Shenzhen Aihui Technology Co. , Ltd.

Antenna specification

Antenna Sample Confirmation From

Name of supplier	ShenZhen Aihui Technology Co.，Ltd				
Customer name	**Hui Kun**				
Sample name	P1100				
model					
Sample size	WIFI antenna: 175mm 3-generation terminal				
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					

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Customer feedback	
Customer signature/seal	date:

Antenna Test Report

Test Unit: Shenzhen Aihui Technology Co. , Ltd.			
Materials	FPC coaxial line		
Antenna type	MonopoleType	Polarization mode	Linear
Application scenario			
Working band	2400Mhz-2500Mhz 5100Mhz -5850Mhz	VSWR	≤2
Power	Max：2W	Impedance	50Ω

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dBi	≥1.0dBi
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.

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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

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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:
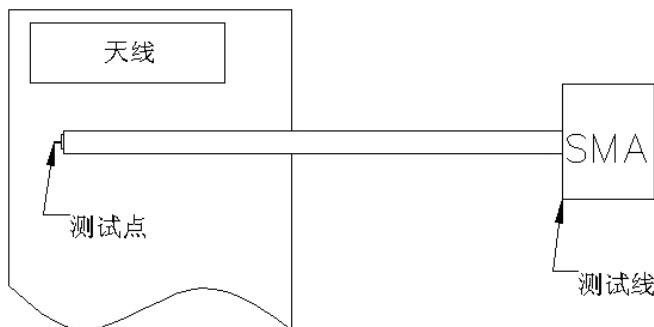

