



GUANGZHOU XAIRCRAFT TECHNOLOGY
CO., LTD.

Number: AN2450-PCB135GX

Edition: A0

Name: Dual-band internal PCB antenna

Specification: 2.4/5G PCB Antenna 1.13mm Gray Wire L=110mm HPEX

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: AN2450-PCB135GX
Product Name: Antenna

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Revision History (变更履历)

Revision	Date	Change Notification	Description
1.0	2023.12.20	初版	

Product Number: AN2450-PCB135GX

Product Name: Antenna

1. Specification

Sample Photo



A. Electrical Characteristics

Frequency 频率	2400-2500 MHz/5150-5850MHz
S.W.R. 驻波比	≤ 2.0
Antenna Gain 增益	2.72dBi /3.70dBi
Polarization 极化方式	Linear
Impedance 阻抗	50 Ohm

B. Material & Mechanical Characteristics

Cable Type 线材规格	OD1.13mm, gray
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

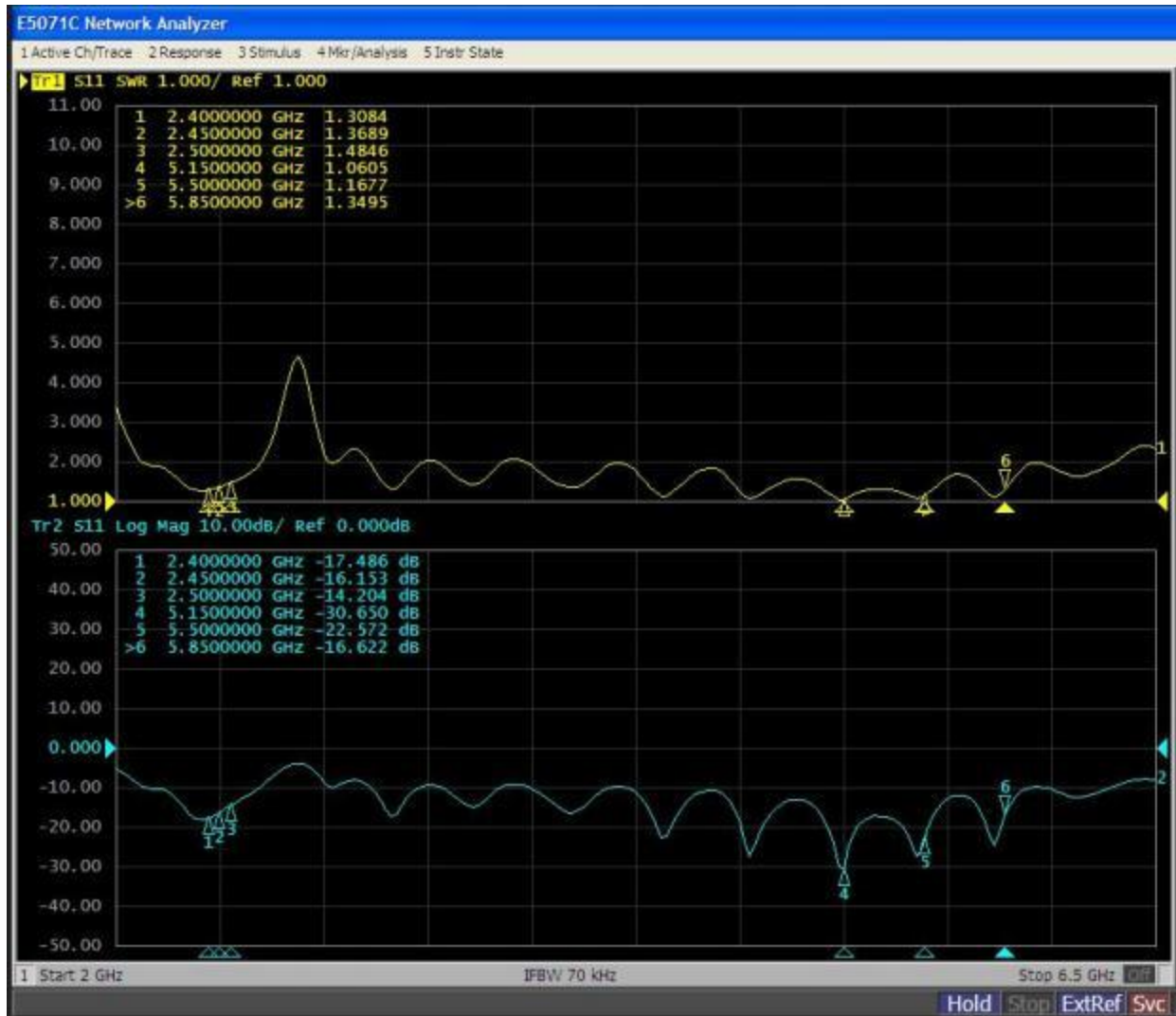
Test Items 测试项目		Test Condition and Procedure 测试方法	Requirements 要求	Result 结果
