

Shanghai Shangyuan Communication Technology Co., LTD

Antenna admission book

Customer name: Yunjia		Project name: F510
Working frequency band: WiFi2.4G&5G		
Hardware version: F510-T113-S3-V2.120240617		
Hardware version: PD_VCI_V0.2-20231027		
Shangyuan material specifications		
specifications and models	Shang Yuan material number	Customer material number
WIFI ant	SZ24201IB74	2.1.09.12.011601

Change the resume			
Preparation / change date	Change the content	Change the person	edition
2024.06.24	A new release	XUWEI	A

Shang Yuan will sign the column				
research and development	structure:	examine and verify:	Quality Engineer:	ratify:
	radio frequency:	examine and verify:		

The customer will sign the column			
electronic engineer	project manager	construction engineer	Quality engineer

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一、 item information

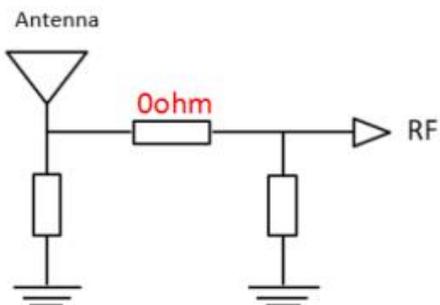
.11 Schematic diagram



.21 Antenna product diagram



二、 Antenna matching circuit



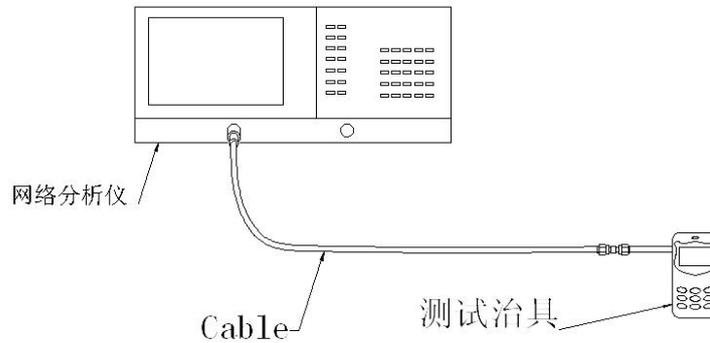
三、 Complete machine test data

3.1 S11 Description of the test method

Test Equipment: Network Analyzer (Agilent E5071C)

Test method: Export a 50 Ohm CABLE cable from the instrument test port, connect the SMA connector of the test device after the calibrator, and record the echo loss and standing wave ratio corresponding to the relevant frequency point.

The test schematic diagram is as follows:



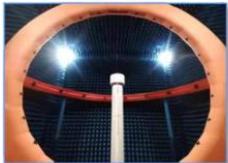
Schematic diagram of the test

3.2 Test environment

Test System: MPS 6450 Multi-sensor OTA Measurement System (XH-IoT)

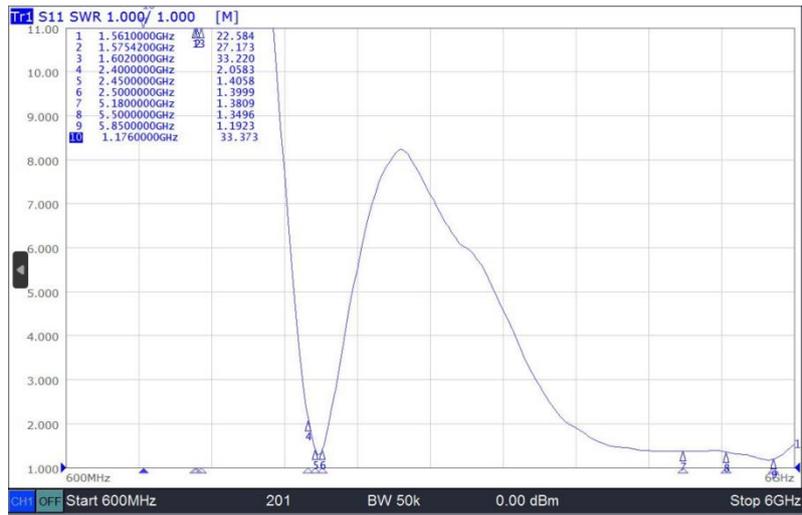
Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

