

修订履历  
REVISION HISTORY

| 版本/次<br>REVISION | 修改项次<br>DESCRIPTION         |  |  |  |  | 修改日期<br>DATE |
|------------------|-----------------------------|--|--|--|--|--------------|
| X1               | 首次发行<br>First time to issue |  |  |  |  | 2023/10/31   |
| X2               | 公司名称变更                      |  |  |  |  | 2025/04/28   |
|                  |                             |  |  |  |  |              |
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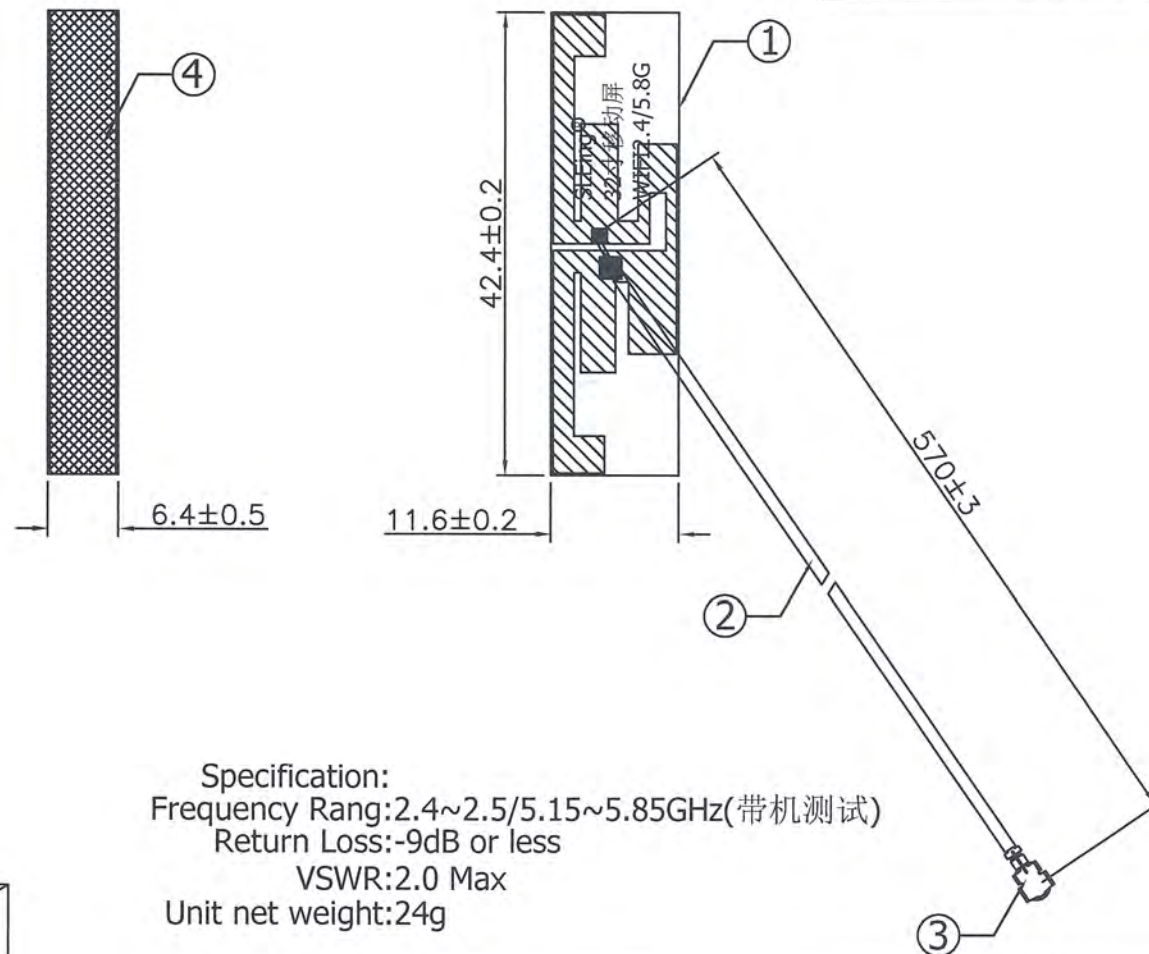
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## 产品实物图 PRODUCT DRAWING

(备注：此页请附上物料的实物图片(必须是该料号实物图片)，包括正视图、侧视图)Remarks: Please attach the actual picture of the material (must be the actual picture of the material number) on this page, including front view and side view



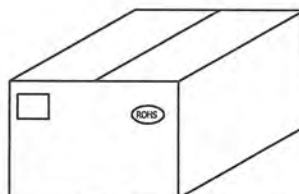
| REV. | CONTENT      | DATE       |
|------|--------------|------------|
| X1   | First Sample | 2023.10.31 |
| X2   | 公司名称变更       | 2025.04.28 |



Specification:  
Frequency Rang:2.4~2.5/5.15~5.85GHz(带机测试)  
Return Loss:-9dB or less  
VSWR:2.0 Max  
Unit net weight:24g



25pcs/Bundle  
Packing:50pcs/bag



外箱须贴ROHS标签与物料标签各1PCS

SLEing® 森领  
广东森领通信科技有限公司  
GUANGDONG SLEING COMM-TECH CO., LTD

|          |       |                  |          |
|----------|-------|------------------|----------|
| CUSTOMER |       |                  |          |
| PART NO  |       |                  |          |
| TITLE    |       | WIFI2 ANTENNA    |          |
| S.L P/NO |       | SLEingB243420570 |          |
| SIZE     | DRAWN | CHECKED          | APPROVED |
| A4       | Jerry | Jerry            | JongRea  |

| NO | PART NAME | DESCRIPTION                        | REMARK          | Q'TY | SCALE: 1/1 | TOLERANCE UNLESS OTHERWISE SPECIFIED | UNIT:mm | ANGLES ±0.5° | X. ±0.3 | XX. ±0.5 | XXX. ±2.0 |
|----|-----------|------------------------------------|-----------------|------|------------|--------------------------------------|---------|--------------|---------|----------|-----------|
| 4  | Foam      | EVA,L42.4*W11.6*T6mm               |                 |      |            |                                      |         |              |         |          |           |
| 3  | Connector | MHF Plug for Φ1.13 Cable           | 第一代端子           | 1    |            |                                      |         |              |         |          |           |
| 2  | Cable     | Φ1.13mm Coaxial Cable White 50Ω    |                 | 1    |            |                                      |         |              |         |          |           |
| 1  | FPCB      | FPC,L42.4*W11.6*T0.3mm,Color:Black | 300LSE Adhesive | 1    |            |                                      |         |              |         |          |           |



电性测试报告

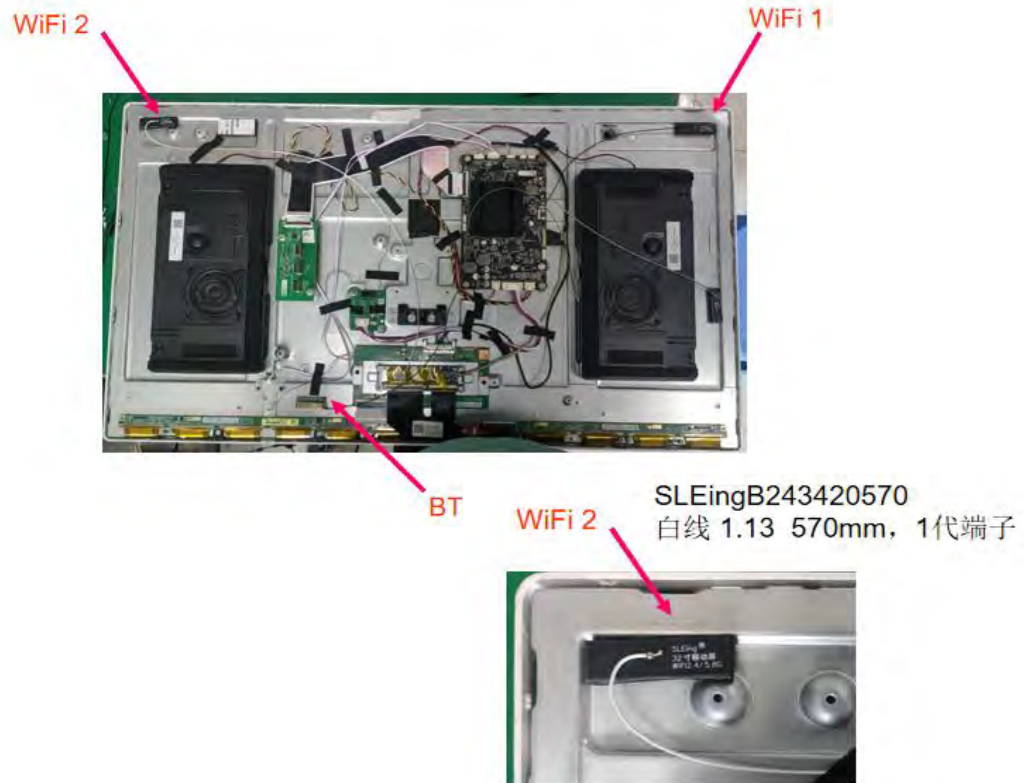
Test Reports

| Electrical Properties |                               |
|-----------------------|-------------------------------|
| Frequency             | 2400-2500/5150-5850 MHz(带机测试) |
| Impedance             | 50 Ohm Nominal                |
| V.S.W.R               | $\leq 2.0$                    |
| Return Loss           | -9.0dB Max                    |
| Radiation             | Omni-directional              |
| Gain (Peak)           | 2.4G: 5.18 dBi/5.8G: 4.58 dBi |
| Polarization          | Linear, Vertical              |
| Admitted Power        | 2 W                           |
| Connector             | MHF                           |
| Physical Properties   |                               |
| Antenna Material      | FPCB                          |
| Cable Type            | $\Phi 1.13\text{mm}$ Grey     |
| Operating Temp        | -40°C-85°C                    |
| Storage Temp.         | -5°C-30°C                     |
|                       |                               |

