

三合一天线规格书

3-in-1 antenna specification

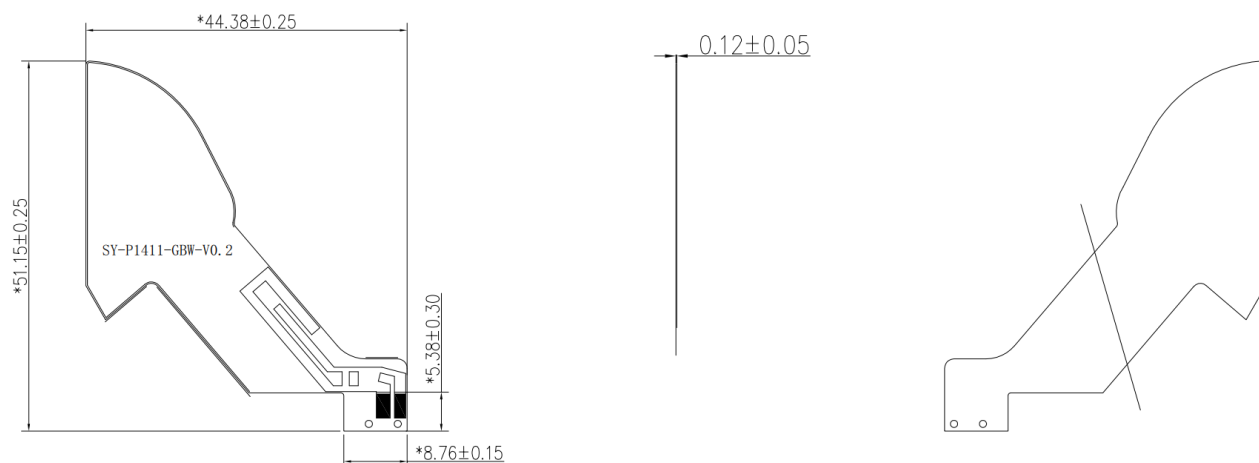
基本信息

General information

制造商 Manufacturer	SunnyWay Technology Co.,Ltd
天线型号 Model Name	P1411-GPS&WIFI&BT ant
日期 Date	2024.1.22
版本 Version	1.0
制造商地址 Vendor address	1F, Building 4, No. 99, Lane 215, Gaoguang Road, Qingpu District, Shanghai

天线外观

Antenna Appearance



技术规格

Technical Specifications

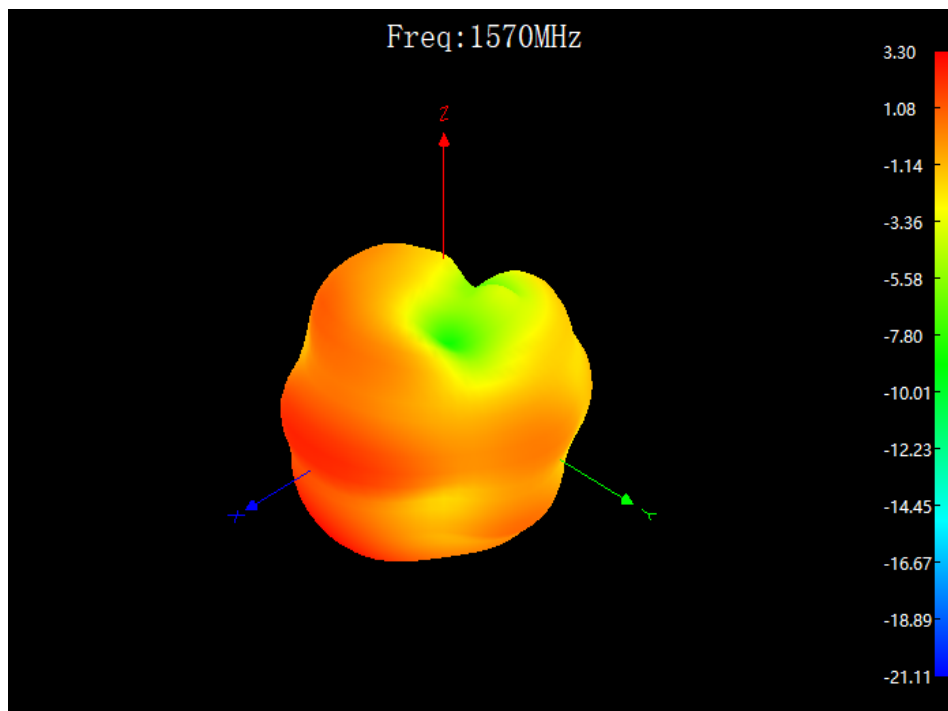
频率范围 Frequency Range	1575.42MHZ+2400-2500MHZ~5150-5850MHZ
天线类型 Antenna Type	IFA
尺寸 Dimensions	33.92*18.85mm
阻抗 Impedance	50 ohm
最大增益 Maximum Gain	2.63dbi
驻波比 VSWR	≤ 3
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Efficiency and gain

