

天线测试报告

Antenna Test Report

*Manufacturer: SHENZHEN ELECTRON TECHNOLOGY
CO., LTD.*

MN: WL1109TH

RF: 陈鑫

MD: 黄清清

MP: 13184572550

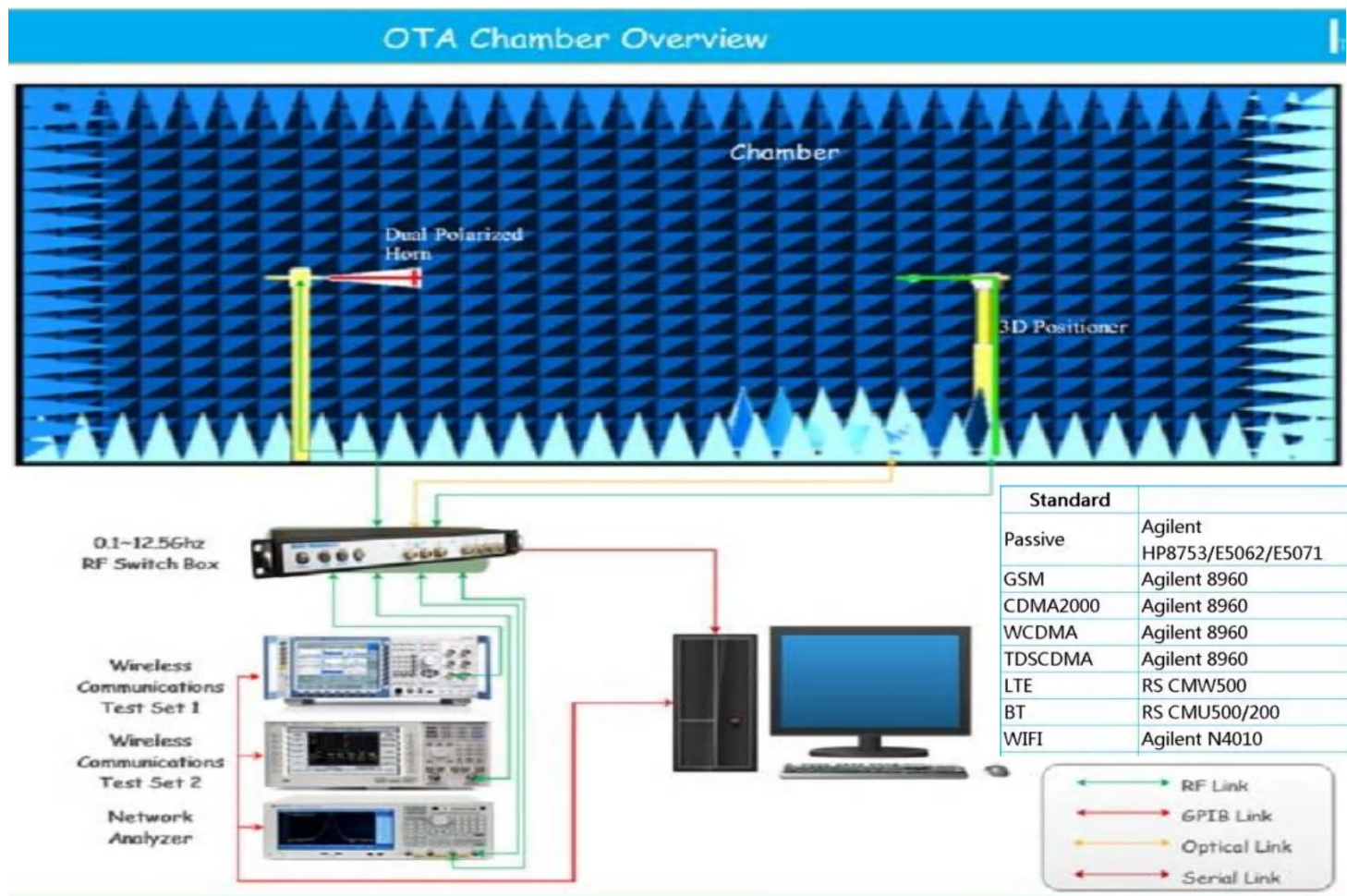
*Manufacturer Address: RBld. 2, Yingfeng Industrial
Zone, Tantou Community, Songgang Street, Bao' an,
Shenzhen, China.*

