

# Antenna

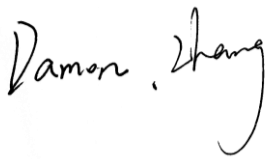
# FCM362K Datasheet

**Antenna Services**

Version: 1.0

Date: 2023-11-01

Status: Preliminary

A handwritten signature in black ink that reads "Damon Zhang". The signature is written in a cursive, flowing style.

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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; 5150-5850MHz |
| Input Impedance   | 50 $\Omega$                 |
| VSWR              | $\leq 4.0$                  |
| Gain              | $\leq 1.0$ dBi              |
| Polarization Type | Linear                      |
| Antenna type      | PCB Printed Antenna         |

#### Mechanical Specifications

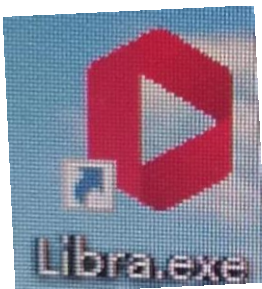
|                     |                   |
|---------------------|-------------------|
| Antenna Size(mm)    | 11.5 × 6          |
| Material            | FR4               |
| Color               | Green             |
| Working Temperature | -40 °C to +105 °C |

## 4 Overall Performance

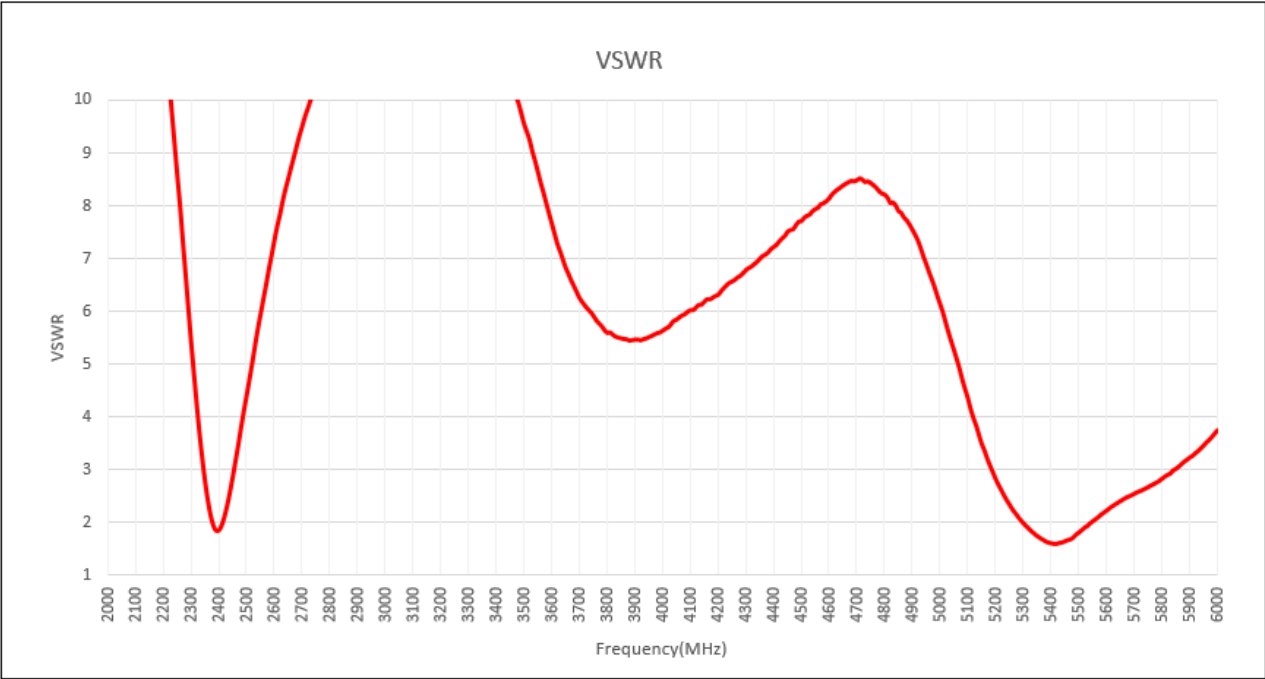
### 4.1. Test Environment

- KEYSIGHT ENA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz
- Calibration date 2023/10/30

