



深圳星源创科技有限公司

Shen Zhen Xing Yuan Chuang Technology Co., Ltd

规格承认书 Approval Sheet

客户名称 Customer	昱科	日期 Data	2023/05/10
产品名称 Product	WiFi副天线	客户机型 Models	AL1621-YD
料号 P/N	F810-14LG-280	客户料号 Customer P/N	
规格描述 Specifications	黑色FPC; RF0.81四代端子灰色同轴线; L=280mm		

供应商承认签印 Vender Approved By	客户承认签印 Customer Approved By
	
Checked By:	Checked By:
Audit By:	Audit By:
Approval By:	Approval By:

文件修订履历表

版本 Version	修订内容 Revise The Content	修订人 Revused	核准 Approval	修订日期 Date	备注 Note

地址: 深圳市宝安区福永镇福海街道塘尾股份商务大厦1506

Address: 1506, Tangwei Business Building, Fuhai Street, Fuyong Town, Baoan District, Shenzhen

Tel: 0755-82103639 QQ: 487580356 Email: Stephdeng_Vis@126.com



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Specification

1.1 Electrical Properties

Characteristics	Specifications
Working Band	2.4GWiFi; 5GWiFi
Antenna From	PIFA
Impedance	50 Ω
Polarization	Linear
Peak Effi	36%@2.4G; 49%@5G
Peak Gain	1.39dBi@2.4G; 3.29dBi@5G

1.2 Physical Properties

Characteristics	Specifications
Operating Temp	-10°C ~+60°C
Storage Temp	-10°C ~+70°C
Humidity	10~95%RH

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WiFi Ant Test Information

Frequency	2. 4G (2402~2483) Mhz	5G (5150~5850) Mhz
Module information		

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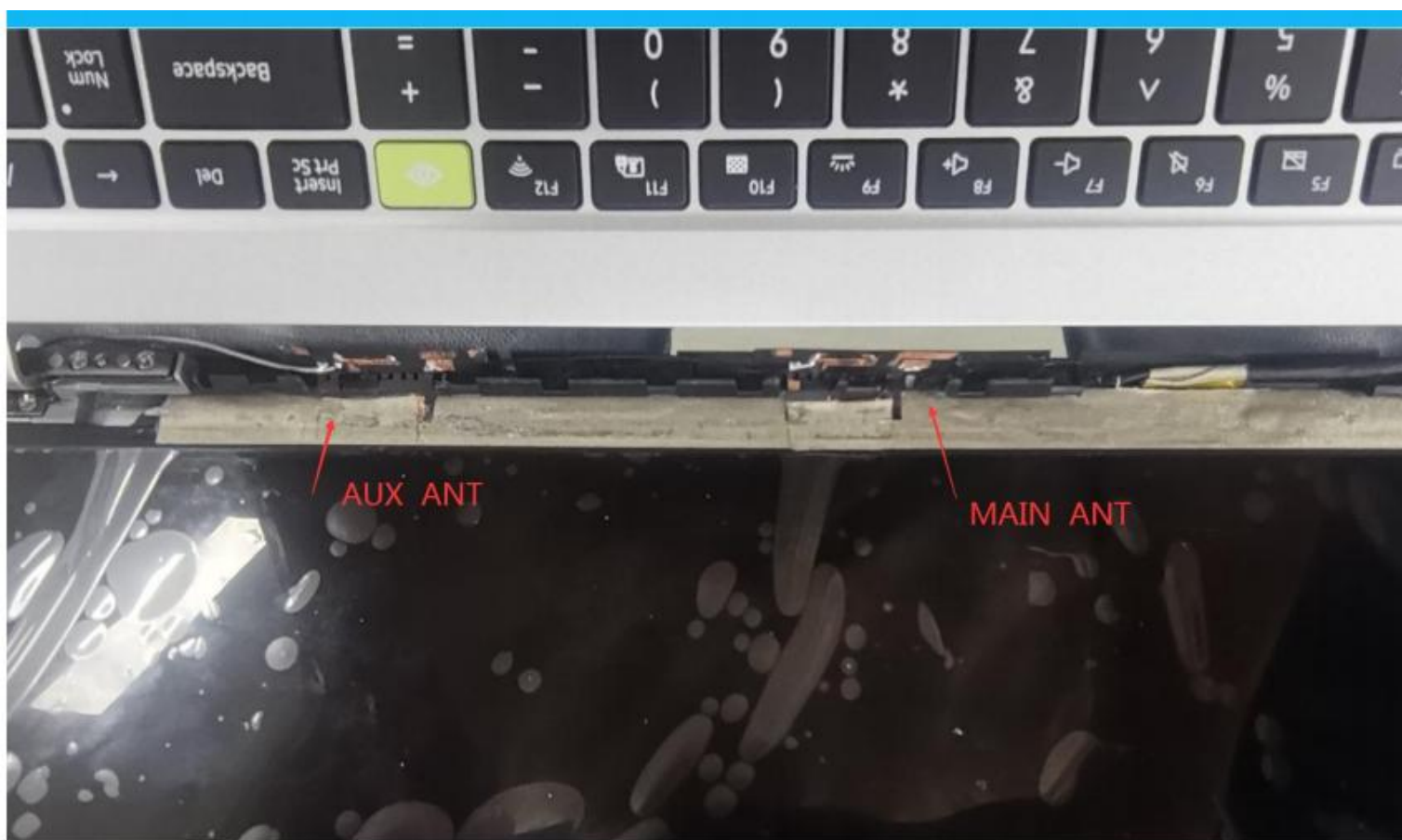
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Antenna Placement



