



2024

深圳祥博一科技有限公司

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天线测试报告 Antenna report



TEST REPORT

01 客户名称/Customer：和天创

02 项目名称/Project：L009

03 立项编号/Project NO：XBY240035

04 工程师/Engineer：何国荣
电话/Phone：18123875607

PART 1

测试报告版本/Report version

日期 Date	天线版本 Antenna version	主板版本 PCB version	变更描述 Description of Change
2024-02-23			天线测试数据

PART 2

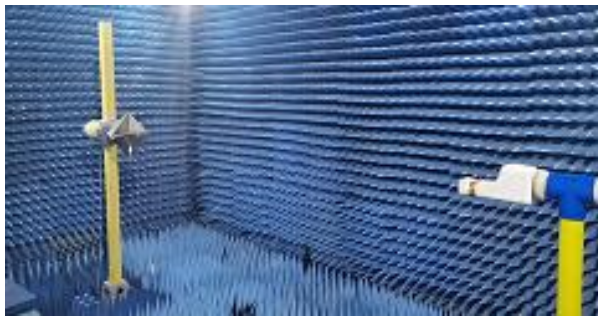
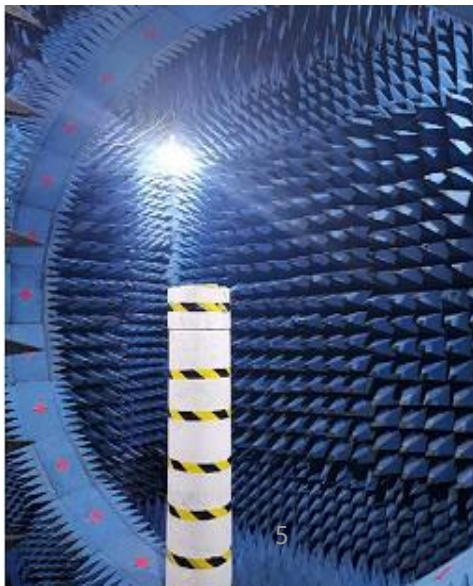
项目信息/Project brief

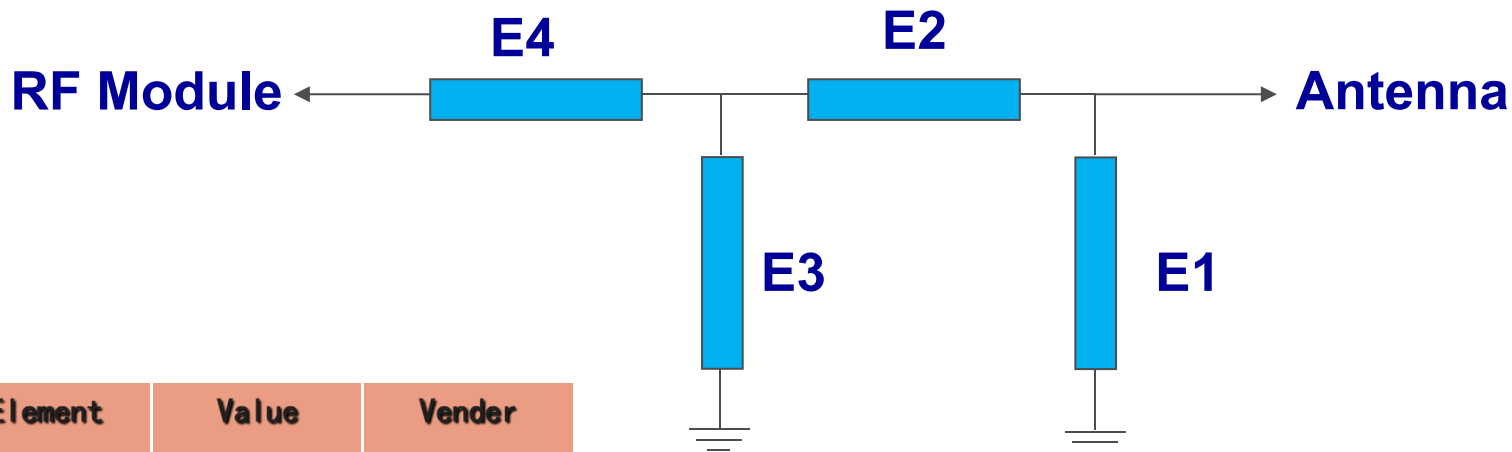
NO	ITEMS	DETAILS
1	工作频段 Operating band	WIFI: B/G/N/A模
2	频率范围 Frequency band	WIFI: 2400-2500Mhz; 5180-5850Mhz
3	天线类型 Antenna type	MAIN: monopole
4	天线材质及实现形状 Material and implementation shape	FPC+焊线 FPC welding wire

