

Antenna specification

Antenna Sample Confirmation From

Name of supplier	ShenZhen Aihui Technology Co. , Ltd				
Customer name	Ju ren				
Sample name	X10				
model	Cell phones				
Sample size					
Inspection item	Performance test	Visual inspection	Structure	In the news	Test results
Notes					
Quality Audit		Project Audit		Business confirm ation	
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
Application scenario	W/G/B		
Working band	2400Mhz-2500Mhz 5100Mhz-5850Mhz 1575Mhz	VSWR	≤2

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Power	Max: 2W	Impedance	50Ω
dBi	≥ 1dB ±0.5DB		
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

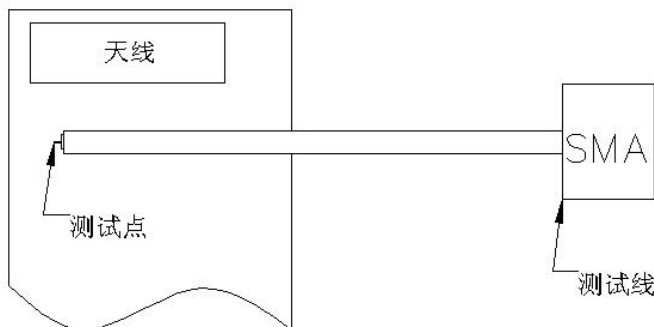
1.Project Image

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

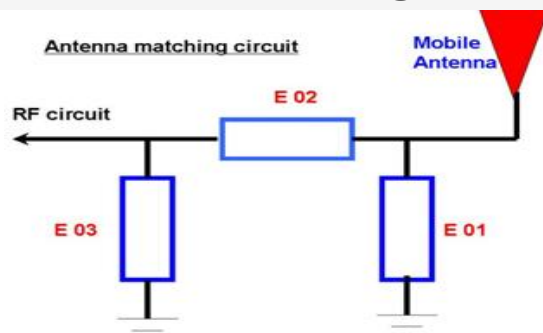
2.Test Fixture

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



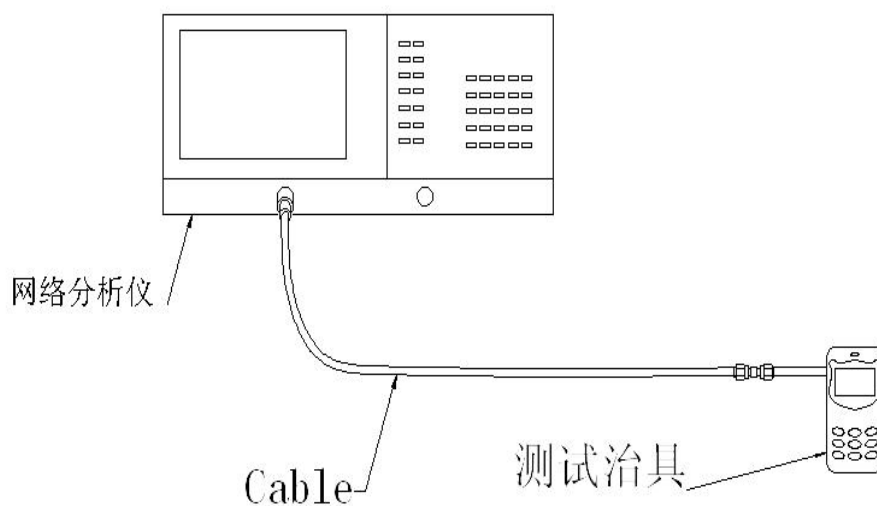
Modify

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:



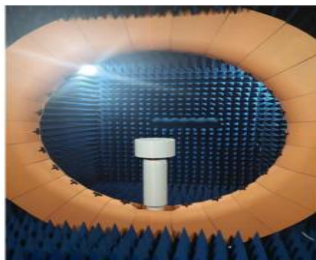
5.Darkroom test equipment and data

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 AGILENTE5071C to test active data, use the omnibus CMW500



7.Active antenna test data

2. 4G	B			G		
channel	1	6	12	1	6	12
TRP	10. 6	10. 5	10. 2	9. 2	9. 3	9. 6
TIS			-80. 4			-69. 1

