

Shanghai Shangyuan Communication Technology Co., LTD

Antenna admission book

Customer name: Yunjia		Project name: P701
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	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

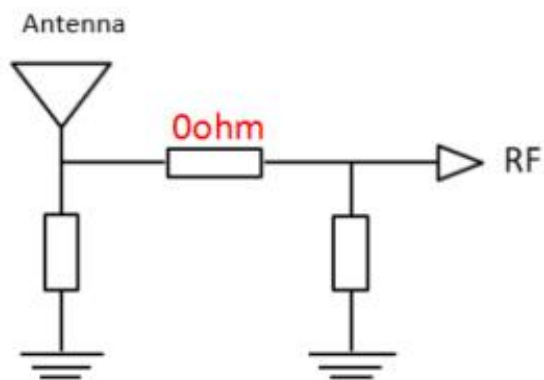
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一、 item information

.11 Schematic diagram



二、 Antenna matching circuit



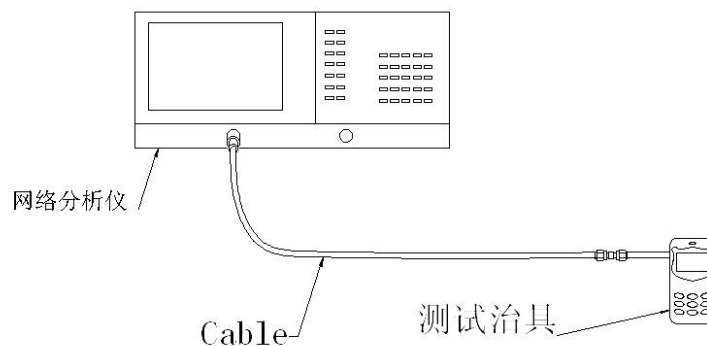
三、 Complete machine test data

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

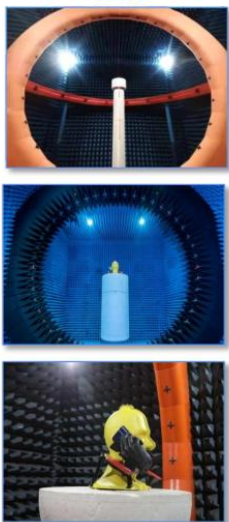
Test System: MPS 6450 Multi-sensor OTA Measurement System (XH-IoT)

