

Shenzhen Zonke Melly Technology Co., Ltd

Approval Sheet

Customer Resvent Medical Technology Co., Ltd

Project Model HR01

Product Name 2.4G Wifi Cable

Custom P/N 09901-010006-00

Internal P/N RX-001

Sample Version A

	Customer	Marketing	Design
Signature		Qinghua Mao	Deshu Qi
Date		2022/5/1	2022/4/30

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Change History

Version	Date	Description	Comments
A	2022/4/18	First Version	

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1. Description

The approval sheet is for the Wifi cable on HR01 project

- a) WIFI cable working frequency range 2400~2500MHz
- b) The kind of WIFI cable takes FPC material

2. WIFI Cable Picture



3. Parameters

A. Electrical Characteristics	
Frequency	2400 MHz ~2500 MHz
VSWR	<3
Efficiency	>47%
Impedance	50 Ohm $\pm$ 15%
Polarization	Linear
Peakgain Type	2.96dbi

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Line Loss 2400 MHz ~2500 MHz	0.5db
B. Material & Mechanical Characteristics	
Material of Radiator	FPC Black
Cable Type	Cable $\varnothing$ 0.81mm black
Connetor Type	Gen3 Terminal
C. Environmental	
Operation Temperature	-40° C ~ + 80° C
Storage Temperature	-45° C ~ + 90° C

4. Adjust and Test Equipment

4.1 Test Instrument

Agilent E5071B is applied to test VSWR by connecting to mobile phone fixture, the test condition is free space

4.2 Test Environment and Method

Test Environment: Temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, Humidity $50\% \pm 15\%$

Anechoic Chamber Spec: 7*4*3; 5*3*3

TD-SCDMA Test Equipment: Agilent 8960

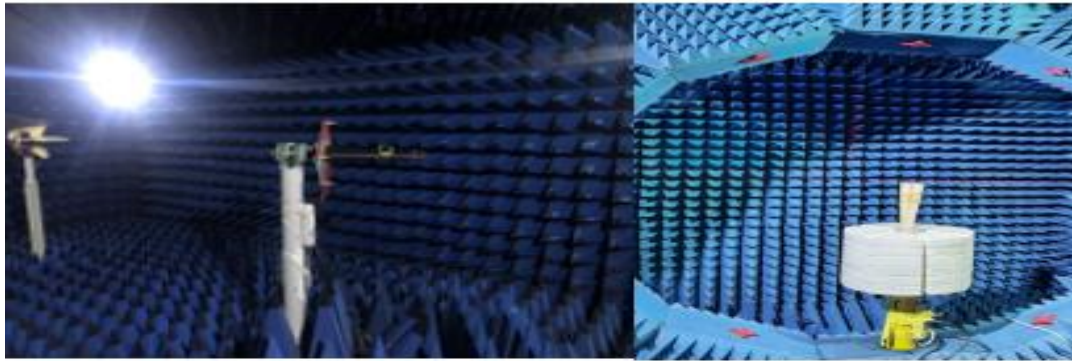
LTE-TDD/FDD-SCDMA Test Equipment: StarPoint SP8011/CMW500/Anritsu MT8820C

