SLEing®
森岭 智能科技

Antenna Measurement Report

Project name：	华微H238A一体机
Type of antenna：	WIFI 5G
Redact：	
Approver：	
Version number：	V1.0
Date：	20241014

1.测试项目与设备

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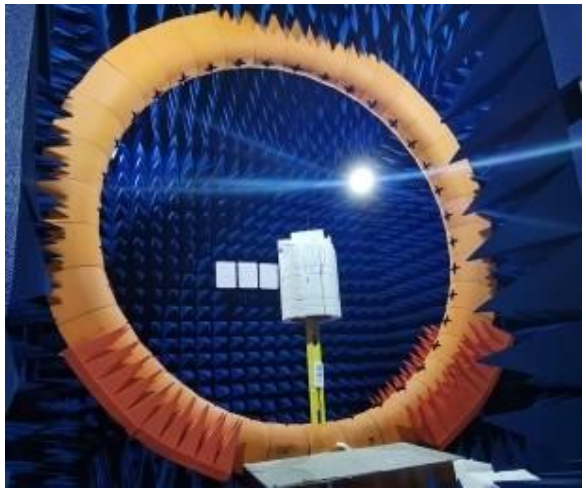
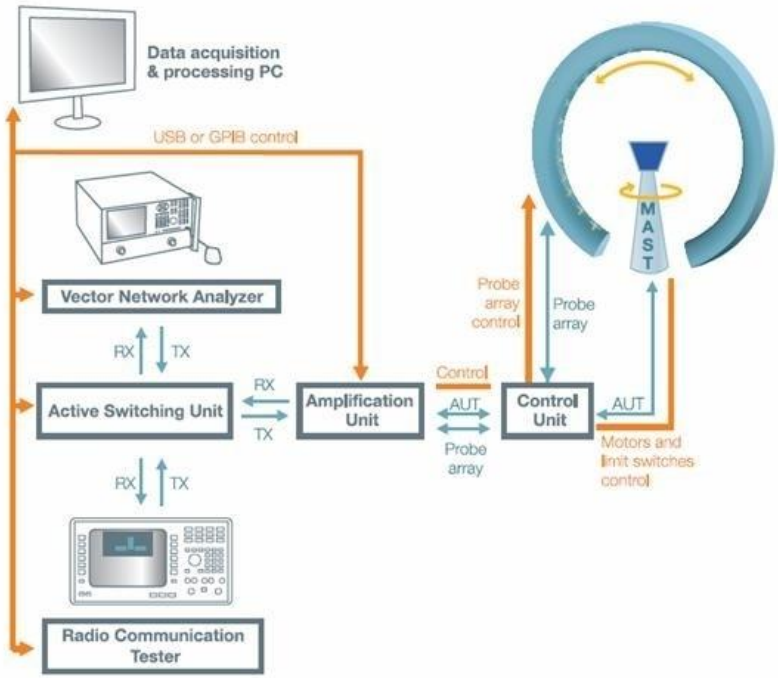
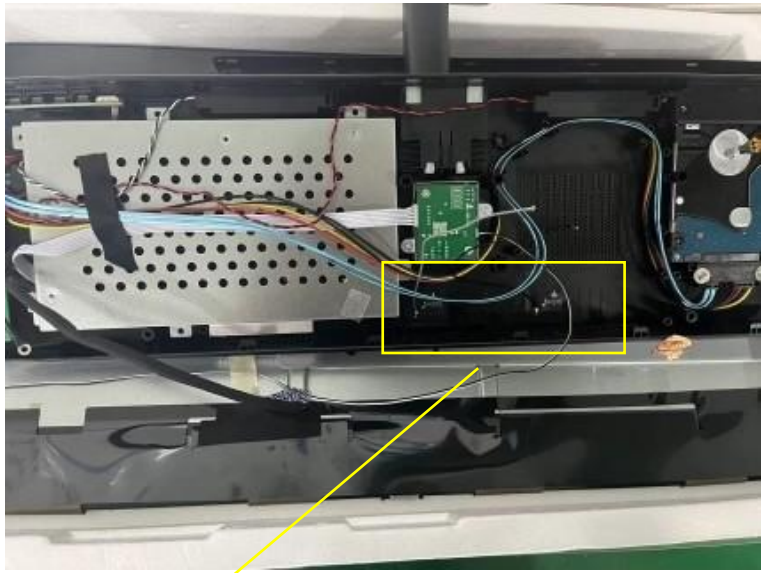
无源测试项		有源测试项	
1. S参数	网络分析仪E5071C	1. 整机辐射功率	**Microwave chamber**
2. 辐射参数	Microwave chamber 网络分析仪E5071B	2. 整机接收灵敏度	CMW500 MT8000A
		3.吞吐量	ixchariot

