深圳市星源创科技有限公司
SHENZHEN Xingyuanchuang TECHNOLOGY CO.,LTD

天线测试报告

Antenna Test Report

antenna type：PIFA
antenna model：1.0
size：47*11MM

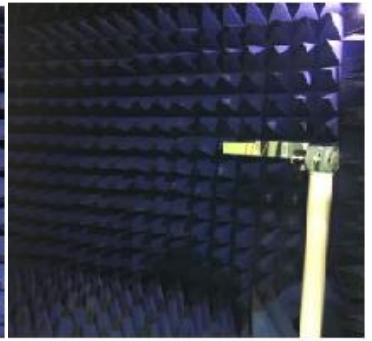
Date：2022.08.29.
REV :V1.0

测试信息
Test information

	Antenna band		Antenna state	Antenna form	Matchc hanges	Note
Main ANT	2G					
	3G				NO	
	4G					
AUX ANT	BT/WIFI	2.4/5G		PIFA	NO	
	GPS	1.575G			NO	
	DIV				NO	

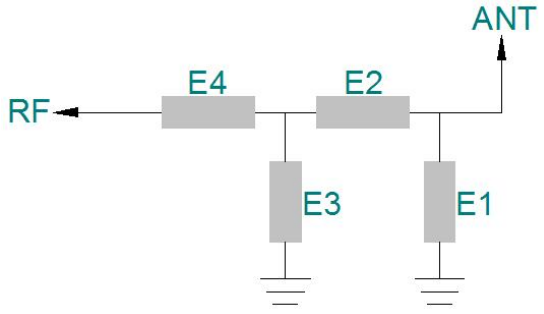
测试环境
Test environment

	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.The screen is off/on	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



