

Antenna specification

Antenna Sample Confirmation From

Name of supplier	ShenZhen Aihui Technology Co. , Ltd				
Customer name	Zhi Niu				
Sample name	FPC				
model	ZJ. 255. YKW2R00-W3				
Sample size	F1 antenna;mini-WIFI-AH band first generation terminal 80mm (1.13) F2 antenna;mini-WIFI-AH band first generation terminal 80mm (1.13)				
Inspection item	Performance test	Visual inspection	Structure	In the news	Test results
Notes					
Quality Audit		Project Audit		Business confirm	



Shenzhen Aihui Technology Co. , Ltd.

				ation	
The following is to be completed by the client					
Customer feedback					
Customer signature/seal	<div>date:2025-01-14</div>				

Antenna Test Report

Test Unit: Shenzhen Aihui Technology Co. , Ltd.			
Materials	FPC		
Antenna form	PIFA	Polarization mode	Linear
Application scenario	Wifi /BT		
Working band	WIFI/BT	VSWR	≤2
Power	Max: 2W	Impedance	50Ω
dBi	≥		
Test Equipment	HPE5071C、Shielding Room、3D automatic turntable		

Antenna Description::

1. Grounding processing and picture description: no

2. Need to change the motherboard to match: no

- Test voltage: 3.6V, check the antenna contact is good before testing.
- The RF cable of the integrated tester is kept in a natural state and can not be curled.

Specification:test the specified power level, all indicators must conform to the specifications.

1. Project Image
2. Test Fixture
3. Antenna matching circuit
4. S11 test
5. Antenna passive efficiency and gain
6. Darkroom test equipment and data
7. Schematic diagram of antenna assembly
8. Antenna environment handling
9. Antenna mass production index
10. Structural drawing

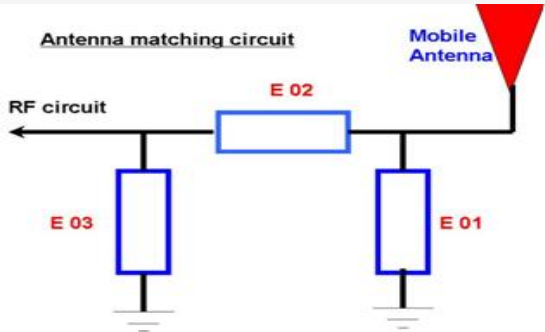
1.Project Image

The final verification antenna performance prototype in our company for at least one year, easy to analyze and solve the problem of antenna mass production, to ensure the quality of antenna shipment

2.Test Fixture

Objective: to test the passive parameters of antenna as accurately as possible. Making Method: the handset is made of a 50 ohm coaxial cable, one end of which is connected to the test point of the back end of the matching circuit of the handset motherboard (front end of the RF test hole) , and the other end is connected to the SMA joint. The diagram is as follows:

3、Antenna matching circuit



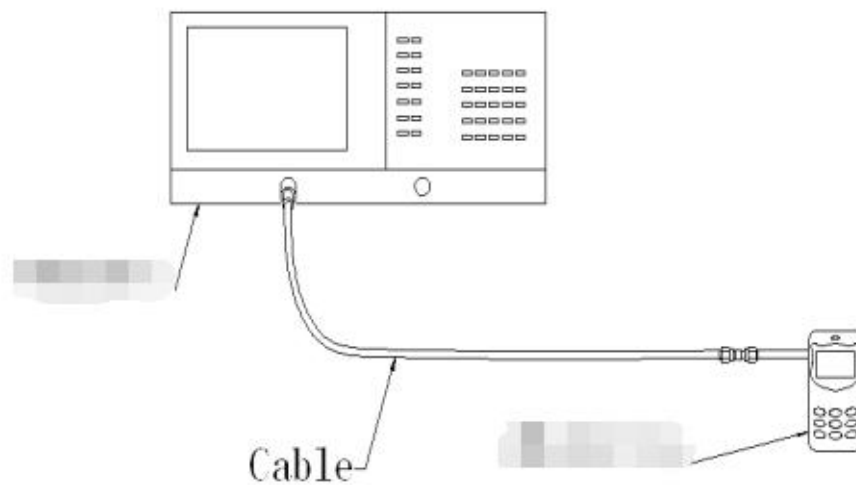
Modify

E01	E02	E03
No	No	No

Note: The match is unmodified.

