

Antenna Test Report

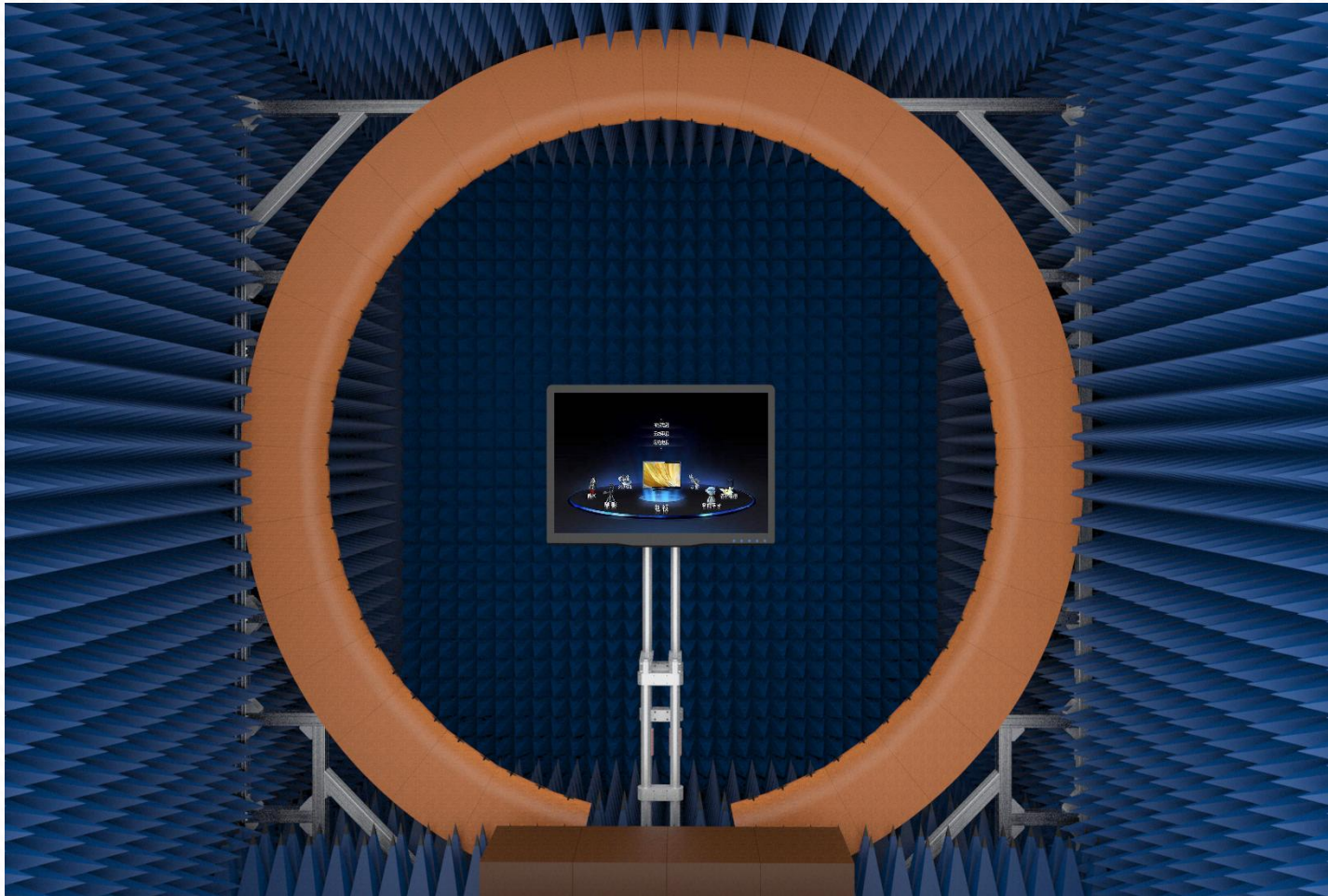
Client Name: Xtool tech
Project name: P902
Smart Diagnostic System

Report version: 2023.09.28 A5

versions	times	Updated Description
A0	2023.08.30	Preliminary commissioning report.
A1	2023.09.01	Optimize data reporting.
A2	2023.09.08	Latest sample validation data report.
A3	2023.09.13	Antenna active verification data and directionality test report.
A4	2023.09.14	Remove TP grounding treatment and directionality test report.
A5	2023.09.28	New machine validation test report.
A6		
A7		
A8		
A9		

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prototype state	Active debuggers	Project prototype drawing:
Product Type	diagnostic tablet	
Number of antennas	WIFI1WIFI2 Antenna	
antennae band	2.4+5.8WIFI	
Form of structure	FPC+Coaxial Cable	
environmental treatment	Eco-Environmental Processing	
Matching Circuit	unchanged	



