



顺达成科技

深圳市顺达成科技有限公司

SHUN DA CHENG TECHNOLOGY CO.LTD

Antenna Test Report



客户名称：普耐尔

项目名称：P703

频段：WIFI（2.4G/5.8G）&BT

版本：A

制作日期：2024-11-1



Content

- 1. Antenna Matching Network**
- 2. *S11 Parameter-VSWR***
- 3. 1 Gain & Efficiency**
- 3. 2 3D Pattern**
- 4. OTA Data**
- 5. Antenna Assembly & environmental processing**
- 6. conclusion**



深圳市顺达成科技有限公司

顺达成科技

1. Test system

Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & Agilent 5062A
OTA Test	TRP&TIS	Agilent 8960 E5515C& Agilent 4438C&CMW500 &CMW2 ETS&SATIMO
Gain & Efficiency	Gain & Efficiency	ETS&SATIMO Agilent 5071C

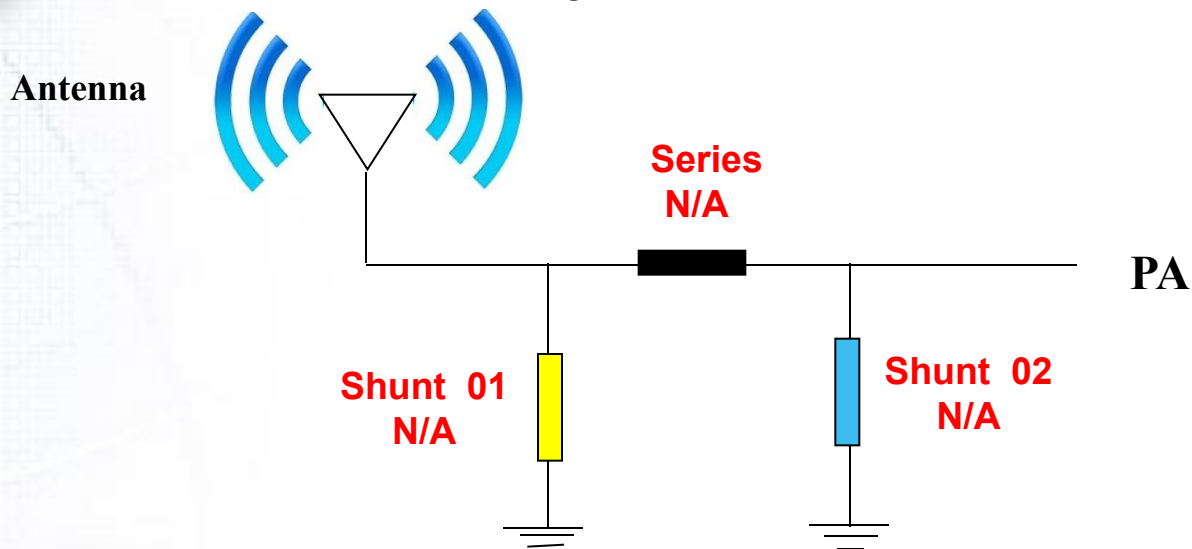




深圳市顺达成科技有限公司

顺达成科技

2. Antenna Matching Network



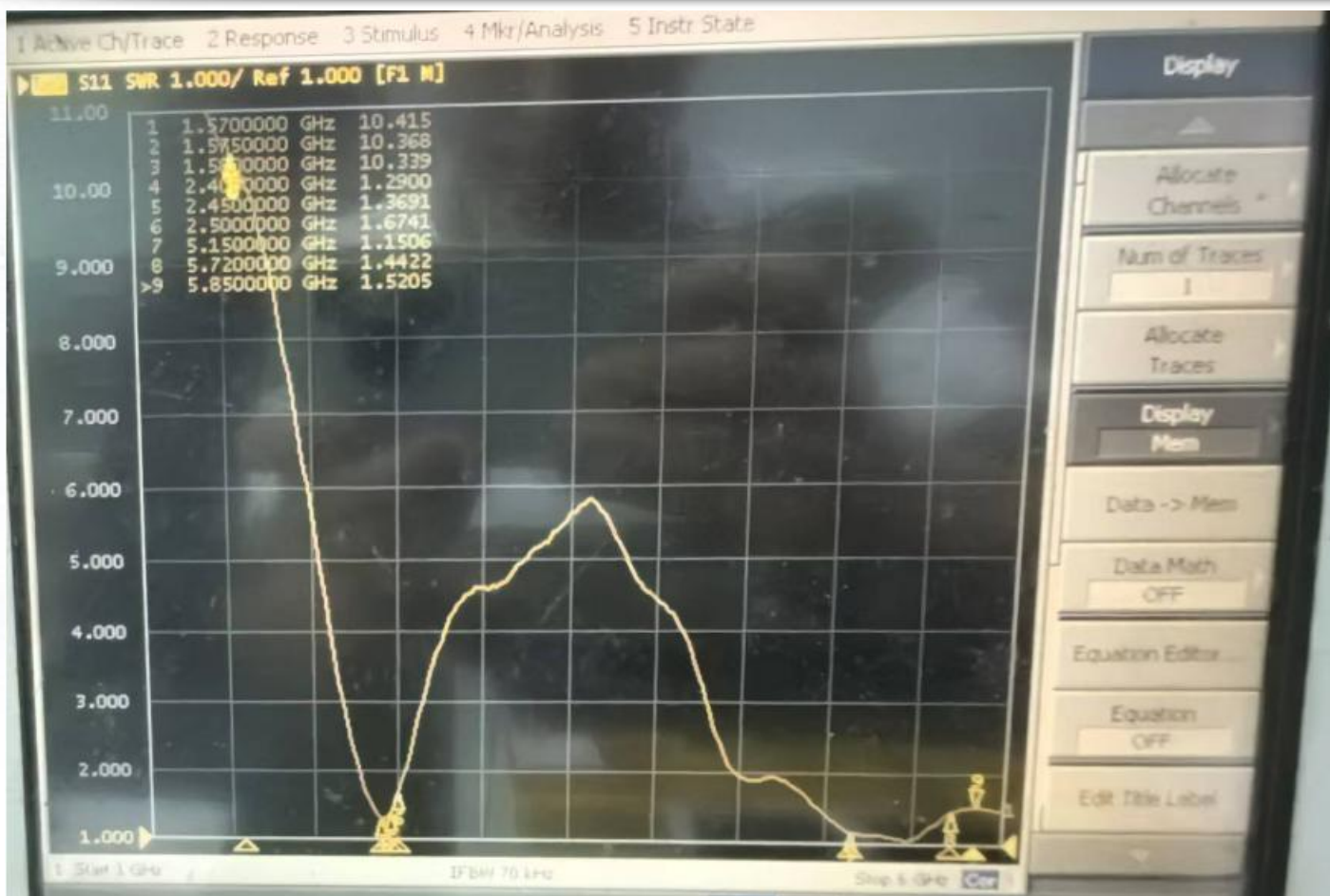
Location	Description	Vendor
Shunt 01	N/A	N/A
Series	N/A	N/A
Shunt 02	N/A	N/A

未改动主板
匹配电路



顺达成科技

S11 Parameter-SWR



Frequency(MHz)	2400	2450	2500	5150	5720	5850
VSWR	1.29	1.36	1.67	1.15	1.44	1.52

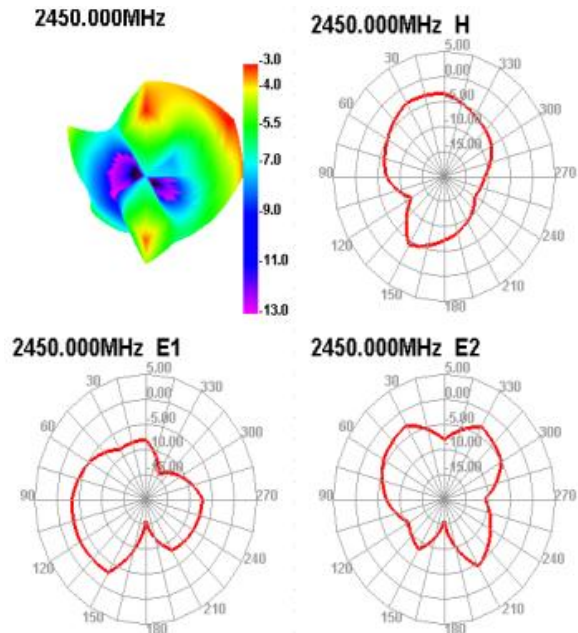
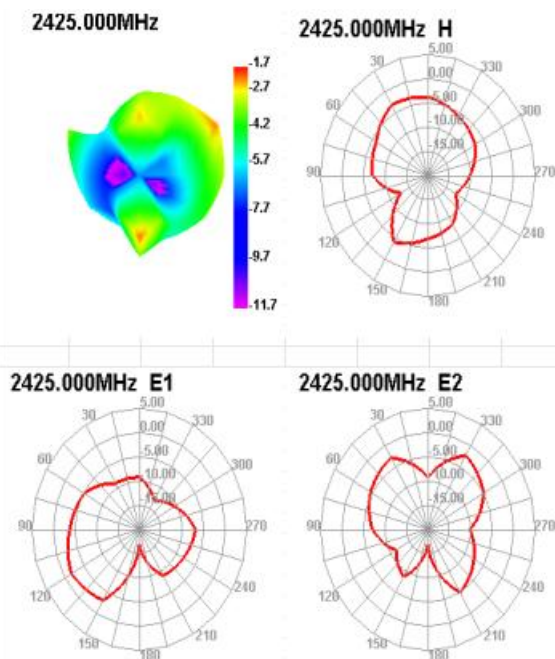
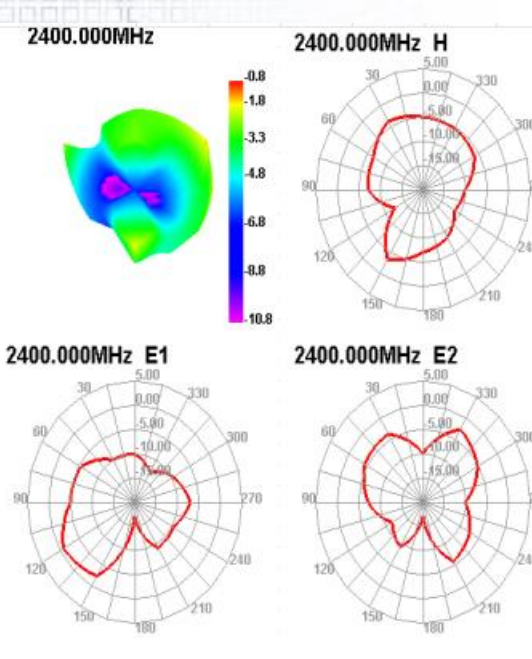


