

Antenna Gain test report

FCC ID: R9C-CPH2477

Equipment: Mobile Phone

Brand Name: OPPO

Model Name: CPH2477

Manufacturer:

Guangdong OPPO Mobile Telecommunications Corp.,
Ltd.

NO.18 Haibin Road, Wusha Village, Chang'an Town,

Dongguan City, Guangdong, China

Issue Date: July 8, 2022

Project Engineer: pengtao Nan Date:2022/7/8

Checked by: yunpan Wei Date:2022/7/8

Approved by:wei Li Date:2022/7/8

Antenna Gain and Antenna Type specification:

| Antenna Gain (dBi) | | Ant 0 | Ant 1 | Ant 2 | Antenna Type |
|--------------------|----------------|-------|-------|-------|-------------------------|
| 2.4G WiFi | 2400~2483.5MHz | | | 1 | IFA(Inverted F Antenna) |
| 5G Wifi | 5150~5250 MHz | | | 2.5 | IFA(Inverted F Antenna) |
| | 5250~5350 MHz | | | 2.5 | IFA(Inverted F Antenna) |
| | 5470~5725 MHz | | | 2.5 | IFA(Inverted F Antenna) |
| | 5725~5850 MHz | | | 2.5 | IFA(Inverted F Antenna) |
| BT | 2400~2483.5MHz | | | 1 | IFA(Inverted F Antenna) |

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

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 |

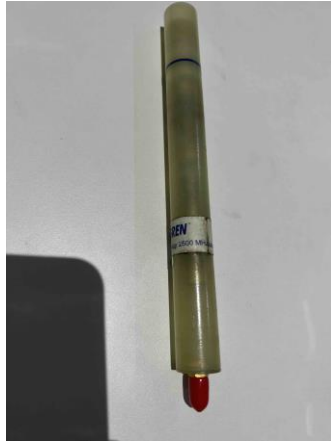


Fig 1 dipole model 3126-2500 frequency 2500 MHz



Fig 2 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.

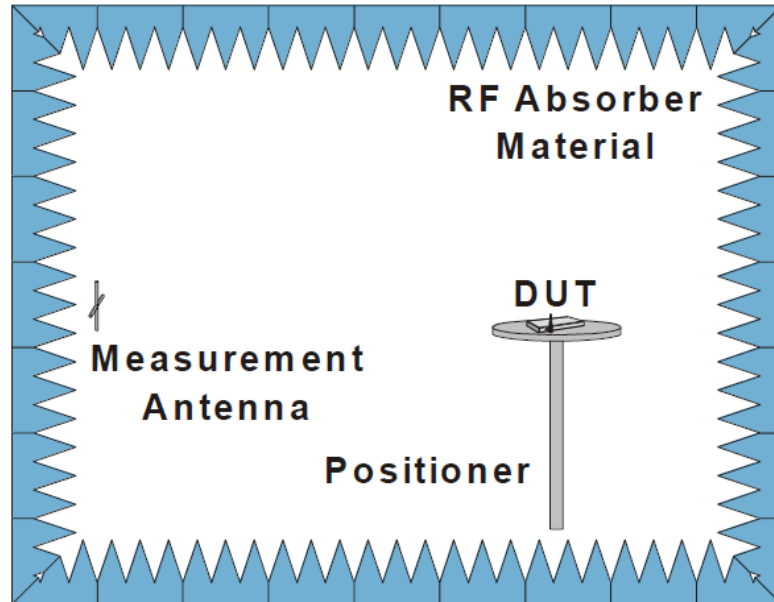


Fig. 3. The fully anechoic chamber