深圳市天联凌科技有限公司

Shenzhen SKYLink Technology Co.,Ltd

天线规格承认书

编号：SLSOA20240330FZF01

客户名称：鲸视

项目名称：P170.MH （WIFI 天线）

产品描述：FPC 背胶，焊接 1.13mm 黑色同轴线，线长 100mm，一代端子。

客户料号：

我司料号：P170.MH.WIFI.C113.100B.1

版　　本：V1.0

日　　期：2024.03.30

此承认书严禁修改

客户

工程	采购	承认

天联凌

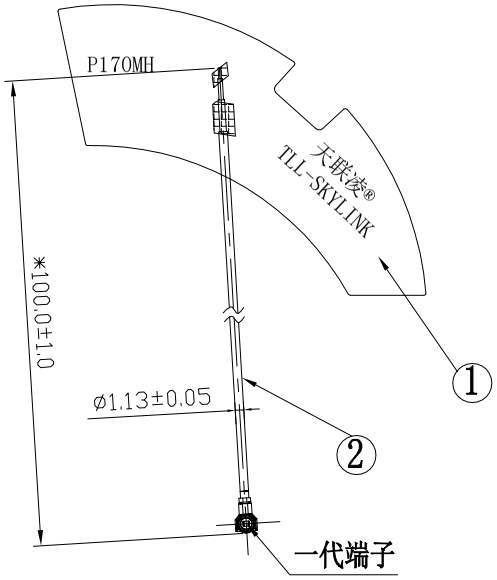
研发	工程	审核

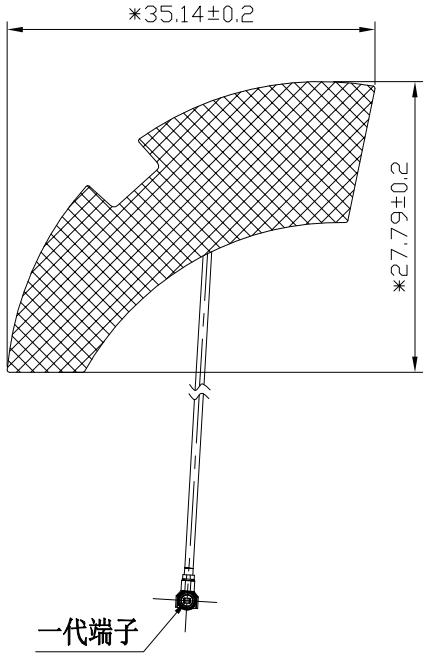
● 规格概述

电特性	
频率	2400MHz ~2500MHz 5150MHz ~5850MHz
回波损耗	<-5dB
效率	>50%
增益	2.5dbi
阻抗	50 欧姆
极化方式	线极化
材料和机械特性	
材料	FPC
线材类型	线径 1.13 mm，黑色
端子类型	一代端子
图纸尺寸	详见图纸
丝印方式	黑底白字
环境特性	
储存温度	- 30 ˚C ~ + 85 ˚C
FPC 焊接温度	280±5℃ 浸渍时间:10 秒
射频线焊接温度	320±5℃ 2-3 秒

由 Autodesk 教育版产品制作

RoHS
Compliant
G P





注：

1. "*"为重点尺寸 ；
2. 未标注尺寸请依图纸；
3. Pb、Hg、Cr+6、PBBs、PBDEs各项小于1000PPM，Cd小于100PPM。

No.	PartName	Material	Colour	Remark
2	同轴线	镀银铜丝	黑色	
1	天线	FPC	黑色	

Rev	Description	Date	Remark
A	New drawing		

深 圳 天 联 凌 科 技 有 限 公 司
SHEN ZHEN SKYLink CO.,LTD

Third Angle				Project		Date	2024.03.29		
0～10	±0.05	○	0.02	Part Name	WIFI天线	Designed by			
10～18	±0.10	◎	⌀0.03	Part No.	WP170.MH.WIFI.C113.	100B.1 Checked by	MD		
18～30	±0.12	⊥	0.02	Material			RF		
30～40	±0.15	▱	0.04	DWG No.		Approved by			
40～	±0.20	Angle	±0.5°			Unit mm	Scale 1:1	Rev A	
Location									