Frequency (MHz)	Gain(dBi)	Efficiency(%)
1540	1.04	42.27
1550	1.14	42.56
1560	1.3	42.85
1570	1.33	41.59
1580	1.2	41.59
1590	1.15	41.11
1600	1.23	41.11

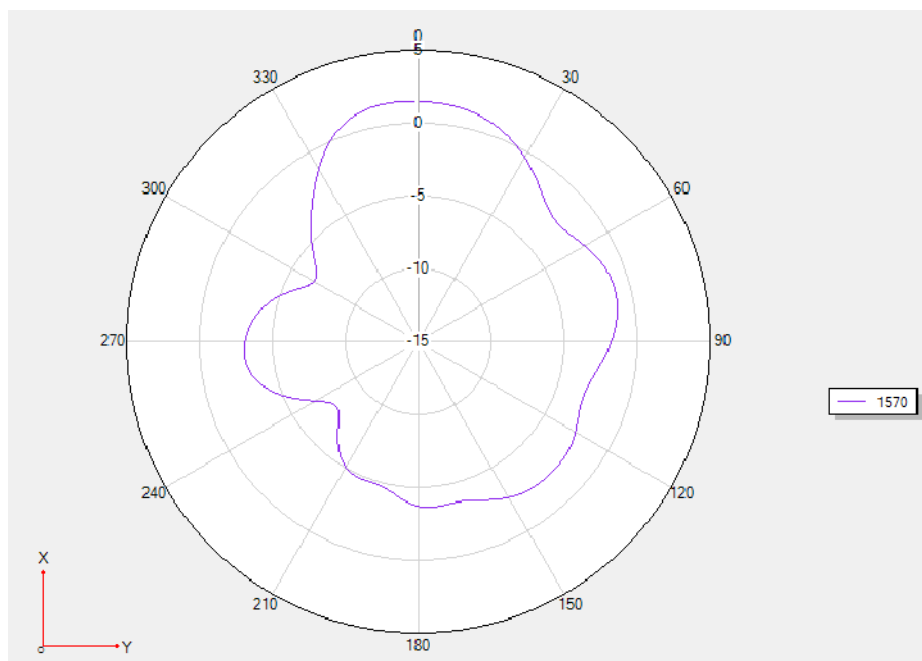
Frequency (MHz)	Gain(dBi)	Efficiency(%)	Frequency (MHz)	Gain(dBi)	Efficiency(%)
2400	-0.67	25.96	5100	1.07	33.34
2410	-0.49	28.32	5200	1.15	32.73
2420	0.37	31.63	5300	1.11	31.12
2430	0.59	33.28	5400	1.02	30.83
2440	0.76	34.49	5500	1.21	31.41
2450	1.5	36.55	5600	1.01	30.13
2460	1.82	36.85	5700	1.11	30.13
2470	1.93	37.18	5800	1.3	31.48
2480	2.37	37.38	5900	1.1	30.2
2490	2.42	38.05			
2500	2.63	38.24			

