

深圳市晨信微科技有限公司  
Shenzhen Chenxinwei Technology Co.,LTD.

承 认 书  
SPECIFICATION FOR APPROVAL

客户名称CUSTOMER: 博创域

客户品名DESCRIPTION: DF6320 004 (WIFI-A)

客户料号PART NO:

规格描述 Spec Desc: 内置天线Antenna/2.4G~5.8G-WiFi/3dBi/50ohm/31.2\*12.9mm/  
RF1.13mm黑色同轴线L=100mm+剥线浸锡2-1.5-1mm/(DF6320 004-A)

| 确认 APPROVED SIGNATURES           |                  |                   |                                |                  |                   |
|----------------------------------|------------------|-------------------|--------------------------------|------------------|-------------------|
| 晨 信 微 确 认<br>APPROVED SIGNATURES |                  |                   | 客 户 确 认<br>APPROVED SIGNATURES |                  |                   |
| 制样<br>SAMPLE BY                  | 审核<br>REVIEWD BY | 批准<br>APPROVED BY | 验证<br>CHECKED BY               | 审核<br>REVIEWD BY | 批准<br>APPROVED BY |
|                                  |                  |                   |                                |                  |                   |
|                                  |                  |                   |                                |                  |                   |
| 日 期<br>DATE                      | 2025-03-14       |                   | 日 期<br>DATE                    |                  |                   |

深圳市晨信微科技有限公司

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地址:深圳市宝安区新桥街道中心路与蚝乡路交汇处同方创想公社1123

Address: 1123 Tongfang Chuangxiang Commune, Intersection of Zhongxin Road and Haoxiang Road, Xinqiao Street, Bao'an District, Shenzhen

联系人: 王建国 Contact: Wang Jianguo

手机: 13424341872 Mobile phone: 13424341872

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**Shenzhen Chenxinwei Technology Co., LTD.**

## 2、文件制定/修订/废止履历表

Document Development/Revision/Abolition Resume

[illegible]

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### 3、目录Catalogue

|                                                   |      |
|---------------------------------------------------|------|
| 1、封面Cover.....                                    | 1    |
| 2、文件制定/修订/废止履历表Abolition Resume.....              | 2    |
| 3、目录Catalogue.....                                | 3    |
| 4、产品图纸Product drawings.....                       | 4    |
| 5、天线位置Antenna position.....                       | 5    |
| 6、无源测试数据Passive test data.....                    | 6-7  |
| 7、有源测试数据Active test data.....                     | 7    |
| 8、电气性能测试报告Electrical Performance Test Report..... | 8    |
| 9、可靠性测试报告Reliability Test Report.....             | 9-10 |
| 10、包装规范Packaging specifications.....              | 11   |

