Antenna SPEC

Supplier Name	Sunnyway Technology(China).Co.Ltd		
Material Name	WIFI/BT Antenna		
Specifications	21.9* 21.9mm Black FPC(LL701/ Far away) Screen printing: SY_LL701_WIFI/BT_V1. 0		
Project Model	LL701	Pigment	Black
Material code/material number	KR3317L70160100		
Environmental requirements	■RoHS compliant □no-RoHS □Confirmed to REACH □no-REACH		
Type	□New product recognition□Material change will be admitted□Specification changes will be admitted		
State	□Structure sample qualified □Appearance sample qualified □Color samples qualified		

Description of replacement material		
Date	Change description	Signature

Fill in by supplier					
Producer/Date		Reviewer/Date		Approver/Date	

Fill in by the company					
Structural recognition	Project recognition	Procurement recognition	Quality recognition	Hardware recognition	

Antenna SPEC

Customer name：JimiloT	Entry name：LL701
Working frequency band:2.4G WIFI/BT	
Motherboard version：LL701 MB V1.0	

Sunnyway Material specification		
Specification type	Sunnyway number	Customer number
WIFI/BT Antenna	SZ21621IB75-2	KR3317L70160100

Revision history			
Date of preparation/change	Change content	Altered person	Edition
2022.02.28	**New issue**	**Yang XIN**	**A**
2022.06.07	**New positioning column**	**Yang XIN**	**B**

Sunnyway Countersign column				
RD	ME：	To examine：	QE：	Approval：
	RF：	To examine：		

Customer will sign the column			
Electronic Engineer	Project manager	Structural Engineer	Quality Engineer

Tel：＋86-021-64842326 （shanghai）；＋86-0755-82504258（shenzhen）Fax：＋86-021－64842328
Shanghai R&D Center: 1 / F, Building 4, No. 99, Lane 215, Gaoguang Road, Qingpu District, Shanghai
Shenzhen R&D Center: 6th Floor, Building 5, Nantaiyun Chuanggu Center, Guangming District, Shenzhen
Chongqing R&D Center: 1F, ARM Ecological Industrial Park, No. 19, East Datagu Road, Xiantao, Yubei District, Chongqing
Huizhou Manufacturing Center: Floor 4-5, No. 1, Central Village Road, Longhu Industrial Zone, Shuikou Town, Huicheng District, Huizhou
Email: sales@sunnyway-iot.com Web: www.sunnyway-iot.com

ITEM

1. PROJECT PICTURES

project pictures shown below：

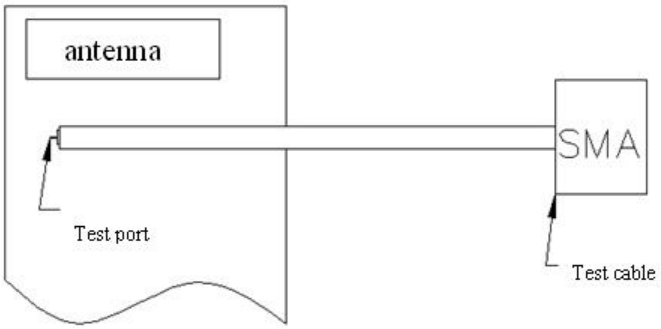
PS：

To ensure that the antenna shipment quality, the final prototype Clients validated the antenna's performance, should be kept in our company for at least a year time, facilitate solving antenna amount during abnormal situation,

2. TEST FIXTURE

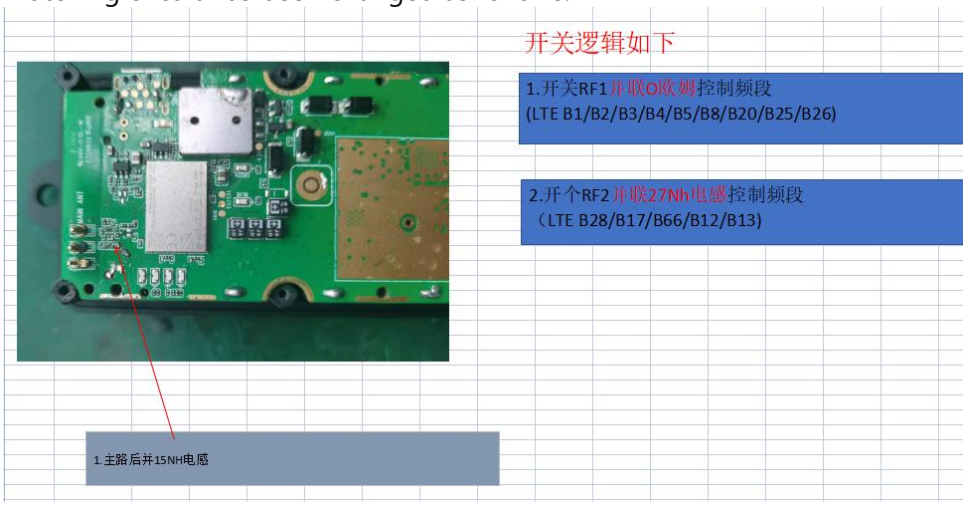
Purpose： To test antenna passive parameters as accurately as possible。

methods：the fixture is to use a 50 ohm coaxial cable, one end is connected to the pad after the antenna 's matching circuit (the front of the antenna switch) , and the other end is connected to the SMA connector.



