

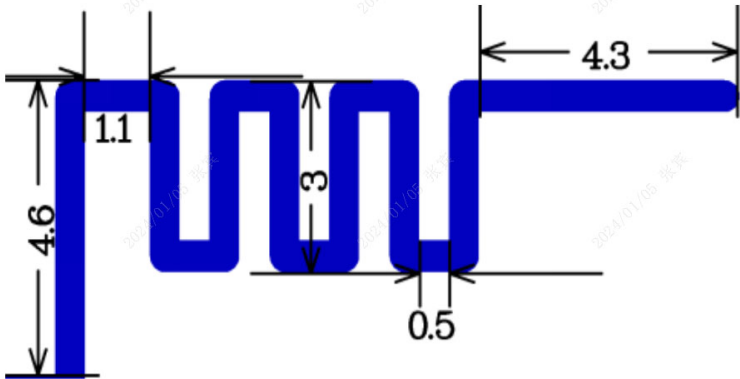
# Antenna Specification

|                     |                      |
|---------------------|----------------------|
| Project name        | KU004                |
| ITEM                | SPEC.                |
| Model Name          | BT2.4G               |
| Polarization        | Vertical             |
| Gain                | 2.4G<-2.17           |
| Impedance           | 50 Ω                 |
| Weight              | /                    |
| Product description | PCB Antenna          |
| Antenna Length      |                      |
| Manufacturer        | Ugreen Group Limited |

产品图片 (Product picture)

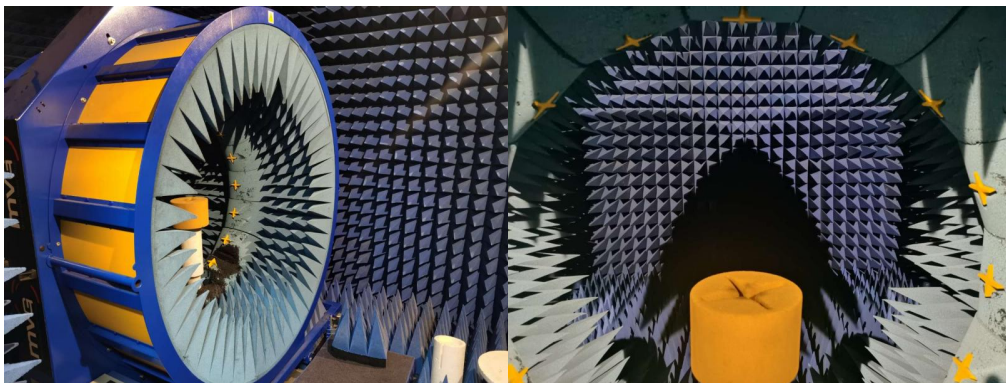


天线尺寸 (单位: mm)

