

Shanghai Shangyuan Communication Technology Co., LTD

Antenna admission book

Customer name: Yunjia		Project name: P701
Working frequency band: WiFi2.4G&5G		
Hardware version: PAD01_PX30_MB_V2.1_20230819		
Hardware version: PAD01V2.0_V1.0_20240430		
Shangyuan material specifications		
specifications and models	Shang Yuan material number	Customer material number
WIFI ant	SZ24202IB74	2.01.09.12.010501

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

catalogue

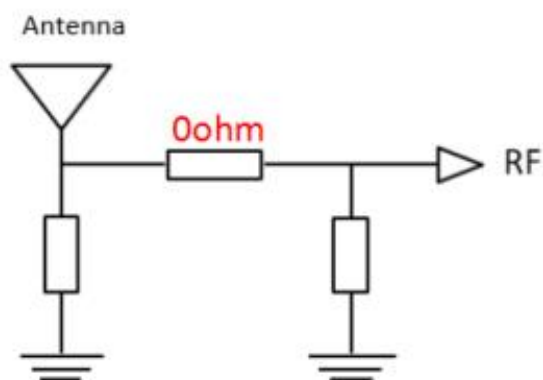
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一、 item information

.11 Schematic diagram



二、 Antenna matching circuit



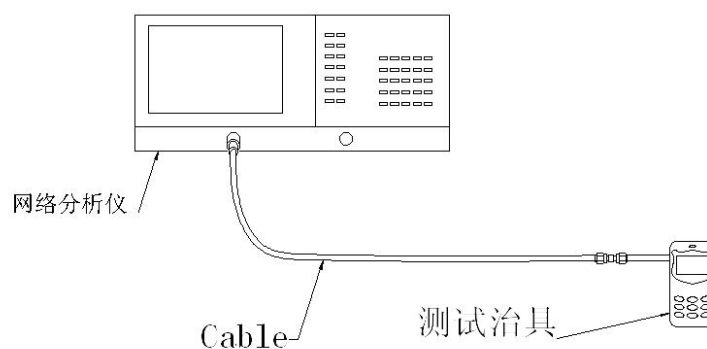
三、 Complete machine test data

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

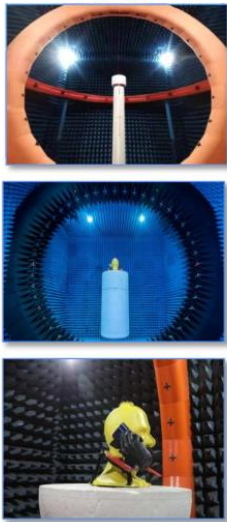
3.2 Test environment