Free space 3D radiation pattern



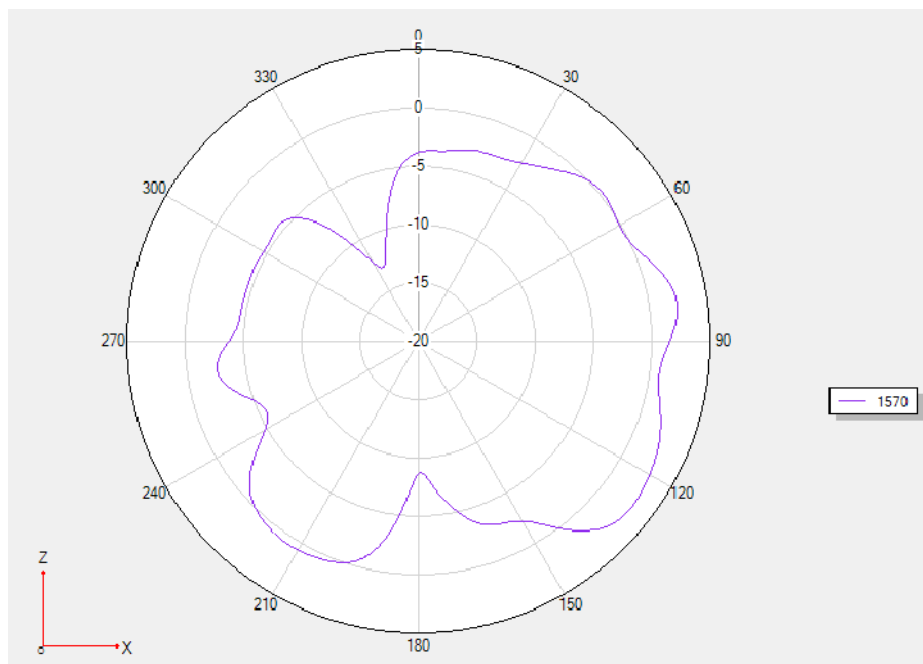
Free space 2D radiation pattern

X-Y Plane
H Theta=90

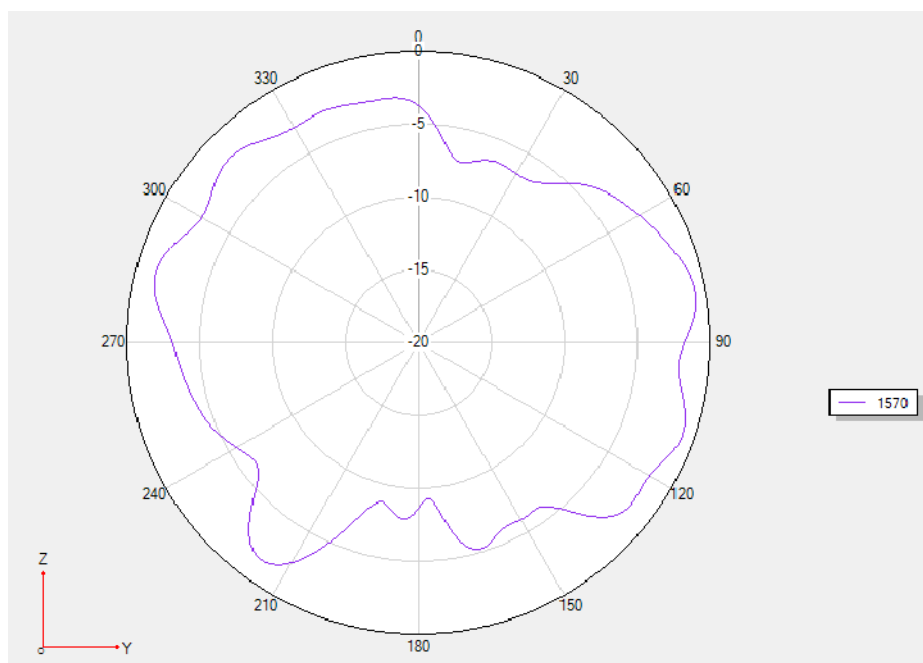


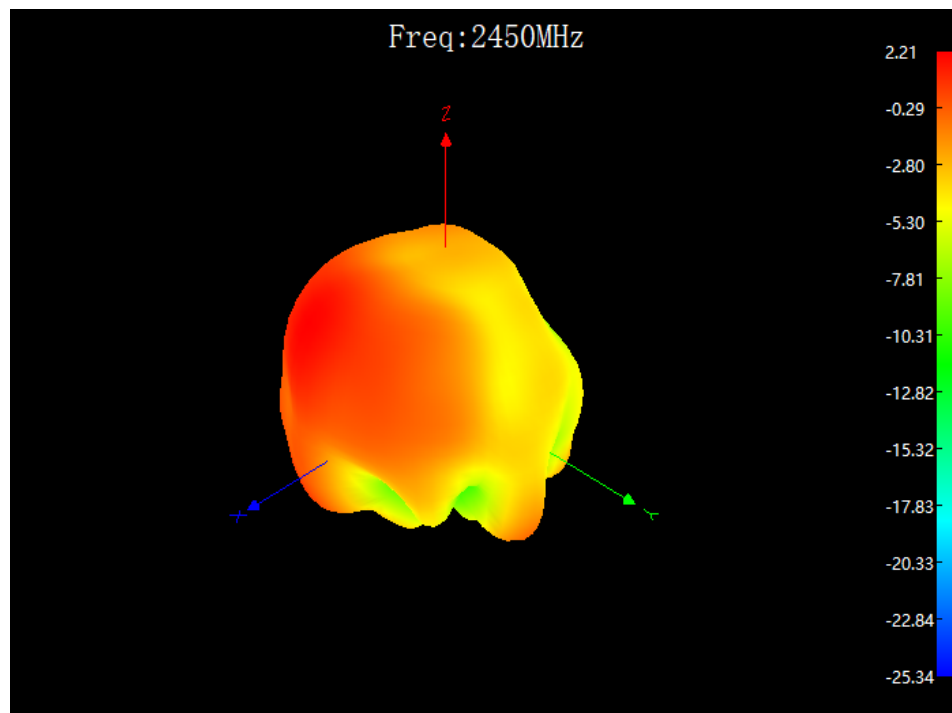
X-Z Plane

V Phi=0

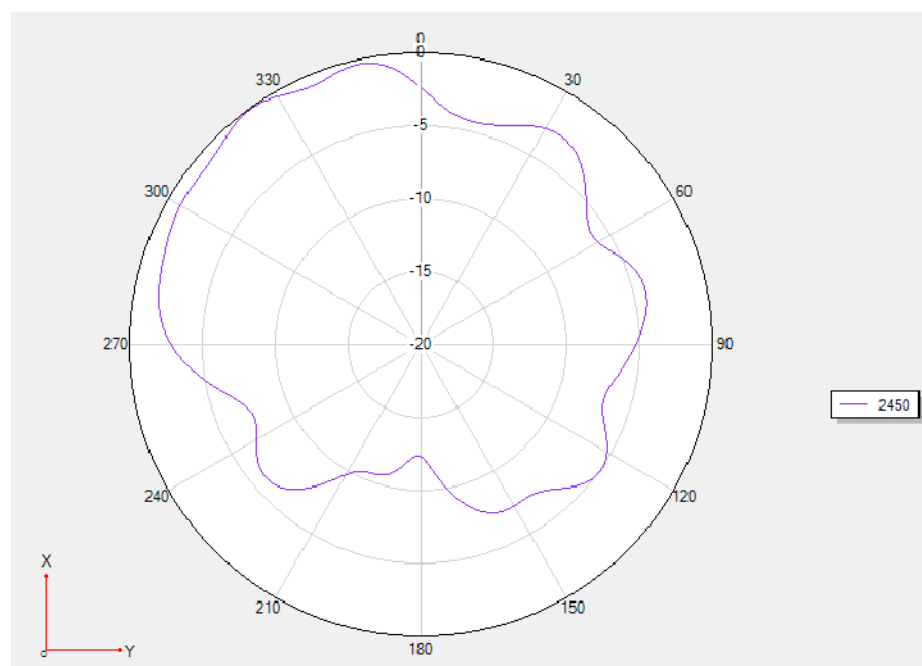


**Y-Z Plane
V Phi=90**

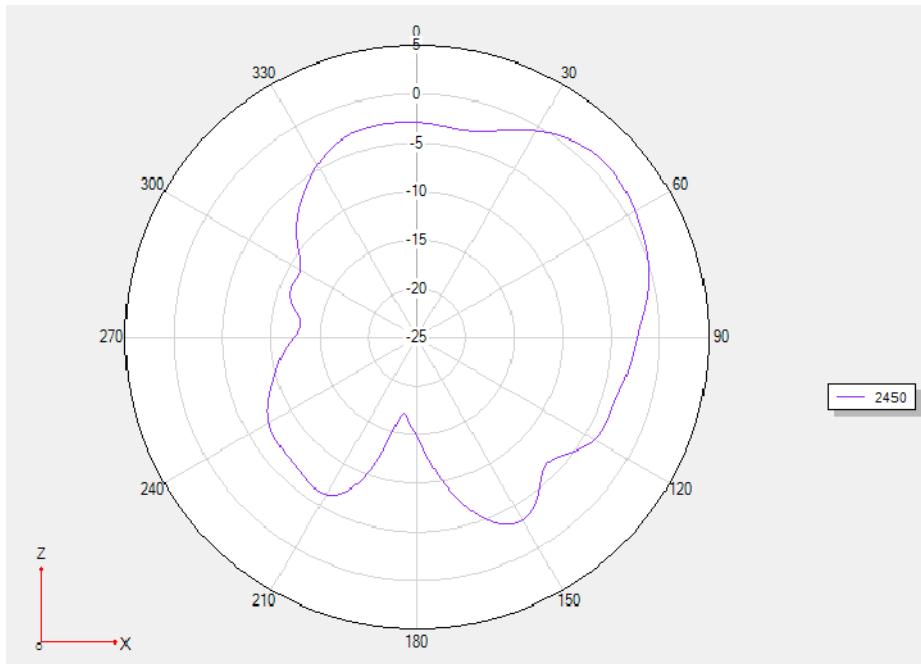




