



TA-1689 Mini-大显科技-天线规格书

样品承认书 Sample acceptance letter

| | | | | | | |
|--|--|--|-------------------------------|------|--|----------------|
| 供应商名称 (全称) 9/5000 Supplier Name (full name) | 深圳市麒麟通达科技有限公司 Shenzhen Qixin Tongda Technology Co., LTD | | 供应商代码 5/5000 Supplier code | 2038 | 物料名称 name of the material | 天线 The antenna |
| 沃特沃德信息料号 (P/N) Waterward Information Material Number (P/N) | 3. S-5A02-000795-000 5A02000795000 | 供应商料号 (P/N) Supplier part Number (P/N) | RXD-5520-GF025 | | 物料类型 Material type | 结构料 |
| 供应商地址 Supplier address | 深圳市福田区车公庙泰然工业园211栋503 503, Building 211, Tairan Industrial Park, Chegongmiao, Futian District, Shenzhen | | | | | |
| 项目 project | GF025 | 承认书版本号 Recognize book version numbers | V1.0 | | 物料颜色 The material color | 黑色 black |
| 送样数量 Deliver quantity | 8PCS | 送样日期 Deliver date | 2024/3/29 | | 是否有环保要求物料 Whether environmental requirements for materials | 环保要求物料 |
| 物料描述 Material description | 天线组件, GF025A 素材黑色, PC, 素材纹面, ROHS+Reach+无卤, 注塑, 火花纹#24, 单Sim卡, 有TF卡, 带摄像头, 贴主天线 (丝印: GF025A-M)+ BT天线 (丝印: GF025A-B)+ 分级天线 (丝印: GF025A-D), 底壳客供 | | | | | |

送样原因:

新物料 新供应商 替代料 2nd Source 工程变更 (PCN/ECN) 其他 _____

Sample submission reason:

new material/supplier/alternative material from 2nd Source mind engineering change (ECN/PCN) and other _____

附送报告列表: Attached is a list of reports:

- 产品规格书 (Spec) * Product Specification *
- 原理图 (电子料) Schematic diagram (electronic materials)
- 标准2D图纸 * Standard 2D drawings *
- 安规认证报告 Safety certification report
- 关键元器件清单 (BOM) * List of Key components (BOM) *
- 实物解剖图 Physical anatomy
- 工艺菲林图 Process film drawing

- 测试报告 (沃特沃德信息 供应商 第三方 客户) * Test Report (Waterward Information Supplier Third Party Customer) *
- 产品绿色环保数据 (环保声明书 环保报告) * Product green environmental protection data (Environmental protection statement Environmental protection report) *
- PMP或QC Chart管控流程图 * PMP or QC Chart control flow Chart *
- 全尺寸测量报告 (CPK) * Full scale Measurement Report (CPK) *
- 包装方式说明 * Description of packing method *
- 供应商产品命名规则 Supplier's product naming rules
- 品质管控计划 Quality control plan

说明: 物料承认书必须包含带“*”文件, 其他列表文件根据物料特性及要求提供, 且必须与实物信息一致, 其中电子物料测试报告必须包含可靠性测试报告及性能测试报告, 包材、辅料可提供全尺寸报告, 有环保要求的物料必须提供环保数据 (环保声明书或环保测试报告)。Note: The material acknowledgement must contain the file with “*”, other list files are provided according to the material characteristics and requirements. It must be consistent with the physical information. The electronic material test report must include reliability test report and performance test report. Packaging materials, accessories can only provide full - size report. Environmental data (environmental declaration or environmental test report) must be provided for materials with environmental requirements.

评估结果: Evaluation Results:

- 完全认可 (符合沃特沃德信息及客户要求) 21/5000
- Fully approved (in accordance with Waterward information and customer requirements)
- 条件性认可 (客户要求 初步认可, 规格认证 其他 _____) 限量数量: _____ - conditional approval (/ customer requirements/preliminary approval, the certification/specifications for other _____) limited quantity: _____
- 其他: _____ other: _____

备注: Remark:

供应商物料制作确认: (须盖章, 纸质文档加盖骑缝章) Supplier material production confirmation: (must be sealed, paper documents stamped with seal)

| 组织 Set of woven | 制作 making | 商务确认 Business confirmation | 研发审核 Research and development of audit | 品质确认 Quality confirmation | 批准 Approved |
|-----------------|-----------------------------|----------------------------|--|---------------------------|------------------|
| 签字 Sign a word | 代庆蓉 Generation of city rong | 李瑞妃 ere | 傅梁成 Li hailong | 曹光平 Cao Guangping | 龙超群 Dragon super |
| 日期 Day period | 2024/3/29 | 2024/3/29 | 2024/3/29 | 2024/3/29 | 2024/3/29 |

沃特沃德信息核准: (涉及客制化标贴类需商务签核, 手写签字附带签字日期) Waterward information approval: (business signature is required for customized labeling, handwritten signature is attached with signature date)

| 组织 Set of woven | 商务确认 Business confirmation | 项目确认 Project confirmation | 项目核准 Project approval | 品质确认 Quality confirmation | 品质核准 Quality approval |
|-----------------|----------------------------|---------------------------|-----------------------|---------------------------|-----------------------|
| 签字 Sign a word | | | | | |

| | | | | |
|---------------|--|--|--|--|
| 日期 Day period | | | | |
|---------------|--|--|--|--|

一、变更记录栏 1. Change record column

| 序号 The serial number | 版本号 The version number | 变更内容 Change the content | 修订人 Revised one | 变更日期 Change the date |
|-------------------------|---------------------------|----------------------------|--------------------|-------------------------|
| 1 | V1.0 | 初始版本 | 代庆蓉 | 2024/3/21 |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

二、样品图片 2. Sample pictures

| 正面图片 Positive image | 背面图片 On the back of the photo | 丝印/条形码图片 Screen printing/bar code picture |
|------------------------|----------------------------------|--|
| | | <p>主天线: GF025A-M 分集天线: GF025A-D 蓝牙天线: GF025A-B</p> |

第 2 页

三、物料基本情况 Iii. Basic information of materials

| | | | | | | | | | |
|---|-------------------|---|-------|--|----|---|------|-----------------------|----|
| 1 | 类别 Class don't | <input type="checkbox"/> 拉杆 材料类型及规格 - pull rod material type and specification | | <input checked="" type="checkbox"/> 金属冲压 材料类型及规格 stamping material type and specification | | <input checked="" type="checkbox"/> metal | | | |
| 2 | FPC | 材料类型及规格 Material type and specification | 单面半对半 | 金手指化金厚度 Gold finger gold thickness | 1麦 | 背胶型号 Lamination model | 9471 | 背胶供应商 Gum supplier | 3M |

备注: 上述不适用请使用 "/" 填充表示

四、BOM (关键物料清单) Iv. BOM (List of Key Materials)

| 序号 The serial number | 物料名称 The name of the material | 规格/性能参数 Specifications/performance parameters | 单位 unit | 用量 The dosage | 供应商 supplier | 备注 note |
|-------------------------|----------------------------------|--|------------|------------------|------------------------|------------|
| 1 | 主天线 main | 55.81*22.59*0.1mm | PCS | 1 | 麒麟通达 Qi Xin Tong Da | |
| 2 | 分集天线 Diversity Antenna | 43.71*18.47*0.1mm | PCS | 1 | 麒麟通达 Qi Xin Tong Da | |
| 3 | BT天线 BT antenna | 16.80*16.26*0.1mm | PCS | 1 | 麒麟通达 Qi Xin Tong Da | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |

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1. 图形参考 Graphic reference

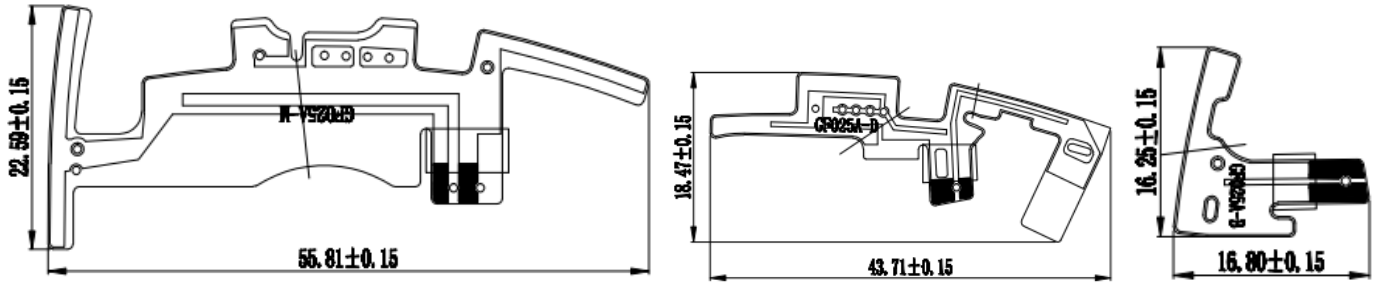


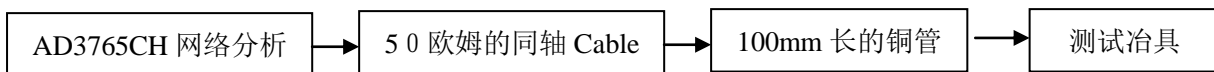
图1 GF025_主天线 ANTENNA RXD

| | |
|------------------------------------|--|
| 品名 name | ANTENNA |
| 机型 models | GF025 |
| 频段 spectrum | GSM:3/5/8 WCDMA:1/5/8 FDD:1/3/5/7/8/20/28AB TDD:38/40/41 |
| 输入阻抗 input impedance | 50Ω |
| 容许功率 Permissible power | 5W |
| 工作温度范围 Operating temperature range | -25 ~ +65 °C |
| 保存温度范围 Storage temperature range | -40 ~ +85 °C |

2. 电性能测试 Electrical performance test

2.1 测试步骤 Test steps

VSWR测试装置为 test device is:



