

Shenzhen Aihui Technology Co., Ltd.

Antenna Sample Confirmation From

Vendor Name	ShenZhen Aihui Technology Co., Ltd				
Customer Name	Wanmosi				
Sample Name	AC019 Dual Band FPC Antenna ROHS				
Part Number	A1L07.00053				
Specification	wire length: main antenna : 50MM 1Terminal substitute silk-screen :AC019 Dual Band FPC Antenna ROHS wire length: slave antenna: 50MM 1Terminal substitute silk-screen :AC019 Dual Band FPC Antenna ROHS				
Inspection Item	Performance	Total Appearance	structure	Others	Inspection Result
Remark					
QA Audit		Engineer Audit	Gao Endian	Sales Confirm	
The following are filled by Customer					
Customer Evaluation					
Signation/ Chapter by Customer	date:2026.08.07				

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Antenna Test Report

Test by: ShenZhen Aihui Technology Co., Ltd			
Material	FPC		
Antenna Type	MonopoleType	Polarization mode	Linear
Application			
Band	2.4G/5.8GWIFI	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.			

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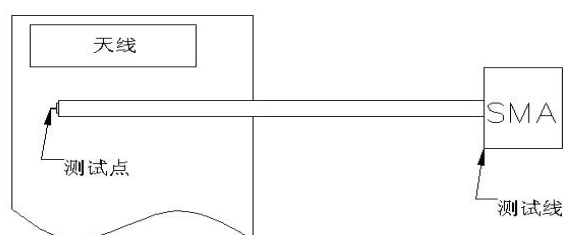
1、Project Images

None

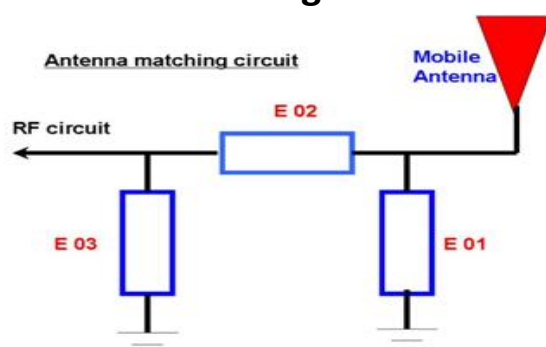
Note: The customer shall retain the antenna performance prototype for at least one year at our company to facilitate analysis and resolution of any anomalies encountered during mass production, thereby ensuring the quality of the final antenna shipments.

2、 Purpose of the test fixture: To measure the antenna's passive parameters as accurately as possible.

Construction method: The mobile phone test fixture utilizes a 50-ohm coaxial cable, with one end connected to the test point at the rear end of the matching circuit (front end of the RF test port) on the mobile phone's motherboard, and the other end connected to an SMA connector. The schematic diagram is shown below.:



3、 Antenna Matching Circuit



Modify

E01	E02	E03
No	No	No

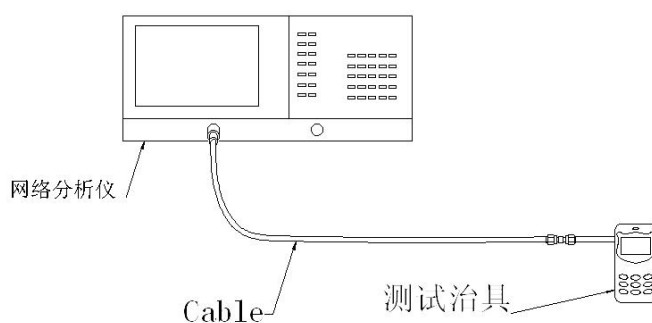
Note: No matching modifications required.

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4. S11test

4.0 S11Test Method Description: Test Equipment: Network Analyzer (E5071C).
Test Procedure: Use a 50-ohm cable to connect from the instrument's test port; after calibrating with a calibration standard, connect it to the SMA connector of the mobile device adapter, and record the echo loss and standing wave ratio at the corresponding frequencies.

