

Shenzhen Jiexuntong Wireless Technology Co., Ltd

Antenna specification sheet

Customer Name: Lingdu

Project model: AL502

Our part number:205050351004/200140352001

Antenna specifications: FPC antenna

Date of issuance: March 19, 2024



Confirmation Letter Change History

version	data	Change description	Remarks
R/A	2024-3-19	First edition	

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一、Antenna image

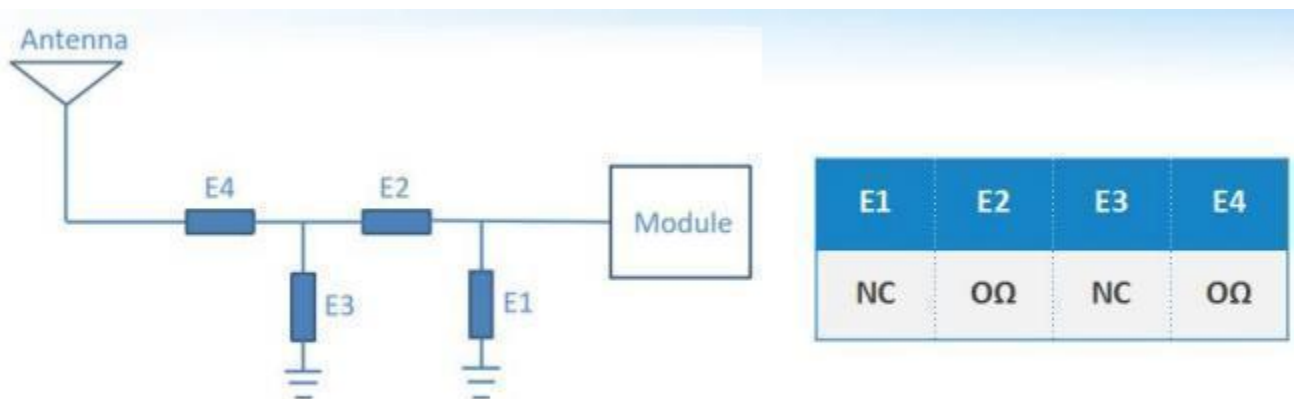


二. testing environment

2.1. Environmental treatment

无

3、Antenna matching



***: 我司未对原有天线前端匹配做更改。**

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三：Products Specification

无源电性能指标 Passive Electrical Specifications

频率范围 Frequency Range (MHz)	2400-2500
输入阻抗 Input Impedance (Ω)	50
电压驻波比 VSWR	≤ 2.0
极化形式 Polarization Type	线极化