由 Autodesk 教育版产品制作

● Test Equipment & Conditions

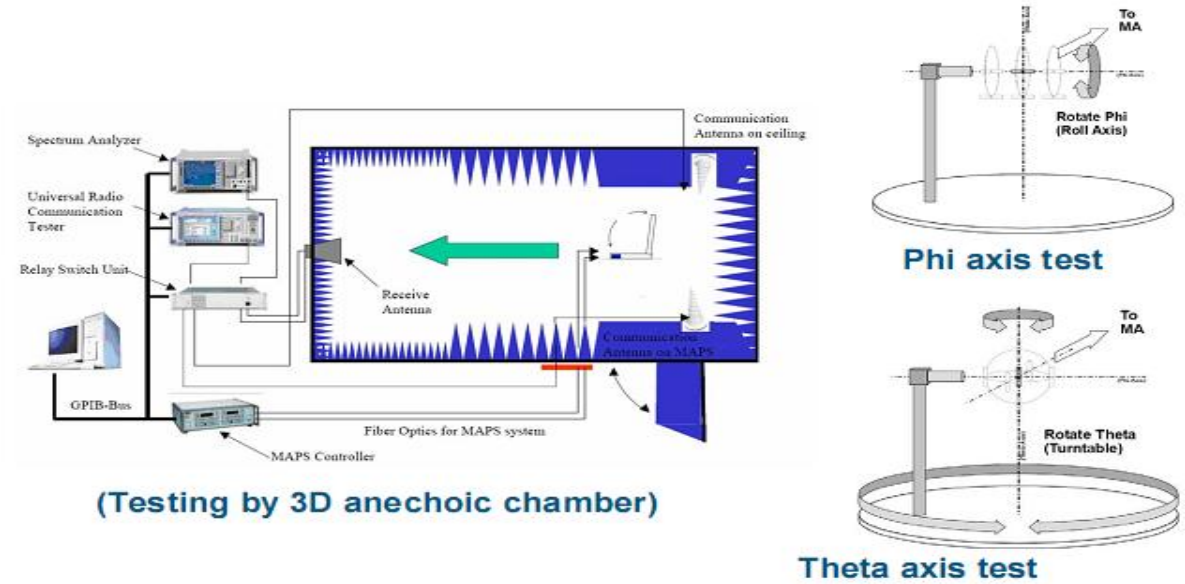
1. Network Analyzers :

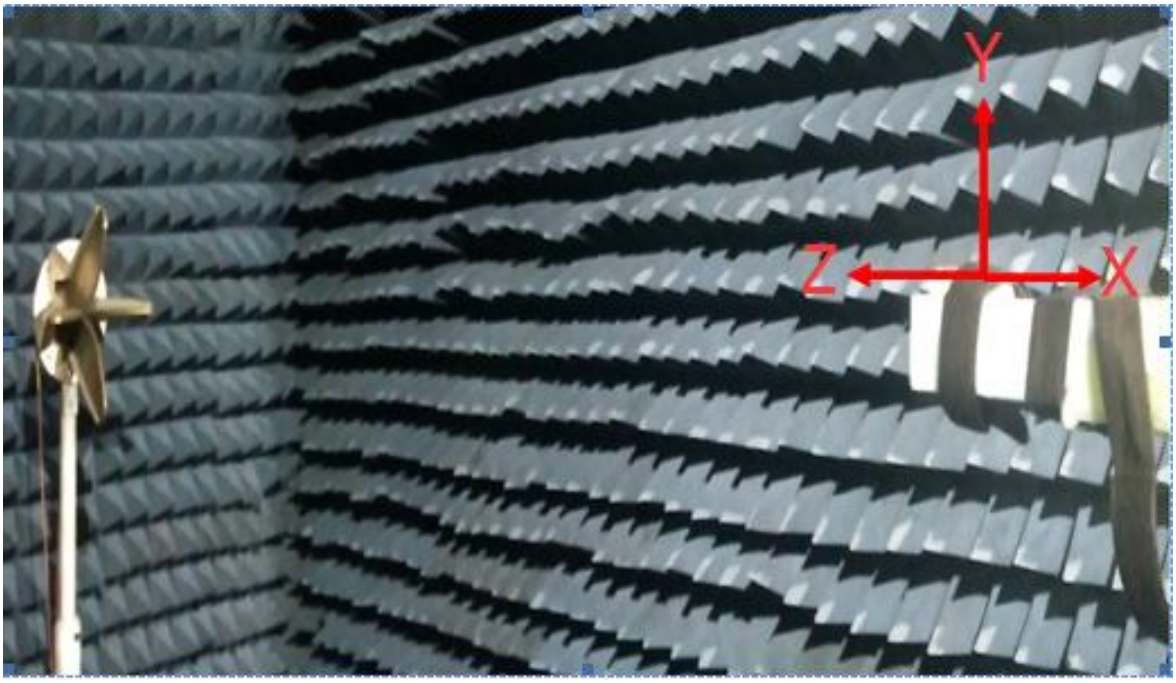
Agilent 8753D 5071B

Communications Test Set:

Agilent E5515C CMW500

2. 3D Chamber Test System





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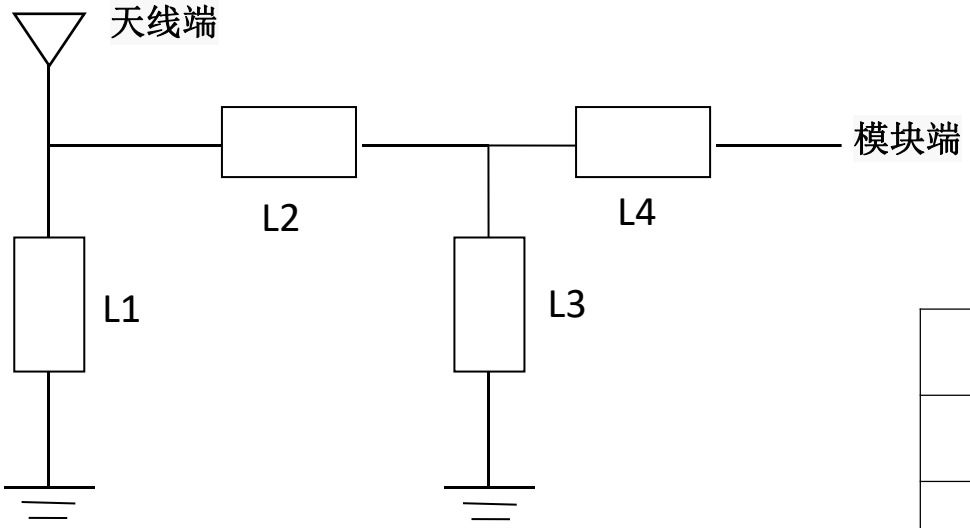
Email:damoncui@tllskylink.com

