

Antenna Testing Report

Customer : PAX Computer Technology(Shenzhen)Co.,Ltd.

Project Name : A920PRO-7861

Report version: October 11, 2025 A0

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Approval: Liu Xinhao *Liu Xin hao*

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A0	2025.10.11	Antenna Passive Tuning Report
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Project Overview

Prototype status	Debugging machine
Device type	POS
Number of antennas	Main antenna, Diversity antenna,WIFI,GPS,Bluetooth
Frequency band	
	WCDMA B2/4/5
	FDD LTE B2/4/5/12/13/17
	WiFi 2.4/5.8
	GPS L1
Antenna Type	FPC Antenna
Environment adjustment	change
Matching modification	No change

Equipment List

The industry's top 64 sensors OTA chamber

Frequency range: 400MHz-11GHz

Device Llimitation: 2M

Load-bearing limitation:100KG

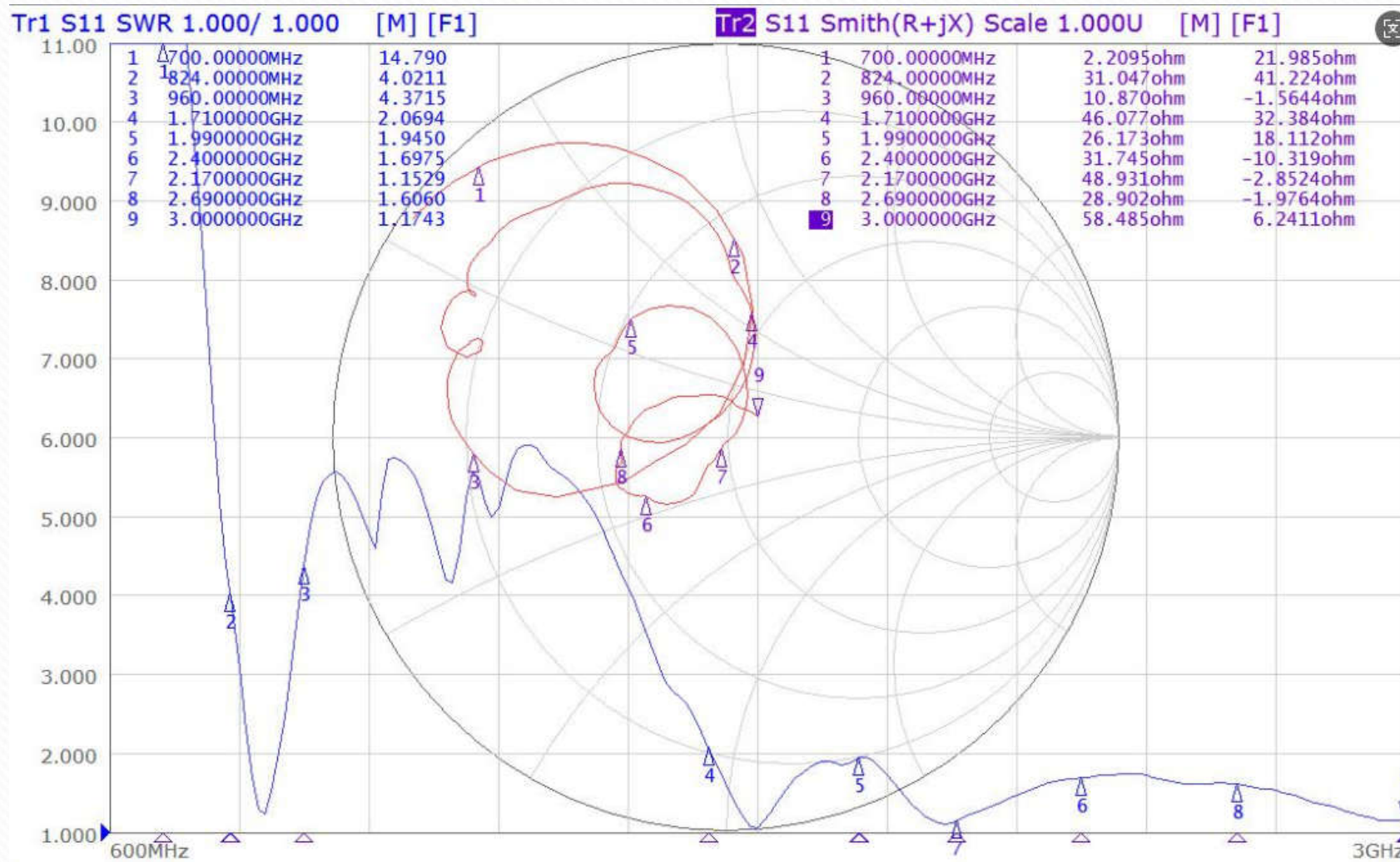
Equipments Items	Total Quantity	Quantity for Shanghai R&D	Quantity for Shenzhen R&D	Quantity for ChongQing R&D
OTA chamber	10	4	5	1
5G Tester (SP9500-CTS)	3	1	1	1
R&S Tester (high configuration CMW500)	6	3	2	1
Japan Anritsu Tester (Dual Channel 8820)	4	2	2	--
NB-IoT Tester (SP8315)	3	1	1	1
Agilent Tester (8960)	9	4	4	--
Agilent Network Analyzer (E5062A)	7	3	3	1
Agilent Network Analyzer (E5071C 8.5GHZ)	11	5	5	1
Agilent Network Analyzer (E5071B 8.5GHZ)	7	3	3	1
R&S Network Analyzer (ZND)	9	4	4	1
R&S Network Analyzer (ZVB)	3	1	1	1
OTA head hand / ear hand / arm hand	5	2	2	1
GPS/WIFI active test equipment	5	2	2	1