WCDMA/GSM/CDMA Test Equipment: Agilent 8960

Passive Efficiency Test Equipment: Agilent Technologies E5071B

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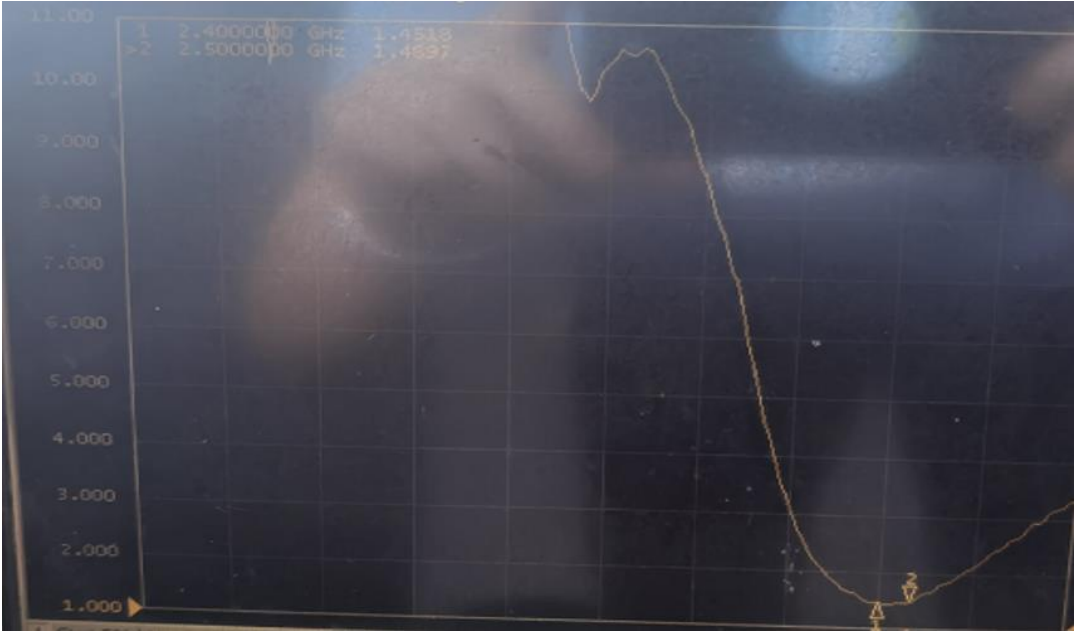
Test Equipment Pictures:



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5. WIFI Cable Test Data

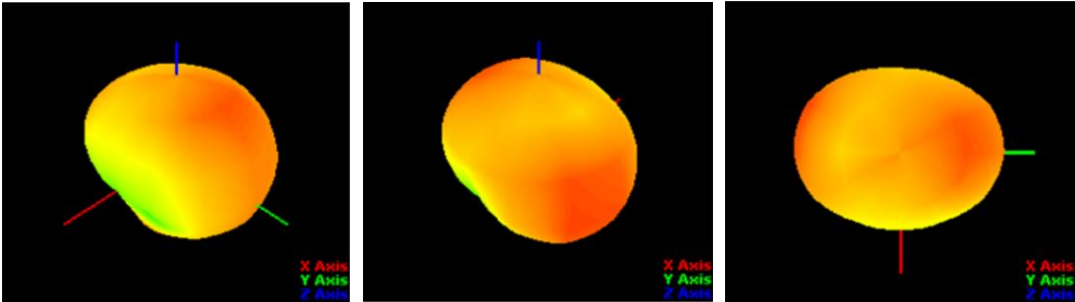
5.1 SWR



5.2 Passive Test Result for Frequency Band

Test Point ID	1	2	3	4	5	6	7	8	9	10	11
Freq. (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-1.91	-1.86	-1.81	-1.80	-1.75	-1.71	-1.78	-1.92	-1.97	-2.09	-2.24
Gain (dBi)	1.79	1.85	2.03	2.58	2.84	2.96	2.52	2.04	1.73	1.55	1.62
Efficiency (%)	64.4%	65.2%	65.9%	66.1%	66.8%	67.5%	66.4%	64.2%	63.5%	61.8%	59.7%

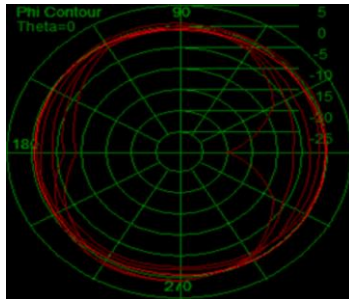
5.3 Apple Diagram



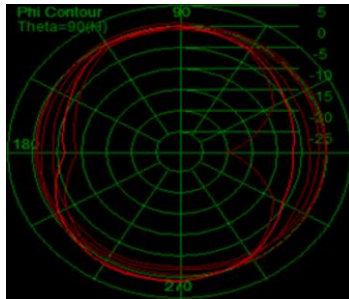
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5.4 Field Pattern

