

Antenna specification

Antenna Sample Confirmation From

Name of supplier	ShenZhen Aihui Technology Co. , Ltd				
Customer name	Ji mo ke				
Sample name	EVO-X2				
model	Mini PC				
Sample size	Main antenna: silk screen printing: GMK-EVO-X2-WIFI7-Z-AH; cable length: 145mm,4th generation, black. Sub-antenna: silk screen: GMK-EVO-X2-WIFI7-F-AH; cable length: 265mm 4th generation; grey.				
Inspection item	Performance test	Visual inspection	Structure	In the news	Test results
Notes					
Quality Audit		Project Audit		Business confirmation	

The following is to be completed by the client

Customer

feedback

Customer

signature/seal



date:

## Antenna Test Report

Test Unit: Shenzhen Aihui Technology Co. , Ltd.

Materials

FPC

Antenna  
form

PIFA

Polarization mode

Linear

# Shenzhen Aihui Technology Co. , Ltd.

Application scenario	2400Mhz-2500Mhz 5100Mhz-5850Mhz		
Working band	2400Mhz-2500Mhz 5100Mhz-5850Mhz	VSWR	≤2
Power	Max: 2W	Impedance	50Ω
dBi	≥2dBi		
Test Equipment	HPE5071C、Shielding Room、3D automatic turntable		
<div>Antenna Description::</div> <div>1. Grounding processing and picture description: no</div> <div>2. Need to change the motherboard to match: no</div> <div><div>● Test voltage: 3.6V, check the antenna contact is good before testing.</div><div>● The RF cable of the integrated tester is kept in a natural state and can not be curled.</div></div> <div>Specification:test the specified power level, all indicators must conform to the specifications.</div>			

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

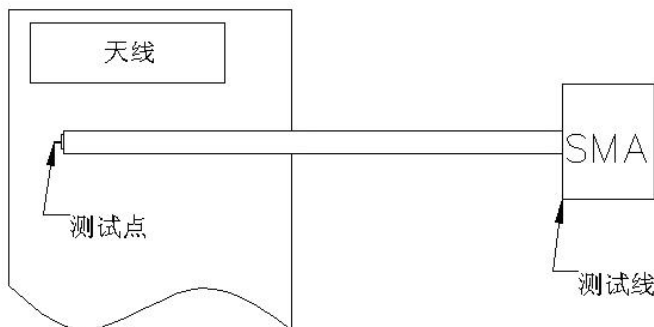
## 1.Project Image

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

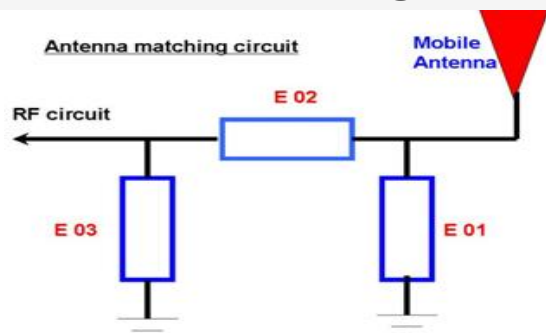
## 2.Test Fixture

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



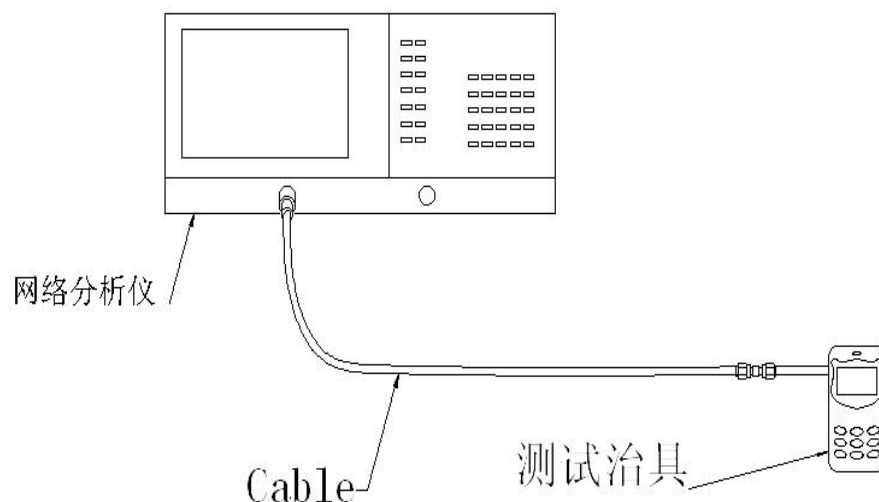
**Modify**

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:



## 4.1 SWR

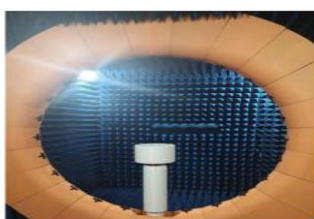


## 5. Test Equipment

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

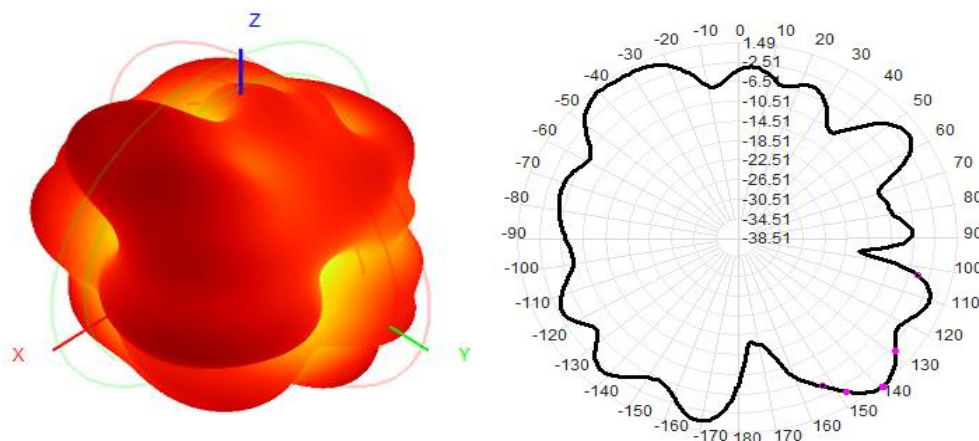


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Shenzhen

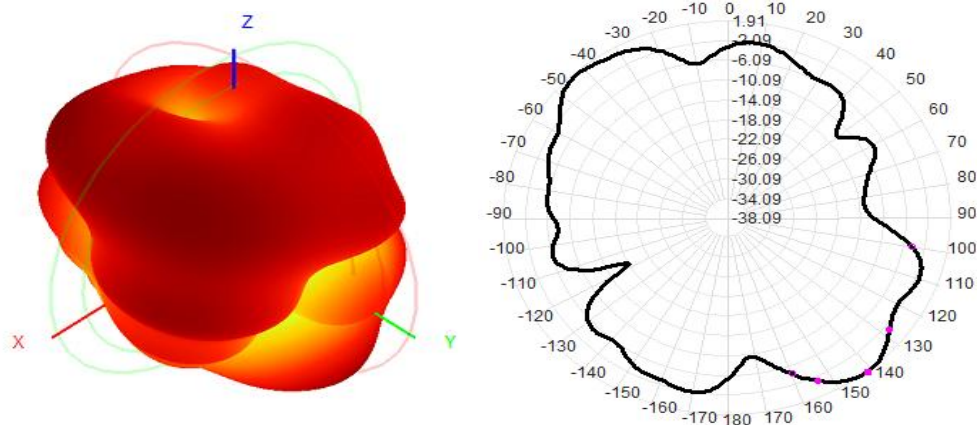
6.Active antenna test data

Test data:		
WIFI 2.4G ANT 1 and ANT 2		
Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	55.65	1.12
2410	54.25	1.25
2420	53.36	1.33
2430	54.94	1.49
2440	57.15	1.09
2450	58.22	1.26
2460	54.63	1.24
2470	52.29	1.05
2480	54.16	1.00
2490	55.65	1.12
2500	54.25	1.25