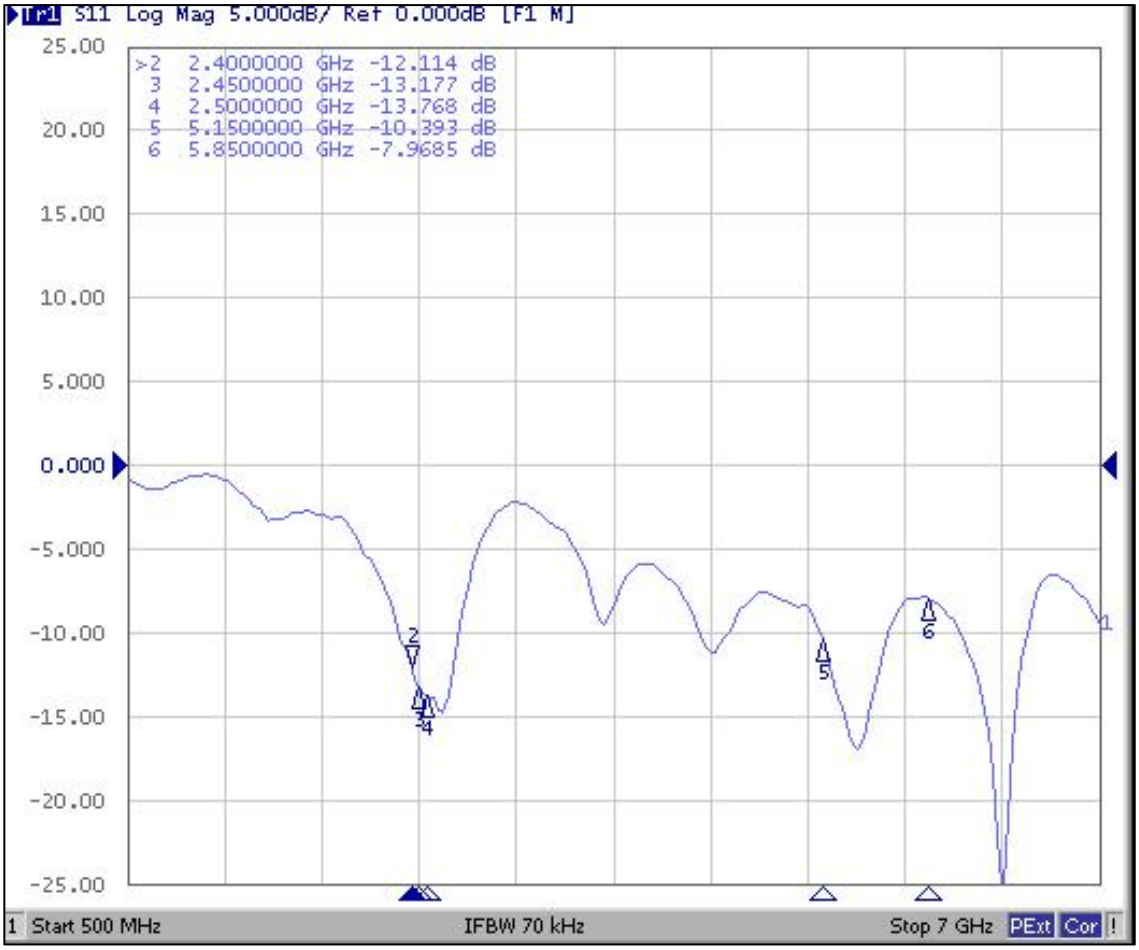
● 匹配电路 （matching circuit）



L1	/
L2	/
L3	/
L4	/

原主板匹配电路不变

◆ Return Loss



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◆ TRP/TIS

B模式11M

Test	Wifi 2G TRP		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
TRP(dBm)	19.1	19.79	18.64
Test	Wifi 2G TIS		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
TIS(dBm)	-78.63	-77.4	-77.36

N模式 MCS7

Test	Wifi 5G TRP		
Result	36	100	149
Frequency (MHz)	5180	5500	5745
TRP(dBm)	13.68	13.82	13.35
Test	Wifi 5G TIS		
Result	36	100	149
Frequency (MHz)	5180	5500	5745
TIS(dBm)	-65.73	-64.85	-66.36