Test equipment

		date
Test equipment and calibration data	CWM500	2025.6.3—2026.6.3
	Network Analyzer VNA485L	2025.6.3—2026.6.3
Test Applications	Passive Test	

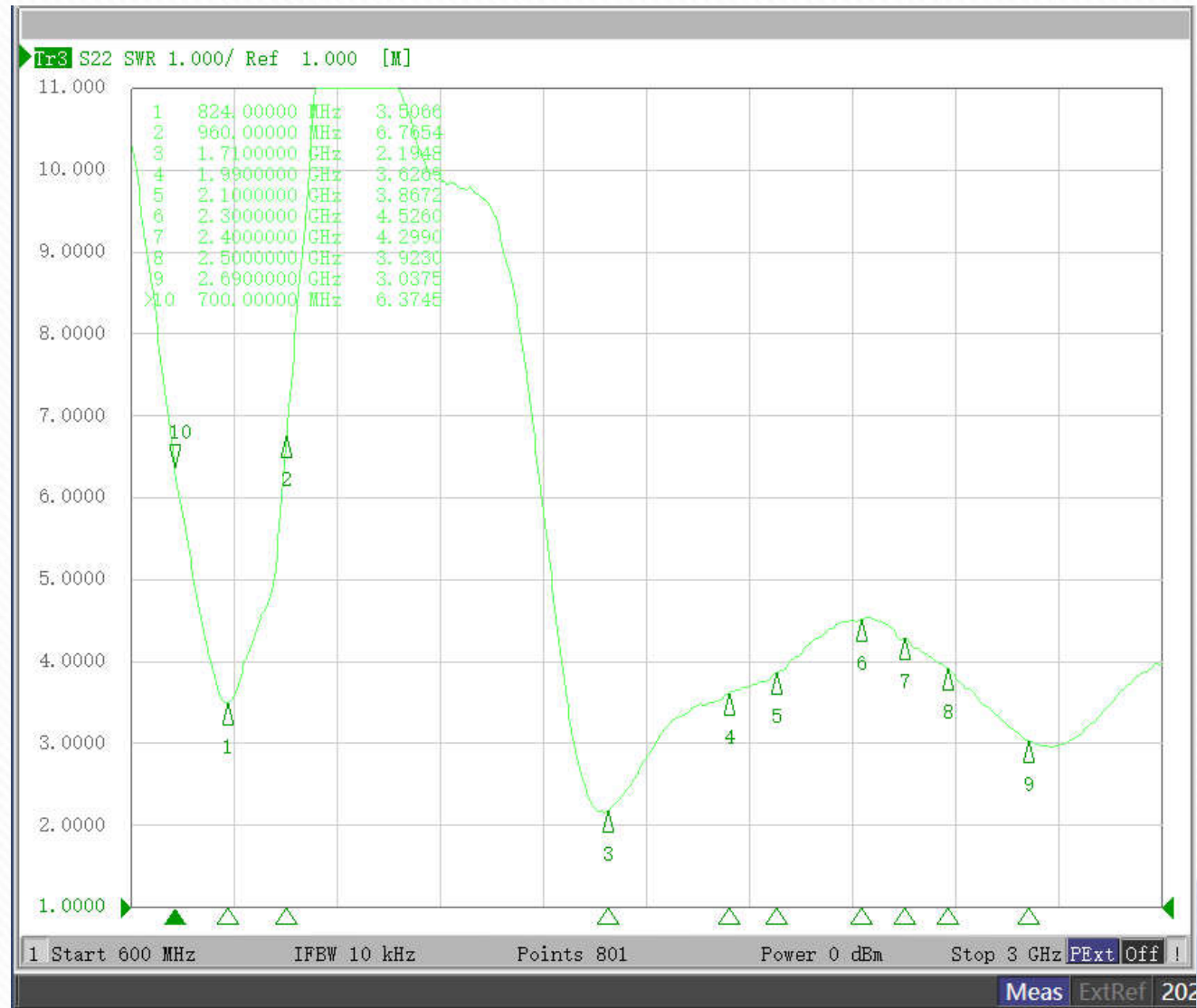
S11 parameter test

Main Antenna



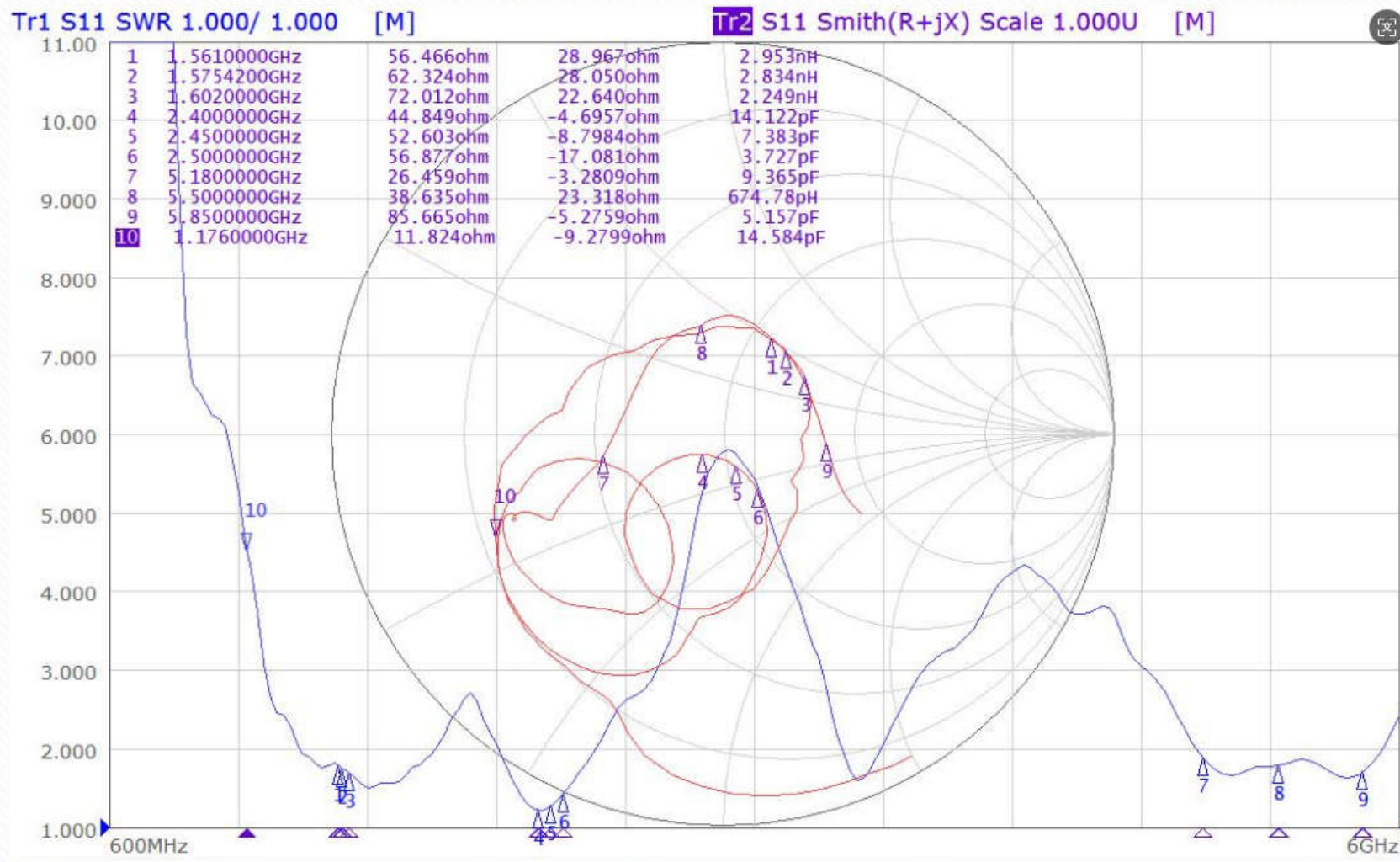
S11 parameter test