Test equipment: Use the network analyzer R & S ZND / Agilent E5071C when testing the passive data
When testing active data, use the comprehensive meter Agilent 8960 / CMW500 / S P9500E / SP 8315

OTA实验室	综测仪器	其他设备
		
		
		
	SP9500-CTS-5G	OTA head hand
	CMW500	OTA ear hand
	SP8315 NB-IoT /eMTC	OTA arm hand

3.3 The passive test parameters

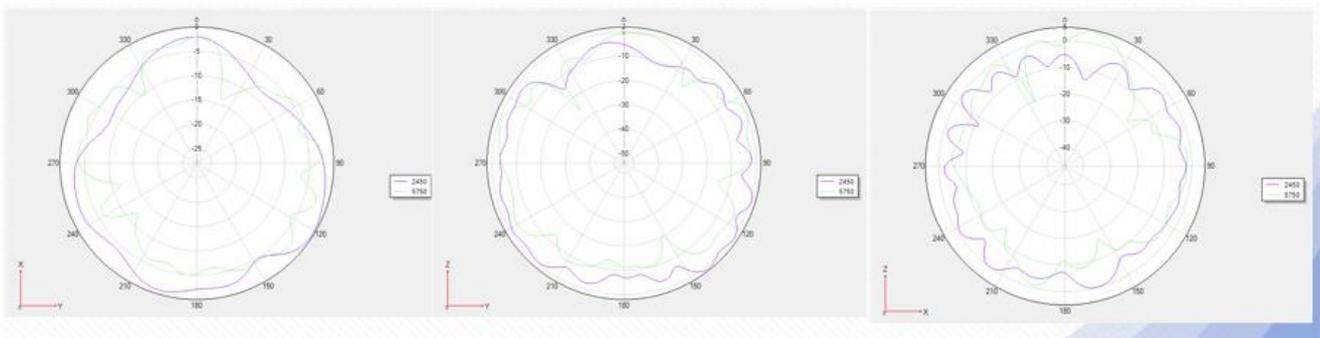
standing-wave ratio VSWR



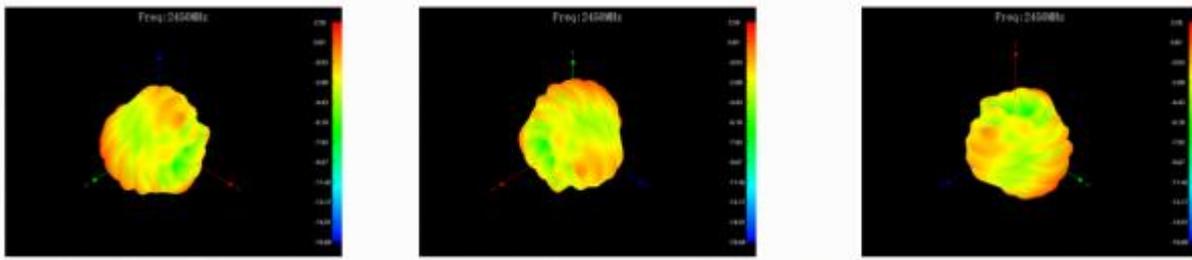
Passive efficiency

Frequency/Mhz	Efficiency / %	MaxGain/dBi	5150	50.95	6.11	5510	40.82	6.94
2400	59.98	2.59	5160	49.02	6.01	5520	39.89	7.02
2410	58.55	2.76	5170	49.43	6.12	5530	39.89	6.87
2420	59.02	2.66	5180	48.21	6	5540	39.32	6.98
2430	56.37	2.76	5190	47.68	6.04	5550	40.58	6.98
2440	57.45	3	5200	46.1	5.86	5560	40.35	7.12
2450	56.68	3.17	5210	46.49	5.98	5570	40.7	7.03
2460	54.86	3.12	5220	45.21	5.84	5580	39.43	7.03
2470	53.68	3.31	5230	43.58	5.78	5590	42	7.15
2480	53.39	3.18	5240	45.59	5.87	5600	40.58	7.15
2490	49.84	2.95	5250	43.33	5.82	5610	41.64	7.13
2500	48.08	2.73	5260	43.7	5.76	5620	42	7.25
			5270	40.93	5.78	5630	45.85	7.51
			5280	42.84	5.79	5640	43.46	7.35
			5290	40.93	5.83	5650	45.59	7.47
			5300	42	5.87	5660	43.46	7.35
			5310	39.55	5.85	5670	45.85	7.52
			5320	41.52	6.08	5680	44.08	7.42
			5330	38.87	5.98	5690	45.98	7.59
			5340	39.66	6.05	5700	43.58	7.44
			5350	36.77	5.88	5710	46.75	7.73
			5360	39.66	6.22	5720	44.83	7.55
			5370	37.21	6.12	5730	45.59	7.63
			5380	39.43	6.36	5740	46.1	7.67
			5390	37.64	6.27	5750	46.75	7.71
			5400	40.23	6.59	5760	46.1	7.54
			5410	39.09	6.47	5770	46.1	7.61
			5420	39.66	6.66	5780	47.68	7.65
			5430	39.09	6.52	5790	46.49	7.66
			5440	40.58	6.96	5800	47.02	7.54
			5450	40.12	6.8	5810	46.36	7.58
			5460	40.12	6.96	5820	49.29	7.7
			5470	39.09	6.76	5830	46.62	7.56
			5480	40.58	7.07	5840	48.21	7.58
			5490	39.66	6.89	5850	44.95	7.4
			5500	38.98	6.9			