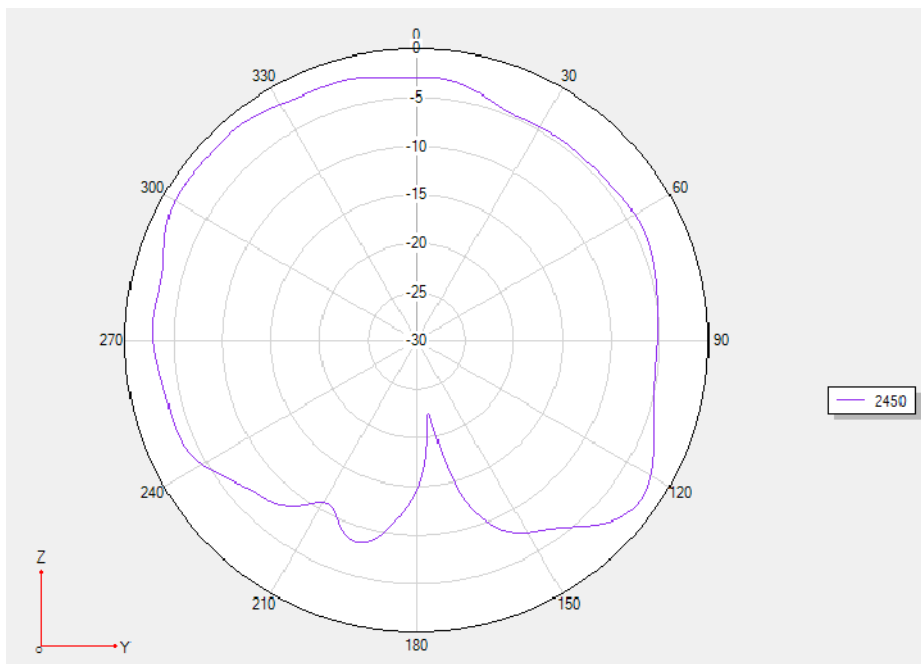
**X-Y Plane
H Theta=90**

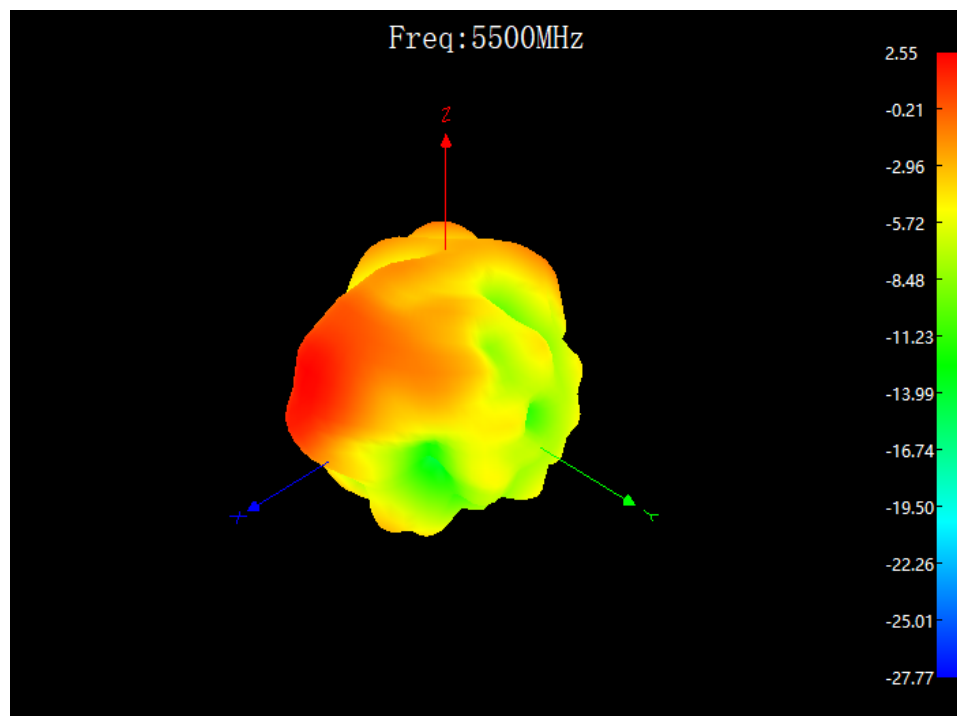


**X-Z Plane
V Phi=0**

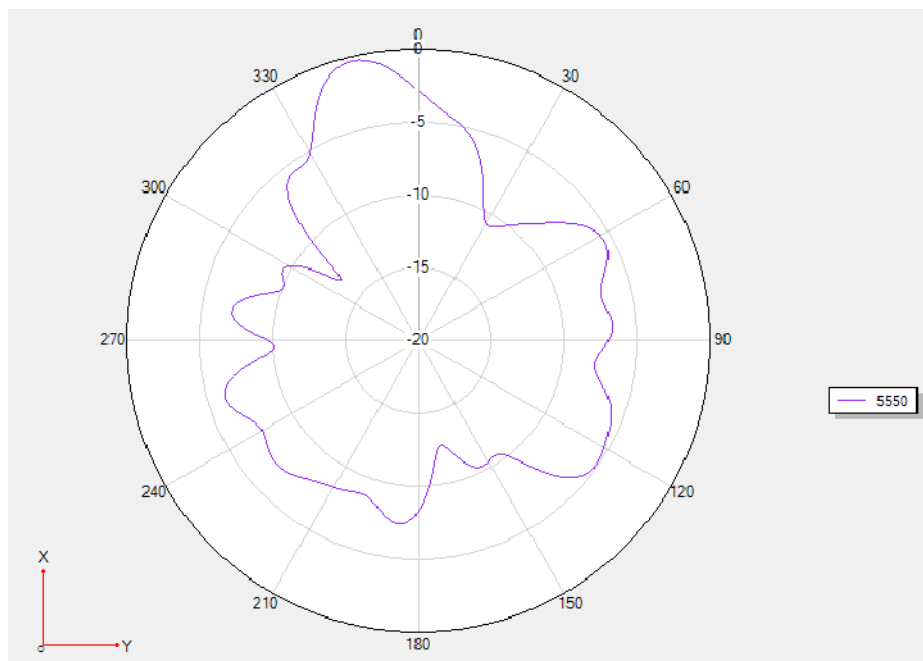


**Y-Z Plane
V Phi=90**

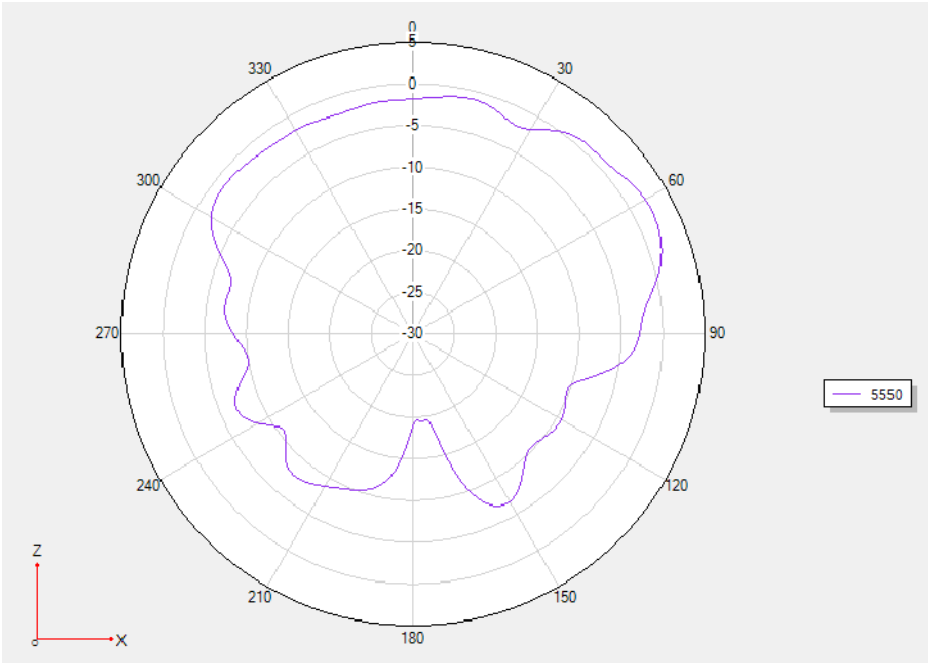




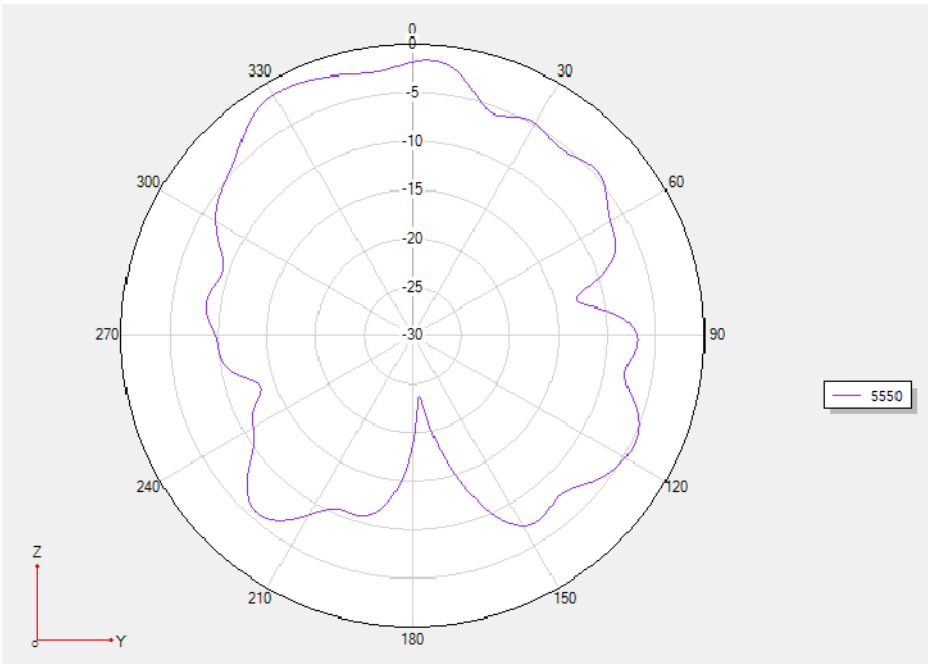
**X-Y Plane
H Theta=90**



X-Z Plane
V Phi=0



Y-Z Plane
V Phi=90