2.2 测试场地 Test site

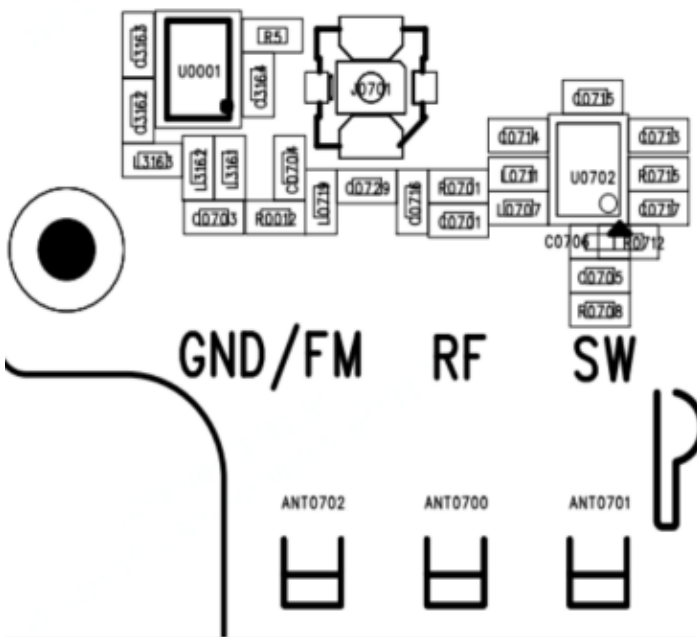
RXD 微波暗室：测试频率范围为 800MHz-6GHz, 静区范围为 25cm 圆周，反射率小于 -90dB. RXD microwave blackout: the test frequency range is 800MhZ-6ghz, and the quiet zone range is 25cm

Fire rate less than -90dB

GF025天线测试报告

| | | | | |
|-------|--------------------|--|----|-----|
| 天线工程师 | 傅工 (137 6016 7811) | | | |
| 结构工程师 | 龙工 (151 1812 5046) | | | |
| 审问 | | | | |
| 测试环境 | 温度 | 22.5°C | 湿度 | 52% |
| 机器状态 | 主板版本 | FF638-MB-V0.2 | | |
| | PA匹配 | ANT switch-matching-PA | | |
| | 天线版本 | FPC样品测试 | | |
| | 天线匹配 | ANT-matching-ANT switch | | |
| | 软件版本 | | | |
| | 调试频段 | GSM:3/5/8 WCDMA:1/5/8 FDD:1/3/5/7/8/20/28AB TDD:38/40/41 | | |
| 其他 | 模具壳料样品天线验证 | | | |

主天线匹配：



主天线匹配说明

馈电脚匹配

FM放大电路，需设计到馈电脚上面来。其他匹配按默认贴片不变。

调谐逻辑说明

RF1位号 (C0717) : **0Ω**

使用频段 (逻辑频段有更改)

GSM:8 WCDMA:8 FDD:3/8

RF2位号 (R0715) : **3.9nH (有更改)**

使用频段

GSM:5 WCDMA:5 FDD:5/20

RF3位号 (L0707) : **18nH (有更改)**

使用频段

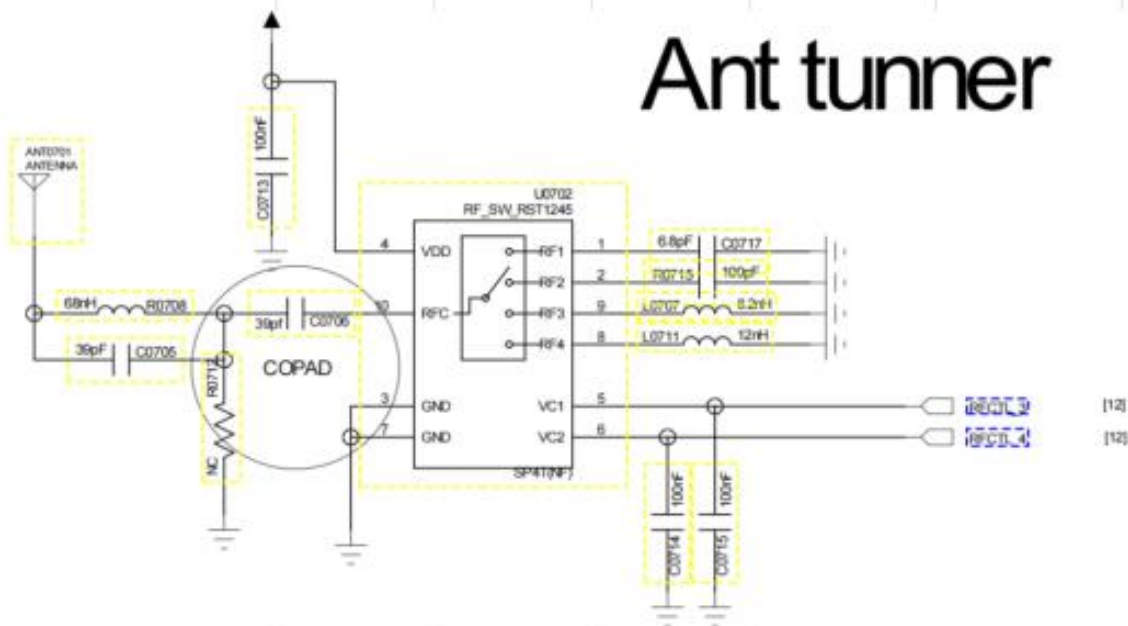
FDD:B28A/B28B

RF4位号 (L0711) : **NC (有更改)**

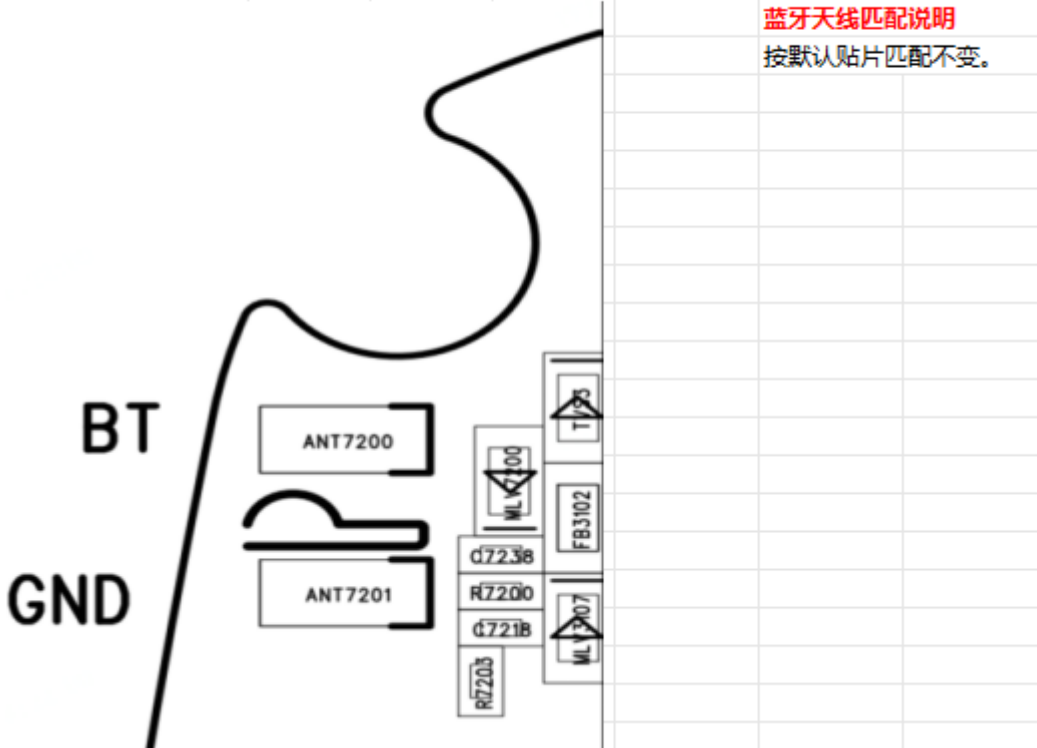
使用频段 (逻辑频段有更改)

