

Shanghai Shangyuan Communication Technology Co., LTD

Shenzhen R&D Center: 6th Floor, Building 5, Nantaiyun Chuanggu Center, Guangming District, Shenzhen, China

Antenna admission book

Customer name: Yunjia		Project name: A104
Working frequency band: BT		
Hardware version: YXD-ML E466113		
Shangyuan material specifications		
specifications and models	Shang Yuan material number	Customer material number
WIFI ant	SZ24449IA70	

Change the resume			
Preparation / change date	Change the content	Change the person	edition
2024.11.15	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

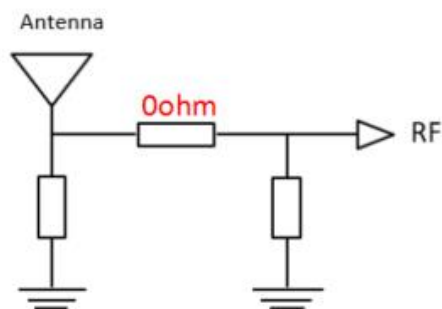
Antenna admission book.....	1
1. item information	3
2. Antenna matching circuit.....	3
3. Complete machine test data	3
3.4 Active test data	5
4. The prototype environment processing mode	6
5. Antenna mounting position	7
Vi. Mass production antenna index	7
Vii. Engineering drawing	8
VIII. ROHS restricted substance composition questionnaire	9
IX. Reliability test report	10

