

产品规格承认书

Product Specification Acknowledgment

移动通信终端天线产品设计与制造

Design & Manufacturing of Mobile Terminal Antennas

产品名称: 瑞昱 300 万 3881-WiFi

PRODUCT NAME Realtek 3MP 3881-WiFi

客户名称: 看护家

CUSTOMER NAME Shenzhen Ehome Technology Co., Ltd



客户料号:

MATERIAL CODE

景松料号:

118-033-1A 118-033-1B

JINGSONG

MATERIAL CODE

客户 Customer	深圳市景松科技有限公司 Shenzhen JINGSONG Technology Co., Ltd			
客户确认 Customer Confirmation	品质 Quality Dept.	研 发 部 R&D Dept	结 构 Structure Design	核 准 Approval
日期Date:	日期Date: 2023 年 12 月 20 日			

深圳市景松科技有限公司

Shenzhen JINGSONG Technology Co., LTD

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1.目的 Purpose

对于深圳市景松科技有限公司出品的移动通信终端天线产品规格、测试方法进行规范，避免因测试条件，方法的不同引起误差。To standardize the product specifications and testing methods for the mobile communication terminal antennas produced by Shenzhen JINGSONG Technology Co., Ltd., and to avoid errors caused by differences in testing conditions and methods.

2.产品类别和产品型号概述 Overview of Product Categories and Product Models

2.1 产品型号概述 Overview of Product Models

这份报告主要概述的是瑞昱300万3881-WiFi项目所设计的天线的电气结果。此天线设计频段为：2. 4G/ WIFI 段。This report primarily summarizes the electrical results of the antenna designed for the Realtek 3- megapixel 3881-WiFi project. The designed frequency band for this antenna is: 2. 4G/WIFI band.

3.基本参数和实验设备说明 Basic Parameters and Experimental Equipment Description

3.1 基本参数 Basic Parameters

产品电气性能指标 Electrical Specification	
工作频率范围Frequency range	2400-2480MHz
驻波比VSWR	2400-2480 MHz: < 1.5
天线增益Antenna gain	2400-2480 MHz: 1.5dBi ± 0.5dBi
辐射效率Radiation efficiency	2400-2480 MHz: > 50%
阻抗Impedance	50 ohm
产品材料说明Product Material	
PCB	同轴线 Coaxial cable
壳料Shell material	
产品环境说明Product Working Environment	
工作温度Working temperature	- 30℃ ~ + 85 ℃
储藏温度Storage temperature	- 30℃ ~ + 85 ℃

3.2 实验设备说明Experimental Equipment

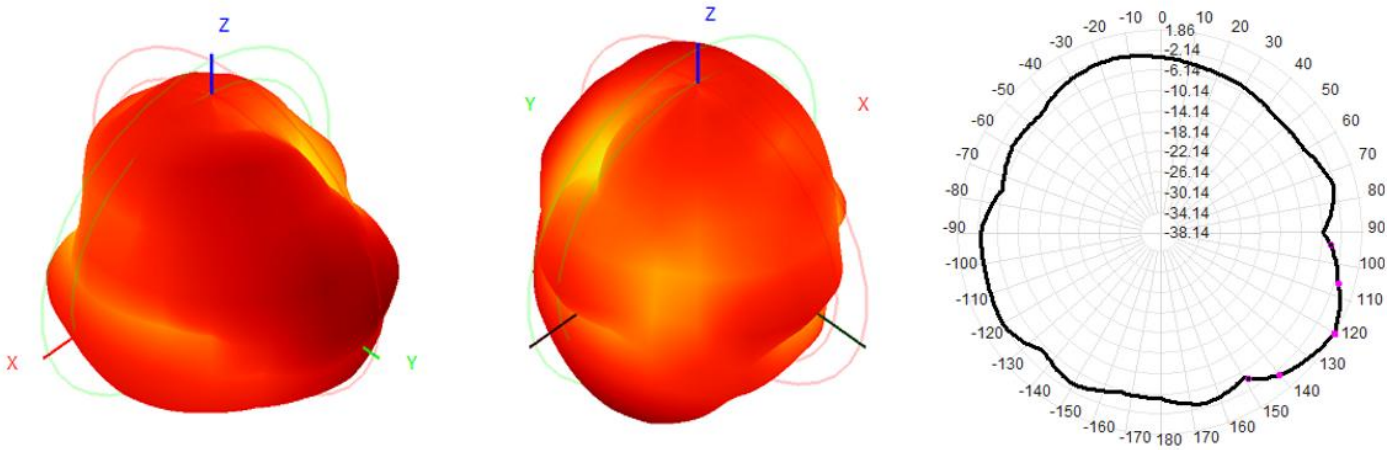
List	Testing project	Equipment
1. S Parameters	1.Return loss 2. VSWR at	Network analyzer: Agilent 8753ES
2. Coupling power test	1. Transmission power 2. Receiving sensitivity	Comprehensive tester: Agilent 8960 E5515C
3. Radiation pattern and gain	1. Radiation pattern 2. Antenna gain	1. Darkroom: 7x4x3 m (3D) 2. Network analyzer : Agilent 8753ES

