

广州极飞科技股份有限公司

样品承认书

产品料号: 01-003-00467

产品版本: A0

产品名称: 球阀加长版2.4G内置PCB天线

产品规格: 2.4G PCB 天线 RG178 黑色线
L=2460mm+FAKRA A 母头

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:AN2400-PCB169BX
Product Name: Antenna

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Revision History (变更履历)

Revision	Date	Change Notification	Description
1.0	2024.9.12	初版	

Product Number:AN2400-PCB169BX

Product Name: Antenna

1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency 频率	2400-2500 MHz
S.W.R. 驻波比	<= 2.0
Antenna Gain 增益	-1.05dBi
Polarization 极化方式	Linear
Impedance 阻抗	50 Ohm
B. Material & Mechanical Characteristics	
Cable Type 线材规格	RG178 ,Black
Connector Type 连接器规格	FAKRA A 母头
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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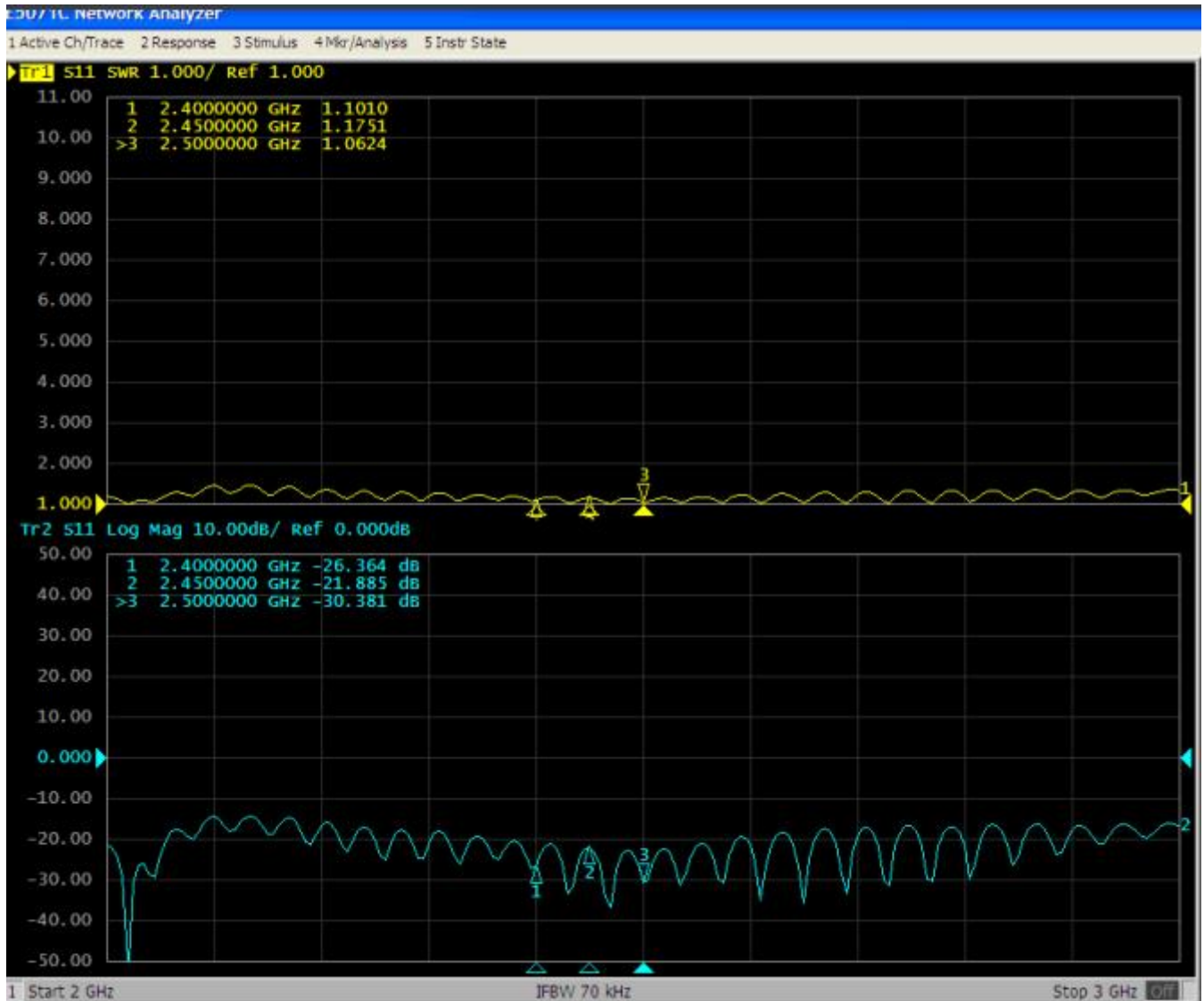
2. Characteristics and Reliability Test

