

# Antenna OTA Test

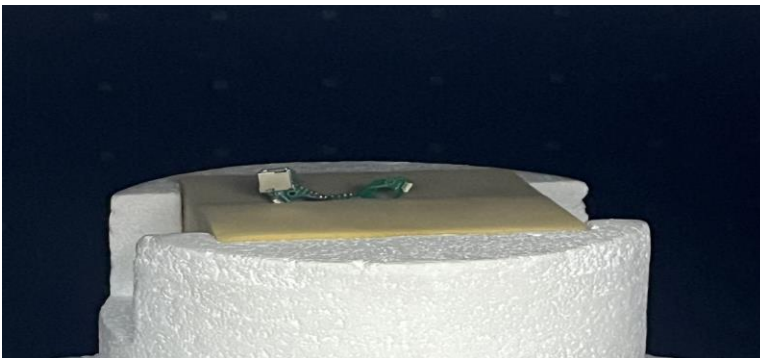
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## 1. Hardware Testing

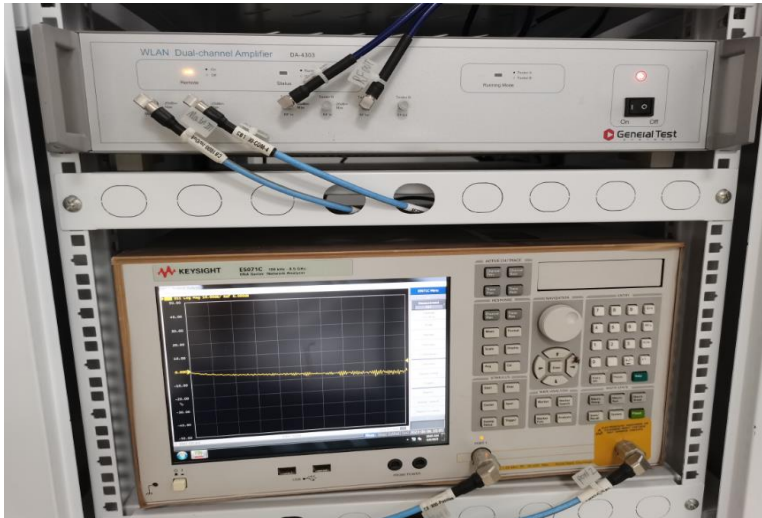
### 1.1. PCBA board testing

Weld the RF SMA cable to the PCB board and then connect it to the OTA testing facility. The connection diagram between the RF cable and the PCB board is shown below:

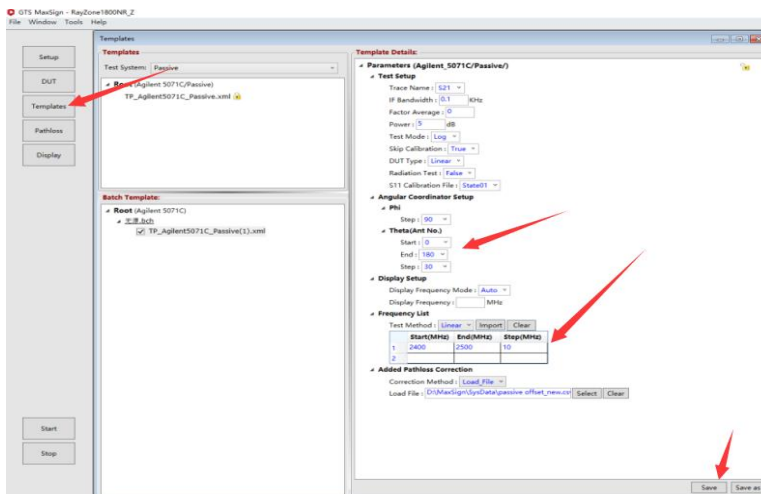
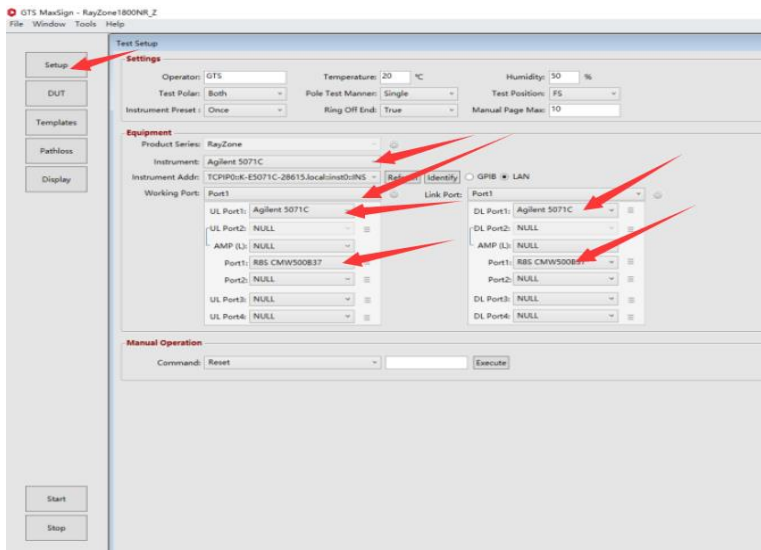


