



天线规格

Antenna specifications

TC: 长城

MN: W1741

RF: 刘磊确

MD: 黄清清

MP: 13005478517

Date: 2024. 5. 6
REV : V1. 0



ANTENNA

深圳市星源创科技有限公司

SHENZHEN Xingyuanchuang TECHNOLOGY CO., LTD

测试信息

Test information

WIFI ANT Test information

Frequency

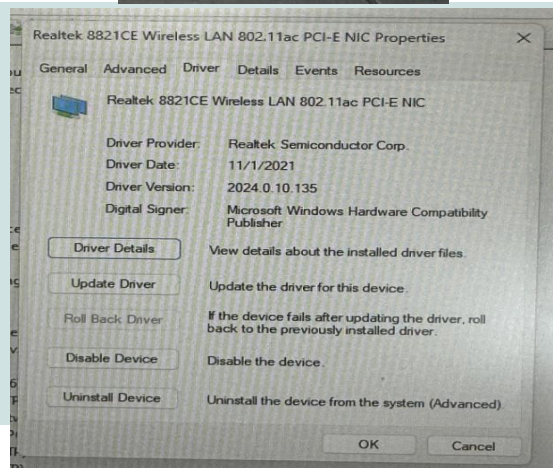
2. 4G (2402~2483) Mhz

5G (5150~5850) Mhz

Module
information



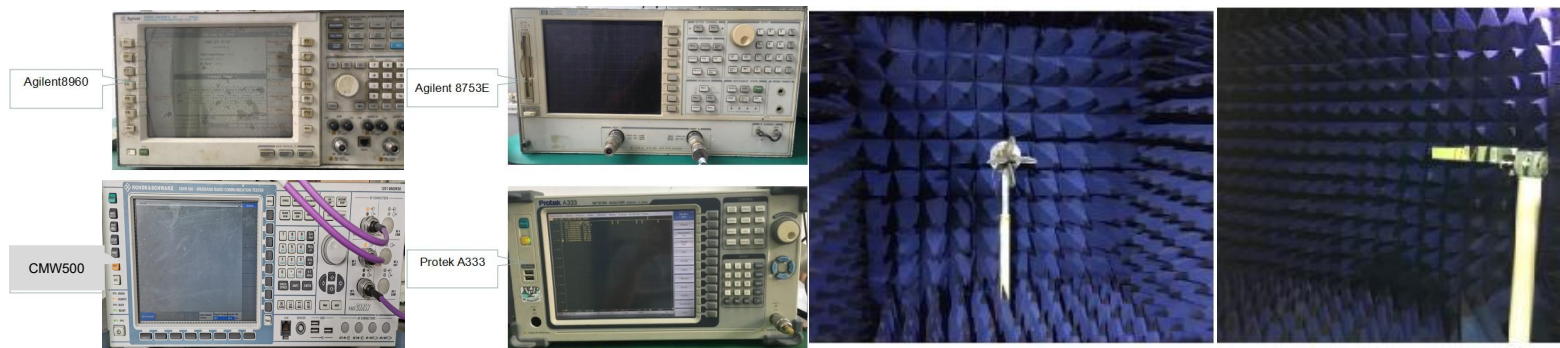
Driver version
information



测试环境

Test environment

	测试项目	测试设备
S参数 (S-parameter)	1. 电压驻波比 (VSWR) 2. 回波损耗 (Rrtun Loss)	网络分析仪: Agilent8753ES
2. 有源测试 (Active)	1. 发射功率 (TRP) 2. 接收灵敏度 (TIS) 3. 屏灭/屏亮	1. 暗室: 5*3*3m (3D) Chamber 2. 综测仪: Agilent8960 CMW500
3. 无源测试 (Passive)	1. 天线增益 (Gain) 2. 天线效率 (Efficiency)	1. 暗室: 5*3*3m (3D) Chamber 2. 网络分析仪: Agilent 8753ES