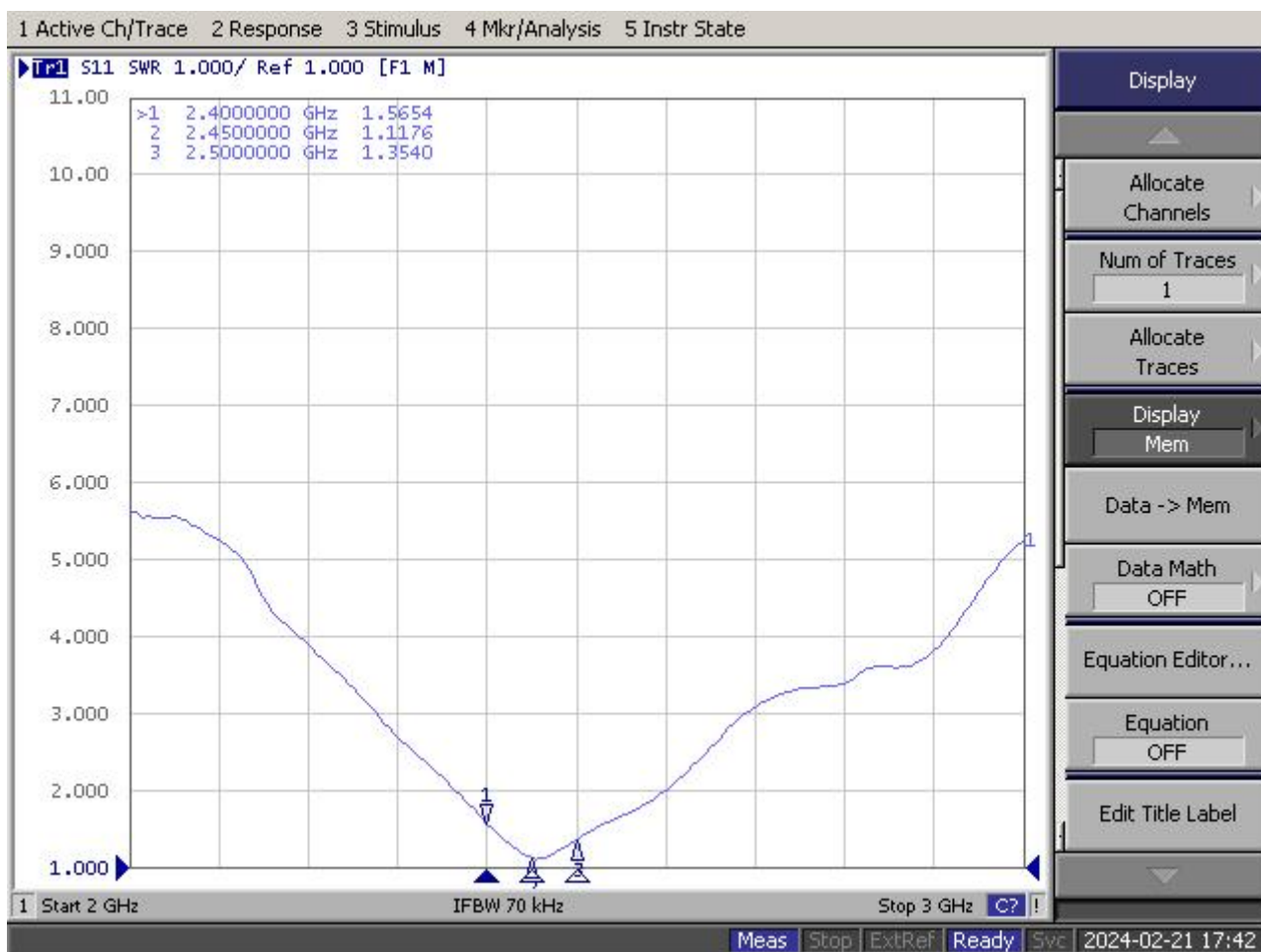
机械指标 Mechanical Specifications

天线形式 (Antenna form)	WIFI
天线尺寸 Antenna Size (mm)	34.3*20.7*0.12
馈线长度 Cable Length (mm)	94mm+240mm
辐射体 Radiator	铜 Cuprum
连接器型号 Connect Type	MCX flange female seat + MCX male elbow
工作温度 Working Temperature ($^{\circ}\text{C}$)	-40 ~ +85
颜色 Radome Color	/



4、Electrical performance report

VSWR



Frequency (MHz)	2400	2450	2500
V SWR	1.56	1.11	1.35

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Passive test data:

Freq (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
2400	1.8	-3.050329794	49.54125688
2405	1.7	-3.09832939	48.99672599
2410	1.7	-3.141298068	48.51434734
2415	1.6	-3.125236008	48.69410626
2420	1.6	-3.1175116	48.7807912
2425	1.5	-3.116128373	48.79633034
2430	1.5	-3.071191328	49.30385383
2435	1.6	-3.003580712	50.07741804
2440	1.6	-2.993805197	50.19026402
2445	1.5	-2.961523798	50.56472157
2450	1.5	-2.943912654	50.77018367
2455	1.6	-2.910589031	51.16124412
2460	1.6	-2.840492786	51.99369969
2465	1.6	-2.814255397	52.30876424
2470	1.6	-2.812019253	52.3357045
2475	1.7	-2.772456775	52.81463984
2480	1.7	-2.767720281	52.87227186
2485	1.6	-2.791996913	52.5775456
2490	1.7	-2.745115056	53.1481919
2495	1.7	-2.726476158	53.37678162
2500	1.7	-2.76956919	52.84976749

