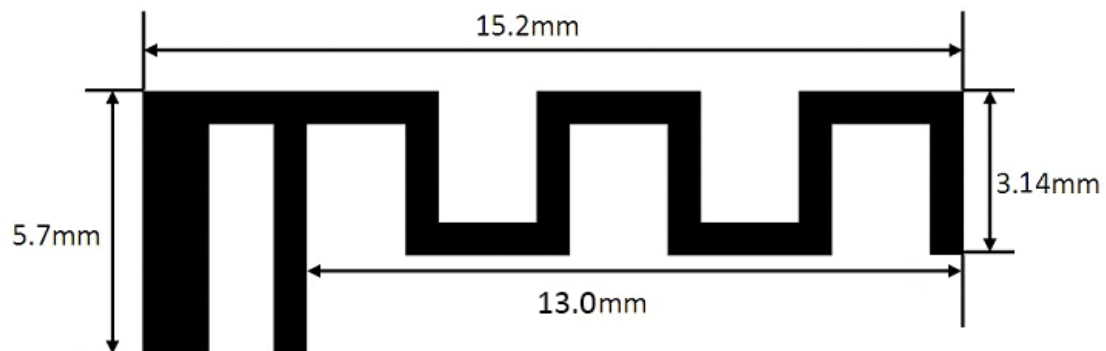


Inverted F Antenna Specification

Summary

ITEM	ANT SPEC					
Model Name	2.4G ANT					
Center Frequency	Horizontal			Vertical		
	2400MHz	2450MHz	2500MHz	2400MHz	2450MHz	2500MHz
	-1.26	-0.76	-0.58	-5.25	-2.46	-1.86
MAX. Gain	-0.58dBi					
Polarization	Horizontal and Vertical					
Azimuth Beam Pattern	Omni-directional					
Impedance	50 Ohm					
Antenna Length	38.20mm					
Manufacture	ZHUHAI JIELI TECHNOLOGY CO.,LTD					
Address	No. 333, Kexing Road, Xiangzhou District, Zhuhai City					

Antenna Photo & Length (mm)



Horizontal: 2400 MHz 2450 MHz 2500 MHz

Power (dBm)

