

广州极飞科技股份有限公司

样品承认书

产品料号: 01-003-00476

产品版本: A0

产品名称: 带频控双频外置天线-L

产品规格: 2.4G/5G 黑色天线 1.37mm 黑色线 L=110mm+
IPEX

原料牌号:

表面处理: 丝印

供 应 商: 东莞市海恒电子科技有限公司

极飞签核		
结构设计	可靠性质量	中试审批
说明:		

供应商签核		
制作	审核	核准
邓文兵	胡超	陈鹏
说明:		

Product Number: AN2450-138B01BX-B
Product Name: Antenna

Index:

- 1. Specification (规格)
- 2. Characteristics and Reliability Test (产品特性和可靠性测试标准)
- 3. Antenna - S Parameter Test Data (样品测试数据)
- 4. Antenna - Radiation Pattern Test Data (辐射模式测试数据)
- 5. Mechanical and Packing Drawing (图纸包装规范)

Revision History (变更履历)

Revision	Date	Change Notification	Description
1.0	2024.12.9	1.0	
1.1	2025.3.7	1.1	客户需求加长 10mm

Product Number: AN2450-138B01BX-B

Product Name: Antenna

1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency 频率	2400-2500MHz/ 5150-5850MHz
S.W.R. 驻波比	≤ 2.5 / ≤ 2.5
Antenna Gain 增益	5.05dBi / 5.14dBi
Polarization 极化方式	Linear
Impedance 阻抗	50 Ohm
B. Material & Mechanical Characteristics	
Material of Plastic 塑胶材质	PC+ABS
Cable Type 线材规格	OD1.37mm ,Black
Connector Type 连接器规格	I-PEX
C. Environmental	
Storage Temperature 存储温度	- 30 °C ~ + 65°C
Operation Temperature 工作温度	- 30 °C ~ + 65°C