GSM:3 WCDMA:1 FDD:1/7 TDD:38/40/41

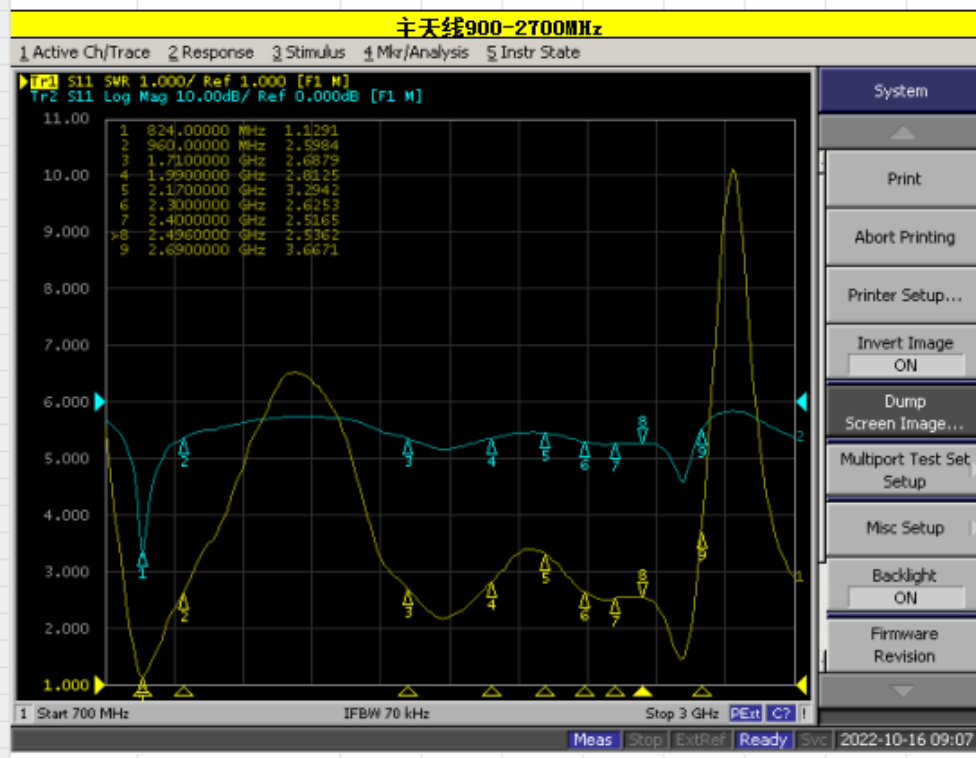
Ant tuner

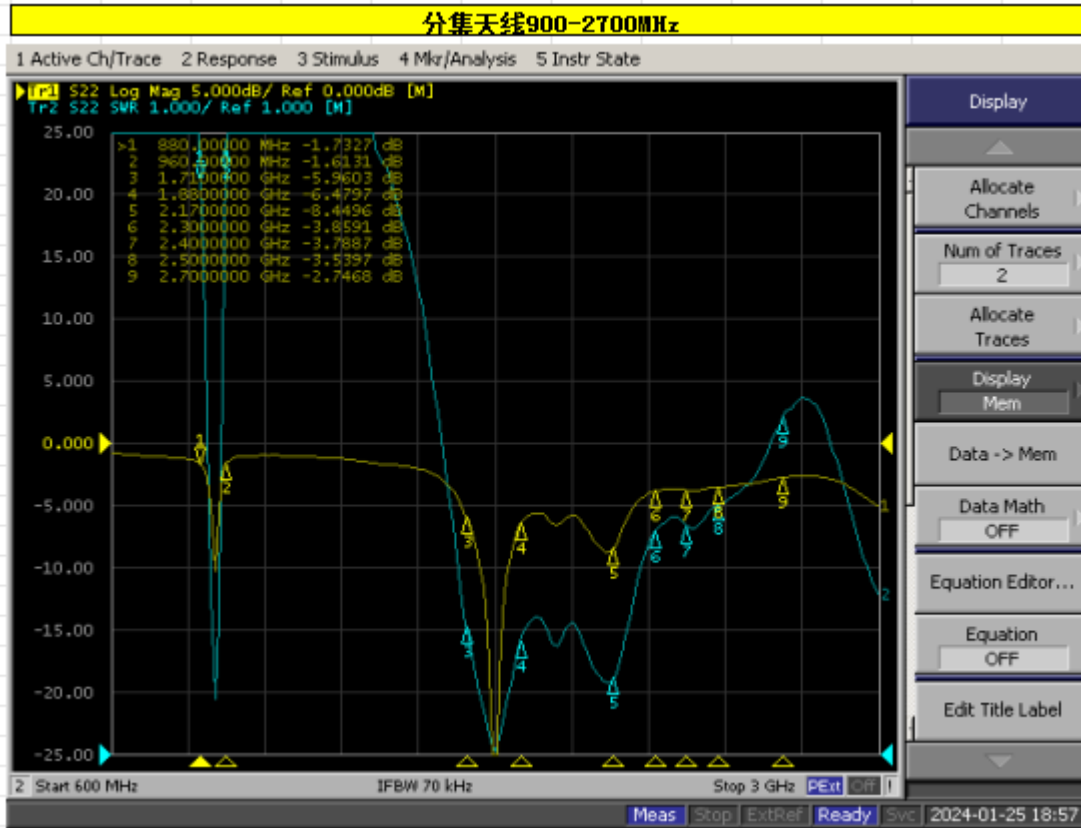
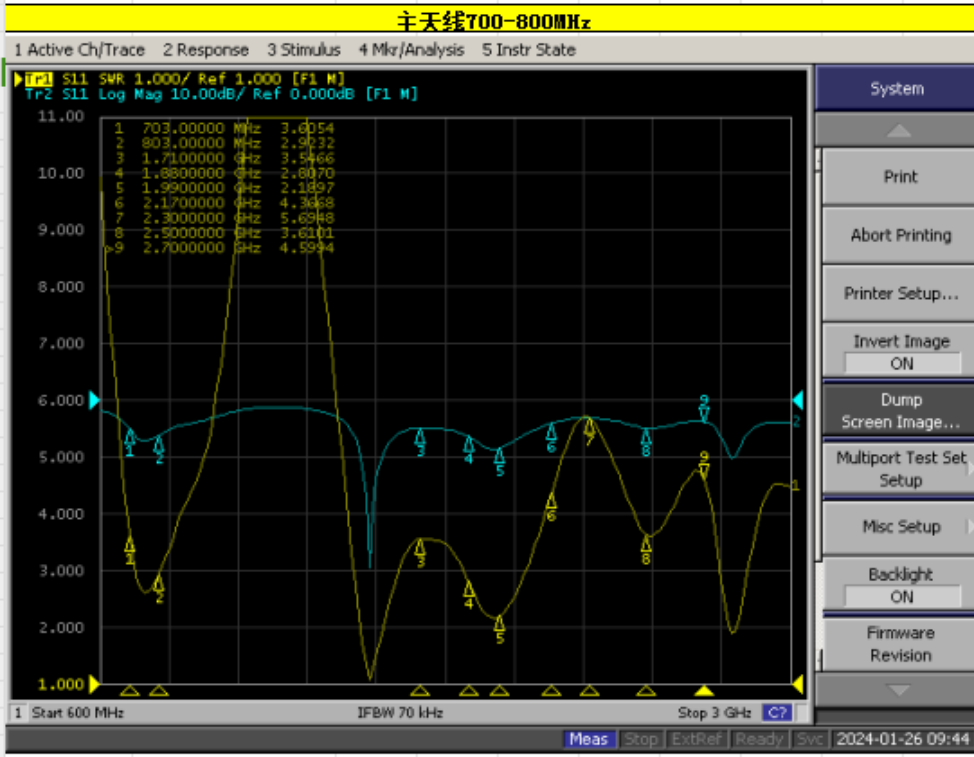


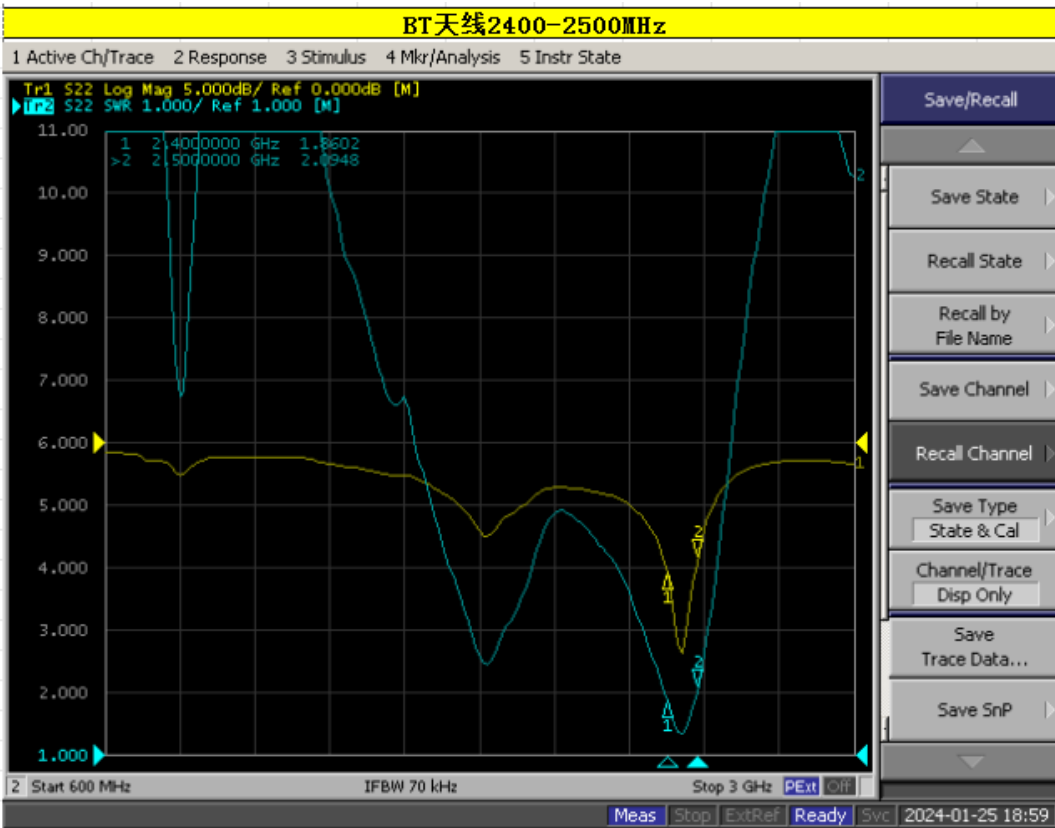
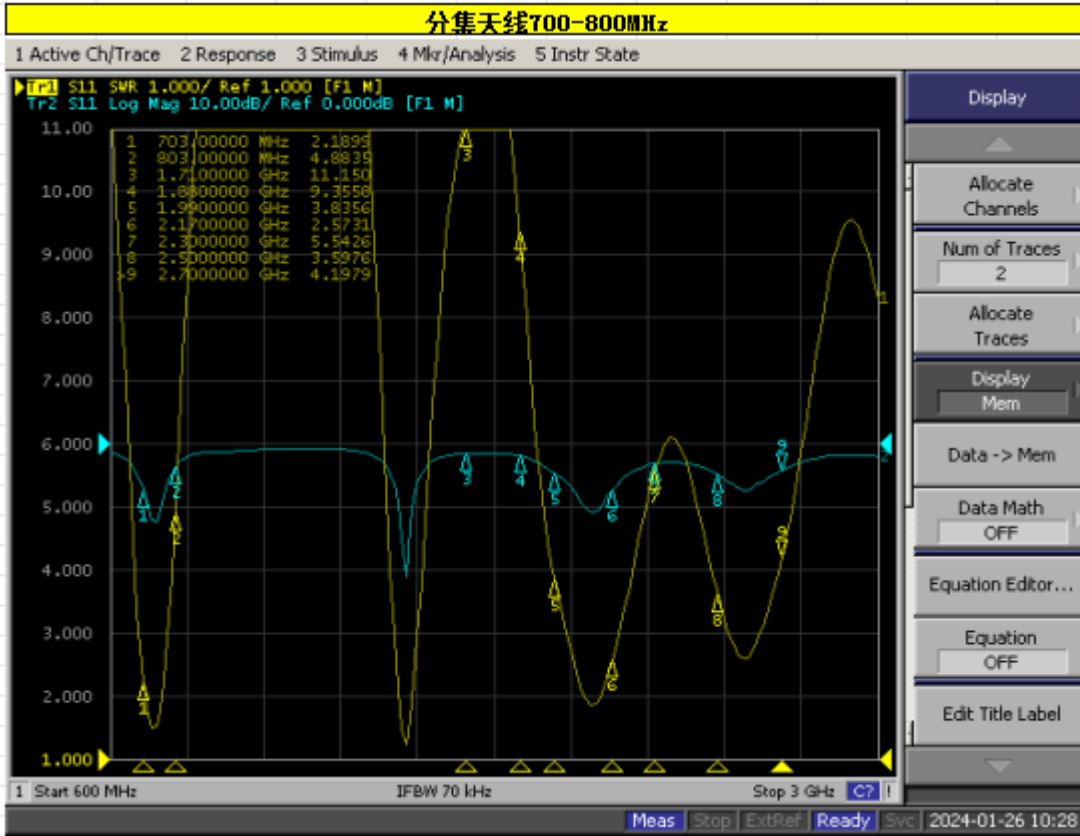
蓝牙天线匹配：