天线位置
Antenna position

匹配电路
Matching circuit



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

Matching circuit schematic & bit number diagram

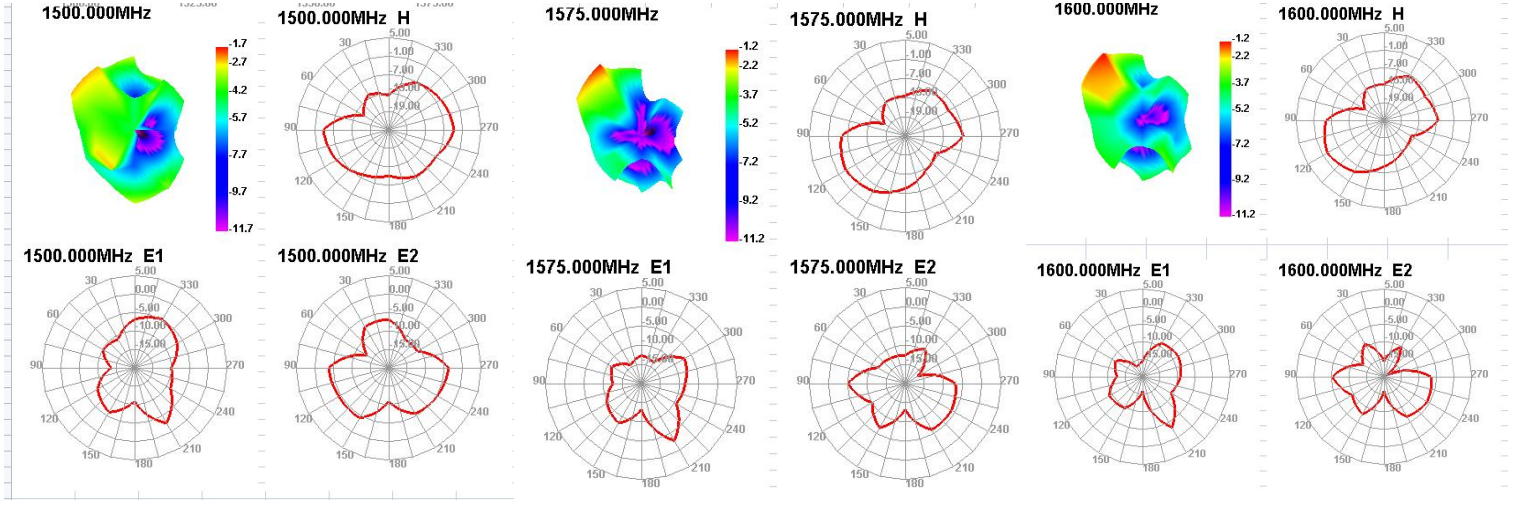
无源测试数据
Passive test data

ANT1 GAIN&Efficiency-GPS

Passive Test For GPS						
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)
1500	22.99	-6.38	-1.7	-3.85	10.702	12.288
1505	23.54	-6.28	-1.66	-3.81	10.944	12.596
1510	24.25	-6.15	-1.44	-3.59	11.247	13
1515	23.92	-6.21	-1.48	-3.63	11.116	12.804
1520	23.05	-6.37	-1.39	-3.54	10.688	12.358
1525	22.74	-6.43	-1.15	-3.3	10.551	12.191
1530	22.14	-6.55	-1.06	-3.21	10.291	11.846
1535	21.32	-6.71	-0.99	-3.14	9.93	11.387
1540	21.39	-6.7	-0.85	-3	9.944	11.443
1545	21.86	-6.6	-0.66	-2.81	10.2	11.663
1550	21.68	-6.64	-0.51	-2.66	10.305	11.377
1555	21.35	-6.71	-0.5	-2.65	10.264	11.083
1560	21.23	-6.73	-0.49	-2.64	10.364	10.863
1565	19.75	-7.05	-0.74	-2.89	9.833	9.912
1570	18.14	-7.41	-1.1	-3.25	9.166	8.973
