承　　认　　书
SPECIFICATION FOR APPROVAL

客户名称 Customer Name			
客户项目名 Customer Project Name	AG-04	盛邦尔项目名 Surbaner Project Name	AG-04
客户编码 Customer P/N	天线 SUR-T20-V1.0 (AG03/AG04)共用	盛邦尔料号 Surbaner P/N	9010-170-00425-V01
频段 Band	2400-2500MHz		
版本号 Version	A0		
设计人信息/Designer Information			
射频工程师 RF Engineer	Xu Yong	研发主管 R&D Diretor	Lin Deyou
结构工程师 ME Engineer	Zou Rongkai		

盛邦尔审批/Surbaner Approval				客户批准/Customer Approval	
	制作 Prepared By	审核 Checked By	批准 Approval By	审核 Checked By	批准 Approval By
签章 Signature	Liu Shengrong				
日期 Date	2022.12.12				

修订履历/Change Log				
版本 Version	修订内容 Change Description	责任人 Person in Charge	核准 Approval By	日期 Date

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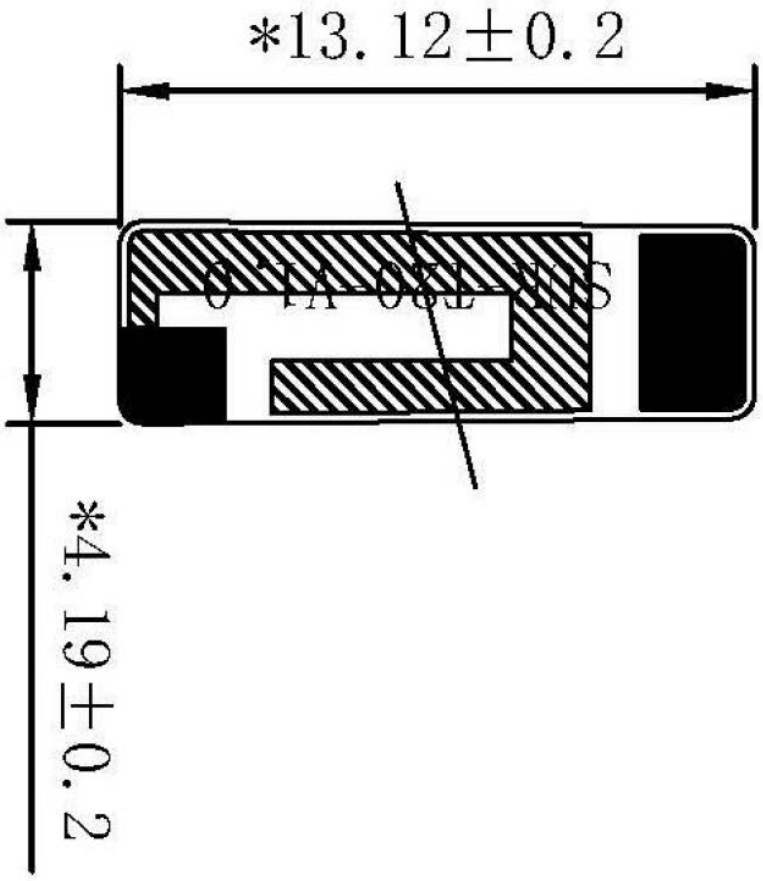
产品图纸或实物图片
Drawing or Product Image

Antenna Type:FPCB Antenna



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射频性能测量报告

RF Performance Test Report

客户名称 Customer Name		项目名称 Project Name	AG-04	盛邦尔料号 Surbaner P/N	9010-170-00425-V01
频段 Band	2400-2500MHz	测试日期 Test Date	2022/12/05	测试人 Inspector	Xu Yong

天线测试设备简介

Antenna Test Equipment Introduction

测试天线输入特性使用 **Agilent E5071C and Agilent 5062A** 矢量网络分析仪；辐射特性利用 Satimo 三维近场暗室进行测试，并分别使用 8960 E5515 和 Agilent E4438C 进行了分析。暗房的测试坐标如下：

Test of antenna input characteristics using **Agilent E5071C and Agilent 5062A** vector network analyzer; The radiation pattern of the antenna are tested using the Satimo starlab 3D near field Anechoic Chamber, and the instrument is used to agilent8960 E5515 and Agilent E4438C. The test coordinates of the darkroom are as follows:

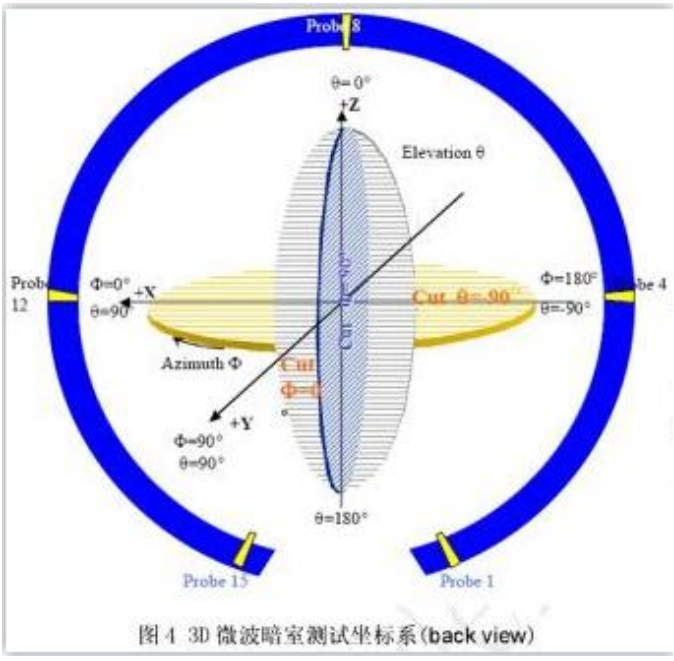

图 4 3D 微波暗室测试坐标系(back view)

1. S11 参数测量/*S11 Parameter-VSWR*

使用一根 50Ω同轴电缆连接到天线，然后该电缆连接到网络分析仪测量 S11 参数，被测量产品远离金属至少 20 厘米。

Measuring Method is a 50Ωcoaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.

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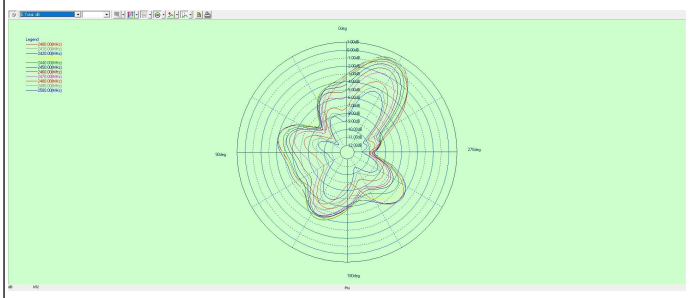
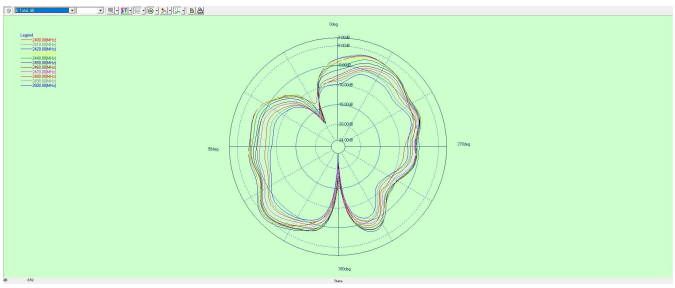
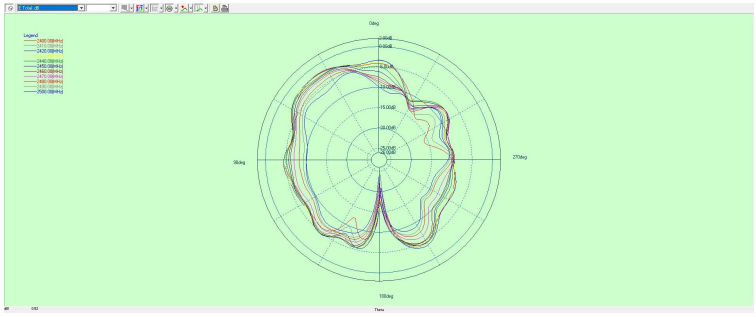
3.2D Pattern







2.Gain & Efficiency

Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	30.16%	-0.31
2410	32.87%	0.13
2420	35.56%	0.64
2430	35.24%	0.53
2440	32.64%	0.02
2450	30.38%	-0.23
2460	27.84%	-0.57
2470	24.12%	-1.45
2480	19.53%	-2.42

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