## 天线组装图

### Antenna assembly diagram

Device



Antenna



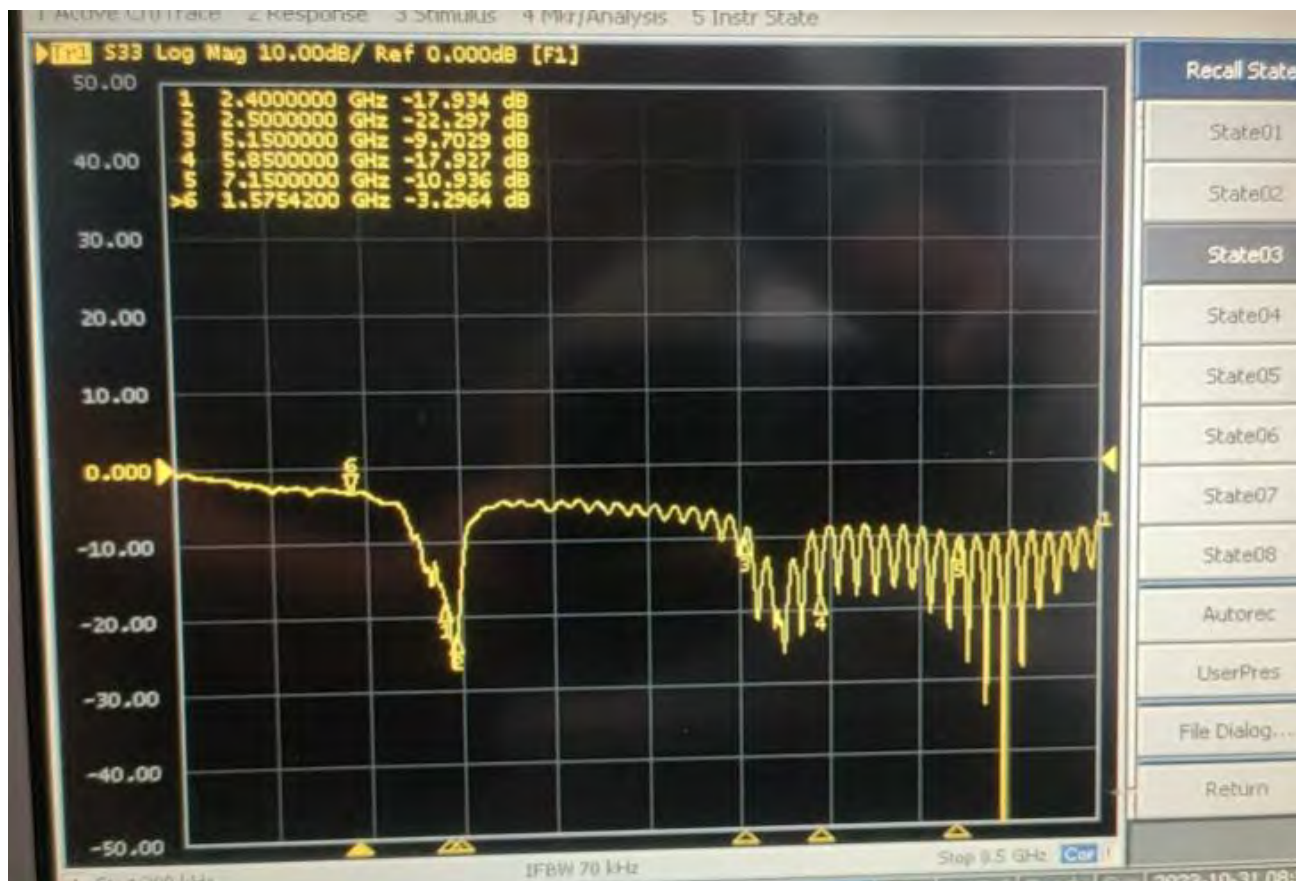
## S参数测试

### S Parameter Test

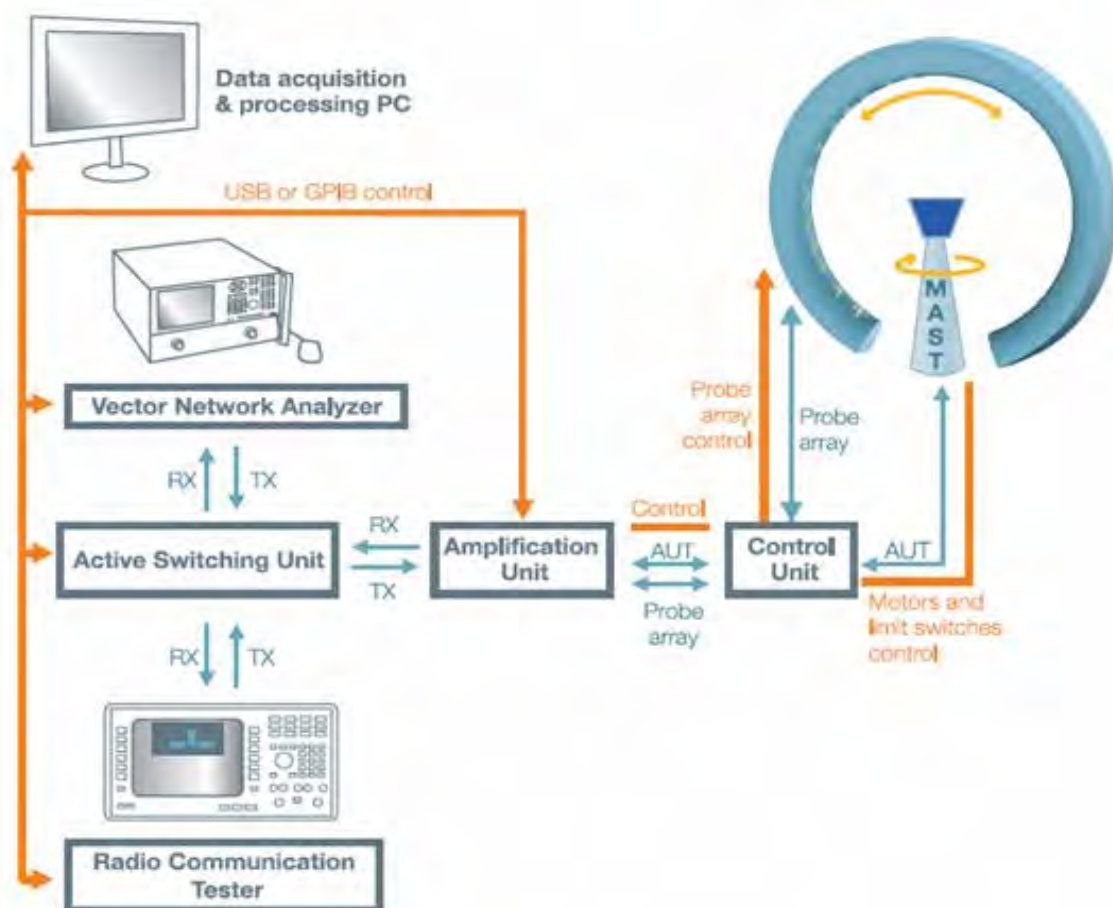
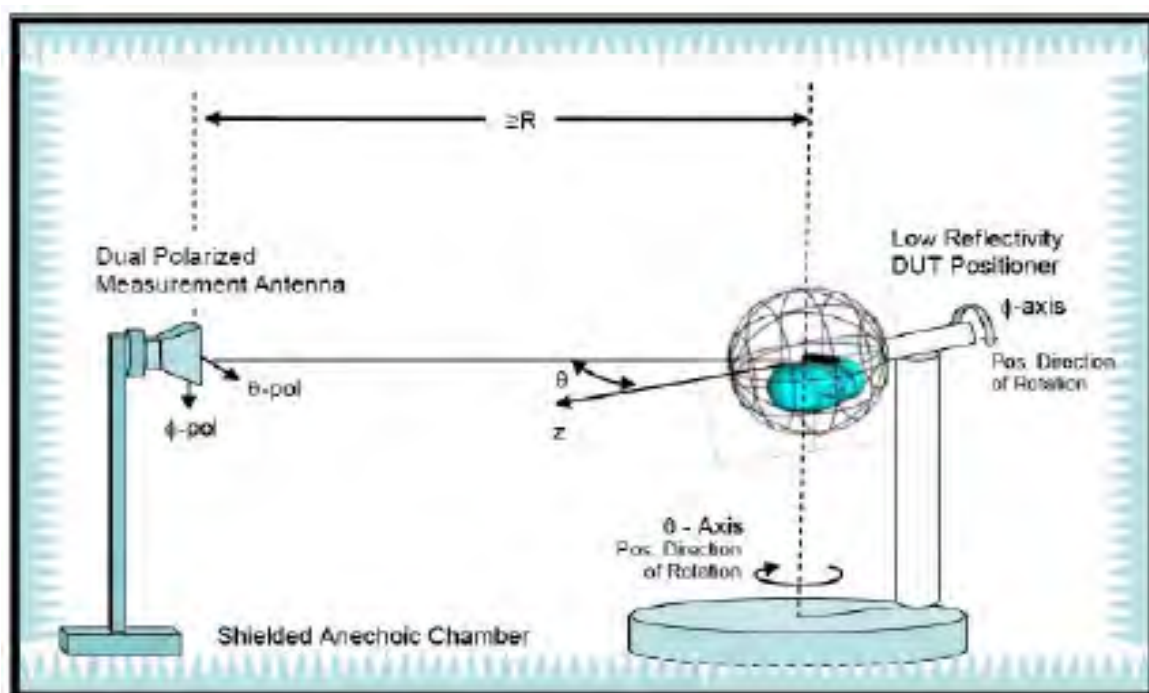
Agilent E5071C Network Analyzer



RF Antenna (Return Loss)



