# Antenna report

**1: 天线样品 antanna photo**

Please refer to antenna photo.

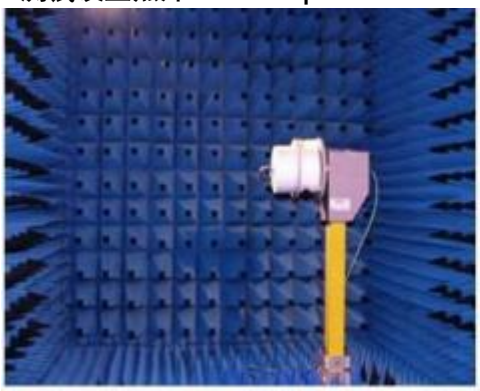
| Antenna Type | Band(S) | Dimension（mm） |
|---|---|---|
| PCB antenna | 2.4GHz - 2.5GHz | 37*15.5 |

**2：测试步骤程序 Test method and standard**

| Name | Parameter | Method | Standard no. |
|---|---|---|---|
| Antenna performance | Radiation efficiency | IEEE Standard Test Procedures for Antennas | ANSVIEEE Std 149-2021 |

| | |
|---|---|
| 测试地点 test location | Dongguan South Star Technology Co., Ltd |
| | No. 3, Nanfang 1st Road, Chigang, Humen Town, Dongguan City |
| 测试人员 test person | Wangdongyang |
| 测试日期test date | 2023-06-29 |