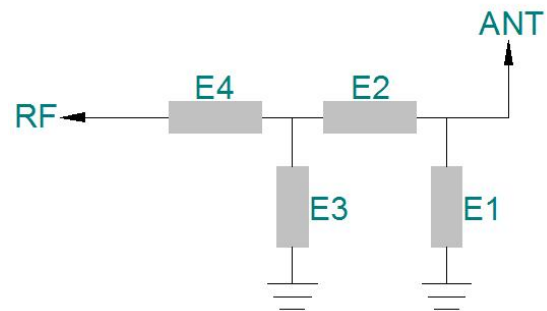


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匹配电路
Matching circuit



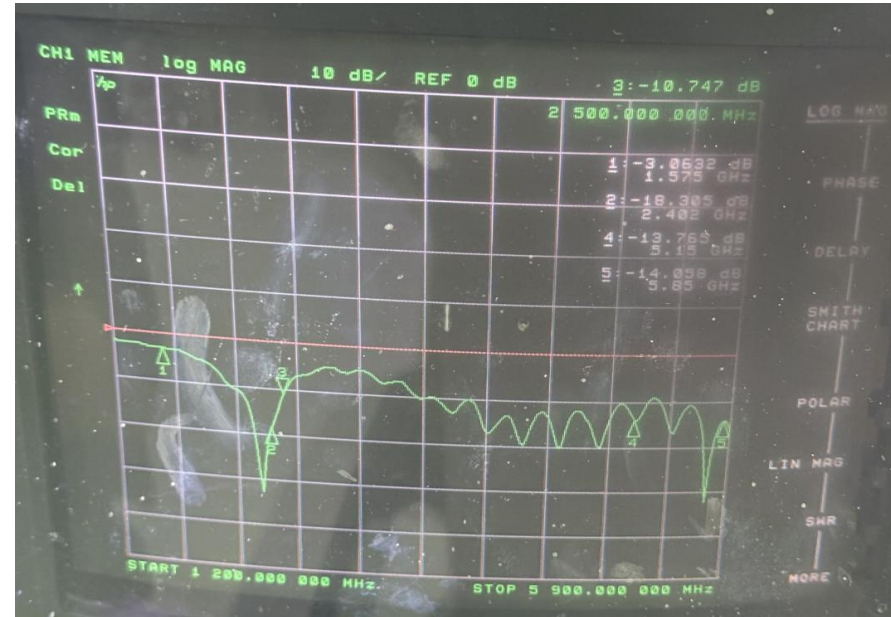
匹配电路原理图&位号图

	电容 (PF)	电感 (NH)
E1(0402)		
E2(0402)		
E3(0402)		
E4(0402)		



无源测试数据 Passive test data

ANT1 S11-VSWR&Return Loss



Frequency (MHZ)	2400	2500	5150	5850
VSWR	1.27	1.82	1.51	1.49
Return Loss (DB)	-18.3	-10.74	-13.76	-14.05



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无源测试数据

Passive test data

ANT1 GAIN&Efficiency-WIFI2.4G/BT

Passive Test For WIFI2.4								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
2400	47.62	-3.22	2.81	0.66	23.722	23.898	2.81	-14.76
2410	45.7	-3.4	2.6	0.45	22.906	22.79	2.6	-14.98
2420	47.92	-3.19	2.79	0.64	24.302	23.617	2.79	-16.12
2430	46.7	-3.31	2.52	0.37	24.188	22.507	2.52	-16.68
2440	46.26	-3.35	2.27	0.12	24.353	21.91	2.27	-16.64
2450	47.47	-3.24	2.33	0.18	25.179	22.291	2.33	-14.85
2460	48.64	-3.13	2.46	0.31	25.815	22.82	2.46	-13.51
2470	45.26	-3.44	1.84	-0.31	24.334	20.928	1.84	-13.15
2480	46.03	-3.37	1.51	-0.64	25.041	20.988	1.51	-12.31
2490	50.52	-2.97	1.93	-0.22	27.246	23.27	1.93	-11.28
2500	44.97	-3.47	1.47	-0.68	24.132	20.836	1.47	-11.35



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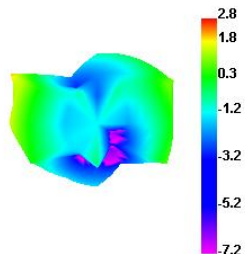
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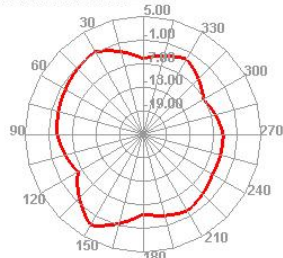
无源测试数据
Passive test data

