深圳市鑫尔盛科技有限公司

Shenzhen xinersheng Technology Co., Ltd

Product name: Wi-Fi&BLE ANT

Material:PCB

Frequency：2.4G

Color: black

Tester：Zhang Qiang

Check：Hu Xiuli

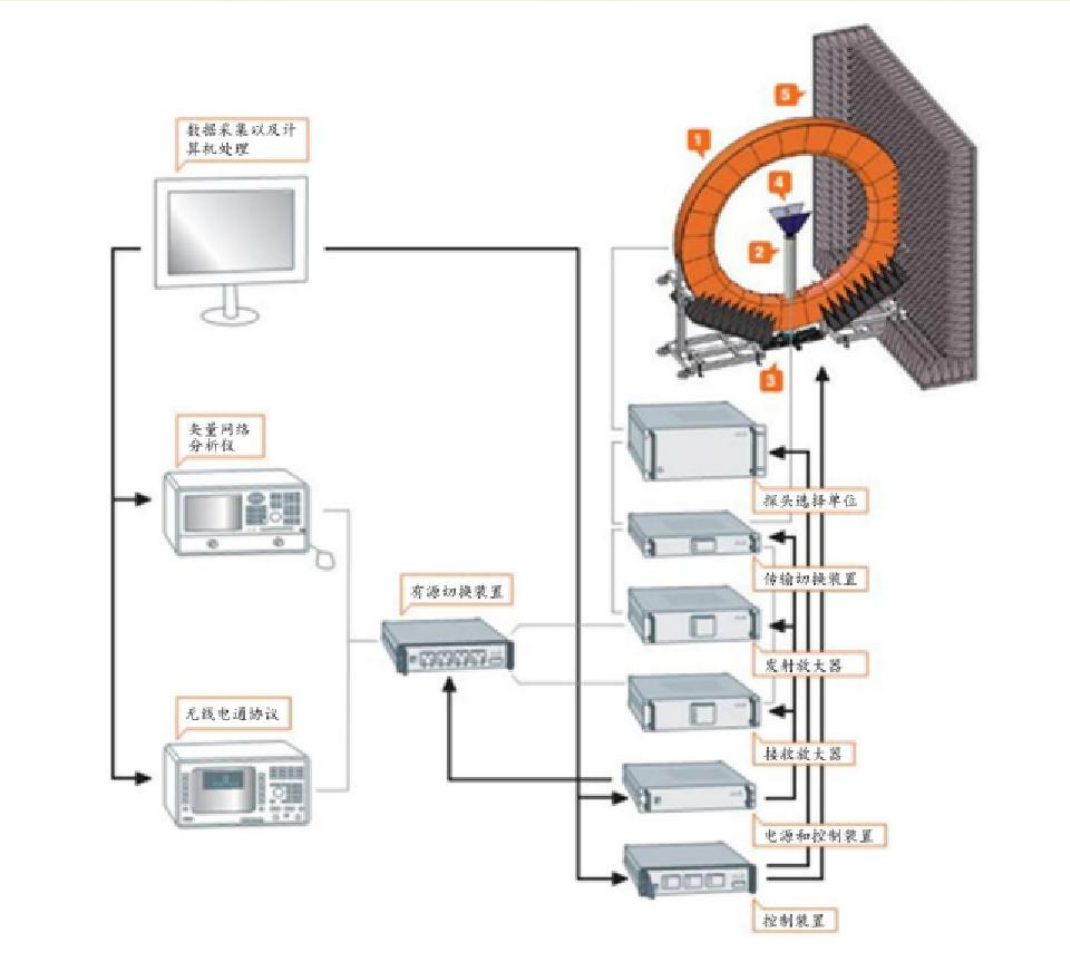
Date:2023-02-21

3rd Floor, No. 96, Lingxia Road, Fenghuang Community, Fuyong Street, Bao'an District， SZ， CN