Max: 0 Min: -40 Scale: 5/div

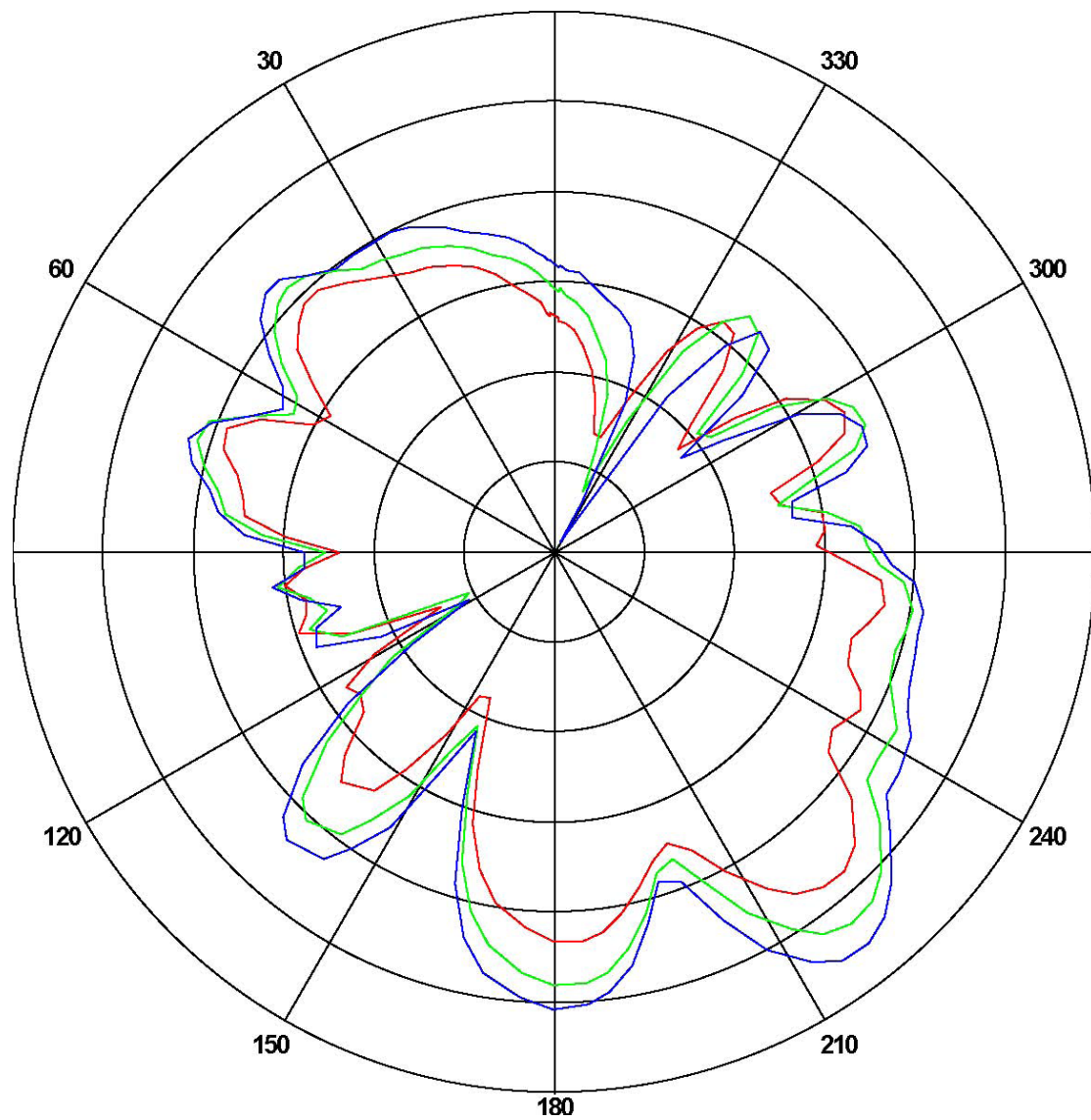


Frequency (MHz)	Gain(dB)		
	Max	Min	Avg
2400	-1.26174	-30.0801	-7.18716
2450	-0.765802	-36.5604	-7.48023
2500	-0.585582	-22.0315	-6.59127

Vertical: 2400 MHz 2450 MHz 2500 MHz

Power (dBm)

Max: 0 Min: -30 Scale: 5/div



Frequency (MHz)	Gain(dB)		
	Max	Min	Avg
2400	-5.2537	-22.1424	-12.4294
2450	-2.4652	-24.5837	-10.4702
2500	-1.86120	-29.5214	-9.20432

ANT Test Labs: Attestation of Global Compliance Co., Ltd.

规格书

Specification

Customer Name 成都易瞳科技有限公司

Part No. 产品名称:双频2.4-5.8G WIFI天线

Customer P/N 客户料号:

Supplier Name 供应商名称:中科伟业(成都)通信有限公司

Supplier P/N 供应商料号:662252600102

Made 制作	Check 审核	Approve 批准
石小江	代果	刘伟
Date 日期	Version 版本号	
2026.07.06	V1	

目录

		Revise Record 版本更改记录
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	2.2	Mechanical Parameter 机械参数
	2.3	Environment Specification 环境规格
3		Passive Test Data 无源测试数据
	3.1	VSWR / Smith chart / Return loss 驻波比/史密斯圆图/回波损耗
	3.2	Match circuit /匹配电路
	3.3	Test System 测试系统
	3.4	Efficiency & Gain 效率&增益
	3.5	2D Radiation Model - 2D 辐射模型
	3.6	3D Radiation Model - 3D 辐射模型
	3.7	OTA Test Data OTA有源测试

版本更改记录
Revise Record

版本号 Version	变更记录 Record of change	拟制 Made	批准 Approve	日期 Date
V1	首次发行	石小江	刘伟	2026.07.06
备注： 1、更改产品指标时，版本号需更换（V1 换为 V2、V3……）；				

