



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	英卡	日期 Data	2025/05/14
产品名称 Product	三合一天线	客户机型 Models	T90/M9C
料号 P/N	T777/M9	客户料号 Customer P/N	
规格描述 Specifications	黑色FPC; RF0.81三代端子黑色同轴线, 长度L=155mm		

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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Content

NO.	Proect	Page NO.
1	Specification	3
2	Antenna Placement	4
3	Test Data	5~~9
4	Antenna Assembly	10
5	Notes	11

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Specification

1.1 Electrical Properties

Characteristics	Specifications
Working Band	BT 2.4G WiFi/5G WiFi
Antenna From	PIFA
Impedance	50 Ω
Polarization	Linear
Peak Effi	44%@BT ; 44%@2.4G; 45%@5G
Peak Gain	-0.1dBi@BT; -0.1dBi@2.4G; 2.02dBi@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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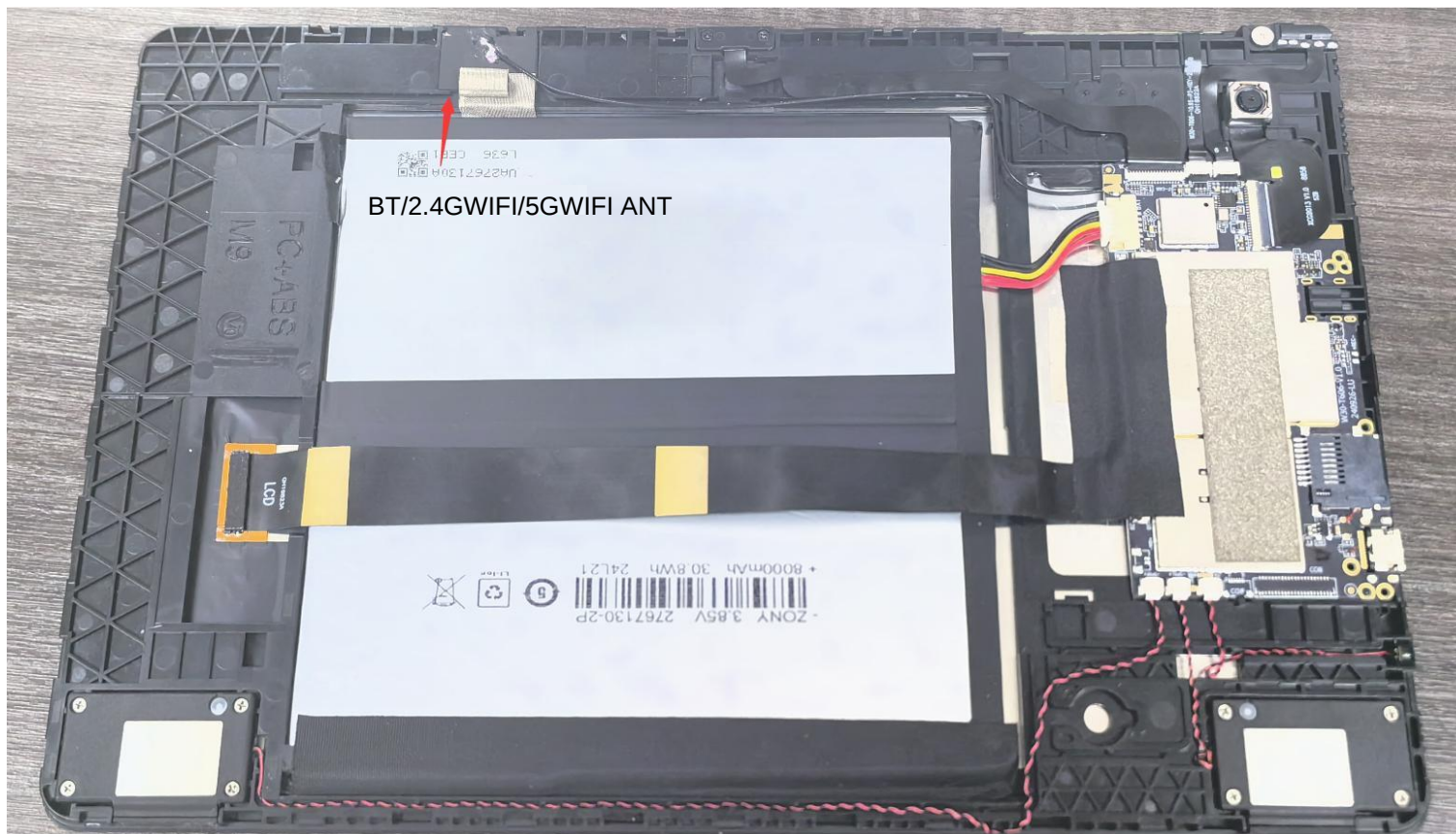
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Antenna Placement



