Shanghai Shangyuan Communication Technology Co., LTD

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Antenna admission book

Customer name: Love yuan ding	Project name: S1 Surface vessel
Working frequency band: BT/WiFi2.4G	
Hardware version:	
Shangyuan material specifications	

specifications and models	Shang Yuan material number	Customer material number
S1 2.4G ANT	SZ23475IV98	3.01.14.02.00001

Change the resume			
Preparation / change date	Change the content	Change the person	edition
2024/01/30	new release	Xu Wei	A

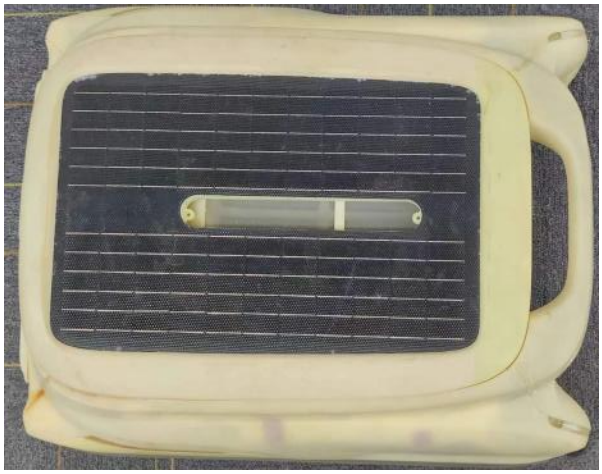
Shang Yuan will sign the column				
research and development	structure:	examine and verify:	Quality Engineer:	ratify:
	radio frequency:	examine and verify:		

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

catalogue

1、item information

1.1、Prototype diagram



2、Antenna matching circuit

No change in matching circuit

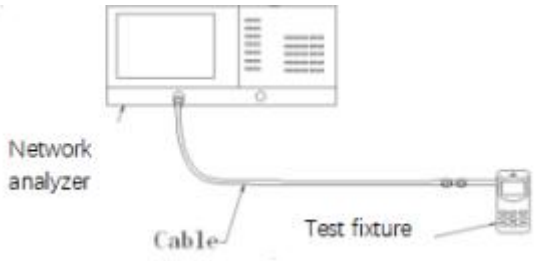
3、Overall test data

3.1 S11 Test Method Description

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 Testing Environment

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

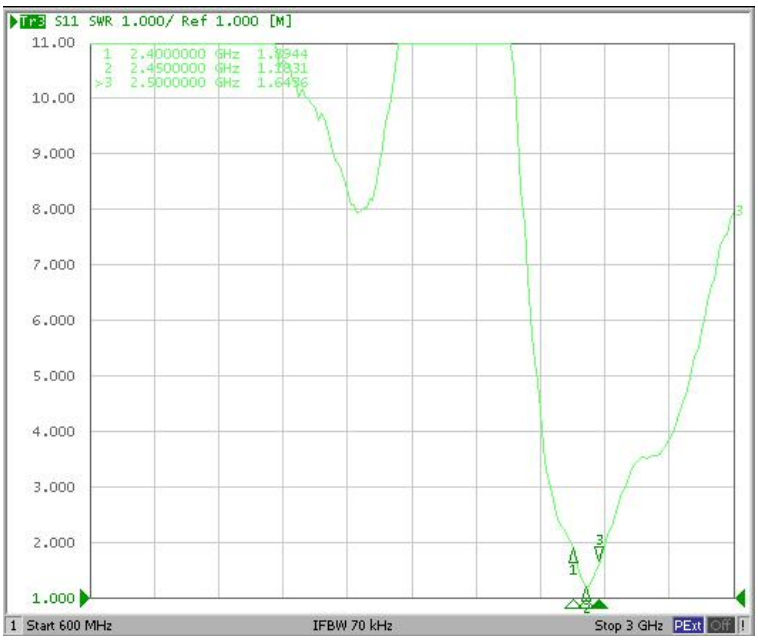
Test environment: temperature 22℃± 3℃, humidity 50% ± 15%

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

3.3 Passive testing parameters

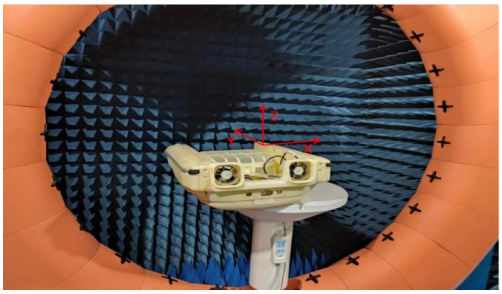
Return Loss -BT/WiFi

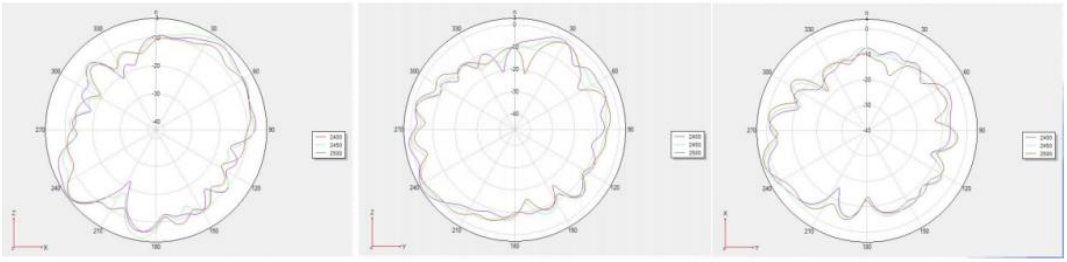


Passive efficiency-WiFi1

Frequency/Mhz	MaxGain/dBi	Efficiency / %
2400	4.03	37.2
2410	3.65	37.75
2420	3.44	36.88
2430	3.43	37.81
2440	3.89	37.96
2450	4.01	37.5
2460	4.28	36.21
2470	4.42	36.58
2480	4.57	36.19
2490	4.55	35.97
2500	4.81	36.19

Passive direction diagram-BT/WiFi1





5、Antenna installation position

The antenna is assembled as shown in the following figure

6、Mass production antenna indicators

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) <VSWR (recognized performance) + 1

7、Engineering Drawing