1. 2D Drawing & Product Picture 2D图纸以及实物照片



天线组装位置如图所示

2. Antenna Specification 天线规格

2.1. Electrical Specification 电气参数

Electrical Specification 电气参数	
频率范围 Operation Frequency (MHz)	2400-2500 5150-5850
输入阻抗 Impedance (Ohms)	50
驻波比 VSWR	2400-2480 ≤ 2.0 5150-5850 ≤ 2.0
效率 Efficiency (%)	2400-2480 : 44.18 AVG 5150-5850 : 35.77 AVG
峰值增益 Peak Gain (dBi)	2400-2480 : 0.47 AVG 5150-5850 : 1.89 AVG
辐射方向 Radiation Properties	Omnidirectional 全向
极化方式 Polarization	Line Polarization 线极化
功率容量 Max input Power (Watts)	50

2.2 Mechanical Parameter 机械参数

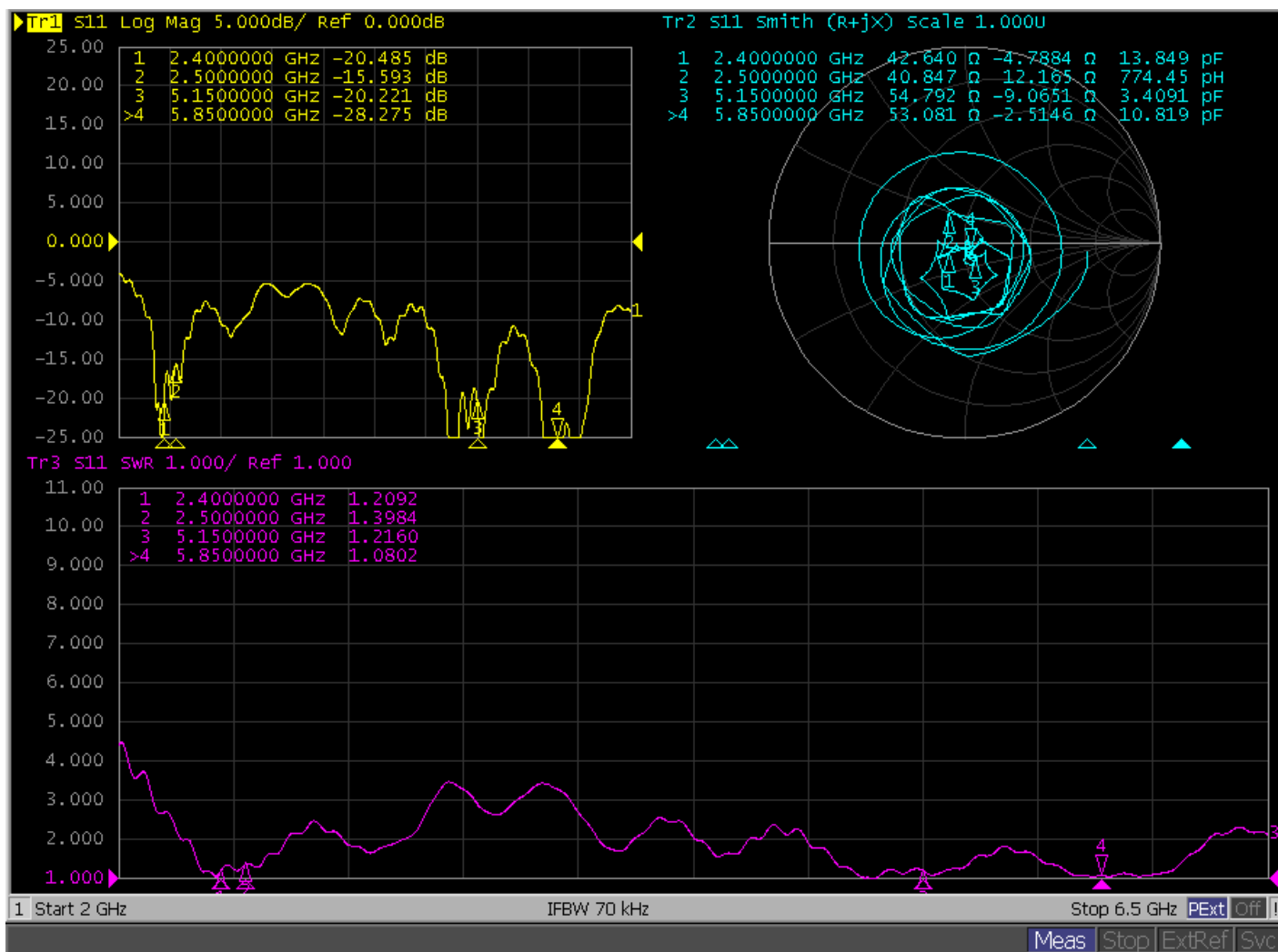
Mechanical Parameter 机械参数	
Structure Type 结构方式	IPEX1代
Dimension 尺寸	31.85*10.1
Material 材料	FPC
Salt Spray 盐雾测试	48H