1575	17.93	-7.46	-1.18	-3.33	9.143	8.792
1580	18.22	-7.39	-1.12	-3.27	9.333	8.888
1585	18.41	-7.35	-1.07	-3.22	9.486	8.92
1590	18.89	-7.24	-0.97	-3.12	9.712	9.174
1595	19.37	-7.13	-0.95	-3.1	10.013	9.356
1600	18.55	-7.32	-1.2	-3.35	9.622	8.928

无源测试数据
Passive test data

ANT1 Direction of figure(GPS)



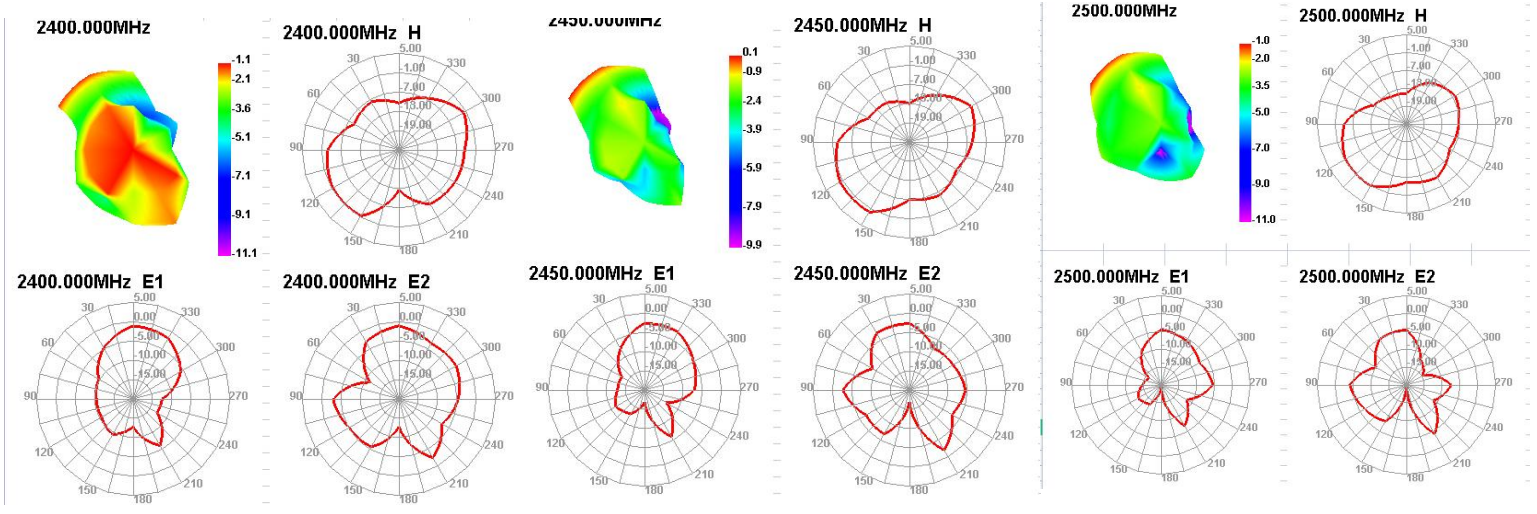
无源测试数据
Passive test data

ANT1 GAIN&Efficiency-WIFI2.4G

Passive Test For WIFI2.4						
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)
2400	29.97	-5.23	-1.13	-3.28	18.022	11.951
2410	27.53	-5.6	-1.15	-3.3	16.475	11.059
2420	25.6	-5.92	-0.95	-3.1	15.395	10.201
2430	25.52	-5.93	-0.55	-2.7	15.332	10.188
2440	28.17	-5.5	0.19	-1.96	16.673	11.5
2450	26.31	-5.8	0.12	-2.03	15.238	11.071
2460	21.17	-6.74	-0.71	-2.86	12.082	9.092
2470	23.07	-6.37	-0.27	-2.42	12.823	10.245
2480	24.3	-6.14	0.12	-2.03	13.138	11.164
2490	23.85	-6.23	0.21	-1.94	12.525	11.32
2500	18.46	-7.34	-1.02	-3.17	9.753	8.709

