

# Antenna Gain test report

FCC ID: 2AUYFRMX5051

Equipment: Mobile Phone

Brand Name: realme

Model Name: RMX5051

Manufacturer: Realme Chongqing Mobile

Telecommunications Corp., Ltd.

No.178 Yulong Avenue, Yufengshan, Yubei District,

Chongqing, China

Issue Date: November 29, 2024

### Antenna Gain and Antenna Type specification:

Antenna Gain (dBi)		Ant 12	Antenna Type
2.4G WiFi	2400~2483.5MHz	-2.4	PIFA Antenna
5G Wifi	5150~5250 MHz	-2.9	PIFA Antenna
	5250~5350 MHz	-3.1	PIFA Antenna
	5470~5725 MHz	-3.3	PIFA Antenna
	5725~5850 MHz	-3.2	PIFA Antenna
BT	2400~2483.5MHz	-2.4	PIFA Antenna

NFC	13.56MHz	Demsion:56.86*31.75mm	
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Table1 Antenna Gain and Antenna Type specification

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

Accoring toTest standard: IEEE Std 149-2021,we measure antenna gain .

### List of Test and Measurement Instruments

#### TEST EQUIPMENT

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



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.

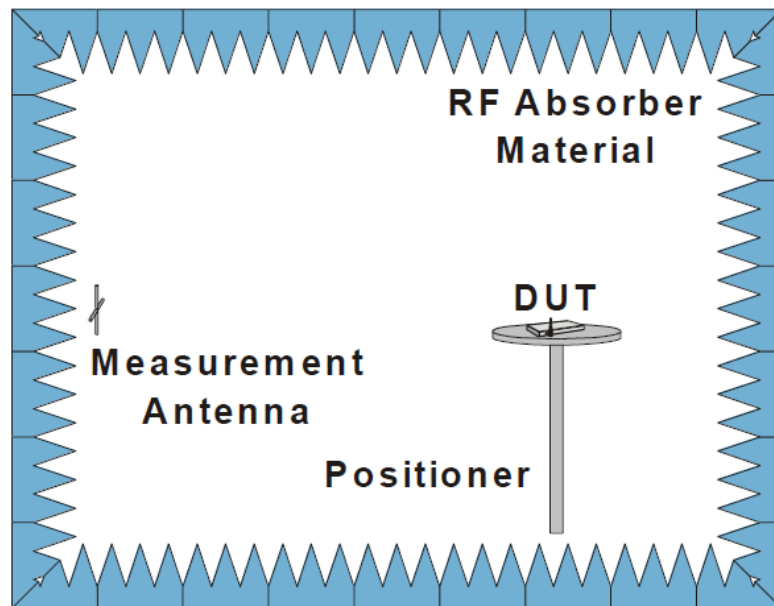


Fig. 4. The fully anechoic chamber

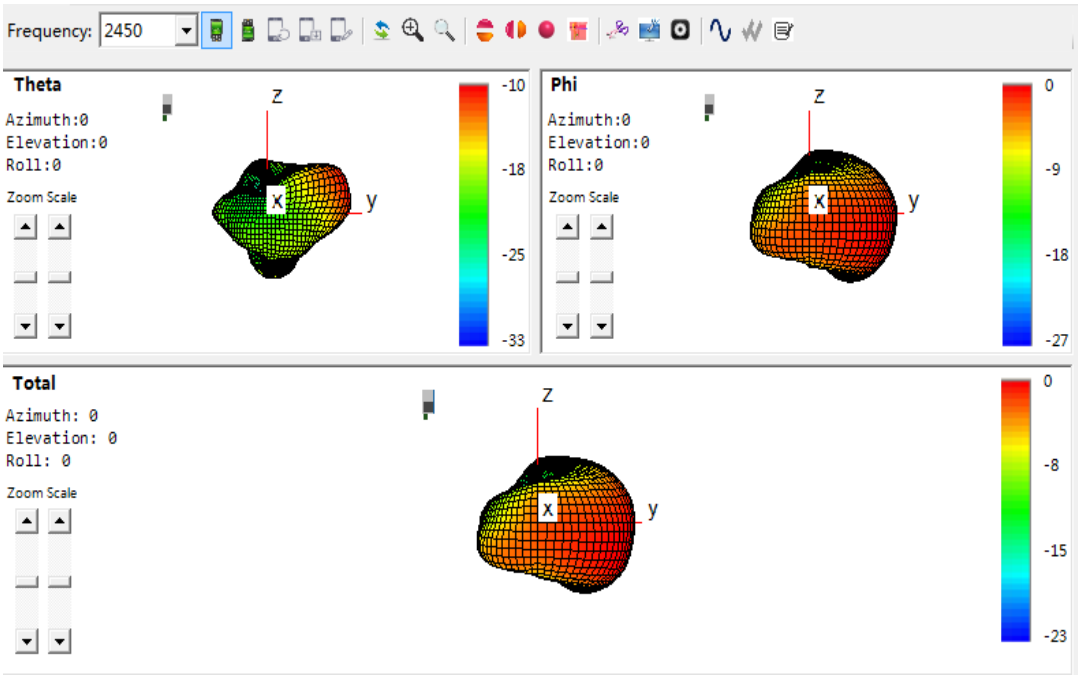


Fig.5. The DUT in the fully anechoic chamber

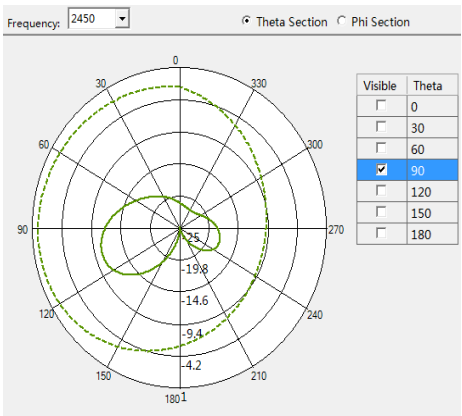
BT&WIFI 2D or 3D pattern 图  
ANT -ANT12

2.4G WIFI

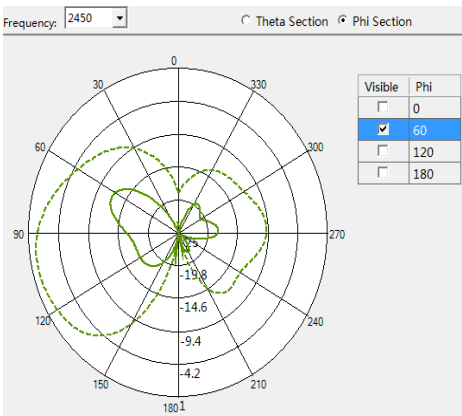
Ant12	频点
	2450



Ant12	频点
	2450

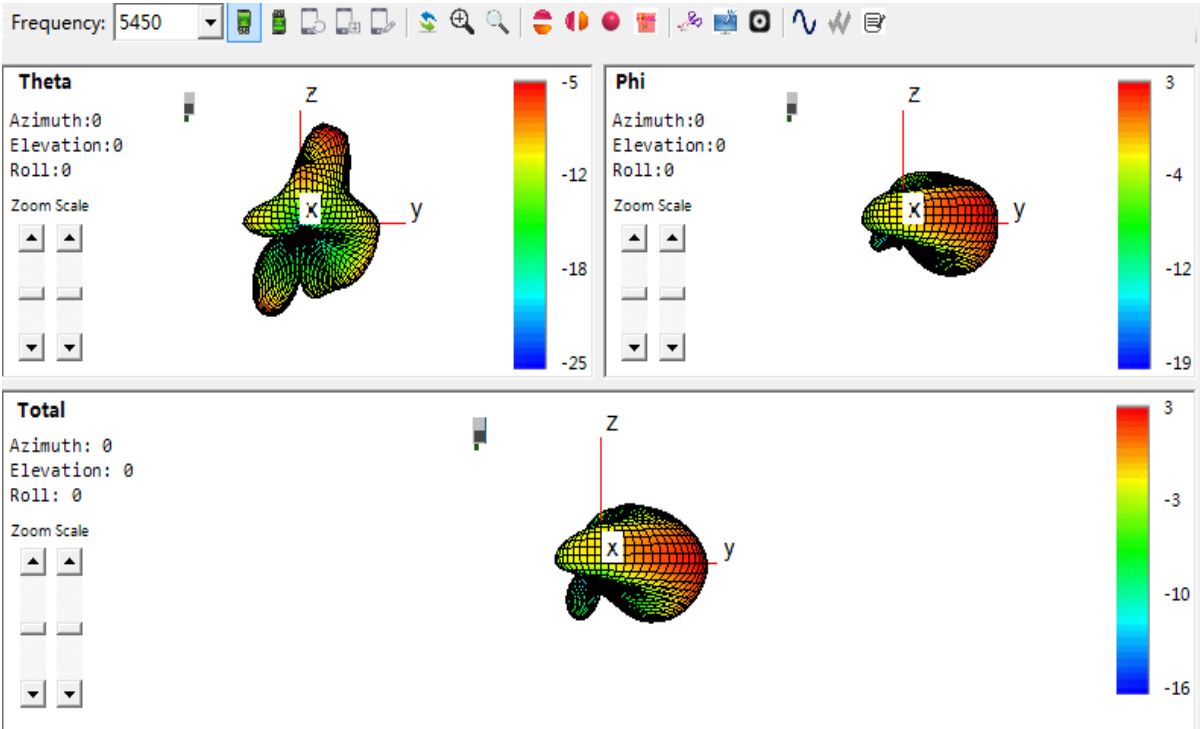


Ant12	频点
	2450

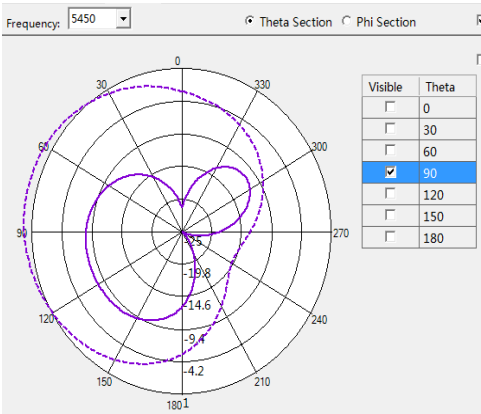


5G WIFI

Ant12	频点
	5450



Ant12	频点
	5450



Ant12	频点
	5450

