

Sunnyway Technology (China) Co., Ltd.

Antenna admission book

customer name: Notioni		project name: L28i
Working frequency band: 2400 MHz-2500 MHz		
Motherboard version:L28i-N31		
Sunnyway material specifications		
specifications and models	Sunnyway material number	Customer material number

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

Sunnyway will sign the column				
research and development	structure:	examine and verify:	Quality Engineer:	ratify;
	radio frequency:	examine and verify:		
customer signature field				
electronic engineer	project Manager	construction engineer	Quality engineer	

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1. project

information Machine

information



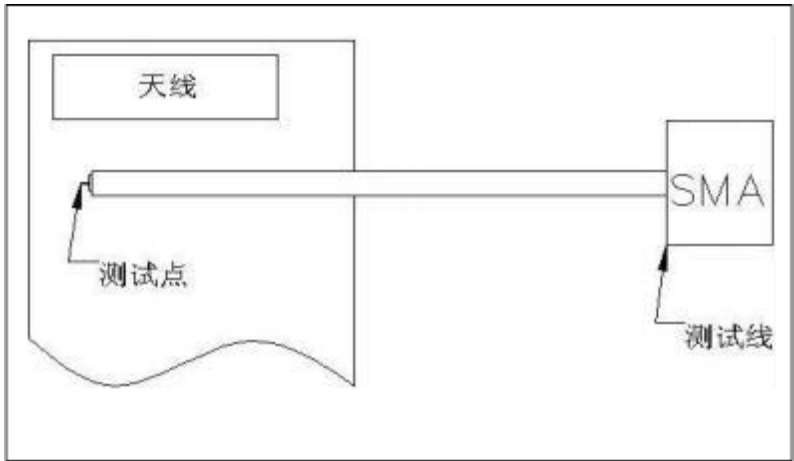
Note: The prototype of the customer's final verification of antenna performance is retained in our company for at least one year, which is convenient for analyzing and solving abnormal situations in the mass production of antennas. Ensure the quality of antenna shipments.

2. Test the manufacturing equipment

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

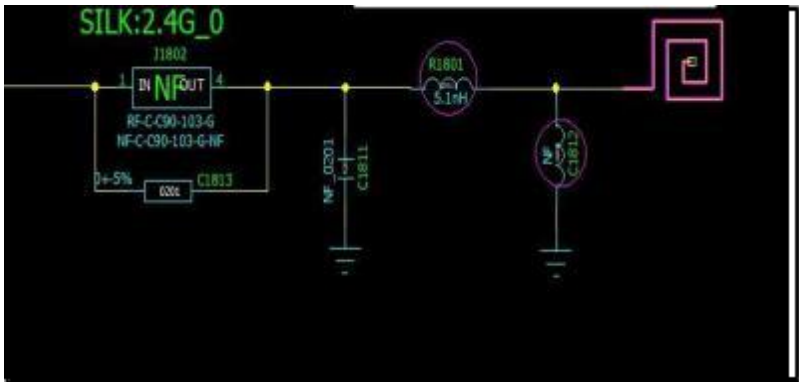
Preparation method: the sample mechanism is to use a 50 ohm coaxial cable, one end is connected to the test point of the matching circuit (front end of the RF test hole), and the other end is connected to the SMA connector at the back end.

The schematic diagram is as follows:

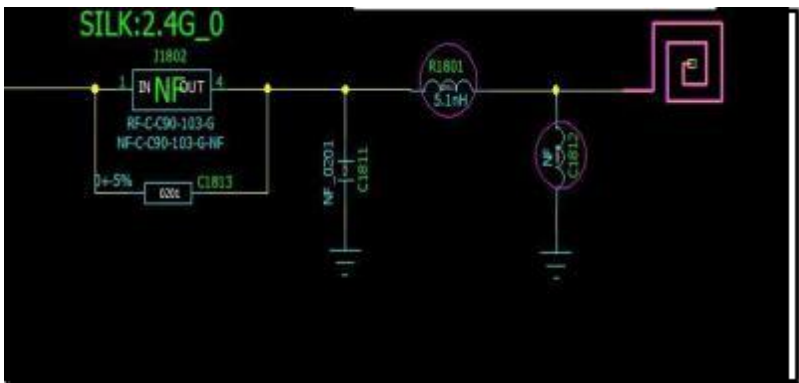


3. Matching the circuit

wifi antenna



E1e metnt	Value	item	specific ations
E1	N/A		
E2	5.1nH		
E3	N/A		



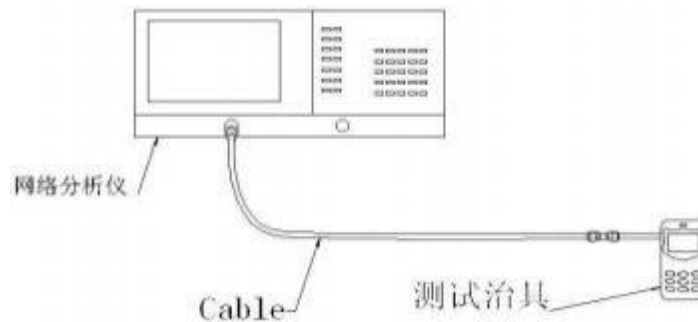
E1e metnt	Value	item	specific ations
E1	1pF		
E2	5.6nH		
E3	N/A		

4. S11 test

1. s11 test method description

Test Equipment: Network Analyzer (E 5071C)

Test method: Export a 50 ohm CABLE cable from the instrument test port, use the SMA connector of the connection mechanism after the calibration piece, 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

.24 S11 parameters

wifi 0 Antenna



wifi 1 Antenna



5 Dark room test data

Test system: shield the dark room

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

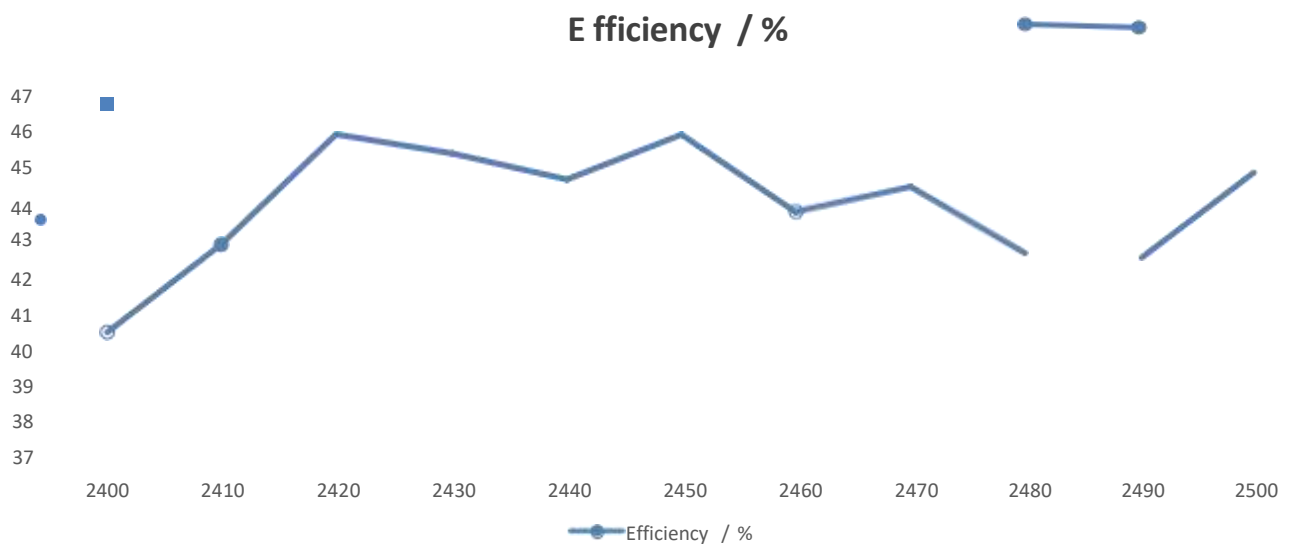
Test equipment: Use the network analyzer Agilent E 5062C when testing the passive data

When testing active data, use the comprehensive meter Agilent 8960 / CMW 500 / E 4438C

