



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	亿莱顿	日期 Data	2023/10/26
产品名称 Product	WiFi天线	客户机型 Models	EM101A
料号 P/N	T629A-14RB-053	客户料号 Customer P/N	
规格描述 Specifications	黑色FPC; RF0.81四代端子黑色同轴线, L=53mm;		

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 $\Omega$
Polarization	Linear
Peak Effi	48%@2.4G; 46%@5G
Peak Gain	1.9dBi@2.4G; 2.1dBi@5G

### 1.2 Physical Properties

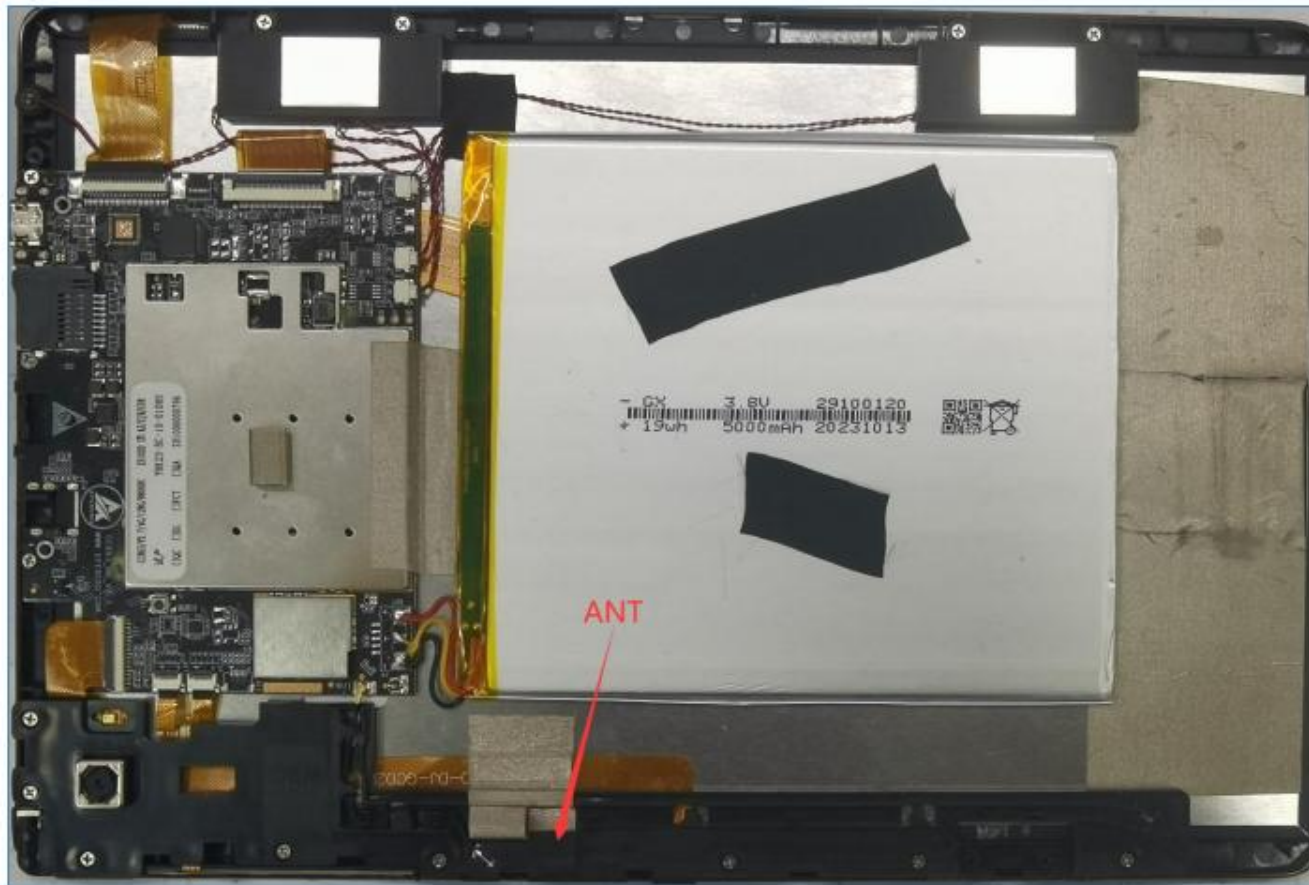
Characteristics	Specifications
Operating Temp	-10°C~+60°C
Storage Temp	-10°C~+70°C
Humidity	10~95%RH



