



# Tengxiang Technology.Inc

东莞市腾祥电子有限公司

Product Number: AN0827-58B01BLX-W

Product Name: Antenna

## Specification For Approval

Date: 2023.6.13

Version: 1.0

客户名称

Customer:

客户料号

Customer P/N:

腾祥料号

TX P/N:

AN0827-58B01BLX-W

规格描述

Description:

4G 白色天线 1.13mm 蓝色线 L=250mm+IPEX

|                               |     |                               |  |
|-------------------------------|-----|-------------------------------|--|
| Tengxiang Checked By:<br>腾祥审核 |     | Customer Approved By:<br>客户审核 |  |
| DRAWN<br>制作                   | 路婷  | TESTED BY<br>检测               |  |
| CHECKED BY<br>审核              | 胡超  | CHECKED BY<br>审核              |  |
| Q.C.DEPT.<br>品管               | 梁凤珍 | Q.C.DEPT.<br>品管               |  |
| APPROVED BY<br>核准             | 韦佳  | APPROVEDBY<br>核准              |  |



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Product Number: AN0827-58B01BLX-W

Product Name: Antenna

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5. Mechanical and Packing Drawing (图纸包装规范)

## Revision History (变更履历)

| Revision | Date      | Change Notification | Description |
|----------|-----------|---------------------|-------------|
| 1.0      | 2023.6.13 | 初版                  |             |
|          |           |                     |             |
|          |           |                     |             |
|          |           |                     |             |
|          |           |                     |             |
|          |           |                     |             |

Product Number: AN0827-58B01BLX-W

Product Name: Antenna

## 1. Specification

| Sample Photo                                                                       |                           |
|------------------------------------------------------------------------------------|---------------------------|
|  |                           |
| A. Electrical Characteristics                                                      |                           |
| Frequency 频率                                                                       | 824-960 MHz /1710-2700MHz |
| S.W.R. 驻波比                                                                         | $\leq 3.0$ / $\leq 2.5$   |
| Antenna Gain 增益                                                                    | 0.85dBi /3.85dBi          |
| Polarization 极化方式                                                                  | Linear                    |
| Impedance 阻抗                                                                       | 50 Ohm                    |
| B. Material & Mechanical Characteristics                                           |                           |
| Material of Plastic 塑胶材质                                                           | PC                        |
| Cable Type 线材规格                                                                    | OD1.13mm ,BLUE            |
| Connector Type 连接器规格                                                               | I-PEX                     |
| C. Environmental                                                                   |                           |
| Storage Temperature<br>存储温度                                                        | - 40 °C ~ +80 °C          |
| Operation Temperature<br>工作温度                                                      | - 40 °C ~ +80 °C          |
| Antenna Color Storage life<br>天线颜色存储寿命                                             | < 2 year                  |

