

Shenzhen Aihui Technology Co. , Ltd.

## Antenna specification

### Antenna Sample Confirmation From

Name of supplier	ShenZhen Aihui Technology Co. , Ltd				
Customer name	Xin Xiang				
Sample name	R106				
model					
Sample size					
Inspection item	Performance test	Visual inspection	Structure	In the news	Test results
Notes					
Quality Audit		Project Audit	Caoyang	Business confirmation	

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Shenzhen Aihui Technology Co. , Ltd.

The following is to be completed by the client \_\_\_\_\_

Customer feedback	
Customer signature/seal	
	<b>date:</b>

## Antenna Test Report

Test Unit: Shenzhen Aihui Technology Co. , Ltd.

Materials	FPC coaxial line		
Antenna form	PIFA	Polarization mode	Linear

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# Shenzhen Aihui Technology Co. , Ltd.

Application			
scenario			
Working band	2400Mhz-2500Mhz	VSWR	≤2
Power	Max: 2W	Impedance	50 Ω
dB <sub>i</sub>	≤2dB <sub>i</sub>		
Test Equipment	HPE5071C、Shielding Room、3D automatic turntable		
<b>Antenna Description::</b> <b>1. Grounding processing and picture description: no</b> <b>2. Need to change the motherboard to match: no</b> <ul style="list-style-type: none"><li>● Test voltage: 3.6V, check the antenna contact is good before testing.</li><li>● The RF cable of the integrated tester is kept in a natural state and can not be curled.</li></ul> 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

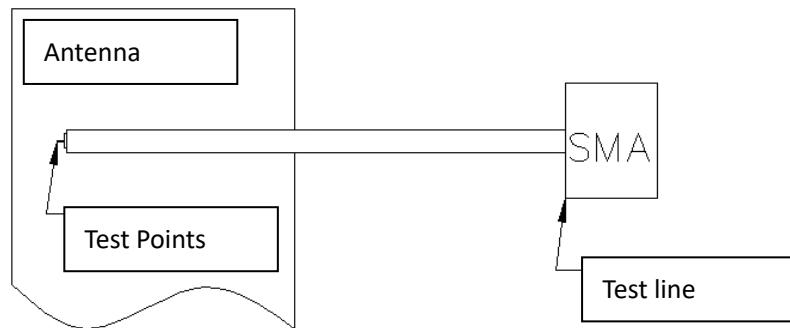
10.Structural drawing

## 1. Project Image

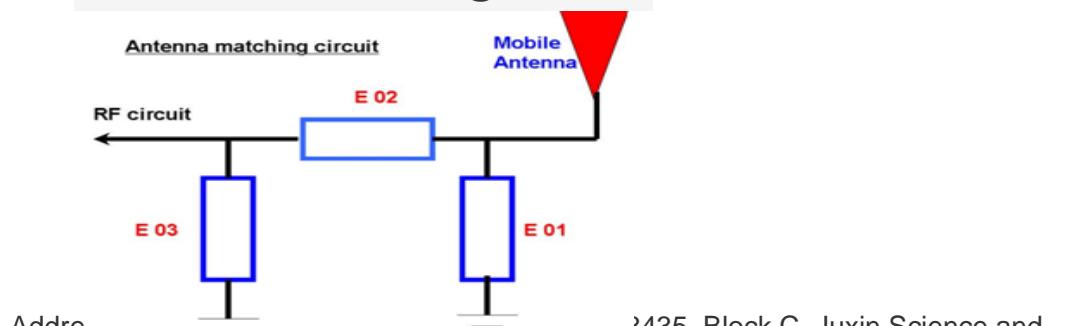
The final verification antenna performance prototype in our company for at least one year, easy to analyze and solve the problem of antenna mass production, to ensure the quality of antenna shipment

## 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



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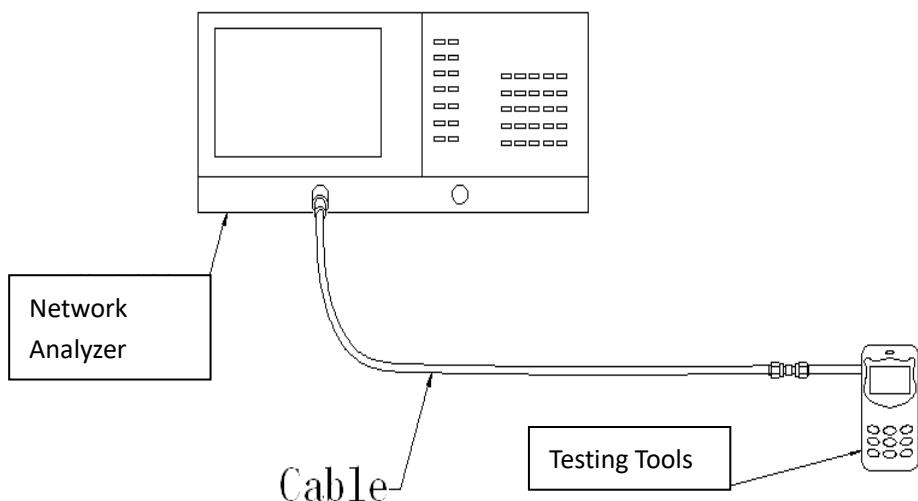
**Modify**