2.3 Environment Specification 环境规格

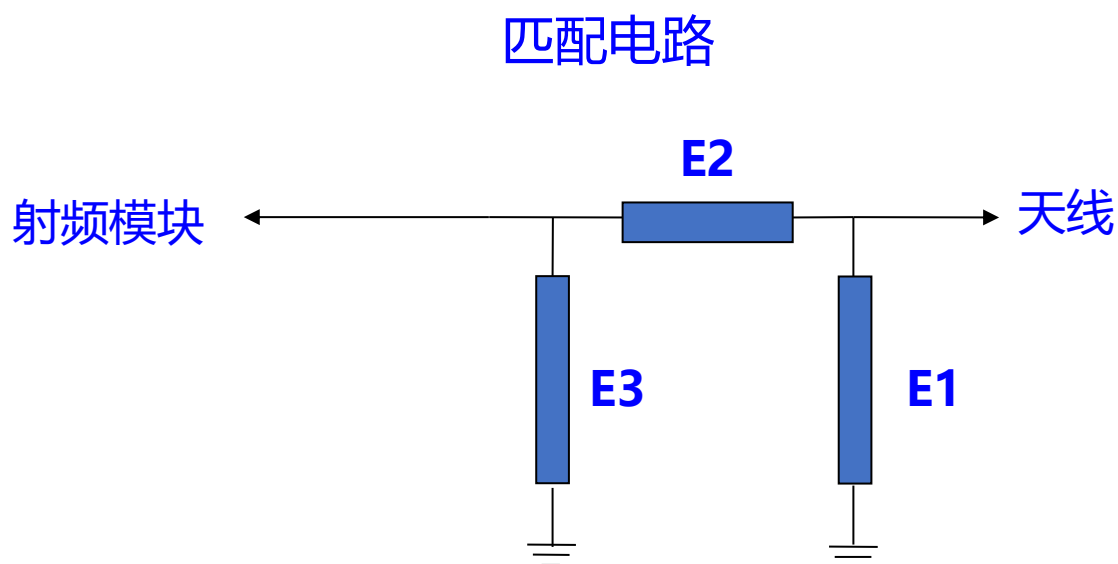
Environment Specification 环境规格	
Operating temperature 工作温度	-40°C ~ +80°C
Storage temperature 存储温度	-40°C ~ +80°C

