



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	TOPDON TECHNOLOGY Co., Ltd.	日期 Data	2023/07/18
产品名称 Product	WIFI antenna	客户机型 Models	AD500S
料号 P/N	F515C-12LB-047	客户料号 Customer P/N	
规格描述 Specifications	FPC黑色; RF0.81二代端子黑色同轴线, 长度L=47mm FPC black; RF0.81 second generation terminal black coaxial line, length L = 47mm		

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	2.4G WiFi/5G WiFi
Antenna Form	FPC
Impedance	50 Ω
Polarization	Linear
Peak Effi	56%@2.4G; 54%@5G
Peak Gain	1.67dBi@2.4G; 3.31dBi@5725-5850 1.39dBi@5150-5250

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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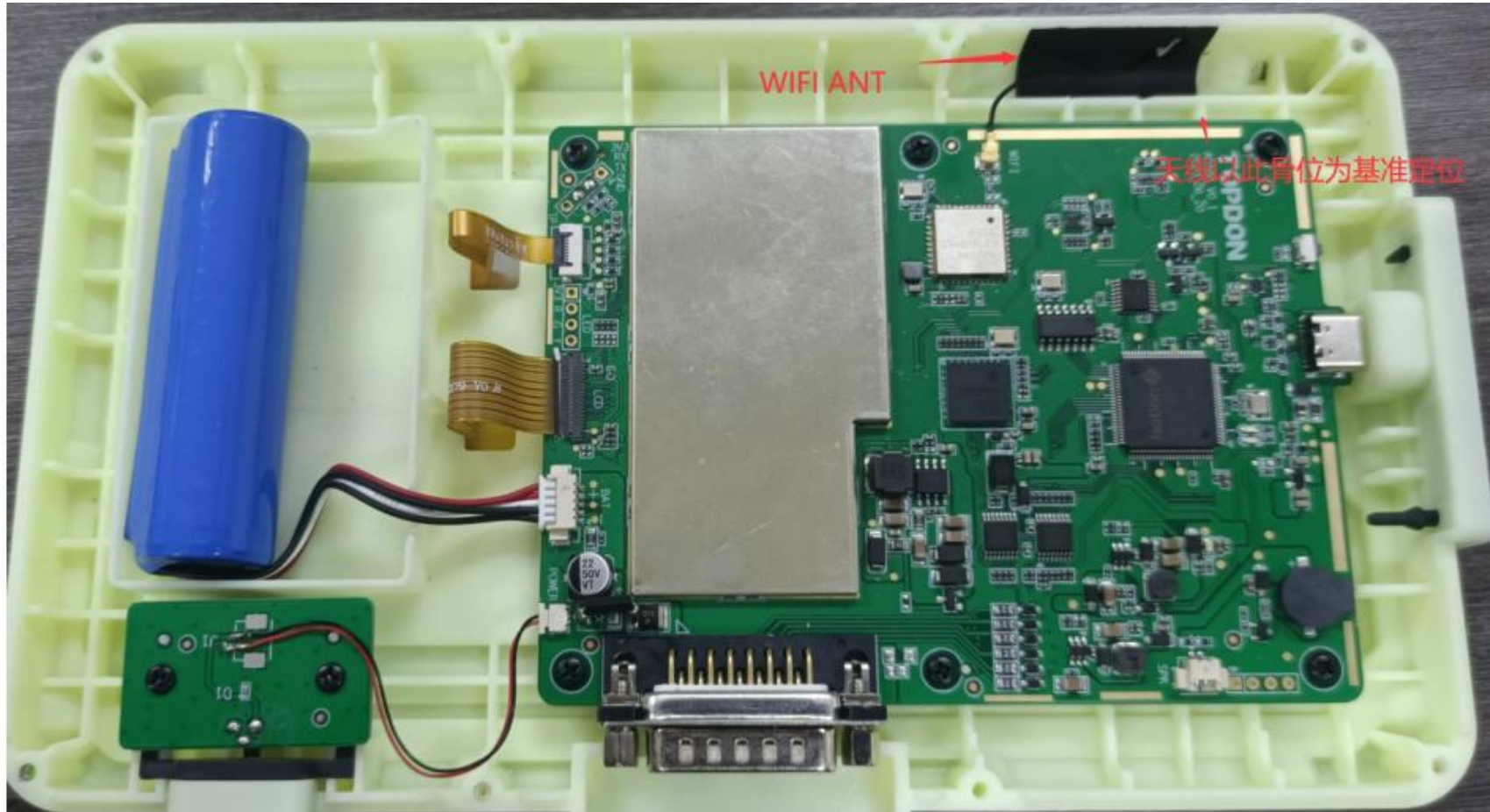
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Antenna Placement