蓝牙天线匹配说明
按默认贴片匹配不变。







四、无源增益与效率测试

| BT | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|--------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2400-2500MHz | Frequency ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | Frequency (MHz) | 2400.0 | 2410.0 | 2420.0 | 2430.0 | 2440.0 | 2450.0 | 2460.0 | 2470.0 | 2480.0 | 2490.0 | 2500.0 |
| | Efficiency (%) | 36.10 | 39.40 | 35.70 | 37.20 | 37.00 | 42.20 | 41.60 | 42.90 | 40.50 | 42.30 | 40.00 |
| | Gain (dBi) | 0.32 | 0.68 | 0.29 | 0.52 | 0.49 | 1.82 | 1.63 | 1.98 | 1.03 | 1.83 | 0.95 |

| 主天线 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | | |
|--------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 700-800MHz | Frequency ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | | |
| | Frequency (MHz) | 700.0 | 710.0 | 720.0 | 730.0 | 740.0 | 750.0 | 760.0 | 770.0 | 780.0 | 790.0 | 800.0 | 810.0 | | | | | |
| | Efficiency (%) | 29.70 | 30.10 | 30.80 | 31.20 | 31.80 | 32.40 | 32.80 | 32.50 | 31.60 | 30.70 | 30.30 | 29.90 | | | | | |
| | Gain (dBi) | -3.65 | -3.40 | -3.21 | -3.02 | -2.70 | -2.52 | -2.45 | -2.50 | -2.82 | -3.32 | -3.39 | -3.53 | | | | | |
| 800-960MHz | Frequency ID | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | Frequency (MHz) | 800.0 | 810.0 | 820.0 | 830.0 | 840.0 | 850.0 | 860.0 | 870.0 | 880.0 | 890.0 | 900.0 | 910.0 | 920.0 | 930.0 | 940.0 | 950.0 | 960.0 |
| | Efficiency (%) | 36.60 | 37.10 | 38.50 | 38.60 | 37.90 | 36.30 | 35.80 | 34.50 | 33.40 | 32.80 | 32.20 | 31.60 | 31.20 | 30.90 | 30.70 | 30.10 | 29.20 |
| | Gain (dBi) | -1.36 | -1.25 | -1.14 | -1.05 | -1.21 | -1.43 | -1.52 | -1.68 | -2.13 | -2.43 | -2.65 | -2.79 | -2.91 | -3.16 | -3.28 | -3.43 | -3.86 |
| 1700-2700MHz | Frequency ID | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| | Frequency (MHz) | 1700.0 | 1720.0 | 1740.0 | 1760.0 | 1780.0 | 1800.0 | 1820.0 | 1840.0 | 1860.0 | 1880.0 | 1900.0 | 1920.0 | 1940.0 | 1960.0 | 1980.0 | 2000.0 | 2020.0 |
| | Efficiency (%) | 26.80 | 28.20 | 29.80 | 30.40 | 30.00 | 31.90 | 33.40 | 34.00 | 36.50 | 37.90 | 37.00 | 37.50 | 34.10 | 30.20 | 30.90 | 30.80 | 31.90 |
| | Gain (dBi) | -1.43 | -1.24 | -1.43 | -1.28 | -1.25 | -0.83 | -0.72 | -0.41 | -0.96 | -1.23 | -0.81 | 0.01 | -0.34 | -0.56 | -0.90 | -0.87 | -0.93 |

| | | | | | | | | | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 |
| 2040.0 | 2060.0 | 2080.0 | 2100.0 | 2120.0 | 2140.0 | 2160.0 | 2180.0 | 2200.0 | 2300.0 | 2310.0 | 2320.0 | 2330.0 | 2340.0 | 2350.0 | 2360.0 | 2370.0 | 2380.0 |
| 29.40 | 29.80 | 30.40 | 30.30 | 30.60 | 30.90 | 32.90 | 31.50 | 30.10 | 29.60 | 29.90 | 30.30 | 33.70 | 35.30 | 32.40 | 29.30 | 29.30 | 30.10 |
| -1.50 | -1.29 | -1.38 | -1.59 | -1.69 | -1.10 | -0.59 | -1.02 | -1.39 | -0.76 | -1.21 | -1.25 | -0.83 | -0.58 | -0.65 | -0.60 | -0.49 | 0.24 |

| | | | | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 |
| 2390.0 | 2400.0 | 2500.0 | 2520.0 | 2540.0 | 2560.0 | 2580.0 | 2600.0 | 2620.0 | 2640.0 | 2660.0 | 2680.0 | 2700.0 |
| 29.40 | 31.20 | 29.30 | 29.90 | 30.60 | 29.70 | 31.30 | 32.50 | 31.00 | 29.59 | 29.60 | 28.80 | 27.00 |
| 0.31 | 0.46 | 0.76 | 0.88 | 0.85 | 1.49 | 2.69 | 2.60 | 2.30 | 0.99 | 1.27 | 1.20 | 1.57 |



| 分集天线 | | | | | | | | | | | | | | | | | | | |
|--------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| 700-800MHz | Frequency ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | | | |
| | Frequency (MHz) | 700.0 | 710.0 | 720.0 | 730.0 | 740.0 | 750.0 | 760.0 | 770.0 | 780.0 | 790.0 | 800.0 | 810.0 | | | | | | |
| | Efficiency (%) | 22.10 | 22.30 | 23.00 | 22.80 | 22.50 | 21.90 | 21.60 | 21.10 | 20.70 | 20.50 | 20.30 | 19.80 | | | | | | |
| | Gain (dBi) | -4.05 | -3.85 | -3.46 | -3.51 | -3.60 | -4.03 | -4.12 | -4.28 | -4.35 | -4.42 | -4.49 | -5.62 | | | | | | |
| 800-960MHz | Frequency ID | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | |
| | Frequency (MHz) | 800.0 | 810.0 | 820.0 | 830.0 | 840.0 | 850.0 | 860.0 | 870.0 | 880.0 | 890.0 | 900.0 | 910.0 | 920.0 | 930.0 | 940.0 | 950.0 | 960.0 | |
| | Efficiency (%) | 18.30 | 19.90 | 20.10 | 21.50 | 22.00 | 22.70 | 22.90 | 24.70 | 25.90 | 26.80 | 25.90 | 24.20 | 23.70 | 22.30 | 21.80 | 20.70 | 20.10 | |
| | Gain (dBi) | -6.02 | -5.89 | -4.51 | -4.21 | -4.24 | -4.04 | -3.54 | -2.39 | -2.20 | -2.38 | -2.87 | -3.05 | -3.30 | -3.84 | -3.96 | -4.46 | -4.61 | |
| 1700-2700MHz | Frequency ID | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | |
| | Frequency (MHz) | 1700.0 | 1720.0 | 1740.0 | 1760.0 | 1780.0 | 1800.0 | 1820.0 | 1840.0 | 1860.0 | 1880.0 | 1900.0 | 1920.0 | 1940.0 | 1960.0 | 1980.0 | 2000.0 | 2020.0 | |
| | Efficiency (%) | 16.20 | 18.20 | 18.30 | 19.80 | 22.00 | 23.60 | 27.50 | 26.00 | 28.90 | 28.90 | 34.60 | 35.50 | 40.00 | 38.10 | 37.60 | 36.50 | 36.30 | |
| | Gain (dBi) | -1.15 | -0.73 | -0.43 | -0.13 | -0.60 | -2.30 | -0.53 | -0.54 | -0.28 | -0.93 | -0.18 | 0.46 | 1.16 | 1.00 | 0.42 | 0.43 | 0.29 | |

| | | | | | | | | | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 |
| 2040.0 | 2060.0 | 2080.0 | 2100.0 | 2120.0 | 2140.0 | 2160.0 | 2180.0 | 2200.0 | 2220.0 | 2240.0 | 2260.0 | 2280.0 | 2300.0 | 2320.0 | 2340.0 | 2360.0 | 2380.0 |
| 43.00 | 41.80 | 41.50 | 37.30 | 40.10 | 39.50 | 43.40 | 44.90 | 46.90 | 43.60 | 32.80 | 32.10 | 31.90 | 36.20 | 34.30 | 29.20 | 23.60 | 19.20 |
| 0.98 | 0.19 | -0.02 | -0.03 | 0.32 | 0.13 | 0.61 | 0.89 | 0.98 | 0.60 | -0.46 | -0.69 | -0.96 | -0.38 | -0.59 | -1.29 | -1.92 | -2.37 |

| | | | | | | | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 |
| 2400.0 | 2420.0 | 2440.0 | 2460.0 | 2480.0 | 2500.0 | 2520.0 | 2540.0 | 2560.0 | 2580.0 | 2600.0 | 2620.0 | 2640.0 | 2660.0 | 2680.0 | 2700.0 |
| 19.50 | 17.90 | 20.50 | 19.40 | 17.80 | 13.80 | 12.20 | 12.90 | 12.30 | 14.30 | 13.20 | 12.30 | 10.50 | 8.80 | 9.40 | 9.10 |
| -1.95 | -2.40 | -1.69 | -1.52 | -1.70 | -2.81 | -3.36 | -3.28 | -3.78 | -3.45 | -3.79 | -3.73 | -4.17 | -5.09 | -4.81 | -4.60 |