2. 4G	N					
channel	1	6	12	L	M	H
TRP	9. 1	9. 2	9. 5			
TIS			-67. 6			

5G	A			N		
channel	36	64	165	36	64	165
TRP	10. 3	10. 4	10. 8			
TIS			-69. 1			

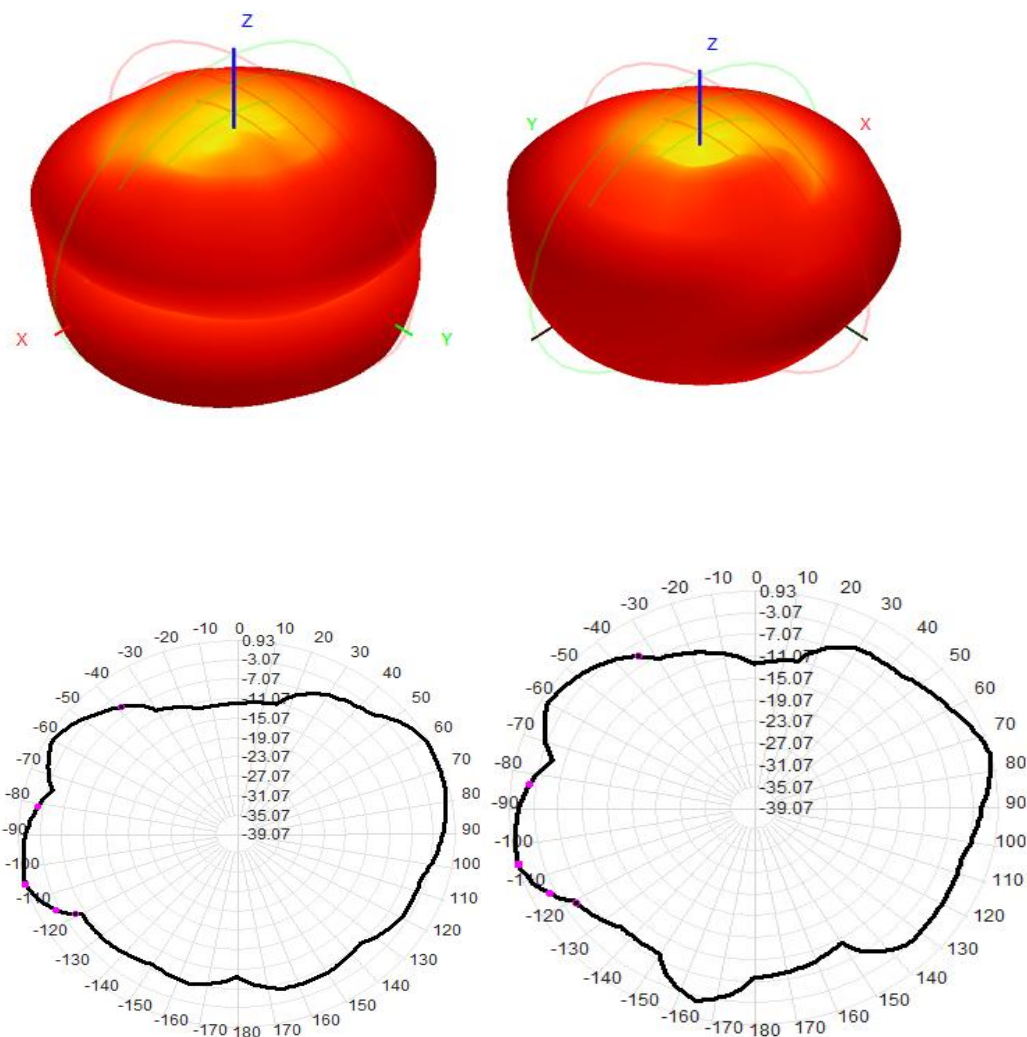
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BT 2400-2500Mhz		
Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	44.1	0.23
2410	45.2	0.61
2420	46.6	0.18
2430	47.5	0.63
2440	42.3	0.51
2450	41.4	0.08
2460	42.3	0.06
2470	44.9	0.41
2480	45.1	0.25
2490	46.3	0.03
2500	45.1	0.02