ANT1 Direction of figure(2.4/BT)

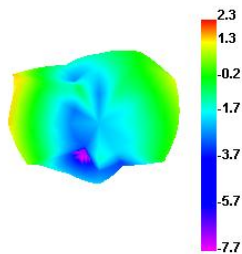
2400.000MHz



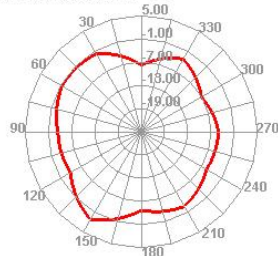
2400.000MHz H



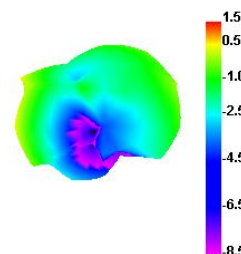
2450.000MHz



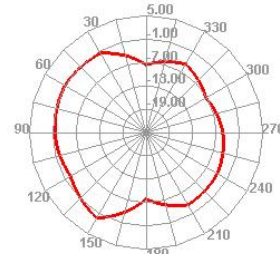
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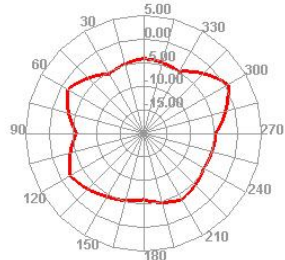
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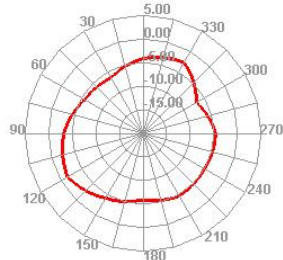
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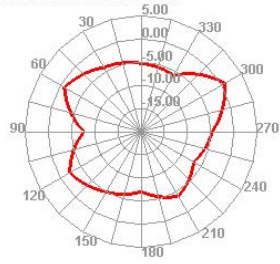
2400.000MHz E1



