



2022

深圳祥博一科技有限公司

Shenzhen Xiangboyi Technology Co. Ltd

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：L005
- 03** 立项编号/Project NO：XBY220598
- 04** 工程师/Engineer：魏道发
电话/Phone：18123850014

PART 1

测试报告版本/Report version

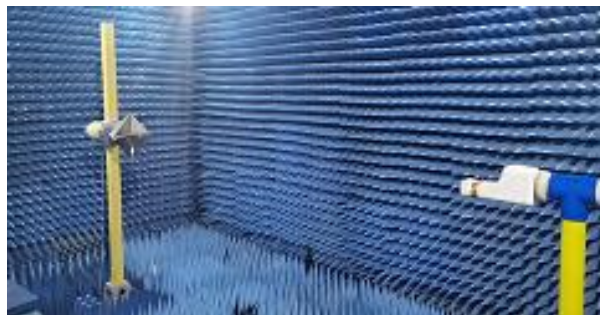
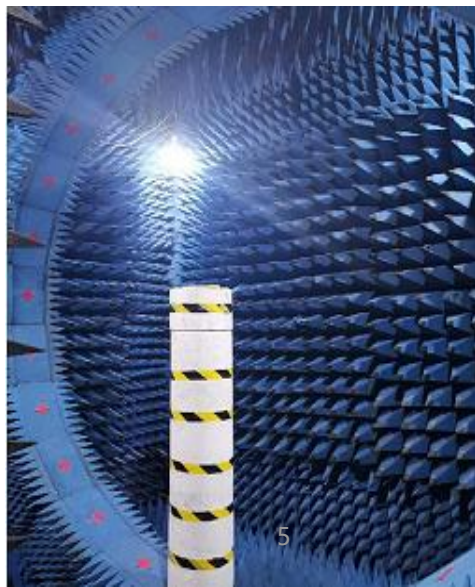
| 日期 Date | 天线版本 Antenna version | 主板版本 PCB version | 变更描述 Description of Change |
|------------|----------------------------|---------------------|-------------------------------|
| 2022-12-28 | | | 样品天线测试数据 |
| | | | |
| | | | |
| | | | |
| | | | |

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

PART 3

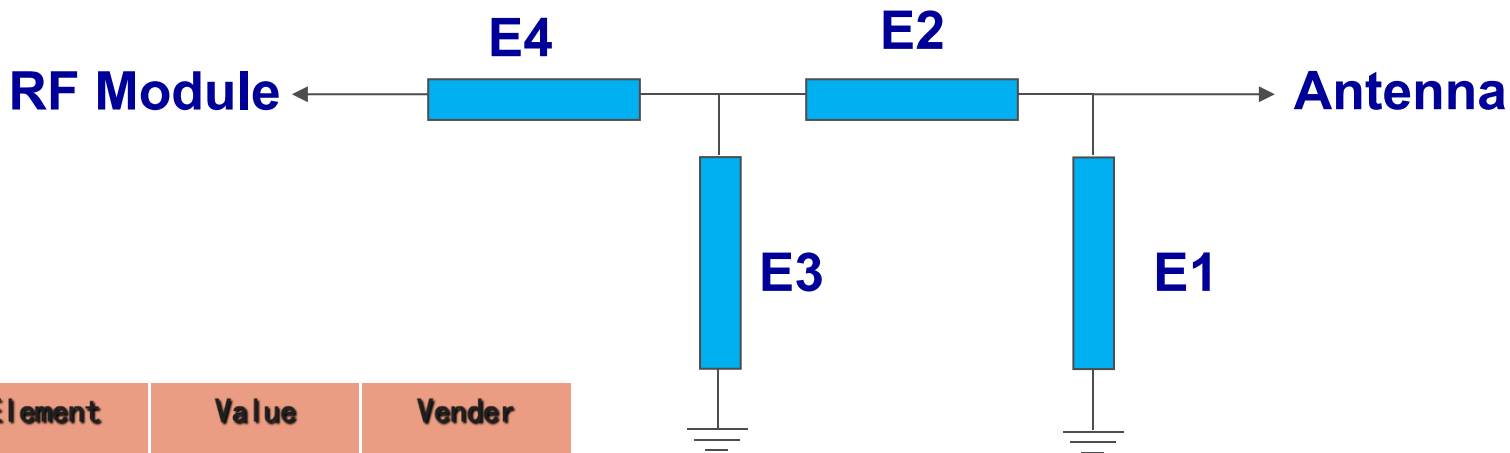
Test system and equipment

| | 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 |



PART 4

匹配电路/Matching Circuits



| Element | Value | Vender |
|-----------|-------|--------|
| E1 (0402) | NA | |
| E2 (0402) | 0 Ohm | |
| E3 (0402) | NA | |
| E4 (0402) | 0 Ohm | |

Original match unchanged.

