



深圳市英佳创电子科技有限公司

<http://www.szsyjc.com>

APPROVAL SHEET

承认书

CUSTOMER NAME 客户名称	深圳市华曦达科技股份有限公司	
CUSTOMER P/N 客户料号		
PART NAME 品 名	WIFI-L 金属内置天线 WIFI-L metal built-in antenna	
P/ N 料 号	YJC-6N000-B661	
APPROVAL REV. 版 次	A0	
DELIVERY DATE 送样日期	2025 年 11 月 21 日	
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APPROVED BY 核 准	肖 汉	
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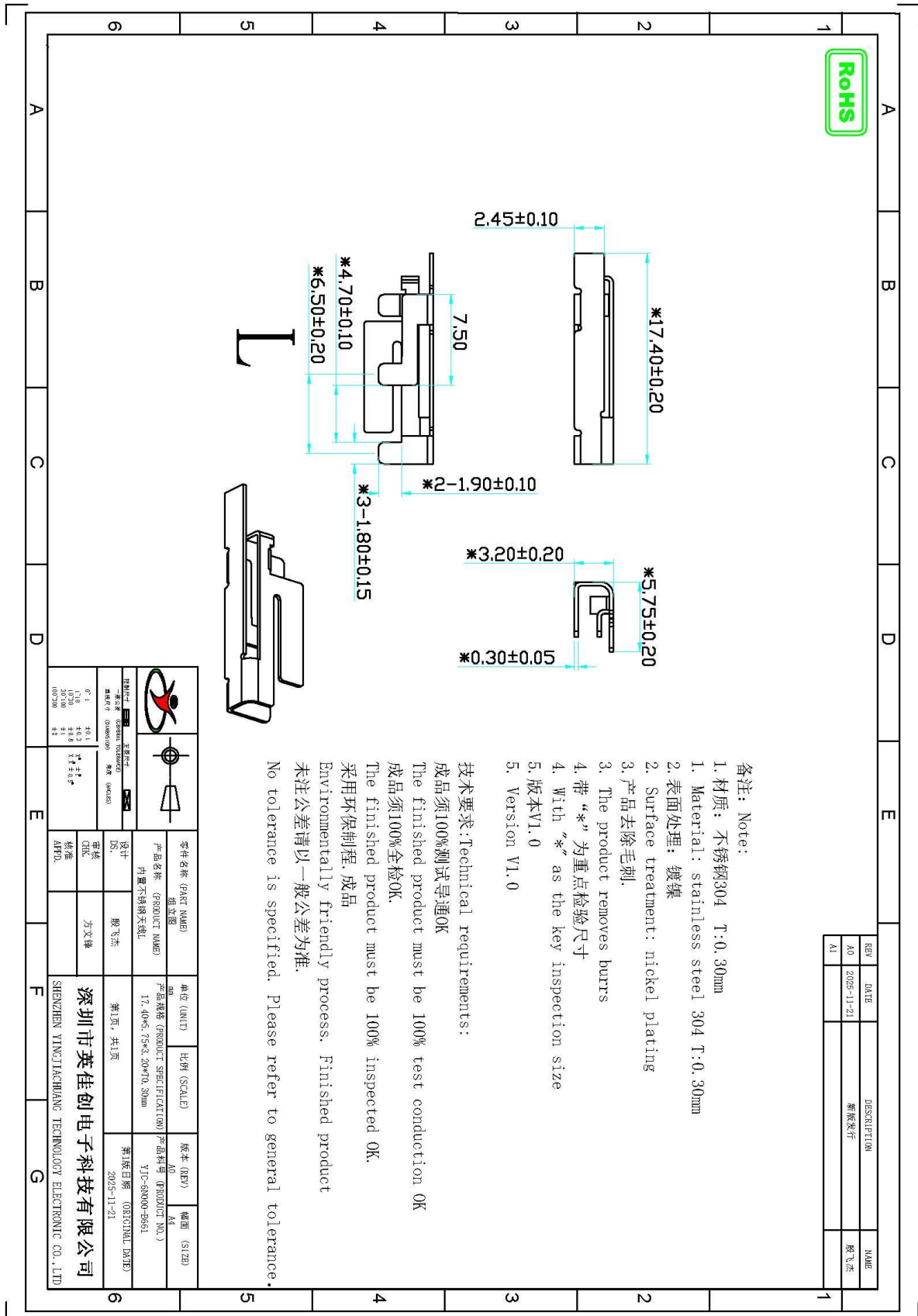


