

## Antenna specification

### Antenna Sample Confirmation From

<b>Name of supplier</b>	ShenZhen Aihui Technology Co. , Ltd				
<b>Customer name</b>	Yi Gao				
<b>Sample name</b>	ET-1028				
<b>model</b>	Tablets				
<b>Sample size</b>	WIFI antenna: 180mm 3-generation terminal				
<b>Inspection item</b>	<b>Performance test</b>	<b>Visual inspection</b>	<b>Structure</b>	<b>In the news</b>	<b>Test results</b>
<b>Notes</b>					
<b>Quality Audit</b>		<b>Project Audit</b>		<b>Business confirmation</b>	
<b>The following is to be completed by the client</b>					



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Power	Max: 2W	Impedance	50Ω
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. 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

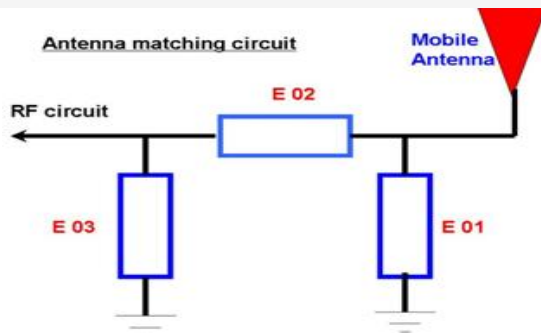
## 1. Project Image

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



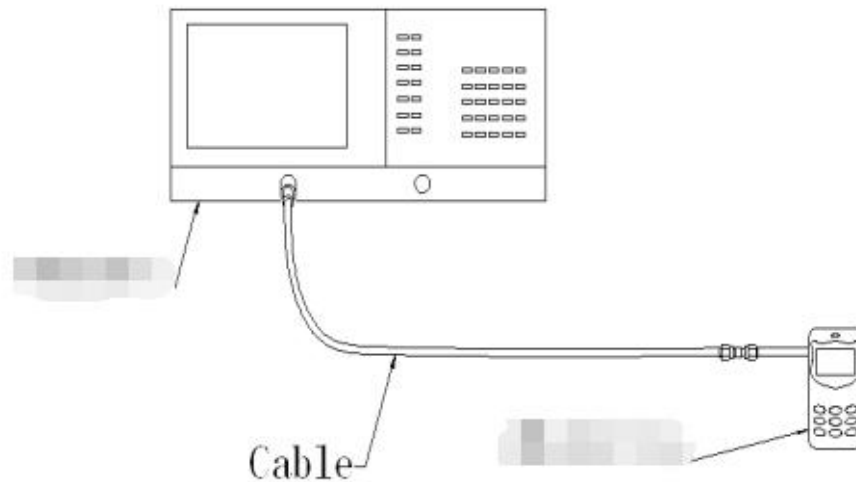
### Modify

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:



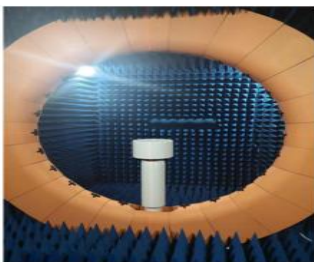
## 5.Darkroom test equipment and data

### 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	WIFI-2.4G-B			WIFI-2.4G-G		
CH	L	M	H	L	M	H
TRP	13.25	13.58	14.52	12.33	12.41	13.05
TIS			-80.25			-69.20

