



东莞市顶益通讯科技有限公司  
Dong-guan TopGain Communication Technology Co.,Ltd.

|                             |                            |            |
|-----------------------------|----------------------------|------------|
|                             | 2.4G ANT1 & 2.4G ANT2      |            |
| 料号 Part No.                 | 19340100079ZL-PCB106-X90C1 |            |
| 材质 Material                 | FR4/RG137cable/ RG113cable |            |
|                             |                            |            |
| 客户回签/The customer sign back | 编制日期/Date:                 | 2022.08.29 |
| 审核/Checked:                 | 设计/Design By:              | 江鸿富        |
| 批准/Approved:                | 审核/Checked By:             | 王睦冲        |
|                             |                            |            |

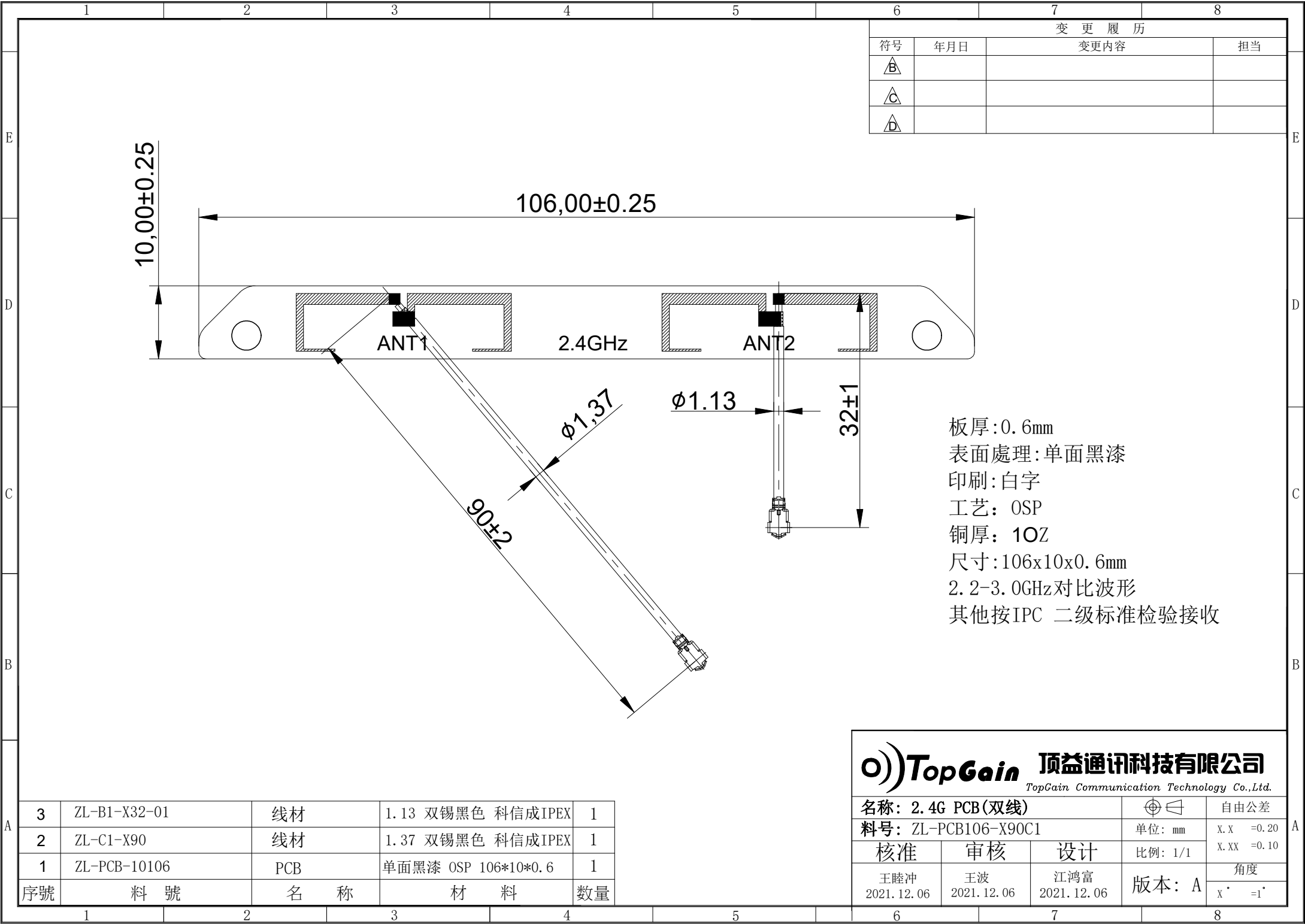


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Dong-guan TopGain Communication Technology Co.,Ltd.

