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烽火通信天线类

# 物料规格书

SPECIFICATION FOR APPROVAL

Antenna P/N: RFB1650CBB01D

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Antenna Printing: RF01D3A 224

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Antenna Description: 5G 5dBi 白色天线 110mm

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Model NO: SR1041HF

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Revision: R\_A

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Date: 2022-03-19

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|----------------|---------------|----------------|------------------|
| 制订<br>Prepared | 审核<br>Checked | 核准<br>Approved | 烽火验收<br>Accepted |
| 黄磊             | 杨堡钧           | 姚定军            |                  |

# Contents

| Version | Date       | Description | Author |
|---------|------------|-------------|--------|
| RA      | 2022-03-19 | New Release | 黄磊     |
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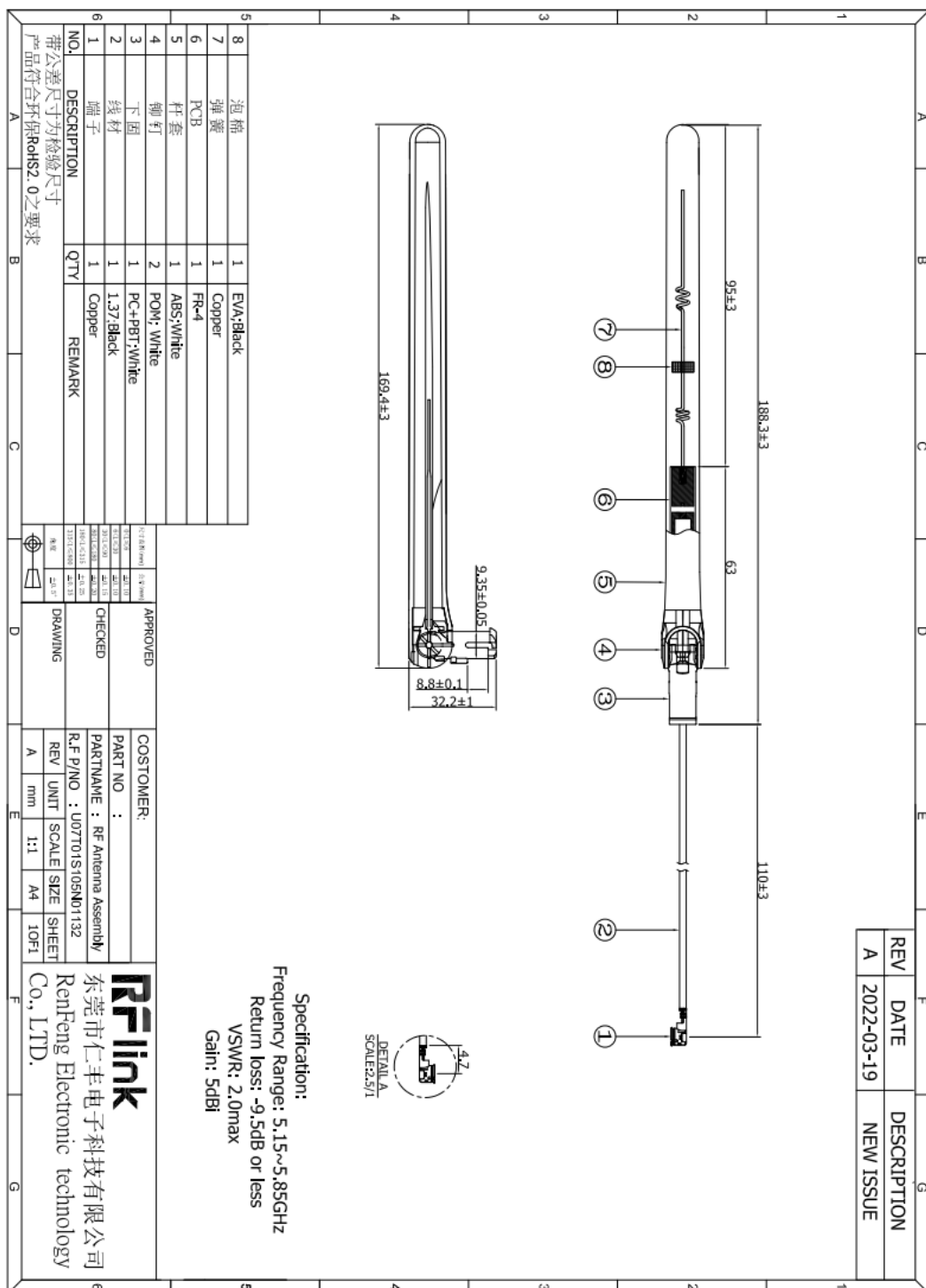
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## 一、Electrical Performance