Date: 2025. 11. 18.
REV :V1. 0

测试信息

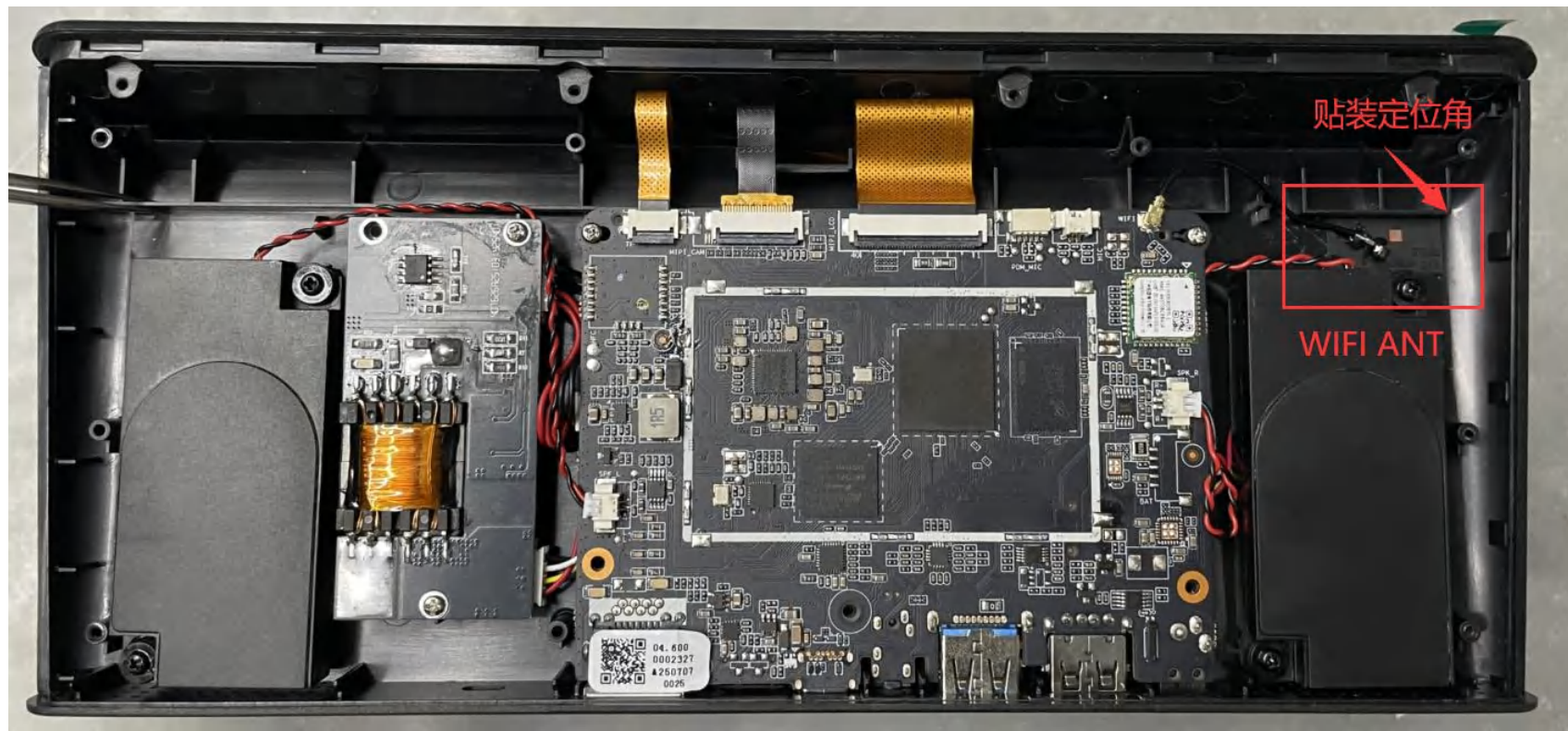
Test information

Antenna band		Antenna state	Antenna form	Match changes	Note
Main ANT	2G	FPC	PIFA	NO	
	3G				
	4G				
AUX ANT	BT/WIFI	2.4G/5G	FPC	PIFA	NO
	GPS		FPC	PIFA	NO
	DIV		FPC	PIFA	NO

