

Antenna specification

Antenna Sample Confirmation From

Name of supplier	ShenZhen Aihui Technology Co. , Ltd				
Customer name	Zhi Teng				
Sample name	F39				
model					
Sample size	Main antenna: wire length: 255mm 4 generation terminal, black sub-antenna: wire length: 275mm 4 generation terminal, black				
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		Polarization mode	Linear
Application scenario			
Working band	WiFi	VSWR	≤2
Power		Impedance	50 Ω

dBi	
Test Equipment	HPE5071C、Shielding Room、3D automatic turntable
<p><b>Antenna Description::</b></p> <p><b>1. Grounding processing and picture description: no</b></p> <p><b>2. Need to change the motherboard to match: no</b></p> <ul style="list-style-type: none"><li>● Test voltage: 3.6V, check the antenna contact is good before testing.</li><li>● The RF cable of the integrated tester is kept in a natural state and can not be curled.</li></ul> <p>Specification:test the specified power level, all indicators must conform to the specifications.</p>	

1. Project Image
2. Test Fixture
3. Antenna matching circuit
4. S11 test
5. Schematic diagram of antenna assembly
6. Darkroom test equipment and data
7. Antenna passive efficiency and gain
8. Antenna environment handling
9. Antenna mass production index
10. Structural drawing

