



# Tengxiang Technology.Inc

东莞市腾祥电子有限公司

Product Number:AN2400-FPC231BX

Product Name: Antenna

## Specification For Approval

Date: 2023.07.19

Version: 1.1

客户名称

Customer:

深圳市神牛摄影器材有限公司

客户料号

Customer P/N:

122-80113-000

腾祥料号

T X P/N:

AN2400-FPC231BX

规格描述

Description :

2.4G FPC 天线 1.13mm 黑色线 L=60mm +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             |  |



NO.53 Shatou ShaChong Road, ChangAn Town, Guangdong province, China

中国广东省东莞市长安镇沙头区沙涌路 53 号

TEL:86-769-81873082 FAX:86-769-82663788

<http://www.tenxiang.cn>



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Product Number:AN2400-FPC231BX

Product Name: Antenna

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## Revision History (变更履历)

| Revision | Date       | Change Notification | Description         |
|----------|------------|---------------------|---------------------|
| 1.0      | 2023.6.8   | 初版                  |                     |
| 1.1      | 2023.07.19 | B                   | 增加离型纸易撕角 线材变更为 60mm |
|          |            |                     |                     |
|          |            |                     |                     |
|          |            |                     |                     |
|          |            |                     |                     |

Product Number: AN2400-FPC231BX

Product Name: Antenna

## 1. Specification

|                                                                                    |                 |
|------------------------------------------------------------------------------------|-----------------|
| Sample Photo                                                                       |                 |
|  |                 |
| <b>A. Electrical Characteristics</b>                                               |                 |
| Frequency 频率                                                                       | 2400-2500 MHz   |
| S.W.R. 驻波比                                                                         | 参考波形            |
| Antenna Gain 增益                                                                    | 3.69dBi         |
| Polarization 极化方式                                                                  | Linear          |
| Impedance 阻抗                                                                       | 50 Ohm          |
| <b>B. Material &amp; Mechanical Characteristics</b>                                |                 |
| Cable Type 线材规格                                                                    | OD1.13mm ,Black |
| Connector Type 连接器规格                                                               | I-PEX           |
| <b>C. Environmental</b>                                                            |                 |
| Storage Temperature<br>存储温度                                                        | - 40°C ~ +80 °C |
| Operation Temperature<br>工作温度                                                      | - 40°C ~ +80 °C |

