

Antenna Gain test report

FCC ID: 2AUYFRMX5078

Equipment: Mobile Phone

Brand Name: realme

Model Name: RMX5078

Manufacturer: Realme Chongqing Mobile

Telecommunications Corp., Ltd.

No.178 Yulong Avenue, Yufengshan, Yubei District,

Chongqing, China

Issue Date: DEC 17, 2024

Test engineer: Ran Huang

Ran Huang

Test Report

Report No.:OP20220708

ANT8:WIFI antenna dimension: 15.44mm*9.151mm

Mode: QN7500A-WCN

ANT9:WIFI antenna dimension: 21.12mm*11.46mm

Antenna Type: IFA Antenna

Mode: AN7500A-WIFI_H

NFC antenna dimension: 34.79mm*28.01mm

Antenna Type: Coli Antenna

Manufacturer: Kunshan Innowave Communication Technology Co., Ltd.

Mode: QN7500A-NFC

Antenna Gain and Antenna Type specification:

Antenna Gain (dBi)		Ant 8	ANT9	Antenna Type
2.4G WiFi	2400~2483.5MHz	-1.0	-7.5	IFA(Inverted F Antenna)
5G Wifi	5150~5250 MHz	2.0	-0.93	IFA(Inverted F Antenna)
	5250~5350 MHz	2.0	-0.45	IFA(Inverted F Antenna)
	5470~5725 MHz	2.0	-0.98	IFA(Inverted F Antenna)
	5725~5850 MHz	2.0	-1.1	IFA(Inverted F Antenna)
BT	2400~2483.5MHz	-1.0	\	IFA(Inverted F Antenna)

***ANT8 & ANT9 not mimo antenna , use SP2T tuner change Antenna working.**

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	Keysight	MY469057 5	

calibration date: 2024.12.17

Due date: 2025.12.17

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:

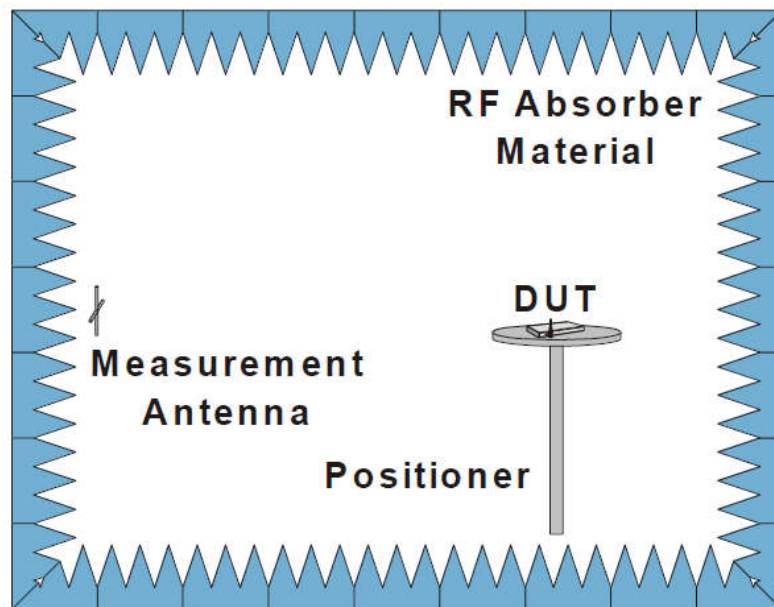
A Fully Anechoic Chamber is used to simulate free-space conditions.

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

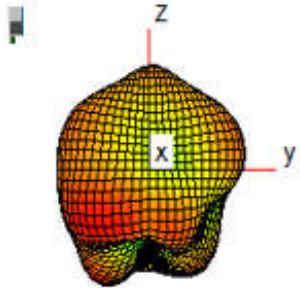
RF/microwave absorber reduces reflections from the inner walls of the shield.

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

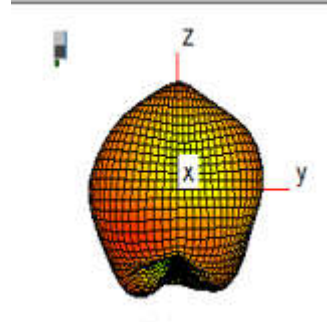
Normal incidence is best, shallower angles are worse.



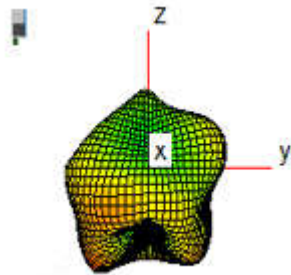
BT&WIFI 2D or 3D pattern
ANT8:



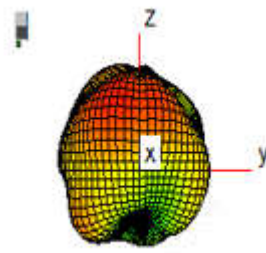
2400MHZ



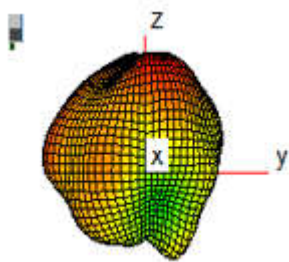
2450MHZ



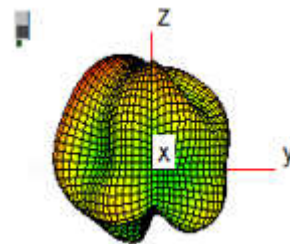
2500MHZ



5150MHZ



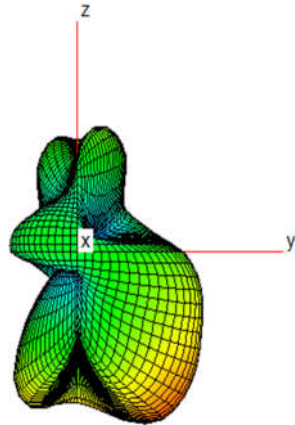
5500MHZ



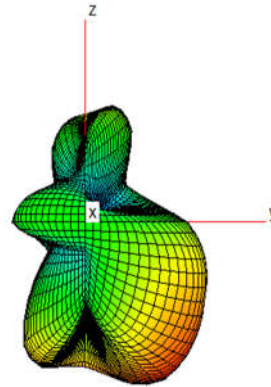
5800MHZ

WIFI 2D or 3D pattern

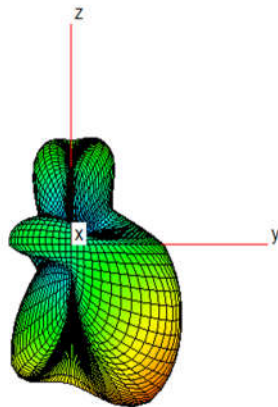
ANT9:



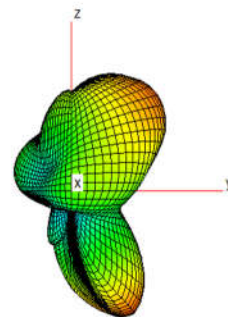
2400MHZ



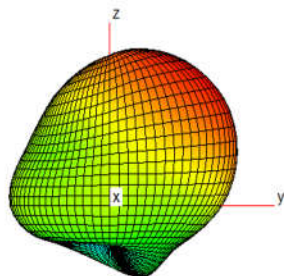
2450MHZ



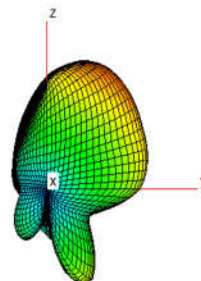
2500MHZ



5150MHZ



5500MHZ



5800MHZ