WIFI(可选, 不涉及可删除)

| 主要技术指标           |            | Main technical specifications |                  |
|------------------|------------|-------------------------------|------------------|
| 频率范围<br>(MHZ)    | 2400~2500  | Frequency Range<br>(MHZ)      | 2400~2500        |
| 特性阻抗( $\Omega$ ) | 50         | Impedance( $\Omega$ )         | 50               |
| 增益(dBi)          | 5 $\pm$ 1  | Peak Gain(dBi)                | 5 $\pm$ 1        |
| 输出电压<br>驻波比      | $\leq 1.5$ | VSWR                          | $\leq 1.5$       |
| 极化方式             | 垂直极化       | Polarization                  | Linear,Vertical  |
| 方向性              | 全向性        | Radiation                     | Omni-directional |

## 二、Dimensions



备注:

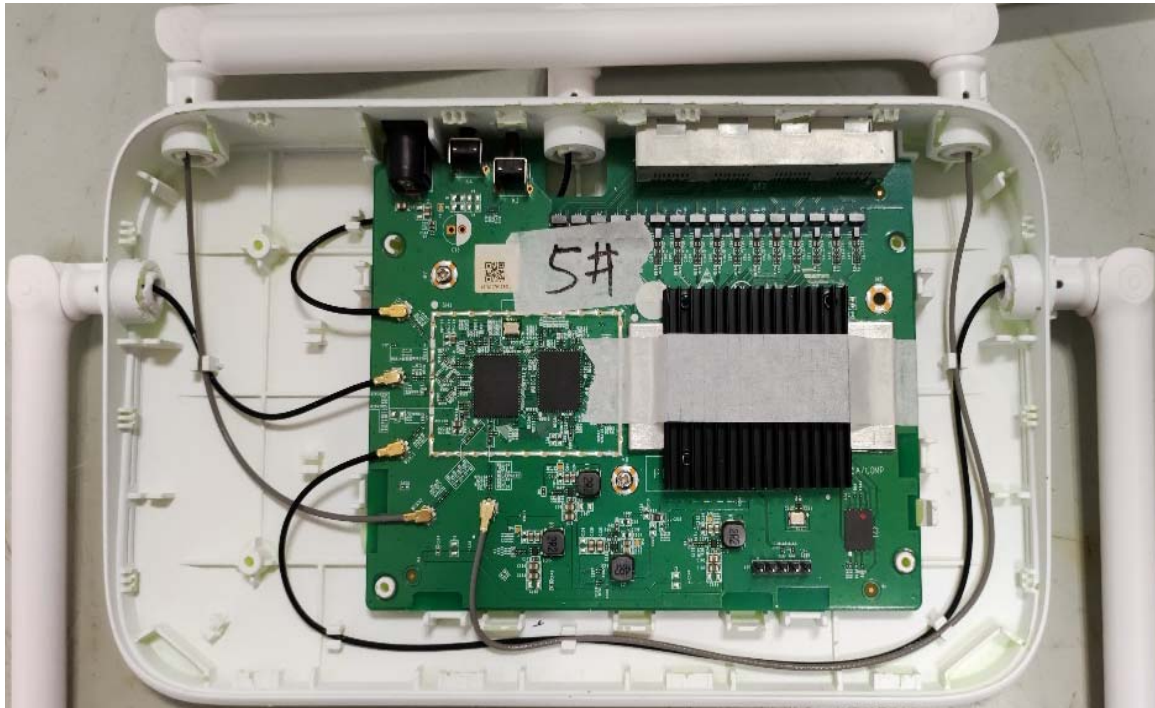
外置天线要求:

| 天线塑胶材质     |     |    |
|------------|-----|----|
| 杆套         | 铆钉  | 转轴 |
| ABS/PC ABS | POM | PC |

