

# Antenna Gain test report

FCC ID: 2AUYFRMX5106

Equipment: Mobile Phone

Brand Name: realme

Model Name: RMX5106

Manufacturer: Realme Chongqing Mobile

Telecommunications Corp., Ltd.

No.178 Yulong Avenue, Yufengshan, Yubei District,  
Chongqing, China

Issue Date: May 8, 2025

Test equipment

calibration date: 2024.06.29

Due date: 2025.06.28

Test engineer: Wei Li

**Antenna Location&dimension:**

Please refer to Antenna Location&dimension&setup photos.

Fig 1 Antenna location & dimension

**Antenna Gain and Antenna Type specification:**

| Antenna Gain (dBi) |                | Ant 9 | Antenna Type  |
|--------------------|----------------|-------|---------------|
| 2.4G WiFi          | 2400~2483.5MHz | 1     | Fixed Antenna |
|                    | 5150~5250 MHz  | 0.6   | Fixed Antenna |
|                    | 5250~5350 MHz  | 1.2   | Fixed Antenna |
|                    | 5470~5725 MHz  | 2.63  | Fixed Antenna |
|                    | 5725~5850 MHz  | 2.4   | Fixed Antenna |
| BT                 | 2400~2483.5MHz | 1     | Fixed Antenna |

Table1 Antenna Gain and Antenna Type specification

**NFC:**

NFC antenna dimension: 35.46mm\*24.73mm

Antenna Type: **Loop** Antenna

Note: Antenna gain was measured in the anechoic chamber, 3D scan was exercised, and the highest numbers are reported in this document.

According to Test standard: IEEE Std 149-2021, we measure antenna gain.

**List of Test and Measurement Instruments****TEST EQUIPMENT**

| NO. | Equipment                      | Manufacturer      | Model No.        | Dynacomm    |
|-----|--------------------------------|-------------------|------------------|-------------|
| 1   | <b>AMS-8923</b>                | <b>ETS-Lingen</b> | <b>SN1702</b>    | GTS MaxSign |
| 2   | <b>Network Analyzer E5071C</b> | <b>Kesight</b>    | <b>MY4690575</b> | /           |



Fig 2 dipole model 3126-2500 frequency 2500 MHz



Fig 3 model 3126-5500 frequency 5500 MHz

## I. Measurement Setup:

### A. Reflection Coefficient Measurement:

**Instrument:** Network Analyzer (Kesight E5071C).

#### Setup:

1. Calibrate the Network Analyzer by one port calibration using Kesight 85093C Electronic calibration module .
2. Connect the antenna under test to the Network Analyzer.
3. Measure the S11(reflection coefficient),Return Loss....

### B. Pattern Measurement:

A Fully Anechoic Chamber is used to simulate free-space conditions.

A Fully Anechoic Chamber is a shielded room lined with RF/microwave absorber on all walls, ceiling, and floor.

RF/microwave absorber reduces reflections from the inner walls of the shield.

Absorber performance depends on the depth and design of the absorber and the angle of incidence of the field.

Normal incidence is best, shallower angles are worse.

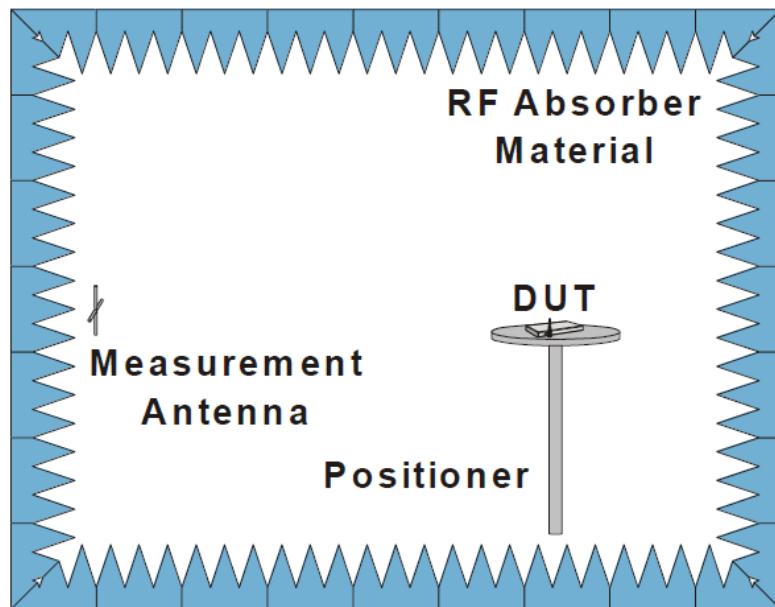


Fig. 4. The fully anechoic chamber

Please refer to Antenna Location&dimension&setup photos.

