

# Antenna

# HCM111Z Datasheet

**Antenna Services**

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Status: Preliminary



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# About the Document

## Revision History

Version	Date	Author	Note
-	2023-7-28	Damon Zhang	Creation of the document
1.0	2023-7-28	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
- High efficiency
- Excellent performance

### 3 Product Specifications

#### Passive Electrical Specifications

Frequency Range	Bluetooth: 2400–2500 MHz
Input Impedance	50 $\Omega$
VSWR	$\leq 4.2$
Gain	$\leq -3.7$ dBi
Polarization Type	Linear

#### Mechanical Specifications

Antenna Size(mm)	9.45 × 4.62
Material	FR4
Color	Green
Working Temperature	-40 °C to +105 °C

## 4 Overall Performance

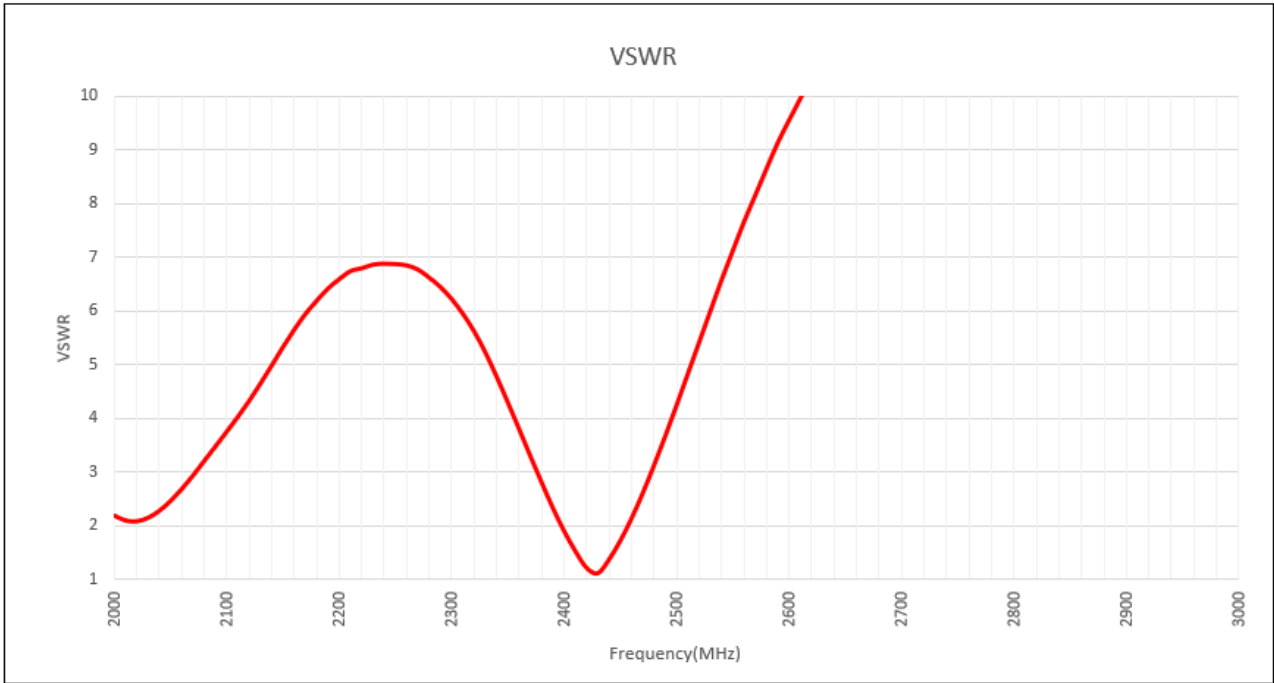
### 4.1. Test Environment

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



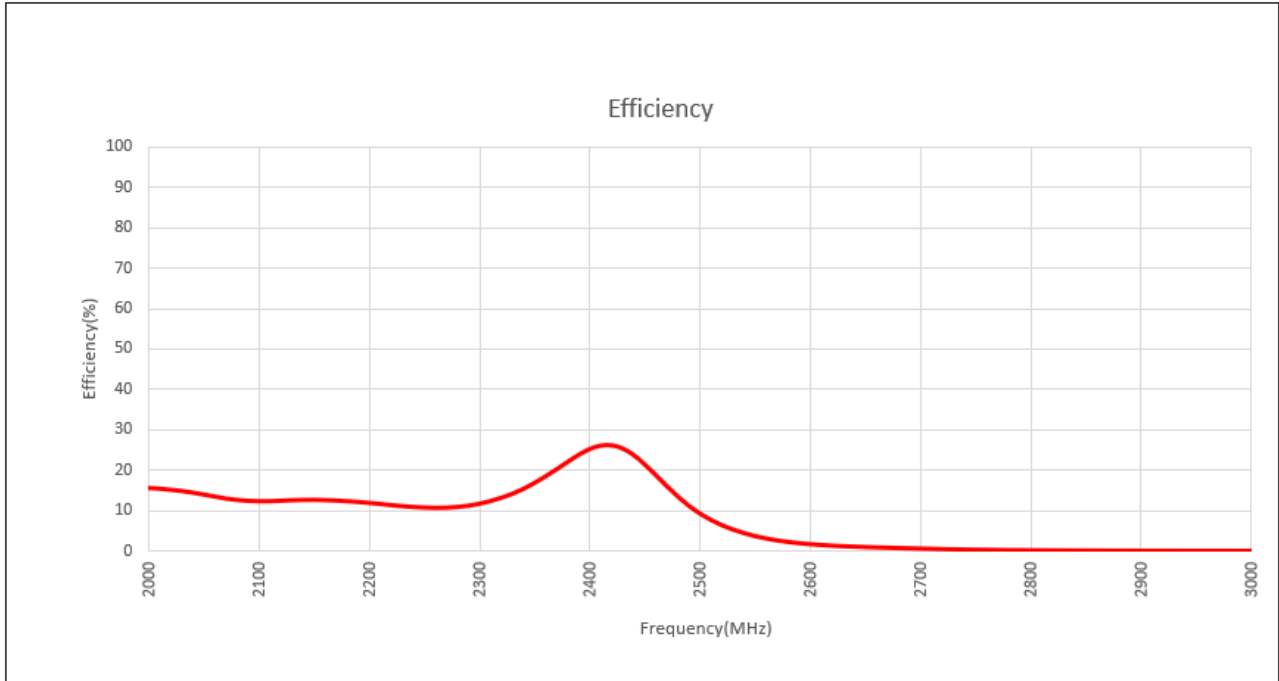


**4.2. VSWR**



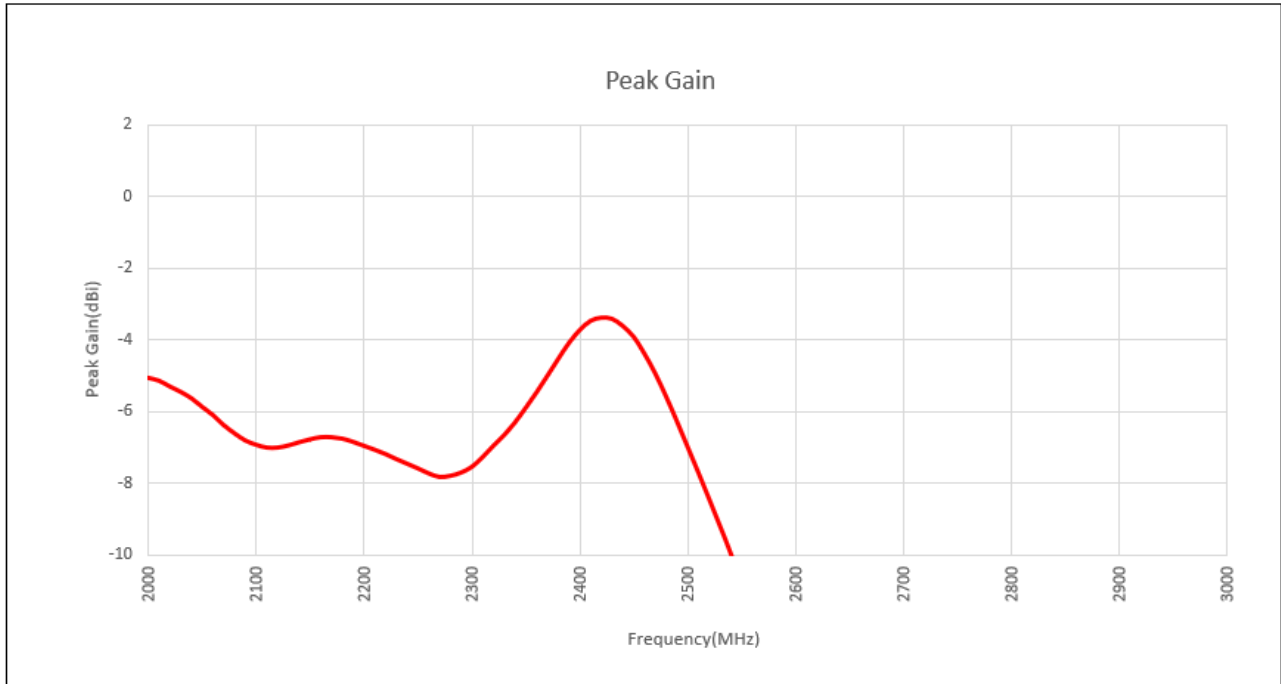
<b>Frequency (MHz)</b>	2400	2450	2500
<b>VSWR</b>	1.9	1.7	4.2

