

2023

天线测试报告 Antenna report



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
2023-05-09			天线测试数据

PART 2

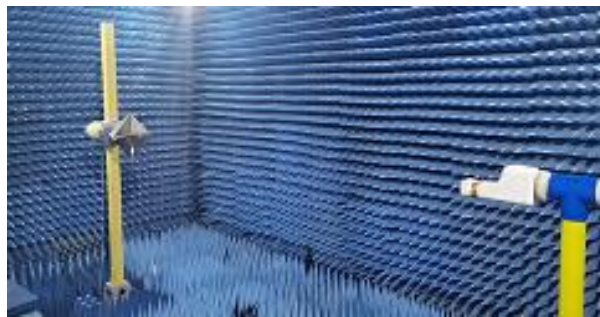
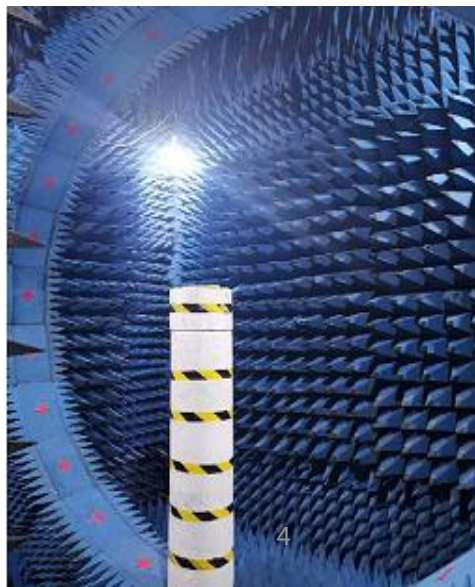
项目信息/Project brief

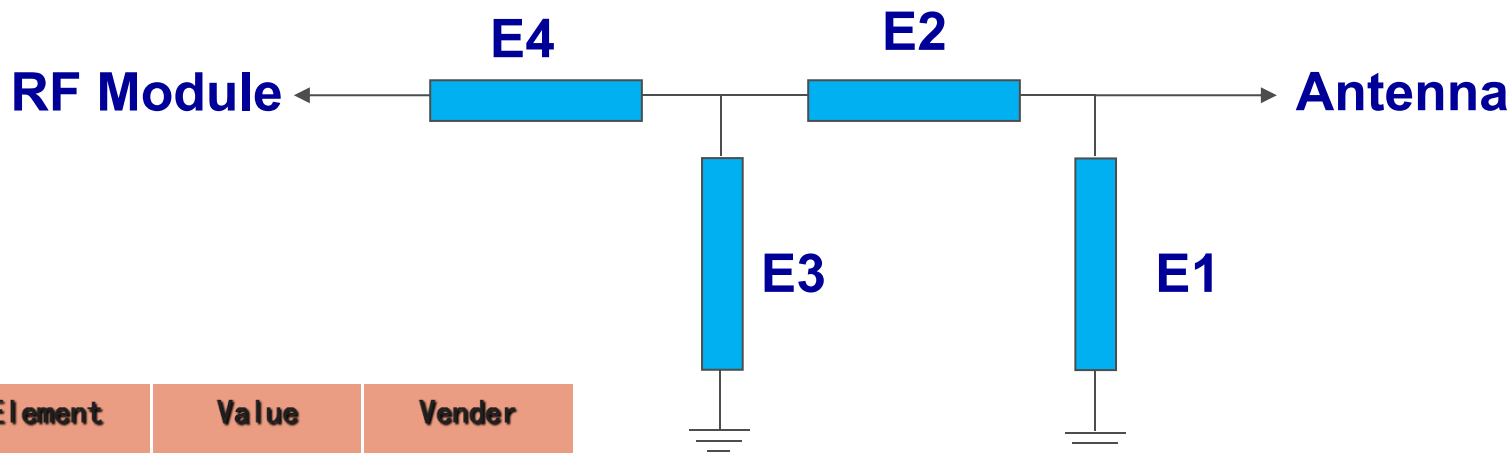
NO	ITEMS	DETAILS
1	工作频段 Operating band	WIFI:2.4G , 5.8G BT
2	频率范围 Frequency band	MAIN: 2400-2500Mhz ; 5180-5850Mhz
3	天线类型 Antenna type	MAIN: PIFA
4	天线材质及实现形状 Material and implementation shape	PCB+焊线