1	V.S.W.R. 电压驻波比	Set DUT on Network Analyzer; make individual calibration to test 设置网络分析仪参数进行测试	Directive DUT specification 符合待测物规范	PASS
2	Insertion Loss 插入损失	Set DUT on Network Analyzer; make individual calibration to test 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°C ; RH: $\geq 95\%$; NaCl solution: $\geq 5\%$; Time: 24H 温度 35°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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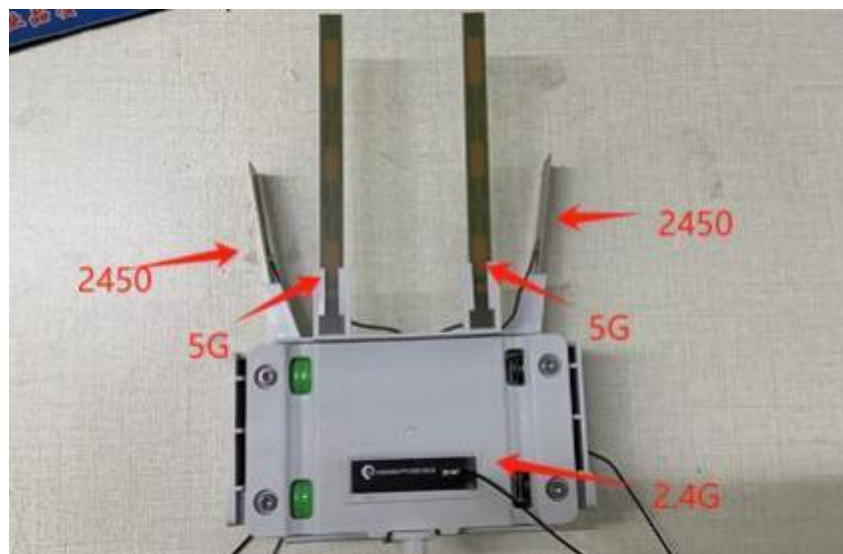
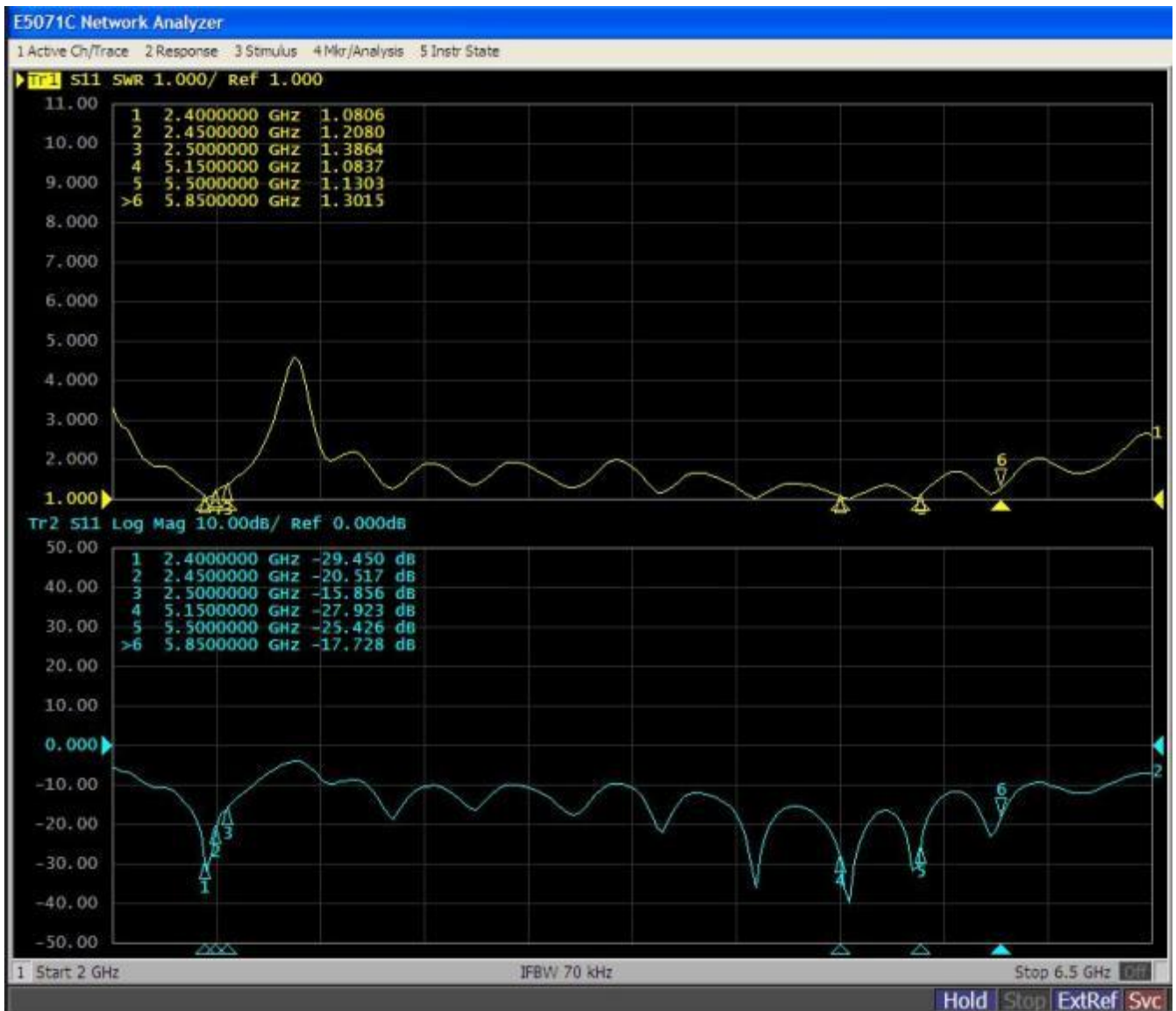
3. Antenna - S Parameter Test Data