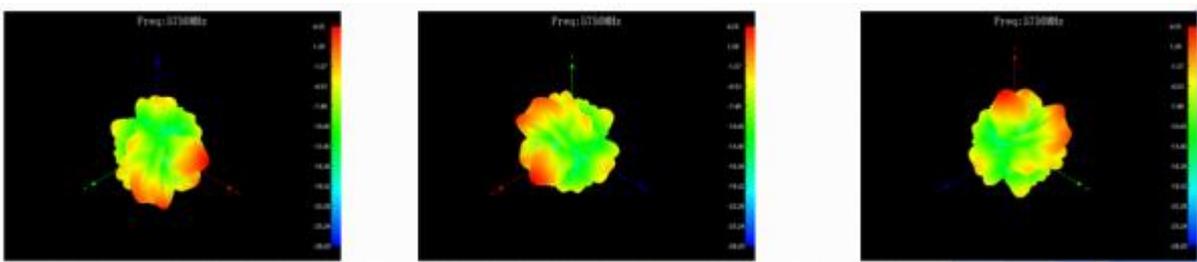
Passive direction diagram



Radiation Apple Figure 2.4G



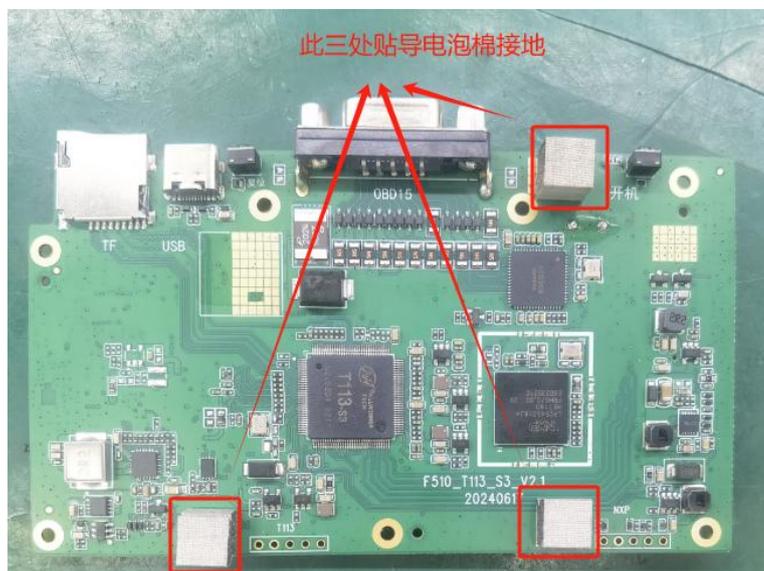
Radiation Apple Figure 5.8G



3.4 Active test data

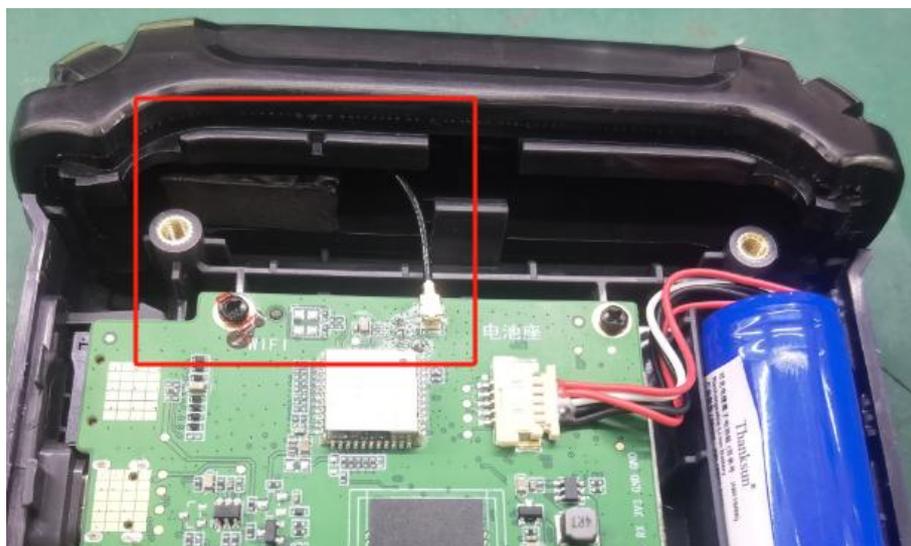
Measurement	Band	Channel	Total
TRP	WIFI_B (1M)	1	16.22
TRP	WIFI_B (1M)	6	16.34
TRP	WIFI_B (1M)	11	16.44
TIS(EIRP)	WIFI_B (11M)	11	-83.56
TRP	WIFI_G (6M)	1	15.89
TRP	WIFI_G (6M)	6	16.11
TRP	WIFI_G (6M)	11	15.91
TIS(EIRP)	WIFI_G (54M)	11	-69.89
TRP	WIFI_N_ISM (6.5M)	1	15.22
TRP	WIFI_N_ISM (6.5M)	6	15.23
TRP	WIFI_N_ISM (6.5M)	11	15.11
TIS(EIRP)	WIFI_N_ISM (65M)	11	-66.26
TRP	WIFI_A (6M)	36	13.44
TRP	WIFI_A (6M)	149	13.51
TRP	WIFI_A (6M)	165	13.66
TIS(EIRP)	WIFI_A (54M)	165	-69.67
TRP	WIFI_N_UNII (6.5M)	36	12.24
TRP	WIFI_N_UNII (6.5M)	149	11.98
TRP	WIFI_N_UNII (6.5M)	165	12.11
TIS(EIRP)	WIFI_N_UNII (65M)	165	-65.29