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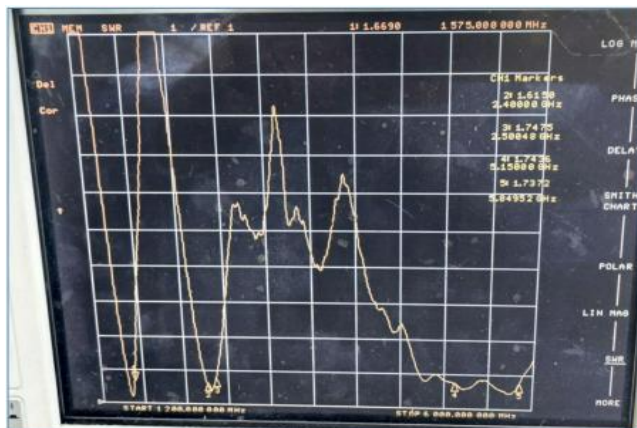
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Test Data

S11 Parameter-VSWR



Frequency (MHZ)
VSWR
Return Loss (DB)

2400	2500	5150	5850
1.61	1.74	1.74	1.73
-12.57	-11.31	-11.34	-11.39

WiFi Active Test Data

	Frequency	TRP		TIS	
		Channel	Throughput (Mbps)	Channel	Throughput (Mbps)
802.11b	2412	CH1 11Mbps	14.1	CH1 11Mbps	-81.51
	2437	CH6 11Mbps	14.64	CH6 11Mbps	-83.67
	2467	CH11 11Mbps	13.43	CH11 11Mbps	-82.52
802.11g		TRP		TIS	
	2412	CH1 54Mbps	12.6	CH1 54Mbps	-70.08
	2437	CH6 54Mbps	11.16	CH6 54Mbps	-71.51
	2467	CH11 54Mbps	11.35	CH11 54Mbps	-71.3
802.11g/n		TRP		TIS	
	2412	CH1 MCS7	11.06	CH1 MCS7	-64.65
	2437	CH6 MCS7	11.55	CH6 MCS7	-67.42
	2467	CH11 MCS7	11.15	CH11 MCS7	-66.75
802.11a		TRP		TIS	
	5180	CH36 6Mbps	10.3	CH36 54Mbps	-70.97
	5300	CH60 6Mbps	11.35	CH60 54Mbps	-71.38
	5805	CH161 6Mbps	11.12	CH161 54Mbps	-71.04
802.11ac		TRP		TIS	
	5180	CH36 MCS9	8.52	CH36 MCS9	-65.85
	5300	CH60 MCS9	8.93	CH60 MCS9	-65.47
	5805	CH161 MCS9	8.39	CH161 MCS9	-65.94

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Efficiency Table (2.4G)

Passive Test For WIFI2.4 /BT								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
2400	43.77	-3.59	-0.1	-2.25	24.688	19.082	-0.1	-9.76
2410	41.62	-3.81	-0.12	-2.27	23.306	18.319	-0.12	-9.11
2420	42.92	-3.67	0.12	-2.03	23.878	19.045	0.12	-8.96
2430	39.94	-3.99	-0.16	-2.31	21.998	17.944	-0.16	-9.06
2440	38.42	-4.15	-0.4	-2.55	20.846	17.574	-0.4	-9.42
2450	39.87	-3.99	-0.47	-2.62	21.39	18.482	-0.47	-9.49
2460	42.75	-3.69	-0.67	-2.82	22.804	19.942	-0.67	-9.42
2470	40.07	-3.97	-1.14	-3.29	21.246	18.824	-1.14	-10.22
2480	40.43	-3.93	-0.96	-3.11	21.39	19.041	-0.96	-10.61
2490	42.74	-3.69	-0.73	-2.88	22.528	20.213	-0.73	-10.21
2500	44.32	-3.53	-0.64	-2.79	23.148	21.172	-0.64	-9.12