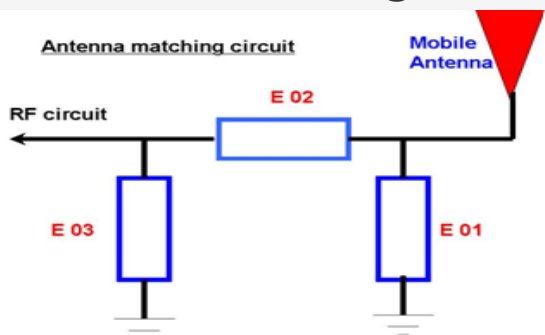
1.Project Image

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



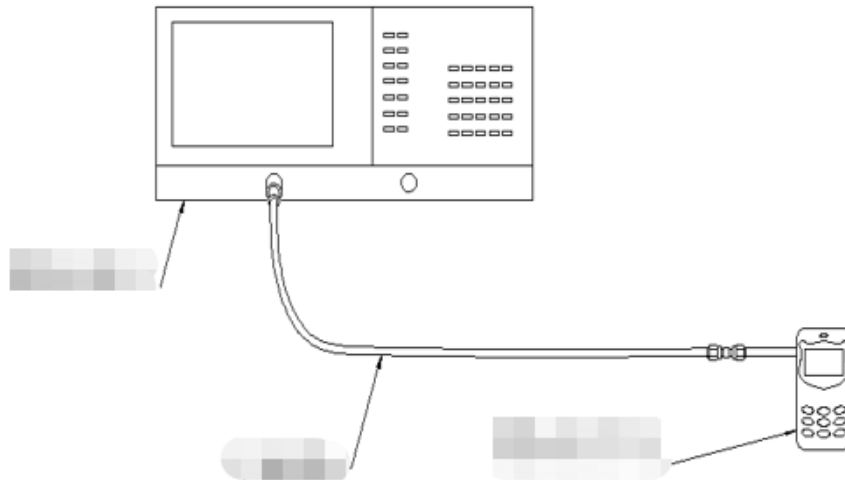
Modify

E01	E02	E03
No	No	No

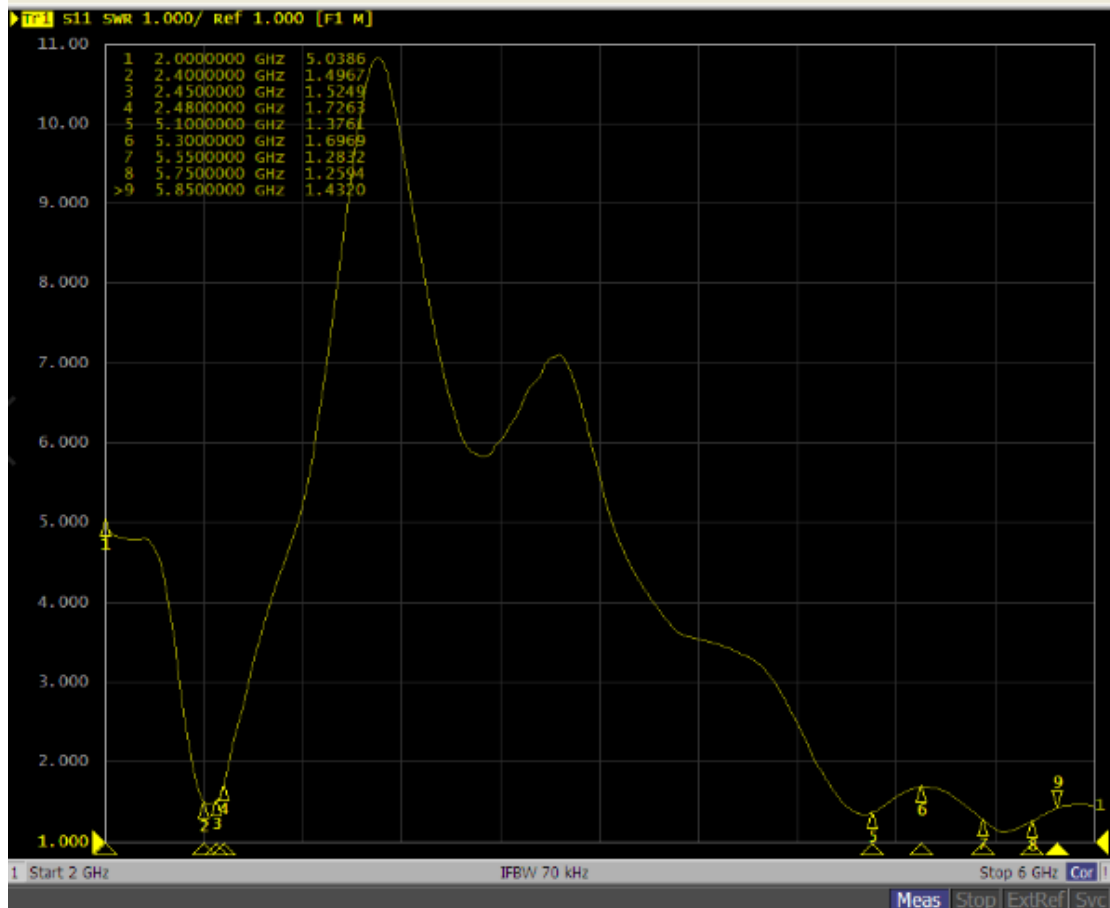
Note: The match is unmodified.