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## Antenna Placement



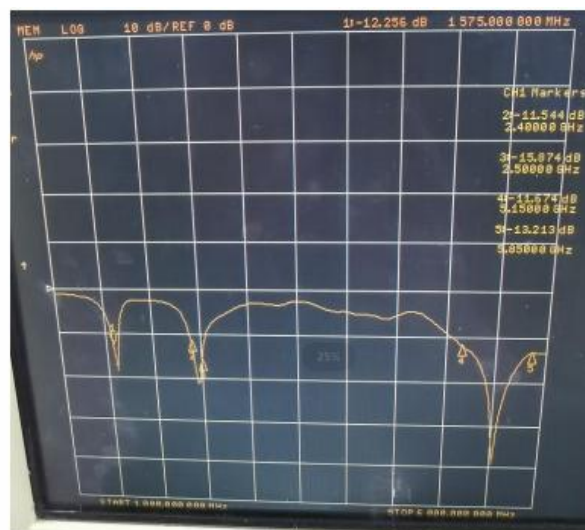
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### Test Data

#### S11 Parameter-VSWR



Frequency (MHZ)	2400	2500	5150	5850
VSWR	1.72	1.38	1.70	1.55
Return Loss (DB)	-11.54	-15.87	-11.67	-13.21

#### WiFi Active Test Data

Frequency	TRP		TIS	
	802.11b			
2412	CH1 11Mbps	10.14	CH1 11Mbps	-78.21
2437	CH6 11Mbps	10.19	CH6 11Mbps	-77.33
2467	CH11 11Mbps	9.11	CH11 11Mbps	-76.23
802.11a				
		TRP		TIS
5180	CH36 6Mbps	9.55	CH36 54Mbps	-69.83
5300	CH60 6Mbps	10.57	CH60 54Mbps	-69.59
5805	CH161 6Mbps	10.69	CH161 54Mbps	-70.47

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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)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	46.08	-3.36	1.69	-0.46	28.112	17.971	1.69	-13.53	5.05	60	45.79	46.02
2410	46.12	-3.36	1.87	-0.28	28.247	17.877	1.87	-13.06	5.24	60	46	46.28
2420	46.44	-3.33	1.93	-0.22	28.563	17.88	1.93	-13.47	5.26	30	45.66	45.93
2430	45.93	-3.38	1.79	-0.36	28.314	17.613	1.79	-14.41	5.17	30	45.82	46.17
2440	47.06	-3.27	1.78	-0.37	29.236	17.829	1.78	-15.6	5.06	30	45.92	46.28
2450	47.89	-3.2	1.84	-0.31	29.961	17.932	1.84	-15.72	5.03	60	45.95	46.38
2460	47.95	-3.19	1.83	-0.32	30.11	17.844	1.83	-16.64	5.02	60	45.93	46.31
2470	48.13	-3.18	1.84	-0.31	30.139	17.99	1.84	-17.88	5.01	60	46.24	46.64
2480	48.22	-3.17	1.81	-0.34	30.095	18.121	1.81	-17.03	4.97	60	46.17	46.56
2490	45.76	-3.4	1.63	-0.52	28.362	17.393	1.63	-15.45	5.03	90	46.38	46.78
2500	42.36	-3.73	1.34	-0.81	26.108	16.252	1.34	-14.77	5.07	90	46.26	46.65

