



GUANGZHOU XAIRCRAFT TECHNOLOGY  
CO., LTD.

Number: AN5800-PCB41BX

Edition: A0

Name: 5.8G built-in PCB antenna

Specification: 5G PCB antenna 1.13mm black line L=135mm+PEX

Surface treatment: Screen printing

manufacturer: Dongguan Haiheng electronic Technology Co., LTD

address: 209, Floor 2, No. 51, East Jinghai Road, Shatou South District, Chang 'an Town, Dongguan City

Product Number: AN5800-PCB41BX  
Product Name: Antenna

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**Revision History (变更履历)**

<b>Revision</b>	<b>Date</b>	<b>Change Notification</b>	<b>Description</b>
1.0	2023.12.20	初版	

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## 1. Specification

### Sample Photo



### A. Electrical Characteristics

Frequency 频率	5150 -5850 MHz
S.W.R. 驻波比	<= 2.0
Antenna Gain 增益	5.87dBi
Polarization 极化方式	Linear
Impedance 阻抗	50 Ohm

### B. Material & Mechanical Characteristics

Cable Type 线材规格	OD1.13mm , Black
Connector Type 连接器规格	I-PEX

### C. Environmental

Storage Temperature 存储温度	- 40°C ~ +80 °C
Operation Temperature 工作温度	- 40°C ~ +80 °C

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## 2. Characteristics and Reliability Test