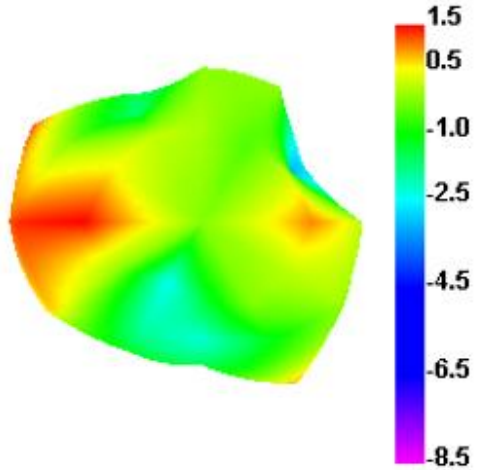
◆ Gain & Efficiency

Freq (MHz)	Effi (%)	Gain (dBi)
2400	62.72	1.53
2410	61.74	1.44
2420	60.1	1.13
2430	56.55	0.97
2440	57.72	1.15
2450	53.67	0.83
2460	54.15	0.8
2470	50.64	0.38
2480	52.96	0.44
2490	54.42	0.64
2500	56.4	0.81

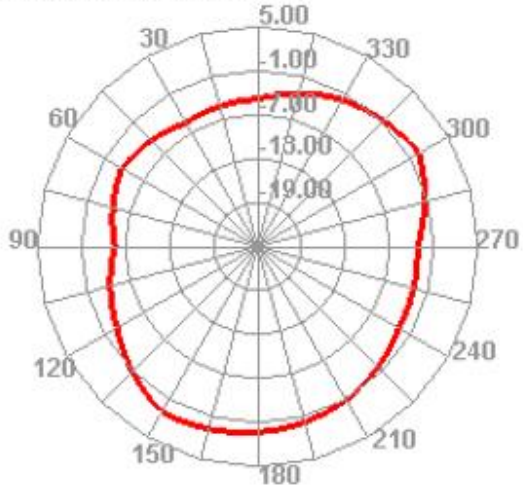
Freq (MHz)	Effi (%)	Gain (dBi)
5150	51.81	-0.12
5200	51.85	-0.13
5250	54.01	0.87
5300	52.43	2.71
5350	51.35	2.08
5400	51.32	2.47
5450	53.07	2.54
5500	50.38	2.48
5550	54.05	2.26
5600	54.01	2.47
5650	52.04	1.35
5700	51.58	1.35
5750	54.78	0.96
5800	51.84	1.27
5850	54.55	2.11