4.天线测试数据 Antenna Testing Data

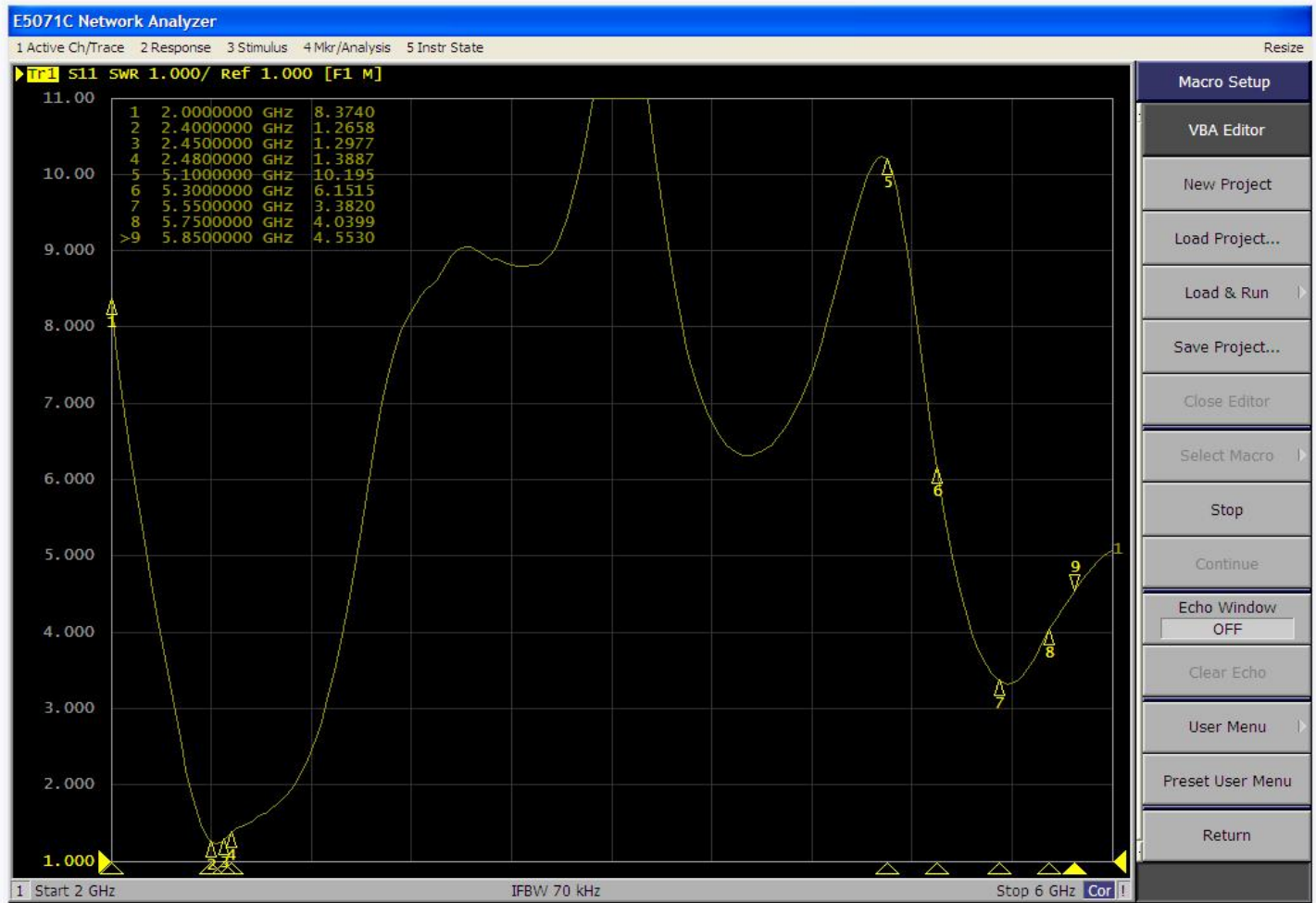
4.1 Wifi:2.4G 效率/增益 Frequency/Gain

WIFI 测试数据 Testing data:		
WIFI 2.4G		
Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	50.1	1.75