PART 3

Test system and equipment

	测试项目/Test items	设备/equipment
1: S参数 S parameter	1. 回波损耗 Return loss 2. 驻波比 VSWR	网络分析仪/Network analyzer: A338/A333
2: 耦合功率测试 Active test	1. 发射功率 Transmitting power 2. 接收灵敏度 Receiving sensitivity	综合测试仪/Comprehensive test instrument: Agilent 8960/ CMW500
3: 辐射模式与增益 Radiation mode and gain	1. 辐射模式 Radiation mode 2. 天线增益 Gain	1. 暗室/Shielding room: 7x4x3 m (ETS-3D) 2. 网络分析仪/Network analyzer: HP 8753D





Element	Value	Vender
E1 (0402)	NA	
E2 (0402)	0 0hm	
E3 (0402)	NA	
E4 (0402)	0 0hm	

Original match unchanged.

PART 5

有源测试数据/Active Test data

WIFI BAND	802.11a : 54MBps (5G)					
Channel	CH36	CH149	CH161			
TRP	11.41	12.13	12.37			
TIS			-70.15			

WIFI BAND	802.11b : 11MBps (2.4G)			802.11g : 54MBps (2.4G)		
Channel	CH1	CH6	CH11	CH1	CH6	CH11
TRP	14.35	14.56	14.83	10.79	10.85	11.12
TIS			-79.46			-67.61

WIFI BAND	802.11n : MCS7 (2.4G)					
Channel	CH1	CH6	CH11			
TRP	10.54	10.98	10.64			
TIS			-69.40			

WiFi 2.4G ANT1

Freq (MHz)	Effi (%)	Gain (dBi)
2400	48.05	2.87
2410	49.78	2.87
2420	52.69	2.98
2430	53.06	2.77
2440	52.56	2.49
2450	52.56	2.3
2460	50.99	1.97
2470	51.04	1.69
2480	52.95	1.95
2490	52.51	2.07
2500	51.95	2.28

BT/WiFi 2.4 ANT2

Freq (MHz)	Effi (%)	Gain (dBi)
2400	44.93	2.11
2410	45.03	2.25
2420	46.56	2.43
2430	47.58	2.45
2440	48.24	2.56
2450	48.75	2.56
2460	48.55	2.59
2470	49.1	2.6
2480	50.52	2.7
2490	50.42	2.6
2500	49.69	2.41

WIFI ANT1

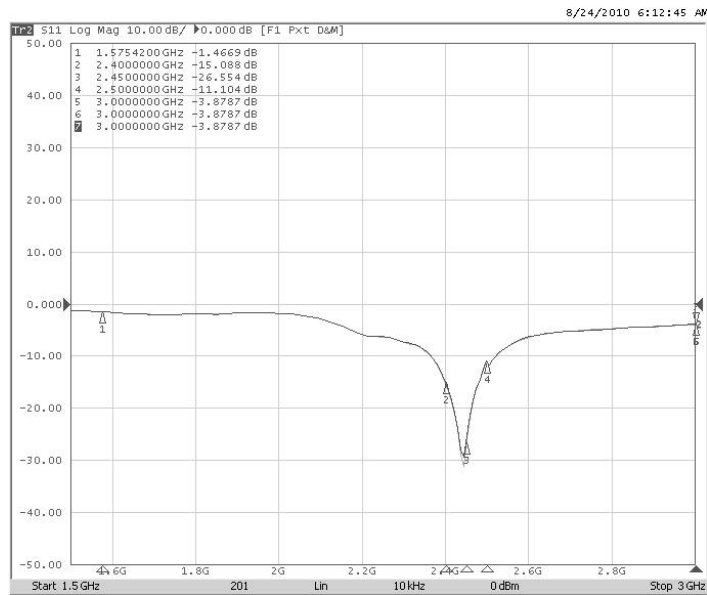
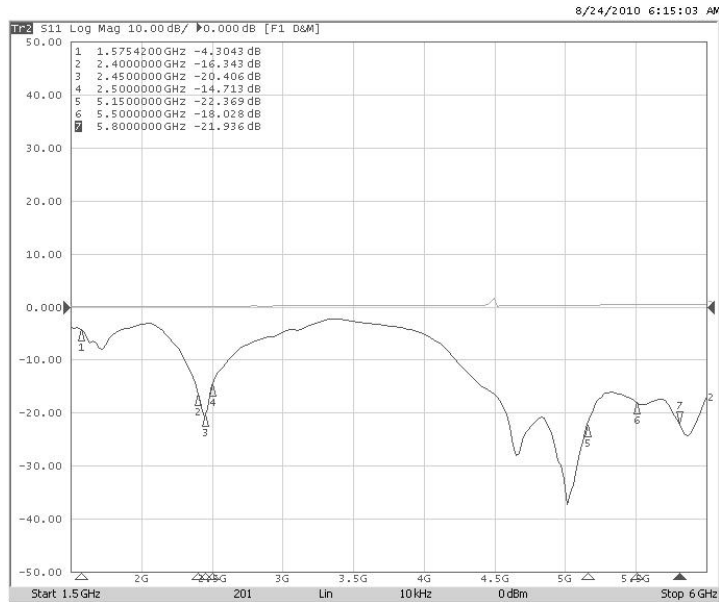
WiFi 5G		
Frequency (MHz)	Effi (%)	Gain (dBi)
5000	50.46	1.38
5100	53.56	1.49
5200	54.17	2.71
5300	49.61	2.62
5400	50.18	3.56
5500	52.57	3.76
5600	51.25	3.89
5700	55.26	3.26
5800	52.12	3.47
5900	47.43	2.04
6000	47.36	2.69