## 测试设备 Test Setup



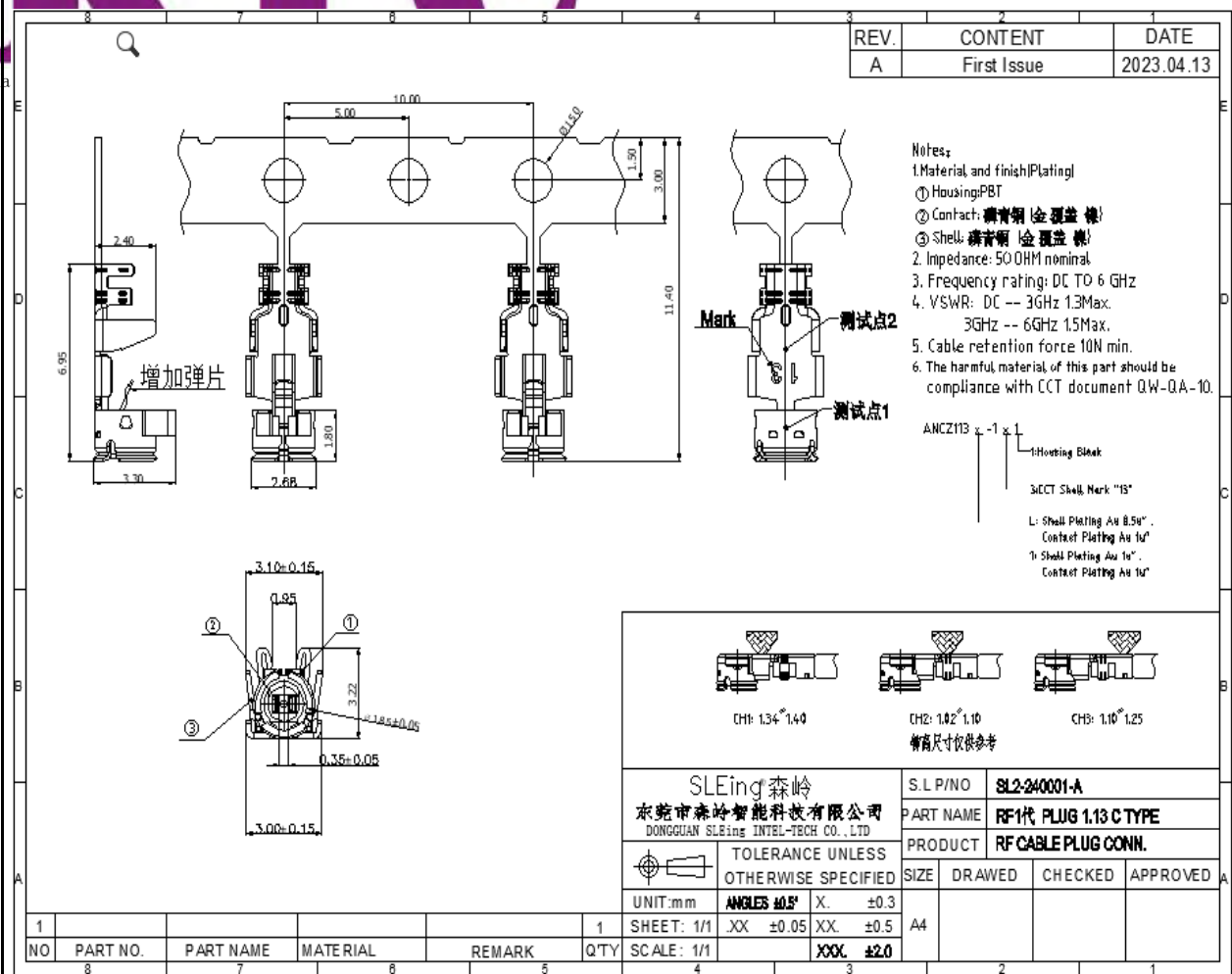
## 测试效率 Test Efficiency

|                  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Frequency (MHz)  | 2400  | 2410  | 2420  | 2430  | 2440  | 2450  | 2460  | 2470  | 2480  | 2490  | 2500  |       |       |       |       |
| Efficiency (dBi) | -5.87 | -5.62 | -5.40 | -5.33 | -5.04 | -5.00 | -5.08 | -5.03 | -5.07 | -5.27 | -5.25 |       |       |       |       |
| Gain (dBi)       | 4.23  | 4.26  | 4.41  | 4.45  | 4.97  | 5.04  | 4.78  | 5.24  | 5.18  | 5.03  | 4.86  |       |       |       |       |
| Efficiency (%)   | 25.91 | 27.44 | 28.82 | 29.34 | 31.30 | 31.64 | 31.04 | 31.42 | 31.14 | 29.75 | 29.86 |       |       |       |       |
| Frequency (MHz)  | 5150  | 5200  | 5250  | 5300  | 5350  | 5400  | 5450  | 5500  | 5550  | 5600  | 5650  | 5700  | 5750  | 5800  | 5850  |
| Efficiency (dBi) | -5.79 | -5.91 | -5.32 | -5.24 | -5.53 | -4.94 | -4.88 | -4.76 | -4.94 | -5.26 | -5.25 | -5.60 | -5.69 | -5.89 | -6.05 |
| Gain (dBi)       | 3.94  | 3.47  | 3.91  | 4.25  | 3.36  | 3.55  | 3.84  | 4.30  | 4.01  | 3.73  | 4.27  | 4.07  | 4.64  | 4.56  | 4.58  |
| Efficiency (%)   | 26.38 | 25.64 | 29.40 | 29.92 | 28.00 | 32.08 | 32.52 | 33.45 | 32.10 | 29.77 | 29.88 | 27.55 | 26.96 | 25.74 | 24.83 |

产品各零部件ROHS清单(ROHS list of all parts of the product):

产品ROHS及REACH信息

| 产品信息  |      |        |      | ROHS及REACH信息        |      |            |    |                    |      |            |    |
|-------|------|--------|------|---------------------|------|------------|----|--------------------|------|------------|----|
| 产品料号  | 部件名称 | 材质     | 供应商  | ROHS报告编号            | 测试机构 | 报告日期       | 结果 | REACH报告编号          | 测试机构 | 报告日期       | 结果 |
|       | FPC  | 基材铜箔   | 蔡仑格蒂 | SHAEC23001049105    | SGS  | 2023.02.15 | 符合 | SHAEC23001049103   | SGS  | 2023.02.15 | 符合 |
|       |      | 背胶     | 3M   | SHAEC2217569207     | SGS  | 2023.02.04 | 符合 | SHAEC2217569403    | SGS  | 2023.02.04 | 符合 |
|       |      | 阻焊油墨   | 凯耀   | ETR23205710         | SGS  | 2023.03.20 | 符合 | A2230101693101001E | SGS  | 2023.03.20 | 符合 |
|       |      | 字符油墨   | 凯耀   | ETR22A01347M01      | SGS  | 2022.10.17 | 符合 | ETR22105272        | SGS  | 2022.10.27 | 符合 |
|       |      | OSP    | 豪杰行  | SZXECC23000005501   | SGS  | 2023.01.09 | 符合 | SZXECC23000005503  | SGS  | 2023.01.09 | 符合 |
|       |      | 补强     | 富邦电子 | A2230108006101006E  | CTI  | 2023.03.21 | 符合 | A2230108006102001E | CTI  | 2023.03.23 | 符合 |
| CABLE |      | 金属     | 海联通  | A2230079122101002E  | CTI  | 2023.03.09 | 符合 | A2230079122102002E | CTI  | 2023.03.13 | 符合 |
|       |      | 非金属    |      | A223007912210101ERJ | CTI  | 2023.02.09 | 符合 | A2230079122102001E | CTI  | 2023.03.13 | 符合 |
|       |      | 铜      |      | CANECC2301145809    | SGS  | 2023.02.08 | 符合 | CANECC2301145815   | SGS  | 2023.02.08 | 符合 |
| 端子    |      | 塑胶 PBT | 新光   | ETR23705937         | SGS  | 2023.08.07 | 符合 |                    |      |            |    |



## 技术要求 Technical requirements:

1. 材质说明 (铜材型号 厚度) Material description (copper model thickness):
2. 表面处理 (电镀材质) Surface treatment (electroplating material):
3. 工作温度 Operating temperature:
4. 端子拔出力 (测试前/测试后) Un-mating force (initial/after test):
5. 压接强度 Crimp strength:
6. 额定电压 Rating voltage:
7. 额定频率 Rating frequency:
8. 接触电阻 (测试前/测试后) (内导体/外导体) Contact resistance(initial/after test)(main contact/ground contact):
9. 绝缘电阻 Insulation resistance:
10. 介质耐压 Dielectric withstand voltage:
11. 耐久性 Durability:
12. 驻波比 (接端子SMA适配头测试) VSWR(Mated with SMA adapter) :

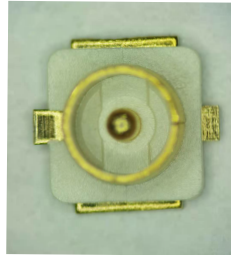
## 1. 样品描述 DESCRIPTION OF SAMPLE

样品编号(Sample No.): JHJC210319001

CFC130B11 (Plug +Cable) :



CFP12\*W12 (Receptacle) :



## 2. 实验室环境条件 LABORATORY AMBIENCE CONDITION

温度(Temperature): 15~35℃

相对湿度(Relative Humidity): 20%~70%

## 3. 应用文件 APPLICATION DOCUMENT

产品规范 (文件编号: PS-0003; 版次: D)

Product Specification (Document number: PS-0003; Revision: D)

## 4. 限定测试顺序 QUALIFICATION TEST SEQUENCE

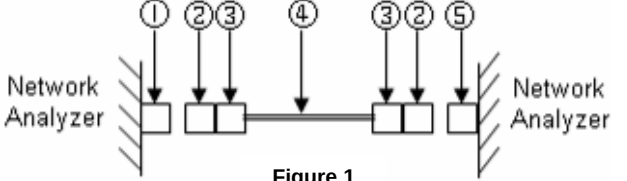
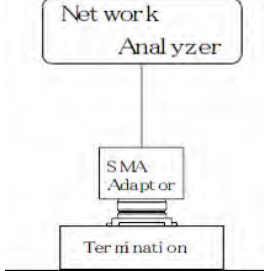
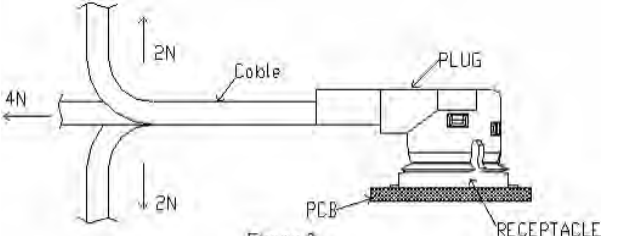
| 测试项目<br>Test Item                       | 测试顺序<br>Test Sequence |     |     |     |     |     |     |     |     |     |   |     |     |     |
|-----------------------------------------|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|
|                                         | A                     | B   | C   | D   | E   | F   | G   | H   | I   | J   | K | L   | M   | N   |
| 外观检查<br>Examination of Visual           | 1,3                   | 1,3 | 1,5 | 1,5 | 1,5 | 1,5 | 1,7 | 1,7 | 1,5 | 1,7 | 1 | 1,3 | 1,3 | 1,3 |
| 低电平接触电阻<br>Low level contact resistance |                       |     | 2,4 | 2,4 | 2,4 | 2,4 | 2,5 | 2,5 | 2,4 | 2,5 |   |     |     |     |
| 绝缘电阻<br>Insulation resistance           |                       |     |     |     |     |     | 3,6 | 3,6 |     | 3,6 |   |     |     |     |
| 耐电压<br>Dielectric withstanding voltage  | 2                     |     |     |     |     |     |     |     |     |     |   |     |     |     |
| 驻波比<br>V.S.W.R                          |                       |     |     |     |     |     |     |     |     |     |   | 2   |     |     |
| 拔去力<br>Unmating force                   |                       | 2   |     |     |     |     |     |     |     |     |   |     |     |     |
| 引张强度<br>Crimp strength                  |                       |     |     |     |     |     |     |     |     |     | 2 |     |     |     |
| 耐久性<br>Durability                       |                       |     | 3   |     |     |     |     |     |     |     |   |     |     |     |
| 线材保持力<br>Cable retention force          |                       |     |     | 3   |     |     |     |     |     |     |   |     |     |     |
| 振动<br>Vibration                         |                       |     |     |     | 3   |     |     |     |     |     |   |     |     |     |
| 机械冲击<br>Mechanical shock                |                       |     |     |     |     | 3   |     |     |     |     |   |     |     |     |