### 4.3. Efficiency



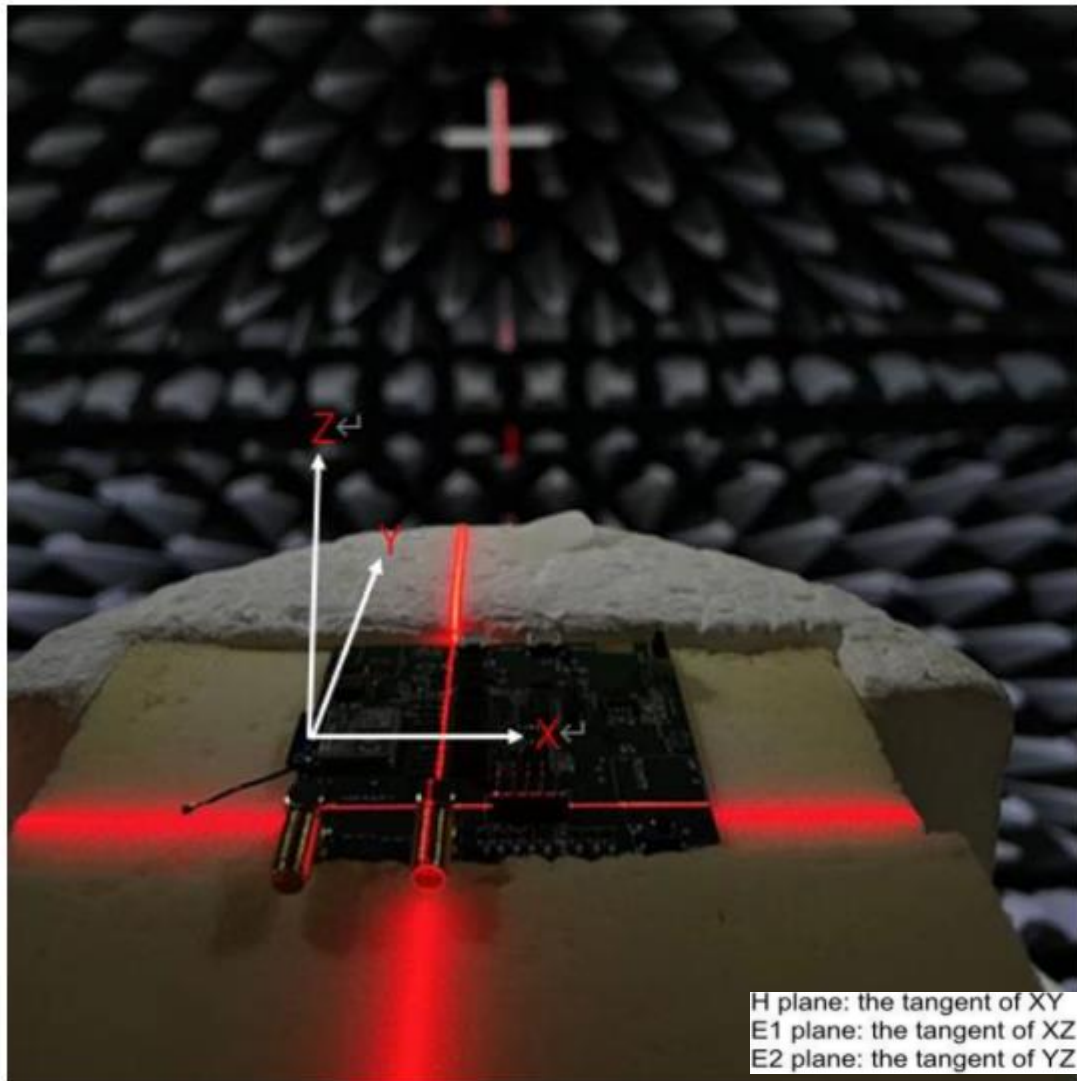
<b>Frequency (MHz)</b>	2400	2450	2500
<b>Efficiency (%)</b>	25.2	21.4	9.8