Product Number: AN0827-58B01BLX-W

Product Name: Antenna

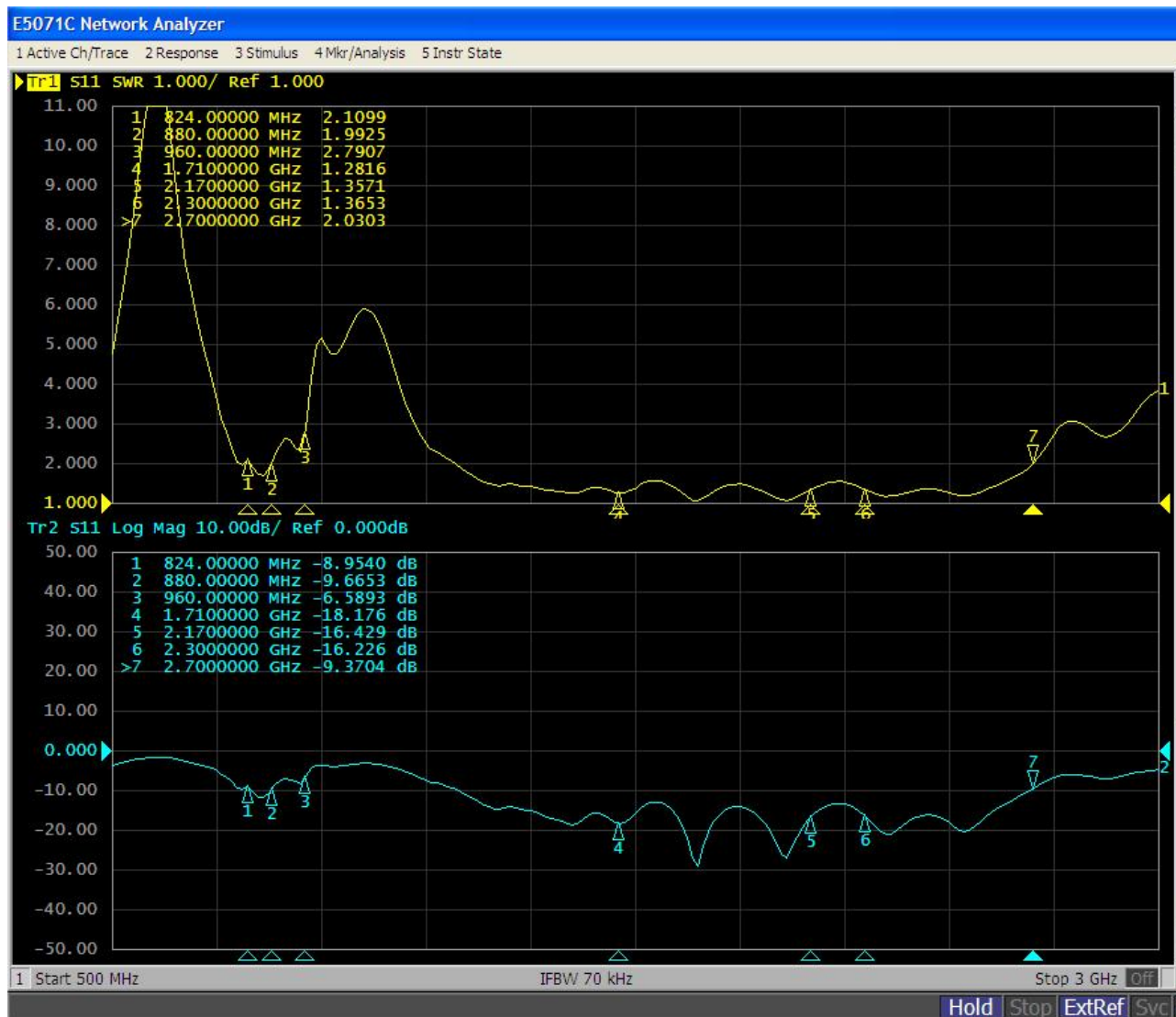
## 2. Characteristics and Reliability Test

| Test Items 测试项目 |                                          | Test Condition and Procedure 测试方法                                                                                                                | Requirements 要求                                                                                                    | Result 结果 |
|-----------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------|
| 1               | V.S.W.R.<br>电压驻波比                        | Set DUT on Network Analyzer; make individual calibration to test 设置网络分析仪参数进行测试                                                                   | Directive DUT specification<br>符合待测物规范                                                                             | PASS      |
| 2               | Antenna Gain<br>天线增益                     | Set DUT on Antenna Chamber; make individual calibration to test 设置天线暗室参数进行测试                                                                     | Directive DUT specification<br>符合待测物规范                                                                             | PASS      |
| 3               | Pull Test<br>拉力                          | Holding with individual specification; force applied to axis of terminal 单独定义产品端子拉力                                                              | 1. Directive DUT specification<br>2. Frequency Tol. $\leq 5\%$<br>符合待测物规范; 频率偏移 $\leq 5\%$                         | PASS      |
| 4               | Torque Test<br>扭力                        | Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal<br>单独定义产品端子之顺时针及逆时针扭力                      | 1. Directive DUT specification<br>2. Frequency Tol. $\leq 5\%$<br>符合待测物规范; 频率偏移 $\leq 5\%$                         | PASS      |
| 5               | Dimension<br>尺寸                          | Inspection of dimension, color, material, package, surface process. 检查尺寸, 颜色, 材料, 包装, 表面处理                                                       | Directive DUT specification<br>符合待测物规范                                                                             | PASS      |
| 6               | Waterproof<br>防水                         | With Reference to IEC 60529 // IP Code Definition<br>参考 IEC60529 IP 定义                                                                           | Directive DUT specification<br>符合待测物规范                                                                             | NA        |
| 7               | Salt Spray 盐雾                            | GB / T 2423.17-2008<br>Temp: 35°C; RH: $\geq 95\%$ ; NaCl solution: $\geq 5\%$ ; Time: 24H<br>温度 35°C; 湿度 $\geq 95\%$ ; 盐水浓度 $\geq 5\%$ ; 测试 24H | 1. No Visual Damage<br>2. Frequency Tol. $\leq 5\%$<br>无明显外观不良; 频率偏移 $\leq 5\%$                                    | PASS      |
| 8               | Temperature and Humidity Chamber<br>恒温恒湿 | GB / T 2423.3-2006<br>Temp: 80°C / 12 H; -40°C / 12H RH: $\geq 90\%$ ; Time: 24H<br>温度 80°C 测试 12H 转 -40°C 测试 12H; 湿度 $\geq 90\%$ ; 时间 24H       | After 2 Hours Recovery<br>1. No Visual Damage<br>2. Frequency Tol. $\leq 5\%$<br>恢复 2H 后, 无明显外观不良; 频率偏移 $\leq 5\%$ | PASS      |
| 9               | Aging test<br>老化                         | GB / T 2423.2 - 2008<br>Temp 80°C; Time: 24 hours<br>温度 80°C, 测试 24H                                                                             | After 2 Hours Recovery<br>1. No Visual Damage<br>2. Frequency Tol. $\leq 5\%$<br>无明显外观不良; 频率偏移 $\leq 5\%$          | PASS      |
| 10              | RoHS                                     | With Reference to IEC 62321:2008 with flow chart<br>参考 IEC 62321 测试流程                                                                            | Directive RoHS 2011/65/EU<br>符合 RoHS 2015/863/EU 标准                                                                | PASS      |