5.1 passive test data wifi 0

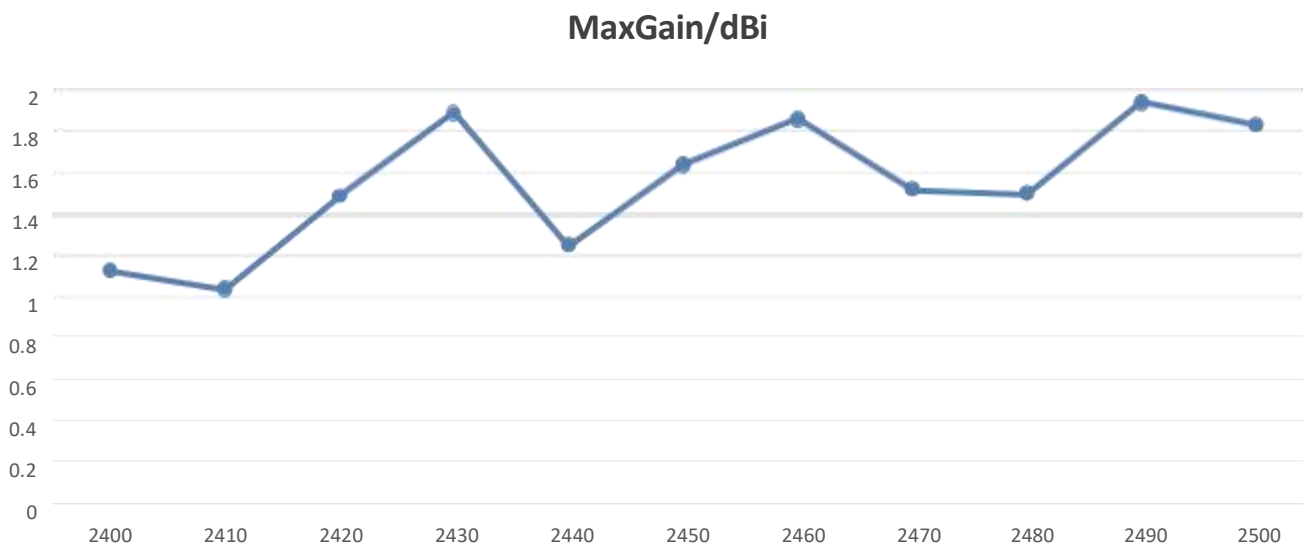
passive

efficiency



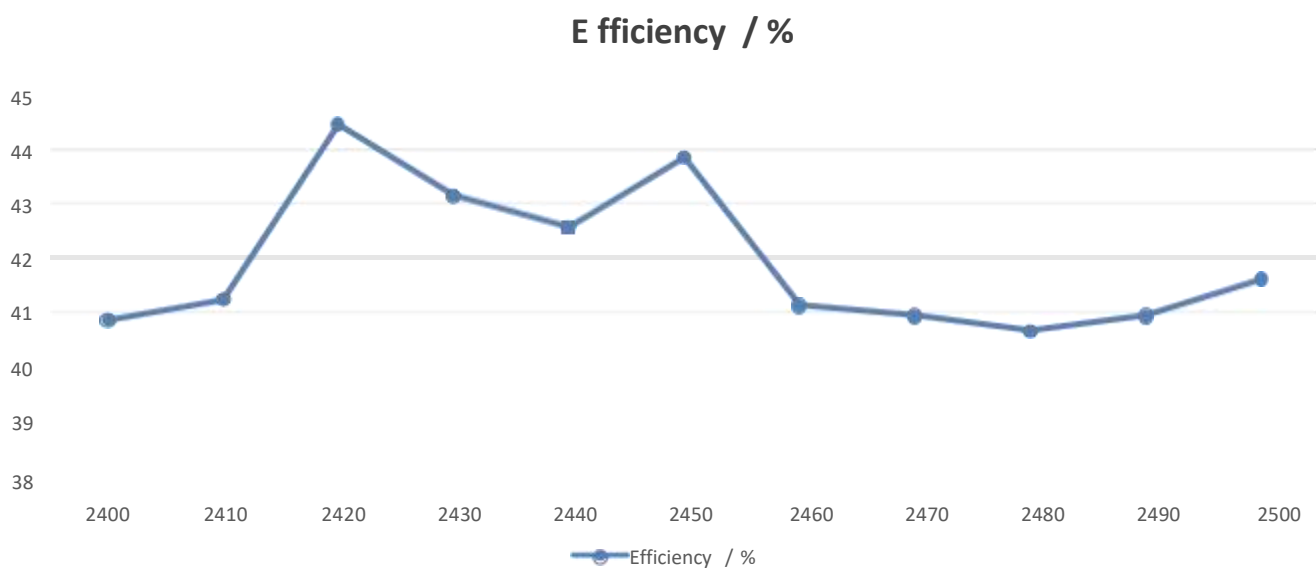
Freq . (MHz)	2400-2500		
	minimum	maximum	average value
Effi (%)	40.27	45.81	43.83
Effi (dB)	-3.95	-3.39	-3.59