### 4.4. Gain

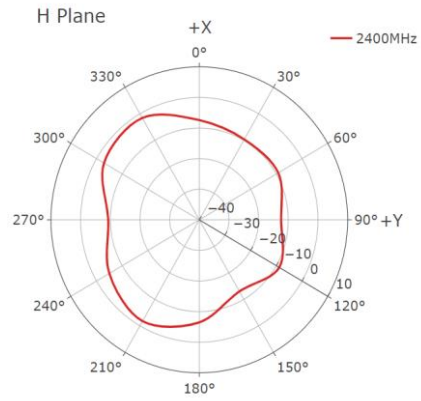
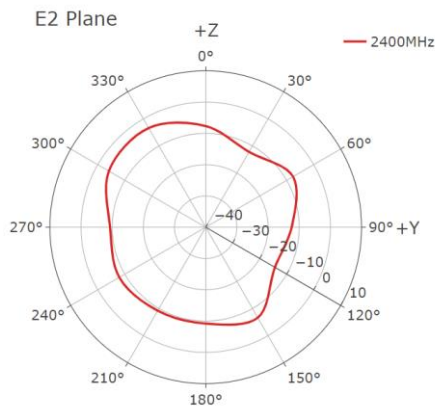
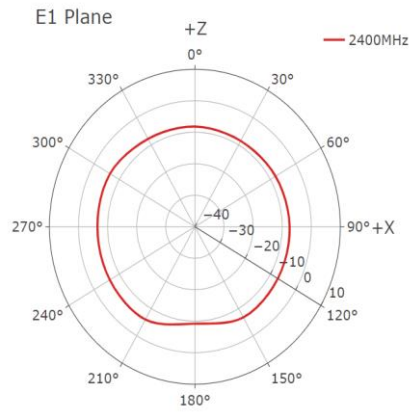
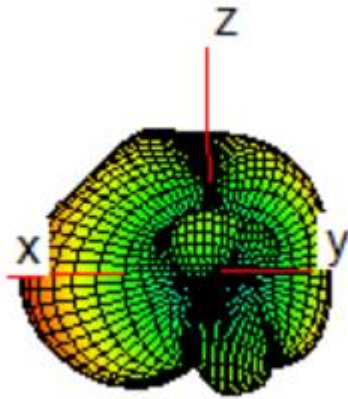


<b>Frequency (MHz)</b>	2400	2450	2500
<b>Gain (dBi)</b>	-3.7	-3.8	-6.9

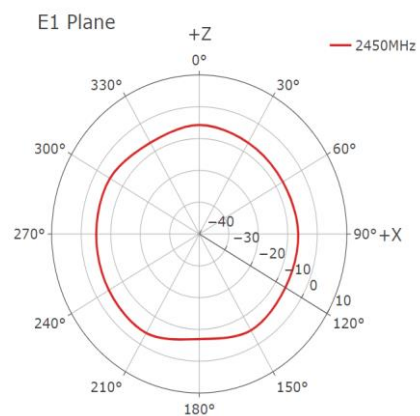
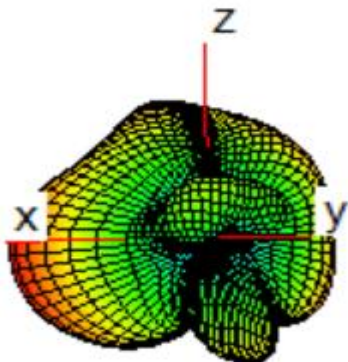
### 4.5. Radiation Pattern