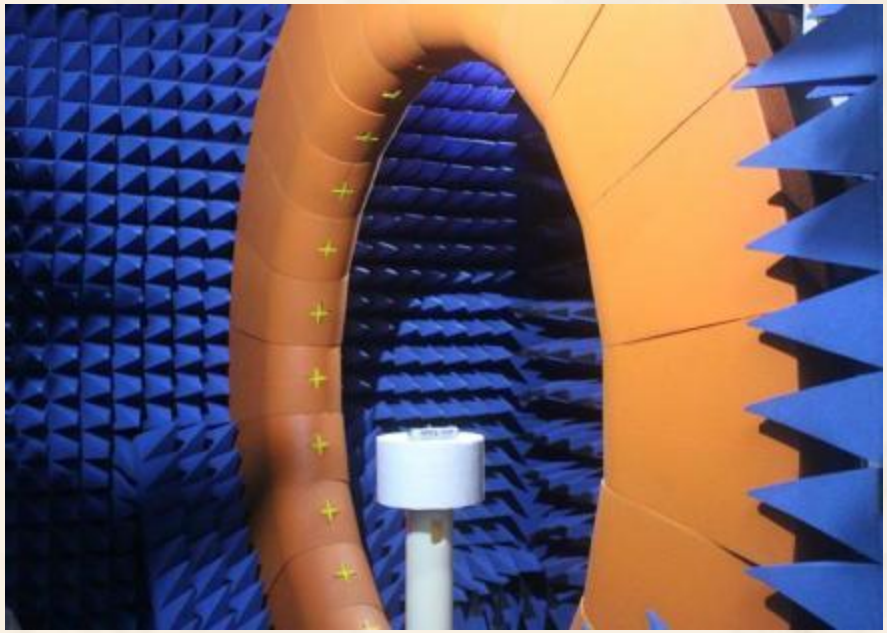
1. Test information 测试信息

测试机构 Test company	Shenzhen xinersheng Technology Co., Ltd
地址 ADD.	3rd Floor, No. 96, Lingxia Road, Fenghuang Community, Fuyong Street, Bao'an District， SZ， CN
测试系统 Test system	Satimo 24 probe OTA microwave anechoic chamber Test software：SPM， Version: V1.8
测试方法 Method	IEEE Standard Test Procedures for Antennas
标准 Stand	ANSI/IEEE Std149-2021
客户 Customer	Cdtech
Product name	Wi-Fi&BLE ANT
Material	PCB
Frequency	2400MHZ-2500MHZ
Color	black
Tester	Zhang Qiang
Date	2023-02-21