3. 测试结果 test results:

| 三、OTA测试 | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|--------|-----------------|----|-----------|--------|------|------|----------------|------|-------------|--------|------|------|-------------|--------|------|------|------------------|-------|
| Band | SPEC for NOKIA | | Conducted Power | | FS | | | | BHLH/R for VDF | | BHHL | | GAP | | BHHR | | GAP | | BHLH/R for NOKIA | |
| | FS(class B) | | 功率0.7dBm | | (覆盖率达实验室) | | | | | | (覆盖率达实验室数据) | | | | (覆盖率达实验室数据) | | | | class B | |
| | TRP | TIS | TX | RX | TRP | TIS | TRP | TIS | TRP | TIS | TRP | TIS | TRP | TIS | TRP | TIS | TRP | TIS | TRP | TIS |
| GSM850 | 25.5 | -102 | 32.6 | | 26.8 | -105.6 | 1.3 | 3.6 | | | 18.4 | -97.3 | | | 19.0 | -97.8 | | | 17.5 | -94 |
| | 25.5 | -102 | 32.6 | | 27.2 | -105.5 | 1.4 | 3.5 | | | 19.0 | -97.6 | | | 19.5 | -98.2 | | | 17.5 | -94 |
| | 25.5 | -102 | 32.6 | | 28.1 | -105.3 | 2.6 | 3.3 | | | 19.3 | -97.4 | | | 19.9 | -98.1 | | | 17.5 | -94 |
| GSM900 | 25.5 | -102 | 32.5 | | 27.4 | -105.8 | 1.9 | 3.8 | 19 | -95 | 18.9 | -97.5 | -0.1 | 2.5 | 19.5 | -98.0 | 0.5 | 3 | 17.5 | -94 |
| | 25.5 | -102 | 32.5 | | 28.8 | -105.6 | 3.3 | 3.6 | 19 | -95 | 19.2 | -97.8 | 0.2 | 2.8 | 19.7 | -98.2 | 0.7 | 3.2 | 17.5 | -94 |
| | 25.5 | -102 | 32.5 | | 29.4 | -105.5 | 3.9 | 3.5 | 19 | -95 | 19.4 | -98.2 | 0.4 | 3.2 | 20.0 | -98.6 | 1 | 3.6 | 17.5 | -94 |
| DCS1800 | 24.5 | -103 | 29.3 | | 23.8 | -104.1 | -0.7 | 1.1 | 18 | -96 | 19.7 | -98.3 | 1.7 | 2.3 | 20.3 | -99.2 | 2.3 | 3.2 | 19 | -97 |
| | 24.5 | -103 | 29.3 | | 24.2 | -103.9 | -0.3 | 0.9 | 18 | -96 | 19.6 | -98.4 | 1.6 | 2.4 | 20.4 | -99.1 | 2.4 | 3.1 | 19 | -97 |
| | 24.5 | -103 | 29.3 | | 24.1 | -103.7 | -0.4 | 0.7 | 18 | -96 | 19.9 | -98.1 | 1.9 | 2.1 | 20.5 | -98.9 | 2.5 | 2.9 | 19 | -97 |
| PCS1900 | 24.5 | -103 | | | | | | | | | | | | | | | | | 19 | -97 |
| | 24.5 | -103 | | | | | | | | | | | | | | | | | 19 | -97 |
| | 24.5 | -103 | | | | | | | | | | | | | | | | | 19 | -97 |
| WCDMA1 | 18 | -106 | 22 | | 16.8 | -106.1 | -1.2 | 0.1 | 14 | -100 | 12.7 | -101.2 | -1.3 | 1.2 | 13.3 | -101.3 | -0.7 | 1.3 | 12.5 | -100 |
| | 18 | -106 | 22 | | 16.9 | -105.9 | -1.1 | -0.1 | 14 | -100 | 12.9 | -101.0 | -1.1 | 1 | 13.4 | -101.5 | -0.6 | 1.5 | 12.5 | -100 |
| | 18 | -106 | 22 | | 16.8 | -105.8 | -1.2 | -0.2 | 14 | -100 | 13.2 | -101.4 | -0.8 | 1.4 | 13.1 | -101.6 | -0.9 | 1.6 | 12.5 | -100 |
| WCDMA2 | 18 | -105 | | | | | | | | | | | | | | | | | 12 | -99 |
| | 18 | -105 | | | | | | | | | | | | | | | | | 12 | -99 |
| | 18 | -105 | | | | | | | | | | | | | | | | | 12 | -99 |
| WCDMA4 | 18 | -105 | | | | | | | | | | | | | | | | | 12 | -99 |
| | 18 | -105 | | | | | | | | | | | | | | | | | 12 | -99 |
| | 18 | -105 | | | | | | | | | | | | | | | | | 12 | -99 |
| WCDMA5 | 16.5 | -103 | 22.5 | | 17.6 | -107.1 | 1.1 | 4.1 | | | 10.6 | -98.3 | | | 10.9 | -98.6 | | | 9.5 | -96 |
| | 16.5 | -103 | 22.5 | | 18.2 | -106.8 | 1.7 | 3.8 | | | 10.7 | -98.5 | | | 11.1 | -98.8 | | | 9.5 | -96 |
| | 16.5 | -103 | 22.5 | | 18.9 | -106.7 | 2.4 | 3.7 | | | 10.5 | -98.6 | | | 11.0 | -98.7 | | | 9.5 | -96 |
| WCDMA8 | 16.5 | -103.5 | 22.5 | | 17.9 | -107.5 | 1.4 | 4 | 11 | -96 | 10.7 | -98.3 | -0.3 | 2.3 | 11.3 | -98.5 | 0.3 | 2.5 | 9.5 | -96 |
| | 16.5 | -103.5 | 22.5 | | 18.8 | -107.3 | 2.3 | 3.8 | 11 | -96 | 10.5 | -98.2 | -0.5 | 2.2 | 11.4 | -98.6 | 0.4 | 2.6 | 9.5 | -96 |
| | 16.5 | -103.5 | 22.5 | | 19.1 | -107.2 | 2.6 | 3.7 | 11 | -96 | 10.3 | -97.6 | -0.7 | 1.6 | 11.5 | -97.8 | 0.5 | 1.8 | 9.5 | -96 |
| FDD1(10M) | 17.5 | -93 | 22.6 | | 17.4 | -94.5 | -0.1 | 1.5 | 13 | -88 | 12.3 | -91.2 | -0.7 | 3.2 | 12.5 | -90.4 | -0.5 | 2.4 | 12 | -88 |
| | 17.5 | -93 | 22.6 | | 17.2 | -94.2 | -0.3 | 1.2 | 13 | -88 | 12.5 | -90.9 | -0.5 | 2.9 | 12.3 | -90.5 | -0.7 | 2.5 | 12 | -88 |
| | 17.5 | -93 | 22.5 | | 17.2 | -94.1 | -0.3 | 1.1 | 13 | -88 | 12.7 | -91.1 | -0.3 | 3.1 | 12.2 | -90.6 | -0.8 | 2.6 | 12 | -88 |
| FDD2(10M) | 17.5 | -93 | | | | | | | | | | | | | | | | | 12 | -88 |
| | 17.5 | -93 | | | | | | | | | | | | | | | | | 12 | -88 |
| | 17.5 | -93 | | | | | | | | | | | | | | | | | 12 | -88 |
| FDD3(10M) | 18 | -93.5 | 22.3 | | 17.8 | -95.5 | -0.2 | 2 | 14 | -90 | 13.1 | -91.6 | -0.9 | 1.6 | 13.4 | -91.8 | -0.6 | 1.8 | 12.5 | -89 |
| | 18 | -93.5 | 22.3 | | 17.9 | -95.3 | -0.1 | 1.8 | 14 | -90 | 13.3 | -92.0 | -0.7 | 2 | 13.5 | -92.6 | -0.5 | 2.6 | 12.5 | -89 |
| | 18 | -93.5 | 22.2 | | 17.8 | -95.1 | -0.2 | 1.6 | 14 | -90 | 13.2 | -91.8 | -0.8 | 1.8 | 13.6 | -92.1 | -0.4 | 2.1 | 12.5 | -89 |
| FDD4(10M) | 17.5 | -93 | | | | | | | | | | | | | | | | | 12 | -88 |
| | 17.5 | -93 | | | | | | | | | | | | | | | | | 12 | -88 |
| | 17.5 | -93 | | | | | | | | | | | | | | | | | 12 | -88 |
| FDD5(10M) | 16 | -91 | 22.4 | | 18.3 | -95.6 | 2.3 | 4.6 | | | 11.0 | -87.1 | | | 11.5 | -87.7 | | | 8.5 | -85 |
| | 16 | -91 | 22.4 | | 18.8 | -95.3 | 2.8 | 4.3 | | | 11.2 | -87.2 | | | 11.7 | -87.6 | | | 8.5 | -85 |
| | 16 | -91 | 22.5 | | 19.4 | -95.2 | 3.4 | 4.2 | | | 11.4 | -86.9 | | | 12.1 | -87.4 | | | 8.5 | -85 |
| FDD7(10M) | 17.5 | -94 | 21.3 | | 16.8 | -95.2 | -0.7 | 1.2 | 13 | -89 | 12.8 | -89.4 | -0.2 | 0.4 | 13.1 | -90.5 | 0.1 | 1.5 | 12.5 | -88.5 |
| | 17.5 | -94 | 21.3 | | 16.9 | -95.0 | -0.6 | 1 | 13 | -89 | 12.9 | -89.7 | -0.1 | 0.7 | 13.5 | -90.2 | 0.5 | 1.2 | 12.5 | -88.5 |
| | 17.5 | -94 | 21.3 | | 16.7 | -94.9 | -0.8 | 0.9 | 13 | -89 | 12.6 | -89.6 | -0.4 | 0.6 | 13.7 | -90.1 | 0.7 | 1.1 | 12.5 | -88.5 |
| FDD8(10M) | 16.5 | -91 | 22.6 | | 19.1 | -96.2 | 2.6 | 5.2 | 10 | -84 | 10.3 | -85.7 | 0.3 | 1.7 | 10.1 | -85.8 | 0.1 | 1.8 | 8.5 | -85 |
| | 16.5 | -91 | 22.5 | | 19.5 | -95.9 | 3 | 4.9 | 10 | -84 | 10.2 | -86.1 | 0.2 | 2.1 | 10.3 | -85.6 | 0.3 | 1.6 | 8.5 | -85 |
| | 16.5 | -91 | 22.5 | | 19.4 | -95.7 | 2.9 | 4.7 | 10 | -84 | 10.4 | -85.6 | 0.4 | 1.6 | 10.0 | -85.4 | 0 | 1.4 | 8.5 | -85 |
| FDD20(10M) | 16.5 | -91 | 22.4 | | 18.1 | -95.2 | 1.6 | 4.2 | 11 | -86 | 10.3 | -85.7 | -0.7 | -0.3 | 10.2 | -85.1 | -0.8 | -0.9 | 8.5 | -85 |
| | 16.5 | -91 | 22.4 | | 18.8 | -95.1 | 2.3 | 4.1 | 11 | -86 | 10.2 | -85.4 | -0.8 | -0.6 | 10.0 | -85.1 | -1 | -0.9 | 8.5 | -85 |
| | 16.5 | -91 | 22.4 | | 19.9 | -94.8 | 3.4 | 3.8 | 11 | -86 | 10.1 | -85.2 | -0.9 | -0.8 | 9.7 | -85.0 | -1.3 | -1 | 8.5 | -85 |
| FDD28(10M) | 16 | -91 | 22.6 | | 17.1 | -94.3 | 1.1 | 3.3 | 9 | -83 | 8.6 | -85.6 | -0.4 | 2.6 | 8.8 | -84.5 | -0.2 | 1.5 | 8 | -84 |
| | 16 | -91 | 22.7 | | 17.3 | -94.6 | 1.3 | 3.6 | 9 | -83 | 8.7 | -85.2 | -0.3 | 2.2 | 9.0 | -84.7 | 0 | 1.7 | 8 | -84 |
| | 16 | -91 | 22.6 | | 17.6 | -94.5 | 1.6 | 3.5 | 9 | -83 | 9.1 | -84.7 | 0.1 | 1.7 | 8.9 | -85.1 | -0.1 | 2.1 | 8 | -84 |
| FDD66(10M) | 17.5 | -93 | | | | | | | | | | | | | | | | | 12 | -88 |
| | 17.5 | -93 | | | | | | | | | | | | | | | | | 12 | -88 |
| | 17.5 | -93 | | | | | | | | | | | | | | | | | 12 | -88 |
| TDD38(10M) | 16.5 | -92 | 22.2 | | 17.2 | -92.8 | 0.7 | 0.8 | 13 | -89 | 13.1 | -89.4 | 0.1 | 0.4 | 13.5 | -89.7 | 0.5 | 0.7 | 12.5 | -88.5 |
| | 16.5 | -92 | 22.2 | | 17.2 | -92.6 | 0.7 | 0.6 | 13 | -89 | 13.0 | -89.3 | 0 | 0.3 | 13.6 | -89.5 | 0.6 | 0.5 | 12.5 | -88.5 |
| | 16.5 | -92 | 22.2 | | 17.1 | -92.5 | 0.6 | 0.5 | 13 | -89 | 13.3 | -89.1 | 0.3 | 0.1 | 13.8 | -89.4 | 0.8 | 0.4 | 12.5 | -88.5 |
| TDD39(10M) | 16 | -89 | | | | | | | | | | | | | | | | | 12 | -86 |
| | 16 | -89 | | | | | | | | | | | | | | | | | 12 | -86 |
| | 16 | -89 | | | | | | | | | | | | | | | | | 12 | -86 |
| TDD40(10M) | 16 | -91 | 22.5 | | 17.5 | -92.3 | 1.5 | 1.3 | | | 13.2 | -89.3 | | | 13.6 | -90.0 | | | 12 | -88 |
| | 16 | -91 | 22.4 | | 17.5 | -92 | 1.5 | 1 | | | 13.1 | -89.0 | | | 13.5 | -89.7 | | | 12 | -88 |
| | 16 | -91 | 22.4 | | 17.2 | -91.8 | 1.2 | 0.8 | | | 13.0 | -88.6 | | | 13.5 | -89.2 | | | 12 | -88 |
| TDD41(10M) | 16 | -89 | 22 | | 16.8 | -91.5 | 0.8 | 2.5 | | | 12.1 | -89.0 | | | 12.7 | -89.5 | | | 12 | -86 |
| | 16 | -89 | 22 | | 16.6 | -91.4 | 0.6 | 2.4 | | | 12.0 | -88.6 | | | 13.0 | -89.3 | | | 12 | -86 |
| | 16 | -89 | 22 | | 16.5 | -91.2 | 0.5 | 2.2 | | | 11.9 | -88.4 | | | 12.5 | -89.0 | | | 12 | -86 |