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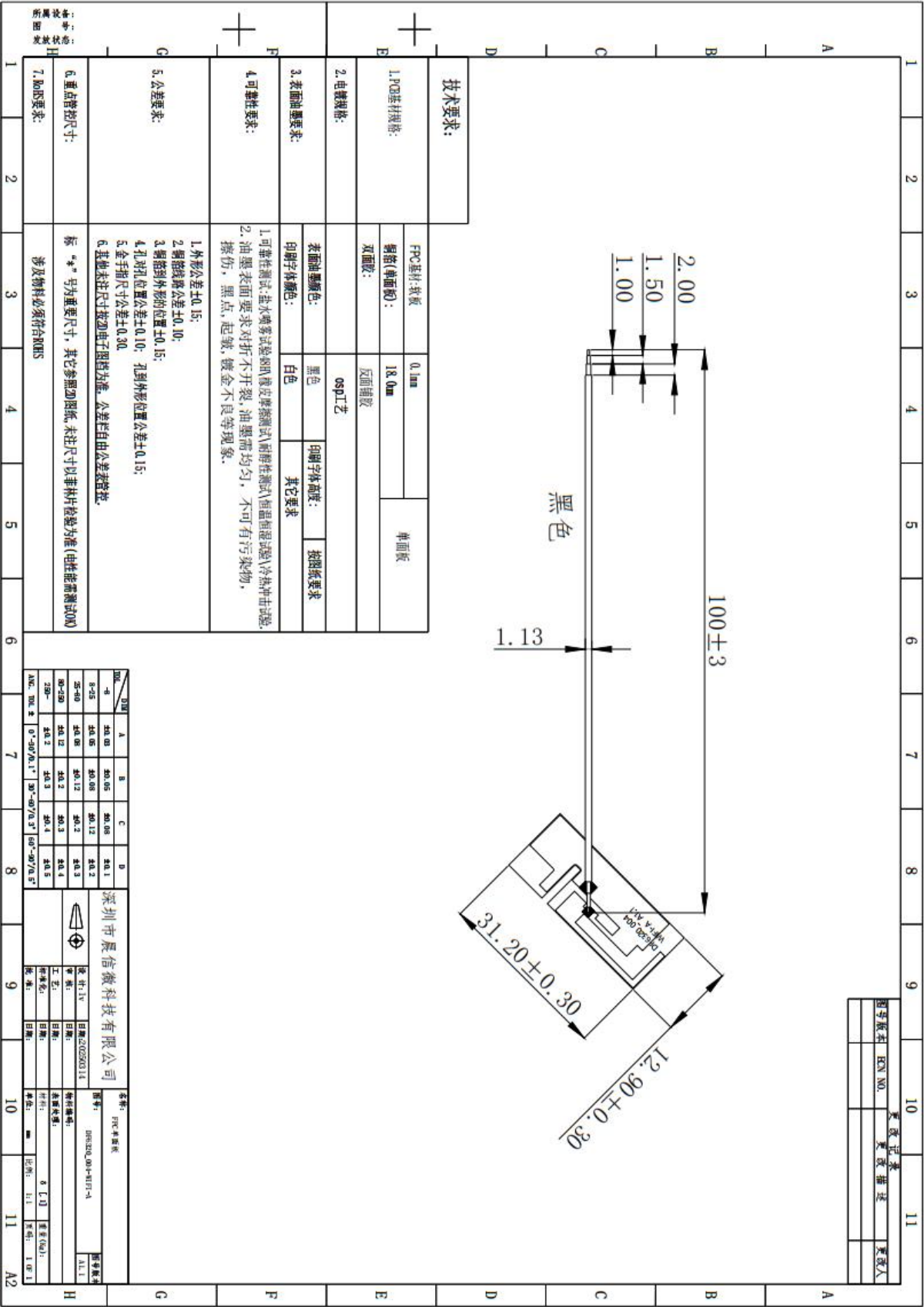
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#### 4、产品图纸Product drawings



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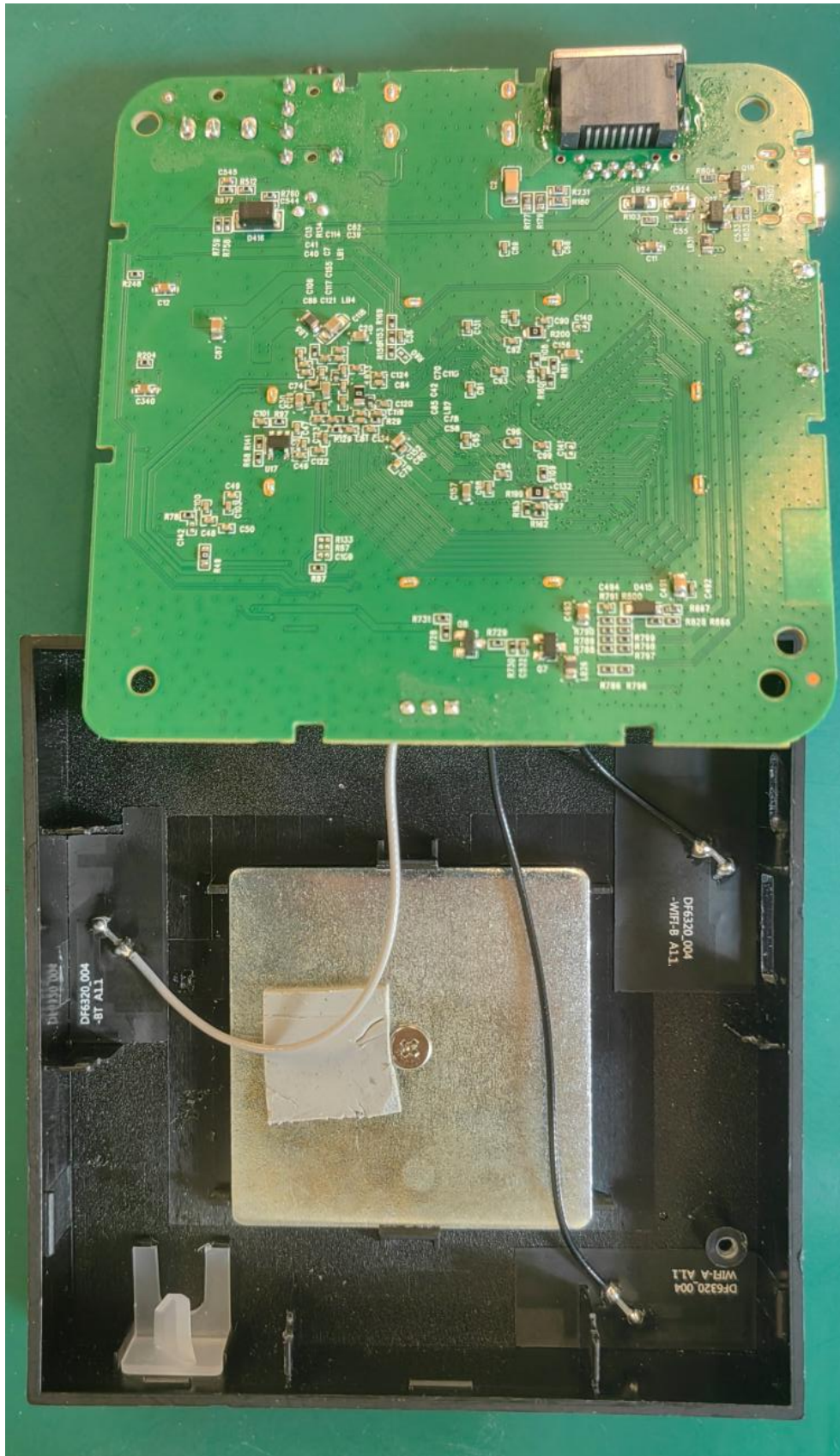
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## 5、天线位置Antenna position



