

承 认 书

SPECIFICATION FOR APPROVAL

客户名称 Customer Name	TOPICON HK LIMITED		
客户项目名 Customer Project Name	MDT1060	盛邦尔项目名 Surbaner Project Name	MDT1060
客户编码 Customer P/N		盛邦尔料号 Surbaner P/N	3160-170-00263-V01
频段 Band	2400-2500MHz		
版本号 Version	A0		
设计人信息/Designer Information			
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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	刘胜荣 LiuShengRong				
日期 Date	2022.4.29				

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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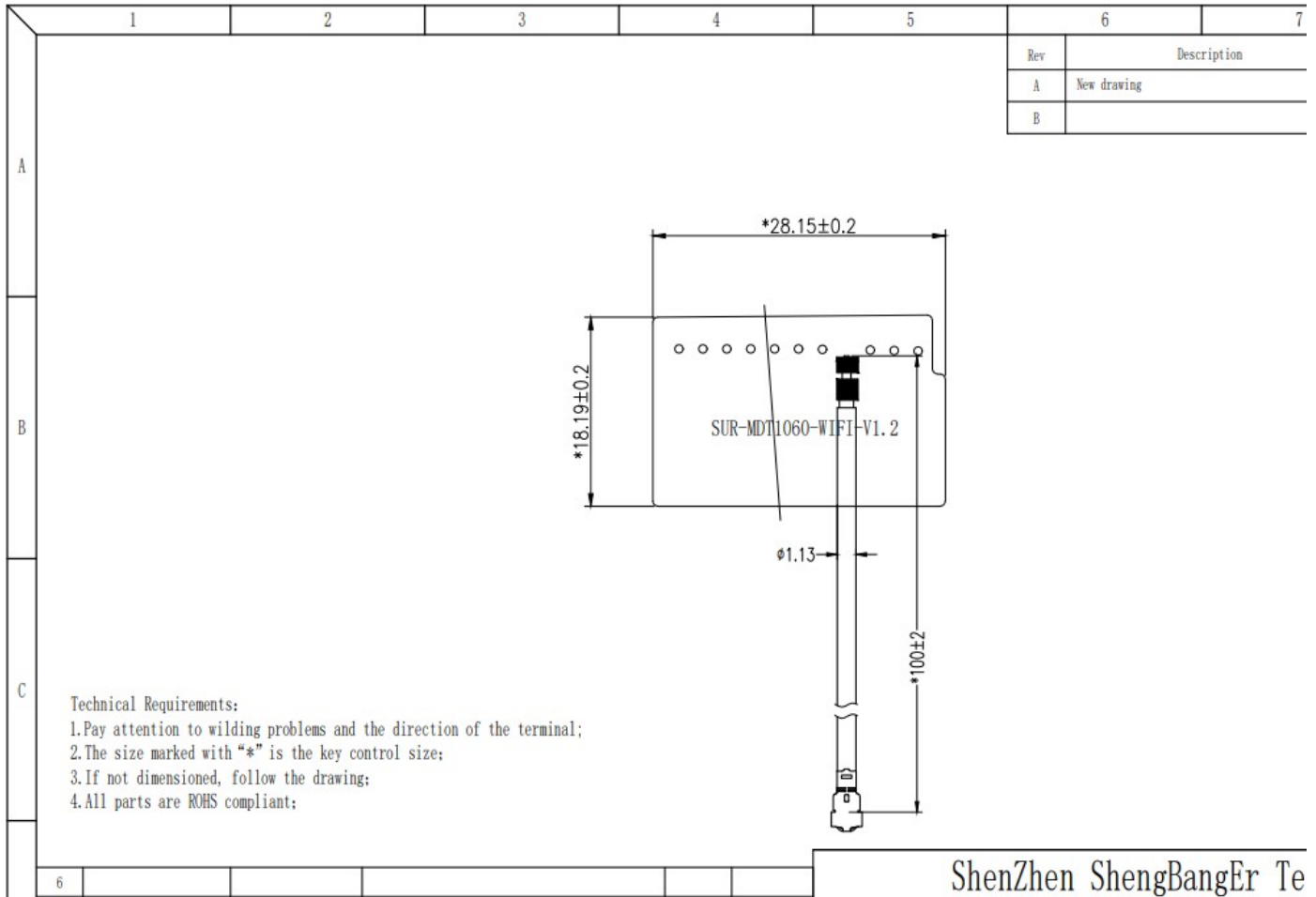
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产品图纸或实物图片