## 1.2. Test Facility and Environment

The equipment required for this test includes a computer, spectrum analyzer, amplifier, and OTA test site, as shown in the following diagram



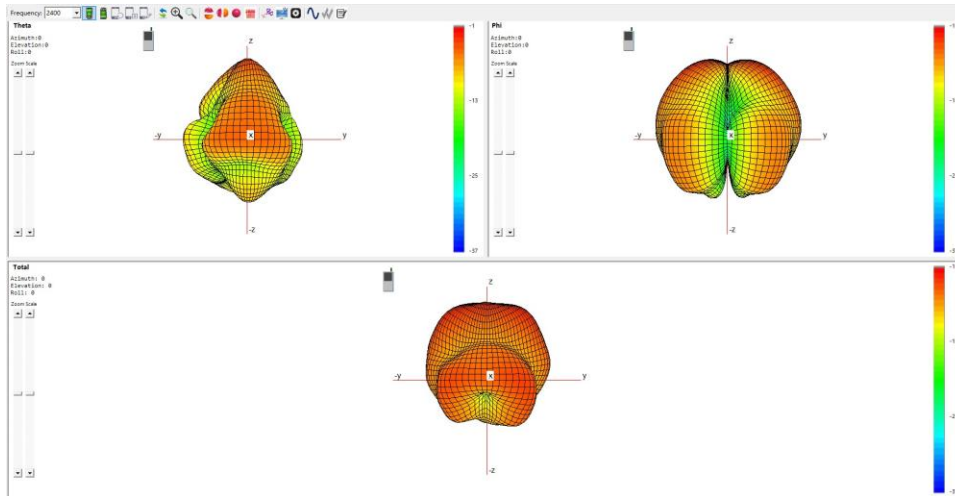
## 2. Software testing



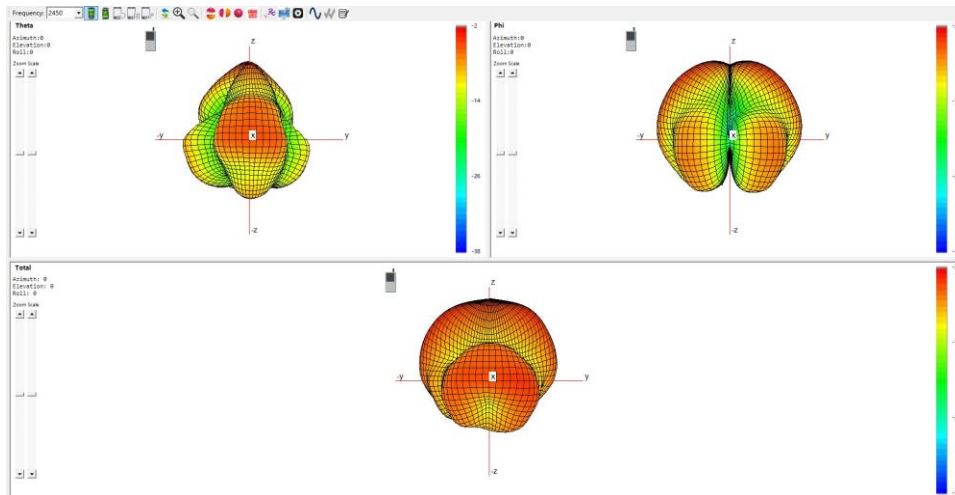
### 3. Test Data

#### 3.1. Scan the 3D radiation pattern of the antenna

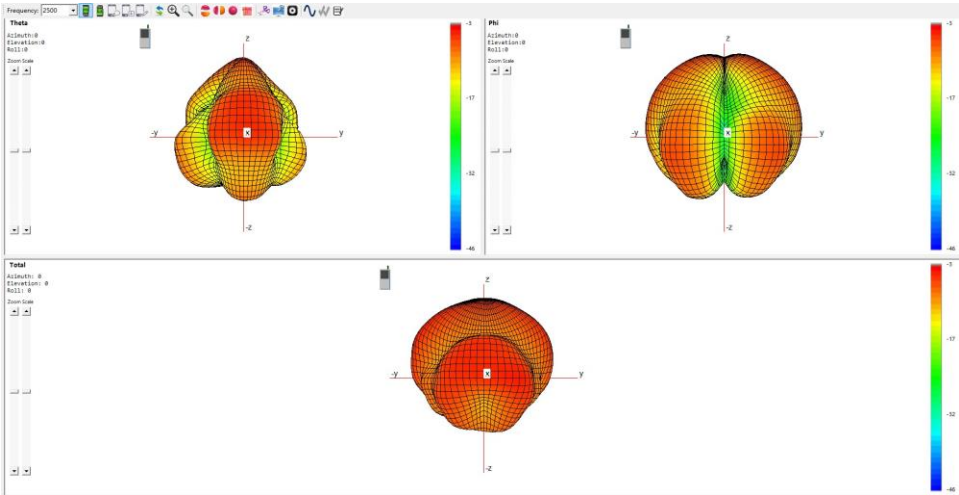
2400MHz



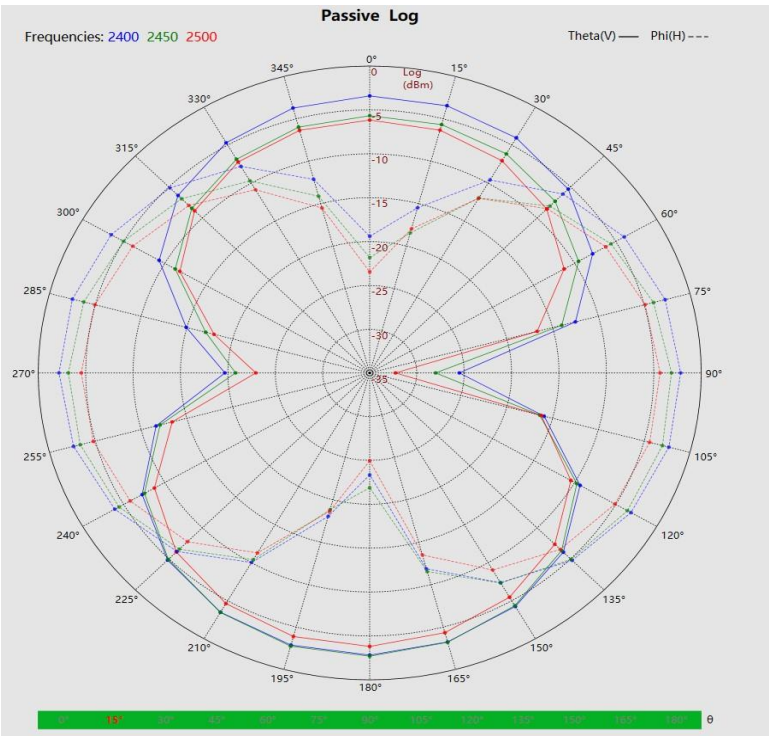
2450MHz



2500MHz



3.2. 2D radiation pattern of scanning antenna



### 3.3. Detailed Test Data

| Freq<br>(MHz) | Gain<br>(dBi) | Efficiency<br>(dB) | Efficiency<br>(%) |
|---------------|---------------|--------------------|-------------------|
| 2400          | -1.87         | -5.72              | 26.82             |
| 2410          | -1.43         | -5.45              | 28.49             |
| 2420          | -1.27         | -5.40              | 28.85             |
| 2430          | -1.69         | -5.96              | 25.35             |
| 2440          | -2.19         | -6.48              | 22.51             |
| 2450          | -2.36         | -6.46              | 22.58             |
| 2460          | -3.04         | -6.78              | 21.01             |
| 2470          | -3.52         | -7.09              | 19.56             |
| 2480          | -3.68         | -7.13              | 19.35             |
| 2490          | -3.83         | -7.23              | 18.91             |
| 2500          | -3.31         | -6.80              | 20.88             |

## 4. Summary

|                      |                                      |
|----------------------|--------------------------------------|
| <b>ITEMs</b>         | ANT SPEC                             |
| <b>Model Name</b>    | 2.4G ANT                             |
| <b>Antenna plate</b> | PCB antenna                          |
| <b>MAX. Gain</b>     | -1.27dBi                             |
| <b>Polarization</b>  | Horizontal and Vertical              |
| <b>Impedance</b>     | 50Ohm                                |
| <b>Manufacture</b>   | Brand Collective Corporation Limited |