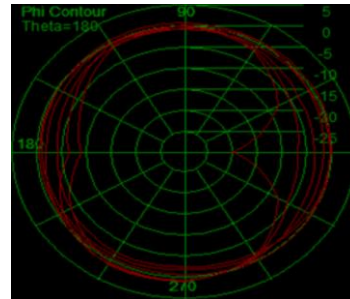
XY Axis



XZ Axis



YZ Axis



5.5 TRP & TIS

Test	2.4WIFI B		
Result	1	6	11
TRP (dBm)	14.25	13.89	14.02
TIS (dBm)	-81.86	-82.53	-82.41

5.6 UUT Picture



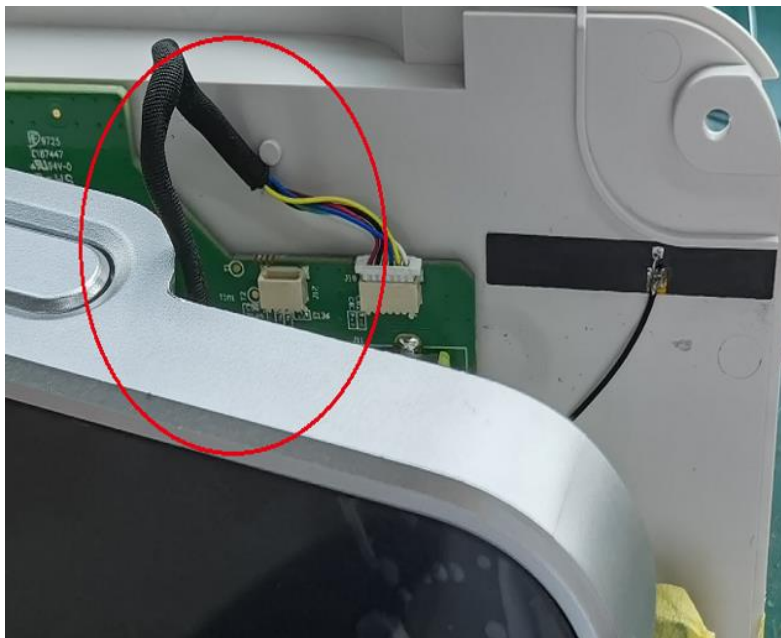
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5.7 WIFI Cable Installation Notice