有源数据

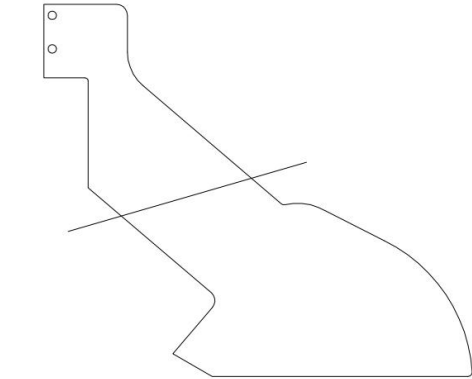
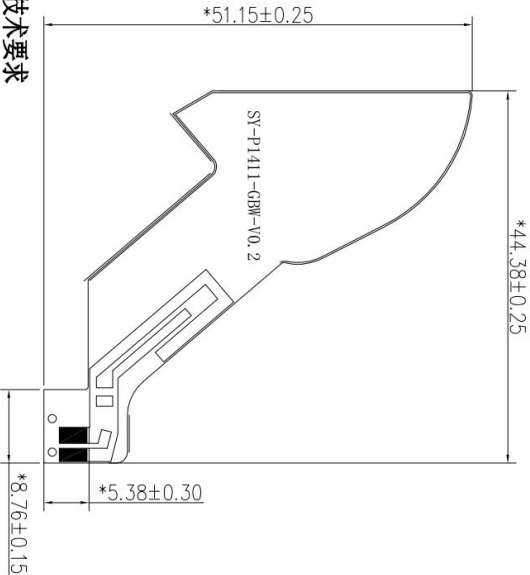
OTA（TRP TIS）

WIFI OTA测试		WIFI OTA test	
测试频段 Test frequency	信道 Channel	TRP	TIS
WIFI 11a（54M）	36	10.39	
	149	10.41	
	165	10.53	-71.42
WIFI 11b（11M)	1	13.51	
	7	13.55	
	13	13.49	-83.24

ROHS2.0、REACH

Silk screen white
characters 白字

版本	修改内容	修改人	日期