Product Number: AN2450-138B01BX-B

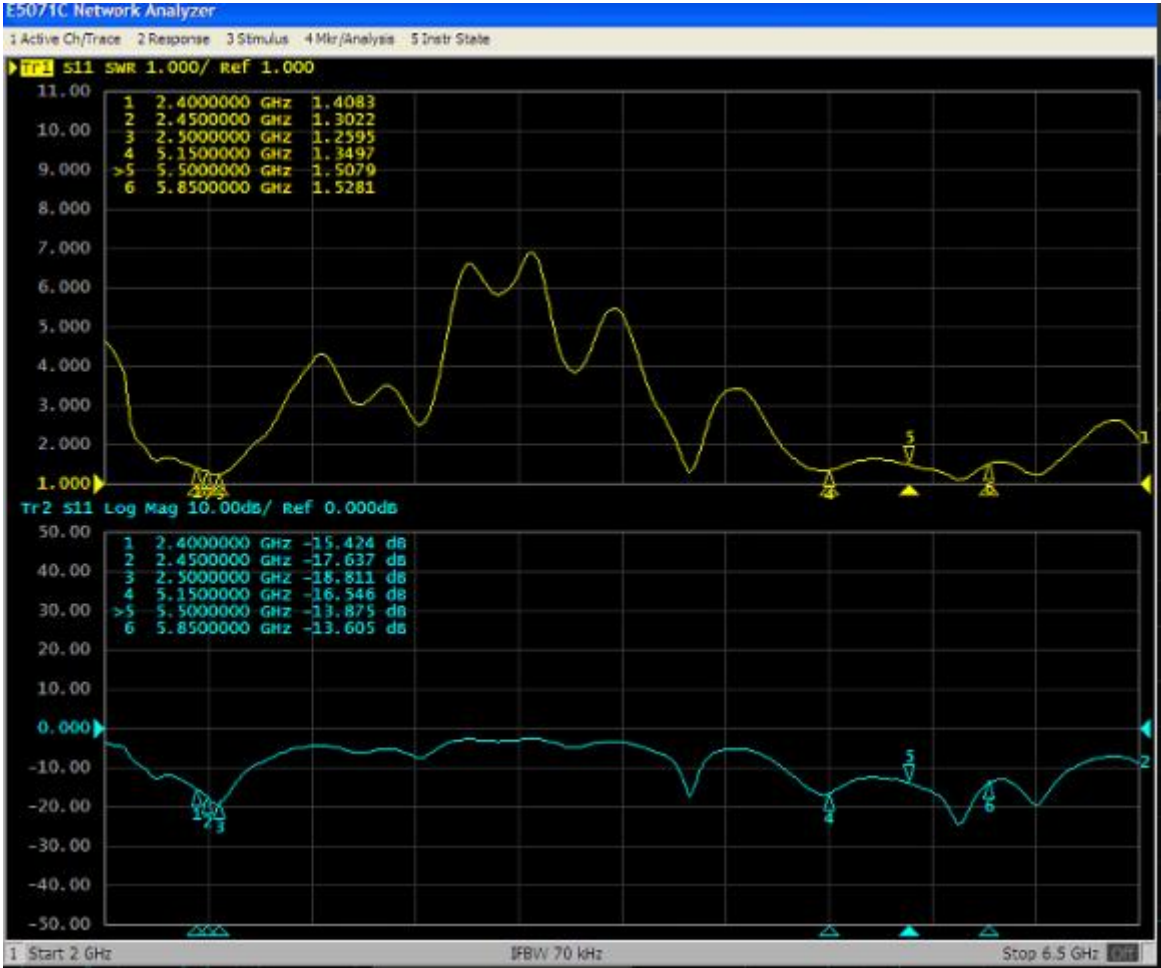
Product Name: Antenna

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. 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	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
3	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
4	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
5	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
6	Temperature and Humidity Chamber 恒温恒湿	GB / T 2423.3-2006 Temp: 65°C / 12 H; -30°C / 12H RH: $\geq 90\%$; Time: 24H 温度 65°C 测试 12H 转 -30°C 测试 12H; 湿度 $\geq 90\%$; 时间 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. $\leq 5\%$ 恢复 2H 后, 无明显外观不良; 频率偏移 $\leq 5\%$	PASS
7	Aging test 老化	GB / T 2423.2 - 2008 Temp: 65°C; Time: 24 hours 温度 65°C, 测试 24H	After 2 Hours Recovery 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 2011/65/EU 符合 RoHS 2015/863/EU 标准	PASS

Product Number: AN2450-138B01BX-B
Product Name: Antenna

3. Antenna - S Parameter Test Data



4. Antenna - Radiation Pattern Test Data

左天线上翻

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	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
Gain (dBi)	4.68	4.97	4.90	4.98	5.05	4.99	4.68	4.50	4.22	4.18	4.40	4.60	4.66	4.82	4.72	4.75	4.88	4.97	4.72	4.99	4.98	5.09	5.10	5.05	5.14	5.01
Efficiency (%)	60.09	61.24	62.35	58.41	59.02	60.10	60.29	66.02	63.61	60.15	61.79	51.22	53.66	52.88	53.77	56.77	58.55	58.23	56.99	59.77	62.15	61.22	60.77	64.99	62.95	58.12

左天线翻下

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	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
Gain (dBi)	3.82	3.99	4.01	3.98	3.90	3.85	3.77	3.79	3.65	3.59	3.38	4.52	4.58	4.50	4.90	4.98	4.72	4.99	4.82	5.06	5.42	4.99	4.98	5.08	5.22	5.16
Efficiency (%)	56.13	57.96	59.57	55.74	56.18	57.14	51.59	63.10	61.32	58.26	60.01	52.33	54.66	53.22	53.77	57.23	58.62	58.23	57.25	60.22	63.15	61.88	60.90	65.22	63.25	58.98

