



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

TC: 海途乐

MN: PK81A-W

RF: 刘磊确

MD: 黄清清

MP: 13005478517

Date: 2023. 1. 6

REV :V1. 0



测试信息

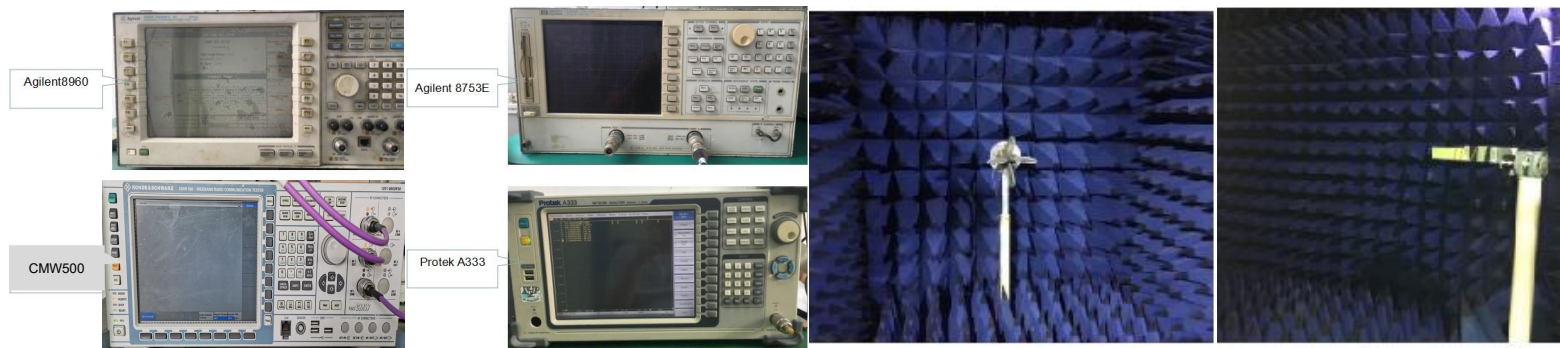
Test information

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



天线位置 Antenna position



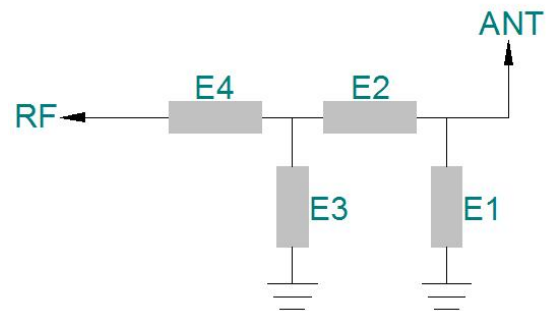


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匹配电路
Matching circuit

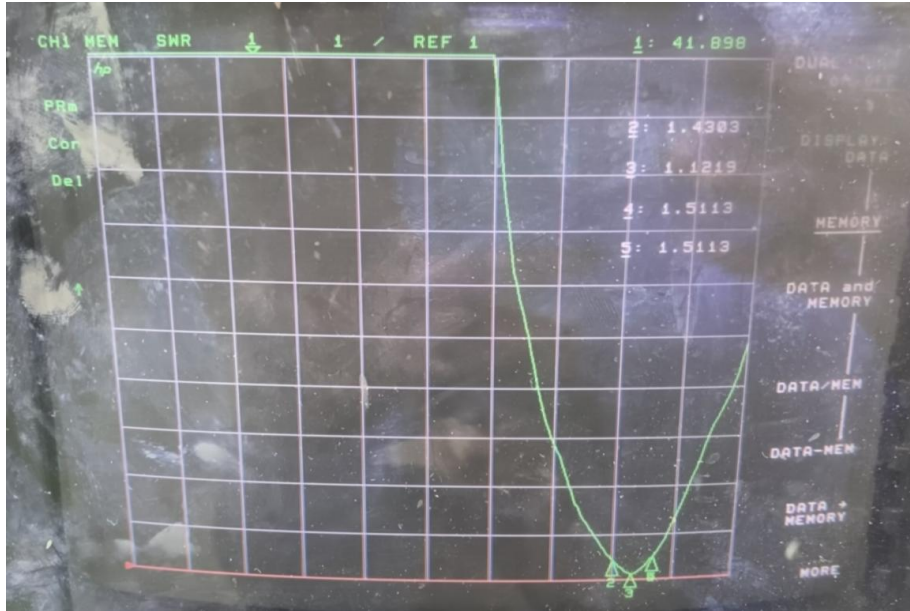


匹配电路原理图&位号图

	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	2450	2483
VSWR	1.43	1.12	1.51
Return Loss (DB)	-15.03	-24.81	-13.84