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

测试数据/RFReport

天线换位置贴数据。

WIFI BAND	802.11b : 11Mbps (2.4G)			802.11g : 54Mbps (2.4G)		
Channel (信道)	CH1	CH6	CH11	CH1	CH6	CH11
TRP (发射功率)	13.18	13.63	12.68	10.23	11.54	11.79
TIS (接收灵敏度)			-80.12			-70.27

WIFI BAND	802.11n : MCS7 (2.4G)			802.11a: 54Mbps (5.8G)		
Channel (信道)	CH1	CH6	CH11	CH36	CH161	
TRP (发射功率)	9.8	10.17	10.58	10.02	9.26	
TIS (接收灵敏度)			-74.51		-68.27	

天线换位置贴数据

5.8G天线效率, 增益		
天线频率点 (MHz)	天线效率 (%)	天线增益 (dBi)
4800	42.15%	0.59
4900	41.52%	0.84
5000	43.78%	0.75
5100	46.15%	1.24
5200	42.89%	0.63
5300	46.25%	1.51
5400	45.48%	1.16
5500	46.17%	1.49
5600	43.69%	0.74
5700	43.41%	0.43
5800	41.78%	0.37

天线换位置贴数据。

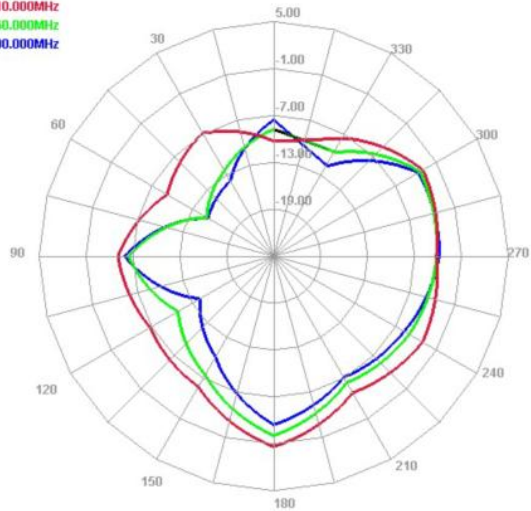
BT 效率与增益		
天线频率点 (MHz)	天线效率 (%)	天线增益 (dBi)
2400	35.10%	-0.26
2410	36.18%	-0.22
2420	35.95%	-0.25
2430	40.39%	0.48
2440	38.60%	0.4
2450	38.53%	0.51
2460	37.14%	0.38
2470	38.69%	0.3
2480	40.87%	0.69
2490	42.09%	0.84
2500	43.99%	1.13