## 规格

|                                                     |                   |
|-----------------------------------------------------|-------------------|
| <b>A. Electrical Characteristics</b>                |                   |
| 阻抗                                                  | 50 Ohm            |
| 频率范围                                                | 2.4-2.5GHz        |
| VSWR                                                | 2.0Max            |
| <b>B. Material &amp; Mechanical Characteristics</b> |                   |
| 辐射方向                                                | 全向                |
| 极化方式                                                | 垂直                |
| 线材规格                                                | 1.37 黑色 L=90mm    |
|                                                     | 1.13 黑色 L=32mm    |
| 接头型号                                                | IPEX              |
| 颜色                                                  | 黑色                |
| <b>C. Environmental</b>                             |                   |
| 工作温度                                                | - 20 °C ~ + 70 °C |
| 储存温度                                                | - 40 °C ~ + 80 °C |



| 变 更 履 历 |     |      |    |
|---------|-----|------|----|
| 符号      | 年月日 | 变更内容 | 担当 |
| △A      |     |      |    |
| △C      |     |      |    |
| △D      |     |      |    |

板厚:0.6mm  
表面處理:单面黑漆  
印刷:白字  
工艺: OSP  
铜厚: 10Z  
尺寸:106x10x0.6mm  
2.2-3.0GHz对比波形  
其他按IPC 二级标准检验接收

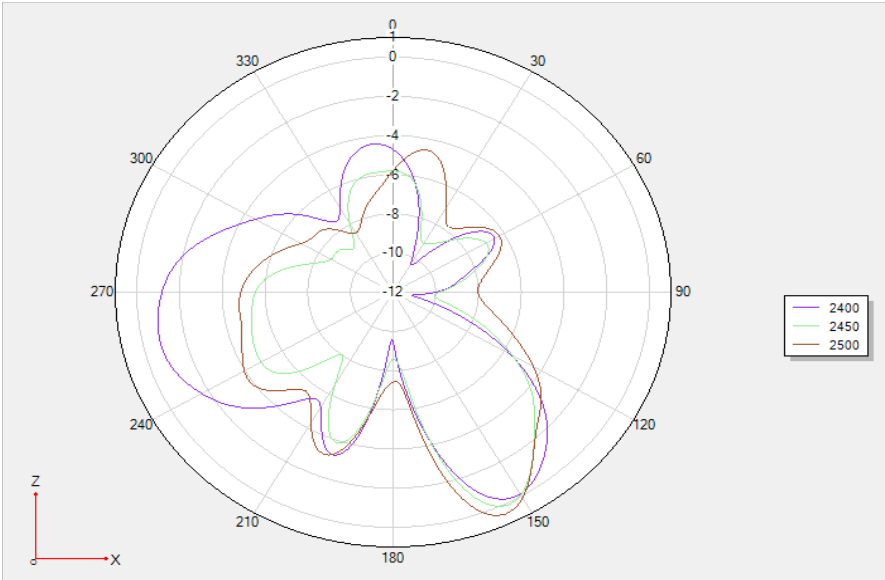
|    |              |     |                     |    |
|----|--------------|-----|---------------------|----|
| 3  | ZL-B1-X32-01 | 线材  | 1.13 双锡黑色 科信成IPEX   | 1  |
| 2  | ZL-C1-X90    | 线材  | 1.37 双锡黑色 科信成IPEX   | 1  |
| 1  | ZL-PCB-10106 | PCB | 单面黑漆 OSP 106*10*0.6 | 1  |
| 序號 | 料 號          | 名 称 | 材 料                 | 数量 |

|                                                                        |                  |                   |         |
|------------------------------------------------------------------------|------------------|-------------------|---------|
| <b>TopGain</b> 顶益通讯科技有限公司<br>TopGain Communication Technology Co.,Ltd. |                  |                   |         |
| 名称: 2.4G PCB(双线)                                                       |                  |                   | 自由公差    |
| 料号: ZL-PCB106-X90C1                                                    |                  |                   | 单位: mm  |
| 核准                                                                     | 审核               | 设计                | 比例: 1/1 |
| 王睦冲<br>2021.12.06                                                      | 王波<br>2021.12.06 | 江鸿富<br>2021.12.06 | 版本: A   |
|                                                                        |                  |                   | 角度      |
|                                                                        |                  |                   | X° =1°  |