一、 item information

.11 Schematic diagram



二、 Antenna matching circuit



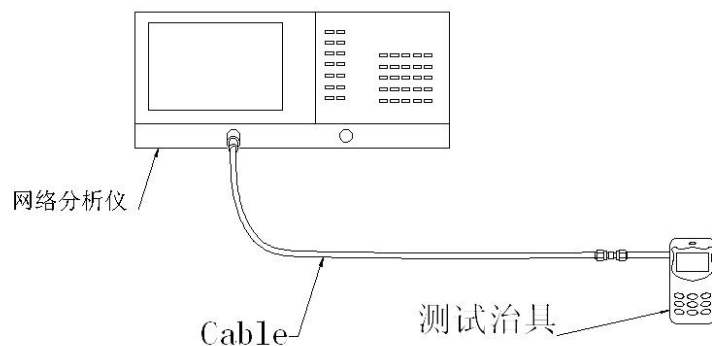
三、 Complete machine test data

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

S11 parameter

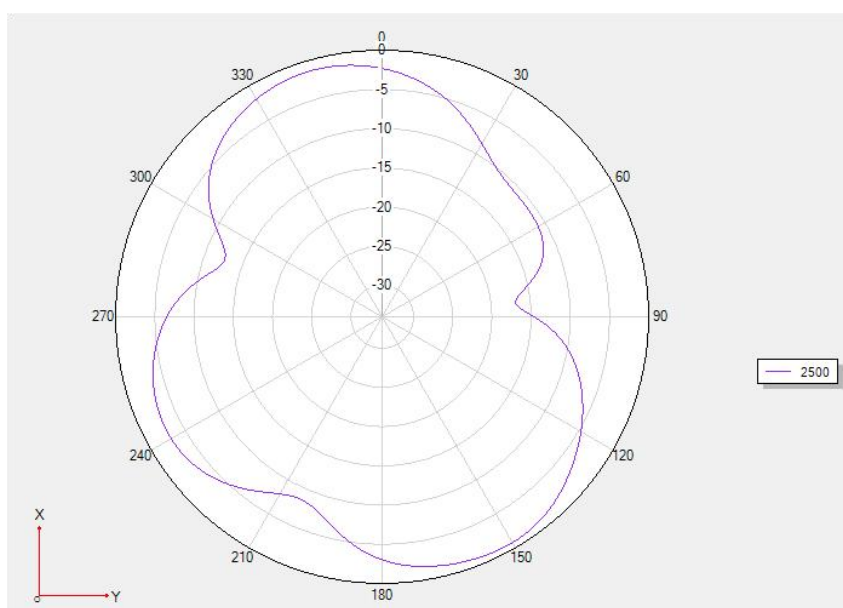
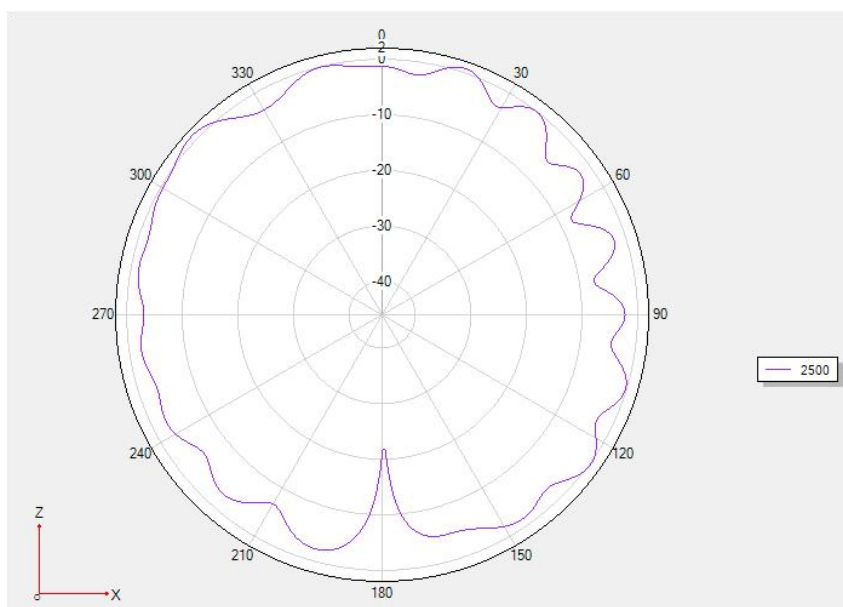
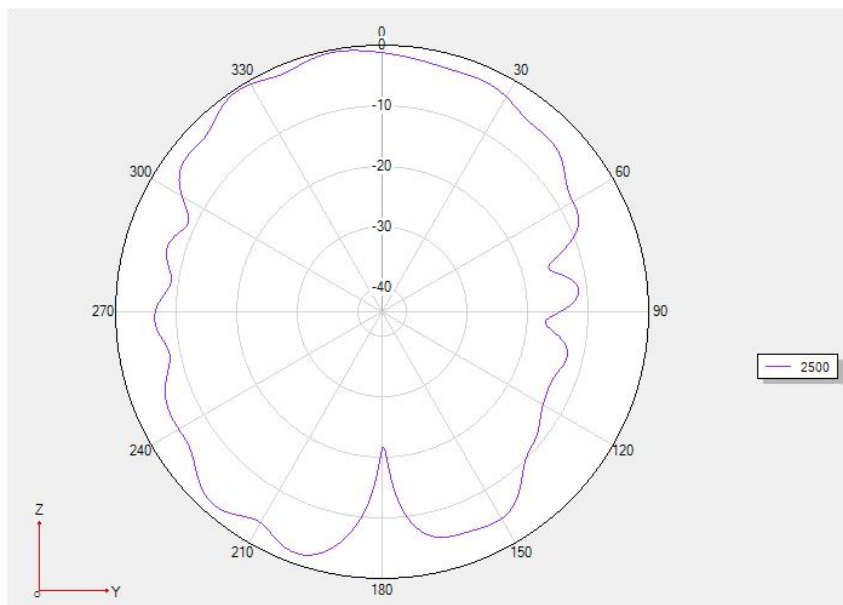
频率 (GHZ) Frequency	2400	2500
驻波比 Standing-Wave Ratios	1.64	1.55

