深圳市华曦达科技股份有限公司
SHEN ZHEN SDMC Technology Co.，LTD

样品承认规格书

PART SHEET FOR APPROVAL

制造商名称： Manufacturer：	东莞市信博联电子科技有限公司 Dongguan Sinbolin Electronic Technology Co.,Ltd.
供应商名称： Supplier：	东莞市信博联电子科技有限公司 Dongguan Sinbolin Electronic Technology Co.,Ltd.
产品名称： Part Description：	WIFI 金属片天线 WIFI Metal Antenna
规格型号： Model No：	JSP20068
制造商 P/N： Manufacturer P/N：	JSP-2006803-09BN
华曦达编码： SDMC P/N：	360100320
日期： Issued Date：	2023.06.20

供应商确认 Supplier confirmation

承办 Made By	审核 Engineer	批准 Approver
黄梦诗	向瑞盛	程志超

东莞市信博联电子科技有限公司 工程专用章

华曦达确认 SDMC confirmation

承认原因: Approval Reason：	☐新物料 New Part ☐替代料 Substitute Part			
承办 Made By	审核 Engineer			批准 Approver
	品质 Quality	研发 R&D	业务 Sales	

备注：签名表明提交样品获得承认，图纸规格已经受控。Note：Signature indicates that the submitted sample is approved and the drawing/specification is now the controlling document.

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Address: 19/F, Changhong Science & Technology Mansion, No.18, Keji South 12th Road, High-tech Industrial Park, Nanshan District, Shenzhen, China

Product Number:JSP-2006803-09BN
Product Name: WIFI Metal Antenna

Specification For Approval
规 格 承 认 书

日期 Date : 2021/04/28

编号 File No. : XBL21042801

版次 Version : 1.0

客 户
Customer: 华曦达

客 户 料 号
Customer P/N: 360100320

信博联料号
Sinbolin P/N: JSP-2006803-09BN

品 名
Description : WIFI Metal Antenna

信博联核对 Sinbolin Checked By:
客户核对 Customer Approved By:

东莞市信博联电子科技有限公司 工程专用章

东莞市信博联电子科技有限公司
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SINBOLIN

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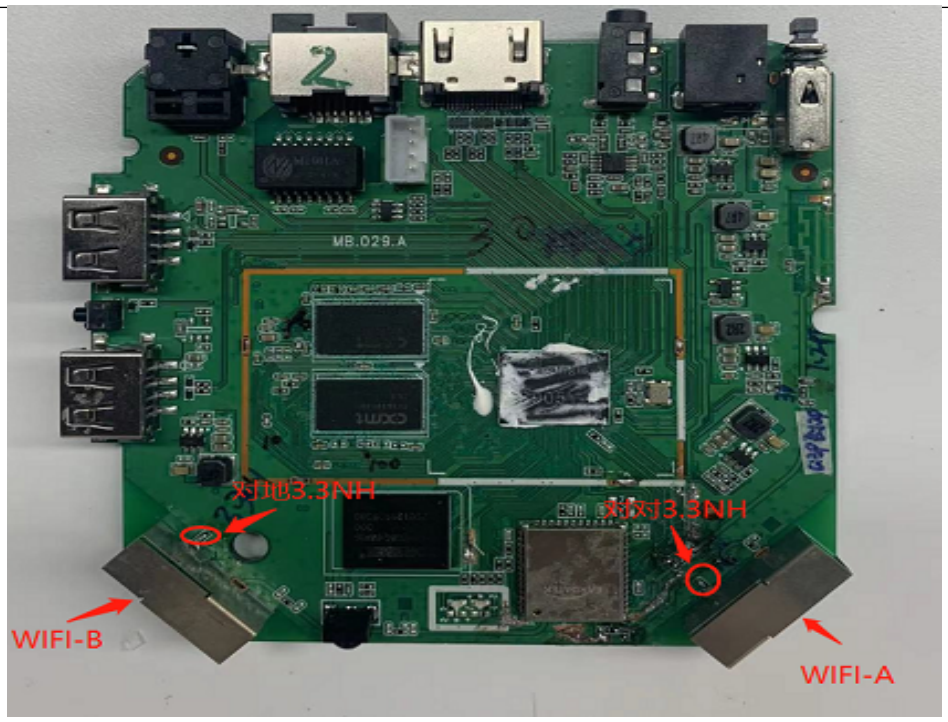
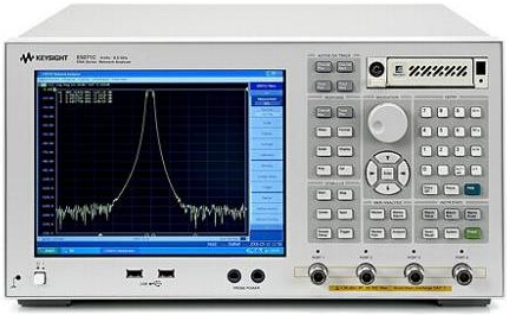
1. 产品规格（Product Specification）

产品图片（Product Photo）	
	
A. 电性参数（Electrical Characteristics）	
频率（Frequency）	2400 ~ 2500 MHz & 5150 ~ 5850 MHz
电压驻波比（V.S.W.R）	<= 2.0 @ 2400 ~ 2500 MHz & 5150 ~ 5850 MHz
返回损失（Return Loss）	<=-10dB @ 2400 ~ 2500 MHz & 5150 ~ 5850 MHz
天线增益（Antenna Gain）	3.64 dBi(Max) @ 2400 ~ 2500 MHz 4.66 dBi(Max) @ 5150 ~ 5850 MHz
辐射效率（Radiation Efficiency）	50 ~ 60 % @ 2400 ~ 2500 MHz 55 ~ 70 % @ 5150 ~ 5850 MHz
阻抗（Impedance）	50 Ohm
极化方式（Polarization）	线性（Linear）
天线类型（Antenna Type）	PIFA
B. 材质及机械特性（Material & Mechanical Characteristics）	
辐射材质（Material of Radiator）	1.2
C. 环境因素（Environmental）	
工作温度（Operation Temperature）	- 40 ˚C ~ + 75 ˚C
储存温度（Storage Temperature）	- 40 ˚C ~ + 85 ˚C