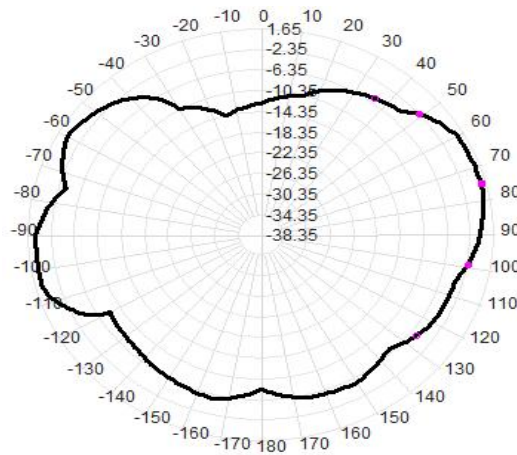
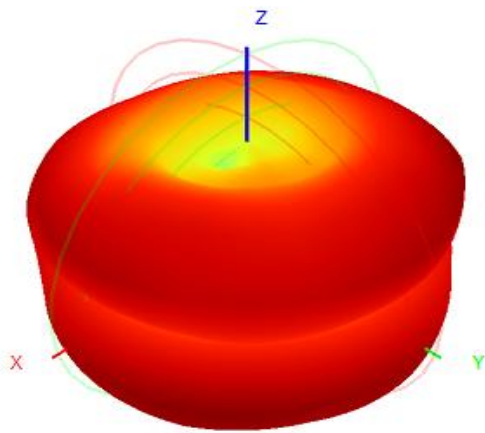
2.4G	WIFI-2.4G-N			WiFi-5.8G-A		
CH	L	M	H	L	M	H
TRP	12.44	12.06	12.11	12.51	13.25	12.41
TIS			-67.41			-70.41

Test data		
WIFI 2.4G&BT		
Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	55.25	1.25
2410	55.41	1.47
2420	57.65	1.35
2430	59.65	1.44



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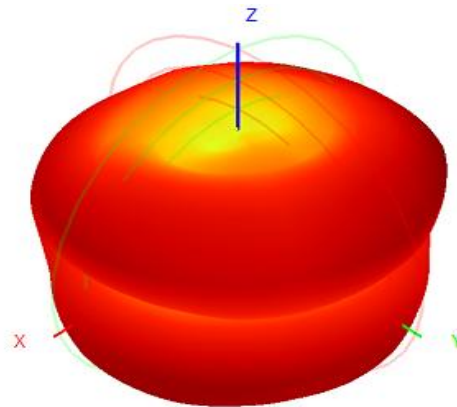
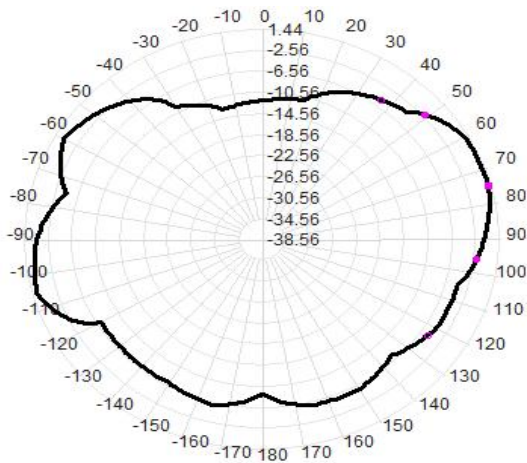
2440	61.41	1.54
2450	60.54	1.52
2460	62.63	1.44
2470	64.15	1.65
2480	59.64	1.23