2410	51.2	1.86
2420	50.6	1.66
2430	50.4	1.93
2440	51.1	1.77
2450	50.9	1.68
2460	50.8	1.86
2470	50.4	1.72
2480	50.7	1.91

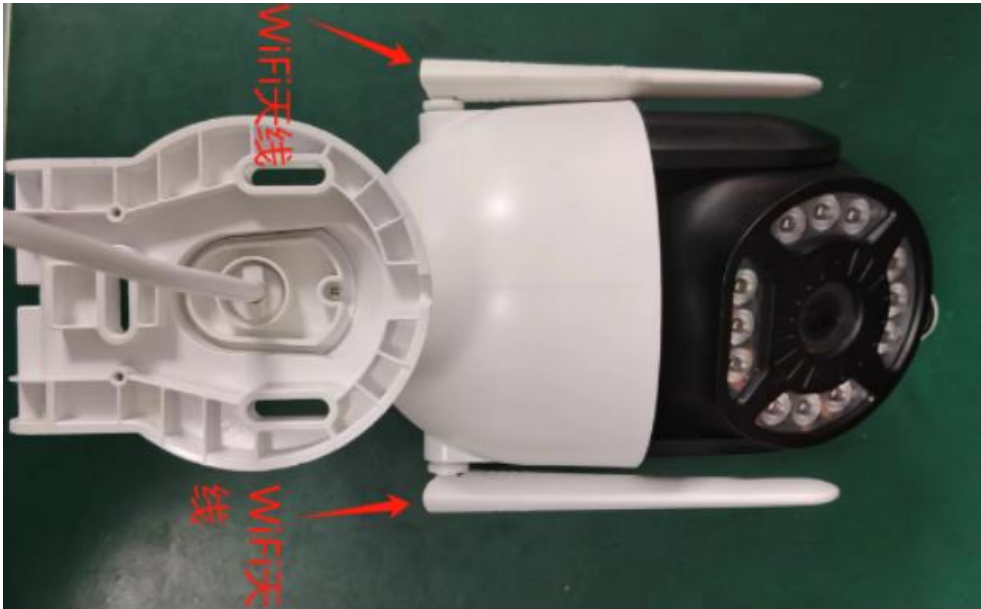
5.1 天线 2.4G 苹果图 2.4G Antenna Apple Diagram