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



SP9500-CTS-5G



CMW500



SP8315 NB-IoT
/eMTC

其他设备



OTA head hand



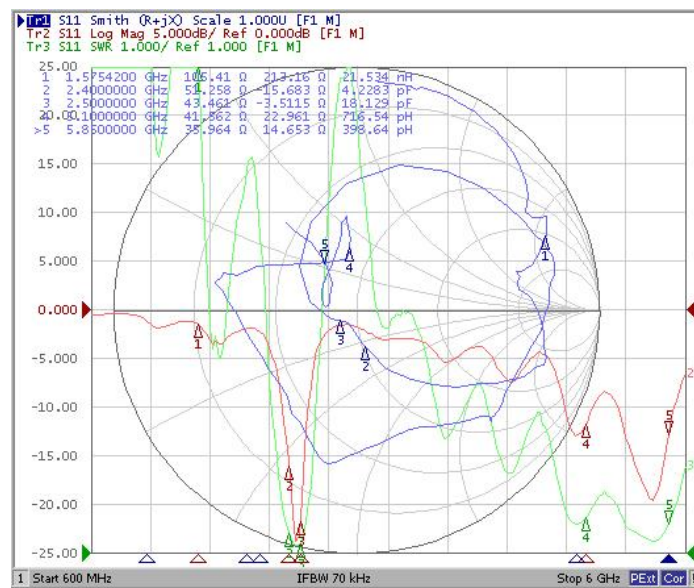
OTA ear hand



OTA arm hand

3.3 The passive test parameters

standing-wave ratio VSWR

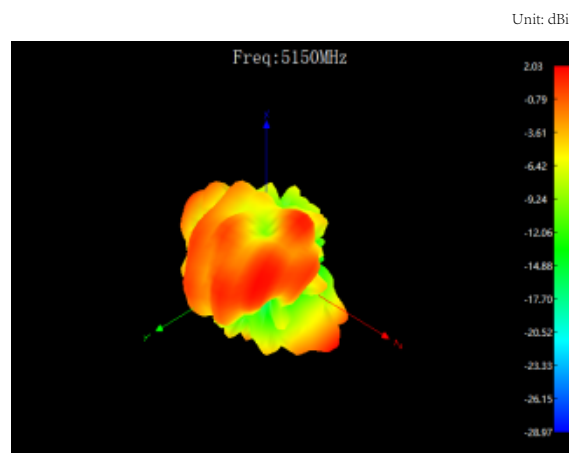
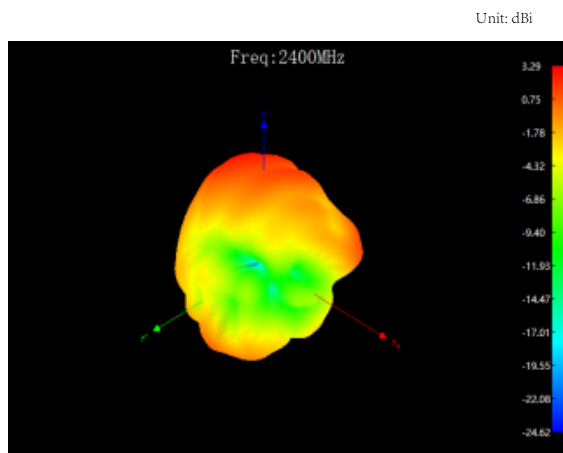


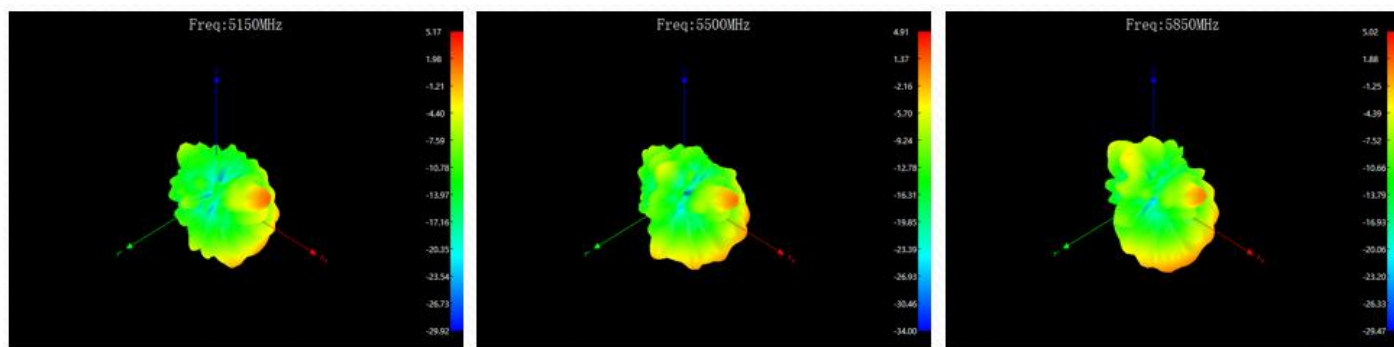
Passive efficiency

Freq	Effi	Gain
(MHz)	(%)	(dB)
2400	40.72	1.68
2410	40.36	1.99
2420	40.99	1.84
2430	40.26	1.92
2440	40.9	1.87
2450	41.09	1.86
2460	42.58	1.8
2470	43.11	1.93
2480	42.07	1.84
2490	41.75	1.87
2500	40.88	1.68

Freq	Effi	Gain
(MHz)	(%)	(dB)
5150	40.15	1.57
5200	40.4	1.65
5250	40.51	1.68
5300	41.04	1.75
5350	41.42	1.84
5400	41.89	1.96
5450	41.48	1.86
5500	41.28	1.69
5550	42.46	1.84
5600	43.74	1.93
5650	44.35	1.96
5700	41.55	1.8
5750	40.63	1.72
5800	40.17	1.69
5850	40.9	1.71