无源测试数据

Passive test data

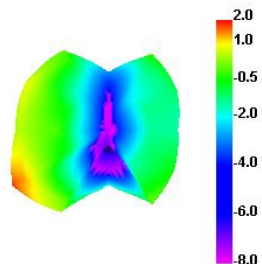
ANT1 GAIN&Efficiency-WIFI2.4G/BT

Passive Test For WIFI2.4								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
2400	63.51	-1.97	1.98	-0.17	28.496	35.014	1.98	-13.82
2410	61.6	-2.1	1.81	-0.34	27.845	33.755	1.81	-13.36
2420	59.89	-2.23	1.64	-0.51	26.988	32.902	1.64	-12.93
2430	57.88	-2.37	1.4	-0.75	25.894	31.99	1.4	-12.94
2440	58.73	-2.31	1.37	-0.78	25.724	33.009	1.37	-12.93
2450	59.77	-2.24	1.48	-0.67	25.599	34.169	1.48	-13.61
2460	60	-2.22	1.56	-0.59	25.166	34.83	1.56	-14.5
2470	59.08	-2.29	1.57	-0.58	24.508	34.569	1.57	-14.96
2480	58.93	-2.3	1.61	-0.54	24.269	34.66	1.61	-14.81
2490	59.76	-2.24	1.68	-0.47	24.697	35.059	1.68	-13.95
2500	56.83	-2.45	1.44	-0.71	23.451	33.382	1.44	-13.36

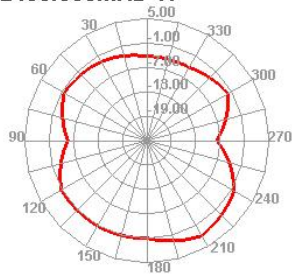
无源测试数据
Passive test data

ANT1 Direction of figure(2.4/BT)

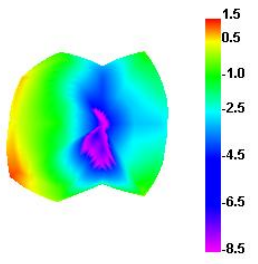
2400.000MHz



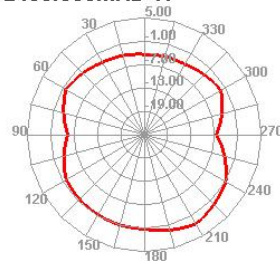
2400.000MHz H



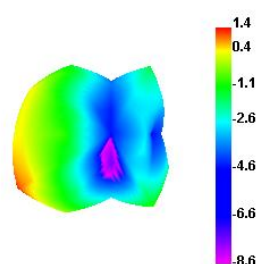
2450.000MHz



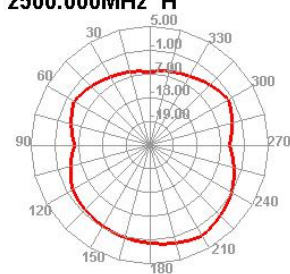
2450.000MHz H



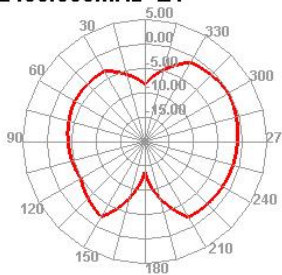
2500.000MHz



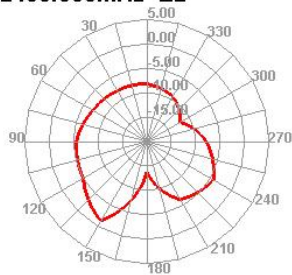
2500.000MHz H



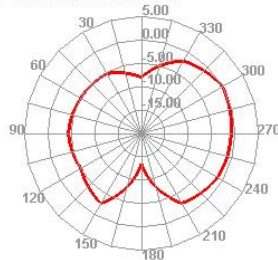
2400.000MHz E1



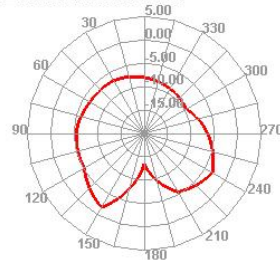
2400.000MHz E2



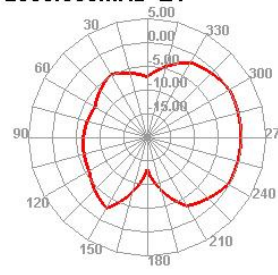
2450.000MHz E1



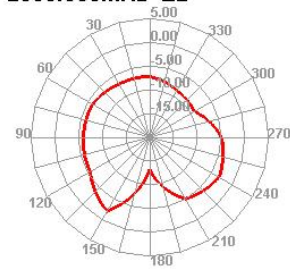
2450.000MHz E2



2500.000MHz E1



2500.000MHz E2





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有源测试数据
Active test data

802.11b	Frequency	TRP		TIS	
	2412	CH1 11Mbps	13.11	CH1 11Mbps	-81.23
	2437	CH6 11Mbps	14.58	CH6 11Mbps	-80.2
	2467	CH11 11Mbps	13.69	CH11 11Mbps	-80.66