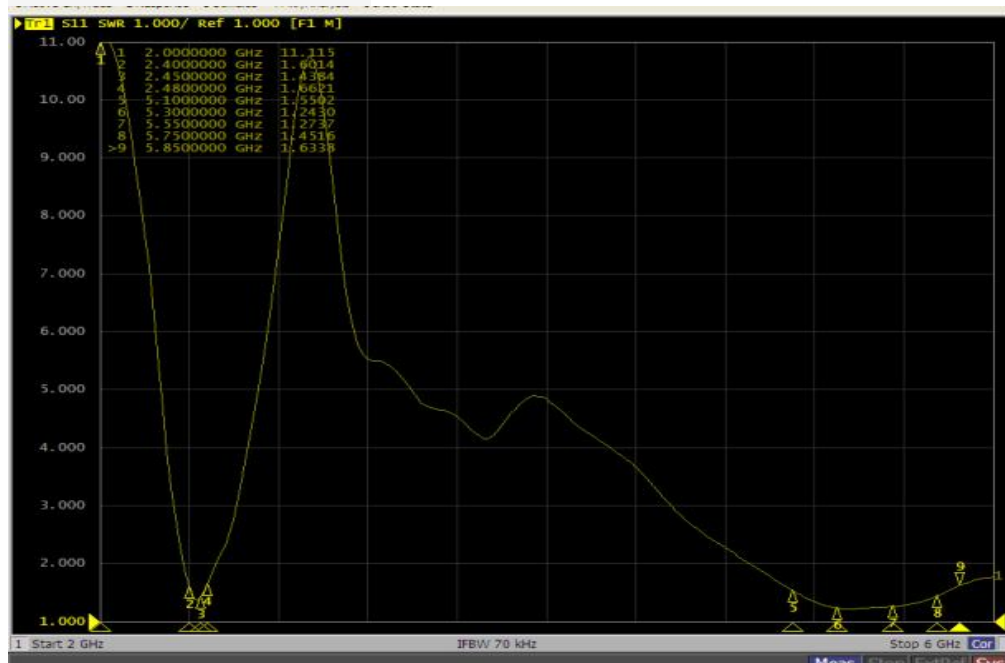
4.S11 test

4.0 4.0s11 test method description of test equipment: Network Analyzer (E5071C) test method: a 50 ohm CABLE is used to export from the instrument test port. The SMA connector for connecting the handset is calibrated using a calibration piece, record the echo loss and standing wave ratio corresponding to the relevant frequency points. The test schematic is as follows:



Product Electrical Performance Index	
Operating frequency range	2400-2500MHz 4900-5850MHz
SWR	2400-2500 MHz: < 1.5 4900-5850 MHz: < 1.5
Antenna gain	2400-2500 MHz: 1.5dBi ± 0.5dBi 4900-5850 MHz: 1.5dBi ± 0.5dBi
Radiation efficiency	2400-2500MHz: > 50% 4900-5850 MHz: > 50%
Impedance	50 ohm
Product material description	
FPC	Electrolytic copper+PI
Coaxial line	Braided thread
Product environment description	
Operating temperature	- 30°C ~ + 85 °C
Storage temperature	- 30°C ~ + 85 °C

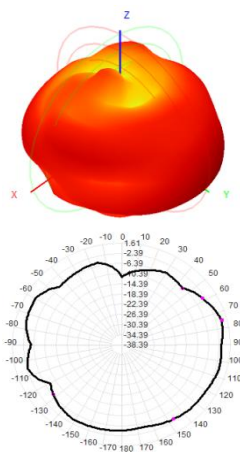
5. antenna SWR



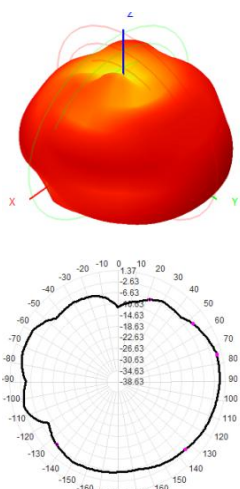
5.2 Test data for this antenna

Frequency Band	2. 4GWIFI-B			2. 4WIFI-G		
channel	L	M	H	L	M	H
TRP	15.38	15.27	15.14	13.49	13.38	13.36
TIS	-78.76	78.10	-77.33	-68.14	-68.11	-68.42
Frequency Band	2. 4WIFI-N			5. 8WIFI-A		
channel	L	M	H	L	M	H
TRP	13.60	13.53	13.55	15.17	15.36	14.55
TIS	-67.50	-67.43	-67.49	-67.12	-67.33	-68.14

