



深圳市锦鸿无线科技有限公司

Shenzhen Jinhong Wireless Technology Co., Ltd.

天线规格书

Antenna Specification

产品描述 Part Description	客户: 蓝硕 Vendor: 产品名称: LTE/DIV/WIFI/转接线 Product Name: 物料代码: Part NO:	规格型号: JHLS2606-203-A/B/C/D Description: 所承认项目: U850-4981 Project: 版本: A1 Version:
附件 Attachments	☒ 规格书 Spec ☐ CPK 报告 Cpk Report ☐ 制造流程图 QC Flow Chart ☒ 包装方式 Packing Content	☒ 工程图面 Drawing ☐ 关键尺寸报告 FAI Report ☐ 成型条件 Molding conditions ☐ C3C 证书 3C Certificate
供应商签核 Vendor	拟制: 彭彪 Design: 审核: 郑翠兰 Check: 批准: 彭发辉 Approval:	☒ 样品 Sample ☒ ROHS 报告 ROHS Repot ☐ 可靠性测试报告 Reliability Report ☐ 安规报告 Safety Report ☒ 材质证明书 Material Verification Sheet ☐ 物料检验标准 Material inspection standard
技术确认 Technology check	结构意见/签名: Mechanical 工业/包材设计意见/签名: ID 品质意见/签名: DQE/SQE	硬件意见/签名: Hardware 项目意见/签名: Market
最终确认 Final check	质量策划: Quality planning	ROHS: ☐ Rohs 物料 ☐ 非 Rohs 物料
承认条件 Approval condition	☐ 承认 Approved ☐ 条件承认 Condition approved ☐ 临时承认 Temporary approved	☐ 拒绝承认 Reject 需满足条件: _____ 限量 _____ PCS 采购
审批 Approval by	研发总工 (技术总监): RD Leader(Technology Director)	质量总监: Quality Director
分发部门 Distribute	☐ IQC ☐ 采购 (供应商)	☐ 样品管理/文控 ☐ 外协厂 ☐ 其它

www.szjhw.com

地址: 深圳市宝安区西乡街道南昌社区南昌宝源路旁伟业创新一八工业区B1栋301
Address: Room 301, Building B1, Weiyechuangxin Industrial Zone 18, by Nanchang Baoyuan Road, Nanchang Community, Xixiang Street, Bao'an District, Shenzhen, China

目录 Content

1 说明书Instructions.....	
2 产品技术指标 Product specifications.....	
3 电气性能测试 Electrical performance test.....	
3.1 测试设备Test equipment and environment.....	
3.2 天线有源数据 Antenna active test data.....	
3.3 效率与增益 Efficiency and Gain.....	
3.4天线方向图 Antenna pattern.....	
4 工程图纸 Engineering drawings.....	
5 安装说明 Installation instructions.....	
6包装方式 Packing method.....	

1 说明instructions

这份报告包含天线电性能测试的若干设备、测试环境和测试结果，以及天线的结构图纸和检验报告.

This report includes several equipment, test environment and test results for the electrical performance of the antenna, as well as structural drawings and inspection reports of the antenna.

2 产品技术指标 Product specifications

电性能指标 Electrical Specifications	
频率范围 Frequency Range (MHz)	700-960&1710-2600
增益 Gain (dBi)	见下方表格
电压驻波比 VSWR	≤2
输入阻抗 Input Impedance (Ω)	50
极化方式 Polarization	水平
最大功率 Maximum input power (W)	2
接头型号 Input connector type	无
机械指标 Mechanical Specifications	
天线尺寸 Dimensions (mm)	见下方图纸
天线重量 Antenna weight (kg)	
天线颜色 Antenna color	黑色

3 电气性能测试 Electrical performance test

3.1 测试设备 Test equipment and environment

测试设备

SATIMO-24

ETS

模拟人头手

安捷伦8960

安利MT8820C

CMW500

安捷伦E5071C

测试系统	测试环境	有源测试	无源测试
SATIMO—24	温度：22℃ ± 3℃	支持2G/3G/4G	400MHZ——6G
ETS	湿度：50% ± 15%	BT/WIFI/GPS	

