



APPROVAL SHEET

承认书

| | | |
|---------------------------------------|--|-------------|
| CUSTOMER NAME Customer name | ShenzhenJichenTechnologyCo.,Ltd. | |
| CUSTOMER P/N Customer Part Number | | |
| PART NAME | 2.4G black FPC built-in antenna, 1.13 black line L=117MM | |
| P/N Part Number | YJC-6N117-B01 | |
| APPROVAL REV. | A0 | |
| DELIVERY DATE Sample delivery date | January 10, 2024 | |
| PREPARED BY | Yin Feijie | |
| CHECKED BY | Fang Wenfeng | |
| APPROVED BY | Xiao Han | |
| Customer Approved | | |
| Prepared By | Checked By Review | Approved By |
| | | |

Address: Building C, Hongyu Guangming Valley, No. 11, Youma Gang Road, Ma Tian Street, Guangming District,
ShenzhenDongguan Branch: Yingjiachuang Industrial Park, No. 2 Yinhe 3rd Road, Shishuikou, Qiaotou Town, Dongguan
CityHangzhou Office: 212, Building B, Dahua Jianghong International Innovation Park, 369 Internet of Things Street, Binjiang
District, HangzhouMianyang Office: No. 4F-34 Wanxiang High-tech International, No. 35 Mianxing East Road, Mianyang High
-tech Zone, Sichuan Province

Tel: 0755-27810060

Fax: 0755-27810057

Website: <http://www.szsyjc.com>



Table of contents

| | |
|--|---|
| 1. Cover | 1 |
| 2. Contents | 2 |
| 3. Revise your resume | 3 |
| 4. Antenna plan view | 4 |
| 5. Antenna technical parameters and environmental performance test | |
| 6. Actual antenna picture and attachment location diagram | |
| 7. Antenna performance test diagram | 6 |
| 8. 2D 3D test data (2.4 G). 7- 8 | |
| 9. OTA Active Test Data Statistics 8 | |
| 10. ROHS Material Control Report 9 | |



Resume:

| Version | Changes and reasons for changes | date | issued |
|---------|---------------------------------|------------------|--------|
| A0 | First edition released | January 10, 2024 | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



Antenna plan:

