



Approval Sheet

客户名称 _____

(Customer Name)

产品名称 _____ F100 (GPS/WIFI/BT) _____

(Specification)

客户料号 _____

(Customer P/N)

产品料号 _____

(O/I)

送样日期 _____ 2025-12-5 _____

Frequency band	GPS:1575MHz 2.4GWIFI/BT:2400MHz-2500MHz 5.8GWIFI:5150MHz-5850MHz		
Version	A		
RF	Chenmushao	Confirm	Chenmushao
Structural Engineer	Yangguojun		
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

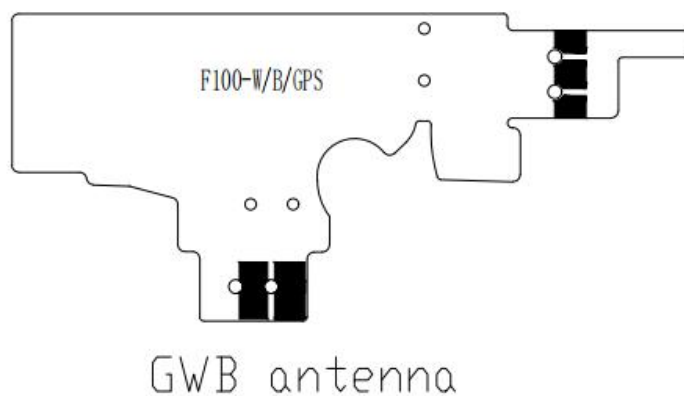
5. Power and sensitivity testing

5.1 Test data

6. Structural drawings



1. Project image (for reference only)

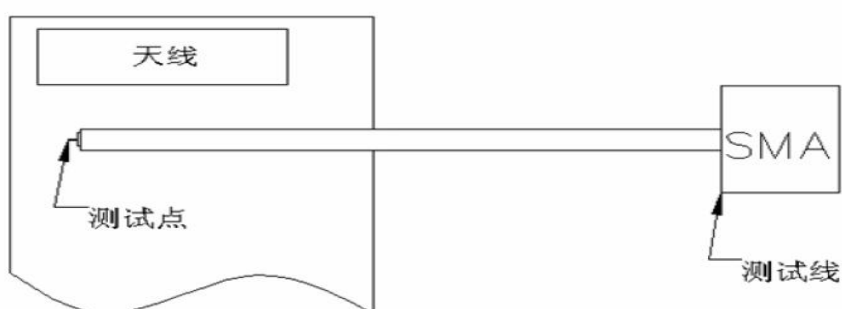




2. Passive Test

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:

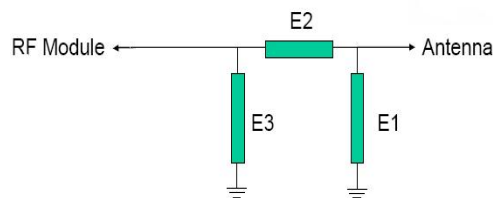


The following table shows the performance test indicators for F100mass-produced antennas:

F100- Antenna				
	频率 (MHz)	VSWR	频率 (MHz)	VSWR
频段	发射端		接收端	
GPS	1575	≤3.5	1575	≤3.5
2.4GWIFI/BT	2400-2500	≤3.5	2400-2500	≤3.5
5.8GWIFI	5150-5850	≤3.5	5150-5850	≤3.5