无源测试数据
Passive test data

ANT1 Direction of figure(2.4G)



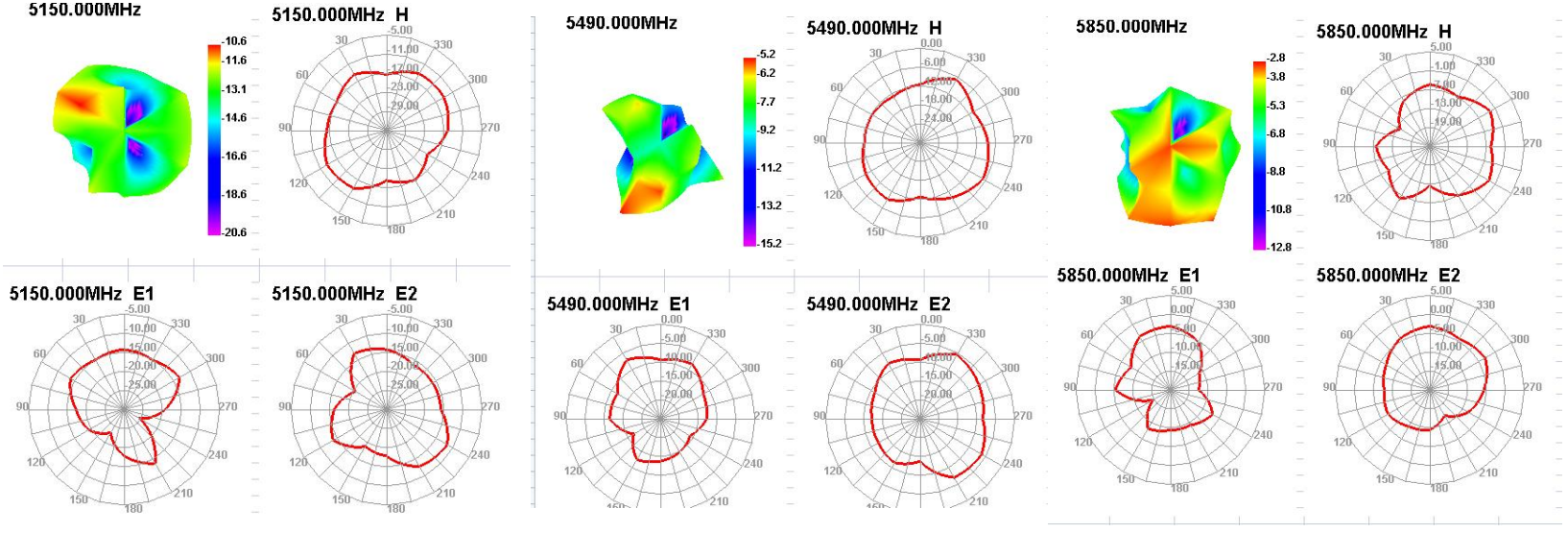
无源测试数据
Passive test data

ANT1 GAIN&Efficiency-WIFI5G

Passive Test For WIFI5G						
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)
5150	12.96	-8.87	-10.58	-12.73	6.511	6.444
5170	13.31	-8.76	-9.36	-11.51	6.744	6.563
5190	13.33	-8.75	-9.22	-11.37	6.838	6.491
5210	13.91	-8.57	-8.19	-10.34	6.874	6.734
5230	14.25	-8.46	-7.72	-9.87	7.422	6.83
5250	14.78	-8.30	-7.14	-9.29	7.726	7.052
5270	14.98	-8.24	-6.85	-9	7.932	7.043
5290	16.21	-7.90	-5.84	-7.99	7.68	8.53
5310	16.52	-7.82	-5.87	-8.02	8.885	7.635
5330	17.7	-7.52	-5.52	-7.67	9.31	8.466
5350	18.31	-7.37	-5.41	-7.56	8.869	9.44
5370	18.88	-7.24	-4.99	-7.14	9.238	9.645
5390	18.58	-7.31	-5.35	-7.5	9.015	9.568
5410	21.18	-6.74	-4.66	-6.81	10.579	10.602
5430	20.55	-6.87	-5.01	-7.16	10.142	10.41
5450	20.83	-6.81	-4.96	-7.11	10.445	10.388
5470	20.25	-6.94	-5.36	-7.51	10.049	10.197
5490	20.6	-6.86	-5.19	-7.34	10.402	10.198
5510	20.85	-6.81	-4.51	-6.66	10.522	10.325
5530	21.44	-6.69	-4.06	-6.21	10.978	10.459
5550	22.78	-6.42	-3.73	-5.88	11.843	10.939
5570	21.38	-6.70	-4.13	-6.28	11.036	10.344
5590	23.84	-6.23	-3.23	-5.38	11.595	12.249
5610	22.25	-6.53	-3.81	-5.96	10.603	11.646
5630	26.08	-5.84	-2.96	-5.11	13.012	13.065
5650	22.64	-6.45	-4.08	-6.23	11.874	10.764
5670	25.79	-5.89	-3.12	-5.27	12.916	12.876
5690	23.28	-6.33	-3.9	-6.05	11.252	12.023
5710	25.94	-5.86	-3.14	-5.29	13.855	12.083
5730	26.45	-5.78	-3.11	-5.26	13.163	13.29
5750	25.23	-5.98	-3.67	-5.82	12.394	12.837
5770	26.38	-5.79	-3.29	-5.44	13.107	13.269
5790	25.6	-5.92	-3.42	-5.57	12.537	13.064
5810	26.95	-5.69	-2.82	-4.97	13.98	15.971
5830	26.7	-5.73	-2.88	-5.03	16.469	16.235
5850	25.44	-5.94	-2.82	-4.97	13.422	12.021

无源测试数据
Passive test data

ANT1 Direction of figure(5G)



BT天线实测 BT
Antenna test

Test environment: Corridor access

Test tool: Bluetooth speaker

Test distance: 10M(smooth music without stalling)

Wifi天线实测
Wifi Antenna test

Test environment: Open space

Analytical Assistant: Wifi
Analytical Assistant Distance: 10m

Signal strength: 2.4G: -53dbm
5G: -60dbm test results are shown in the right figure