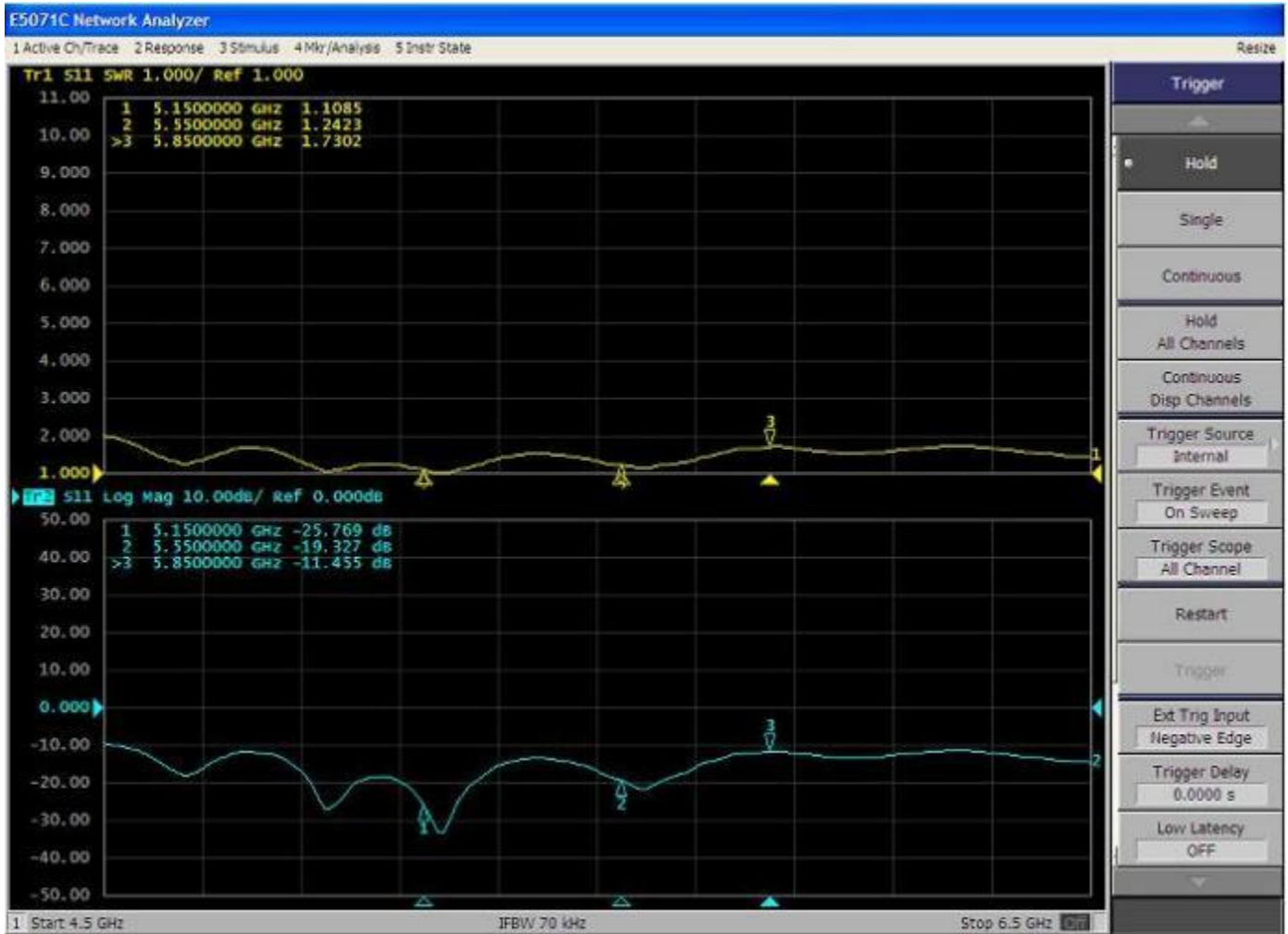
Test Items 测试项目	Test Condition and Procedure 测试方法	Requirements 要求	Result 结果
1 V.S.W.R. 电压驻波比	Set DUT on Network Analyzer; make individual calibration to test 设置网络分析仪参数进行测试	Directive DUT specification 符合待测物规范	PASS
2 Insertion Loss 插入损失	Set DUT on Network Analyzer; make individual calibration to test 设置网络分析仪参数进行测试	Directive DUT specification 符合待测物规范	PASS
3 Antenna Gain 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 符合待测物规范	PASS
4 Solderability 可焊性	GB / T2423.28-2005 Temp: $260 \pm 5^{\circ} \text{C}$ ; Duration: 5 seconds 温度 $260 \pm 5^{\circ} \text{C}$ ; 持续 5 秒	Tin evenly on full 上锡均匀饱满	PASS
5 Pull Test 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 2. Frequency Tol. $\leq 5\%$ 符合待测物规范; 频率偏移 $\leq 5\%$	PASS
6 Dimension 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 符合待测物规范	PASS
7 Salt Spray 盐雾	GB / T 2423.17-2008 Temp: $35^{\circ}\text{C}$ ; RH: $\geq 95\%$ ; NaCl solution: $\geq 5\%$ ; Time: 24H 温度 $35^{\circ}\text{C}$ ; 湿度 $\geq 95\%$ ; 盐水浓度 $\geq 5\%$ ; 测试 24H	1. No Visual Damage 2. Frequency Tol. $\leq 5\%$ 无明显外观不良; 频率偏移 $\leq 5\%$	PASS
8 RoHS	With Reference to IEC 62321:2008 with flow chart 参考 IEC 62321 测试流程	Directive RoHS 2015/863/EU 符合 RoHS 2015/863/EU 标准	PASS

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### 3. Antenna - S Parameter Test Data

