



公司地址：东莞市塘厦镇清湖头三坑工业区1号

东莞市仁丰电子科技有限公司

Dongguan RF Electronic Technology Co., Ltd

电话：0769-38940168 传真：0769-39010966 网址：http://rflink.net.cn

# 规格书

## SPECIFICATION FOR APPROVAL

客户名称

CUSTOMER NAME:

产品名称

PRODUCT NAME: Built-in antenna 2.4G L=100MM + terminals

客户料号

CUSTOMER P/N: VTA AW2410-0019

仁丰料号

RenFeng P/N: U00T02S000N07645 REV:D

|              |                           |                       |
|--------------|---------------------------|-----------------------|
|              | MANUFACTURER<br>SIGNATURE | CUSTOMER<br>SIGNATURE |
| CHECKED BY:  |                           |                       |
| AUDITOR BY:  |                           |                       |
| APPROVED BY: |                           |                       |
| DATE:        | 2024-12-20                |                       |

地址：东莞市塘厦镇清湖头三坑路一号

传真：0769-38940199

Address: No.1, Sanjing Road, Qinghutou,  
Tangxia Town, Dongguan City

Fax: 0769-38940199

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## 规格表:

### RF Cable Assembly Specification

| 主要技术指标           |            | Main technical specifications |            |
|------------------|------------|-------------------------------|------------|
| 频率范围<br>(MHZ)    | 2400-2500  | Frequency Range<br>(MHZ)      | 2400-2500  |
| 特性阻抗( $\Omega$ ) | 50         | Impedance( $\Omega$ )         | 50         |
| 输出电压<br>驻波比      | $\leq 2.0$ | VSWR                          | $\leq 2.0$ |
| 增益 (dBi)         | 4.33       | Peak Gain(dBi)                | 4.33       |
| 天线材料             | FR-4       | Antenna cover                 | FR-4       |
| 物理性能             |            | Physical Properties           |            |
| 线材               | 1.37低损线    | Cable                         | 1.37 Cable |
| 连接头              | 端子         | Connector                     | MHF Plug   |
| 保存温度             | -20℃~+70℃  | Storage Temp                  | -20℃~+70℃  |
| 工作温度             | -20℃~+60℃  | Operating Temp                | -20℃~+60℃  |

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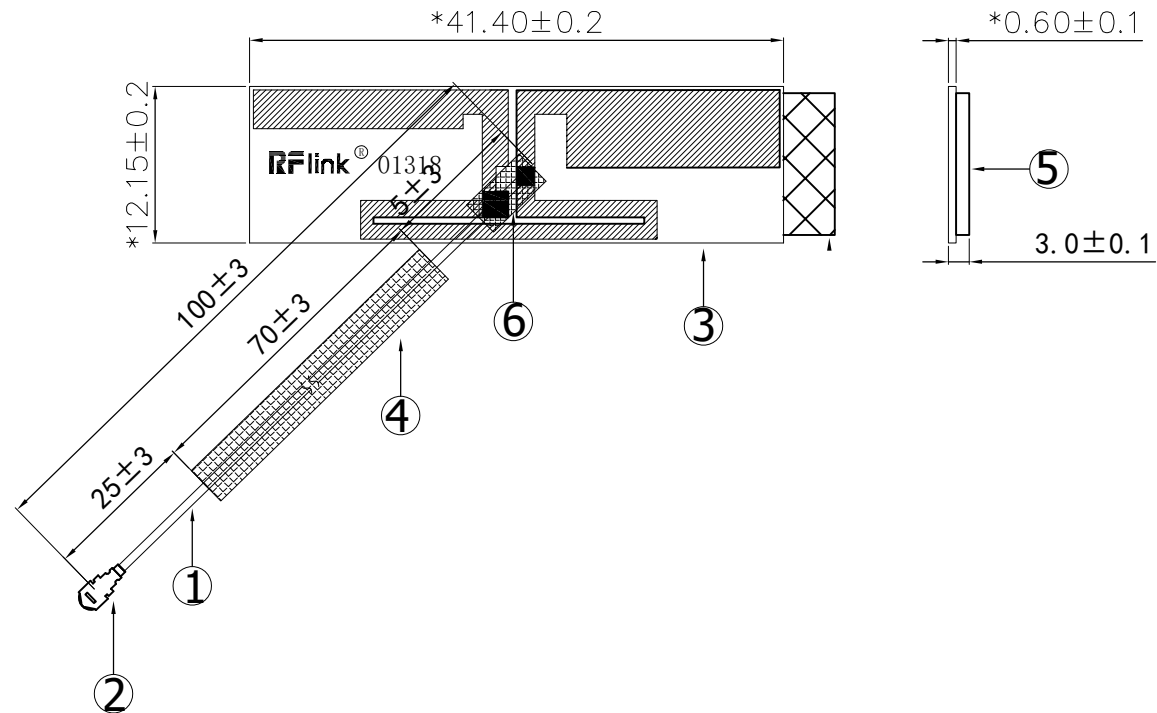
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规格Specification:  
频率Frequency Range: 2.4-2.5GHz

