

ANTENNA SPECIFICATION

Antenna Sample Confirmation Form

Vendor Name	ShenZhen Aihui Technology Co., Ltd				
Customer Name	Xinzhiyuan				
Sample Name	W H-20				
Part Number					
Specification	Cable: 120 mm; Gen 1; black; left exit; print: 514K-AH				
Inspection Item	Performance	Total Appearance	structure	Others	Inspection Result
Remark					
QA Audit		Engineer Audit		Sales Confirm	
The following are filled by Customer					
Customer Evaluation					
Signation/ Chapter by Customer					

Date: _____

Antenna Test Report

:			
Test by: ShenZhen Aihui Technology Co., Ltd			
Material	FPC + coaxial cable		
Antenna Type	MonopoleType	Polarization mode	Linear
Application			
Band	2.4G/5.8GWIFI/BT	VSWR	≤2
Power	Max: 2W	Impedance	50Ω
dBi	≥1dBi		
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 Images

2. Test Fixture

3. Antenna Matching Circuit

4. S11 Test

4.0 S11 Test Method

4.1 S11 Parameter Plot

5. Anechoic Chamber Test Equipment and Data

5.0 Test Equipment

5.1 Passive Test Data

6. Antenna Assembly Diagram

7. Antenna Environmental Treatment

8. Antenna Mass-production Criteria

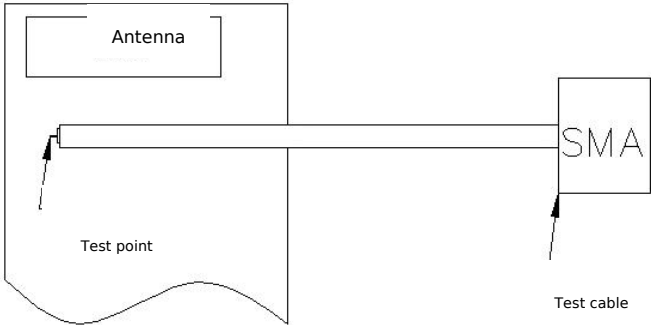
9. Mechanical Drawing

1. Project Images

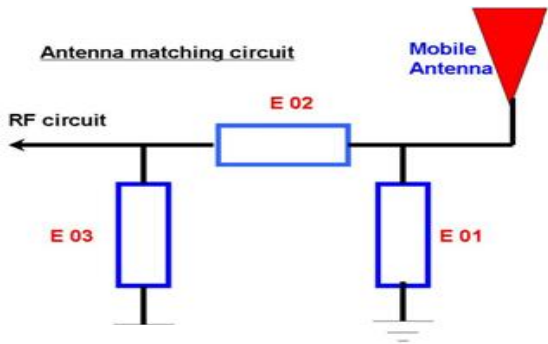
Note: The final customer-verified prototype used for antenna-performance validation will be retained by our company for at least one year to support the analysis and resolution of mass-production anomalies and to ensure outgoing antenna quality.

2. Test Fixture

Purpose: Measure the passive antenna parameters as accurately as possible.
Method: Use one 50-ohm coaxial cable. Connect one end to the test point after the matching circuit on the handset motherboard (before the RF test port), and connect the other end to an SMA connector, as shown below.



3. Antenna Matching Circuit



Modify

E01	E02	E03
No	No	No

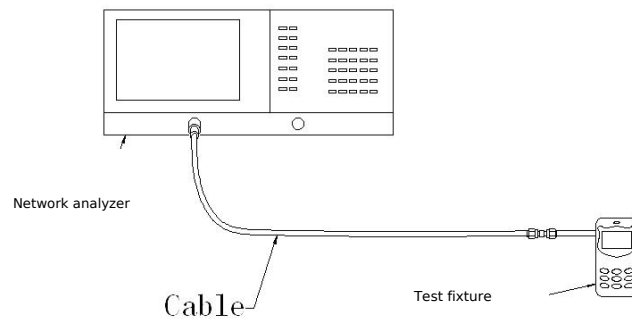
Remark: No matching changes.

4. S11 Test

4.0 S11 Test Method

Test equipment: Network analyzer (E5071C).

Test method: Route a 50-ohm cable from the instrument test port. After calibration with the calibration kit, connect it to the test fixture's SMA connector. Record the return loss and VSWR at the relevant frequencies. The setup is shown below.



Test setup diagram

4.1 S11 Parameter Plot

Primary antenna passive VSWR

5. Anechoic Chamber Test Equipment and Data

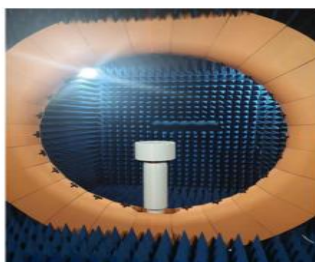
5.0 Test Equipment

Test system: Shielded anechoic chamber.