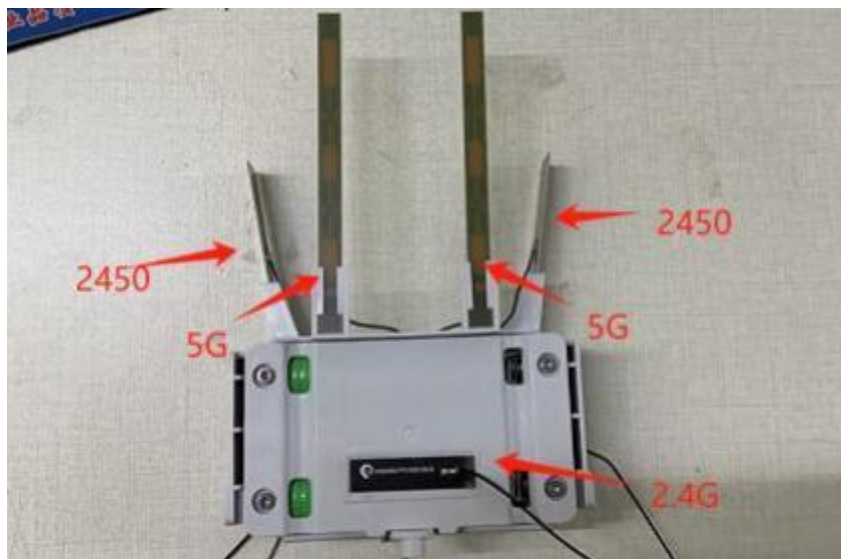
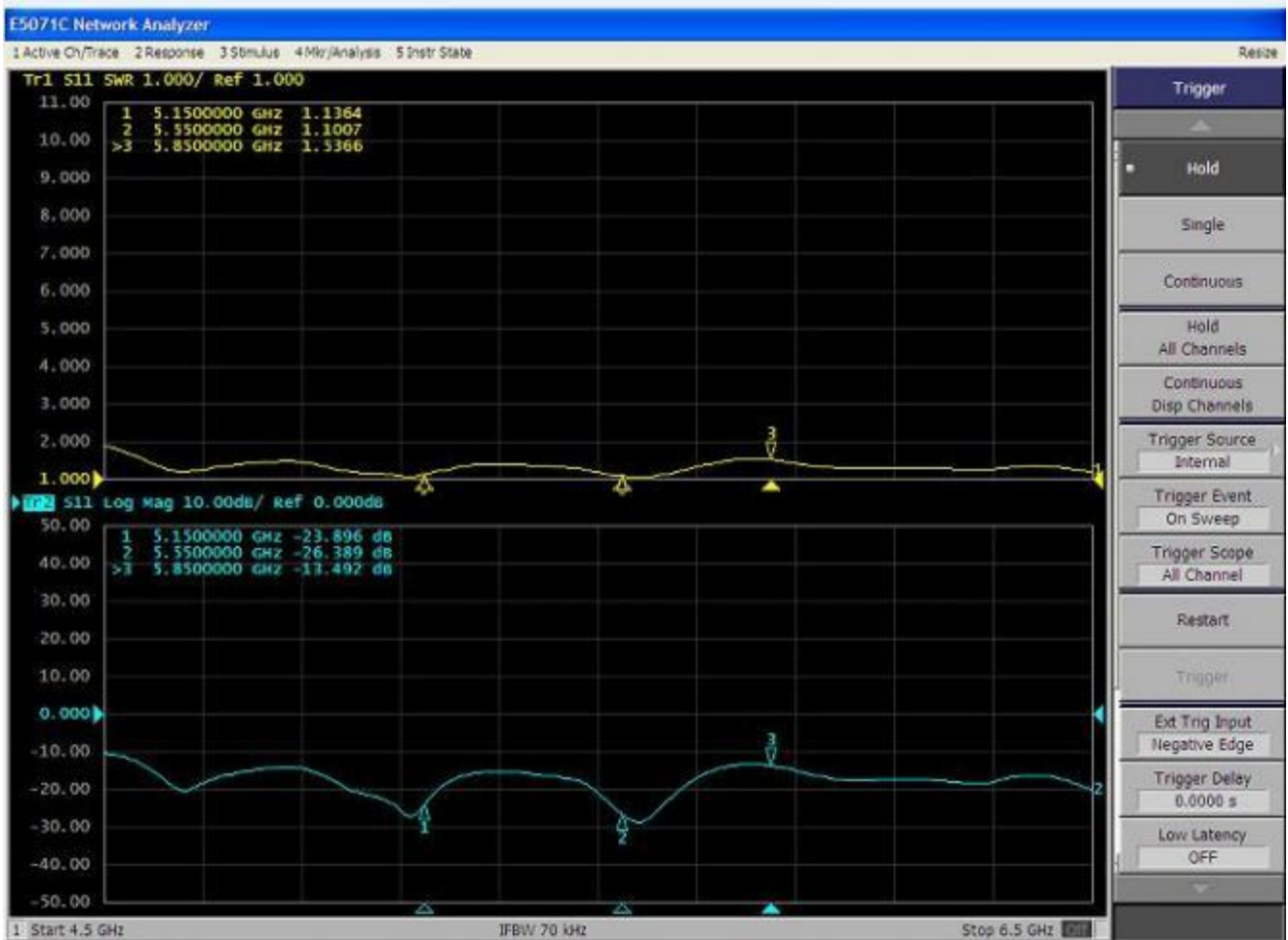
1