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



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)	-1.27	-1.15	-1.34	-1.31	-1.05	-1.15	-2.02	-1.77	-1.91	-1.80	-1.85
Efficiency (%)	15.84	15.97	15.15	15.84	16.91	16.15	13.16	13.85	13.22	13.30	12.92

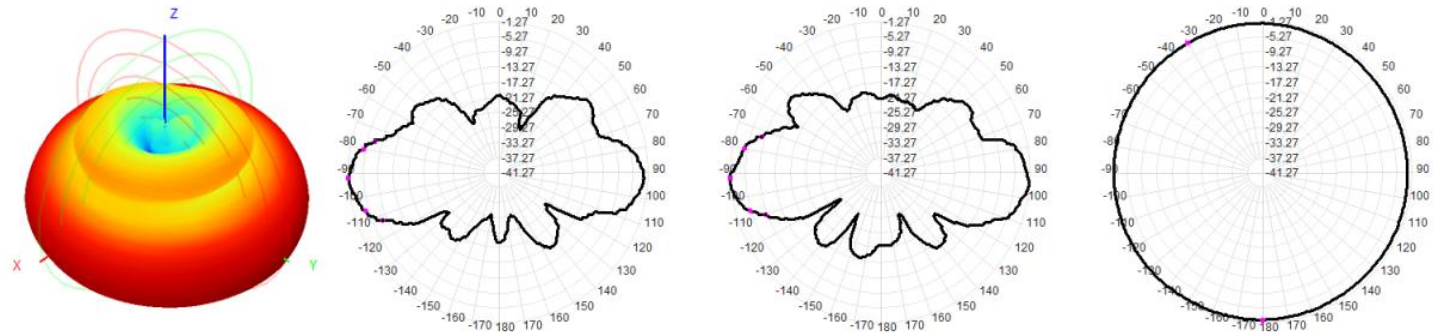
Product Number:AN2400-PCB169BX
Product Name: Antenna