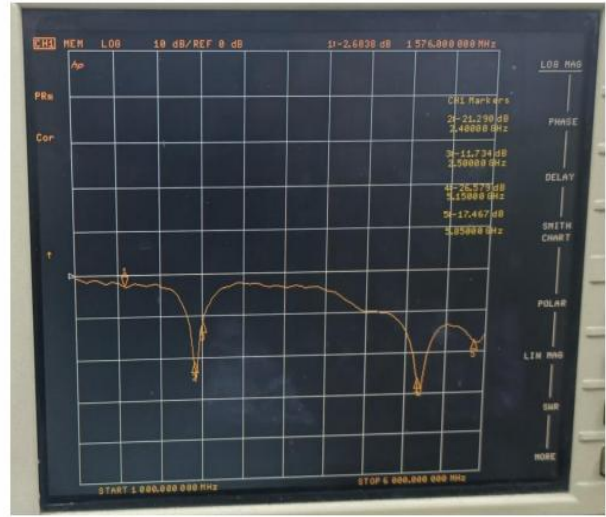
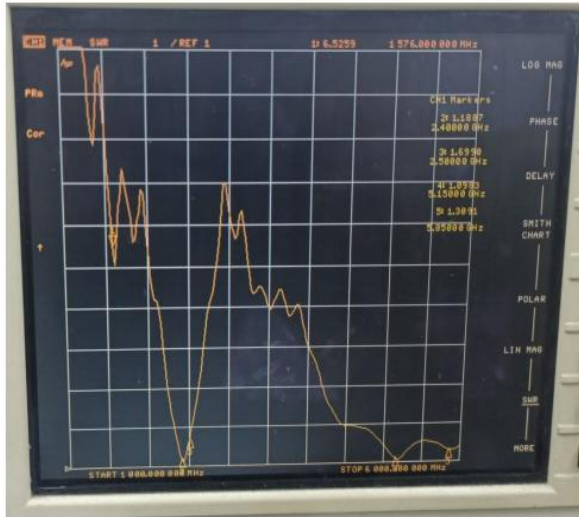
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Test Data

S11 Parameter-VSWR



Frequency (MHZ)	2400	2500	5150	5850
VSWR	1.18	1.69	1.09	1.30
Return Loss (DB)	-21.29	-11.73	-26.57	-17.36

WiFi Active Test Data

	Frequency	TRP		TIS	
		Channel	Value	Channel	Value
802.11b	2412	CH1 11Mbps	11.8	CH1 11Mbps	-80.71
	2437	CH6 11Mbps	12.84	CH6 11Mbps	-80.27
	2467	CH11 11Mbps	12.38	CH11 11Mbps	-80.36
802.11a			TRP		TIS
	5180	CH36 6Mbps	12.35	CH36 54Mbps	-70.35
	5300	CH60 6Mbps	12.05	CH60 54Mbps	-70.54
	5805	CH161 6Mbps	12.51	CH161 54Mbps	-70.59

