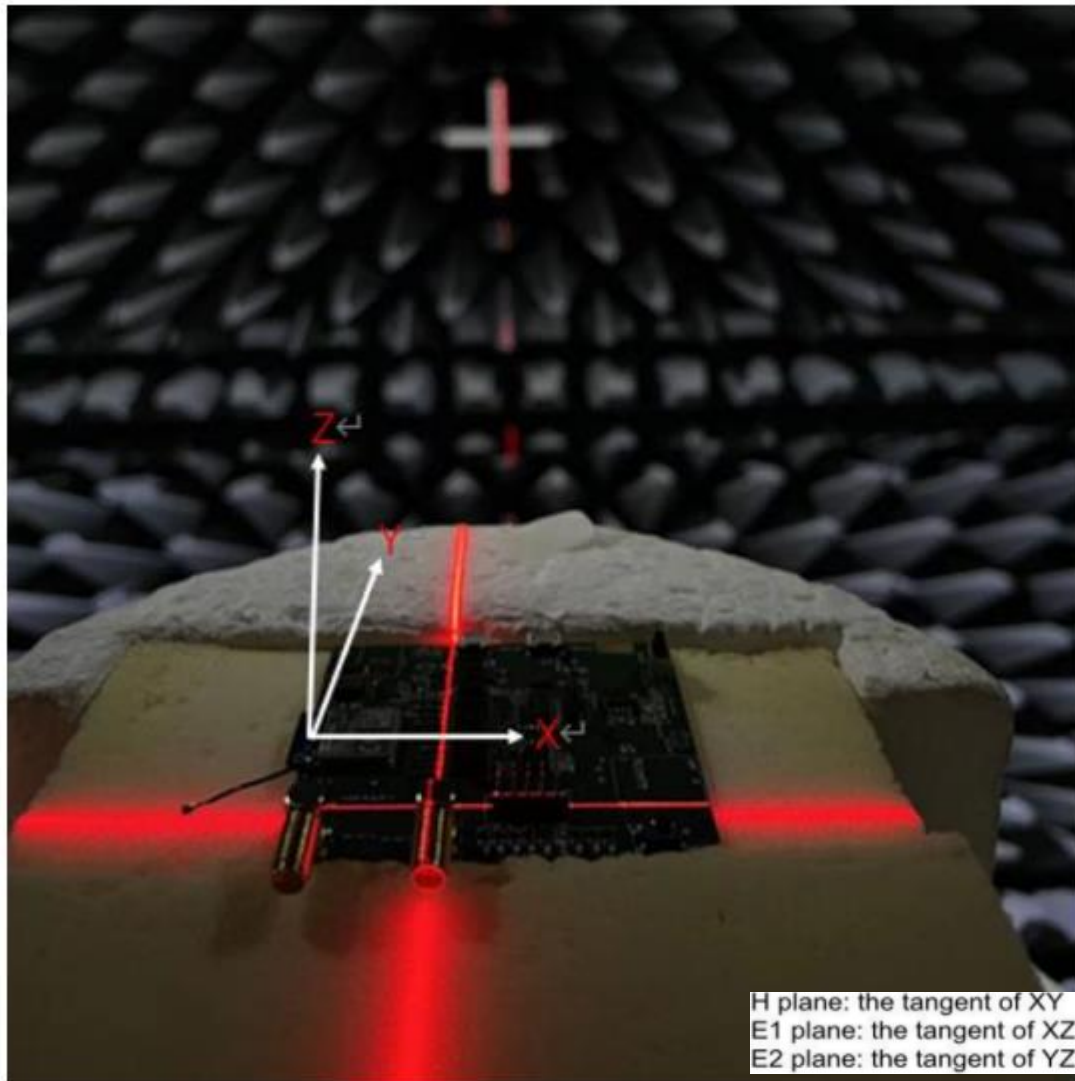
Frequency (MHz)	2400	2450	2500
Efficiency (%)	28	28	32

## 4.4. Gain

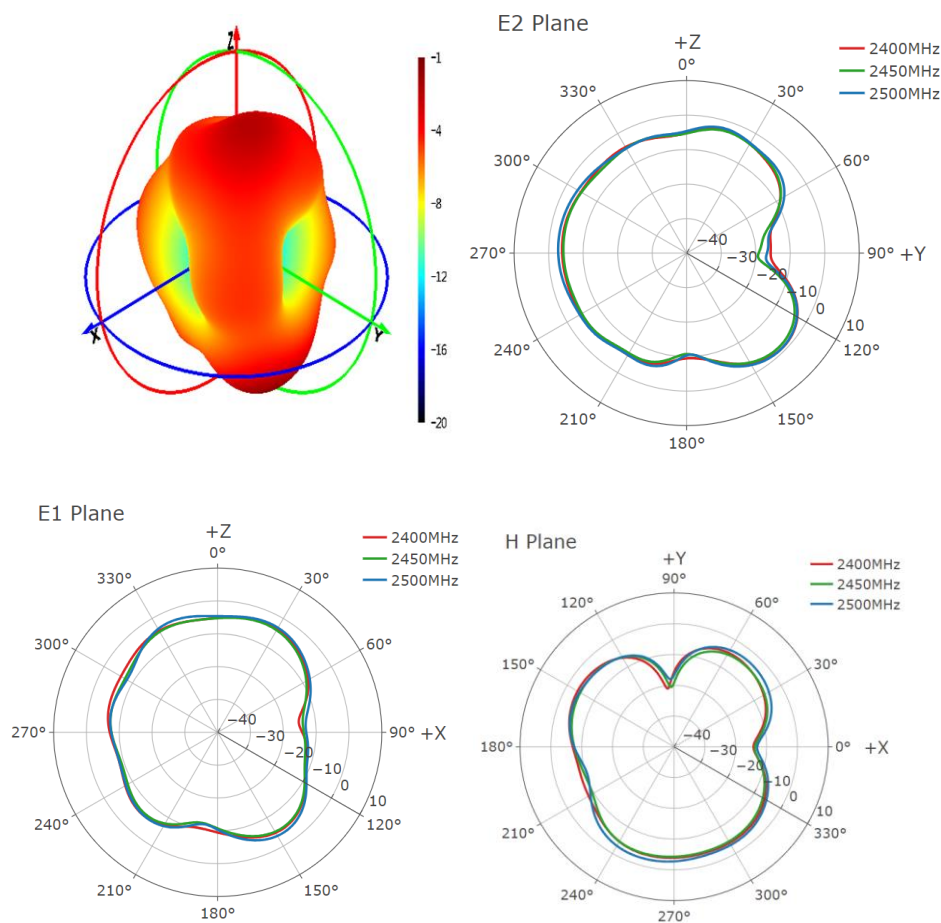


Frequency (MHz)	2400	2450	2500
Gain (dBi)	-1.0	-1.1	-0.5

## 4.5. Radiation Pattern



2450MHz



## 5 Product Size (mm)