XZ

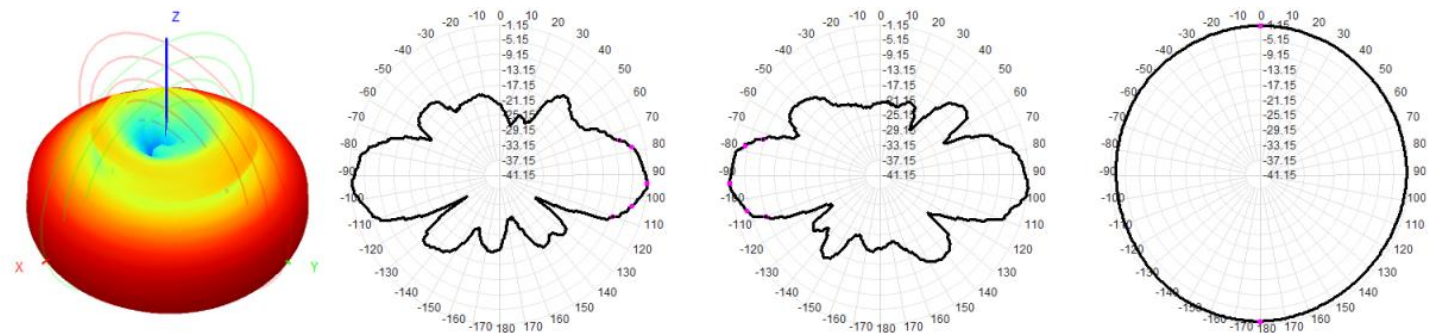
YZ

XY

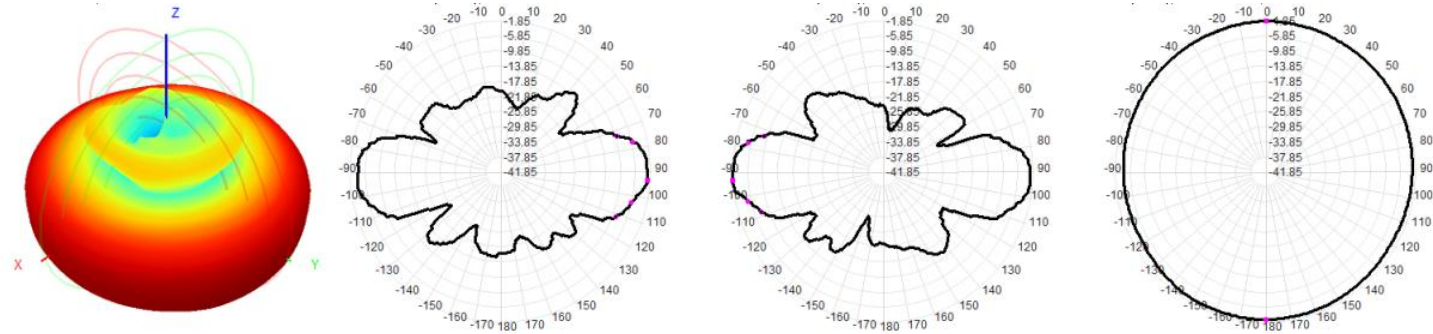
2400MHz



2450MHz

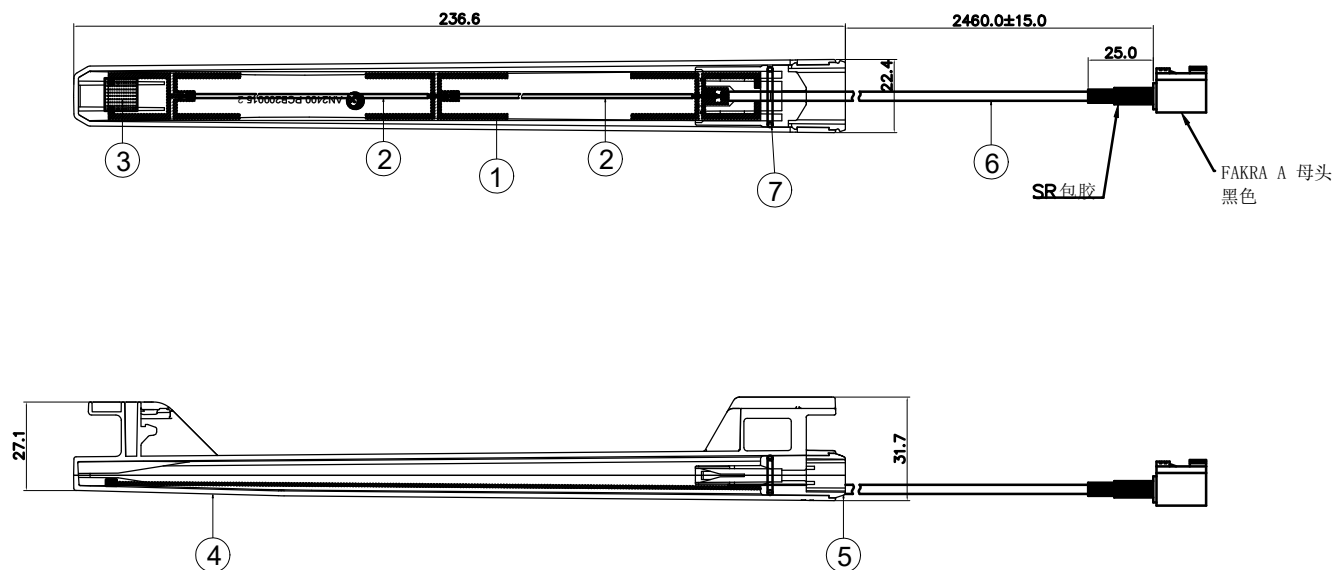


2500MHz



5. Mechanical Drawing See attached files

SIGN	DATE	DESCRIPTION	APPROVER
			
			
			



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.