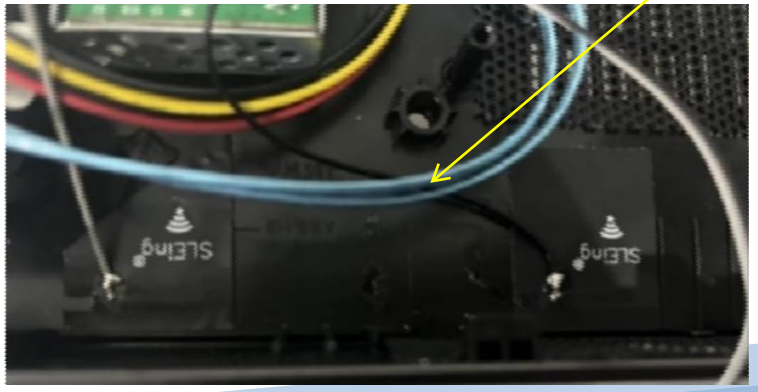




2.产品信息

产品名称：	华微H238A一体机
测试天线：	WIFI5G

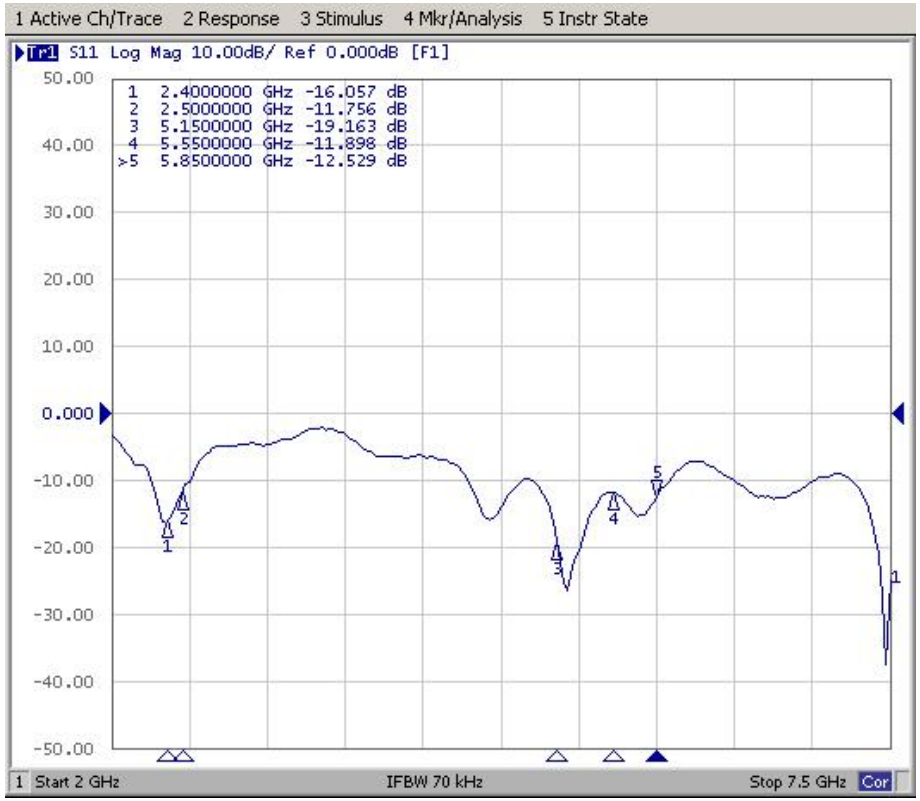




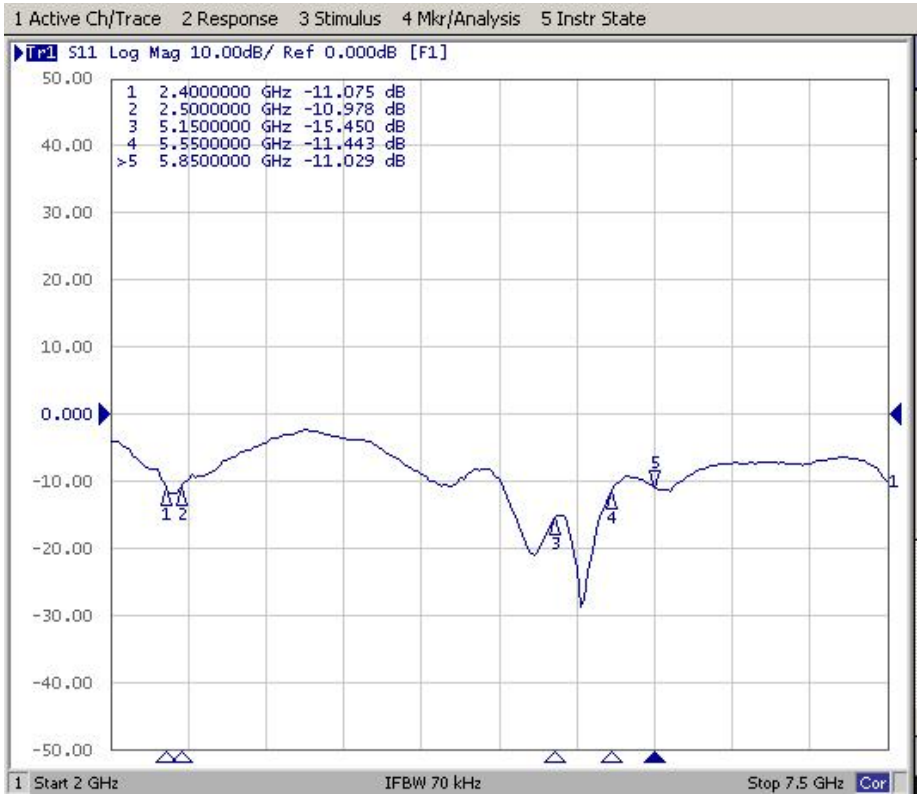
3.规格说明

Rough description	华微H238A一体机	Dimensions	
Impedance	50Ω	Test environment	None
Application	WIFI 5G	Freq. Range	5.15G-5.85G
5.8G Gain	5.8G peak gain: WIFI main:8.40dBi WIFI aux:6.82dBi	VSWR	1.92 : 1
Isolation	None	Polarization	line
Connector type	ipex 2	Cable type	1.13黑/灰