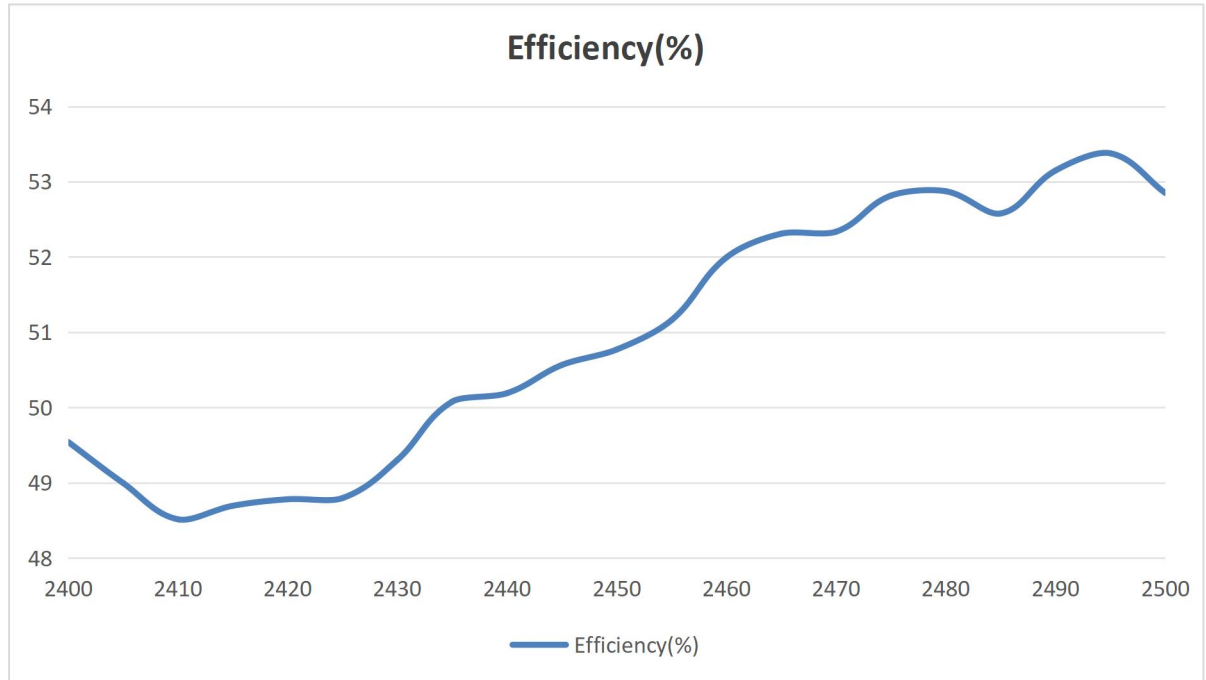
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Active data:

b 模			g 模			gn 模		
信道	TRP	TIS	信道	TRP	TIS	信道	TRP	TIS
1	16.92	-83.92	1	12.89	-68.15	1	12.68	-67.34
6	17.03	-84.36	6	13.09	-69.53	6	12.85	-68.26
11	16.81	-84.12	11	13.19	-68.84	11	13.21	-67.16

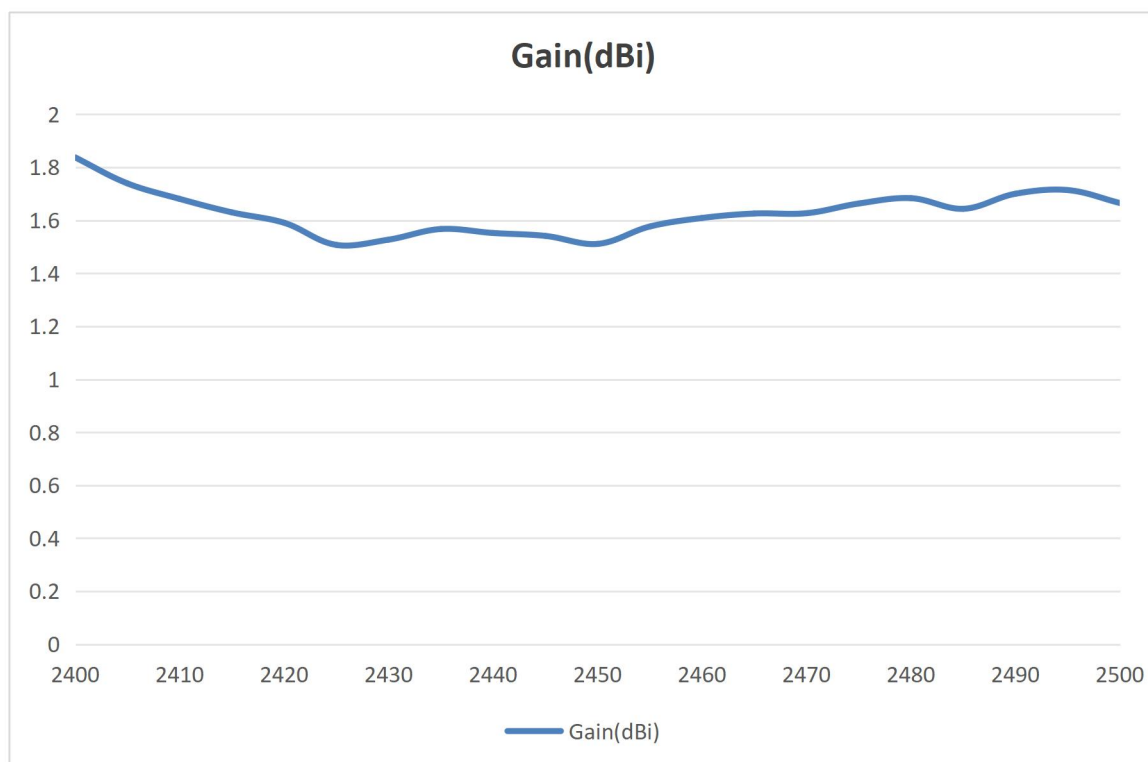
Efficiency line chart:



Frequency (MHz)	2400	2450	2500
Efficiency (%)	49.54	50.77	52.84

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Gain line chart:

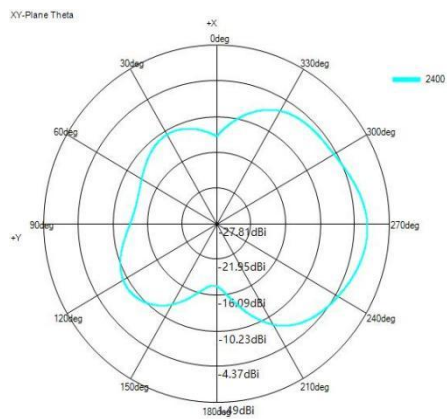
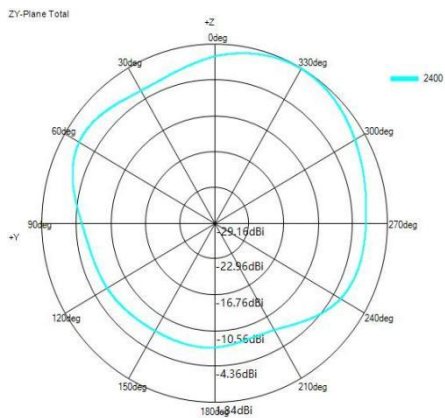
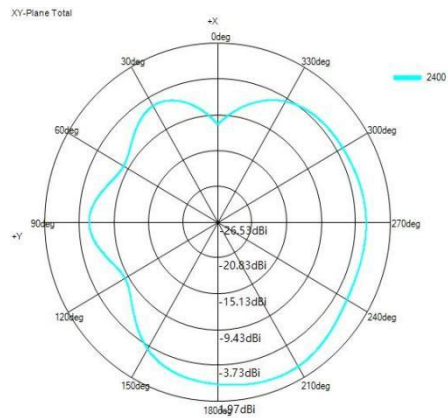
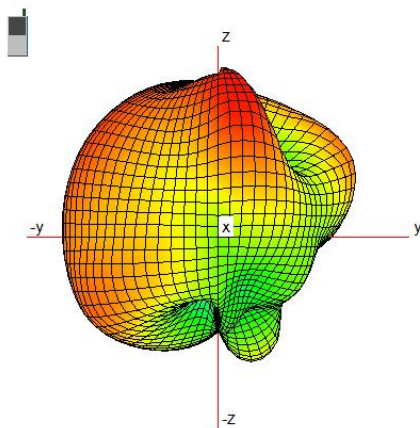