7	02-001-11784	客供防水胶圈	硅胶60度	外径Φ18.5;线径Φ1.5; Black	1
6	CABLE-178-BFK	Cable+FAKRA-A JACK		Black	1
5	02-001-11783		PP+30%GF	客供塑胶壳	1
4	02-001-11782		PP+30%GF	客供塑胶壳	1
3	BJ-40-200100	海绵		20*10mm; T=4.0mm	1
2	CB-137BS	Coaxial Cable		Ø1.37mm,Black	2
1	AN2400-PCB200015-2	PCB	FR4	Black T=0.8mm	1
No.	Part Number	Name	Material	Finish	Q'ty

东莞市海恒电子科技有限公司						
TITLE: Antenna						
PART NO.: AN2400-PCB169BX				CUSTOMER P/N: /		
APP BY		CHK BY	RF BY	DES BY		Tolerance
YCX		HC	WJ	SYY	UNITS: mm	X.X ±0.5
2024.09.13		2024.09.13	2024.09.13	2024.09.13	SCALE: 1/1	X.XX ±0.2
					REVISION: A	X° ±1

产品包装规范

PACKING CRITERION

Date: 2024.09.13

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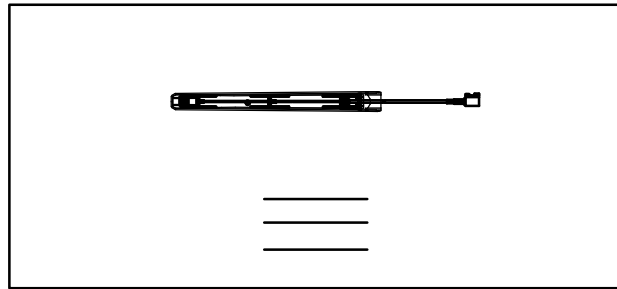
Part Number : AN2400-PCB169BX

Revision : A

Name: Antenna

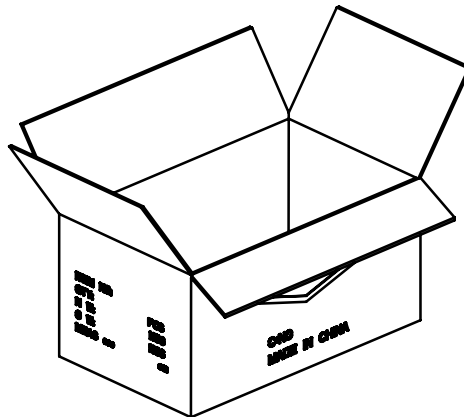
Customer : ALL

1 . Enter PE bag。



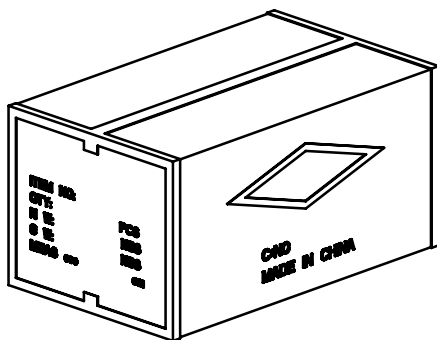
1pcs/ PE bag

2.PACKING 。

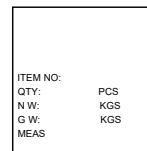


100pcs/Carton

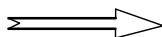
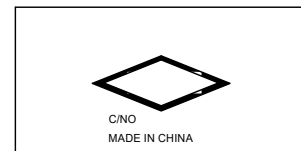
3. SEALING 。



SIDE



FRONT



APPROVED BY : YCX

CHECKED BY : HC

DESIGNED BY : SY Y