Antenna Gain test report

FCC ID：2ABZ2-AA534

Equipment：Mobile Phone

Brand Name：ONEPLUS

Model Name：CPH2513, CPH2515

Manufacturer：

OnePlus Technology (Shenzhen) Co., Ltd.

18C02, 18C03, 18C04, and 18C05, Shum Yip Terra Building,

Binhe Avenue North, Futian District, Shenzhen,

Guangdong, P.R. China.

Issue Date： Dec. 6, 2022

Project Engineer: Sichao Wen Date:2022/12/6

Checked by: He Xiang Date:2022/12/6

Approved by:Tianping Liang Date:2022/12/6

Antenna Gain and Antenna Type specification:

Antenna Gain (dBi)		Ant 0	Antenna Type
2.4G WiFi	2400~2483.5MHz	0.5	IFA(Inverted F Antenna)
5G WiFi	5150~5250 MHz	0.0	IFA(Inverted F Antenna)
	5250~5350 MHz	1.0	IFA(Inverted F Antenna)
	5470~5725 MHz	2.0	IFA(Inverted F Antenna)
	5725~5850 MHz	1.0	IFA(Inverted F Antenna)
BT	2400~2483.5MHz	0.5	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 toTest 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.

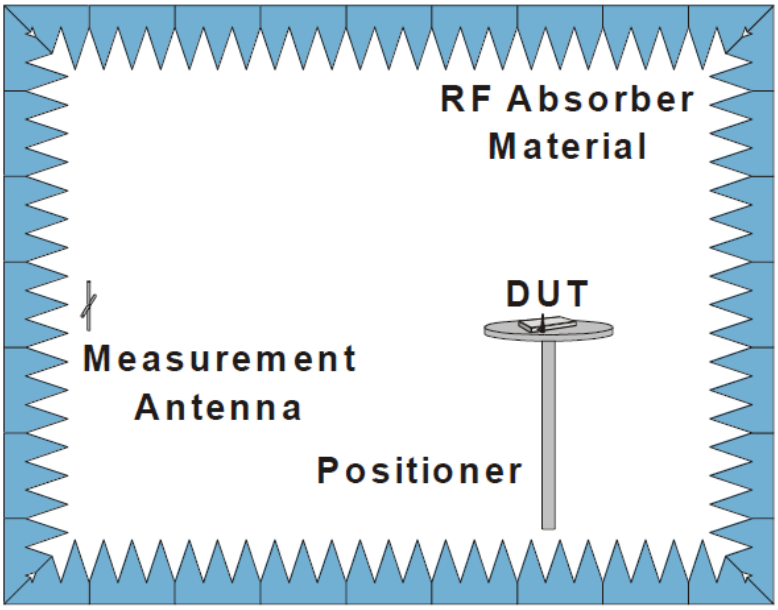

Fig. 3. The fully anechoic chamber