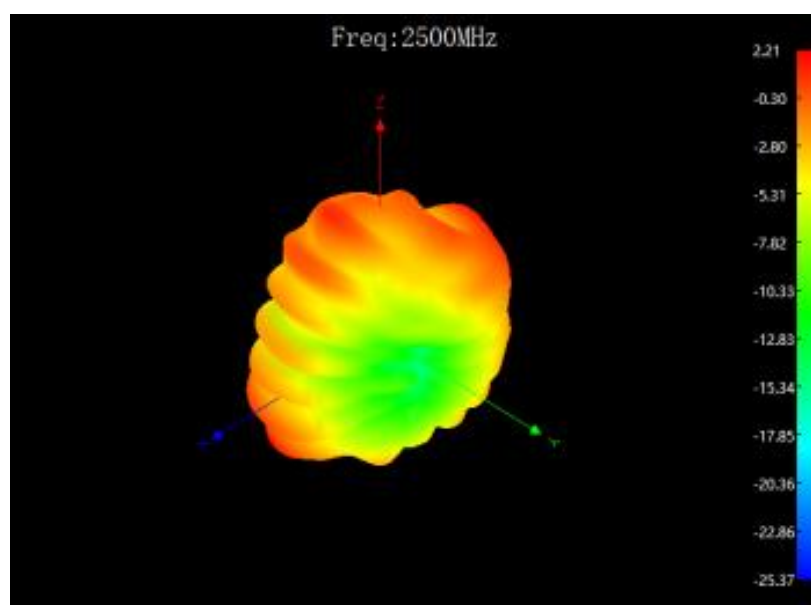
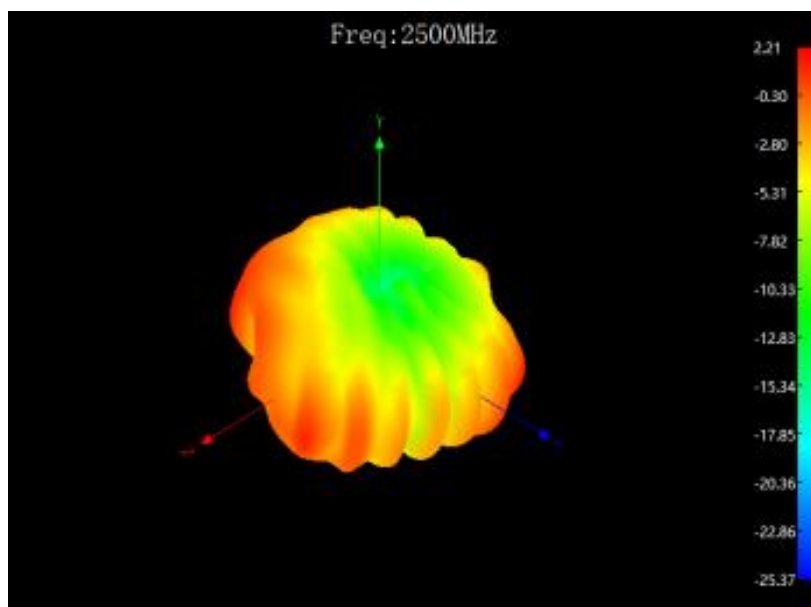
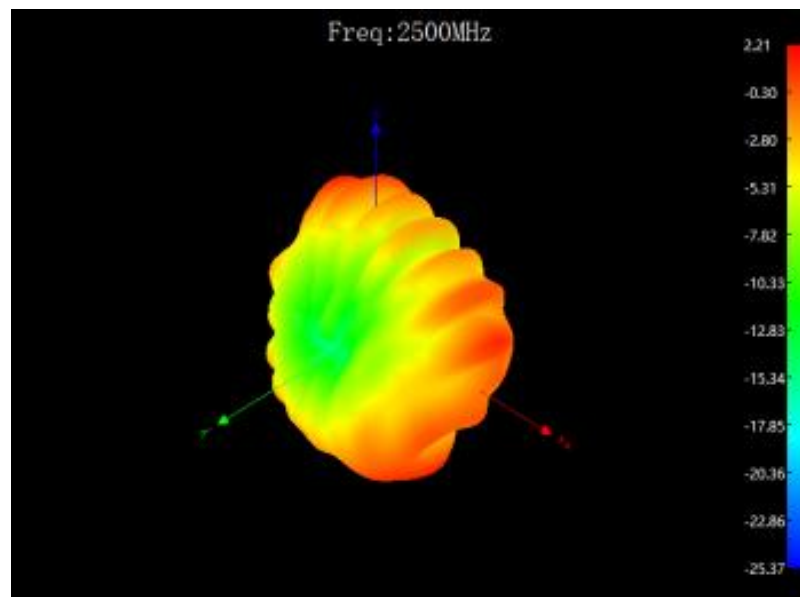
standing-wave ratio VSWR