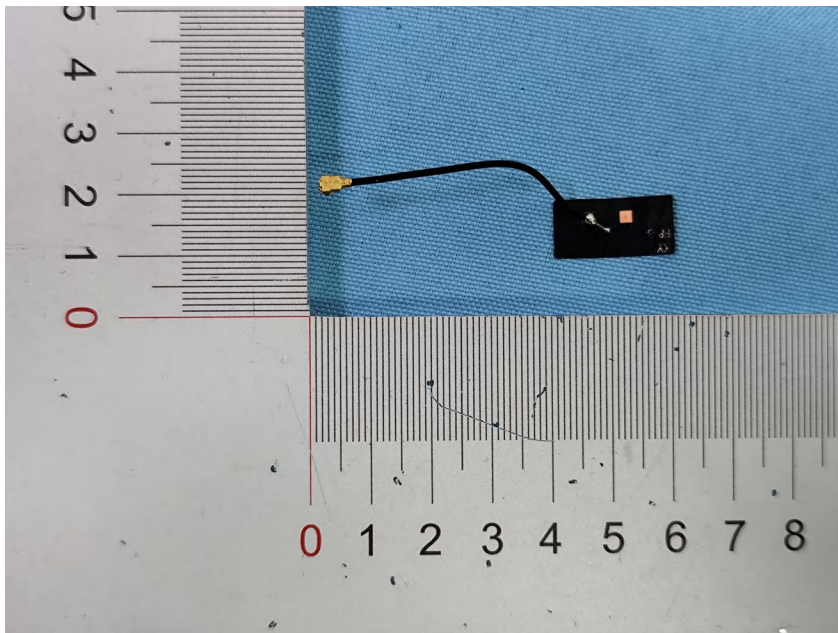


天线位置

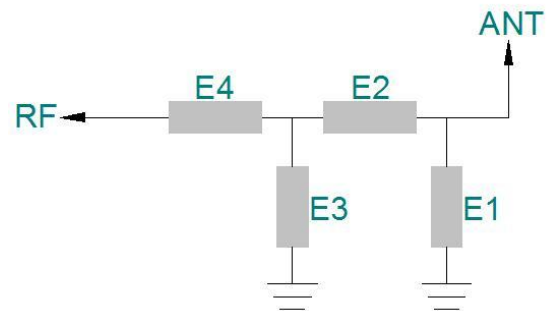
Antenna position



匹配电路 Matching circuit



匹配电路原理图&位号图



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

有源测试数据

Active test data

802.11b	Frequency	TRP		TIS	
	2412	CH1 11Mbps	14.46	CH1 11Mbps	-76.54
	2437	CH6 11Mbps	14.31	CH6 11Mbps	-78.22
	2467	CH11 11Mbps	14.39	CH11 11Mbps	-80.19
802.11g		TRP		TIS	
	2412	CH1 54Mbps	13.08	CH36 54Mbps	-65.38
	2437	CH6 54Mbps	13.19	CH60 54Mbps	-66.66
	2467	CH11 54Mbps	13.45	CH161 54Mbps	-66.76
802.11n		TRP		TIS	
	2412	CH1 MCS7	14.54	CH1 MCS7	-64.75
	2437	CH6 MCS7	14.10	CH6 MCS7	-64.07
	2467	CH11 MCS7	14.57	CH11 MCS7	-64.20
802.11a		TRP		TIS	
	5180	CH36 54Mbps	13.35	CH36 54Mbps	-71.48
	5300	CH60 54Mbps	13.38	CH60 54Mbps	-71.15
	5805	CH161 54Mbps	13.65	CH161 54Mbps	-71.74

Wifi/BT天线实测

Wifi Antenna test

WIFI

Test Environment: Open space

Test Tool: Wifi Analytical

Assistant

Test Distance: 10m

Signal Strength: 2.4G: -38dBm, 5G:
-44dBm Test results are shown in
the right figure.