环境处理

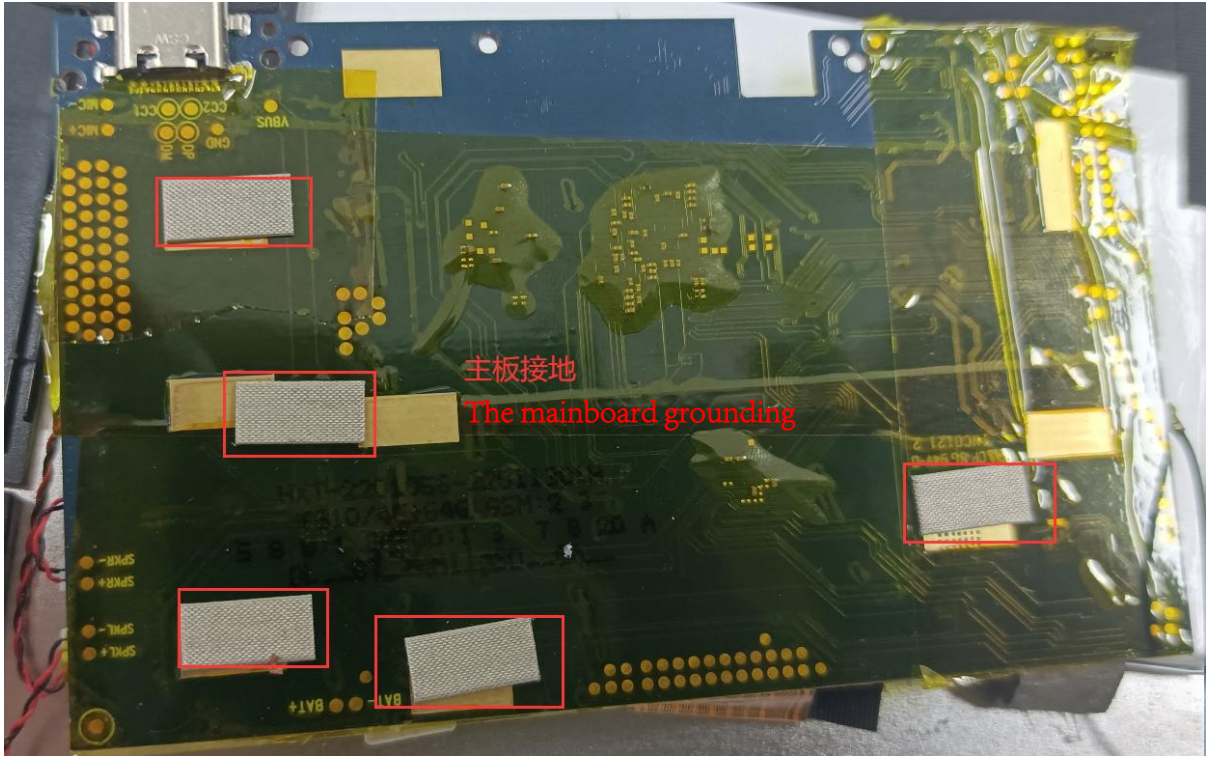
Environmental treatment

环境处理

Environmental treatment

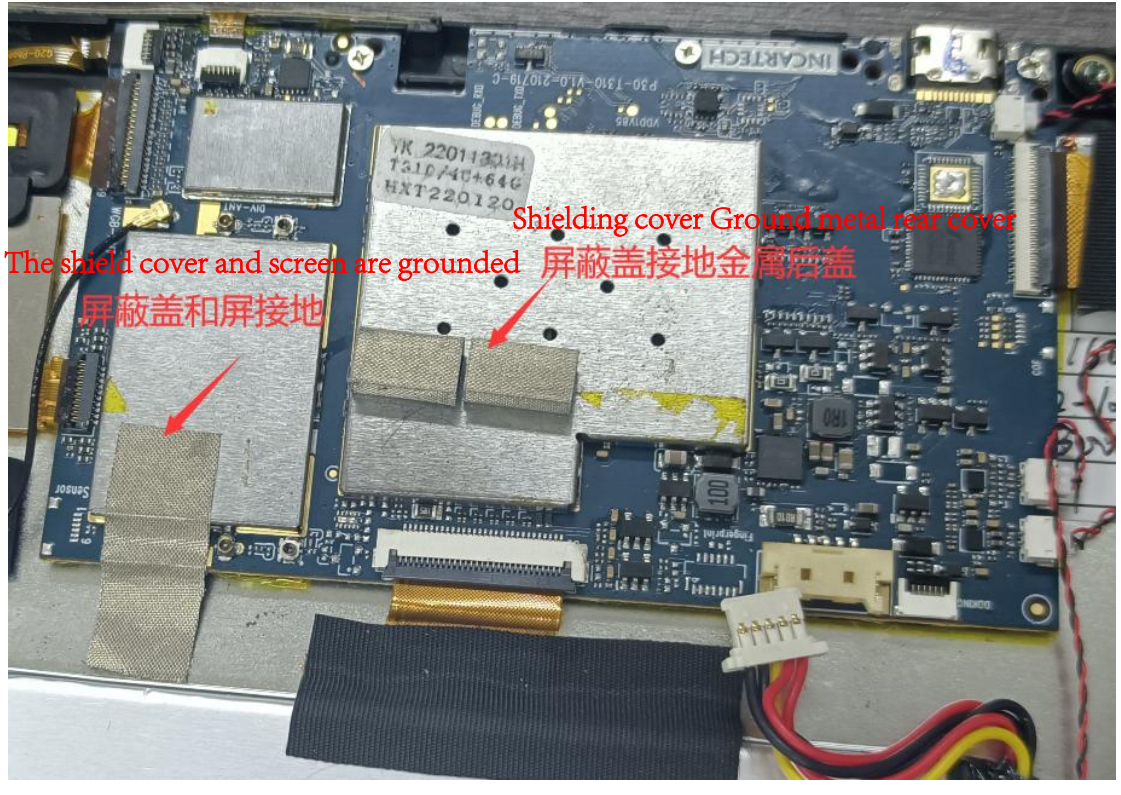
环境处理

Environmental treatment



环境处理

Environmental treatment



附加说明
Additional instructions

01

Whether the antenna matching circuit is changed in the report and whether the environmental processing related to the antenna is increased will directly

02

If your company has the latest trial production or updated products (such as software, ESD, materials, etc.), please provide them to our company for verification as soon as possible to confirm whether the antenna performance is affected by changes.

03

If your company needs to send the third party inspection institution for retest or customer test, please make sure to conduct antenna related test and confirm with our company first. Due to the consistency of motherboard • assembly, the difference of antenna assembly and other factors, the deviation of antenna parameters may be caused.

ENDING