Gain & Efficiency

顺达成科技

Passive Test For 2.4G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	31.03	-6.02	-0.82	-2.97	11.978	13.049	-0.82	-17.23	5.19	30	49.26	49.31
2425	30.24	-6.15	-1.74	-3.89	11.716	12.529	-1.74	-17.29	4.41	60	48.96	49.02
2450	29.25	-6.34	-2.96	-5.11	11.279	11.97	-2.96	-15.64	3.38	90	48.56	48.52
2475	29.85	-6.22	-2.52	-4.67	11.479	12.374	-2.52	-15.83	3.7	90	48.46	48.26
2500	32.19	-5.66	-1.3	-3.45	12.763	14.431	-1.3	-15.81	4.35	90	48.42	48.11





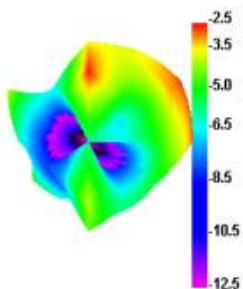
Gain & Efficiency

顺达成科技

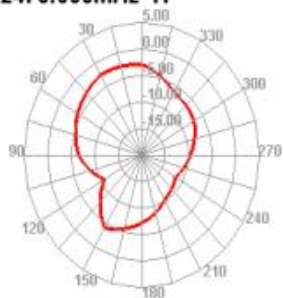
Passive Test For 2.4G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	31.03	-6.02	-0.82	-2.97	11.978	13.049	-0.82	-17.23	5.19	30	49.26	49.31
2425	30.24	-6.15	-1.74	-3.89	11.716	12.529	-1.74	-17.29	4.41	60	48.96	49.02
2450	29.25	-6.34	-2.96	-5.11	11.279	11.97	-2.96	-15.64	3.38	90	48.56	48.52
2475	29.85	-6.22	-2.52	-4.67	11.479	12.374	-2.52	-15.83	3.7	90	48.46	48.26
2500	32.19	-5.66	-1.3	-3.45	12.763	14.431	-1.3	-15.81	4.35	90	48.42	48.11