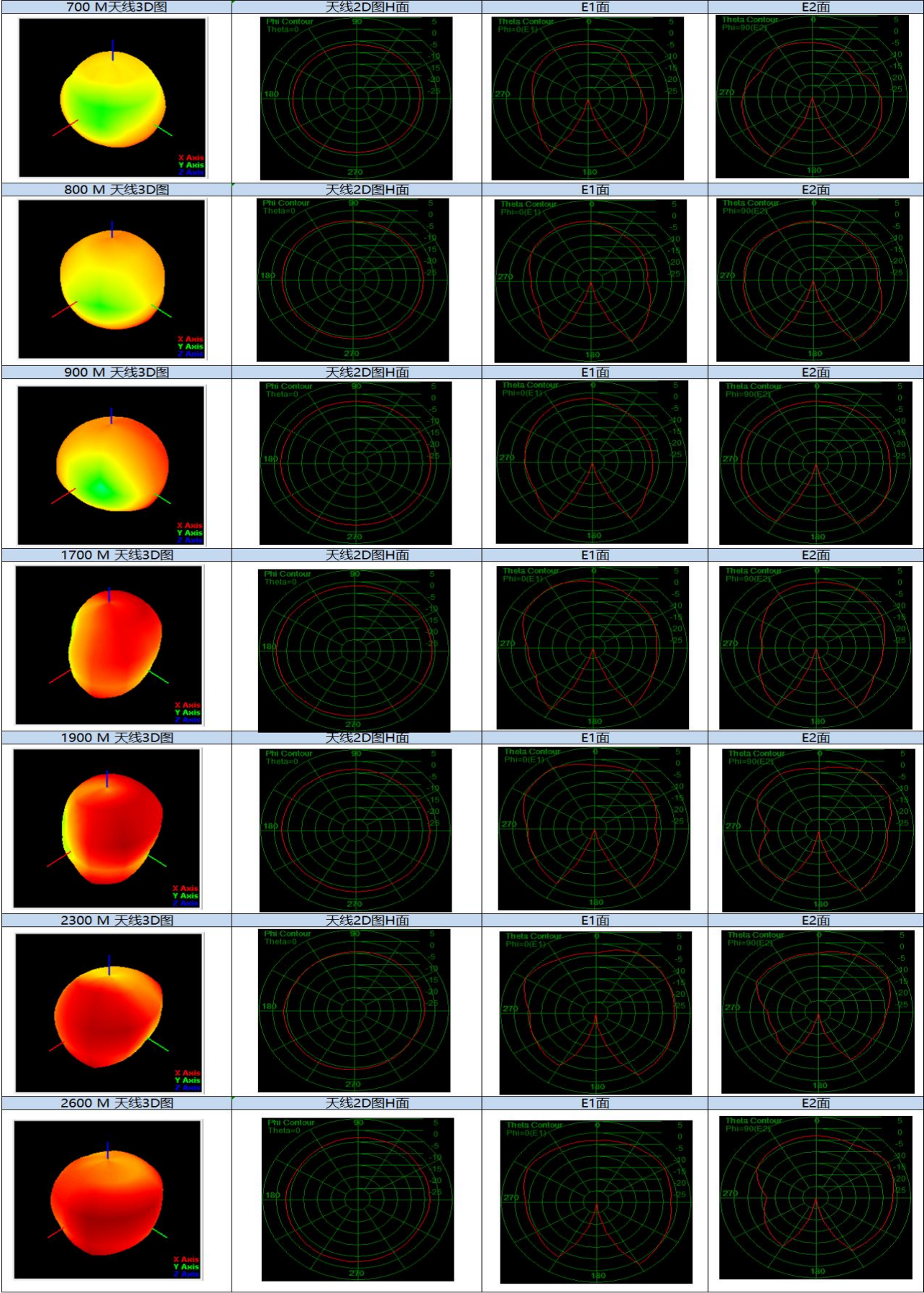
3.2 天线有源数据 Antenna active test data

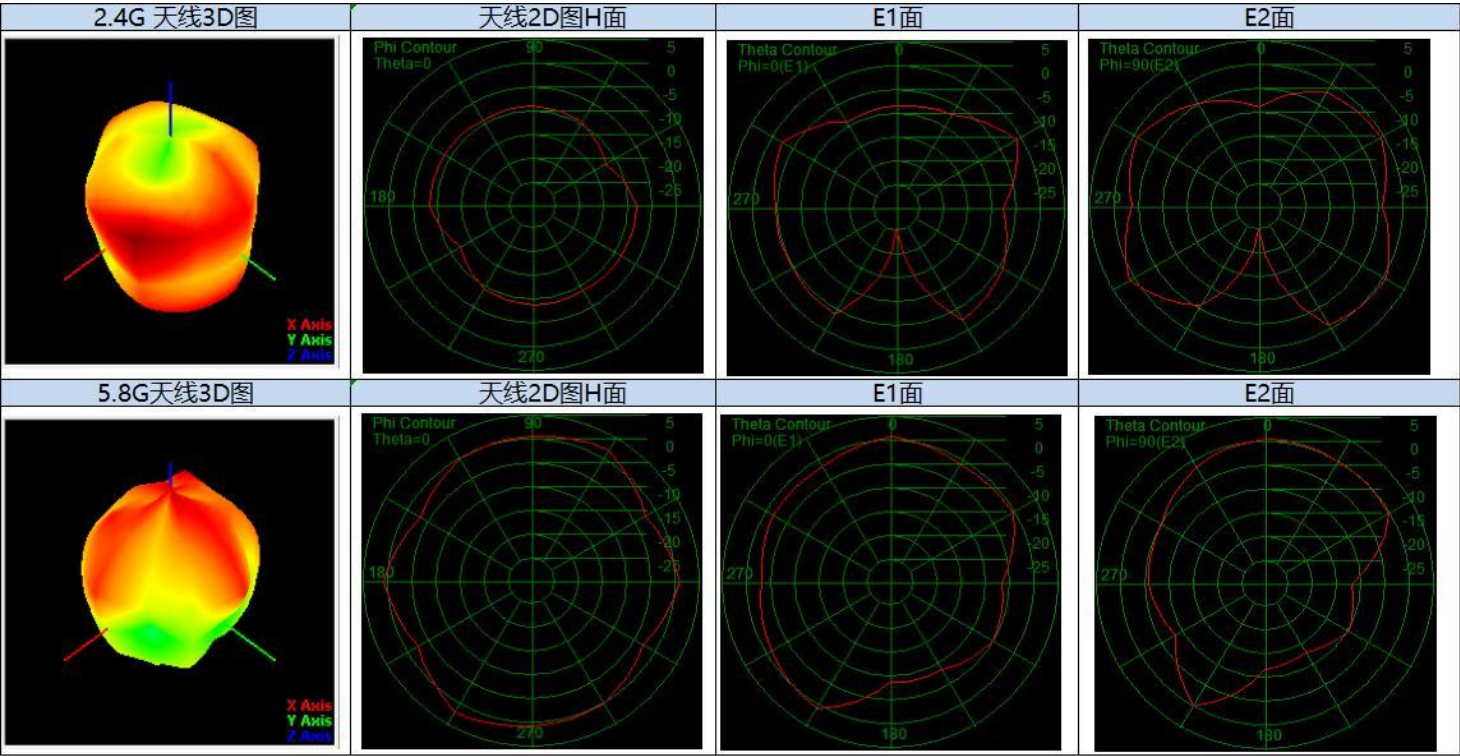
LTE OTA测试报告							
频段	信道	TRP	TIS	频段	信道	TRP	TIS
Band 1	18050	18.7		Band 66	132022	18.6	
	18300	18.0			132622	18.9	
	18550	18.2	-94.2		132297	19.2	-93.1
Band 2	18700	18.8		Band 71 (10M)	133172	17.2	
	18900	18.5			133297	17.5	
	19100	18.9	-94.0		132422	17.3	-90.0
Band 3	19250	20.1		GSM900	1	27.2	
	19525	20.1			62	27.4	
	19900	19.9	-93.8		124	27.5	-107.2
Band 4	20050	19.2		DCS1800	512	27.2	
	20175	19.3			698	27.3	
	20300	18.9	-94.0		885	28.0	-107.6
Band 5	20450	18.7		GSM850	128	27.0	
	20525	18.8			192	27.6	
	20600	19.1	-94.5		251	26.9	-107.0
Band 7	20800	19.6		PCS1900	512	26.5	
	21100	20.1			610	26.7	
	21400	19.7	-94.7		810	27.0	-106.8
Band 8	21500	19.8		W2100	10562	18.5	
	21625	20.0			10700	19.1	
	21750	19.9	-91.8		10838	19.2	-106.5
Band 12	23060	19.2		W1900	9662	18.1	
	23095	19.4			9700	18.6	
	23130	18.8	-92.5		9938	18.4	-107.2
Band 13	23230			W1700	1537	18.8	
	23202	18.3			1638	18.0	
	23255		-91.8		1738	18.5	-106.8
Band 17	23780	18.5		W900	2937	18.6	
	23790	18.9			3013	19.1	
	23800	18.8	-91.5		3088	19.4	-107.6
Band 20	24200	20.1		W850	4357	19.4	
	24300	20.4			4408	19.2	
	24300	19.7	-93.0		4458	19.7	-106.7
Band 28	27260	20.1					
	27430	20.6					
	27610	19.9	-91.5				