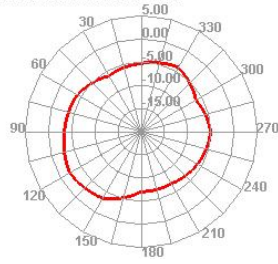
2400.000MHz E2



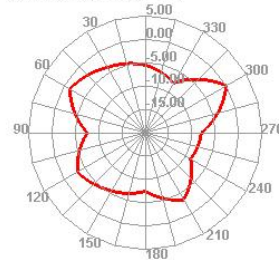
2450.000MHz E1



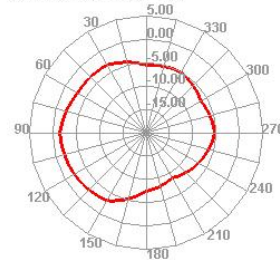
2450.000MHz E2



2500.000MHz E1



2500.000MHz E2





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无源测试数据
Passive test data

ANT1 GAIN&Efficiency-WIFI 5G

Passive Test For WIFI5G								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)
5150	30.39	-5.17	-1	-3.15	16.987	13.401	-1	-18.55
5170	29.03	-5.37	-0.72	-2.87	15.963	13.065	-0.72	-19.71
5190	29.95	-5.24	-0.27	-2.42	16.349	13.606	-0.27	-18.25
5210	30.65	-5.14	-0.27	-2.42	16.609	14.043	-0.27	-16.62
5230	28.86	-5.4	-0.79	-2.94	15.454	13.405	-0.79	-15.88
5250	31.49	-5.02	-0.5	-2.65	16.696	14.792	-0.5	-16.96
5270	30.8	-5.11	-0.54	-2.69	16.409	14.392	-0.54	-18.78
5290	34.61	-4.61	-0.32	-2.47	18.532	16.074	-0.32	-17.21
5310	31.3	-5.04	-0.87	-3.02	16.585	14.711	-0.87	-16.38
5330	31.49	-5.02	-0.43	-2.58	16.626	14.859	-0.43	-13.94
5350	31.31	-5.04	0.2	-1.95	16.742	14.564	0.2	-15.28
5370	31.81	-4.97	0.78	-1.37	17.117	14.692	0.78	-16.81
5390	29.34	-5.33	0.5	-1.65	15.746	13.591	0.5	-15.88
5410	35.14	-4.54	1.45	-0.7	19.026	16.117	1.45	-14.25
5430	30.15	-5.21	1.14	-1.01	16.753	13.399	1.14	-15.06
5450	36.17	-4.42	2.11	-0.04	20.272	15.896	2.11	-15.54
5470	33.58	-4.74	1.7	-0.45	18.676	14.901	1.7	-15.59
5490	34.98	-4.56	1.75	-0.4	19.466	15.513	1.75	-13.22
5510	35.13	-4.54	2.04	-0.11	19.904	15.223	2.04	-15.5
5530	39.17	-4.07	2.59	0.44	22.351	16.822	2.59	-14.68
5550	41.8	-3.79	2.61	0.46	23.635	18.164	2.61	-14.86
5570	42.99	-3.67	2.5	0.35	23.877	19.112	2.5	-17.25
5590	42.92	-3.67	2.51	0.36	23.949	18.973	2.51	-19.75
5610	43.32	-3.63	2.54	0.39	24.453	18.87	2.54	-15.77
5630	41.4	-3.83	2.02	-0.13	23.24	18.161	2.02	-14.04
5650	41.89	-3.78	1.22	-0.93	23.334	18.558	1.22	-17.04
5670	40.25	-3.95	0.73	-1.42	22.595	17.653	0.73	-22.29
5690	41.62	-3.81	0.37	-1.78	23.962	17.653	0.37	-17.39
5710	40.07	-3.97	0.04	-2.11	23.718	16.353	0.04	-16.74
5730	42.52	-3.71	0.32	-1.83	25.522	16.996	0.32	-17.22
5750	37.78	-4.23	-0.24	-2.39	22.827	14.948	-0.24	-18.08
5770	40.73	-3.9	0.24	-1.91	24.656	16.069	0.24	-19.4
5790	37.51	-4.26	-0.24	-2.39	22.972	14.54	-0.24	-21.28
5810	39.45	-4.04	0.02	-2.13	24.417	15.037	0.02	-19.6
5830	39.32	-4.05	0.32	-1.83	24.387	14.934	0.32	-17.72
5850	42.62	-3.7	0.8	-1.35	26.571	16.045	0.8	-16.62



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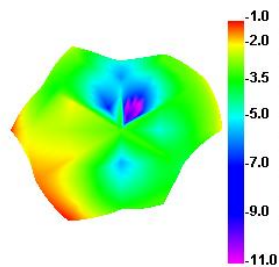
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无源测试数据

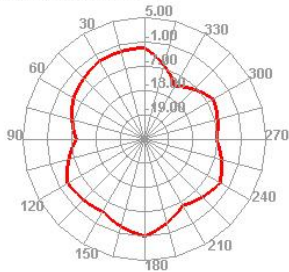
Passive test data

ANT1 Direction of figure(5G)