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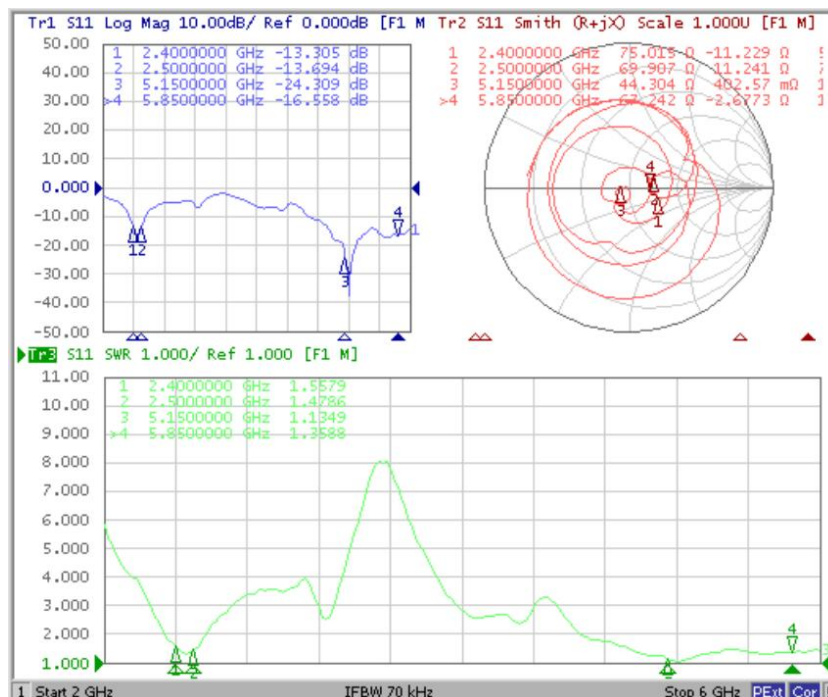
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## 6、无源测试数据Passive test data

S11



|             |        |        |        |        |
|-------------|--------|--------|--------|--------|
| Fre(GHz)    | 2.4    | 2.5    | 5.15   | 5.85   |
| ReeturnLoss | -13.30 | -13.69 | -24.30 | -16.55 |
| VSWR        | 1.55   | 1.47   | 1.13   | 1.35   |