APPROVED

COSTOMER:

PART NO : 3010100929

CHECKED

PARTNAME : RF Antenna Assembly

DRAWING

R.F P/NO : U00T02S000N07645

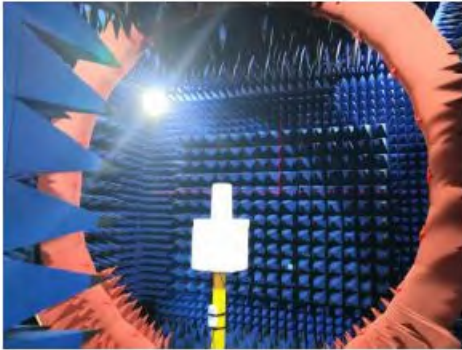
| REV | UNIT | SCALE | SIZE | SHEET |
|-----|------|-------|------|-------|
|     | mm   | 1:1   | A4   | 1OF1  |

**RFLink**

东莞市仁丰电子科技有限公司  
RenFeng Electronic technology  
Co., LTD.

# 测试设备 (Test Equipment)

## ◆ 测试设备 (Test Equipment)

| 设备<br>( Equipment )                | 型号<br>( Type )       | 照片 ( photo )                                                                          |
|------------------------------------|----------------------|---------------------------------------------------------------------------------------|
| 微波暗室<br>Microwave anechoic chamber | FTMP-24D ( 4*4*3.5 ) |    |
| 综合测试仪<br>( Comprehensive tester )  | R&S CMW500           |   |
| 网络分析仪<br>( Network Analyzer )      | KEYSIGHT E5063A      |  |