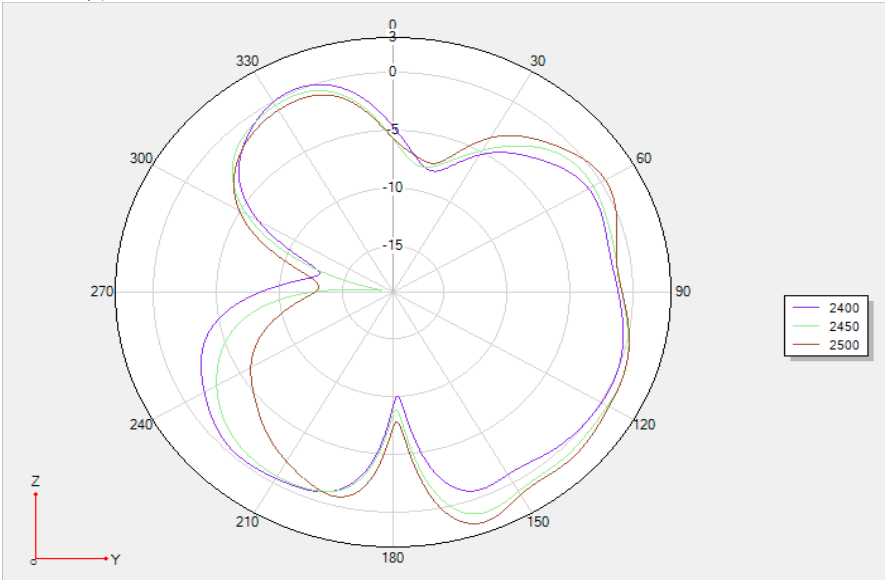
ANT1增益效率测试报告

|                 |       |       |       |       |       |      |
|-----------------|-------|-------|-------|-------|-------|------|
| Frequency / MHz | 2400  | 2420  | 2440  | 2460  | 2480  | 2500 |
| Efficiency / %  | 44.77 | 44.06 | 42.56 | 47.27 | 49.77 | 49.2 |
| Gain/ dB        | 1.66  | 1.35  | 0.79  | 1.64  | 2.3   | 2.61 |