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Efficiency Table

Passive Test For WIFI2.4								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
2400	47.21	-3.26	1.36	-0.79	24.739	22.468	1.36	-14.57
2410	46.91	-3.29	1.26	-0.89	24.43	22.481	1.26	-14.76
2420	51.95	-2.84	1.57	-0.58	26.677	25.269	1.57	-13.86
2430	52.52	-2.8	1.54	-0.61	26.739	25.777	1.54	-12.7
2440	52.58	-2.79	1.57	-0.58	26.903	25.677	1.57	-12.68
2450	54.25	-2.66	1.67	-0.48	27.789	26.465	1.67	-12.59
2460	54.63	-2.63	1.59	-0.56	27.905	26.72	1.59	-12.77
2470	55.91	-2.53	1.54	-0.61	28.299	27.612	1.54	-13.01
2480	56.56	-2.47	1.48	-0.67	28.46	28.105	1.48	-13.29
2490	53.68	-2.7	1.27	-0.88	26.587	27.089	1.27	-13.44
2500	45.82	-3.39	0.67	-1.48	22.457	23.36	0.67	-13.41

Passive Test For WIFI5G								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
5150	33.77	-4.72	1.05	-1.1	19.569	14.198	1.05	-22.02
5170	32.79	-4.84	0.91	-1.24	18.767	14.022	0.91	-20.04
5190	34.72	-4.59	1.04	-1.11	20.115	14.606	1.04	-21.16
5210	34.96	-4.56	0.86	-1.29	20.516	14.44	0.86	-22.81
5230	36.41	-4.39	1.04	-1.11	21.48	14.926	1.04	-19.94
5250	37.88	-4.22	1.39	-0.76	22.195	15.683	1.39	-18.12
5270	40.72	-3.9	1.66	-0.49	23.694	17.028	1.66	-16.72
5290	40.22	-3.96	1.14	-1.01	23.416	16.809	1.14	-18.67
5310	40.16	-3.96	0.87	-1.28	23.029	17.132	0.87	-18.16
5330	42.04	-3.76	1.11	-1.04	23.536	18.499	1.11	-16.64
5350	44.19	-3.55	1.24	-0.91	24.218	19.977	1.24	-17.36
5370	42.8	-3.69	0.96	-1.19	23.423	19.376	0.96	-18.31
5390	39.27	-4.06	0.76	-1.39	21.719	17.549	0.76	-18.96
5410	47.22	-3.26	1.87	-0.28	26.124	21.092	1.87	-18.16
5430	41.32	-3.84	1.48	-0.67	22.96	18.359	1.48	-18.98
5450	46.71	-3.31	1.8	-0.35	26.272	20.44	1.8	-19.71
5470	43.99	-3.57	1.81	-0.34	25.302	18.69	1.81	-19.1
5490	45.46	-3.42	1.91	-0.24	26.325	19.131	1.91	-21.2
5510	47.47	-3.24	1.8	-0.35	27.32	20.146	1.8	-18.14
5530	49.53	-3.05	2.03	-0.12	28.515	21.012	2.03	-18.98
5550	53.09	-2.75	2.67	0.52	30.776	22.315	2.67	-22.61
5570	48.11	-3.18	2.45	0.3	27.998	20.116	2.45	-19.41
5590	51.14	-2.91	3.02	0.87	29.477	21.667	3.02	-16.86
5610	48.88	-3.11	2.99	0.84	28.098	20.785	2.99	-18.09
5630	52.94	-2.76	3.11	0.96	30.55	22.394	3.11	-20.19
5650	49.87	-3.02	2.57	0.42	28.967	20.907	2.57	-17
5670	50.19	-2.99	2.78	0.63	29.291	20.904	2.78	-16.31
5690	51.23	-2.91	2.79	0.64	29.934	21.292	2.79	-17.41
5710	47.83	-3.2	2.46	0.31	27.885	19.95	2.46	-16.63
5730	54.58	-2.63	3.31	1.16	31.889	22.694	3.31	-18.1
5750	47.29	-3.25	2.75	0.6	27.708	19.577	2.75	-21.28
5770	50.38	-2.98	2.83	0.68	29.43	20.954	2.83	-24.27
5790	45.39	-3.43	2.29	0.14	26.396	18.998	2.29	-18.99
5810	47.37	-3.25	2.61	0.46	27.126	20.243	2.61	-20.65
5830	45.62	-3.41	2.48	0.33	25.838	19.779	2.48	-18.66
5850	46.69	-3.31	2.26	0.11	26.077	20.608	2.26	-19.76

