

Shanghai Sunnyway Communication Technology Limited Company

Temporary antenna specification

Product Name: FinWhale Smart Chlorine Dispenser		Model Name: FinWhale
Operating frequency band: BT		
Motherboard version: /		
Antenna manufacture: Shanghai Sunnyway Communication Technology Limited Company		
Antenna manufacture' s address: 1st Floor, Building 4, No. 99, Lane 215, Gaoguang Road, Qingpu District, Shanghai.		
Shangyuan material specifications		
Specifications and models	Shangyuan material number	Customer part number
BT Antenna	SH26042IB98	

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

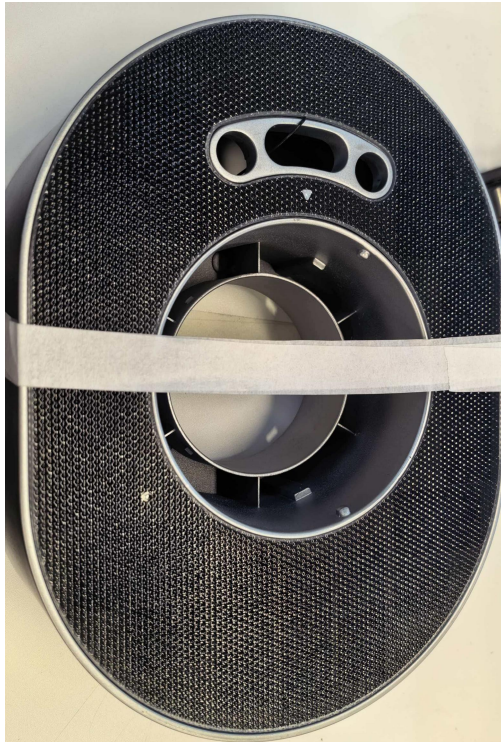
Chongqing R&D Center Address: C08-1 Building-1, No. 19 Xiantao Data Valley East Road,
Yubei District, Chongqing

Catalogue

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 . Chamber TEST DATA.....	6
5.1 Passive test data.	6
5.2 Antenna pattern.....	7
6. Mass production antenna indicators.....	8
7. Engineering drawings.....	9

1. Project information

Machine information



Antenna information



Antenna version	V0.1
Antenna type	PIFA

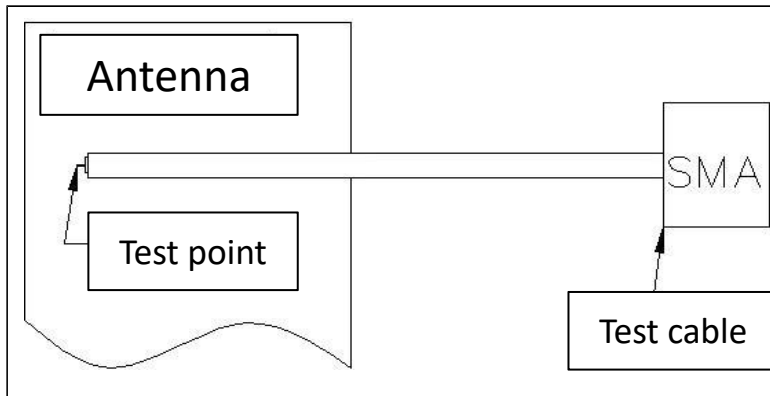


Note: The customer finally verified that the antenna performance prototype was retained in our company for at least one year, which is convenient for analysis and solution to abnormal situations in antenna mass production. Ensure antenna shipment quality.