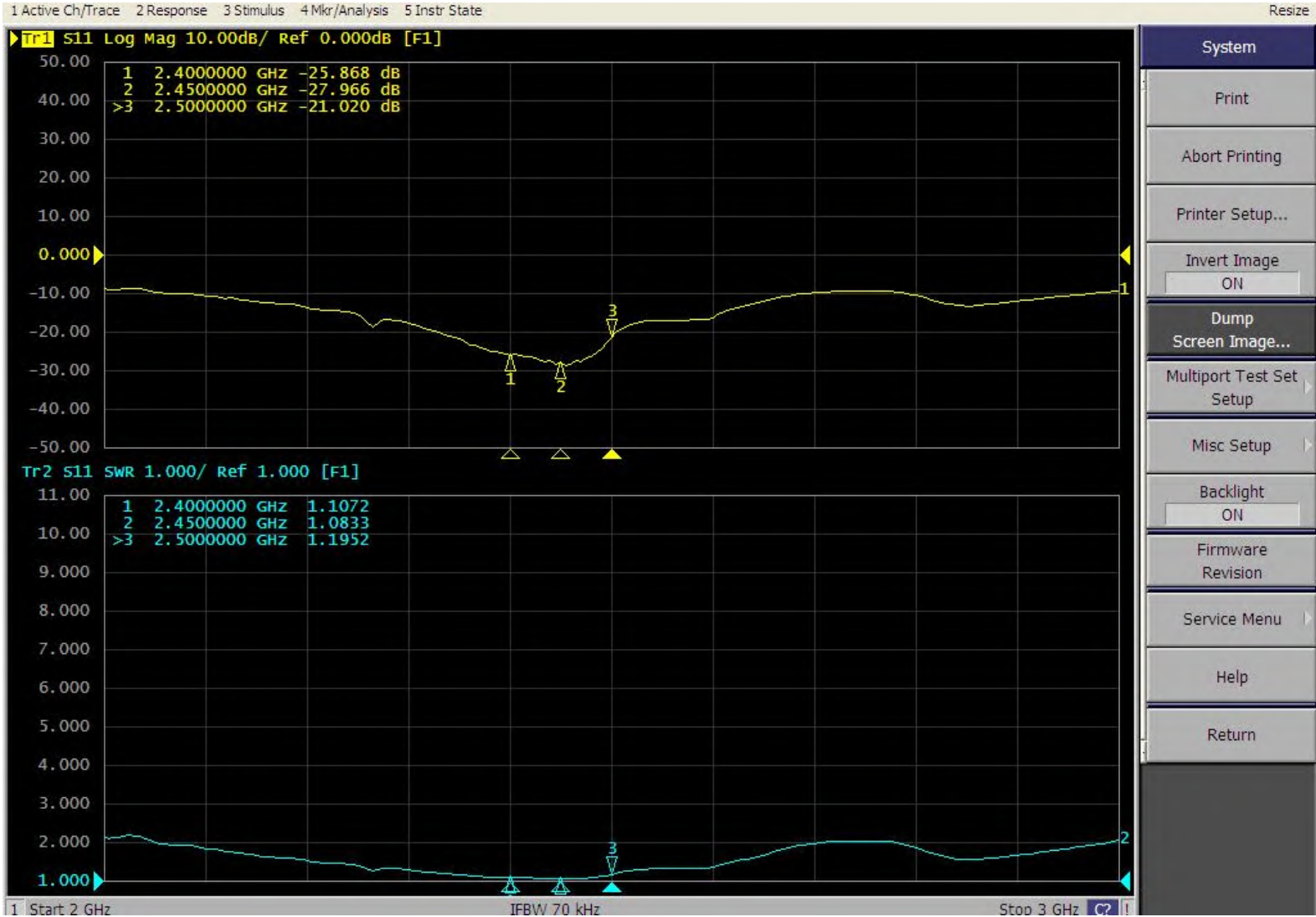
## 天线规格图片（Antenna Specification Chart）

### ◆ 天线规格图片（Antenna