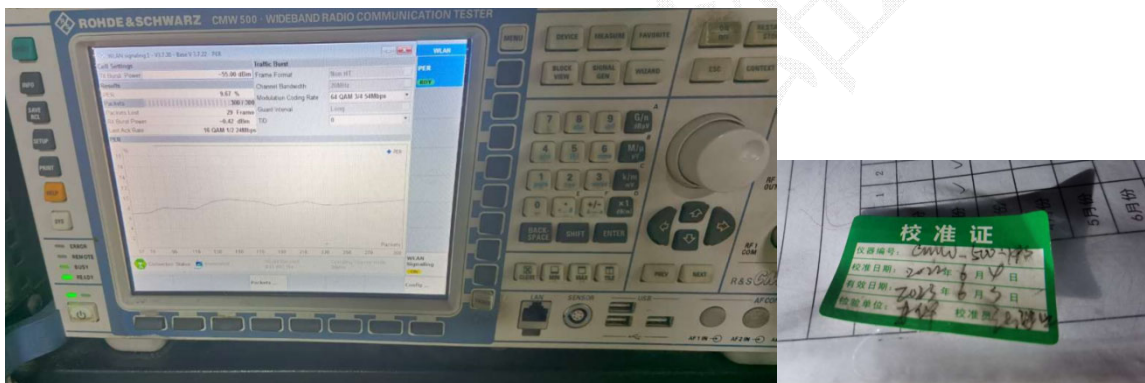


## 测试环境

### Satimo 暗室