| A | | B | | C | | D | | E | | F | | G | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------------|-----------------|-----------|--|---|--|---|--|---|--|--|-----------------|-------------------------|-----------------|-------------|--------------|-------------------|------------------|------------------------|-----|------------------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|--|
| 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| <div style="text-align: right;">RoHS</div> | | | | | | | | | | | | <table border="1"><thead><tr><th>REV</th><th>DATE</th><th>DESCRIPTION</th><th>NAME</th></tr></thead><tbody><tr><td>A0</td><td>2024-01-10</td><td>新版发行</td><td>殷飞杰</td></tr><tr><td>A1</td><td></td><td></td><td></td></tr></tbody></table> | | REV | DATE | DESCRIPTION | NAME | A0 | 2024-01-10 | 新版发行 | 殷飞杰 | A1 | | | | | | | | | | | | | | |
| REV | DATE | DESCRIPTION | NAME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A0 | 2024-01-10 | 新版发行 | 殷飞杰 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div style="text-align: center;"></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"><thead><tr><th>频率范围(Frequency Range)</th><th>2400-2500MHz</th></tr></thead><tbody><tr><td>增益 (Gain)</td><td>2.0±1dBi</td></tr><tr><td>电压驻波比(VSWR)</td><td><1.92</td></tr><tr><td>极化 (Polarization)</td><td>Linear. Vertical</td></tr><tr><td>最大功率(Max power rating)</td><td>50W</td></tr><tr><td>特性阻抗 (Impedance)</td><td>50Ω</td></tr></tbody></table> | | | | | | | | | | | | 频率范围(Frequency Range) | 2400-2500MHz | 增益 (Gain) | 2.0±1dBi | 电压驻波比(VSWR) | <1.92 | 极化 (Polarization) | Linear. Vertical | 最大功率(Max power rating) | 50W | 特性阻抗 (Impedance) | 50Ω | | | | | | | | | | | | | |
| 频率范围(Frequency Range) | 2400-2500MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 增益 (Gain) | 2.0±1dBi | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 电压驻波比(VSWR) | <1.92 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 极化 (Polarization) | Linear. Vertical | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 最大功率(Max power rating) | 50W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 特性阻抗 (Impedance) | 50Ω | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>要求: 1. 成品须100%测试导通OK 2. 成品须100%全检OK. 3. 成品采用环保制程. 4. 符合ROHS要求. 5. 未注公差请以一般公差为准. 6. *为重点标注尺寸.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div style="text-align: center;"></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"><thead><tr><th>零件名称 (PART NAME)</th><th>规格 (UNIT)</th><th>比例 (SCALE)</th><th>版本 (REV)</th><th>数量 (SIZE)</th></tr></thead><tbody><tr><td>2.4G垂直FPCW天线</td><td>mm</td><td></td><td>YJC-6N17-B01</td><td></td></tr><tr><td>设计</td><td>殷飞杰</td><td></td><td></td><td></td></tr><tr><td>审核</td><td>OK</td><td></td><td></td><td></td></tr><tr><td>批准</td><td>方文峰</td><td></td><td></td><td></td></tr></tbody></table> | | | | | | | | | | | | 零件名称 (PART NAME) | 规格 (UNIT) | 比例 (SCALE) | 版本 (REV) | 数量 (SIZE) | 2.4G垂直FPCW天线 | mm | | YJC-6N17-B01 | | 设计 | 殷飞杰 | | | | 审核 | OK | | | | 批准 | 方文峰 | | | |
| 零件名称 (PART NAME) | 规格 (UNIT) | 比例 (SCALE) | 版本 (REV) | 数量 (SIZE) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4G垂直FPCW天线 | mm | | YJC-6N17-B01 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 设计 | 殷飞杰 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 审核 | OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 批准 | 方文峰 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"><thead><tr><th>图例 (GENERAL TOLERANCES)</th><th>公差 (TOLERANCES)</th><th>图例 (GENERAL TOLERANCES)</th><th>公差 (TOLERANCES)</th></tr></thead><tbody><tr><td>±0.1</td><td>0.1</td><td>±0.1</td><td>0.1</td></tr><tr><td>±0.2</td><td>0.2</td><td>±0.2</td><td>0.2</td></tr><tr><td>±0.3</td><td>0.3</td><td>±0.3</td><td>0.3</td></tr><tr><td>±0.4</td><td>0.4</td><td>±0.4</td><td>0.4</td></tr><tr><td>±0.5</td><td>0.5</td><td>±0.5</td><td>0.5</td></tr></tbody></table> | | | | | | | | | | | | 图例 (GENERAL TOLERANCES) | 公差 (TOLERANCES) | 图例 (GENERAL TOLERANCES) | 公差 (TOLERANCES) | ±0.1 | 0.1 | ±0.1 | 0.1 | ±0.2 | 0.2 | ±0.2 | 0.2 | ±0.3 | 0.3 | ±0.3 | 0.3 | ±0.4 | 0.4 | ±0.4 | 0.4 | ±0.5 | 0.5 | ±0.5 | 0.5 | |
| 图例 (GENERAL TOLERANCES) | 公差 (TOLERANCES) | 图例 (GENERAL TOLERANCES) | 公差 (TOLERANCES) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ±0.1 | 0.1 | ±0.1 | 0.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ±0.2 | 0.2 | ±0.2 | 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ±0.3 | 0.3 | ±0.3 | 0.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ±0.4 | 0.4 | ±0.4 | 0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ±0.5 | 0.5 | ±0.5 | 0.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>深圳市英佳创电子科技有限公司 SHENZHEN YINGJIA CHUANG ELECTRONIC TECHNOLOGY CO., LTD</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