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## 3. Antenna - S Parameter Test Data



## 4. Antenna - Radiation Pattern Test Data

| Frequency ID    | 1     | 2     | 3     | 4     | 5     | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     | 20     | 21     |
|-----------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz) | 824.0 | 858.0 | 892.0 | 926.0 | 960.0 | 1710.0 | 1756.0 | 1802.0 | 1848.0 | 1894.0 | 1940.0 | 1986.0 | 2032.0 | 2078.0 | 2124.0 | 2170.0 | 2300.0 | 2400.0 | 2500.0 | 2600.0 | 2700.0 |
| Gain (dBi)      | 0.76  | 0.85  | 0.11  | 0.19  | 0.18  | 0.23   | 0.88   | 1.74   | 3.43   | 3.37   | 3.69   | 3.85   | 3.35   | 2.86   | 3.32   | 2.19   | 1.52   | 3.32   | 3.47   | 1.16   | 0.61   |
| Efficiency (%)  | 44.71 | 50.50 | 41.15 | 38.23 | 39.29 | 39.54  | 49.25  | 49.66  | 57.68  | 59.76  | 56.68  | 56.92  | 45.19  | 43.69  | 43.80  | 39.31  | 39.24  | 44.05  | 50.53  | 35.45  | 28.82  |

有源

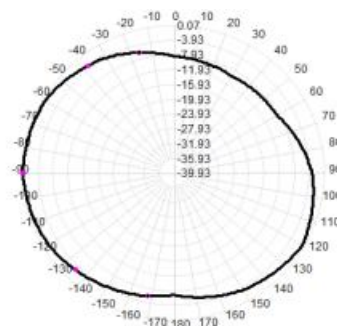
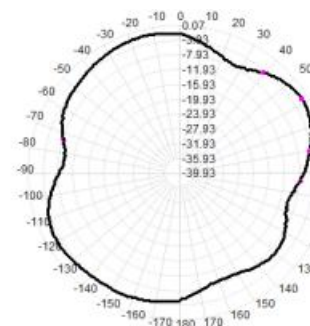
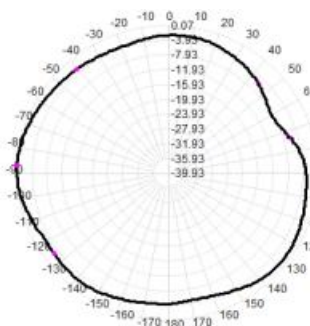
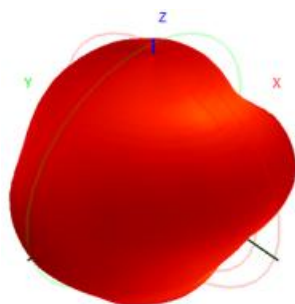
| Test BW   | FDD-10MHz |        |        |        | TDD-20MHz |         |         |         |         |
|-----------|-----------|--------|--------|--------|-----------|---------|---------|---------|---------|
| Channel   | LTE-B1    | LTE-B3 | LTE-B5 | LTE-B8 | LTE-B34   | LTE-B38 | LTE-B39 | LTE-B40 | LTE-B41 |
| TRP (dBm) | 19.61     | 20.69  | 18.46  | 19.11  | 20.7      | 16.56   | 20.73   | 20.07   | 15.18   |
| TIS (dBm) | -90.22    | -87.14 | -81.53 | -82.79 | -85.85    | -88.08  | -87.62  | -91.69  | -88.47  |