2. Test environment 测试框图



3. Test picture 测试图片

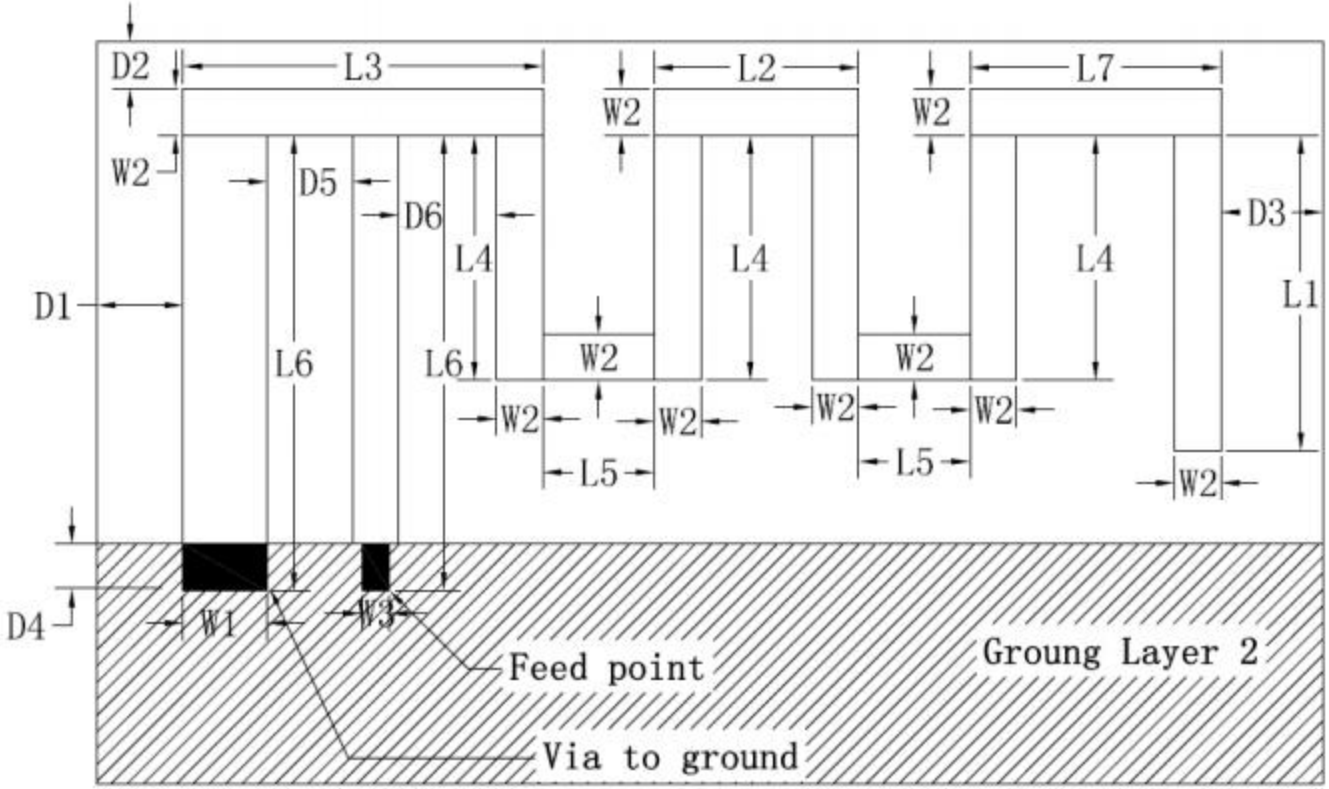


4. Test equipment 测试设备

设备	品牌	型号	SN	效准日期	有效期
矢量网络分析仪	Agilent	E5071C	010031	20221116	20231115
无线通信测试仪	R&S	CMW500	160761	20230328	20240327

