

ShenZhen XinErSheng Technology Co.,Ltd  
深圳市鑫尔盛科技有限公司

【物料承认书】

APPROVAL SHEET

客户 (Customer) : Dongguan Yueshun Electronic Technology Co., Ltd

产品名称 (Description) : Antenna

产品规格 (spec) : PCB Ant: 45\*8mm, 1.13, With IPEX, Cable 105mm,

客户料号 (Cus P/N) : 118D-10030000T01

料号 (Part NO): XESANT12B13358

天线型号 (Antenna Model): 118D-10030000T01

期 (Date) : 2023-10-09

版本 (Version) : V1.1

核准 APPROVED BY	审核 CHECKED BY	制作 DRAWN BY
李庆辉	方立志	Ande



Please sign back after confirmation:

Client signature:  Qualified  Unqualified

批准 APPROVAL	审核 CHECKED	检验 CONFORM

地址(Adress): 深圳市宝安区福永镇凤凰社区岭下路 96 号 D 栋 3 楼

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深圳市鑫尔盛科技有限公司

ShenZhen XinErSheng Technology Co.,Ltd

### 产品主要技术参数

### Main technical parameters of the product

主要技术参数		Main technical specifications	
频率范围 (MHZ)	2400-2500/515 0-5850	Frequency Range(MHZ)	2400-2500/5150-5850
中心频率 特性阻抗 ( $\Omega$ )	50 $\pm$ 10	Impedance( $\Omega$ )	50 $\pm$ 10
峰值增益 (dBi)	3 $\pm$ 1	Peak Gain(dBi)	3 $\pm$ 1
反射损耗	$\leq$ -10	ReTurnLoss(dB)	$\leq$ -10
输出电压驻波比	$\leq$ 2	VSWR	$\leq$ 2
极化方式	垂直极化	Polarization	Linear Vertical
连接方式	IPEX	Connector Type	IPEX
物理特性		Physical Properties	
天线本体材料	FR4	Antenna Base	FR4
工作温度	-20 $^{\circ}$ C-+85 $^{\circ}$ C	Operating Temp	-20 $^{\circ}$ C-+85 $^{\circ}$ C
保存温度	-20 $^{\circ}$ C-+85 $^{\circ}$ C	Storage Temp	-20 $^{\circ}$ C-+85 $^{\circ}$ C

### 原材料清单:

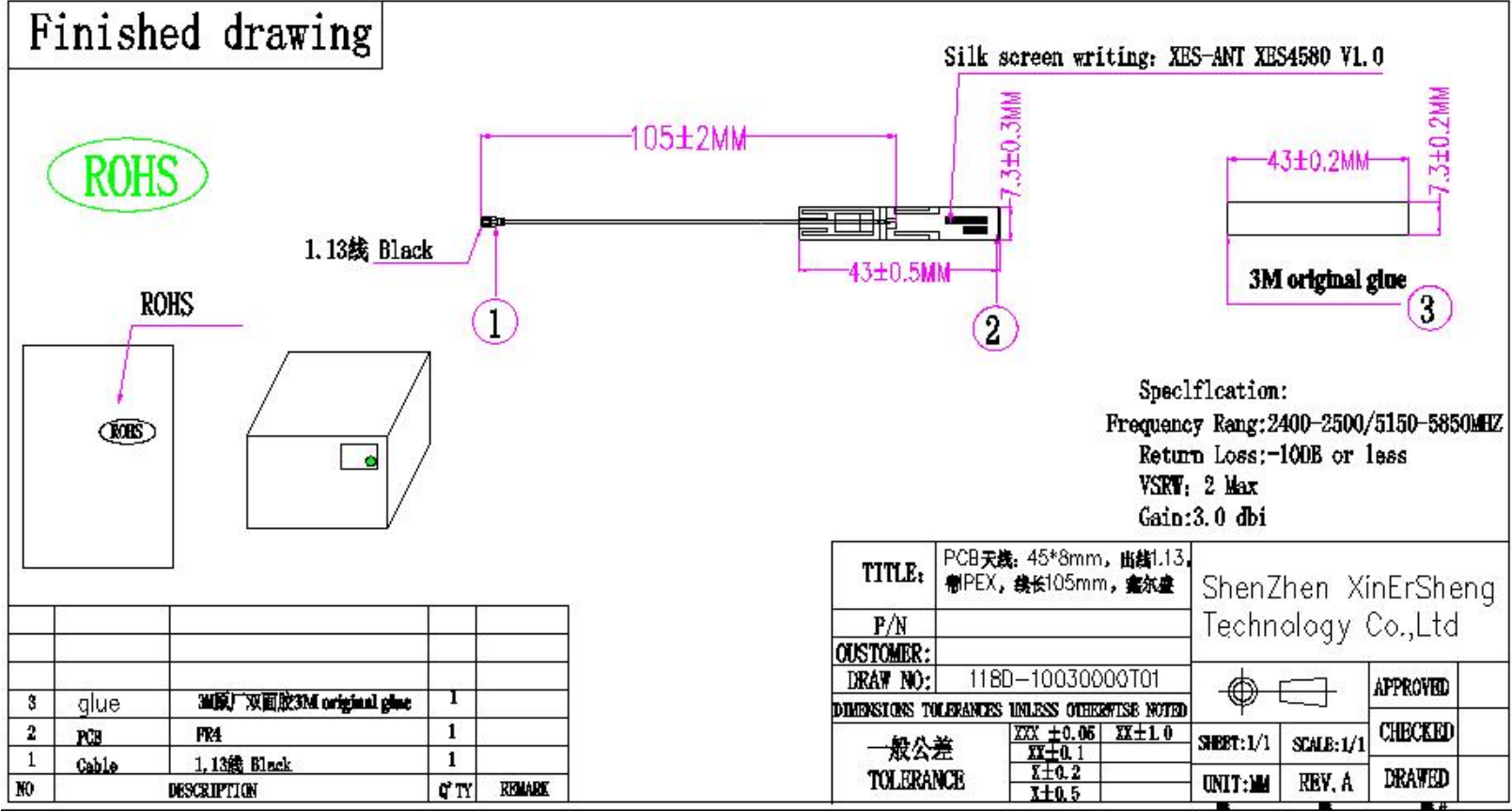
### Bill of materials

编号 Number	名称 Name	主要材质 Main material	数量 Quantity	单位 Unit	备注 Remark
1 one	PCB	FR4	1	PCS	
2 two	线材 Wire rod	1.13 黑色线带扣 1.13 Black Cable Tie	1	PCS	
3 three	胶 glue	3M 原厂胶 3M original glue	1	PCS	