The antenna need to be sticked along with the instrument edge

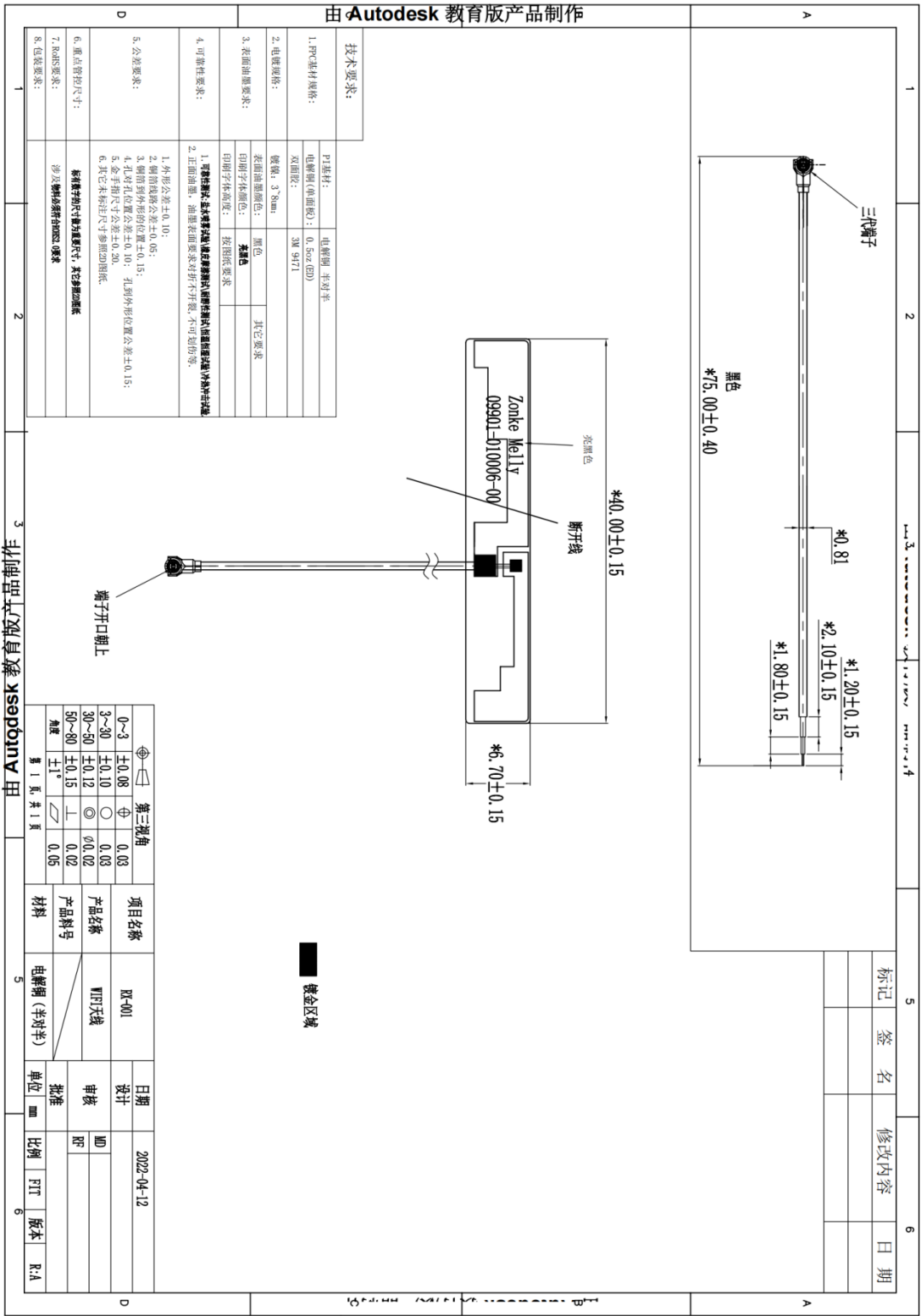
5.8 Ambient Environment Suggestion



The power line need to be away from antenna as far as possible, and keep the good consistence