E01	E02	E03
No	No	No

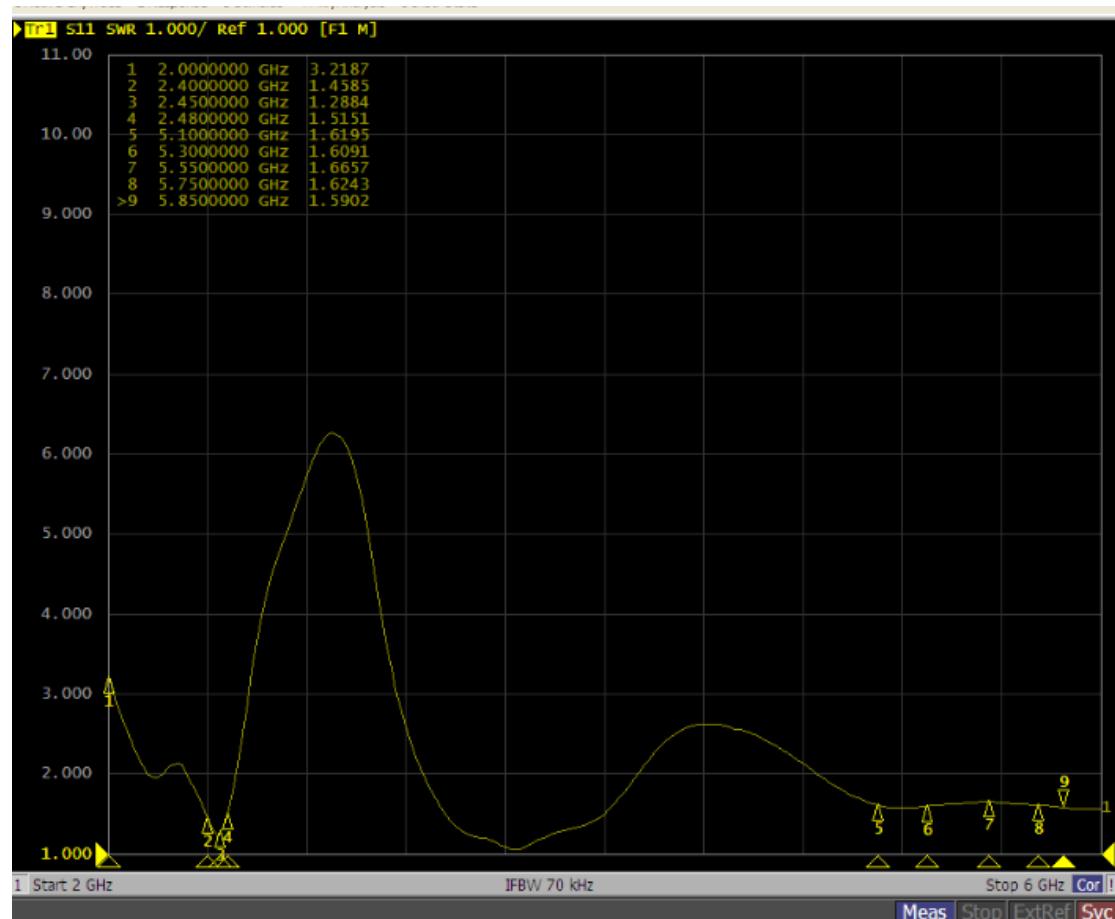
Note: The match is unmodified.