成品图纸

Finished drawing

**Finished drawing**



Silk screen writing: XES-ANT XES4580 VL.0

1. 1.13线 Black

2

3

3M original glue

Specfication:  
Frequency Rang:2400-2500/5150-5850MHZ  
Return Loss:-10DB or less  
VSWR: 2 Max  
Gain:3.0 dbi

NO	DESCRIPTION	Q'TY	REMARK
3	glue 3M原厂双面胶3M original glue	1	
2	PCB FR4	1	
1	Cable 1.13线 Black	1	

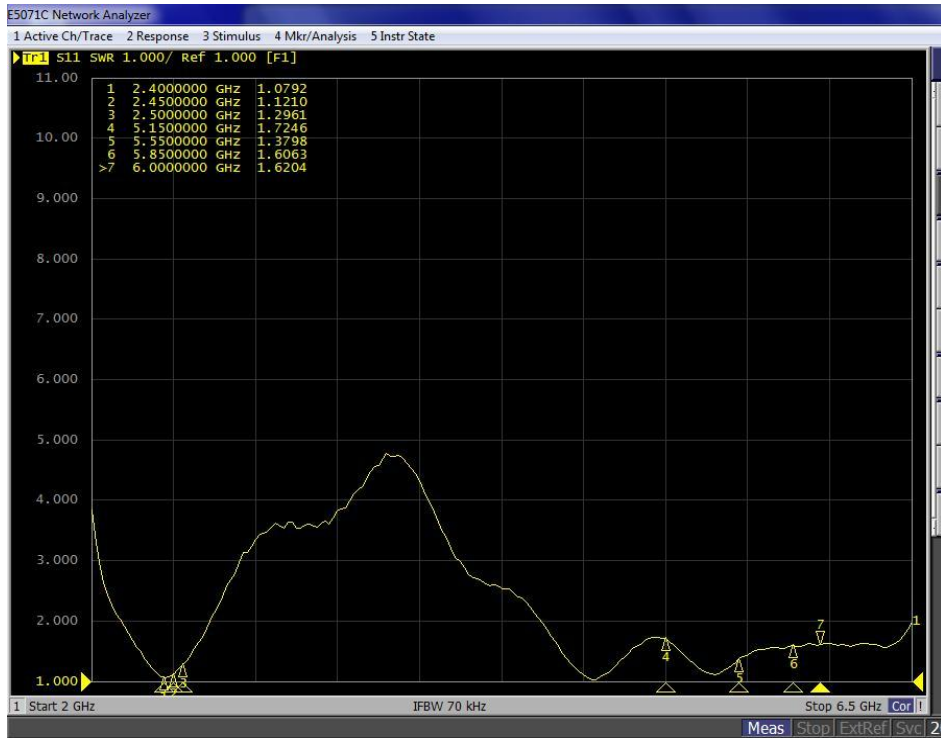
<b>TITLE:</b>	PCB天线: 45*8mm, 出线1.13, 带PEX, 线长105mm, 鑫尔盛	ShenZhen XinErSheng Technology Co.,Ltd
<b>P/N</b>		
<b>CUSTOMER:</b>		
<b>DRAW NO:</b>	118D-10030000T01	
<b>DIMENSIONS TOLERANCES UNLESS OTHERWISE NOTED</b>		
<b>一般公差 TOLERANCE</b>	XX ±0.05	XY ±1.0
	YY ±0.1	
	Z ±0.2	
	X ±0.5	
<b>UNIT:MM</b>	<b>REV. A</b>	

APPROVED
CHECKED
DRAWED

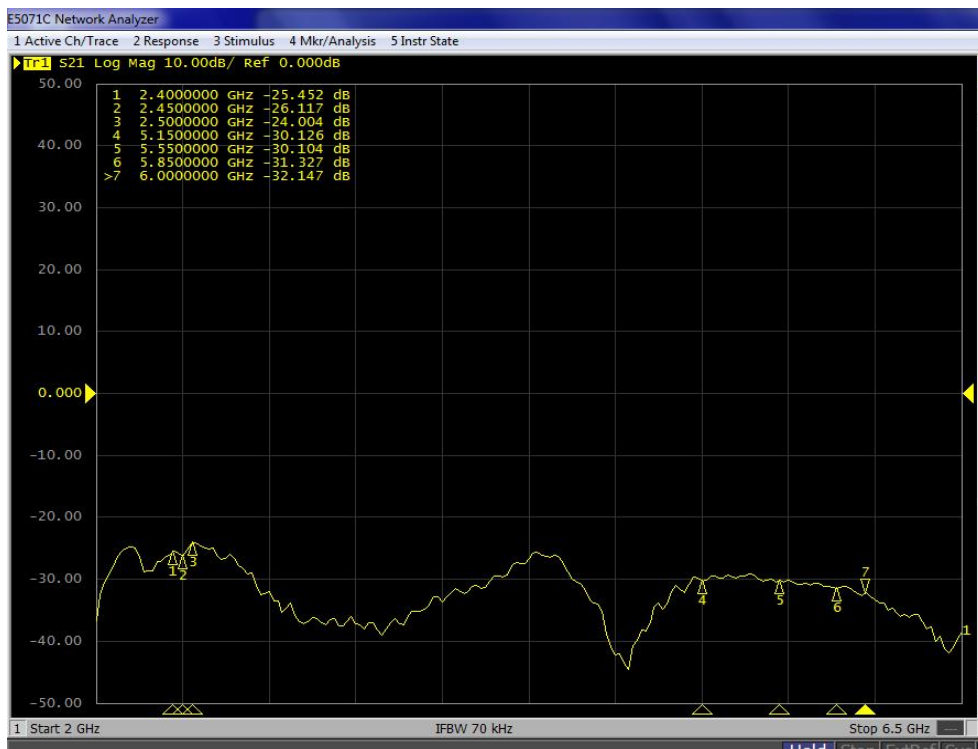
## 网络分析仪测试报告 (Network analyzer test report)

天线 1 (antenna 1)

驻波比 (VSWR) :

