

承認書

APPROVAL SHEET

客 户

Customer

品 名 规 格

DESCRIPTION:

铜管天线-1.13 黑-L200MM-2.4G-RF 一代

料 号

PART NO.:

客 户 料 号

CUS PART NO.:

日 期

D A T E:

2025-4-8

| 工 程                    | 品 保            | 业 务              |
|------------------------|----------------|------------------|
| ENGINEERING DEPARTMENT | Q C DEPARTMENT | SALES DEPARTMENT |
|                        |                |                  |

客户承认签章

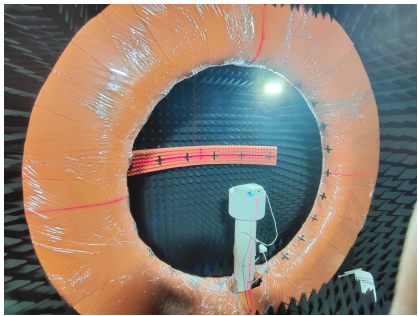
| 工 程                    | 品 保            | 采 购                   |
|------------------------|----------------|-----------------------|
| ENGINEERING DEPARTMENT | Q C DEPARTMENT | PURCHASING DEPARTMENT |
|                        |                |                       |

联系电话:

- ※ 承认书一式三份，惠蒙贵司承认签章
- ※ Approval in duplicate, please signed by your company.