PART 5

测试数据/RF Report

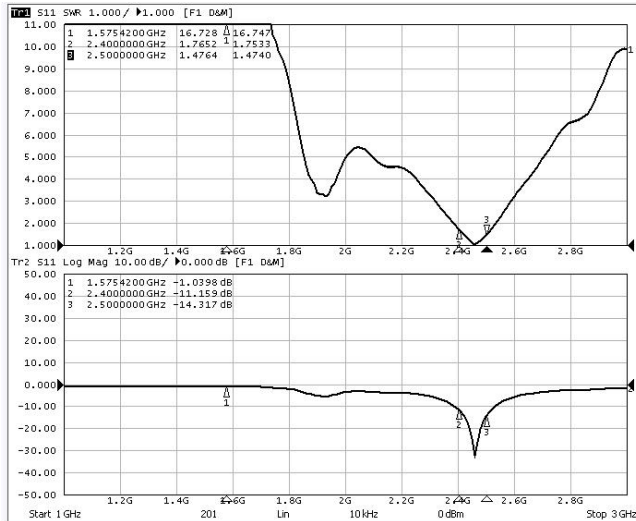
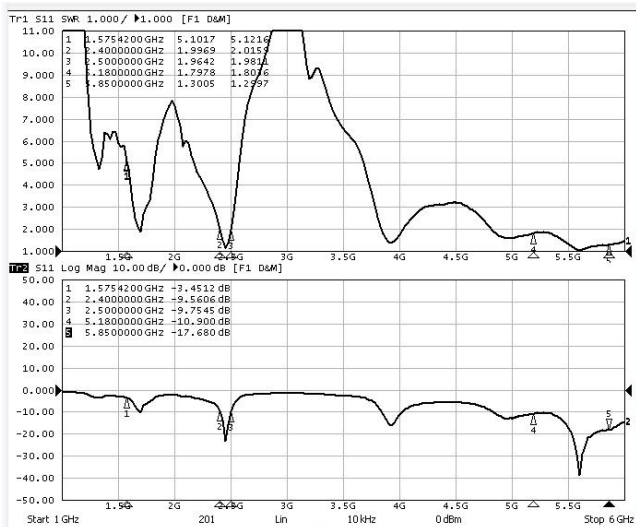
| WIFI BAND | 802.11a : 54Mbps (5G) | | | | | |
|-----------|-----------------------|-------|--------|--|--|--|
| Channel | CH36 | CH149 | CH161 | | | |
| TRP | 14.09 | 13.02 | 14.31 | | | |
| TIS | | | -69.23 | | | |

| WIFI BAND | 802.11b : 11Mbps (2.4G) | | | 802.11g : 54Mbps (2.4G) | | |
|-----------|-------------------------|-------|--------|-------------------------|-------|--------|
| Channel | CH1 | CH6 | CH11 | CH1 | CH6 | CH11 |
| TRP | 14.23 | 14.53 | 14.47 | 14.79 | 15.08 | 15.01 |
| TIS | | | -79.68 | | | -68.03 |

| WIFI BAND | 802.11n : MCS7 (2.4G) | | | | | |
|-----------|-----------------------|-------|--------|--|--|--|
| Channel | CH1 | CH6 | CH11 | | | |
| TRP | 14.95 | 15.54 | 15.94 | | | |
| TIS | | | -69.28 | | | |

PART 6

测试数据/RF Report



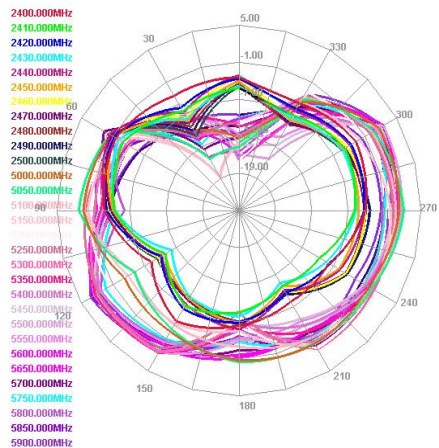
WIFI

| Passive Test For 2.4G | | |
|-----------------------|----------|------------|
| Freq (MHz) | Effi (%) | Gain (dBi) |
| 2400 | 44.64 | 2.29 |
| 2410 | 30.88 | 0.48 |
| 2420 | 37.77 | 1.19 |
| 2430 | 30.13 | 0.08 |
| 2440 | 40.02 | 2.02 |
| 2450 | 32.38 | 1.24 |
| 2460 | 37.84 | 2.19 |
| 2470 | 34.05 | 1.73 |
| 2480 | 33.24 | 1.67 |
| 2490 | 34.15 | 1.73 |
| 2500 | 33.46 | 1.65 |

