

Shenzhen New Lingk Technology Co.,Ltd

ANTENNA APPROVAL SHEET

Customer: See the

Project : XC01

| Part number | | Audit | |
|-----------------------|---|---------------------|------------------|
| RF Engineer | See the | Structural Engineer | |
| address | The fifth floor of the office building of the Fifth Industrial Zone, North District, High-tech Park, Nanshan District, Shenzhen | | |
| Phone | 13902948715 | site | www.kpanenna.com |
| Company email address | sales@kpanenna.com | Contact | Li Peng |

| | | | |
|-----------------------|--|-------------------|--|
| Customer hardware | | Customer projects | |
| Customer Structure/MD | | Customer quality | |

This acknowledgment is the debugging of the gold machine data, only for the gold machine is responsible, it is recommended that your company keep a gold machine in our company, and our company will have the same amount as the gold machine materials and software. The production machine guarantees the antenna performance.

| | | |
|------------------------------------|--------------------------|---|
| project: : XC01 | write: Zhang hai dong | file name: See the-XC01 antenna specification book |
| date: 2025.04.01 | | |
| version | V1 | to examine: liufang |
| Mold products | | |
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1.Overview

This report mainly describes the performance of the antenna for the machine. See-XC01 project camera, the use frequency range is, 2.4G/5.8GWIFI the machine antenna is PIFA form, located inside the machine