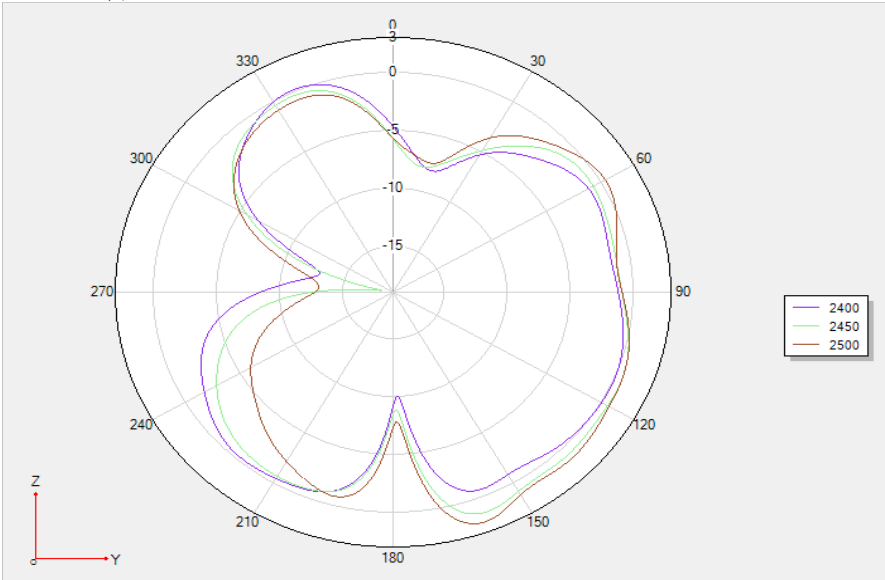
Phi 0 2D图



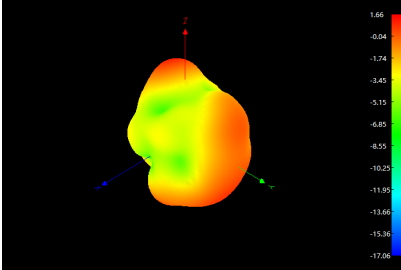
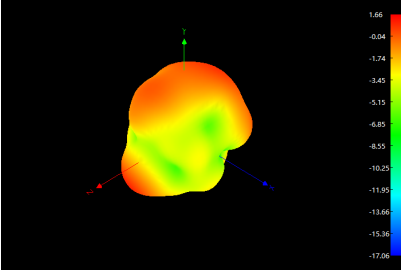
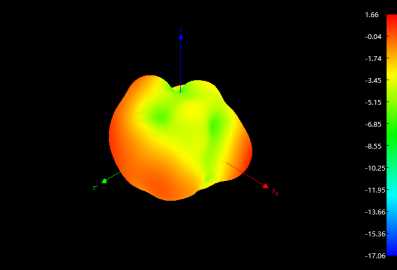
Phi 90 2D图



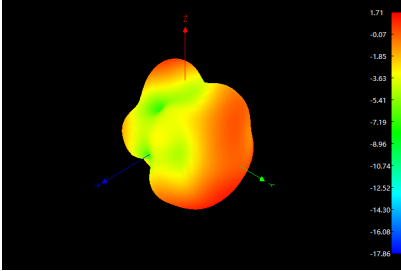
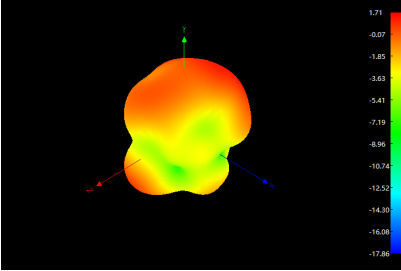
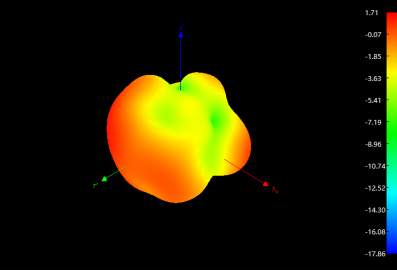
Theta 90 2D图



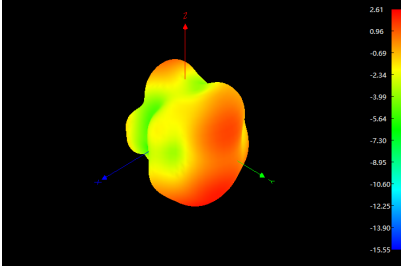
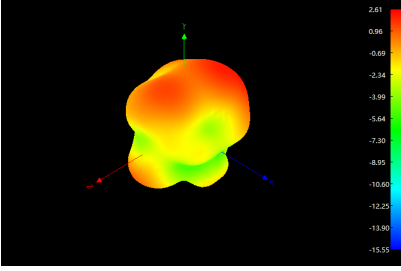
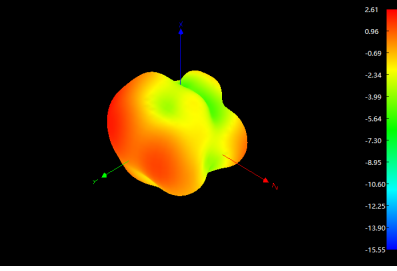
2400MHz