1



Product Number: AN2450-PCB135GX
Product Name: Antenna

2



Product Number: AN2450-PCB135GX

Product Name: Antenna

4. Antenna - Radiation Pattern Test Data

1

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)	1.87	1.90	1.90	1.94	1.93	1.90	1.90	1.87	1.88	1.85	1.83
Efficiency (%)	53.31	53.92	54.33	55.31	56.66	57.03	54.04	55.16	52.94	53.63	53.78

11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
2500.0	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
1.83	2.60	2.62	2.66	2.75	2.56	2.62	2.75	2.72	2.65	2.77	2.65	2.68	2.69	2.72	2.90
53.78	61.22	61.40	63.85	64.47	62.79	64.28	64.15	63.46	62.46	63.68	64.20	61.29	62.63	63.47	64.47

2

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)	2.36	2.35	2.29	2.33	2.36	2.32	2.30	2.72	2.60	2.45	2.26
Efficiency (%)	54.25	56.62	56.75	56.80	58.65	57.25	54.23	54.65	52.43	53.22	54.25

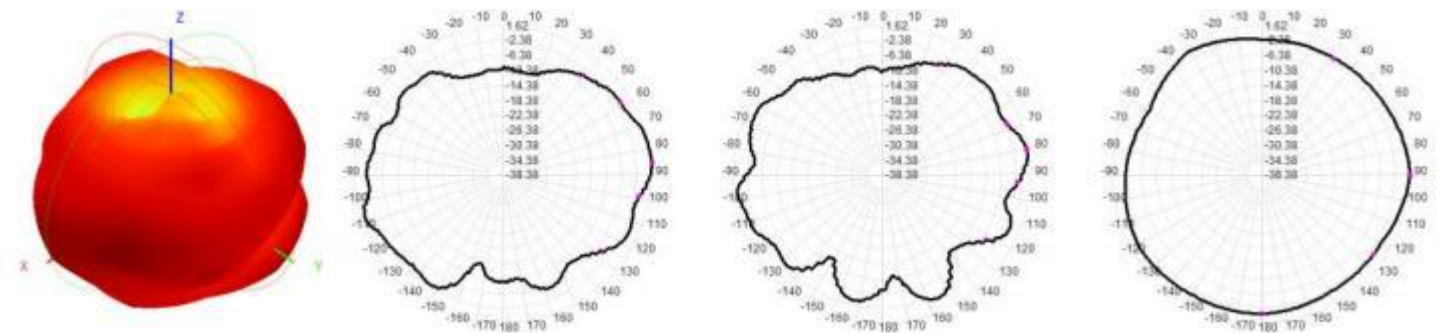
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
5150.0	5200.0	5250.0	5300.0	5350.0	5400.0	5450.0	5500.0	5550.0	5600.0	5650.0	5700.0	5750.0	5800.0	5850.0
2.70	2.92	3.58	3.42	3.70	3.62	3.06	2.56	2.92	3.02	2.67	2.72	2.99	3.17	2.75
63.99	63.75	64.51	62.18	62.25	64.25	64.59	63.39	62.22	64.57	64.50	64.33	64.52	63.44	63.11