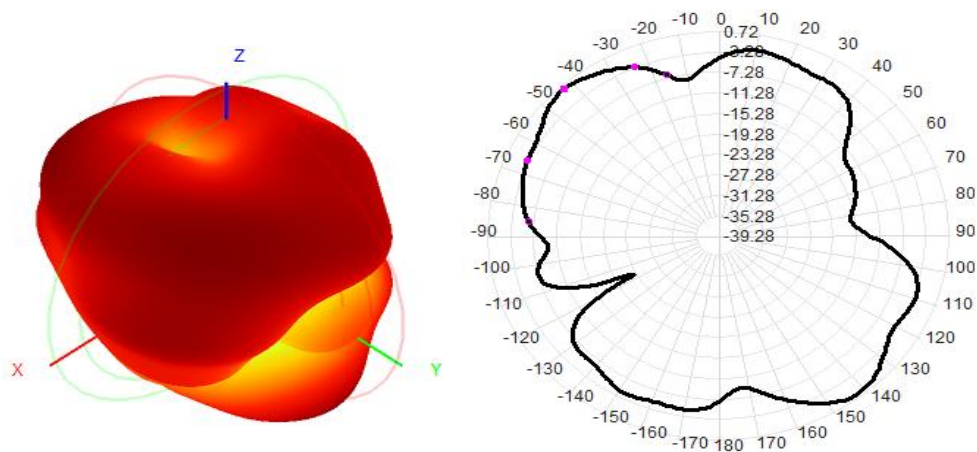
Test data:		
WIFI 5.8G ANT 1 and ANT 2		
Freq(MHz)	Efficiency (%)	Gain (dBi)
5100	54.16	1.33
5200	54.32	1.47
5300	52.55	1.88
5400	59.30	1.91
5500	58.14	1.25
5600	58.55	1.11
5700	57.19	1.64
5800	56.35	1.75
5850	54.19	1.32



Test data:

WIFI 7.1G

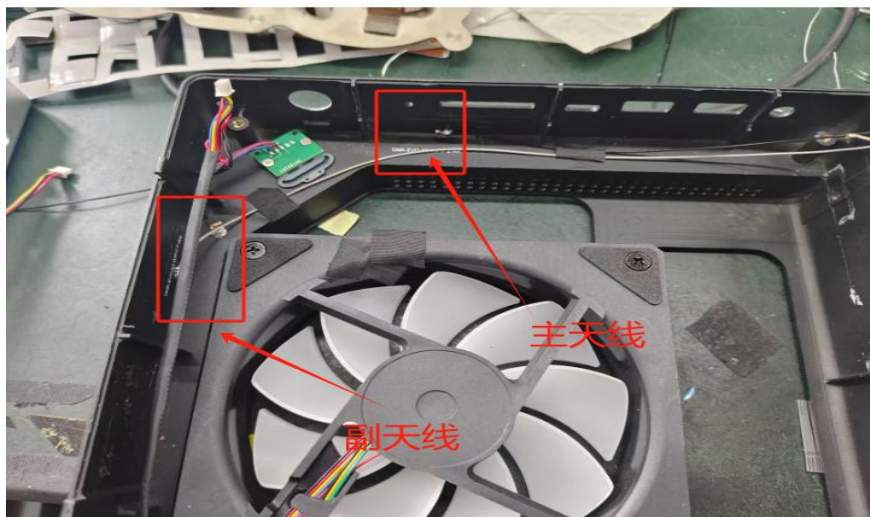
Freq(MHz)	Efficiency (%)	Gain (dBi)
6000	52.22	0.19
6150	54.16	0.58
6300	55.63	0.66
6450	54.91	0.72
6600	57.15	0.49
6750	55.26	0.70
6900	52.30	0.69
7050	51.16	0.58
7200	51.82	0.46



Frequency Band	2.4GWIFI-B 模			5GWIFI-A 模		
channel	L	M	H	L	M	H
TRP	8.65	8.77	8.44	11.25	11.32	11.25
TIS			-75.25			-72.15
Frequency Band	2.4WIFI-G 模			2.4WIFI-N 模		
channel	L	M	H	L	M	H
TRP	7.55	7.41	7.36	8.54	7.44	7.26
TIS			-68.58			-66.16

Note: Due to the network card module, the transmission is 10DB.

## 7. Antenna environment handling



The original environment, we do not do processing

## 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 5100 MHZ-7200 MHZ	VSWR (Mass Production performance) & LT; VSWR(recognition performance) 0.5

## 10. Structural drawings

Shenzhen Aihui Technology Co. , Ltd.