- 1, 天线图纸需经过烽火 UED 审核;
- 2, 天线塑壳需经过烽火 UED 封样后方可量产;
- 3, 使用原材料需提供明确厂家牌号, 更换牌号需重新报备并测试通过后方可使用。
- 4, 特殊原因需变更部件材质时, 需报备并测试通过后方可使用。

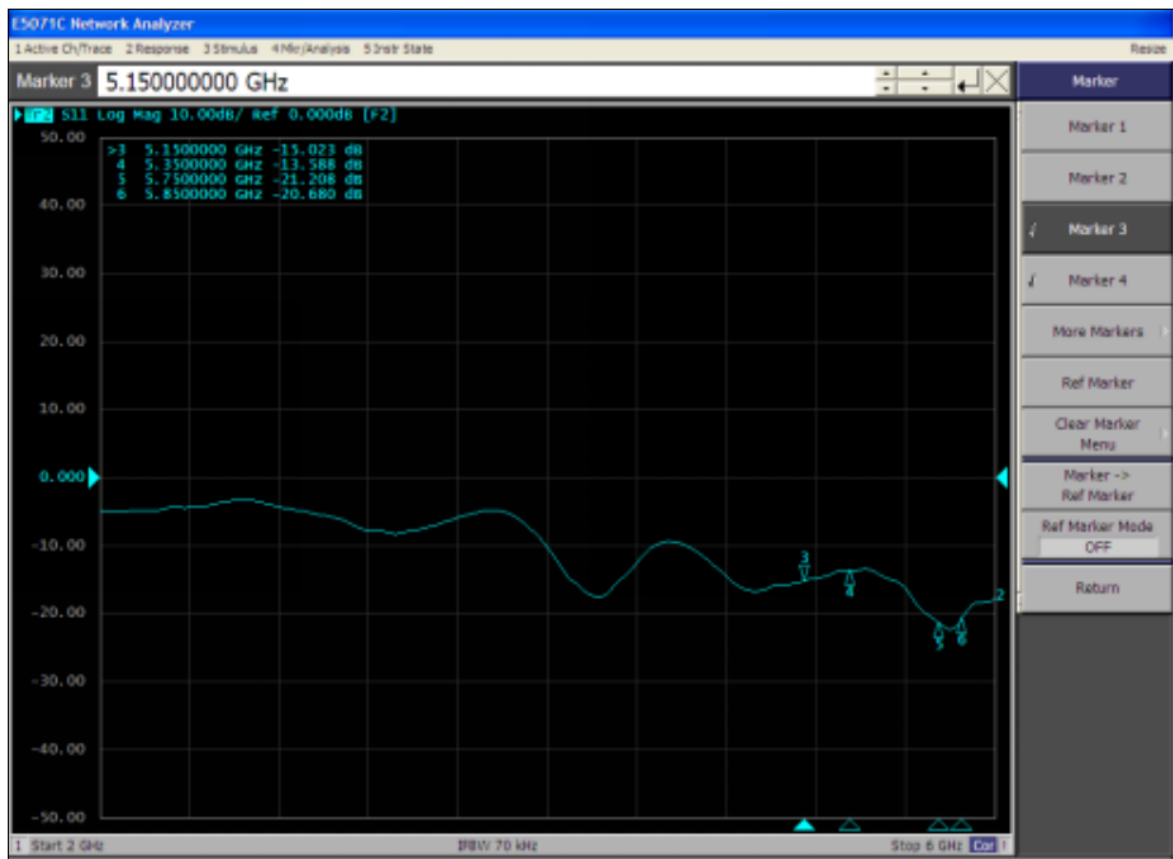
三、 Details of the antenna and the whole machine (including the antenna body, the relative position of the antenna and the whole machine

setting, etc.)