Specification Chart）



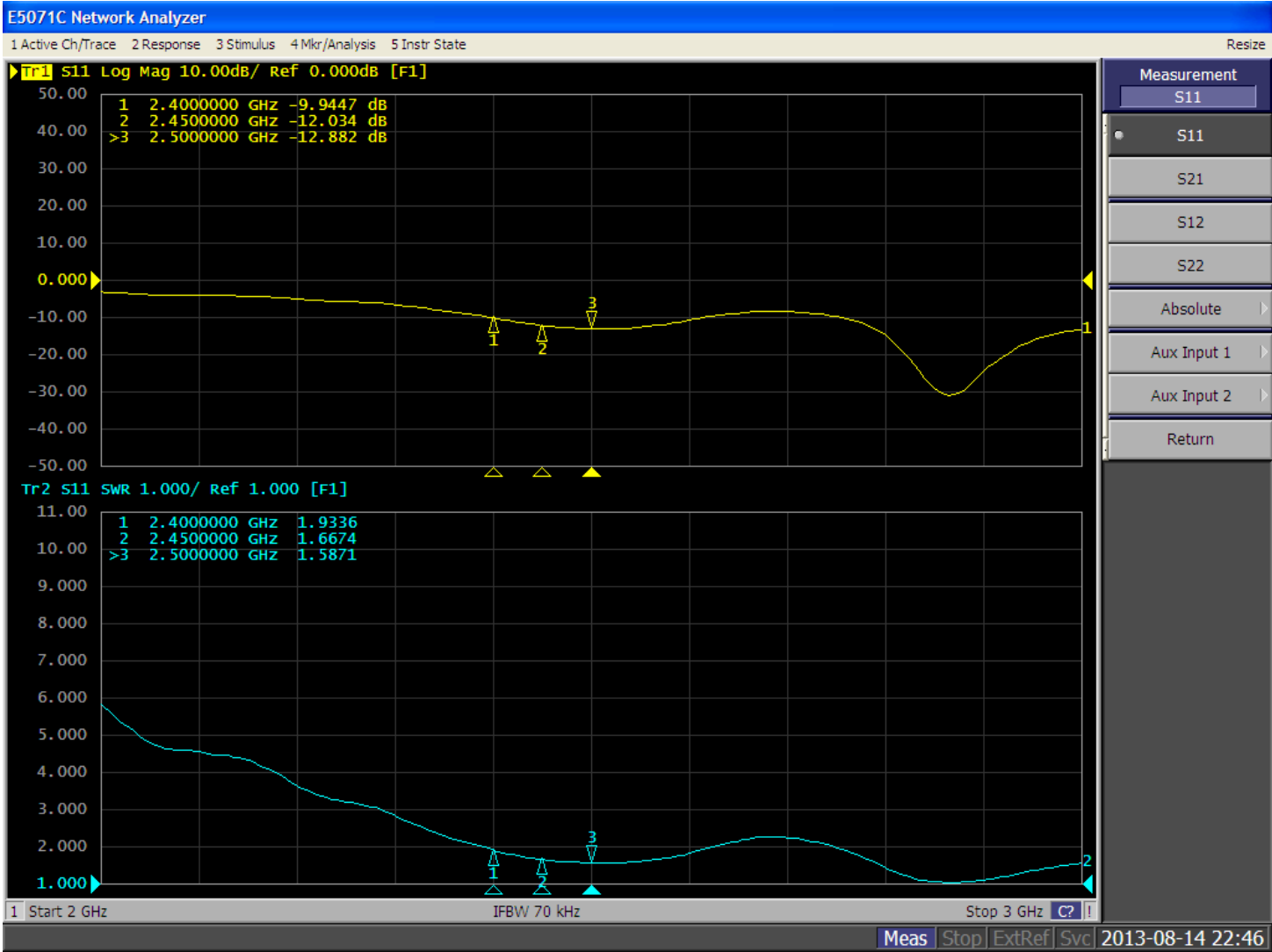
# 无源S11 ( Passive S11)