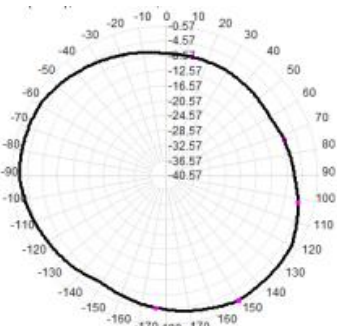
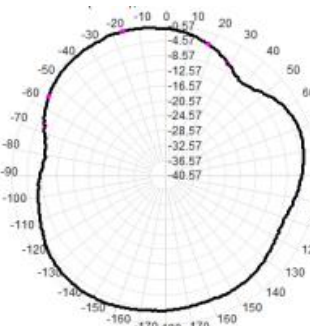
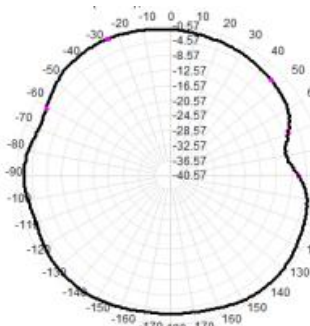
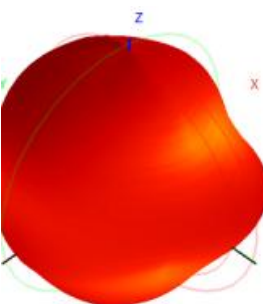
Product Number: AN0827-58B01BLX-W

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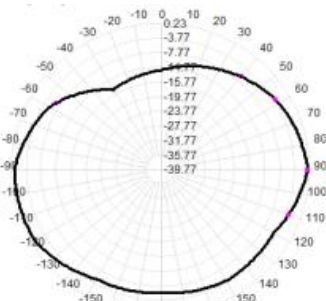
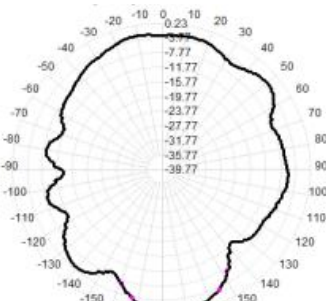
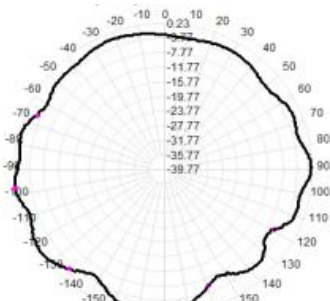
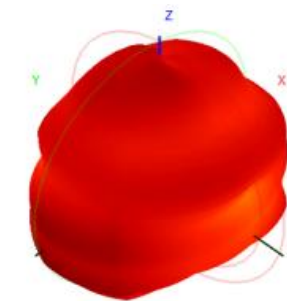
824MHz



