



深圳市英佳创电子科技有限公司

<http://www.szsyjc.com>

# APPROVAL SHEET

|                   |                                      |             |
|-------------------|--------------------------------------|-------------|
| CUSTOMER NAME     |                                      |             |
| CUSTOMER P/N      |                                      |             |
| PART NAME         | 2.4G/5.8G 绿色 PCB 内置天线, 1.13黑 L=160MM |             |
| P/ N              | YJC-6N160-B30                        |             |
| APPROVAL REV.     | A0                                   |             |
| DELIVERY DATE     | 2023 年 03 月 25 日                     |             |
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| APPROVED BY       | 肖 汉                                  |             |
| Customer Approved |                                      |             |
| Prepared By       | Checked By                           | Approved By |
|                   |                                      |             |

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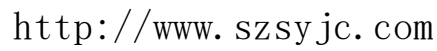
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|     |                                |     |
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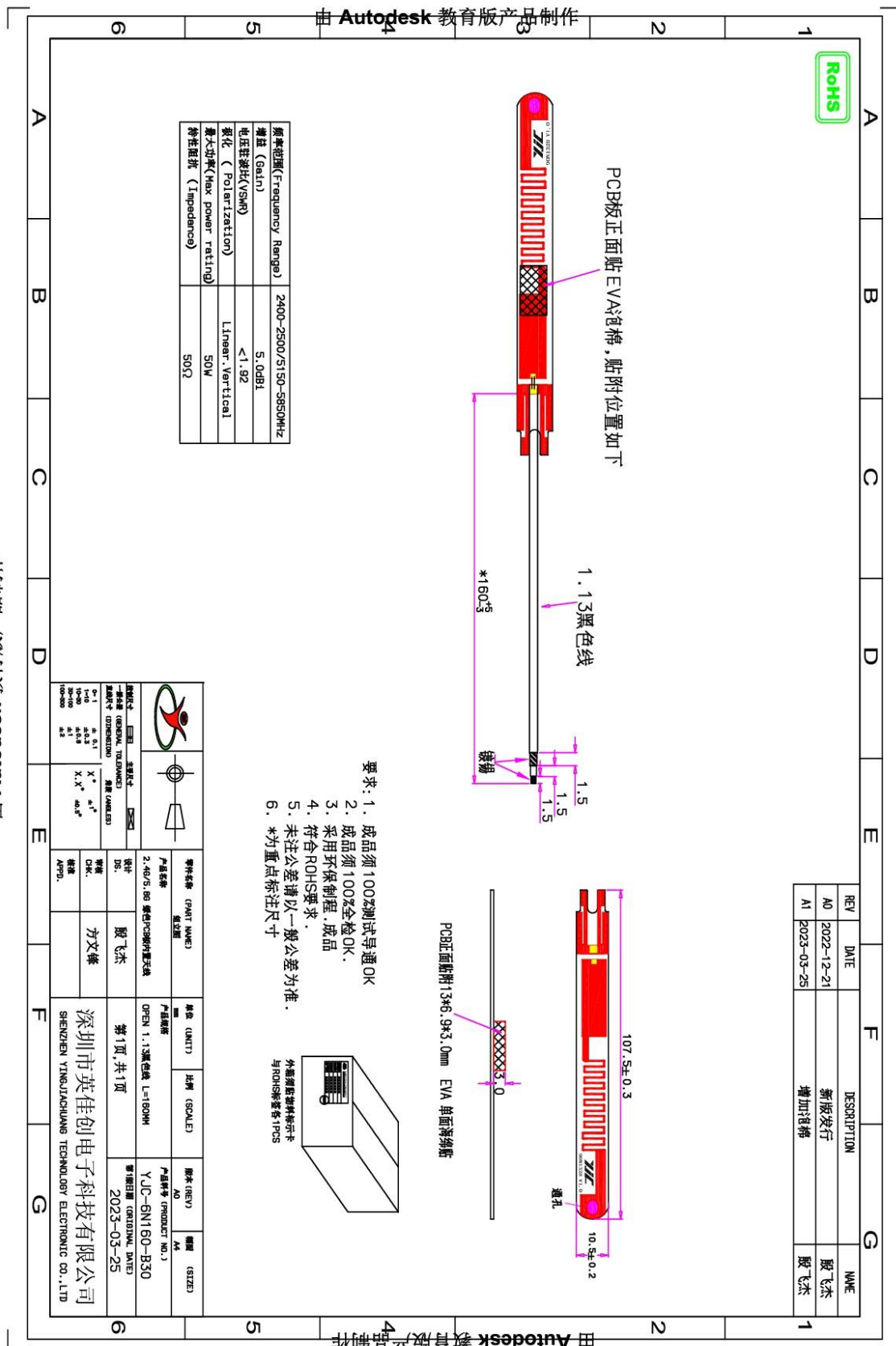