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

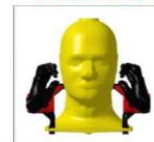


CMW500



SP8315 NB-IoT /eMTC

其他设备



OTA head hand



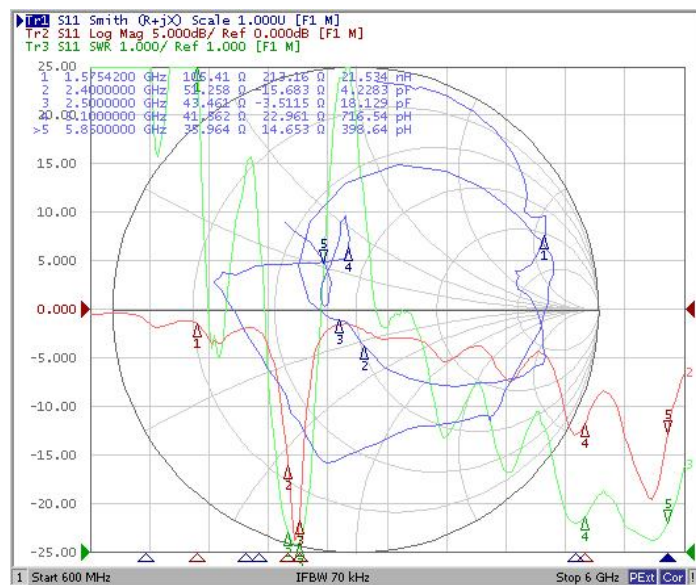
OTA ear hand



OTA arm hand

3.3 The passive test parameters

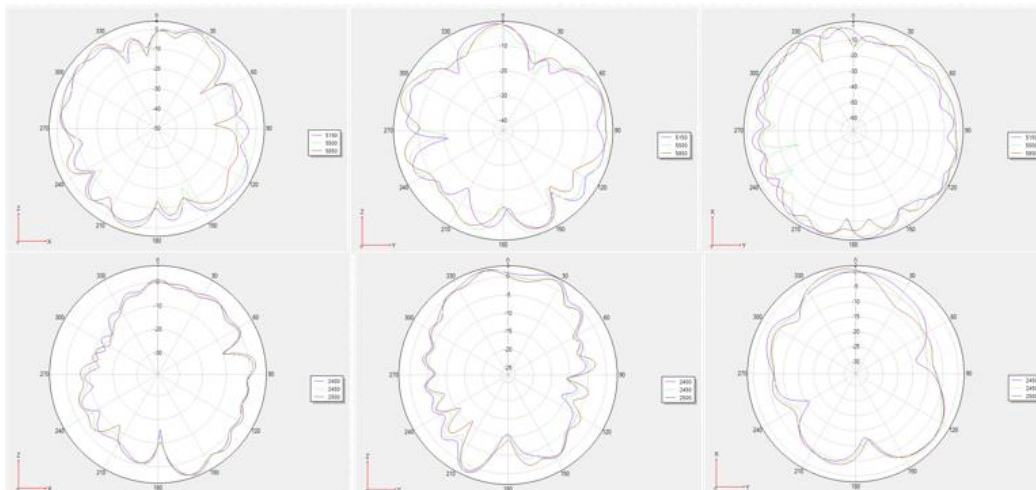
standing-wave ratio VSWR



Passive efficiency

Gain&Efficiency&PhaseCenter						
增益、效率和相位中心						
Frequency 频率(MHz)	Gain 增益(dBi)	MinGain 最小增益 (dBi)	CO Gain 主极化最 大增益 (dBi)	CP Gain 交叉极化 最大增益 (dBi)	Efficiency 效率(dB)	Efficiency 效率(%)
2400.00	4.40	-16.19	0.84	0.56	-1.62	68.83
2410.00	4.46	-15.80	0.88	0.59	-1.78	66.35
2420.00	5.19	-15.48	0.40	0.23	-1.41	72.34
2430.00	4.65	-15.01	0.66	0.64	-1.83	65.57
2440.00	5.13	-14.44	0.98	0.94	-1.77	66.56
2450.00	5.36	-14.07	1.39	0.96	-1.45	71.64
2460.00	5.01	-14.14	0.73	0.53	-2.04	62.52
2470.00	5.18	-13.72	0.90	1.21	-1.67	68.10
2480.00	5.53	-12.65	1.24	1.02	-1.54	70.19
2490.00	5.33	-12.92	1.02	1.16	-1.67	68.06
2500.00	4.91	-12.66	1.08	0.96	-1.75	66.76

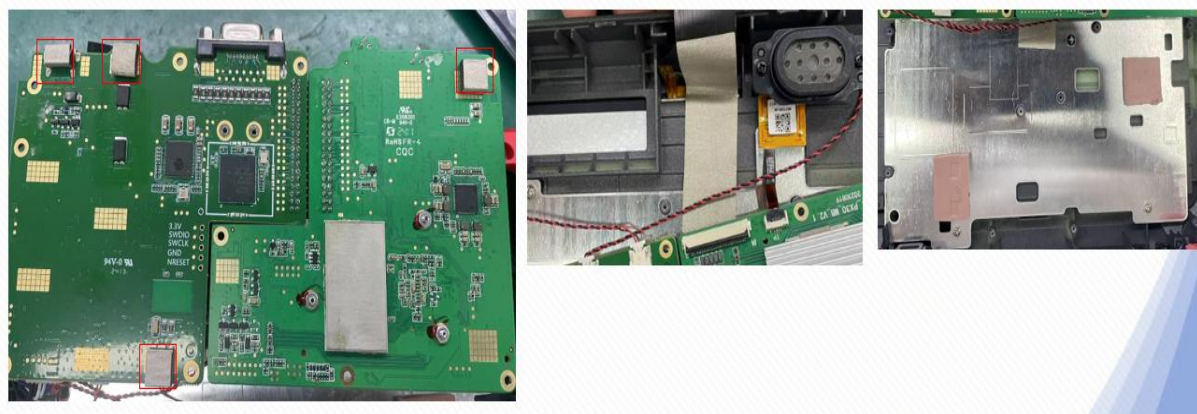
Passive direction diagram



3.4 Active test data

Off screen Brighten the screen					Off screen Brighten the screen				
2.4G	信道	TRP	TIS	TIS	5G	信道	TRP	TIS	TIS
802.11b 11Mbps	1	15.06			802.11a 54Mbps	36	14.18		
	6	15.37				64	13.96		
	12	15.86	-85.81	-79.62		165	13.87	-72.24	-67.13
802.11g 54Mbps	1	14.22			802.11n MCS7	36	13.13		
	6	14.19				64	13.07		
	12	15.26	-73.18	-67.25		165	13.22	-71.36	-65.89
802.11n MCS7	1	13.25							
	6	13.86							
	12	14.03	-72.16	-66.51					

