

Shanghai Sunnyway Communication Technology Limited Company

Temporary antenna specification

Customer: YIKE		The project: PT102V	
Operating frequency band: FDD 4/13			
Motherboard version:			
Shangyuan material specifications			
Specifications and models		Shangyuan material number	Customer part number
antenna		SH22141IB89	
Antenna type		Metal antenna	

The record of project changes			
Date of preparation/change	Changes	Change of person	version

Sunnyway counter-signature bar				
Research and development	ME:	Auditor:	QE:	Approver:
	RF:	Auditor:		
Client Counter-signature bar				
EE	PM		RF	QE

Tel: +86-021-60835368 (Shanghai) ; +86-0755-82504258 (Shenzhen)

Shanghai R&D Center Address: 1st Floor, Building 4, No. 99, Lane 215, Gaoguang Road,
Qingpu District, Shanghai

Shenzhen R & D Center Address: Shenzhen Guangming District South Taiyun Chuanggu Center 5
Building 6 floor

Chongqing R&D Center Address: C08-1 Building-1, No. 19 Xiantao Data Valley East Road,
Yubei District, Chongqing

目录

1. Project picture.....	3
2. Test fixtures.....	4
3. Matching circuits.....	4
4. S11 test.....	5
4.1 S11 Test Method Description.....	5
4.2 S11 parameter.....	5
5 . DARKROOM TEST DATA.....	7
5.1 Passive test data.	8
5.2 Active test data.....	12
6. Environmental treatment.....	14
7. Mass production antenna indicators.....	15
8 Drawing.....	16

1. Project information

Machine information



Antenna information

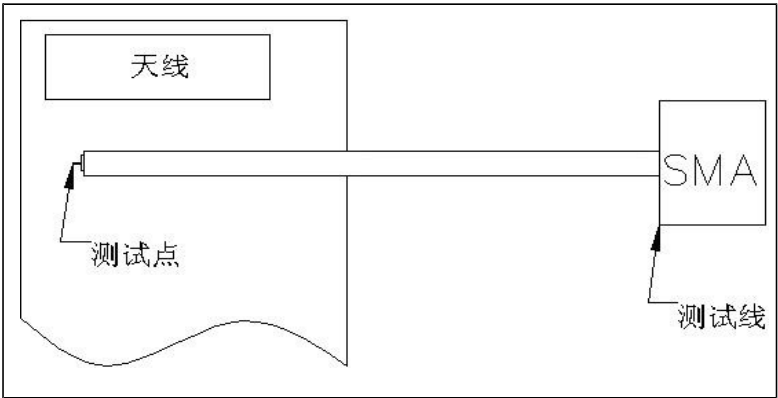
	version
motherboard	
Main Antenna	

Note: The customer finally verified that the antenna performance prototype was retained in our company for at least one year, which is convenient for analysis and solution to abnormal situations in antenna mass production.
Ensure antenna shipment quality.

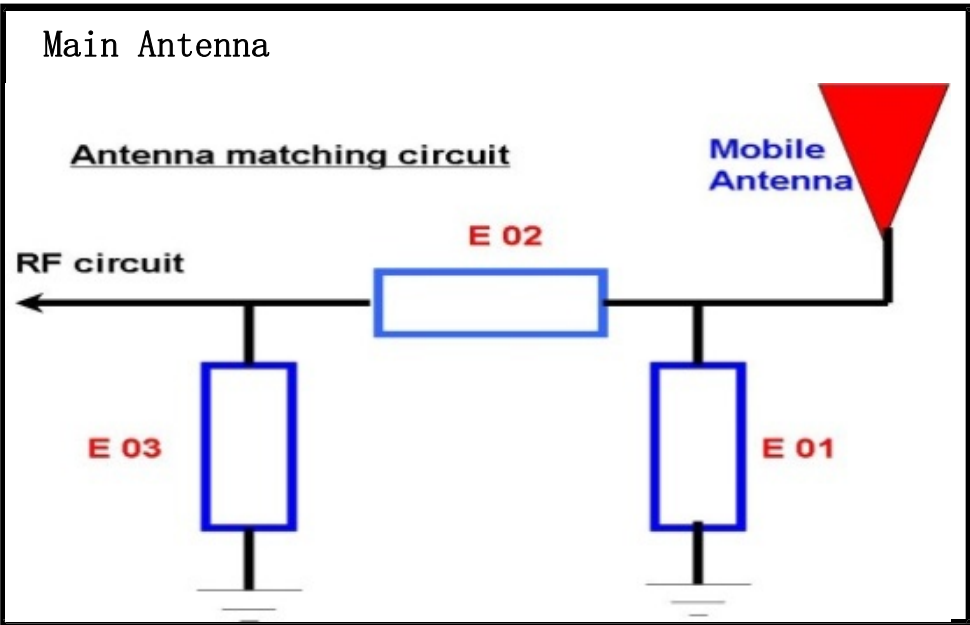
2. Test fixtures

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

How to make: The prototyping mechanism is made of a 50 ohm coaxial cable, one end is connected to the test point at the back of the matching circuit of the prototype motherboard (the front of the RF test hole), and the other end is connected to the SMA connector. The schematic diagram is as follows:



3. Matching circuits



Element	Value	Specification
E1	N/A	
E2	0 欧姆	
E3	N/A	

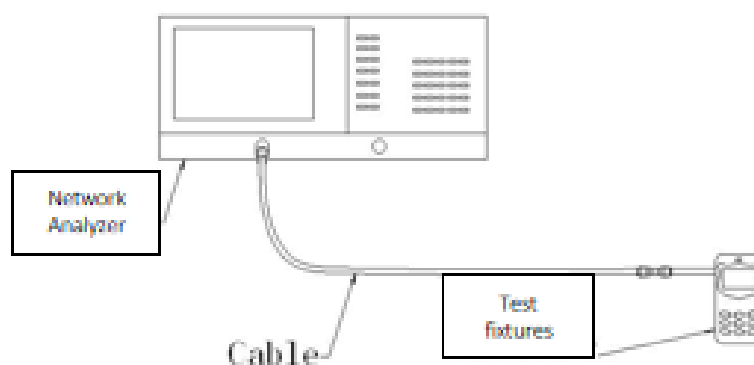
4. S11 test

4.1 S11 Test Method Description

Test Equipment: Network Analyzer (E5071C)

Test method: A 50 ohm CABLE cable is derived from the instrument test port, and the SMA connector of the prototype is connected after calibration using the calibrator to record the return loss and standing wave ratio corresponding to the relevant frequency point.

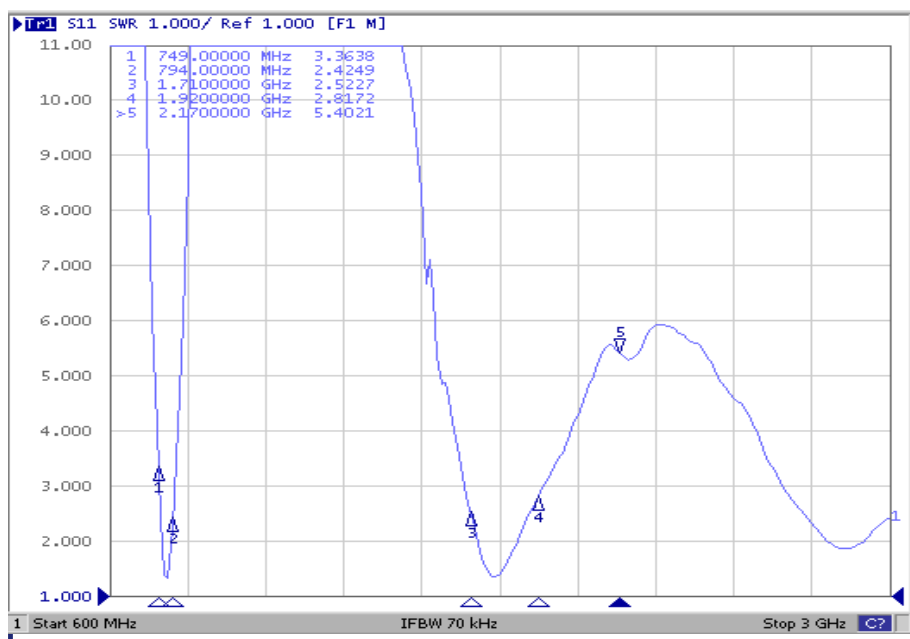
The test diagram is as follows:



Test the schematic

4.2 S11 parameter

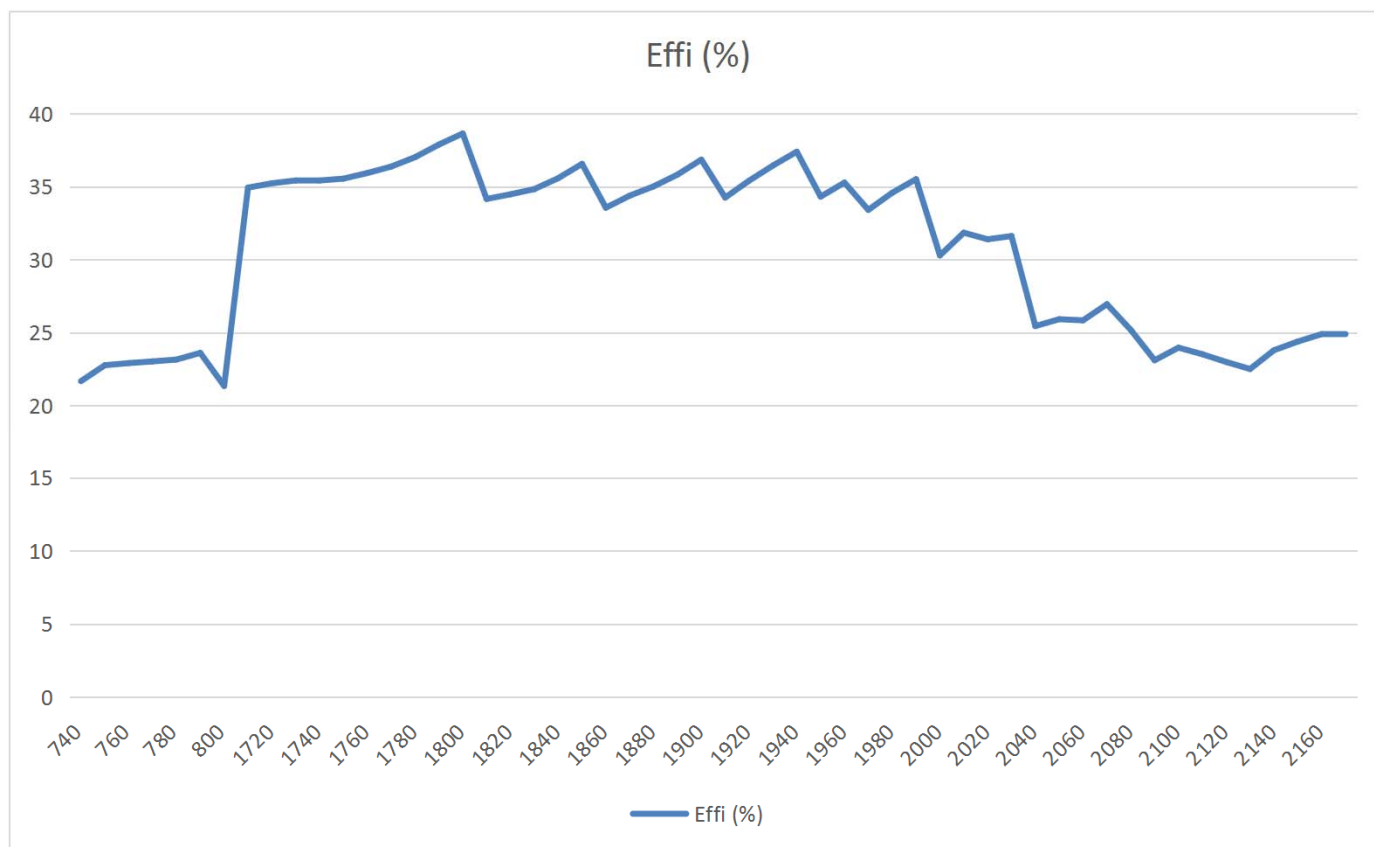
Main Antenna



	main
frequency (MHz)	SWR
746	3.36
786	2.42
1710	2.52
1920	2.81
2170	5.40

5.1 Passive test data

Main antenna efficiency



Freq. (MHz)	B13 (777-787)			B4 (1710-1755)		
	Min	Max	Avg	Min	Max	Avg
Effi (%)	21.33	23.59	22.63	22.49	38.62	31.87
Effi (dB)	-6.71	-6.27	-6.45	-6.47	-4.13	-5.02
Gain(dBi)	-3	-3	-3	-4	-4	-4

5.2 Active test data

Main antenna test active data

Band	TRP	TIS
FDD_B4 (10M)	19.87	
	20.11	
	19.8	-93.51
FDD_B13 (10M)		
	18.68	-90.36

6. Environmental treatment



The conductive cloth on half of the battery pack and the grounding of the shielding cover ,

Environmental treatment



Add conductive foam and speaker grounding treatment



Conductive foam should be increased here to prevent insufficient battery grounding

7. Mass production antenna indicators

When the antenna is mass-produced, the standing wave ratio is used as the mass production test standard. According to the differences in the project itself, the following criteria are given:

Frequency (MHz)	Mass production standards
740-790.; 1710-2170	VSWR (Mass production performance) <VSWR(Recognize performance)+1

8 Drawings