## 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. Darkroom test equipment and data

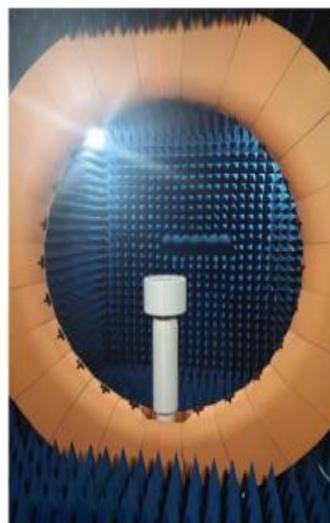
## 6. Test Equipment

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## 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 5071C to test active data, use the omnibus CMW500

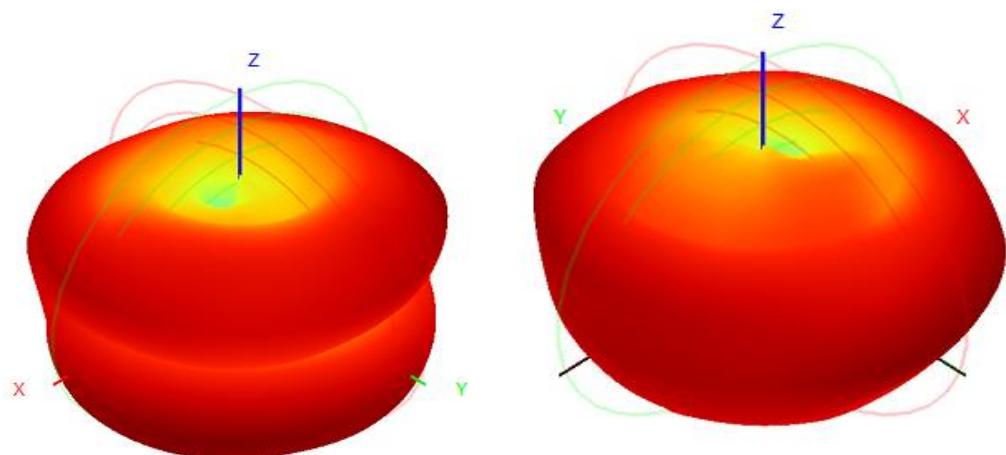


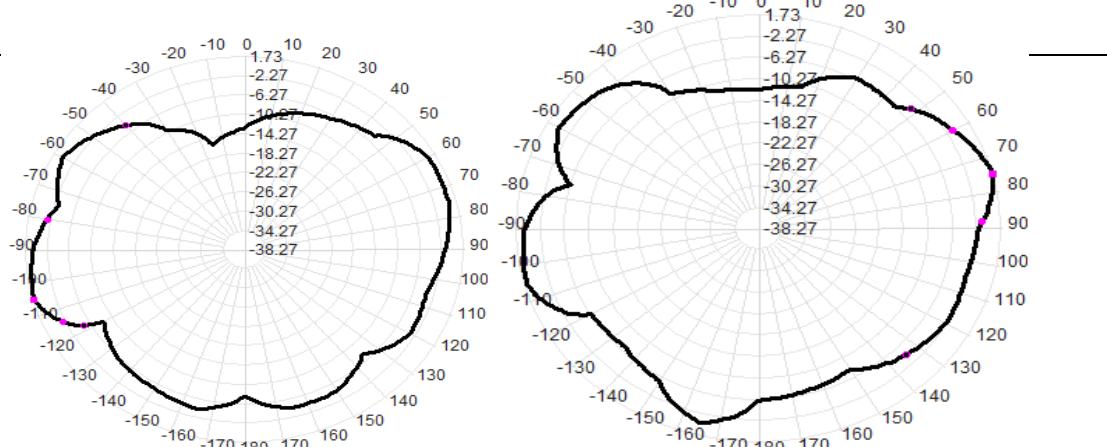
## 7.Active antenna test data

Frequency	Band	2.4GWIFI-B			2.4WIFI-G		
channel		L	M	H	L	M	H
TRP		13.5	13.8	13.9	11.5	12.8	12.3
TIS				-81.4			-71.2
Frequency	Band	2.4WIFI-N					
channel		L	M	H			
TRP		12.4	12.3	12.5			
TIS				-66.3			

WIFI:		
WIFI: 2.4G		
Frequency (MHZ)	Efficiency (%)	Gain (dbi)
2400	55.4	1.14
2410	56.5	1.25
2420	57.5	1.30

2430	54.2	1.42
2440	55.6	1.28
2450	60.0	1.30
2460	61.5	1.42
2470	64.5	2.00
2480	62.5	1.52
2490	61.8	1.31
2500	62.3	1.25





## 8.Schematic diagram of antenna assembly

## 9. Antenna environment handling

## 10. Antenna mass production index

<p>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:</p>	<p><b>Standard for volume production</b></p>
<p><b>2400Mhz-2500Mhz</b></p>	<p><b>VSWR (Mass Production performance) &amp; LT;</b></p>

Shenzhen Aihui Technology Co. , Ltd.

	VSWR(recognition performance) 0.5	

## 10.1 Structural drawings