四、 The prototype environment processing mode



五、 Antenna loading position

The antenna is assembled in the following figure



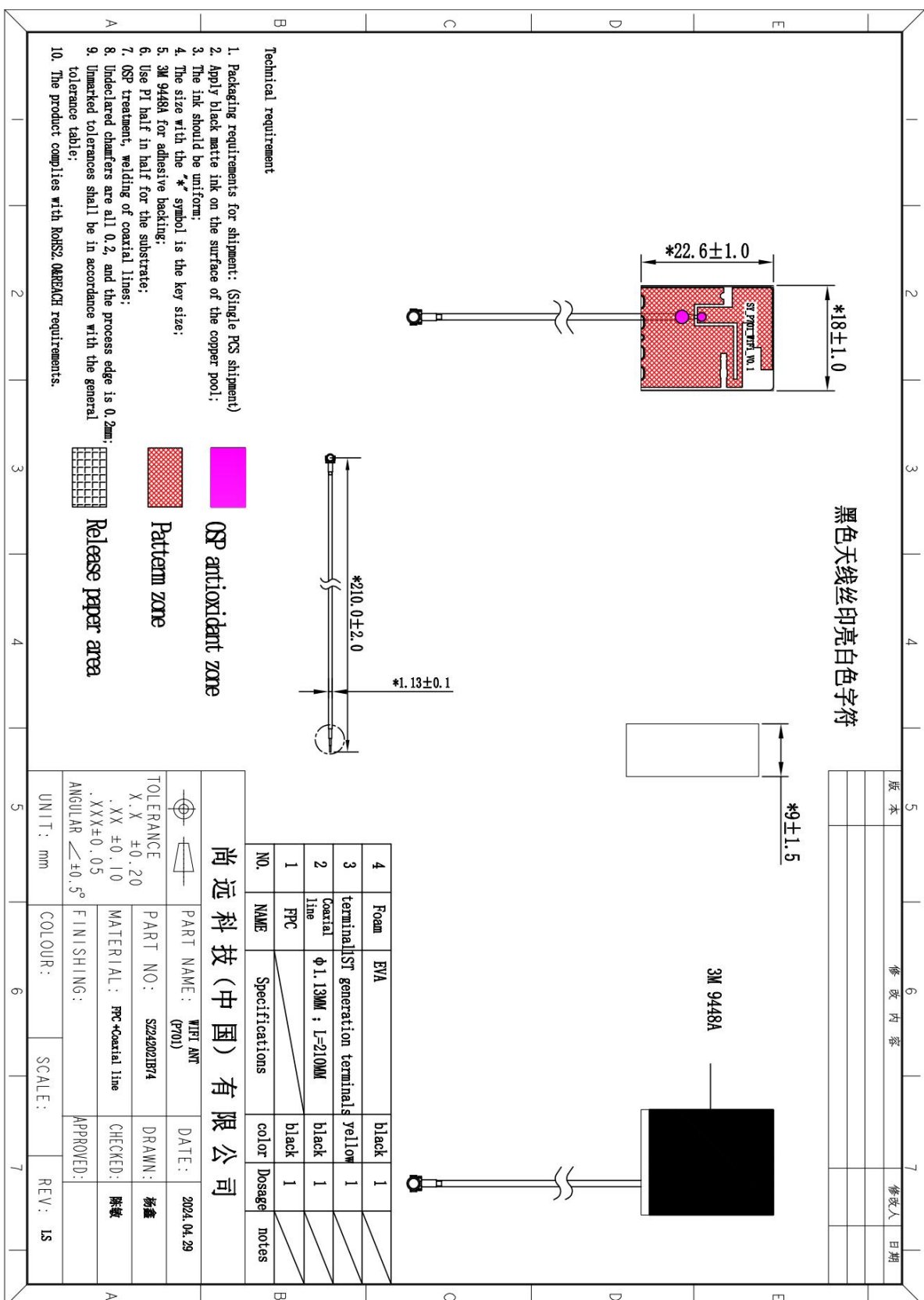
六、 Mass production antenna index

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 Usage of single product(g)	供应商/supplier	检测报告 /Test report 有/无 Yes / no	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					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 /Cherengetti	有/yes	ND	ND	ND	ND	ND	ND	ND	审核SGS报告 /Review SGS report	SHAEC23001049105	2023/2/15	www.sgsgroup.com.cn	/
2	FPC	油墨 /printing ink			优立/You li	有/yes	ND	ND	ND	ND	ND	ND	ND	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	ND	ND	ND	ND	ND	ND	ND	审核SGS报告 /Review SGS	SHAEC2217569205	2023/1/4	www.sgsgroup.com.cn	/
4	FPC	电金 /Dianjin			泰德/taide	有/yes	ND	ND	ND	ND	ND	ND	ND	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	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	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	N.D	审核SGS报告 /Review SGS	A2220537196103001C	2022. 12. 01	www.sgsgroup.com.cn	/
8	CABLE	CS191R			英华特	N.D	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	N.D	审核SGS报告 /Review SGS	CANEC2302637847	2023. 03. 7	www.sgsgroup.com.cn	/
10	CABLE	镀层镍			QIAOFU	ND	ND	ND	ND	ND	ND	ND	ND	审核SGS报告 /Review SGS	CANEC2302637827	2023. 03. 7	www.sgsgroup.com.cn	/
11	CABLE	胶芯			新空	ND	ND	ND	ND	ND	ND	ND	ND	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	SZ242021B74	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	 Customer Name: Yunjia Product Name: WiFi Antenna Order number: Manufacturer code: SZ242021B74 Customer code: Quantity: Inspector: Delivery date: __ Year __ Month __ day Precautions: moisture-proof, shockproof, pressure resistant, handle with care 50pcs / PE bag Carton label		
外包装方式示意图及标签	Customer Name: Yunjia Product Name: WiFi Antenna Order number: Manufacturer code: SZ242021B74 Customer code: Quantity: Inspector: Delivery date: __ Year __ Month __ day Precautions: moisture-proof, shockproof, pressure resistant, handle with care  Carton label Check packaging, paste product		
		manufacturer	
		XUWEI	
* The packaging picture is a schematic, does not mean that the picture is the actual product.			