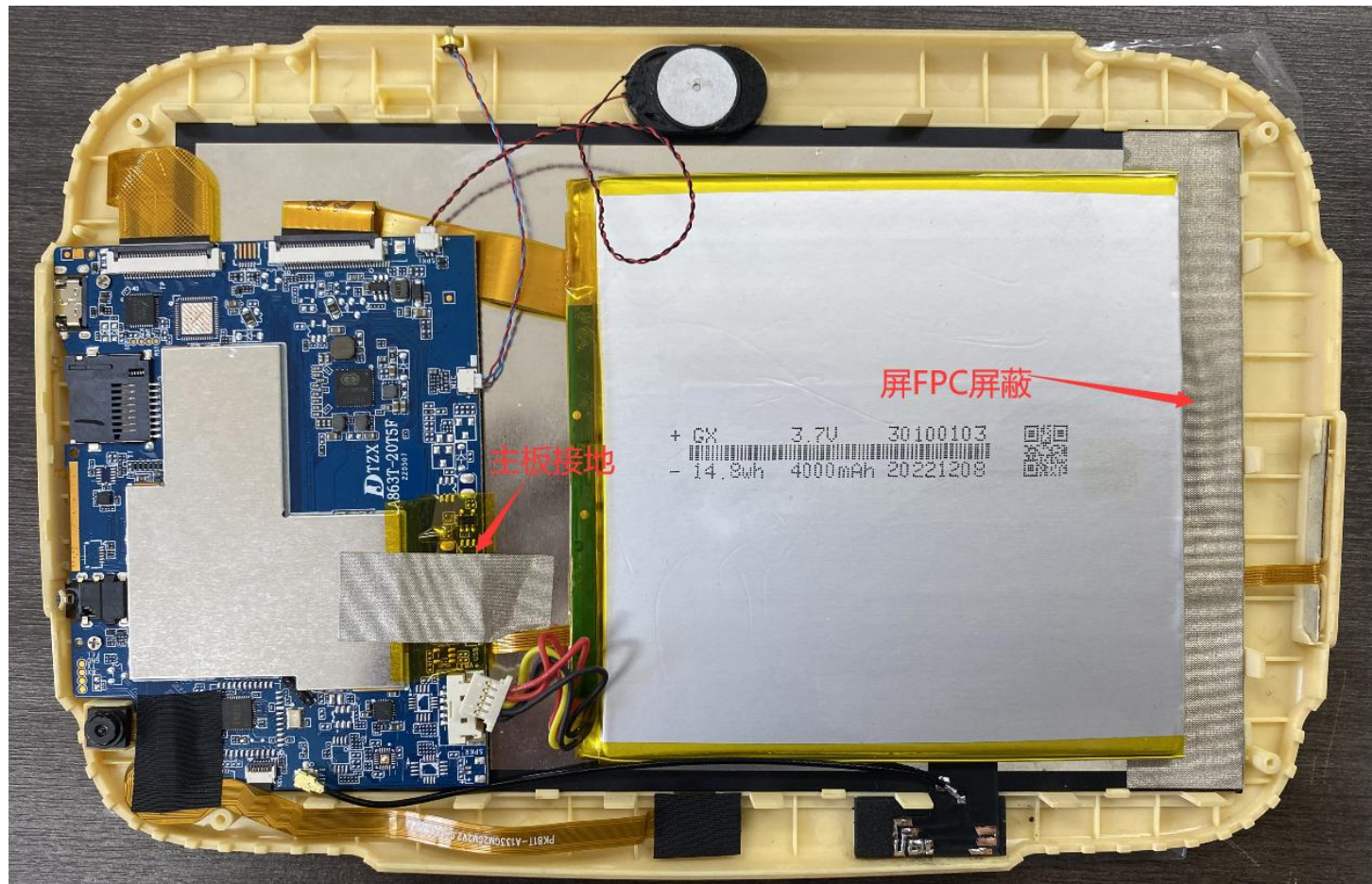
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环境处理

Environmental treatment



合作共赢