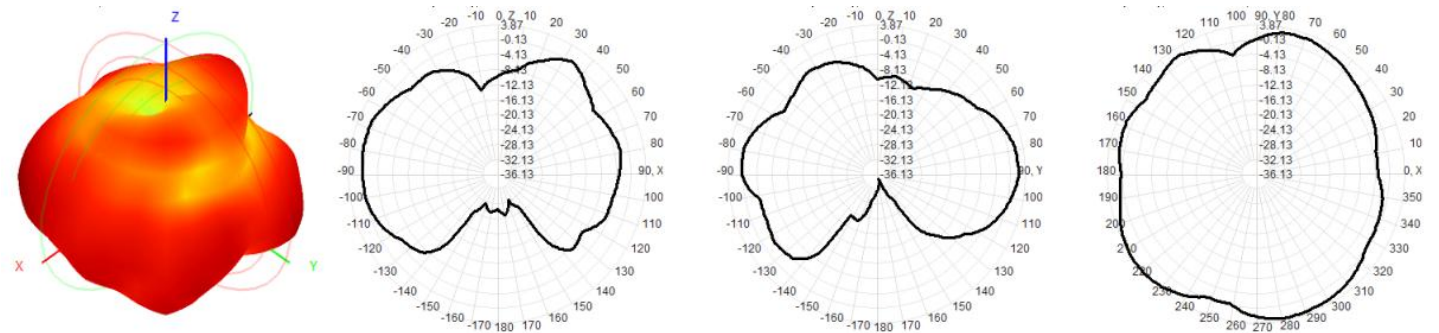
Product Number: AN2450-138B01BX-B
Product Name: Antenna