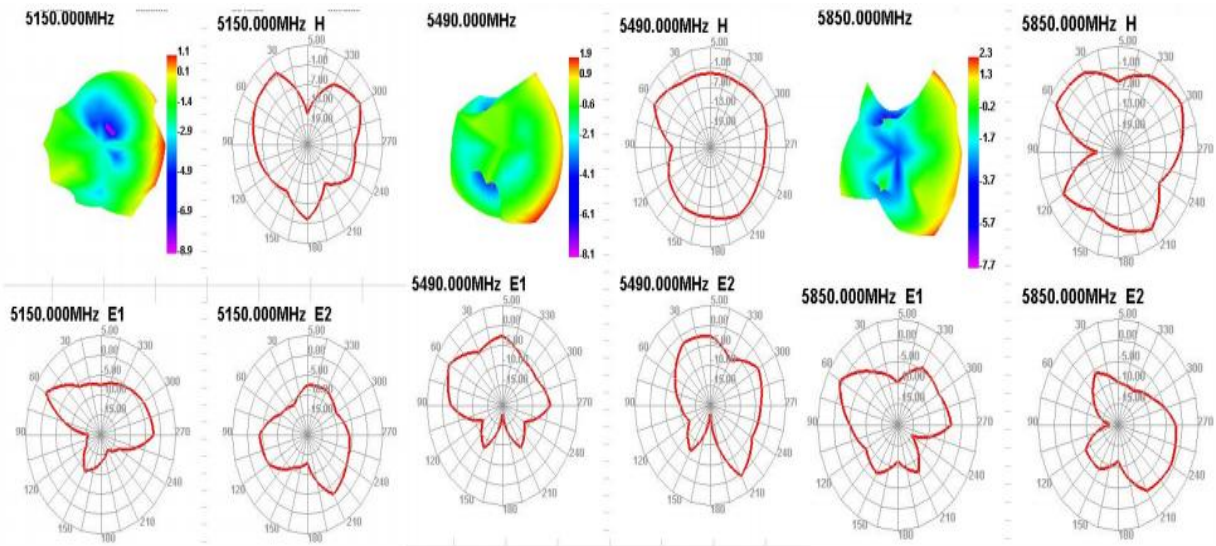
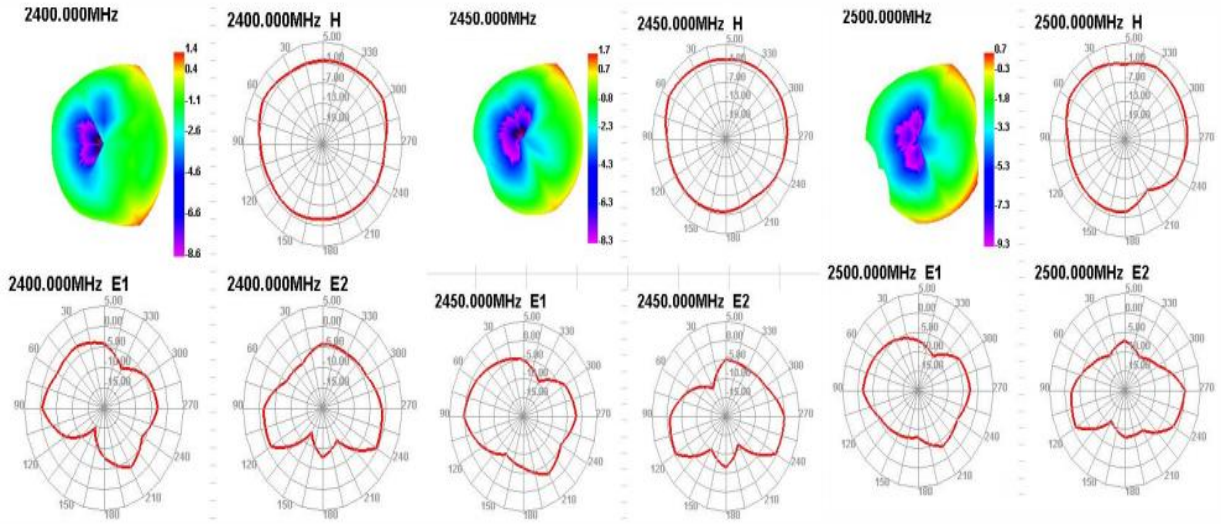
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Radiation Pattern