Frequency (MHz)	2400	2450	2500
Gain(dbi)	1.8	1.5	1.7

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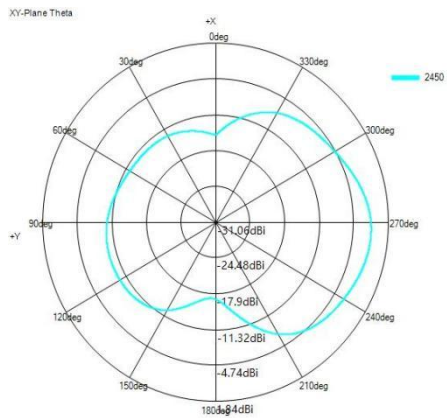
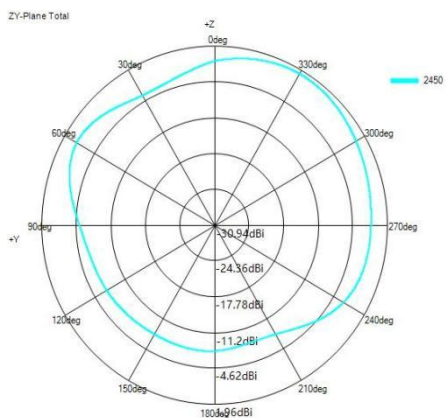
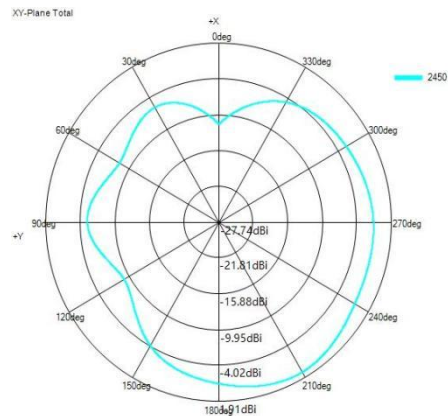
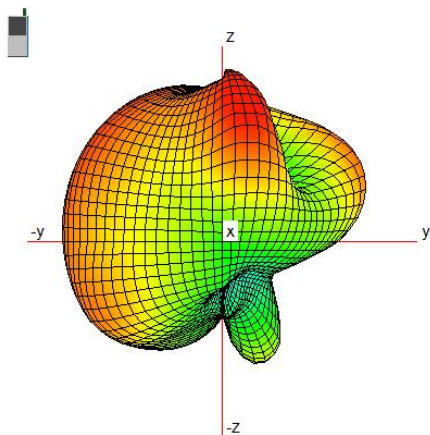
Field diagram:

2400 MHZ



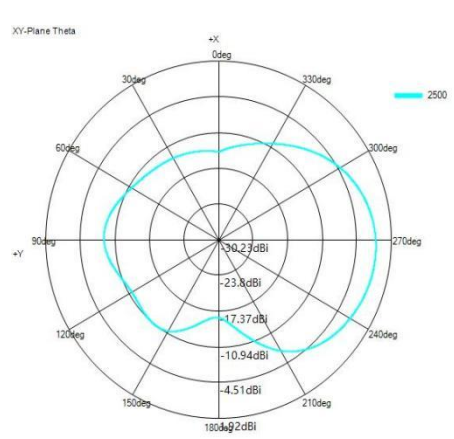
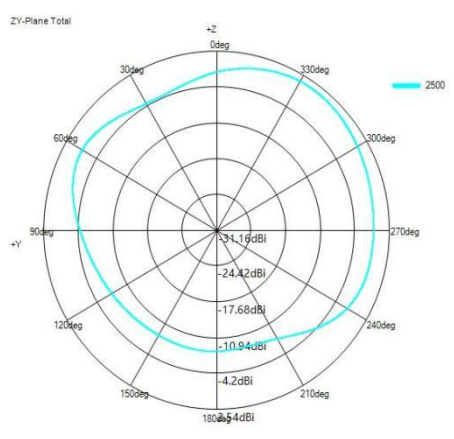
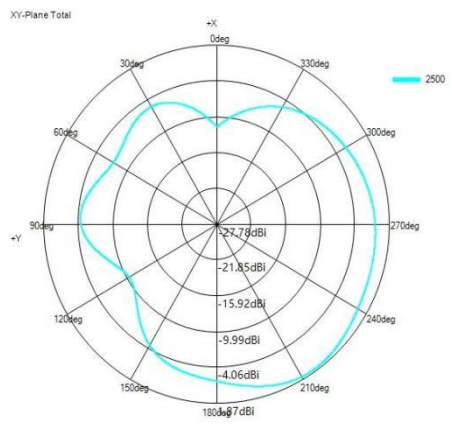
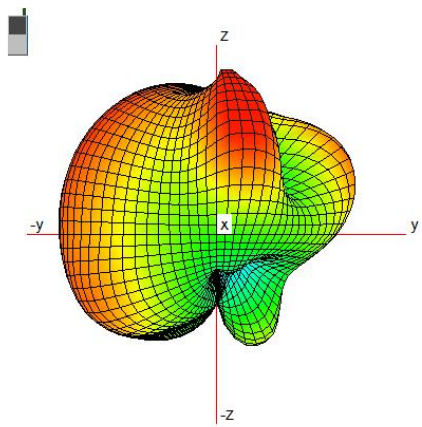
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2450 MHZ