4.天线S11

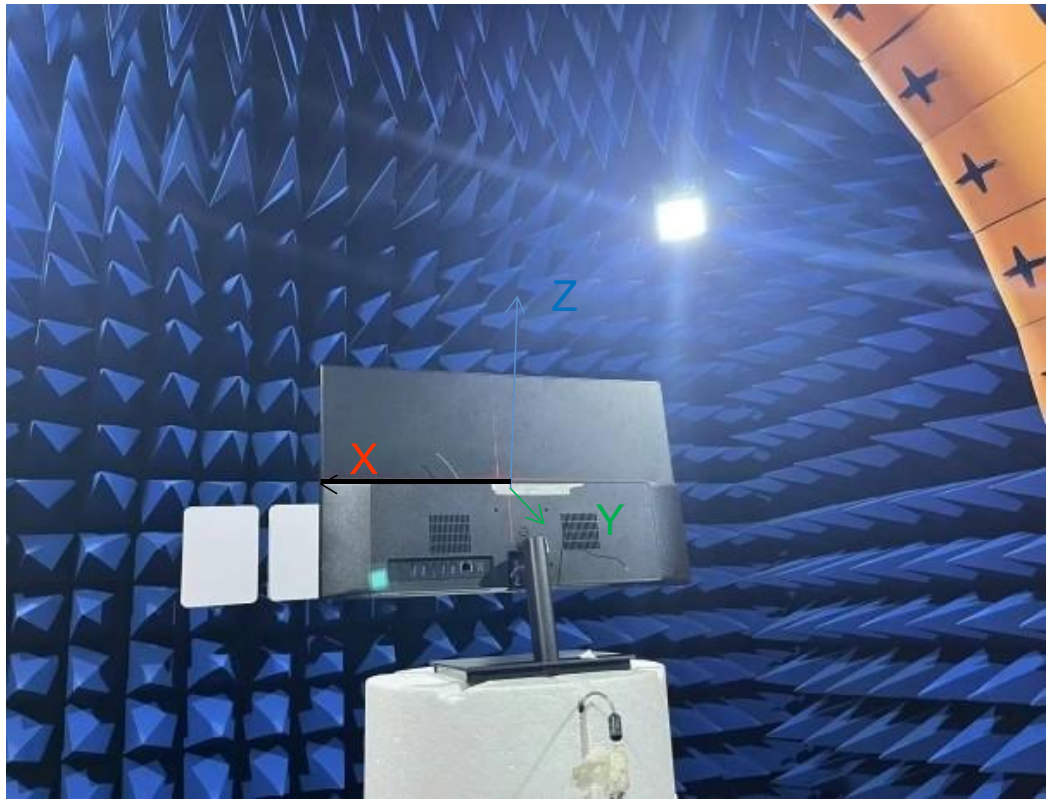


WiFi Main天线



WiFi AUX天线

5.测试环境及方向



6.2 天线场型图（WIFI-main)

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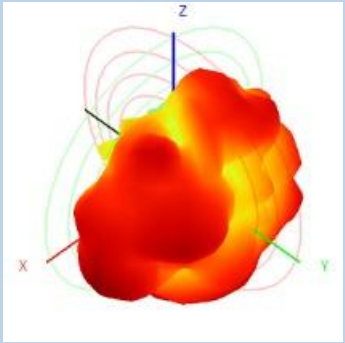
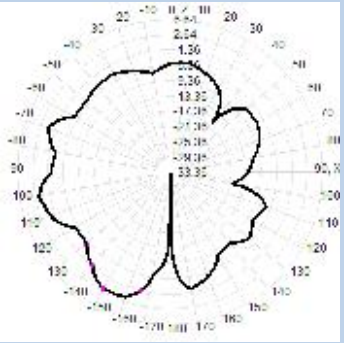
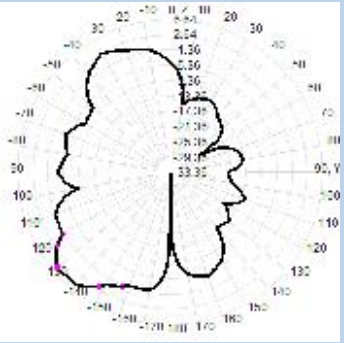
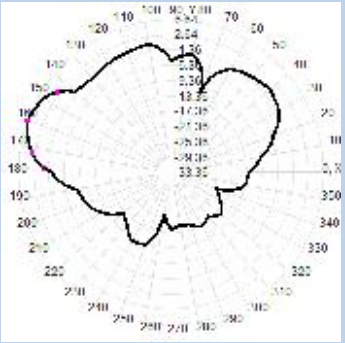