Passive direction diagram
2.4G

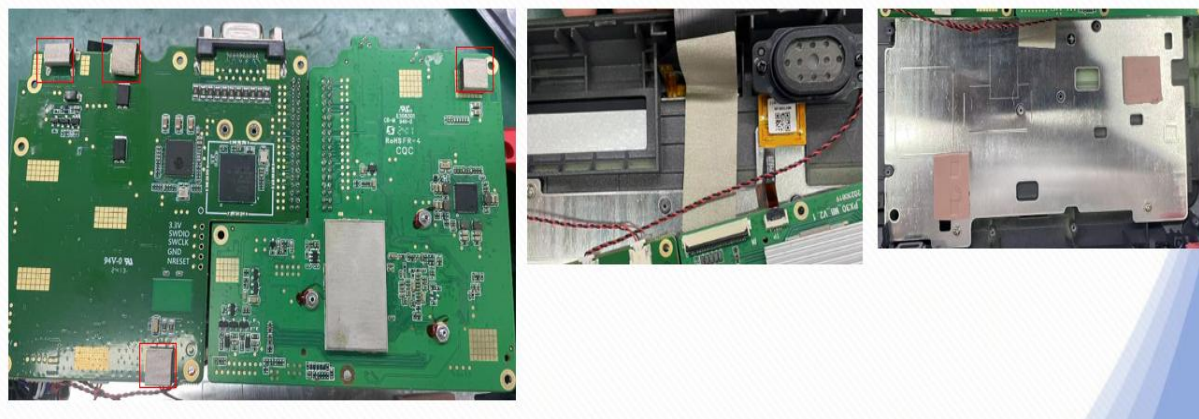




3.4 Active test data

2. 4G	信道	TRP	TIS		5G	信道	TRP	TIS
802. 11b 11mbps	1	15.06			802. 11a 54mbps	36	14.18	
	6	15.37				64	13.96	
	12	15.86	-79.62			165	13.87	-67.13
802. 11g 54mbps	1	14.22			802. 11n MCS7	36	13.13	
	6	14.19				64	13.07	
	12	15.26	-67.25			165	13.22	-65.89
802. 11n MCS7	1	13.25						
	6	13.86						
	12	14.03	-66.51					