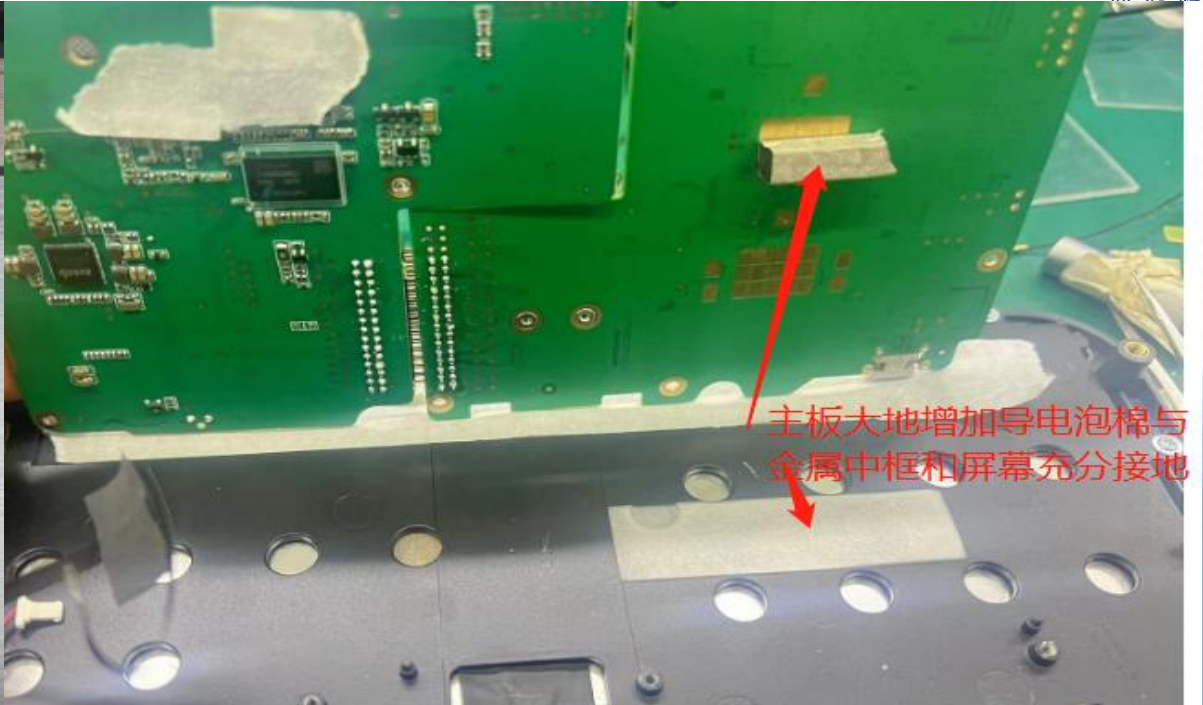
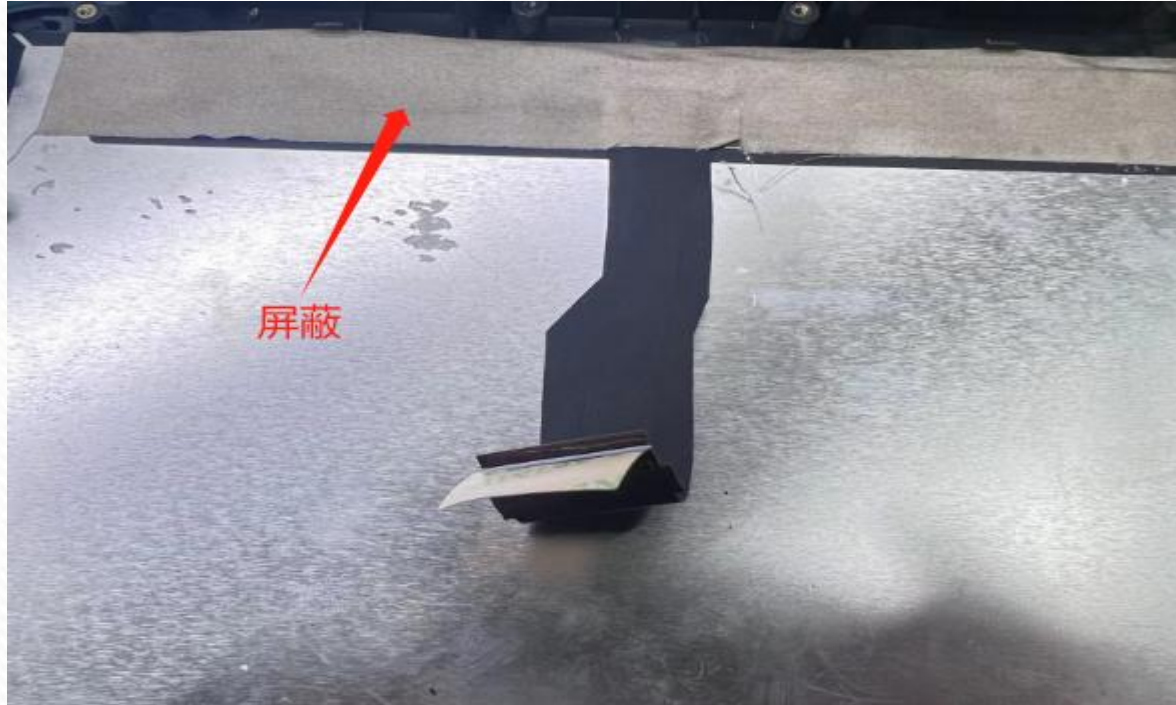
Industry's top OTA darkroom:
64 probes; length/width/height are 6 meters; items to be measured can be up to 2 meters in size