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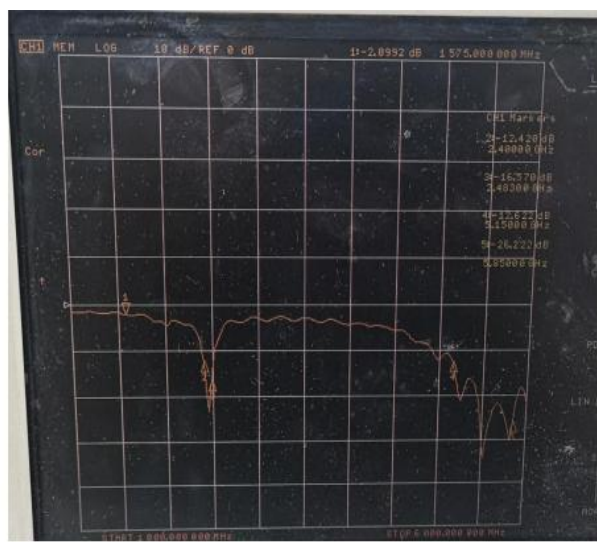
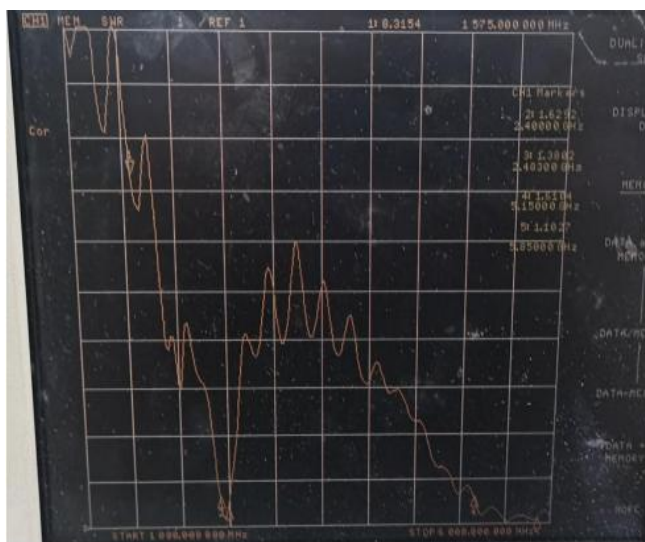


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Test Data

S11 Parameter-VSWR



Frequency (MHZ)	2400	2450	2483	5150	5500	5850
VSWR	1.62		1.38	1.61		1.10
Return Loss (DB)	-12.42		-16.57	-12.62		-26.22