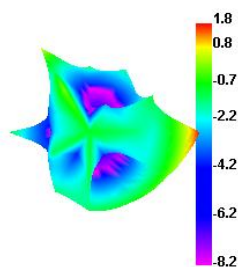
5150.000MHz



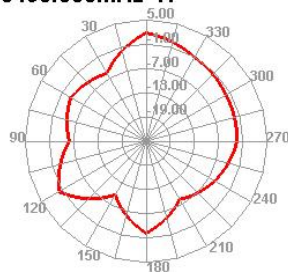
5150.000MHz H



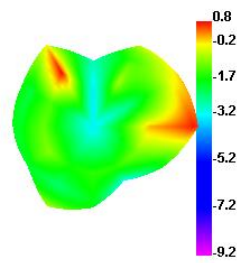
5490.000MHz



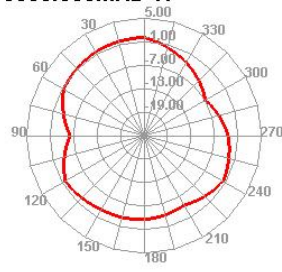
5490.000MHz H



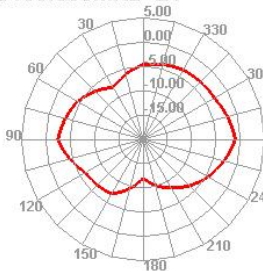
5850.000MHz



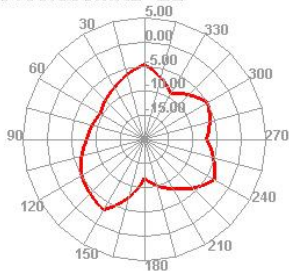
5850.000MHz H



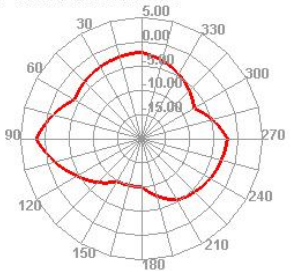
5150.000MHz E1



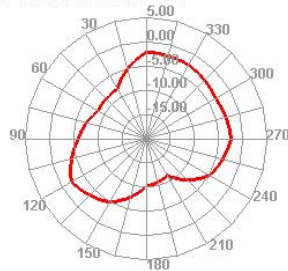
5150.000MHz E2



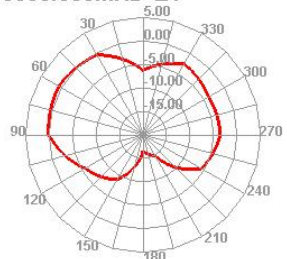
5490.000MHz E1



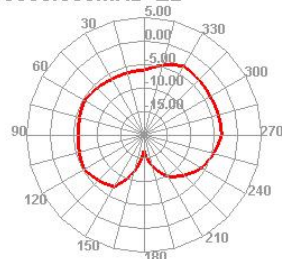
5490.000MHz E2



5850.000MHz E1



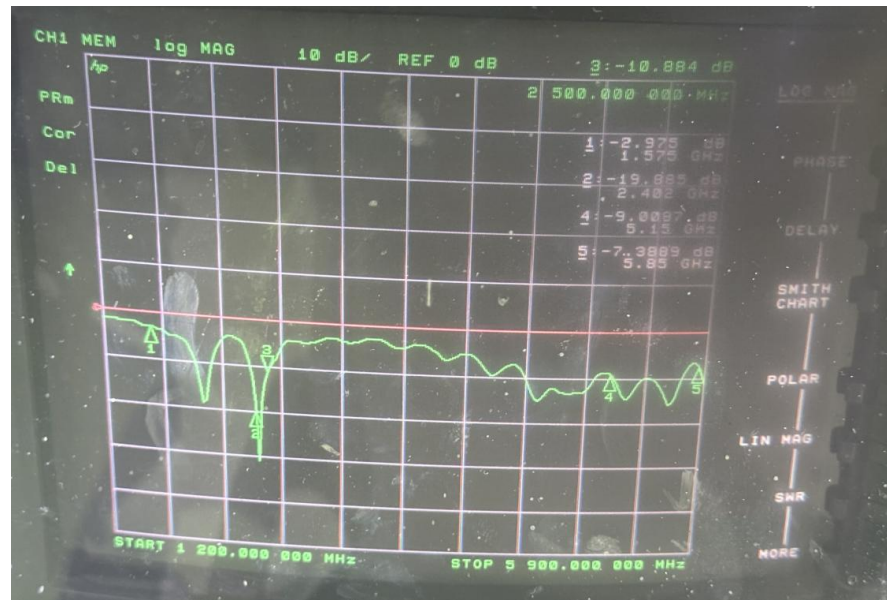
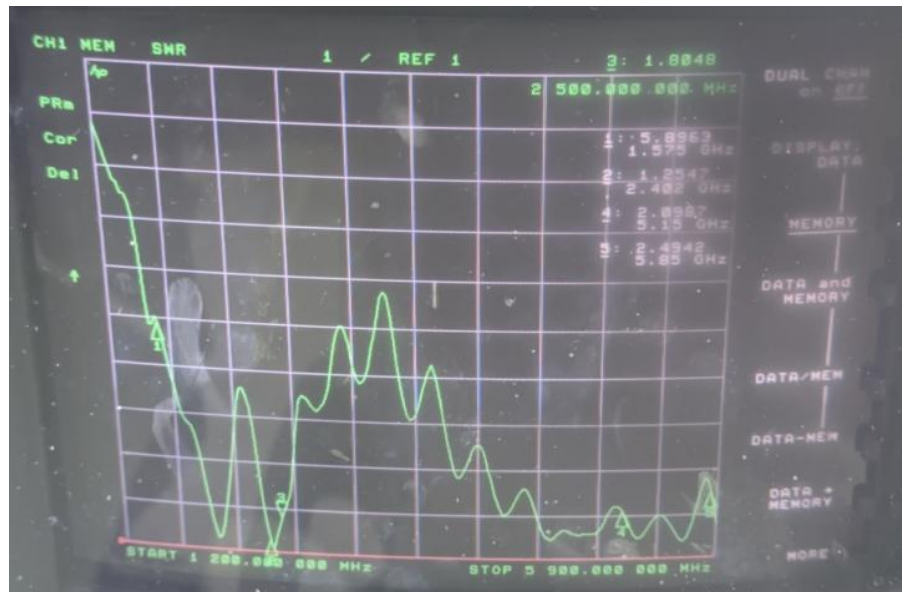
5850.000MHz E2