WIFI ANT2

WiFi 5G		
Frequency (MHz)	Effi (%)	Gain (dBi)
5000	50.15	1.36
5100	53.69	1.52
5200	53.62	2.71
5300	50.63	2.41
5400	52.63	3.36
5500	54.32	3.52
5600	52.3	3.74
5700	53.01	3.47
5800	53.63	3.36
5900	48.12	2.56
6000	48.63	2.63

PART 7

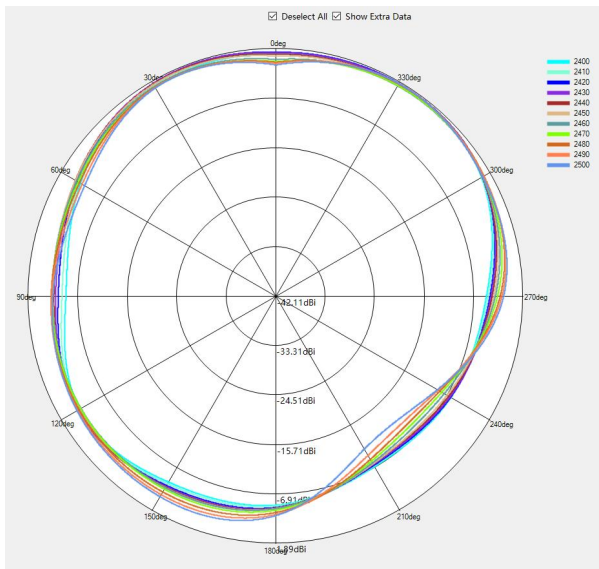
驻波图/ Passive Standing Wave Diagram



PART 8