3.3 效率与增益 Efficiency and Gain

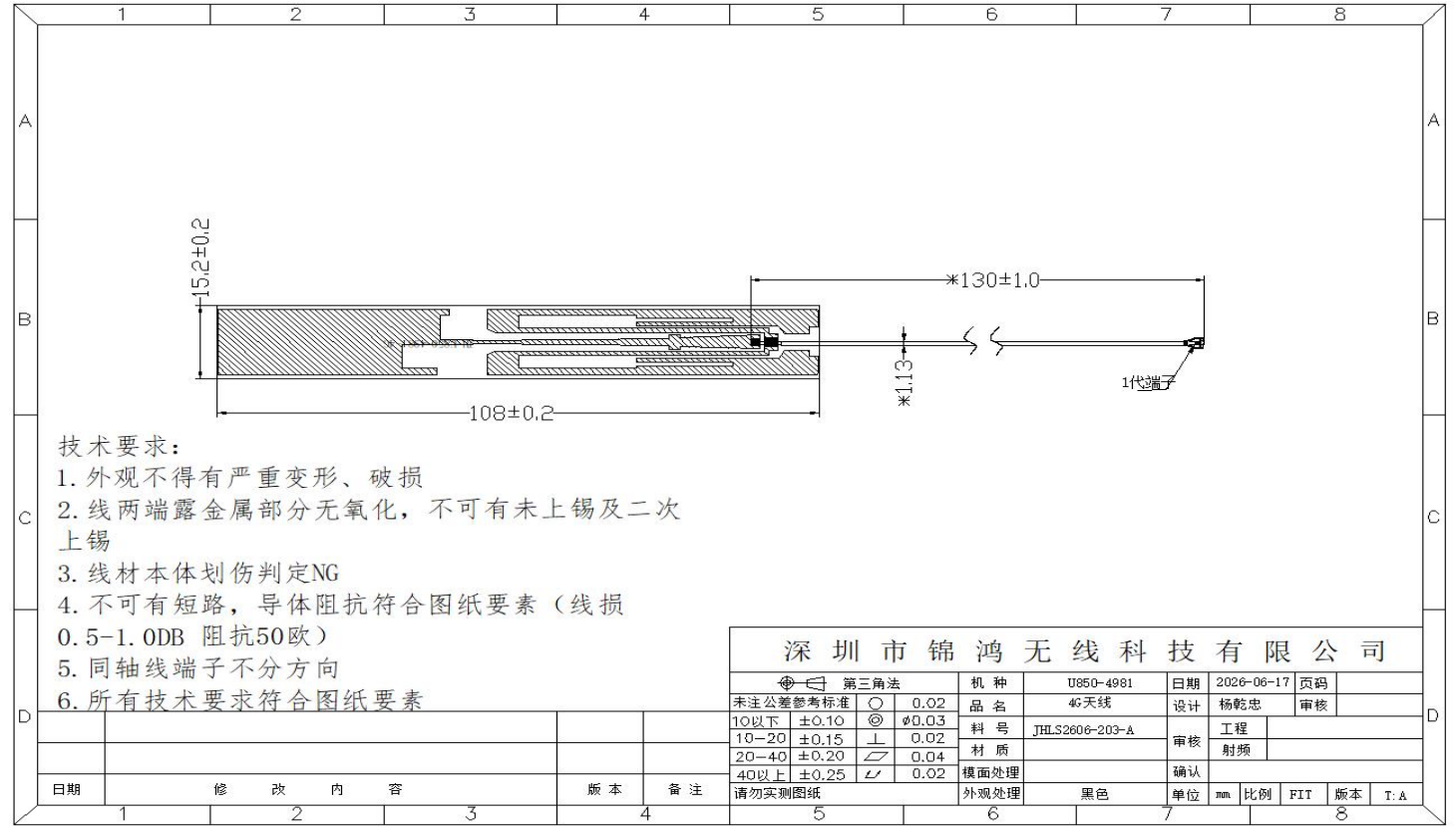
LTE天线			Test Point ID	Freq. (MHz)	Gain (dBi)	Efficiency (%)
Frequency 频率(MHz)	Gain 增益(dBi)	Efficiency 效率 (%)				
700.0	0.34	31.3%	1-21	2400.0	1.85	50.5%
720.0	0.34	38.4%		2420.0	2.22	54.2%
740.0	0.36	38.8%		2440.0	1.95	46.9%
760.0	0.42	37.8%		2460.0	2.95	59.1%
780.0	0.36	38.1%		2480.0	2.04	49.0%
800.0	0.67	37.8%		2500.0	2.55	46.9%
820.0	0.71	47.7%		5150.0	1.19	41.0%
840.0	0.68	45.3%		5200.0	1.47	42.0%
860.0	0.92	46.8%		5250.0	2.03	42.2%
880.0	1.12	45.4%		5300.0	1.21	45.0%
900.0	1.23	47.5%		5350.0	1.99	43.1%
920.0	1.23	45.4%		5400.0	1.66	44.2%
940.0	1.84	41.6%		5450.0	1.34	47.0%
960.0	2.60	42.6%		5500.0	1.14	52.0%
1700.0	1.17	47.7%		5550.0	1.83	48.2%
1750.0	1.00	53.6%		5600.0	1.46	53.0%
1800.0	1.99	52.3%		5650.0	2.29	50.0%
1850.0	2.23	54.8%		5700.0	1.91	46.0%
1900.0	1.03	55.7%		5750.0	0.67	45.0%
1950.0	1.25	51.8%		5800.0	1.62	47.0%
2000.0	2.02	55.4%		5850.0	0.39	43.0%
2050.0	1.84	52.3%				
2100.0	2.28	55.6%				
2150.0	3.09	60.6%				
2200.0	1.46	55.4%				
2250.0	1.44	52.9%				
2300.0	2.00	58.8%				
2350.0	1.28	51.2%				
2400.0	1.83	49.7%				
2450.0	2.32	52.8%				
2500.0	1.45	55.2%				
2550.0	1.46	53.0%				
2600.0	1.49	58.8%				
2650.0	1.17	50.6%				
2700.0	1.06	50.7%				