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WiFi/BT Measured

WIFI

测试环境: 开放空间

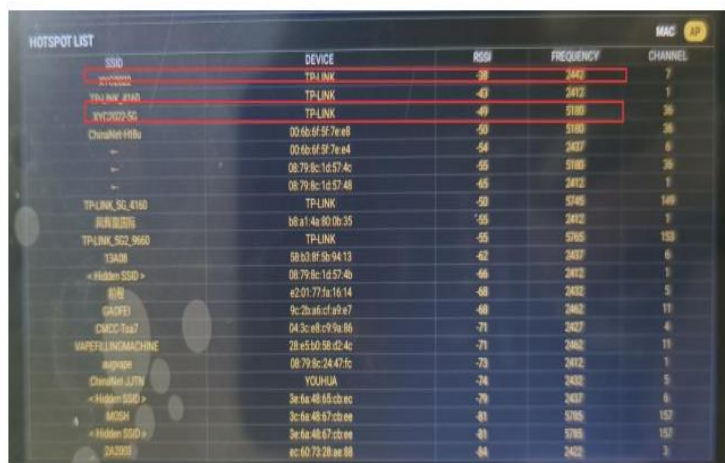
测试工具: Wifi Analytical Assistant

测试距离: 10m

信号强度: 2.4G: -38dBm 5G: -49dBm

测试结果如右图

Test environment: Open space
 Test tool: Wifi Analytical Assistant
 Measuring distance: 10m
 Signal strength: 2.4G: -38dBm 5G: -49dBm
 The test results are shown on the right



SSID	DEVICE	RSSI	FREQUENCY	CHANNEL
TP-LINK	TP-LINK	-38	2412	1
TP-LINK_4140	TP-LINK	-49	2412	1
TP-LINK_5G	TP-LINK	-49	5180	36
CHANGHE	00:60:6f:5f:7e:e8	-50	5180	36
	00:60:6f:5f:7e:e4	-54	2437	6
	08:79:8c:1d:57:4c	-55	5180	36
	08:79:8c:1d:57:48	-65	2412	1
TP-LINK_SG_4140	TP-LINK	-50	5745	149
TP-LINK_SG_5860	TP-LINK	-55	2412	1
TP-LINK_SG2_5860	TP-LINK	-55	5765	153
13AM	58:b3:8f:5b:94:13	-62	2437	6
<Hidden SSID>	08:79:8c:1d:57:4b	-66	2412	1
8188	e2:01:77:fa:16:14	-68	2432	5
CAIPEI	9c:2b:36:cf:89:e7	-68	2432	11
CMCC-T407	04:3c:e8:c9:9a:86	-71	2437	4
WAPERLINGMACHINE	28:e5:60:58:d2:4c	-71	2460	11
supper	08:79:8c:24:47:3c	-73	2412	1
ChangHe_4179	YOUHUA	-74	2432	5
<Hidden SSID>	3c:6a:48:65:cd:ec	-79	2437	6
MGSH	3c:6a:48:67:cd:ee	-81	5765	157
<Hidden SSID>	3c:6a:48:67:cd:ee	-81	5765	157
2430E	ac:60:72:28:ae:88	-84	2432	3

BT

测试环境: 开放空间(通道)

