

# 规格承认书

# **Approval Sheet**

客户名称	MEFERI	
(Customer Name)		
产品名称	MC45-WIFI2 Antenna	
(Specification)		
客户料号		
(Customer P/N)		
产品料号		
(O/I)		
送样日期	2025-02-25	
(Date)		

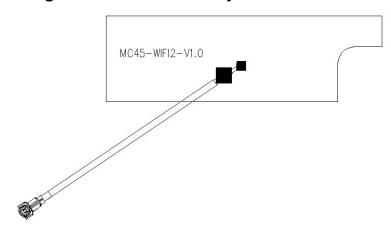
Frequency band	2.4GWiFi/5GWiFi				
Version	А				
RF	Peng Wei	Confirm			
Structural Engineer	Yang Xuezhong	Commi			
Customer confirmation					
Date					

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# Catalogue

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### 1. Project image (for reference only)

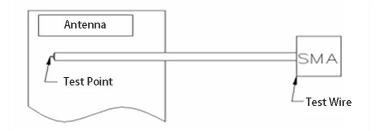


WIFI2 Antenna

#### 2. Passive Test

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

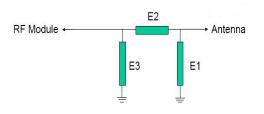
Method: This fixture uses a 50 ohm coaxial cable, with one end connected to the test point at the back end of the matching circuit (RF test hole front section) of the mobile phone motherboard, and the other end connected to the SMA connector. As shown in the following figure:



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

MC45-WIFI2						
Frequency (MHz)		VSWR	Frequency (MHz)	VSWR		
Frequency band	Transmitting end	VSVVK	Receiving end	VSVVK		
2.4G WIFI 2400-2500		≤1.2	2400-2500	≤1.7		
5G WIFI	5150-5850	≤1.4	5150-5850	≤2.1		

#### 3. Matching circuit



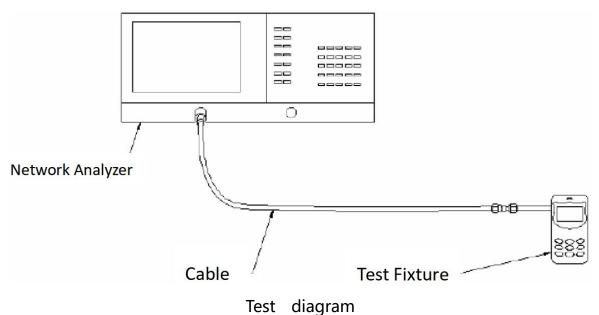
Element	Matching Value
E1	
E2	
E3	

#### 4. S11Test

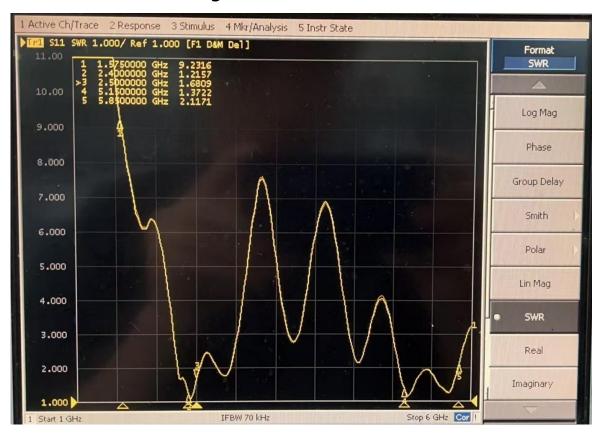
#### 4.1 S11Test Method Description Specification Standards

VSWR The testing devices are sequentially connected as follows : E5071BNetwork analyzer  $\rightarrow$  50 $\Omega$  Coaxial line  $\rightarrow$  120mm Copper tube  $\rightarrow$  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



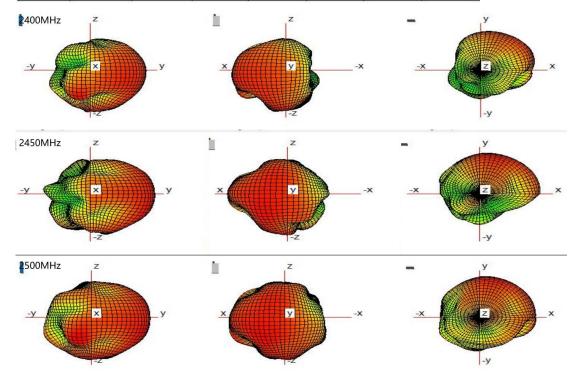
#### 5: Antenna Test

#### 5.1 Test data

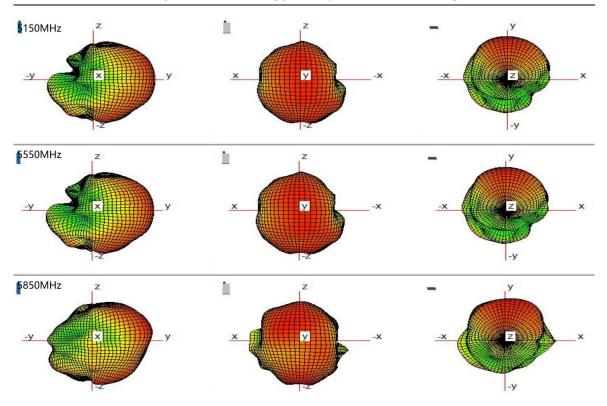
Channel	2.4G 11B (11M)			2.4G 11G(54M)			2.4G 11N(MCS7)		
	1	6	11	1	6	11	1	6	11
TRP	12.22	11.48	10.01	11.55	10.74	9.77	11.16	11.16	9.75
TIS	-84.78	-84.80	-84.17	-72.43	-72.20	-71.65	-70.30	-70.12	-70.19
Channel	5G 11A(64M)			5G 11AN(MCS7)		5G 11AC(MCS8)			
	36	60	165	36	60	165	36	60	165
TRP	14.82	14.53	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

Pass	sive Test I	For 2400-2	500	Pass	ive Test F	For 5150-5	850
Freq	Effi	Gain	Effi	Freq	Effi	Gain	Effi
(MHz)	(dB)	(dBi)	(%)	(MHz)	(dB)	(dBi)	(%)
2400	-1.79	4. 27	66.22	5150	-2. 38	3.39	57.79
2410	-1.75	4. 39	66.81	5200	-1.3	4.31	74. 16
2420	-1.71	4. 37	67.39	5250	-1.3	4. 52	74. 1
2430	-1.83	4. 31	65.6	5300	-2. 68	3. 3	53.9
2440	-1.82	4. 22	65.7	5350	-2. 65	3.49	54. 36
2450	-1.86	4. 12	65.09	5400	-1. 21	5.13	75. 62
2460	-1.97	3. 93	63.49	5450	-2. 03	4.46	62.69
2470	-2.11	3. 69	61.5	5500	-3. 35	3.32	46.19
2480	-2.2	3. 6	60.3	5550	-2. 85	3.86	51.83
2490	-2.24	3. 57	59.76	5600	-1.86	4.86	65.14
2500	-2.25	3. 64	59.54	5650	-2. 54	4.02	55.77
				5700	-3. 64	2.93	43.28
				5750	-2. 85	3.86	51.84
				5800	-2.5	3. 9	56.27
	7	:		5850	-3. 09	2.92	48.78



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# 6: Structural drawings