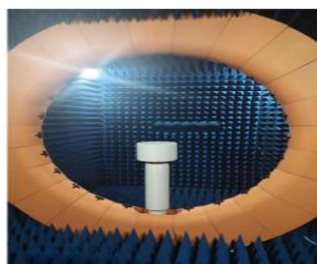
The test schematic is shown below:



Test schematic diagram

5、Darkroom testing equipment and data

5.0Test equipment and test system: Shielded darkroom test environment:
Temperature: $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$; Humidity: $50\% \pm 15\%$; Test equipment: For passive data testing, use an oscilloscope (Agilent E5071C); for active data testing, use a comprehensive measurement instrument (CMW500).



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5.1Antenna Active Test Data

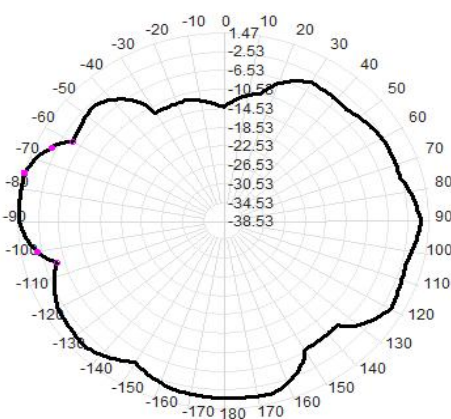
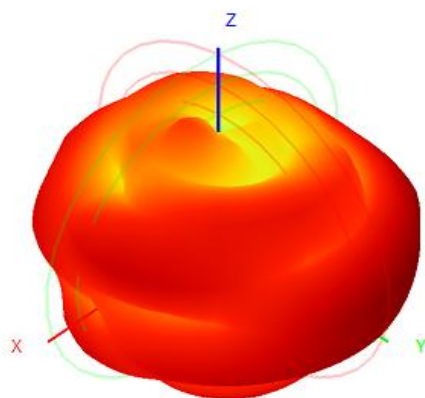
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6.Antenna passive test data

test data:

WIFI 2.4G

Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	56.25	1.36
2410	53.73	1.28
2420	52.62	1.12
2430	55.58	1.28
2440	52.11	1.05
2450	54.77	1.24
2460	56.39	1.47
2470	54.45	1.41
2480	51.23	1.08



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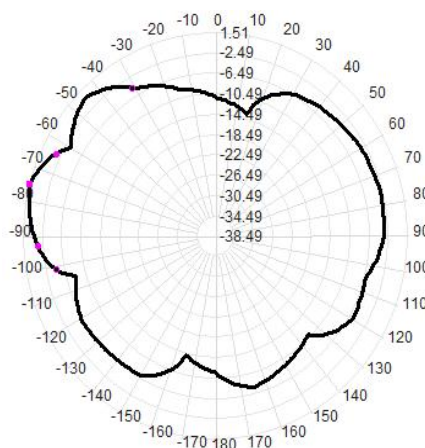
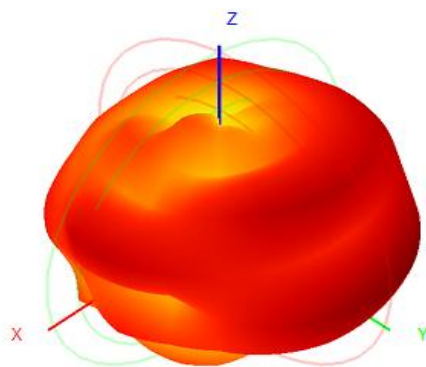
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test data:

WIFI 5.8G

Freq(MHz)	Efficiency (%)	Gain (dBi)
5000	55.27	1.34
5100	54.93	1.51
5200	56.82	1.47
5300	55.41	1.44
5400	52.47	1.09
5500	54.36	1.27
5600	56.29	1.16
5700	54.65	1.03
5800	55.78	1.39
5850	54.31	1.28



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7. Antenna Assembly Schematic Diagram