3. Passive Test Data 无源测试数据

3.1. VSWR / Smith chart / Return loss 驻波比/史密斯圆图/回波损耗



3.2. Match circuit /匹配电路

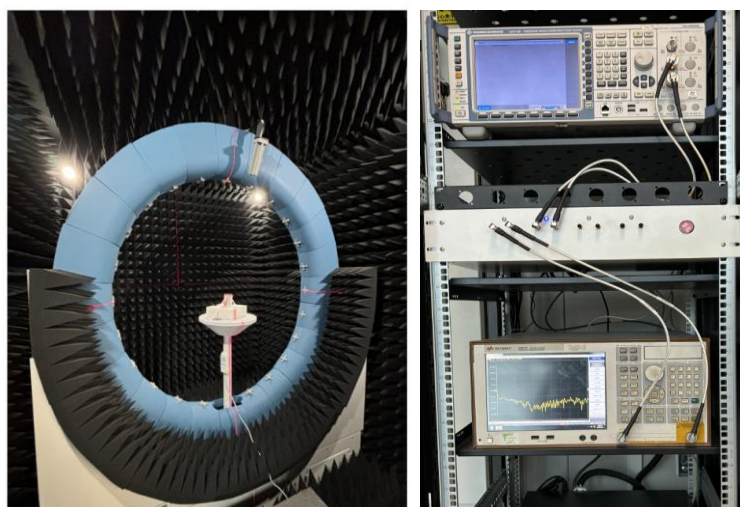


元件	值
E1(0402)	NC
E2(0402)	0Ω
E3(0402)	NC
注：主板匹配未做改动	

3.3 Test System 测试系统

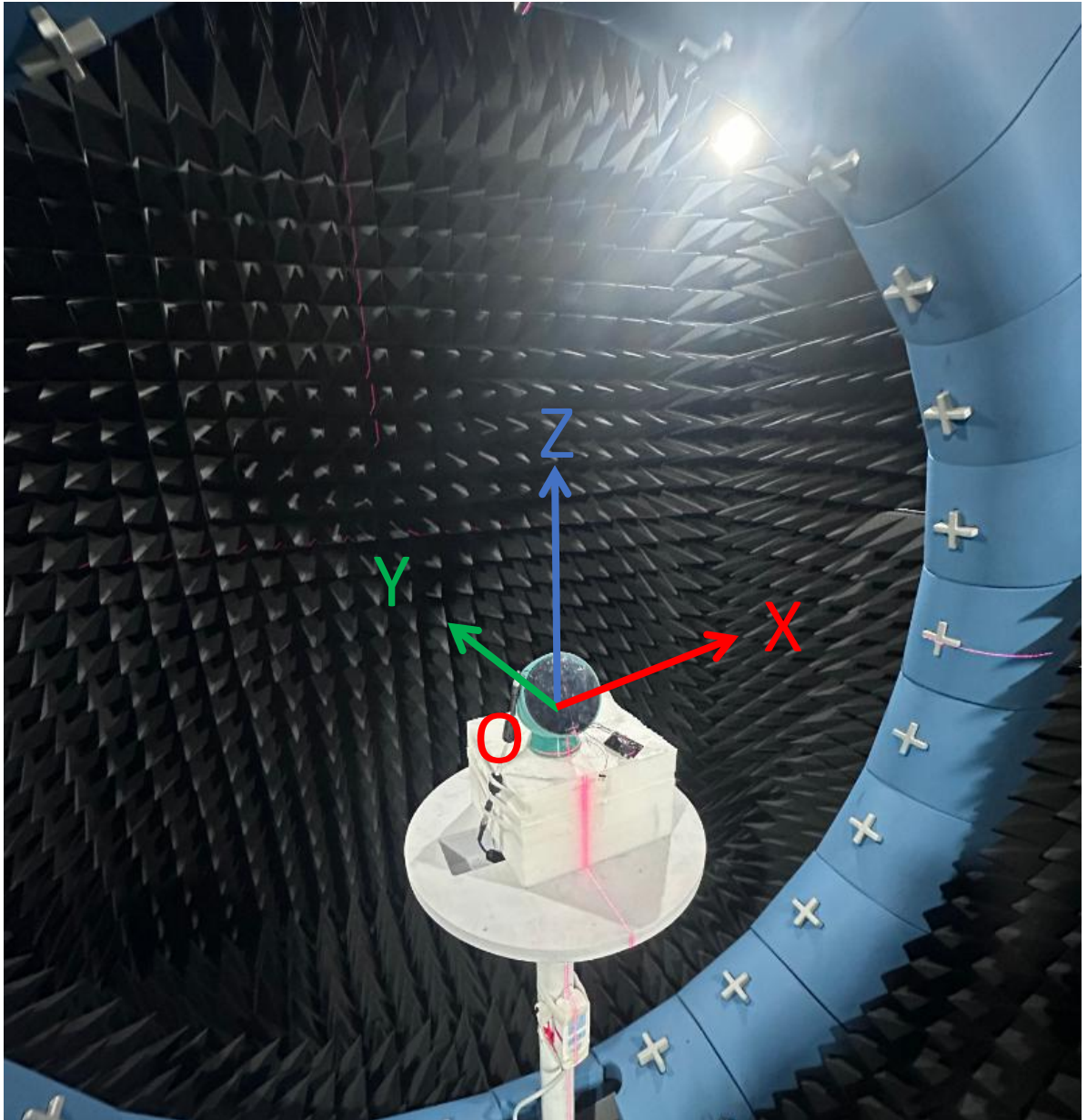
Multi-probe spherical near-field anechoic chamber test system that meets the relevant international regulations such as CTIA and 3GPP, a multi-functional wireless test system with excellent performance in radio frequency, absorption, and mechanical structure. The system has high integration and reliability. It supports pendulum sampling frequency-doubling technology and can be adapt to the testing needs of small multi-lobed antennas. It is suitable for the wireless testing of small high-integration electronic devices such as IoT devices, drone modules, car machine modules, smart home devices, and mobile communication equipment. It can also meet the testing needs of ceiling antennas, miniature base stations, and embedded routers, etc., which have high dependence on the passive performance of antennas.