Passive test data

Frequency/Mhz	MaxGain/dBi	Efficiency / %
2400	0.99	45.75
2410	1.16	45.35
2420	1.29	45.36
2430	1.44	44.46
2440	1.72	46.88
2450	1.95	45.97
2460	1.93	45.43
2470	2.09	45.89
2480	2.14	45.29
2490	2.2	45.93
2500	2.21	45.58





四、 The prototype environment processing mode

No enviromental treatmentadded

五、 Antenna loading position

The antenna is assembled in the following figure



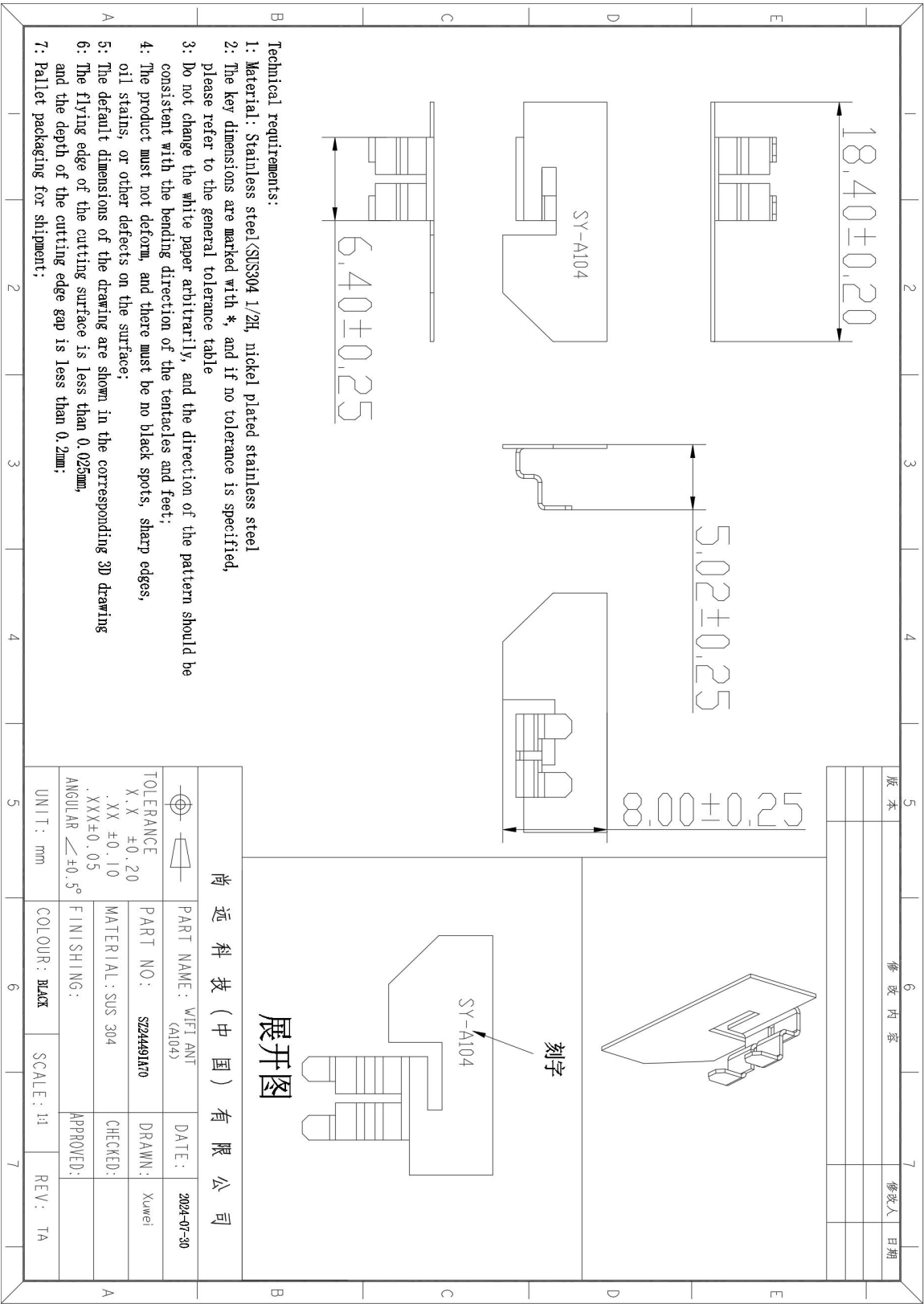
六、 Mass production antenna index

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
2400-2500MHz	VSWR (mass production performance) <VSWR (recognized performance) ± 0.5

七、 schedule drawing



RoHS List of RoHS restricted substances

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: 2024/10/22

九、 Reliability test report



Sunnyway Technology (China) Co., Ltd.

Antenna Environment Test Report

entry name: V209 sunnyway NO.: SZ244491A70

Number of samples: 5PCS Test time: 2024/07/10

Test time	测试项目 Test items	测试条件和需求 Test conditions and requirements	测试设备 Test equipment	测试结果 test result				
2024.07.10	low temperature storage	Store in a incubator (-40℃±5) for 24 hours, and then let it dry at room temperature for 2 hours before testing. The electrical performance (VSMR) and structural appearance are good	Standard temperature and humidity	1	2	3	4	5
2024.07.11				RF	-40℃ OK	-40℃ OK	-40℃ OK	-40℃ OK
2024.07.10	高温存储 high temperature	Store in a temperature box (80℃±5) for 24 hours, and then let it dry at room temperature for 2 hours before testing. The electrical performance (VSMR) and structural appearance are good	Standard temperature and humidity	1	2	3	4	5