- Test the software: Libra

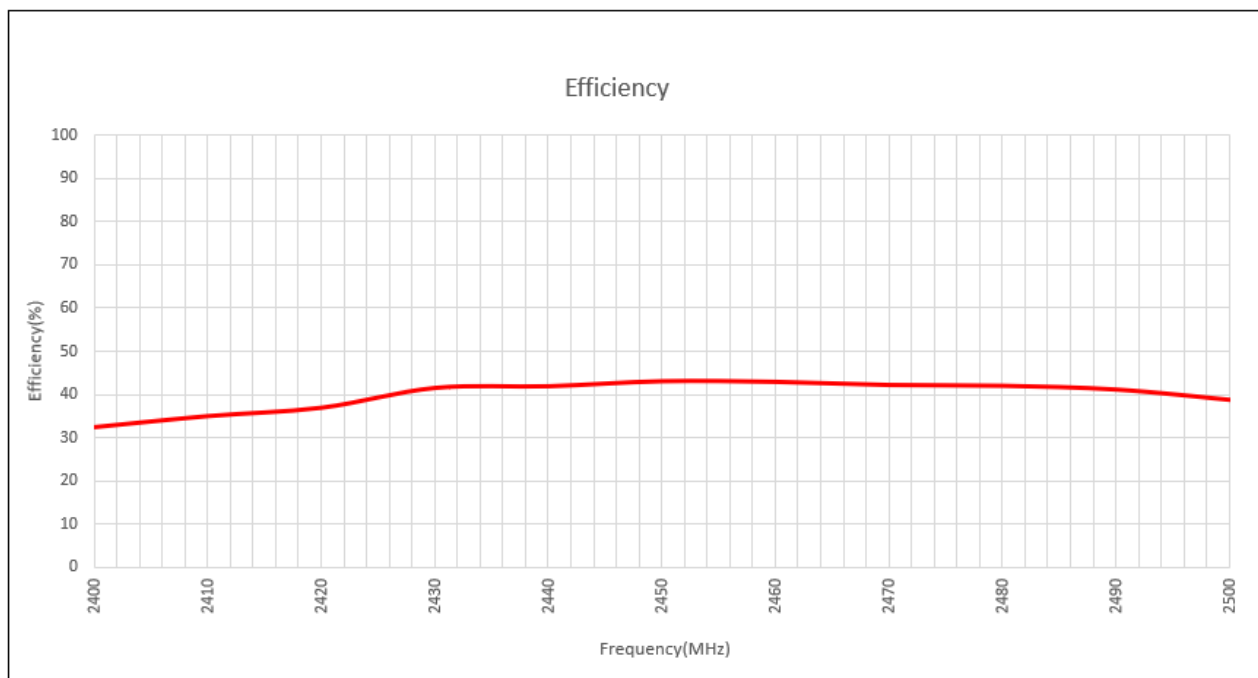
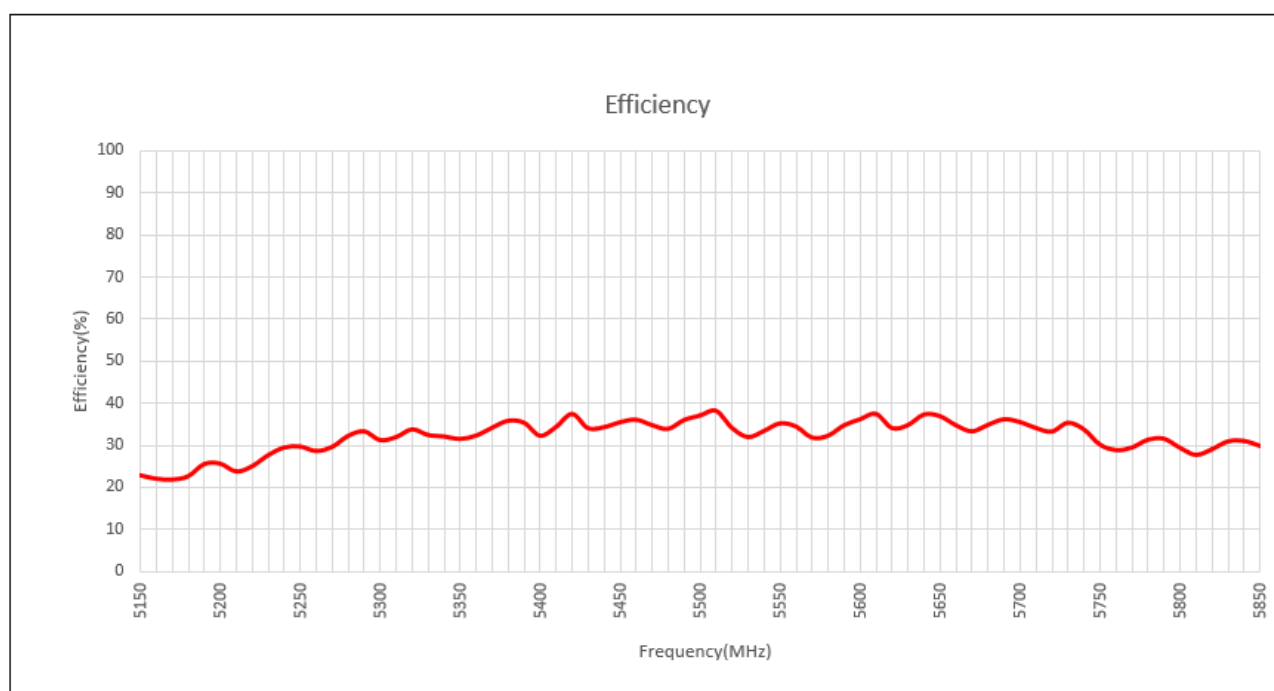