Antenna technical parameters and environmental testing:

| Electrical Specifications | | | |
|--|-----------------|------------------------------|--------------------------|
| Electrical performance indicators | | Electrical Specifications | |
| Frequency range 2400-2500MHz | | Frequency Range 2400-2500MHz | |
| VSWR \leq 1.92 | | VSWR | \leq 1.92 |
| Input impedance 50 Ω | | Input Impedance | 50 Ω |
| direction | Omnidirectional | Direction | All |
| Gain | 2.0 \pm 1dBi | Gain | 2.0 \pm 1dBi |
| Mechanical indicators | | Mechanical Specifications | |
| Wire color Black | | Wire Color | Black |
| Interface type XD | | Input connector | XD |
| Cable length 117MM | | Wire Length | 117MM |
| Working temperature -20 \sim +70 \circ C | | Working Temperature | -20 \sim +70 \circ C |
| Working humidity 20%~80% | | Working Humidity 20%~80% | |

Environmental performance test:

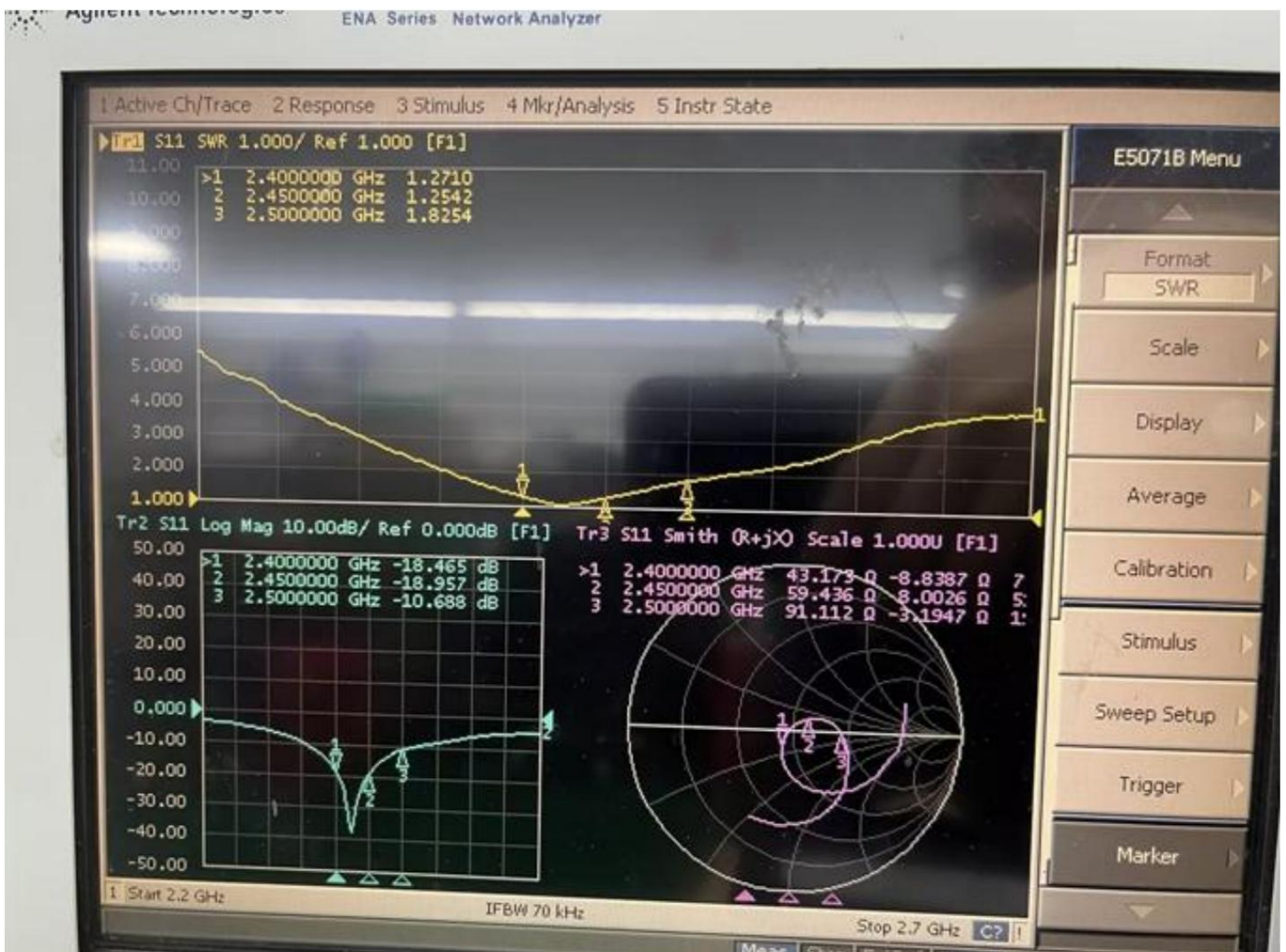
| project | Test conditions | Specification |
|--------------------------------------|--|--|
| Storage environment | When not specified, the test temperature, humidity and air pressure are as follows: 1. Temperature: -20 \sim +70 \circ C 2. Relative humidity is 45%-85% 3. Air pressure is 86kpa-106kpa | Electrical and mechanical performance is normal |
| High and low temperature test | Cycle between 70 \circ C and -20 \circ C for 5 times, then 1-2H, check the appearance quality. | The size should meet the requirements and should meet the full Sufficient mechanical and electrical performance |
| Constant resistance Wet heat test | Relative humidity 95 \pm 3%, test temperature: 40 \circ C. After 2 hours of continuous action, The electrical performance of the test sample shall be measured within 5 minutes after it is taken out. 1-2 hours after the parts are removed, check the appearance quality | The size should meet the requirements and should meet the full Sufficient mechanical and electrical performance |
| Vibration test | Frequency range: 10-55HZ, displacement amplitude: 0.35MM, acceleration amplitude: 50.0M/S, sweep cycle times: 30 times | Electrical and mechanical performance is normal |
| Drop test: 1M high | altitude free fall 3 times in mutually perpendicular axis directions | Electrical and mechanical performance is normal |