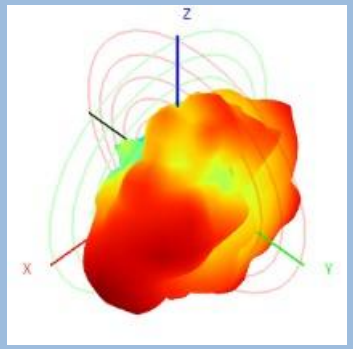
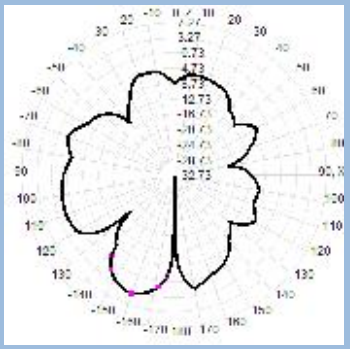
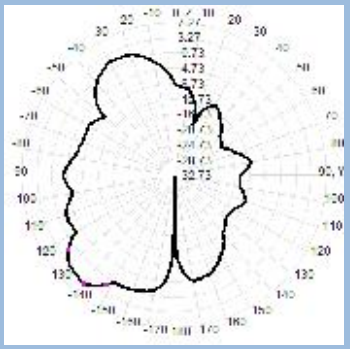
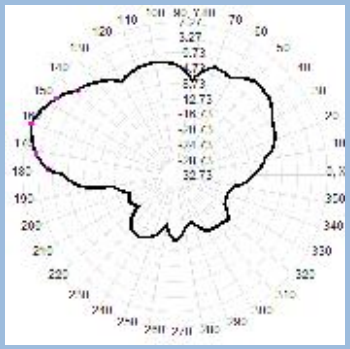
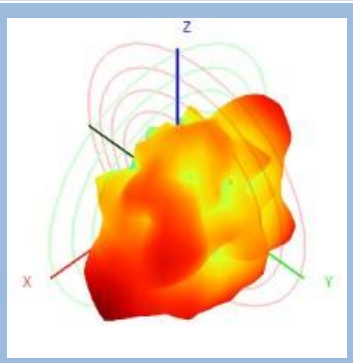
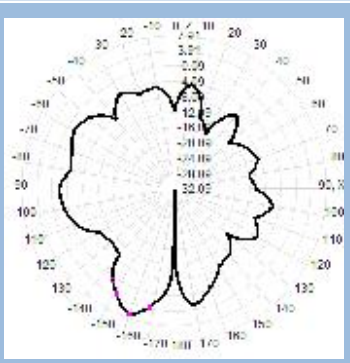
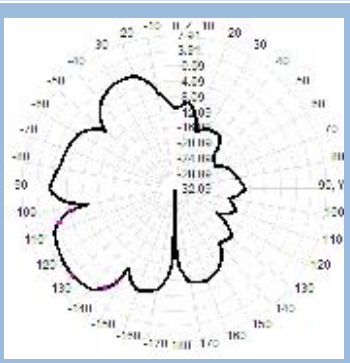
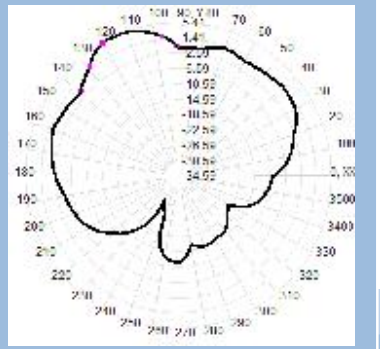
WiFi main