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2500 MHZ



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五、 Reliability test report

5.1. Salt spray test report

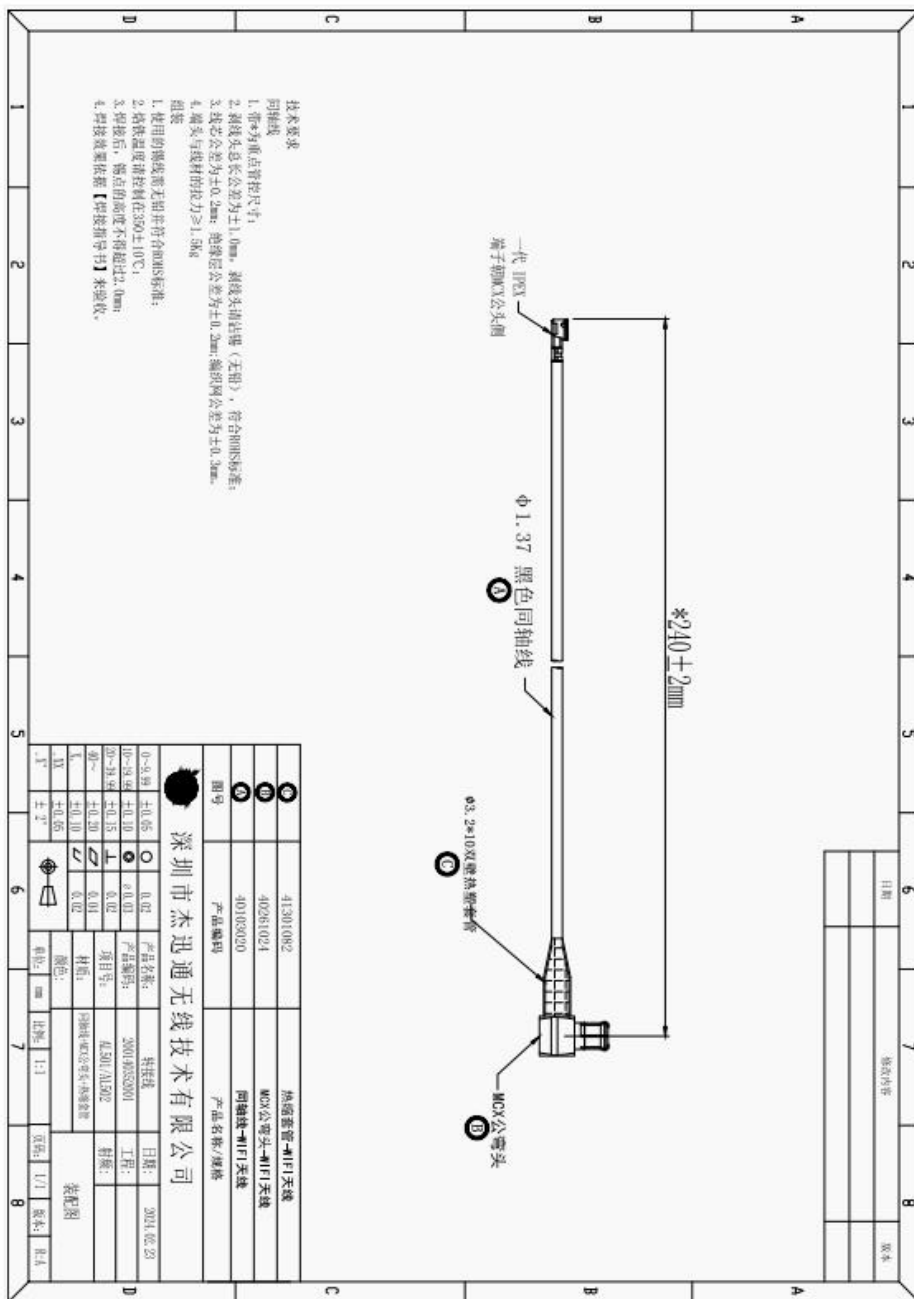
Customers	Ling Du	Part Name	AL502	Completion date	2024-3-27
Testing items	Testing requirements			Actual measurement results	evaluate
Neutral salt spray experiment	<p>Test process: conduct neutral salt spray test on the hardware on the antenna. In a closed environment of $35\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$, the humidity is more than 85%, and the PH value is within the range of 6.5-7.2. After using $5\% \pm 1\%$ NaCl solution and continuous 24h saline spray, the product surface should be free of rust, discoloration, and coating peeling.</p>			<p>After the experiment, the surface of the product has no rust, no discoloration, and no peeling of the coating.</p>	qualified
Experiment: Wang Ming			Approved by: Wang Ming		