Antenna physical picture and attachment location map:



Antenna performance test chart:

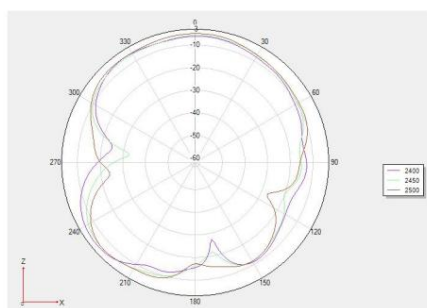




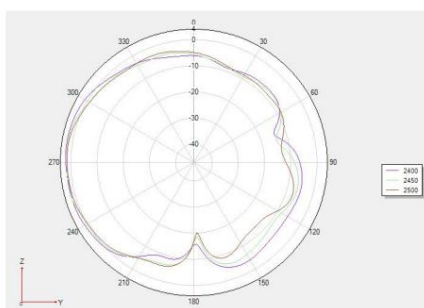
2D, 3D (2.4G) test data:

| Frequency(MHz) | Efficiency (%) | Gain.(dBi) |
|----------------|----------------|------------|
| 2400MHz | 64.30 | 2.48 |
| 2410MHz | 63.11 | 2.55 |
| 2420MHz | 61.12 | 2.33 |
| 2430MHz | 62.95 | 2.51 |
| 2440MHz | 60.79 | 2.30 |
| 2450MHz | 65.76 | 2.17 |
| 2460MHz | 66.50 | 2.46 |
| 2470MHz | 65.01 | 1.85 |
| 2480MHz | 63.24 | 1.97 |
| 2490MHz | 60.67 | 1.59 |
| 2500MHz | 61.80 | 1.74 |

