



Approval Sheet

客户名称 耘趣 (Yunqu)

(Customer Name)

产品名称 E0501 Antenna

(Specification)

客户料号

(Customer P/N)

产品料号

(O/I)

送样日期 2025-06-17

Frequency band	2. 4G+5. 8G/WiFi		
Version	A		
RF	Chenmeidui	Confirm	
Structural Engineer	Yangyuzhen		
Customer confirmation			
Date			

Catalogue



1. Project image

2. Test fixture

3. Matching circuit

4. S11 Test electrical performance

4.1 S11 Test Method Description Specification Standards

4.2 S11 Parameter

4.3 S11 Parameter image

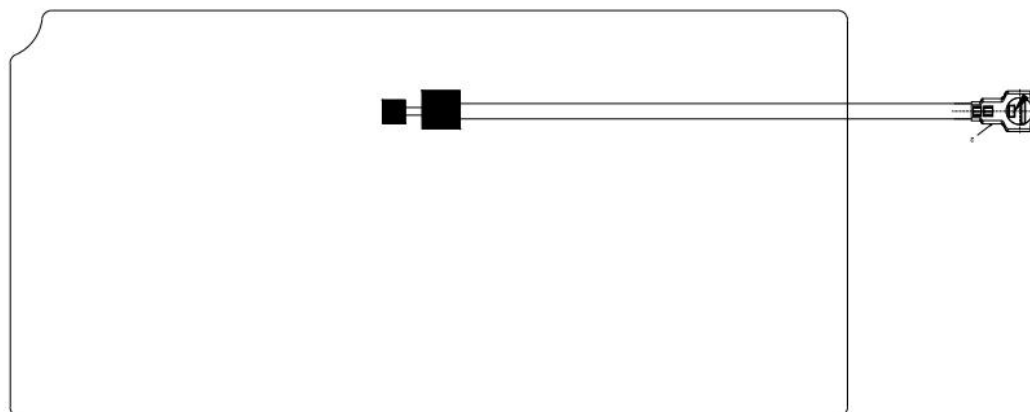
5. Power and sensitivity testing

5.1 Test data

6. Structural drawings



1. Project image (for reference only)

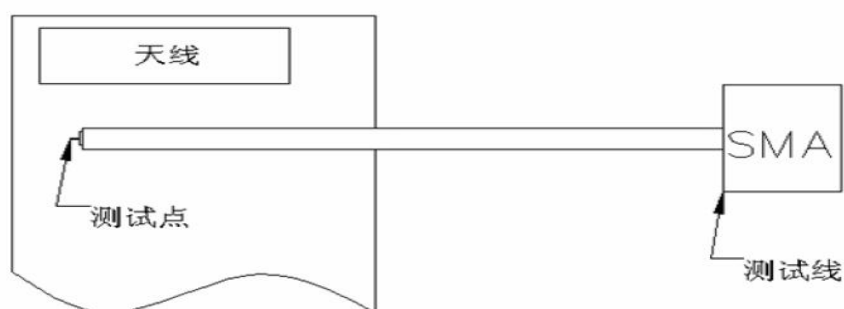


WiFi Antenna

2. Passive Test

Purpose: To test the passive parameters of the antenna as accurately as possible.

Method: This fixture uses a 50 ohm coaxial cable, with one end connected to the test point at the back end of the matching circuit (RF test hole front section) of the mobile phone motherboard, and the other end connected to the SMA connector. As shown in the following figure:

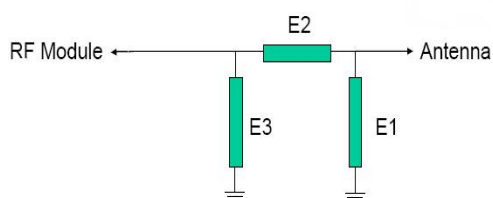




The following table shows the performance test indicators for EC501 mass-produced antennas:

EC501 - Antenna				
	Frequency (MHz)	VSWR	Frequency (MHz)	VSWR
Frequency band	Transmitting end		Receiving end	
2.4G WIFI	2400-2550	≤ 3.0	2400-2550	≤ 3.0
5.8G WIFI	5150-5850	≤ 3.0	5150-5850	≤ 3.0

3. Matching circuit



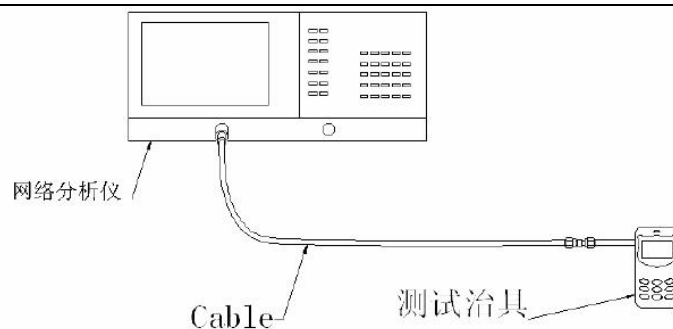
Element	Matching Value
E1	
E2	0
E3	

4. S11Test

4.1 S11Test Method Description Specification Standards

VSWR The testing devices are sequentially connected as follows :
E5071B Network analyzer → 50Ω Coaxial line → 120mm Copper tube → Test fixture.

Treatment of testing fixture: Use a hard cable to lead out the SMA-J connector from the 50 ohm test point of the antenna on the mobile phone PCB, connect it to a copper pipe with a choke ring, and then connect other devices in sequence.

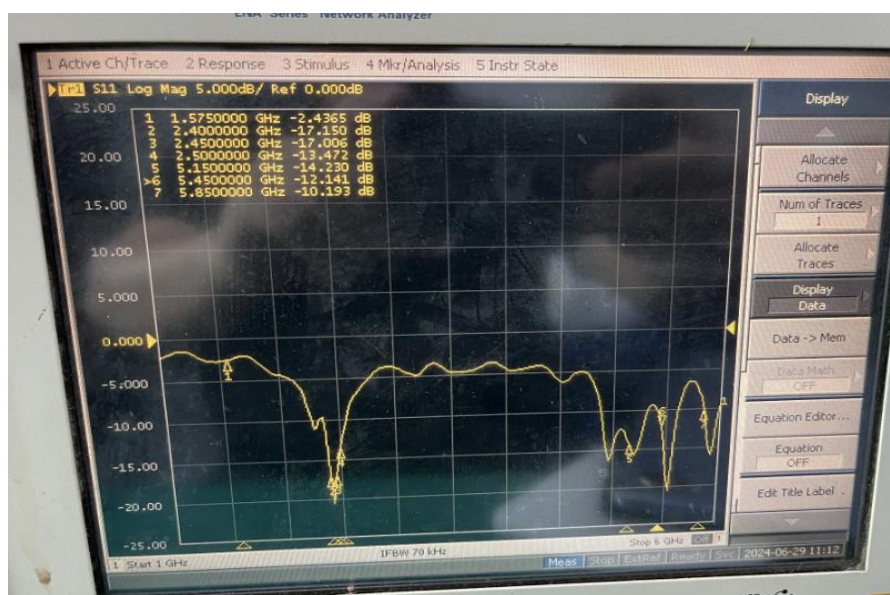


Test diagram

4.2 S11Parameter

The following table shows the standing wave ratio values at the edge frequency points of the ME61 antenna operating frequency band. The waveform diagrams of Return Loss and VSWR obtained from the test are shown in the attachment.