四、 The prototype environment processing mode



五、 Antenna loading position

The antenna is assembled in the following figure



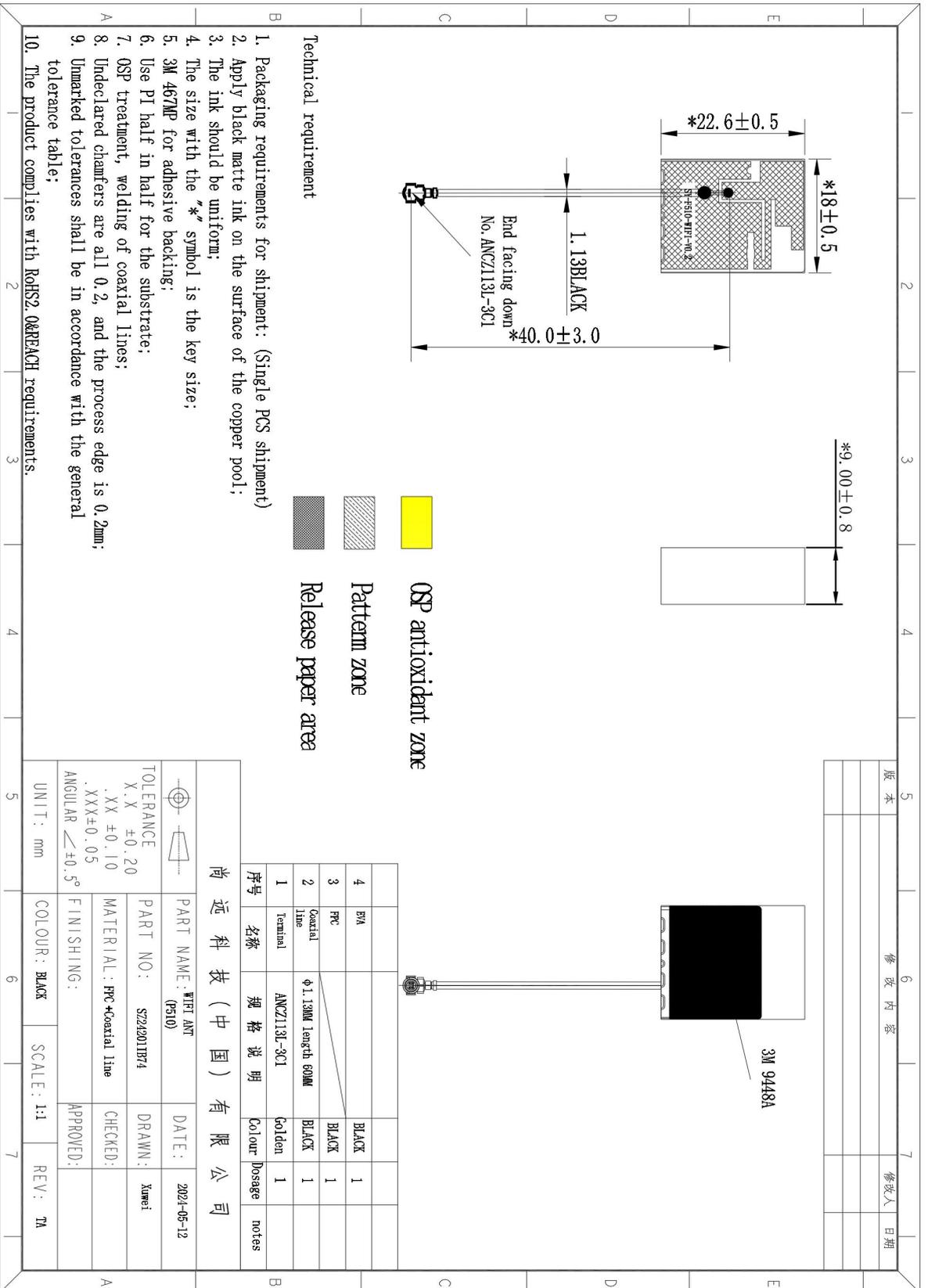
六、 Mass production antenna index

When the antenna is in mass production, the standing wave ratio is used as the test standard for mass production.

Based on the differences of the project itself, the following criteria are given:

Frequency (MHz)	Mass production standards
2400-2450MHz	VSWR (mass production performance)
5150-5850MHz	<VSWR (recognized performance) + 0.5

七、 schedule drawing



八、 ROHS restricted substance composition questionnaire

RoHS List of RoHS restricted substances

零件料号/Part number		零件名称/型号/Part name / model		供应商料号/Supplier item number	制造商名称/Name of manufacturer
		P510		SZ242011B74	深圳市尚远科技有限公司
SUBPART					

