

Shanghai Sunnyway Communication Technology Limited Company

Skyline Acknowledgement Book

Customer: DynamiCodeCompany Limited		The project: P92
Operating frequency band: 2.4G WiFi		
Motherboard version: P92-321-MAIN-V1.10		
Shangyuan material specifications		
Specifications and models	Shangyuan material number	Customer part number

The record of project changes			
Date of preparation/change	Changes	Change of person	version

Sunnyway counter-signature bar				
Research and development	ME:	Auditor:	QE:	Approver:
	RF:	Auditor:		
Client Counter-signature bar				
EE	PM	RF	QE	

Tel: +86-021-60835368 (Shanghai) ; +86-0755-82504258 (Shenzhen)

Shanghai R&D Center Address: 1st Floor, Building 4, No. 99, Lane 215, Gaoguang Road,
Qingpu District, Shanghai

Shenzhen R & D Center Address: Shenzhen Guangming District South Taiyun Chuanggu Center 5
Building 6 floor

Chongqing R&D Center Address: C08-1 Building-1, No. 19 Xiantao Data Valley East Road,
Yubei District, Chongqing

Catalogue

1. Project picture.....	3
2. Test fixtures.....	4
3. Matching circuits.....	4
4. S11Test.....	4
4.1 S11 Test Method Description.	4
4.2 S11 parameter.....	5
5. Darkroom test data.....	6
5.1 Passive test data.....	6
6. Mass production antenna indicators.....	8
7. Drawings.....	8

1. Project information

Machine information



Antenna information



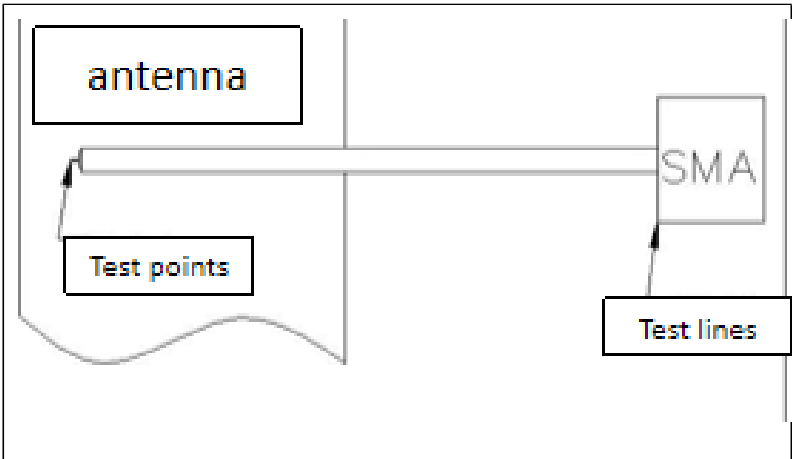
	版本
MINI	SY-P92-WIFI-V0.1
Mainboard	P92-321-MAIN-V1.10
Mx-microatx	P92-IO-MESH-V1.20

Note: The customer finally verified that the antenna performance prototype was retained in our company for at least one year, which is convenient for analysis and solution to abnormal situations in antenna mass production.
Ensure antenna shipment quality.

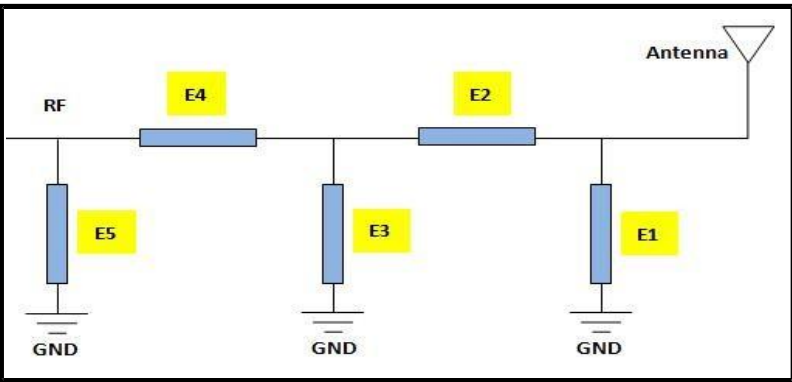
2. Test fixtures

Purpose: To test the passive parameters of the antenna as accurately as possible.