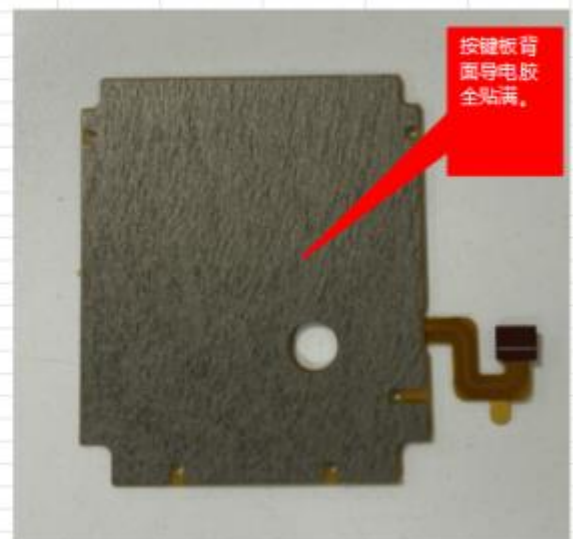
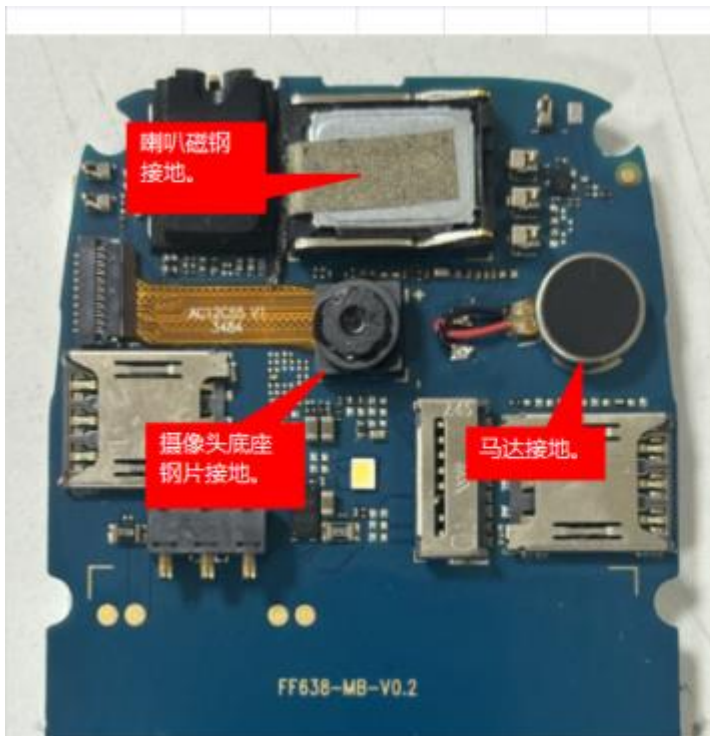
四、主天线增益

| GF025A(Icon)-Peak Gain (dBi) 主天线 | | | | |
|-----------------------------------|------|-------|-------|-------|
| | BAND | SKU1 | SKU2 | SKU3 |
| 2G | B3 | -0.83 | -0.83 | -0.83 |
| | B5 | -1.43 | -1.43 | -1.43 |
| | B8 | -1.36 | -1.36 | -1.36 |
| 3G | B1 | -0.9 | -0.9 | -0.9 |
| | B5 | -1.43 | -1.43 | -1.43 |
| | B8 | -1.36 | -1.36 | -1.36 |
| 4G-FDD | B1 | -0.9 | -0.9 | -0.9 |
| | B3 | -0.83 | -0.83 | -0.83 |
| | B5 | -1.43 | -1.43 | -1.43 |
| | B7 | — | 0.85 | 0.85 |
| | B8 | -1.36 | -1.36 | -1.36 |
| | B20 | — | -1.43 | -1.43 |
| 4G-TDD | B28 | — | -2.52 | -2.52 |
| | B38 | — | 2.6 | 2.6 |
| | B39 | — | — | 0.01 |
| | B40 | — | -0.65 | -0.65 |
| | B41 | — | 2.3 | 2.3 |

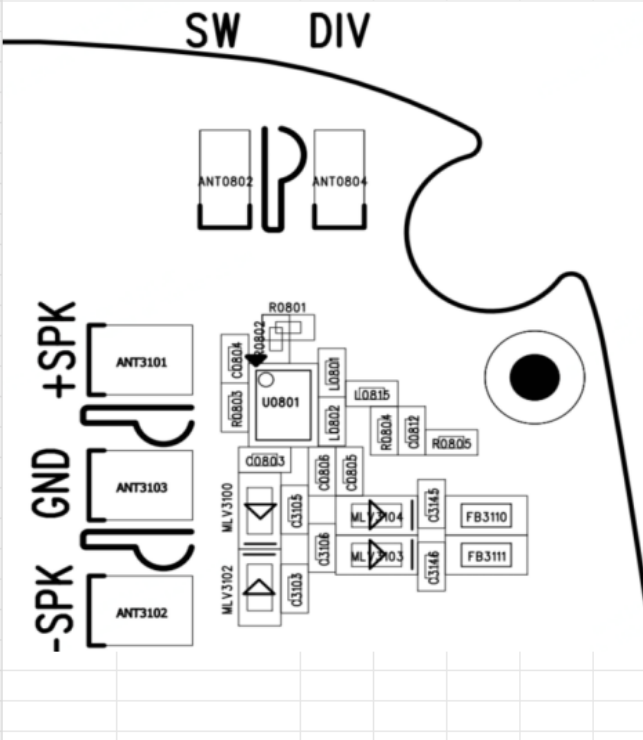
五、FM测试

| FM测试环境 | 总控台个数 | 播放音质清晰台个数 |
|--------|-------|-----------|
| 办公室内 | 8 | 7 |
| 办公室窗台 | 20 | 19 |

6.环境处理 environmental treatment:



一、分集天线匹配



分集天线匹配说明

馈电脚匹配

位号 (L0815) : **15nH** ; 其余按默认贴片不变。

调谐逻辑说明

RF1位号 (C0804) : **0Ω**

使用频段(逻辑频段有更改)