|                                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 盐水喷雾<br>Salt spray                           |   |   |   |   |   |   |   |   | 3 |   |   |   |   |   |
| 温度寿命<br>Temperature life                     |   |   |   |   |   |   |   |   |   | 4 |   |   |   |   |
| 热冲击<br>Thermal shock                         |   |   |   |   |   |   | 4 |   |   |   |   |   |   |   |
| 耐湿性<br>Humidity                              |   |   |   |   |   |   |   | 4 |   |   |   |   |   |   |
| * 可焊性<br>* Solder ability                    |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |
| * 耐焊接热<br>* Resistance to reflow solder heat |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| 每组样品数<br>Specimen size per test group        | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |

备注 Note: 标有“\*”检测项目仅针对板端 (\* The test item only for receptacles)

## 5. 测试方法 TEST METHOD

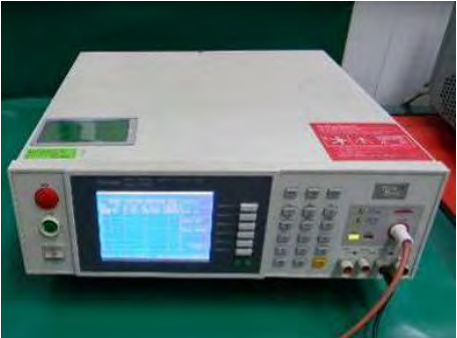
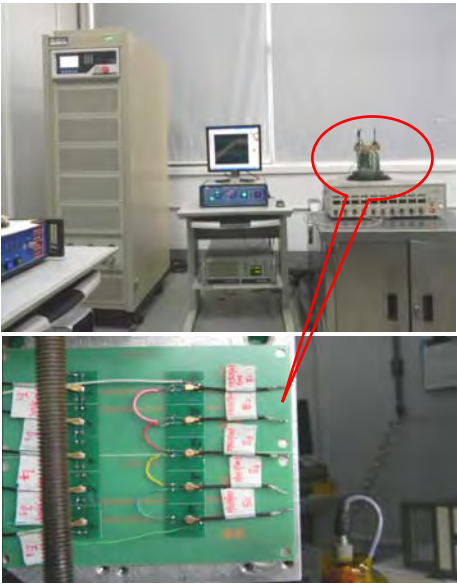
| 项目<br>Item | 测试项目<br>Test Description                | 测试方法<br>Test Method                                                                                                                                                                                     | 执行标准<br>Perform Standard      |
|------------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 1          | 外观检查<br>Examination of Visual           | 依据品质检查计划外观检查<br>Visual according to applicable quality inspection plan.                                                                                                                                 | EIA/ECA-364-18B               |
| 2          | 低电平接触电阻<br>Low level contact resistance | 公母端连接器配合后使用最大 20mV 开路电压, 以最大 10mA 电流进行测试。<br>Mated connectors: apply the level condition of 20mV maximum for the open circuit voltage and 10mA test current maximum.                                    | MIL-STD-202H<br>Method 307    |
| 3          | 绝缘电阻<br>Insulation resistance           | 使用直流 100V, 保持 1 分钟, 测试端子与外壳间。<br>100V DC is applied for one minute between Inner contact and Ground contact.                                                                                            | MIL-STD-202H<br>Method 302    |
| 4          | 耐电压<br>Dielectric withstanding voltage  | 使用交流 200V, 保持 1 分钟, 测试端子与外壳间。<br>200V AC is applied for one minute between Inner contact and Ground contact.                                                                                            | MIL-STD-202H<br>Method 301    |
| 5          | 拔去力<br>Unmating force                   | 沿着插入相反方向, 以每分钟 25±3mm 的速度将样品(公头)从母座中拔出。<br>Along the reverse direction of mating, un-mating the plug connectors from the receptacle connector at a speed of 25 ±3mm per minute.                         | EIA-364-13E                   |
| 6          | 耐久性<br>Durability                       | 将母座焊接在板上, 用公座以每分钟 25±3mm 的速度插拔 30 次。<br>Solder the receptacle connector to the test board and mating and un-mating the receptacle connector and the plug for 30 cycles at a speed of 25±3mm per minute. | 产品规范<br>Product Specification |

|    |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |
|----|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 7  | 驻波比<br>V.S.W.R                 | <p>线端：<br/>频率：DC0.1~6GHz；测试方法如 Figure 1 所示：<br/>Plug + Cable：<br/>Frequency: DC0.1~6GHz;<br/>Method of measurement as shown in Figure 1:</p>  <p>①: Port 1 ; ②: SMA;<br/>③: 7.000AC-000-1RB(Plug +Cable) ④: Cable ;<br/>⑤: Port 4</p>                                                                                                                                                                                                              | 产品规范<br>Product Specification |
| 8  | 引张强度<br>Crimp strength         | <p>板端：<br/>频率：DC0.1~6GHz；<br/>测试方法如 Figure 2 所示：<br/>Receptacle：<br/>Frequency: DC0.1~6GHz;<br/>Method of measurement as shown in Figure 2:</p>  <p>Figure 2</p>                                                                                                                                                                                                                                                                                   | 产品规范<br>Product Specification |
| 9  | 线材保持力<br>Cable retention force | <p>施力于 Figure 3 方向，测试期间工作电流 100mA DC，检查瞬间电流中断。</p>  <p>Figure 3</p> <p>Apply force on the cable as shown in Figure 3, During the testing, run 100mA DC to check electrical discontinuity.</p>                                                                                                                                                                                                                                                    | 产品规范<br>Product Specification |
| 10 | 振动<br>Vibration                | <p>配对的连接器固定在振动仪上，15 分钟内振动频率为 10-100-10 Hz，振幅 1.5mm 或加速度 59 m/s<sup>2</sup>(6G)，三个相互垂直的方向进行振动，各方向振动 5 次（共 75 分钟），测试过程中加载 100mA 直流电。</p> <p>Mated connectors are fixed on the vibration tester's 3 mutually perpendicular planes. Vibration frequency traverse from 10Hz to 100Hz, then return to 10Hz in 15 minute at 1.5mm amplitude or 59m/s<sup>2</sup>(6G) peak. Test duration for each plane is 5 cycles (approx 75min). 100mA DC shall be carried to all contacts during the test with an electrical discontinuity monitor.</p> | EIA-364-28F<br>EIA-364-46C    |

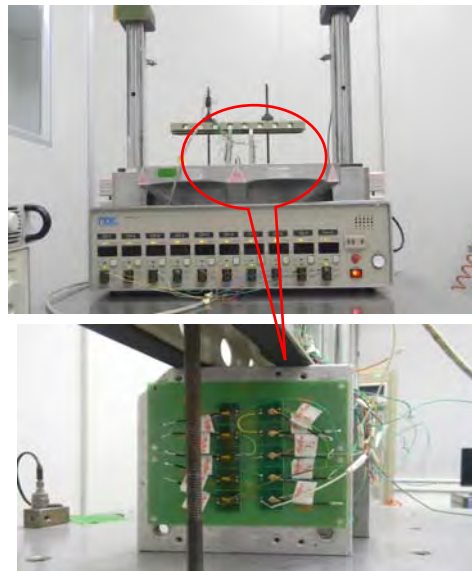
|    |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                           |
|----|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 11 | 机械冲击<br>Mechanical shock  | <p>配对的连接器固定在冲击试验机上，以 75gn 的加速度、半正弦冲击波的波形和 11 毫秒的冲击时间进行测试。冲击次数：正反三个相互垂直方向各冲击 3 次，共 18 次。测试过程中加载 100mA 直流电。</p> <p>Mated connectors are fixed on the shock tester's 3 mutually perpendicular planes. Dropping 3 times each to normal and reversed 3 mutually perpendicular planes (total of 18 times). The test condition: acceleration 75gn max., duration of the plus: 11 ms .100mA DC shall be carried to all contacts during the test with an electrical discontinuity monitor.</p> | EIA-364-27C<br>EIA-364-46C                |
| 12 | 盐水喷雾<br>Salt spray        | <p>配对的连接器暴露在以下条件测试48小时。条件如下：1)温度：35±2℃<br/>2)盐水浓度：5±1%（重量比）</p> <p>The mated connectors shall be exposed to the following condition for 48 hours:</p> <p>1) temperature: 35±2℃<br/>2) salt water density by weight : 5±1%</p>                                                                                                                                                                                                                                                         | MIL-STD-202H<br>Method 101<br>Condition B |
| 13 | 热冲击<br>Thermal shock      | <p>配对的连接器暴露在以下条件测试5个循环。一个循环条件如下：1) -40℃ 测试30分钟；<br/>2) +5~+35℃最大测试5分钟；3) +90℃ 测试30分钟；4) +5~+35℃最大测试5分钟。</p> <p>The mated connectors shall be exposed to the following condition for 5 cycles.</p> <p>1 cycle: 1) -40℃ for 30 minutes<br/>2) +5~+35℃ for 5 minutes Max.; 3) +90℃ for 30 minutes; 4) +5~+35℃ for 5minutes Max.</p>                                                                                                                                                      | EIA-364-32G                               |
| 14 | 温度寿命<br>Temperature life  | <p>配对的连接器暴露在温度为 90℃±2℃的条件下测试 96 小时。</p> <p>The mated connectors are exposed to the temperature of 90℃±2℃ for 96 hours.</p>                                                                                                                                                                                                                                                                                                                                                            | EIA-364-17C                               |
| 15 | 耐湿性<br>Humidity           | <p>配对的连接器暴露在温度为 40±2℃，相对湿度为 90~95%的条件下测试 96 小时。</p> <p>The mated connectors are exposed to the temperature of 40±2℃, 90~95% relative humidity for 96 hours.</p>                                                                                                                                                                                                                                                                                                                       | MIL-STD-202H<br>Method 103<br>Condition B |
| 16 | * 可焊性<br>* Solder ability | <p>将焊锡部位浸入温度为 245℃±5℃的锡炉中保持 10±0.5 秒。</p> <p>Immerse the solder part of the connectors in the solder bath at 245℃±5℃ for 10±0.5 seconds.</p>                                                                                                                                                                                                                                                                                                                                          | 产品规范<br>Product Specification             |