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2



Product Number: AN5800-PCB41BX

Product Name: Antenna

### 4. Antenna - Radiation Pattern Test Data

1

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Frequency (MHz)	5150.0	5200.0	5250.0	5300.0	5350.0	5400.0	5450.0	5500.0	5550.0	5600.0	5650.0	5700.0	5750.0	5800.0	5850.0
Gain (dBi)	4.84	4.96	5.01	4.75	5.09	5.61	5.52	5.42	5.73	5.39	4.98	4.72	4.87	5.08	5.87
Efficiency (%)	63.55	65.27	63.96	63.70	65.90	65.71	65.85	65.07	65.50	63.20	63.62	63.94	64.14	63.25	65.76

2

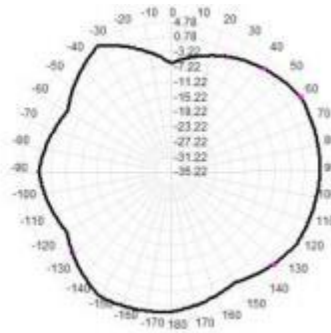
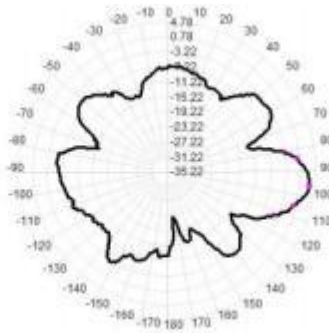
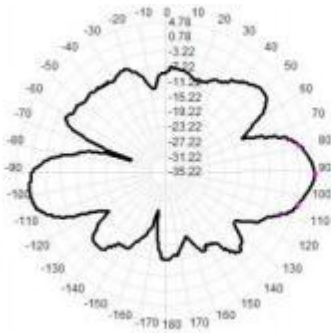
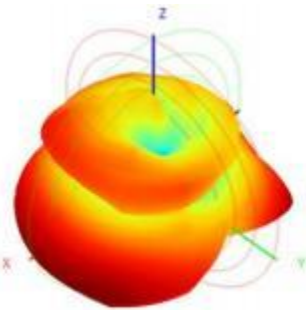
Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Frequency (MHz)	5150.0	5200.0	5250.0	5300.0	5350.0	5400.0	5450.0	5500.0	5550.0	5600.0	5650.0	5700.0	5750.0	5800.0	5850.0
Gain (dBi)	5.25	5.25	5.31	4.72	4.75	4.92	5.29	5.07	5.55	5.62	5.40	4.66	4.89	4.56	5.70
Efficiency (%)	62.90	63.44	63.70	63.25	62.28	63.07	64.34	65.96	64.11	65.70	63.84	63.40	65.20	64.79	64.44