Technical requirement技术要求

1. Shipping and packaging requirements: (single PCS packaging and shipping) 出货包装要求: (单PCS包装出货)
2. Copper moor surface black ink; 铜泊表面黑色油墨;
3. The ink should be uniform; 油墨要均匀;
4. The size with "*" symbol is the key size; 带"*"符号尺寸为重点尺寸;
5. Back glue with TESA 68905; 背胶用TESA 68905 ;
6. The substrate uses PI T=1MI; 基材使用PI T=1MI;
7. Copper foil thickness 0.5oz; 铜箔厚0.5oz;
8. Gold plating thickness 0.5 wheat, 48 hours salt spray; 镀黄金厚0.5麦, 48小时盐雾;
9. The unpoured fillet Angle is 0.2, and the process edge is 0.2mm; 未注倒圆角均为0.2, 工艺沿边为0.2mm;
10. No tolerance is indicated according to the general tolerance table; 未注公差按一般公差表;
11. The products meet the requirements of ROHS2.0 and REACH. 产品符合ROHS2.0、REACH要求。



CU 铜箔区域



gold plating
表面镀金

Sunnyway Technology Co., Ltd

Sunnyway Technology Co., Ltd		PART NAME: P1411 bwg antenna		DATE:	2023.9.15
TOLERANCE X.X ±0.20 .XX ±0.10 .XXX±0.05 ANGULAR <±0.5°		PART NO: SH232961B75-2	DRAWN:	YUJIANG	
UNIT: mm		MATERIAL:	CHECKED:	ZHANGTU	
COLOUR: 黑色		FINISHING:	APPROVED:		
SCALE: 1:1		REV:			