



深圳市国质信网络通讯有限公司  
ShenZhen NQI network communication ltd

# Antenna Test Report

For

Project BT0719

Version:

|              |     |            |           |
|--------------|-----|------------|-----------|
| Customer     | 联欣宏 | Project    | BT0719    |
| Band         | BT  | Color      |           |
| Issued by    | 罗工  | Checked by |           |
| Confirmed by |     | Date       | 2024.7.31 |

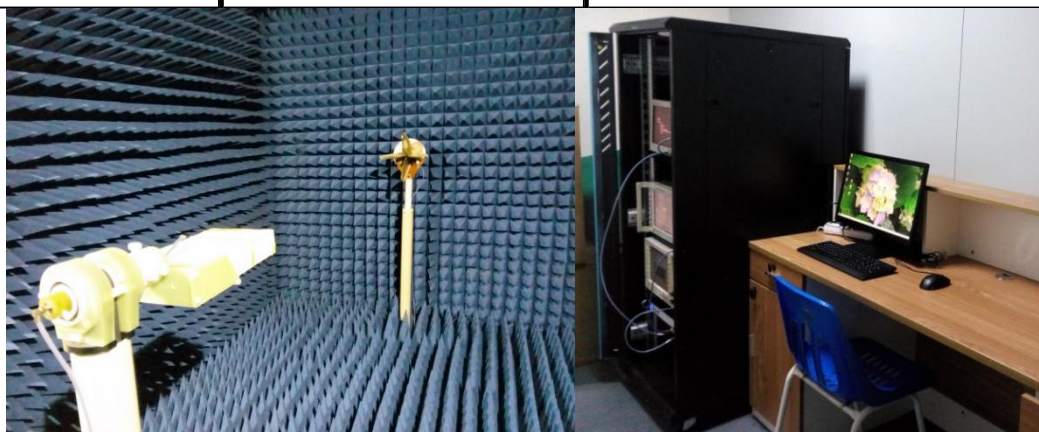
## 一. Test Instrumentation and item(测试设备及项目)

|            |                  |                |
|------------|------------------|----------------|
| 类别 (Class) | 测试项目 (Test item) | 设备 (Equipment) |
|------------|------------------|----------------|

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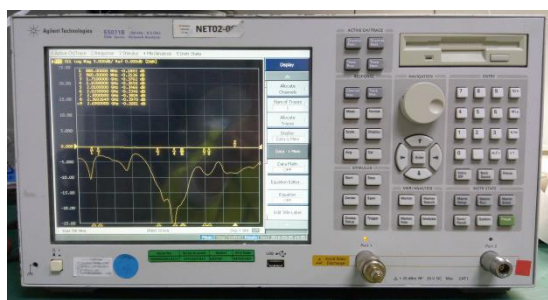


|                            |                                                                   |                                                                                                                                                                                                                                    |
|----------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. S parameter             | 1. 回波损耗(RL)<br>2. 驻波比 (VSWR)<br>3.斯密斯原图(Smith chart)              | 网分 (VNA) : Agilent E5071B<br><br>R&S ZVB8<br><br>Protek A333                                                                                                                                                                       |
| 2. 耦合测试 (Coupling testing) | 1. 发射功率 (MAX Power)<br>2. 接收灵敏度 (MIN Sens)                        | 1.2G/3G Tester: Agilent 8960<br>2.The coupling box: TESCOM TC-5060A<br>3. 3D Chamber: ETS 3D Chamber (5x3x3)                                                                                                                       |
| 3. 3D 无源测试 (Passive Test)  | 1. 效率 (Effeciency)<br>2. 增益 (Gain)<br>3.辐射方向图 (radiation pattern) | 1. 3D Chamber: TEM24 3D Chamber (5x5x5)<br><br>ETS 3D Chamber (5x3x3)<br>2. 网分 (VNA) : Agilent E5071B<br><br>R&S ZVB8                                                                                                              |
| 4.3D 有源测试 (Active Test)    | 1. 3D 功率 (TRP)<br>2. 3D 灵敏度 (TIS)<br>3.吞吐率 (Throughput rate)      | 1. 3D Chamber: TEM24 3D Chamber (5x5x5)<br><br>ETS 3D Chamber (5x3x3)<br>2.2G/3G Tester: Agilent 8960<br>3.4G Tester: MT8820C/CMW500<br>4.WIFI/BT/NB-iot Tester: CMW500<br>5. 5G Tester: SP9500-CTS<br>6.Head: HEAD-P10 (FACE-P10) |