XZ

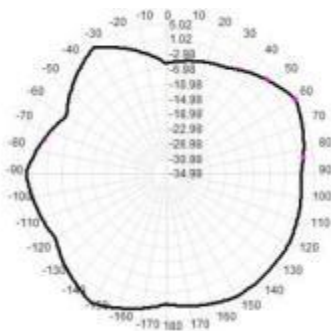
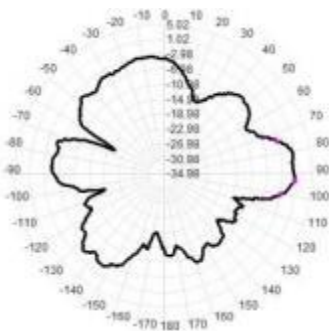
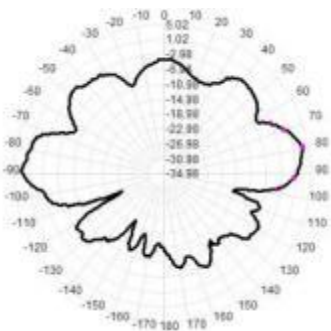
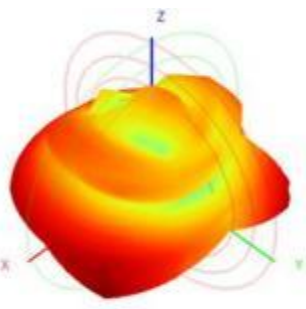
YZ

XY

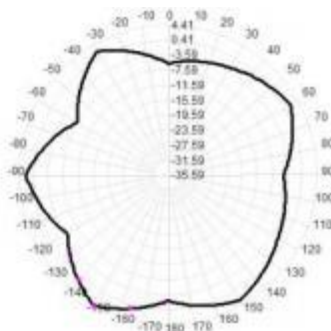
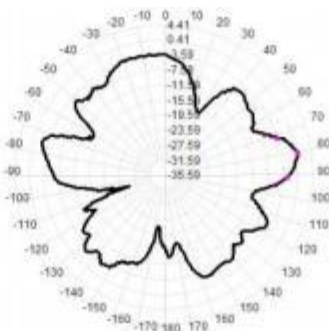
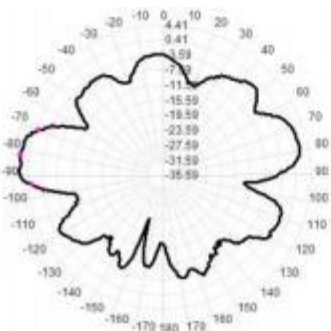
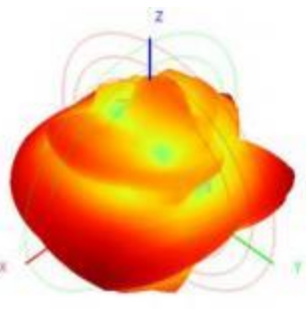
5150MHz



