



规格承认书

Approval Sheet

客户名称 MEFERI

(Customer Name)

产品名称 MG45-WIFI1 Antenna

(Specification)

客户料号 _____

(Customer P/N)

产品料号 _____

(O/I)

送样日期 2025-02-25

(Date)

Frequency band	2.4GWiFi/5GWiFi		
Version	A		
RF	Peng Wei	Confirm	
Structural Engineer	Yang Xuezhong		
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 image

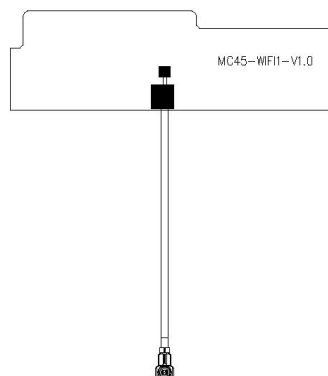
5. Power and sensitivity testing

5.1 Test data

5.2 Passive parameters

6. Structural drawings

1. Project image (for reference only)

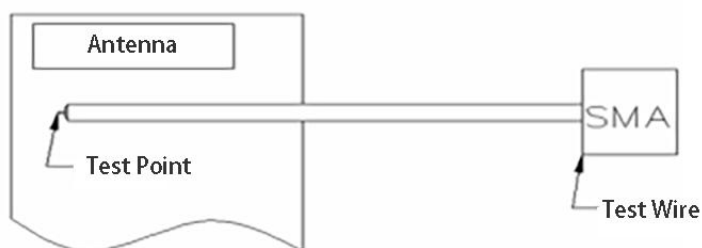


WIFI1 Antenna

2. Passive Test

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

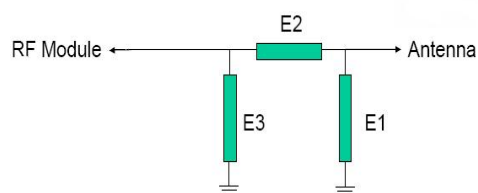
Method: This fixture uses a 50 ohm coaxial cable, with one end connected to the test point at the back end of the matching circuit (RF test hole front section) of the mobile phone motherboard, and the other end connected to the SMA connector. As shown in the following figure:



The following table shows the performance test indicators for MC45 mass-produced antennas:

MC45-WIFI1				
	Frequency (MHz)	VSWR	Frequency (MHz)	VSWR
Frequency band	Transmitting end		Receiving end	
2.4G WIFI	2400-2500	≤1.5	2400-2500	≤1.6
5G WIFI	5150-5850	≤1.4	5150-5850	≤2.1