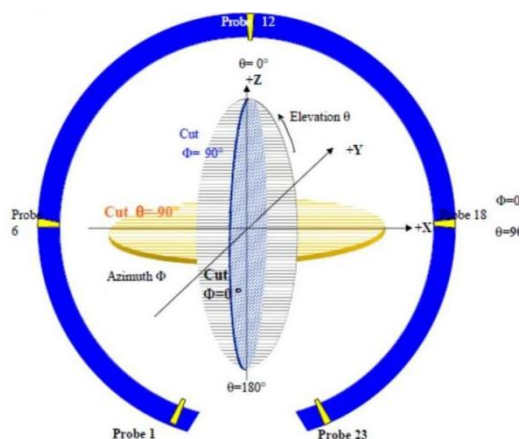
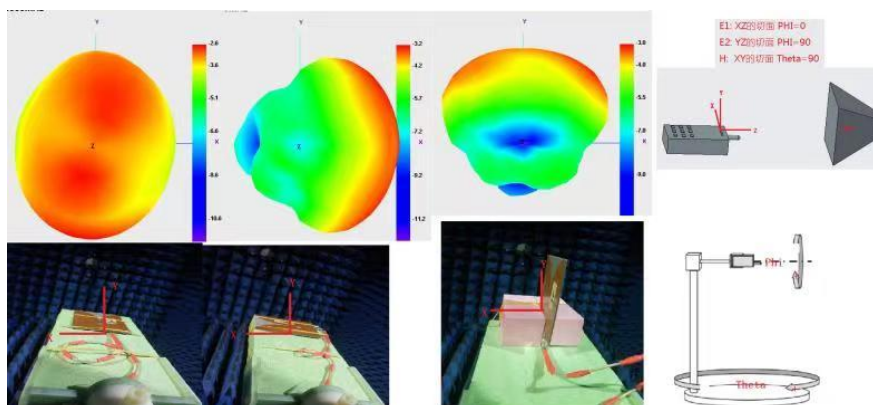




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## 二. Chamber coordinate axis (暗室坐标)



## 三. Definitions (定义)

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VSWR: Voltage Standing Wave Rate

RL: Return loss

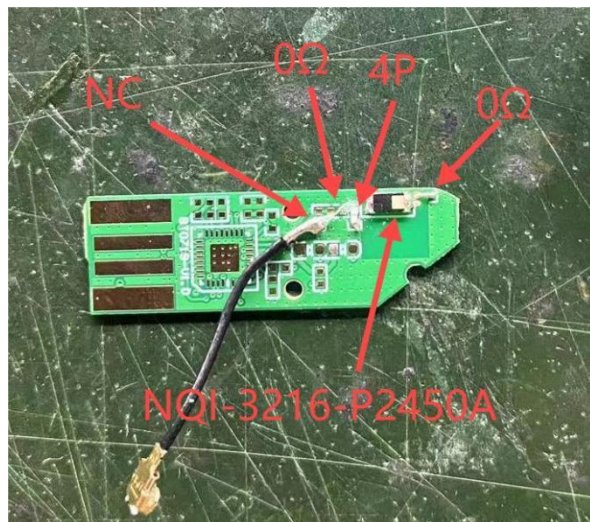
TRP: total radiated power

TIS: total isotropic sensitivity

#### 四. Cell-Phone Photo and Dealing Method (手机图片及环境处理)

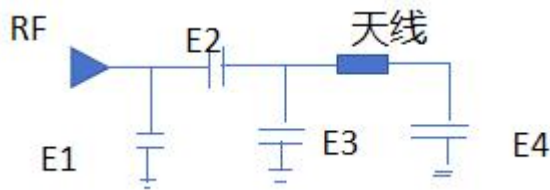


#### 五. Matching Circuit Description (匹配描述)





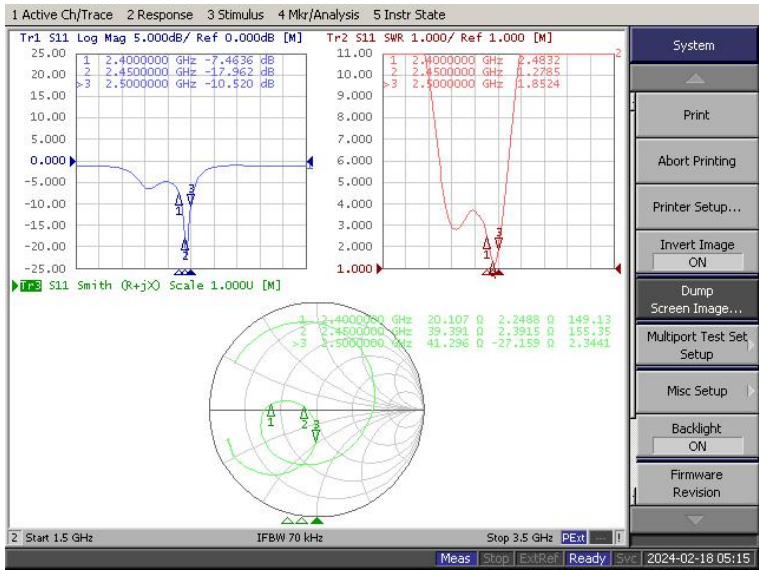
## 匹配电路



| Element  | Value      |
|----------|------------|
| E1(0201) | NC         |
| E2(0201) | 0 $\Omega$ |
| E3(0201) | 4P         |
| E4(0201) | 0 $\Omega$ |