5550MHz



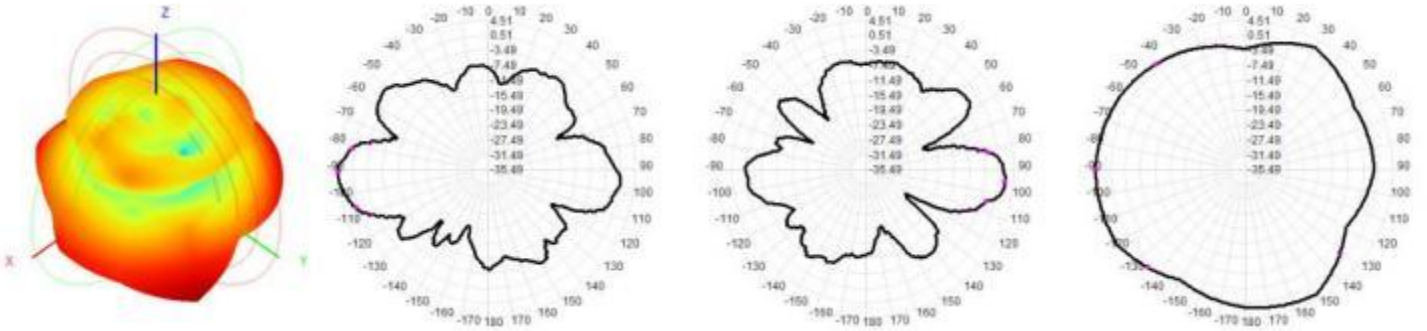
5850MHz



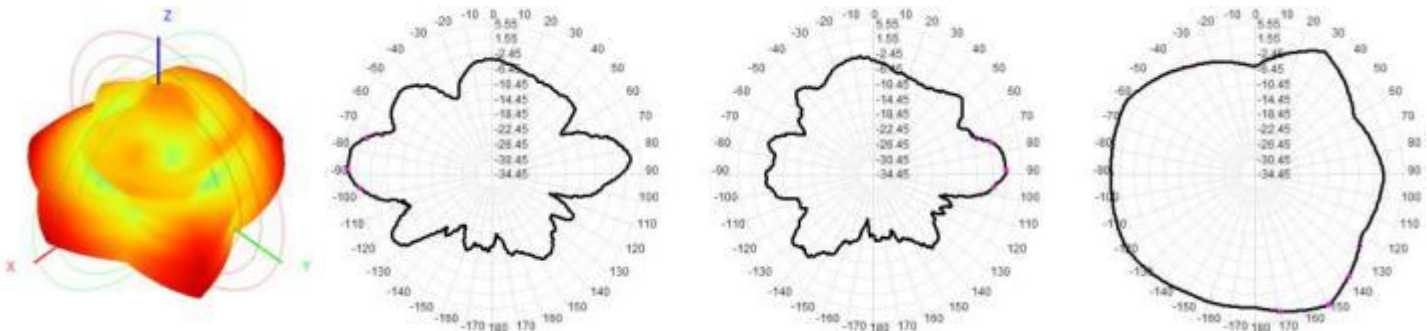
Product Number: AN5800-PCB41BX

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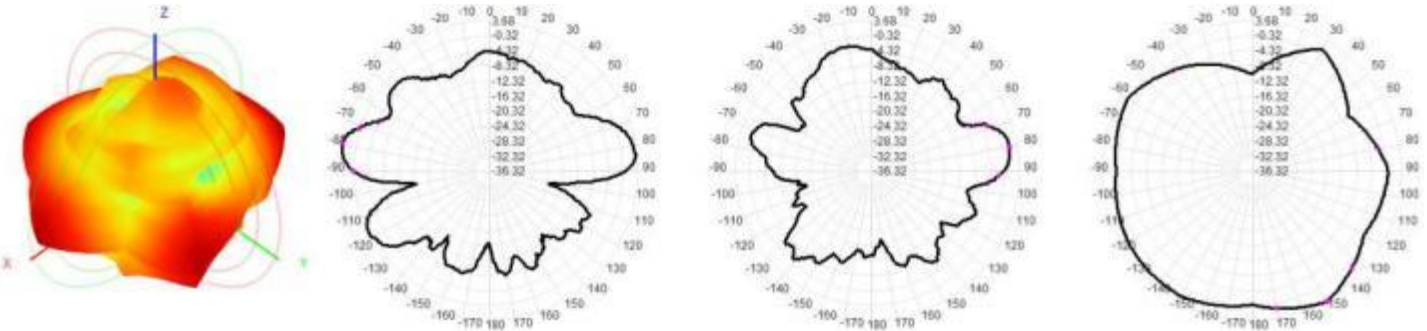
5150MHz