## 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:



## 5.1 S11 parameter picture



## 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.Passive antenna test data

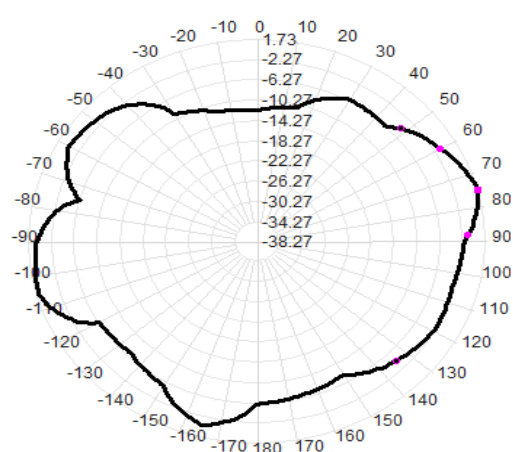
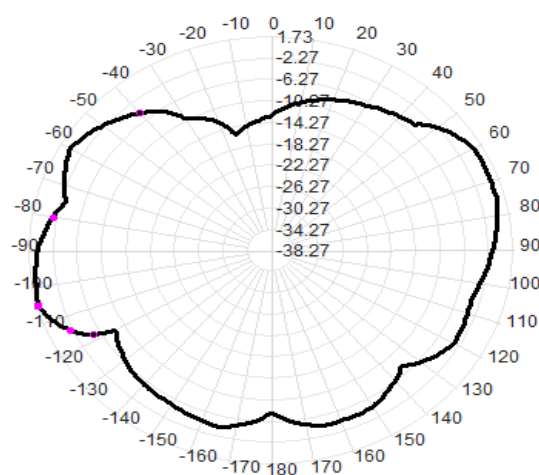
Frequency Band	2.4GWIFI-B			5.8GWIFI-A		
channel	L	M	H	L	M	H
TRP	13.24	14.44	14.51	10.24	11.41	11.30
TIS			-77.52			-68.31
Frequency Band	2.4WIFI-G			2.4WIFI-N		
channel	L	M	H	L	M	H
TRP	12.41	12.33	13.21	11.54	12.31	12.30
TIS			-68.65			-66.35

WIFI 2.4G		
Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	58.4	1.12
2410	59.5	1.44
2420	60.2	1.73
2430	51.5	1.55
2440	53.5	1.32

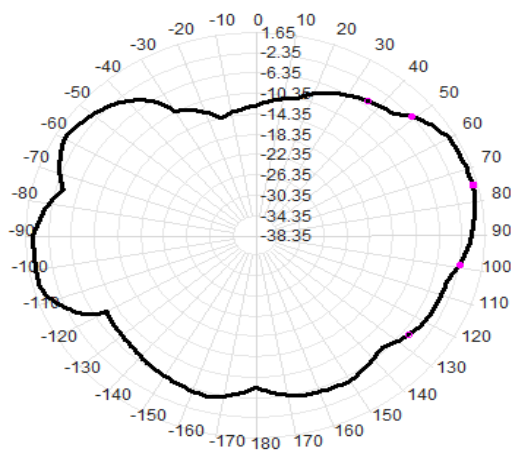
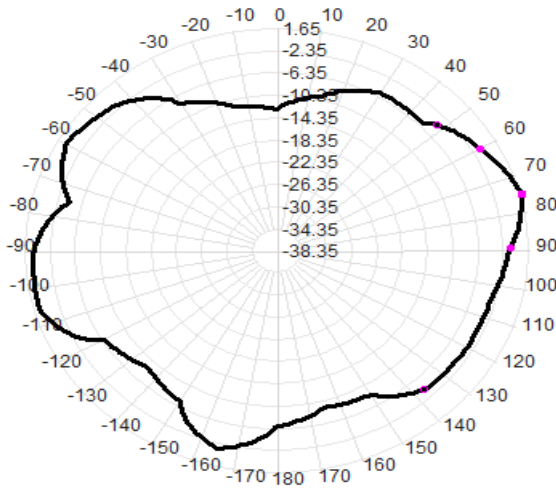


