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

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

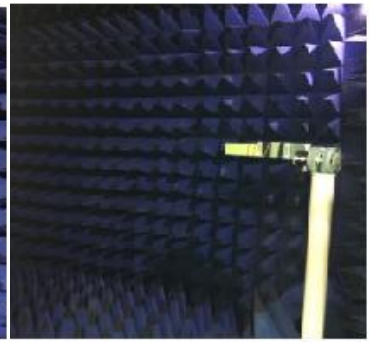
Date：2023.1.6
REV :V1.0

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	

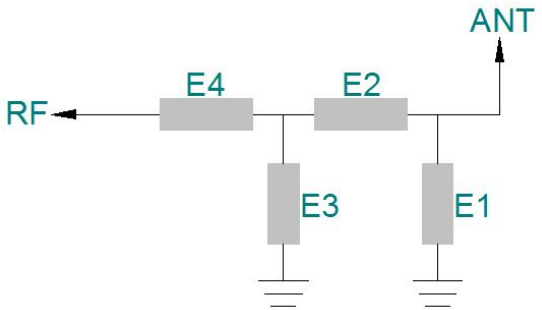
测试环境
Test environment

	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

匹配电路
Matching circuit

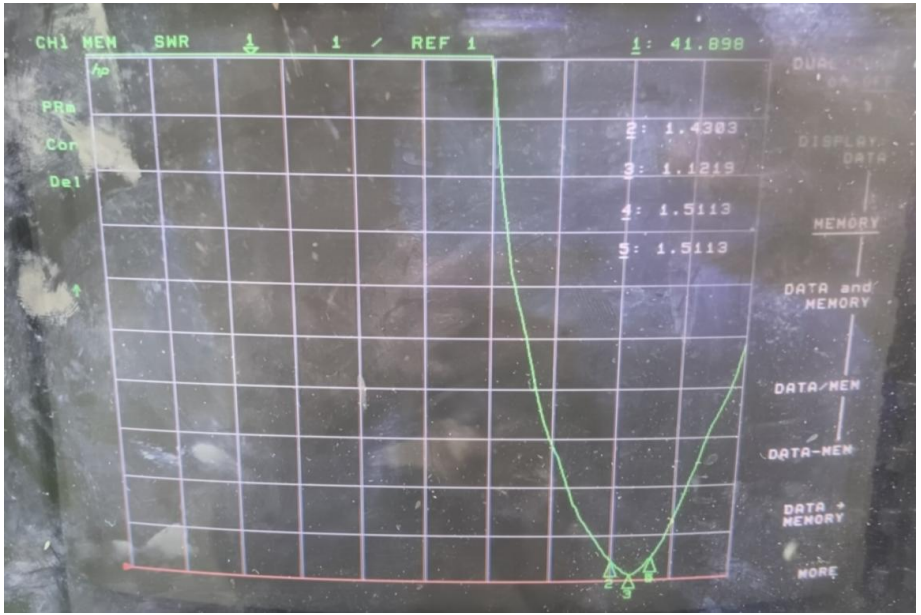