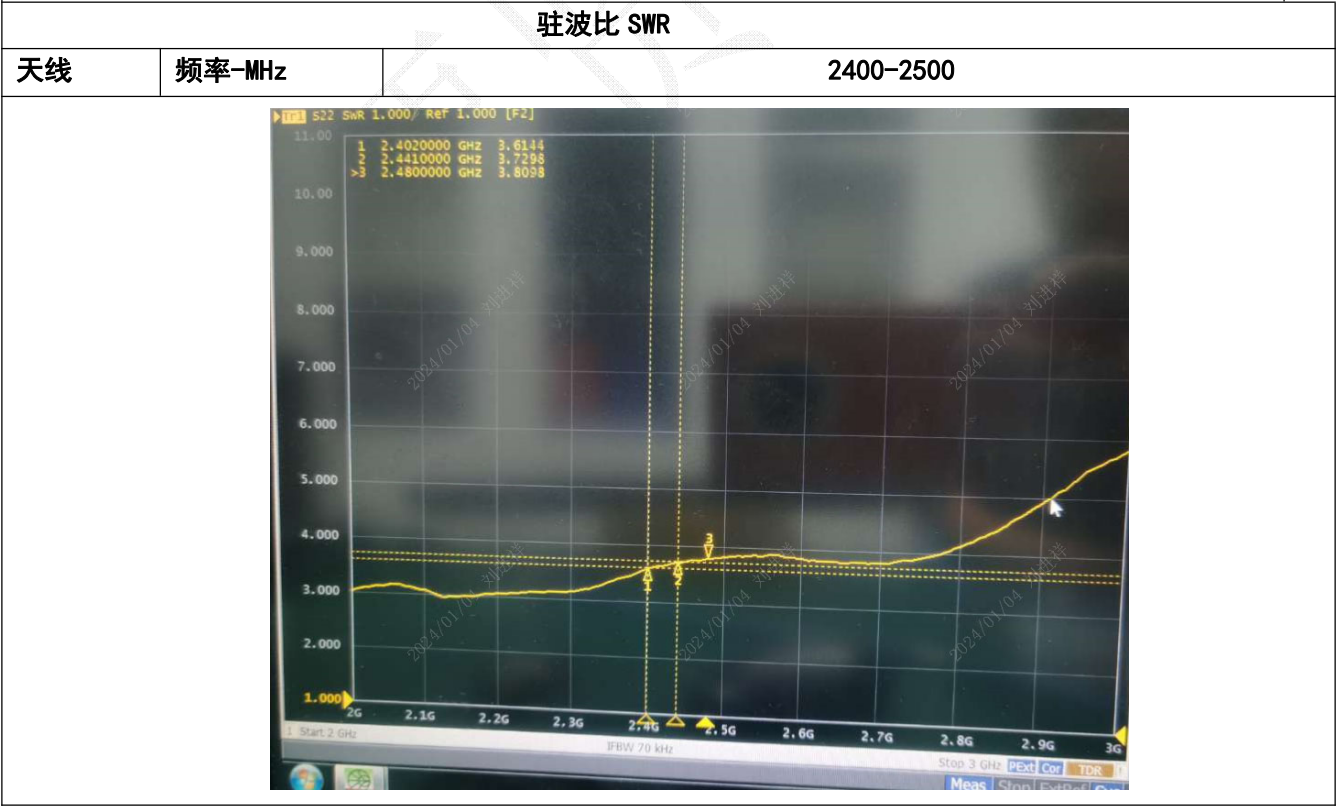
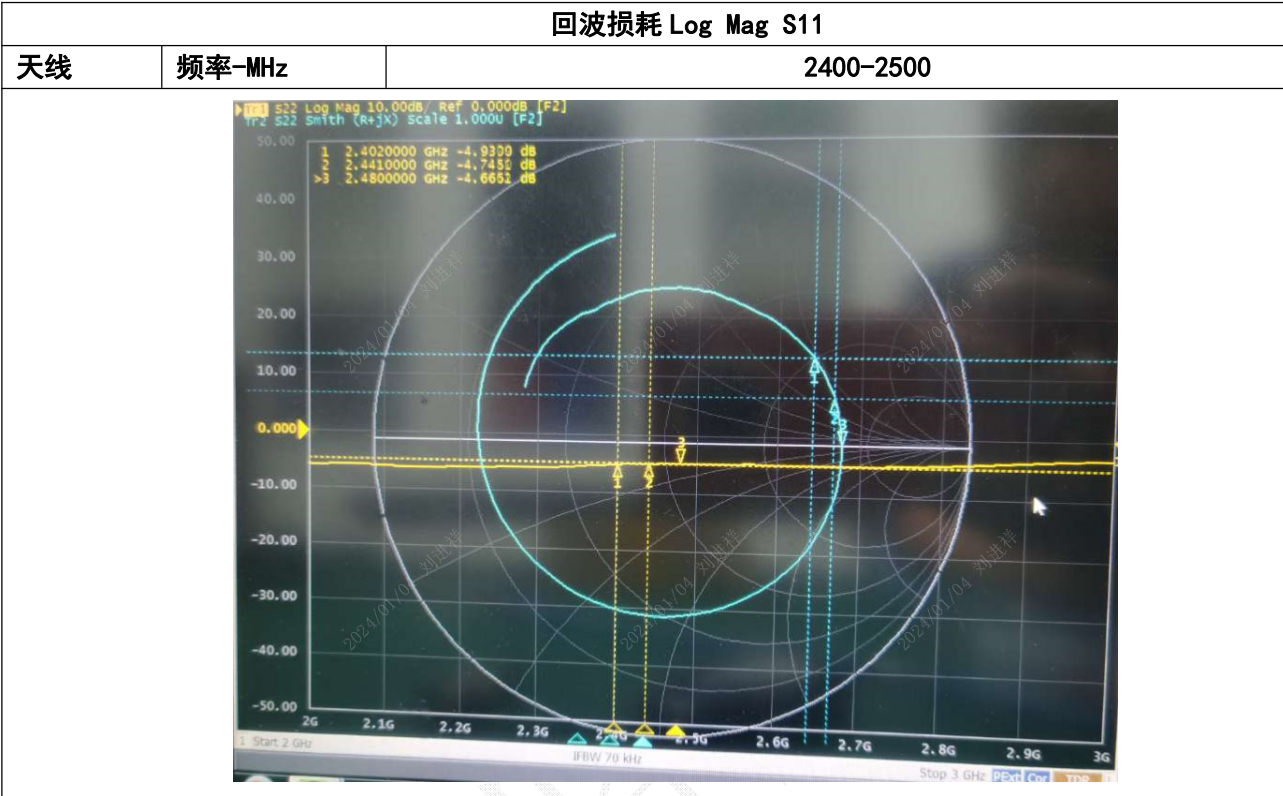
### CMW-500 综测仪