XZ

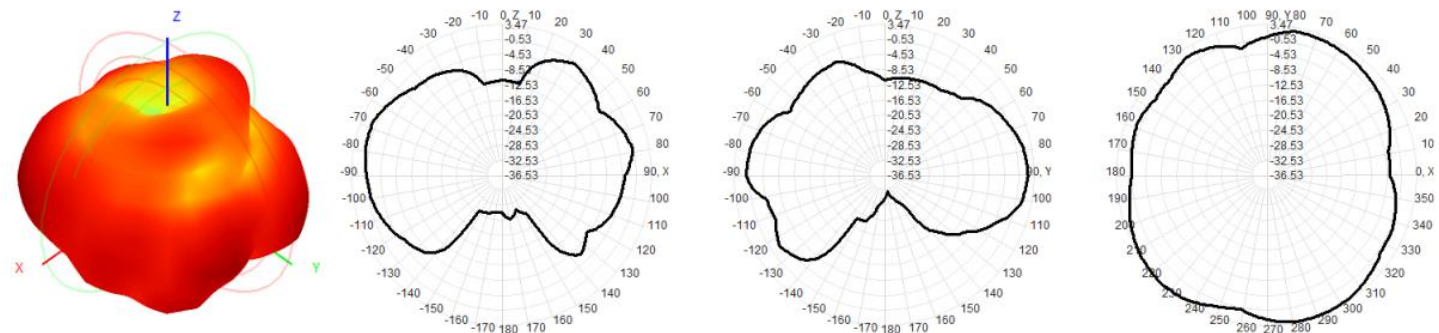
YZ

XY

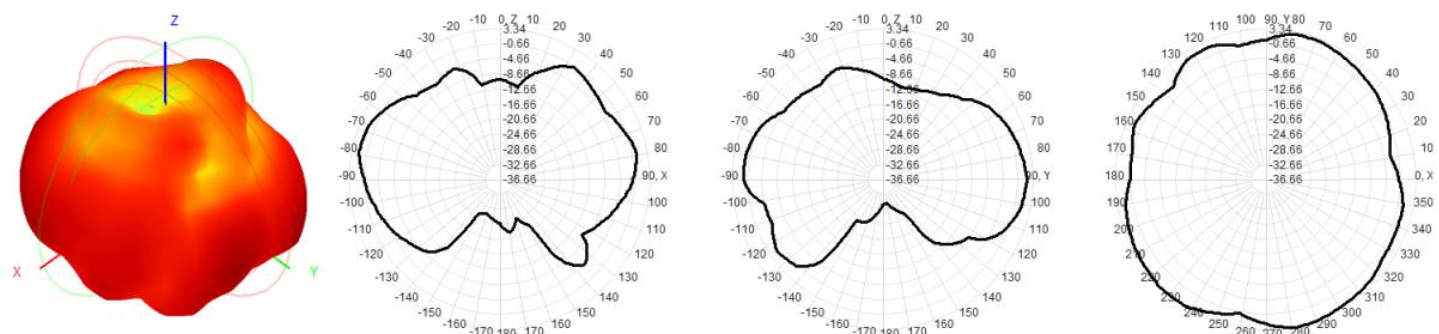
左天线上翻
2400MHz



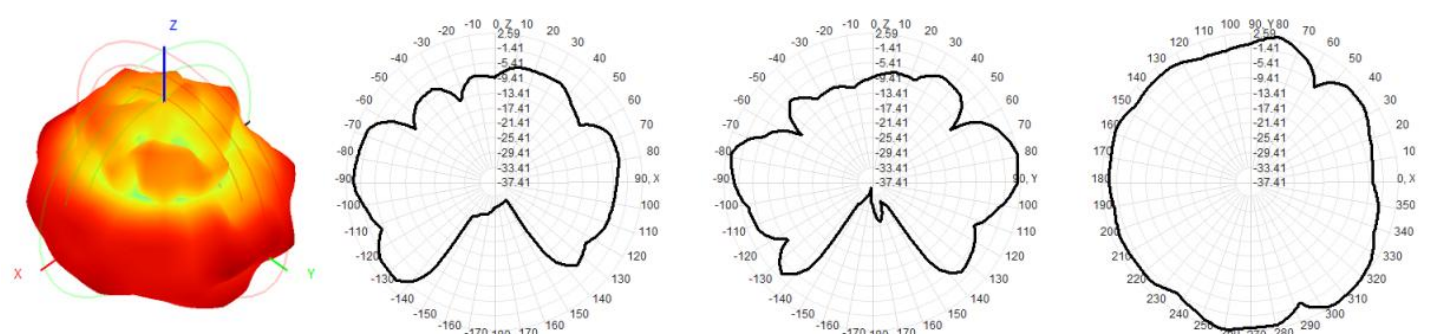
2450MHz



2500MHz



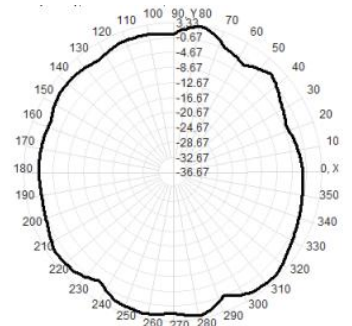
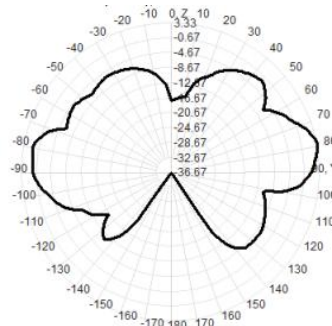
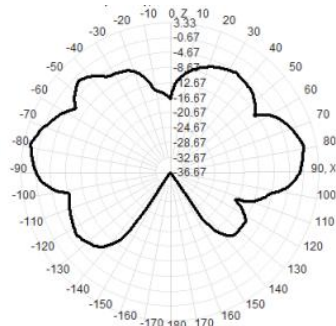
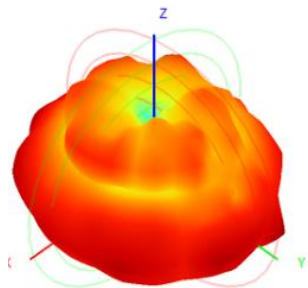
5150MHz



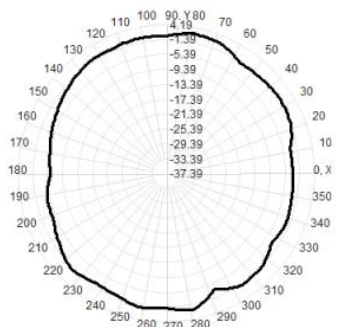
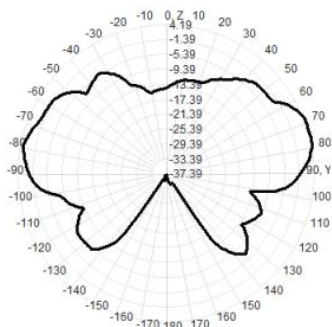
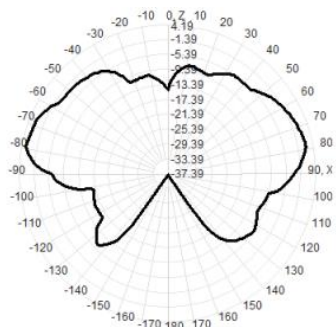
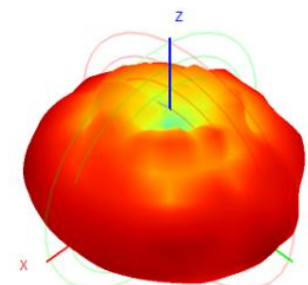
Product Number: AN2450-138B01BX-B