Radiation Pattern

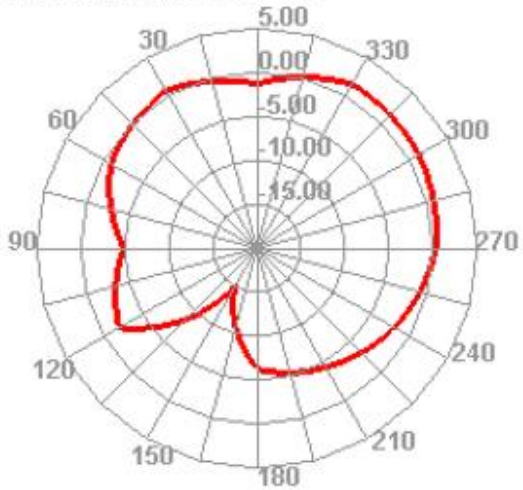
2400.000MHz



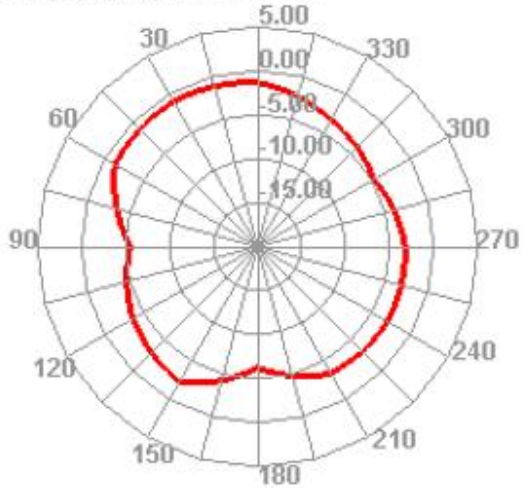
2400.000MHz H



2400.000MHz E1



2400.000MHz E2



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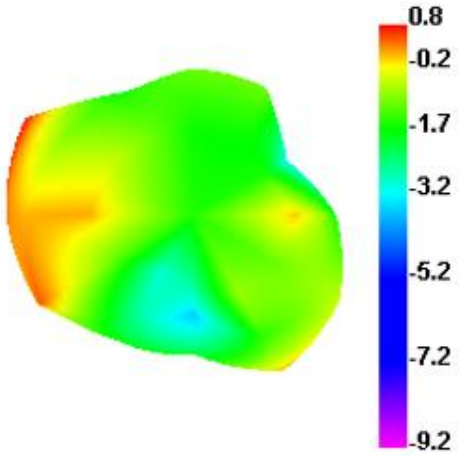
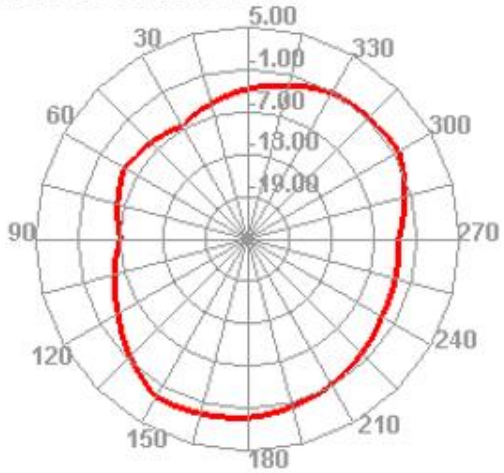
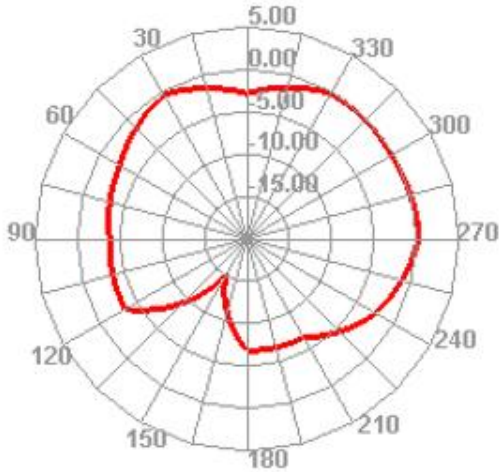
2450.000MHz



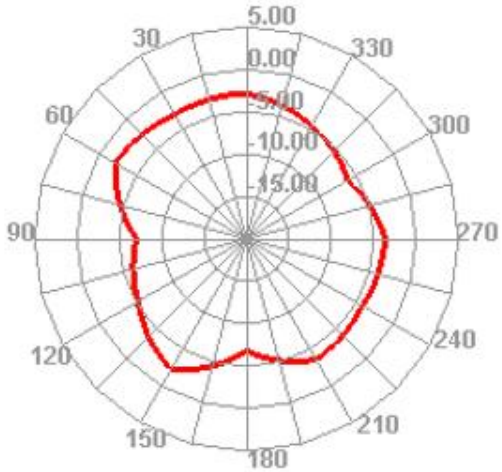
2450.000MHz H



2450.000MHz E1



2450.000MHz E2



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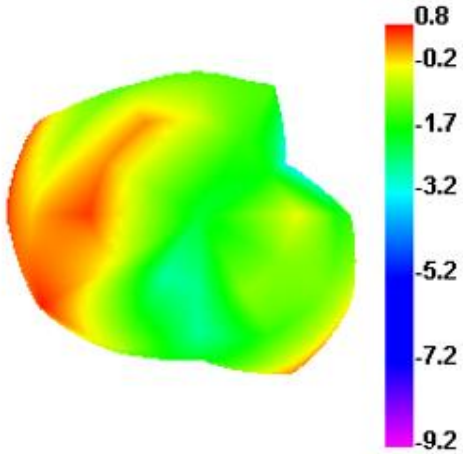
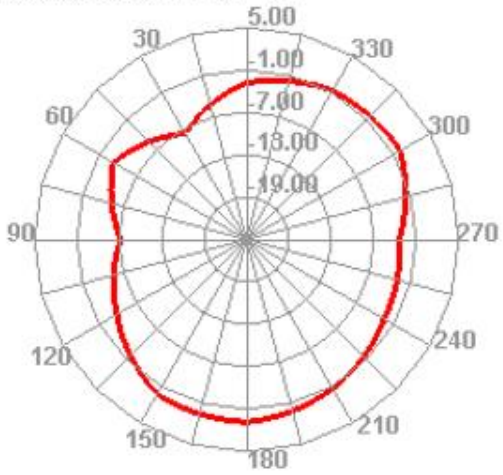
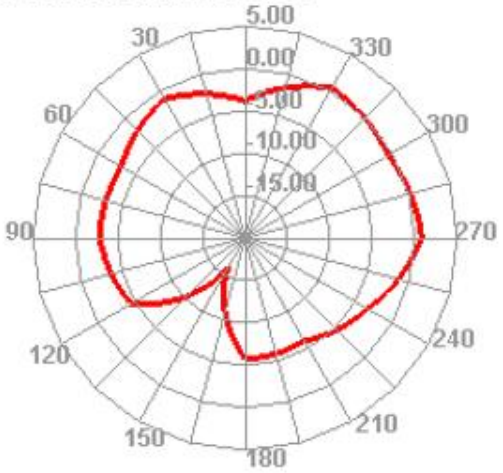
2500.000MHz



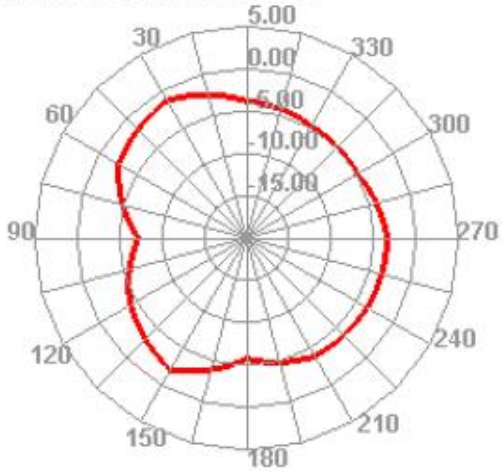
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