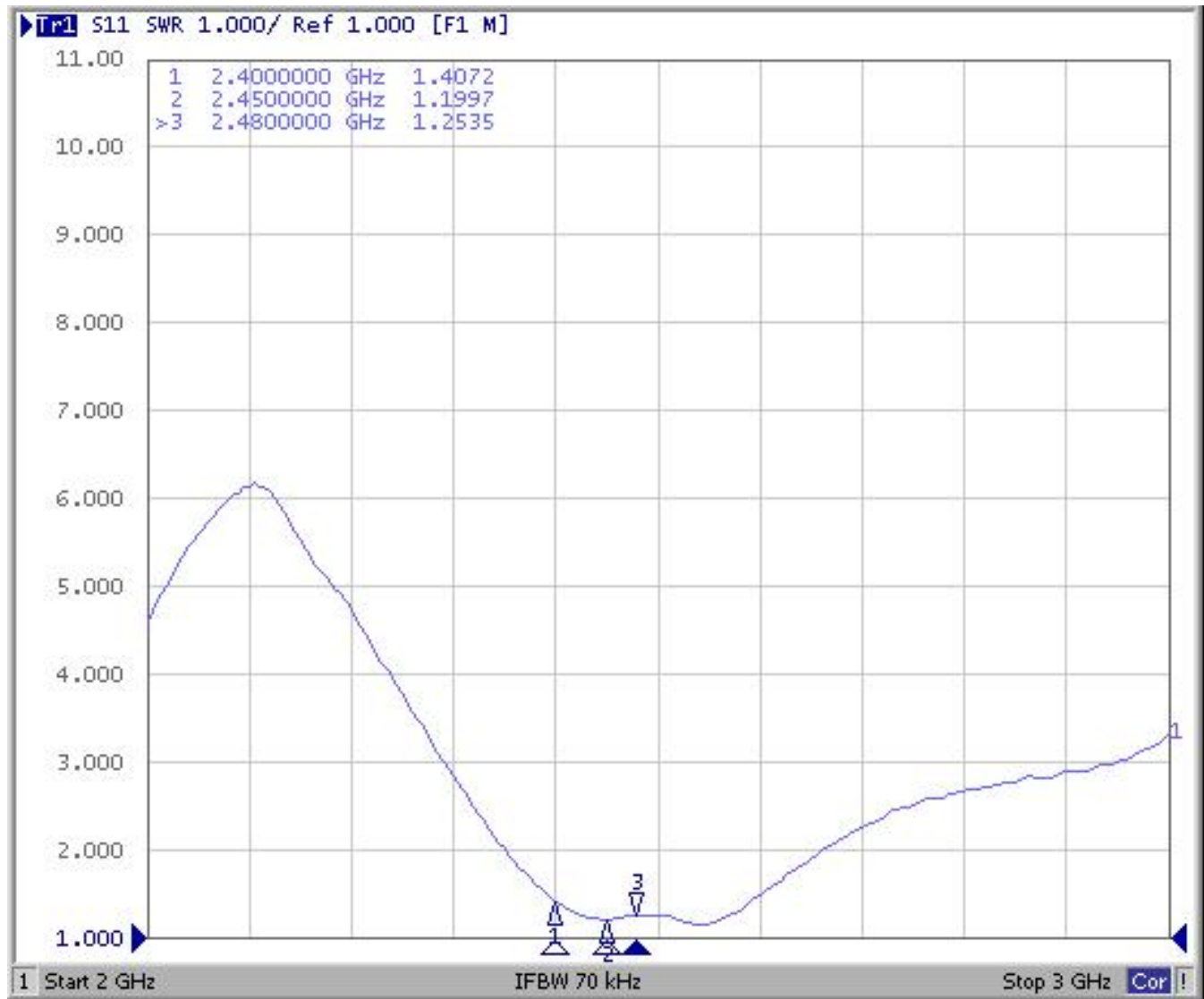
1. 测试项目与设备

|                            | 测试项目                                     | 设备                                                                                                                         |
|----------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 1. S11 参数<br>(S-parameter) | 1. 回波损耗 (Return Loss)<br>2. 电压驻波比 (VSWR) | 网络分析仪: Agilent E5071B<br>HP 8753D                                                                                          |
| 2. 有源测试<br>(Active)        | 1. 发射功率 (TRP)<br>2. 接收灵敏度 (TIS)          | 1. 暗室: ETS 7x4x3 m (3D) Chamber<br>ETS 5x3x3 m (3D) Chamber<br>2. 综合测试仪: Agilent 8960 E5515B ×2<br>StarPoint SP6011 Cmw500 |
| 3. 无源测试<br>(Passive)       | 1. 天线增益 (Gain) 2. 天线效率 (Efficiency)      | 1. 暗室: ETS 7x4x3 m (3D) Chamber<br>ETS 5x3x3 m (3D) Chamber<br>2. 网络分析仪: Agilent E5071B<br>HP 8753D                        |