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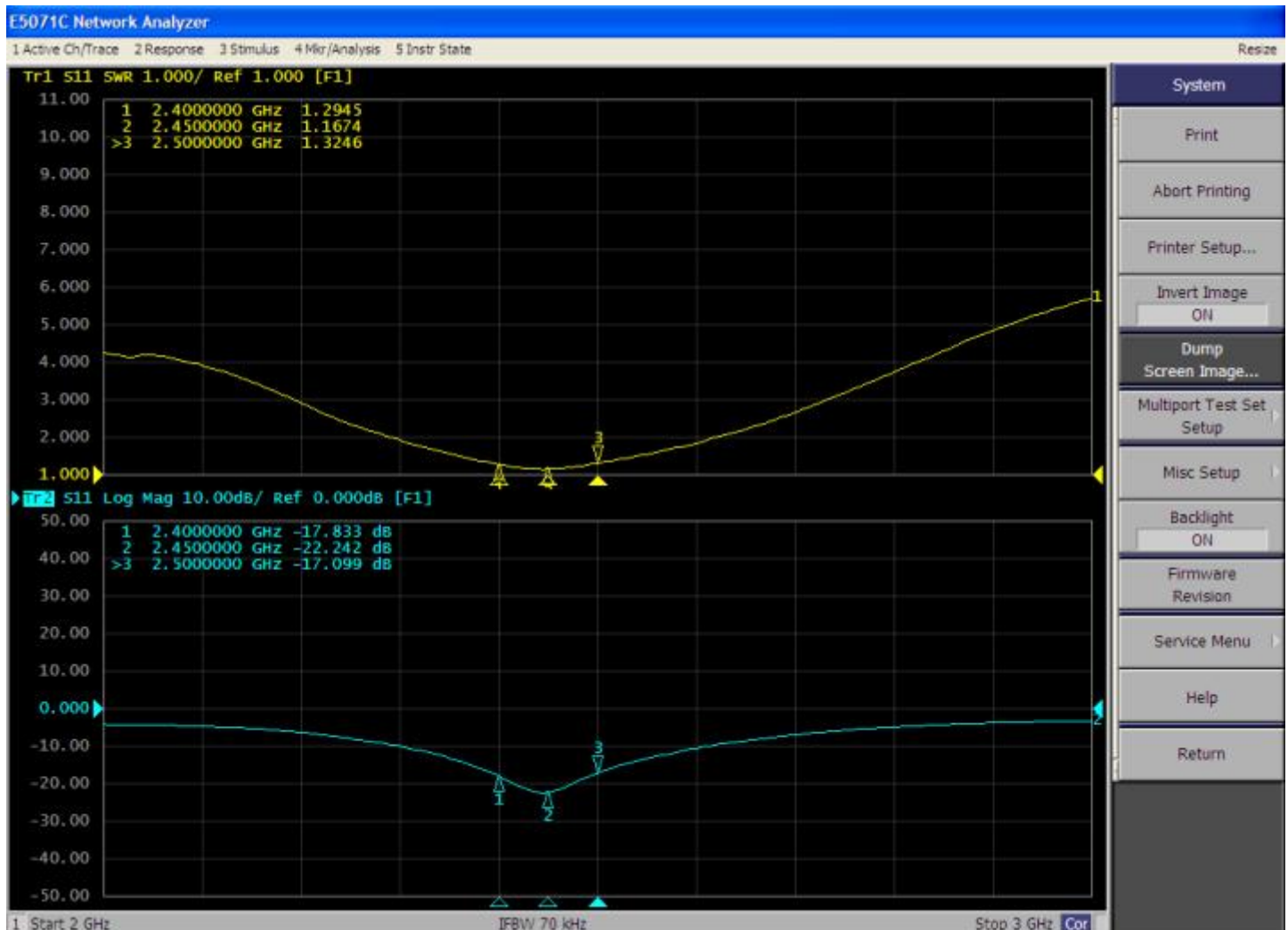
## 2. Characteristics and Reliability Test

| 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               | Insertion Loss 插入损失  | 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      |
| 3               | 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      |
| 4               | Solderability<br>可焊性 | GB / T2423.28-2005<br>Temp: 260±5° C;Duration: 5 seconds 温度 260±5° C;持续 5 秒                                    | Tin evenly on full<br>上锡均匀饱满                                              | PASS      |
| 5               | 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.≤5%<br>符合待测物规范;频率偏移≤5% | PASS      |
| 6               | 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      |
| 7               | Salt Spray 盐雾        | GB / T 2423.17-2008<br>Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H<br>温度 35°C; 湿度≥95%;盐水浓度≥5%; 测试 24H | 1. No Visual Damage<br>2. Frequency Tol.≤5%<br>无明显外观不良;频率偏移≤5%            | PASS      |
| 8               | RoHS                 | With Reference to IEC 62321:2008 with flow chart<br>参考 IEC 62321 测试流程                                          | Directive RoHS 2015/863/EU<br>符合 RoHS 2015/863/EU 标准                      | PASS      |

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## 3. Antenna - S Parameter Test Data



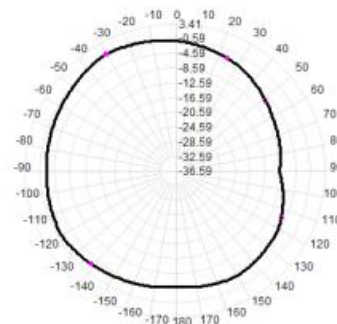
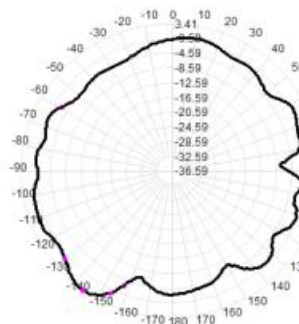
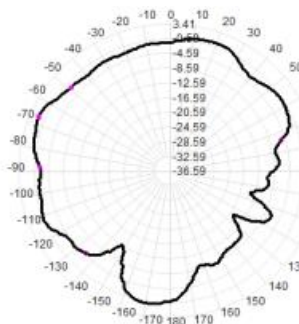
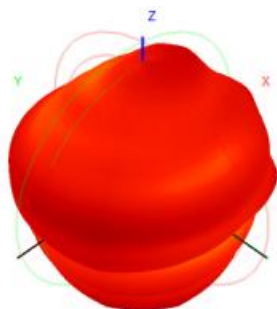
## 4. Antenna - Radiation Pattern Test Data