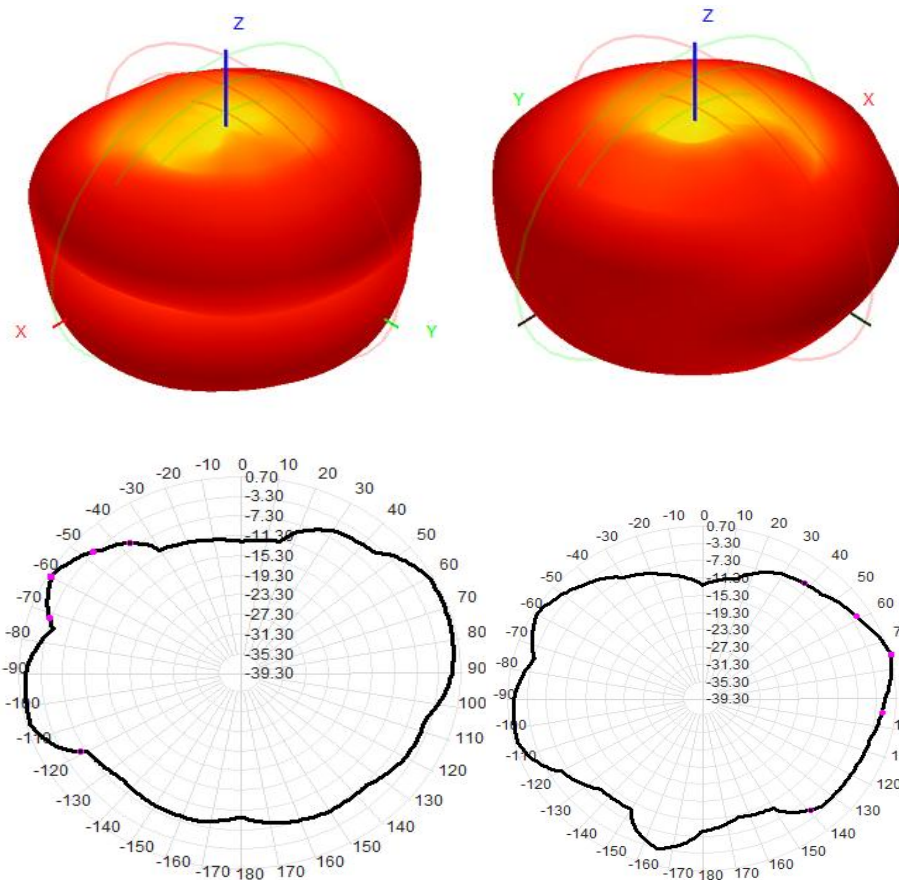
WiFi 5100-5850Mhz		
Freq(MHz)	Efficiency (%)	Gain (dBi)
5100	42.2	0.30
5200	43.2	0.41
5300	44.1	0.36
5400	45.6	0.44
5500	48.2	0.61
5600	42.6	0.25
5700	43.1	0.62
5800	44.6	0.25
5850	42.4	0.98

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2.4G



5.8G



6.The panel matches the change schematic

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7.Antenna environment handling

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The original environment, we do not do processing

8.Antenna mass production index

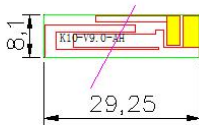
When the antenna is mass-produced, the standing wave ratio is taken as the mass-produced test standard.

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

Frequency	Standard for volume production
2400 MHZ -2500MHZ	VSWR (Mass Production performance) & LT; VSWR(recognition performance) 0.5
5100 MHZ -5800MHZ 1575MHZ	VSWR (Mass Production performance) & LT; VSWR(recognition performance) 0.5

10. Structural drawings

Shenzhen Aihui Technology Co. , Ltd.

	1	2	3	4	5	6	7	8																																																						
A	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. 																																																													
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C																																																														
D	Material description <table border="1"><thead><tr><th>①</th><th>FPC antenna</th><th>Type</th><th>K10</th><th>Date</th><th>2023/04/18</th></tr></thead><tbody><tr><td>②</td><td></td><td>Brand name</td><td></td><td>Design</td><td>SEANZHANG</td></tr><tr><td>③</td><td></td><td>Material</td><td>K10-V9.0-AR</td><td>Audit</td><td></td></tr><tr><td>④</td><td></td><td>Material</td><td>FPC</td><td>Confirm</td><td></td></tr><tr><td></td><td></td><td>Quality</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>Die Treatment</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>Appearance</td><td></td><td></td><td></td></tr></tbody></table>			①	FPC antenna	Type	K10	Date	2023/04/18	②		Brand name		Design	SEANZHANG	③		Material	K10-V9.0-AR	Audit		④		Material	FPC	Confirm				Quality						Die Treatment						Appearance				<table border="1"><thead><tr><th>Unit</th><th>mm</th><th>Project</th><th>Fit</th><th>Version</th><th>R: A</th></tr></thead><tbody><tr><td>6</td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>					Unit	mm	Project	Fit	Version	R: A	6					
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