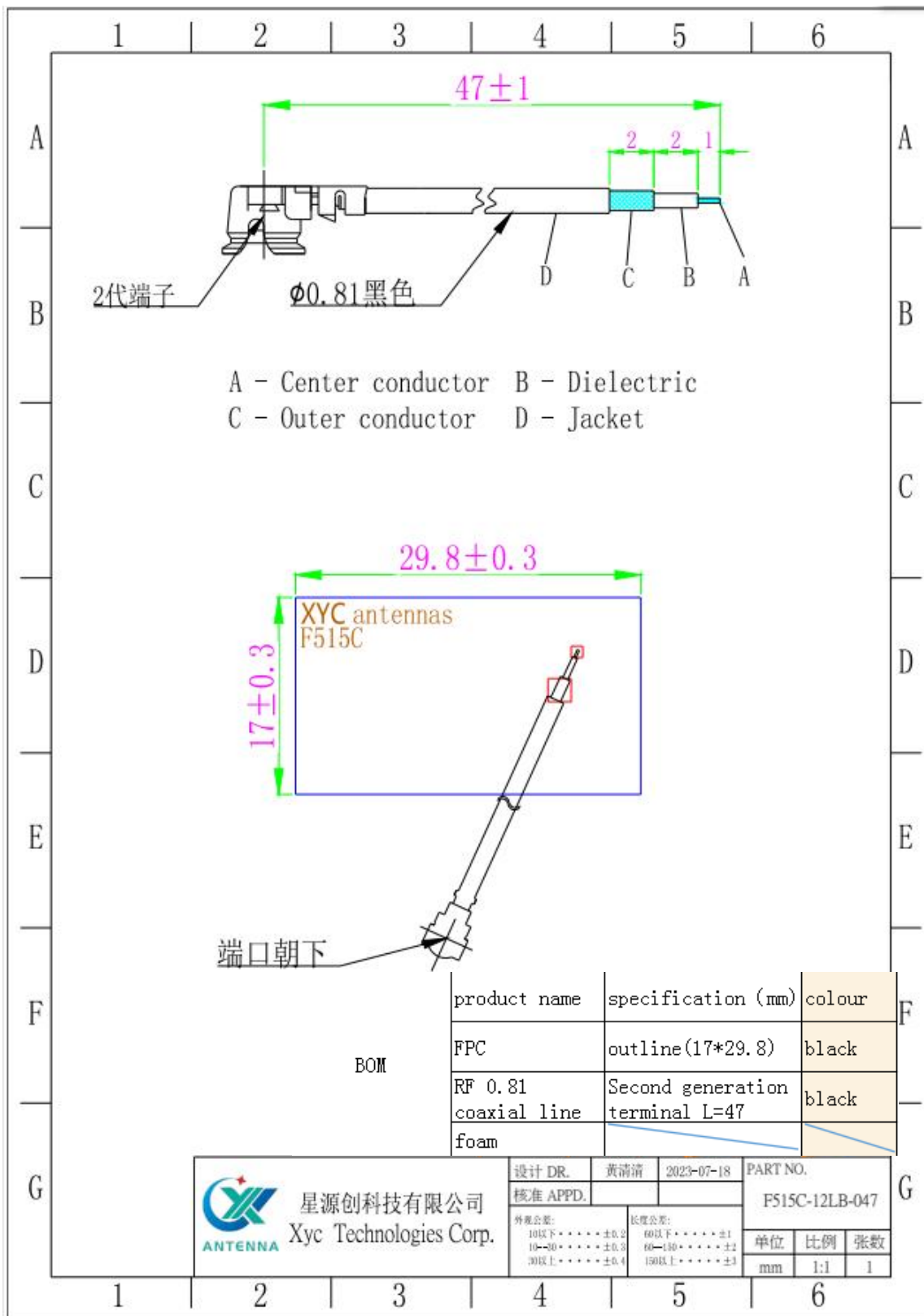
测试工具: 蓝牙音响

测试距离: 10m

结果: 播放音乐流畅, 无杂音。

Test environment: Open space
 Test tool: Bluetooth audio
 Measuring distance: 10m
 Results: The music was played smoothly and without noise

Antenna Assembly



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