4.2. VSWR



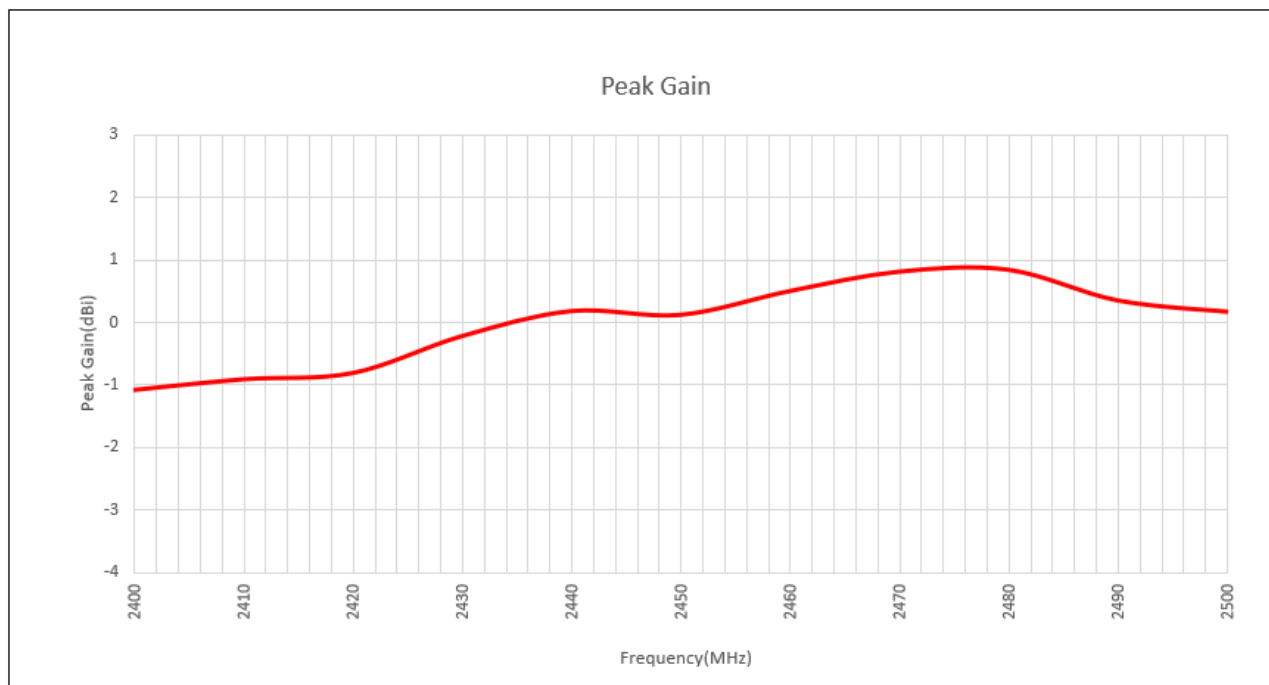
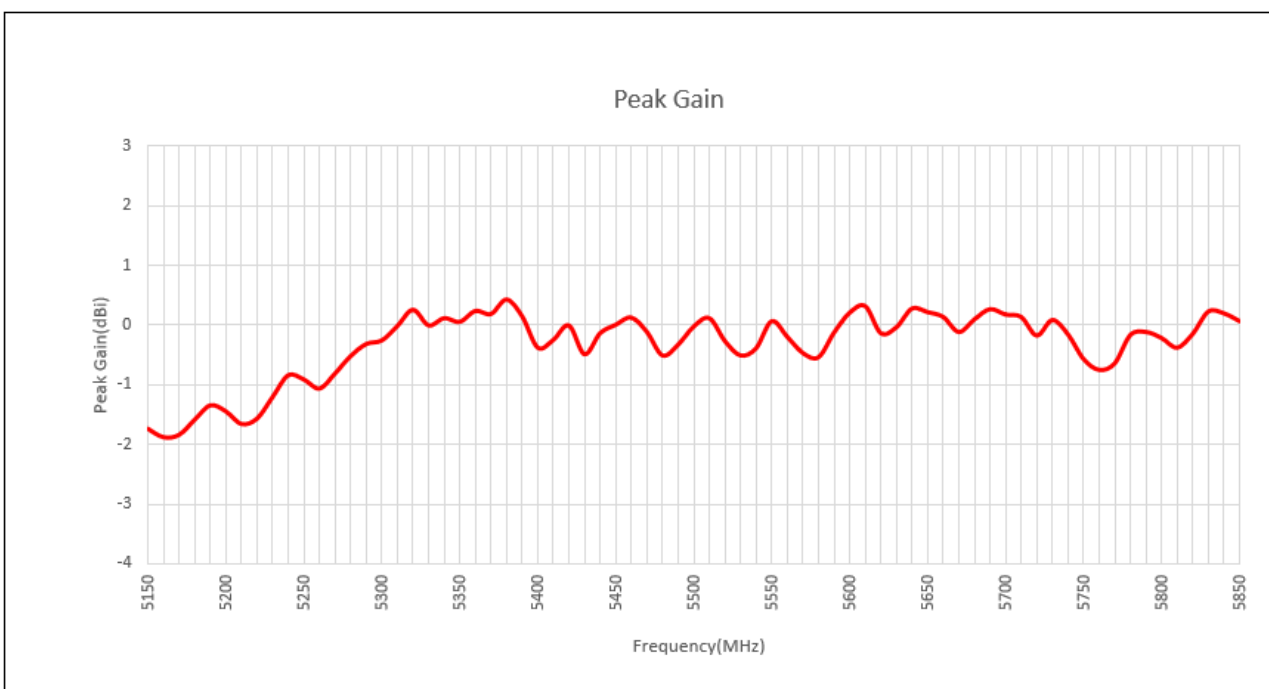
| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5350 | 5500 | 5750 | 5850 |
|-----------------|------|------|------|------|------|------|------|------|
| VSWR            | 1.8  | 2.6  | 4.0  | 3.5  | 1.7  | 1.8  | 2.7  | 3.0  |