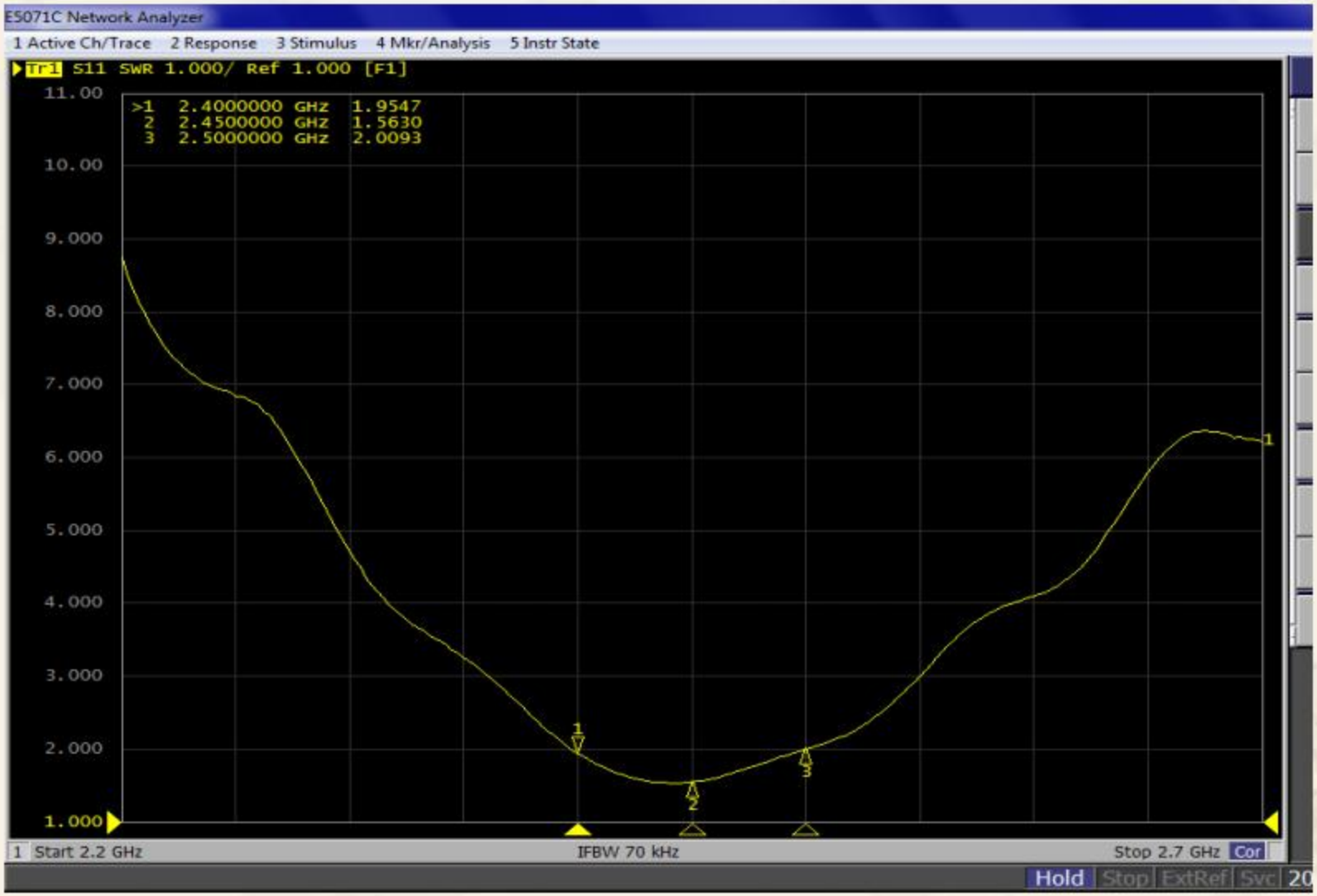
5. Antenna picture 天线图片

6. Antenna size 天线尺寸



Antenna Dimensions	
L1	3.4mm
L2	2.2mm
L3	3.87mm
L4	2.64mm
L5	1.2mm
L6	4.9mm
L7	2.7mm
W1	0.9mm
W2	0.5mm
W3	0.3mm
D1	0.93mm
D2	0.35mm
D3	1.1mm
D4	0.5mm
D5	0.92mm
D6	1.05mm