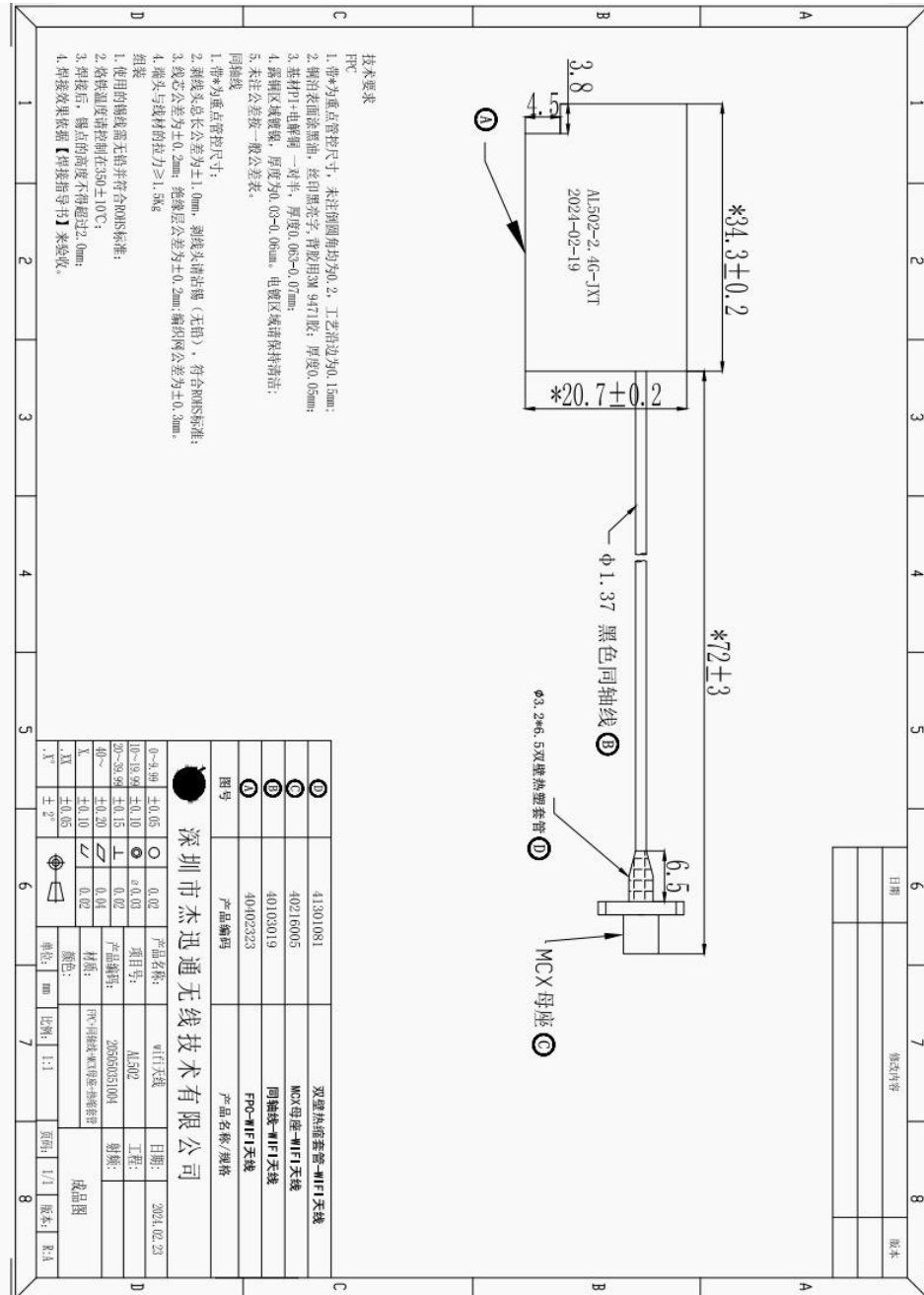
Antenna testing instrument



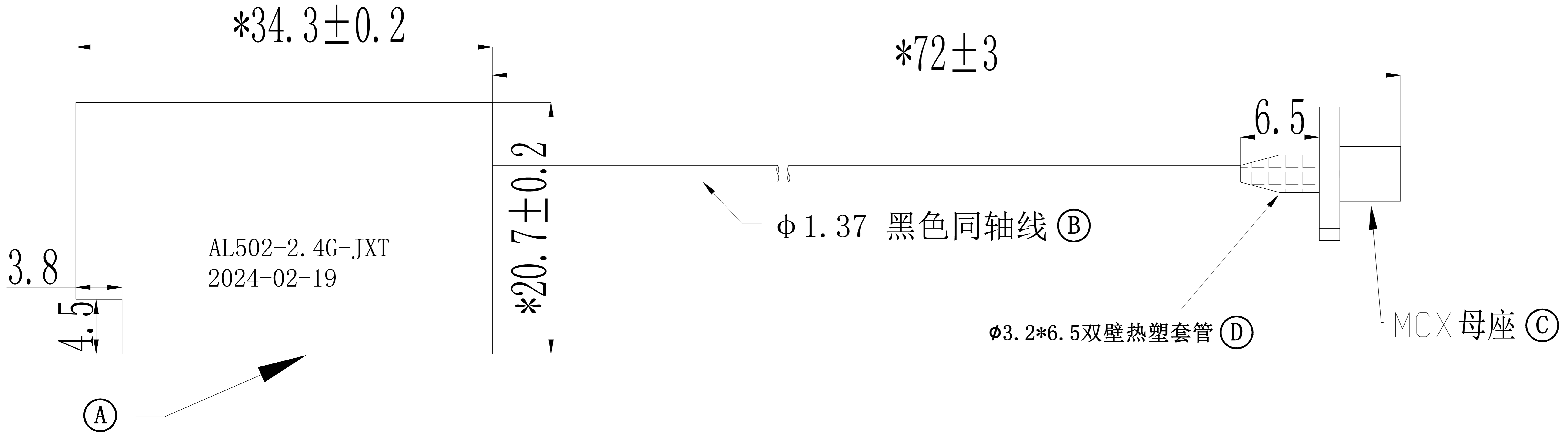
六. Engineering drawings



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日期	修改内容	版本



技术要求
FPC

- 带*为重点管控尺寸，未注倒圆角均为0.2，工艺沿边为0.15mm；
- 铜泊表面涂黑油，丝印黑亮字，背胶用3M 9471胶；厚度0.05mm；
- 基材PI+电解铜 一对半，厚度0.063-0.07mm；
- 露铜区域镀镍，厚度为0.03-0.06um。电镀区域请保持清洁；
- 未注公差按一般公差表。

同轴线

- 带*为重点管控尺寸；
- 剥线头总长公差为±1.0mm，剥线头请沾锡（无铅），符合ROHS标准；
- 线芯公差为±0.2mm；绝缘层公差为±0.2mm；编织网公差为±0.3mm。
- 端头与线材的拉力≥1.5Kg

组装

- 使用的锡线需无铅并符合ROHS标准；
- 烙铁温度请控制在350±10℃；
- 焊接后，锡点的高度不得超过2.0mm；
- 焊接效果依据【焊接指导书】来验收。

(D)	41301081	双壁热缩套管-WIFI天线
(C)	40216005	MCX母座-WIFI天线
(B)	40103019	同轴线-WIFI天线
(A)	40402323	FPC-WIFI天线
图号	产品编码	产品名称/规格

深圳市杰迅通无线技术有限公司

0~9.99	±0.05	○	0.02	产品名称:	wifi天线	日期:	2024.02.23
10~19.99	±0.10	◎	∅0.03	项目号:	AL502	工程:	
20~39.99	±0.15	⊥	0.02	产品编码:	205050351004	射频:	
40~	±0.20	∕	0.04	材质:	FPC+同轴线+MCX母座+热缩套管	成品图	
X.	±0.10	∕	0.02	颜色:			
.XX	±0.05			单位:	mm	比例:	1:1
.X°	±2°			页码:	1/1	版本:	R:A