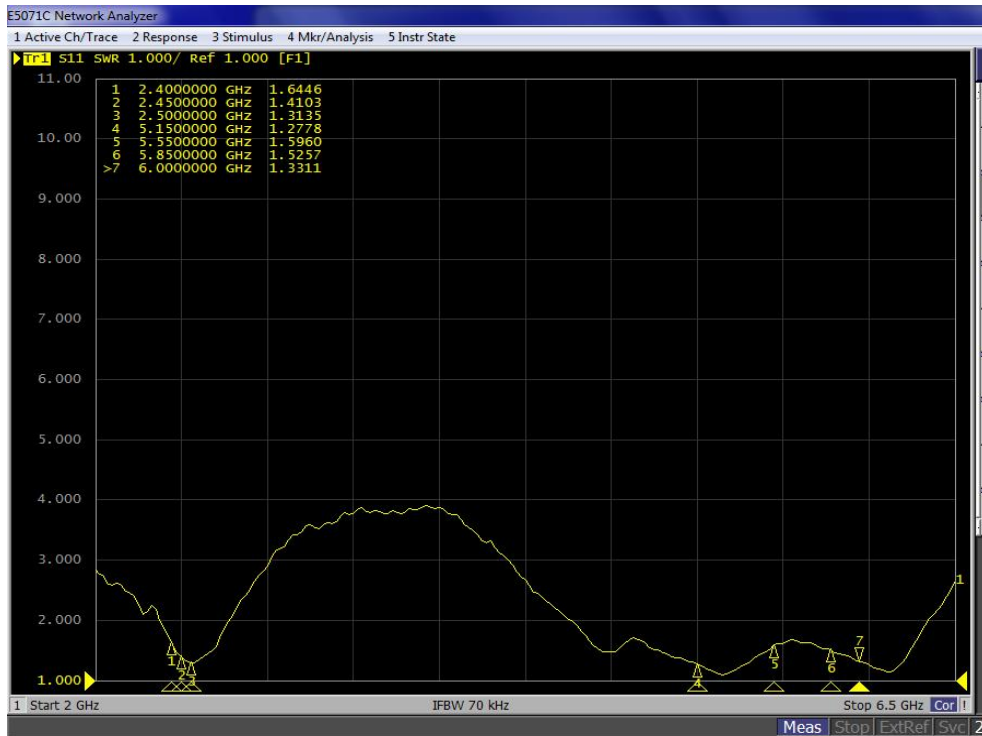


天线隔离度 (Antenna isolation)

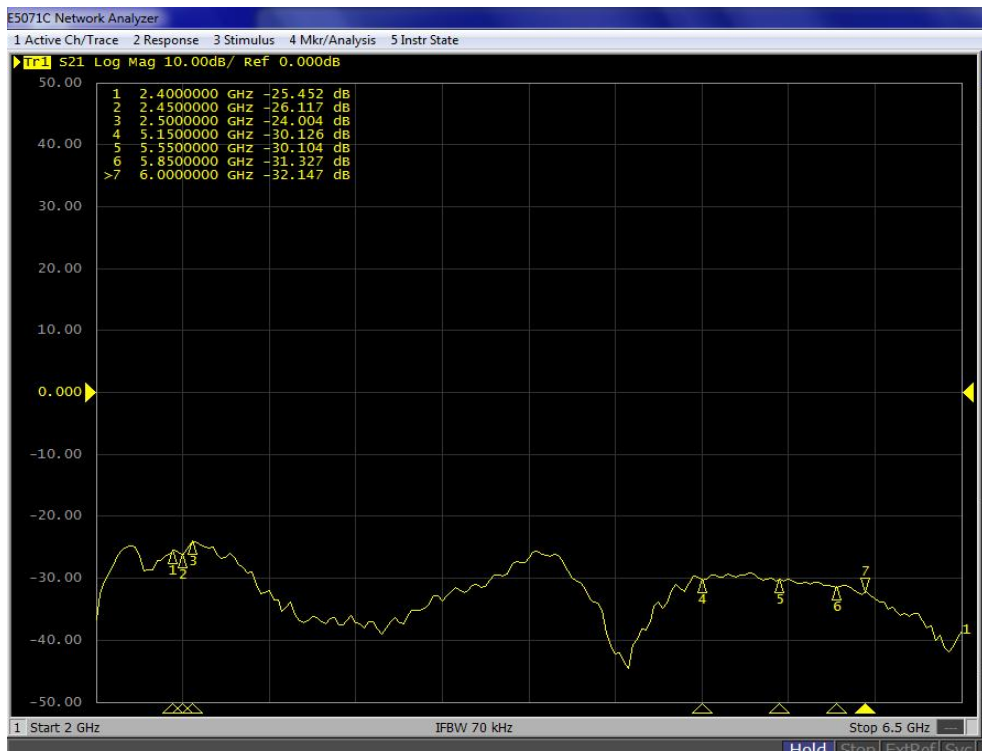


### 天线 2 (antenna 2)

驻波比 (VSWR) :