GSM:2/3 WCDMA:1 FDD:1/3 TDD:40

RF2位号 (R0803) : **7.5nH (有更改)**

使用频段

GSM:8 WCDMA:8 FDD:8

RF3位号 (L0801) : **15nH(有更改)**

使用频段

GSM:5 WCDMA:5 FDD:B5/20

RF4位号 (L0802) : **27nH**

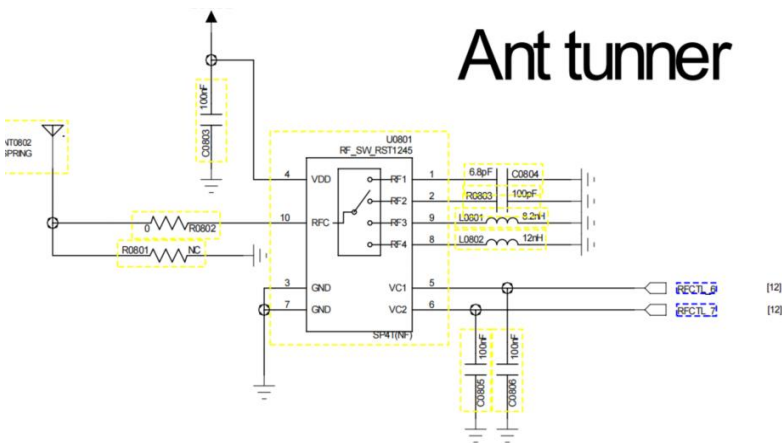
使用频段 (逻辑频段有更改)

FDD:7/28A/28B TDD:38/41

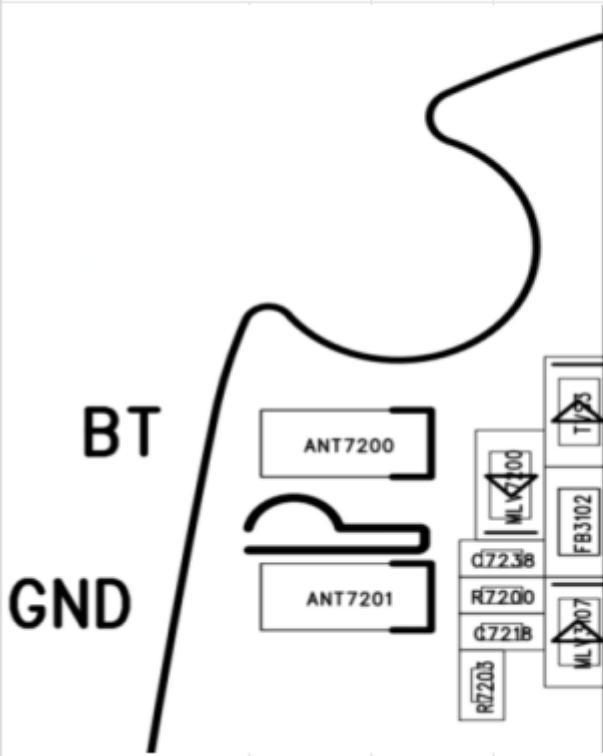
二、分集天线增益

GF025A(Icon)-Peak Gain (dBi) 分集天线

| | BAND | 分集 |
|--------|------|-------|
| 2G | B3 | -2.3 |
| | B5 | -4.04 |
| | B8 | -2.87 |
| 3G | B1 | 0.42 |
| | B5 | -4.04 |
| | B8 | -2.87 |
| 4G-FDD | B1 | 0.42 |
| | B3 | -2.3 |
| | B5 | -4.04 |
| | B7 | -3.28 |
| | B8 | -2.87 |
| | B20 | -4.04 |
| 4G-TDD | B28 | -4.12 |
| | B38 | -3.28 |
| | B39 | -0.18 |
| | B40 | -1.29 |
| | B41 | -3.73 |



一、蓝牙大线匹配



蓝牙天线匹配说明
按默认贴片匹配不变。

二、BT实测

| 蓝牙规格 | BT测试环境 | 蓝牙最大匹配距离 | 蓝牙通话音质正常距离 |
|-------|--------|----------|------------|
| FPC材质 | 办公室内 | 10-11m | 8-9m |
| | 空旷区域 | 9-10m | 7-8m |

三、蓝牙增益

| GF025A(Icon)-Peak Gain (dBi) 蓝牙天线 | |
|-----------------------------------|------|
| BT | 1.82 |

5: 零件表 BOM table

深圳市麒鑫通达科技有限公司 Shenzhen Qixin Tongda Technology Co., LTD

BOM 表 BOM table

客户:沃特沃德 Guest:

产品名称:GF025 Product name :GF025

版本: V1.0 Version: V1.0

2024/2/27

| 序号The serial number | 物料名称The name of the material | 物料编号The material number | 使用材料Use the material | 数量The number of | 描述describe | 供应商supplier | 材料损耗Material loss | 备注note |
|---------------------|------------------------------|-------------------------|----------------------|-----------------|------------|----------------------|-------------------|--------|
| 1 | 天线组件 | 3.S-5A02-000794-000 | 铜箔 Copper foil | 1 | 黑色blaac | 麒鑫通达 Qixin Tongda | | |
| 2 | 天线组件 | 3.S-5A02-000795-000 | 铜箔 Copper foil | 1 | 黑色blaac | 麒鑫通达 Qixin Tongda | | |

说明:Description:

1、此文件为麒鑫通达内部受控文件,盖有效受控章与图纸同时使用生效; 1. This document is an internal controlled document of Qixin Tongda, and it takes effect when the effective controlled seal is used together with the drawings;

2、此表单原版一件留工程存档,复印两份分发至厂务部及品质部; 2. One original copy of this form shall be kept in the project for archiving, and two copies shall be distributed to the factory Affairs Department and the Quality Department;

3、此表单只作采购、生产、检验依据;任何人不得随意手改其内容,违者必究; 3. This form is only used as the basis for purchase, production and inspection; No one shall alter its contents at will, the offender shall be prosecuted;

4、此表单需由工程部经理在每种机型量产前及时准确下发到相关部门。4. This form shall be delivered to relevant departments timely and accurately by the engineering department before each type of machine quantity.

制表:龙超群Watchmaking: Long Chaoqun 审核:傅梁成Reviewed by: Fu Liangcheng

批准:曹光平Approved by: Cao Guangping

6.成品尺寸报告 Finished size report

深圳市麒鑫通达科技有限公司尺码检测表

Shenzhen Qixin Tongda Technology Co., LTD Measurement list

型号 model: GF025 天线 ANTENN 制表日期 Tabulating date: 2024-3-21

| 图纸尺寸 Drawing size | 穴号 Acupuncture point no | | | | 检测设备 Testing equipment | 判断 judge |
|--|----------------------------|--------------|---------------------|------------------------|---------------------------|-------------|
| | 1# | 2# | 3# | 4# | | |
| 55.81±0.15 | 55.79 | 55.78 | 55.77 | 55.78 | A | OK |
| 22.59±0.15 | 22.57 | 22.56 | 22.57 | 22.57 | A | OK |
| 43.71±0.15 | 43.68 | 43.69 | 43.67 | 43.66 | A | OK |
| 18.47±0.15 | 18.45 | 18.44 | 18.45 | 18.44 | A | OK |
| 16.80±0.15 | 16.78 | 16.79 | 16.78 | 16.77 | A | OK |
| 16.25±0.15 | 16.23 | 16.23 | 16.24 | 16.24 | A | OK |
| 检测设备: A: 数显卡尺 B: 投影仪 C: 二次元 Testing equipment A: Digital caliper B: projector C: Secondary yuan | | | | | | |
| 制表: Create table | 代庆蓉 Dai qingrong | 审核: audit | 龙超群 Long chaoqun | 核准: Approved by the | 曹光平 Cao Guangping | |

7.包装方式 packing way

| 包装规范-CKD包装 Packaging specification-CKD Packaging | | | | | |
|--|------------------------|-------------------|-------------------|-----------------------------------|-----------------|
| 项目名称: entry name: | | GFO25A | 版次 Revision | V0 | 日期 2024/2/29 |
| 序号 NO. | 物料名称 Material name | | 用量 consumption | 加工流程 Processing flow | 备注 remarks |
| 1 | 底壳组件 Shell assembly | | 1 | 注塑+组装 Injection + assembly | |
| 包装材料及尺寸规格: Packaging materials and dimensions: | | | | | |
| 序号 NO. | 名称 name | 规格 Specifications | 用量 consumption | | |
| 1 | 大纸箱 Large carton | 540*380*320mm | 1 | | |
| 2 | 吸塑盒 Blister box | 17格 17 cells | 40 | | |
| 3 | PE膜 PE film | 600*400mm | 40 | | |
| 4 | 纸板 cardboard | 520*360mm | 2 | | |
| 5 | 大PE袋 Large PE bag | 650*650*0.35mm | 1 | | |
| 6 | 干燥剂 desiccant | / | 4 | | |
| 包装要求: Packaging requirements: | | | | | |
| <p>先把平卡放到下面, 吸塑盒垫棉每格装1PCS产品, 产品表面朝下放置, 然后叠加直到50层装满箱为止, 最上面用平卡覆盖, 然后用绳子以“十”字或“井”字形方式捆绑(方便放置与提取产品), 共850PCS/箱 Put the flat card on the bottom, pad the plastic box with cotton and pack 1 PCS of products in each grid, place the product surface downward, and then stack it until the 50 layers are full, cover the top with the flat card, and then bind it with a rope in a "cross" or "well" shape (convenient for placing and extracting products), a total of 850 PCS/box</p> | | | | | |
| 制定 formulate: 陈沛兴 cheng pei xing | | 审核 examine: / | | 核准 approval: 代庆蓉 Dai Qing Rong | |