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8.Environmental Treatment

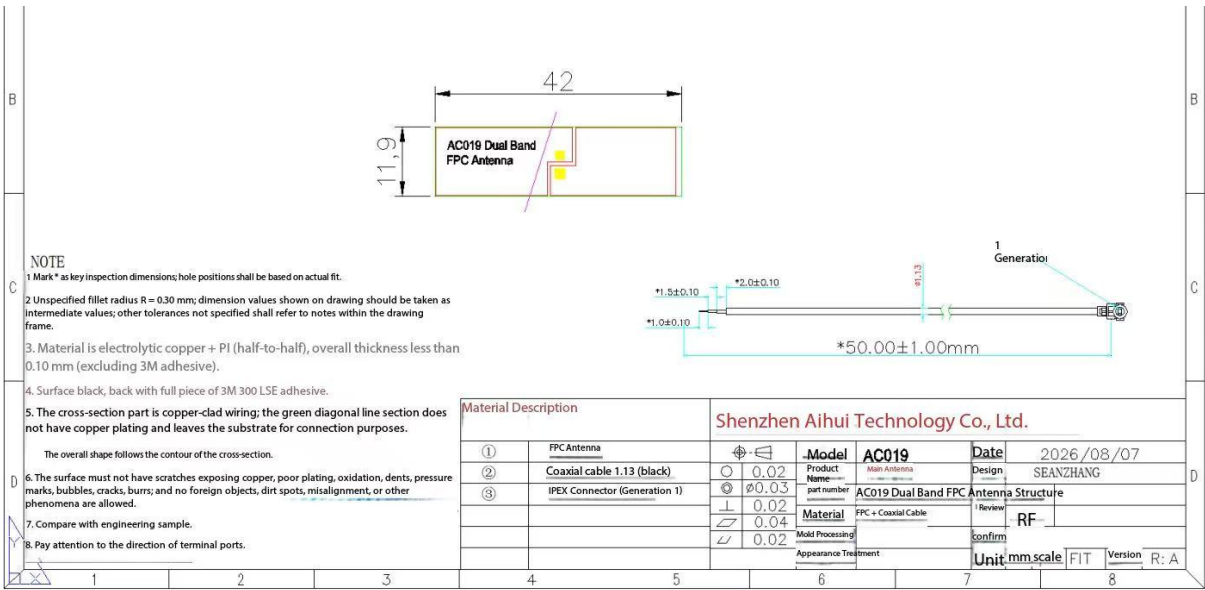
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9.ANTENNA MASS-PRODUCTION SPECIFICATIONS: DURING ANTENNA MASS PRODUCTION, THE STANDING WAVE RATIO (SWR) SHALL BE USED AS THE MASS-PRODUCTION TESTING CRITERION.

BASED ON THE SPECIFIC CHARACTERISTICS OF EACH PROJECT, THE FOLLOWING STANDARDS ARE PROVIDED:

frequency	Mass Production Standards
2400MHZ-2500MHZ	VSWR (Mass-production performance) <VSWR(Acknowledge performance)+0.5
5100MHZ-5850MHZ	VSWR (Mass-production performance) <VSWR(Acknowledge performance)+0.5

10.structural drawings



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NOTE

1. Marked * indicates critical inspection dimensions; hole positions shall be based on actual fit.

2. Unspecified filllet radius $R = 0.30\text{ mm}$; dimension values shown on drawing should be taken as intermediate values; other tolerances not specified shall refer to notes within the drawing frame.

3. Material is electrolytic copper + PI (half-to-half), overall thickness less than 0.10 mm (excluding 3M adhesive).

4. Surface black, back with full piece of 3M 300 LSE adhesive.

5. The cross-section part is copper-clad wiring; the green diagonal line section does not have copper plating and retains substrate material for connection purposes.

The overall shape follows the contour of the cross-section.

6. The surface must not have scratches exposing copper, poor plating, oxidation, dents, pressure marks, bubbles, cracks, burrs, and no foreign objects, dirt spots, misalignment, or other phenomena are allowed.

7. A controlled engineering sampling.

8. Pay attention to the direction of terminal ports.

Material Description				Shenzhen Aihui Technology Co., Ltd.			
①	FPC Antenna	Model	AC019	Date	2026/08/07		
②	Coaxial cable 1.13 (black)	Product Name	Depulpy antenna	Design	SEANZHANG		
③	IPEX Connector (1st Generation)	part number	AC019 Dual Band FPC Antenna Structure				
		Material	FPC + Coaxial Cable		-RF		
		Mold Processing		confirm			
		Appearance Treatment		Unit	MN Scale	FIT Version	
				Unit	MN Scale	R: A	

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