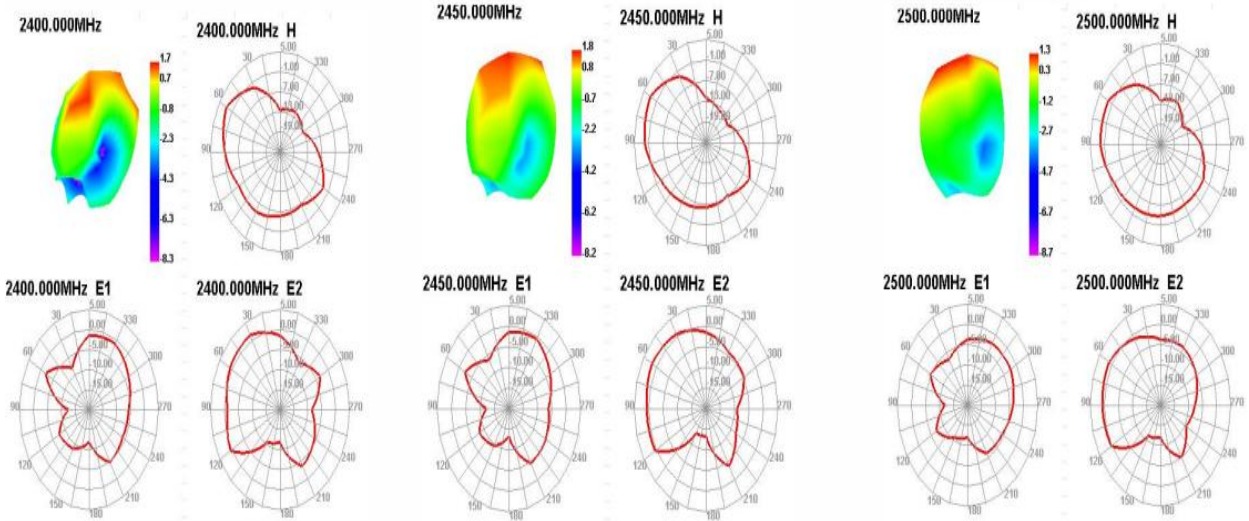
Passive Test For WIFI5G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	29.49	-5.3	0.1	-2.05	16.293	13.197	0.1	-20.78	5.4	30	49.82	49.4
5170	31.37	-5.03	0.61	-1.54	17.355	14.018	0.61	-18.75	5.64	0	50.13	49.77
5190	32	-4.95	0.41	-1.74	17.791	14.209	0.41	-19	5.36	0	50.42	49.95
5210	37.26	-4.29	1.13	-1.02	20.984	16.275	1.13	-22.19	5.42	0	50.88	50.49
5230	35.89	-4.45	1.13	-1.02	20.402	15.489	1.13	-23.05	5.58	0	50.42	50.08
5250	39.62	-4.02	1.68	-0.47	22.582	17.039	1.68	-19.56	5.7	0	51.02	50.72
5270	41.1	-3.86	1.77	-0.38	23.383	17.718	1.77	-18.94	5.64	0	50.85	50.6
5290	42.31	-3.74	1.89	-0.26	24.293	18.02	1.89	-18.87	5.62	0	51.34	51.12
5310	40.3	-3.95	1.78	-0.37	23.35	16.952	1.78	-25.34	5.72	0	50.44	50.36
5330	40.94	-3.88	1.73	-0.42	23.729	17.212	1.73	-19.79	5.61	0	51.08	51.01
5350	43.58	-3.61	1.96	-0.19	25.292	18.289	1.96	-17.02	5.57	0	51.02	51.01
5370	42.04	-3.76	1.85	-0.3	24.537	17.5	1.85	-19.2	5.61	0	50.91	50.95
5390	38.1	-4.19	1.42	-0.73	22.421	15.676	1.42	-21.31	5.61	0	50.46	50.43
5410	43.44	-3.62	1.86	-0.29	25.661	17.782	1.86	-17.33	5.49	0	51.18	51.09
5430	40.32	-3.94	1.36	-0.79	23.635	16.69	1.36	-18.46	5.3	0	50.69	50.7
5450	43.1	-3.65	1.64	-0.51	25.086	18.016	1.64	-20.56	5.3	0	50.71	50.85
5470	41.1	-3.86	1.39	-0.76	23.851	17.252	1.39	-19.65	5.25	0	50.93	50.83
5490	41.05	-3.87	1.52	-0.63	23.815	17.234	1.52	-18.42	5.39	0	50.92	50.79
5510	42.3	-3.74	1.82	-0.33	24.152	18.144	1.82	-17.93	5.55	0	51.18	51.16
5530	43.53	-3.61	1.95	-0.2	24.383	19.147	1.95	-18.26	5.56	0	51.44	51.3
5550	46.43	-3.33	2.1	-0.05	25.824	20.602	2.1	-17.95	5.43	0	51.89	51.76
5570	44.01	-3.56	1.87	-0.28	24.518	19.493	1.87	-17.7	5.43	0	51.42	51.33
5590	44.83	-3.48	1.9	-0.25	24.793	20.042	1.9	-17.44	5.38	0	51.71	51.76
5610	42.54	-3.71	1.6	-0.55	23.352	19.189	1.6	-17.75	5.32	0	51.17	51.22
5630	44.09	-3.56	1.45	-0.7	24.486	19.599	1.45	-17.41	5.01	0	51.78	51.77
5650	41.61	-3.81	1.22	-0.93	23.434	18.175	1.22	-16.71	5.03	30	51.47	51.55
5670	39.23	-4.06	0.95	-1.2	22.311	16.915	0.95	-15.23	5.02	30	52.12	52.28
5690	40.5	-3.93	0.99	-1.16	23.329	17.169	0.99	-16.16	4.92	30	52.12	52.25
5710	35.65	-4.48	0.72	-1.43	20.882	14.769	0.72	-16.91	5.19	30	51.95	52.05
5730	41.65	-3.8	1.49	-0.66	24.786	16.866	1.49	-14.15	5.29	30	51.59	51.69
5750	33.78	-4.71	0.4	-1.75	20.216	13.565	0.4	-14.81	5.12	30	51.12	51.15
5770	37.75	-4.23	0.9	-1.25	22.79	14.958	0.9	-16.46	5.13	30	51.02	51.06
5790	32.46	-4.89	0.29	-1.86	19.913	12.546	0.29	-18.54	5.18	30	51.08	51.16
5810	36.36	-4.39	0.91	-1.24	22.686	13.672	0.91	-15.6	5.31	30	51.36	51.43
5830	34.13	-4.67	0.94	-1.21	21.605	12.529	0.94	-17.73	5.61	30	51.65	51.66
5850	39.03	-4.09	1.62	-0.53	24.767	14.259	1.62	-18.09	5.71	30	51.88	52.05