2450MHz



2500MHz

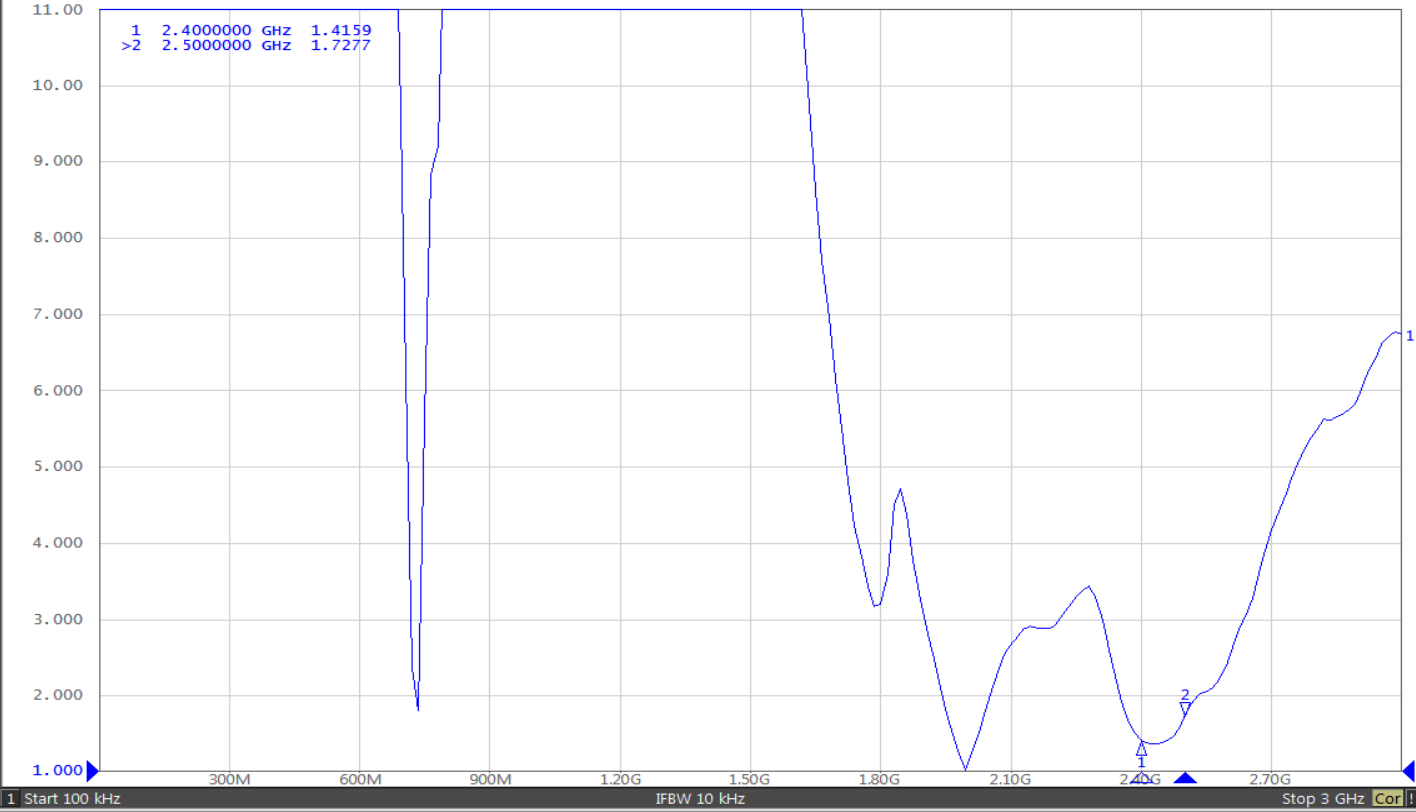


驻波比测试

矢量网络分析仪

1 通道/迹线 2 响应 3 激励 4 光标/分析 5 仪器状态

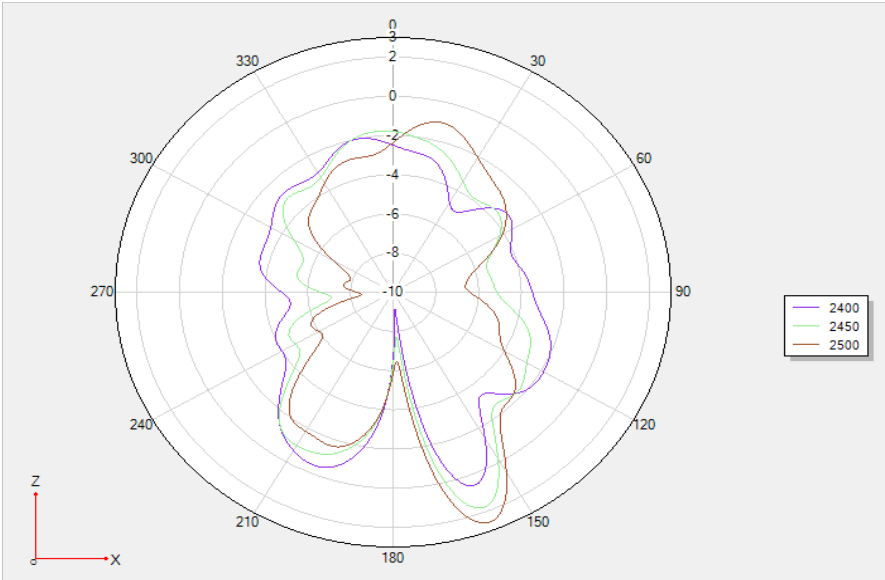
S11 SWR 1.000/ Ref 1.000 [F1]