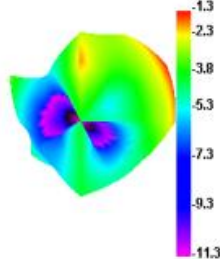
2475.000MHz



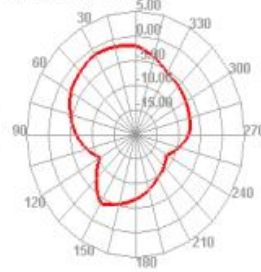
2475.000MHz H



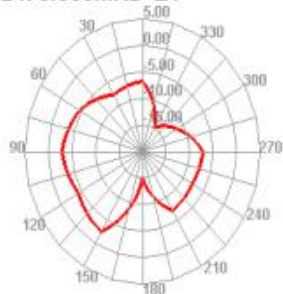
2500.000MHz



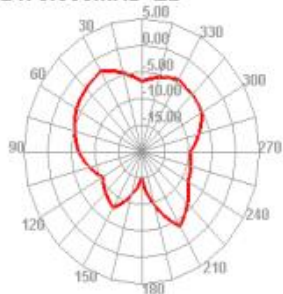
2500.000MHz H



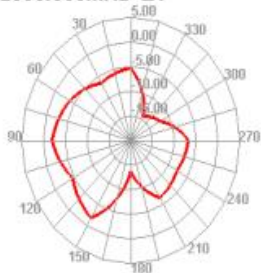
2475.000MHz E1



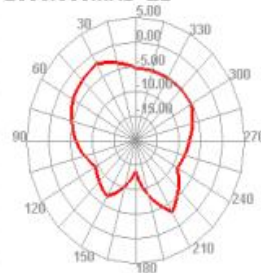
2475.000MHz E2



2500.000MHz E1



2500.000MHz E2

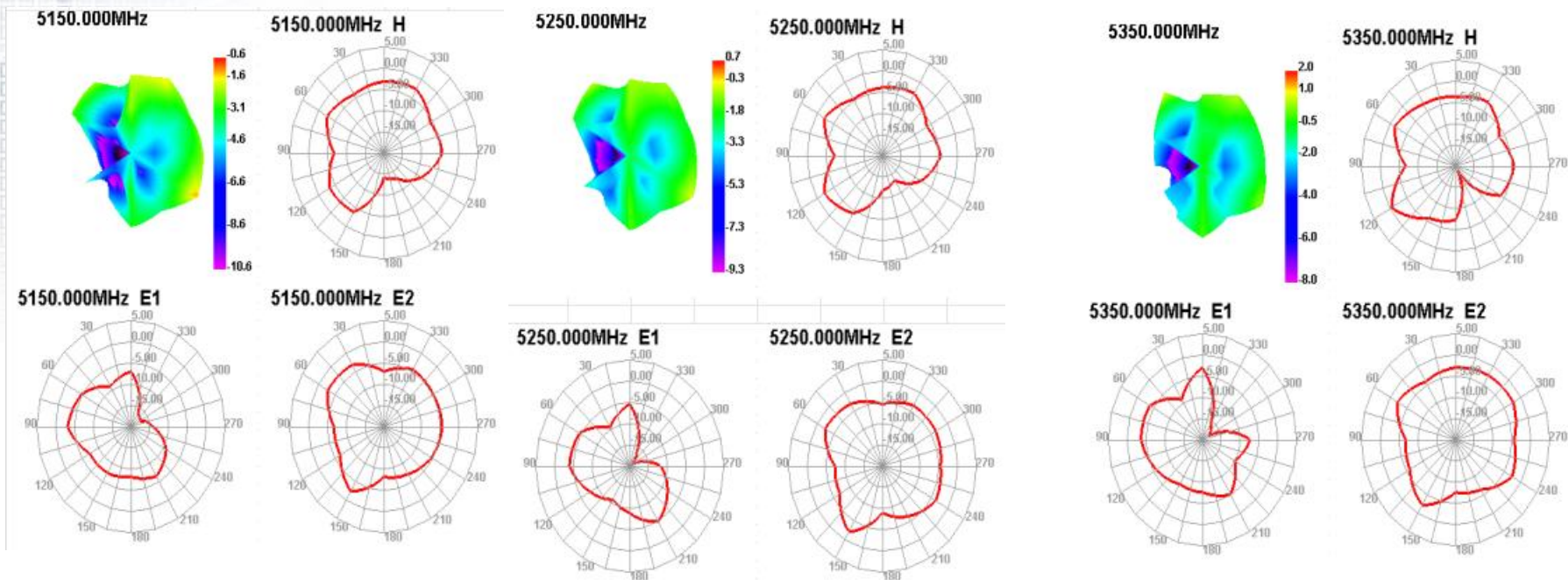




Gain & Efficiency

顺达成科技

Passive Test For 5.8G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	27.42	-5.62	-0.63	-2.78	13.3	14.118	-0.63	-17.21	4.99	30	58.6	58.01
5250	29.45	-5.31	0.74	-1.41	13.768	15.684	0.74	-20.76	6.05	30	58.53	57.74
5350	34.99	-4.56	1.99	-0.16	16.352	18.641	1.99	-18.82	6.55	0	57.99	57.08
5450	38.76	-4.12	2.01	-0.14	19.074	19.689	2.01	-24.15	6.13	0	59.19	57.9
5550	37.35	-4.28	0.24	-1.91	19.119	18.235	0.24	-22.72	4.52	30	60.21	58.81
5650	37.77	-4.23	0.2	-1.95	19.094	18.68	0.2	-14.44	4.43	0	60.31	59.42
5750	34.1	-4.67	0.41	-1.74	16.561	17.54	0.41	-16.61	5.09	150	60.88	60.28
5850	31.02	-5.08	0.33	-1.82	15.983	15.033	0.33	-21.11	5.41	90	61.09	60.41