3. MATCHING CIRCUIT

The matching circuit has been changed as follows:



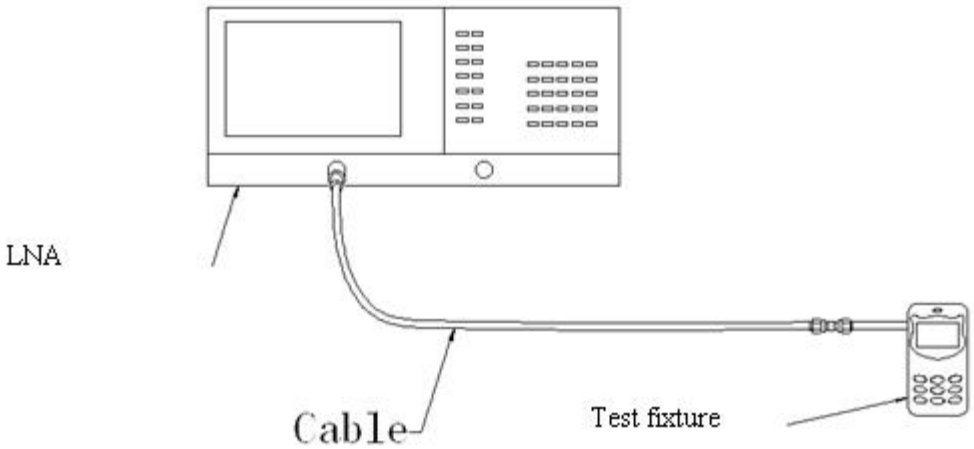
4. S11 test

4.0 S11 test method instructions

Test equipment：LNA(Agilent E5071B)

Test method：With a 50 ohm CABLE ,CABLE export from instrument testing port ， After the calibration with calibration Key, connected to the SMA connector， Records the return loss and VSWR of the related frequency points.