8.QC Chart 管控流程图 QC Chart control flow Chart

| 冲 压 Q C 管 控 流 程 图 Stamping Q C control flow chart | | | | | | | | | |
|--|---|--|---|--|--|-------------------------------|---|---|--|
| 文件编号 Document number | ZX-0013 | 制定日期 Formulation date | 2019/3/15 | 批准 approval | 李瑞 Li Rui | 审核 to examine | 曹光平 Cao Guangping | 作成 Make | |
| 工程名称 Project name | 主要设备 major equipment | 指导书 Instruction | 控制项目/方法/责任 Control items / methods / Responsibilities | | | | 使用记录 Usage record | | |
| | | | 控制项目 Control items | 控制方法 Control method | 操作者 operator | 复查者 Reviewer | | | |
| 原料型号 Raw material model | 计划单 Plan sheet | 检验规程 Inspection procedure | 1. 外观 Appearance 2. 材质型号 Material model | 1. 目视检验 Visual inspection 2. 核对计划材质型号 Check the material and model of the plan | 物料员 Material clerk | 技术组长 Technical team leader | 检验记录表 Inspection record form | | |
| 模具型号 Mold model | 计划单 Plan sheet | 检验规程 Inspection procedure | 内部模具编号 Internal mold number | 核对计划模具型号 Check the planned mold model | 物料员 Material clerk | 技术员 technician | 核对记录表 Checklist | | |
| 产 品 P r o d u c t 品 | 模具安装 Mold installation | 升降车 冲压机 Lift truck Stamping machine | 1. 升降车操作规程 Operating procedures of lift truck 2. 冲压机操作规程 Operating procedures of stamping machine | 1. 人员设备安全 Personnel and equipment safety 2. 模具与机器对中心 Centering of mould and machine | 1. 专人培训持证作业 Special personnel shall be trained to operate with certificates 2. 对位目视 Visual alignment | 技术员 technician | 技术组长 Technical team leader | 模具切换单 Mold switching sheet | |
| | 调试 debugging | 冲压机 Stamping machine | 1. 冲压机操作规程 Operating procedures of stamping machine 2. 作业标准书 Operation standard | 工艺参数 process parameters | 1. 目视核对 Visual check 2. 空运转目视 Idling visual inspection | 技术员 technician | 技术组长 Technical team leader | 调试记录表 Commissioning record sheet | |
| 成 型 m o l d i n g | 首件确认 First article confirmation | 投影机 显微镜 卡尺 Projector Microscope calipers | 1. 产品承认书 Product recognition 2. 作业标准书 Operation standard 3. 投影机操作规程 Projector operating procedures 4. 显微镜操作规程 Operating procedures of microscope | 1. 卡尺 calipers 2. 外观 Appearance 3. 韧性、强度、高度 Toughness strength, brightness | 1. 实测在图纸公差内 The actual measurement is within the tolerance of the drawing 2. 对照样品目视 Visual inspection of control sample 3. 组零件实测测试 Actual measurement and test of assembly parts 4. 性能测试 Performance test | 技术员 technician | 品质 quality | 首件检验记录 First article inspection record | |
| 全检外观 Full inspection appearance | 台灯 Desk lamp | 1. 作业标准书 Operation standard | 油污、变形、毛边、压伤 Oil stain Deformation Burr Crush injury | 目视 visual | 操作员 operator | 品质组长 Quality team leader | 生产交验单 Production delivery inspection sheet | | |
| 包 装 packing | 电子秤 封口机 Electronic scale Sealing machine | 1. 电子秤操作规程 Operating procedures for electronic scale 2. 包装作业规程 Packing operation procedures | 1. 包装规格、数量 Packing specification quantity 2. 产品保护 Product protection | 1. 与标准书对照目视 Visual comparison with standard book 2. 防堆积、防尘、防混装 Prevent accumulation Dust proof Anti mixed loading | 操作员 operator | 品质组长 Quality team leader | 生产交验单 Production delivery inspection sheet | | |
| 终检 (FQC) Final inspection (FQC) | / | 抽样计划表 Sampling schedule | 1. 产品外观 Product appearance 2. 包装规格 Package specification | 目视 visual | 品质 Quality | 品质组长 Quality team leader | FQC日报表 FQC daily report | | |
| 储 存 Store | / | 产品防护控制程序 Product protection control procedure | 产品防护 Product protection | 防潮、防尘、防重压、防混、防盗、防晒 moisture-proof, Dust proof Prevent heavy pressure Guard against Muddle along Guard against theft Sunscreen | 仓管 Warehouse tube | 仓库组长 Warehouse leader | 库存卡 Inventory card | | |

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| 管控物质 | 管控依据 |
|---|----------------------------------|
| ◆ 欧盟 REACH 法规: 附件 17 限制物质 | (EC) 1907/2006 |
| ◆ 欧盟 REACH 法规: 附件 14 授权物质 | (EC) 1907/2006 |
| ◆ 欧盟 REACH 法规: SVHC | (EC) 1907/2006 |
| ◆ 欧盟 RoHS 指令 | 2011/65/EU 及其修订指令(EU) 2015/863 |
| ◆ 欧盟持久性有机污染物 (POP) | (EU) 2019/1021 |
| ◆ 放射线物质 | 2013/59/EURATOM |
| ◆ 消耗臭氧层物质 (ODS) | 蒙特利尔协议; (EC) 1005/2009; 美国清洁空气法案 |
| ◆ 氟化温室气体 | (EC) 517/2014 |
| ◆ 加州 65 号提案列出的物质 (对使用者有暴露风险且需要警告的所有应用) | Prop65 |
| ◆ 可能引起皮肤过敏的物质 (禁止用于可能长时间接触皮肤的所有应用) | (EC) 1272/2008 |
| ◆ 欧盟电池指令 | 2006/66/EC 及其修订指令 2013/56/EU |



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| | |
|--------------------------------|-----------------------------|
| ◆ 欧盟包装指令 | 94/62/EC 其修订指令(EU) 2018/852 |
| ◆ 三氧化二锑(限值 0.09%) | Prop65 |
| ◆ 氧化铍(禁用) | Prop65 |
| ◆ 铍及其化合物(氧化铍除外)(限值 0.1%) | Prop65 |
| ◆ 溴及其化合物(限值 0.09%) | 无卤 |
| ◆ 氯及其化合物(限值 0.09%) | 无卤 |
| ◆ 甲醛(包装材料中禁用; 其它材料避免使用, 如有需报告) | Prop65 |
| ◆ 镍(禁止用于可能长时间与皮肤接触的所有应用) | 皮肤致敏物 |
| ◆ 全氟辛酸(PFOA)(限值 25ppb) | (EU) 2017/1000 |
| ◆ 聚乙烯(PE)泡棉(包装材料中禁用) | 客户要求 |
| ◆ 发泡聚苯乙烯(包装材料中禁用) | 客户要求 |
| ◆ 聚氨酯(包装材料中禁用) | 客户要求 |
| ◆ 聚氯乙烯(PVC)(禁用) | 客户要求 |

公司注册编号: 91440300319681231G

公 司 名: 深圳市麒鑫通达科技有限公司

公司盖印:

法 人 代 表: 周在芝

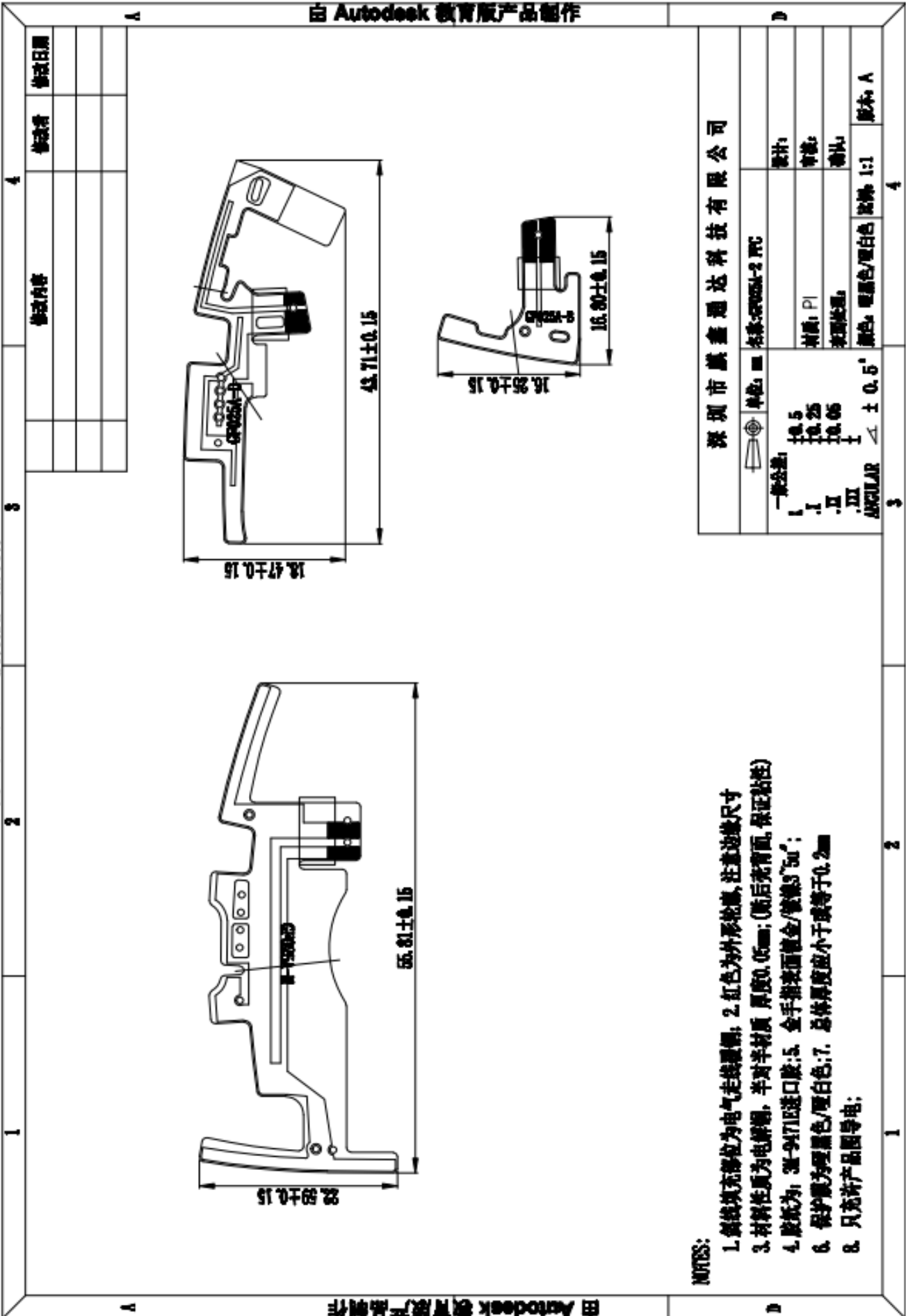
日 期:

2022 年 12 月 5 日

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NOTES:

1. 斜线填充部位为电气走线覆铜; 2. 红色为外形轮廓; 注意边缘尺寸
3. 材料性质为电铸铜, 半对半材质 厚度0.05mm; (前后充背面, 保证粘性)
4. 胶板为: 3M-9471E进口胶; 5. 金手指表面镀金/镀镍3~5μ';
6. 保护层为哑黑色/哑白色; 7. 总体厚度应小于或等于0.2mm
8. 只允许产品图导电;

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