Drawing or Product Image



样品尺寸测量报告

Sample Dimensions Test Report

客户名称 Customer Name	高迅导航	客户料号 Customer P/N		盛邦尔料号 Surbaner P/N	3160-170-00263-V01
测试日期 Test Date	2022/4/29	样品数量 Sample Qty.	3	测试人 Inspector	曾心荣
尺寸编号 Dimension No.	标准 Standard	样品 1 Sample 1	样品 2 Sample 2	样品 3 Sample 3	Pass/NG
①长度 Length	28.15±0.2mm	28.16	28.15	28.14	Pass
②宽度 Width	18.19±0.2mm	18.18	18.19	18.19	Pass
③厚度 Thickness	0.12±0.05mm	0.121	0.12	0.121	Pass
④线长 Wire length	100±2mm	100	100	100	Pass
⑤					
⑥					
⑦					
最终结论 Conclusion					PASS
测试人&日期 Inspector & Date	曾心荣 ZengXinRong 2022/4/29		批准&日期 Approval & Date		

射频性能测量报告

RF Performance Test Report

客户名称 Customer Name	TOPICON HK LIMITED	项目名称 Project Name	MDT1060	盛邦尔料号 Surbaner P/N	3160-170-00263-V01
频段 Band	2400-2500MHz	测试日期 Test Date	2022/03/30	测试人 Inspector	林德友 LinDeYou

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:

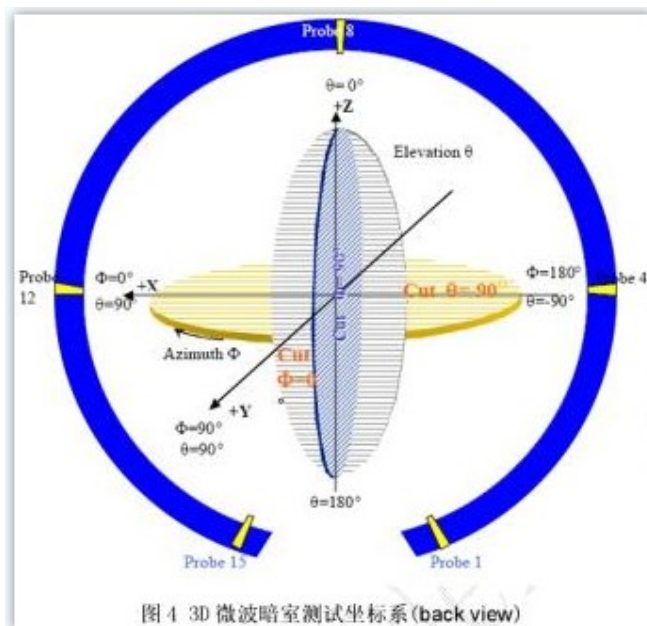


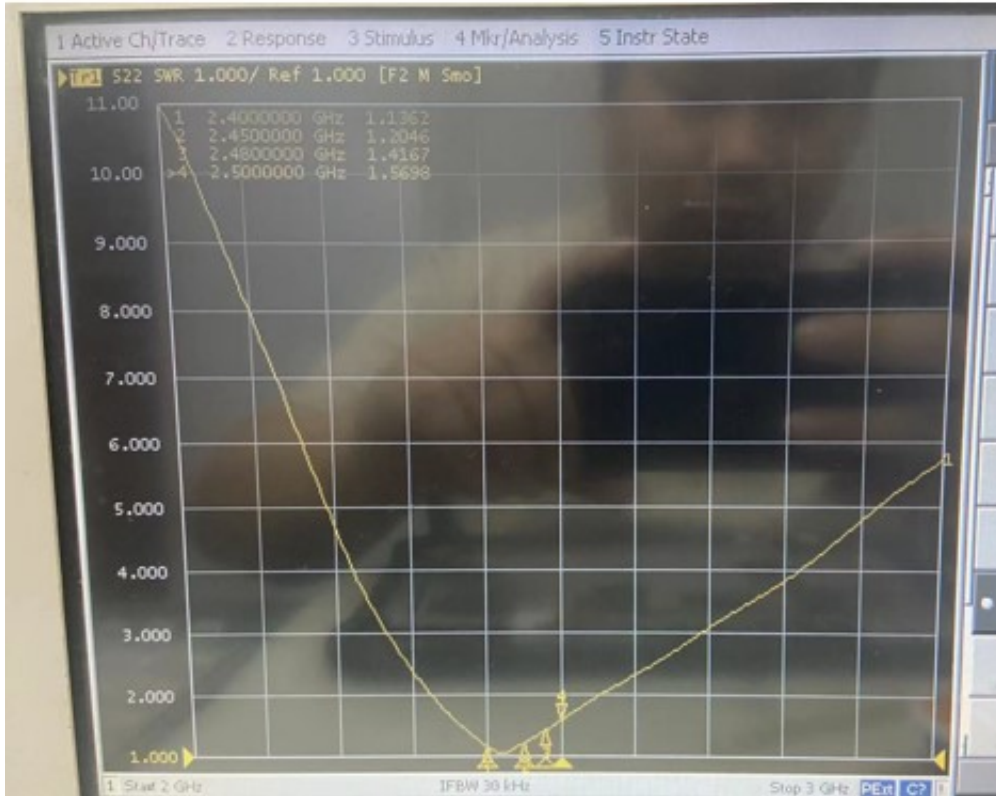
图 4 3D 微波暗室测试坐标系 (back view)

1. S11 参数测量/S11 Parameter-VSWR

使用一根 50 Ω 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。

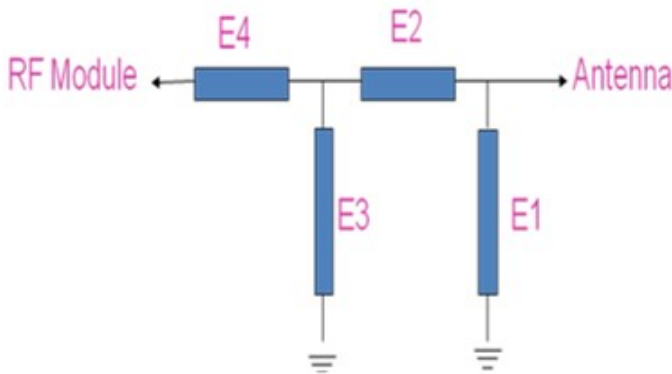
Measuring Method is a 50Ωcoaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.