6. Mechanical

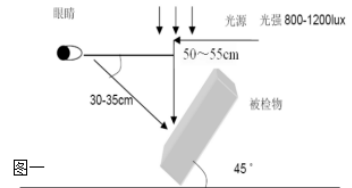
6.1 2D Drawing



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6.2 WIFI Cable Inspection

SIP作业指导书		文件编号	版本	适用范围	审核	拟制	制作部门	制作日期	页次
		YC/WI.QC-014	A. 2	IPQC/OQC	冯继武	何丽	质量部	2020-10-22	1 of 2
一、FPC/同轴线外观检查									
1	目 的	为确保FPC来料与壳料FPC加工品质符合客户品质验收标准。							
2	检验项目	外观							
3	使用设备及工具	压壳治具、万用表、恒温烙铁							
4	抽样基准	品管依据MIL-STD-105E单次抽样计划表Ⅰ之一般检验水平Ⅱ作抽样检验。							
5	检验条件	1) 光照强度：控制在800~1200LUX左右（100W冷白荧光灯，光源距被测物表面100~110cm）；							
		2) 检测面与工作台面成45°；上下左右转动90°（保证各个面的缺陷均能被看到）；							
		3) 检视距离：产品与眼睛的距离为30~35cm(检验者裸视视力大于1.0);如（图一）							
		4) 温度条件：温度15~35℃；湿度20%~75%；							
		5) 目检时间：每个面检查时间不低于2S；							
		6) 外观检验步骤要求：正面-底面-右侧-上部-左侧-反面。							
二、外观检验标准									
序号	检验项目	标 准							
1	包装	物料外包装标识清晰，标识完整，无混料、数量短装、有日期标识。							
2	外观	不允许断裂，表面无脏污，氧化，缺损、折痕、丝印错误、残缺、露铜、金手指脱落翘起，有脏污，氧化现象。							
3	颜色	颜色与样品及承认书要求相符；							
4	材质	主体及硬度与认证材料要求相符；							
5	结构尺寸	产品本体加强板结构、尺寸与样品及承认书相符；				序号	注意事项		
6	导通测试	进行线路导通测试，不能出现开路或缺路测量FPC每一条线路全长的导通电阻值；阻止≤1Ω；				1	检查时注意配带手指套，避免金手指氧化；		
						2	不同物料进行区分摆放，并做标识防止混淆；		
7	可焊性	恒温烙铁360° C±20；				3	检查时注意良品与不良品的区分；		
8	LED发光测试	在LED灯光照射下，观察其发光颜色、亮度是否一致；				4	产品检验完后贴好合格证与日期标签；		
9	附着力	用3M背胶贴FPC正面3分钟后，撕下胶纸检查不能掉油墨				5	产品尾数箱附出厂检验报告；		



SIP作业指导书		文件编号	版本	适用范围	审核	拟制	制作部门	制作日期	页次
		YC/WI.QC-014	A. 2	IPQC/OQC	冯继武	何丽	质量部	2020-10-22	2 of 2
二、外观检验看板									
             									

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6.3 ROHS

客户产品名称 Customer product name and coding	物料编码 Material Coding	零件名称 Component Name	单位重量 (mg) Unit Weight	物料名称 (The Name of Homogeneous Substance)	品牌/厂家 Brand manufacturer	物质名称 Substances Name	物质CAS NO.	物质重量 (mg) Substance Weight	物质含量 (%) Content (%)	检测报告编号 The Number of Testing Reports	报告日期 The Date of Issue Reports	检测机构名称 The Name of Testing Institution	RoHS指令指令(Directive 2002/95/EC)检测结果 (Testing Result)														备注 Remarks	其他测试报告 Other test reports	MSDS	备注																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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RX-001	RX-001	50	PI-CCL 导电胶 导电胶膜	PI-CCL 导电胶膜	PI-CCL 导电胶膜	Halogen-free epoxy resin	25065-38-8	0.2	18.00%	SHAECC220246050	2022-02-21/2022-02-22	SGS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

6.4 BOM

项次	料号	品名	类型	版本	规格	材质	表面处理	颜色	单位	数量	工艺
1	513001-1A	WIFI组件	Z	R: A	40.00*6.70*1.5MM			黑色	PCS	1	焊接
1.1	513001-1A-01	WIFI-FPC	W	R: A	40.00*6.70*0.12MM	电解铜 半对半	镀镍	黑色	PCS	1	焊接
1.2	513001-1A-02	同轴线	W	R: A	0.81MM*75MM	CABLE线+单头3代端子	端子镀金	黑色	PCS	1	焊接

类型: W. 外购 B. 半成品 Z. 成品 C. 客供

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7. Package

Package Requirement

Customer	Resvent	Project Model	HR01	Customer P/N	09901-010006-00
Date	2022-4-18	Product Name	2.4 G WIFI Cable	Internal P/N	RX-001
Storage:		Temperature 20° C & Humidity 75%			
Package Material			MOQ: 100PCS/ a small bag 		
No	Description	Spec			
1	Sealable Bag	250*170mm			
2	Carton	300*200*180mm			
100pcs for a small bag 10 small bags for 1 big bag					

Package instruction

1000PCS/a big bag and labelling



Packed according to order



Outer box label