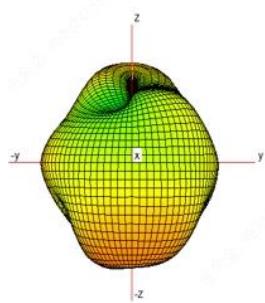
Fig.5. The DUT in the fully anechoic chamber

### BT&WIFI 2D or 3D pattern 图

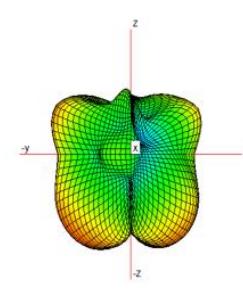
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|------|---------|----|
| Ant8 | 频点      | 方向 |
|      | 2450MHz | E1 |

|      |         |    |
|------|---------|----|
| Ant8 | 频点      | 方向 |
|      | 2450MHz | E2 |

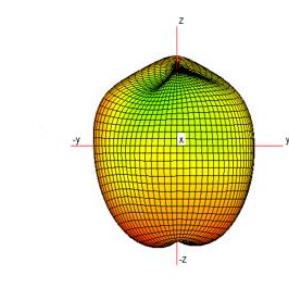
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| Ant8 | 频点      | 方向 |
|      | 2450MHz | H  |



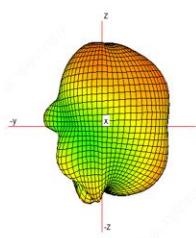
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| Ant8 | 频点      | 方向 |
|      | 5200MHz | E1 |



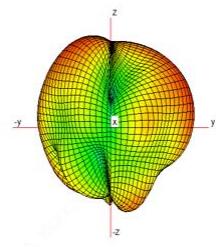
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| Ant8 | 频点      | 方向 |
|      | 5200MHz | E2 |



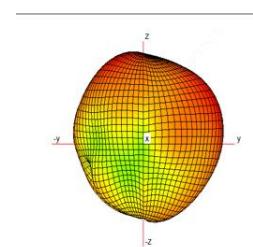
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| Ant8 | 频点      | 方向 |
|      | 5200MHz | H  |



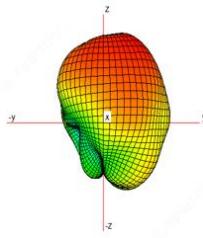
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|      | 5300MHz | E1 |



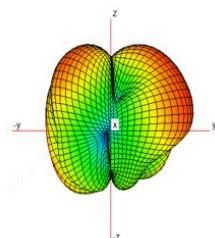
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|      | 5300MHz | E2 |



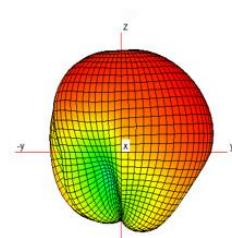
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|------|---------|----|
| Ant8 | 频点      | 方向 |
|      | 5300MHz | H  |



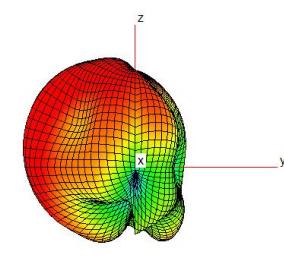
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|      | 5500MHz | E1 |



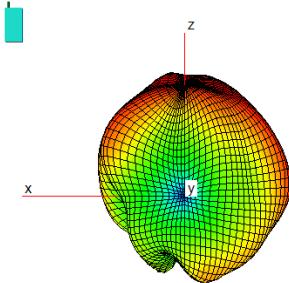
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|      | 5500MHz | E2 |



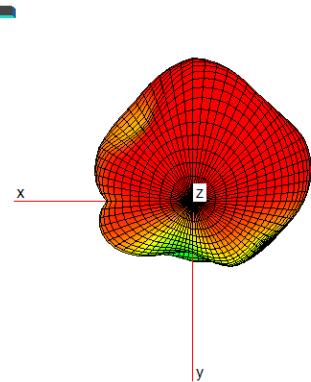
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|------|---------|----|
| Ant8 | 频点      | 方向 |
|      | 5500MHz | H  |



|      |         |    |
|------|---------|----|
| Ant8 | 频点      | 方向 |
|      | 5780MHz | E1 |



|      |         |    |
|------|---------|----|
| Ant8 | 频点      | 方向 |
|      | 5780MHz | E2 |



|      |         |    |
|------|---------|----|
| Ant8 | 频点      | 方向 |
|      | 5780MHz | H  |