## ◆ 无源S11 ( Passive S11)

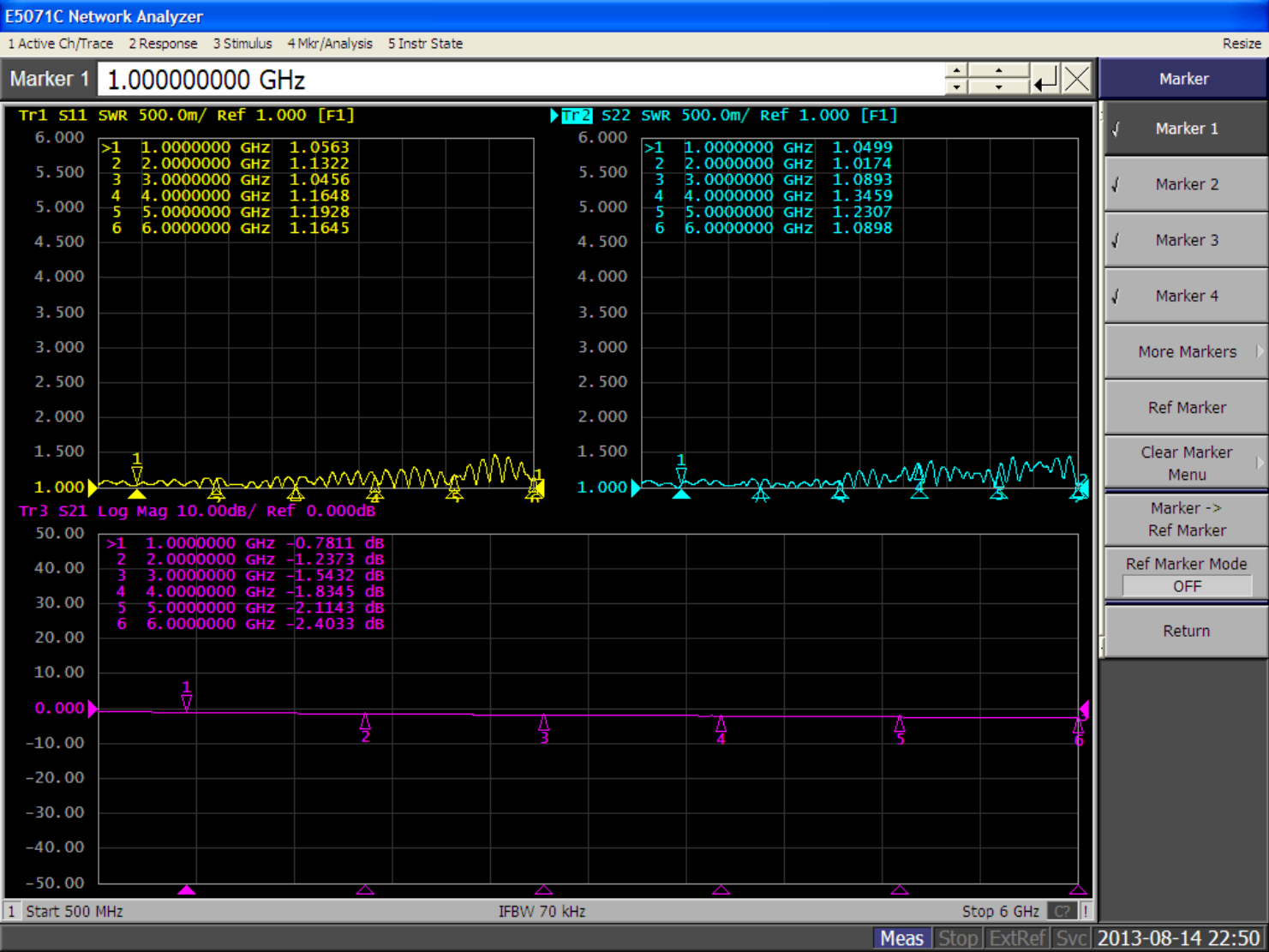


| Frequency (MHz) | 2400   | 2450   | 2500   |
|-----------------|--------|--------|--------|
| return loss     | -25.86 | -27.97 | -21.02 |
| VSWR            | 1.1    | 1.08   | 1.19   |

◆ 单体天线性能测试 (S11)



◆ 线损测试 Line loss test



# 无源效率、增益测试报告 (Passive efficiency and gain test report)

◆ 无源效率、增益测试报告 (Passive efficiency and gain test report)

| Frequency / MHz |                |           |
|-----------------|----------------|-----------|
|                 | Efficiency / % | Gain/ dBi |
| 2400            | 55.08          | 4.33      |
| 2410            | 53.83          | 4.26      |
| 2420            | 53.21          | 4.31      |
| 2430            | 50.93          | 4.27      |
| 2440            | 52.97          | 4.28      |
| 2450            | 52.72          | 4.16      |
| 2460            | 52.29          | 4.17      |
| 2470            | 52.05          | 4.23      |
| 2480            | 52.23          | 4.18      |
| 2490            | 51.2           | 4.01      |
| 2500            | 50.31          | 3.96      |