履历表(Resumer):

版本 Version	变更内容及更改原因 Changes and reasons	发行 publish	发行 publish
A/0	初版发行 (Issued)	2025 年 11 月 21 日 (November 21, 2025)	



产品平面图 (Product plan):

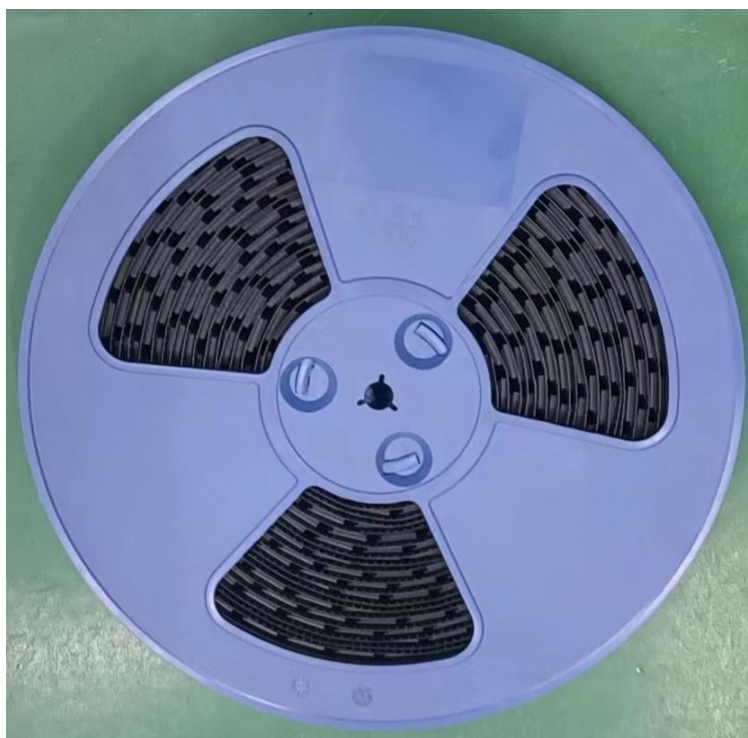




天线技术参数(Antenna technical parameters):

电气技术参数(Electrical technical parameters)	
电 性 能 指 标 (Electrical Specifications)	
频率范围 (Frequency Range)	2400 -2500/5150-5850MHZ
电压驻波比 (VSWR)	<1.92
输入阻抗 (Input Impedance)	50 Ω
方向 (Direction)	全向
增益 (Gain)	WIFI-L: 2.4G $\geq$ -0.1dBi, 5G $\geq$ 0.79dBi
机 械 指 标 (Mechanical Specifications)	
材质	304 不锈钢 (Stainless steel)
工作温度	-20℃~+70℃
工作湿度	20~80%

包装方式 (The packing way) :





环境性能测试(Environmental performance testing):