无源测试数据 Passive test data

ANT2 S11-VSWR&Return Loss



Frequency (MHZ)	2400	2500	5150	5850
VSWR	1.23	1.8	2.09	2.49
Return Loss (DB)	-19.88	-10.88	-9	-7.38



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无源测试数据
Passive test data

ANT2 GAIN&Efficiency-WIFI2.4G/BT

Passive Test For WIFI2.4								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)
2400	35.96	-4.44	1.84	-0.31	16.579	19.386	1.84	-14.25
2410	36.44	-4.38	2.12	-0.03	16.993	19.445	2.12	-13.84
2420	37.26	-4.29	2.09	-0.06	17.43	19.825	2.09	-13.23
2430	37.19	-4.3	2.01	-0.14	17.349	19.846	2.01	-14.11
2440	40.99	-3.87	2.05	-0.1	19.092	21.901	2.05	-15.24
2450	42.57	-3.71	1.79	-0.36	19.942	22.626	1.79	-16.64
2460	40.33	-3.94	1.27	-0.88	19.294	21.034	1.27	-16.92
2470	40.55	-3.92	0.75	-1.4	19.712	20.841	0.75	-16.35
2480	43.27	-3.64	0.57	-1.58	21.404	21.869	0.57	-15.33
2490	46.84	-3.29	0.69	-1.46	23.392	23.446	0.69	-14.06
2500	40.83	-3.89	-0.03	-2.18	20.536	20.298	-0.03	-14.48



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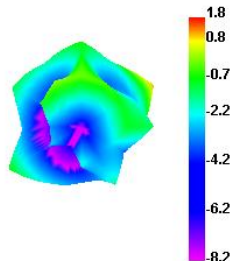
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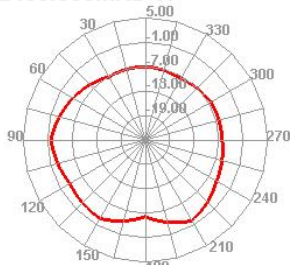
无源测试数据
Passive test data

ANT2 Direction of figure(2.4/BT)