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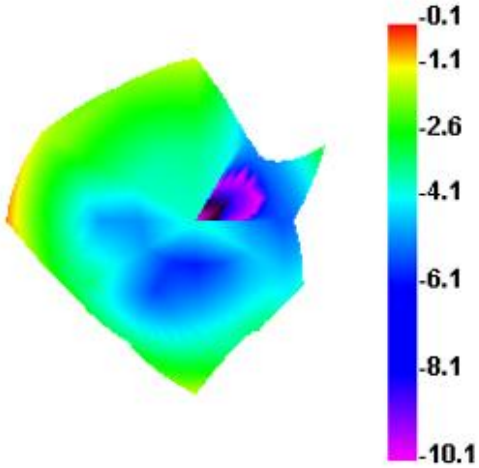
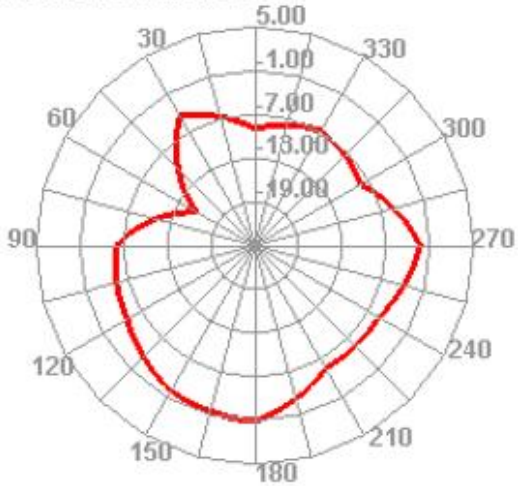
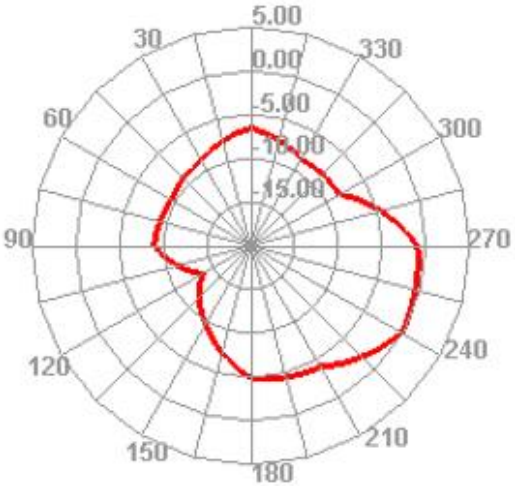
5150.000MHz



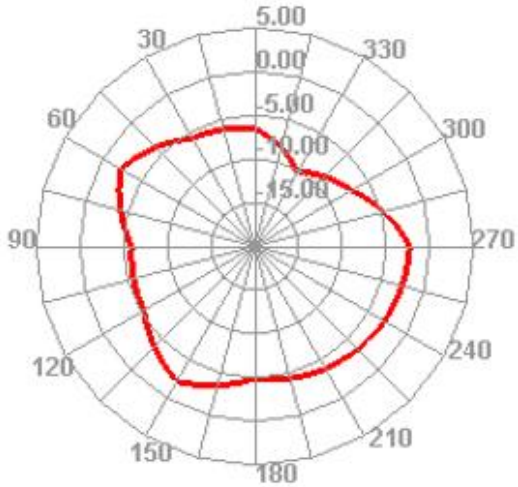
5150.000MHz H



5150.000MHz E1



5150.000MHz E2



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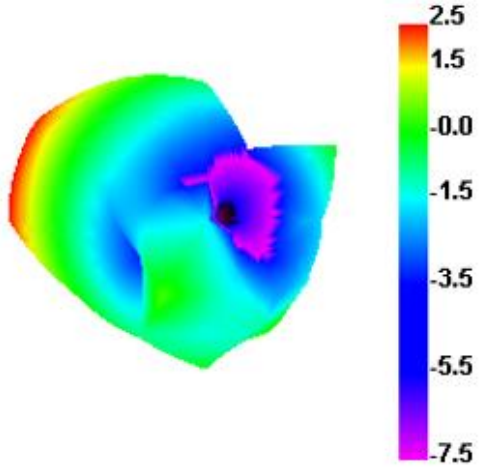
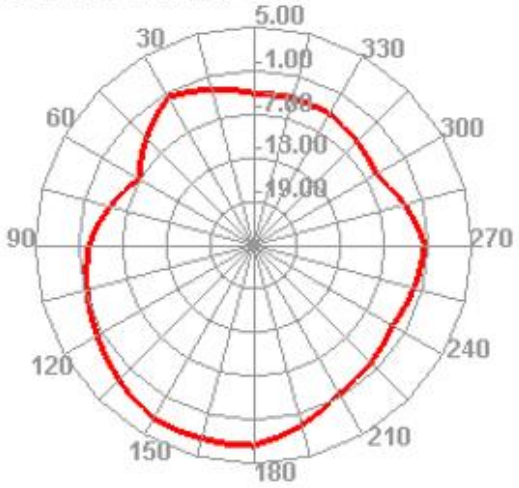
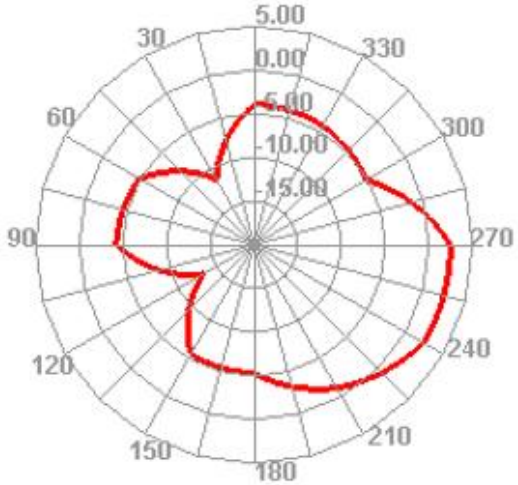
5500.000MHz