方向图/ Directions graph

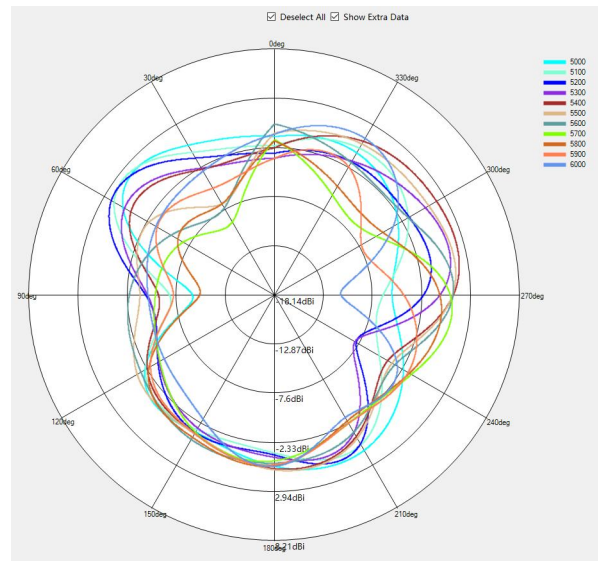
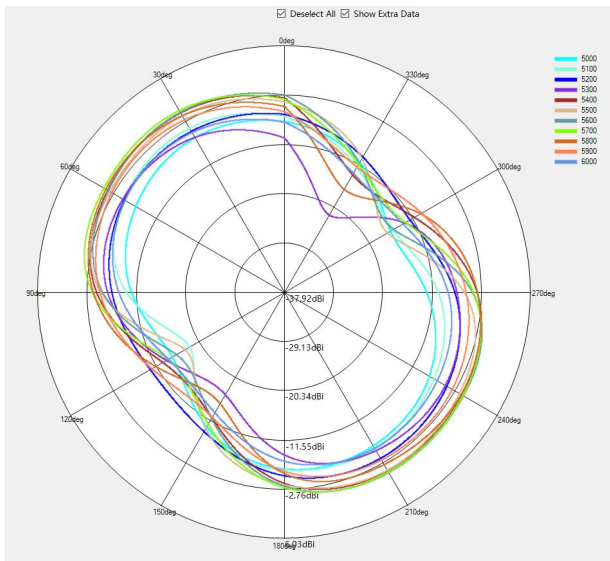
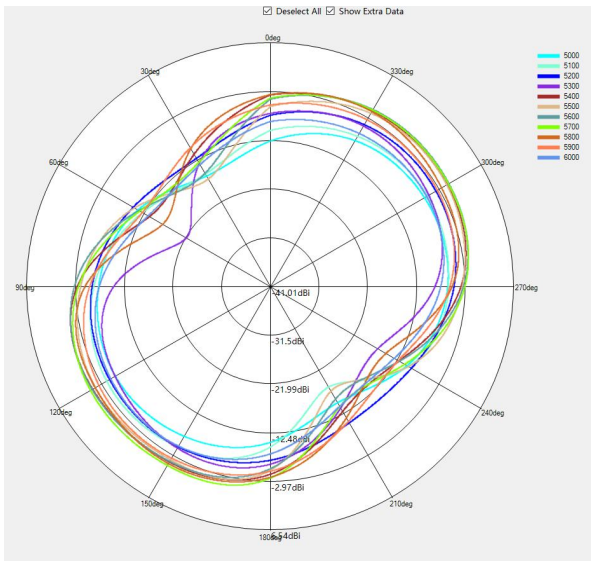
WiFi 2.4G-ANT1



PART 8

方向图/ Directions graph

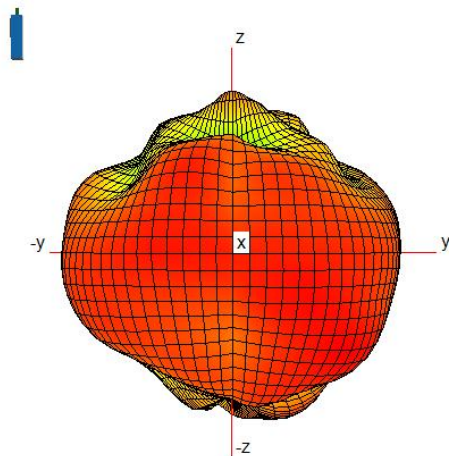
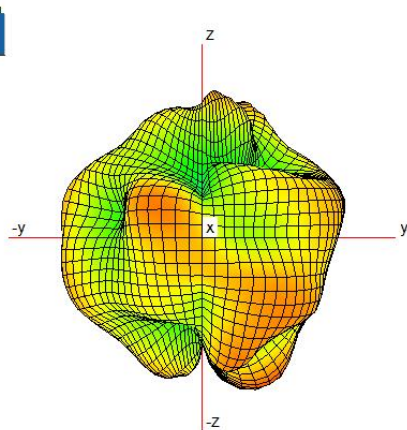
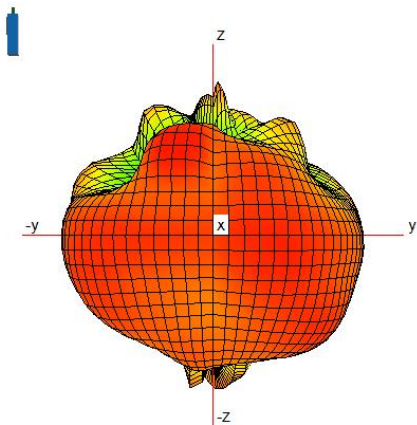
WiFi 5G-ANT1