2. 网络参数测试数据（S Parameter Test Data）

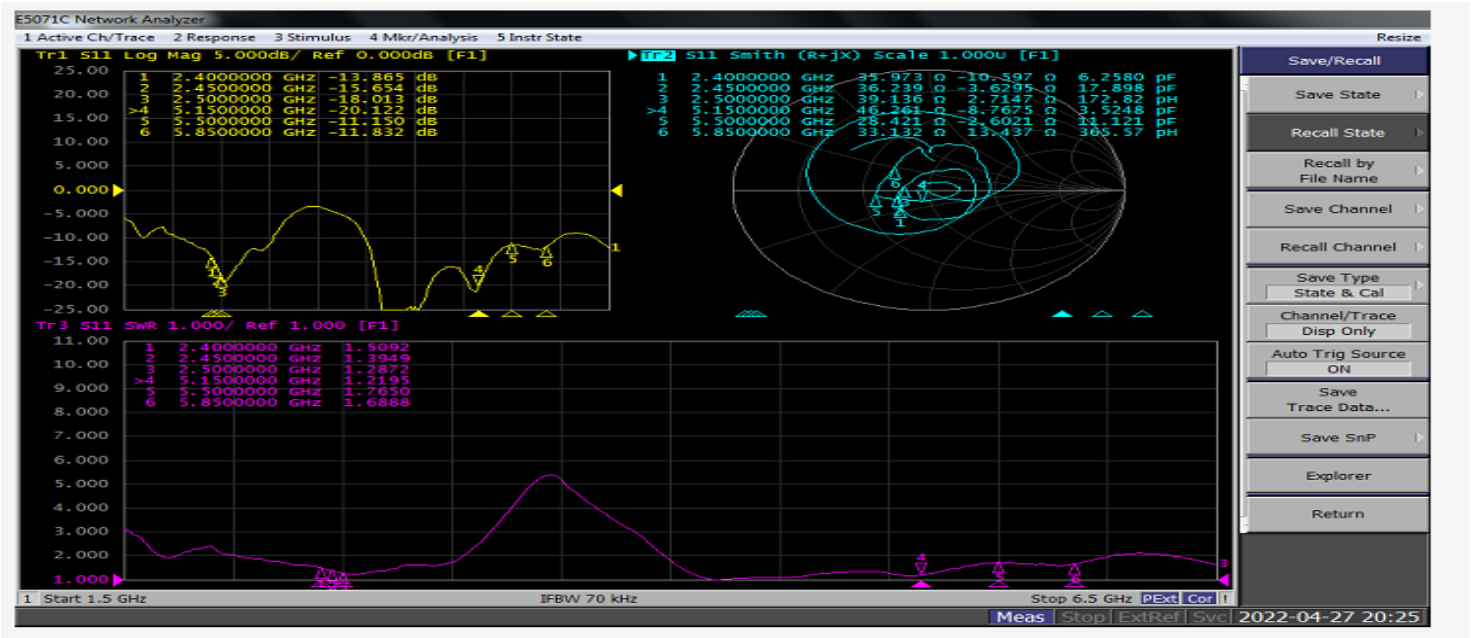


（Agilent Technologies）安捷伦E5071C网络分析仪

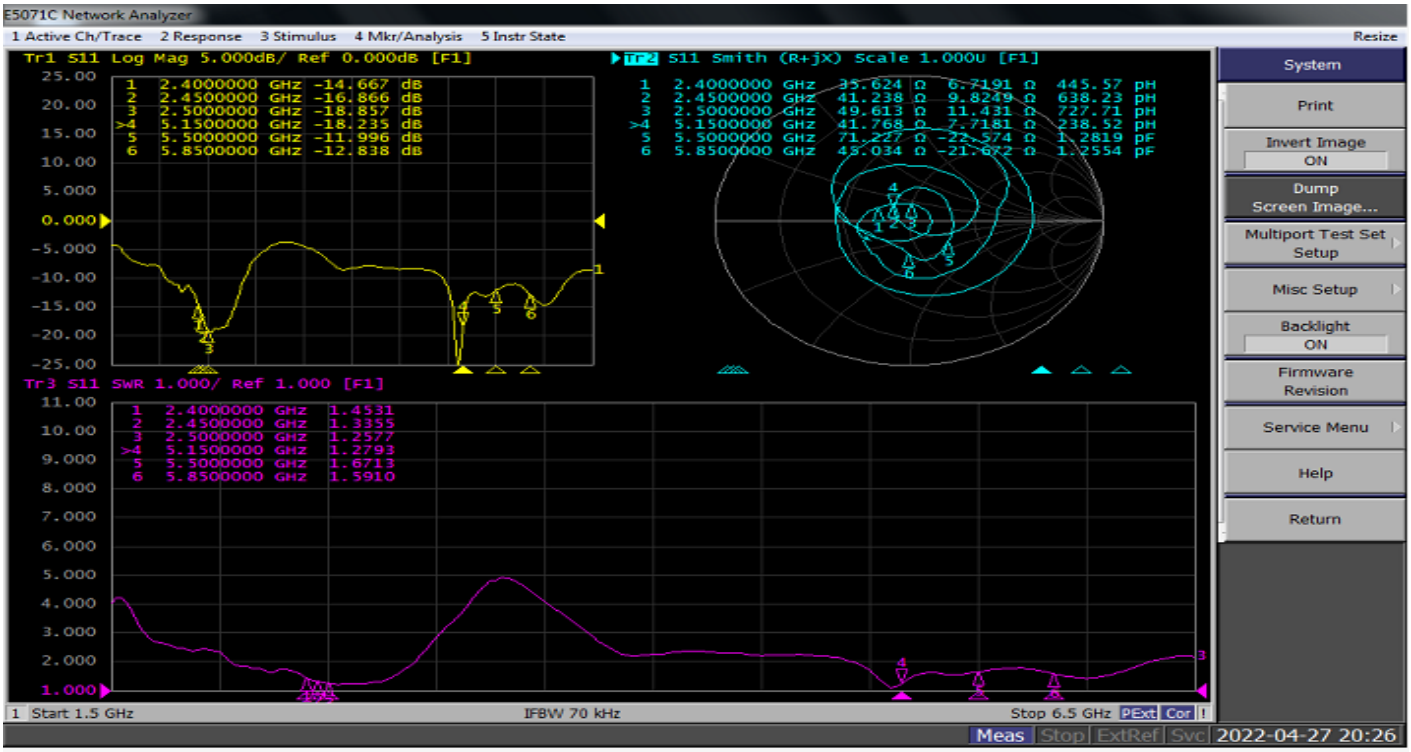
测试频率范围：300KHz-8.5GHz

测试能力：V.S.W.R、Return Loss、Smith等

WIFI-A



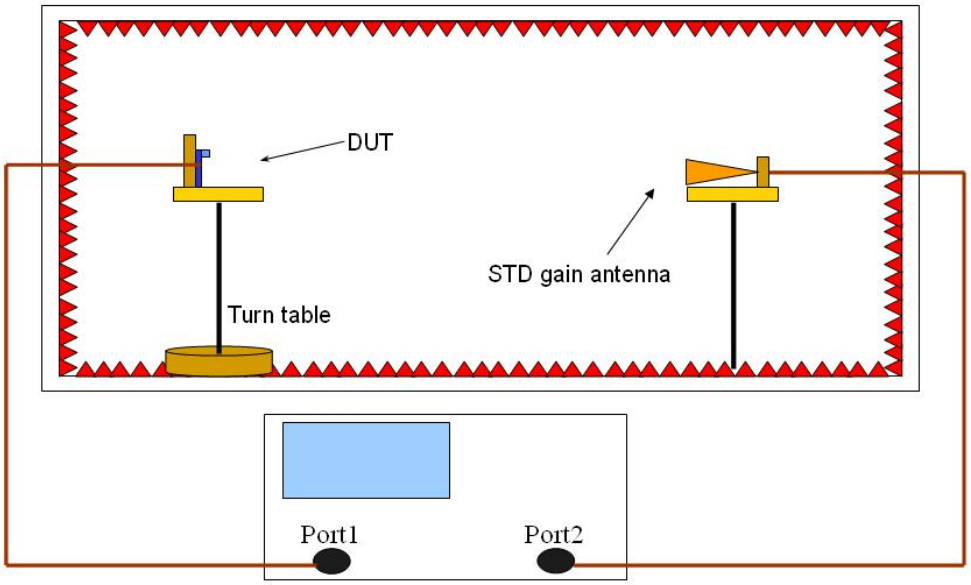
WIFI-B



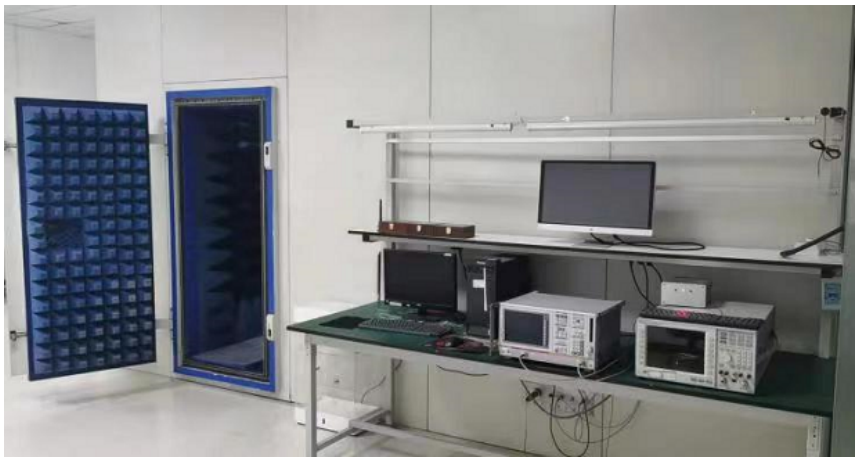
3. 天线辐射场型测试（Antenna - Radiation Pattern Test）