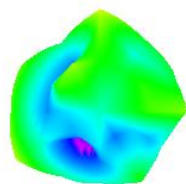
2400.000MHz



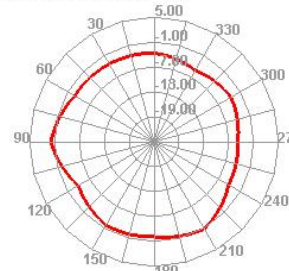
2400.000MHz H



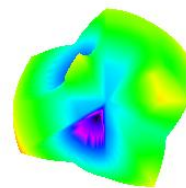
2450.000MHz



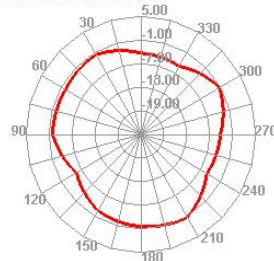
2450.000MHz H



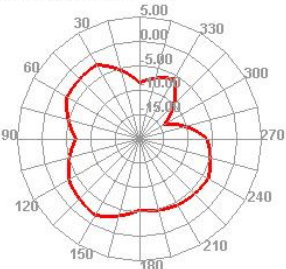
2500.000MHz



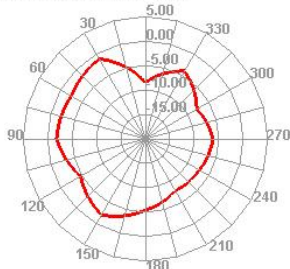
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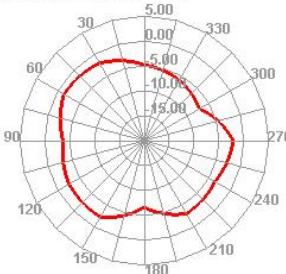
2400.000MHz E1



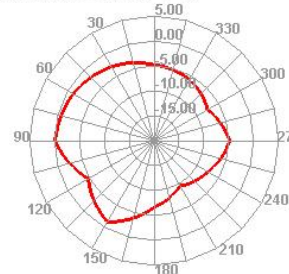
2400.000MHz E2



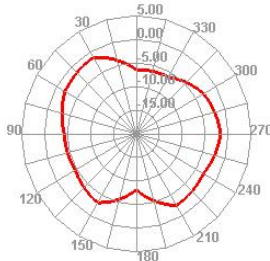
2450.000MHz E1



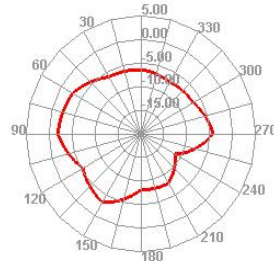
2450.000MHz E2



2500.000MHz E1



2500.000MHz E2





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无源测试数据

Passive test data

ANT2 GAIN&Efficiency-WIFI 5G

Passive Test For WIFI5G								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dEd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
5150	25.55	-5.93	-1.39	-3.54	14.135	11.411	-1.39	-18.26
5170	23.23	-6.34	-1.79	-3.94	13.029	10.203	-1.79	-16.64
5190	27.52	-5.6	-1.08	-3.23	15.261	12.259	-1.08	-15
5210	27.87	-5.55	-1.31	-3.46	15.179	12.694	-1.31	-16.65
5230	30.64	-5.14	-1.05	-3.2	16.58	14.056	-1.05	-17.82
5250	31.77	-4.98	-0.81	-2.96	17.443	14.324	-0.81	-16.37
5270	36.1	-4.43	0.1	-2.05	19.761	16.337	0.1	-15.54
5290	35.13	-4.54	0.54	-1.61	19.011	16.121	0.54	-16.83
5310	34.36	-4.64	0.7	-1.45	18.398	15.964	0.7	-18.11
5330	33.96	-4.69	0.72	-1.43	18.328	15.632	0.72	-16.6
5350	36.4	-4.39	1.52	-0.63	19.39	17.008	1.52	-14.99
5370	33.72	-4.72	1.6	-0.55	17.534	16.188	1.6	-15.41
5390	32.19	-4.92	1.44	-0.71	16.507	15.686	1.44	-15.15
5410	35.25	-4.53	1.7	-0.45	18.059	17.189	1.7	-14.28
5430	37	-4.32	1.86	-0.29	18.991	18.013	1.86	-14.72
5450	36.44	-4.38	1.98	-0.17	18.326	18.118	1.98	-14.87
5470	38.26	-4.17	2.21	0.06	18.996	19.266	2.21	-18.41
5490	34.99	-4.56	1.6	-0.55	17.323	17.669	1.6	-16.07
5510	38.15	-4.19	1.8	-0.35	18.965	19.184	1.8	-13.36
5530	38.02	-4.2	1.54	-0.61	18.623	19.395	1.54	-12.99
5550	44.3	-3.54	2.1	-0.05	21.364	22.932	2.1	-11.88
5570	41.27	-3.84	1.55	-0.6	20.274	20.992	1.55	-13.04
5590	42.63	-3.7	1.59	-0.56	21.51	21.124	1.59	-12.53
5610	38.28	-4.17	1.06	-1.09	19.271	19.013	1.06	-12.6
5630	41.99	-3.77	1.78	-0.37	20.269	21.72	1.78	-11.33
5650	37.33	-4.28	1.22	-0.93	17.864	19.469	1.22	-13.44
5670	41.35	-3.84	1.78	-0.37	19.764	21.581	1.78	-15.23
5690	35.79	-4.46	0.81	-1.34	17.264	18.531	0.81	-14.73
5710	38.56	-4.14	0.84	-1.31	18.037	20.521	0.84	-16.06
5730	38.97	-4.09	0.62	-1.53	18.471	20.499	0.62	-17.83
5750	35.77	-4.46	0.39	-1.76	17.23	18.54	0.39	-15.65
5770	37.02	-4.32	0.81	-1.34	18.196	18.822	0.81	-15.53
5790	34.23	-4.66	0.6	-1.55	17.026	17.207	0.6	-16.93
5810	35.09	-4.55	0.42	-1.73	17.64	17.454	0.42	-16.15
5830	35.36	-4.51	0.18	-1.97	17.945	17.414	0.18	-14.39
5850	36.6	-4.37	0.4	-1.75	18.508	18.089	0.4	-17.01