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Efficiency Table (5G)

Passive Test For WIFI5G								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)
5150	25.38	-5.96	-0.78	-2.93	16.337	9.042	-0.78	-18.1
5170	24.88	-6.04	-0.63	-2.78	16.066	8.814	-0.63	-18.61
5190	28.32	-5.48	-0.33	-2.48	18.244	10.072	-0.33	-22.31
5210	29.48	-5.31	-0.21	-2.36	19.1	10.377	-0.21	-22.59
5230	31.6	-5	-0.48	-2.63	20.468	11.134	-0.48	-16.29
5250	34.31	-4.65	-0.22	-2.37	22.191	12.12	-0.22	-14.82
5270	35.64	-4.48	0.04	-2.11	22.845	12.794	0.04	-16.8
5290	37.06	-4.31	0.35	-1.8	23.702	13.358	0.35	-18.1
5310	33.6	-4.74	-0.15	-2.3	21.369	12.234	-0.15	-18.36
5330	31.43	-5.03	-0.48	-2.63	19.86	11.57	-0.48	-18.2
5350	32.62	-4.86	-0.31	-2.46	20.338	12.283	-0.31	-15.42
5370	28.45	-5.46	-0.91	-3.06	17.556	10.891	-0.91	-17.45
5390	29.27	-5.34	-0.9	-3.05	17.796	11.478	-0.9	-18.59
5410	32.08	-4.94	-0.39	-2.54	19.372	12.711	-0.39	-18.28
5430	35.95	-4.44	0.13	-2.02	21.508	14.442	0.13	-17.02
5450	36.13	-4.42	0.38	-1.77	21.444	14.686	0.38	-19.21
5470	37.7	-4.24	0.68	-1.47	22.316	15.386	0.68	-25.12
5490	34.77	-4.59	0.62	-1.53	20.528	14.239	0.62	-28.55
5510	37.56	-4.25	1.3	-0.85	22.215	15.349	1.3	-23.13
5530	36.92	-4.33	1.48	-0.67	21.82	15.103	1.48	-23.99
5550	41.48	-3.82	2.02	-0.13	24.769	16.71	2.02	-24.7
5570	40.52	-3.92	1.72	-0.43	24.546	15.977	1.72	-30.35
5590	38.26	-4.17	1.33	-0.82	23.213	15.044	1.33	-23.94
5610	39.45	-4.04	1.6	-0.55	23.852	15.6	1.6	-20.23
5630	34.31	-4.65	0.82	-1.33	20.803	13.506	0.82	-20.34
5650	42.55	-3.71	1.68	-0.47	25.896	16.65	1.68	-20.86
5670	39.5	-4.03	1.09	-1.06	24.081	15.423	1.09	-20.08
5690	43.76	-3.59	1.31	-0.84	26.759	17.003	1.31	-16.8
5710	42.39	-3.73	1.11	-1.04	26.072	16.318	1.11	-16.55
5730	45.75	-3.4	1.17	-0.98	28.296	17.454	1.17	-15.53
5750	40.31	-3.95	0.5	-1.65	25.105	15.207	0.5	-14.62
5770	43.23	-3.64	0.93	-1.22	27.065	16.162	0.93	-14.9
5790	37.79	-4.23	0.52	-1.63	23.669	14.125	0.52	-17.6
5810	38.59	-4.13	0.7	-1.45	24.048	14.545	0.7	-19.06
5830	35.97	-4.44	0.57	-1.58	22.327	13.647	0.57	-19.23
5850	36.43	-4.38	0.74	-1.41	22.598	13.836	0.74	-17.51