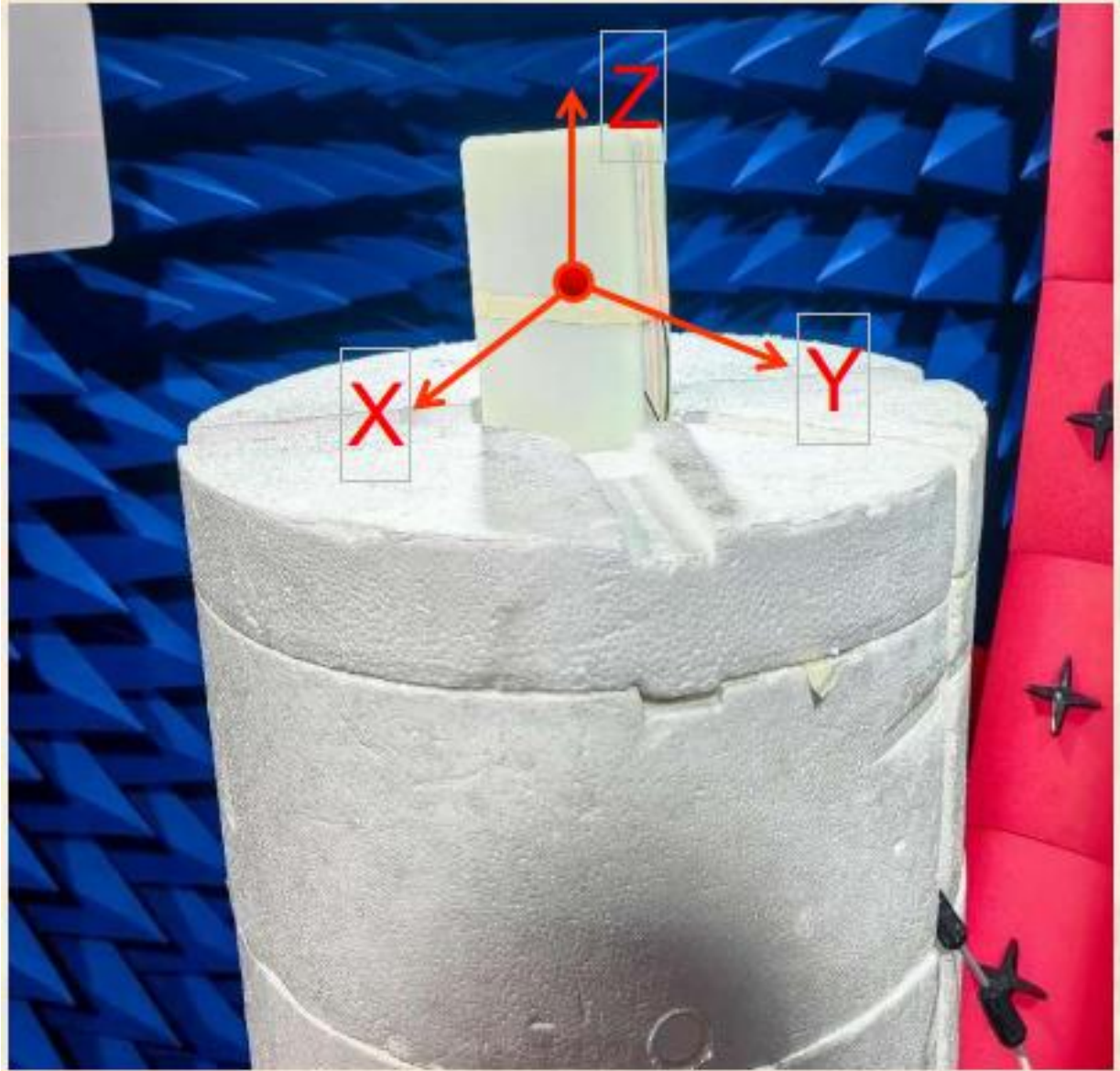


### 天线隔离度 (Antenna isolation)

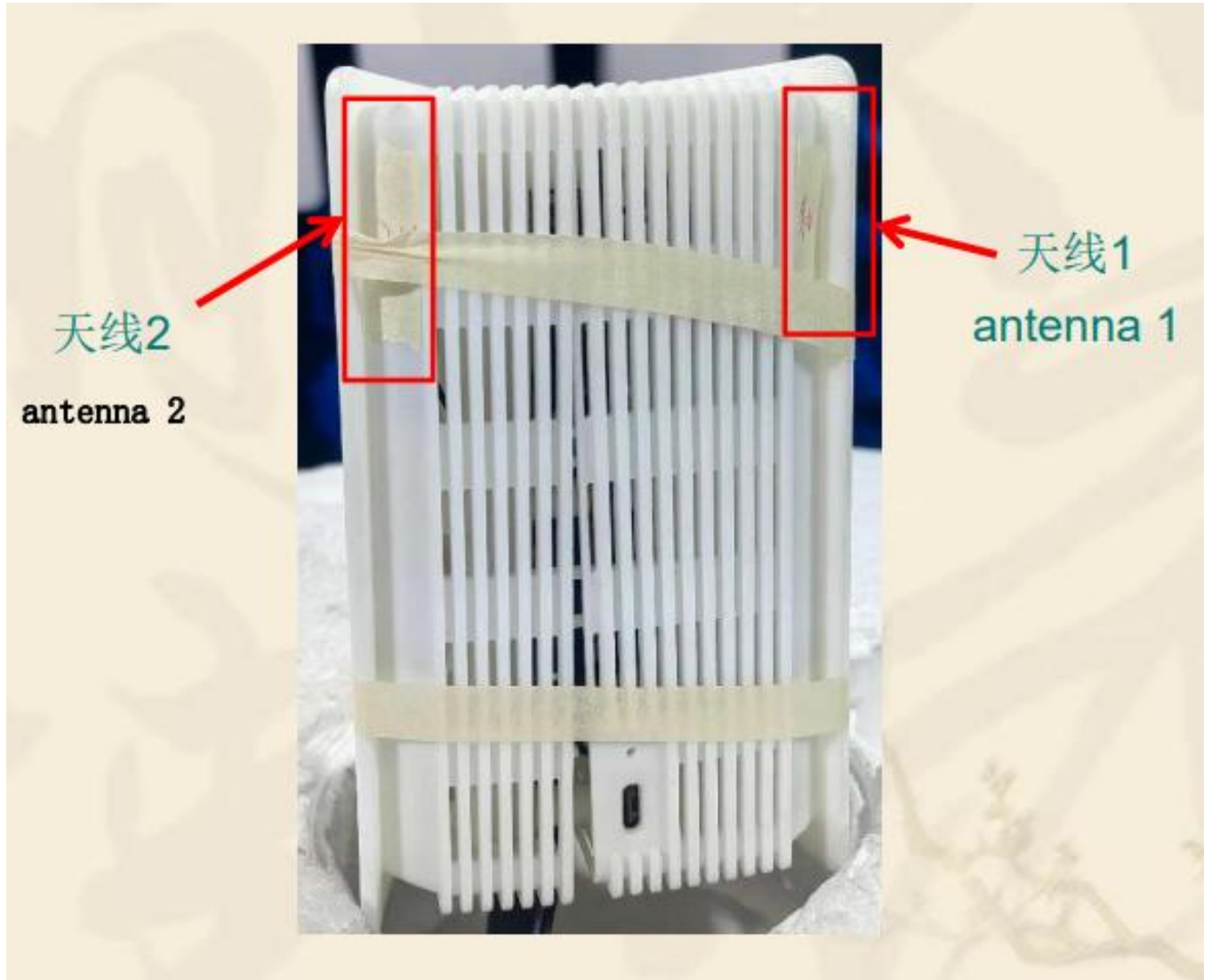




## 测试环境（testing environment）



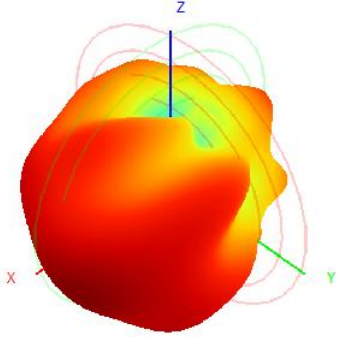
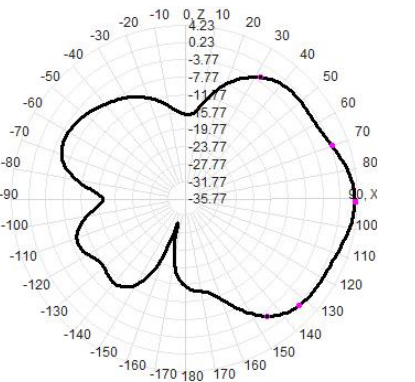
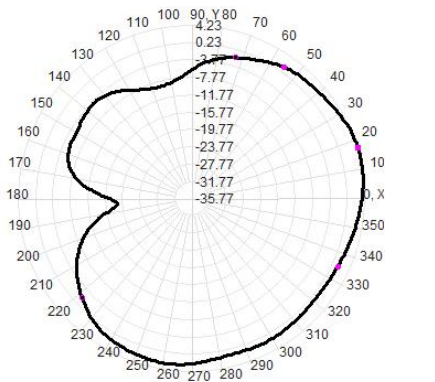
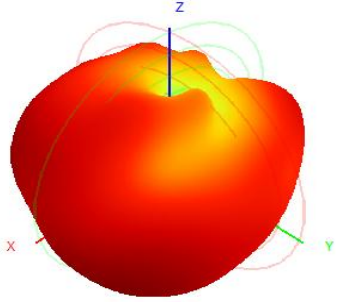
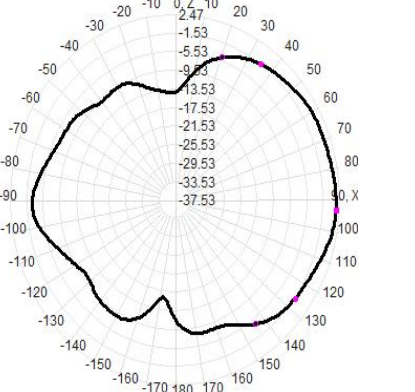
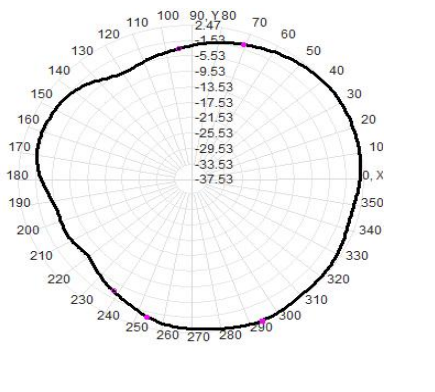
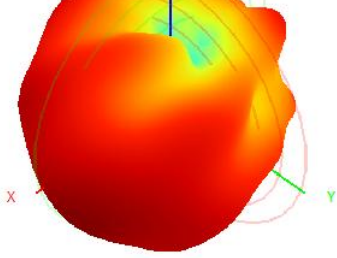
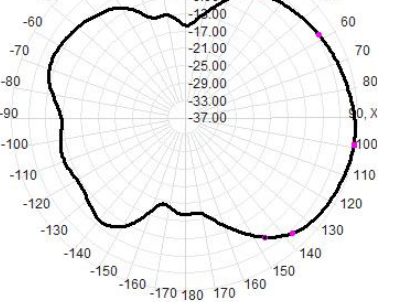