多探头球面近场空腔暗室测试系统，符合CTIA和3GPP等相关国际法规的多功能无线测试系统。该系统在射频、吸波和机械结构等有良好的表现，系统的集成度和可靠性较高。系统支持摇摆式采样倍频技术，可适应小型多副瓣天线的测试需求，适用于物联网、无人机、车机模块、智能家居、移动通信设备等小型高集成度电子设备的无线测试。同时也可满足吸顶天线、微型基站、嵌入式路由器等对天线无源性能依赖度高的无线设备测试。



Supported Band 可支持频率	400MHz-9GHz (Expand. 12GHz)
Test Item 测试内容	Passive: Gain/Efficiency/2D/3D radiation/non-circularity(不圆度)/axial ratio(轴比) ... Active: TRP/TIS/EIRP/EIS
Test Standard 测试制式	2G/3G/4G/5G/Wi-Fi b/g/n/a/ac/ax/蓝牙 /NB-IOT /Cat-M (eMTC)/GPS/BEIDOU/GLONASS/ZigBee/LoRa(Non-signaling 非信令)...

3.3 Test System 测试系统

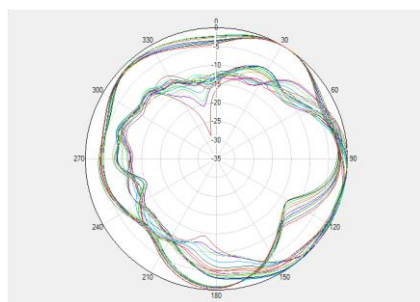


天线测试时在暗室中摆放位置

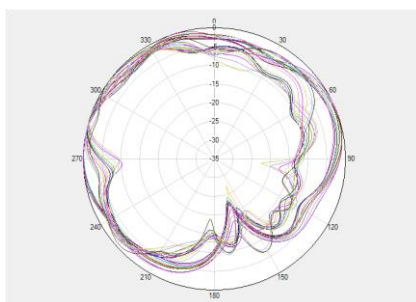
3.4. Efficiency & Gain 效率&增益

Frequency (MHz)(频率)	Gain(dBi) (最大增益)	Efficiency (%)(效率%)
2400	0.02	43.75
2410	0.55	45.81
2420	0.86	47.53
2430	0.54	45.92
2440	0.2	42.95
2450	0.22	41.88
2460	0.41	42.36
2470	0.57	44.87
2480	0.79	45.19
2490	0.33	43.65
2500	0.72	42.17
5150	2.02	39.63
5200	2.29	39.54
5250	2.19	39.45
5300	2.42	37.33
5350	2.23	35.4
5400	1.69	32.51
5450	1.73	30.2
5500	1.71	32.06
5550	1.75	32.58
5600	1.42	33.42
5650	1.39	34.12
5700	1.53	35.4
5750	1.81	38.46
5800	2.02	38.64
5850	2.17	37.93