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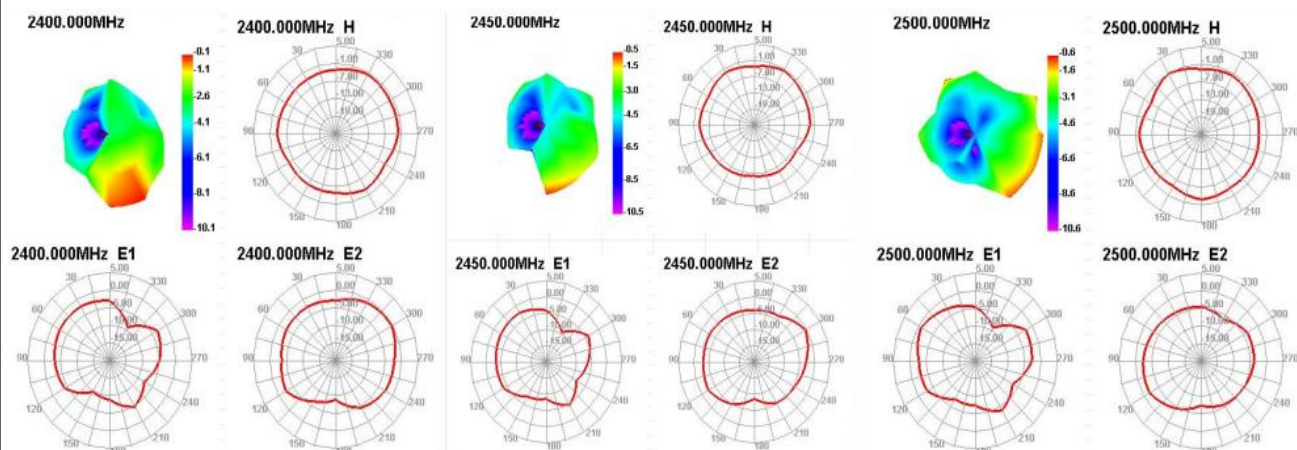
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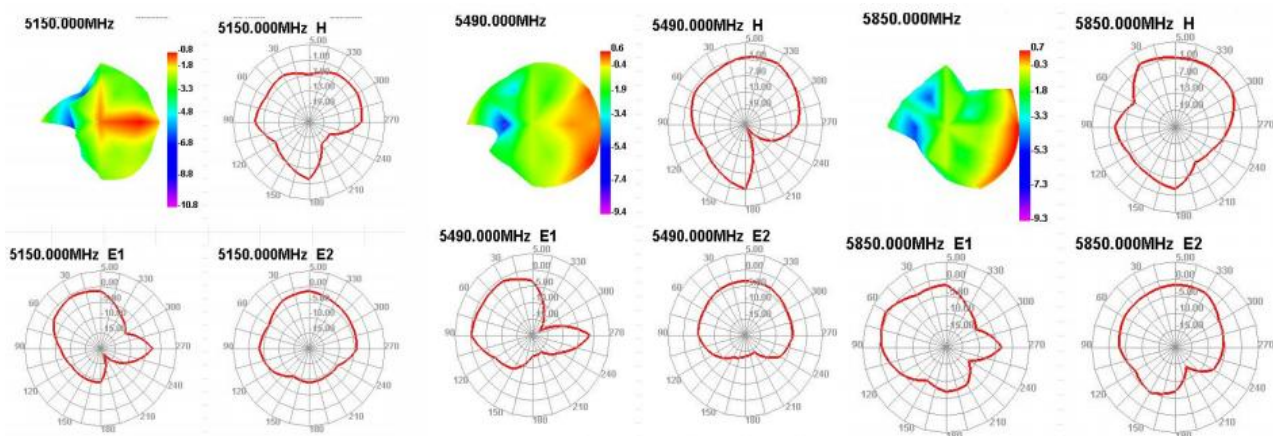
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Radiation Pattern (2.4G)



Radiation Pattern (5G)