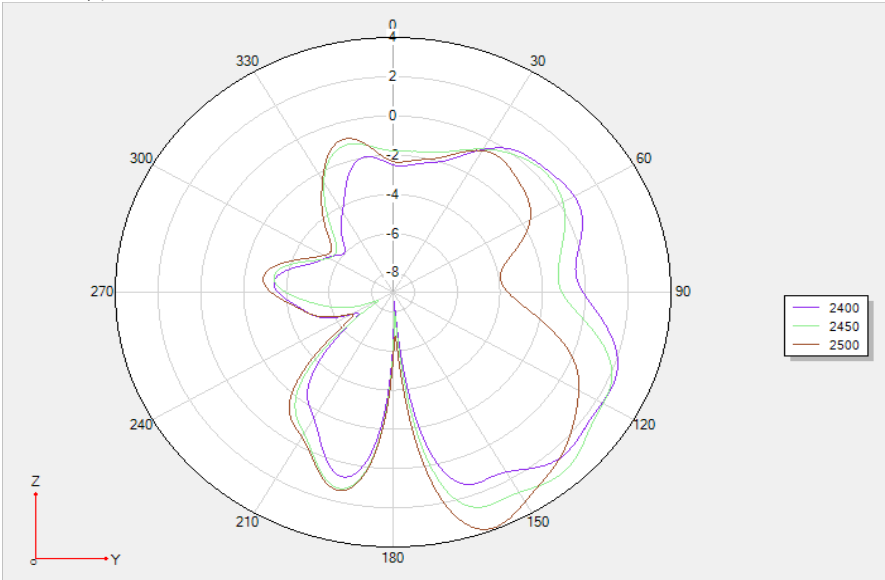
ANT2增益效率测试报告

|                 |       |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-------|
| Frequency / MHz | 2400  | 2420  | 2440  | 2460  | 2480  | 2500  |
| Efficiency / %  | 65.61 | 65.16 | 65.92 | 64.12 | 62.95 | 56.62 |
| Gain/ dB        | 2.53  | 2.88  | 3.08  | 3.13  | 3.59  | 3.93  |