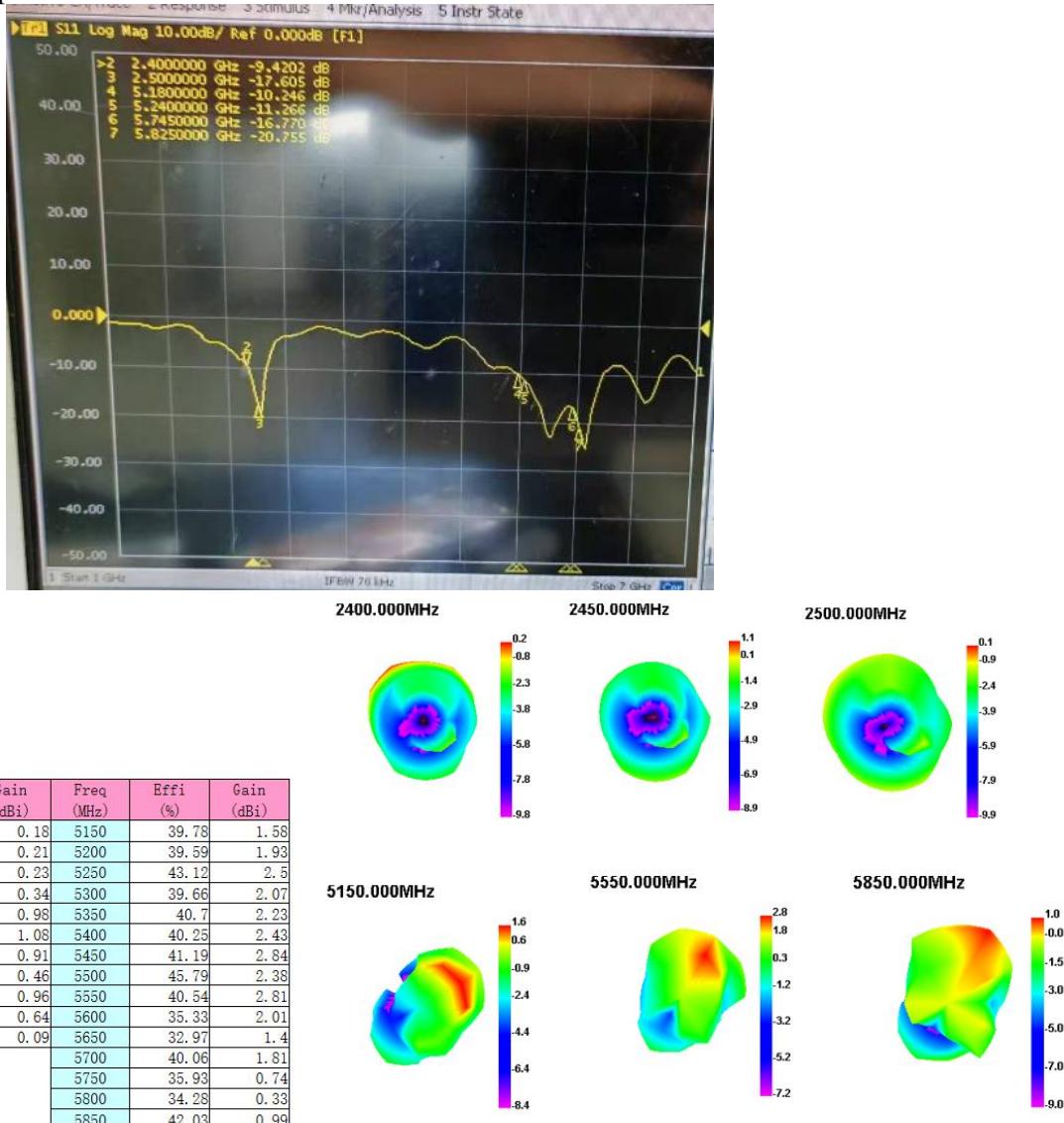
2. Detailed introduction

2.1 Matching circuit (matching unchanged)

3.Debug the settings

The transmit power and receive sensitivity are 3D results measured using the CMW500/8960 in a microwave anechoic chamber (6m*3m*3m).