# 驻波比、回波损耗测试报告（VSWR and Return loss test report）

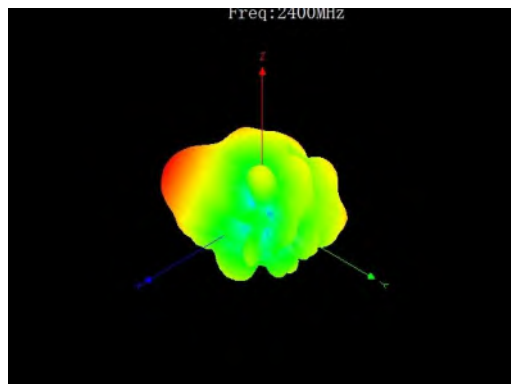
◆ VSWR、Return loss （Passive efficiency and gain test report）

| Frequency / MHz |             |      |
|-----------------|-------------|------|
|                 | Return loss | VSWR |
| 2400            | -25.86      | 1.1  |
| 2450            | -27.97      | 1.08 |
| 2500            | -21.02      | 1.19 |

# 辐射方向图 (Radiation pattern)

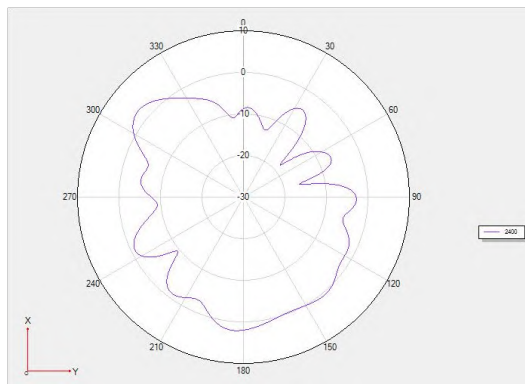
## ◆ 辐射方向图 (Radiation pattern)

3D

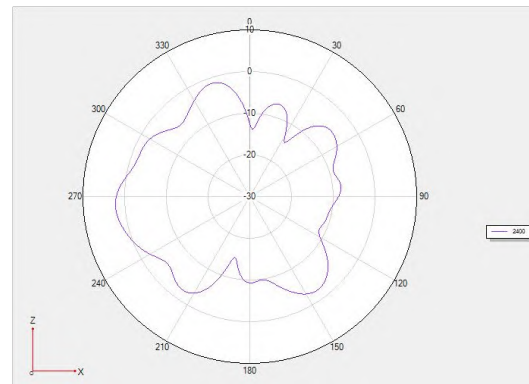


2400MHz

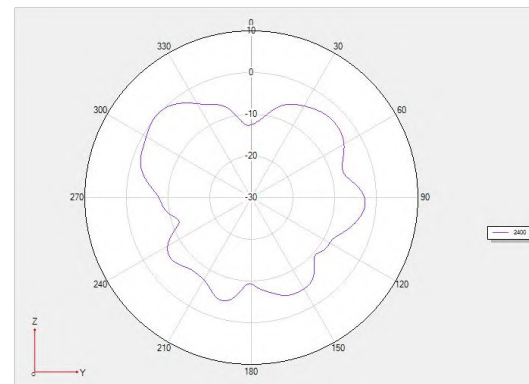
XY



ZX



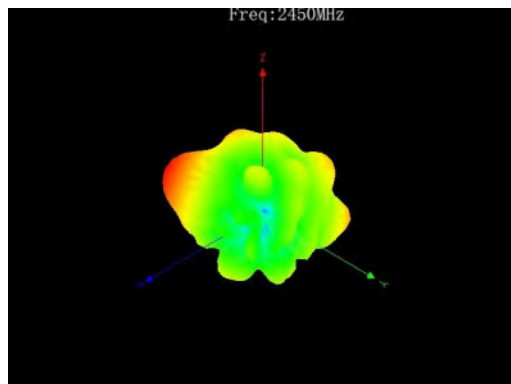
ZY



# 辐射方向图 (Radiation pattern)

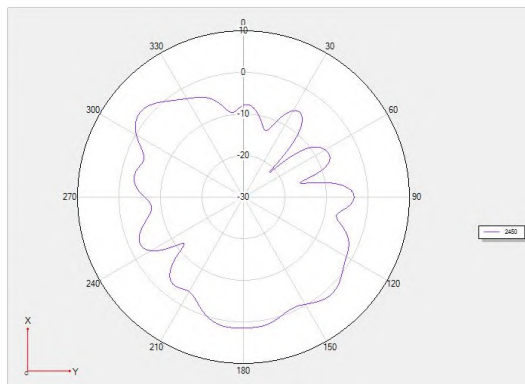
## ◆ 辐射方向图 (Radiation pattern)