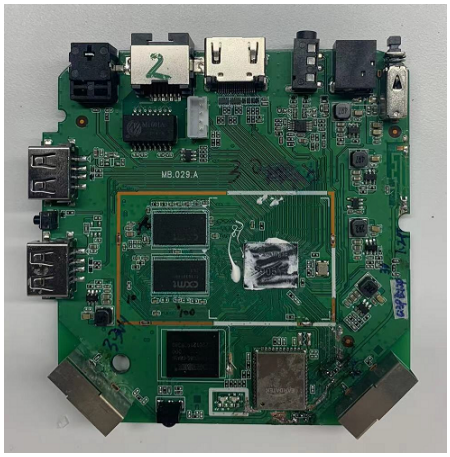
测试设备规格（**Testing Equipment Specification**）：

天线微波暗室尺寸（**Antenna Anechoic Chamber Dimension**）**: 6 x 3 x 3** 米（**m**）
屏蔽性能（**Isolation**）**: >100dB @ 1 MHz ~ 10 GHz**
测试设备（**Testing Equipment**）：（ROHDE&SCHWARZ）ZVL 矢量网络分析仪
接收天线（**Received Antenna**）**: 0.7 ~ 6.0 GHz** 双极喇叭校准天线
（**0.7 ~ 6.0 GHz for Gain Calibration Double Ridged Horn Antenna**）



