

## Antenna Gain test report

Equipment: Mobile Phone

Brand Name: OPPO

Model Name: CPH2637

Manufacturer:

Guangdong OPPO Mobile Telecommunications Corp.,  
Ltd.

NO.18 Haibin Road, Wusha Village, Chang'an Town,  
Dongguan City, Guangdong, China

Issue Date: March 15, 2024

Checked by: Rocky Ren

Date:2024/3/15

Approved by: Lucas Sun

Date: 2024/3/15

**Antenna Location&dimension:**

Please Refer to Antenna Location&dimension

Fig 1 Antenna location&dimension

**Antenna Gain and Antenna Type specification:**

Antenna Gain (dBi)		Chain0	Antenna Type	Antenna model	Manufacturer
2.4G WiFi	2400~2483.5MHz	-1	IFA(Inverted F Antenna)	AC175-TOP-COVER	Shenzhen Sunway Communication Co., Ltd
5G Wifi	5150~5250 MHz	-2.5	IFA(Inverted F Antenna)	AC175-TOP-COVER	Shenzhen Sunway Communication Co., Ltd
	5250~5350 MHz	0	IFA(Inverted F Antenna)	AC175-TOP-COVER	Shenzhen Sunway Communication Co., Ltd
	5470~5725 MHz	0.5	IFA(Inverted F Antenna)	AC175-TOP-COVER	Shenzhen Sunway Communication Co., Ltd
	5725~5850 MHz	-0.5	IFA(Inverted F Antenna)	AC175-TOP-COVER	Shenzhen Sunway Communication Co., Ltd
BT	2400~2483.5MHz	-1	IFA(Inverted F Antenna)	AC175-TOP-COVER	Shenzhen Sunway Communication Co., Ltd
NFC	13.56MHz	/	FPC(Flexible Printed Circuit)	AC175-SXA1XX	Shenzhen Sunway Communication Co., Ltd

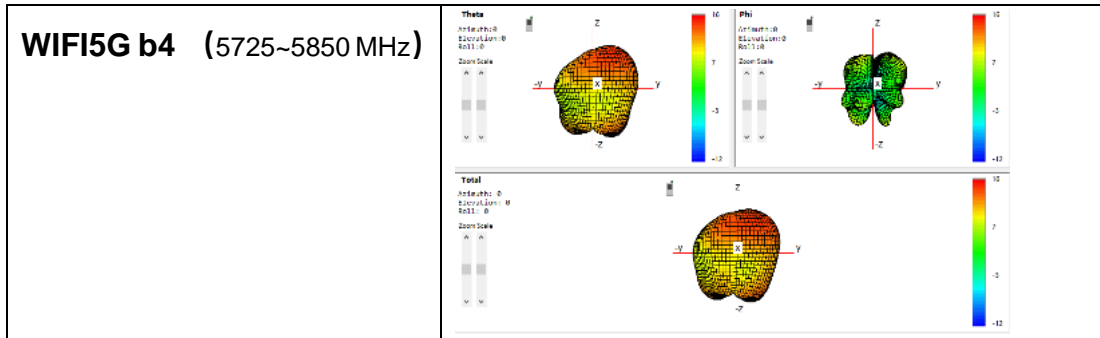
Table1 Antenna Gain and Antenna Type specification

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 .