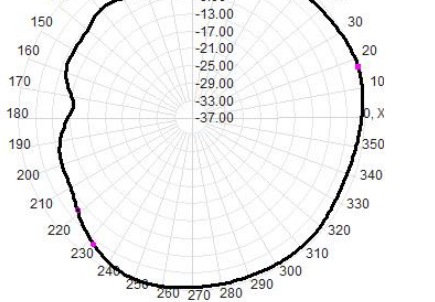
天线安装示意图 (Antenna installation diagram)

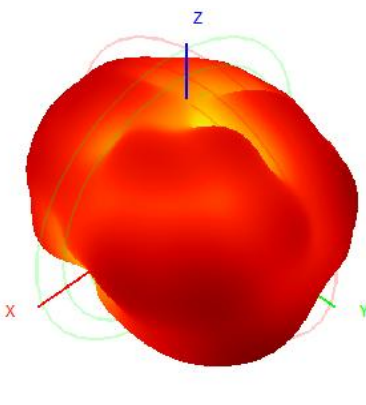
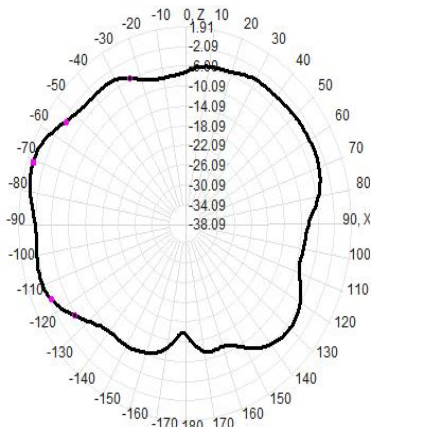
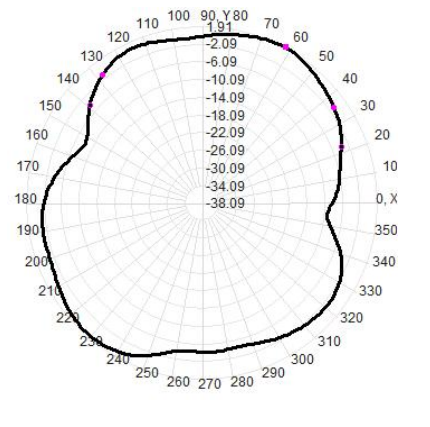
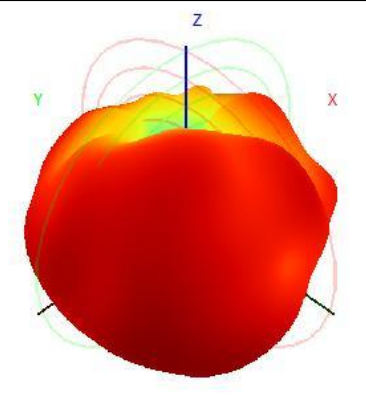
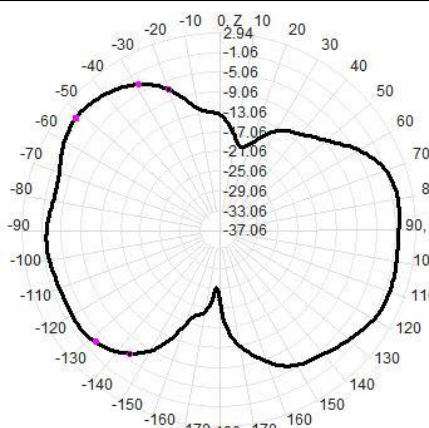
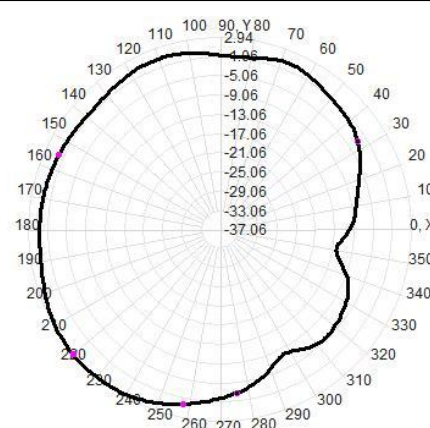
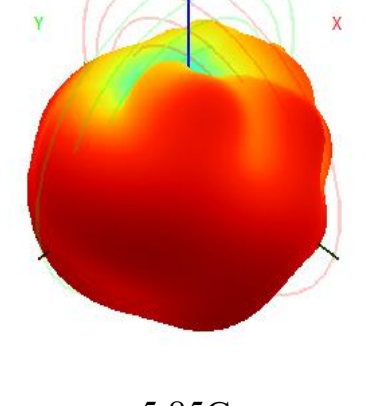
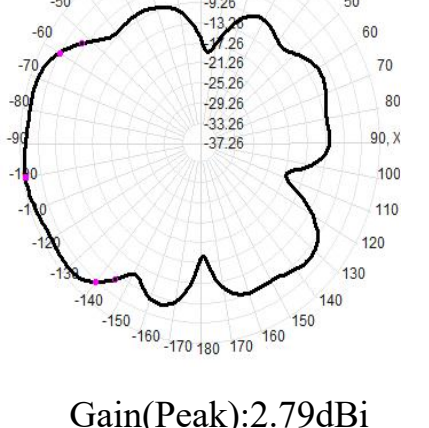
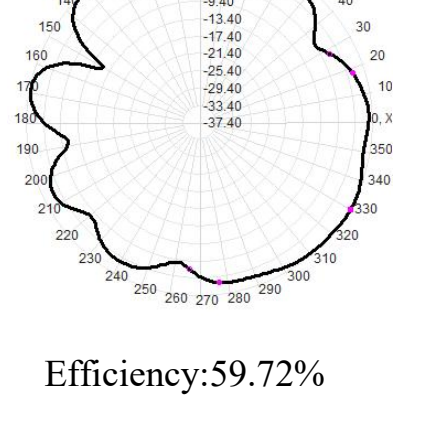