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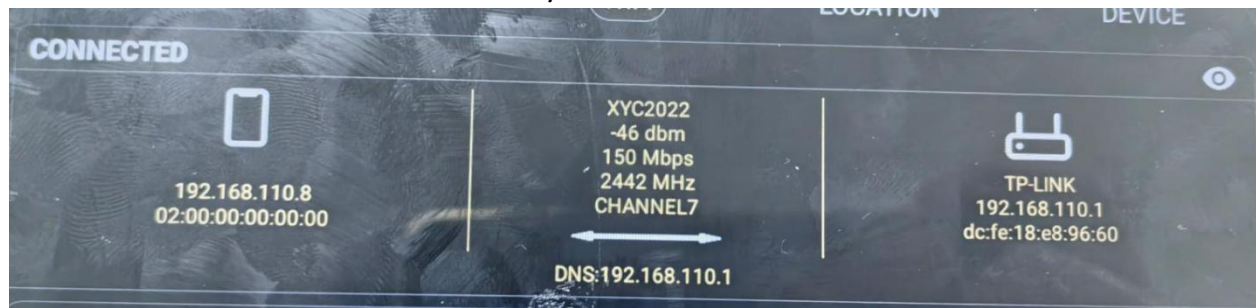
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WiFi/BT Measured



WIFI

测试环境：开放空间

测试工具：Wifi Analytical Assistant

测试距离：10m

信号强度：2.4G :-43dBm 5G:-52dBm

BT

测试环境：开放空间(通道)