|    |                                              |                                                                                                                                                                                                                                                                                                                                                   |                               |
|----|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 17 | * 耐焊接热<br>* Resistance to reflow solder heat | 将连接器放置在 PCB 上, 依以下条件过回焊炉 2 次:<br>1. 预热: 130~200°C, 60~120秒;<br>2. 回流: 230°C 以上, 40~50秒;<br>3. 峰值温度: 260+0/-5°C。<br>Place the connector on the P.C. Board and apply the following condition to the reflow oven 2times:<br>1. Preheat: 130~200°C for 60~120 seconds;<br>2. Reflow: Over 230°C for 40~50seconds;<br>3. Peak temperature: 260+0/-5°C. | 产品规范<br>Product Specification |
|----|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|

## 6. 测试设备 TEST EQUIPMENT

| 测试项目<br>Test Description                                                | 测试设备<br>Test equipments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 低电平接触电阻<br>Low level contact resistance                                 | <div>  </div> <div>           测试设备: 毫欧姆表<br/>           型 号: 16502<br/>           最近校准日期: 2022.05.27<br/>           下次校准日期: 2023.05.26<br/>           Test equipment used: Milliohm meter<br/>           Model: 16502<br/>           Date of latest calibration: 2022.05.27<br/>           Date of next calibration: 2023.05.26         </div>                                                                                                                                                                                                   |
| 绝缘电阻<br>耐电压<br>Insulation resistance<br>Dielectric withstanding voltage | <div>  </div> <div>           测试设备: 电气安规分析仪<br/>           型 号: 19032<br/>           最近校准日期: 2022.03.21<br/>           下次校准日期: 2023.03.20<br/>           Test equipment used: Electrical safety analyzer<br/>           Model: 19032<br/>           Date of latest calibration: 2022.03.21<br/>           Date of next calibration: 2023.03.20         </div>                                                                                                                                                                                   |
| 振动<br>Vibration                                                         | <div>  </div> <div>           测试设备: 电磁式高频振动仪/瞬断仪<br/>           型 号: EM-600F3K-40N120 / NM-11A<br/>           最近校准日期:<br/>           2022.03.21 / 2022.05.25<br/>           下次校准日期:<br/>           2023.03.20/2023.05.24<br/>           Test equipment used: Electromagnetism high frequency vibration tester / Electrical discontinuity monitor Model: EM-600F3K-40N120 / NM-11A Date of latest calibration:<br/>           2022.03.21/2022.05.25<br/>           Date of next calibration:<br/>           2023.03.20/2023.05.24         </div> |

机械冲击  
Mechanical shock



测试设备：冲击弹跳试验机/瞬断仪  
型 号：DP-201-450 / NM-11A

最近校准日期：

2021.11.27/ 2022.05.25下

次校准日期：

2023.11.26 / 2023.05.24

Test equipment used: Shock bump tester /  
Electrical discontinuity monitor

Model: DP-201-450 / NM-11A

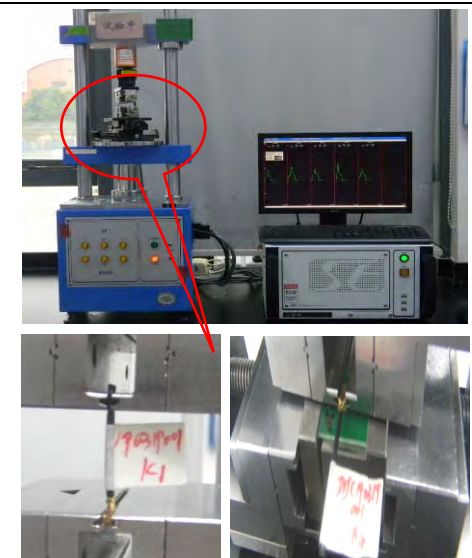
Date of latest calibration:

2021.11.27/ 2022.05.25 Date

of next calibration:

2022.11.26 / 2023.05.24

引张强度  
拔去力  
Crimp strength  
Unmating force



测试设备：插拔力试验机

型 号：1220S

最近校准日期：2022.05.27

下次校准日期：2023.05.26

Test equipment used:

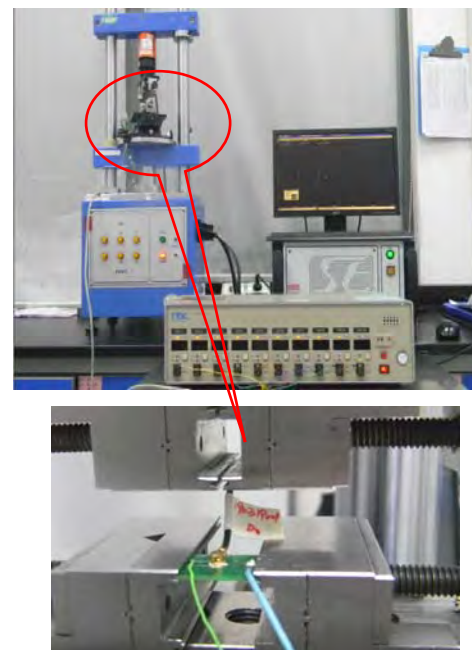
Insert / withdrawal force tester

Model: 1220S

Date of latest calibration: 2022.05.27

Date of next calibration: 2023.05.26

线材保持力  
Cable retention force



测试设备：插拔力试验机//瞬断仪

型 号：1220S / NM-11A

最近校准日期：2021.05.27/ 2022.05.25

下次校准日期：2022.05.26/2023.05.24

Test equipment used:

Insert / withdrawal force tester

/ Electrical discontinuity monitor

Model: 1220S / NM-11A

Date of latest calibration:

2021.05.27/ 2022.05.25

Date of next calibration:

2022.05.26/ 2023.05.24

热冲击  
Thermal shock



测试设备：冷热冲击试验机  
型 号：H-TS-501  
最近校准日期：2022.05.27  
下次校准日期：2023.05.26

Test equipment used: Thermal shock tester  
Model: H-TS-501  
Date of latest calibration: 2022.05.27  
Date of next calibration: 2023.05.26

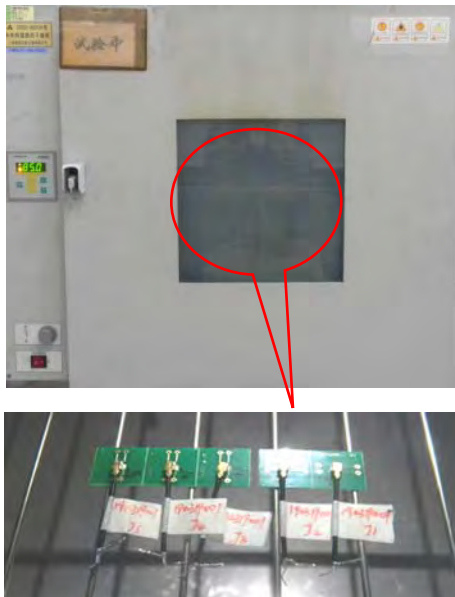
耐湿性  
Humidity



测试设备：恒温恒湿试验机  
型 号：KTHA-715TBS  
最近校准日期：2022.05.27  
下次校准日期：2023.05.26

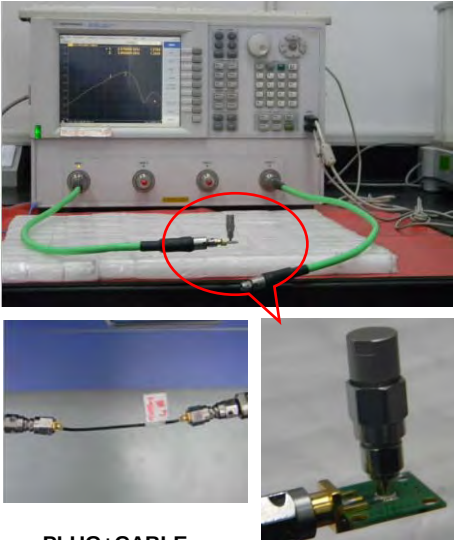
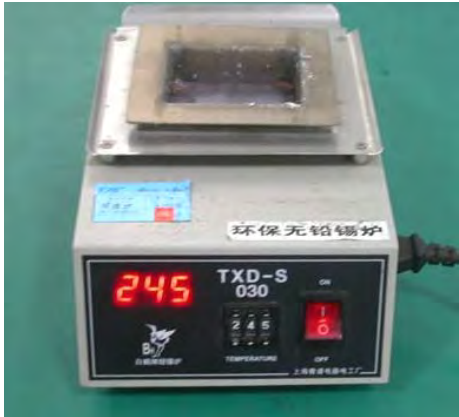
Test equipment used:  
temperature & humidity tester  
Model: KTHA-715TBS  
Date of latest calibration: 2022.05.27  
Date of next calibration: 2023.05.26