### 4.3. Efficiency



| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5350 | 5500 | 5750 | 5850 |
|-----------------|------|------|------|------|------|------|------|------|
| Efficiency (%)  | 32   | 43   | 38   | 23   | 32   | 35   | 30   | 30   |

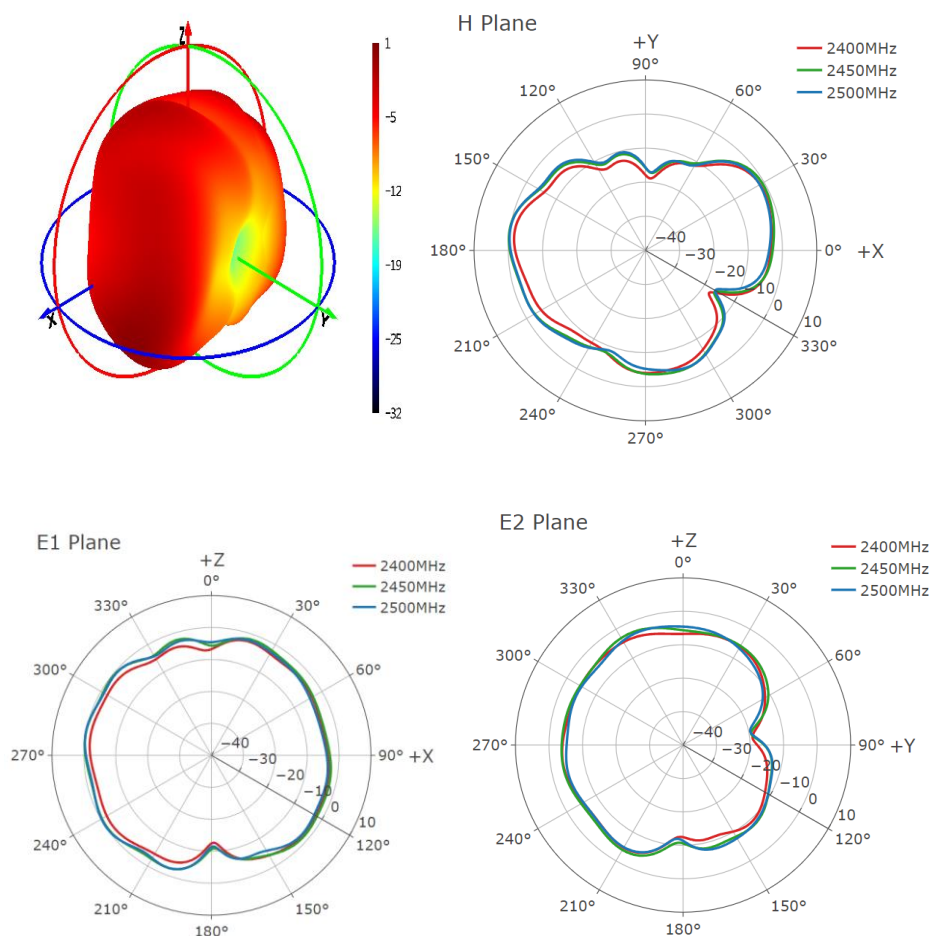
## 4.4. Gain



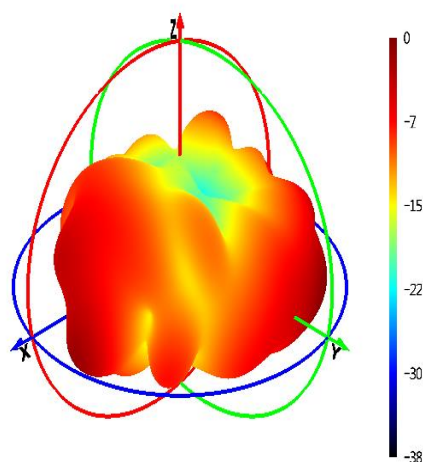
| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5350 | 5500 | 5750 | 5850 |