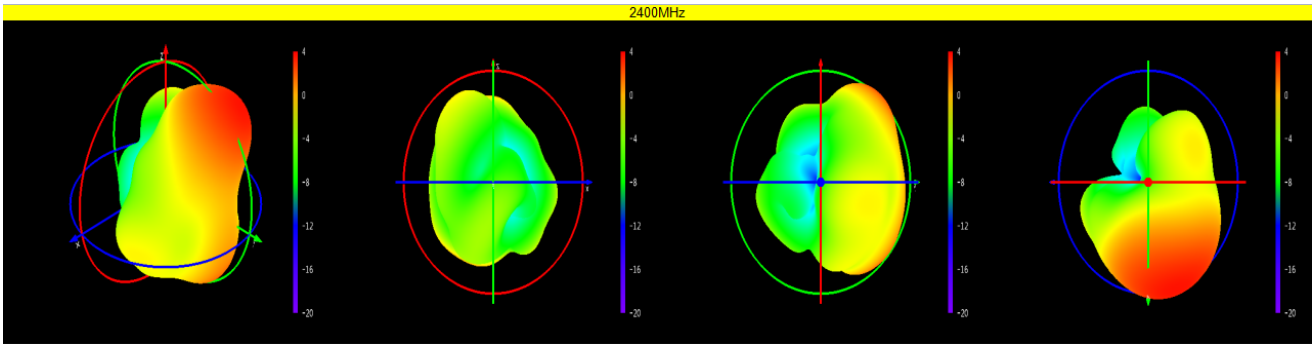
测试原理图

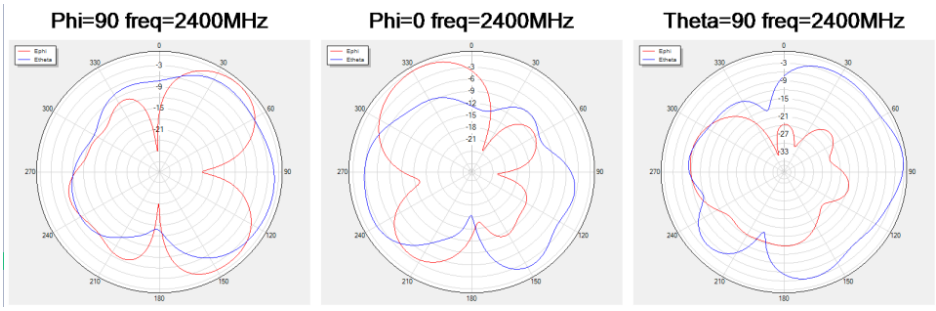




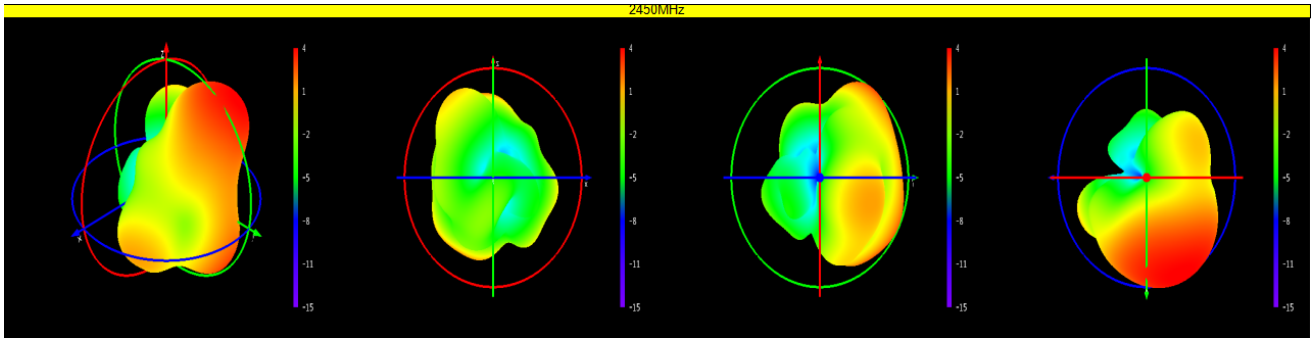
4.1 效率及增益测试数据（Efficiency and Gain Test Data）

WIFI-A JSP-2006803-09BN						
2.4G				5G		
Frequency / MHz	Gain/ dBi	Efficiency / %		Frequency / MHz	Gain/ dBi	Efficiency / %
2400	3.64	55.59		5150	3.9	67.02
2410	3.6	55.57		5200	4.04	67.15
2420	3.52	55.93		5250	4.11	61.77
2430	3.41	56.57		5300	4.21	60.32
2440	3.3	57.43		5350	4.36	60.21
2450	3.21	58.56		5400	4.39	60.09
2460	3.17	60.32		5450	4.43	60.56
2470	3.11	61.41		5500	4.55	61.63
2480	3.13	62.36		5550	4.6	61.9
2490	3.15	63.58		5600	4.66	62.41
2500	3.19	63.53		5650	4.61	61.81
				5700	4.55	61.87
				5750	4.37	60.39
				5800	4.16	59.07
				5850	3.79	54.83