Diversity Antenna



S11 parameter test

WiFi Antenna

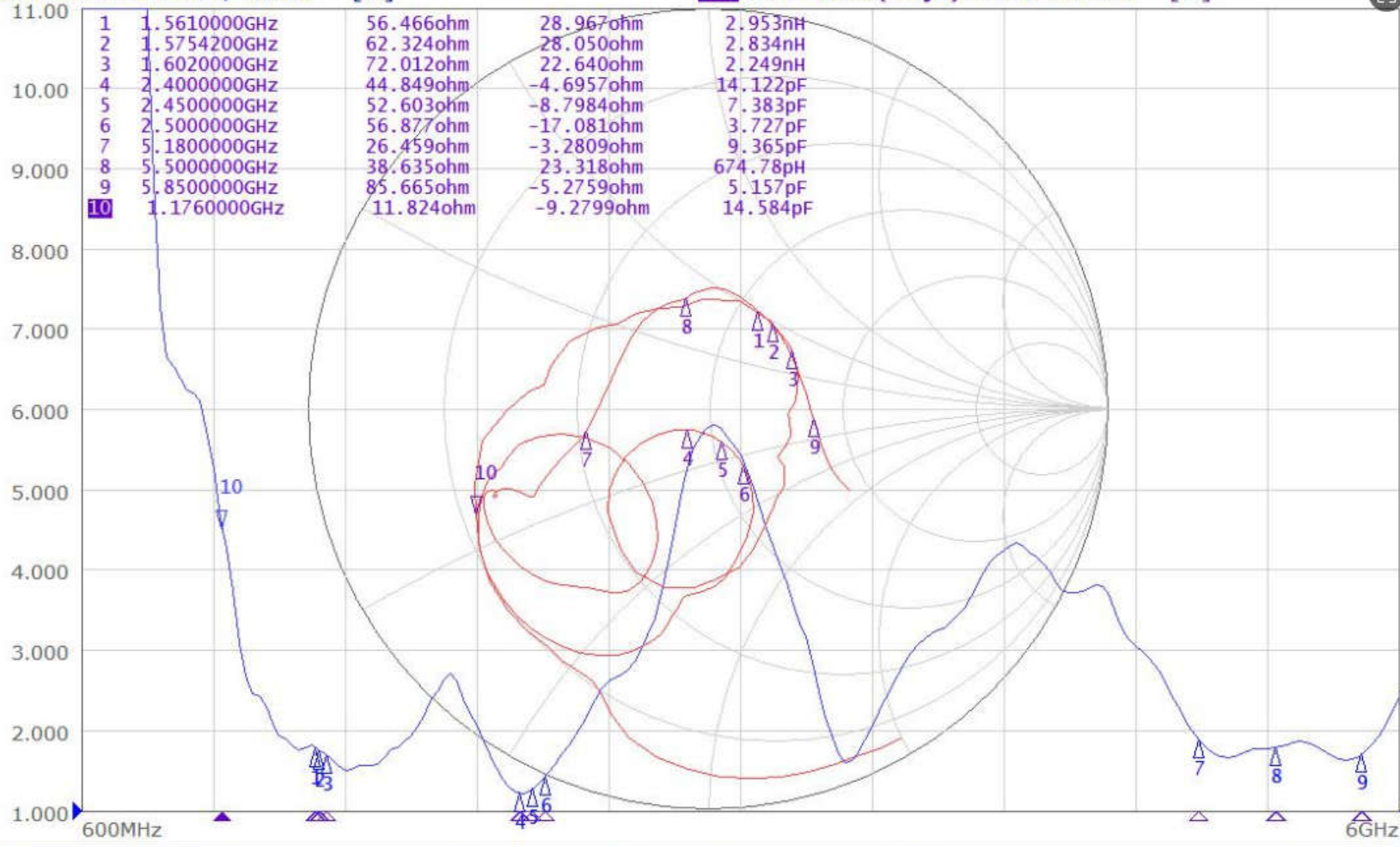


S11 parameter test

GPS Antenna

Tr1 S11 SWR 1.000/ 1.000 [M]