3.1Antenna passive data

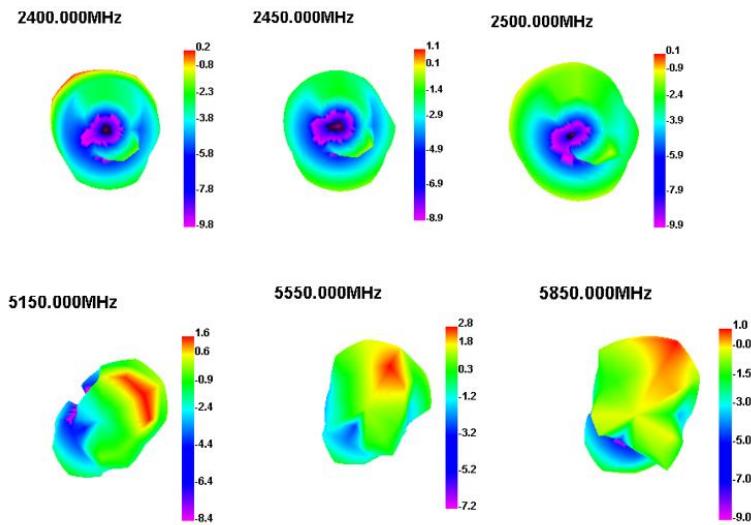


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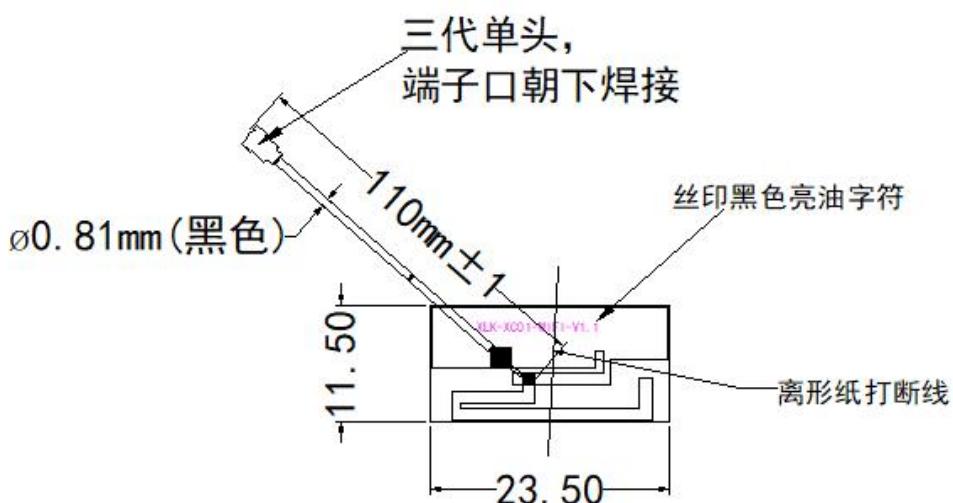
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| Freq (MHz) | Effi (%) | Gain (dBi) | Freq (MHz) | Effi (%) | Gain (dBi) |
|------------|----------|------------|------------|----------|------------|
| 2400 | 42.01 | 0.18 | 5150 | 39.78 | 1.58 |
| 2410 | 40.48 | 0.21 | 5200 | 39.59 | 1.93 |
| 2420 | 39.79 | 0.23 | 5250 | 43.12 | 2.5 |
| 2430 | 40.09 | 0.34 | 5300 | 39.66 | 2.07 |
| 2440 | 45.67 | 0.98 | 5350 | 40.7 | 2.23 |
| 2450 | 47.3 | 1.08 | 5400 | 40.25 | 2.43 |
| 2460 | 46.34 | 0.91 | 5450 | 41.19 | 2.84 |
| 2470 | 42.39 | 0.46 | 5500 | 45.79 | 2.38 |
| 2480 | 45.08 | 0.96 | 5550 | 40.54 | 2.81 |
| 2490 | 46.57 | 0.64 | 5600 | 35.33 | 2.01 |
| 2500 | 42.02 | 0.09 | 5650 | 32.97 | 1.4 |
| | | | 5700 | 40.06 | 1.81 |
| | | | 5750 | 35.93 | 0.74 |
| | | | 5800 | 34.28 | 0.33 |
| | | | 5850 | 42.03 | 0.99 |



4. Structural diagram

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技术要求:

1. 材质: FPC(黑油, 一对半电解铜基材), T<0.15mm; 反面背胶类型: 3M9471
2. 标“*”号为重点管控尺寸, 未注公差按图框中自由公差管控; 未注尺寸以菲林片检验为准(电性能需测试OK):
3. 倾点镀金, 不可有镀金后易断裂及脱落, 导电不良, 电路部分断裂等不良现象;
4. FPC表面油墨需均匀, 不可有污染物, 损伤, 黑点, 起皱, 镀镍不良等现象;
5. 产品符合ROHS标准.

| 深圳市新领科技术有限公司 | | | | | |
|--------------|---|--------|-------|------------|--|
| 第三视角 | | 项目名称: | 日期 | 2024-11-12 | |
| | ◆ | XC01 | 设计 | Zsb | |
| | ○ | WIFI天线 | 审核 | MD | |
| | ◎ | 产品料号: | | RF | |
| | 上 | 材料: | 批准 | | |
| | □ | FPC | 单位:mm | 比例:FIT | |

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5. Structural diagram

| | | | | | | | |
|---|------------------------|--------------------|-------------|-------------------------------------|-----------------------|---------------|----------|
| Product model | XC01 | | | Number of tests | 5PCS | | |
| Test Standards | GB2423.17 | | | Product materials | FPC | | |
| Test items | Requirement Standards | Actual values | decision | Test items | Requirement Standards | Actual values | decision |
| Test Instrument Specifications | KD-60 | KD-60 | OK | Test time | 24H | 24H | OK |
| Types of salt spray tests | NSS neutral | NSS neutral | OK | Salt spray box temperature | 35°C | 35°C | OK |
| SALINE PH | 6.5-7.2 | 6.8 | OK | (H.80C) Salt spray sedimentation | 1-2ml | 1.8ml | OK |
| Spray method | Spray continuously | Spray continuously | OK | Material of the goods | FPC | FPC | OK |
| Brine ingredients | 5%/NaCL | 5%/NaCL | OK | Compressed air section pressure | 1 ± 0.1KG/CM2 | 1 | OK |
| Saturation temperature | 47°C | 47°C | OK | Specimen placement angle | 90° | 90° | OK |
| Test observation time | Observe the phenomenon | | | | | | |
| 4H | No anomalies | | | | | | |
| 12H | No anomalies | | | | | | |
| 24H | No anomalies | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Judging criteria: According to the national standard 5944-86 rating method, grade 9 or above is qualified | | | | | | | |
| Final Judgment | Eligible ✓ | | | Unqualified | | | |
| Tester | He Yuanyuan | Audit | Wang Aibing | Approval | | | |
| Note: The commonly used salt spray test methods are: NSS medium salt spray test, AASS acetate spray test, CASS copper acetic acid accelerated test. | | | | | | | |