## 效率、增益、方向图Efficiency, gain, and directional graph



| Frequency ID               | 1      | 3      | 5      | 7      | 9      | 11     | 12     | 14     | 16     | 18     | 20     | 22     | 24     | 26     |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz)            | 2400.0 | 2420.0 | 2440.0 | 2460.0 | 2480.0 | 2500.0 | 5150.0 | 5250.0 | 5350.0 | 5450.0 | 5550.0 | 5650.0 | 5750.0 | 5850.0 |
| Efficiency (dBi)           | -2.60  | -2.61  | -3.08  | -3.39  | -3.03  | -2.61  | -4.71  | -4.91  | -3.51  | -3.51  | -4.15  | -4.60  | -4.46  | -4.21  |
| Gain (dBi)                 | 2.70   | 2.75   | 2.63   | 2.54   | 2.65   | 3.39   | 2.86   | 2.48   | 4.01   | 4.09   | 3.53   | 3.30   | 3.28   | 3.18   |
| Efficiency (%)             | 54.95  | 54.81  | 49.21  | 45.78  | 49.77  | 54.86  | 33.80  | 32.28  | 44.58  | 44.59  | 38.50  | 34.67  | 35.81  | 37.97  |
| Directivity (dB)           | 5.30   | 5.36   | 5.70   | 5.94   | 5.68   | 6.00   | 7.57   | 7.39   | 7.52   | 7.60   | 7.67   | 7.90   | 7.74   | 7.38   |
| Peak Gain Position (Theta) | 96.00  | 110.00 | 98.00  | 96.00  | 101.00 | 108.00 | 99.00  | 68.00  | 96.00  | 71.00  | 70.00  | 69.00  | 70.00  | 99.00  |
| Peak Gain Position (Phi)   | 71.00  | 62.00  | 70.00  | 72.00  | 69.00  | 65.00  | 64.00  | 91.00  | 74.00  | 87.00  | 89.00  | 87.00  | 84.00  | 63.00  |
| Efficiency ThetaPol (%)    | 44.13  | 43.69  | 39.28  | 37.66  | 40.31  | 44.84  | 30.68  | 28.07  | 40.36  | 40.98  | 34.90  | 30.84  | 32.28  | 34.08  |
| Efficiency PhiPol (%)      | 10.82  | 11.12  | 9.93   | 8.11   | 9.46   | 10.02  | 3.12   | 4.20   | 4.23   | 3.61   | 3.60   | 3.83   | 3.53   | 3.90   |
| Upper Hem. Efficiency (%)  | 31.68  | 30.27  | 26.30  | 25.46  | 28.01  | 29.56  | 20.11  | 17.97  | 25.14  | 25.47  | 22.73  | 20.81  | 21.25  | 22.10  |
| Lower Hem. Efficiency (%)  | 23.27  | 24.54  | 22.92  | 20.32  | 21.76  | 25.31  | 13.69  | 14.31  | 19.44  | 19.12  | 15.76  | 13.86  | 14.56  | 15.88  |