SSID	DEVICE	RSSI	FREQ	CH	WID
XVC2023	70:85:c4:73:7d:ad	-38	2437	6	20
XVC2023_5G	72:85:c4:93:7d:ad	-44	5300	60	80
<HiddenSSID>	72:85:c4:d3:7d:ad	-46	5300	60	80
XVC2025	c6:b2:5b:88:ee:de	-49	2412	1	20
	c4:b2:5b:28:ee:de	-51	5260	52	80
	c6:b2:5b:89:29:ef	-56	2412	1	20
ChinaNet-2jvE	c4:b2:5b:29:29:ef	-60	5765	153	80
NETGEAR95	TIANYI COMHEART	-54	2417	2	20
NETGEAR95-5G	6c:cd:d6:07:22:e8	-55	2447	8	40
XVC2025-1	6c:cd:d6:07:22:e7	-56	5220	44	160
@PHICOMM50	TP-LINK	-57	2442	7	40
	Phicomm				

BT

Test environment: Open space
(channel)

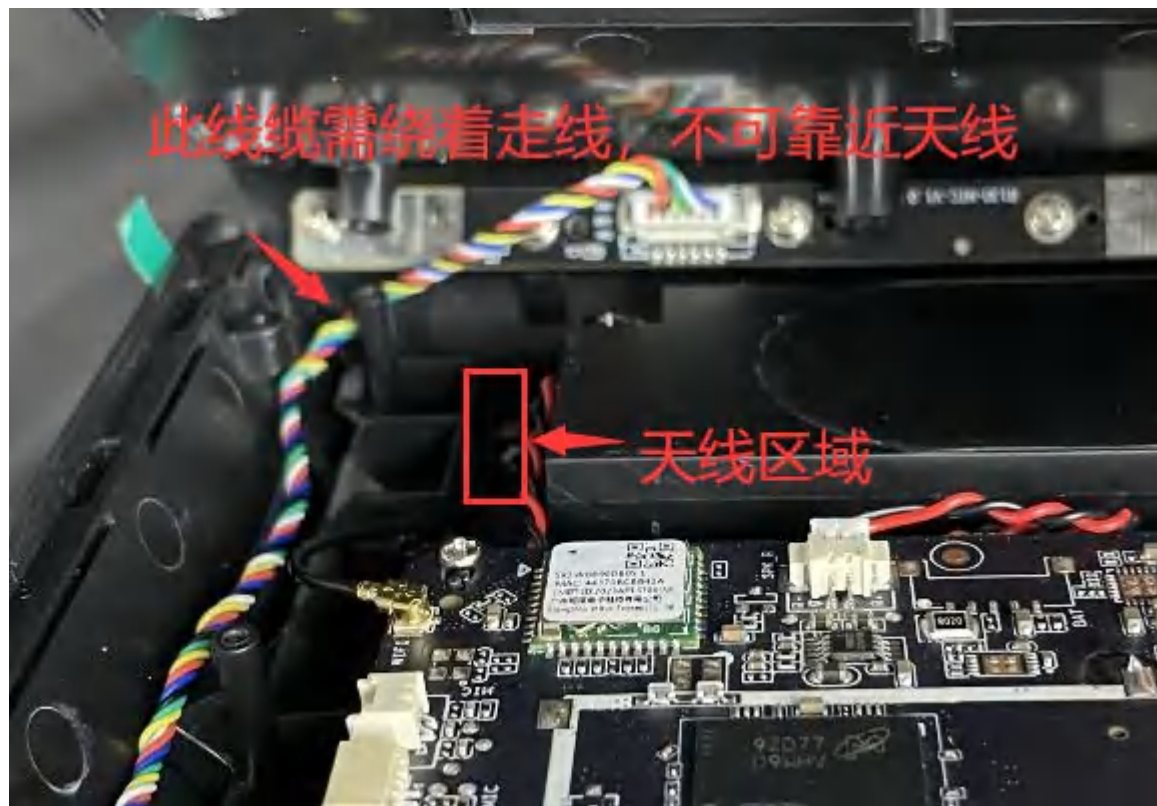
Test tool: Bluetooth speaker

Test distance: 10+m

Result: Music playback is smooth and
there is no noise.