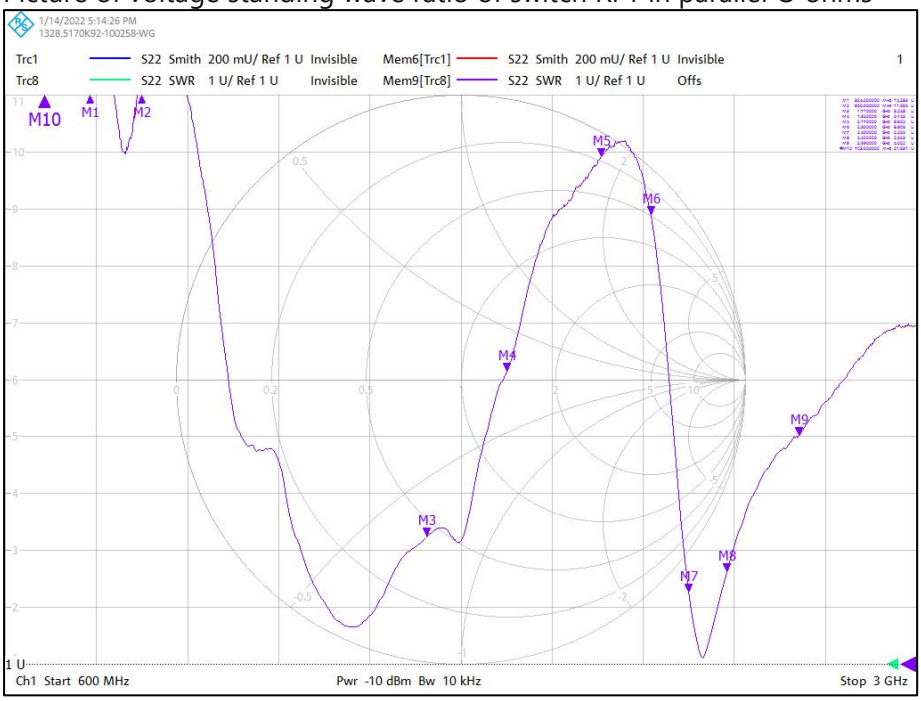
Test schematic diagram is as follows：



Test schematic diagram

4.1 S11 parameter

Picture of voltage standing wave ratio of switch RF1 in parallel O ohms



频率（MHz)	2400	2500
VSWR	2.4	2.7

5 CHAMBER TEST DATA

Test equipment

Test system: chamber

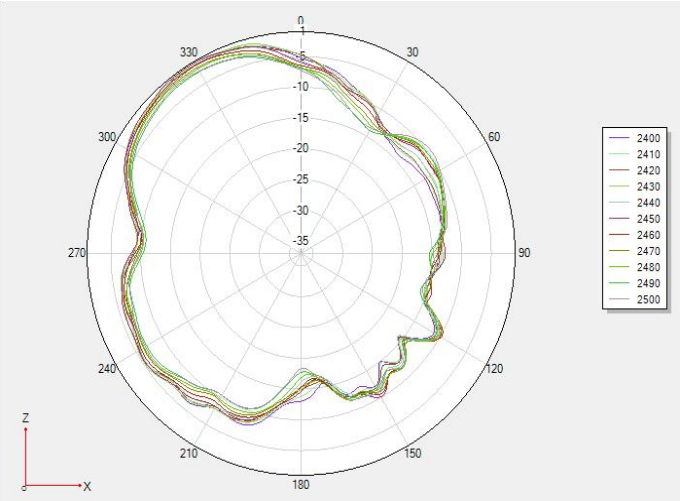
Test environment: the temperature of 22 ℃ ＋3 ℃, humidity of 50% plus or minus 15%

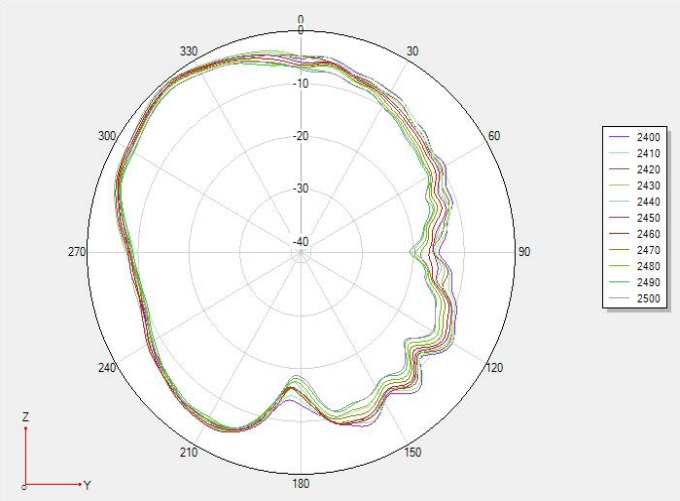
Test equipment: to test passive status , use Agilent 5071C to test active status, use CMW500.

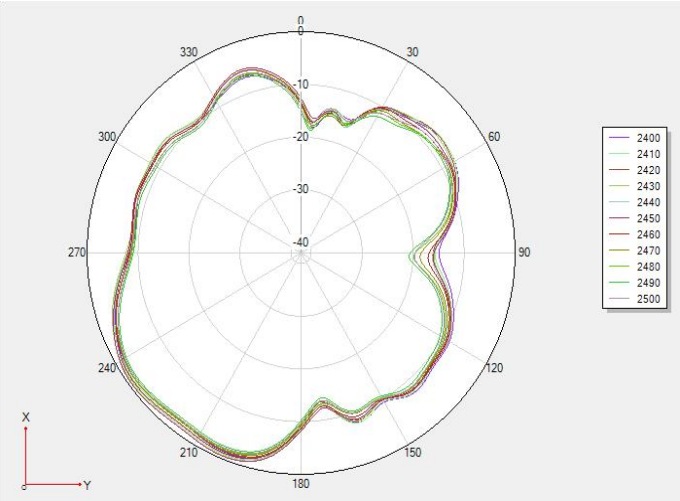
OTA Test data

Freq (MHz)	Effi (%)	Gain (dBi)
2400	43.13	1.65
2410	42.65	1.51
2420	43.12	1.59
2430	47.72	1.93
2440	48.74	1.95
2450	46.96	1.82
2460	45.81	1.75
2470	44.03	1.49
2480	42.38	1.34
2490	43.11	1.56
2500	43.42	1.58

Radiation pattern







6. Antenna environment processing and mounting position

Environmental treatment is not added, according to the customer's original environmental treatment.

7. Mass production antenna Spec

During Mass production, to test VSWR as production test standard

According to the difference of the project itself, the following specification:

Frequency	SPEC , Mass Production
2400-2500MHz	VSWR（MP performance）<VSWR(Verify performance)+0.5

8. Structural drawings