6.1 驻波比VSWR

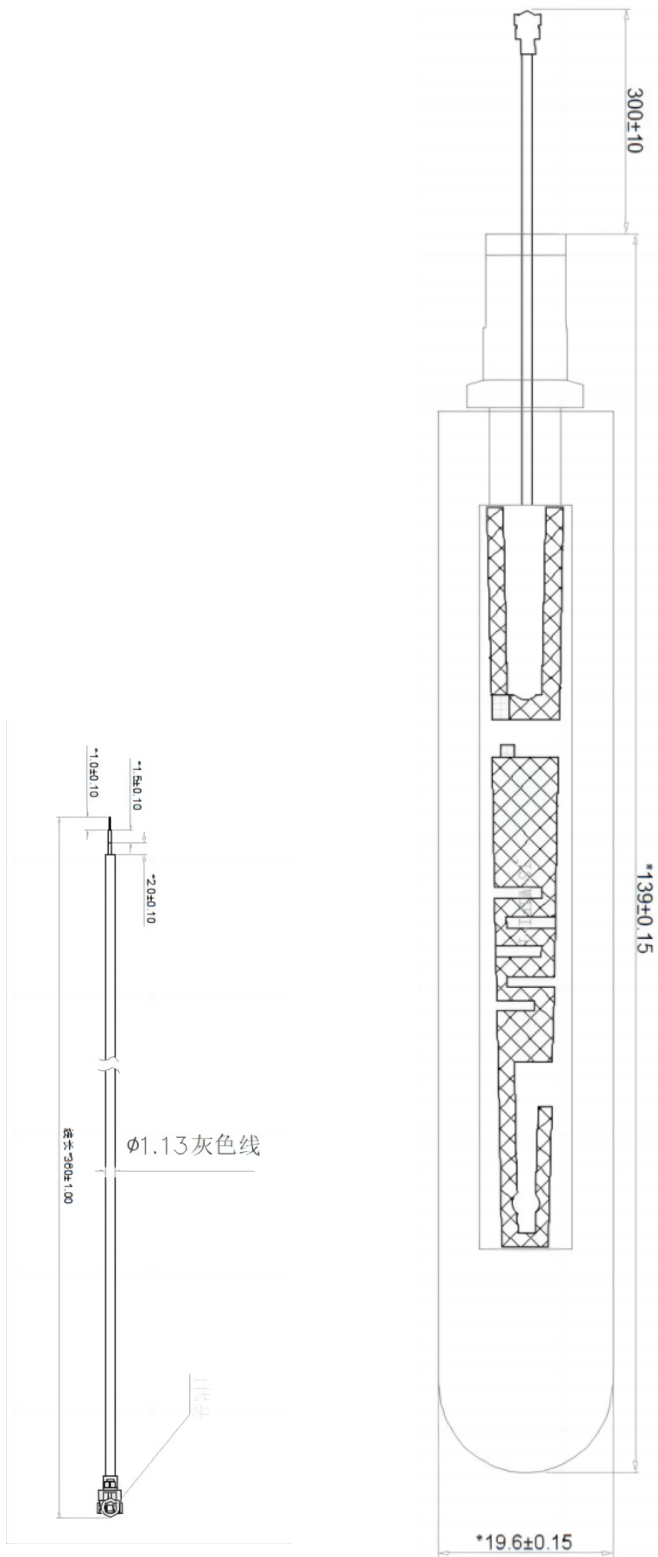


7.1 天线装配图 Antenna Assembly Chart



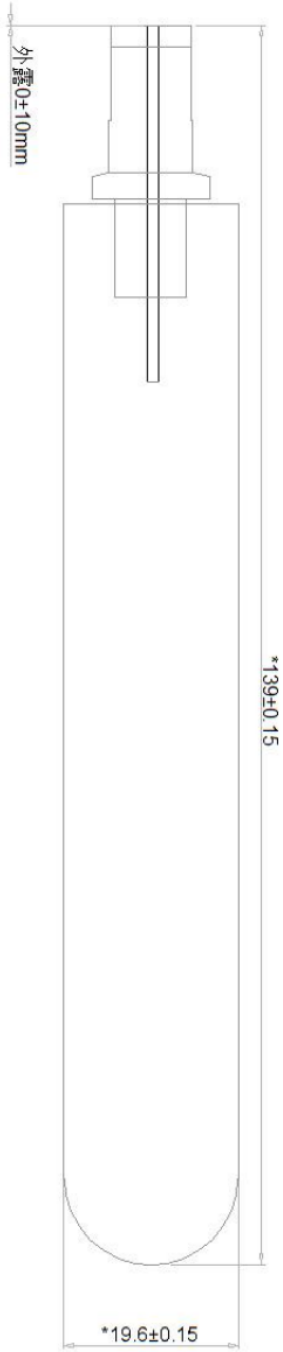
8.1 有源数据 Active Data

天线测试报告	802. 11B Antenna Performance Table			802. 11G Antenna Performance Table		
Channel	CH 1	CH 6	CH11	CH 1	CH 6	CH 11
Max Power (dBm)	20. 7	21. 4	20. 1	20. 6	21. 2	21. 3
TRP(dBm)	17. 3	18. 1	17. 5	17. 5	18. 1	18. 6
Sensitivity (dBm)	-86. 2	-87. 7	-86. 9	-75. 3	-75. 4	-75. 6
TIS(dBm)	-83. 1	-84. 2	-83. 4	-72. 5	-72. 6	-72. 1
天线测试报告	802. 11N Antenna Performance Table					
Channel	CH 1	CH 6	CH 11			
Max Power (dBm)	16. 1	17. 5	17. 3			
TRP(dBm)	13. 3	14. 1	14. 6			
Sensitivity (dBm)	-70. 4	-69. 5	-70. 1			
TIS(dBm)	-67. 8	-66. 2	-67. 6			



- NOTE
1. 打*为重点检测尺寸，孔位尺寸以装配为准。
2. 关键尺寸标注为** require priority inspection, hole positions must be verified by actual assembly.
3. Critical dimensions marked with * require priority inspection, hole positions must be verified by actual assembly.
4. 未注圆角R0.30mm。图中尺寸做中间值为佳，其它表格公差参照图框内说明。
5. Unmarked fillet sizes shall have a radius(R)of 0.30mm.Dimensions on the drawing should target the midpoint of tolerance ranges. For other unspecified tolerances, refer to the notes in the drawing frame.
6. 材料为通用钢种：(1).copper(铜)(galvanized)
7. 表面颜色：白色经印 Silver film with black or white silkscreen printing
8. 十字槽面须为倒角处理，棱角处棱边而部分不能有缺陷，起毛刺作用。整体外形轮廓四面外形轮廓。
9. Cross-sectioned areas marked with crosses indicate copor traces. Areas with green diagonal hatching show no copper plating, leaving the base material (PCB) to serve as insulation and conduction. The overall external shape must follow the center of the cross-sectional profile.