Tr2 S11 Smith(R+jX) Scale 1.000U [M]



Passive efficiency and Gain

Main Antenna

Frequency/Mhz	Efficiency / %	Efficiency / dB	Gain/dBi
700	18.17	-7.41	-5.81
750	22.86	-6.41	-4.68
800	24.95	-6.03	-3.78
850	28.71	-5.42	-3.11
900	29.31	-5.33	-2.83
950	31.48	-5.02	-2.35
1000	27.54	-5.6	-3
1700	25.82	-5.88	-1.74
1750	29.04	-5.37	-1.28
1800	27.67	-5.58	-0.8
1850	27.1	-5.67	-0.63
1900	28.77	-5.41	-0.71
1950	32.51	-4.88	-0.27
2000	32.89	-4.83	-0.72
2050	34.28	-4.65	-0.74
2100	33.81	-4.71	-0.62
2150	38.9	-4.1	0.37
2200	38.46	-4.15	0.41
2250	37.93	-4.21	2.58
2300	34.12	-4.67	0.91
2350	36.22	-4.41	1.02
2400	35.32	-4.52	0.85
2450	34.91	-4.57	0.84
2500	36.22	-4.41	1.06
2550	37.41	-4.27	0.56
2600	37.33	-4.28	0.99
2650	36.73	-4.35	1.06

Passive efficiency and Gain

Diversity
Antenna

Frequency/Mhz	Efficiency / %	Efficiency / dB	MaxGain/dBi
700	5.4	-12.68	-9.9
720	7.53	-11.23	-8.25
740	8.71	-10.6	-6.96
760	10.19	-9.92	-6.88
780	11.97	-9.22	-6.22
800	11.3	-9.47	-6.45
820	8.55	-10.68	-9.09
840	10.05	-9.98	-8.74
860	10.4	-9.83	-9.42
880	9.27	-10.33	-9.54
900	8.73	-10.59	-9.22
920	8.55	-10.68	-8.9
940	6.31	-12	-9.34
960	4.94	-13.06	-10.12
1710	32.28	-4.91	-0.03
1760	41.98	-3.77	0.79
1810	45.08	-3.46	1.33
1860	35.97	-4.44	0.4
1910	26.3	-5.8	-0.3
1960	27.48	-5.61	-1.14
2010	22.18	-6.54	-2.23
2060	29.04	-5.37	0.61
2110	35.4	-4.51	0.48
2160	32.81	-4.84	2.76
2210	33.04	-4.81	1.16
2260	41.69	-3.8	2.43
2310	52.6	-2.79	3.03
2360	47.64	-3.22	1.66
2410	43.85	-3.58	0.99
2460	39.26	-4.06	1.01
2510	37.24	-4.29	0.93
2560	36.81	-4.34	1.41
2610	35.65	-4.48	0.83
2660	32.58	-4.87	0.69

Passive efficiency and Gain

GPS Antenna

Frequency/Mhz	Efficiency / dB	Efficiency / %	Gain/dBi
1555	-4.94	32.06	-1.98
1560	-4.78	33.27	-1.88
1565	-4.86	32.66	-2.01
1570	-4.97	31.84	-2.07
1575	-5.08	31.05	-2.1
1580	-5.21	30.13	-2.11
1585	-5.27	29.72	-1.99
1590	-5.29	29.58	-1.9
1595	-5.27	29.72	-1.87
1600	-5.23	29.99	-1.94