Environment: 22 +/- 3 deg C; relative humidity: 50% +/- 15%.

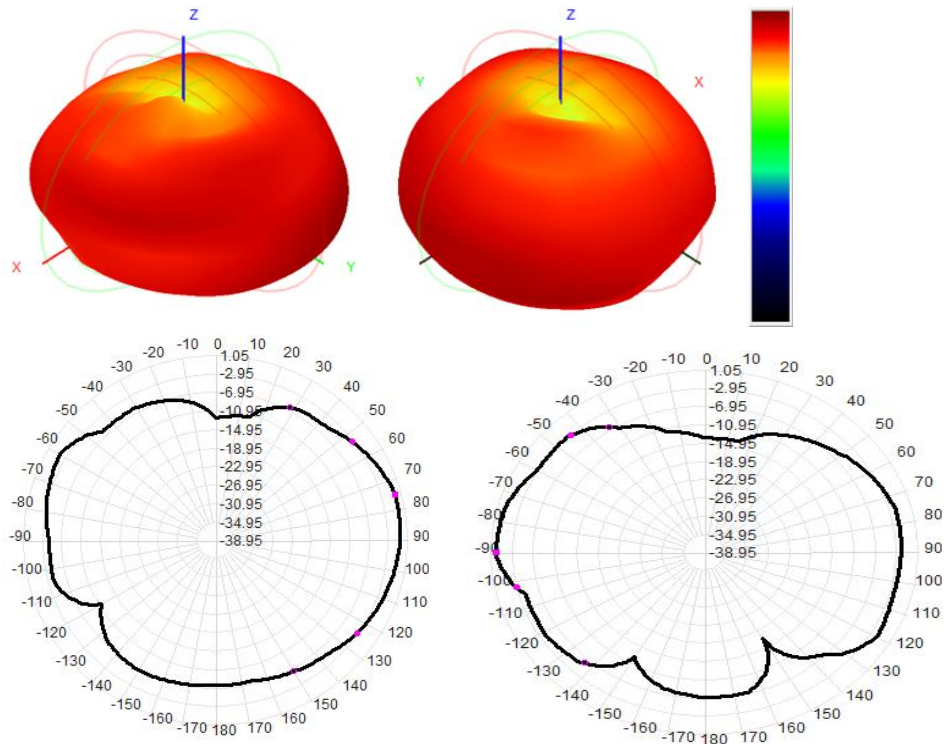
Passive-data equipment: Agilent E5071C network analyzer.

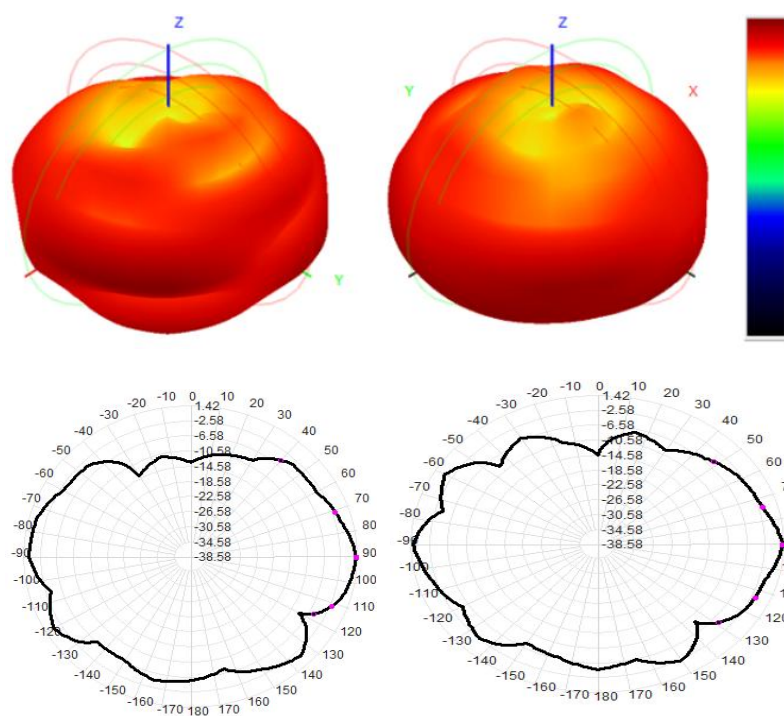
Active-data equipment: CMW500 radio communication tester.