WiFi Active Test Data

802.11b	Frequency	TRP		TIS	
	2412	CH1 11Mbps	9.48	CH1 11Mbps	-78.24
	2437	CH6 11Mbps	9.30	CH6 11Mbps	-77.54
	2467	CH11 11Mbps	9.33	CH11 11Mbps	-78.82
802.11a		TRP		TIS	
	5180	CH36 6Mbps	7.68	CH36 54Mbps	-69.03
	5300	CH60 6Mbps	10.03	CH60 54Mbps	-69.40
	5805	CH161 6Mbps	10.41	CH161 54Mbps	-70.10

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Efficiency Table

Passive Test For WIFI2.4						
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)
2400	29.59	-5.29	1.1	-1.05	10.769	18.816
2410	27.17	-5.66	0.61	-1.54	10.008	17.162
2420	27.7	-5.57	0.56	-1.59	10.195	17.508
2430	28.63	-5.43	0.71	-1.44	10.502	18.133
2440	28.35	-5.47	0.74	-1.41	10.255	18.097
2450	27.55	-5.6	0.74	-1.41	9.699	17.851
2460	29.74	-5.27	1.15	-1	10.17	19.569
2470	30.95	-5.09	1.27	-0.88	10.595	20.36
2480	31.92	-4.96	1.22	-0.93	11.143	20.775
2490	33.26	-4.78	1.12	-1.03	11.868	21.394
2500	36.04	-4.43	1.39	-0.76	13.142	22.9

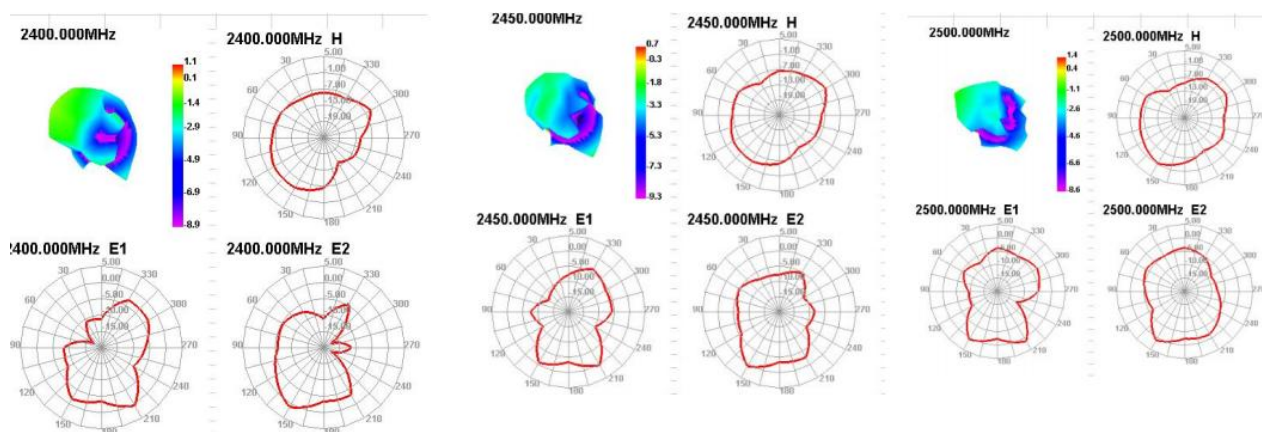
Passive Test For WIFI5G							
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)
5150	29.52	-5.3	0.44	-1.71	12.548	16.971	0.44
5170	34.2	-4.66	0.97	-1.18	14.26	19.942	0.97
5190	31.54	-5.01	1.06	-1.09	12.87	18.667	1.06
5210	38.41	-4.16	1.83	-0.32	15.579	22.832	1.83
5230	34.72	-4.59	1.43	-0.72	14.262	20.46	1.43
5250	41.53	-3.82	2.58	0.43	17.175	24.357	2.58
5270	40.12	-3.97	2.71	0.56	16.504	23.615	2.71
5290	44.25	-3.54	2.93	0.78	18.121	26.134	2.93
5310	39.63	-4.02	2.11	-0.04	16.366	23.262	2.11
5330	40.26	-3.95	2.29	0.14	16.636	23.626	2.29
5350	40.74	-3.9	2.4	0.25	16.48	24.261	2.4
5370	39.88	-3.99	2.03	-0.12	15.868	24.013	2.03
5390	34.13	-4.67	1.07	-1.08	13.499	20.628	1.07
5410	40.05	-3.97	1.79	-0.36	15.849	24.2	1.79
5430	35.66	-4.48	1.63	-0.52	13.921	21.742	1.63
5450	39.76	-4.01	2.18	0.03	15.21	24.554	2.18
5470	36.97	-4.32	1.7	-0.45	13.955	23.018	1.7
5490	38.58	-4.14	1.98	-0.17	14.429	24.15	1.98
5510	39.83	-4	2.22	0.07	14.899	24.935	2.22
5530	42.3	-3.74	2.64	0.49	15.508	26.792	2.64
5550	44.83	-3.48	2.76	0.61	16.08	28.748	2.76
5570	41.79	-3.79	2.26	0.11	14.922	26.864	2.26
5590	45.74	-3.4	2.72	0.57	16.282	29.463	2.72
5610	42.73	-3.69	2.42	0.27	15.153	27.574	2.42
5630	48.84	-3.11	2.88	0.73	17.301	31.544	2.88
5650	42.33	-3.73	1.99	-0.16	15.07	27.26	1.99
5670	45.8	-3.39	2.33	0.18	16.369	29.427	2.33
5690	43.81	-3.58	2.19	0.04	15.733	28.075	2.19
5710	43.65	-3.6	2.12	-0.03	15.55	28.098	2.12
5730	47.77	-3.21	2.54	0.39	17.058	30.709	2.54
5750	42.65	-3.7	2.39	0.24	15.28	27.365	2.39
5770	47.01	-3.28	2.9	0.75	16.858	30.156	2.9
5790	44	-3.57	2.44	0.29	15.917	28.081	2.44
5810	47.78	-3.21	2.76	0.61	17.38	30.397	2.76
5830	47.12	-3.27	2.87	0.72	17.142	29.983	2.87
5850	49.92	-3.02	3.29	1.14	18.196	31.724	3.29