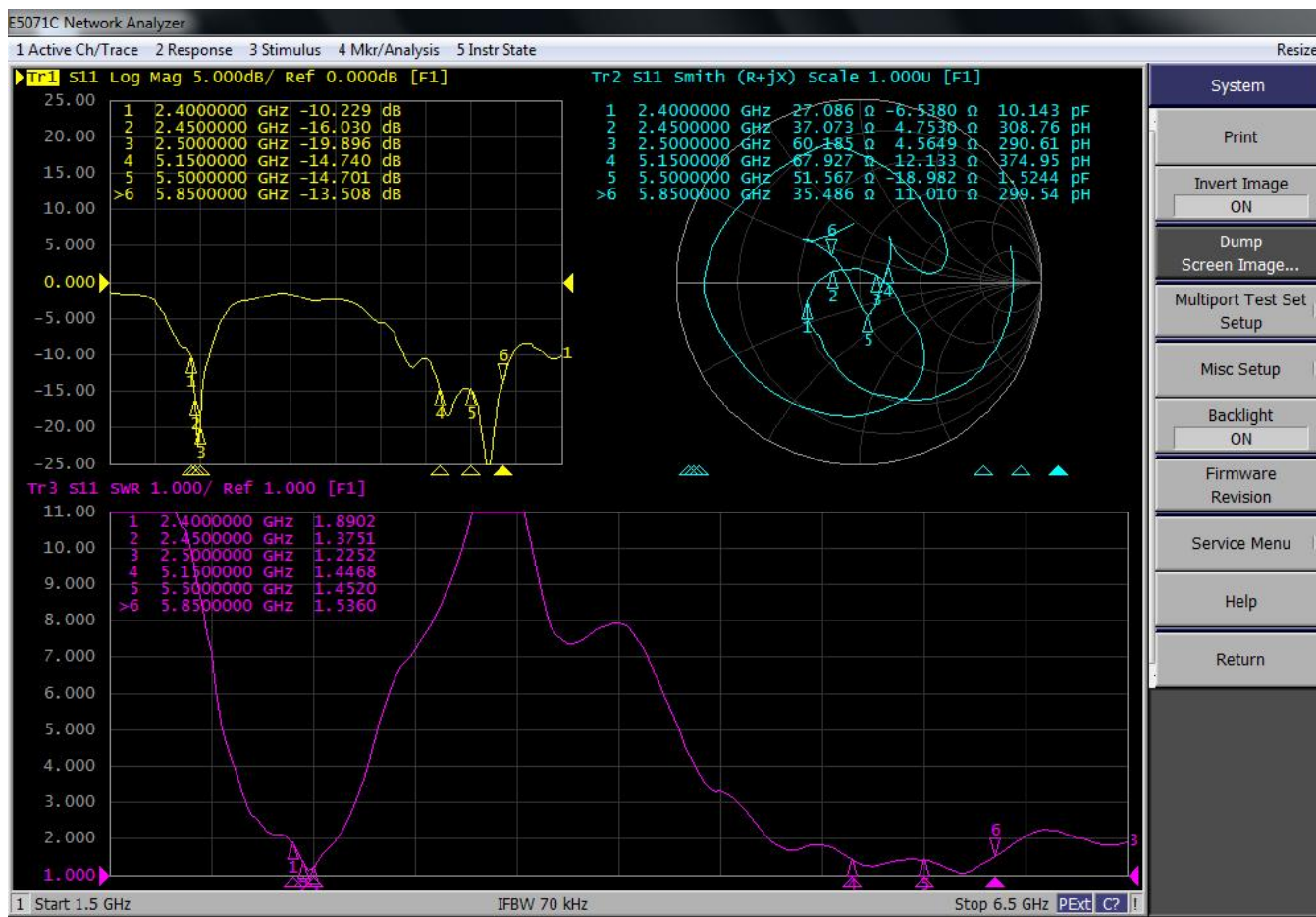
项目 (Project)	测试条件 (Test condition)	规格 (Specification)
储存环境 Storage Conditions	In the absence of specified test temperature, humidity, air pressure is as follows: 在没有指定的情况下测试温度、湿度、气压如下: 1. Temperature is $-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$ 1. 温度为 $-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$ 2. Relative humidity of 45% to 85% 2. 相对湿度为45%-85% 3. Air pressure is 86 kpa to 106 kpa 3. 气压为86kpa-106kpa	Electrical and mechanical properties is normal 电气机械性能正常
高低温试验 high and low temperature test	Between 70°C and -20°C for 5 loops, then 1-2 h under normal conditions, check the appearance quality. 在 70°C 与 -20°C 之间进行5次循环,然后在正常条件下1-2H, 检查外观质量。	Size should meet the requirements and should satisfy the content with the electrical and mechanical properties 尺寸应满足规定并应满足于机械、电气性能
耐恒定 湿热试验 Constant damp and hot resistance test	95 + / - 3% relative humidity, temperature test: 40°C . Lasts 2 h after, try to take out the determination of electrical properties, within 5 min after try 1-2 h under article normal thing, check the appearance quality 相对湿度 $95 \pm 3\%$, 试验温度: 40°C . 持续2H作用后, 试品取出后5min之内测定电气性能, 试品在正常条件下1-2H, 检查外观质量	Size should meet the requirements and should satisfy the content with the electrical and mechanical properties 尺寸应满足规定并应满足于机械、电气性能
振动试验 vibration test	10-55 hz, vibration frequency range of displacement amplitude: 0.35 MM, acceleration amplitude: 50.0 M/S, sweep cycles: 30 times 振频范围10-55HZ, 位移幅值: 0.35MM, 加速度幅值: 50.0M/S, 扫频循环次数: 30次	Electrical and mechanical properties is normal 电气机械性能正常
跌落试验 fall down test	1 m high altitude in accordance with the perpendicular axis free drop 3 times 1M高空按照互相垂直的轴方向自由跌落3次	Electrical and mechanical properties is normal 电气机械性能正常