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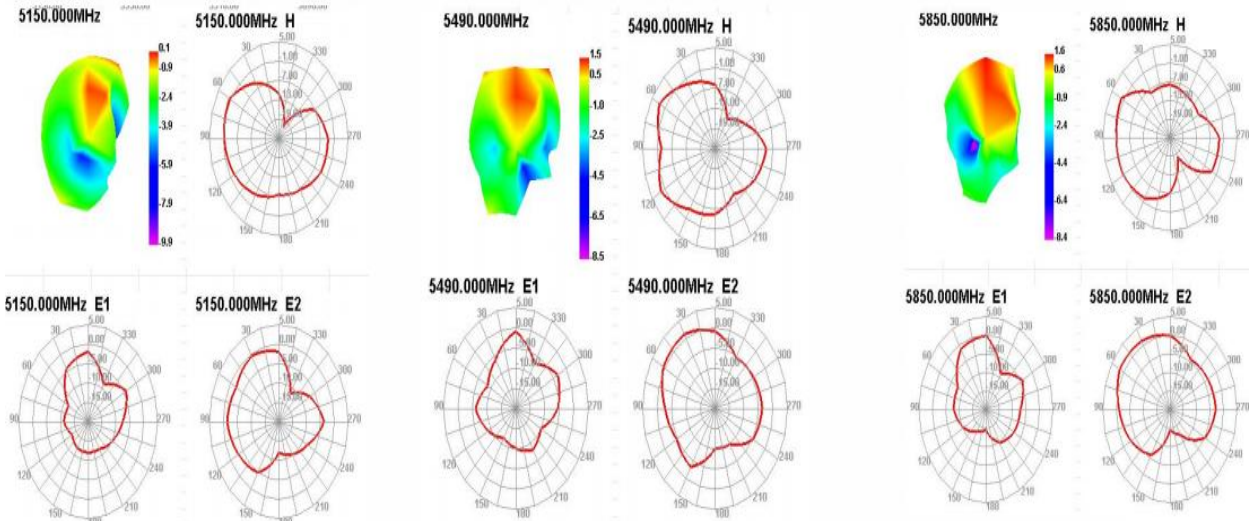
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### Radiation Pattern(2.4G)