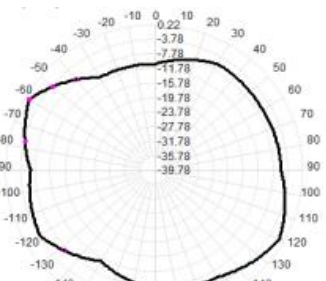
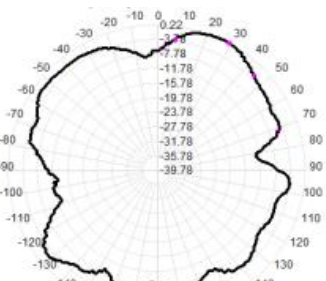
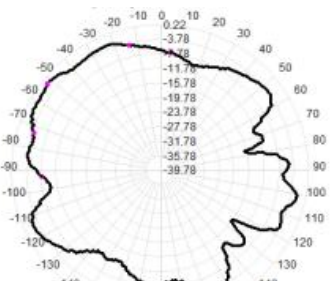
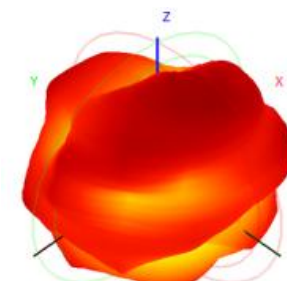
960MHz



1710MHz



2700MHz



5. Mechanical Drawing See attached files

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |               |            |            |                                                                                                                                                                                                                                |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------------|------|------|-------------|----------|---|----------|---------------|--------|------|---|---|---------------|--------|----|----------|---|---|--------------|--------|----|-------|---|-----|-------------|------|----------|--------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------|--------|-------|--------|--|-----------|-----|----|----|-----|-----------|----------|------------|------------|------------|------------|------------|-----------|-------------|--|--|--|--|--------|
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2             | 3             | 4          | 5          | 6                                                                                                                                                                                                                              | 7 | 8           |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| <div>HF<input type="checkbox"/></div> <div>RoHS2.0<input checked="" type="checkbox"/></div> <div>REACH<input type="checkbox"/></div> <div>CONFIDENTIAL</div>                                                                                                                                                                                                                                                                                                                                          |               |               |            |            | <table><tr><td>SIGN</td><td>DATE</td><td>DESCRIPTION</td><td>APPROVER</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table> |   |             | SIGN | DATE | DESCRIPTION | APPROVER |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| SIGN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | DATE          | DESCRIPTION   | APPROVER   |            |                                                                                                                                                                                                                                |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |               |            |            |                                                                                                                                                                                                                                |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |               |            |            |                                                                                                                                                                                                                                |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |               |            |            |                                                                                                                                                                                                                                |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |               |            |            |                                                                                                                                                                                                                                |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| <div>Note:<div>1. Dimension: Take * is the important dimension</div><div>2. Tolerance: Unmarked tolerance refer to the standard tolerance please</div></div>                                                                                                                                                                                                                                                                                                                                          |               |               |            |            |                                                                                                                                                                                                                                |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| <table><tr><td>4</td><td>CR-113-ZP-A</td><td>IPEX</td><td>CU</td><td>Au Plated</td><td>1</td></tr><tr><td>3</td><td>CB-113BL</td><td>Coaxial Cable</td><td>OD1.13</td><td>BLUE</td><td>1</td></tr><tr><td>2</td><td>ANT58B-02WH35</td><td>Body 2</td><td>PC</td><td>White,新模</td><td>1</td></tr><tr><td>1</td><td>ANT58-01WH35</td><td>Body 1</td><td>PC</td><td>White</td><td>1</td></tr><tr><td>No.</td><td>Part Number</td><td>Name</td><td>Material</td><td>Finish</td><td>Q'ty</td></tr></table> |               |               |            |            |                                                                                                                                                                                                                                | 4 | CR-113-ZP-A | IPEX | CU   | Au Plated   | 1        | 3 | CB-113BL | Coaxial Cable | OD1.13 | BLUE | 1 | 2 | ANT58B-02WH35 | Body 2 | PC | White,新模 | 1 | 1 | ANT58-01WH35 | Body 1 | PC | White | 1 | No. | Part Number | Name | Material | Finish | Q'ty | <div> <b>Tengxiang Electronics Co., Ltd.</b></div> <div>TITLE: 4G Antenna</div> <div>PART NO.: AN0827-58B01BLX-W</div> <div>DWG NAME:</div> <table><tr><td>APP BY</td><td>CHK BY</td><td>RF BY</td><td>DES BY</td><td></td><td>Tolerance</td></tr><tr><td>YCX</td><td>HC</td><td>WJ</td><td>DWF</td><td>UNITS: mm</td><td>X.X ±0.5</td></tr><tr><td>2023.06.12</td><td>2023.06.12</td><td>2023.06.12</td><td>2023.06.12</td><td>SCALE: 1/1</td><td>X.XX ±0.2</td></tr><tr><td colspan="5">REVISION: A</td><td>X° ±1°</td></tr></table> |  | APP BY | CHK BY | RF BY | DES BY |  | Tolerance | YCX | HC | WJ | DWF | UNITS: mm | X.X ±0.5 | 2023.06.12 | 2023.06.12 | 2023.06.12 | 2023.06.12 | SCALE: 1/1 | X.XX ±0.2 | REVISION: A |  |  |  |  | X° ±1° |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CR-113-ZP-A   | IPEX          | CU         | Au Plated  | 1                                                                                                                                                                                                                              |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CB-113BL      | Coaxial Cable | OD1.13     | BLUE       | 1                                                                                                                                                                                                                              |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ANT58B-02WH35 | Body 2        | PC         | White,新模   | 1                                                                                                                                                                                                                              |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ANT58-01WH35  | Body 1        | PC         | White      | 1                                                                                                                                                                                                                              |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Part Number   | Name          | Material   | Finish     | Q'ty                                                                                                                                                                                                                           |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| APP BY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | CHK BY        | RF BY         | DES BY     |            | Tolerance                                                                                                                                                                                                                      |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| YCX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | HC            | WJ            | DWF        | UNITS: mm  | X.X ±0.5                                                                                                                                                                                                                       |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| 2023.06.12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2023.06.12    | 2023.06.12    | 2023.06.12 | SCALE: 1/1 | X.XX ±0.2                                                                                                                                                                                                                      |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| REVISION: A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |               |            |            | X° ±1°                                                                                                                                                                                                                         |   |             |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2             | 3             | 4          | 5          | 6                                                                                                                                                                                                                              | 7 | 8           |      |      |             |          |   |          |               |        |      |   |   |               |        |    |          |   |   |              |        |    |       |   |     |             |      |          |        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |        |        |       |        |  |           |     |    |    |     |           |          |            |            |            |            |            |           |             |  |  |  |  |        |