PART 5

测试数据/RFReport

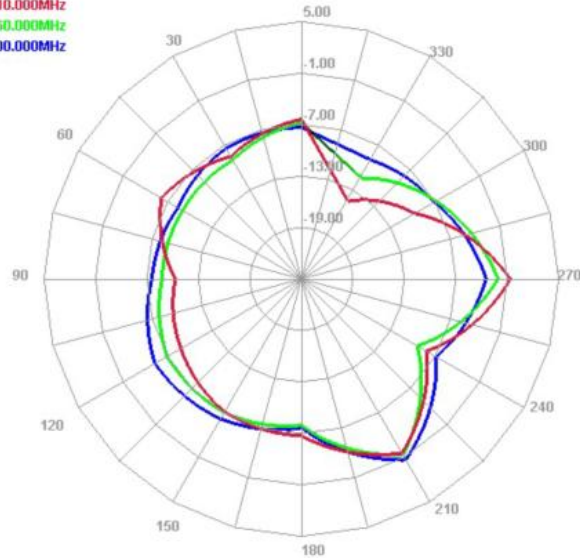
Horizontal

2410.000MHz
2460.000MHz
2500.000MHz



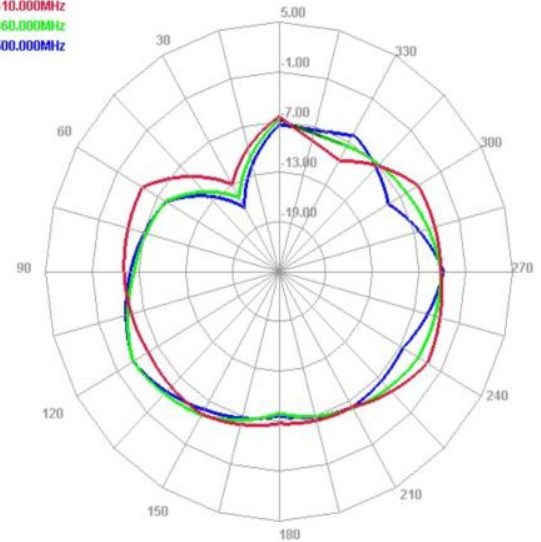
E1 Face

2410.000MHz
2460.000MHz
2500.000MHz



E2 Face

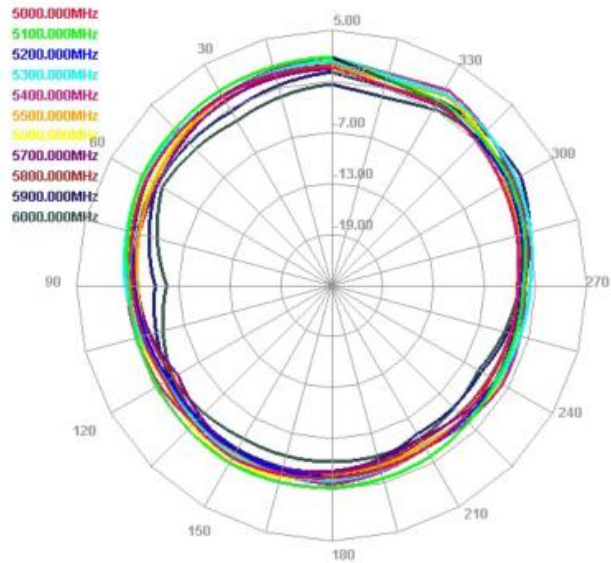
2410.000MHz
2460.000MHz
2500.000MHz