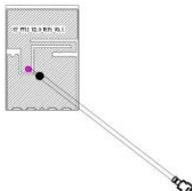
序号 Serial number	名称/name 单体 Monomer /component	料号 /Item No	使用量/Usage of single product(g)	供应商/supplier /Cheranguetti	检测 报告 /Test report	限制物质含量PPM/Content of restricted substances ppm						控制方法 /Control method	SGS Report			备注 /Remarks	
						有/无 Yes / no	铅 /Pb	镉 Cd	汞/Hg	六价铬 /Cr6+	PBB		PBDE	编号/number	生效日期 /effective date		查询网址/Query website
1	FPC 基材/base material			蔡伦格蒂 /Cheranguetti	有/yes	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	SHAEC24000428806	2024/1/12	www.sgsgroup.com.cn	/	
2	FPC 油墨 /printing ink			优立/You li	有/yes	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	ETR23701480	2023/6/13	www.sgsgroup.com.cn	/	
3	FPC 背胶/Gum Back			3M	有/yes	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	CANEC2227657306	2023/5/30	www.sgsgroup.com.cn	/	
4	FPC 电金 /Dianjin			鑫达昇	有/yes	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	A2230153997101001E	2023/4/12	www.sgsgroup.com.cn	/	
5	CABLE 镀锡圆铜线			震雄铜业	N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	A2230496550101001C	2023/09/22	www.sgsgroup.com.cn	/	
6	CABLE FEP				N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	NGBPC24000131241	2024/1/16	www.sgsgroup.com.cn	/	
7	CABLE 线材色母			见龙	N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	A22302224211010010	2023/5/16	www.sgsgroup.com.cn	/	
8	CABLE C5191			紫金铜业	N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	CANEC24000977304	2024/01/22	www.sgsgroup.com.cn	/	
9	CABLE C5210			紫金铜业	N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	CANEC24000977302	2024/01/22	www.sgsgroup.com.cn	/	
10	CABLE 胶芯				N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	ETR23705937	2023/08/04	www.sgsgroup.com.cn	/	
11	CABLE 镀金			翔腾电子	N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	A2230400553101001E	2023/08/09	www.sgsgroup.com.cn	/	
12	CABLE 镀镍			翔腾电子	N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	A2230400553101002E	2023/08/09	www.sgsgroup.com.cn	/	
13																	

制表/Tabulation: 陈小平

制表者部门/Tabulator: Department: 品质部/品质工程师 Quality Department

日期/date: 2024/5/8

九、 manner of packing

Parts packing instructions report			
customer name	Yunjia	manufacturer	SUNNYWAY
entry name	SZ23605IB74	product name	FPC antenna module
Bale quantity	50 PCS * <u>1</u> <input type="checkbox"/> bundle <input checked="" type="checkbox"/> PE bag <input type="checkbox"/> disc <input type="checkbox"/> layer <input type="checkbox"/> other_____		
Moisture-proof & slow walking	<input type="checkbox"/> desiccant <input type="checkbox"/> Vacuum bag <input type="checkbox"/> Bubble pack <input type="checkbox"/> foam <input type="checkbox"/> Paper wood <input checked="" type="checkbox"/> other_____		
内包装方式及标签		<div style="border: 1px solid black; padding: 5px;"> 客户名称: 移远 产品名称: 主天线 订单号码: 尚远科技编码: SH20052IB77-3 客户物料编码: 数 量: 供应商: 上海尚远通讯科技有限公司 检验员: (盖章) 发货日期: ____年__月__日 注意事项: 防潮、防震、防压, 小心轻放…… </div>	
		50pcs / PE bag	Carton label
外包装方式示意图及标签	<div style="border: 1px solid black; padding: 5px;"> 客户名称: 移远 产品名称: 主天线 订单号码: 尚远科技编码: SH20052IB77-3 客户物料编码: 数 量: 供应商: 上海尚远通讯科技有限公司 检验员: (盖章) 发货日期: ____年__月__日 注意事项: 防潮、防震、防压, 小心轻放…… </div>		
	Carton label	Check packaging, paste product	
		manufacturer	
		XUWEI	
* The packaging picture is a schematic, does not mean that the picture is the actual product.			