PART 9

苹果图/ Apple chart

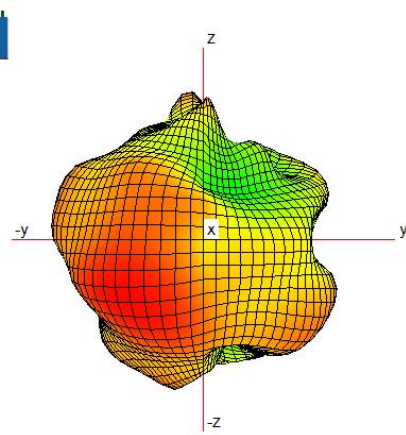
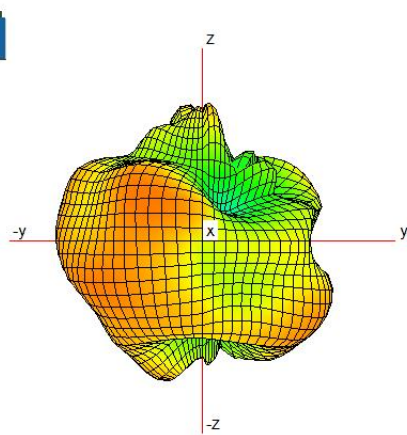
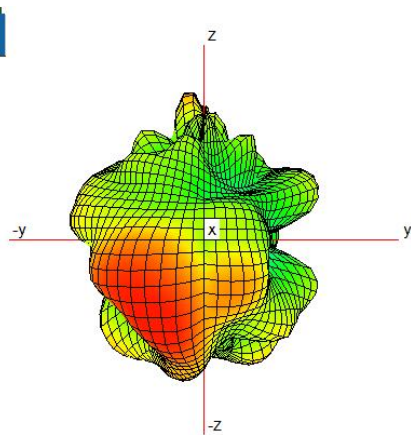
WiFi 2.4G-ANT2



PART 9

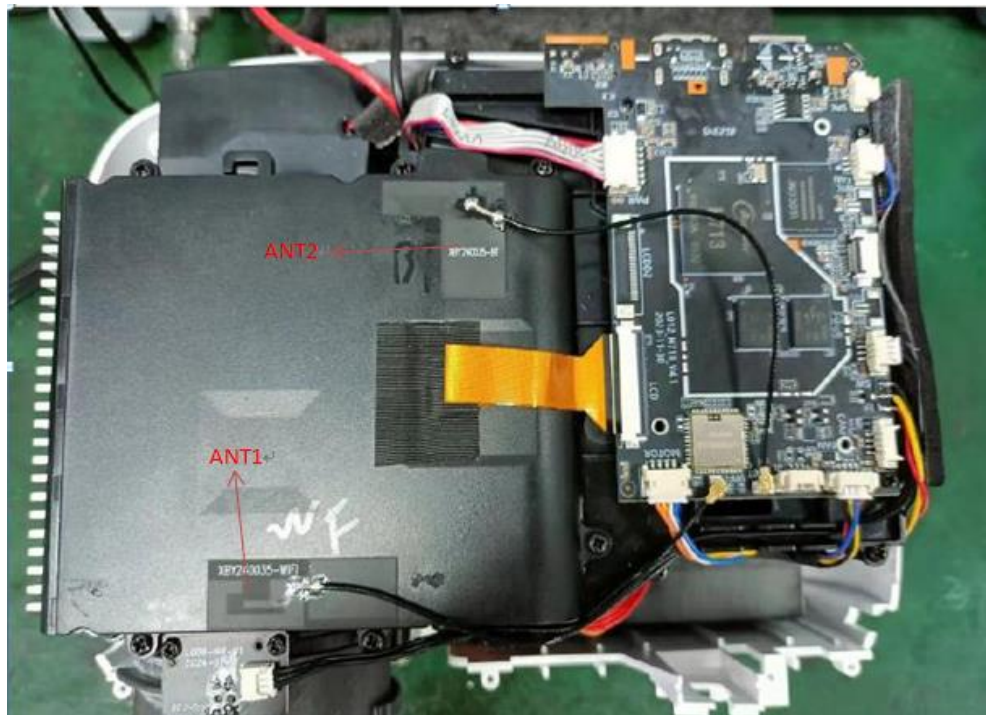
苹果图/ Apple chart

WiFi 5.8G-ANT2



PART 10

组装方式/Assembly method



PART 11

整机图片 Picture of complete machine





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