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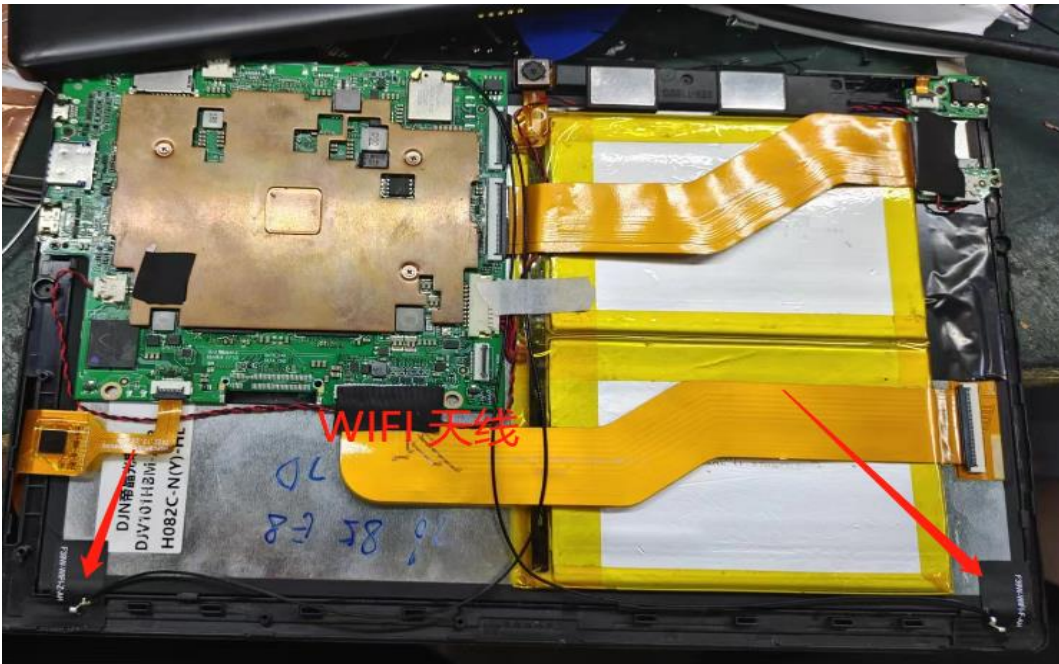
<b>2450</b>	<b>51.5</b>	<b>1.65</b>
<b>2460</b>	<b>59.6</b>	<b>1.54</b>
<b>2470</b>	<b>58.7</b>	<b>1.45</b>
<b>2480</b>	<b>59.3</b>	<b>1.21</b>



WIFI 5.8G		
Freq(MHz)	Efficiency (%)	Gain (dBi)
5000	55.2	1.55
5100	54.5	1.41
5200	56.3	1.65
5300	57.5	1.41
5400	59.8	1.52
5500	59.6	1.09
5600	58.7	1.21
5700	51.2	1.41
5800	52.5	1.02
5850	53.1	1.30