5550MHz



5850MHz

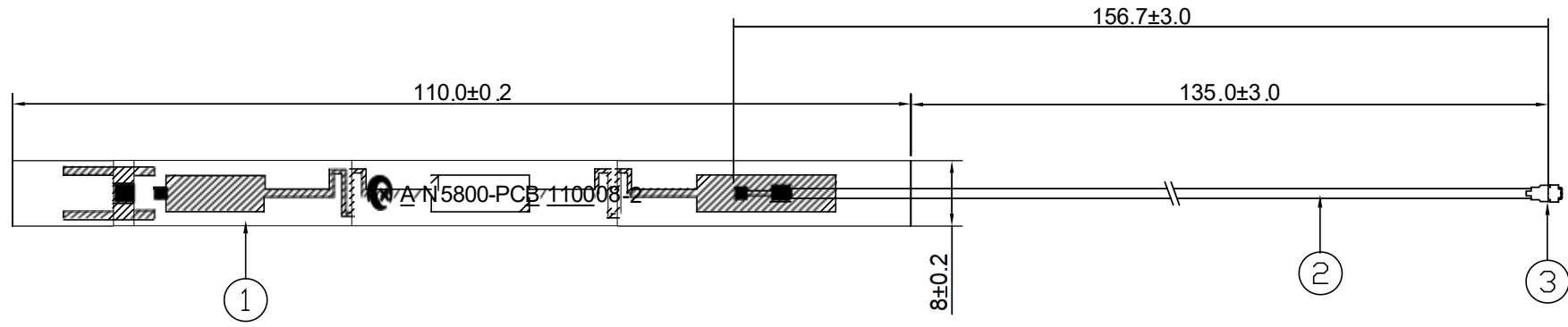


## 5. Mechanical and Packing Drawing



HF   
 RoHS 2.0   
 REACH   
 CONFIDENTIAL

SIGN	DATE	DESCRIPTION	APPROVER



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.

### 东莞市海恒电子科技有限公司

3	CR-113-ZP-A	I-PEX	Cu	Au Plated	1
2	CB-113BD	Coaxial Cable		Ø1.13mm,Black	1
1	AN5800-PCB110008-2	PCB	FR4	Black,T=0.8	1
No.	Part Number	Name	Material	Finish	Q'ty

TITLE: Antenna					
PART NO.: AN5800-PCB41BX			CUSTOMER P/N: /		
APP BY	CHK BY	RF BY	DES BY		Tolerance
YCX	HC	WJ	SY		UNITS: mm
2023.12.20	2023.12.20	2023.12.20	2023.12.20	SCALE: 1/1	X.XX ±0.2
REVISION: A					X° ±1

# 产品包装规范

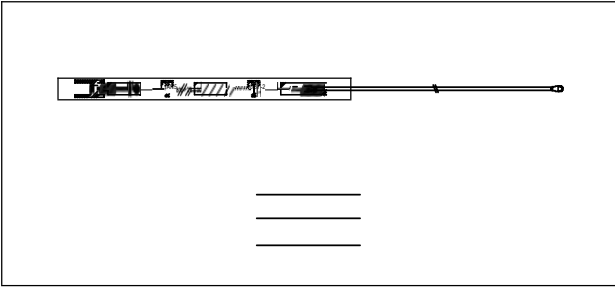
## PACKING CRITERION

Date: 2023.12.20

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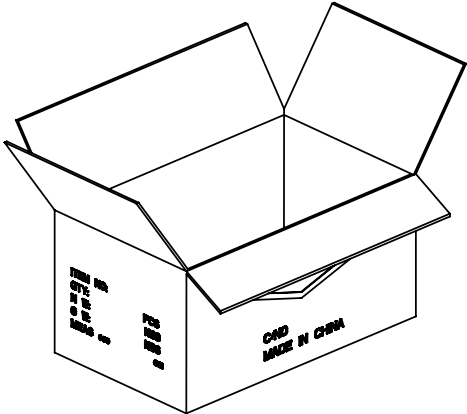
Part Number : AN5800-PCB41BX	Revision : A
Name: Antenna	Customer : ALL

1 . Enter PE bag.



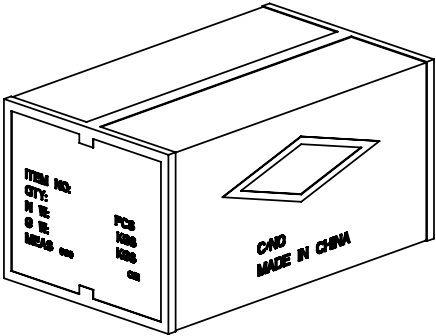
100pcs/ PE bag

2.PACKING .

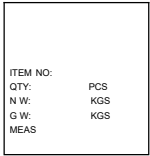


8000pcs/Carton

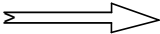
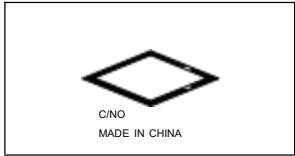
3. SEALING .



SIDE



FRONT



APPROVED BY : YCX

CHECKED BY : HC

DESIGNED BY : sviV