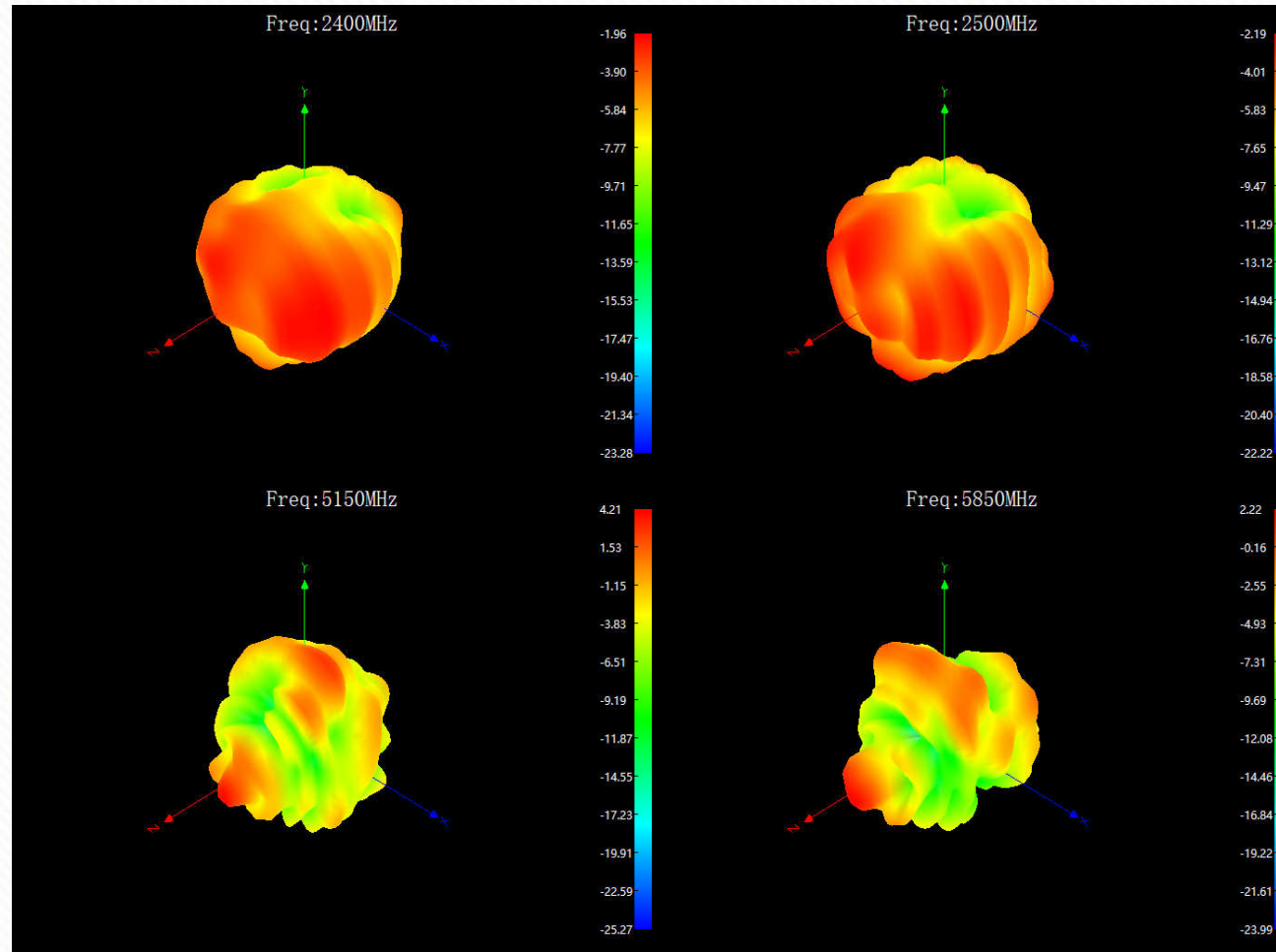
Passive efficiency and Gain

Wifi Antenna

Frequency/Mhz	Efficiency / %	Efficiency / dB	Gain/dBi	Frequency/Mhz	Efficiency / %	Efficiency / dB	Gain/dBi
2400	30.41	-5.17	-2.31	5150	39.99	-3.98	-3.98
2410	31.19	-5.06	-2.29	5200	38.46	-4.15	-4.15
2420	31.55	-5.01	-2.3	5250	36.9	-4.33	-4.33
2430	31.62	-5	-2.35	5300	36.31	-4.4	-4.4
2440	31.48	-5.02	-2.26	5350	33.81	-4.71	-4.71
2450	31.48	-5.02	-2.21	5400	33.57	-4.74	-4.74
2460	31.62	-5	-2.23	5450	32.96	-4.82	-4.82
2470	31.99	-4.95	-2.09	5500	34.2	-4.66	-4.66
2480	32.28	-4.91	-1.98	5550	33.81	-4.71	-4.71
2490	32.43	-4.89	-1.91	5600	31.84	-4.97	-4.97
				5650	32.28	-4.91	-4.91
				5700	29.58	-5.29	-5.29
				5750	25.94	-5.86	-5.86
				5800	23.6	-6.27	-6.27
				5850	20.18	-6.95	-6.95