Equipment Name	总数量	上海研发中心数量	深圳研发中心数量	重庆研发中心数量
OTA Labs	10pcs	4pcs	5pcs	1pcs
5G synthesizer (SP9500-CTS)	3pcs	1pcs	1pcs	1pcs
R&S synthesizer (high end CMW500)	7pcs	3pcs	3pcs	1pcs
Japan Anri tsu synthesizer (dual-channel 8820)	4pcs	2pcs	2pcs	--
NB-IoT synthesizer (SP8315)	3pcs	1pcs	1pcs	1pcs
Agilent synthesizer (8960)	9pcs	4pcs	4pcs	1pcs
Agilent Network Analyzer (E5062A)	7pcs	3pcs	3pcs	1pcs
Agilent Network Analyzer (E5071C8.5GHZ)	11pcs	5pcs	5pcs	1pcs
Agilent Network Analyzer (E5071B8.5GHZ)	10pcs	5pcs	5pcs	1pcs
R&S Network Analyzer (ZND)	10pcs	5pcs	4pcs	1pcs
R&S Network Analyzer (ZVB)	3pcs	1pcs	1pcs	1pcs
OTA human head hand/cochlear/arm	5pcs	2pcs	2pcs	1pcs
GPS/WIFI Active Test Set	5pcs	2pcs	2pcs	1pcs



装机位置验证





Measurement	Band	Channel	亮屏100% Total
TRP	WIFI_B (11M)	1	15.67
TRP	WIFI_B (11M)	6	15.44
TRP	WIFI_B (11M)	11	15..69
TIS(EIRP)	WIFI_B (11M)	11	-81.26
TRP	WIFI_G (54M)	1	14.37
TRP	WIFI_G (54M)	6	14.61
TRP	WIFI_G (54M)	11	14.59
TIS(EIRP)	WIFI_G (54M)	11	-70.91
TRP	WIFI_N_ISM (65M)	1	14.3
TRP	WIFI_N_ISM (65M)	6	14.29
TRP	WIFI_N_ISM (65M)	11	14.46
TIS(EIRP)	WIFI_N_ISM (65M)	11	-71.27