# Antenna 1

## 2D、3DRaditation Pattern

		
<p>2.412G</p>	<p>Gain(Peak):1.84dBi</p>	<p>Efficiency:67.94%</p>
		 <p>Efficiency:64.68%</p>
<p>2.442G</p>	<p>Gain(Peak):1.68dBi</p>	
		 <p>Efficiency:60.54%</p>
<p>2.477G</p>	<p>Gain(Peak):1.59dBi</p>	

		
<p>5.15G</p>	<p>Gain(Peak):2.13dBi</p>	<p>Efficiency:58.72%</p>
		
<p>5.5G</p>	<p>Gain(Peak):2.88dBi</p>	<p>Efficiency:64.67%</p>
		 <p>Efficiency:59.72%</p>
<p>5.85G</p>	<p>Gain(Peak):2.79dBi</p>	



### Antenna gain and efficiency

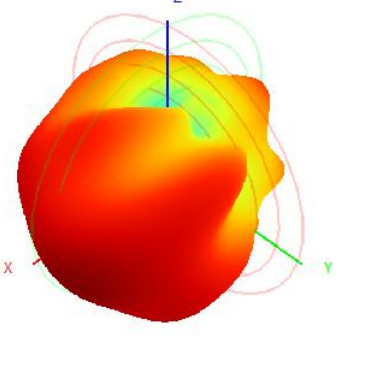
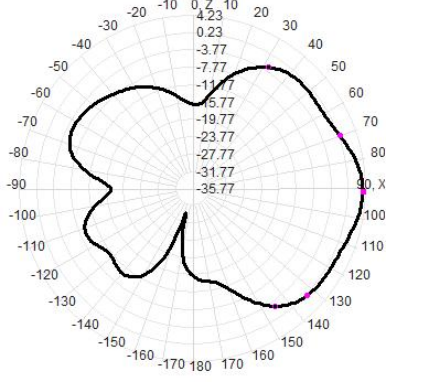
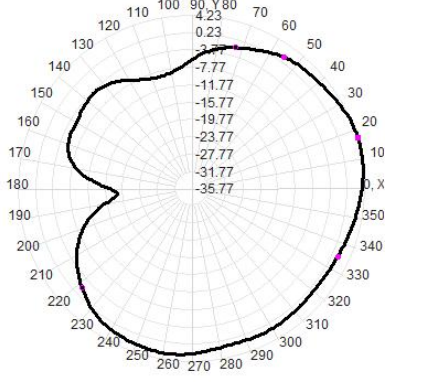
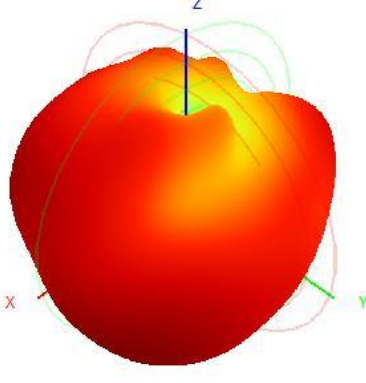
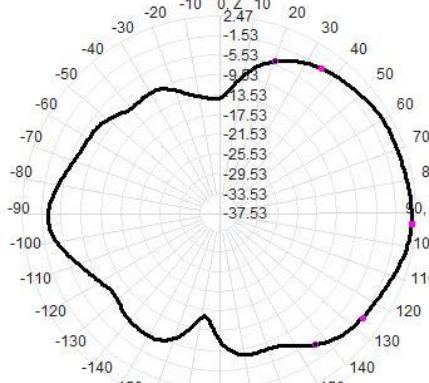
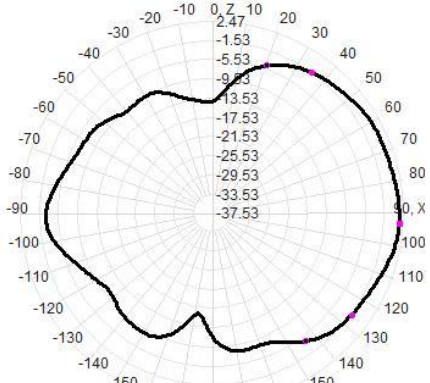
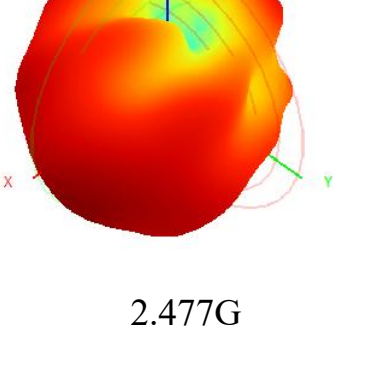
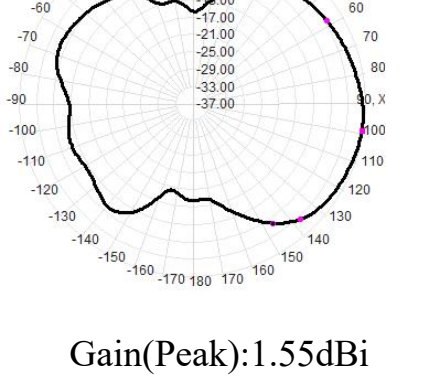
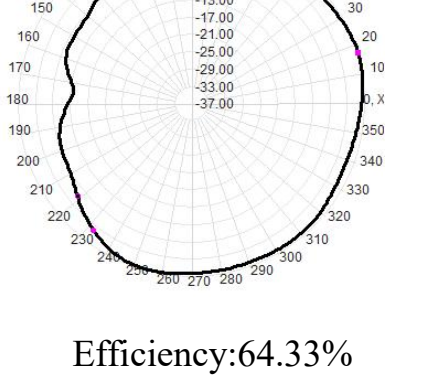
Frequency (MHz)	Gain (dBi)	Efficiency (%)
2412.0	1.84	67.94
2417.0	1.76	67.12
2422.0	1.83	66.78
2427.0	1.79	67.55
2432.0	1.74	66.28
2437.0	1.61	64.59
2442.0	1.68	64.68
2447.0	1.73	64.54
2452.0	1.76	64.17
2457.0	1.85	64.29
2462.0	1.88	62.68
2467.0	1.78	61.31
2472.0	1.75	61.58
2477.0	1.59	60.54