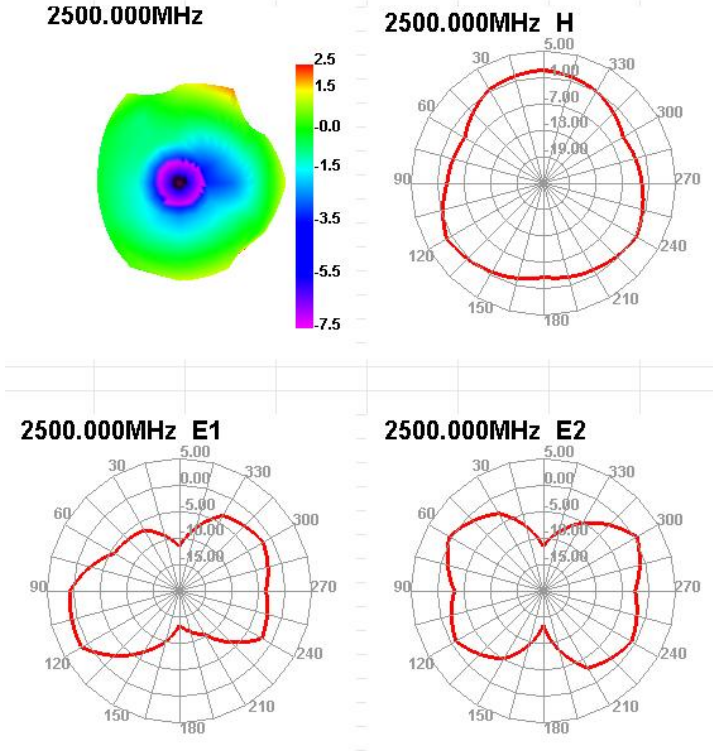
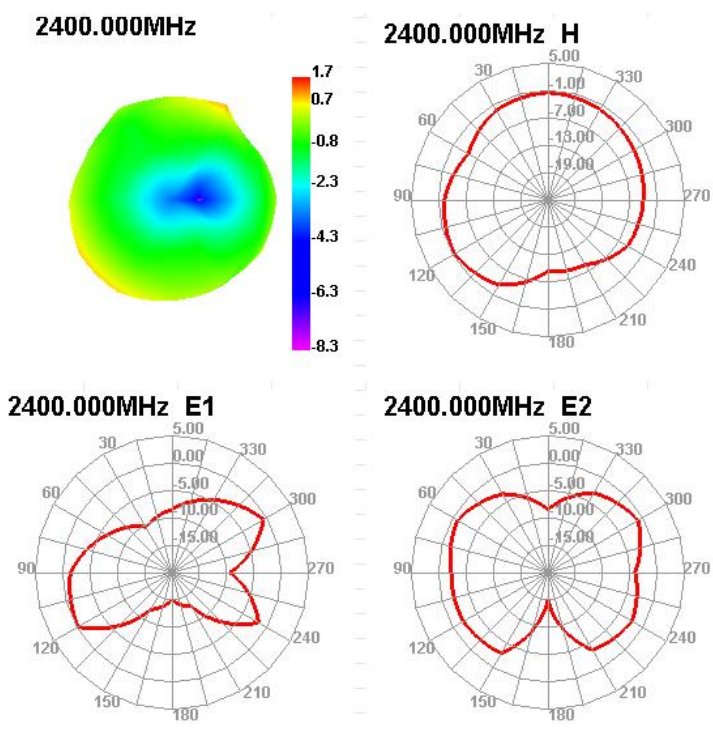
## 2. 天线性能