温度寿命  
Temperature life



测试设备：烤箱  
型 号：DGG-9203A  
最近校准日期：2022.03.19  
下次校准日期：2023.03.18

Test equipment used: Oven  
Model: DGG-9203A  
Date of latest calibration: 2022.3.19  
Date of next calibration: 2023.03.18

|                                                          |                                                                                                                     |                                                                                                                                                                                                                                                  |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>驻波比<br/>V.S.W.R</p>                                   |  <p>PLUG+CABLE      RECEPTACLE</p> | <p>测试设备：网络分析仪<br/>型 号：N5230C<br/>最近校准日期：2022.03.22<br/>下次校准日期：2023.03.21</p> <hr/> <p>Test equipment used: Network analyzer<br/>Model: N5230C<br/>Date of latest calibration: 2022.03.22<br/>Date of next calibration: 2023.03.21</p>            |
| <p>盐水喷雾<br/>Salt spray</p>                               |                                   | <p>测试设备：盐水喷雾<br/>型 号：H-SST-60<br/>最近校准日期：2022.05.27<br/>下次校准日期：2023.05.26</p> <hr/> <p>Test equipment used: Salt spray<br/>Model: H-SST-60<br/>Date of latest calibration: 2022.05.27<br/>Date of next calibration: 2023.05.26</p>               |
| <p>可焊性<br/>Solder ability</p>                            |                                  | <p>测试设备：锡炉<br/>型 号：TXD-S030<br/>最近校准日期：2022.05.27<br/>下次校准日期：2023.05.26</p> <hr/> <p>Test equipment used: Tin Stove<br/>Model: TXD-S030<br/>Date of latest calibration: 2022.05.27<br/>Date of next calibration: 2023.05.26</p>                  |
| <p>* 耐焊接热<br/>* Resistance to reflow solder<br/>heat</p> |                                  | <p>测试设备：回流焊炉<br/>型 号：FL-VP1060<br/>最近校准日期：2022.03.19<br/>下次校准日期：2023.03.18</p> <hr/> <p>Test equipment used:<br/>Reflow Solder Oven<br/>Model: FL-VP1060<br/>Date of latest calibration: 2022.03.19<br/>Date of next calibration: 2023.03.18</p> |

## 7. 测试结果 TEST RESULT

### GROUP A:

| 测试项目<br>Test Description                 | 要求<br>Requirement                                                                                   | 测试结果 Test result |               |               |               |               |               | 评定<br>Rate |
|------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------|---------------|---------------|---------------|---------------|---------------|------------|
|                                          |                                                                                                     | Sample           | 1             | 2             | 3             | 4             | 5             |            |
| 1.外观检查<br>Examination of visual          | 符合产品要求<br>Meet the requirements of product                                                          | Result           | OK            | OK            | OK            | OK            | OK            | 合格<br>Pass |
| 2.耐电压<br>Dielectric withstanding voltage | 不能有电火花产生，漏电流不能超过 2mA。<br>No creeping discharge or flash over shall occur, Current leakage: 2mA Max. | Visual           | No flash over | No flash over | No flash over | No flash over | No flash over | 合格<br>Pass |
|                                          |                                                                                                     | Current leakage  | 0.007 mA      | 0.009 mA      | 0.009 mA      | 0.009 mA      | 0.009 mA      |            |
| 3.外观检查<br>Examination of visual          | 符合产品要求<br>Meet the requirements of product                                                          | Result           | OK            | OK            | OK            | OK            | OK            | 合格<br>Pass |

### GROUP B:

| 测试项目<br>Test Description        | 要求<br>Requirement                                                                              | 测试结果 Test result           |       |       |       |       |       |       |       |       | 评定<br>Rate |
|---------------------------------|------------------------------------------------------------------------------------------------|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
|                                 |                                                                                                | Sample                     | 1     | 2     | 3     | 4     | 5     | Max.  | Min.  | Avg.  |            |
| 1.外观检查<br>Examination of visual | 符合产品要求<br>Meet the requirements of product                                                     | Result                     | OK    | OK    | OK    | OK    | OK    | /     | /     | /     | 合格<br>Pass |
| 2.拔去力<br>Unmating force         | 综合拔去力:<br>初回拔去力最小 8N。<br>中心导体:<br>初回拔去最小 0.15N。                                                | Total unmate force         | 12.82 | 16.81 | 12.82 | 13.25 | 13.64 | 16.81 | 12.82 | 13.87 | 合格<br>Pass |
|                                 | Total un-mate force:<br>Initial 8N Min.<br>Inner contact Un-mate force:<br>Initial 0.15N Min.  | Inner contact unmate force | 1.31  | 1.60  | 1.32  | 0.82  | 0.94  | 1.60  | 0.82  | 1.20  | 合格<br>Pass |
|                                 | 30 次插拔后,<br>综合拔去力:<br>终回拔去力最小 5N。<br>中心导体:<br>终回拔去力最小 0.1N。<br>After 30 cycles durability test | Total unmate force         | 10.45 | 9.64  | 5.91  | 7.23  | 10.35 | 10.45 | 5.91  | 8.72  | 合格<br>Pass |
|                                 | Total un-mate force:<br>Final 5N Min.<br>Inner contact Un-mate force :<br>Final 0.1N Min.      | Inner contact unmate force | 0.42  | 0.63  | 0.65  | 0.25  | 0.41  | 0.65  | 0.25  | 0.47  | 合格<br>Pass |
| 3.外观检查<br>Examination of visual | 符合产品要求<br>Meet the requirements of product                                                     | Result                     | OK    | OK    | OK    | OK    | OK    | /     | /     | /     | 合格<br>Pass |

GROUP C:

| 测试项目<br>Test Description                  | 要求<br>Requirement                                                                                                 | 测试结果 Test result |           |           |           |           |           |      |      |      | 评定<br>Rate |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------|-----------|-----------|-----------|-----------|-----------|------|------|------|------------|
|                                           |                                                                                                                   | Sample           | 1         | 2         | 3         | 4         | 5         | Max. | Min. | Avg. |            |
| 1.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                        | Result           | OK        | OK        | OK        | OK        | OK        | /    | /    | /    | 合格<br>Pass |
| 2.低电平接触电阻<br>Low level contact resistance | 中心导体: 初值最大 20mΩ<br>外部导体: 初值最大 10mΩ<br>Inner contact:<br>20mΩ Max. Initial<br>Ground contact:<br>10mΩ Max. Initial | Inner contact    | 8.4       | 7.4       | 7.2       | 8.7       | 8.3       | 8.7  | 7.2  | 8.0  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 4.5       | 4.3       | 4.8       | 4.9       | 4.5       | 4.9  | 4.3  | 4.6  |            |
| 3.耐久性<br>Durability                       | 30 次插拔后无损坏<br>After 30 cycles durability test,<br>No damage.                                                      | Result           | No damage | No damage | No damage | No damage | No damage | /    | /    | /    | 合格<br>Pass |
| 4.低电平接触电阻<br>Low level contact resistance | 中心导体: 终值最大 25mΩ<br>外部导体: 终值最大 15mΩ<br>Inner contact:<br>25mΩ Max. Final<br>Ground contact:<br>15mΩ Max. Final     | Inner contact    | 10.2      | 7.1       | 9.7       | 8.5       | 8.5       | 10.2 | 7.1  | 8.8  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 3.8       | 3.6       | 3.1       | 3.3       | .3.5      | 3.8  | 3.1  | 3.5  |            |
| 5.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                        | Result           | OK        | OK        | OK        | OK        | OK        | /    | /    | /    | 合格<br>Pass |

GROUP D:

| 测试项目<br>Test Description                  | 要求<br>Requirement                                                                                                 | 测试结果 Test result |           |           |           |           |           |      |      |      | 评定<br>Rate |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------|-----------|-----------|-----------|-----------|-----------|------|------|------|------------|
|                                           |                                                                                                                   | Sample           | 1         | 2         | 3         | 4         | 5         | Max. | Min. | Avg. |            |
| 1.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                        | Result           | OK        | OK        | OK        | OK        | OK        | /    | /    | /    | 合格<br>Pass |
| 2.低电平接触电阻<br>Low level contact resistance | 中心导体: 初值最大 20mΩ<br>外部导体: 初值最大 10mΩ<br>Inner contact:<br>20mΩ Max. Initial<br>Ground contact:<br>10mΩ Max. Initial | Inner contact    | 9.0       | 10.1      | 8.9       | 8.1       | 9.1       | 10.1 | 8.1  | 9.0  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 3.3       | 4.4       | 1.6       | 5.1       | 4.8       | 5.1  | 1.6  | 3.8  |            |
| 3.线材保持力<br>Cable retention force          | 瞬断时间小于 1 微妙<br>Electrical discontinuity < 1μs.                                                                    | Visual           | No damage | No damage | No damage | No damage | No damage | /    | /    | /    | 合格<br>Pass |
|                                           |                                                                                                                   | Discontinuity    | <1 μs     | <1 μs     | <1 μs     | <1 μs     | <1 μs     | /    | /    | /    |            |
| 4.低电平接触电阻<br>Low level contact resistance | 中心导体: 终值最大 25mΩ<br>外部导体: 终值最大 15mΩ<br>Inner contact:<br>25mΩ Max. Final<br>Ground contact:<br>15mΩ Max. Final     | Inner contact    | 10.0      | 9.0       | 9.6       | 9.8       | 9.0       | 10.0 | 9.0  | 9.5  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 3.5       | 3.6       | 2.0       | 2.7       | 3.7       | 3.7  | 2.0  | 3.1  |            |
| 5.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                        | Result           | OK        | OK        | OK        | OK        | OK        | /    | /    | /    | 合格<br>Pass |

## GROUP E:

| 测试项目<br>Test Description                  | 要求<br>Requirement                                                                                                 | 测试结果 Test result |           |           |           |           |           |      |      |      | 评定<br>Rate |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------|-----------|-----------|-----------|-----------|-----------|------|------|------|------------|
|                                           |                                                                                                                   | Sample           | 1         | 2         | 3         | 4         | 5         | Max. | Min. | Avg. |            |
| 1.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                        | Result           | OK        | OK        | OK        | OK        | OK        | /    | /    | /    | 合格<br>Pass |
| 2.低电平接触电阻<br>Low level contact resistance | 中心导体: 初值最大 20mΩ<br>外部导体: 初值最大 10mΩ<br>Inner contact:<br>20mΩ Max. Initial<br>Ground contact:<br>10mΩ Max. Initial | Inner contact    | 8.3       | 8.5       | 7.7       | 8.2       | 8.5       | 8.5  | 7.7  | 8.2  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 3.1       | 4.1       | 4.2       | 3.6       | 4.4       | 4.4  | 3.1  | 3.9  |            |
| 3.振动<br>Vibration                         | 瞬断时间小于 1 微妙<br>Electrical discontinuity < 1μs.                                                                    | Visual           | No damage | No damage | No damage | No damage | No damage | /    | /    | /    | 合格<br>Pass |
|                                           |                                                                                                                   | Discontinuity    | <1 μs     | <1 μs     | <1 μs     | <1 μs     | <1 μs     | /    | /    | /    |            |
| 4.低电平接触电阻<br>Low level contact resistance | 中心导体: 终值最大 25mΩ<br>外部导体: 终值最大 15mΩ<br>Inner contact:<br>25mΩ Max. Final<br>Ground contact:<br>15mΩ Max. Final     | Inner contact    | 8.6       | 8.6       | 10.3      | 8.9       | 9.3       | 10.3 | 8.6  | 9.1  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 3.4       | 3.9       | 3.6       | 3.3       | 2.7       | 3.9  | 2.7  | 3.4  |            |
| 5.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                        | Result           | OK        | OK        | OK        | OK        | OK        | /    | /    | /    | 合格<br>Pass |