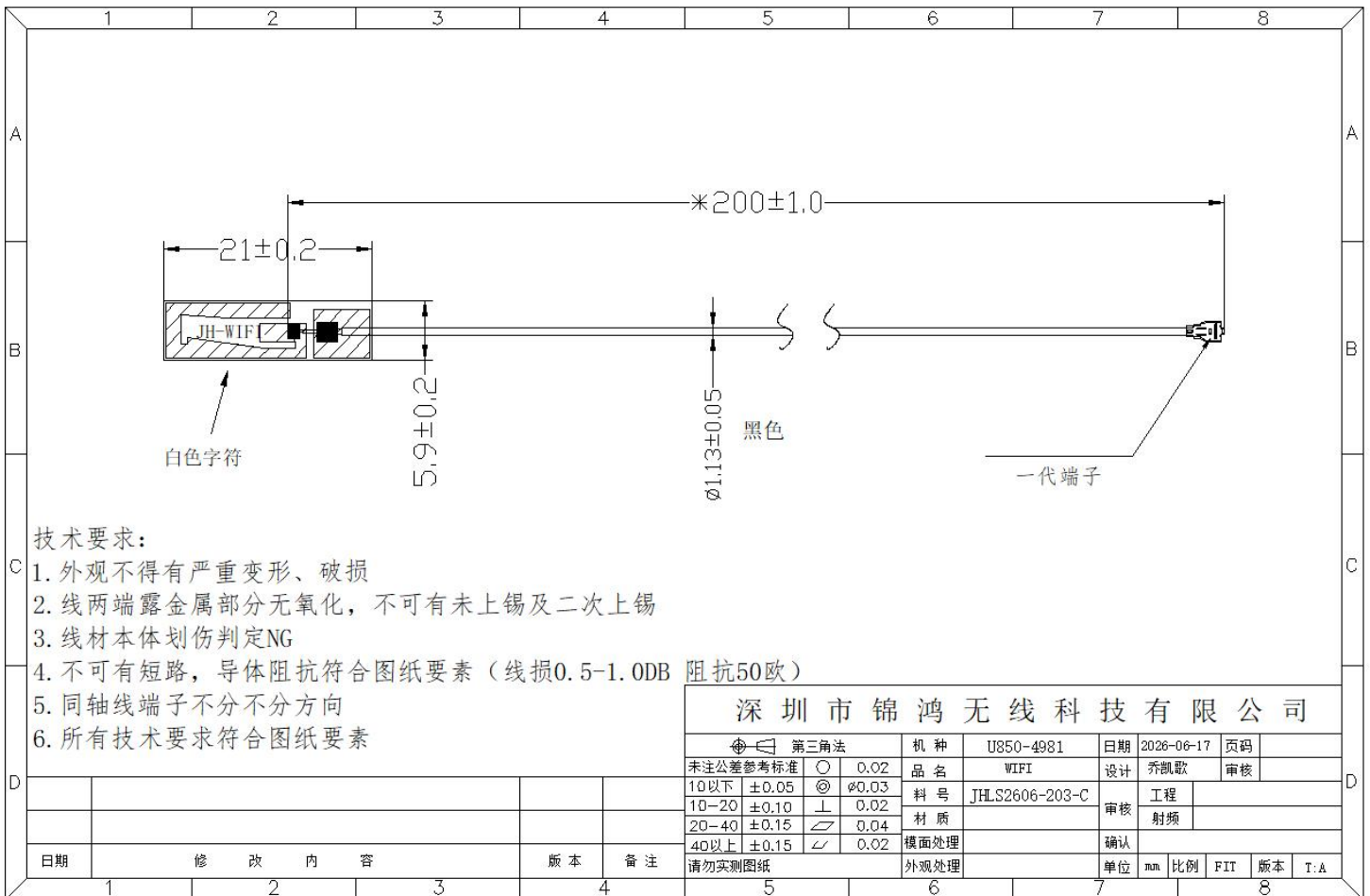
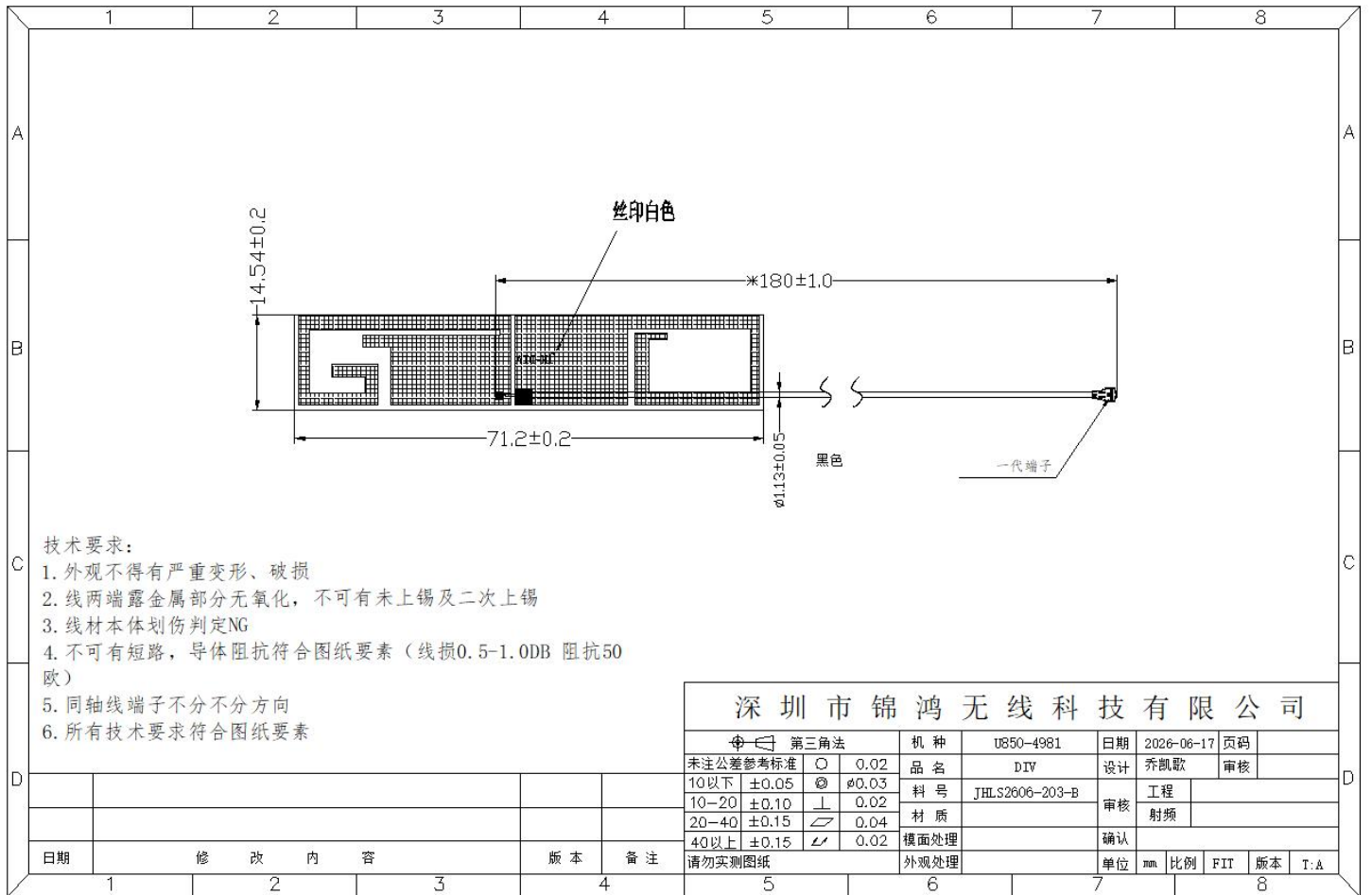
3.4 天线方向图 Antenna pattern





4 工程图纸 Engineering drawings





6 包装方式 Packing method

Inside:

External :



深圳市锦鸿无线科技有限公司

Shenzhen Jinhong Wireless Technology Co., Ltd.

