

## 天线测试 Antenna testing

**Manufacturer: SHENZHEN CLEVER BRIGHT IMP. & EXP. CO.,LTD**

**Model No.: CB-ANC8500**

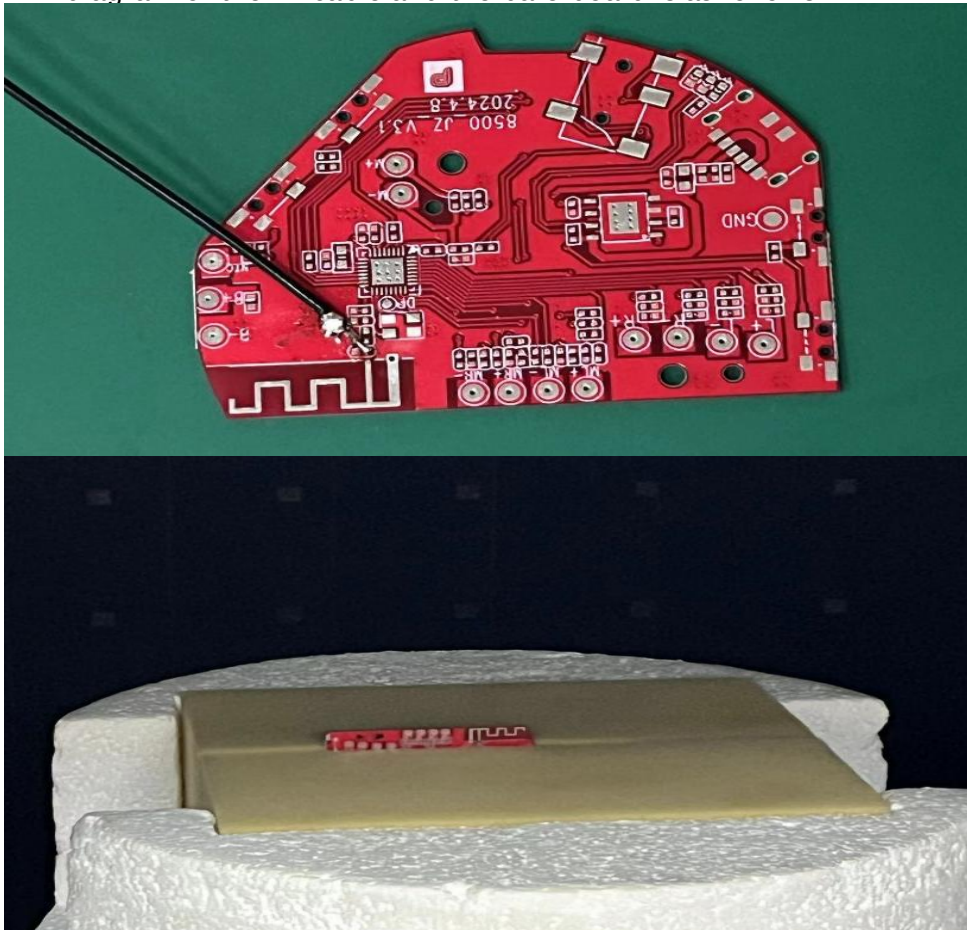
- 1、硬件测试 Hardware test
- 2、软件测试 Software test
- 3、数据读取 Data reading

### 1、硬件测试 Hardware test

#### 1.1 、PCBA 裸板测试 PCBA bare board test

将射频连接线与裸板焊接好，再将其与 OTA 设备连接。射频连接线与裸板连接图，如下图示：

Solder the RF cable to the bare board, and then connect it to the OTA device. The connection diagram of the RF cable and the bare board is as follows:



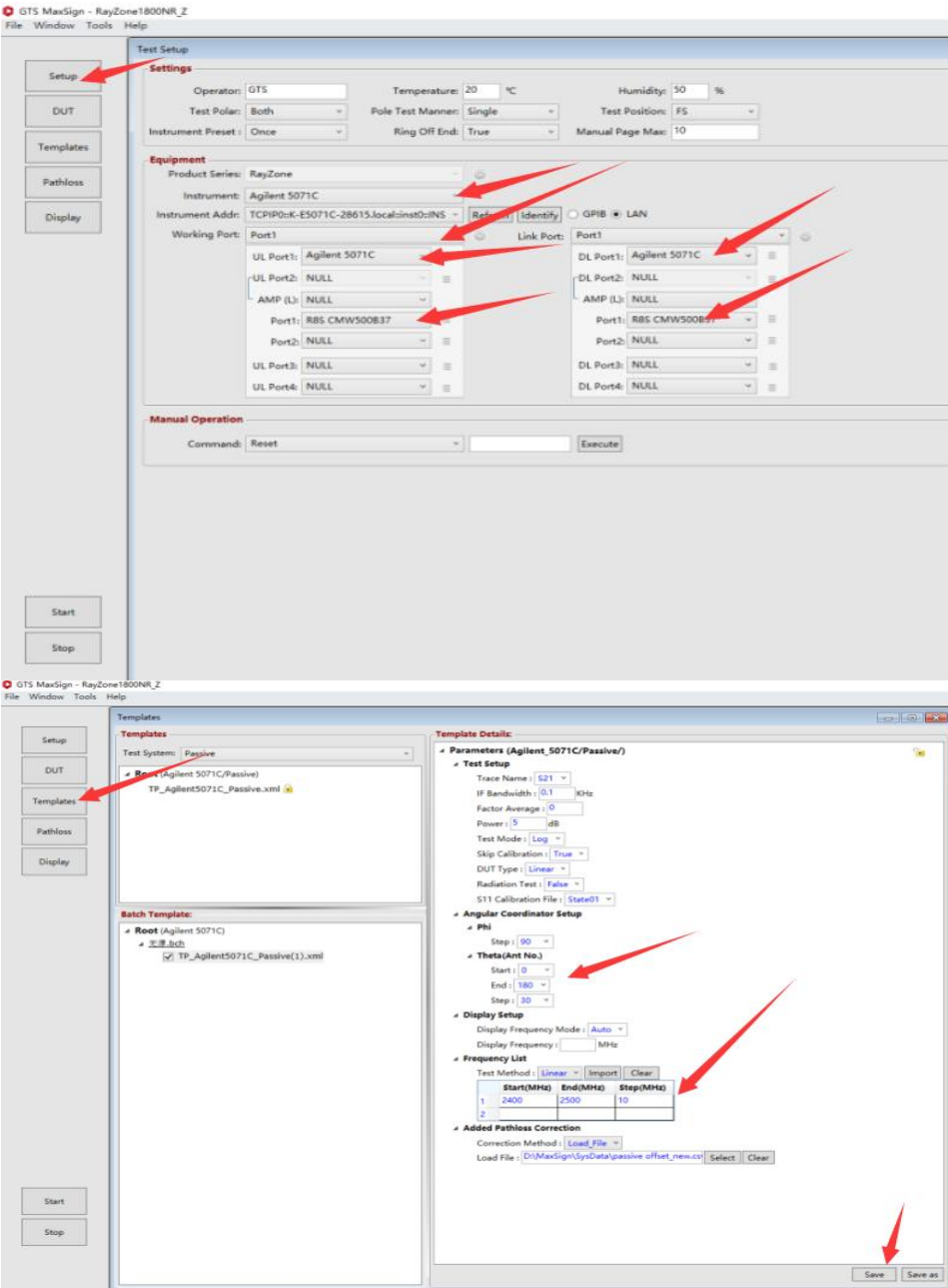
## 1.2 、设备环境 Equipment Environment

本次测试需用到的设备有电脑、频谱仪、放大器和暗室，如下图示：

The equipment required for this test includes a computer, a spectrum analyzer, an amplifier, and a darkroom, as shown below:



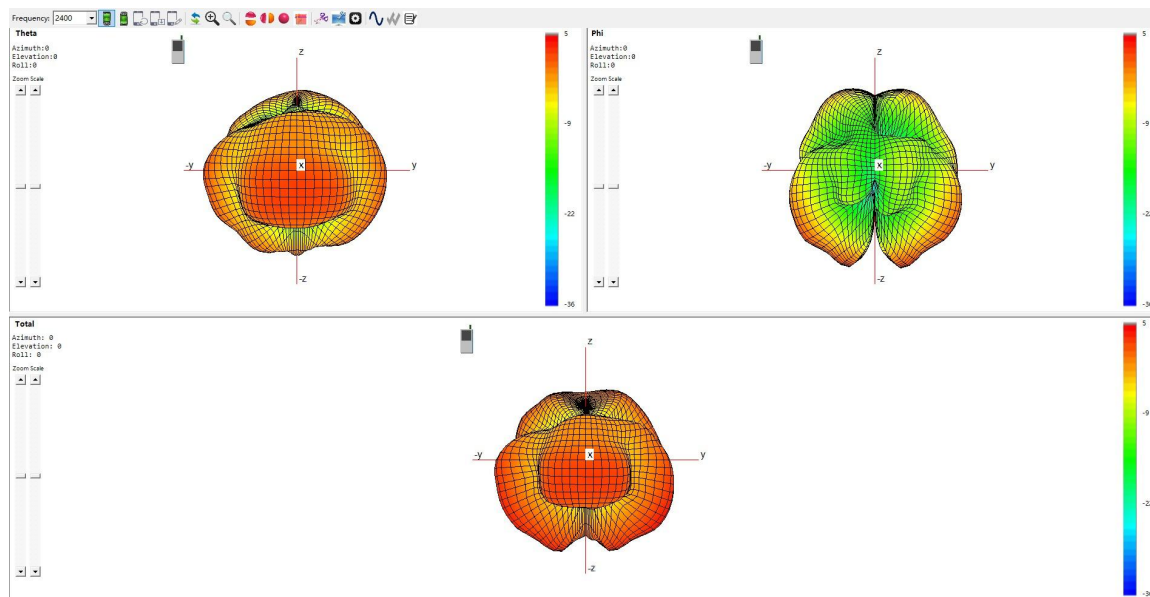
2、软件测试 Software test



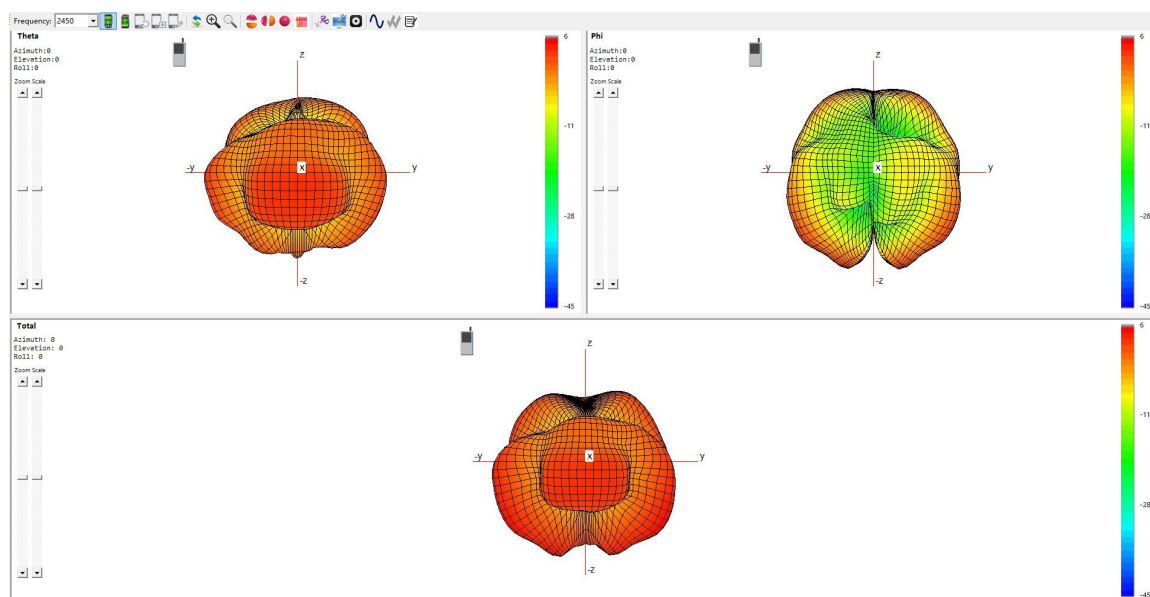