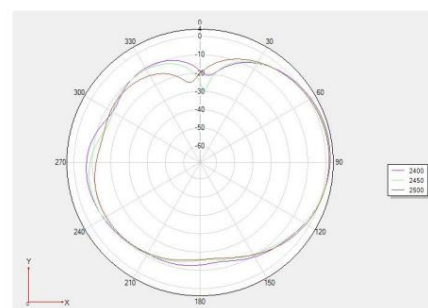
Phi 0 2D graph:



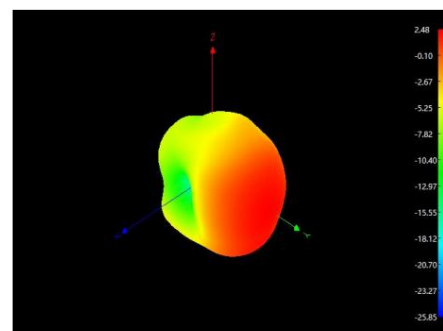
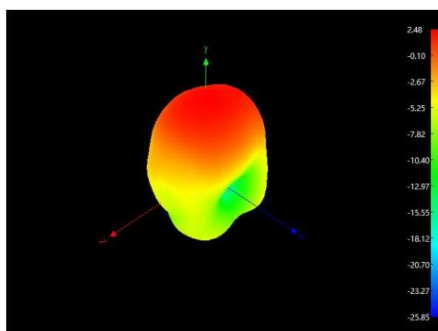
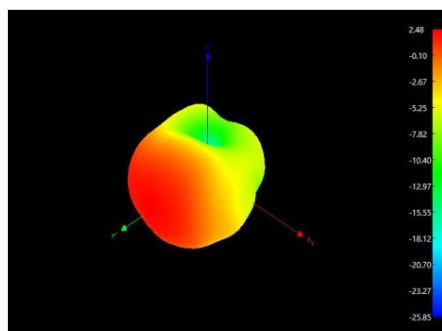
Phi 90 2D Graph