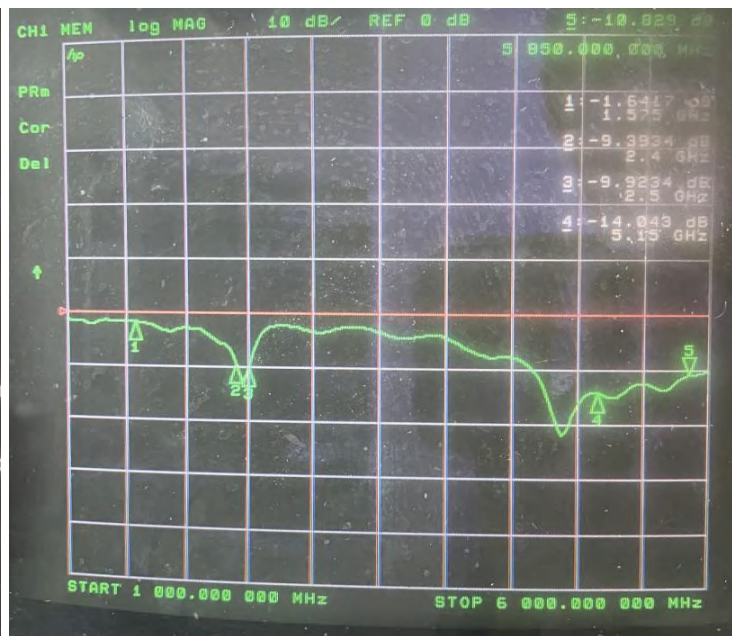
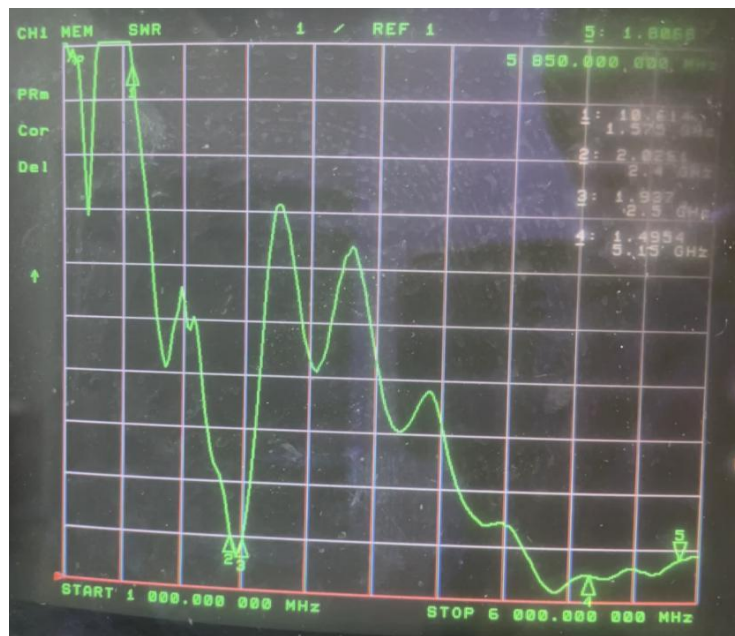
环境处理

Environmental treatment



无源测试数据 Passive test data

ANT1 S11-VSWR&Return Loss



Frequency (MHZ)	2400	2500	5150	5850
VSWR	2.02	1.93	1.49	1.88
Return Loss (DB)	-9.39	-9.92	-14.04	-10.82