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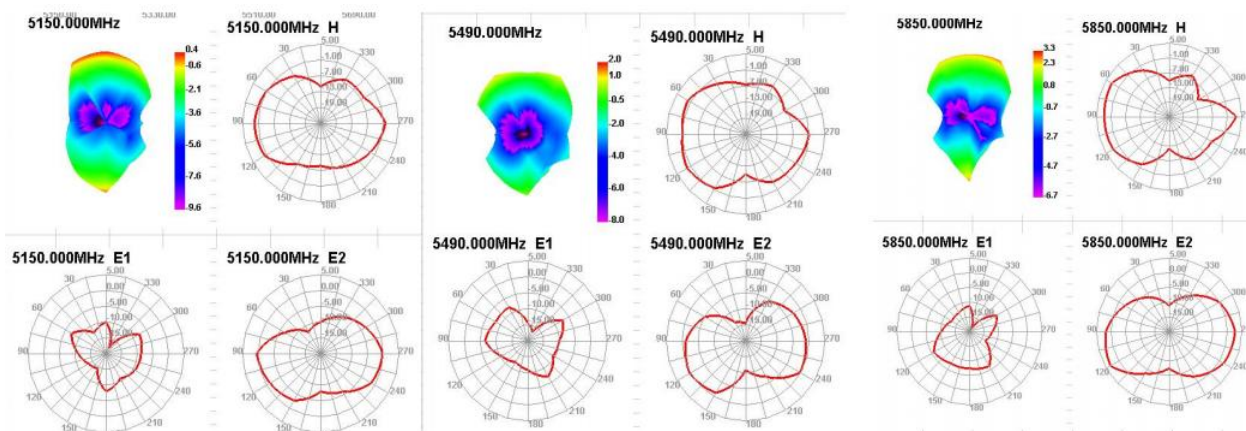
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Radiation Pattern(2.4G)



Radiation Pattern(5G)



BT Test

测试环境：开放空间(通道)