Theta 90 2D Graph

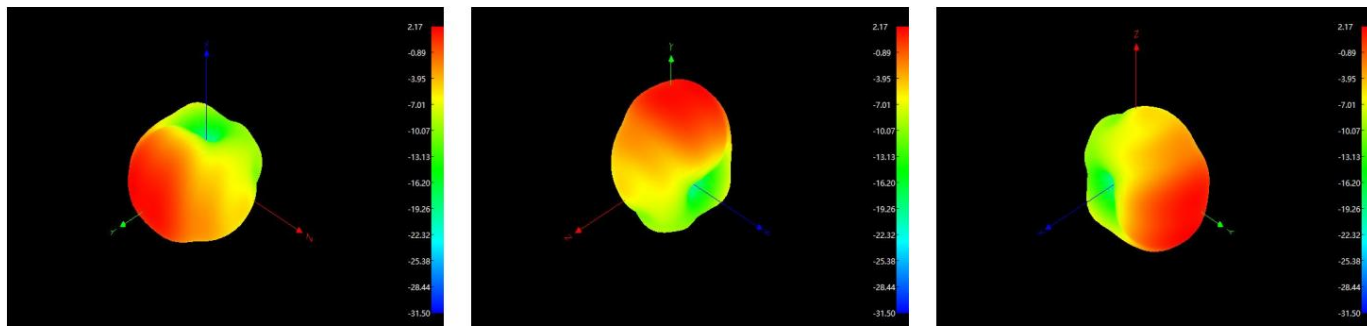


3D 2400

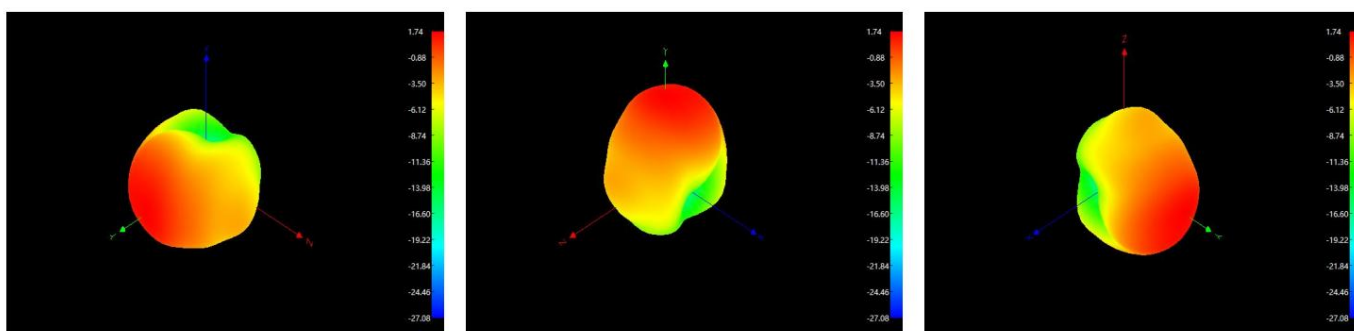




3D 2450



3D 2500



OTA active test data statistics:

| Item | Measurement | Band | Channel | Frequency | Total |
|------|-------------|------------------|---------|-----------|--------|
| 1 | TRP | WIFI_B (11M) | 1 | 2412 | 18.79 |
| 2 | TIS(EIRP) | WIFI_B (11M) | 1 | 2412 | -82.93 |
| 3 | TRP | WIFI_G (54M) | 1 | 2412 | 15.06 |
| 4 | TIS(EIRP) | WIFI_G (54M) | 1 | 2412 | -68.13 |
| 5 | TRP | WIFI_N_ISM (65M) | 1 | 2412 | 16.48 |
| 6 | TIS(EIRP) | WIFI_N_ISM (65M) | 1 | 2412 | -64.04 |



Shenzhen Yingjia Chuang electronic technology Co., LTD

<http://www.szsyjc.com>

| ROHS Material Control Report | | | | | | | | | | | |
|--|--|-----------------------------------|-----------------------------|---------------------------|-----------------------------------|----|----|------------------|----------|----|---------------------|
| This is to certify that the raw materials used in the components and auxiliary materials delivered to your company, as well as the additives in the production process, etc. are in compliance with the environmental requirements of the RoHS Restriction of the Use of Hazardous Substances Directive (RoHS Directive) 2011/65/EC) | | | | | | | | | | | |
| The composition of the raw materials, packaging materials and additives used in the production process of components and auxiliary materials is reported as follows: | | | | | | | | | | | |
| Name of ingredients Component /Part Name | Composition Materials Material Composition | ICP Report Number ICP report # | Testing agency Test Org. | Testing time Test Date | Hazardous substance content (ppm) | | | | | | Qualified? PASS? |
| | | | | | Cd | Pb | Hg | Cr ⁶⁺ | PBB PBDE | | PASS |
| Wire | Teflon coaxial Cables | CANEC2301851703 | SGS | 23/02/23 | ND | ND | ND | ND | ND | ND | PASS |
| FPC | FPC soft board FTS2302160201-01C1 | | SGS | 23/02/20 | ND | ND | ND | ND | ND | ND | PASS |
| Environmentally friendly tin wire | Environmentally friendly tin wire | SHAEC23006357502 | SGS | 23/05/23 | ND | 43 | ND | ND | ND | ND | PASS |
| Terminals | Phosphor bronze | CANEC2301145810 | SGS | 23/02/08 | ND | 5 | ND | ND | ND | ND | PASS |
| | Gold plating A2230400553101001E | | CTI | 23/08/12 | ND | ND | ND | ND | ND | ND | PASS |
| | Rubber core A2230035037101002E | | SGS | 23/02/06 | ND | ND | ND | ND | ND | ND | PASS |