

Antenna specification

Antenna Sample Confirmation From

Name of supplier	ShenZhen Aihui Technology Co. , Ltd				
Customer name	HaoQing				
Sample name	M8				
model					
Sample size	The wire length is 90mm, 3rd generation terminals				
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	<div>date:</div>

Antenna Test Report

Test Unit: Shenzhen Aihui Technology Co. , Ltd.			
Materials	FPC coaxial line		
Antenna type	MonopoleType	Polarization mode	Linear
Application scenario			

Shenzhen Aihui Technology Co. , Ltd.

Working band	2400Mhz-2500Mhz 5100Mhz-5850Mhz	VSWR	≤2
Power	Max: 2W	Impedance	50Ω
dBi	2.4G:0.93dBi(MAX) 5.2G:0.32dBi(MAX) 5.8G:0.25dBi(MAX)		
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

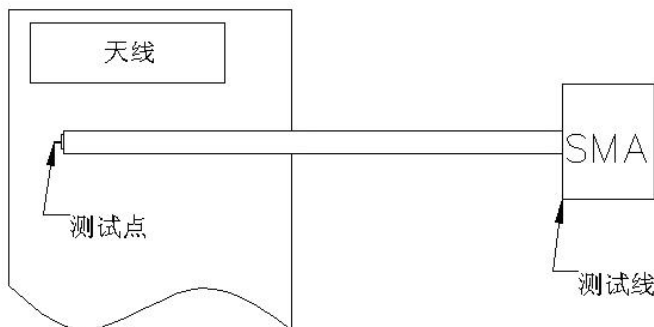
1.Project Image

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

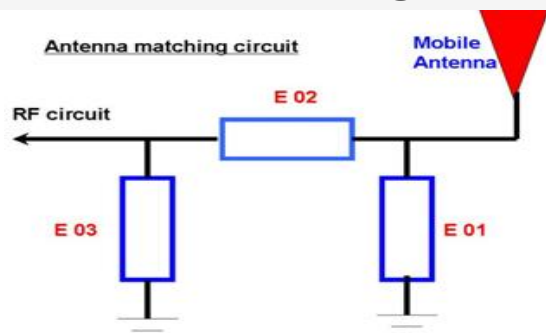
2.Test Fixture

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



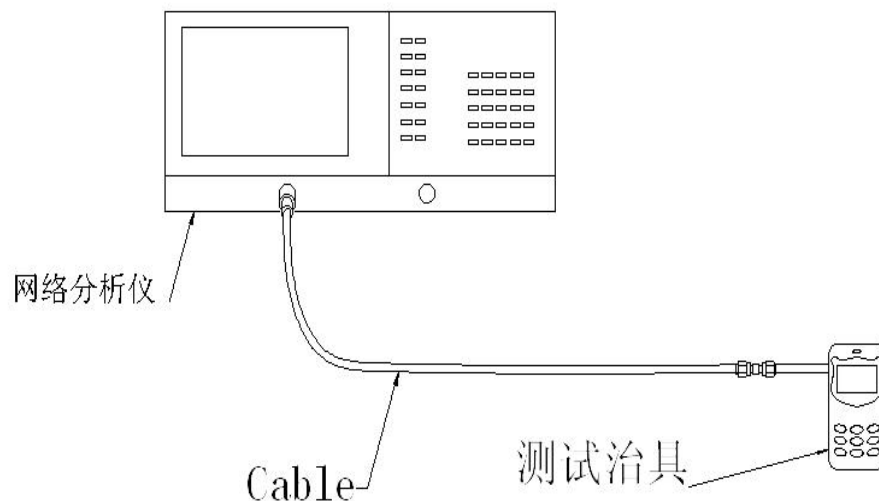
Modify

E01	E02	E03
No	No	No

Note: The match is unmodified.

4.S11 test

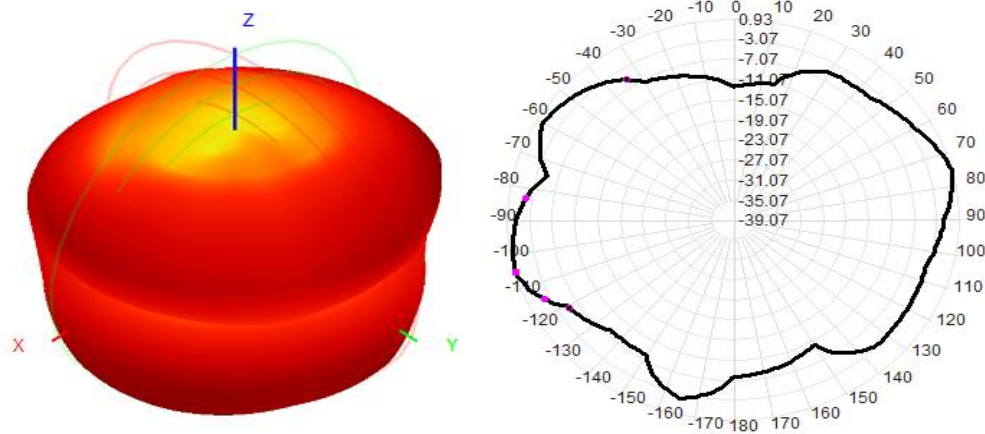
4.0 4.0s11 test method description of test equipment: Network Analyzer (E5071C) test method: a 50 ohm CABLE is used to export from the instrument test port. The SMA connector for connecting the handset is calibrated using a calibration piece, record the echo loss and standing wave ratio corresponding to the relevant frequency points. The test schematic is as follows:



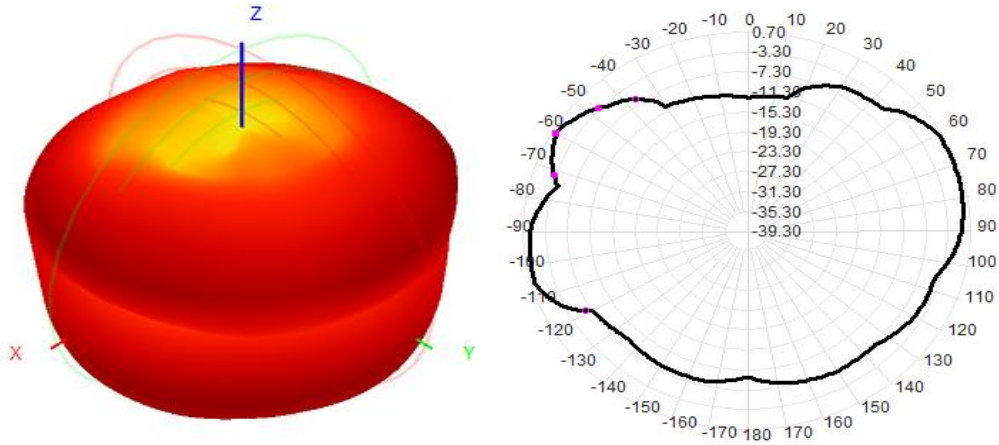
5.Darkroom test equipment and data

Frequency Band	2.4G			5.8G		
channel	L	M	H	L	M	H
TRP	8.98	9.4	9.20	8.44	8.44	8.19
TIS			-73.41			-68.11

Test Data:		
2.4G		
Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	32.52	0.65
2410	38.22	0.25
2420	39.15	0.15
2430	41.22	0.32
2440	44.30	0.44
2450	45.15	0.93
2460	46.30	0.82
2470	42.52	0.71
2480	44.11	0.63



Test Data:		
5G		
Freq(MHz)	Efficiency (%)	Gain (dBi)
5000	44.15	0.11
5100	42.30	0.25
5200	44.62	0.32
5300	45.15	0.65
5400	46.30	0.70
5500	41.25	0.48
5600	42.30	0.30
5700	44.16	0.25
5800	45.30	0.19
5850	46.15	0.09

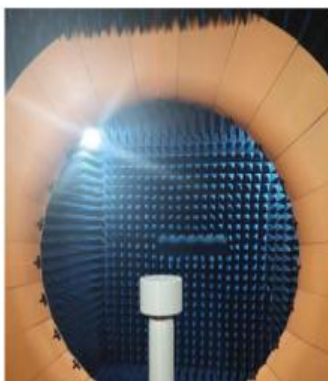


6. Test Equipment

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



8.Schematic diagram of antenna assembly

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9.Antenna environment handling

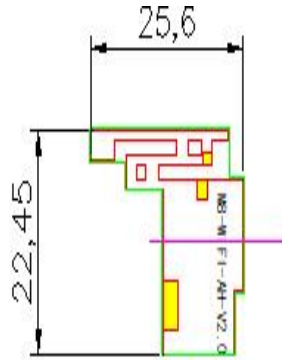
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10.Antenna mass production index

When the antenna is mass-produced, the standing wave ratio is taken as the mass-produced test	Standard for volume production
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standard. Based on the differences of the project itself, the following criteria are given:	
2400 MHZ -25000MHZ 5100MHZ-5850MHZ	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.



Material description		Shenzhen Aihui Technology Co., Ltd.					
①	FPC antenna		Type	M8	Date	2024/10/09	
②	Solder line something 0.51(Black)		0.02	Brand name	Design	SEANZHANG	
③	Strip thread at both ends and Rip		0.03	Material	WIFI/BT FPC Antenna	Structure	
④	Fit		0.02	Material	FPC		
			0.04	Quality			
			0.02	Die Treatment	Confirm		
				Appearance	Unit	mm	Import FIT  R: A
				Treatment			