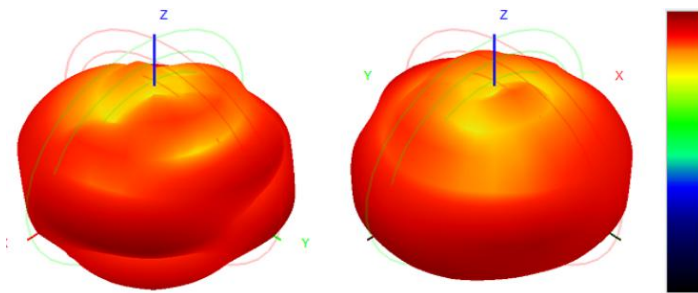
5.1 Antenna Passive Test Data

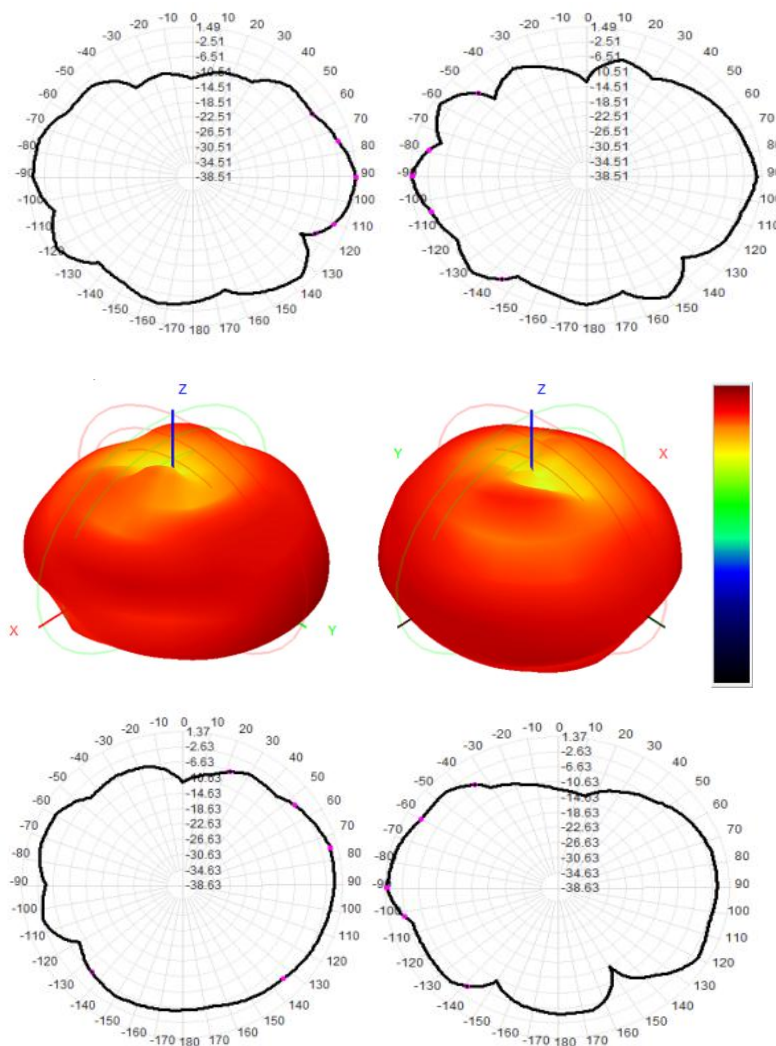
Gain&Efficiency 增益和效率			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
2400M	1.05	-3.16	51.24%
2410M	0.92	-3.21	53.37%
2420M	1.13	-3.24	54.73%
2430M	1.51	-3.27	53.69%
2440M	1.38	-3.30	52.48%
2450M	1.55	-3.29	54.66%
2460M	1.03	-3.32	51.39%
2470M	0.96	-3.26	54.83%
2480M	1.34	-3.37	56.71%
2490M	1.23	-3.41	50.45%
2500M	1.42	-3.46	50.82%





Gain&Efficiency			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
5050M	1.49	-3.47	56.19%
5100M	1.35	-3.43	54.42%
5150M	1.46	-3.86	56.47%
5200M	1.52	-3.17	55.36%
5250M	1.57	-3.47	56.76%
5300M	1.33	-3.13	55.19%
5350M	1.71	-3.55	54.19%
5400M	1.54	-3.02	53.91%
5450M	1.31	-3.34	55.73%
5500M	1.52	-3.43	56.13%
5550M	1.83	-3.24	56.02%
5600M	1.63	-3.61	56.42%
5650M	1.44	-3.88	54.49%
5700M	1.73	-3.79	54.39%
5750M	1.65	-3.69	52.09%
5800M	1.26	-3.83	54.24%
5850M	1.37	-3.71	56.28%





6. Antenna Position

Not specified.

7. Environmental Treatment

Not specified.

8. Antenna Mass-production Criteria

During antenna mass production, VSWR is the production test criterion.

Based on product-specific differences, apply the following limits:

Frequency	Production standard
5100 MHZ -5850MHZ	VSWR (production) < VSWR (approved sample) + 0.5
824MHZ-2690MHZ	VSWR (production) < VSWR (approved sample) + 0.5

9. Mechanical Drawing