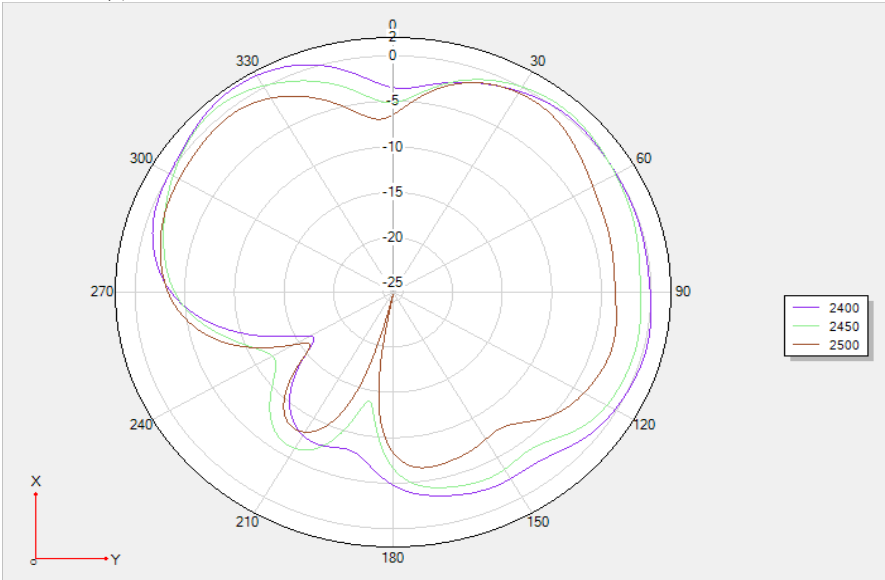
Phi 0 2D图



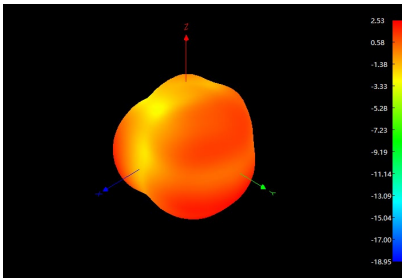
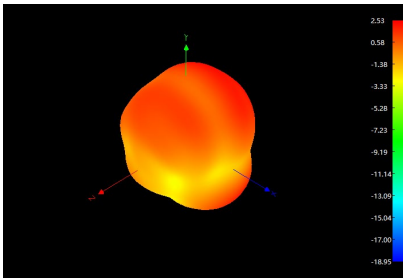
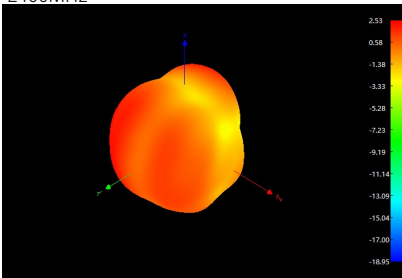
Phi 90 2D图



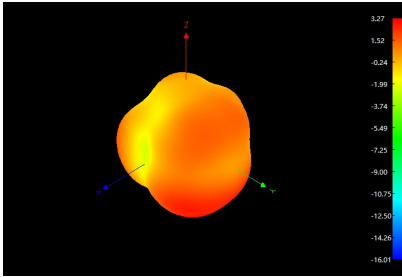
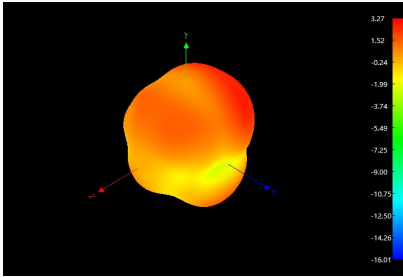
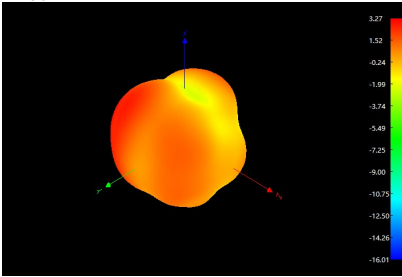
Theta 90 2D图



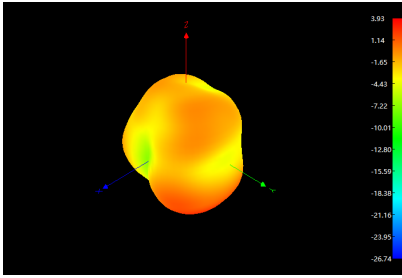
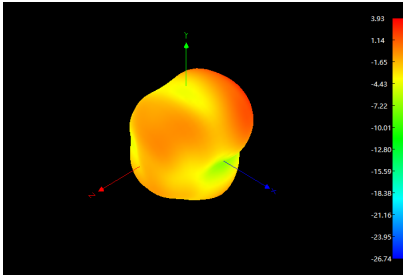
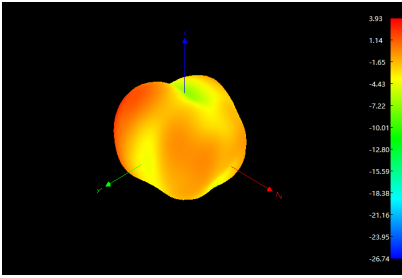
2400MHz



2450MHz



2500MHz



驻波比测试

矢量网络分析仪

1 通道/迹线 2 响应 3 激励 4 光标/分析 5 仪器状态

光标 2 2.500000000 GHz

确定 关闭

S11 SWR 1.000/ Ref 1.000 [F1]