wifi0Antennagain



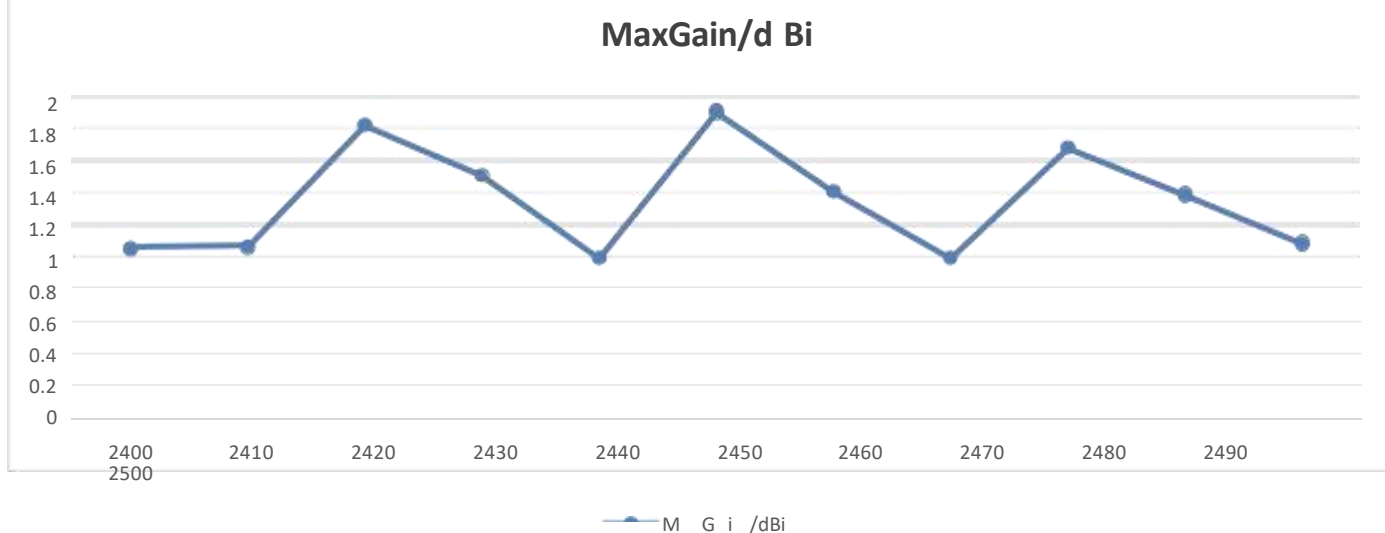
Freq . (MHz)	2400-2500		
	minimum	maximum	average value
MaxGain (dBi)	1.04	1.94	1.55

wifi 1 Active efficiency



Freq . (MHz)	2400-2500		
	minimum	maximum	average value
Effi (%)	40.64	44.46	41.93
Effi (dB)	-3.91	-3.52	-3.78

wifi 1 Antenna gain



Freq . (MHz)	2400-2500		
	least value	crest value	average value
MaxGain (dBi)	1	1.9	1.36

5 Active test data

The WiFi antenna has active test data (free space, bright screen

发射频率 (MHz)	接收频率 (MHz)	测试频段	信道	OTA测试数据	
				TRP	TIS
2400~2500	2400~2500	WiFi 2.4G 11g 54M	5	15.24	-76.23
			7	15.14	-75.92
			11	15.49	-76.57

6. Mass production antenna index

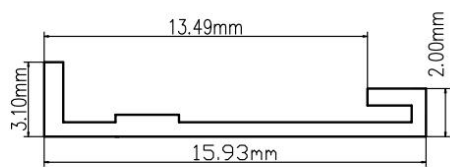
When the antenna is in mass production, the standing wave ratio is used as the test standard for mass production.

Based on the differences of the project itself, the following criteria are given :

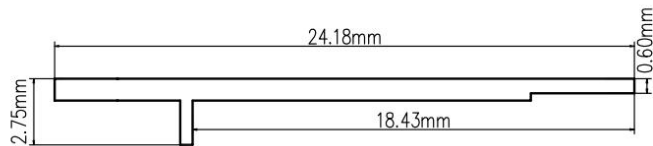
Frequency (MHz)	Mass production standards
2400-2500	VSWR (Production Performance) < VSWR (Recognition Performance) + 1

7. Drawing

Antenna Photo & Length (mm)



WIF10



WIF11