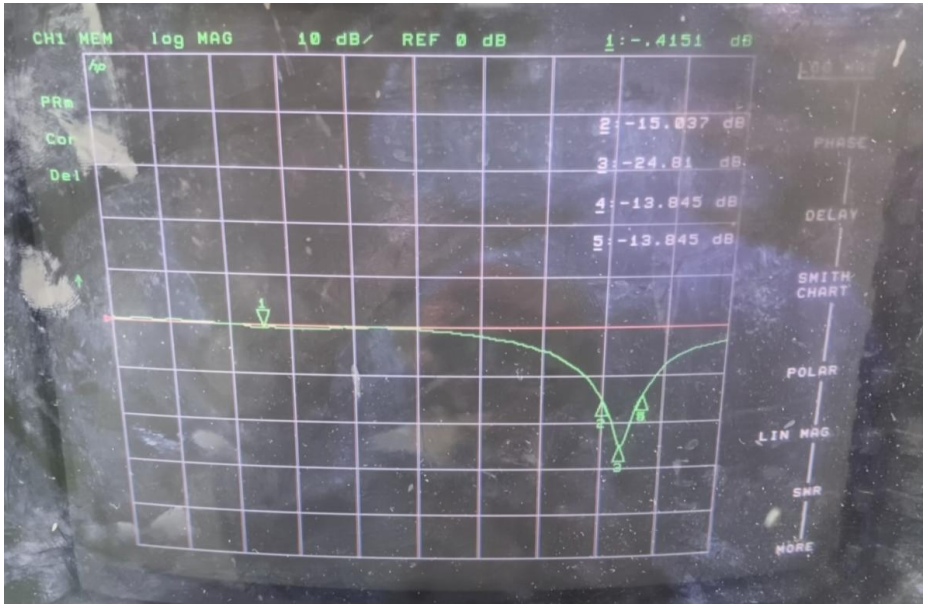
	电容（PF）	电感（NH）
E1(0402)		
E2(0402)		
E3(0402)		
E4(0402)		

匹配电路原理图&位号图

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

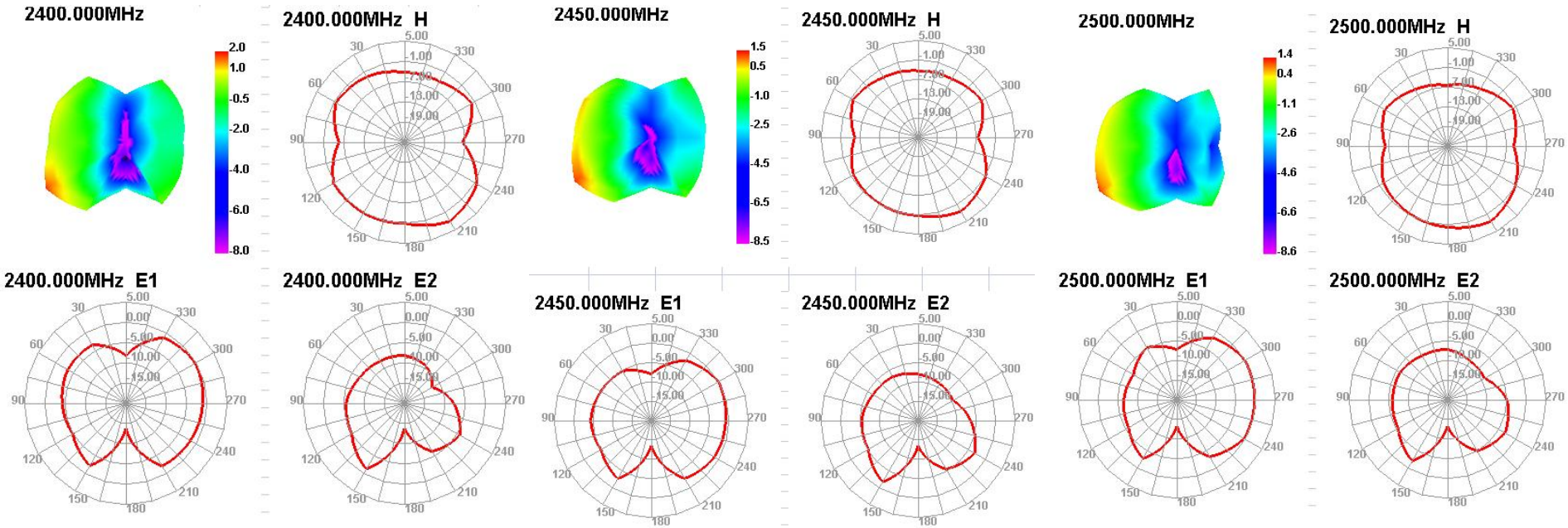
无源测试数据
Passive test data

ANT1 GAIN&Efficiency-WIFI2.4G/BT

Passive Test For WIFI2.4								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	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)