3. Matching circuit



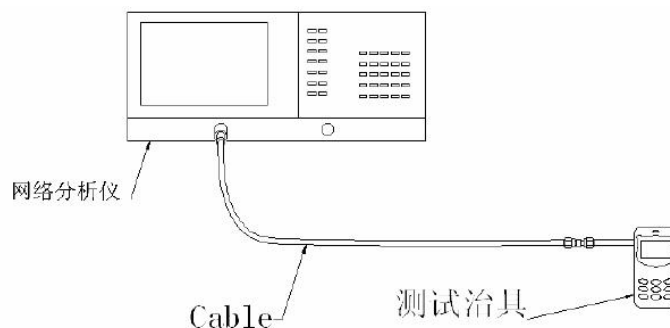
Element	Matching Value
E1	
E2	0
E3	

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

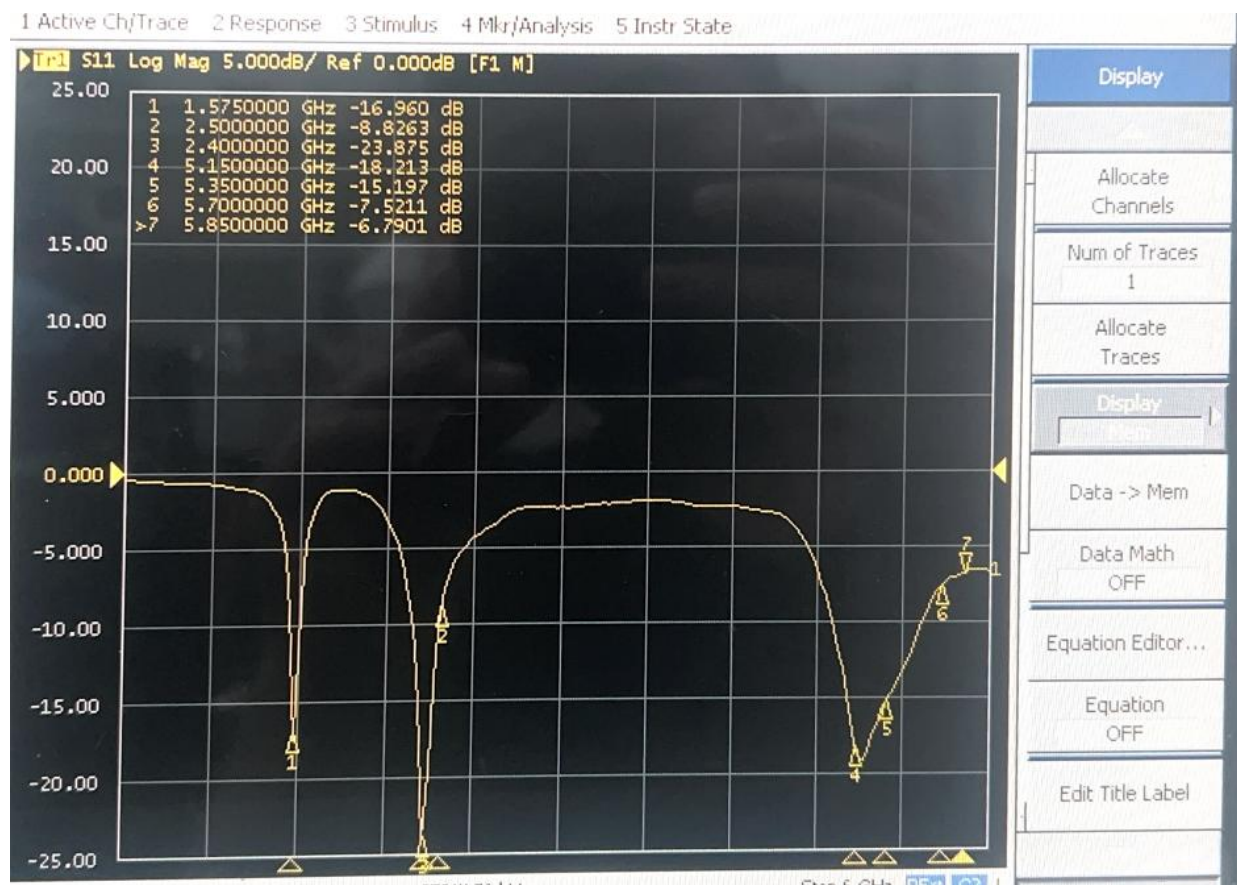
The following table shows the standing wave ratio values at the edge frequency points of the ME61 antenna operating frequency band. The waveform diagrams of Return Loss and VSWR obtained from the test are shown in the attachment.

	A300- Antenna
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Frequency (MHz)	1575	2400	2500	5150	5850			
Free space	16.9	23.8	8.8	18.2	6.7			