10. 表面不能附异物、异物、电镀层氧化、接口、压痕、气纹、裂纹、毛边、以及不次序有异物、脏点、偏位等现象。
11. Surfaces detected as scratches, exposing copper, plating imperfections, oxidation, nicks, dents, bubbles, cracks, burrs, foreign objects, stains, or misalignment are strictly prohibited.
12. 对照工程材料。
13. Final product must match the engineering-approved sealed sample.
14. 注意端口方向。
15. Insure correct orientation of terminal ports.

材质说明		Material				深圳市景松科技有限公司	
①	PCB天线 (PCB antenna)		机种Model	瑞芯500万3881外置IFI天线 38P camera's Realtek 3881 external wifi antenna		日期	2023/12/20
②	同轴缆 (Coaxial cable)		品名 Item name	主天线 Main antenna		设计Design	结构 Structure 射频 RF
③			料号 Material code	118-003-1A		审核 Review	
④			材质 Material	PCB-同轴缆 Coaxial cable		确认 Confirmation	
			模面处理 Die surface Finish			单位(Unit): mm	比例
			外观处理 Surface Finish			(ratio): FTT (Version): F:A	版本



Dummy Antenna

材质说明 Material		 深圳市景松科技有限公司			
①	PCB天线(PCB antenna)	 0.02	物料Model	瑞昱30073881外置WiFi天线 30P camera's Realtek 3881 external wifi antenna	日期 2022/12/20
②	同轴线(Coaxial cable)	 0.03	品名 Item name	主天线 Main antenna	设计Design
③		 0.02	料号 Material code	118-002-1A	审核 Review
④		 0.04	材质 Material	PCB同轴线 Coaxial cable	结构 Structure
		 0.02	模面处理 Die surface Finish		射频 RF
		 0.02	外观处理 Surface Finish		确认 Confirmation
				单位(Unit): mm	比例 (Ratio): 1:1
					版本 (Version): R-A

10.1 Environmental Characteristic

Test Item	Test description
1. Low Temperature	Temp.: -20 °C Time: 24 hours
2. High Temperature	Temp.: 80°C Time: 24 hours
3. Salt Fog	5±0.1% Nad salt fog PH Value: 6.5-7.2 Temp: 35±1°C Time:24 hours