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13
Frequency (MHz)	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Gain (dBi)	6.01	6.58	7.36	7.07	7.21	7.27	7.28	7.23	7.00	7.42	7.72	7.81	8.40
Efficiency (%)	55.49	56.70	64.17	60.53	54.80	52.69	53.59	48.68	47.23	52.02	55.54	53.27	55.44

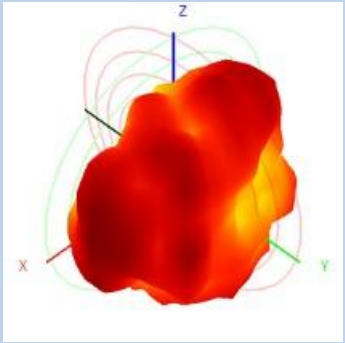
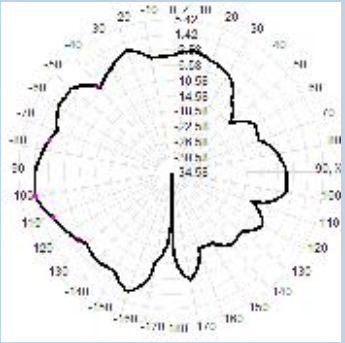
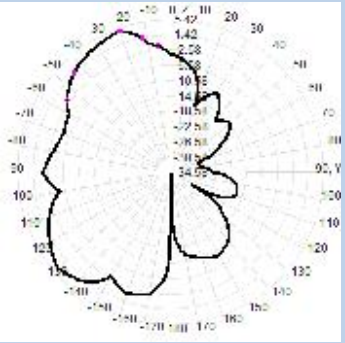
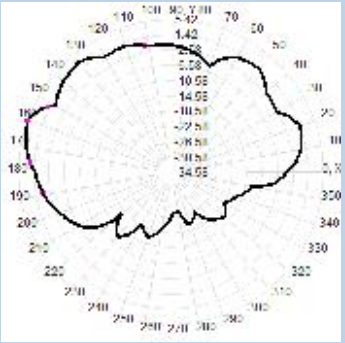
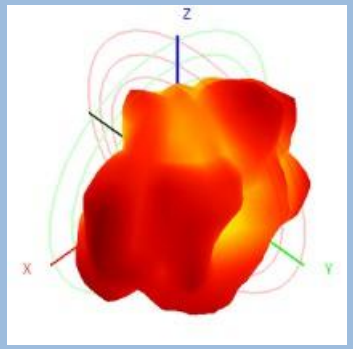
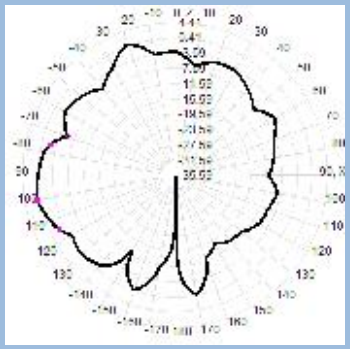
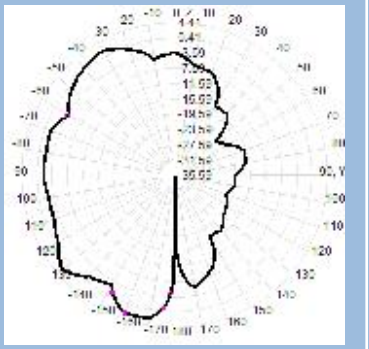
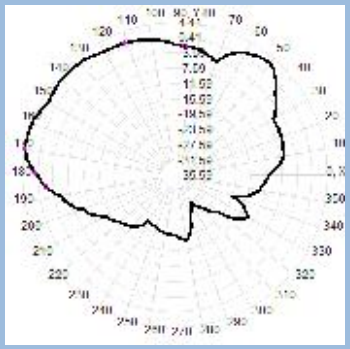
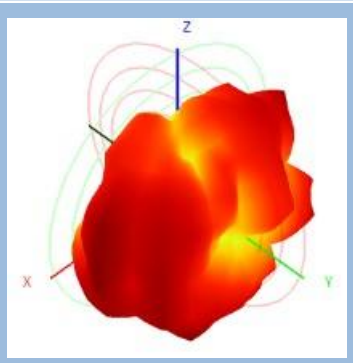
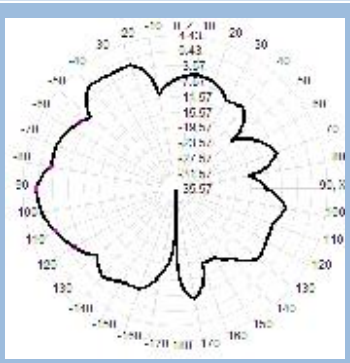
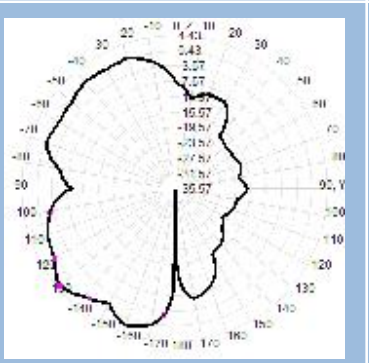
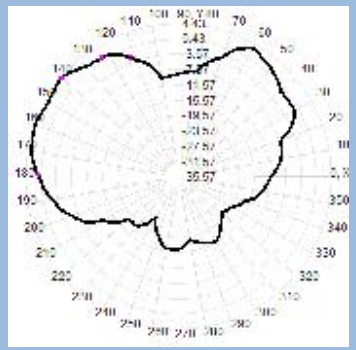
WiFi aux

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13
Frequency (MHz)	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Gain (dBi)	6.59	6.22	6.43	5.95	5.96	6.00	6.67	6.65	6.87	6.82	6.32	5.83	5.51
Efficiency (%)	50.70	50.90	51.65	51.29	49.88	53.87	58.71	56.42	54.73	54.83	53.99	51.26	50.84

6.2 天线场型图（WIFI-aux)

	3D	XoZ	YoZ	XoY
5150				
5500				
5850				

6.2 天线场型图（WIFI-aux)

	3D	XoZ	YoZ	XoY
5150				
5500				
5850				

7.1 有源数据

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WLAN Antenna Performance Table

WLAN Whole Band TRP (dBm) **12.45**

WLAN Whole Band TIS (dBm) **-68.29**

		Channel No.	Freq. (MHz)	TRP (dBm)	TIS (dBm)
Phone Tx (Uplink Path)	1	1	--	12.27	--
	2	6	--	12.28	--
	3	11	--	12.81	--
Phone Rx (Downlink Path)	1	1	--	--	-66.33
	2	6	--	--	-65.28
	3	11	--	--	-73.26