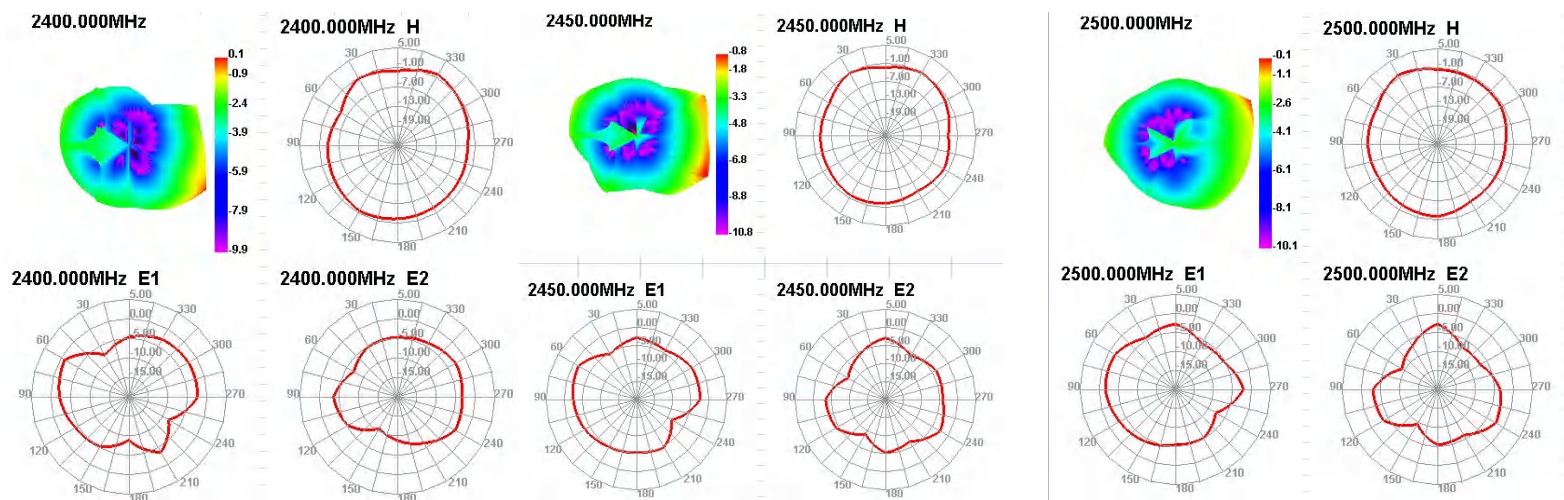
无源测试数据
Passive test data

ANT1 GAIN&Efficiency-WIFI2.4G/BT

Passive Test For WIFI2.4								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)
2400	39.33	-4.05	0.05	-2.1	21.318	18.011	0.05	-10.69
2410	37.32	-4.28	-0.08	-2.23	20.171	17.152	-0.08	-10.48
2420	38.69	-4.12	-0.05	-2.2	20.767	17.918	-0.05	-10.12
2430	38.95	-4.09	-0.26	-2.41	20.771	18.182	-0.26	-9.89
2440	39.1	-4.08	-0.49	-2.64	20.816	18.289	-0.49	-9.53
2450	38.95	-4.09	-0.76	-2.91	20.607	18.344	-0.76	-9.72
2460	38.74	-4.12	-1.01	-3.16	20.235	18.502	-1.01	-10.14
2470	39.78	-4	-0.84	-2.99	20.339	19.438	-0.84	-10.01
2480	40.53	-3.92	-0.47	-2.62	20.209	20.318	-0.47	-10.29
2490	40.1	-3.97	-0.1	-2.25	19.531	20.572	-0.1	-11.61
2500	37.26	-4.29	-0.07	-2.22	17.835	19.424	-0.07	-12.35

无源测试数据 Passive test data

ANT1 Direction of figure (2.4/BT)