# 產品包裝規範

## PACKING CRITERION

Date: 2023.06.12

Page: 1 of 1

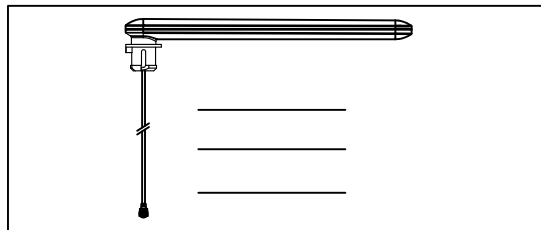
Part Number : AN0827-58B01BLX-W

Revision : A

Name: Antenna

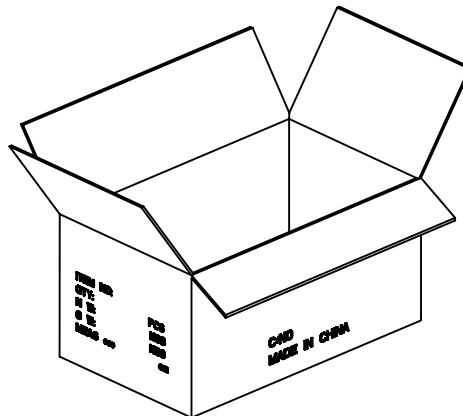
Customer : ALL

1 . Enter PE bag。



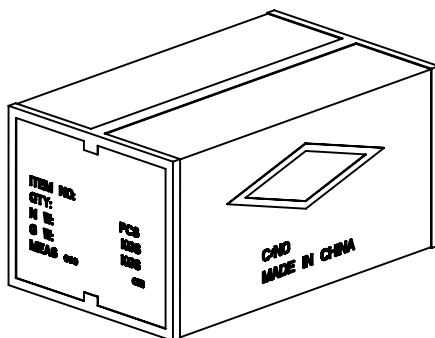
20pcs/ PE bag

2.PACKING 。

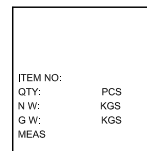


1000pcs/Carton

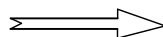
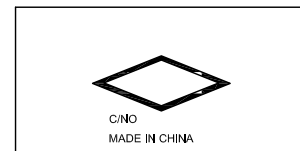
3. SEALING 。



SIDE



FRONT



APPROVED BY : YCX

CHECKED BY : HC

DESIGNED BY : DWF