测试工具：蓝牙音响

测试距离：10m

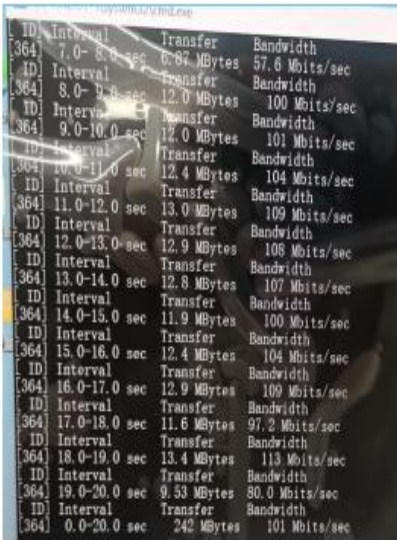
结果：播放音乐流畅，无杂音。



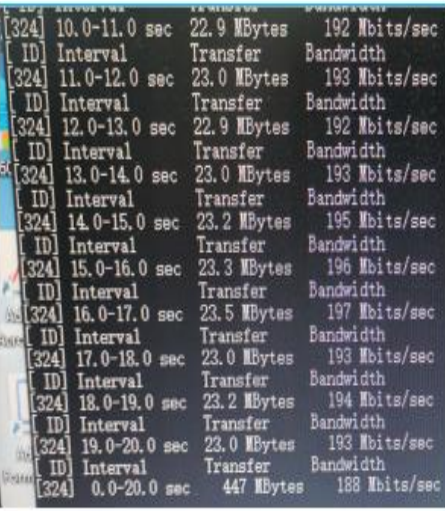
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Throughput Test(2.4G)

上行	101M	下行	84.4M
图片		图片	

Throughput Test(5G)

上行	350M	下行	188M
图片		图片	

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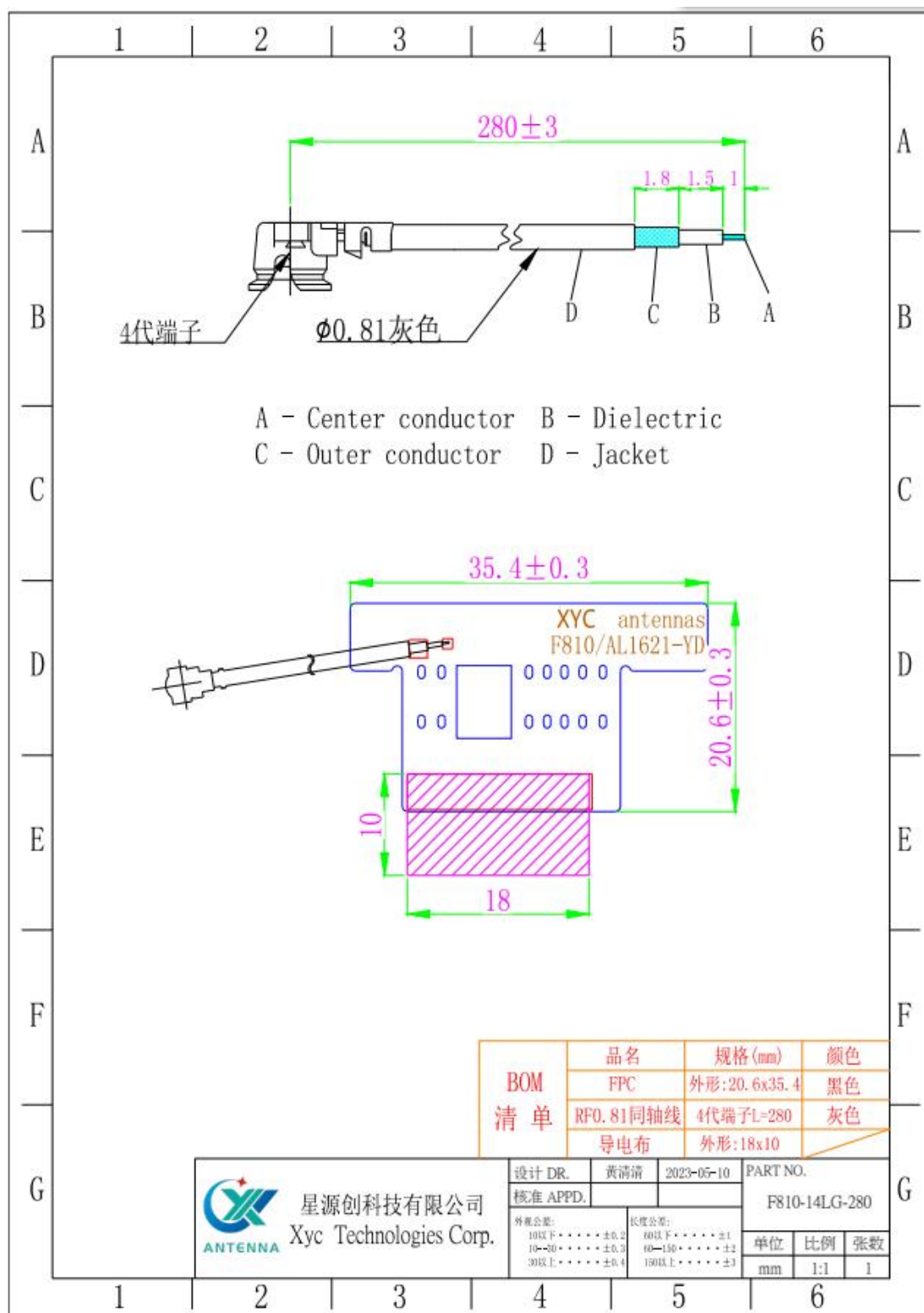
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Antenna Assembly