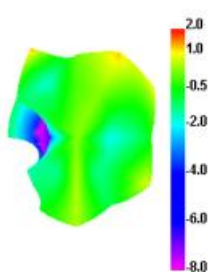
Gain & Efficiency

顺达成科技

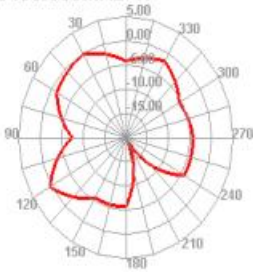
Passive Test For 5.8G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	27.42	-5.62	-0.63	-2.78	13.3	14.118	-0.63	-17.21	4.99	30	58.6	58.01
5250	29.45	-5.31	0.74	-1.41	13.768	15.684	0.74	-20.76	6.05	30	58.53	57.74
5350	34.99	-4.56	1.99	-0.16	16.352	18.641	1.99	-18.82	6.55	0	57.99	57.08
5450	38.76	-4.12	2.01	-0.14	19.074	19.689	2.01	-24.15	6.13	0	59.19	57.9
5550	37.35	-4.28	0.24	-1.91	19.119	18.235	0.24	-22.72	4.52	30	60.21	58.81
5650	37.77	-4.23	0.2	-1.95	19.094	18.68	0.2	-14.44	4.43	0	60.31	59.42
5750	34.1	-4.67	0.41	-1.74	16.561	17.54	0.41	-16.61	5.09	150	60.88	60.28
5850	31.02	-5.08	0.33	-1.82	15.983	15.033	0.33	-21.11	5.41	90	61.09	60.41