## GROUP F:

| 测试项目<br>Test Description                  | 要求<br>Requirement                                                                                                 | 测试结果 Test result |           |           |           |           |           |      |      |      | 评定<br>Rate |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------|-----------|-----------|-----------|-----------|-----------|------|------|------|------------|
|                                           |                                                                                                                   | Sample           | 1         | 2         | 3         | 4         | 5         | Max. | Min. | Avg. |            |
| 1.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                        | Result           | OK        | OK        | OK        | OK        | OK        | /    | /    | /    | 合格<br>Pass |
| 2.低电平接触电阻<br>Low level contact resistance | 中心导体: 初值最大 20mΩ<br>外部导体: 初值最大 10mΩ<br>Inner contact:<br>20mΩ Max. Initial<br>Ground contact:<br>10mΩ Max. Initial | Inner contact    | 9.5       | 8.7       | 7.3       | 8.8       | 9.0       | 9.5  | 7.3  | 8.7  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 3.7       | 3.1       | 3.2       | 2.3       | 4.8       | 4.8  | 2.3  | 3.4  |            |
| 3.机械冲击<br>Mechanical shock                | 瞬断时间小于 1 微妙<br>Electrical discontinuity < 1μs.                                                                    | Visual           | No damage | No damage | No damage | No damage | No damage | /    | /    | /    | 合格<br>Pass |
|                                           |                                                                                                                   | Discontinuity    | <1 μs     | <1 μs     | <1 μs     | <1 μs     | <1 μs     | /    | /    | /    |            |
| 4.低电平接触电阻<br>Low level contact resistance | 中心导体: 终值最大 25mΩ<br>外部导体: 终值最大 15mΩ<br>Inner contact:<br>25mΩ Max. Final<br>Ground contact:<br>15mΩ Max. Final     | Inner contact    | 10.7      | 9.9       | 8.5       | 8.9       | 9.4       | 10.7 | 8.5  | 9.5  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 2.8       | 3.7       | 3.6       | 3.1       | 3.0       | 3.7  | 2.8  | 3.2  |            |

|                                 |                                            |        |    |    |    |    |    |   |   |   |            |
|---------------------------------|--------------------------------------------|--------|----|----|----|----|----|---|---|---|------------|
| 5.外观检查<br>Examination of visual | 符合产品要求<br>Meet the requirements of product | Result | OK | OK | OK | OK | OK | / | / | / | 合格<br>Pass |
|---------------------------------|--------------------------------------------|--------|----|----|----|----|----|---|---|---|------------|

## GROUP G:

| 测试项目<br>Test Description                  | 要求<br>Requirement                                                                                                 | 测试结果 Test result |           |           |           |           |           |      |      |      | 评定<br>Rate |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------|-----------|-----------|-----------|-----------|-----------|------|------|------|------------|
|                                           |                                                                                                                   | Sample           | 1         | 2         | 3         | 4         | 5         | Max. | Min. | Avg. |            |
| 1.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                        | Result           | OK        | OK        | OK        | OK        | OK        | /    | /    | /    | 合格<br>Pass |
| 2.低电平接触电阻<br>Low level contact resistance | 中心导体: 初值最大 20mΩ<br>外部导体: 初值最大 10mΩ<br>Inner contact:<br>20mΩ Max. Initial<br>Ground contact:<br>10mΩ Max. Initial | Inner contact    | 8.6       | 7.9       | 10.0      | 7.5       | 8.2       | 10.0 | 7.5  | 8.4  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 3.7       | 3.5       | 4.5       | 3.1       | 3.2       | 4.5  | 3.1  | 3.7  |            |
| 3.绝缘电阻<br>Insulation resistance           | 最小 500 MΩ<br>500MΩ Min. Initial                                                                                   | Result           | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | /    | /    | /    | 合格<br>Pass |
| 4.热冲击<br>Thermal shock                    | 无损坏<br>No damage                                                                                                  | Result           | No damage | No damage | No damage | No damage | No damage | /    | /    | /    | 合格<br>Pass |
| 5.低电平接触电阻<br>Low level contact resistance | 中心导体: 终值最大 25mΩ<br>外部导体: 终值最大 15mΩ<br>Inner contact:<br>25mΩ Max. Final<br>Ground contact:<br>15mΩ Max. Final     | Inner contact    | 9.3       | 8.1       | 9.2       | 8.6       | 8.5       | 9.3  | 8.1  | 8.7  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 4.4       | 3.9       | 4.2       | 3.6       | 2.4       | 4.4  | 2.4  | 3.7  |            |
| 6.绝缘电阻<br>Insulation resistance           | 最小 100 MΩ<br>100MΩ Min. Final                                                                                     | Result           | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | /    | /    | /    | 合格<br>Pass |
| 7.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                        | Result           | OK        | OK        | OK        | OK        | OK        | /    | /    | /    | 合格<br>Pass |

## GROUP H:

| 测试项目<br>Test Description                  | 要求<br>Requirement                                                                                                 | 测试结果 Test result |     |     |      |     |     |      |      |      | 评定<br>Rate |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------|-----|-----|------|-----|-----|------|------|------|------------|
|                                           |                                                                                                                   | Sample           | 1   | 2   | 3    | 4   | 5   | Max. | Min. | Avg. |            |
| 1.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                        | Result           | OK  | OK  | OK   | OK  | OK  | /    | /    | /    | 合格<br>Pass |
| 2.低电平接触电阻<br>Low level contact resistance | 中心导体: 初值最大 20mΩ<br>外部导体: 初值最大 10mΩ<br>Inner contact:<br>20mΩ Max. Initial<br>Ground contact:<br>10mΩ Max. Initial | Inner contact    | 8.3 | 9.1 | 10.2 | 8.8 | 8.2 | 10.2 | 8.2  | 8.9  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 3.5 | 3.6 | 4.1  | 4.1 | 3.5 | 4.1  | 3.5  | 3.8  |            |

|                                           |                                                                                                               |                |           |           |           |           |           |      |     |     |            |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------|----------------|-----------|-----------|-----------|-----------|-----------|------|-----|-----|------------|
| 3.绝缘电阻<br>Insulation resistance           | 最小 500 MΩ<br>500MΩ Min. Initial                                                                               | Result         | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | /    | /   | /   | 合格<br>Pass |
| 4.耐湿性<br>Humidity                         | 无损坏<br>No damage                                                                                              | Result         | No damage | No damage | No damage | No damage | No damage | /    | /   | /   | 合格<br>Pass |
| 5.低电平接触电阻<br>Low level contact resistance | 中心导体: 终值最大 25mΩ<br>外部导体: 终值最大 15mΩ<br>Inner contact:<br>25mΩ Max. Final<br>Ground contact:<br>15mΩ Max. Final | Inner contact  | 8.8       | 10.3      | 8.8       | 9.5       | 8.3       | 10.3 | 8.3 | 9.1 | 合格<br>Pass |
|                                           |                                                                                                               | Ground contact | 3.7       | 4.3       | 3.0       | 2.4       | 3.6       | 4.3  | 2.4 | 3.4 |            |
| 6.绝缘电阻<br>Insulation resistance           | 最小 100 MΩ<br>100MΩ Min. Final                                                                                 | Result         | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | /    | /   | /   | 合格<br>Pass |
| 7.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                    | Result         | OK        | OK        | OK        | OK        | OK        | /    | /   | /   | 合格<br>Pass |

## GROUP I:

| 测试项目<br>Test Description                  | 要求<br>Requirement                                                                                                 | 测试结果 Test result |              |              |              |              |              |      |      |      | 评定<br>Rate |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------|--------------|--------------|--------------|--------------|--------------|------|------|------|------------|
|                                           |                                                                                                                   | Sample           | 1            | 2            | 3            | 4            | 5            | Max. | Min. | Avg. |            |
| 1.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                        | Result           | OK           | OK           | OK           | OK           | OK           | /    | /    | /    | 合格<br>Pass |
| 2.低电平接触电阻<br>Low level contact resistance | 中心导体: 初值最大 20mΩ<br>外部导体: 初值最大 10mΩ<br>Inner contact:<br>20mΩ Max. Initial<br>Ground contact:<br>10mΩ Max. Initial | Inner contact    | 7.4          | 8.8          | 8.4          | 8.9          | 9.2          | 9.2  | 7.4  | 8.5  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 4.1          | 3.7          | 3.4          | 2.5          | 3.8          | 4.1  | 2.5  | 3.5  |            |
| 3.盐水喷雾<br>Salt spray                      | 镀金区域无明显腐蚀<br>No evident corrosion in Au plating area                                                              | Result           | No corrosion | No corrosion | No corrosion | No corrosion | No corrosion | /    | /    | /    | 合格<br>Pass |
| 4.低电平接触电阻<br>Low level contact resistance | 中心导体: 终值最大 25mΩ<br>外部导体: 终值最大 15mΩ<br>Inner contact:<br>25mΩ Max. Final<br>Ground contact:<br>15mΩ Max. Final     | Inner contact    | 10.7         | 11.3         | 7.6          | 9.9          | 9.5          | 11.3 | 7.6  | 9.8  | 合格<br>Pass |
|                                           |                                                                                                                   | Ground contact   | 3.7          | 4.6          | 2.7          | 3.4          | 3.6          | 4.6  | 2.7  | 3.6  |            |
| 5.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                        | Result           | OK           | OK           | OK           | OK           | OK           | /    | /    | /    | 合格<br>Pass |