无源测试数据

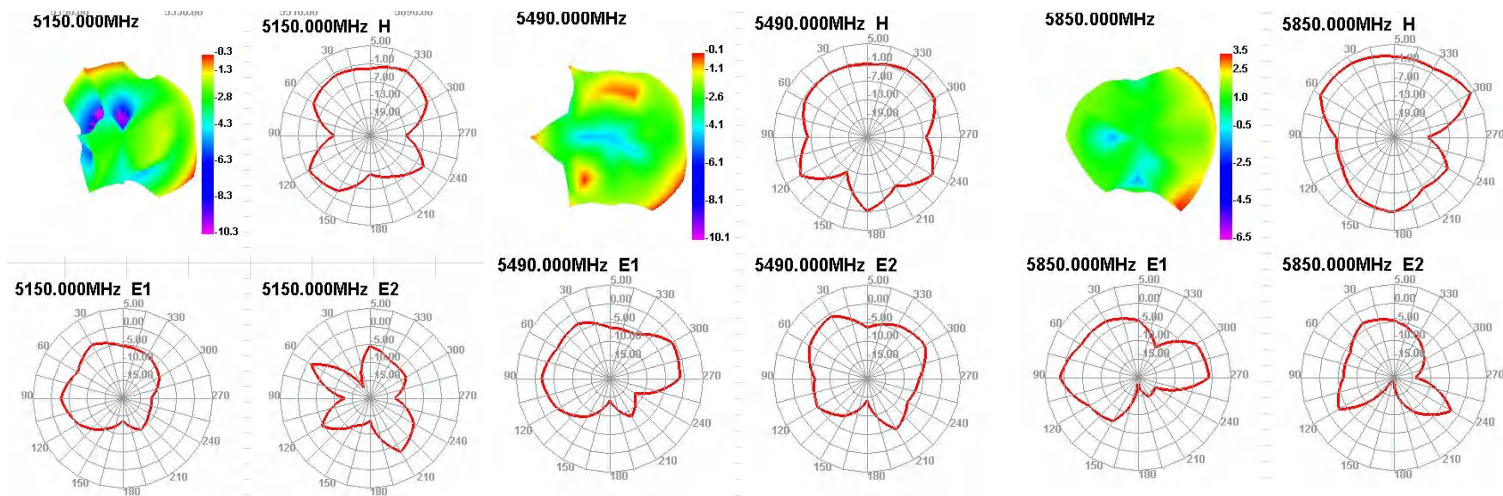
Passive test data

ANT1 GAIN&Efficiency-WIFI 5G

Passive Test For WIFI5G								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)
5150	27.41	-5.62	-0.26	-2.41	15.201	12.207	-0.26	-21.67
5170	27.51	-5.61	-0.69	-2.84	15.408	12.103	-0.69	-20.72
5190	27.87	-5.55	-0.37	-2.52	15.73	12.144	-0.37	-18.3
5210	32.1	-4.94	0.16	-1.99	18.167	13.931	0.16	-17.41
5230	30.17	-5.2	0.35	-1.8	17.22	12.947	0.35	-20.08
5250	34.96	-4.56	1.18	-0.97	20.006	14.954	1.18	-19.1
5270	35.43	-4.51	1.25	-0.9	20.164	15.269	1.25	-16.92
5290	38.06	-4.2	1.34	-0.81	21.52	16.537	1.34	-16.23
5310	35	-4.56	0.77	-1.38	19.756	15.246	0.77	-16.94
5330	36.7	-4.35	0.9	-1.25	20.79	15.915	0.9	-15.87
5350	38.14	-4.19	0.61	-1.54	21.782	16.358	0.61	-15.72
5370	39.31	-4.05	0.37	-1.78	22.739	16.571	0.37	-16.14
5390	35.86	-4.45	-0.09	-2.24	20.83	15.026	-0.09	-18.32
5410	43.51	-3.61	0.42	-1.73	25.406	18.104	0.42	-19.91
5430	39.21	-4.07	-0.19	-2.34	23.292	15.916	-0.19	-17.86
5450	44.36	-3.53	0.46	-1.69	26.815	17.544	0.46	-15.81
5470	42.99	-3.67	0.2	-1.95	26.113	16.88	0.2	-15.88
5490	45.48	-3.42	-0.09	-2.24	27.606	17.874	-0.09	-14.2
5510	47.14	-3.27	1.03	-1.12	28.898	18.247	1.03	-13.43
5530	49.63	-3.04	1.88	-0.27	30.837	18.795	1.88	-14.31
5550	52.93	-2.76	2.38	0.23	32.887	20.046	2.38	-14.84
5570	53.01	-2.76	2.69	0.54	32.69	20.324	2.69	-16.41
5590	57.05	-2.44	3.39	1.24	35.132	21.917	3.39	-18.1
5610	55.46	-2.56	3.59	1.44	34.822	20.634	3.59	-17.96
5630	57.95	-2.37	4.05	1.9	36.763	21.185	4.05	-17.42
5650	55.62	-2.55	4.07	1.92	35.191	20.433	4.07	-18.59
5670	59.92	-2.22	4.45	2.3	37.903	22.02	4.45	-20.11
5690	58.23	-2.35	4.36	2.21	37.045	21.188	4.36	-21.52
5710	58.24	-2.35	4.59	2.44	37.184	21.061	4.59	-22.72
5730	61.38	-2.12	4.81	2.66	38.799	22.583	4.81	-25.77
5750	55.52	-2.56	4.1	1.95	34.465	21.058	4.1	-27.45
5770	59.04	-2.29	4.14	1.99	36.384	22.659	4.14	-31.46
5790	53.54	-2.71	3.65	1.5	32.807	20.732	3.65	-33.13
5810	55.48	-2.56	3.75	1.6	33.73	21.746	3.75	-28.98
5830	52.96	-2.76	3.29	1.14	31.677	21.288	3.29	-27.85
5850	56.91	-2.45	3.51	1.36	33.362	23.552	3.51	-26.29

无源测试数据 Passive test data

ANT1 Direction of figure(5G)



合作共赢