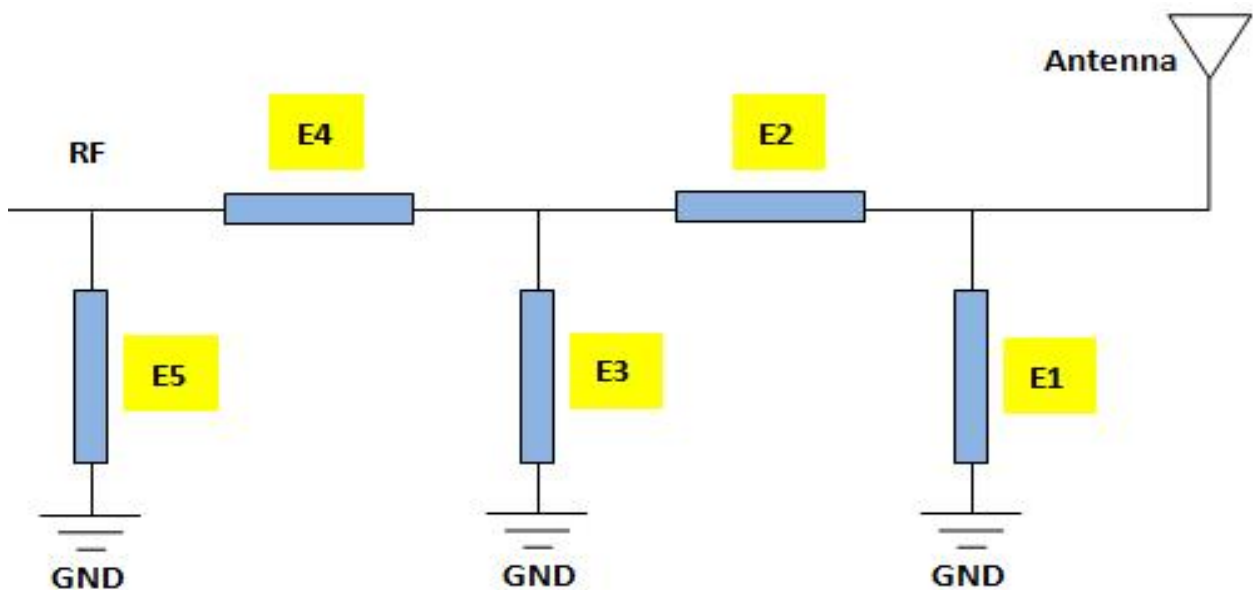
2. Test fixtures

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 (No antenna matching)



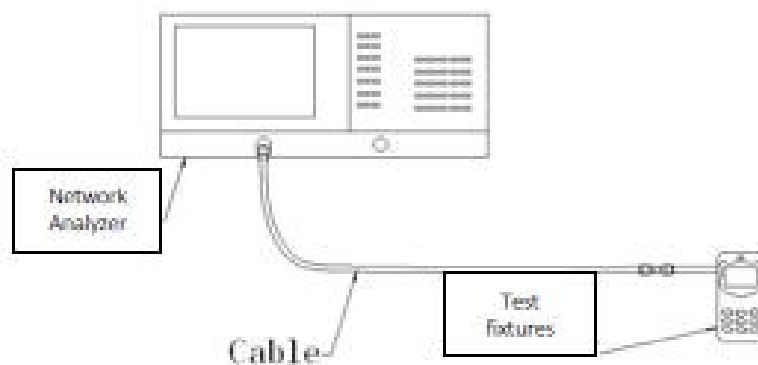
4. S11 test

4.1 S11 Test Method Description

Test Equipment: Network Analyzer (E5071C)