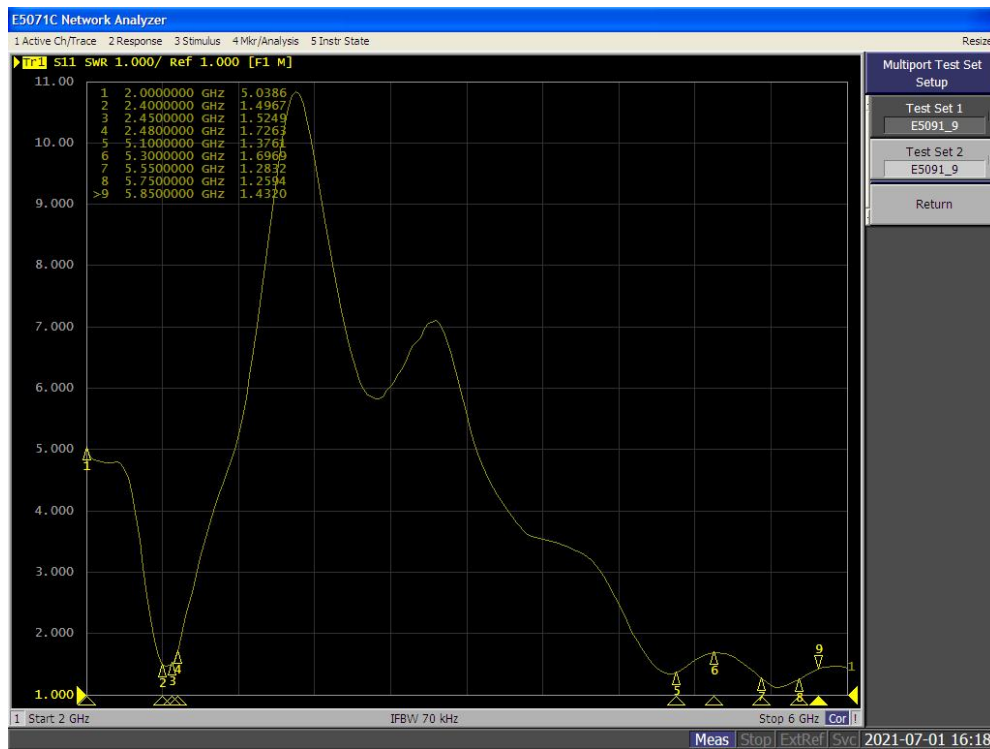
Test data		
WIFI 5.8G		
Freq(MHz)	Efficiency (%)	Gain (dBi)
5000	59.54	1.41
5100	57.85	1.30
5200	59.41	1.25
5300	54.71	1.40

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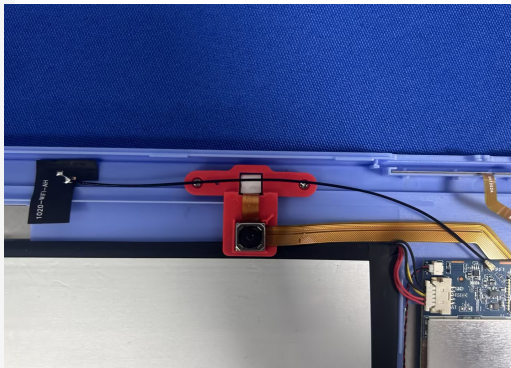
5400	55.63	1.21
5500	57.15	1.31
5600	59.65	1.05
5700	60.22	1.30
5800	61.41	1.25
5850	62.30	1.44



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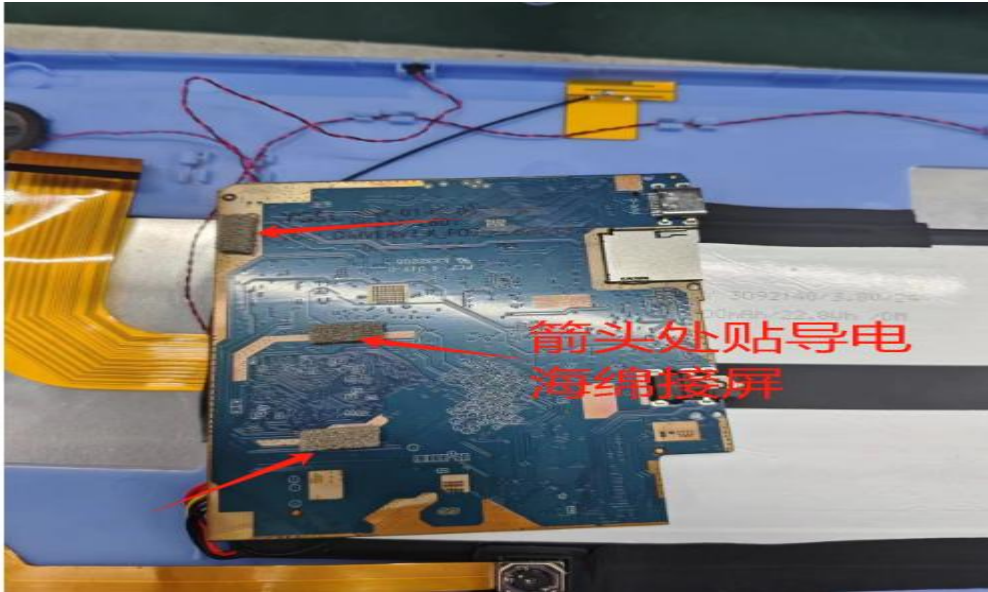