11b-11M有源数据

WLAN Antenna Performance Table

WLAN Whole Band TRP (dBm) **10.73**

WLAN Whole Band TIS (dBm) **-73.24**

		Channel No.	Freq. (MHz)	TRP (dBm)	TIS (dBm)
Phone Tx (Uplink Path)	1	36	--	10.07	--
	2	149	--	11.02	--
	3	161	--	11.10	--
Phone Rx (Downlink Path)	1	36	--	--	-71.50
	2	149	--	--	-73.85
	3	161	--	--	-74.37

11a-54M有源数据

2.4G 11b-11M TIS 测试数据偏低，故测拉外置天线进行测试验证

7.2 有源数据-外置天线

WLAN Antenna Performance Table

WLAN Whole Band TRP (dBm) **13.15**

WLAN Whole Band TIS (dBm) **-72.03**

		Channel No.	Freq. (MHz)	TRP (dBm)	TIS (dBm)
Phone Tx (Uplink Path)	1	1	--	12.85	--
	2	6	--	13.12	--
	3	11	--	13.48	--
Phone Rx (Downlink Path)	1	1	--	--	-67.21
	2	6	--	--	-72.41
	3	11	--	--	-76.47

外置天线测试为天线外挂进行测试，可排除机器干扰，可以判断模块本身TIS较低

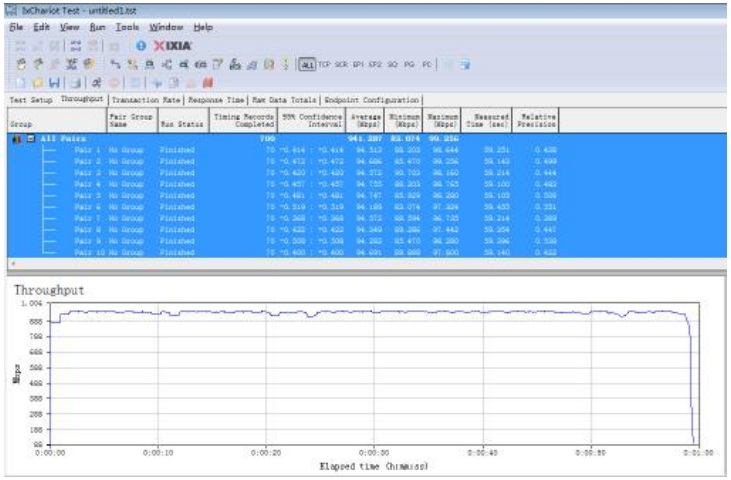
8.1 吞吐量测试环境

测试环境：

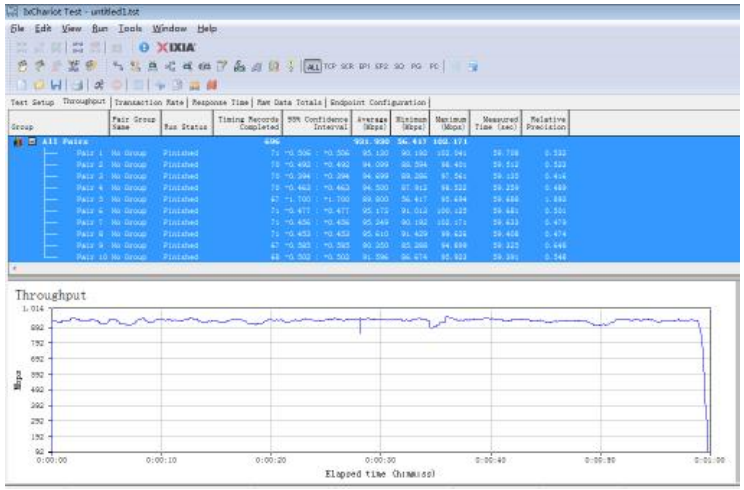
测试距离为10m

吞吐量为拉距10m进行测试，由于距离较大，且测试环境为非屏蔽箱测试，受到的干扰极大，测试数据仅作参考

8.2 吞吐量数据



TX5G:941Mbps



RX5G:931Mbps

Thank you!