| Frequency ID    | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz) | 2400.0 | 2410.0 | 2420.0 | 2430.0 | 2440.0 | 2450.0 | 2460.0 | 2470.0 | 2480.0 | 2490.0 | 2500.0 |
| Gain (dBi)      | 3.41   | 3.63   | 3.65   | 3.58   | 3.69   | 3.67   | 3.59   | 3.39   | 3.30   | 2.94   | 2.90   |
| Efficiency (%)  | 62.22  | 65.12  | 65.94  | 66.45  | 69.34  | 69.63  | 69.67  | 67.93  | 68.05  | 64.47  | 64.80  |

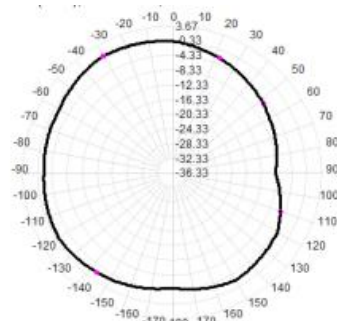
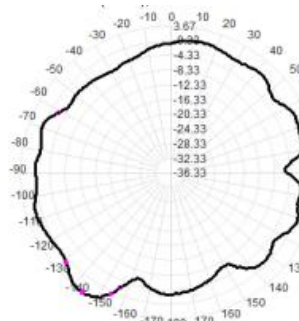
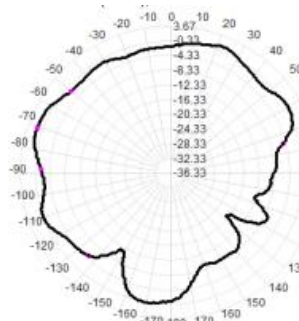
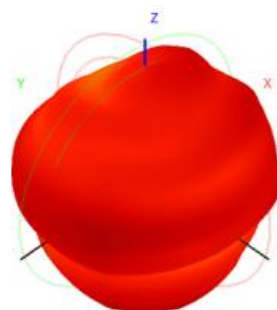
Product Number:AN2400-FPC231BX

Product Name: Antenna

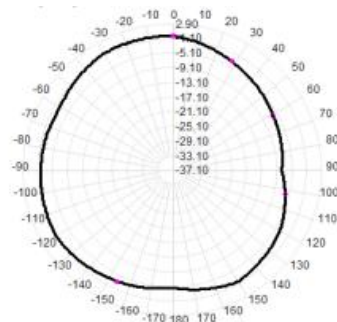
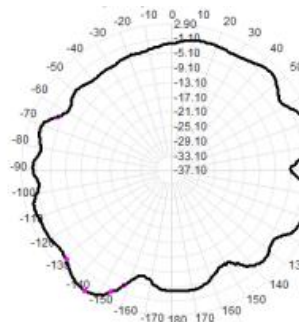
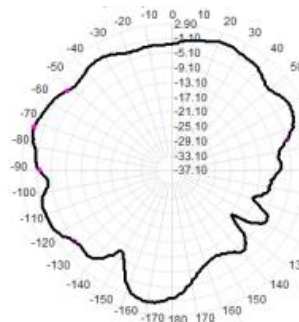
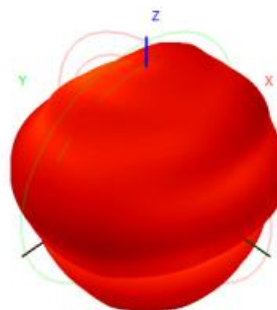
2400MHz