天线实物图 (Antenna attachment position diagram) :

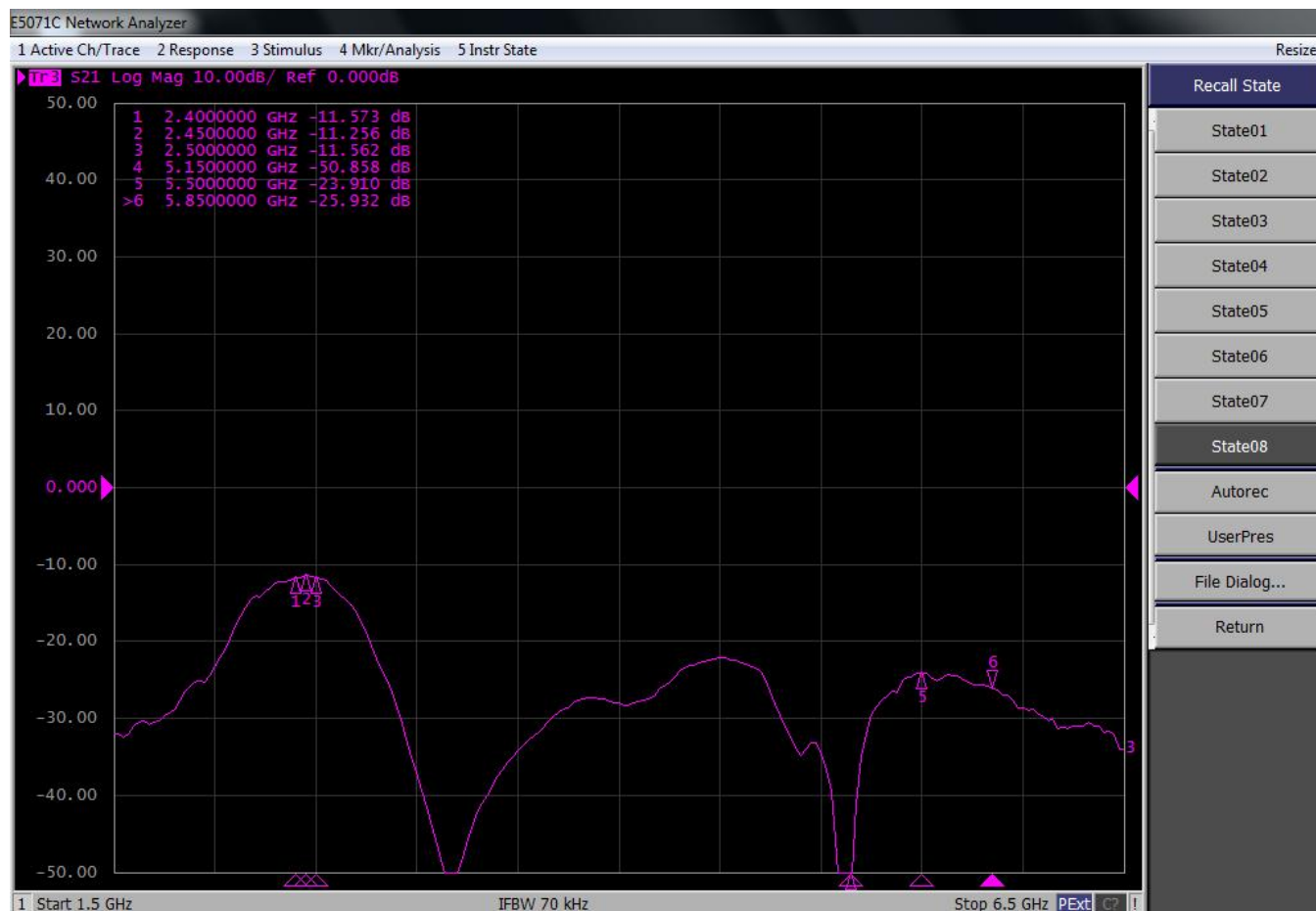


天线性能测试图 (Antenna performance test diagram) (WIFI-L) :