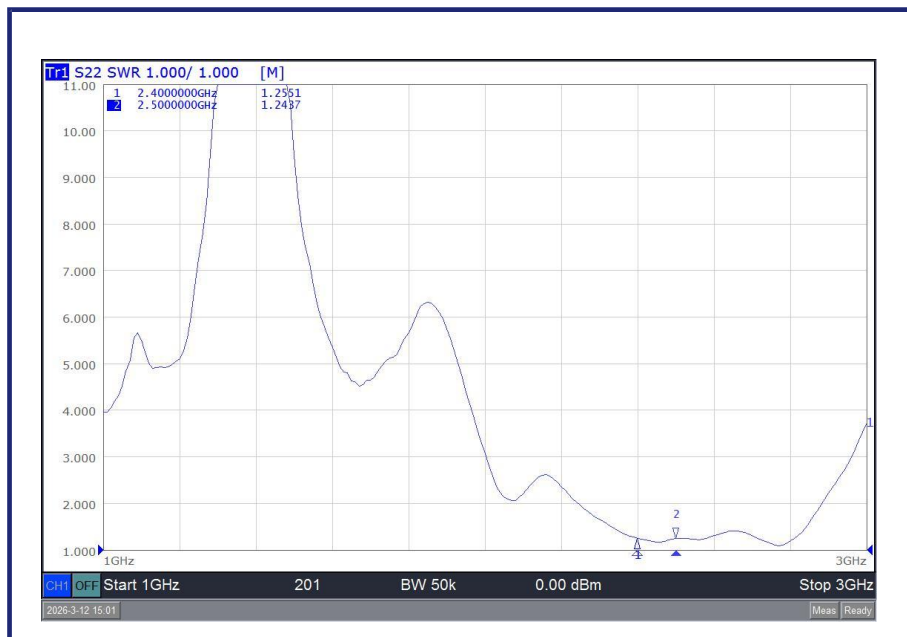
Test method: A 50 ohm CABLE cable is derived from the instrument test port, and the SMA connector of the prototype is connected after calibration using the calibrator to record the return loss and standing wave ratio corresponding to the relevant frequency point.

The test diagram is as follows:



Test the schematic

4.2 S11 parameter



Frequency (MHz)	SWR
2400	1.25
2500	1.24

5.Passive test data

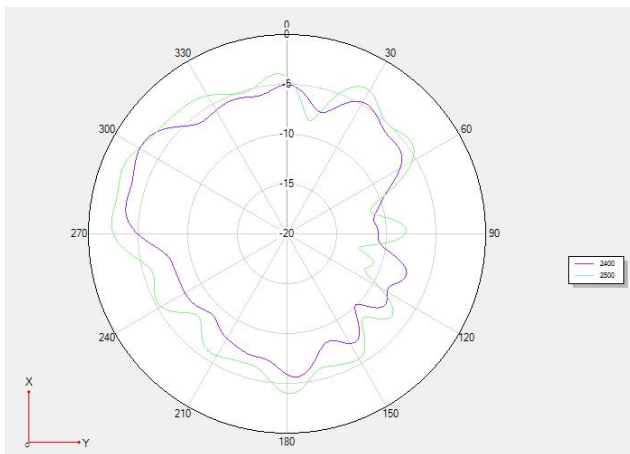
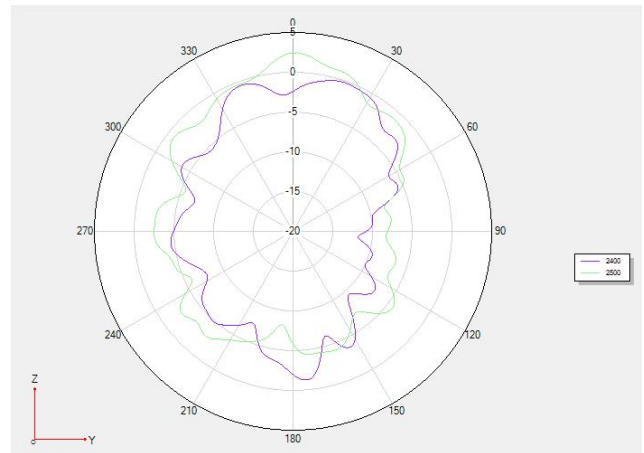
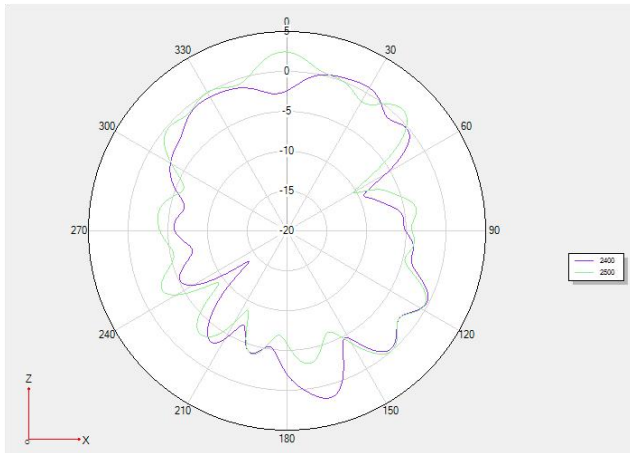
5.1Antenna passive efficiency and gain