天线规格书

Antenna Specification

产品描述 Part Description	客户: 蓝硕 Vendor: 产品名称: 外置扁状天线 Product Name: 物料代码: Part NO:	规格型号: JH;S2609-308-A Description: 所承认项目: U850-外置 Project: 版本: A1 Version:		
附件 Attachments	☒ 规格书 Spec ☐ CPK 报告 Cpk Report ☐ 制造流程图 QC Flow Chart ☒ 包装方式 Packing Content	☒ 工程图面 Drawing ☐ 关键尺寸报告 FAI Report ☐ 成型条件 Molding conditions C3C 证书 3C Certificate	☐ 样品 Sample ☒ 可靠性测试报告 Reliability Report ☒ 材质证明书 Material Verification Sheet ☐ 物料检验标准 Material inspection standard	☒ ROHS 报告 ROHS Repot ☐ 安规报告 Safety Report
供应商签核 Vendor	拟制: 彭彪 Design:	审核: 郑翠兰 Check:	批准: 彭发辉 Approval:	
技术确认 Technology check	结构意见/签名: Mechanical 工业/包材设计意见/签名: ID 品质意见/签名: DQE/SQE	硬件意见/签名: Hardware 项目意见/签名: Market		
最终确认 Final check	质量策划: Quality planning	ROHS: ☐ Rohs 物料 ☐ 非 Rohs 物料		
承认条件 Approval condition	☐ 承认 Approved ☐ 条件承认 Condition approved ☐ 临时承认 Temporary approved	☐ 拒绝承认 Reject 需满足条件: _____ 限量 _____ PCS 采购		
审批 Approval by	研发总工 (技术总监): RD Leader(Technology Director)	质量总监: Quality Director		
分发部门 Distribute	☐ IQC	☐ 采购 (供应商)	☐ 样品管理/文控	☐ 外协厂 ☐ 其它

www.szjhw.com

地址: 深圳市宝安区西乡街道南昌社区南昌宝源路旁伟业创新一八工业区B1栋301

Address: Room 301, Building B1, Weiyechuangxin Industrial Zone 18, by Nanchang Baoyuan Road, Nanchang Community, Xixiang Street, Bao'an District, Shenzhen, China

目录 Content

1 说明书Instructions.....	
2 产品技术指标 Product specifications.....	
3 电气性能测试 Electrical performance test.....	
3.1 测试设备Test equipment and environment.....	
3.2 天线有源数据 Antenna active test data.....	
3.3 效率与增益 Efficiency and Gain.....	
3.4天线方向图 Antenna pattern.....	
4 工程图纸 Engineering drawings.....	
5 安装说明 Installation instructions.....	
6包装方式 Packing method.....	

1 说明instructions

这份报告包含天线电性能测试的若干设备、测试环境和测试结果，以及天线的结构图纸和检验报告.

This report includes several equipment, test environment and test results for the electrical performance of the antenna, as well as structural drawings and inspection reports of the antenna.

2 产品技术指标 Product specifications

电性能指标 Electrical Specifications	
频率范围 Frequency Range (MHz)	700-960&1710-2600
增益 Gain (dBi)	见下方表格
电压驻波比 VSWR	≤3
输入阻抗 Input Impedance (Ω)	50
极化方式 Polarization	水平
最大功率 Maximum input power (W)	2
接头型号 Input connector type	无
机械指标 Mechanical Specifications	
天线尺寸 Dimensions (mm)	见下方图纸
天线重量 Antenna weight (kg)	
天线颜色 Antenna color	黑色

3 电气性能测试 Electrical performance test

3.1 测试设备 Test equipment and environment

测试设备



SATIMO-24



ETS



模拟人头手



安捷伦8960



安利MT8820C



CMW500



安捷伦E5071C

测试系统	测试环境	有源测试	无源测试
SATIMO—24	温度：22℃ ± 3℃	支持2G/3G/4G	400MHZ——6G
ETS	湿度：50% ± 15%	BT/WIFI/GPS	