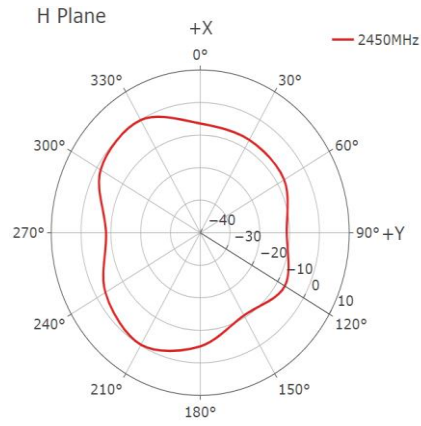
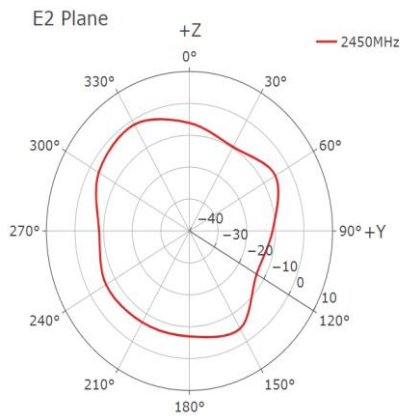


2400MHz

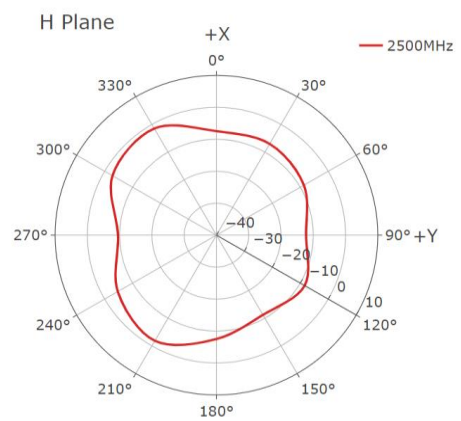
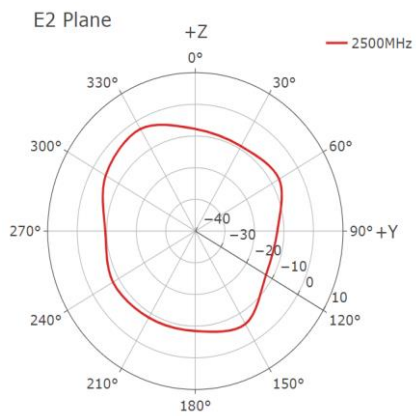
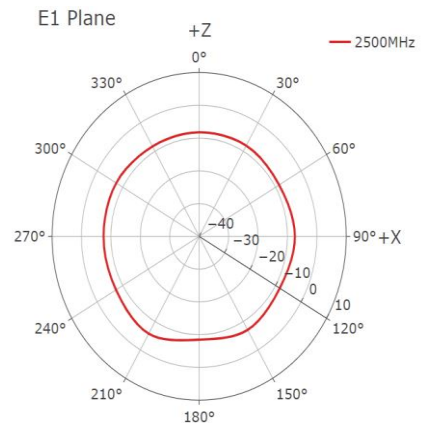
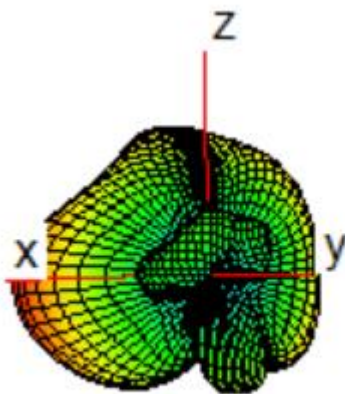


2450MHz





2500MHz



**5 Product Size (mm)**