3、Antenna matching circuit
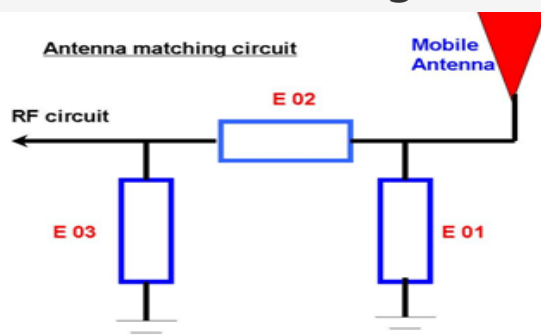
Modify

| 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:
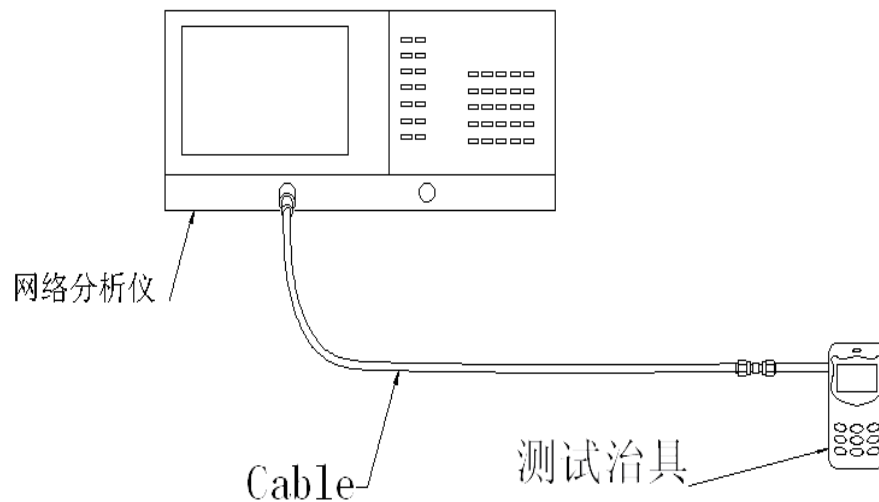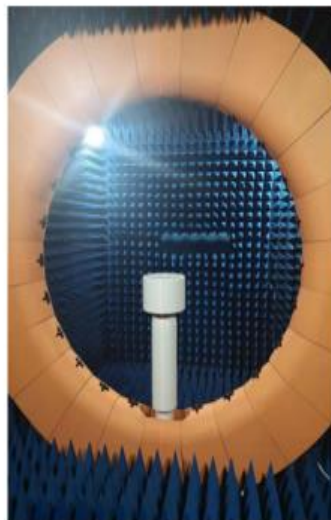
4.1 SWR
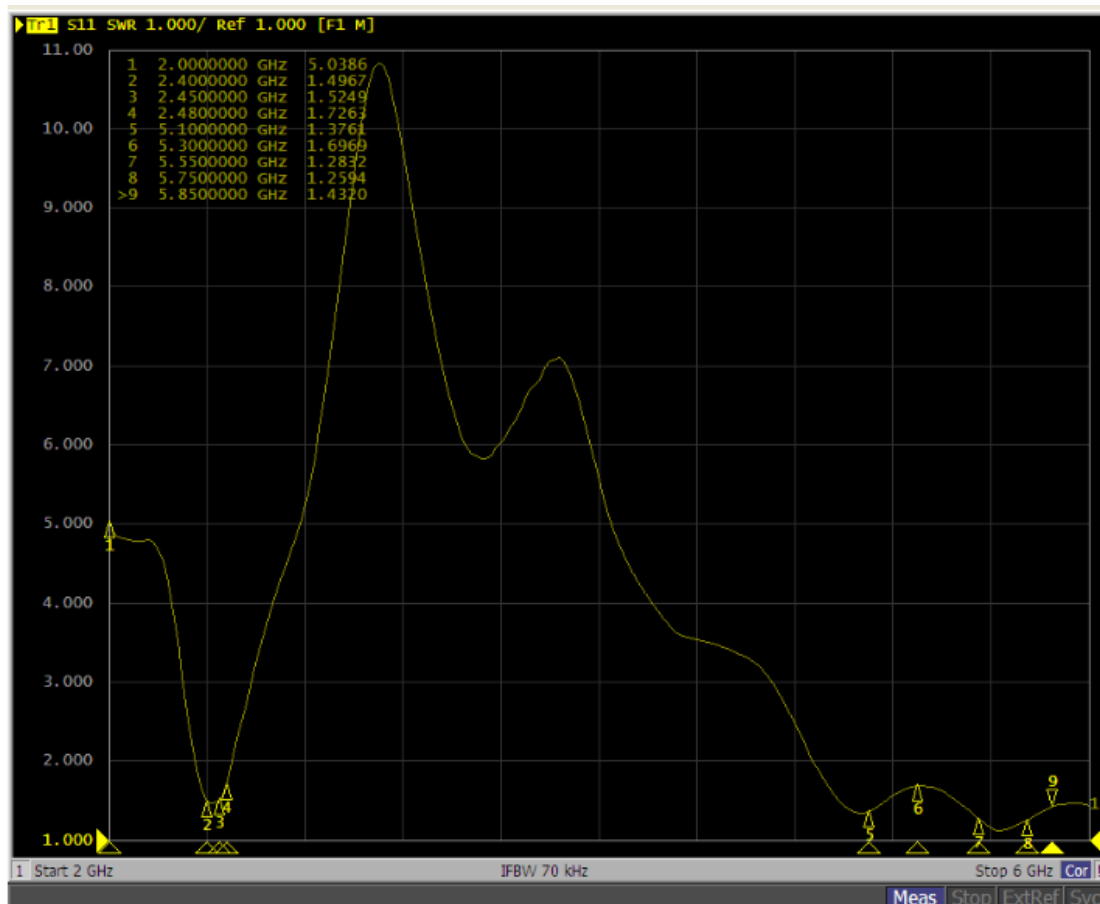
5.Darkroom test equipment and data

6.Test Equipment

Test system: shielded darkroom

The temperature was 22 ° C ± 3 ° C and the humidity was 50% ± 15%

Test equipment: when testing passive data, use the Network analyzer AGILENTE5071C to test active data, use the omnibus CMW500

7.Active antenna test data

Frequency Band	2.4GWIFI-B模			5GWIFI-A模		
channel	L	M	H	L	M	H
TRP	15.96	15.89	15.59	15.06	14.43	13.82
TIS			-84.81			-71.21
Frequency Band	2.4WIFI-G模			2.4WIFI-N模		
channel	L	M	H	L	M	H
TRP	14.14	13.96	13.75	13.56	13.39	13.07
TIS			-70.76			-70.26

WIFI Test Data:

WIFI 2.4G

Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	52.5	1.45
2410	56.3	1.25
2420	55.5	1.30
2430	54.5	1.28
2440	53.2	1.73
2450	51.9	1.47
2460	59.8	1.58
2470	58.7	1.62
2480	57.3	1.08
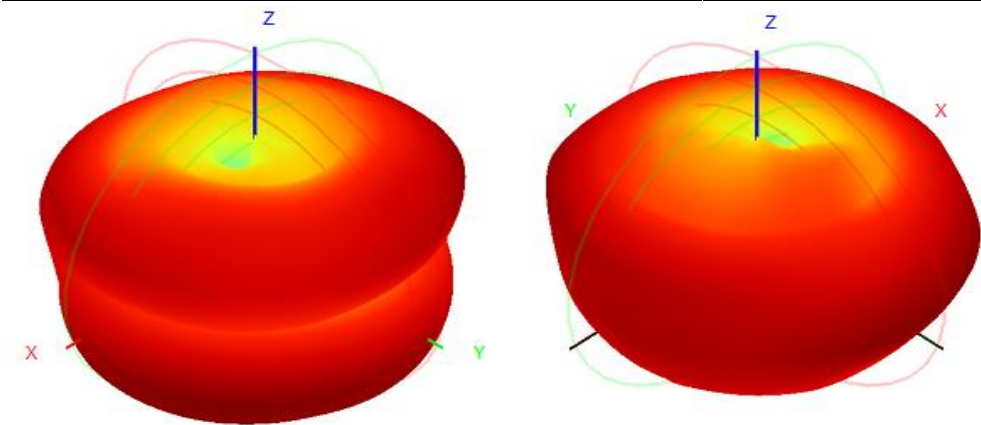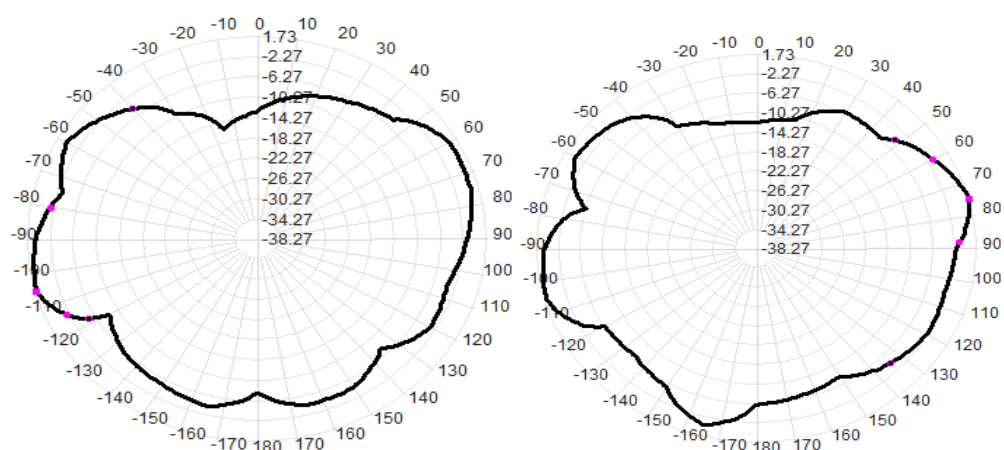
WIFI Test Data:

WIFI 2.4G		
Freq(MHz)	Efficiency (%)	Gain (dBi)
5100	54.26	1.02
5200	56.33	1.01
5300	57.15	1.05
5400	58.25	1.30
5500	54.62	1.42
5600	58.14	1.25
5700	59.25	1.05
5800	54.15	1.15
5850	55.30	1.33
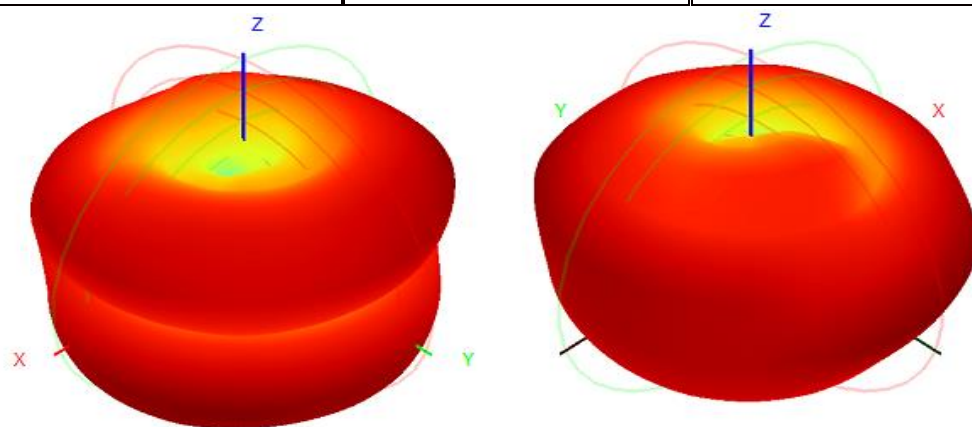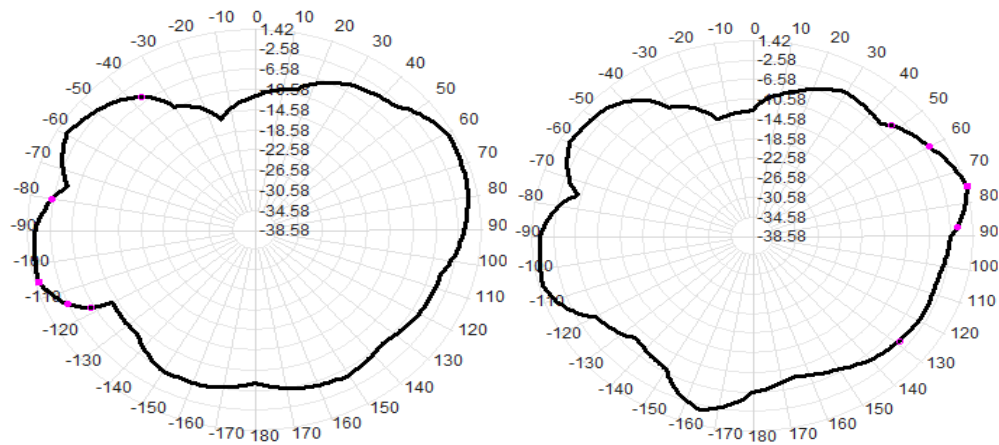
8.Schematic diagram of antenna assembly