## 6.The panel matches the change schematic



## 7.Antenna environment handling

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## 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:

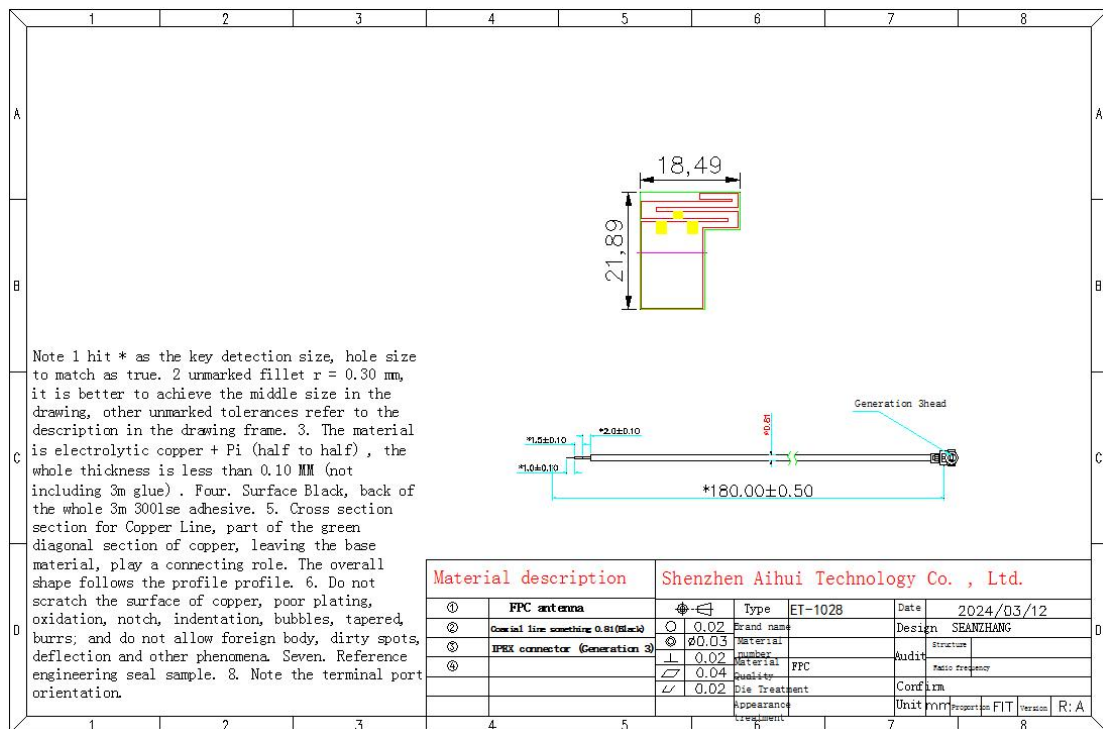
Frequency	Standard for volume production
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2400 MHZ -2500MHZ  
5100MHZ-5850MHZ

VSWR (Mass Production performance) &  
LT; VSWR(recognition performance) 0.5

## 9.Structural drawings



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