3D

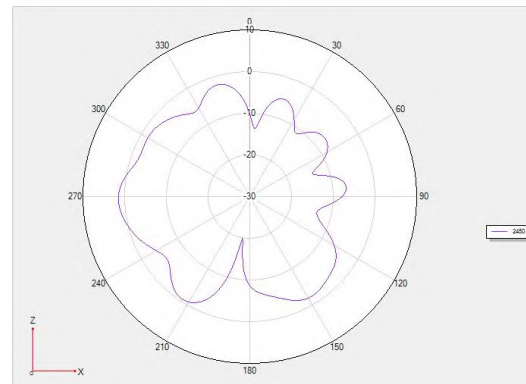


2450MHz

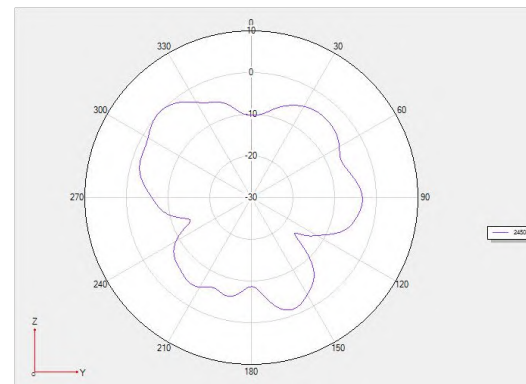
XY



ZX



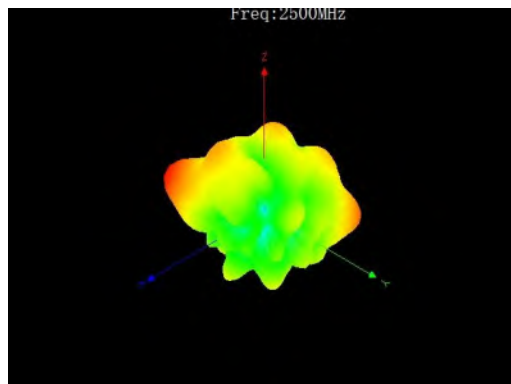
ZY



# 辐射方向图 (Radiation pattern)

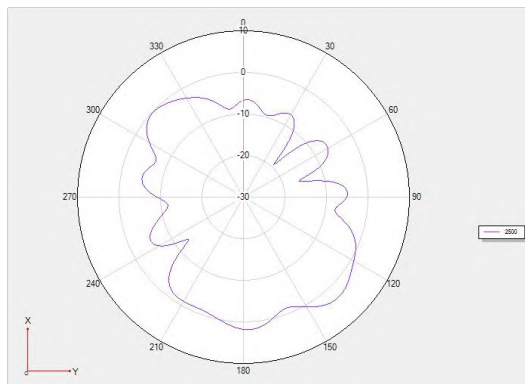
## ◆ 辐射方向图 (Radiation pattern)

3D

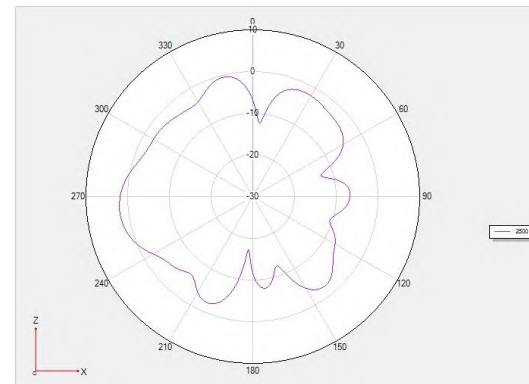


2500MHz

XY



ZX



ZY