Product Name: Antenna

5550MHz

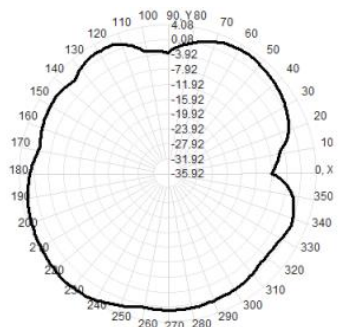
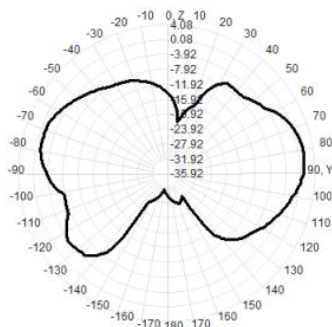
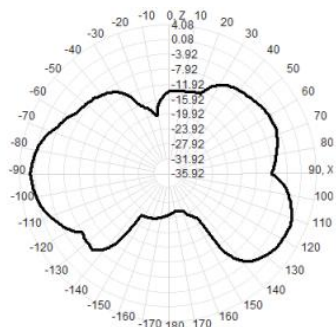
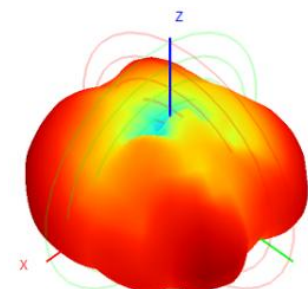


5800MHz

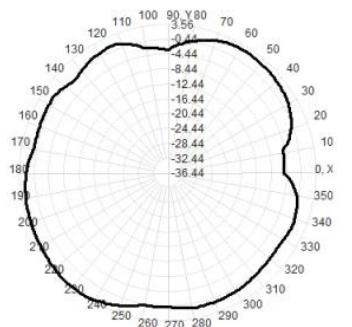
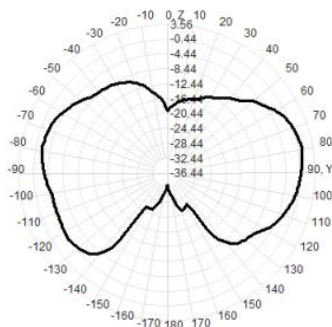
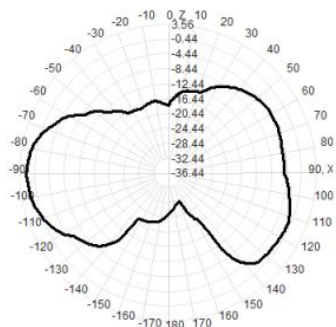
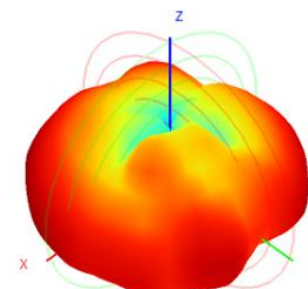