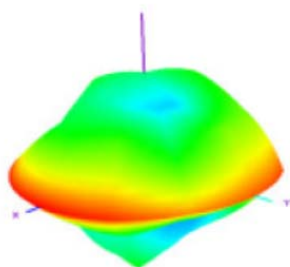


## 四、Test Report

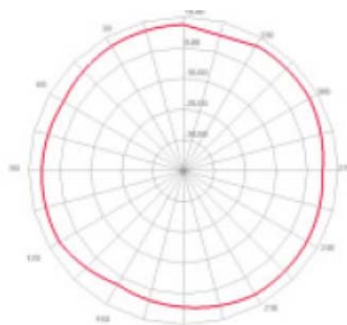
### 3.1: S11, S21 parameters



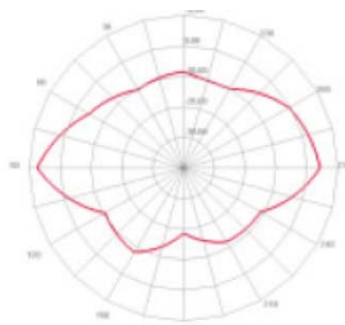
### 3.2: 3D、2D Raditation Pattern



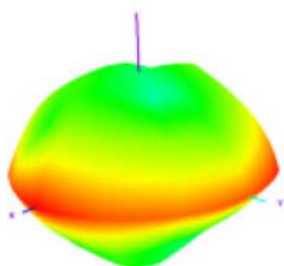
5.15GHz



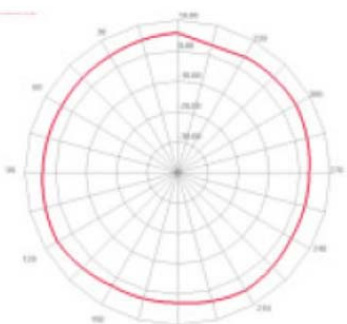
Gain(pPeak):5.16dBi



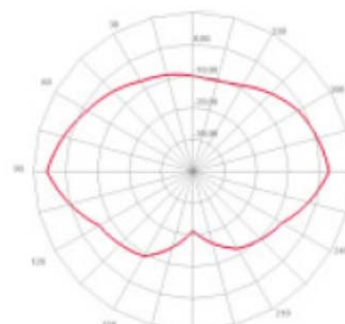
Efficiency:77.6



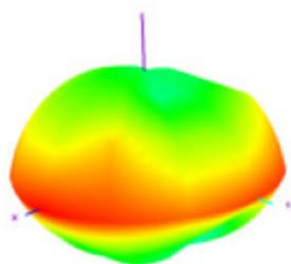
5.55GHz



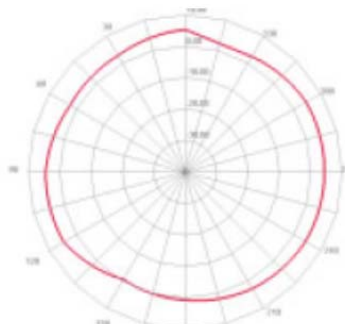
Gain(pPeak):5.25dBi



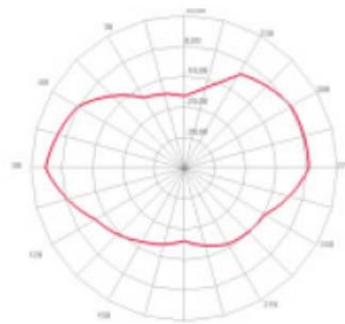
Efficiency:78.5



5.85GHz



Gain(pPeak):5.09dBi



Efficiency:76.8

## 五、 List of Raw Materials /ROHS

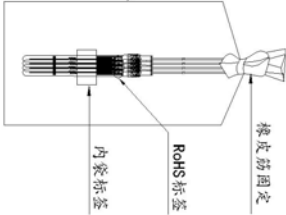
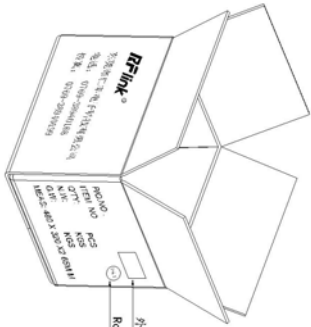
| serial number | key raw materials | raw material                                     |
|---------------|-------------------|--------------------------------------------------|
| 1             | 1.37 wire         | Silver Plated<br>Copper/FEP/Tin<br>Plated Copper |
| 2             | lower mount       | PC+PBT                                           |
| 3             | rod cover         | ABS                                              |
| 4             | rivet             | POM                                              |
| 5             | PCB               | FR-4                                             |
| 6             | terminal          | Phosphor bronze+PBT                              |
| 7             | foam              | Eva                                              |
| 8             | spring            | brass                                            |

## 六、Reliability Test

The conclusion of the external antenna structure reliability test item (the report is attached separately):

| Test items                                                      | Test Results | Remark |
|-----------------------------------------------------------------|--------------|--------|
| Material flame retardant inspection                             | PASS         |        |
| Plastic structure matching inspection                           | PASS         |        |
| Antenna Pulling Force Test                                      | PASS         |        |
| External Antenna Operation Check                                | PASS         |        |
| Alternating Damp Heat Test                                      | PASS         |        |
| temperature cycle test                                          | PASS         |        |
| Antenna Strength Test                                           | PASS         |        |
| Salt spray resistance test                                      | PASS         |        |
| External antenna torque interfit test (shell and antenna shaft) | PASS         |        |