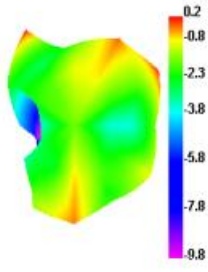
5450.000MHz



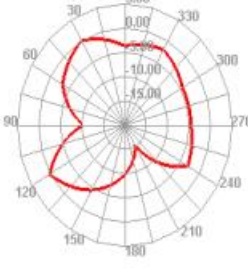
5450.000MHz H



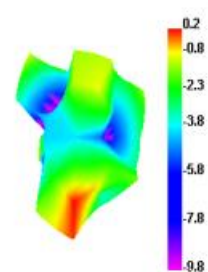
5550.000MHz



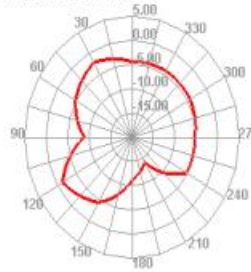
5550.000MHz H



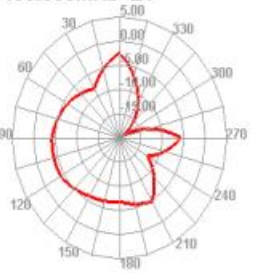
5650.000MHz



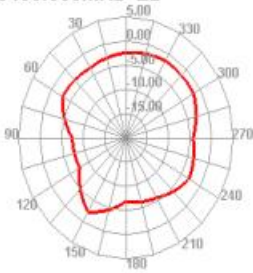
5650.000MHz H



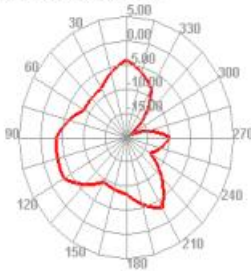
5450.000MHz E1



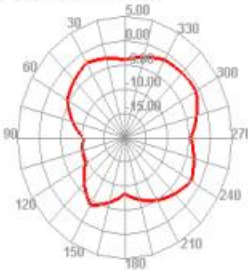
5450.000MHz E2



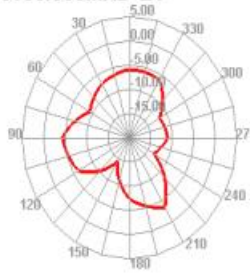
5550.000MHz E1



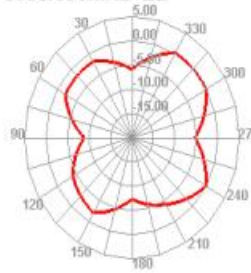
5550.000MHz E2



5650.000MHz E1



5650.000MHz E2

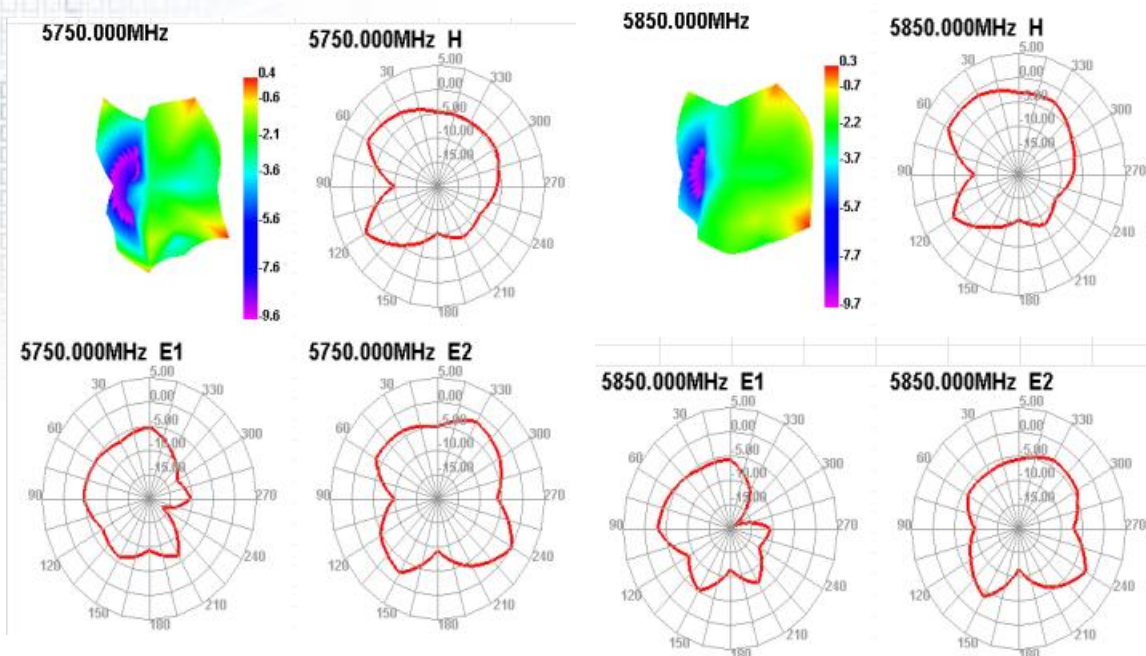




Gain & Efficiency

顺达成科技

Passive Test For 5.8G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	27.42	-5.62	-0.63	-2.78	13.3	14.118	-0.63	-17.21	4.99	30	58.6	58.01
5250	29.45	-5.31	0.74	-1.41	13.768	15.684	0.74	-20.76	6.05	30	58.53	57.74
5350	34.99	-4.56	1.99	-0.16	16.352	18.641	1.99	-18.82	6.55	0	57.99	57.08
5450	38.76	-4.12	2.01	-0.14	19.074	19.689	2.01	-24.15	6.13	0	59.19	57.9
5550	37.35	-4.28	0.24	-1.91	19.119	18.235	0.24	-22.72	4.52	30	60.21	58.81
5650	37.77	-4.23	0.2	-1.95	19.094	18.68	0.2	-14.44	4.43	0	60.31	59.42
5750	34.1	-4.67	0.41	-1.74	16.561	17.54	0.41	-16.61	5.09	150	60.88	60.28
5850	31.02	-5.08	0.33	-1.82	15.983	15.033	0.33	-21.11	5.41	90	61.09	60.41