Resume:

| version | reason for change | date              | issue |
|---------|-------------------|-------------------|-------|
| A0      | Initial release   | December 21, 2022 |       |
|         |                   |                   |       |
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Antenna Plan:





Antenna technical parameters and environmental testing:

| Electrical technical parameters |                        |                           |                        |
|---------------------------------|------------------------|---------------------------|------------------------|
| 电 性 能 指 标                       |                        | Electrical Specifications |                        |
| 频率范围                            | 2400-2500/5150-5850MHz | Frequency Range           | 2400-2500/5150-5850MHz |
| 电压驻波比                           | <1.92                  | VSWR                      | <1.92                  |
| 输入阻抗                            | 50 Ω                   | Input Impedance           | 50 Ω                   |
| 方向                              | 全向                     | Direction                 | All                    |
| 增益                              | 5.0dBi                 | Gain                      | 5.0dBi                 |
| 机 械 指 标                         |                        | Mechanical Specifications |                        |
| 线材颜色                            | 黑色                     | Wire Color                | Black                  |
| 接口形式                            | OPEN                   | Input connector           | OPEN                   |
| 线材长度                            | 160MM                  | Wire Length               | 160MM                  |
| 工作温度                            | -20℃~+70℃              | Working Temperature       | -20℃~+70℃              |
| 工作湿度                            | 20%~80%                | Working Humidity          | 20%~80%                |

Physical image of antenna:





Antenna performance testing:

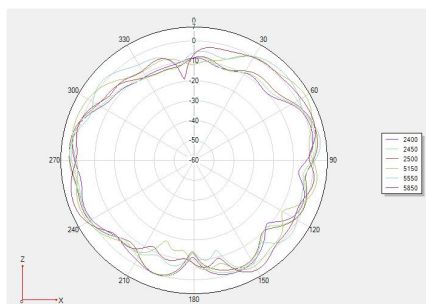




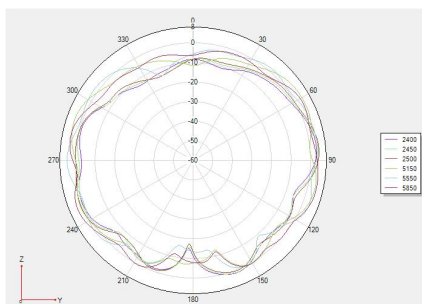
2D、3D(2.4G/5G)test data:

| Frequency (MHz) | Efficiency (%) | Gain. (dBi) |
|-----------------|----------------|-------------|
| 2400MHz         | 60.35          | 3.17        |
| 2410MHz         | 61.83          | 3.73        |
| 2420MHz         | 61.35          | 3.67        |
| 2430MHz         | 63.8           | 4.86        |
| 2440MHz         | 60.59          | 4.61        |
| 2450MHz         | 62.53          | 4.18        |
| 2460MHz         | 62.62          | 3.97        |
| 2470MHz         | 64.19          | 4.64        |
| 2480MHz         | 63.18          | 4.21        |
| 2490MHz         | 64.62          | 4.54        |
| 2500MHz         | 65.17          | 4.42        |
| 5150MHz         | 53.5           | 4.65        |
| 5250MHz         | 55.77          | 5.12        |
| 5350MHz         | 54.96          | 4.68        |
| 5450MHz         | 53.34          | 4.3         |
| 5550MHz         | 52.11          | 4.75        |
| 5650MHz         | 54.65          | 4.9         |
| 5750MHz         | 58.16          | 5.71        |
| 5850MHz         | 55.58          | 5.12        |

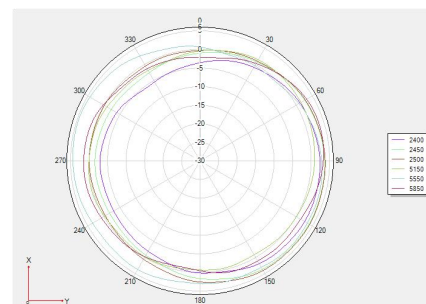
Phi 0 2D:



Phi 90 2D

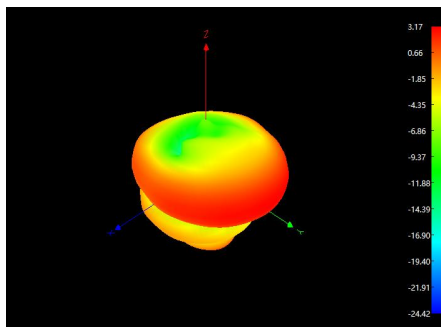


Theta 90 2D

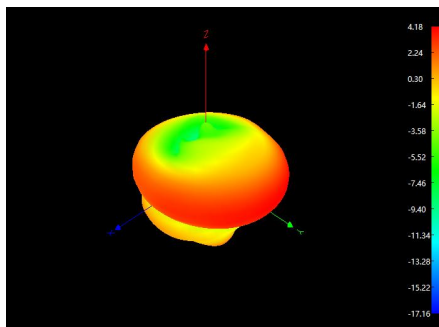




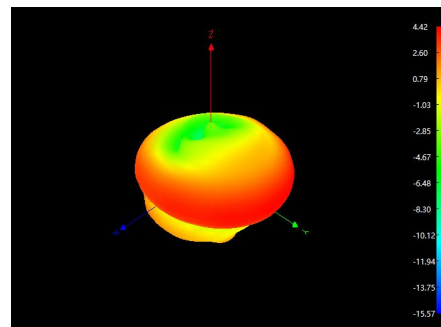
3D 2400:



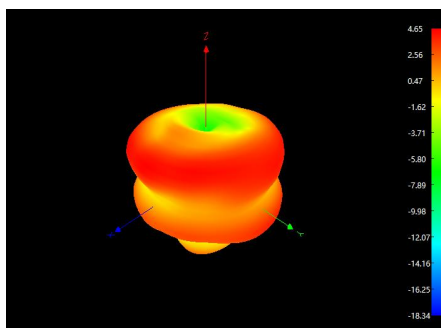
3D 2450:



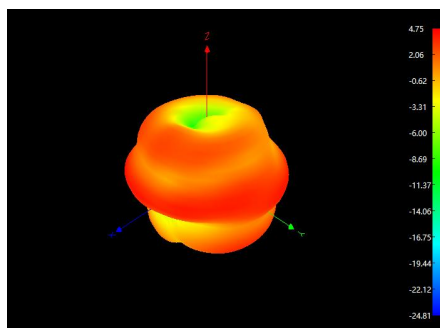
3D 2500:



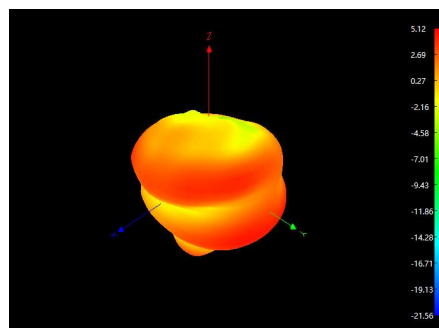
3D 5150:



3D 5550:



3D5850:







| 产品规格 Product Type                        |                                                                                                   | 1.13 线                                                                             |                 |                       |
|------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------|-----------------------|
| 结构图 Structure Drawing                    |                                                                                                   |  |                 |                       |
| 结构特性 Structure Characteristics           |                                                                                                   |                                                                                    |                 |                       |
| 结构 Structure                             | 项目 Item                                                                                           | 标准值 Standard Value                                                                 |                 |                       |
| 内导体<br>Inner Conductor                   | 材质 Material                                                                                       | 镀银铜线 Silver plated copper wire                                                     |                 |                       |
|                                          | 构成(根/mm/Composition(No./mm)                                                                       | 7/0.08±0.005                                                                       |                 |                       |
|                                          | 标称外径 Nom.Dia(mm)                                                                                  | Φ0.24±0.01                                                                         |                 |                       |
| 绝缘层<br>Insulation                        | 材质 Material                                                                                       | 聚全氟乙丙烯/FEP                                                                         |                 |                       |
|                                          | 标称外径 Nom.Dia(mm)                                                                                  | Φ0.7±0.03                                                                          |                 |                       |
| 外导体<br>Outer Conductor                   | 材质 Material                                                                                       | 镀锡铜线 Tinned copper                                                                 |                 |                       |
|                                          | 形式 From                                                                                           | 编织/Weaving                                                                         |                 |                       |
|                                          | 遮蔽率/ Shielding rate                                                                               | ≥90%                                                                               |                 |                       |
|                                          | 标称外径 Nom.Dia(mm)                                                                                  | Φ0.92±0.03                                                                         |                 |                       |
| 护套<br>Jacket                             | 材质 Material                                                                                       | 聚全氟乙丙烯/FEP                                                                         |                 |                       |
|                                          | 标称外径 Nom.Dia(mm)                                                                                  | Φ1.13±0.05                                                                         |                 |                       |
| 电气性能 Electrical Characteristics          |                                                                                                   |                                                                                    |                 |                       |
| 项目 Item                                  | 标准值<br>Standard Value                                                                             | 项目 Item                                                                            | 频率<br>Frequency | 标准值<br>Standard Value |
| 阻抗 Impedance (Ω)                         | 50±3                                                                                              | 衰减<br>Attenuation@20<br>℃<br>(dB/100m)                                             | 1GHz            | ≤2.23                 |
| 电容 Capacitance(pF/m)                     | 98                                                                                                |                                                                                    | 2GHz            | ≤3.15                 |
| 抗拉强度<br>Tensile strengthkgf/mm²          | 1.76                                                                                              |                                                                                    | 3GHz            | ≤3.96                 |
| 驻波比 VSWR                                 | ≤1.40@0-6GHz                                                                                      |                                                                                    | 4GHz            | ≤4.6                  |
| 耐压强度<br>Dielectric Strength (A.C V/1min) | 1000                                                                                              |                                                                                    | 5GHz            | ≤5.15                 |
| 最大工作频率 (MHz)<br>Max.oper. frequency      | 6000                                                                                              |                                                                                    | 6GHz            | ≤5.7                  |
| 可靠性 Dependability                        |                                                                                                   |                                                                                    |                 |                       |
| 最小弯曲半径(单次)Min.Bending Radius/Single      |                                                                                                   | mm                                                                                 | 4               |                       |
| 最小弯曲半径 (重复) Min.Bending Radius/Repeated  |                                                                                                   | mm                                                                                 | 8               |                       |
| 工作温度范围 Operating Temperature             |                                                                                                   | ℃                                                                                  | -20~+80         |                       |
| 包装 Packing                               |                                                                                                   |                                                                                    |                 |                       |
| 包装方式 Packing Mode                        | 1000 (m/盘) 成卷 Reel                                                                                |                                                                                    |                 |                       |
| 使用提示 Trips for Use                       |                                                                                                   |                                                                                    |                 |                       |
| 存储环境 Storage Environment                 | Temperature: below 30 ℃, humidity: 20-65%                                                         |                                                                                    |                 |                       |
| 铁氟龙收缩<br>Teflon Shrink                   | Insulation layer shrinkage ≤ 0.2mm; Shrinkage of sheath layer ≤ 0.3mm                             |                                                                                    |                 |                       |
| 加工温度<br>Processing temperature           | Can withstand for a short period of time at 250 ℃~260 ℃; Thermal decomposition occurs above 300 ℃ |                                                                                    |                 |                       |



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最佳保存周期  
The best save cycle

After 2 months, the tin effect deteriorates, but the electrical performance is not affected. After peeling in high temperature and high humidity environments in summer, it needs to be circulated as soon as possible



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| ROHS                                                                                                                                                                                                                                                                            |                                             |                 |           |           |                                    |     |    |                  |     |      |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------------|-----------|-----------|------------------------------------|-----|----|------------------|-----|------|-------|
| We hereby certify that the components, auxiliary materials, raw materials, and additives used in the production process delivered to your company comply with the environmental requirements of the RoHS Directive on the Restriction of Hazardous Substances (RoHS 2011/65/EC) |                                             |                 |           |           |                                    |     |    |                  |     |      |       |
| The composition report of raw materials, packaging materials, and additives used in the production process for components and auxiliary materials is as follows:                                                                                                                |                                             |                 |           |           |                                    |     |    |                  |     |      |       |
| Component<br>/Part Name                                                                                                                                                                                                                                                         | Material<br>Composition                     | ICP report #    | Test Org. | Test Date | Content of harmful substances(ppm) |     |    |                  |     |      | PASS? |
|                                                                                                                                                                                                                                                                                 |                                             |                 |           |           | Cd                                 | Pb  | Hg | Cr <sup>6+</sup> | PBB | PBDE | PASS  |
| wire rod                                                                                                                                                                                                                                                                        | Teflon<br>coaxial<br>cable                  | SZXEC2202766604 | SGS       | 22/08/18  | ND                                 | ND  | ND | ND               | ND  | ND   | PASS  |
| PCB                                                                                                                                                                                                                                                                             | PCB                                         | CANEC2221844502 | SGS       | 22/10/20  | ND                                 | 12  | ND | ND               | ND  | ND   | PASS  |
| EVA                                                                                                                                                                                                                                                                             | EVA foam<br>adhesive                        | CANEC2227574118 | SGS       | 23/01/03  | ND                                 | 8   | ND | ND               | ND  | ND   | PASS  |
| Environmenta<br>lly friendly<br>tin wire                                                                                                                                                                                                                                        | Environment<br>ally<br>friendly<br>tin wire | SHAEC2206174502 | SGS       | 22/06/13  | ND                                 | 181 | ND | ND               | ND  | ND   | PASS  |