Frequency (MHz)	Gain (dBi)	Efficiency (%)
5150.0	2.13	58.72
5180.0	2.23	59.81
5190.0	2.08	59.91
5200.0	2.18	61.49
5210.0	2.13	60.18
5220.0	2.25	61.04
5230.0	2.25	61.05
5240.0	2.33	61.97
5250.0	2.25	62.81
5260.0	2.02	62.73
5270.0	1.77	61.66
5280.0	1.91	61.15
5290.0	2.10	61.22
5300.0	2.23	61.85
5310.0	2.14	63.05
5320.0	1.94	62.32
5400.0	2.33	63.37
5450.0	2.04	63.75
5500.0	2.88	64.67
5510.0	2.86	64.26
5520.0	2.88	63.33
5530.0	2.93	62.65
5540.0	3.05	62.20
5550.0	3.01	62.04
5560.0	2.87	61.92
5570.0	2.75	62.91

Frequency (MHz)	Gain (dBi)	Efficiency (%)
5580.0	2.68	63.86
5590.0	2.72	64.69
5600.0	2.51	64.56
5610.0	2.24	63.35
5620.0	2.15	61.99
5630.0	2.15	61.61
5640.0	2.24	60.76
5660.0	2.59	62.33
5670.0	2.66	62.46
5680.0	2.74	63.63
5690.0	2.82	63.78
5700.0	3.20	63.46
5710.0	3.53	63.71
5720.0	3.69	63.34
5725.0	3.72	62.56
5745.0	3.71	61.00
5755.0	3.66	60.19
5765.0	3.50	58.57
5775.0	3.35	58.68
5785.0	3.22	59.10
5795.0	3.03	59.57
5800.0	3.05	60.68
5805.0	2.98	60.85
5825.0	2.82	60.45
5850.0	2.79	59.72
5900.0	2.67	57.68

# Antenna 2

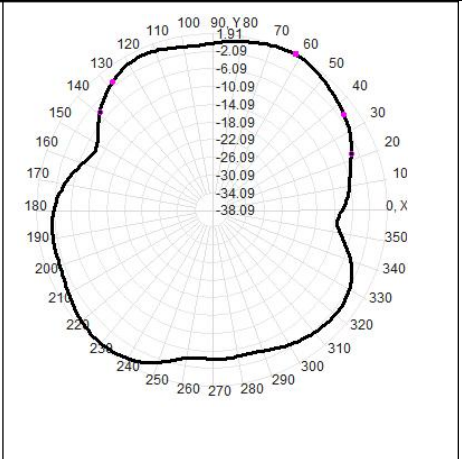
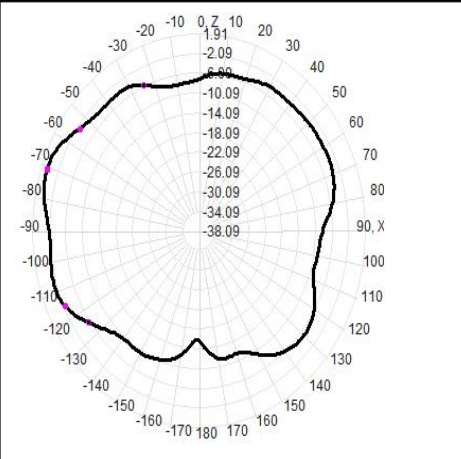
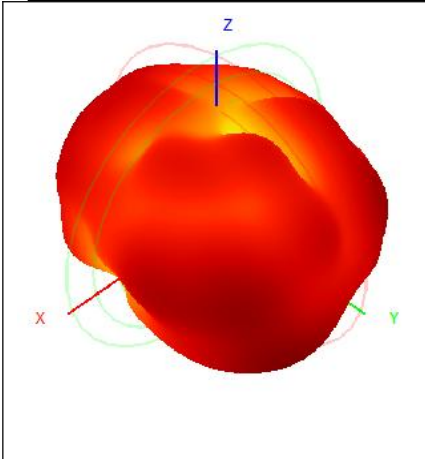
## 2D、3DRaditation Pattern