WIFI 吞吐量

5G

顺达成科技





2.4G





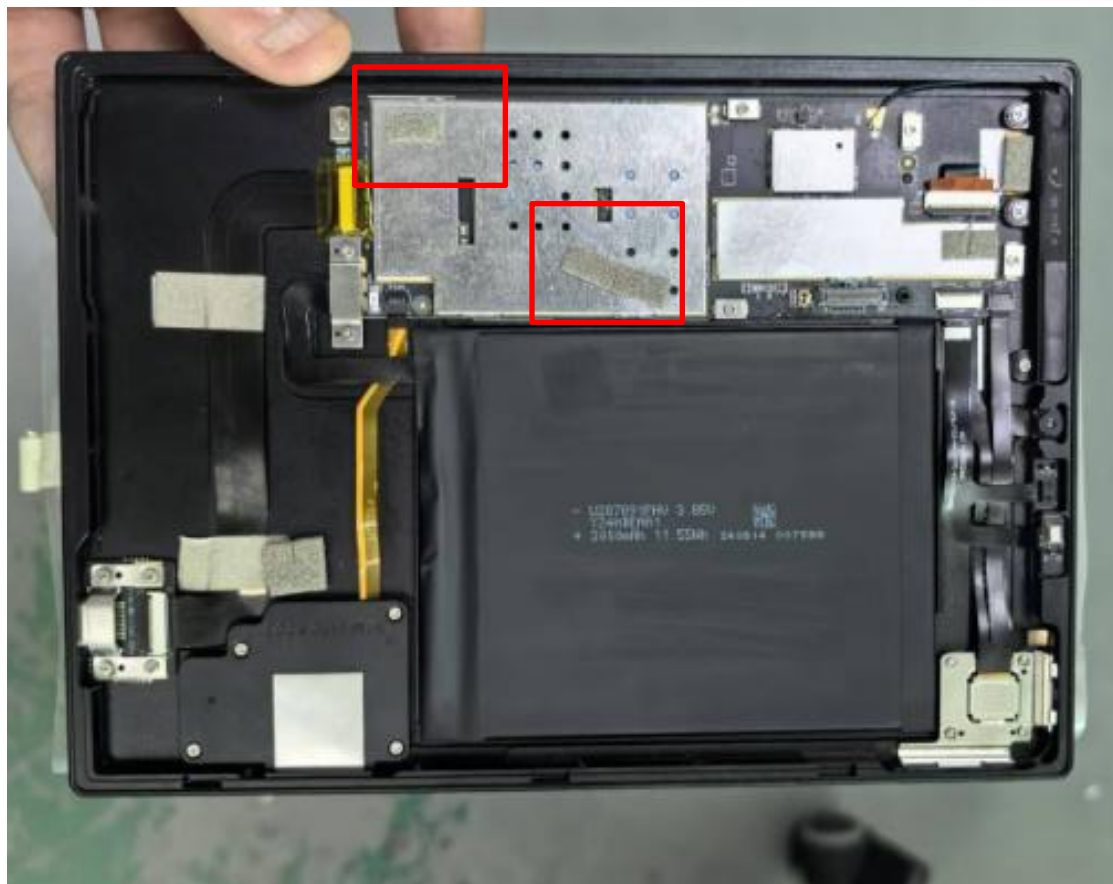
WIFI OTA Data

2.4G	802.11b, (2.4G) 11M		
Channel	CH1	CH6	CH11
TRP	9.63	9.51	9.08
TIS	-75.27	-76.19	-75.16
5.8G	802.11a, (5.8G) 54M		
Channel	CH36	CH60	CH161
TRP	8.6	8.92	9.84
TIS	-67.14	-66.32	-68.5