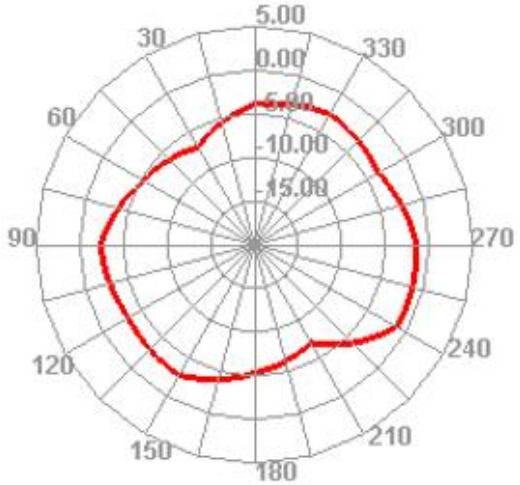
5500.000MHz H



5500.000MHz E1



5500.000MHz E2



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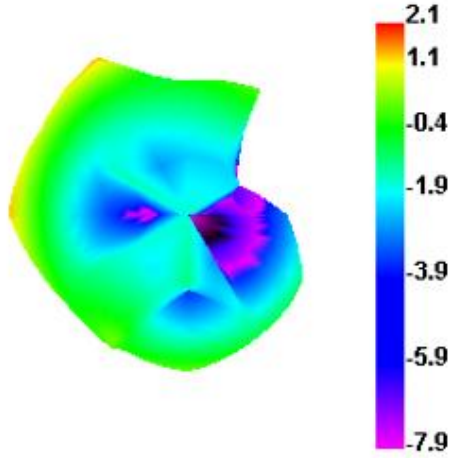
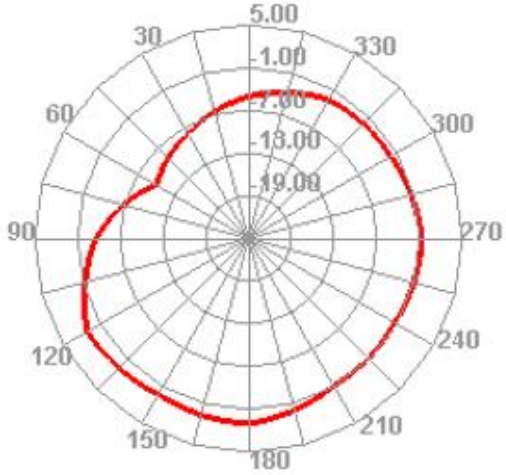
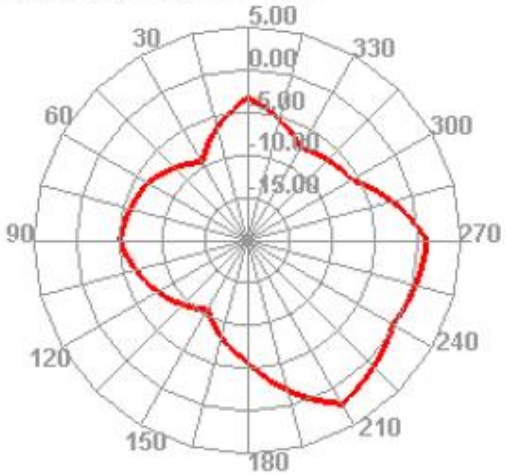
5850.000MHz