WIFI-L/WIFI-R 隔离度 WIFI-L/WIFI-R isolation

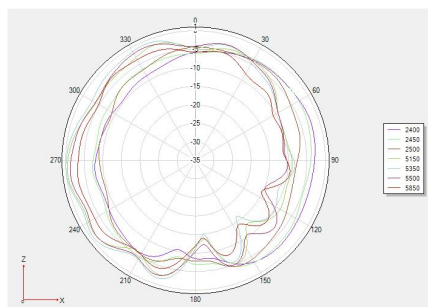




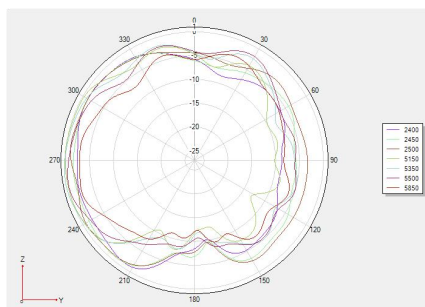
2D、3D 测试数据 Test data(WIFI-L: 2.4G/5G) :

Frequency (MHz)	Efficiency (%)	Gain. (dBi)
2400	52	-0.74
2410	51.29	-0.89
2420	54.2	-0.49
2430	52.72	-0.53
2440	56.1	-0.2
2450	53.83	-0.57
2460	55.46	-0.28
2470	55.98	-0.1
2480	56.36	0.34
2490	54.83	-0.26
2500	56.53	-0.14
5150	50.7	0.79
5200	50.93	0.28
5250	51.76	0.67
5300	53.46	0.39
5350	56.49	0.76
5400	57.15	0.37
5450	66.07	-0.22
5500	64.71	0.1
5550	65.31	-0.25
5600	63.68	-0.22
5650	65.92	-0.11
5700	61.94	-0.31
5750	60.81	-0.57
5800	55.08	-1.28
5850	54.08	-1.68