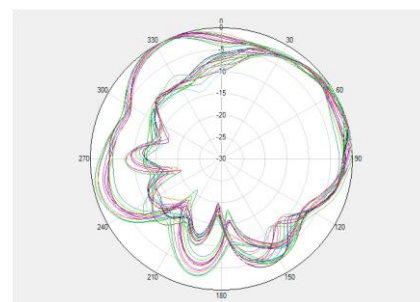
3.5. 2D Radiation Model 2D辐射模型



XOZ

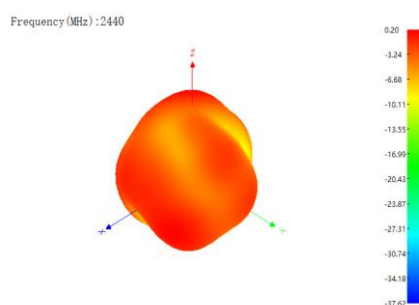


YOZ

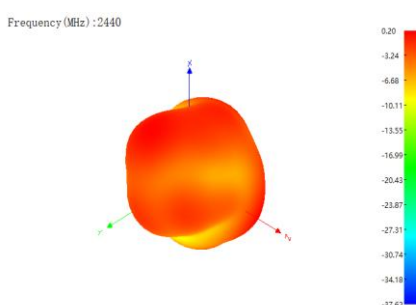


XOY

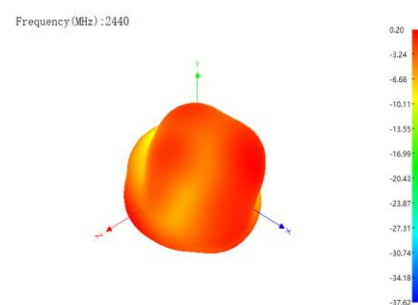
3.6. 3D Radiation Model 3D辐射模型



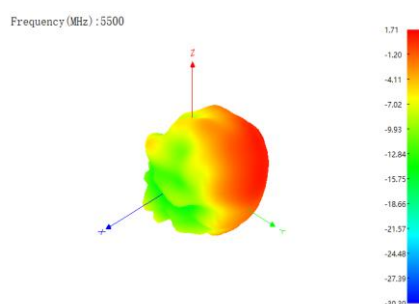
XOZ



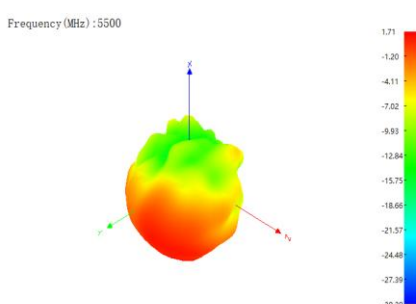
YOZ



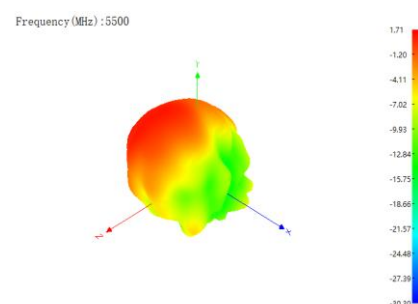
XOY



XOZ



YOZ



XOY

3.7. OTA Test Data OTA有源测试

Standard	Type	Band	ChNo	Fequency	Total
Wifi 5G	WIFI_A (6Mbps)	Trp	36	5180	19.39
			149	5745	18.82
			165	5825	18.72
		Tis	36	5180	92.55
			149	5745	91.32
			165	5825	91.67
Wifi 2.4G	WIFI_B (1Mbps)	Trp	1	2412	19.31
			6	2437	19.04
			11	2462	19.31
		Tis	1	2412	95.05
			6	2437	96.31
			11	2462	94.4
	WIFI_GN (Mcs0)	Trp	1	2412	19.3
			6	2437	19.35
			11	2462	19.01
		Tis	1	2412	88.51
			6	2437	89.89
			11	2462	87.97