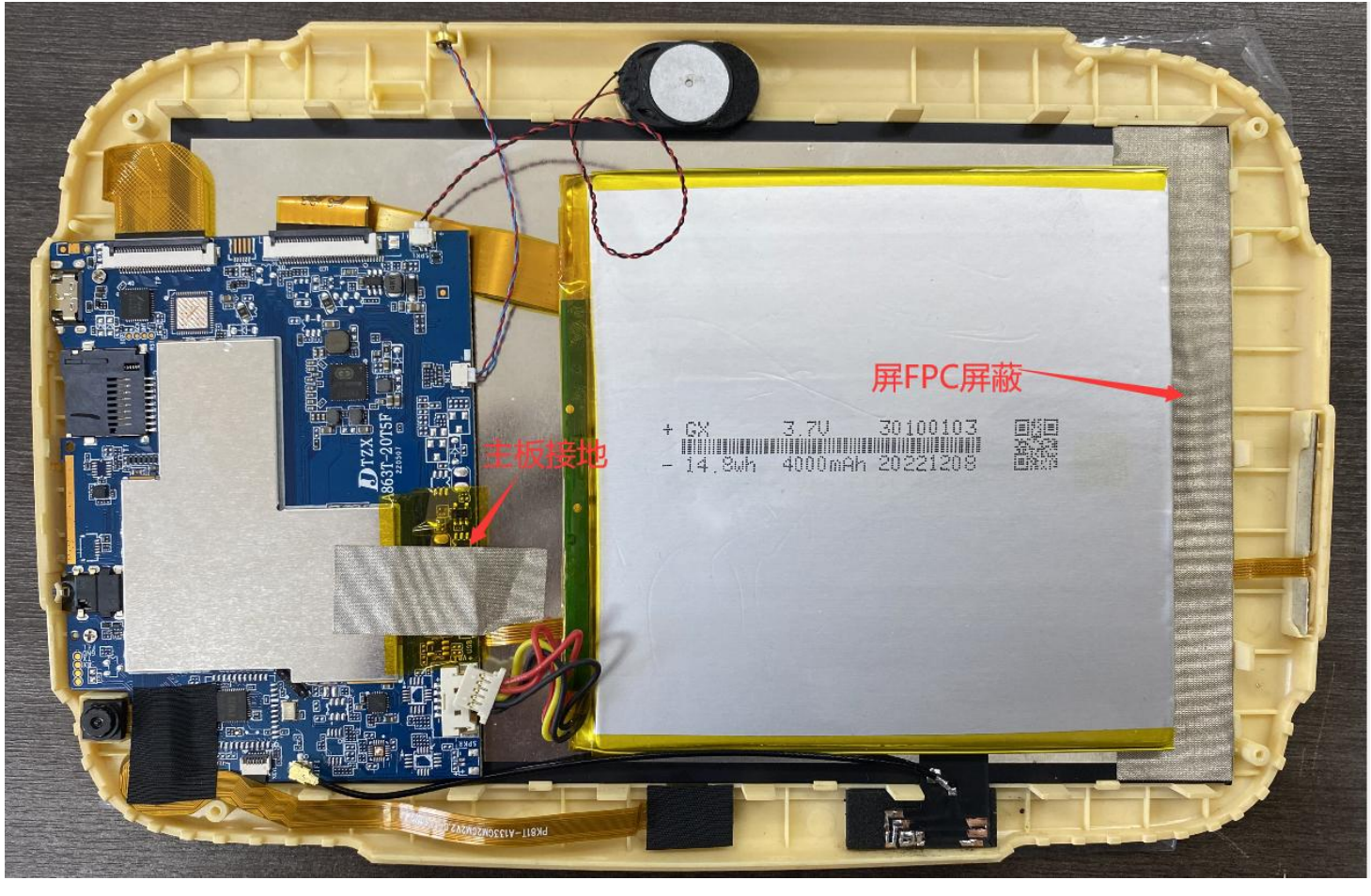


有源测试数据
Active test data

	Frequency	TRP		TIS	
802.11b	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

环境处理

Environmental treatment



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