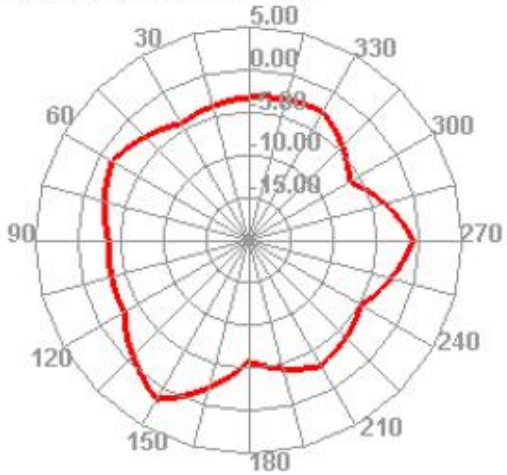
5850.000MHz H



5850.000MHz E1



5850.000MHz E2



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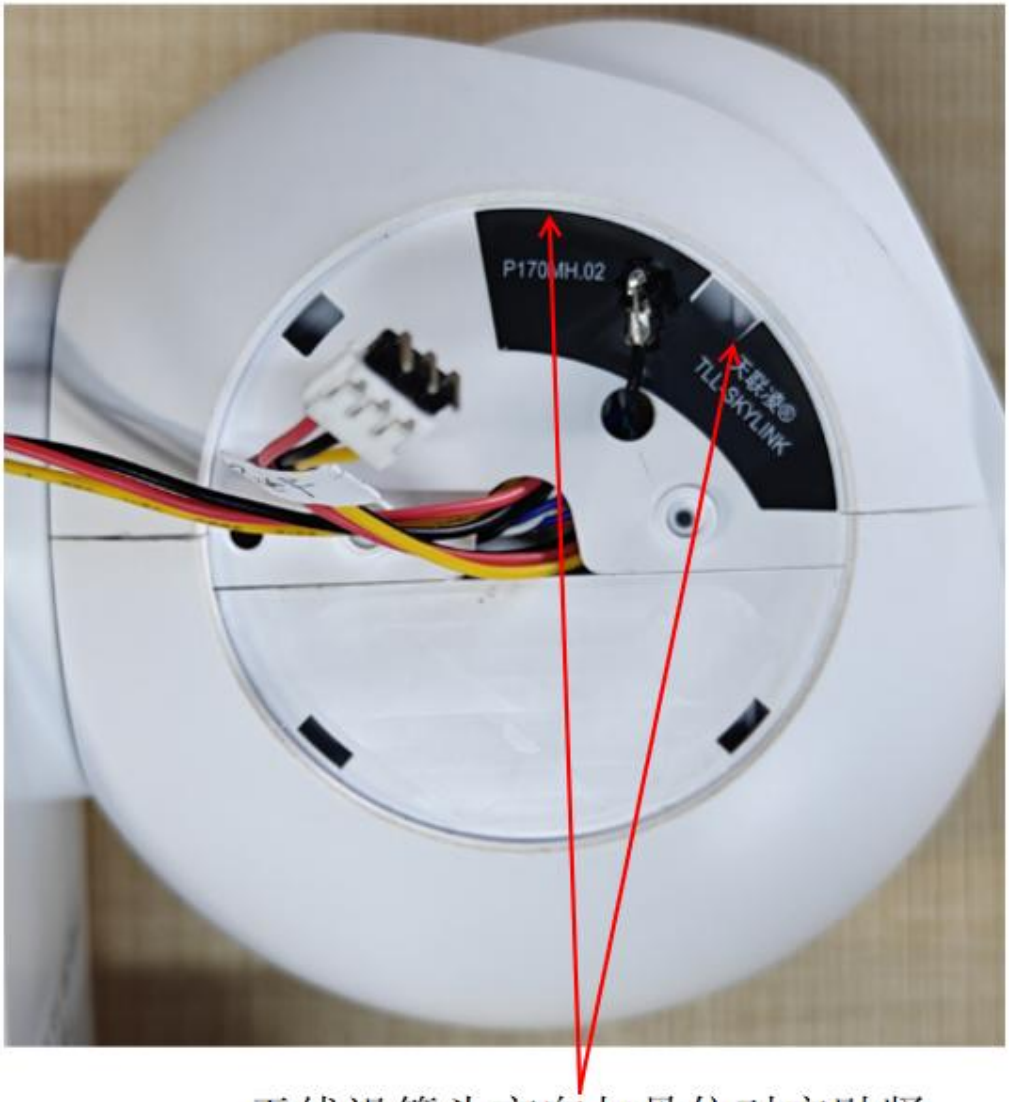
◆ 天线装配方式



天线沿箭头方向与骨位对齐贴紧

◆ 可靠性测试

测试项目		测试条件	设备	规范	结果
1	低温测试	温度：-30℃，湿度：65%，时间：48小时 测试条件： 把天线放置在高低温测试箱里，温度保持在25℃，湿度保持在65%,时间为1小时，然后在1小时内降低温度到-30℃，保持44小时，再升温到25℃，保持2小时	高低温测试机	不允许材料变形 电子性能好	通过
2	高温测试	温度：85℃，湿度：85%，时间：48小时 测试条件： 把天线放置在高低温测试箱里，温度保持在25℃，湿度保持在65%，时间为1小时，然后在1小时内，把温度升到80℃，湿度为85%,保持44小时，再把温度降到25℃，保持2小时。	高低温测试机	不允许材料变形 电子性能好	通过
3	盐雾测试	盐雾测试： 把天线放置在盐雾测试机内 设置测试环境： 温度35±2℃ 湿度85% 盐雾喷剂：5±1% PH值6.5~7.2 时间：24小时	盐雾测试机	没有颜色变化 没有出现生锈	通过

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