左天线 下翻

2400MHz

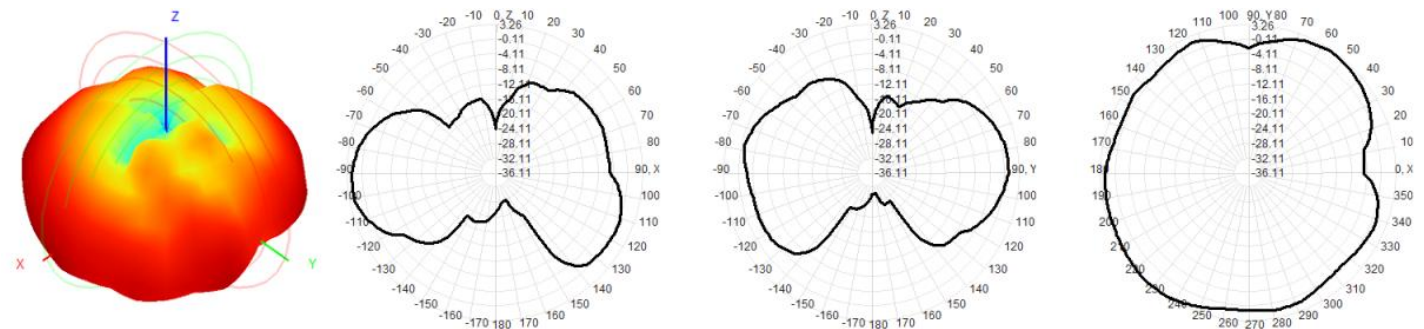


2450MHz

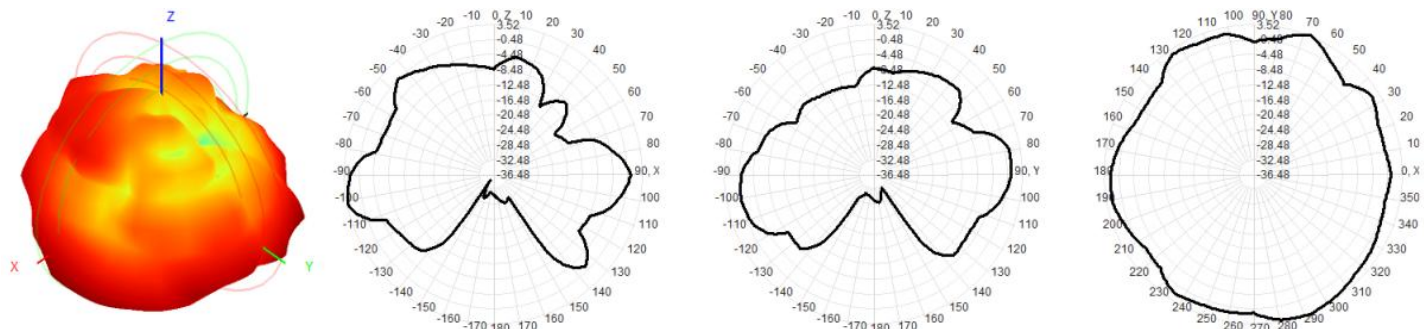


Product Number: AN2450-138B01BX-B
Product Name: Antenna

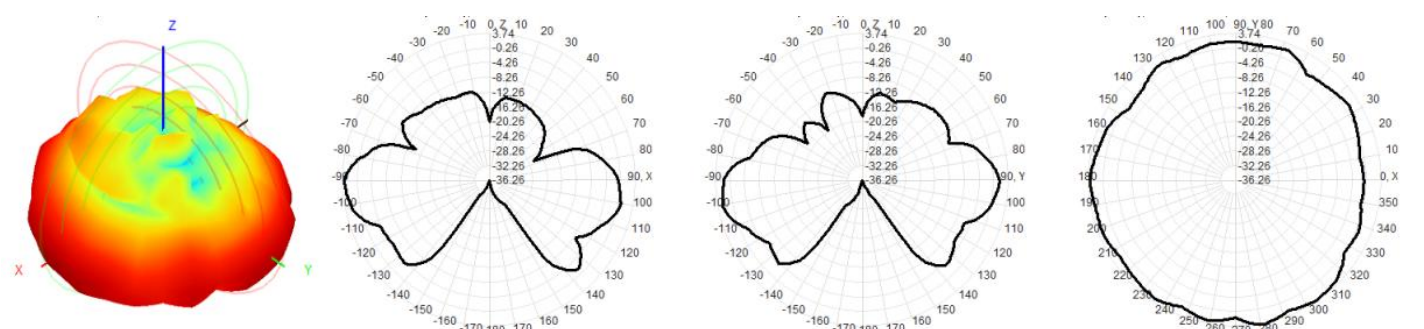
2500MHz



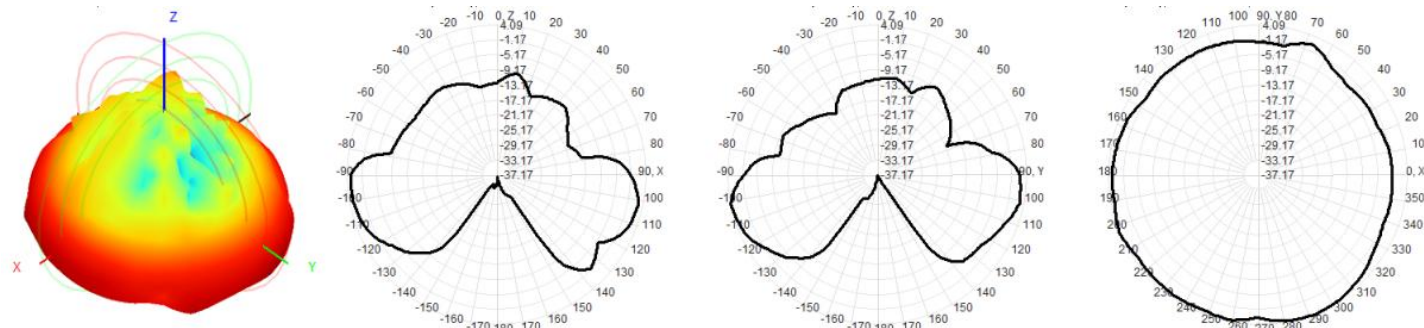
5150MHz



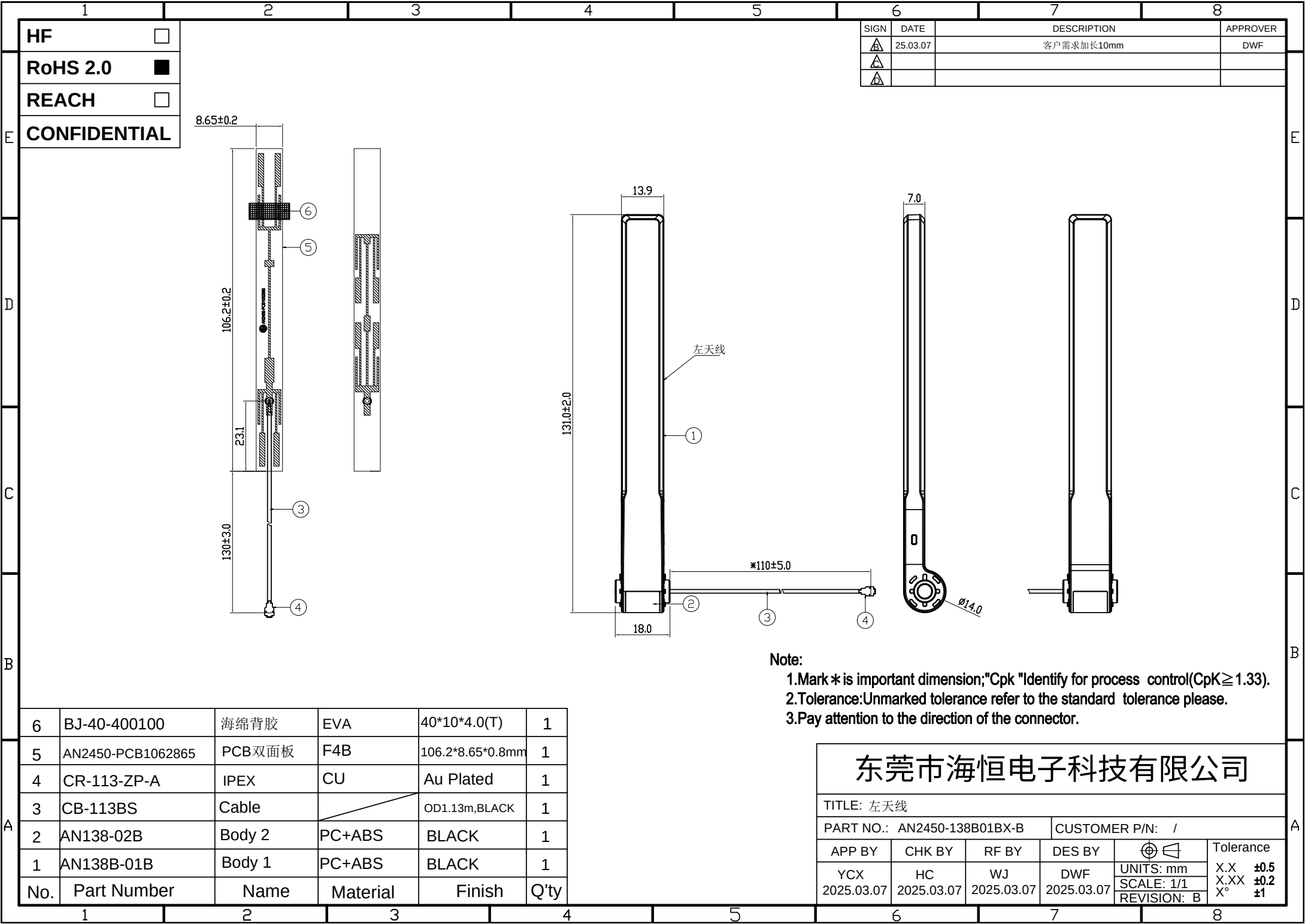
5550MHz



5800MHz



5. Mechanical Drawing See attached files



HF ☐
RoHS 2.0 ☒
REACH ☐
CONFIDENTIAL

SIGN	DATE	DESCRIPTION	APPROVER