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OQC inspection and test report

| report | | Customer part number | | Detection items | Sampling plan | | AQL | AC | RE | decision | |
|----------------------------|-------------------|---|---|-----------------|---------------|----------------------------------|-------------|----------|----------|-----------|--|
| Customer model | XC01 | | | appearance | CR | 0.15 | 0.15 | 0 | 1 | | |
| quantity | Shipment quantity | | | | MAJ | 0.4 | 0.4 | 2 | 3 | qualified | |
| | Number of samples | | | | MIN | 0.65 | 0.65 | 3 | 4 | | |
| 1. Open | | NIL | 10.Pits/crushes | | NIL | 19.The release liner is not cut | | | NIL | | |
| 2. short circuit | | NIL | 11.Plating coarse and dirty, gold watermark | | NIL | 20.Oxidation of the gold surface | | | NIL | | |
| 3. The line is warped | | NIL | 12.Gold pinholes, notches | | NIL | 21.Offset / exposed copper | | | NIL | | |
| 4. Damaged lines | | NIL | 13.Glue line bubbles | | NIL | 22.Not broken | | | NIL | | |
| 5. Rub/scratch | | NIL | 14.Ink color | | NIL | 23.Drop gold/throw gold | | | NIL | | |
| 6. Exposed copper/nickel | | NIL | 15.Unclear characters | | NIL | 24.Bending/deformation | | | NIL | | |
| 7. Lose oil | | NIL | 16.Garbage/foreign objects | | NIL | 25.Form factor notch | | | NIL | | |
| 8. Oxidation/discoloration | | NIL | 17.Overflowing/flowing glue | | NIL | 26.Glue stacking/lack of glue | | | NIL | | |
| 9. The surface is dirty | | NIL | 18.pucker | | NIL | 27.Poor reinforcement | | | NIL | | |
| Decision: | | <input checked="" type="checkbox"/> qualified <input type="checkbox"/> unqualified <input type="checkbox"/> special picking | | | | | | | | | |

Note: Please store this product in a low temperature, low humidity (temperature 18-28°C, humidity 35%-75%RH) non-corrosive gas environment, it is recommended to use it within one week after opening.

Reliability testing

| The name of the project | requirements | Measurements |
|---------------------------|--|--|
| Thermal shock experiments | 288°C*10S'*3order | 288°C*10S'*3 times without delamination and blistering |
| Anti-peel experiment | ≥1.0 kg f/c m² | 1.112 kg f/c m² |
| Ink pull test | The 3M600 tape is pulled up vertically | No ink dropping |

List of production and testing equipment

| | | |
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| Production equipment | Testing equipment 1 | Testing equipment 2 |
|-------------------------|------------------------|---------------------|
| Etching profile machine | Two-dimensional camera | micrometer |

Inspectors:

Audit:

Material Composition Declaration Form

| serial number | The name of the material | Material type | Material Suppliers | Environmental report or declaration number | Report date | remark |
|---------------|--------------------------|----------------------|--------------------|--|-------------|------------|
| 1 | substrate | One-to-one materials | Cailenghetti | SHAEC23001049106 | 2023/2/15 | Pages 1-9 |
| 2 | Adhesive backing | 3M9471LE | 3M | SHAEC2217569205 | 2023/1/04 | Pages 1-9 |
| 3 | printing ink | Black BLACKINK | Youli | CANEC23009939703 | 2023/09/20 | Pages 1-11 |
| 4 | Electricity gold | detect | Qiansheng | A2230512090101002C | 2023/10/11 | Pages 1-4 |

Shipping method

| The item category | Packing | Illustration of an example |
|-------------------|------------------------------|----------------------------|
| FPC | 1、 PET plastic bag packaging | |

Note: Please store this product in a low temperature, low humidity (temperature 18-28 °C, humidity 35%-75%RH) non-corrosive gas environment, it is recommended to use it within a week after opening the package, please try not to let the product 3M glue have fingerprints during use, so as not to affect the adhesion.

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