Antenna specification

Antenna Sample Confirmation From

Name of supplier		ShenZhen Aihui Technology Co., Ltd					
Customer name		Yi Gao					
Sample name		868					
model		tablet co	mputer				
Sample size		Main antenna: 135mm 3rd generation terminals Triple antenna: 215mm 3rd generation terminals Diversity antenna: Pin type					
Inspection item	Performance test	Visual inspection	Structure	In the	Test results		
Notes		<u> </u>					
Quality Audit		Project Audit		Business confirm ation			
The follow	wing is to	be comple	ted by t	the clie	nt		

Customer	Customer feedback	
signature/seal		

Antenna Test Report

Test Unit: Shenzhen Aihui Technology Co. , Ltd.					
Materials	FPC coaxial line				
Antenna type	MonopoleType	Polarization mode	Linear		
Application					
scenario					
Working band	GSM/LTE/WIFI /BT /GPS	VSWR	≤2		
Power	Max: 2W	Impedance	50Ω		
dBi					

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

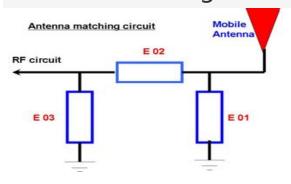
1.Project Image

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



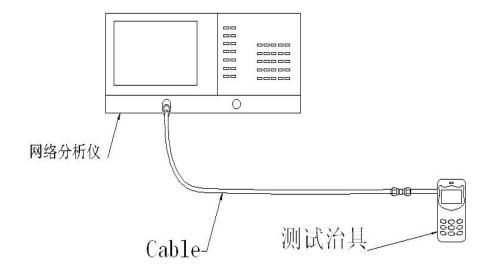
Modify

E01	E02	E03
No	No	No

Note: The match is unmodified.

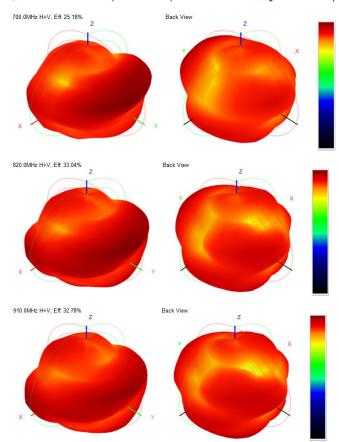
4.S11 test

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:

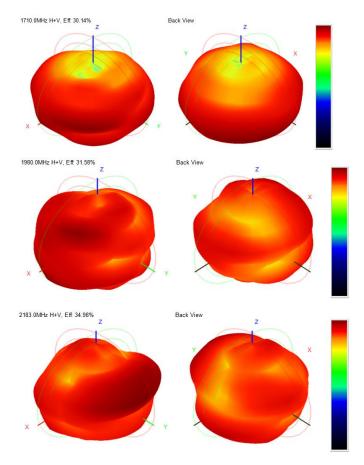


5. Darkroom test equipment and data LTE:

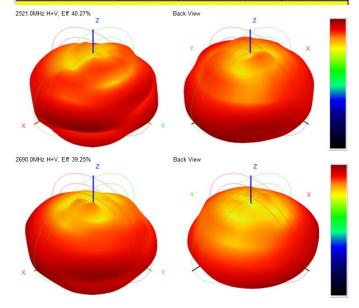
Gain&Efficiency 增益和效率						
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率			
700M	0.39	-4.54	25.18%			
730M	0.63	-4.18	27.15%			
760M	1.03	-3.38	30.88%			
790M	0.96	-3.55	32.17%			
820M	0.83	-3.73	33.04%			
850M	1.25	-3.29	32.4%			
M088	1.17	-3.34	34.88%			
910M	0.66	-4.26	32.78%			



	Gain&Eff 增益和		
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
1710M	0.96	-4.21	30.14%
1743M	0.76	-3.96	32.22%
1777M	1.01	-3.77	33.24%
1811M	1.3	-3.98	32.58%
1845M	0.99	-3.57	34.19%
1878M	0.82	-4.08	31.69%
1912M	1.21	-3.42	33.75%
1946M	1.33	-3.34	35.44%
1980M	1.03	-4.05	31.58%
2014M	0.68	-4.16	30.62%
2047M	0.85	-3.85	32.61%
2081M	0.91	-3.62	34.62%
2115M	1.13	-3.85	33.98%
2149M	1.45	-3.89	32.12%
2183M	0.89	-3.56	34.98%