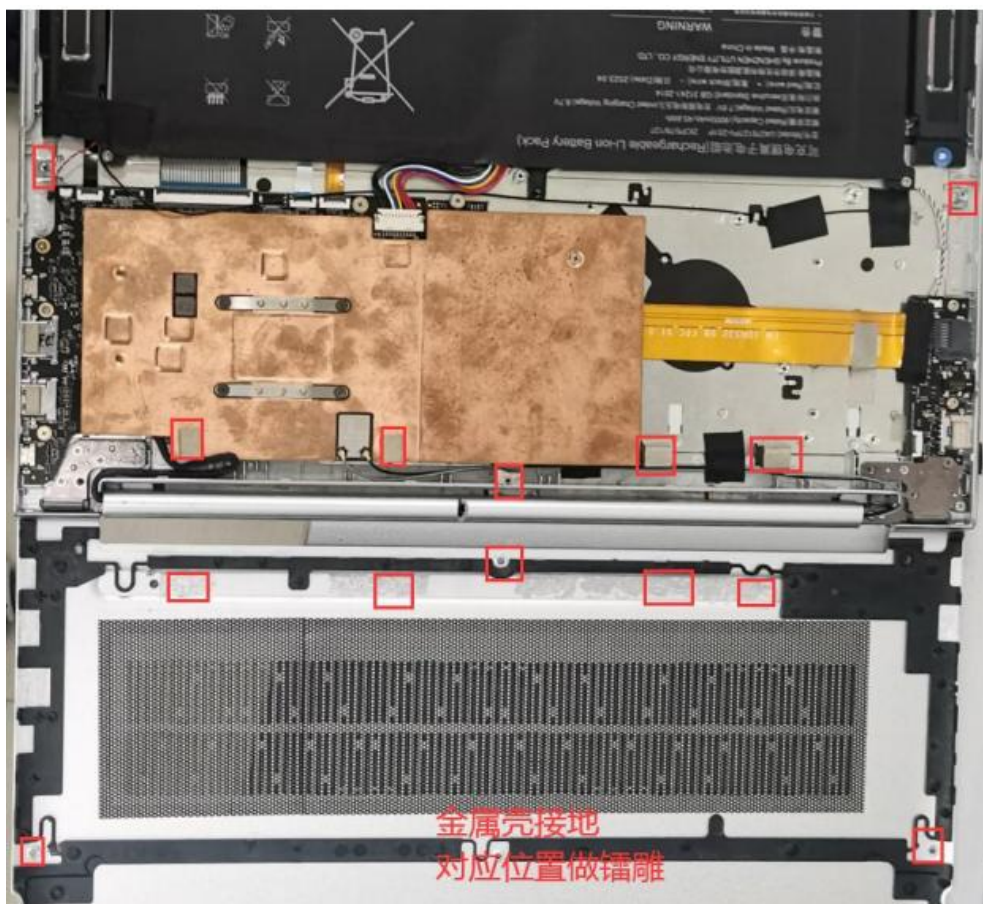


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