### Radiation Pattern(5G)







### Throughput Test(2.4G)

上行		下行	
图片	<pre> 3] 5.0-6.0 sec 9.00 MBytes 79.0 Mbits/sec 3] 6.0-7.0 sec 9.88 MBytes 82.8 Mbits/sec 3] 7.0-8.0 sec 9.75 MBytes 81.8 Mbits/sec 3] 8.0-9.0 sec 16.5 MBytes 138 Mbits/sec 3] 9.0-10.0 sec 18.8 MBytes 157 Mbits/sec 3] 10.0-11.0 sec 19.5 MBytes 164 Mbits/sec 3] 11.0-12.0 sec 17.1 MBytes 144 Mbits/sec 3] 12.0-13.0 sec 6.50 MBytes 54.5 Mbits/sec 3] 13.0-14.0 sec 9.00 MBytes 75.5 Mbits/sec 3] 14.0-15.0 sec 7.38 MBytes 61.9 Mbits/sec 3] 15.0-16.0 sec 8.62 MBytes 72.4 Mbits/sec 3] 16.0-17.0 sec 10.8 MBytes 90.2 Mbits/sec 3] 17.0-18.0 sec 8.25 MBytes 69.2 Mbits/sec 3] 18.0-19.0 sec 8.62 MBytes 72.4 Mbits/sec 3] 19.0-20.0 sec 12.4 MBytes 112 Mbits/sec 3] 20.0-21.0 sec 13.4 MBytes 112 Mbits/sec 3] 21.0-22.0 sec 10.4 MBytes 87.0 Mbits/sec 3] 22.0-23.0 sec 9.88 MBytes 82.8 Mbits/sec 3] 23.0-24.0 sec 8.25 MBytes 69.2 Mbits/sec 3] 24.0-25.0 sec 9.38 MBytes 78.6 Mbits/sec 3] 25.0-26.0 sec 11.2 MBytes 94.4 Mbits/sec 3] 26.0-27.0 sec 9.12 MBytes 76.5 Mbits/sec 3] 27.0-28.0 sec 9.12 MBytes 76.5 Mbits/sec 3] 28.0-29.0 sec 12.9 MBytes 108 Mbits/sec 3] 29.0-30.0 sec 9.88 MBytes 82.8 Mbits/sec 3] 30.0-30.0 sec 32.0 MBytes 89.4 Mbits/sec </pre>	图片	<pre> ID Interval Transfer Bandwidth 272 18.0-19.0 sec 8.67 MBytes 74.4 Mbits/sec ID Interval Transfer Bandwidth 272 19.0-20.0 sec 7.76 MBytes 68.0 Mbits/sec ID Interval Transfer Bandwidth 272 20.0-21.0 sec 13.8 MBytes 116 Mbits/sec ID Interval Transfer Bandwidth 272 21.0-22.0 sec 8.33 MBytes 69.9 Mbits/sec ID Interval Transfer Bandwidth 272 22.0-23.0 sec 8.27 MBytes 69.4 Mbits/sec ID Interval Transfer Bandwidth 272 23.0-24.0 sec 7.34 MBytes 61.6 Mbits/sec ID Interval Transfer Bandwidth 272 24.0-25.0 sec 6.76 MBytes 56.7 Mbits/sec ID Interval Transfer Bandwidth 272 25.0-26.0 sec 6.05 MBytes 50.8 Mbits/sec ID Interval Transfer Bandwidth 272 26.0-27.0 sec 2.92 MBytes 24.5 Mbits/sec ID Interval Transfer Bandwidth 272 27.0-28.0 sec 7.07 MBytes 59.3 Mbits/sec ID Interval Transfer Bandwidth 272 28.0-29.0 sec 14.1 MBytes 118 Mbits/sec ID Interval Transfer Bandwidth 272 29.0-30.0 sec 17.3 MBytes 145 Mbits/sec ID Interval Transfer Bandwidth 272 30.0-30.0 sec 271 MBytes 76.6 Mbits/sec </pre>