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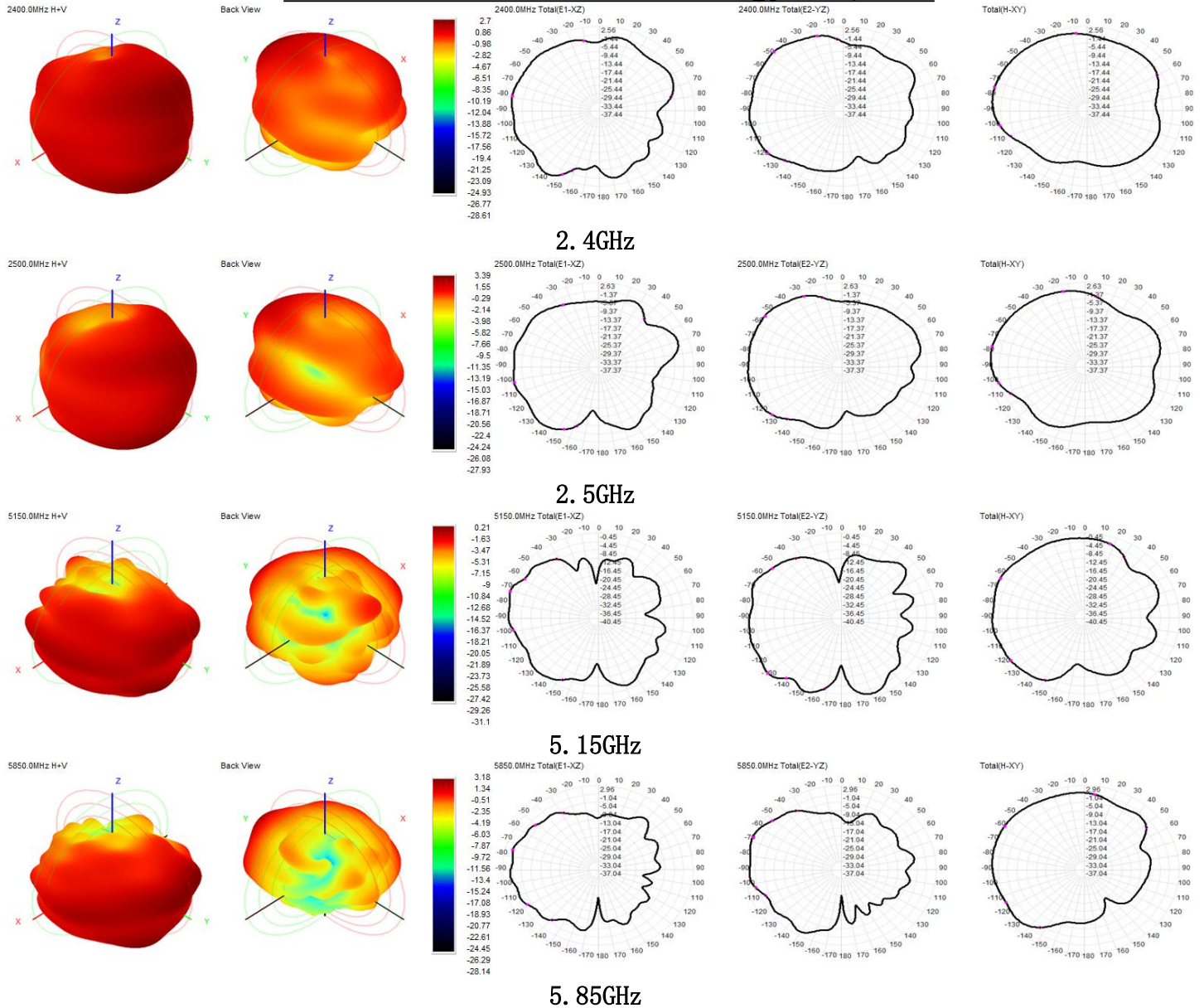
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## 7、有源测试数据Active test data

| DF6320_004                  |         |       |       |         |        |       |
|-----------------------------|---------|-------|-------|---------|--------|-------|
| 2.4G-WiFi 11b 11M tx 11M rx | Channel | TRP   | EIRP  | Channel | TIS    | EIS   |
|                             | ch1     | 16.24 | 21.51 | ch1     | -75.23 | 80.5  |
|                             | ch7     | 15.39 | 20.33 | ch7     | -75.64 | 80.59 |
|                             | ch13    | 16.01 | 21.28 | ch13    | -76.39 | 81.66 |
| 2.4G-WiFi 11n MCS7          | Channel | TRP   | EIRP  | Channel | TIS    | EIS   |
|                             | ch1     | 15.03 | 20.42 | ch1     | -66.37 | 71.76 |
|                             | ch7     | 14.39 | 19.43 | ch7     | -65.74 | 70.78 |
|                             | ch13    | 15.13 | 20.47 | ch13    | -65.47 | 70.81 |
| 5.8G-WiFi 11a 6M tx 54M rx  | Channel | TRP   | EIRP  | Channel | TIS    | EIS   |
|                             | ch36    | 13.72 | 19.22 | ch36    | -71.19 | 76.69 |
|                             | ch64    | 14.26 | 19.63 | ch64    | -72.95 | 78.32 |
|                             | ch165   | 14.22 | 19.69 | ch165   | -73.04 | 78.51 |