## 3：测试设置照片test set up

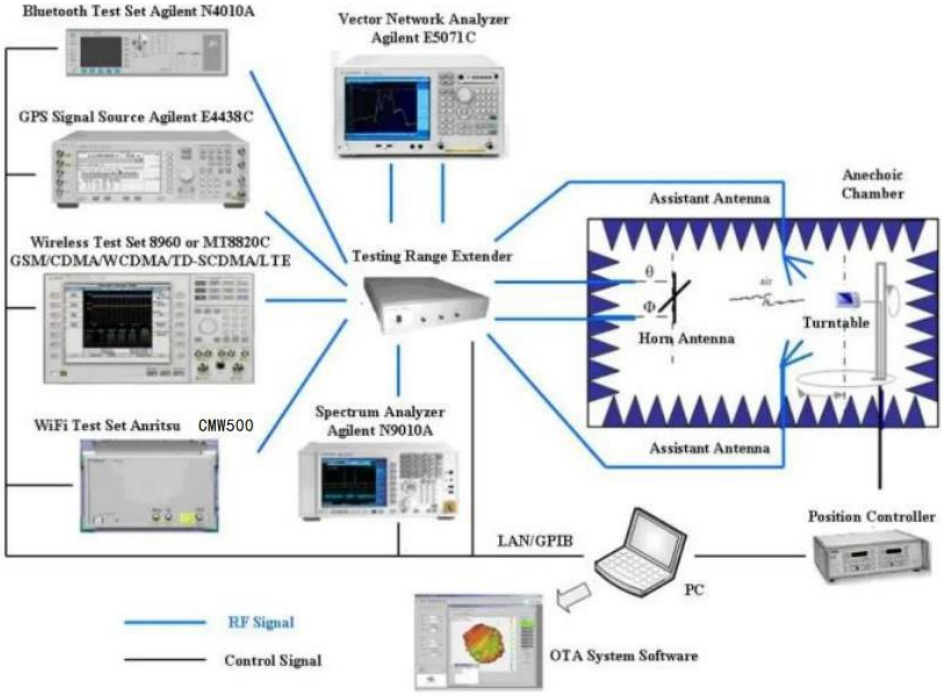




## 4：设备清单 test equipment list

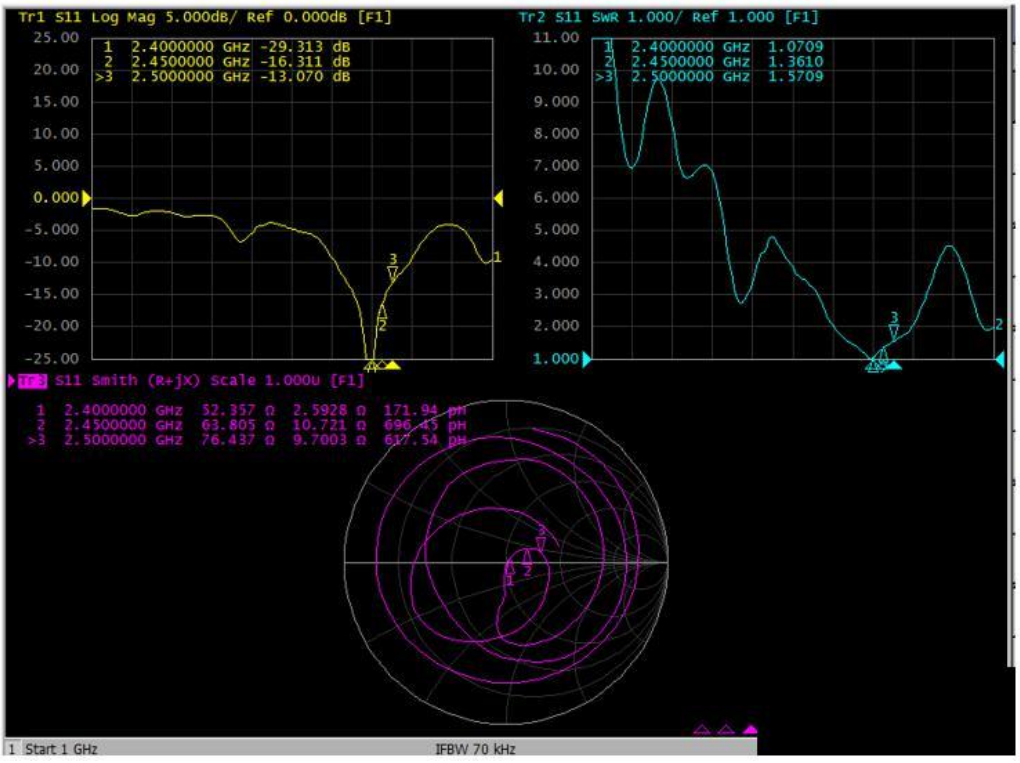
| 序号 | 设备名称 | 型号 | 生产厂家 | 出产编号 | 校准日期 | 校准有效期 |
|---|---|---|---|---|---|---|
| 1 | 全电波暗室 | AMS-8923 | ETS -Lindgren | 5421 | 2023/4/13 | 2024/4/12 |
| 2 | 转台拉制器 | EMCO2090 | ETS -Lindgren | 125967 | / | / |
| 3 | 开关单元 | OSP120 | Rohde & Schwarz | 100939 | / | / |
| 4 | 网络分析仪 | Agilent E5071C | Agilent | 101539 | 2023/4/13 | 2024/4/12 |
| 5 | 综测仪器 | R&S CMW500 | Rohde & Schwarz | 130259 | 2023/4/13 | 2024/4/12 |

## 5:测试配置图



6：天线增益测试图及数据antenna gain test graph and datas

| Freq(Mhz) | Effi(%) | Gain(dBi) |
|---|---|---|
| 2400 | 53.87 | 1.83 |
| 2410 | 53.76 | 1.94 |
| 2420 | 54.95 | 1.99 |
| 2430 | 53.55 | 1.86 |
| 2440 | 51.41 | 1.59 |
| 2450 | 52.98 | 1.77 |
| 2460 | 53.92 | 1.95 |
| 2470 | 53.95 | 2.11 |
| 2480 | 53.49 | 2.22 |
| 2490 | 50.95 | 1.93 |
| 2500 | 51.71 | 1.99 |



# 7：测试步骤 Test Procedure

**Test Step Flow**

1. Maintain the test ambient temperature of 23t2 C, the instrument is powered on and preheated for more than 30 minutes
2. Tum on the darkroom power supply, connect the test cable, and set up the sample according to the standard
3. Outline sets the test content objectives and conducts calibration tests
4. Run the EMQuest OTA software, the test is complete, export the corresponding test diagram and test data, and save to the corresponding directory

**Test Principle**

The test principle can be seen in accordance with the standard ANSI/IEEE std 149-2021

**Test Conditions**

1.The analyte, the network analyzer for testing, the test equipment and the test cable connector should have good reliability, stability, dynamic range and measurement accuracy to ensure the correctness of the measurement accuracy
2. The measuring instrument should have a certificate of conformity and be within the effective calibration period
3. The analyte should be complete and undamaged, and the test environment should be kept clean

# 8：测试软件 Test Software

Test software being used: EMT-OTA
Software Version: V2.0