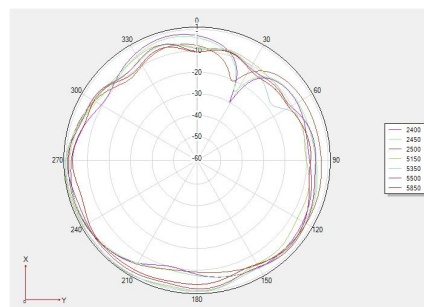
Phi =0 freq=2400MHz



Phi =90 freq=2400MHz

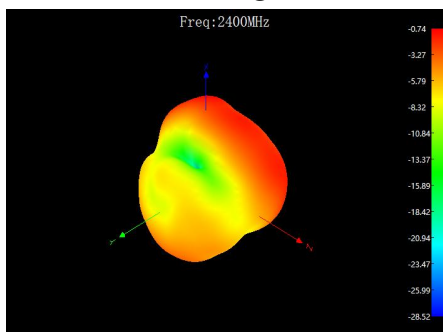


Theta =90 freq=2400MHz

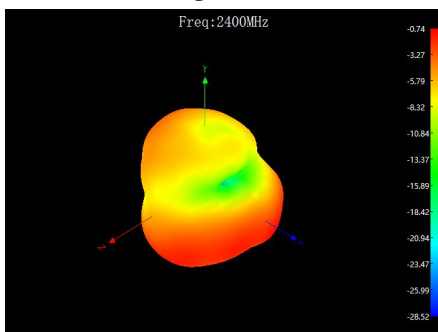




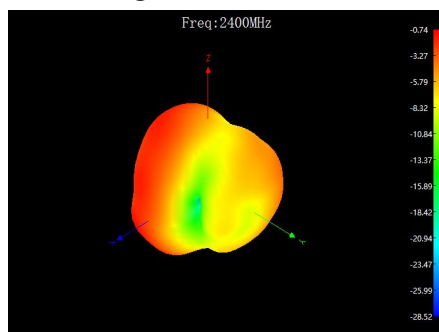
ZXY face @2400MHz



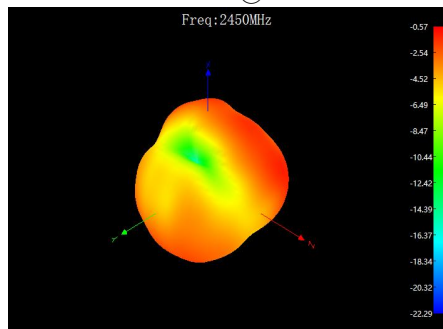
XYZ face @2400MHz



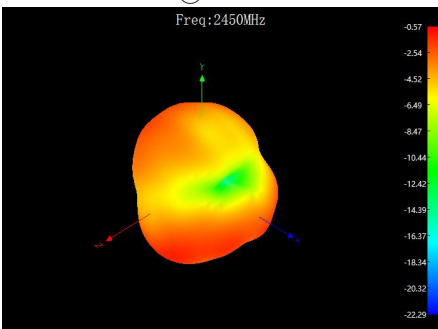
YZX face @2400MHz



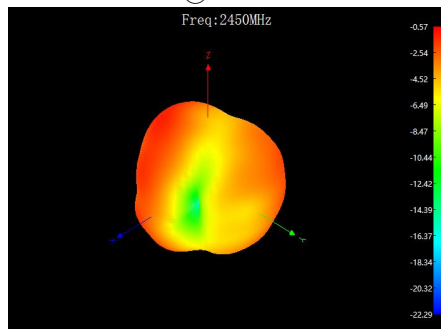
ZXY face @2450MHz



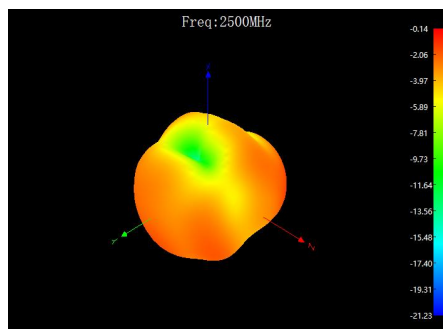
XYZ face @2450MHz



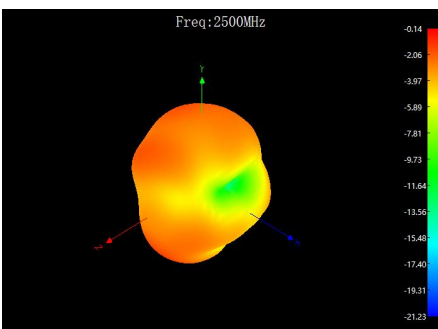
YZX face @2450MHz



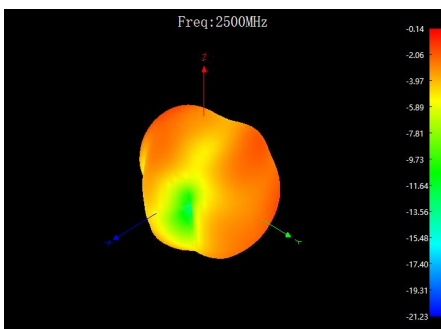
ZXY face @2500MHz



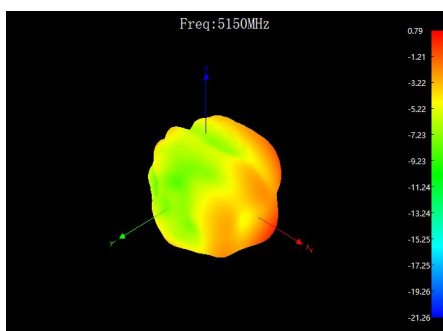
XYZ face @2500MHz



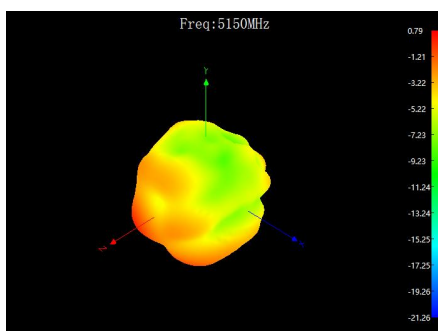
YZX face @2500MHz



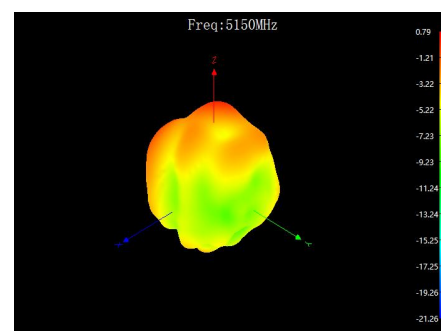
ZXY face @5150MHz



XYZ face @5150MHz

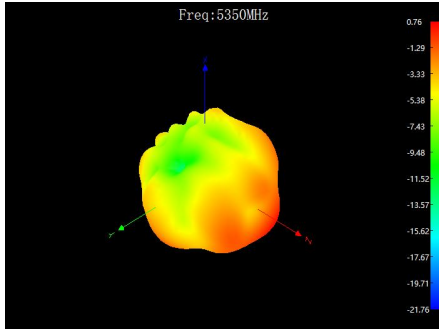


YZX face @5150MHz

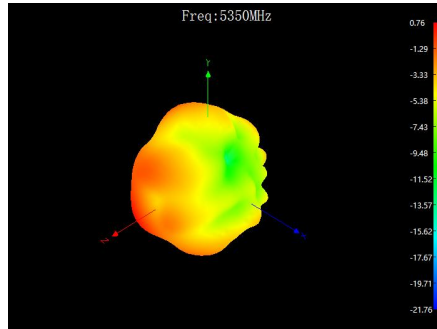




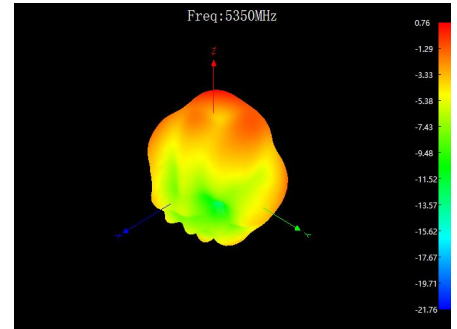
ZXY face @5350MHz



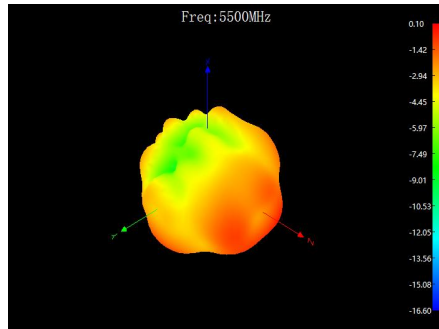