11.1 可靠性测试报告 Characteristics and Reliability Test

Test Items 测试项目		Test Condition and Procedure 测试方法	Requirements 要求	Result 结果
C1	V.S.W.R. 電壓駐波比	Set DUT on Network Analyzer; make individual calibration to test 設置網路分析儀參數進行測試	Directive DUT specification 符合待測物規範	PASS
C3	Antenna Gain 天線增益	Set DUT on Antenna Chamber; make individual calibration to test 設置天線暗室參數進行測試	Directive DUT specification 符合待測物規範	PASS
M1	Vibration 震動	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction 振幅 1.5mm; 頻率 20~80~20Hz; 3 個方向各 2H	1. No Visual Damage 2. Frequency Tol. ≤5% 無明顯外觀不良 ; 頻率偏移 ≤ 5%	PASS
M4	Pull Test 拉力	Holding with individual specification; force applied to axis of Connector . 單獨定義產品端子拉力	1. Directive DUT specification 2. Frequency Tol. ≤5% 符合待測物規範 ; 頻率偏移 ≤ 5%	PASS
M5	Magnetic force 磁力	The separate definition of retention product magnetic surface magnets and adsorption on the iron 單獨定義產品磁鐵表面磁力及吸附鐵板上 保持力	1. Directive DUT specification 2. Frequency Tol. ≤ 5% 符合待測物規範 ; 頻率偏移 ≤5%	PASS
M6	Sway test 搖擺測試	Holding with individual specification; the swing joint and wire, wire and plastic body test. 單獨定義接頭與線材、線材與塑膠本體的搖擺測試 .	1. Directive DUT specification 2. Frequency Tol. ≤ 5% 符合待測物規範 ; 頻率偏移 ≤5%	PASS
M7	Dimension 尺寸	Inspection of dimension, color, material, package, surface process. 检查尺寸 , 颜色, 材料, 包装, 表面處理	Directive DUT specification 符合待測物規範	PASS
E2	Salt Spray 鹽霧	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%; Time: 24H 溫度 35°C; 濕度 ≥95%; 鹽水濃度 ≥5% ; 測試 24H	1. No Visual Damage 2. Frequency Tol. ≤5% 無明顯外觀不良 ; 頻率偏移 ≤ 5%	PASS
E3	Temperature and Humidity Chamber 恒溫恒濕	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H 溫度 80°C 測試 12H 轉 -40°C 測試 12H; 濕度 ≥ 90% ; 時間 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. ≤5% 恢復 2H 后, 無明顯外觀不良 ; 頻率偏移 ≤5%	PASS
E4	Thermal Shock 冷熱衝擊	GB / T 2423.22 - 2008 - 40°C (30 minutes) to + 80° C (30 minutes); Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. ≤5%	PASS

产品包装规范 Code for product packaging

产品名称/规格 Product Name/Specification

一、标签要求 Label requirement

客户名称 Customer	****		
供应商名称 Supplier	***	采购订单号 PO No.	***
物料编号 Material code	***	物料名称 Material	***
物料规格 Material Specification	***	数量 Quantity	***
生产日期 Production date	***	检验员 Inspector	***

物料标签 Material label			
供应商 Supplier	***		
项目名 Project	***		
物料编码 Material code	***		
物料规格 Material specification	***		
送货日期 Delivery date	***	送货数量 Delivery QTY	***

二、装箱要求 Packaging requirement

作业说明 Packaging instructions:

1. 内包装 Inner pack:

产品 200 PCS 一小袋 product:200pcs/small bag

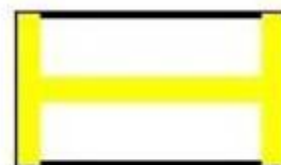


PE bag

2. 外包装 Outer pack:

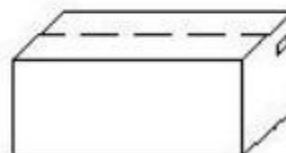
根据实际数量定数量/箱

Set quantity/box based on actual quantity



纸箱

Carton



注意事项:

1. 是否要增设隔板、珍珠棉

Whether to add dividers and EPE foam;

2. 标签的贴附, 如 ROHS 等

Label attachment ,such as ROHS labels;