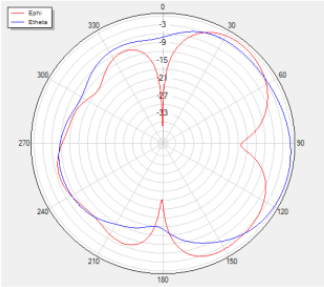




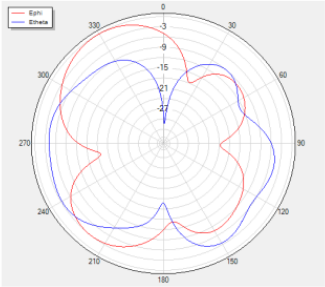
2450MHz



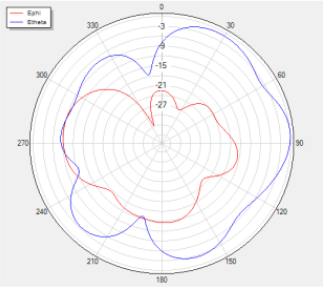
Phi=90 freq=2450MHz



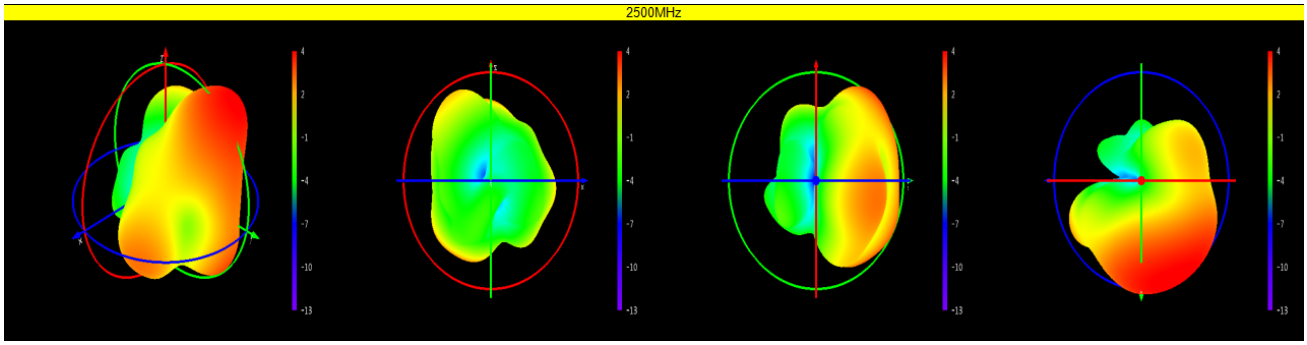
Phi=0 freq=2450MHz



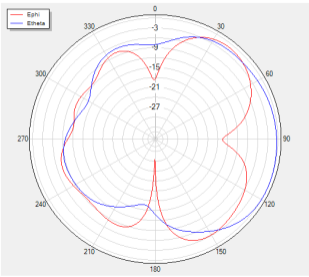
Theta=90 freq=2450MHz



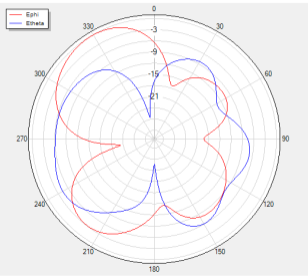
2500MHz



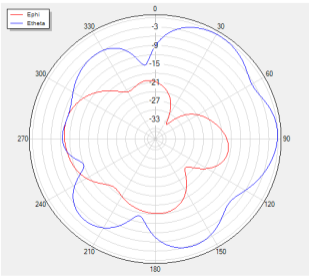
Phi=90 freq=2500MHz



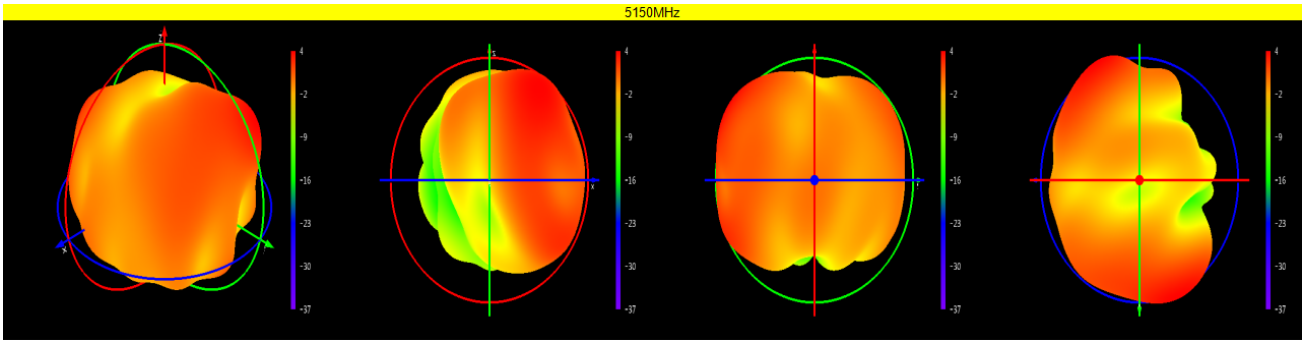
Phi=0 freq=2500MHz



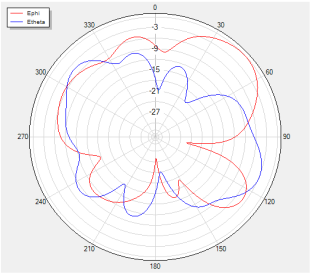
Theta=90 freq=2500MHz



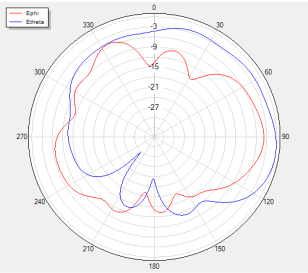
5150MHz



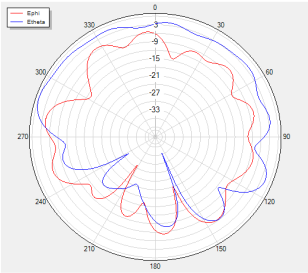
Phi=90 freq=5150MHz



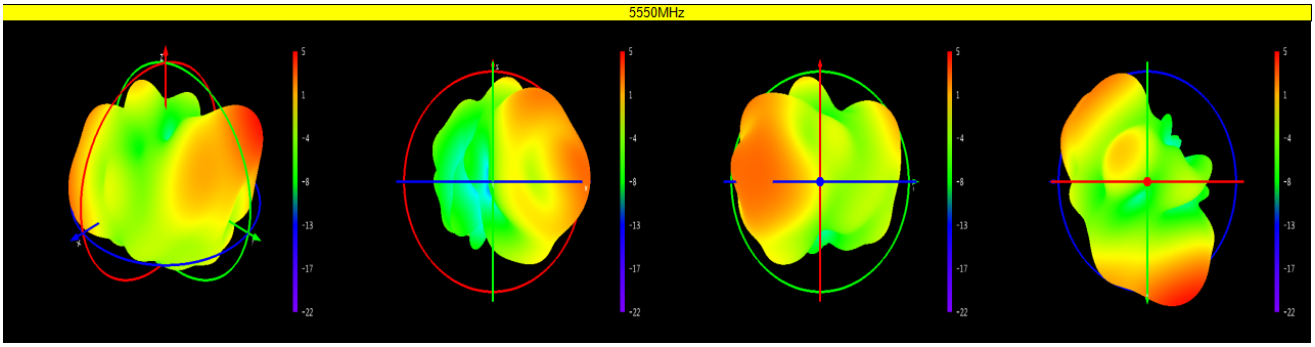
Phi=0 freq=5150MHz



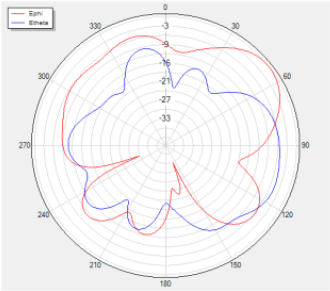
Theta=90 freq=5150MHz



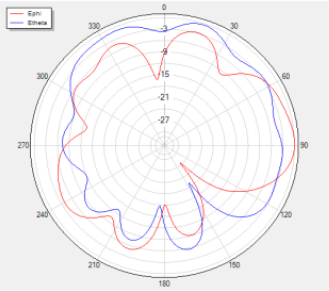
5550MHz



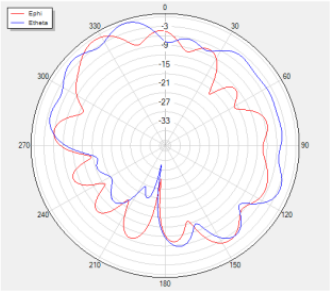
Phi=90 freq=5550MHz



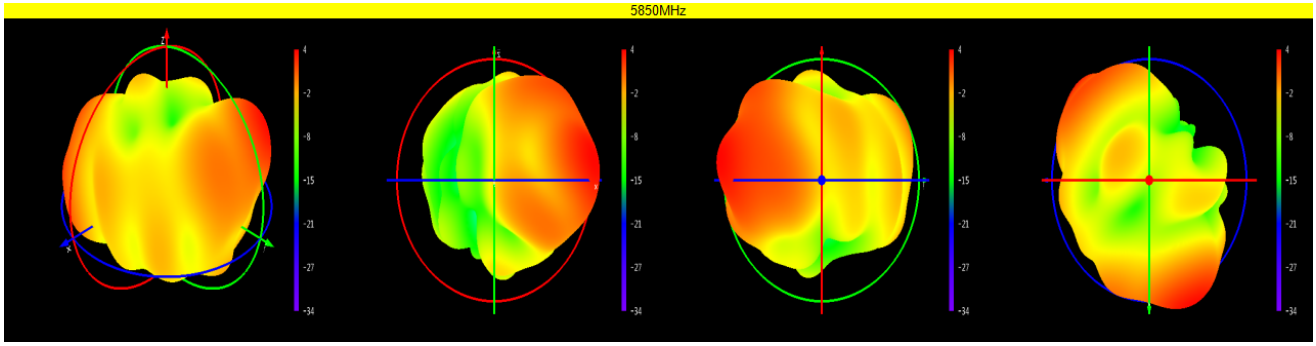
Phi=0 freq=5550MHz