### Agilent 安捷伦网络分析仪



| 天线 Antenna |                         |            |                                            |                |       |                |
|------------|-------------------------|------------|--------------------------------------------|----------------|-------|----------------|
| 序号<br>Num  | 检验项目<br>Inspection item | 单位<br>unit | 性能指标要求<br>Performance index<br>requirement | 检验结果<br>Result |       | 判 决<br>Verdict |
| 1          | 频率范围<br>Frequency range | MHz        | 2400-2483.5                                | 2400-2483.5    |       | OK             |
| 2          | 增 益 Gain                | dBi        | /                                          | 2400           | -2.17 |                |
|            |                         |            |                                            | 2440           | -2.47 |                |
|            |                         |            |                                            | 2480           | -2.8  |                |
| 4          | 回波损耗<br>Return loss     | dB         | $\leq -6$                                  | 2400           | -4.93 |                |
|            |                         |            |                                            | 2440           | -4.74 |                |
|            |                         |            |                                            | 2480           | -4.66 |                |
| 4          | 驻波比 S11                 | dB         | /                                          | 2400           | 3.61  |                |
|            |                         |            |                                            | 2440           | 3.72  |                |
|            |                         |            |                                            | 2480           | 3.80  |                |

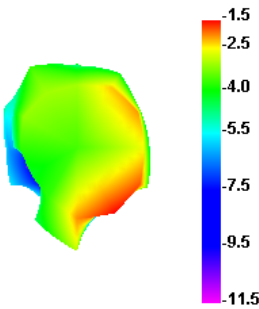


辐射参数测试 Radiation parameter test

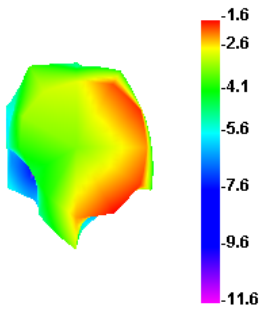
天线 Antenna

辐射方向图 (2.4G Radiation pattern)