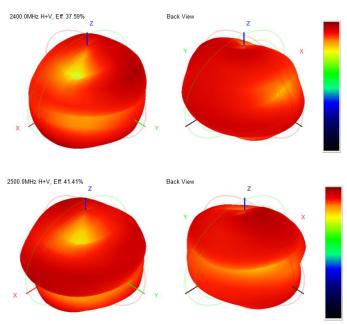


	-		-
2521M	0.83	-3.95	40.24%
2554M	0.86	-3.9	40.72%
2588M	1.39	-4.13	38.65%
2622M	1.25	-4.23	37.73%
2656M	0.62	-4.31	37.1%
2690M	0.83	-39.99	39.25%

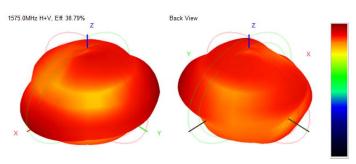


WIFI&BT&GPS

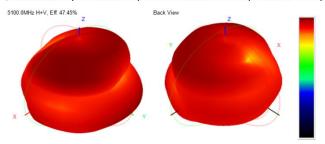
		&Efficiency 益和效率	
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
2400M	0.86	-3.73	37.59%
2420M	1.16	-3.38	38.59%
2440M	1.27	-3.13	38.49%
2460M	0.96	-3.63	40.18%
2480M	1.24	-3.15	40.03%
2500M	1.53	-3.04	41.41%

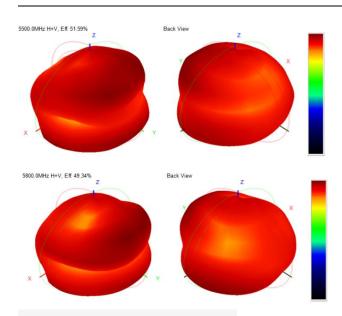


		&Efficiency 益和效率	
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
1565M	0.98	-4.23	36.68%
1575M	0.86	-4.33	38.79%
1585M	0.93	-4.16	36.39%
1595M	0.83	-4.38	35.42%



reguenous agin officiency for their reguenous						
requency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率			
5050M	1.56	-3.47	48.34%			
5100M	1.62	-3.43	47.45%			
5150M	1.44	-3.86	49.29%			
5200M	1.36	-3.17	50.43%			
5250M	1.51	-2.97	52.42%			
5300M	1.61	-3.13	51.47%			
5350M	1.63	-3.55	50.33%			
5400M	1.35	-3.02	52.14%			
5450M	1.47	-3.34	50.17%			
5500M	1.43	-3.43	51.19%			
5550M	1.58	-3.24	48.69%			
5600M	1.57	-3.61	49.51%			
5650M	1.37	-3.88	48.13%			
5700M	1.8	-3.79	50.87%			
5750M	1.74	-4.1	52.09%			
5800M	1.64	-4.22	49.34%			
5850M	1.49	-4.31	50.19%			





5.2.Test Equipment

Test system: shielded darkroom

The temperature was 22 $^{\circ}$ C \pm 3 $^{\circ}$ 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









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6.Active antenna test data

Frequency Band		GSM; 850	55 55		1900	00
channel	L	М	Н	L	М	Н
TRP	26. 57	26, 66	26, 36	24. 25	25. 65	26, 32
TIS	8		-102.35	:		-104. 1
Frequency Band		GSM; 900			1800	
channel	L	М	Н	L	М	Н
TRP	28. 54	28, 42	27. 41	24. 11	24. 32	24. 41
TIS			-103. 30			-103.6

Frequency Band	WCDMA 1			WCDMA 8			
channel	L	М	Н	L	М	н	
TRP	18.66	18.74	19. 62	17.54	17.44	18.11	
TIS			-103. 41			-102.91	

Frequency Band		LTE B1			LT	E B3	
channel	L	M	Н	L	М	Н	
TRP	18. 64	18.94	19. 41	19.65	19.44	19.63	
TIS			-92.35			-92.67	
Frequency Band	LTE B5			LTE B7			
channel	L	М	Н	L	M	Н	
TRP	17. 54	17.88	18. 52	19.65	19. 41	19. 44	
TIS			-93. 25		24.	-92.7	
Frequency Band	LTE B8			LTB B20			
channel	L	М	Н	L	М	Н	
TRP	18. 55	18. 65	18. 14	17.66	17.49	17.82	
TIS			-93, 71			-91.44	

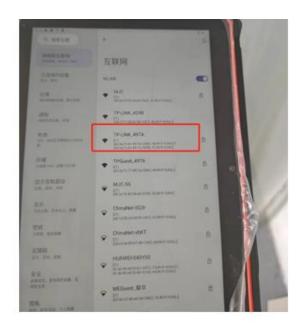
Frequency Band	, w	iFi-2. 4G-B	模 WiFi-2.4G-C模			模
channel	L	М	н	L	М	Н
TRP	12. 21	11. 45	12.30	11.15	11.30	11. 15
TIS			-80.35			-68. 41
Frequency Band	WiFi-2.4G-N模			WiFi-5.8G-A模		
channel	L	М	н	L	М	Н
TRP	10.35	10, 44	10. 25	10.44	10.65	9.82
TIS	9		-67.14			-68. 19