### 3、数据读取 Data reading

#### 3.1、扫描天线的 3D 辐射图 3D radiation pattern of scanning antenna

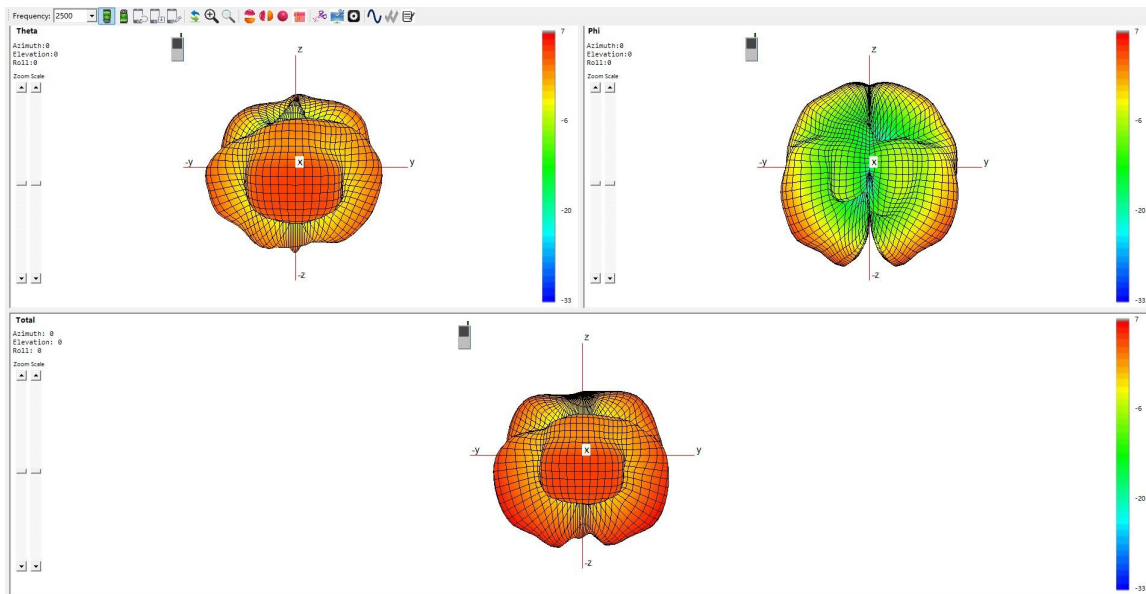
2400MHz:



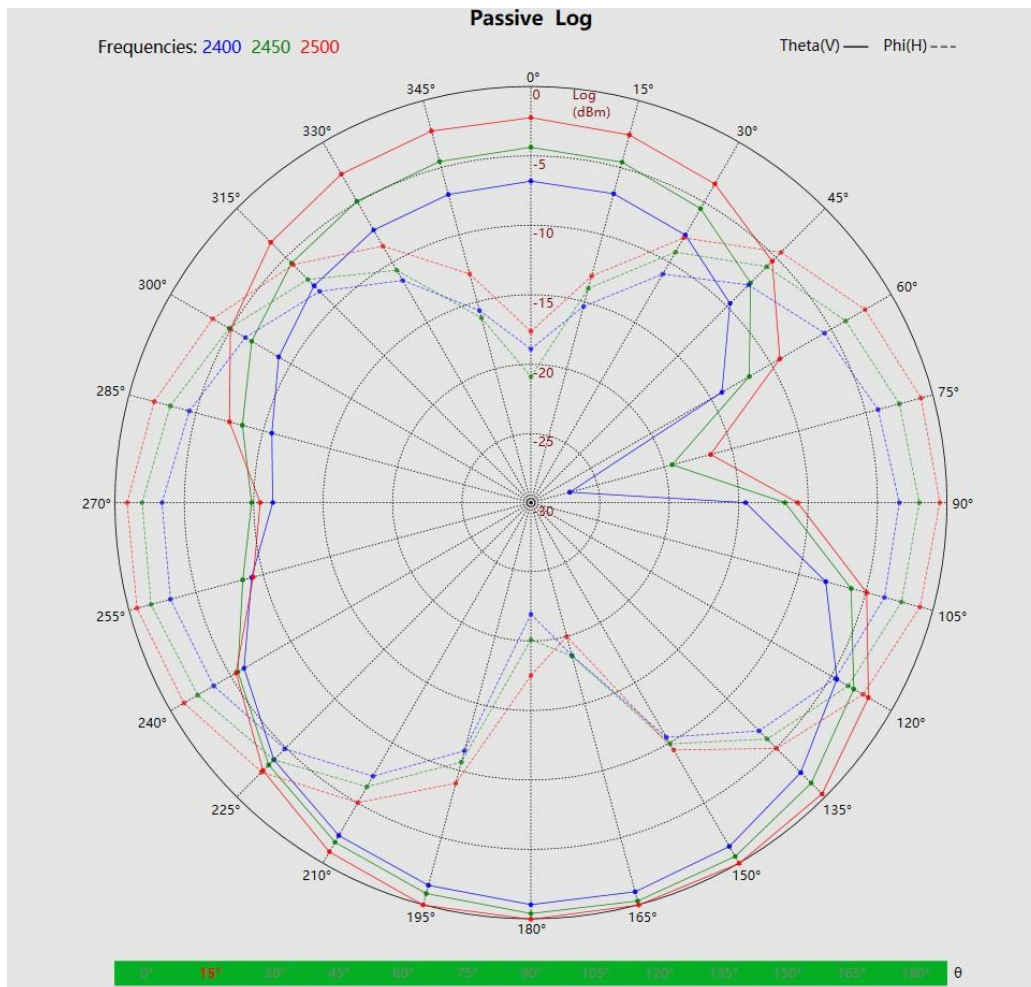
2450MHz:



2500MHz



### 3.2、扫描天线的 2D 辐射图



3.3、详细的扫描输出数据结果 Detailed scan output data results

| Freq(MHz) | Gain(dBi) | Efficiency(dB) | Efficiency(%) |
|-----------|-----------|----------------|---------------|
| 2400      | 4.180     | 0.369          | 108.858       |
| 2410      | 4.366     | 0.574          | 114.138       |
| 2420      | 4.559     | 0.736          | 118.474       |
| 2430      | 5.113     | 1.249          | 133.318       |
| 2440      | 5.430     | 1.567          | 143.458       |
| 2450      | 5.701     | 1.824          | 152.208       |
| 2460      | 6.152     | 2.312          | 170.302       |
| 2470      | 6.435     | 2.480          | 177.014       |
| 2480      | 6.669     | 2.708          | 186.542       |
| 2490      | 6.902     | 2.867          | 193.504       |
| 2500      | 6.795     | 2.715          | 186.852       |

Summary

|                  |                         |          |          |
|------------------|-------------------------|----------|----------|
| ITEM             | ANT SPEC                |          |          |
| Model Name       | 2.4G ANT                |          |          |
| Antenna plate    | PCB antenna             |          |          |
| Center Frequency | 2400MHz                 | 2450MHz  | 2500MHz  |
|                  | 4.180dBi                | 5.701dBi | 6.795dBi |
| MAX. Gain        | 6.902dBi                |          |          |
| Polarization     | Horizontal and Vertical |          |          |
| Impedance        | 50Ohm                   |          |          |
| Manufacture      |                         |          |          |

AntennaPhoto&Length(mm)