4.3 S11



5. Power and sensitivity testing



5.1 Test data

Model: 2.4G/5.8G-WIFI											Unit: dBm	
2.4G	11B(11M)			11G(54M)			11N(MCS7)			11AX(MCS11)		
	CH1	CH6	CH11	CH1	CH6	CH11	CH1	CH6	CH11	CH1	CH6	CH11
TRP	14.08	14.23	14.14	10.12	10.37	10.29	10.23	10.26	10.39	9.22	9.86	9.6
TIS	-81.25	-81.52	-81.6	-67.26	-67.35	--67.54	-64.5	-65.34	-65.67	-62.34	-62.94	-62.78
5.8G	11A(54M)			11AN(MCS7)			11AX(MCS11)					
	CH36	CH60	CH165	CH36	CH60	CH165	CH36	CH60	CH165			
TRP	15.2	15.3	15.37	15.11	14.9	15.14	14.8	14.6	14.1			
TIS	-71.22	-71.57	-71.64	-67.36	-67.21	-67.47	-62.4	-62.12	-63.77			

5.2 Antenna gain

Passive Test For 2400-2500			Passive Test For WIFI5.8		
Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
2400	28.52	0.5	5150	29.7	0.7
2410	27.61	0.35	5200	39.3	1.5
2420	28.12	0.35	5250	42.1	1.5
2430	27.44	0.03	5300	33.3	0.2
2440	26.92	-0.24	5350	35.7	0.1
2450	27.27	-0.04	5400	51.3	1.4
2460	27.89	0.05	5450	42.6	0.8
2470	28	0.26	5500	31.3	-0.4
2480	27.68	0.51	5550	34.9	0.6
2490	27.26	0.6	5600	43.3	1.6
2500	28.01	0.68	5650	35.2	0.7
			5700	25.9	-0.6
			5750	29.1	0.1
			5800	29.9	0.4
			5850	22.4	-1

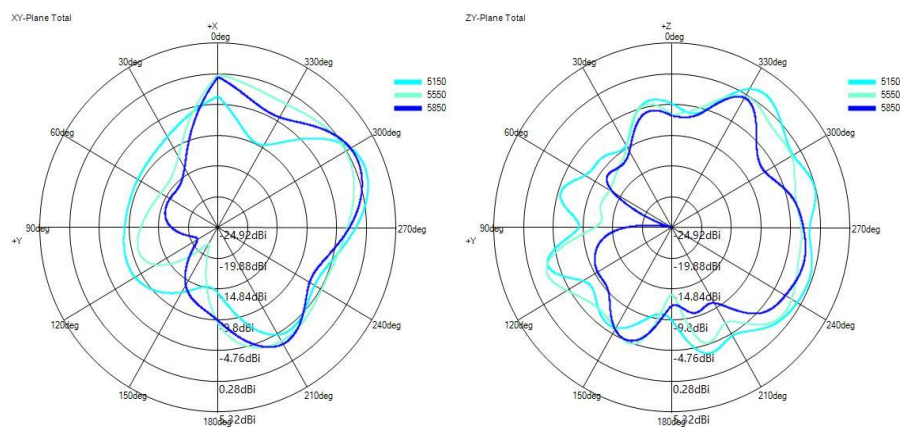
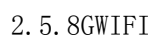
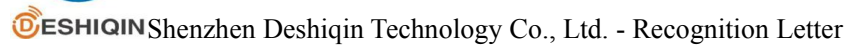
5.3 -2D Plot

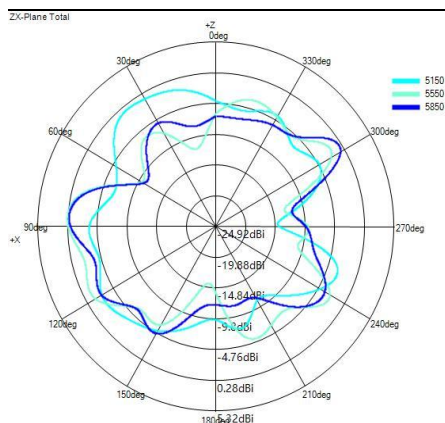
1. 2. 4GWIFI

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6. Structural drawings