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## 8、电气性能参数Electrical Performance Test Report

| 电气参数Electrical parameters     |        |                            |
|-------------------------------|--------|----------------------------|
| 频率范围<br>Frequency range       |        | 2.4–2.5GHz /5.15–5.85GHz   |
| 输入阻抗<br>Input impedance       |        | 50 Ω                       |
| 驻波比<br>SWR                    |        | <2.0                       |
| 增益<br>GAIN                    | 2.4GHz | 3 dBi                      |
|                               | 5.8GHz | 3 dBi                      |
| 极化方式<br>Polarization mode     |        | 交叉极化<br>Cross-polarization |
| 辐射方向<br>Radiation direction   |        | 全向<br>Omnidirectional      |
| 接头型号<br>Connector model       |        | 焊接<br>welding              |
| 机械参数mechanical parameters     |        |                            |
| 线长<br>Cable length            |        | 100mm                      |
| 维持力<br>Sustainability         |        | /                          |
| 同轴电缆<br>Coaxial cable         |        | 灰色1.13mm/ grey1.13mm       |
| 盐雾测试<br>Salt spray test       |        |                            |
| 环境参数Environmental parameters  |        |                            |
| 工作温度<br>Operation temperature |        | –40~85℃                    |

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9、可靠性试验报告

9.1. 恒温恒湿试验

|                                                                                                                                                                                                                                                                                                                                                                           |                                                  |                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------|
| 试验/试验项目<br>Test/Test Item                                                                                                                                                                                                                                                                                                                                                 | 恒温恒湿试验<br>Constant temperature and humidity test | 检验单号<br>Inspection Order Number     |
| 产品名称/规格<br>Product Name/Specification                                                                                                                                                                                                                                                                                                                                     | 2. 4G/5. 8G-FPC<br>RF1.13mm, 线长/length 100mm     | 试验数量: 5PCS<br>Test quantity         |
| 送检日期<br>Date of submission for inspection                                                                                                                                                                                                                                                                                                                                 | : 2025-02-26                                     | 完成日期: 2025-02-27<br>completion date |
| 试验/检验设备Testing/Inspection Equipment:<br>1. 可编程恒温恒湿试验箱Programmable constant temperature and humidity experimental chamber<br>2. 8753ES 网络分析仪8753ES Network Analyzer                                                                                                                                                                                                        |                                                  |                                     |
| 试验/检验条件Test/Inspection Conditions:<br>1. 恒温-40℃ 下试验 12H<br>Test at a constant temperature of -40 ºC for 12 hours<br>2. +65º65~70%RH 试验 12H, 共 24 小时<br>+65 º 65-70% RH test for 12 hours, totaling 24 hours;                                                                                                                                                              |                                                  |                                     |
| 试验结果<br>Test Results                                                                                                                                                                                                                                                                                                                                                      |                                                  |                                     |
| 判定标准Judgment criteria:<br>1、金属表面没有裂痕起皱, 分离等;非金属部分不应发生变色, 开裂, 变形, 脱胶等不良;<br>The metal surface has no cracks, wrinkles, separation, etc; Non metallic parts should not experience discoloration, cracking, deformation, delamination, or other defects<br>2、电气测试符合标准要求;电压驻波比测试合格<br>Electrical testing meets standard requirements; Voltage standing wave ratio test passed |                                                  |                                     |
| 试验/检验判定:<br>Test/Inspection Judgment                                                                                                                                                                                                                                                                                                                                      | ●合格<br>●PASS                                     | ●不合格<br>●NG                         |
|                                                                                                                                                                                                                                                                                                                                                                           |                                                  | ●不作判定<br>●NA                        |
| 测试Test:                                                                                                                                                                                                                                                                                                                                                                   | 审核Check:                                         |                                     |

9.2. 高低温冷热冲击

|                           |                                                   |                                 |
|---------------------------|---------------------------------------------------|---------------------------------|
| 试验/试验项目<br>Test/Test Item | 高低温冷热冲击<br>High and low temperature thermal shock | 检验单号<br>Inspection Order Number |
|---------------------------|---------------------------------------------------|---------------------------------|