## 8. Antenna environment handling



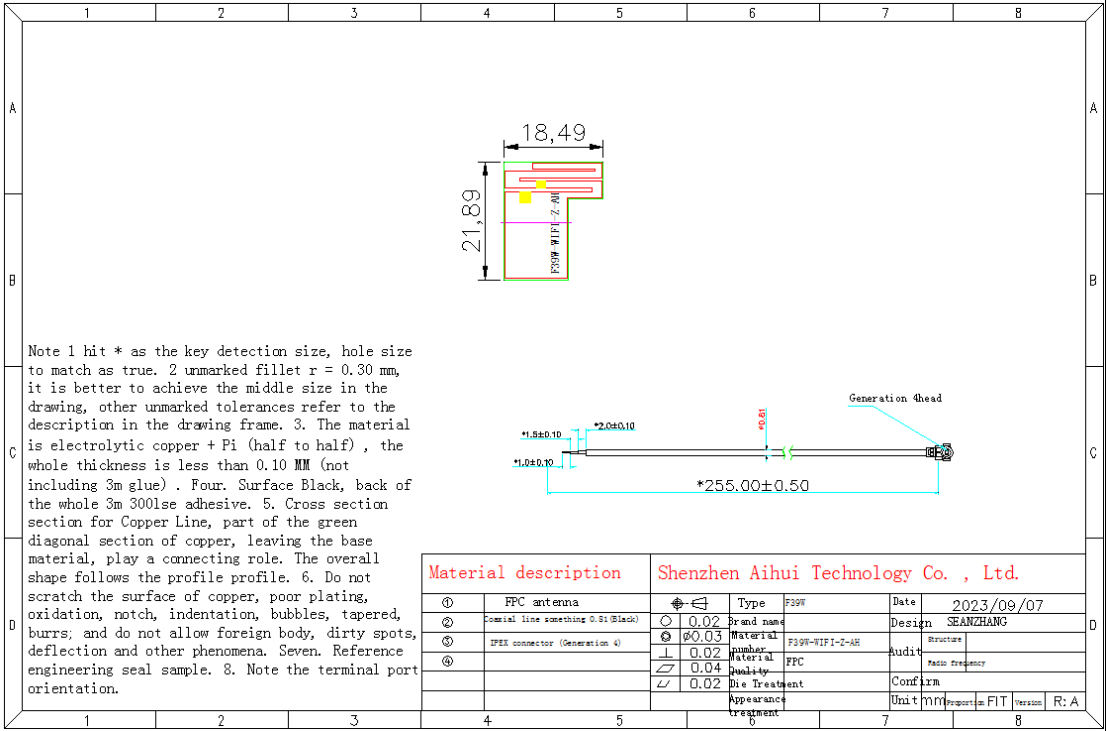
## 9. Antenna mass production index

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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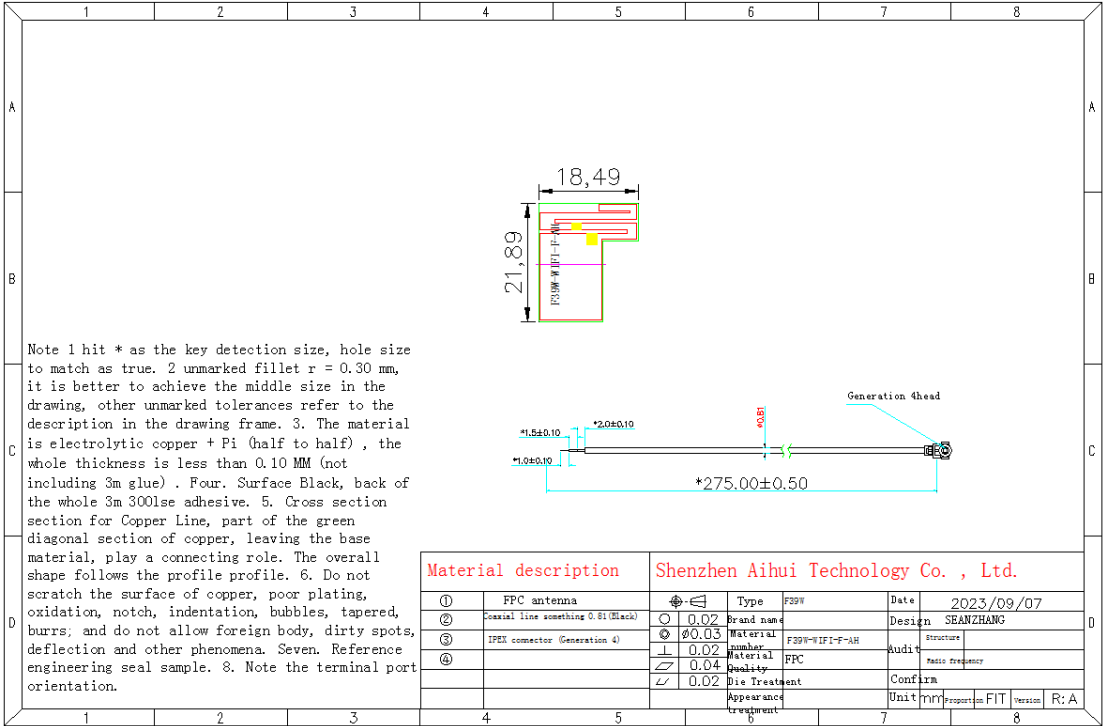
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standard. Based on the differences of the project itself, the following criteria are given:	
2400-2500Mhz 5100-5850 Mhz	VSWR (Mass Production performance) & LT; VSWR(recognition performance) 0.5

10.1 Structural drawings



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