				RF	+85℃ OK	+85℃ OK	+85℃ OK	+85℃ OK
2024.07.11	ure	performance (VSMR) and structural appearance are good	humidity	1	2	3	4	5
RF				OK	OK	OK	OK	OK
2024.07.11	Constant temperature and humidity	The temperature is 60℃±5, the humidity is 90%-95% RH, and after 24 hours, it is required that the structure is undamaged and the electrical performance remains unchanged.	Standard temperature and humidity	1	2	3	4	5
RF				60℃/95% OK	60℃/95% OK	60℃/95% OK	60℃/95% OK	60℃/95% OK
2024.07.12	耐盐雾实验 Salt spray test	NaCl solution with salt spray concentration of 5%, spray the antenna for 24 hours continuously at 35℃, then remove it for cleaning and dry it. The surface of the antenna should be free of residue.	Salt mist machine	1	2	3	4	5
2024.07.13				35℃/5% OK	35℃/5% OK	35℃/5% OK	35℃/5% OK	35℃/5% OK
2024.07.14	resistance							

审核 to examine: 林长青

确认 confirm: 陈小平

测试 test: 韦月丽

十、 Packaging method

Parts packing instructions report			
customer name	Yunjia	manufacturer	SUNNYWAY
entry name	SZ24449IA70	product name	WIFI antenna
Bale quantity	500 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	 客户名称: 云伽 产品名称: WIFI antenna 订单号码: 厂商编码: SZ24449IA70 客户编码: 数量: 检验员 : 发货日期: ____年__月__日 注意事项: 防潮, 防震, 防压, 小心轻放..... 500pcs /layer Carton label		
外包装方式示意图及标签	客户名称: 云伽 产品名称: WIFI antenna 订单号码: 厂商编码: SZ24449IA70 客户编码: 数量: 检验员 : 发货日期: ____年__月__日 注意事项: 防潮, 防震, 防压, 小心轻放.....  Check packaging, paste product Carton label		
		manufacturer	
		XUWEI	
* The packaging picture is a schematic, does not mean that the picture is the actual product.			