5.3 antenna passive data

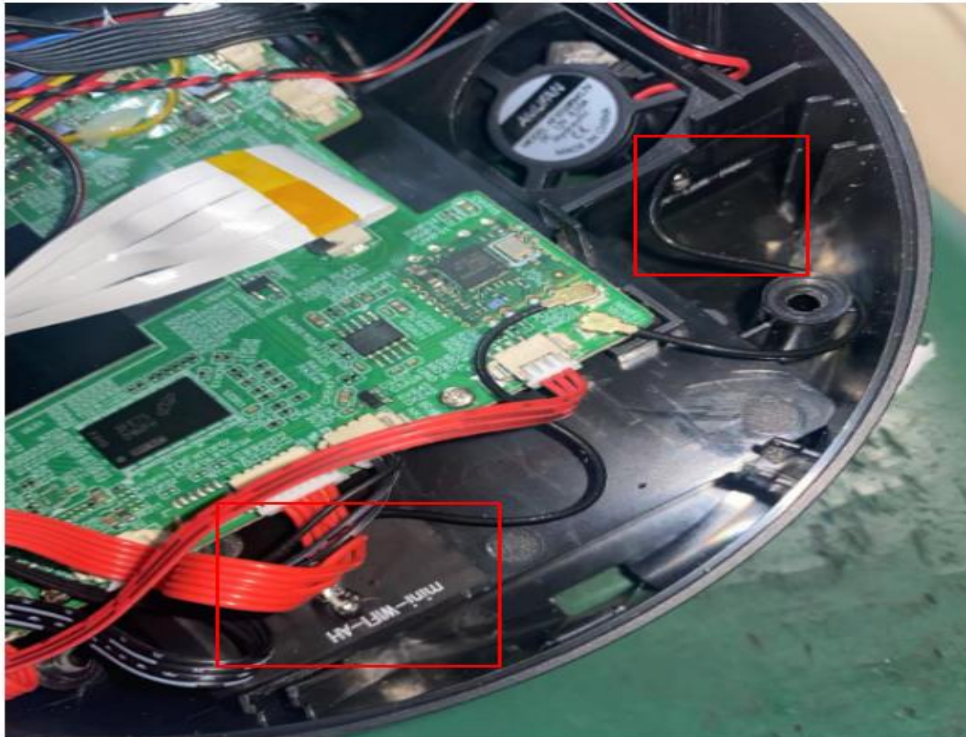


test data:		
WIFI 2. 4G		
Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	51.1	1.04
2410	52.3	1.19
2420	52.9	1.30
2430	54.5	1.44
2440	56.3	1.61
2450	55.8	1.53
2460	54.6	1.46
2470	52.8	1.28
2480	52.2	1.16



test data		
WIFI 5. 8G		
Freq(MHz)	Efficiency (%)	Gain (dBi)
5000	52.4	1.10
5100	53.1	1.12
5200	53.6	1.16
5300	55.9	1.30
5400	56.6	1.37
5500	55.0	1.25
5600	54.8	1.21
5700	54.2	1.18
5800	53.5	1.14
5850	51.7	1.06

6.1 Antenna assembly diagram

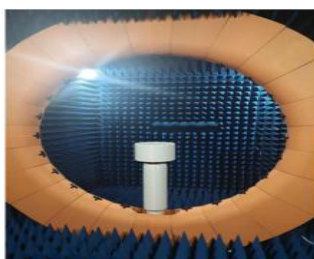


6. Test Equipment

Test system: shielded darkroom

The temperature was $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and the humidity was $50\% \pm 15\%$

Test equipment: when testing passive data, use the Network analyzer AGILENT E5071C to test active data, use the omnibus CMW500



and
Shenzhen

7. Antenna environment handling

Red box paste conductive sponge grounding

8. Antenna mass production index

When the antenna is mass-produced, the standing wave ratio is taken as the mass-produced test standard.

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

Frequency	Standard for volume production
2400 MHZ -2500MHZ 5100MH-5850MH	VSWR (Mass Production performance) & LT; VSWR(recognition performance) 0.5