## 六. Passive Test (无源测试)

### 6.1. RL/VSWR (回波损耗/驻波比)



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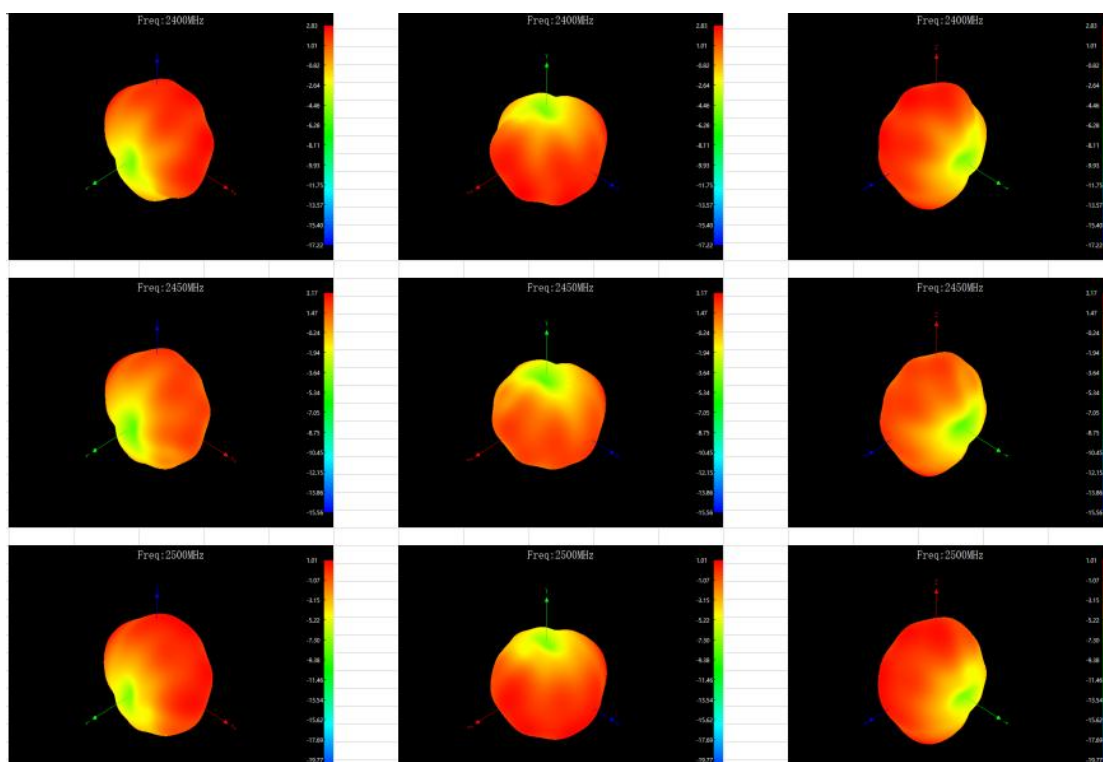


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## 6.2.Effeciency、Gain、 Radiation pattern

| Freq<br>(MHz) | Effi<br>(%) | Gain<br>(dBi) |
|---------------|-------------|---------------|
| 2400          | 66.61       | 2.83          |
| 2410          | 66.99       | 2.56          |
| 2420          | 67.61       | 2.43          |
| 2430          | 65.61       | 2.25          |
| 2440          | 68.23       | 2.55          |
| 2450          | 69.02       | 3.17          |
| 2460          | 69.11       | 3.38          |
| 2470          | 69.79       | 3.31          |
| 2480          | 63.39       | 2.39          |
| 2490          | 57.81       | 2.04          |
| 2500          | 55          | 1.51          |



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## 七 Antenna

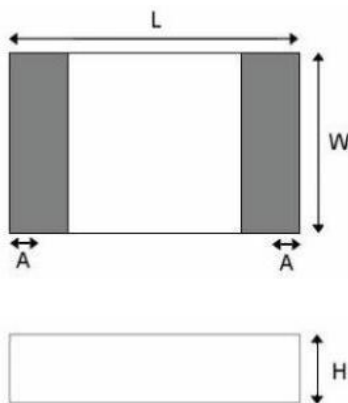
### 1. Operating frequency

Antenna Frequency for 2400-2500 MHz

### 2. Applications

For Miniaturized Bluetooth/WIFI System

#### 2.1. Appearance and Dimensions(Unit : mm):



| L         | W         | A         | H        |
|-----------|-----------|-----------|----------|
| 3.10±0.10 | 1.55±0.10 | 0.40±0.20 | 0.55±0.1 |



#### 2.2. PCB Top Layout (Unit : mm)