S11 Parameter-VSWR



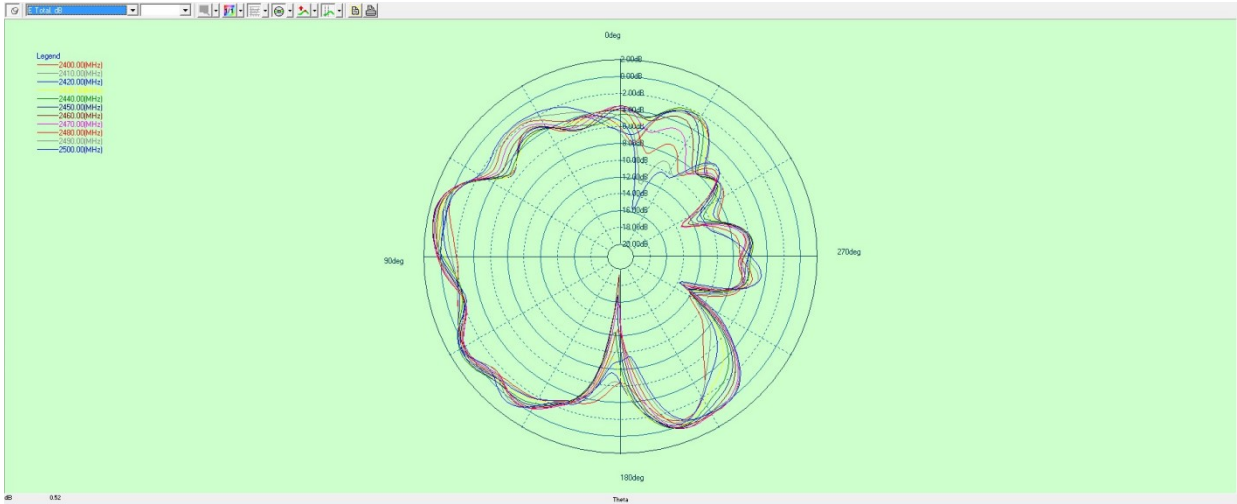
Frequency(MHz)	2400	2450	2500
VSWR	1.13	1.20	1.56