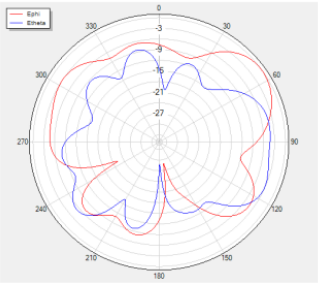
Theta=90 freq=5550MHz



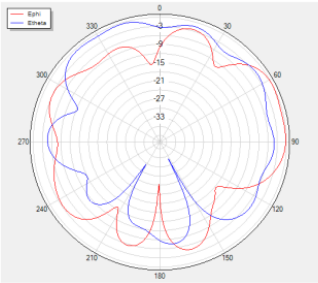
5850MHz



Phi=90 freq=5850MHz



Phi=0 freq=5850MHz



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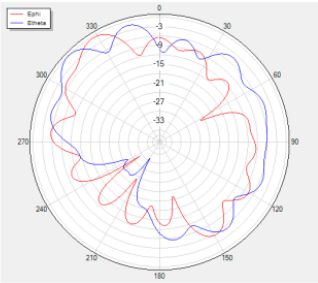
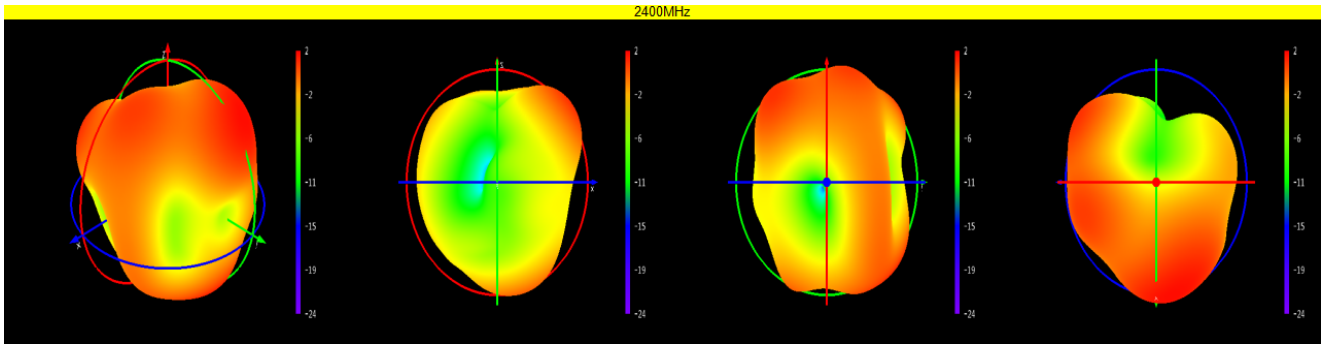
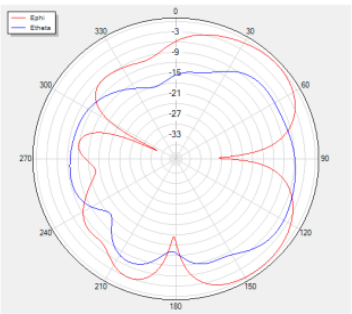


4.2 效率及增益测试数据（Efficiency and Gain Test Data）

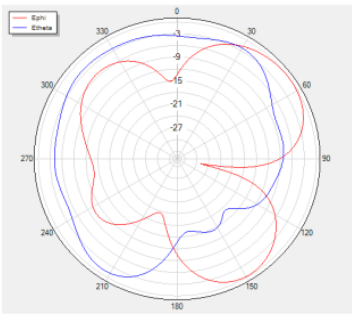
WIFI-B JSP-2006803-09BN						
2.4G				5G		
Frequency / MHz	Gain/ dBi	Efficiency / %		Frequency / MHz	Gain/ dBi	Efficiency / %
2400	3.14	55.59		5150	3.9	67.02
2410	3.64	55.57		5200	4.04	64.75
2420	3.6	55.53		5250	4.11	61.77
2430	3.52	56.57		5300	4.21	60.32
2440	3.41	56.43		5350	4.36	60.21
2450	3.3	58.56		5400	4.39	60.09
2460	3.17	60.32		5450	4.43	60.56
2470	3.11	61.41		5500	4.55	61.63
2480	3.13	62.36		5550	4.6	61.9
2490	3.15	63.58		5600	4.66	62.41
2500	3.19	63.53		5650	4.61	61.81
				5700	4.55	61.87
				5750	4.37	60.39
				5800	4.16	59.07
				5850	3.79	54.83