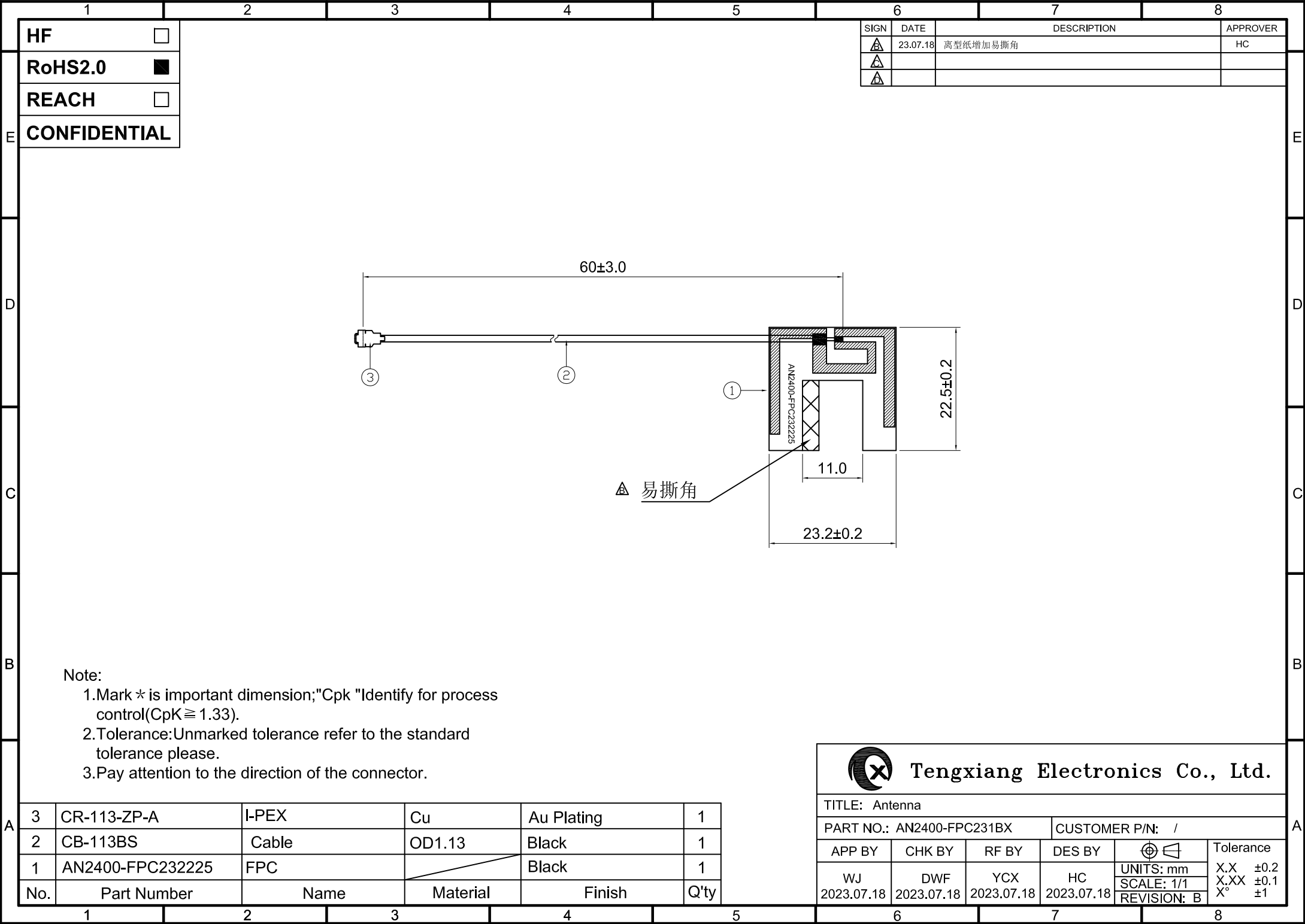
2450MHz



2500MHz



5. Mechanical Drawing See attached files



|              |                                     |
|--------------|-------------------------------------|
| HF           | <input type="checkbox"/>            |
| RoHS2.0      | <input checked="" type="checkbox"/> |
| REACH        | <input type="checkbox"/>            |
| CONFIDENTIAL |                                     |

| SIGN | DATE     | DESCRIPTION | APPROVER |
|------|----------|-------------|----------|
|      | 23.07.18 | 离型纸增加易撕角    | HC       |
|      |          |             |          |
|      |          |             |          |