四、 The prototype environment processing mode



五、 Antenna loading position

The antenna is assembled in the following figure



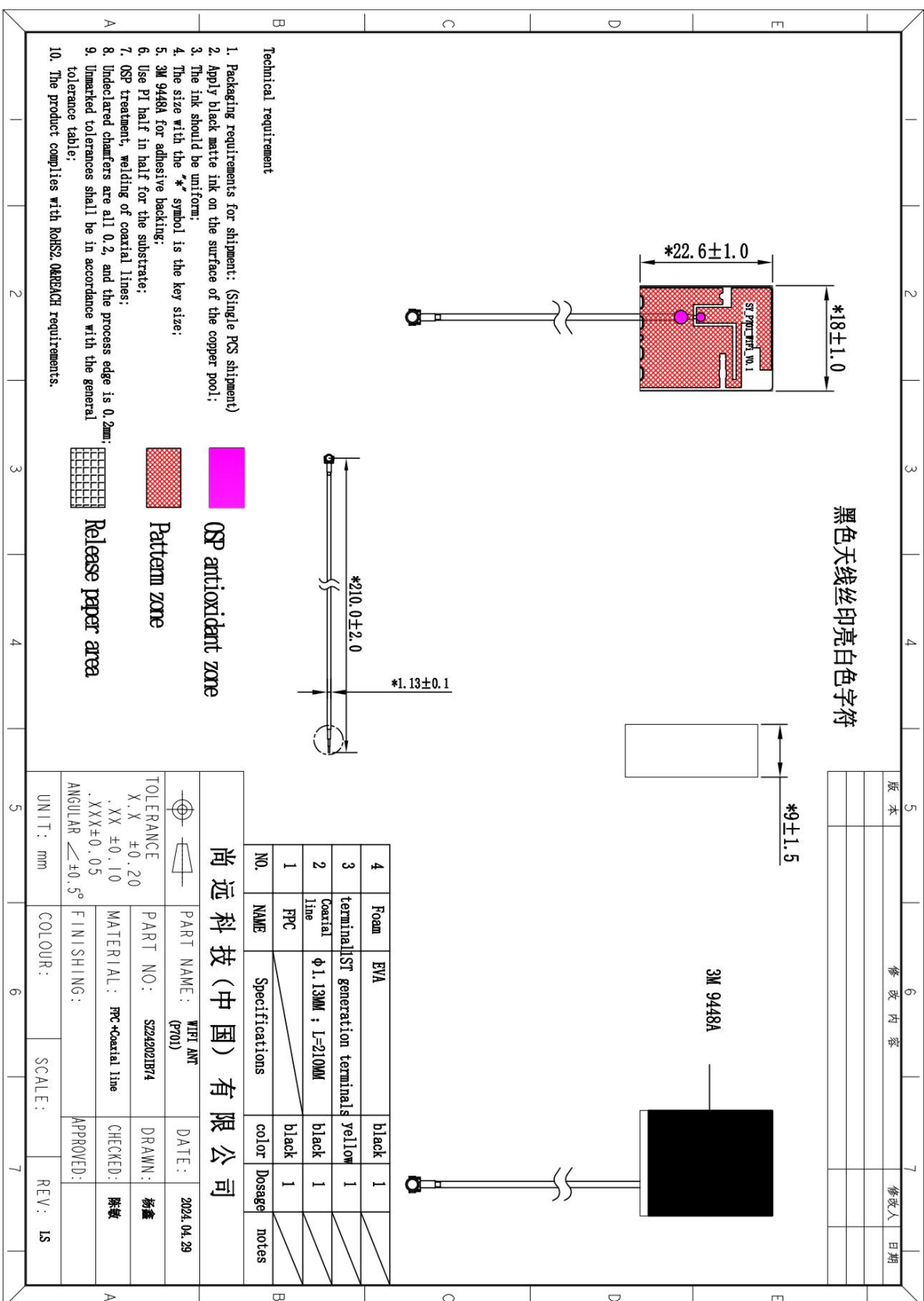
六、 Mass production antenna index

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

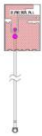
SALEABLE PART																	
零件料号/Part number			零件名称/型号/Part name / model				供应商料号/Supplier Item number		制造商名称/Name of manufacturer								
			P701 FPC ANT				SZ24202B74		深圳市尚远科技有限公司								
SUB-PART																	
序号 Serial number	名称/name		料号 Item No	单件产品 使用量/Usage of single product(g)	供应商/supplier	检测报告 /Test report	限用物质含量PPM/Content of restricted substances ppm						控制方法 /Control method	SGS Report			备注 Remarks
	单体 /Monomer	成分 /component					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	
1	FPC	基材/base material			蔡伦格蒂 /Cherengetti	有/yes	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	SHAFEC23001049105	2023/2/15	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	SHAFEC2217569205	2023/1/4	www.sgsgroup.com.cn	/
4	FPC	电金 /Dianjin			泰德/taide	有/yes	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS report	A2230153997101001E	2023. 04. 07	www.sgsgroup.com.cn	/
5	CABLE	线材胶料			巨化	N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS	NGRMC23000169901	2023/2/6	www.sgsgroup.com.cn	/
6	CABLE	线芯			锦网	N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS	CANEC23000141401	2023/2/13	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	A2220537196103001C	2022. 12. 01	www.sgsgroup.com.cn	/
8	CABLE	GS191R			英华特	N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS	SZNEC2203454507	2022. 10. 28	www.sgsgroup.com.cn	/
9	CABLE	镀金层			科信诚	N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS	CANEC2302637847	2023. 03. 7	www.sgsgroup.com.cn	/
10	CABLE	镀层镍			QIAOFU	N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS	CANEC2302637827	2023. 03. 7	www.sgsgroup.com.cn	/
11	CABLE	胶芯			新空	N.D	N.D	N.D	N.D	N.D	N.D	N.D	审核SGS报告 /Review SGS	ETR23705937	2023.08.04	www.sgsgroup.com.cn	/
12																	
13																	

制表/Tabulation: 陈小平

制表者部门/Tabulation Department: 品质部/品保工程师 Quality Department

日期/date: 2023/06/25

九、 manner of packing

Parts packing instructions report			
customer name	Yunjia	manufacturer	SUNNYWAY
entry name	SZ24202IB74	product name	FPC antenna module
Bale quantity	50 PCS * 1 ☐ bundle ☒ PE bag ☐ disc ☐ layer ☐ other _____		
Moisture-proof & slow walking	☐ desiccant ☐ Vacuum bag ☐ Bubble pack ☐ foam ☐ Paper wood ☒ other _____		
内包装方式及标签	 50pcs / PE bag Customer Name: Yunjia Product Name: WiFi Antenna Order number: Manufacturer code: SZ24202IB74 Customer code: Quantity: Inspector: Delivery date: __ Year __ Month __ day Precautions: moisture-proof, shockproof, pressure resistant, handle with care Carton label		
外包装方式示意图及标签	Customer Name: Yunjia Product Name: WiFi Antenna Order number: Manufacturer code: SZ24202IB74 Customer code: Quantity: Inspector: Delivery date: __ Year __ Month __ day Precautions: moisture-proof, shockproof, pressure resistant, handle with care  Check packaging, paste product Carton label		
		manufacturer	
		XUWEI	
* The packaging picture is a schematic, does not mean that the picture is the actual product.			