天线位置   线长175mm
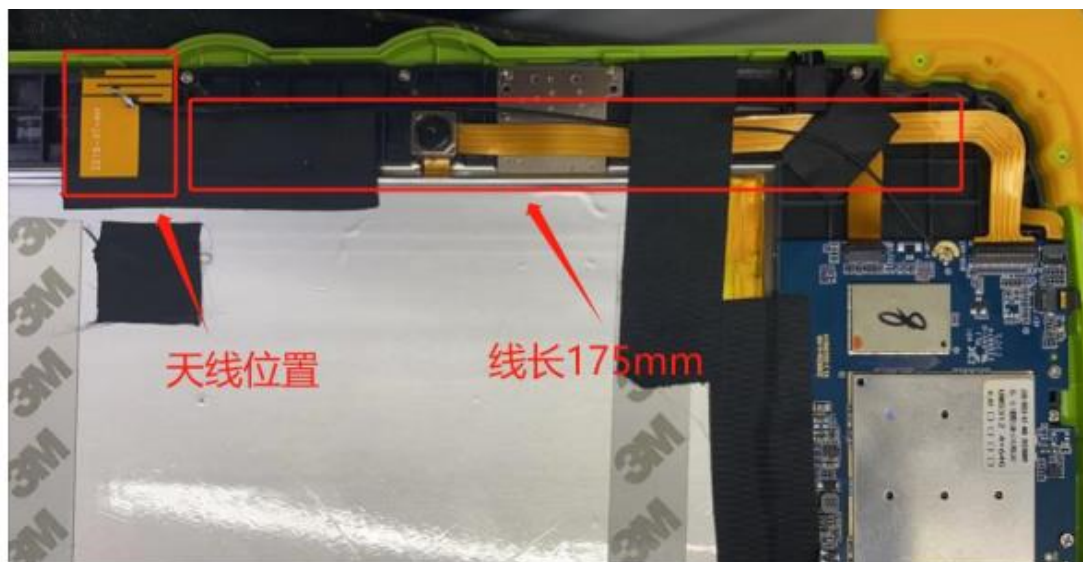
9.Antenna environment handling

10.Antenna mass production index

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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:	Standard for volume production
2400 MHZ -25000MHZ	VSWR (Mass Production performance) & LT; VSWR(recognition performance) 0.5

10.1 Structural drawings

Note 1 hit * as the key detection size, hole size to match as true. 2 unmarked fillet r = 0.30 mm, it is better to achieve the middle size in the drawing, other unmarked tolerances refer to the description in the drawing frame. 3. The material is electrolytic copper + Pi (half to half) , the whole thickness is less than 0.10 MM (not including 3m glue) . Four. Surface Black, back of the whole 3m 300lse adhesive. 5. Cross section section for Copper Line, part of the green diagonal section of copper, leaving the base material, play a connecting role. The overall shape follows the profile profile. 6. Do not scratch the surface of copper, poor plating, oxidation, notch, indentation, bubbles, tapered, burrs; and do not allow foreign body, dirty spots, deflection and other phenomena. Seven. Reference engineering seal sample. 8. Note the terminal port orientation.

18,4
22,2
2218-XT-AH
Generation 3head
*1.5±0.10
*2.0±0.10
*1.0±0.10
*175.00±0.50

Material description	Shenzhen Aihui Technology Co. , Ltd.				
① FPC antenna	⊕ ⊏	Type	P1100	Date	2023/12/09
② Coaxial line something 0.81 (Black)	○ 0.02 Brand name			Design	SEANZHANG
③ IPEX connector (Generation 3)	◎ ∅0.03 Material number	2218-XT-AH		Audit	Structure / Radio frequency
④	⊥ 0.02 Material	FPC		Confirm	
	▱ 0.04 Quality				
	∠ 0.02 Die Treatment			Unit mm Proportion FIT Version R:A

Appearance treatment

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