### Throughput Test(5G)

上行		下行	
图片	<pre> 3] 3.0-4.0 sec 17.7 MBytes 149 Mbits/sec 3] 4.0-5.0 sec 11.8 MBytes 98.6 Mbits/sec 3] 5.0-6.0 sec 8.00 MBytes 67.1 Mbits/sec 3] 6.0-7.0 sec 11.4 MBytes 95.4 Mbits/sec 3] 7.0-8.0 sec 11.0 MBytes 92.3 Mbits/sec 3] 8.0-9.0 sec 11.2 MBytes 94.4 Mbits/sec 3] 9.0-10.0 sec 10.8 MBytes 90.2 Mbits/sec 3] 10.0-11.0 sec 11.0 MBytes 92.3 Mbits/sec 3] 11.0-12.0 sec 17.8 MBytes 149 Mbits/sec 3] 12.0-13.0 sec 11.5 MBytes 96.5 Mbits/sec 3] 13.0-14.0 sec 8.50 MBytes 71.3 Mbits/sec 3] 14.0-15.0 sec 10.1 MBytes 84.9 Mbits/sec 3] 15.0-16.0 sec 8.75 MBytes 73.4 Mbits/sec 3] 16.0-17.0 sec 10.6 MBytes 89.1 Mbits/sec 3] 17.0-18.0 sec 11.1 MBytes 93.3 Mbits/sec 3] 18.0-19.0 sec 11.1 MBytes 93.3 Mbits/sec 3] 19.0-20.0 sec 16.5 MBytes 138 Mbits/sec 3] 20.0-21.0 sec 22.8 MBytes 191 Mbits/sec 3] 21.0-22.0 sec 22.9 MBytes 192 Mbits/sec 3] 22.0-23.0 sec 22.5 MBytes 189 Mbits/sec 3] 23.0-24.0 sec 13.4 MBytes 112 Mbits/sec 3] 24.0-25.0 sec 10.5 MBytes 88.1 Mbits/sec 3] 25.0-26.0 sec 10.6 MBytes 89.1 Mbits/sec 3] 26.0-27.0 sec 10.6 MBytes 89.1 Mbits/sec 3] 27.0-28.0 sec 11.1 MBytes 93.3 Mbits/sec 3] 28.0-29.0 sec 11.6 MBytes 97.5 Mbits/sec 3] 29.0-30.0 sec 11.2 MBytes 94.4 Mbits/sec 3] 30.0-30.0 sec 37.2 MBytes 104 Mbits/sec </pre>	图片	<pre> ID Interval Transfer Bandwidth 272 18.0-19.0 sec 16.0 MBytes 126 Mbits/sec ID Interval Transfer Bandwidth 272 19.0-20.0 sec 11.3 MBytes 95.0 Mbits/sec ID Interval Transfer Bandwidth 272 20.0-21.0 sec 11.4 MBytes 95.1 Mbits/sec ID Interval Transfer Bandwidth 272 21.0-22.0 sec 11.0 MBytes 92.0 Mbits/sec ID Interval Transfer Bandwidth 272 22.0-23.0 sec 11.6 MBytes 97.1 Mbits/sec ID Interval Transfer Bandwidth 272 23.0-24.0 sec 8.89 MBytes 74.6 Mbits/sec ID Interval Transfer Bandwidth 272 24.0-25.0 sec 7.30 MBytes 61.2 Mbits/sec ID Interval Transfer Bandwidth 272 25.0-26.0 sec 11.6 MBytes 97.3 Mbits/sec ID Interval Transfer Bandwidth 272 26.0-27.0 sec 18.4 MBytes 155 Mbits/sec ID Interval Transfer Bandwidth 272 27.0-28.0 sec 12.9 MBytes 108 Mbits/sec ID Interval Transfer Bandwidth 272 28.0-29.0 sec 12.6 MBytes 106 Mbits/sec ID Interval Transfer Bandwidth 272 29.0-30.0 sec 11.0 MBytes 92.1 Mbits/sec ID Interval Transfer Bandwidth 272 30.0-30.0 sec 369 MBytes 103 Mbits/sec </pre>