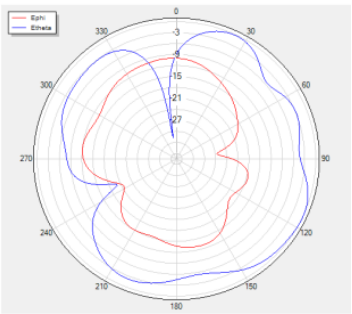
Phi=90 freq=2400MHz



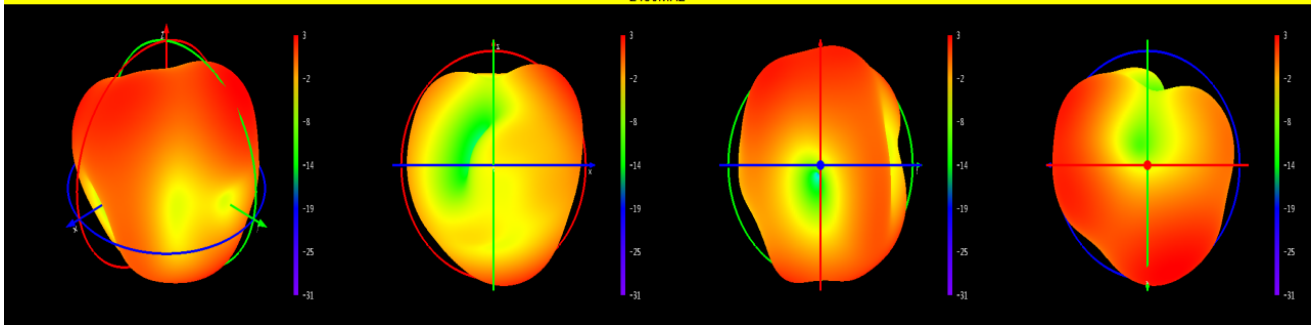
Phi=0 freq=2400MHz



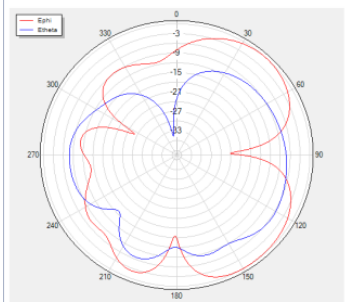
Theta=90 freq=2400MHz



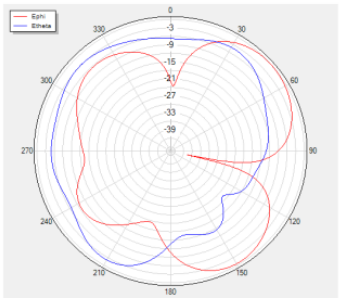
2450MHz



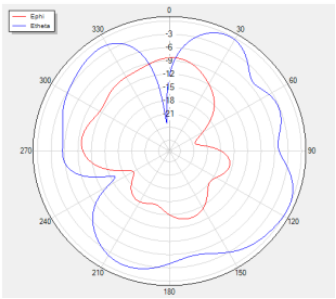
Phi=90 freq=2450MHz



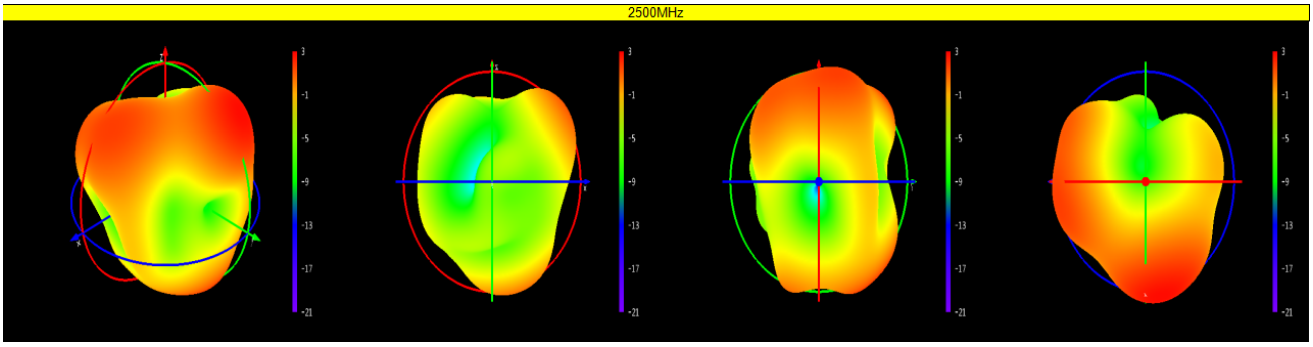
Phi=0 freq=2450MHz



Theta=90 freq=2450MHz



2500MHz



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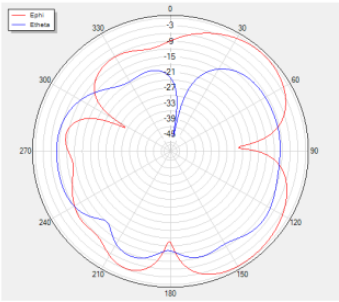

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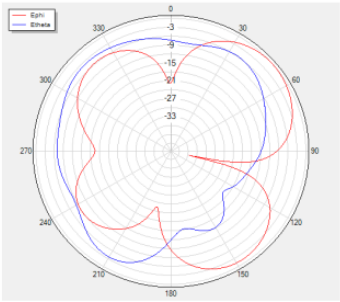

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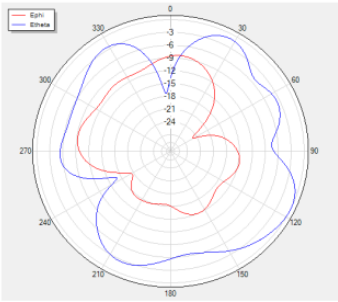
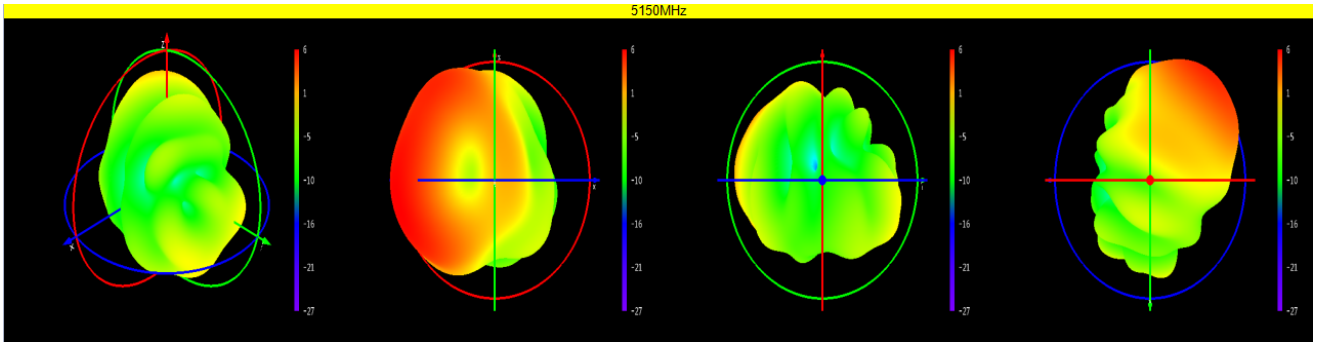
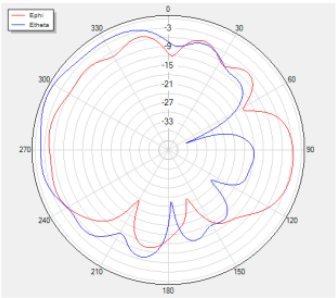