XYZ face @5350MHz



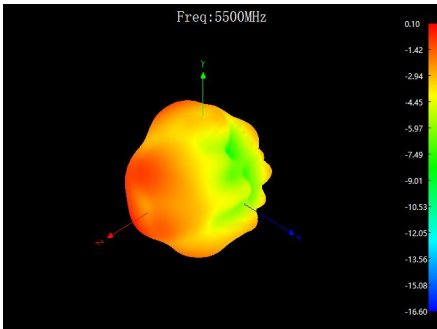
YZX face @5350MHz



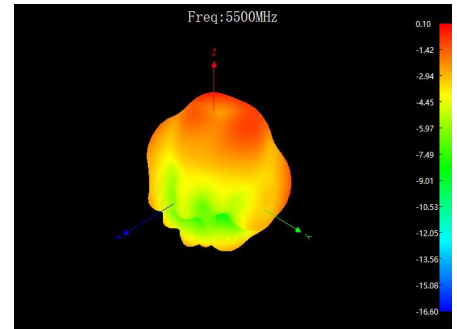
ZXY face @5500MHz



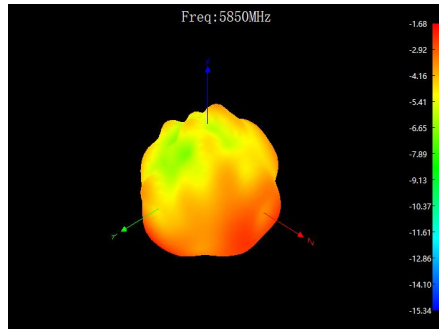
XYZ face @5500MHz



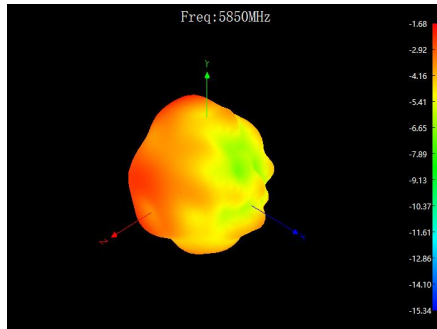
YZX face @5500MHz



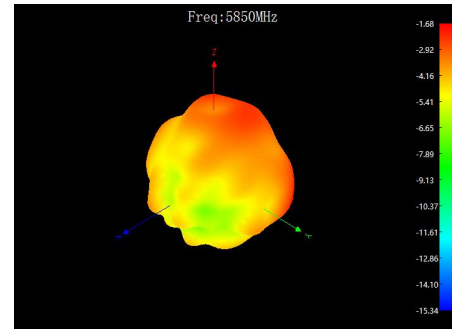
ZXY face @5850MHz



XYZ face @5850MHz



YZX face @5850MHz





盐雾试验记录报告

RD/YW-2025112101

试验日期	20251121	报告编号	2025112101
产品名称	铜件	产品料号	YJC-6N000-B661 YJC-6N000-B662
供方名称	YJC	试验数量 (PCS)	5PCS+5PCS
试验时间: 19日8时30分至21日8时30分, 共计48小时			
试验仪器: 盐雾测试机			
试验中若有中断其原因为:			
试验项目	测试标准	实际数据	
盐水浓度	5% (50±0.5g/L)	5%	
喷雾量	1.0-2.0ml/80CM ² /H	1.8ml	
PH 值	6.5-7.2	7	
空气压力	1.00±0.01(kgf/CM ²)	1	
实验室湿度	相对湿度: 80%±5%	83%	
实验室温度	35°C±1°C	34%	
压力桶温度	47°C±1°C	46%	
盐水温度	35°C±1°C	35°C	
试样处理及判定公式: 1、取出试样用流动冷水轻轻洗涤, 以除去试样表面盐类物质, 用吹风机冷风档吹干后检查, 观察镀层表面蓝色或绿色斑点数量; 2、斑点直径 1-3mm 按 N=3, 斑点直径 3-5mm 按 N=10 计算, 缺陷等级计算公式 $X=N \div S$ (镀层面积 cm ²)			

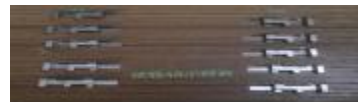


3、缺陷等级 $X > 0.25$ 为不合格;

试验后状态描述: (在放大镜下观察之现象)



现象描述: 无不良现象