## GROUP J:

| 测试项目<br>Test Description | 要求<br>Requirement | 测试结果 Test result |   |   |   |   |   |      |      |      | 评定<br>Rate |
|--------------------------|-------------------|------------------|---|---|---|---|---|------|------|------|------------|
|                          |                   | Sample           | 1 | 2 | 3 | 4 | 5 | Max. | Min. | Avg. |            |

|                                           |                                                                                                                 |                |           |           |           |           |           |      |     |     |            |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------|----------------|-----------|-----------|-----------|-----------|-----------|------|-----|-----|------------|
| 1.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                      | Result         | OK        | OK        | OK        | OK        | OK        | /    | /   | /   | 合格<br>Pass |
| 2.低电平接触电阻<br>Low level contact resistance | 中心导体：初值最大 20mΩ<br>外部导体：初值最大 10mΩ<br>Inner contact:<br>20mΩ Max. Initial<br>Ground contact:<br>10mΩ Max. Initial | Inner contact  | 8.7       | 8.0       | 8.3       | 8.5       | 7.7       | 8.7  | 7.7 | 8.2 | 合格<br>Pass |
|                                           |                                                                                                                 | Ground contact | 3.8       | 3.3       | 3.5       | 2.7       | 3.6       | 3.8  | 2.7 | 3.4 |            |
| 3.绝缘电阻<br>Insulation resistance           | 最小 500 MΩ<br>500MΩ Min. Initial                                                                                 | Result         | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | /    | /   | /   | 合格<br>Pass |
| 4.温度寿命<br>Temperature life                | 无损坏<br>No damage                                                                                                | Result         | No damage | No damage | No damage | No damage | No damage | /    | /   | /   | 合格<br>Pass |
| 5.低电平接触电阻<br>Low level contact resistance | 中心导体：终值最大 25mΩ<br>外部导体：终值最大 15mΩ<br>Inner contact:<br>25mΩ Max. Final<br>Ground contact:<br>15mΩ Max. Final     | Inner contact  | 8.7       | 8.7       | 11.6      | 10.1      | 9.9       | 11.6 | 8.7 | 9.8 | 合格<br>Pass |
|                                           |                                                                                                                 | Ground contact | 4.3       | 3.1       | 4.7       | 3.5       | 3.4       | 4.7  | 3.1 | 3.8 |            |
| 6.绝缘电阻<br>Insulation resistance           | 最小 100 MΩ<br>100MΩ Min. Final                                                                                   | Result         | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | > 50 GΩ   | /    | /   | /   | 合格<br>Pass |
| 7.外观检查<br>Examination of visual           | 符合产品要求<br>Meet the requirements of product                                                                      | Result         | OK        | OK        | OK        | OK        | OK        | /    | /   | /   | 合格<br>Pass |

GROUP K:

| 测试项目<br>Test Description        | 要求<br>Requirement                          | 测试结果 Test result |       |       |       |       |       |       |       |       | 评定<br>Rate |
|---------------------------------|--------------------------------------------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
|                                 |                                            | Sample           | 1     | 2     | 3     | 4     | 5     | Max.  | Min.  | Avg.  |            |
| 1.外观检查<br>Examination of visual | 符合产品要求<br>Meet the requirements of product | Result           | OK    | OK    | OK    | OK    | OK    | /     | /     | /     | 合格<br>Pass |
| 2.引张强度<br>Crimp strength        | 最小 25N (单位: 牛顿)<br>25N Min. (Unit: N)      | Result           | 30.81 | 27.60 | 29.10 | 28.72 | 28.30 | 30.81 | 27.60 | 28.91 | 合格<br>Pass |

GROUP L:

| 测试项目<br>Test Description        | 要求<br>Requirement                                   | 测试结果 Test result |       |       |       |       |       |       |       |       | 评定<br>Rate |
|---------------------------------|-----------------------------------------------------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
|                                 |                                                     | Sample           | 1     | 2     | 3     | 4     | 5     | Max.  | Min.  | Avg.  |            |
| 1.外观检查<br>Examination of visual | 符合产品要求<br>Meet the requirements of product          | Result           | OK    | OK    | OK    | OK    | OK    | /     | /     | /     | 合格<br>Pass |
| 2.驻波比<br>V.S.W.R                | 线端：<br>(0.1 ~3) GHz: 最大 1.3;<br>(3 ~6) GHz: 最大 1.5。 | (0.1~3) GHz      | 1.089 | 1.049 | 1.072 | 1.056 | 1.062 | 1.089 | 1.049 | 1.066 | 合格<br>Pass |

|                                    |                                                                    |                |       |       |       |       |       |              |              |              |            |
|------------------------------------|--------------------------------------------------------------------|----------------|-------|-------|-------|-------|-------|--------------|--------------|--------------|------------|
|                                    | Plug + Cable :<br>1.3Max. at (0.1 ~3)GHz;<br>1.5Max. at (3 ~6)GHz. | (3~6)<br>GHz   | 1.294 | 1.209 | 1.219 | 1.210 | 1.176 | <b>1.294</b> | <b>1.176</b> | <b>1.222</b> | 合格<br>Pass |
|                                    | 板端:<br>(0.1 ~3) GHz: 最大 1.3;<br>(3 ~6) GHz: 最大 1.4。                | (0.1~3)<br>GHz | 1.206 | 1.210 | 1.216 | 1.234 | 1.221 | <b>1.234</b> | <b>1.206</b> | <b>1.217</b> |            |
|                                    | Receptacle :<br>1.3Max. at (0.1 ~3)GHz;<br>1.4Max. at (3 ~6)GHz.   | (3~6)<br>GHz   | 1.314 | 1.307 | 1.298 | 1.305 | 1.294 | <b>1.314</b> | <b>1.294</b> | <b>1.304</b> |            |
| 3.外观检查<br>Examination of<br>visual | 符合产品要求<br>Meet the requirements of<br>product                      | Result         | OK    | OK    | OK    | OK    | OK    | /            | /            | /            | 合格<br>Pass |

## GROUP M:

| 测试项目<br>Test Description         | 要求<br>Requirement                                       | 测试结果 Test result |      |      |      |      |      | 评定<br>Rate |
|----------------------------------|---------------------------------------------------------|------------------|------|------|------|------|------|------------|
|                                  |                                                         | Sample           | 1    | 2    | 3    | 4    | 5    |            |
| 1.产品检查<br>Examination of product | 符合产品要求<br>Meet the requirements of product              | Result           | OK   | OK   | OK   | OK   | OK   | 合格<br>Pass |
| 2. * 可焊性<br>* Solder ability     | 焊锡部位表面粘锡面积至少占总面积的 95%。<br>Wet solder coverage: 95% Min. | Result           | >95% | >95% | >95% | >95% | >95% | 合格<br>Pass |
| 3.产品检查<br>Examination of product | 符合产品要求<br>Meet the requirements of product              | Result           | OK   | OK   | OK   | OK   | OK   | 合格<br>Pass |

## GROUP N:

| 测试项目<br>Test Description                       | 要求<br>Requirement                          | 测试结果 Test result |           |           |           |           |           | 评定<br>Rate |
|------------------------------------------------|--------------------------------------------|------------------|-----------|-----------|-----------|-----------|-----------|------------|
|                                                |                                            | Sample           | 1         | 2         | 3         | 4         | 5         |            |
| 1.产品检查<br>Examination of product               | 符合产品要求<br>Meet the requirements of product | Result           | OK        | OK        | OK        | OK        | OK        | 合格<br>Pass |
| 2. *耐焊接热<br>* Resistance to reflow solder heat | 无损坏<br>No damage.                          | Result           | No damage | No damage | No damage | No damage | No damage | 合格<br>Pass |
| 3.产品检查<br>Examination of product               | 符合产品要求<br>Meet the requirements of product | Result           | OK        | OK        | OK        | OK        | OK        | 合格<br>Pass |

## 8. 其它说明 OTHER EXPLANATION

Max.、Min.和 Avg.分别表示最大值、最小值和平均值。

Max., Min. and Avg. indicate the maximum, minimum and average.

--- 报告内容结束 ---

--- The end ---

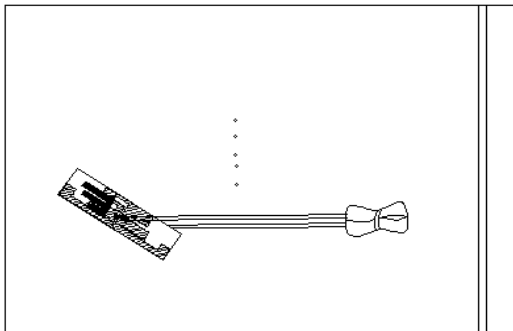
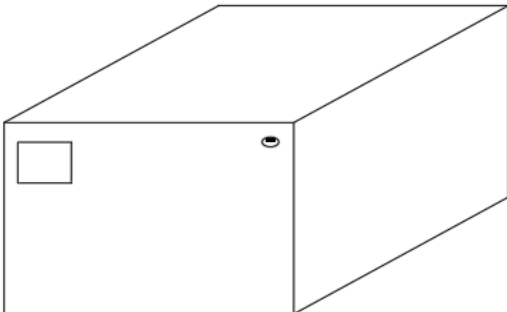
## 产品包装规范

## Product packaging specification

日期/Date: 2023.10.31

page:

1 of 1

|                                                                                                                                                                                                                                                |                  |                                                                                                                                                                                                                                                                                                                     |            |                |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------|--------------|
| 成品名称<br>Name of finished product                                                                                                                                                                                                               | WIFI-2           | 客户<br>customer                                                                                                                                                                                                                                                                                                      |            |                |              |
| 成品料号<br>Finished product number                                                                                                                                                                                                                | SLEingB243420570 | 版本<br>REV.                                                                                                                                                                                                                                                                                                          | X1         |                |              |
| <div><div><p>单PCS天线</p></div><div><p>(4) 外箱均需贴产品标签，以标示产品名称、规格、数量、日期。</p><p>(5) 每批次产品均需附上“出厂检验报告”。</p><p>(6) 储存条件：温度：-5℃-+30℃，湿度：20%-70%，年限一年。</p></div></div> |                  | <p>(2) 25PCS一扎，2扎（50PCS）装一PE袋，PE袋上需标贴产品标签，以标示产品名称、规格、数量、日期并热封处理。</p> <div></div> <p>:</p> <p>(3) 装箱：每箱装20-60包（共1000-3000PCS）</p> <div></div> |            |                |              |
| 承办<br>DESIGNED                                                                                                                                                                                                                                 | 胡赵海（Jreey）       | 审核<br>CHECKED                                                                                                                                                                                                                                                                                                       | 胡赵海（Jreey） | 核准<br>APPROVED | 朱正锐（Jongrei） |