		
<p>2.412G</p>	<p>Gain(Peak):1.45dBi</p>	<p>Efficiency:57.26%</p>
		
<p>2.442G</p>	<p>Gain(Peak):2.54dBi</p>	<p>Efficiency:70.65%</p>
		
<p>2.477G</p>	<p>Gain(Peak):1.55dBi</p>	<p>Efficiency:64.33%</p>



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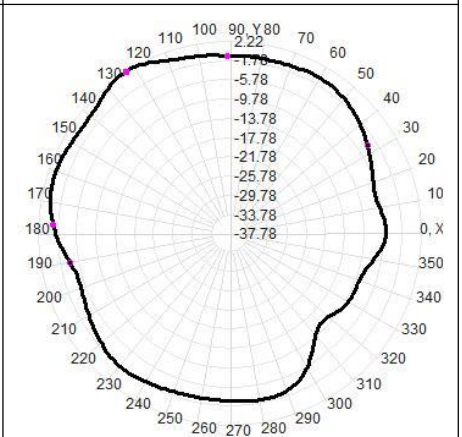
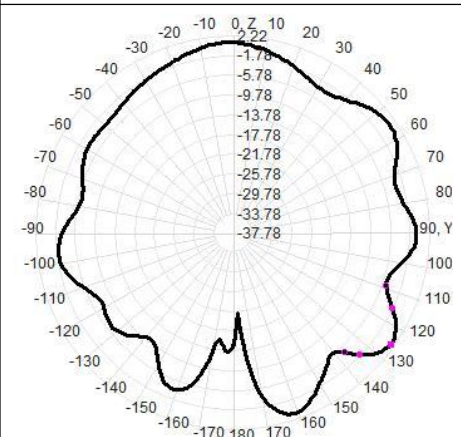
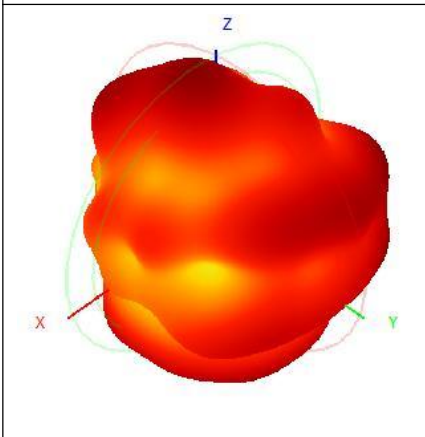
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5.15G

Gain(Peak):2.0dBi

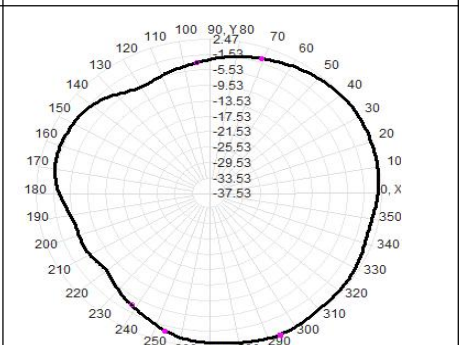
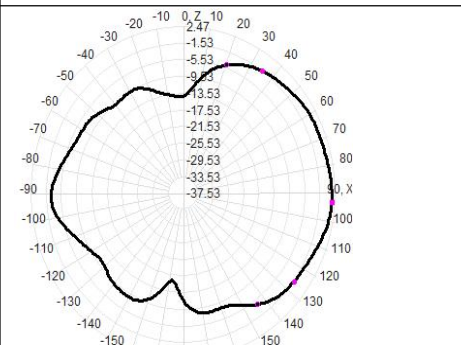
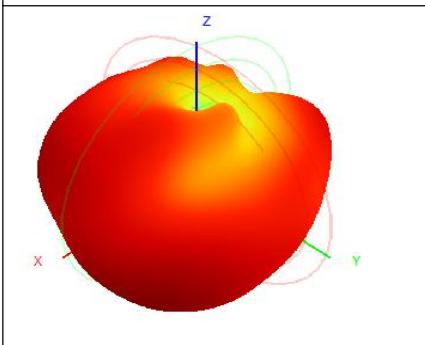
Efficiency:60.28%



5.5G

Gain(Peak):3.51dBi

Efficiency:62.41%



5.85G

Gain(Peak):2.57dBi

Efficiency:64.59%



## Antenna gain and efficiency

### 天线增益及效率

Frequency (MHz)	Gain (dBi)	Efficiency (%)
2412.0	1.45	57.26
2417.0	1.48	58.11
2422.0	1.60	58.11
2427.0	2.56	70.96
2432.0	2.42	68.33
2437.0	2.45	70.50
2442.0	2.54	70.65
2447.0	2.24	70.76
2452.0	1.85	70.96
2457.0	1.96	69.64
2462.0	1.68	67.97
2467.0	1.64	68.33
2472.0	1.66	65.47
2477.0	1.55	64.33

Frequency (MHz)	Gain (dBi)	Efficiency (%)
5150.0	2.00	60.28
5180.0	2.47	60.39
5190.0	2.62	60.91
5200.0	2.82	62.32
5210.0	2.94	62.58
5220.0	2.93	62.80
5230.0	2.78	62.50
5240.0	2.80	62.26
5250.0	2.58	62.17
5260.0	2.40	61.33
5270.0	2.46	60.58
5280.0	2.12	59.89
5290.0	2.08	60.23
5300.0	2.01	61.05
5310.0	2.26	60.19
5320.0	2.54	61.21
5400.0	2.26	58.81
5450.0	3.90	64.00
5500.0	3.51	62.41
5510.0	3.47	61.28
5520.0	3.43	61.04
5530.0	3.42	61.04
5540.0	3.36	61.68
5550.0	3.43	58.49
5560.0	2.81	59.33
5570.0	2.94	60.24

Frequency (MHz)	Gain (dBi)	Efficiency (%)
5580.0	3.10	60.72
5590.0	3.21	61.39
5600.0	3.11	61.32
5610.0	3.24	61.03
5620.0	3.04	60.72
5630.0	2.95	61.08
5640.0	2.89	61.06
5660.0	3.03	63.05
5670.0	3.03	63.33
5680.0	3.29	64.29
5690.0	3.27	64.40
5700.0	3.05	63.45
5710.0	2.84	63.44
5720.0	2.70	62.94
5725.0	2.58	62.53
5745.0	2.66	62.60
5755.0	2.69	62.81
5765.0	2.78	62.51
5775.0	3.01	63.50
5785.0	2.89	64.51
5795.0	2.89	65.77
5800.0	2.88	66.41
5805.0	2.88	66.43
5825.0	2.75	65.69
5850.0	2.57	64.59
5900.0	2.98	66.43