判定标准:

GB/T6461-2002《金属基本体上金属和其它无机覆盖层经试验后的试样和试件的评级》所制定的按照腐蚀面积进行评级的方法。

判定结果: ☒ 合格

☐ 不合格

审核: 冯应梅

检验员: 朱攀



深圳市英佳创电子科技有限公司

<http://www.szsyjc.com>

ROHS 物料控制报告 (ROHS Material control report)

兹证明向贵司交货的零组件、辅助材料所使用的原材料、以及生产工程中的添加剂等均符合 RoHS 限制使用有害物质指令的环保要求 (RoHS 指令 2011/65/EU)
This is to certify that the components delivered to your company, the raw materials used for auxiliary materials, and the additives used in the production project all meet the environmental requirements of the RoHS directive on limiting the use of hazardous substances. (RoHS 指令 2011/65/EU)

关于零组件、辅助材料所使用的原材料、包装材料以及和产过程中使用的添加剂等的构成成份报告如下:

The report on the composition of raw materials, packaging materials, and additives used in the manufacturing process for component auxiliary materials is as follows

组成物料名称 Component /Part Name	组成材料 Material Composition	ICP 报告编号 ICP report #	测试机构 Test Org.	测试时间 Test Date	有 害 物 质 含 量(ppm)						是否合格? PASS?
					Cd	Pb	Hg	Cr ⁶⁺	PBB	PBDE	PASS
金属件	304 不锈钢 Stainless steel	SHAPH25006134216	SGS	25/03/28	ND	ND	ND	ND	ND	ND	PASS