### SWR

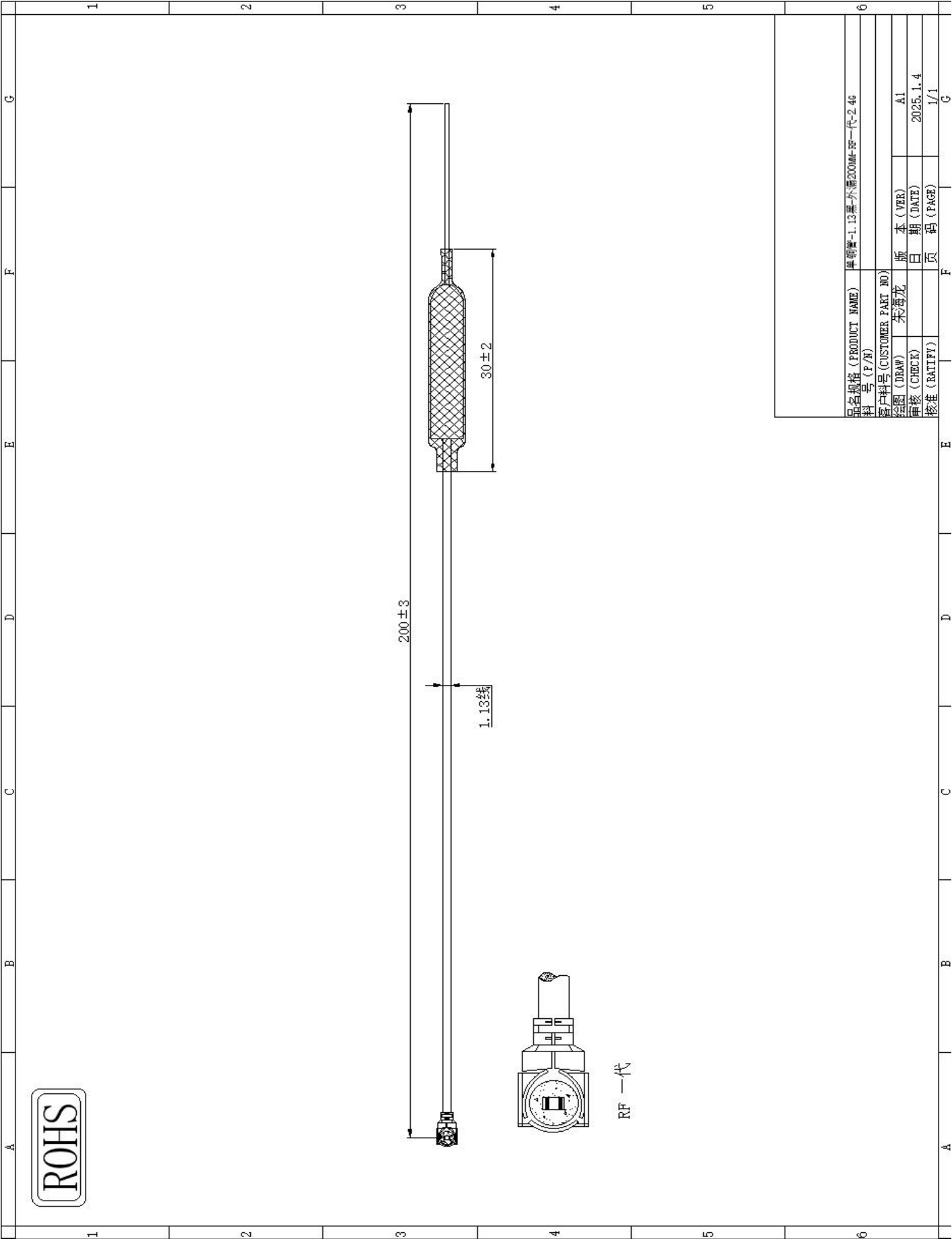


3. 天线效率与增益

| Passive Test For WIFI2.4 |             |               |
|--------------------------|-------------|---------------|
| Freq<br>(MHz)            | Effi<br>(%) | Gain<br>(dBi) |
| 2400                     | 53.2        | 1.74          |
| 2410                     | 53.88       | 1.82          |
| 2420                     | 53.96       | 1.83          |
| 2430                     | 54.83       | 1.82          |
| 2440                     | 57.97       | 2             |
| 2450                     | 61.67       | 2.2           |
| 2460                     | 62.73       | 2.24          |
| 2470                     | 62.91       | 2.27          |
| 2480                     | 65.03       | 2.5           |
| 2490                     | 67.24       | 2.7           |
| 2500                     | 64.93       | 2.47          |



4. 天线结构图：



# 电器技术参数

| 电 性 能 指 标 |              | Electrical Specifications |              |
|-----------|--------------|---------------------------|--------------|
| 频率范围      | 2400~2500MHz | Frequency Range           | 2400~2500MHz |
| 电压驻波比     | ≤1.5         | VSWR                      | ≤1.5         |
| 增益        | 2.5 DBI      | Gain                      | 2.5 DBI      |
| 输入阻抗      | 50 Ω         | Input Impedance           | 50 Ω         |
| 最大输入功率    | 50W          | Maximum Input Power       | 50W          |
| 机 械 指 标   |              | Mechanical Specifications |              |
| 天线颜色      | 黑色           | Antenna Color             | Black        |
| 接口形式      | RF 一代        | Input connector           | RF 1         |
| 线长        | 200 MM       | length                    | 200 MM       |
| 工作温度      | -40℃~+85℃    | Working Temperature       | -40℃~+85℃    |
| 工作湿度      | 20~80%       | Working Humidity          | 20~80%       |