顺达成科技

Antenna Assembly & environmental processing



主板屏蔽罩上方需要用导电海绵对屏做接地处理。



顺达成科技

Antenna Assembly & environmental processing



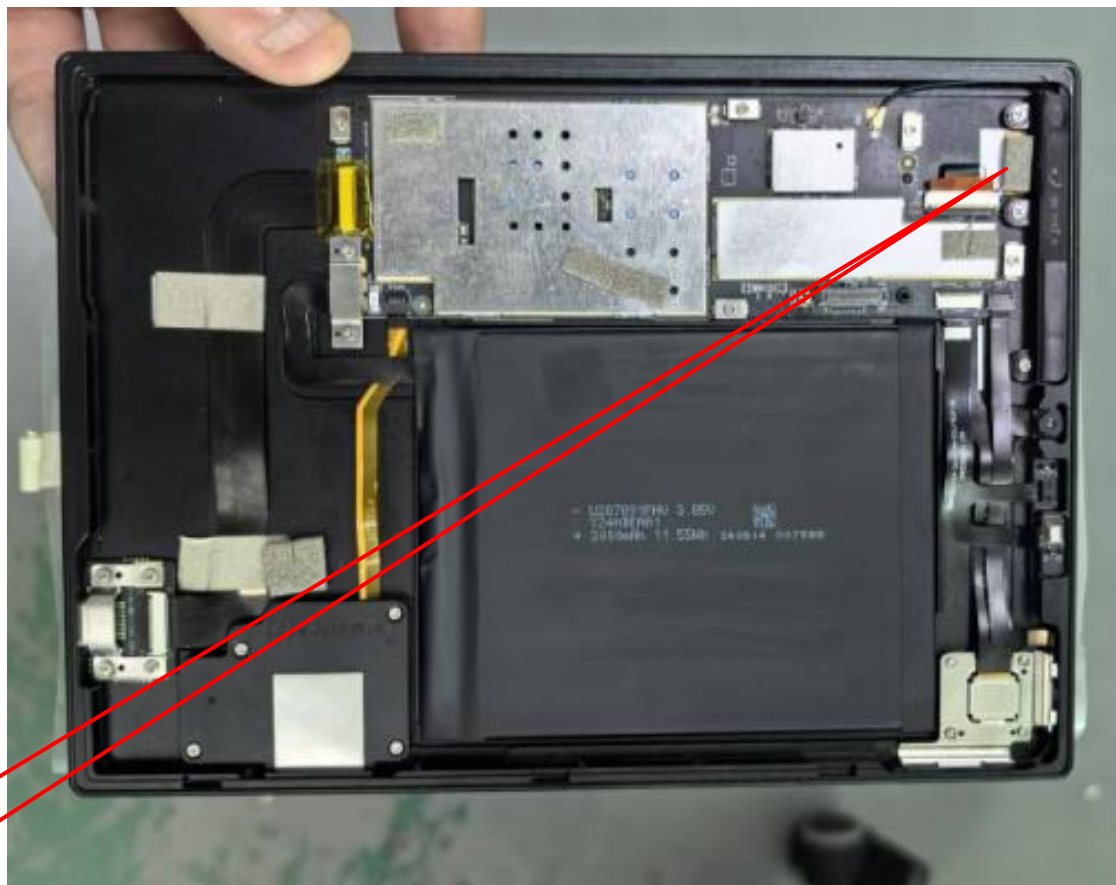
需要用导电布对屏接口做屏蔽处理。



Antenna Assembly & environmental processing

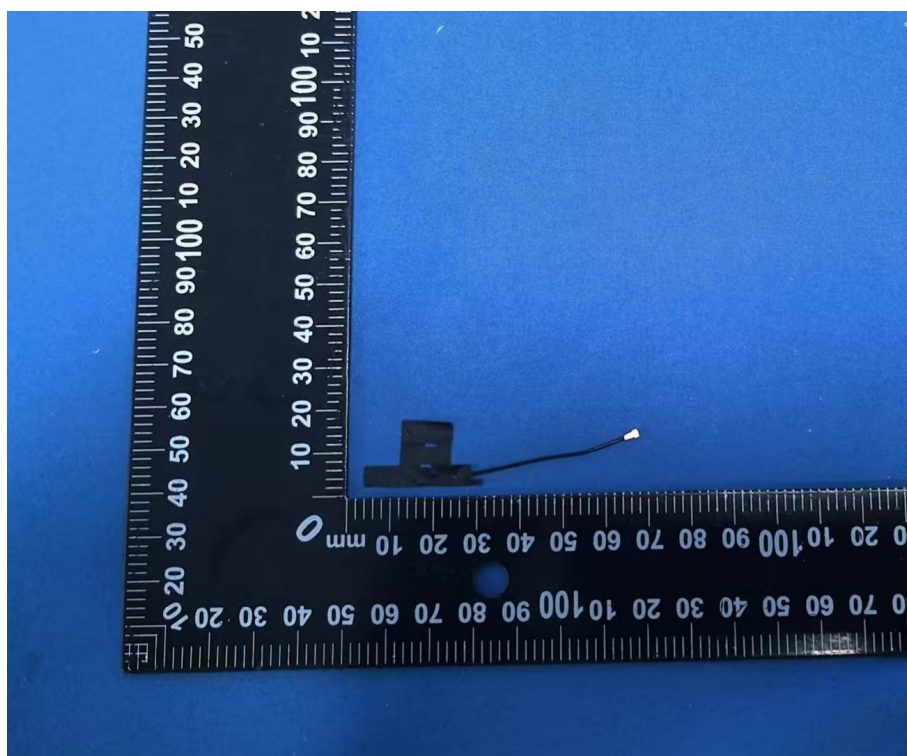
顺达成科技

天线安装位置请参考右图

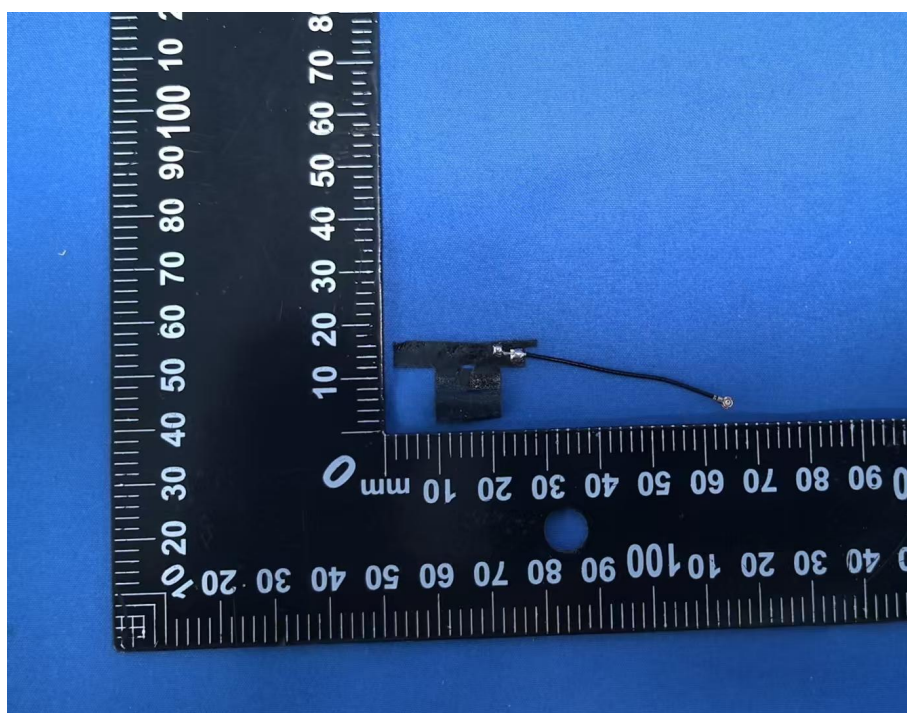


WIFI 天线

天线正面



天线反面





深圳市顺达成科技有限公司

SHUN DA CHENG TECHNOLOGY CO.LTD

顺达成科技

顺达成感谢您的支持

公司地址：深圳市宝安区福永镇重庆路新福工业园B5栋4楼

Company address : Company Address: 4th Floor, Building
B5, Xinfu Industrial Park, Chongqing Road, Fuyong
Town, Bao'an District, Shenzhen