|-----------------|------|------|------|------|------|------|------|------|
| Gain (dBi)      | -1.0 | 0.1  | 0.2  | -1.8 | 0    | 0.1  | -0.2 | 0    |

## 4.5. Radiation Pattern

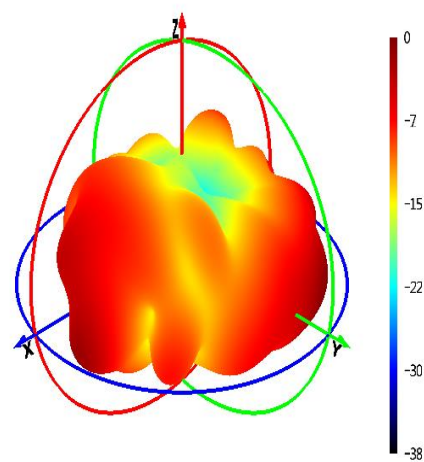
2450MHz



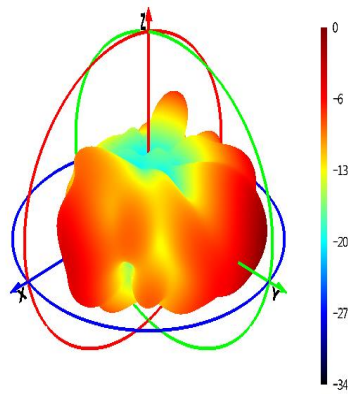
5150MHz



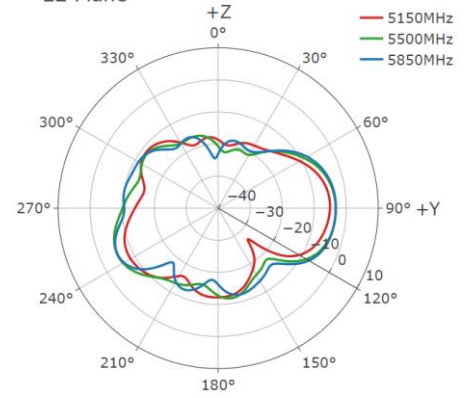
5500MHz



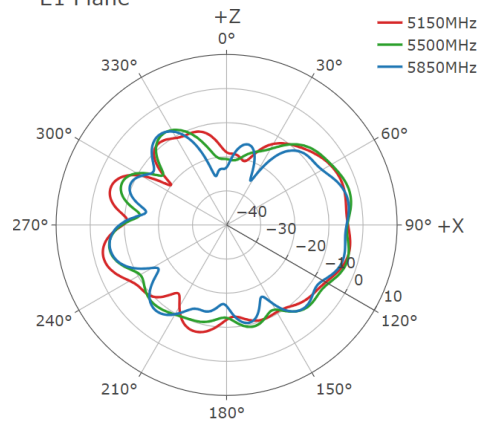
5850MHz



E2 Plane



E1 Plane



H Plane