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|                                                                                                                                                                                                                                                                                                                                                                                                |                                              |                          |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------|--------------|
| 产品名称/规格<br>Product Name/Specification                                                                                                                                                                                                                                                                                                                                                          | 2. 4G/5. 8G-FPC<br>RF1.13mm, 线长/length 100mm | 试验数量:<br>Test quantity   | 5PCS         |
| 送检日期<br>Date of submission for inspection                                                                                                                                                                                                                                                                                                                                                      | : 2025-02-26                                 | 完成日期:<br>completion date | 2025-02-27   |
| 试验/检验设备Testing/Inspection Equipment:<br>1.高低温交变湿热试验箱High and low temperature alternating humidity chamber<br>2.8753ES 网络分析仪8753ES Network Analyzer                                                                                                                                                                                                                                             |                                              |                          |              |
| 试验/检验条件Test/Inspection Conditions:<br>-40℃ (2H)---间隔 80℃ (2H),6 次循环, 共 24 小时<br>-40 ℃ (2H) - Interval of 80 ℃ (2H), 6 cycles, for a total of 24 hours;                                                                                                                                                                                                                                         |                                              |                          |              |
| 试验结果<br>Test Results                                                                                                                                                                                                                                                                                                                                                                           |                                              |                          |              |
| 判定标准Judgment criteria:<br>1、金属表面镀层应无剥落, 裂痕起皱, 分离等;非金属部分不应发生变色, 开裂, 变形, 脱胶等不良;<br>The metal surface coating should be free of peeling, cracks, wrinkles, separation, etc; Non metallic parts should not experience discoloration, cracking, deformation, delamination, or other defects<br>2、电气测试符合标准;电压驻波比测试合格<br>Electrical testing meets standards; Voltage standing wave ratio test passed. |                                              |                          |              |
| 试验/检验判定:<br>Test/Inspection Judgment                                                                                                                                                                                                                                                                                                                                                           | ●合格<br>●PASS                                 | ●不合格<br>●NG              | ●不作判定<br>●NA |
| 测试Test:                                                                                                                                                                                                                                                                                                                                                                                        |                                              | 审核Check:                 |              |

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### 10、包装规范Packaging specifications

|                                                                                                                                                       |  |                                                               |  |                                                   |  |                                                               |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------|--|---------------------------------------------------|--|---------------------------------------------------------------|--|
| 产品料号Product part number:                                                                                                                              |  |                                                               |  |                                                   |  |                                                               |  |
| 产品规格<br>Product specifications: <u>内置天线Antenna/2.4G~5.8G-WiFi/3dBi/50ohm/31.2*12.9mm/RF1.13mm</u><br><u>黑色同轴线L=100mm+剥线浸锡2-1.5-1mm/(DF6320 004-A)</u> |  |                                                               |  |                                                   |  |                                                               |  |
| 一、标签要求labeling requirement                                                                                                                            |  |                                                               |  |                                                   |  |                                                               |  |
| 内标签长 45 宽 70<br>Inner label length 45, width 70                                                                                                       |  |                                                               |  | 外标签长 45 宽 70<br>Outer label length 45, width 70   |  |                                                               |  |
| 需方CUSTOMER                                                                                                                                            |  |                                                               |  | 需方CUSTOMER                                        |  |                                                               |  |
| 供方Suppliers                                                                                                                                           |  | 深圳市晨信微科技有限公司<br>Shenzhen Chenxin Micro<br>Technology Co., Ltd |  | 供方<br>Suppliers                                   |  | 深圳市晨信微科技有限公司<br>Shenzhen Chenxin Micro<br>Technology Co., Ltd |  |
| 客户订单号<br>Customer<br>order number                                                                                                                     |  |                                                               |  | 客户订单号<br>Customer<br>order number                 |  |                                                               |  |
| 客户料号<br>Customer part<br>number                                                                                                                       |  |                                                               |  | 客户料号<br>Customer<br>part number                   |  |                                                               |  |
| 物料编码<br>material code                                                                                                                                 |  |                                                               |  | 物料编码<br>material<br>code                          |  |                                                               |  |
| 品名规格<br>Product name<br>and<br>specification<br>s                                                                                                     |  | 检验员QC                                                         |  | 品名规格<br>Product<br>name and<br>specificat<br>ions |  | 检验员QC                                                         |  |
| 数量/单位<br>Quantity/Unit                                                                                                                                |  | 生产日期<br>Date of<br>manufactur<br>e                            |  | 数量/单位<br>Quantity/U<br>nit                        |  | 生产日期<br>Date of<br>manufact<br>ure                            |  |
| 备注Note                                                                                                                                                |  |                                                               |  | 备注Note                                            |  |                                                               |  |
| 二、装箱要求Packing requirements                                                                                                                            |  |                                                               |  |                                                   |  |                                                               |  |
| 1、内包装Inner packing<br>产品 Product<br>100PCS<br>5000PCS                                                                                                 |  |                                                               |  |                                                   |  |                                                               |  |

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2、外包装External packing

注意事项precautions:

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