3. Matching circuit



Element	Matching Value
E1	
E2	
E3	

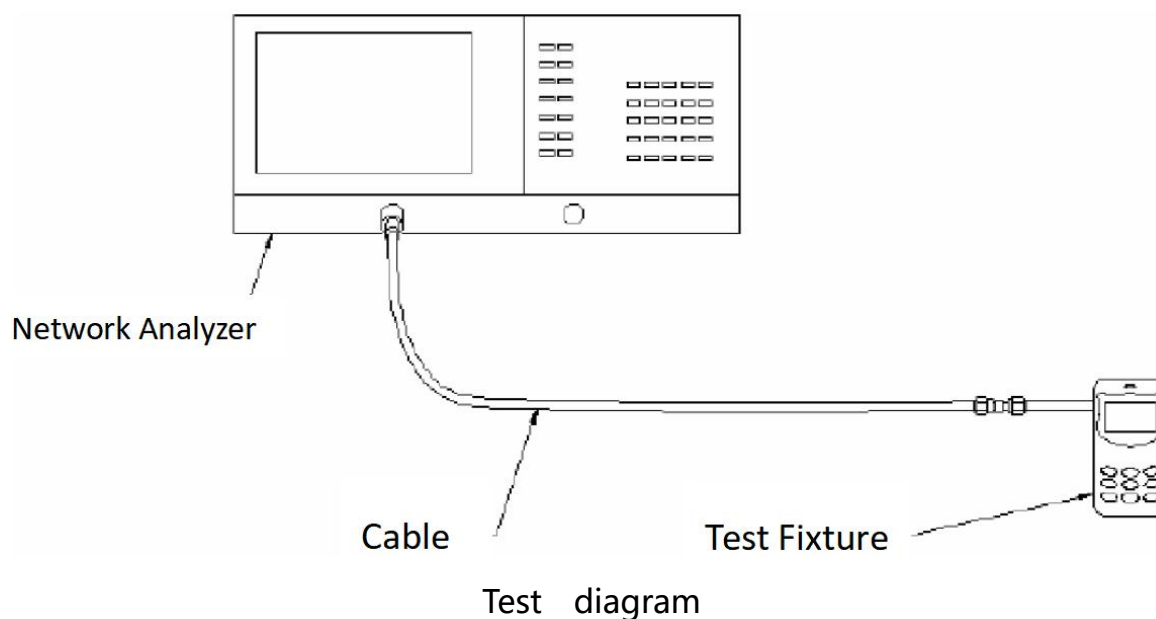
4. S11Test

4.1 S11Test Method Description Specification Standards

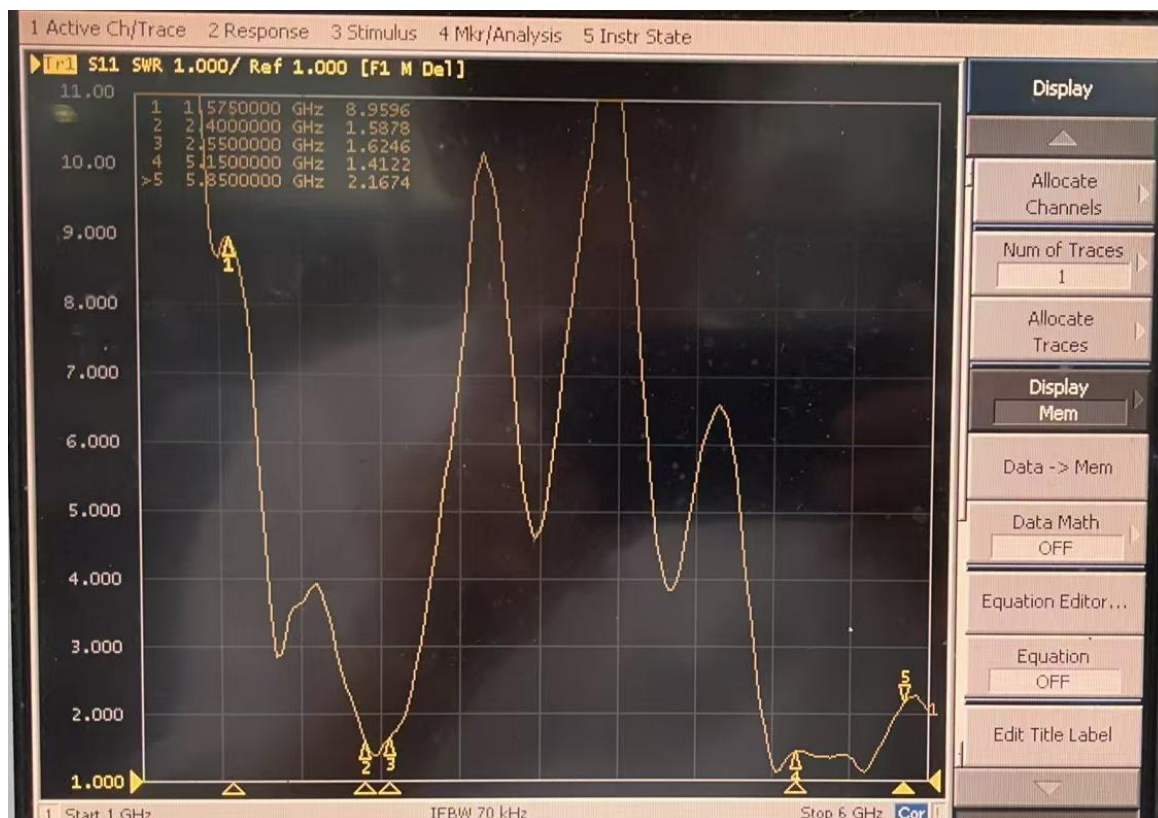
VSWR The testing devices are sequentially connected as follows :

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.