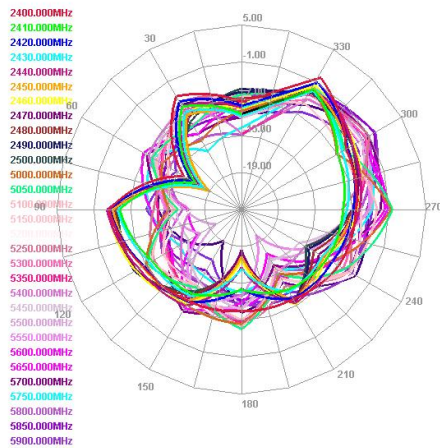
| Passive Test For 5G | | |
|---------------------|----------|------------|
| Freq (MHz) | Effi (%) | Gain (dBi) |
| 5000 | 43.73 | 1.1 |
| 5050 | 44.04 | 1.56 |
| 5100 | 37.24 | 1.55 |
| 5150 | 35.3 | 1 |
| 5200 | 41.41 | 1.51 |
| 5250 | 46.26 | 1.2 |
| 5300 | 42.05 | 0.85 |
| 5350 | 44.37 | 1.36 |
| 5400 | 40 | 0.77 |
| 5450 | 40.68 | 1.06 |
| 5500 | 43.07 | 1.5 |
| 5550 | 35.94 | 0.37 |
| 5600 | 41.6 | 1.09 |
| 5650 | 41.45 | 1.67 |
| 5700 | 43.56 | 1.36 |
| 5750 | 34.73 | 0.93 |
| 5800 | 35.76 | 0.69 |
| 5850 | 41.78 | 1.95 |
| 5900 | 45.5 | 1.2 |
| 5950 | 40.74 | 1.47 |
| 6000 | 36.12 | 0.98 |

WIFI

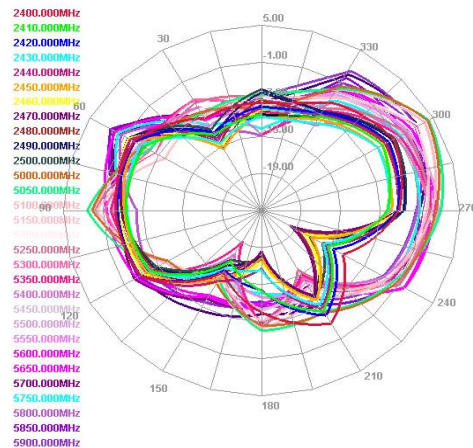
Horizontal



E1 Face



E2 Face

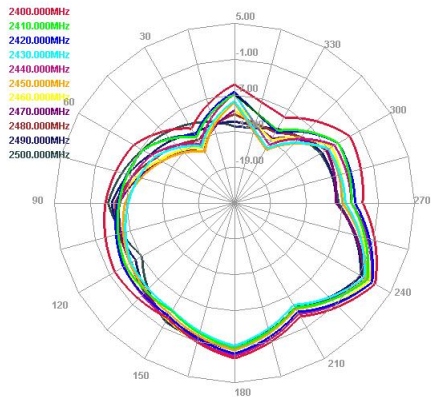


BT

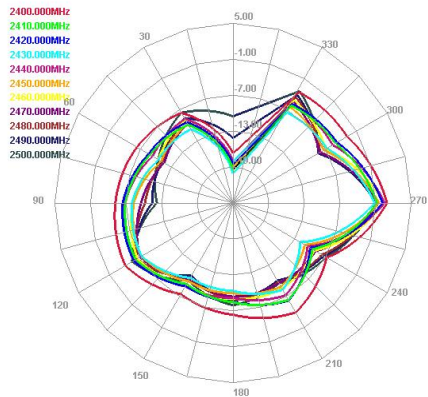
| Passive Test For 2.4G | | |
|-----------------------|-------------|---------------|
| Freq (MHz) | Effi (%) | Gain (dBi) |
| 2400 | 46.47 | 2.56 |
| 2410 | 40.78 | 1.08 |
| 2420 | 45.6 | 1.98 |
| 2430 | 35.06 | 0.54 |
| 2440 | 44.95 | 1.45 |
| 2450 | 37.28 | 0.72 |
| 2460 | 42.8 | 1.38 |
| 2470 | 37.74 | 0.48 |
| 2480 | 39.16 | 0.48 |
| 2490 | 39.11 | 0.08 |
| 2500 | 41.29 | 0.21 |

BT

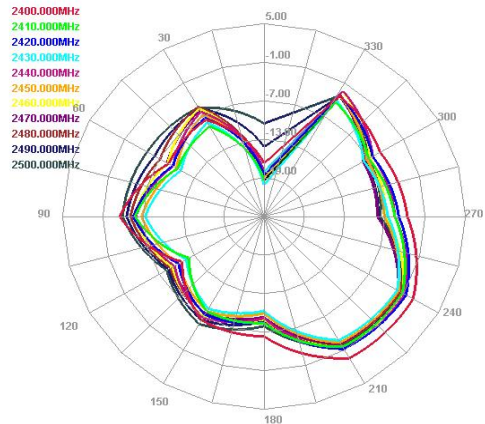
Horizontal



E1 Face



E2 Face





2022 Thanks!

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