Freq.	Effi	Effi	MaxGain
(MHz)	(dB)	(%)	dBi
2400	-3.38	45.92	1.59
2410	-3.9	40.74	0.6
2420	-3.57	43.95	1.41
2430	-3.74	42.27	0.82
2440	-3.37	46.03	1.7
2450	-4.06	39.26	0.69
2460	-3.73	42.36	1.86
2470	-3.86	41.11	1.22
2480	-3.63	43.35	1.7
2490	-4.09	38.99	1.3
2500	-3.69	42.76	1.86

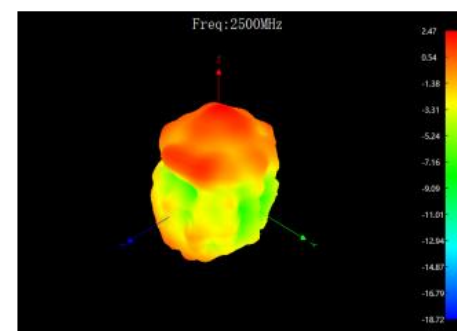
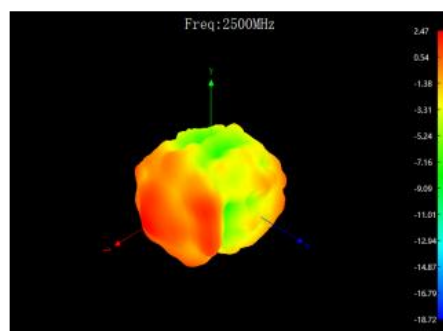
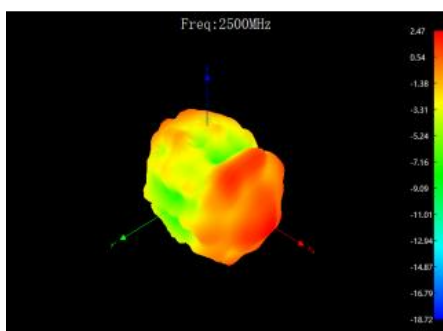
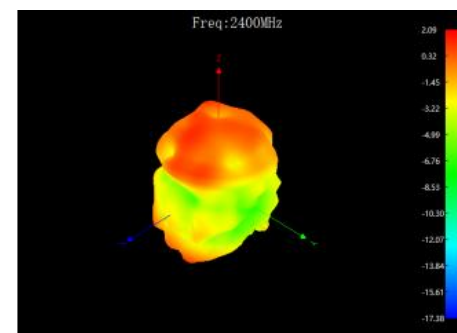
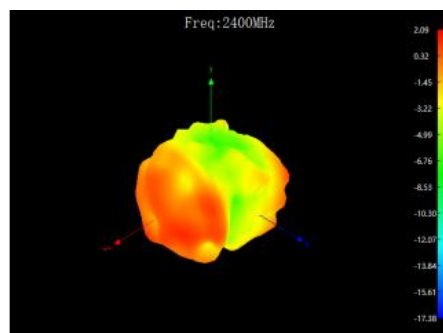
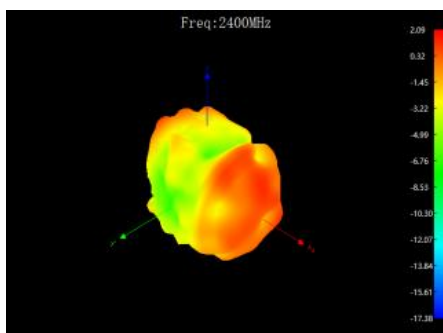
5.Passive test data

5.2Antenna radiation pattern

2D



3D



6. 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 standard
2400-2500	VSWR (Mass production performance) <VSWR(Acknowledge performance)+1

7. Engineering drwaing