7. Real-time WiFi results

测试地点为我司窗台,星值40以上2-3颗

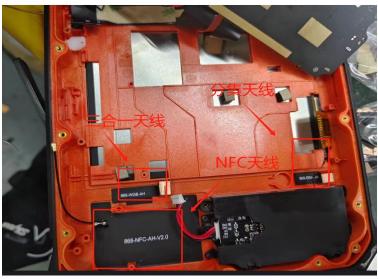


测试距离 10M 信号满 格 上网正常。



8. Schematic diagram of antenna assembly





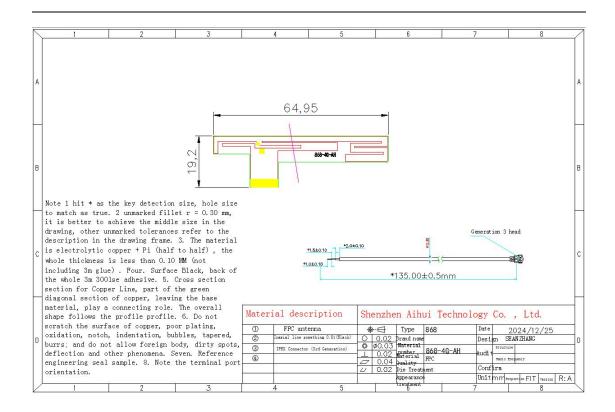
8.1.Antenna environment handling

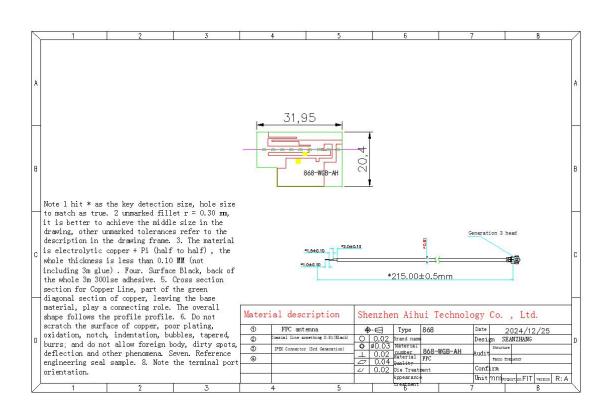


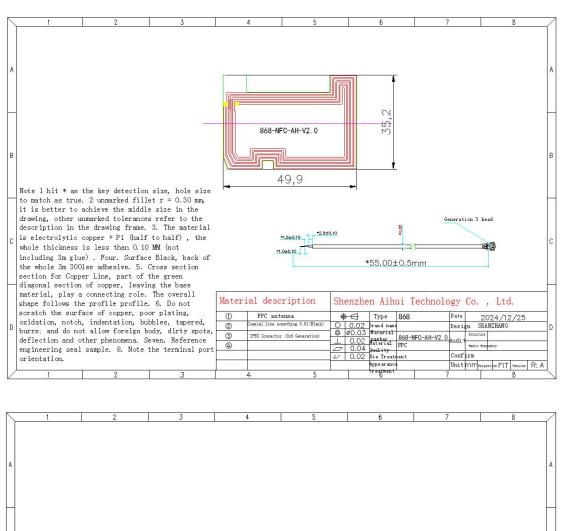
9.Antenna mass production index

When the antenna is	
mass-produced, the	
standing wave ratio is	
taken as the	Standard for volume
mass-produced test	production
standard. Based on the	production
differences of the project	
itself, the following criteria	
are given:	
	VSWR (Mass Production
680MHZ-2700Mhz	,
	performance) & LT;
	VSWR(recognition
	performance) 0.5

10. Structural drawings







 ∞ တ် B68-DIV-AH 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. $\ensuremath{\mathtt{3}}.$ 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 3001se 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 Material description Shenzhen Aihui Technology Co., Ltd. scratch the surface of copper, poor plating, oxidation, notch, indentation, bubbles, tapered, FPC antenna Date 2024/12/25 SEANZHANG ○ 0.02 Brand name
○ 90.03 Material
□ 0.02 Material
□ 0.04 Consider Pro
□ 0.04 Consider Pro
□ 0.02 Die Treatent Design burrs; and do not allow foreign body, dirty spots, deflection and other phenomena. Seven. Reference udi 4 engineering seal sample. 8. Note the terminal port orientation. $\ensuremath{\mathsf{N}}$ orten FIT Version R; A Unit mm