7. Return loss

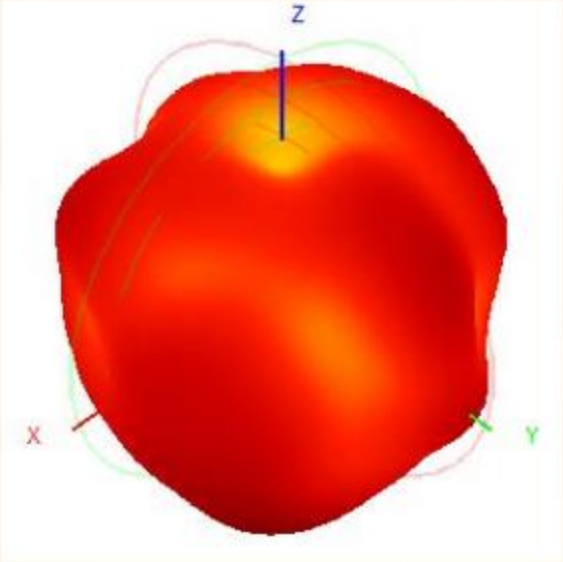


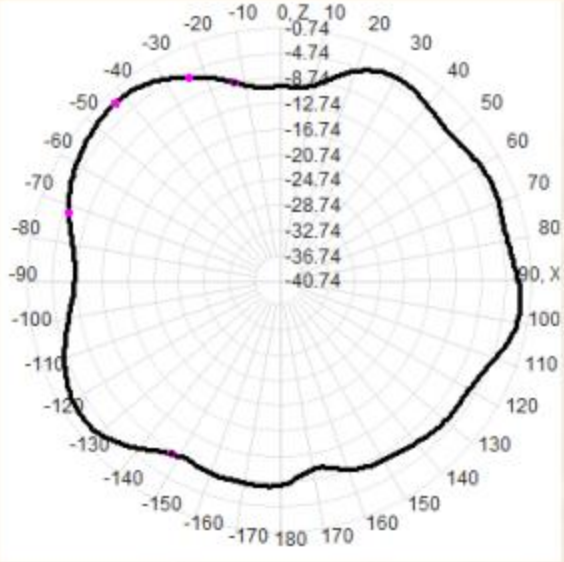
8. Gain 增益

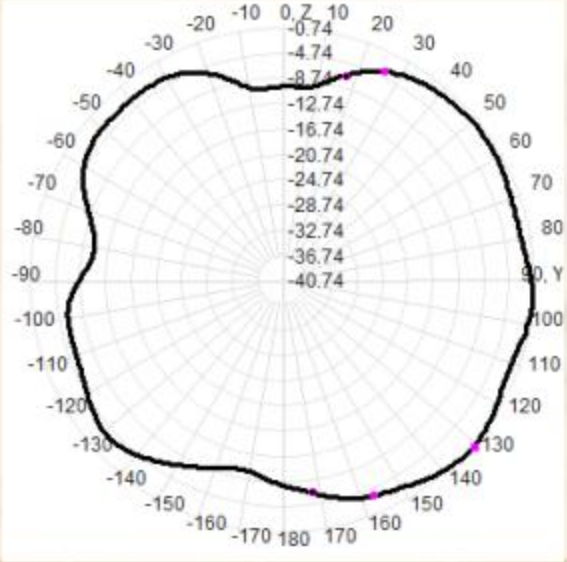
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	-0.66	-0.81	-0.91	-0.93	-0.87	-0.82	-0.88	-1.19	-0.78	-0.91	-1.04
Efficiency (%)	24.27	24.34	24.63	24.63	24.44	24.07	23.61	22.64	21.82	21.92	21.96

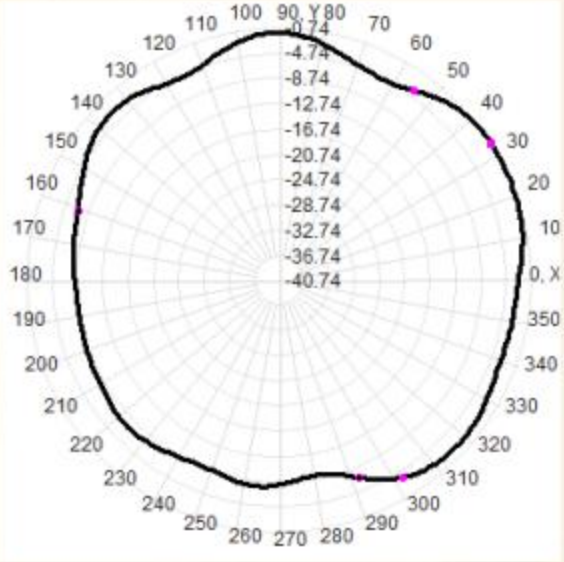
9. 天线辐射方向图

Antenna Radiation Pattern









Test Procedure

Test Step Flow

1. Maintain the test ambient temperature of 23t2 C, the instrument is powered on and preheated for more than 30 minutes
2. Tum on the darkroom power supply, connect the test cable, and set up the sample according to the standard
3. Outline sets the test content objectives and conducts calibration tests
4. Run the SPM OTA software, the test is complete, export the corresponding test diagram and test data, and save to the corresponding directory

Test Principle

The test principle can be seen in accordance with the standard ANSI/IEEE std 149-2021

Test Conditions

1.The analyte, the network analyzer for testing, the test equipment and the test cable connector should have good reliability, stability, dynamic range and measurement accuracy to ensure the correctness of the measurement accuracy
2. The measuring instrument should have a certificate of conformity and be within the effective calibration period
3. The analyte should be complete and undamaged, and the test environment should be kept clean