2. 天线匹配网络/Antenna Matching Network

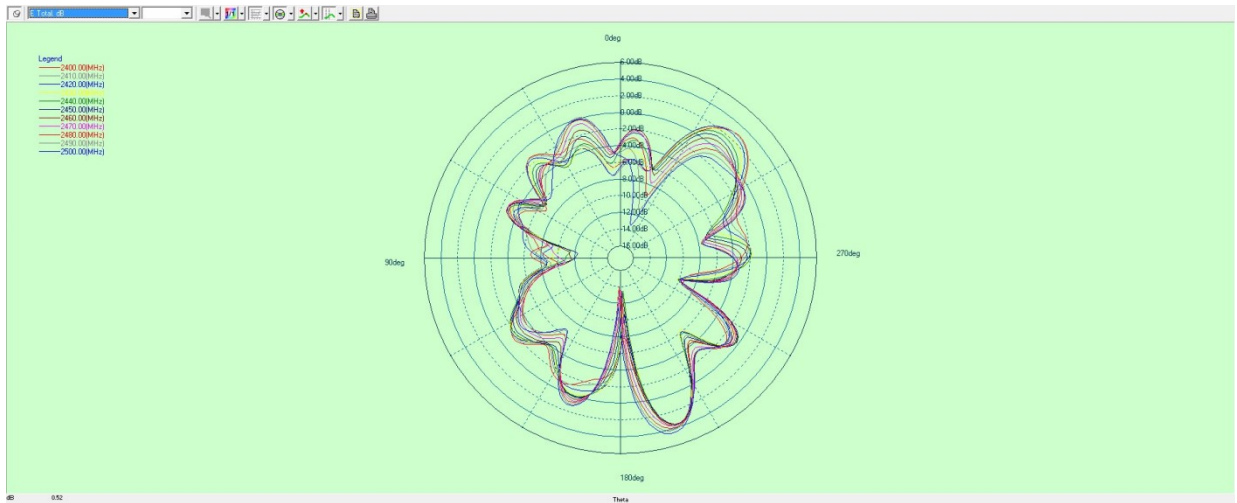


Element	Capacitor	Inductor
E1	N/A	N/A
E2	N/A	N/A
E3	N/A	N/A
E4	N/A	N/A

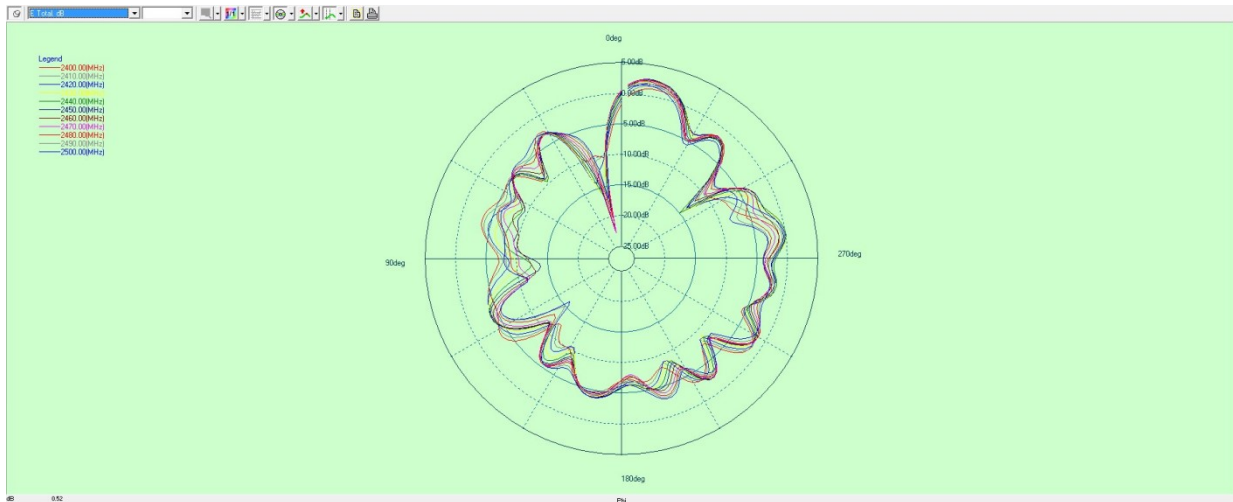
PCB板端匹配电路未改动



Phi =0



Phi =90



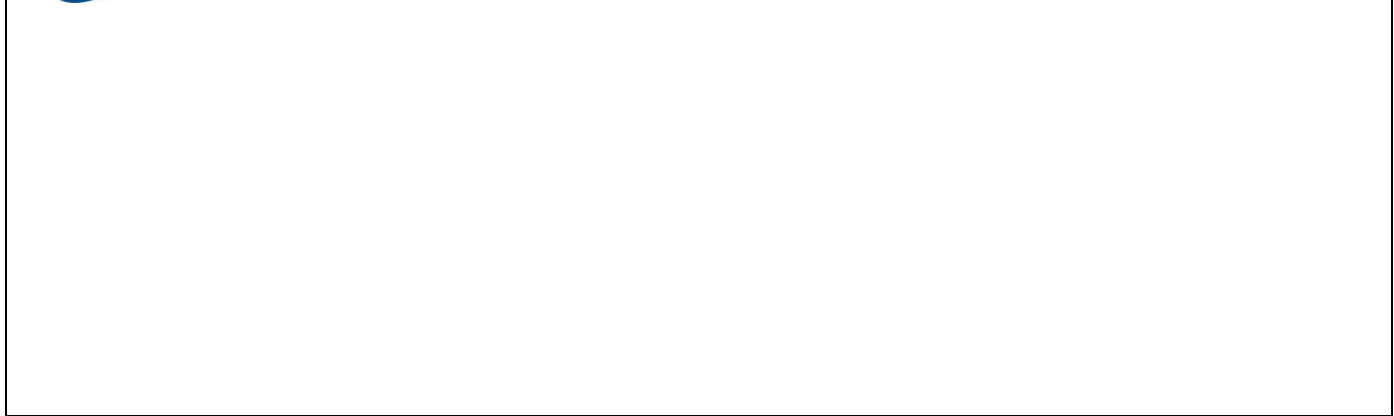
Theta =90

3. Gain & Efficiency

Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)	MAX GAIN (dBi)
2400	50.5%	2.56	3.76
2410	50.5%	2.37	3.64
2420	50.2%	2.27	3.65
2430	50.4%	2.24	3.82
2440	50.9%	2.29	4.12
2450	51.1%	2.23	4.15
2460	51.0%	2.19	4.11
2470	51.3%	2.36	3.69
2480	50.9%	2.59	3.72
2490	49.8%	2.69	3.62
2500	48.7%	2.76	3.45



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