Note:  
1.Mark \* is important dimension;"Cpk "Identify for process control(CpK≥1.33).  
2.Tolerance:Unmarked tolerance refer to the standard tolerance please.  
3.Pay attention to the direction of the connector.

|     |                  |       |          |            |      |
|-----|------------------|-------|----------|------------|------|
| 3   | CR-113-ZP-A      | I-PEX | Cu       | Au Plating | 1    |
| 2   | CB-113BS         | Cable | OD1.13   | Black      | 1    |
| 1   | AN2400-FPC232225 | FPC   |          | Black      | 1    |
| No. | Part Number      | Name  | Material | Finish     | Q'ty |

|                           |            |            |            |                 |           |
|---------------------------|------------|------------|------------|-----------------|-----------|
|                           |            |            |            |                 |           |
| TITLE: Antenna            |            |            |            |                 |           |
| PART NO.: AN2400-FPC231BX |            |            |            | CUSTOMER P/N: / |           |
| APP BY                    | CHK BY     | RF BY      | DES BY     |                 | Tolerance |
| WJ                        | DWF        | YCX        | HC         | UNITS: mm       | X.X ±0.2  |
| 2023.07.18                | 2023.07.18 | 2023.07.18 | 2023.07.18 | SCALE: 1/1      | X.XX ±0.1 |
|                           |            |            |            | REVISION: B     | X° ±1     |

# 產品包裝規範

## PACKING CRITERION

Date: 2023.07.18

Page: 1 of 1

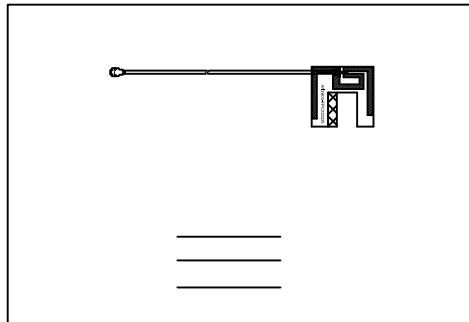
Part Number : AN2400-FPC231BX

Revision : A

Name: Antenna

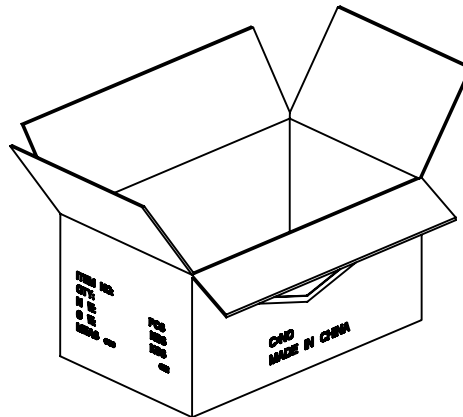
Customer : ALL

1 . Enter PE bag。



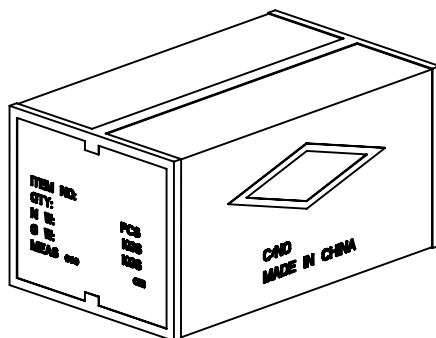
100pcs/ PE bag

2.PACKING。

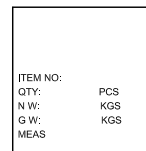


8000pcs/Carton

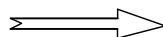
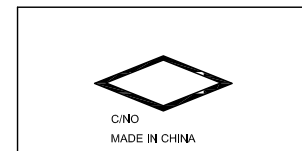
3. SEALING。



SIDE



FRONT



APPROVED BY: WJ

CHECKED BY: YCX

DESIGNED BY: HC