ANTENNA

深圳市星源创科技有限公司

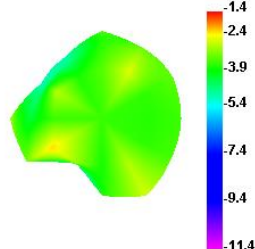
SHENZHEN Xingyuanchuang TECHNOLOGY CO., LTD

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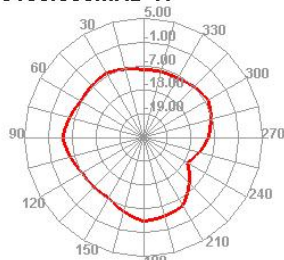
Passive test data

ANT2 Direction of figure(5G)

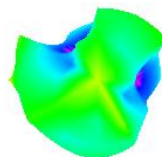
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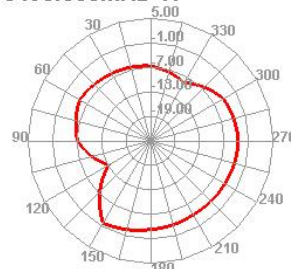
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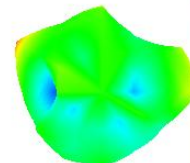
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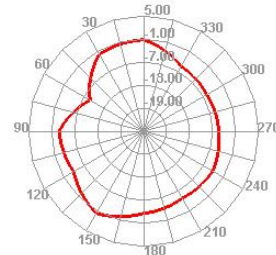
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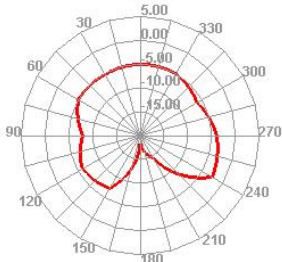
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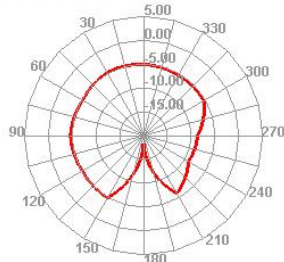
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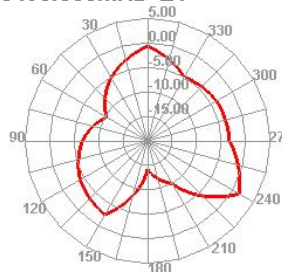
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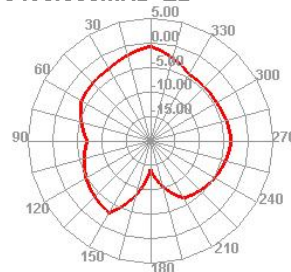
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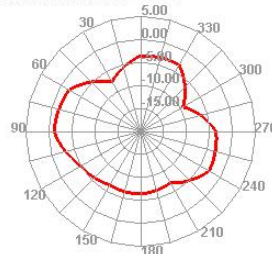
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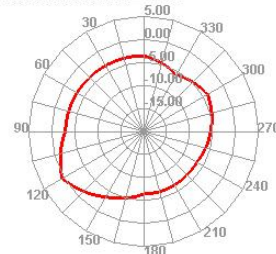
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5850.000MHz E1



5850.000MHz E2



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