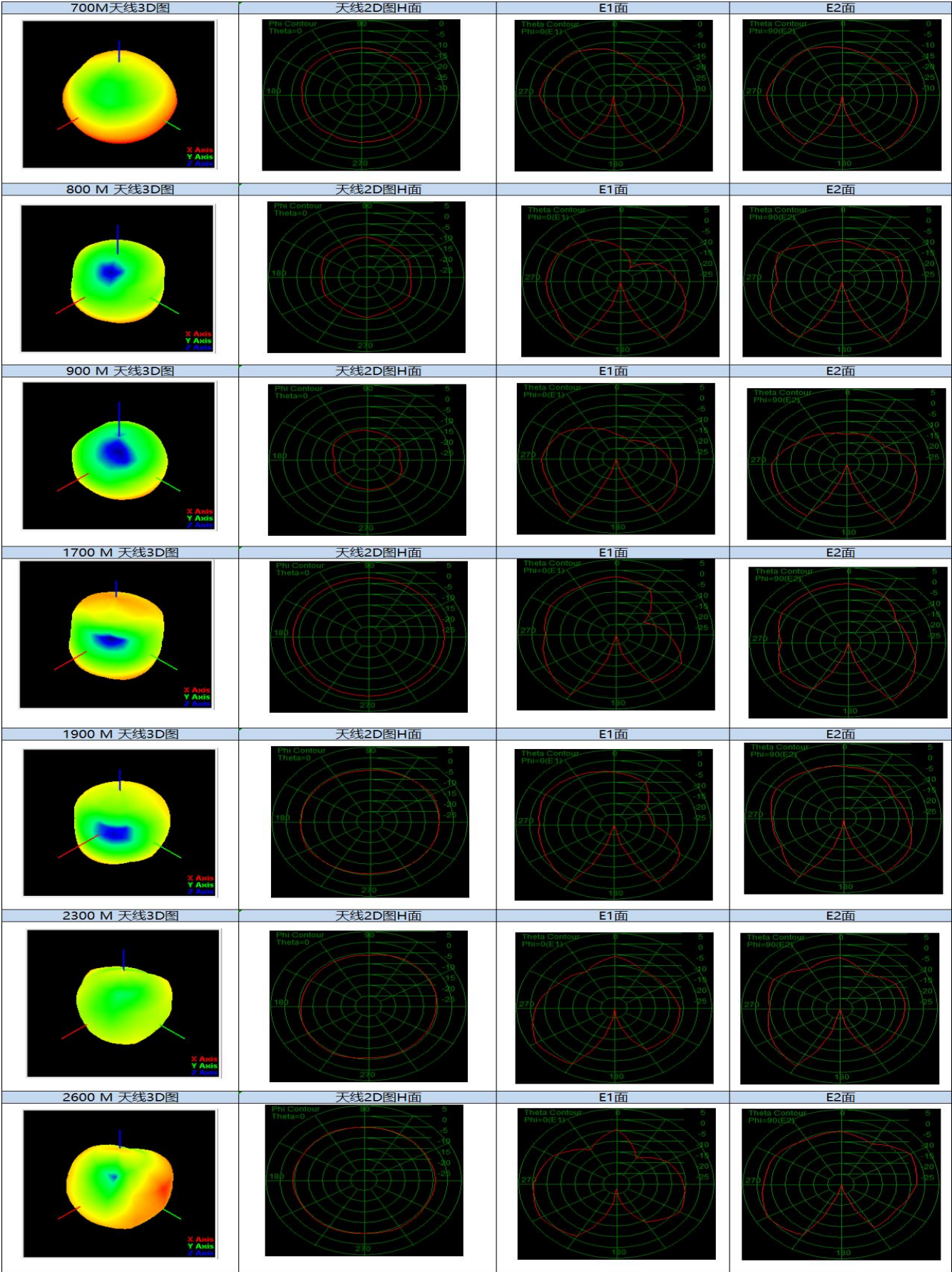
3.2 天线有源数据 Antenna active test data

LTE OTA测试报告							
频段	信道	TRP	TIS	频段	信道	TRP	TIS
Band 1	18050	20.3		Band 66	132022	18.9	
	18300	20.1			132622	19.2	
	18550	18.3	-96.2		132297	18.7	-96.5
Band 2	18700	19.4		Band 71 (10M)	133172	15.6	
	18900	19.0			133297	15.2	
	19100	19.1	-97.1		132422	15.7	-93.2
Band 3	19250	21.6		GSM900	1	27.2	
	19525	20.9			62	27.4	
	19900	21.0	-96.8		124	27.5	-107.2
Band 4	20050	18.9		DCS1800	512	27.2	
	20175	19.2			698	27.3	
	20300	18.7	-97.0		885	28.0	-107.6
Band 5	20450	18.1		GSM850	128	27.0	
	20525	18.5			192	27.6	
	20600	18.3	-98.5		251	26.9	-107.0
Band 7	20800	20.5		PCS1900	512	26.5	
	21100	19.8			610	26.7	
	21400	19.8	-97.1		810	27.0	-106.8
Band 8	21500	15.1		W2100	10562	18.5	
	21625	15.9			10700	19.1	
	21750	16.2	-97.1		10838	19.2	-106.5
Band 12	23060	15.9		W1900	9662	18.1	
	23095	15.6			9700	18.6	
	23130	15.4	-96.5		9938	18.4	-107.2
Band 13	23230			W1700	1537	18.8	
	23202	17.7			1638	18.0	
	23255		-95.8		1738	18.5	-106.8
Band 17	23780	18.5		W900	2937	18.6	
	23790	18.9			3013	19.1	
	23800	18.8	-96.0		3088	19.4	-107.6
Band 20	24200	18.3		W850	4357	19.4	
	24300	17.8			4408	19.2	
	24300	17.5	-95.4		4458	19.7	-106.7
Band 28	27260	16.1					
	27430	16.4					
	27610	17.7	-95.8				