## 七、Package

| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |         |          |                             | B  |       |    |      | C |  |  |  | D |  |  |  | E                                                                                                                                |            |             |           | F       |       | G                                                                                                |           |         |       |                      |         |       |                             |         |       |                           |        |       |         |   |    |       |    |      |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------|-----------------------------|----|-------|----|------|---|--|--|--|---|--|--|--|----------------------------------------------------------------------------------------------------------------------------------|------------|-------------|-----------|---------|-------|--------------------------------------------------------------------------------------------------|-----------|---------|-------|----------------------|---------|-------|-----------------------------|---------|-------|---------------------------|--------|-------|---------|---|----|-------|----|------|--|--|--|--|
| 产品包装                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |          |                             |    |       |    |      |   |  |  |  |   |  |  |  | REV                                                                                                                              | DATE       | DESCRIPTION |           |         |       |                                                                                                  |           |         |       |                      |         |       |                             |         |       |                           |        |       |         |   |    |       |    |      |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |          |                             |    |       |    |      |   |  |  |  |   |  |  |  | A                                                                                                                                | 2022-03-19 | NEW ISSUE   |           |         |       |                                                                                                  |           |         |       |                      |         |       |                             |         |       |                           |        |       |         |   |    |       |    |      |  |  |  |  |
| <p>单个产品</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |          |                             |    |       |    |      |   |  |  |  |   |  |  |  | <p>内袋包装说明:</p> <ol style="list-style-type: none"> <li>1. 每袋装入50pcs 产品.</li> <li>2. 用珍珠棉袋/橡皮筋固定线材</li> <li>3. 每袋需贴相应标签</li> </ol> |            |             |           |         |       | <p>内袋包装</p>  |           |         |       |                      |         |       |                             |         |       |                           |        |       |         |   |    |       |    |      |  |  |  |  |
| <p>外箱包装说明:</p> <ol style="list-style-type: none"> <li>1. 外箱需贴1pc外箱标签及条码标签于图示位置.</li> <li>2. 纸箱尺寸: 长480mm*宽320mm*高265mm.</li> <li>3. 每箱装18袋: 共900PCS/箱</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |          |                             |    |       |    |      |   |  |  |  |   |  |  |  | <p>外箱包装</p>                                   |            |             |           |         |       |                                                                                                  |           |         |       |                      |         |       |                             |         |       |                           |        |       |         |   |    |       |    |      |  |  |  |  |
| <p>产品符合环保RoHS2.0之要求</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |          |                             |    |       |    |      |   |  |  |  |   |  |  |  |                                                                                                                                  |            |             |           |         |       |                                                                                                  |           |         |       |                      |         |       |                             |         |       |                           |        |       |         |   |    |       |    |      |  |  |  |  |