4.3 S11





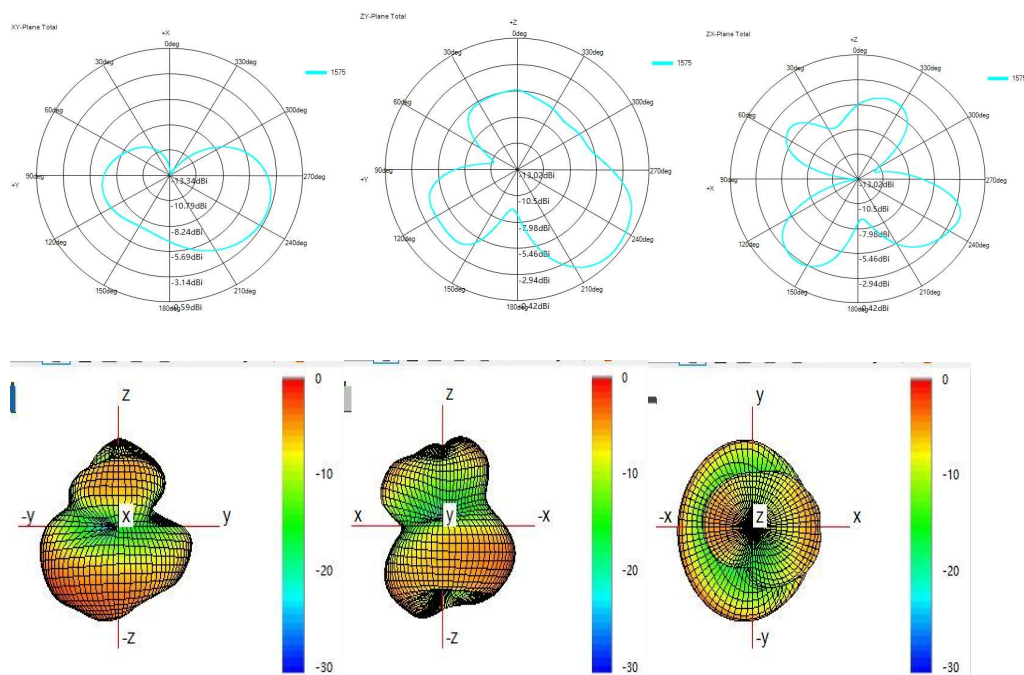
5. Power and sensitivity testing

5.1 low frequency Passive Efficiency Data & Gain

GPS:

Freq(MHz)	Gain(dBi)	Efficiency(%)
1550	-0.40	29.41
1555	-0.49	29.60
1560	-0.64	29.91
1565	-0.57	30.44
1570	-0.56	31.02
1575	-0.59	31.40
1580	-0.65	31.21
1585	-0.70	30.86
1590	-0.79	30.63
1595	-0.87	30.38
1600	-0.90	30.00

2D/3DPin

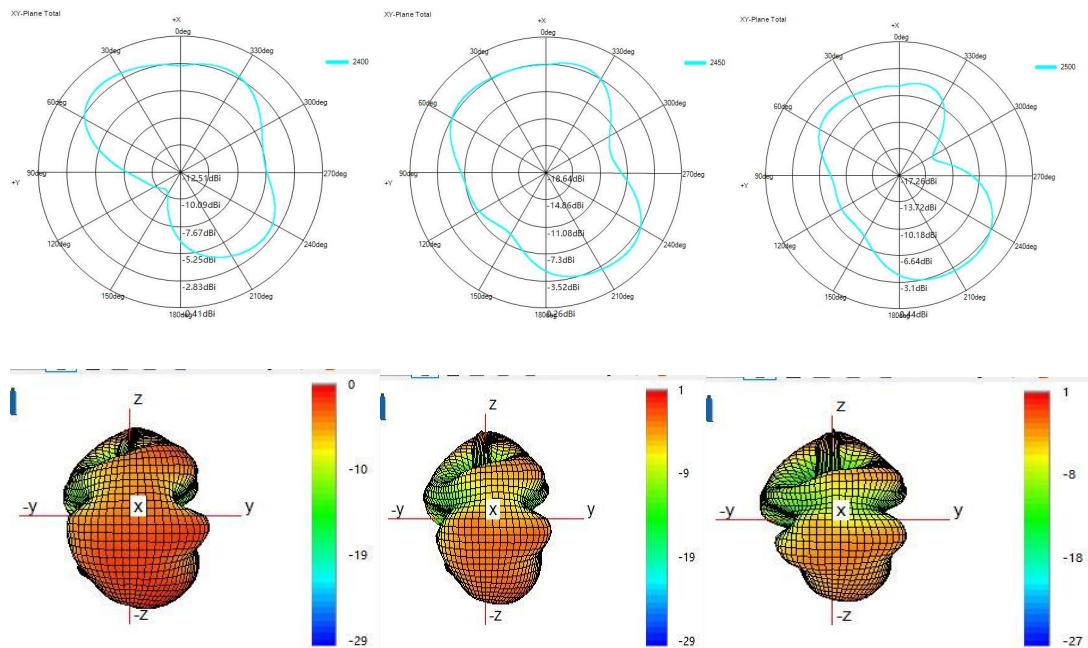




2.4GWIFI/BT:

Freq(MHz)	Gain(dBi)	Efficiency(%)
2400	-0.42	43.46
2410	-0.81	42.68
2420	-0.21	45.09
2430	-0.06	44.66
2440	0.00	44.39
2450	0.18	44.75
2460	0.27	45.50
2470	0.16	44.19
2480	0.13	43.17
2490	0.18	41.59
2500	0.44	42.95

2D/3DPin

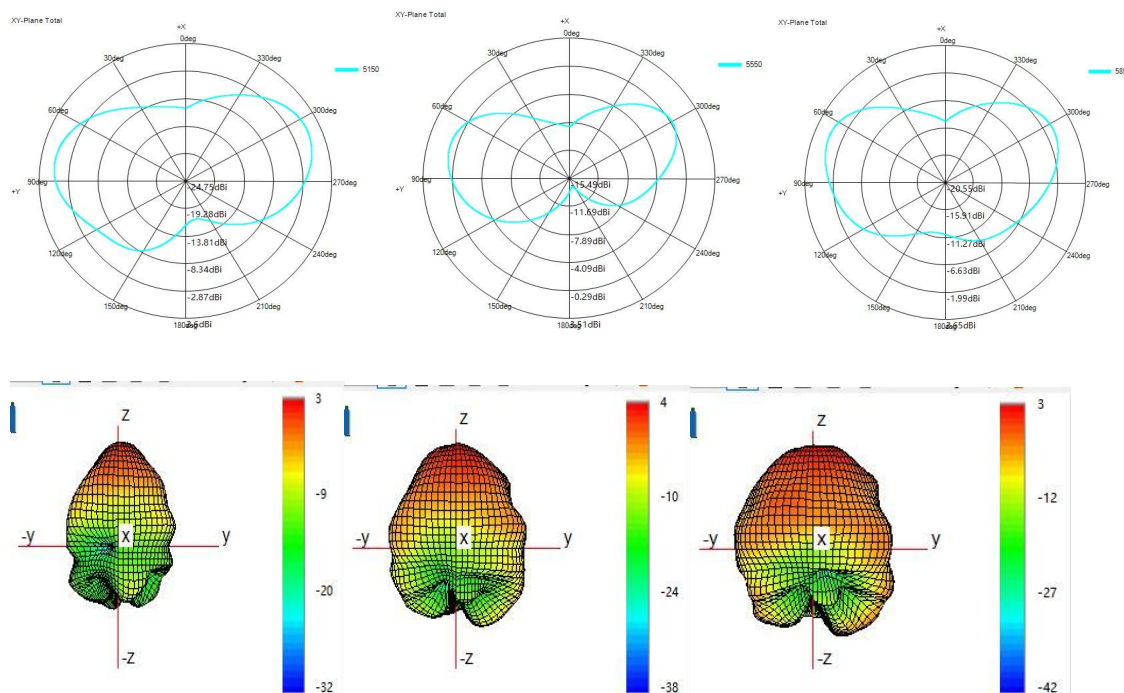




5.8GWIFI:

Freq(MHz)	Gain(dBi)	Efficiency(%)
5150	0.54	44.21
5200	0.91	48.14
5250	1.48	52.93
5300	1.24	51.11
5350	1.69	56.29
5400	1.74	58.90
5450	1.49	57.22
5500	0.97	51.39
5550	1.50	55.66
5600	1.70	57.71
5650	1.18	53.86
5700	1.07	52.75
5750	0.81	51.25
5800	0.96	50.83
5850	0.65	49.27

2D/3DPin





6.GSP/WIFI/BT

GPS/WIFI/BT 注:	GPS	Maximum signal strength	Number of received stars	Average positioning time (s)	Weather conditions	
		42	15-20	60-80	晴	
	WIFI	Normal internet distance (m)		Smooth distance for online browsing (m)		
		10-12		10-12		
	BT	Clear call distance (m)				
		10				

8.Structural drawings