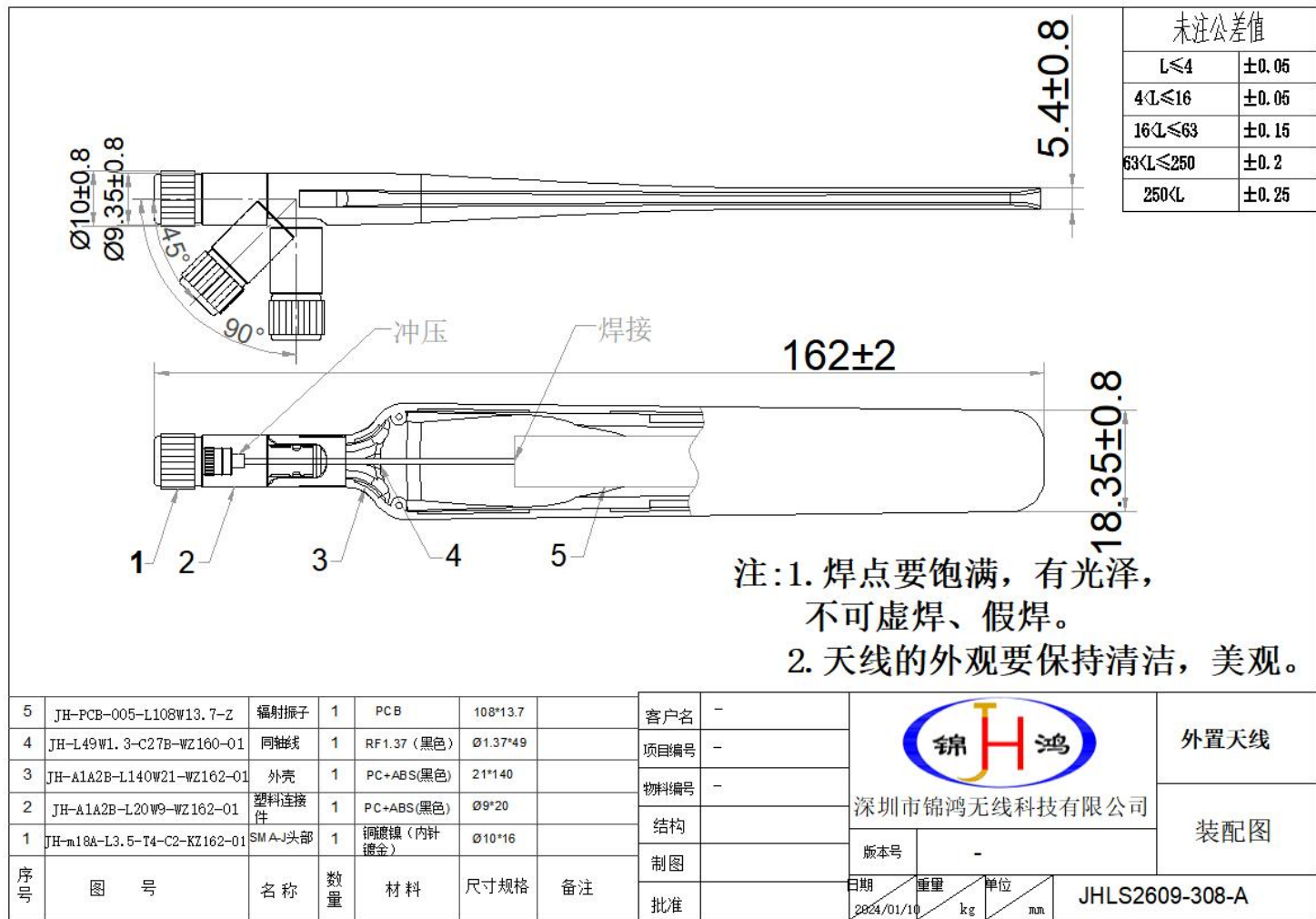
3.3 效率与增益 Efficiency and Gain

Test Point ID	Freq. (MHz)	Gain (dBi)	Efficiency (%)
1	700.0	-2.44	11.3%
2	720.0	-1.71	17.0%
3	740.0	-1.15	20.9%
4	760.0	0.15	26.9%
5	780.0	0.49	30.2%
6	800.0	2.60	41.5%
7	820.0	2.53	38.7%
8	840.0	1.55	28.2%
9	860.0	1.30	25.5%
10	880.0	1.82	28.7%
11	900.0	2.71	35.1%
12	920.0	3.63	42.3%
13	940.0	3.38	43.8%
14	960.0	2.96	46.4%
15	1700.0	2.48	40.5%
16	1750.0	1.60	49.3%
17	1800.0	3.54	49.3%
18	1850.0	3.26	46.4%
19	1900.0	3.07	43.8%
20	1950.0	2.50	41.9%
21	2000.0	2.74	45.0%
22	2050.0	2.22	45.1%
23	2100.0	1.05	52.0%
24	2150.0	1.18	56.9%
25	2200.0	2.52	44.1%
26	2250.0	1.80	49.8%
27	2300.0	2.87	42.1%
28	2350.0	2.33	48.4%
29	2400.0	1.68	42.9%
30	2450.0	1.59	48.4%
31	2500.0	1.05	46.5%
32	2550.0	1.50	49.7%
33	2600.0	1.86	48.8%
34	2650.0	1.32	45.5%
35	2700.0	1.08	40.4%

3.4 天线方向图 Antenna pattern



4 工程图纸 Engineering drawings



5 包装方式 Packing method

Inside:

External :