测试工具：蓝牙音响

测试距离：15m

结果：播放音乐流畅，无杂音。

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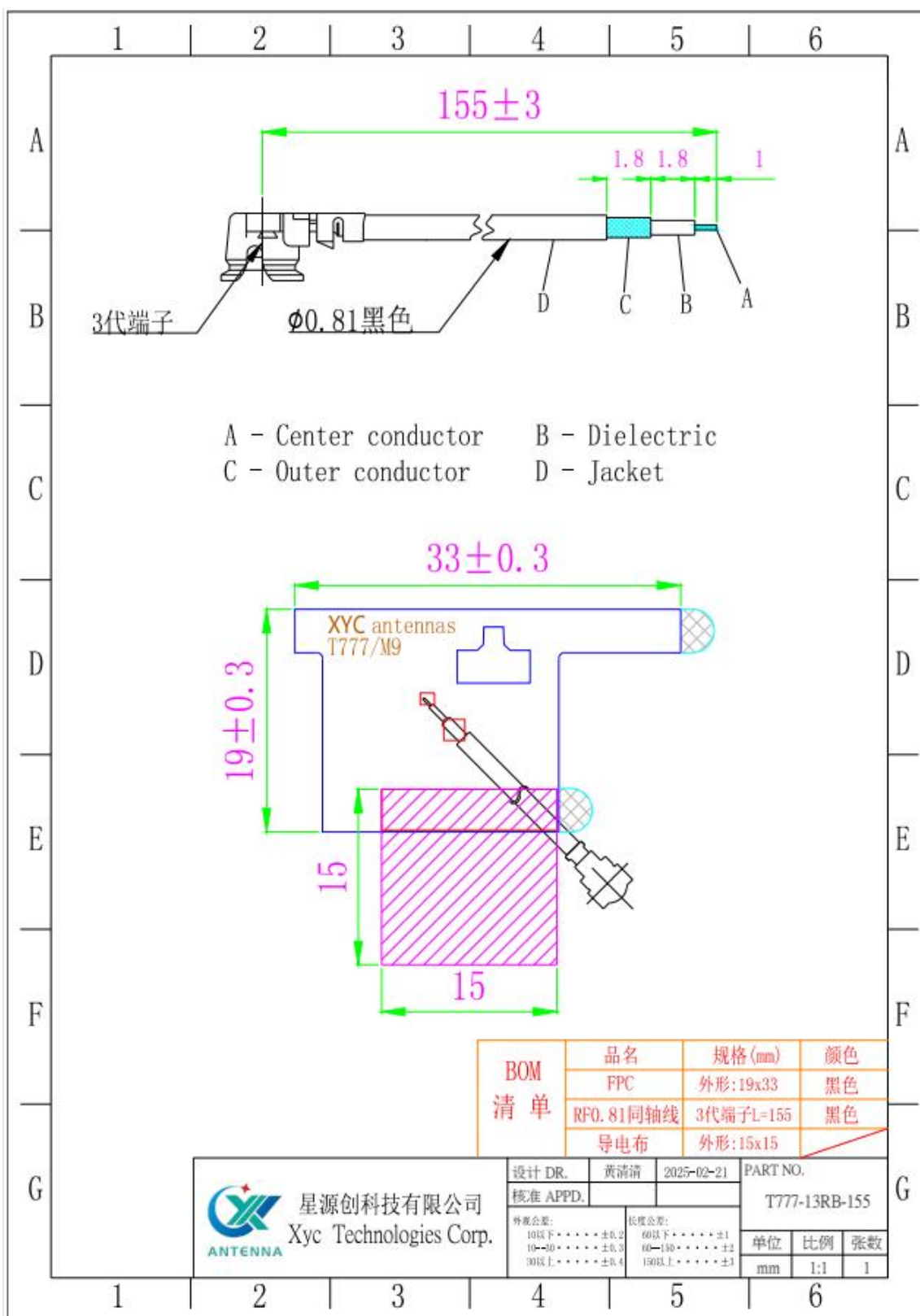
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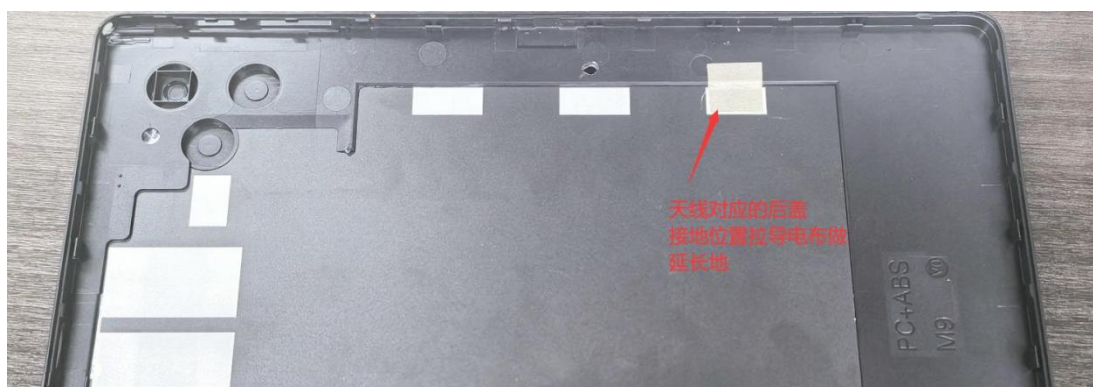
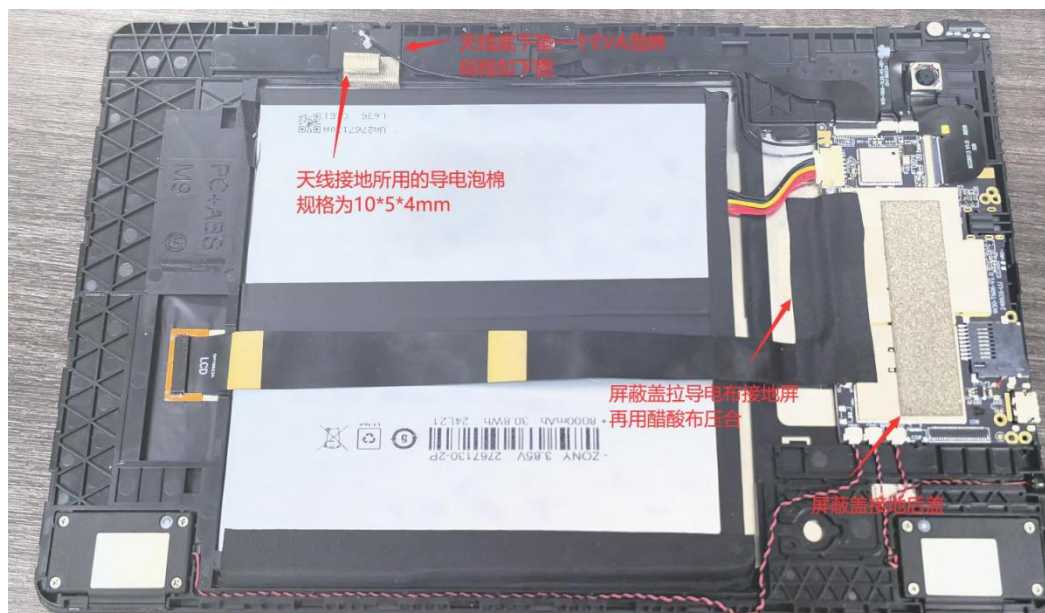
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