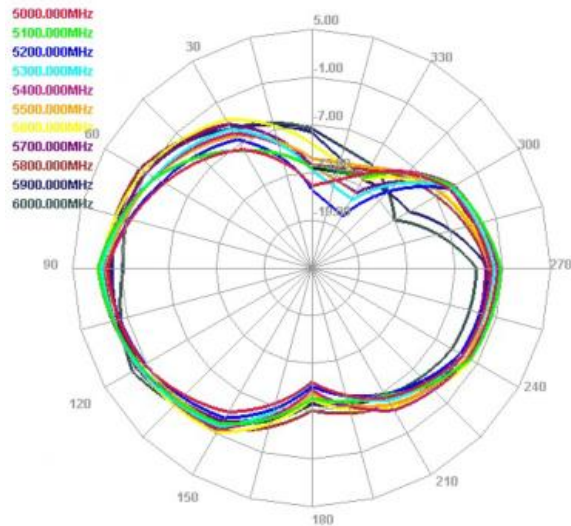
PART 5

测试数据/RFReport

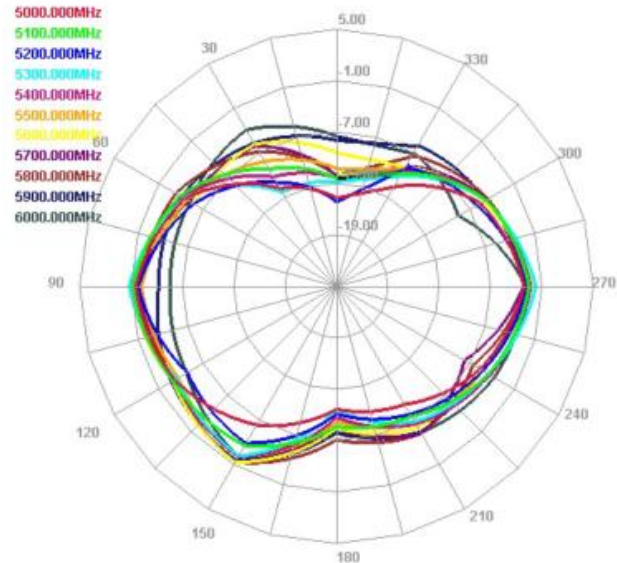
Horizontal



E1 Face



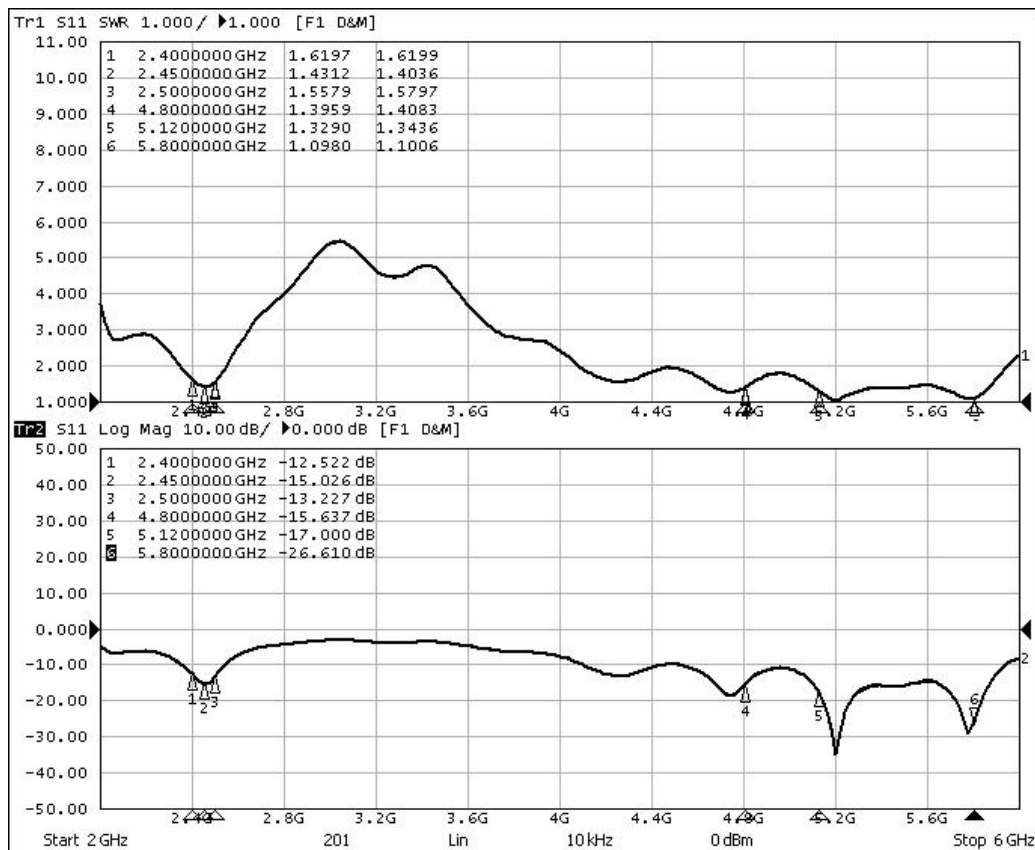
E2 Face



天线贴原位置数据。

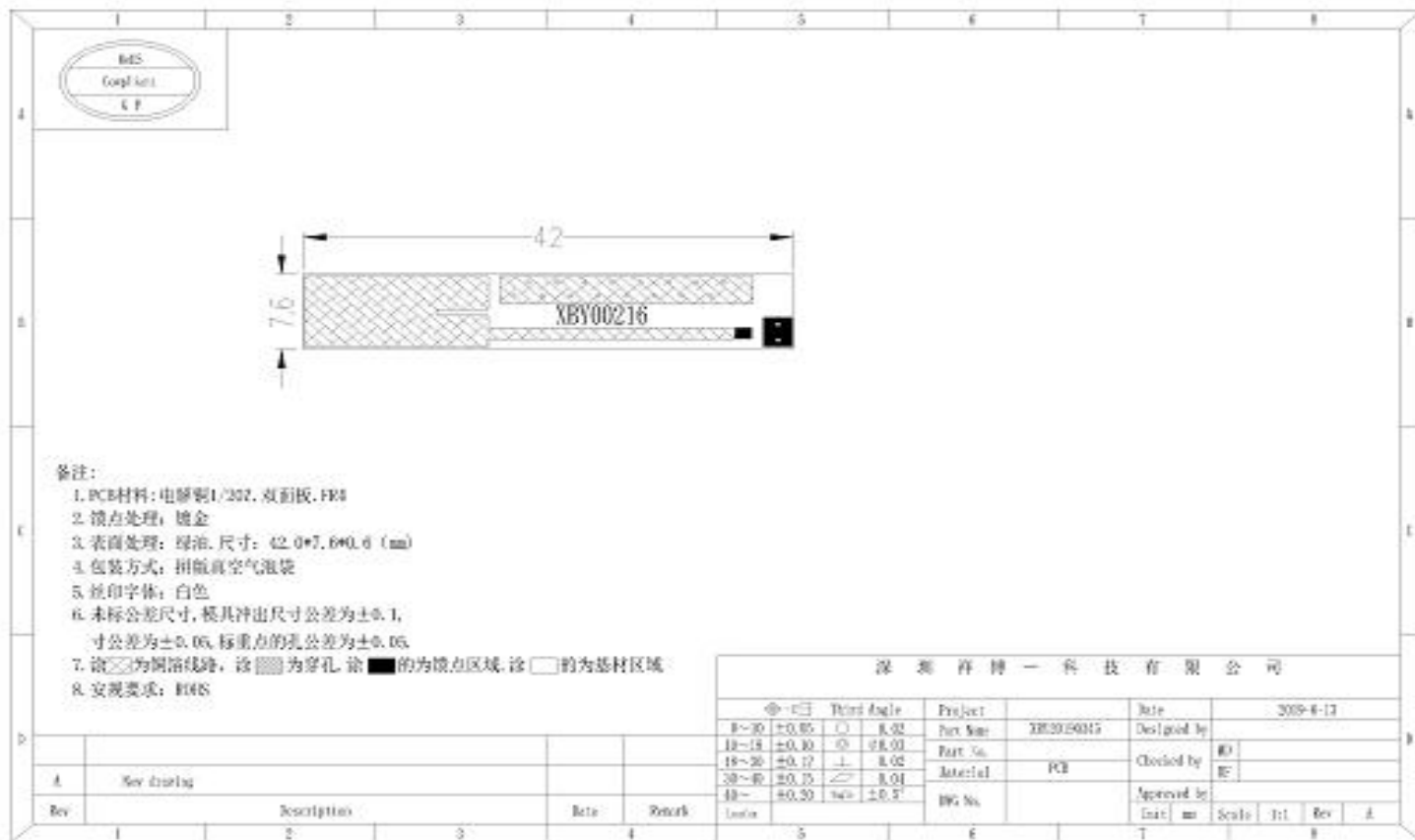
WIFI BAND	802.11b : 11Mbps			802.11g : 54Mbps		
Channel (信道)	CH1	CH6	CH11	CH1	CH6	CH11
TRP (发射功率)	9	9.75	9.28	6.62	7.39	7.53
TIS (接收灵敏度)			-75.9			-65.3

WIFI BAND	802.11n : MCS7 (2.4G)		
Channel (信道)	CH1	CH6	CH11
TRP (发射功率)	5.43	6.66	6.39
TIS (接收灵敏度)			-70.44



PART 6

工程图 Engineering Drawing





2023

Thanks!

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