How to make: The prototyping mechanism is made of a 50 ohm coaxial cable, one end is connected to the test point at the back of the matching circuit of the prototype motherboard (the front of the RF test hole), and the other end is connected to the SMA connector. The schematic diagram is as follows:



3. Matching circuits



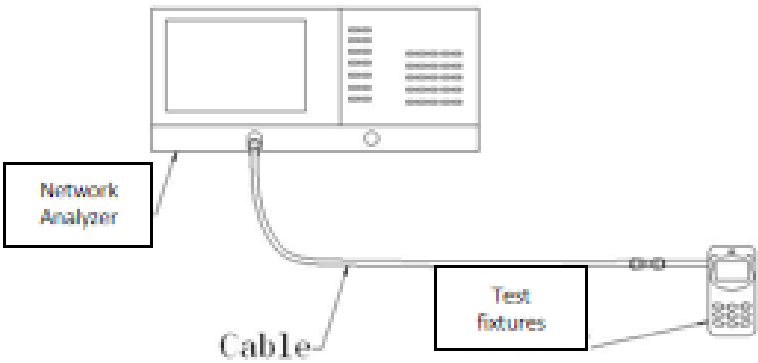
Element	Value	Specification
E1	N/A	
E2	0Ω	
E3	N/A	
E4	0Ω	
E5	N/A	

4. S11 test

5. 4. 1S11 Test Method Description

- Test Equipment: Network Analyzer (E5071C)
- Test method: A 50 ohm CABLE cable is derived from the instrument test port, and the SMA connector of the prototype is connected after calibration using the calibrator to record the return loss and standing wave ratio corresponding to the relevant frequency point.

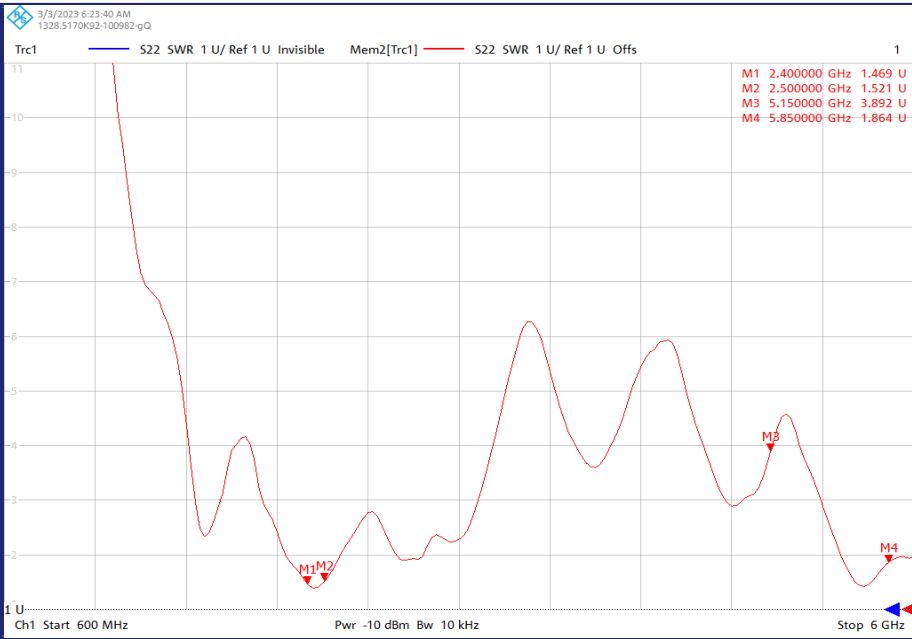
The test diagram is as follows:



Test the schematic

4.2 S11 parameter

WiFi



	WiFi天线
frequency (MHz)	SWR
2400	1.469
2500	1.521

5 Darkroom test data

Test system: Shielded darkroom

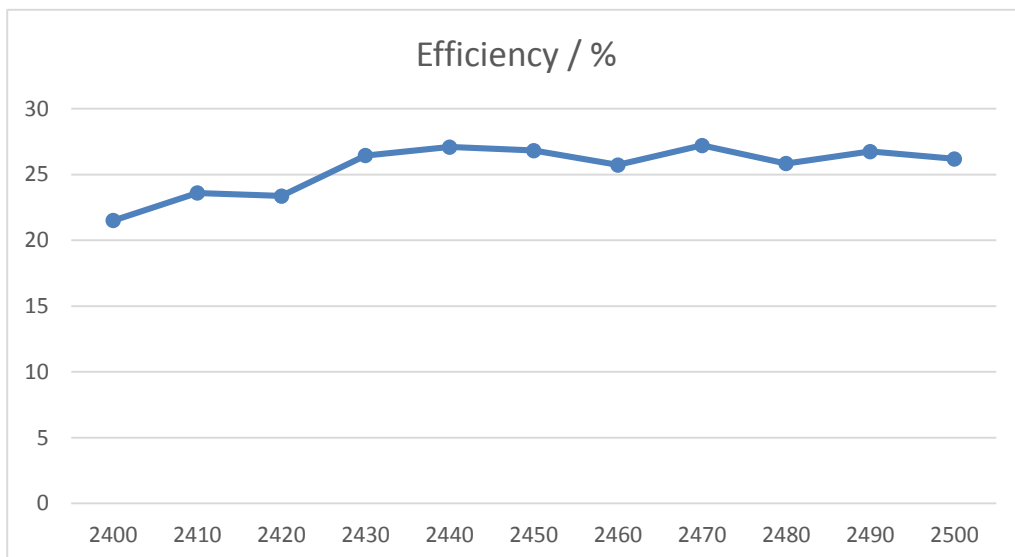
Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity
 $50\% \pm 15\%$

Test equipment: When testing passive data, use the
Network Analyzer Agilent E5062C

When testing active data, the Comprehensive Tester
Agilent 8960 /CMW500/E4438C is used

5.1 Passive test data

Main antenna RF1 passive efficiency

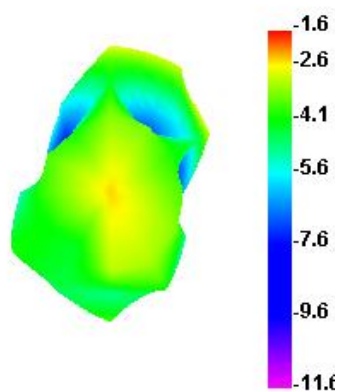


Freq.(MHz)	2400-2500		
	MIN	MAX	AVE
Effi(%)	21.51	27.22	25.51
Effi(dB)	-6.67	-6.05	-5.94
Gain(dBi)	-1.58	-0.63	-0.56

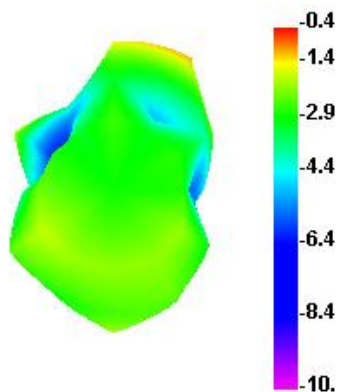
Shanghai Shangyuan Communication Technology Co., Ltd. antenna recognition

WiFi antenna pattern

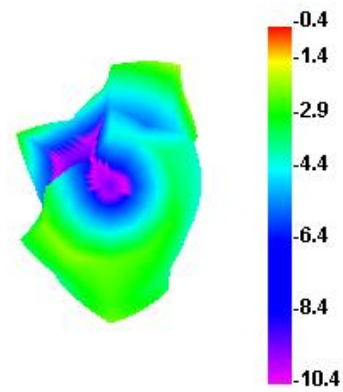
2400.000MHz



2450.000MHz



2500.000MHz



6. Mass production antenna indicators

When the antenna is mass-produced, the standing wave ratio is used as the mass production test standard. According to the differences in the project itself, the following criteria are given:

frequency (MHz)	Mass production standards
Main antenna 700--960; 1710--2690	VSWR (Mass production performance) <VSWR(Acknowledge performance)+1

7. Drawings