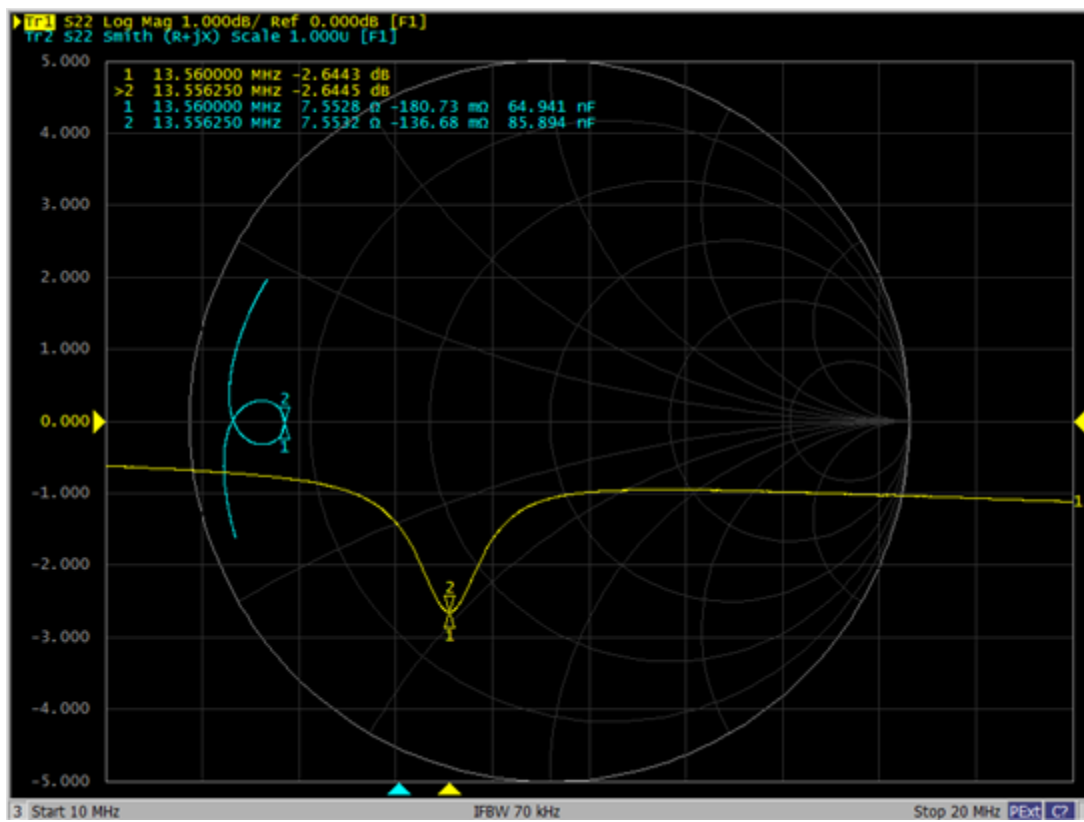
Antenna Radiation Pattern:

	<b>ANT7</b>
<b>WIFI2.4G/BT</b>	
<b>WIFI5G b1 (5150~5250 MHz)</b>	
<b>WIFI5G b2 (5250~5350 MHz)</b>	
<b>WIFI5G b3 (5470~5725 MHz)</b>	



**NFC passive impedance on phone**

<b>Zload@13.56MHz</b>		<b>BW(-3dB)</b>
24.412Ω-2.9816Ω		1.26MHz



**List of Test and Measurement Instruments**

**TEST EQUIPMENT**

NO.	Equipment	Manufacturer	Model No.
1	AMS-8923	ETS-Lingen	SN1702

2	Network Analyzer E5071C	Kesight	MY4690575
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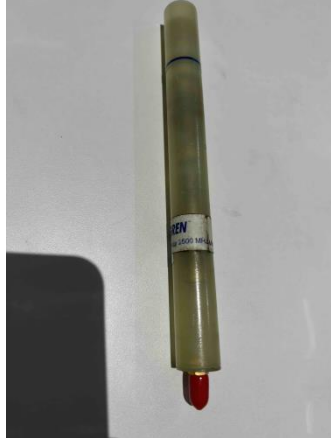


Fig 2 dipole model 3126-2500 frequency 2500 MHz



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.

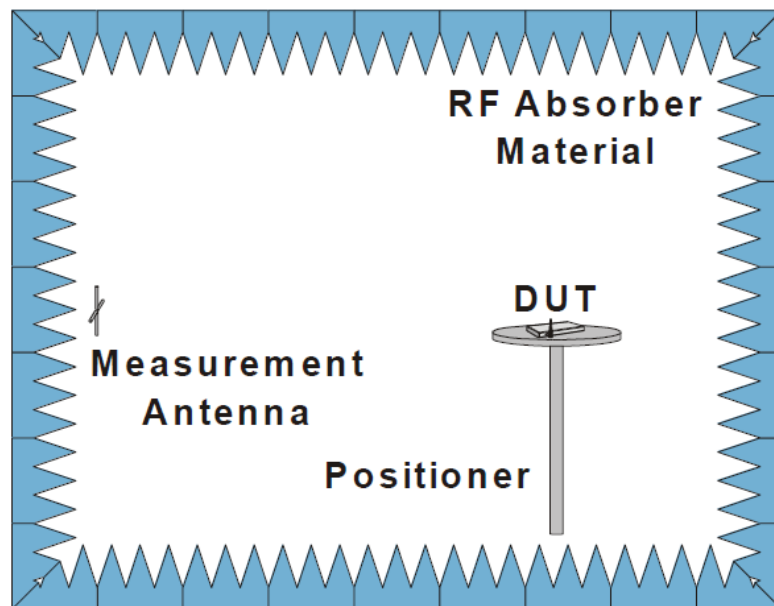


Fig. 4. The fully anechoic chamber