XZ

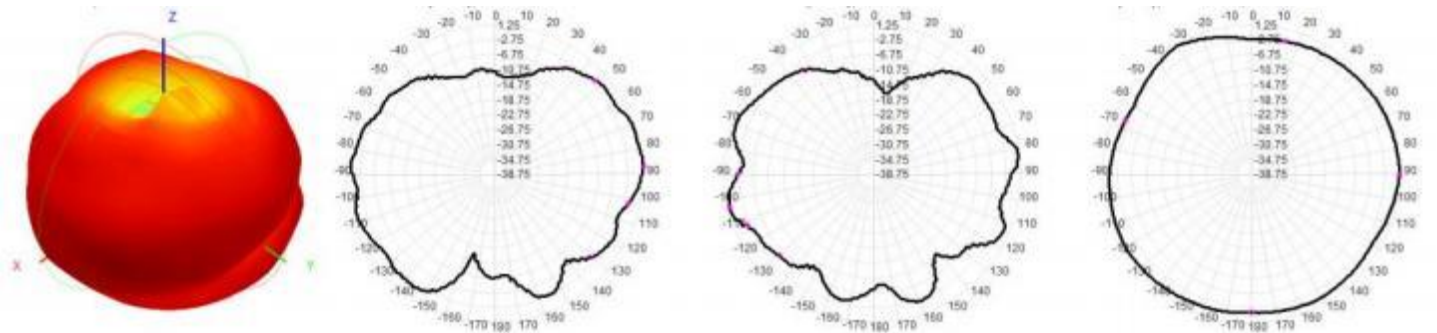
YZ

XY

2400MHz



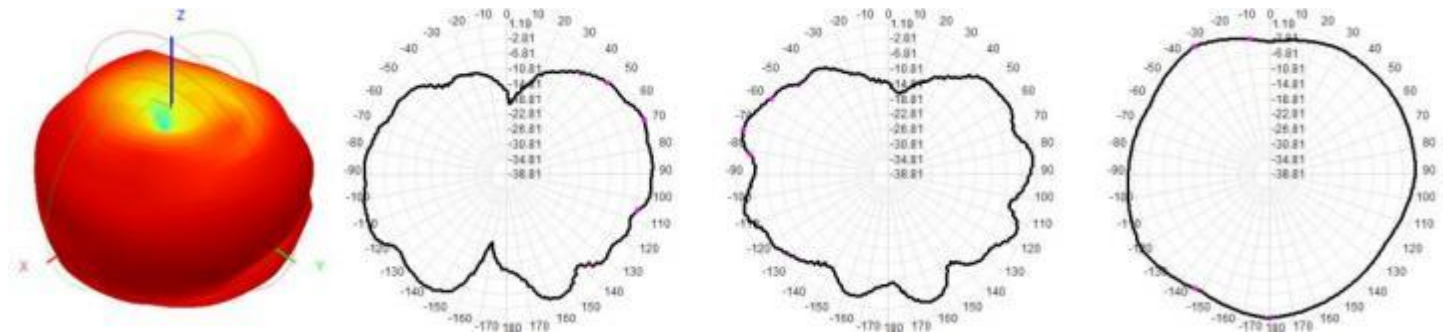
2450MHz



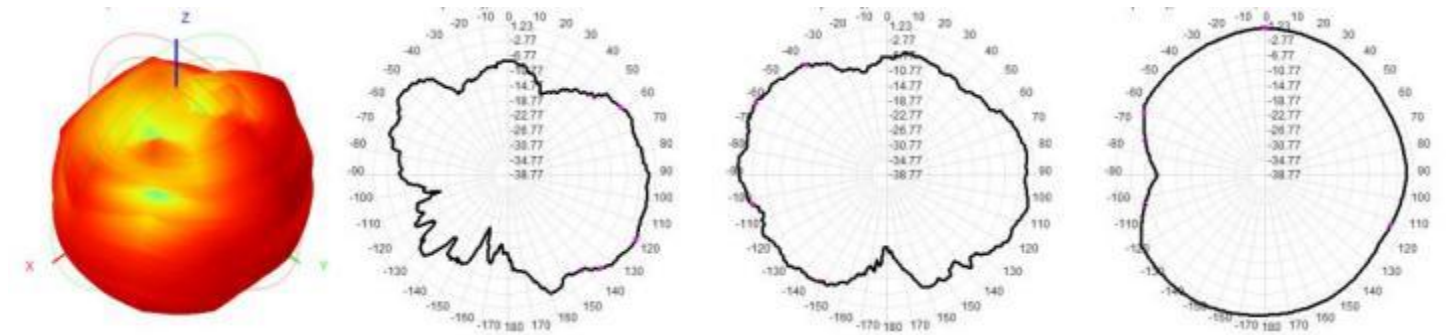
Product Number: AN2450-PCB135GX

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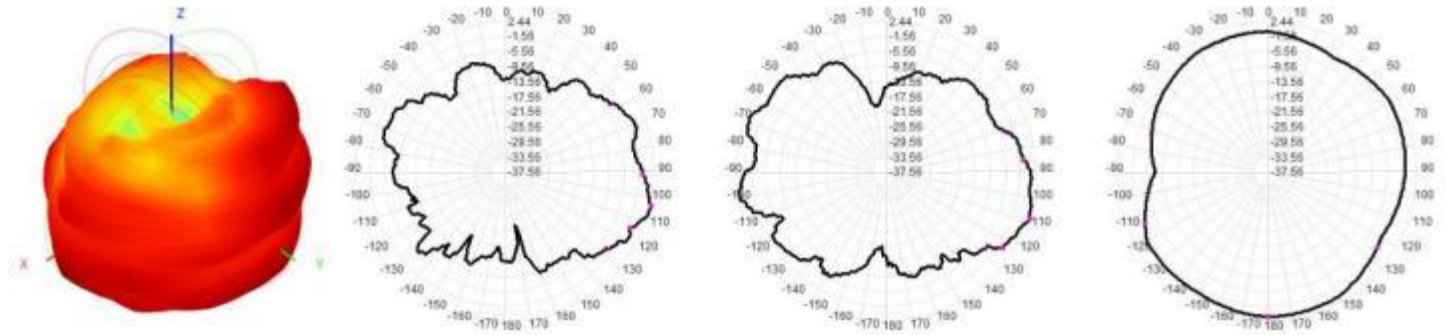
2500MHz