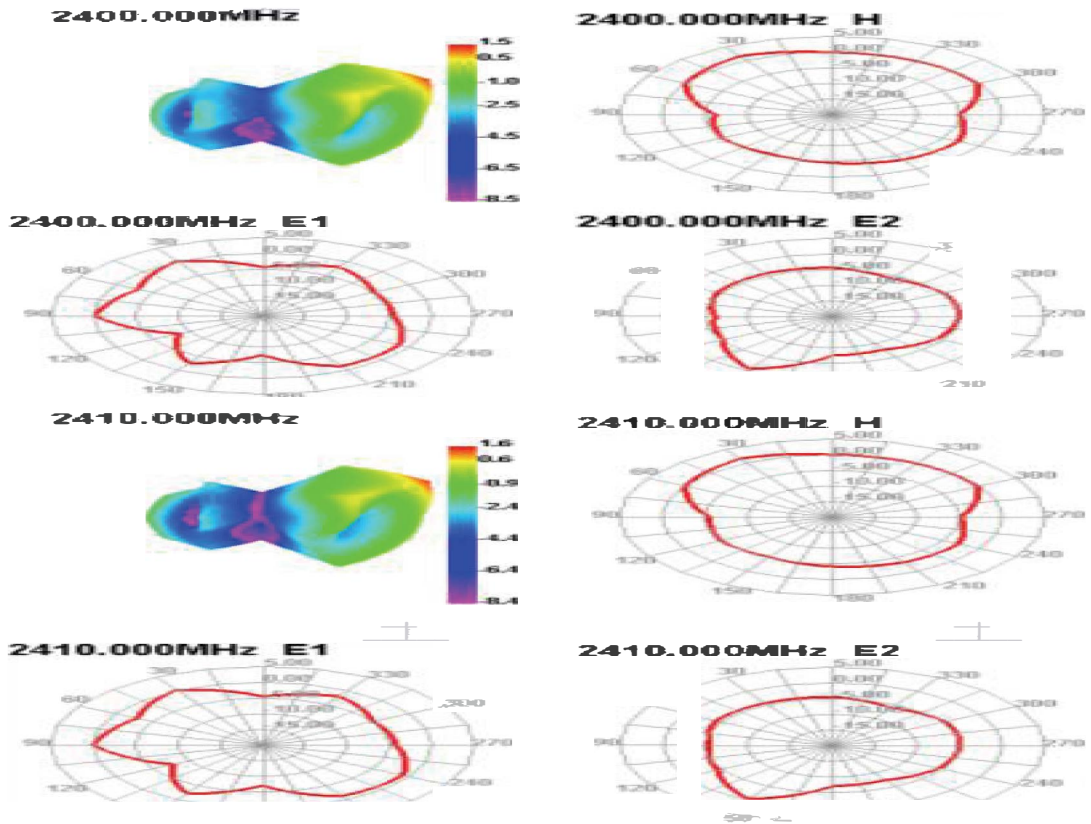
			亮屏100%(装 机位置)	亮屏 (剪短线 长)
Measurement	Band	Channel	Total	Total
TRP	WIFI_B (11M)	1	14.01	14.17
TRP	WIFI_B (11M)	6	14.32	14.2
TRP	WIFI_B (11M)	11	14.62	14.37
TIS(EIRP)	WIFI_B (11M)	11	-83.91	-83.65
TRP	WIFI_G (54M)	1	13.4	13.15
TRP	WIFI_G (54M)	6	13.15	13.29
TRP	WIFI_G (54M)	11	13.13	13.43
TIS(EIRP)	WIFI_G (54M)	11	-71.25	-71.1
TRP	WIFI_N_ISM (65M)	1	13.09	13.1
TRP	WIFI_N_ISM (65M)	6	13.15	13.28
TRP	WIFI_N_ISM (65M)	11	13.27	13.43
TIS(EIRP)	WIFI_N_ISM (65M)	11	-70.14	-70.5
TRP	WIFI_A (54M)	36	11.67	11.43
TRP	WIFI_A (54M)	149	11.05	11.69
TRP	WIFI_A (54M)	165	11.33	11.17
TIS(EIRP)	WIFI_A (54M)	165	-70.61	-70.58

- 1, Antenna version: sample;
- 2, matching changes: no changes;
- 3、 Environmental treatment: there is an increase in environmental treatment;
- 4, current summary: the latest assembly machine verification and WIFI2 antenna cut short wire length verification.