	25.03.07	客户需求加长10mm	DWF

Note:
1.Mark * is important dimension;"Cpk "Identify for process control($CpK \geq 1.33$).
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					
TITLE: 左天线					
PART NO.: AN2450-138B01BX-B			CUSTOMER P/N: /		
APP BY	CHK BY	RF BY	DES BY		Tolerance
YCX	HC	WJ	DWF	UNITS: mm	X.X ±0.5
2025.03.07	2025.03.07	2025.03.07	2025.03.07	SCALE: 1/1	X.XX ±0.2
				REVISION: B	X° ±1

产品包装规范

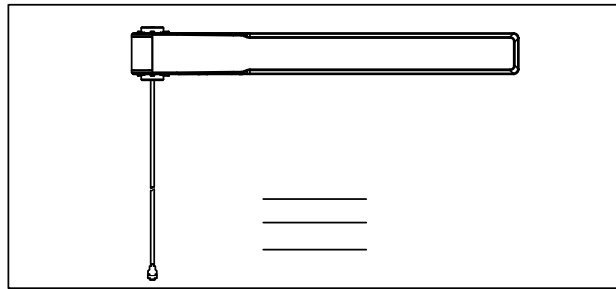
PACKING CRITERION

Date: 2025.03.07

Page: 1 of 1

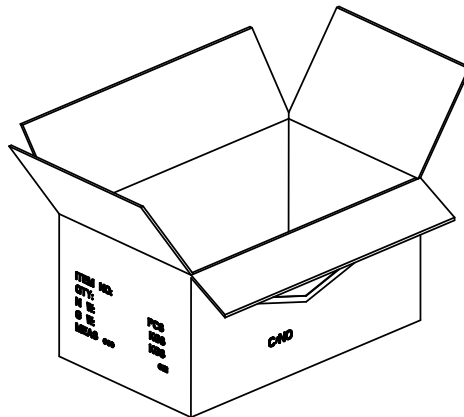
Part Number : AN2450-138B01BX-B	Revision : B
Name: Antenna	Customer : ALL

1 . Enter PE bag。



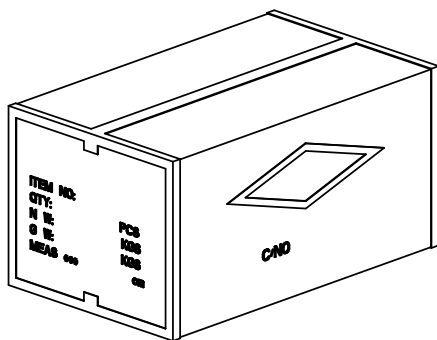
20pcs/ PE bag

2.PACKING 。

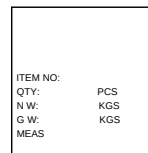


800pcs/Carton

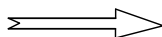
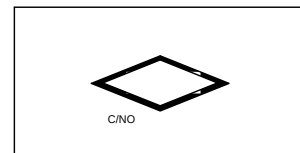
3. SEALING 。



SIDE



FRONT



APPROVED BY : YCX

CHECKED BY : HC

DESIGNED BY : DWF