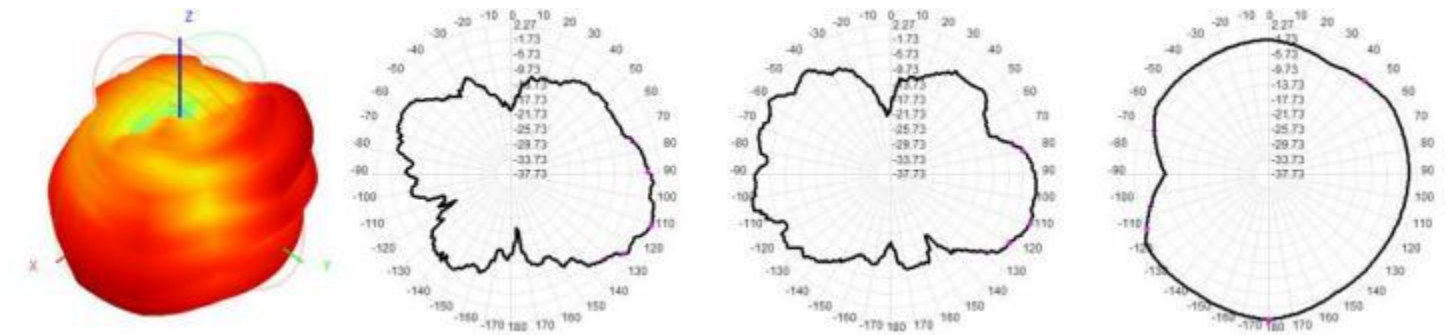
5150MHz



5550MHz



5850MHz



5. Mechanical and Packing Drawing

HF☐

RoHS 2.0☒

REACH☐

CONFIDENTIAL

SIGN

DATE

DESCRIPTION

APPROVER

③

②

①

110.0±3.0

18.0±0.2

65.0±0.2

34.5

AN2450-PCB650180-3

Ø1.13mm, Gray

2.4/5 8G

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.

产品包装规范

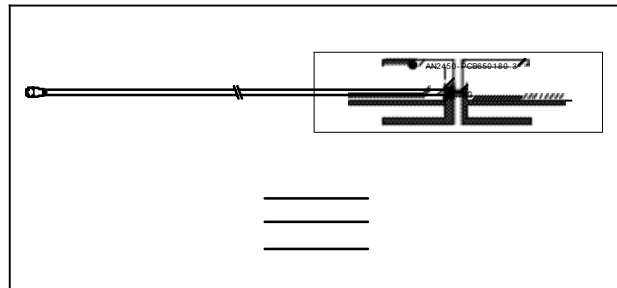
PACKING CRITERION

Date: 2023.11.23

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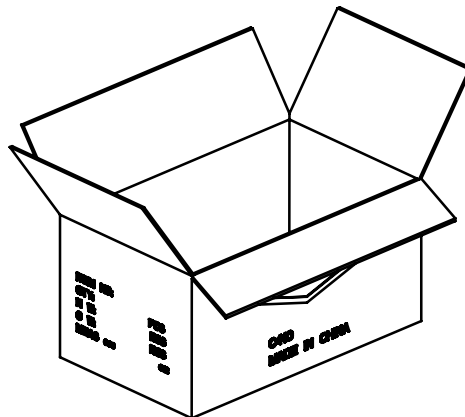
Part Number : AN2450-PCB135GX	Revision : A
Name: Antenna	Customer : ALL

1 . Enter PE bag.



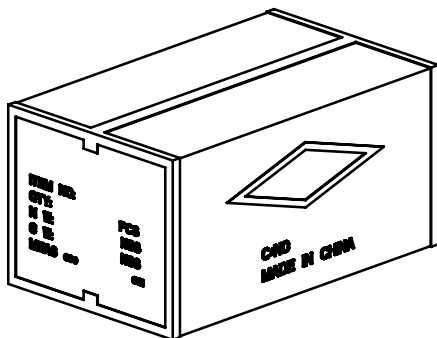
100pcs/ PE bag

2.PACKING .

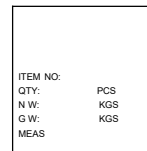


8000pcs/Carton

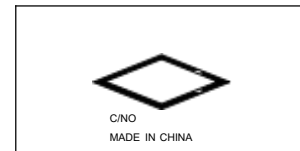
3. SEALING.



SIDE



FRONT



APPROVED BY: YCX

CHECKED BY: HC

DESIGNED BY: SY Y