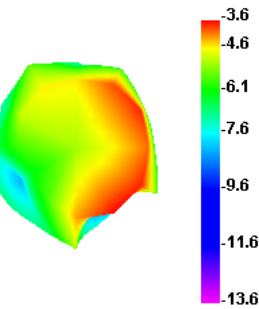
2400.000MHz



2440.000MHz

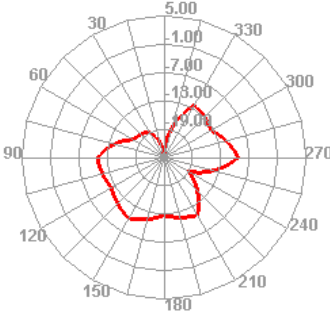


2480.000MHz

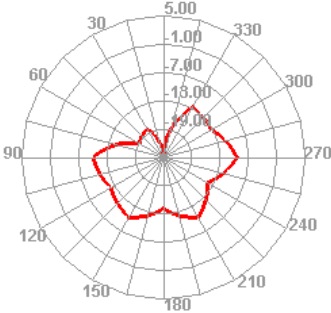


Horizontal plane

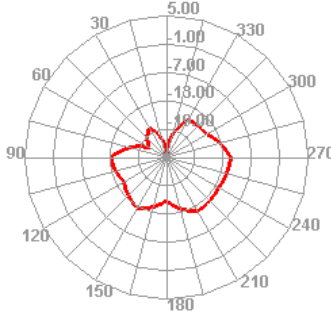
2400.000MHz H



2440.000MHz H

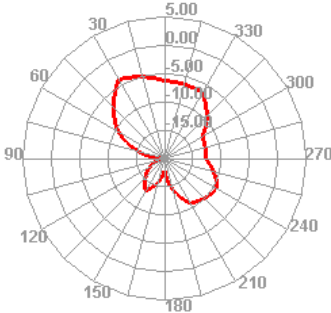


2480.000MHz H

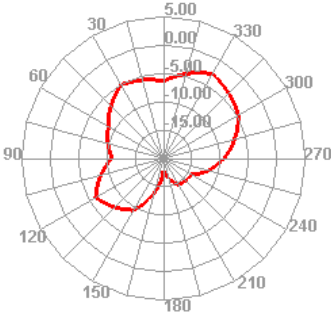


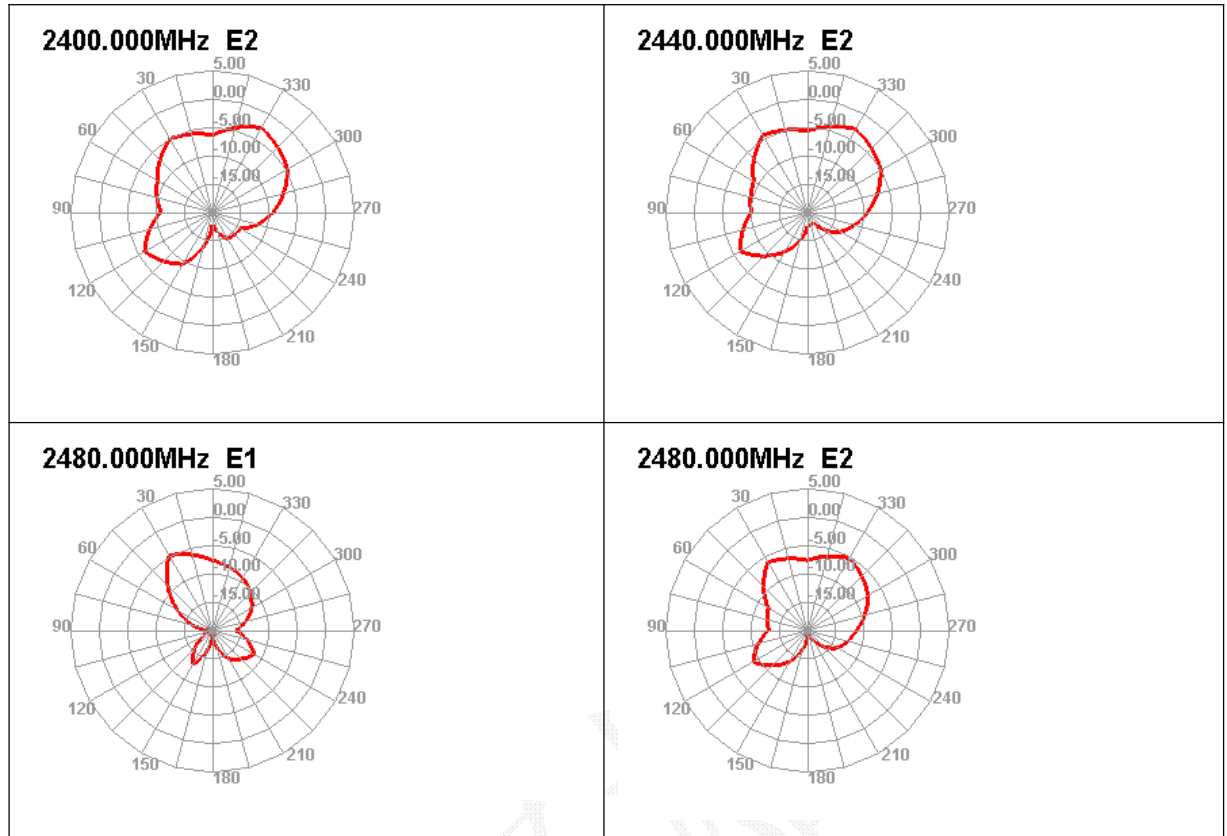
Vertical plane

2400.000MHz E1



2400.000MHz E2





天线无源效率 Antenna Gain&Efficiency

| Frequency | E Total. dB(dBi) | Efficiency(%) |
|-----------|------------------|---------------|
| 2400MHz   | -2.17            | 17.66         |
| 2410MHz   | -2.56            | 16.83         |
| 2420MHz   | -2.21            | 18.19         |
| 2430MHz   | -2.73            | 16.27         |
| 2440MHz   | -2.47            | 17.45         |
| 2450MHz   | -2.34            | 18.51         |
| 2460MHz   | -2.55            | 18.27         |
| 2470MHz   | -3.59            | 15.29         |
| 2480MHz   | -2.8             | 18.42         |
| 2490MHz   | -1.88            | 22.52         |
| 2500MHz   | -2.03            | 21.73         |