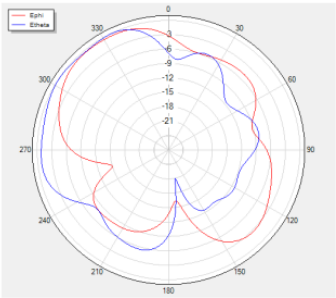
5150MHz



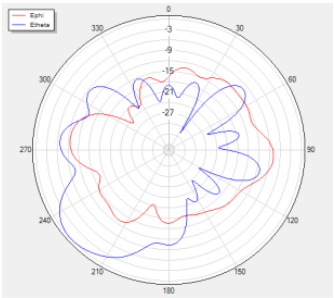
Phi=90 freq=5150MHz



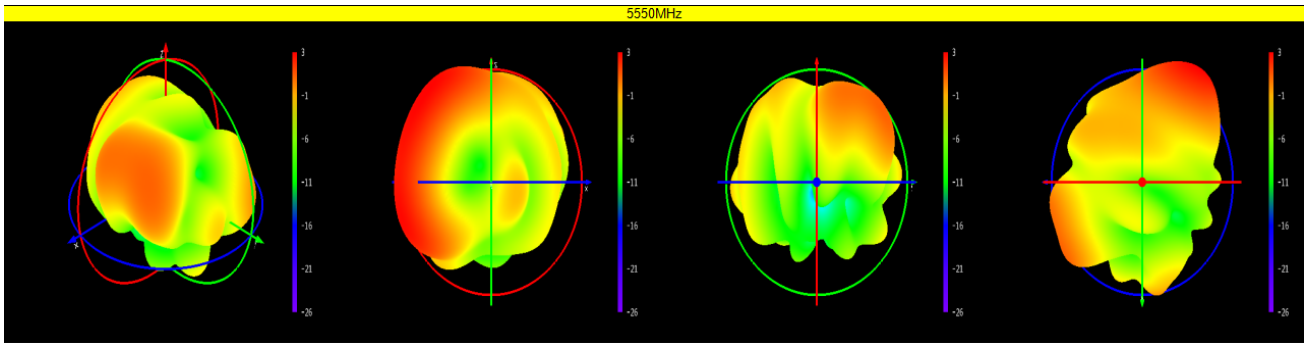
Phi=0 freq=5150MHz



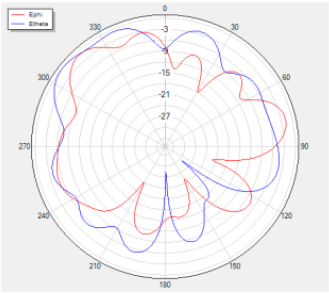
Theta=90 freq=5150MHz



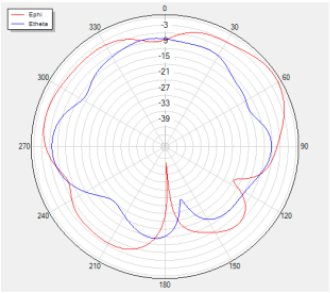
5550MHz



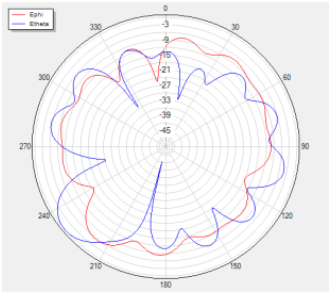
Phi=90 freq=5550MHz



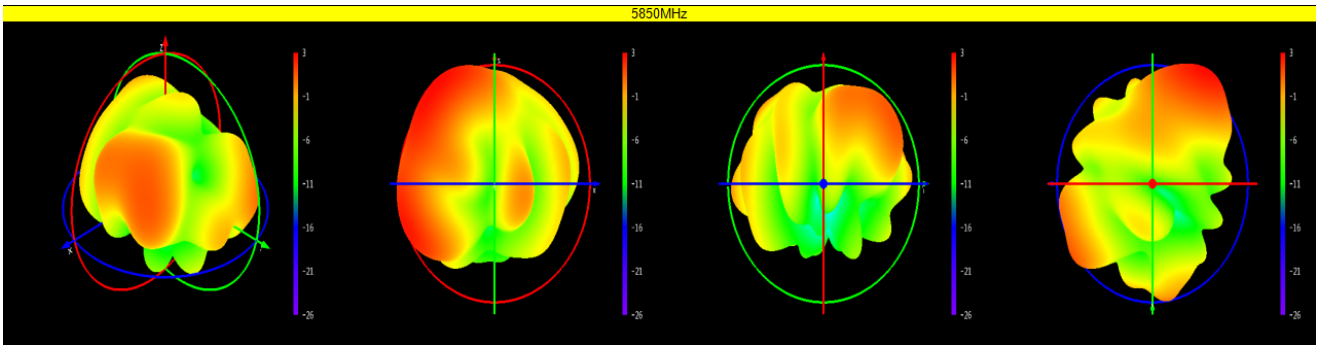
Phi=0 freq=5550MHz



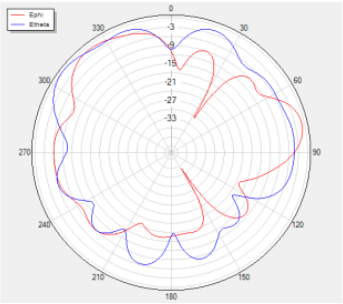
Theta=90 freq=5550MHz



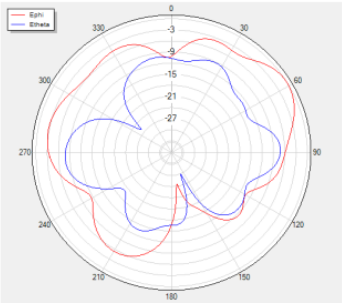
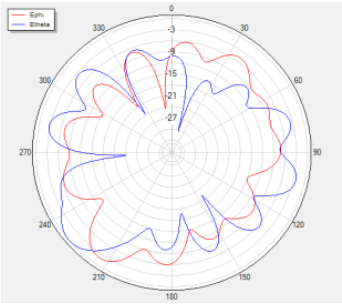
5850MHz



Phi=90 freq=5850MHz



Phi=0 freq=5850MHz



Theta=90 freq=5850MHz