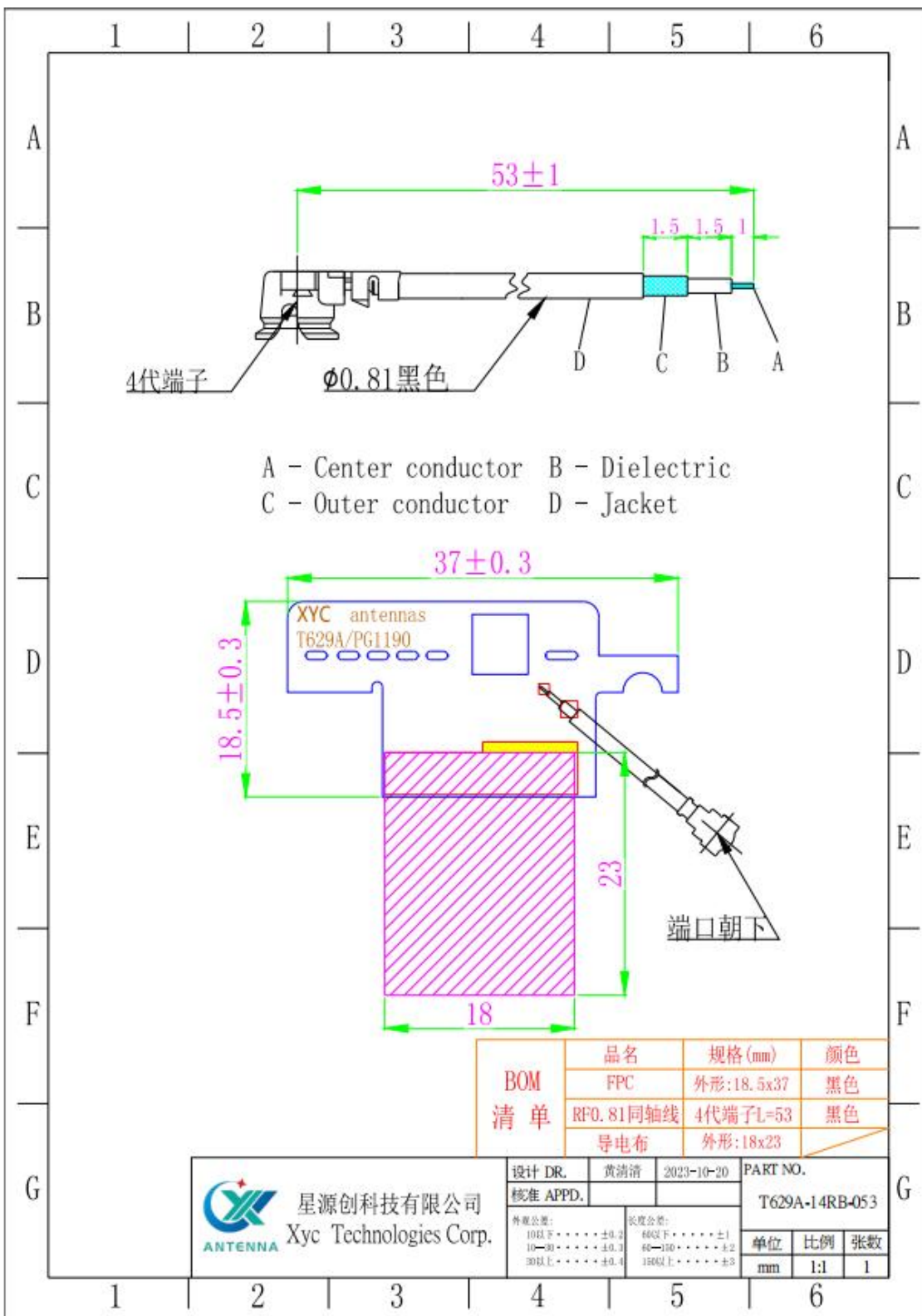
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### Antenna Assembly



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