5. Antenna - Radiation Pattern Test Data

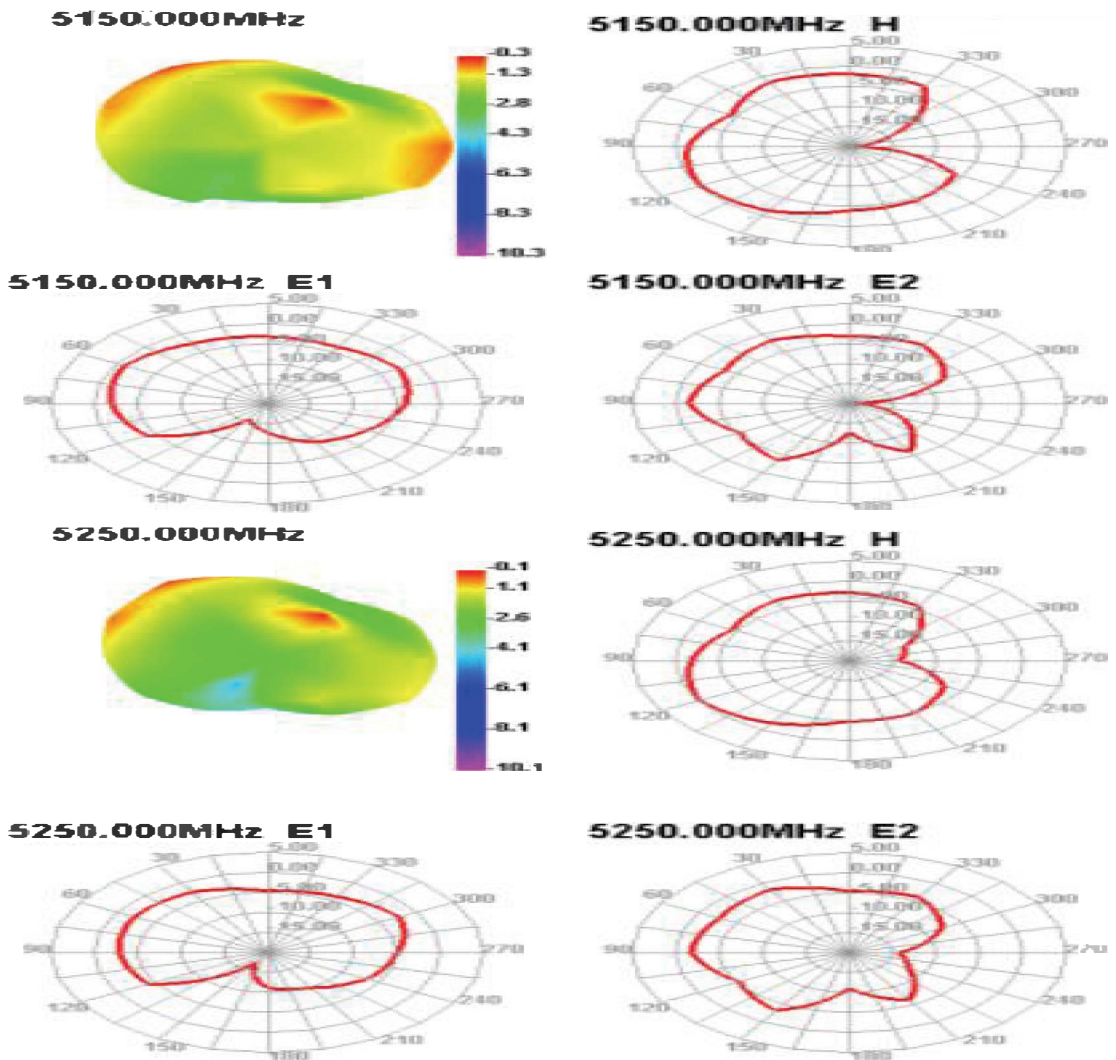
Passive Test For WIFI2400

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)
2400	56.91	-2.45	-0.95	-0.63	28.926	27.987	1.52	-8.76	3.97	0
2410	58.72	-2.31	0.00	-0.55	29.226	29.495	1.6	-7.95	3.91	0
2420	59.31	-2.27	-0.23	-0.57	28.854	30.452	1.58	-7.44	3.85	0
2430	57.61	-2.4	-0.67	-0.79	27.399	30.208	1.36	-7.44	3.75	60
2440	58.24	-2.35	-0.73	-0.82	27.105	31.134	1.33	-7.4	3.68	30
2450	58.51	-2.33	-0.72	-0.83	26.686	31.821	1.32	-7.59	3.65	60
2460	57.6	-2.4	-0.63	0.92	25.848	31.751	1.23	-7.85	3.62	60
2470	56.72	-2.46	-0.12	-1	25.101	31.618	1.15	-7.85	3.61	60
2480	57.69	-2.39	-0.23	-1.04	25.22	32.474	1.11	-7.75	3.5	60
2490	62.37	-2.05	-0.65	-0.9	26.902	35.47	1.25	-7.43	3.3	60
2500	62.22	-2.06	-0.61	-1	26.504	35.718	1.15	-7.53	3.21	60



Passive Test For WIFI-5G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)
5150	36.31	-4.4	-0.29	-2.44	23.018	13.289	-0.29	-20.92	4.11	150
5250	34.4	-4.63	-0.1	-2.25	22.104	12.294	-0.1	-18.14	4.54	210
5350	33.56	-4.74	-0.21	-2.36	21.725	11.837	-0.21	-17.45	4.53	90
5450	32.8	-4.84	-0.93	-3.08	21.155	11.643	-0.93	-14.55	3.91	60
5550	38.08	-4.19	-0.39	-2.54	24.271	13.809	-0.39	-12.72	3.8	60
5650	40.61	-3.91	-0.23	-1.8	25.254	15.355	0.35	-12.95	4.26	60
5750	44.89	-3.48	-0.26	-1.34	27.602	17.293	0.81	-13.08	4.28	60
5850	39.45	-4.04	0.0	-1.97	24.39	15.063	0.18	-12.96	4.22	60



Thank You

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