4.2 S11 Parameter image



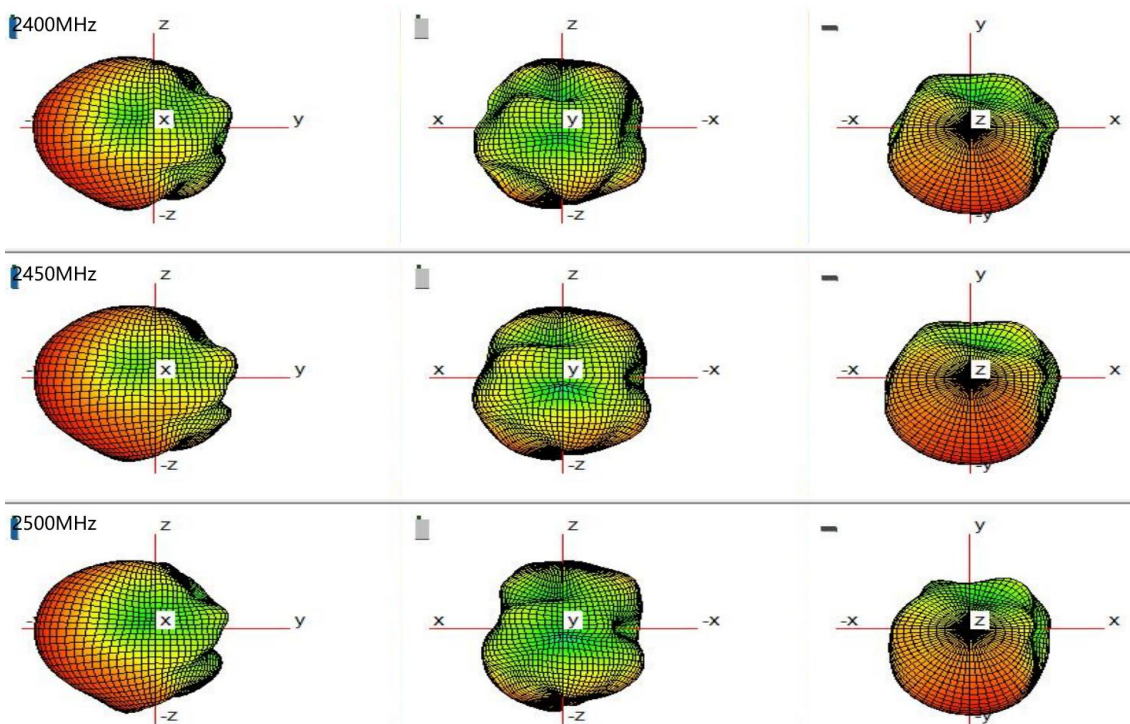
5: Antenna Test

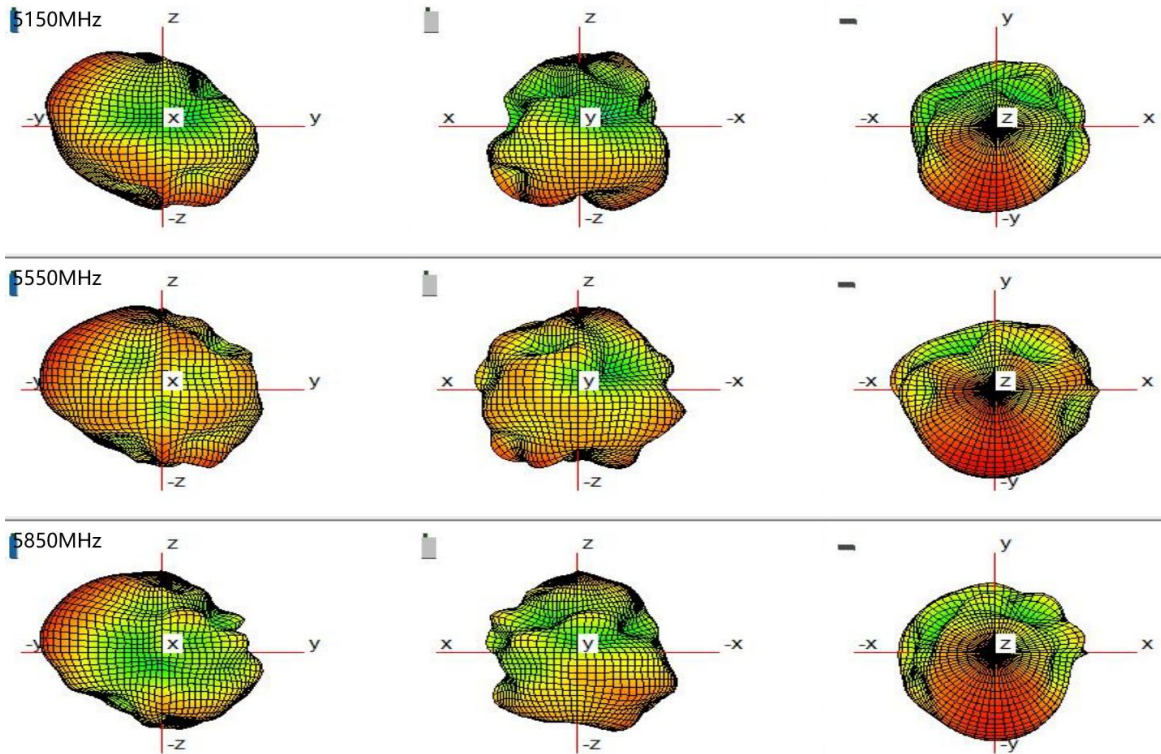
5.1 Test data

Channel	2.4G 11B (11M)			2.4G 11G(54M)			2.4G 11N(MCS7)		
	1	6	11	1	6	11	1	6	11
TRP	12.22	11.48	10.01	11.55	10.74	9.77	11.16	11.16	9.75
TIS	-84.78	-84.80	-84.17	-72.43	-72.20	-71.65	-70.30	-70.12	-70.19
Channel	5G 11A(64M)			5G 11AN(MCS7)			5G 11AC(MCS8)		
	36	60	165	36	60	165	36	60	165
TRP	14.82	14.53	14.30	14.74	14.66	14.49	14.66	14.56	14.19
TIS	-71.22	-70.37	-70.71	-69.34	-68.18	-69.25	-66.11	-65.49	-65.89

5.2 Passive parameters

Passive Test For 2400-2500				Passive Test For 5150-5850			
Freq	Effi	Gain	Effi	Freq	Effi	Gain	Effi
(MHz)	(dB)	(dBi)	(%)	(MHz)	(dB)	(dBi)	(%)
2400	-1.79	4.35	66.15	5150	-2.37	3.17	57.95
2410	-1.69	4.55	67.71	5200	-1.3	4.33	74.15
a2420	-1.58	4.65	69.52	5250	-1.34	4.44	73.46
2430	-1.67	4.58	68.13	5300	-2.81	3.06	52.31
2440	-1.6	4.68	69.14	5350	-2.84	3.41	52
2450	-1.61	4.72	69.1	5400	-1.37	5.01	72.95
2460	-1.7	4.69	67.54	5450	-2.17	4.12	60.69
2470	-1.83	4.65	65.54	5500	-3.53	2.8	44.33
2480	-1.96	4.6	63.62	5550	-3.02	3.83	49.93
2490	-2.01	4.64	63.01	5600	-1.94	4.98	63.94
2500	-2.05	4.65	62.42	5650	-2.57	4.3	55.38
				5700	-3.58	3.22	43.88
				5750	-2.75	4	53.03
				5800	-2.38	4.24	57.85
				5850	-2.94	3.11	50.69





6: Structural drawings