| <table border="1"> <thead> <tr> <th>尺寸范围 (mm)</th> <th>公差 (mm)</th> <th>APPROVED</th> <th>CUSTOMER:</th> </tr> </thead> <tbody> <tr> <td>65.1~50</td> <td>±0.03</td> <td rowspan="4">CHECKED</td> <td>PART NO :</td> </tr> <tr> <td>25.1~20</td> <td>±0.03</td> <td>PARTNAME : 外置天线出线式包装</td> </tr> <tr> <td>20.1~15</td> <td>±0.03</td> <td>R.F P/NO : U07T01S105N01129</td> </tr> <tr> <td>15.1~10</td> <td>±0.03</td> <td>REV UNIT SCALE SIZE SHEET</td> </tr> <tr> <td>10.1~5</td> <td>±0.03</td> <td>DRAWING</td> <td>A</td> <td>mm</td> <td>1 : 1</td> <td>A4</td> <td>10F1</td> </tr> </tbody> </table> |         |          |                             |    |       |    |      |   |  |  |  |   |  |  |  | 尺寸范围 (mm)                                                                                                                        | 公差 (mm)    | APPROVED    | CUSTOMER: | 65.1~50 | ±0.03 | CHECKED                                                                                          | PART NO : | 25.1~20 | ±0.03 | PARTNAME : 外置天线出线式包装 | 20.1~15 | ±0.03 | R.F P/NO : U07T01S105N01129 | 15.1~10 | ±0.03 | REV UNIT SCALE SIZE SHEET | 10.1~5 | ±0.03 | DRAWING | A | mm | 1 : 1 | A4 | 10F1 |  |  |  |  |
| 尺寸范围 (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 公差 (mm) | APPROVED | CUSTOMER:                   |    |       |    |      |   |  |  |  |   |  |  |  |                                                                                                                                  |            |             |           |         |       |                                                                                                  |           |         |       |                      |         |       |                             |         |       |                           |        |       |         |   |    |       |    |      |  |  |  |  |
| 65.1~50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ±0.03   | CHECKED  | PART NO :                   |    |       |    |      |   |  |  |  |   |  |  |  |                                                                                                                                  |            |             |           |         |       |                                                                                                  |           |         |       |                      |         |       |                             |         |       |                           |        |       |         |   |    |       |    |      |  |  |  |  |
| 25.1~20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ±0.03   |          | PARTNAME : 外置天线出线式包装        |    |       |    |      |   |  |  |  |   |  |  |  |                                                                                                                                  |            |             |           |         |       |                                                                                                  |           |         |       |                      |         |       |                             |         |       |                           |        |       |         |   |    |       |    |      |  |  |  |  |
| 20.1~15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ±0.03   |          | R.F P/NO : U07T01S105N01129 |    |       |    |      |   |  |  |  |   |  |  |  |                                                                                                                                  |            |             |           |         |       |                                                                                                  |           |         |       |                      |         |       |                             |         |       |                           |        |       |         |   |    |       |    |      |  |  |  |  |
| 15.1~10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ±0.03   |          | REV UNIT SCALE SIZE SHEET   |    |       |    |      |   |  |  |  |   |  |  |  |                                                                                                                                  |            |             |           |         |       |                                                                                                  |           |         |       |                      |         |       |                             |         |       |                           |        |       |         |   |    |       |    |      |  |  |  |  |
| 10.1~5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ±0.03   | DRAWING  | A                           | mm | 1 : 1 | A4 | 10F1 |   |  |  |  |   |  |  |  |                                                                                                                                  |            |             |           |         |       |                                                                                                  |           |         |       |                      |         |       |                             |         |       |                           |        |       |         |   |    |       |    |      |  |  |  |  |
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