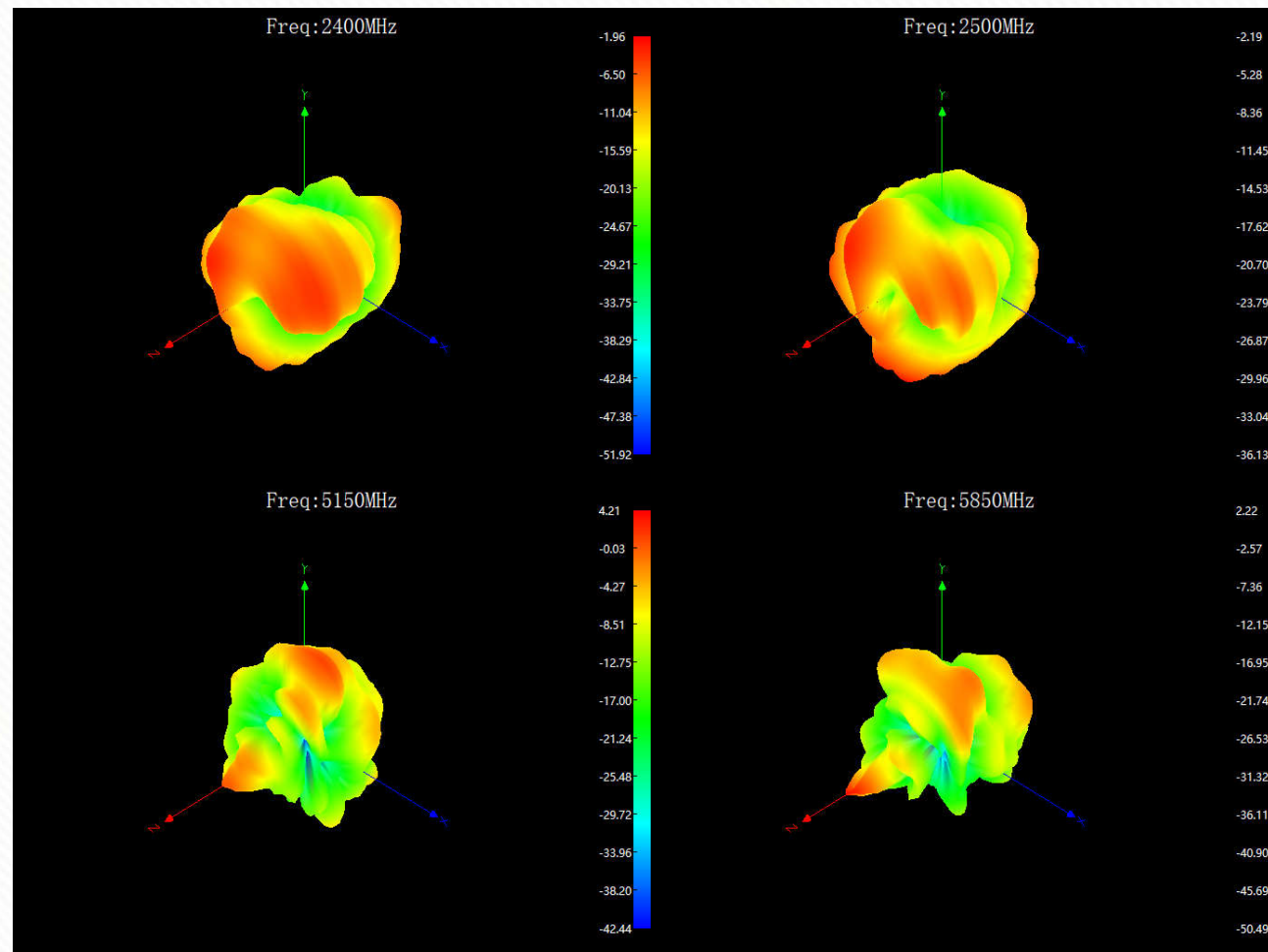
Directional pattern

WiFi Antenna-Total



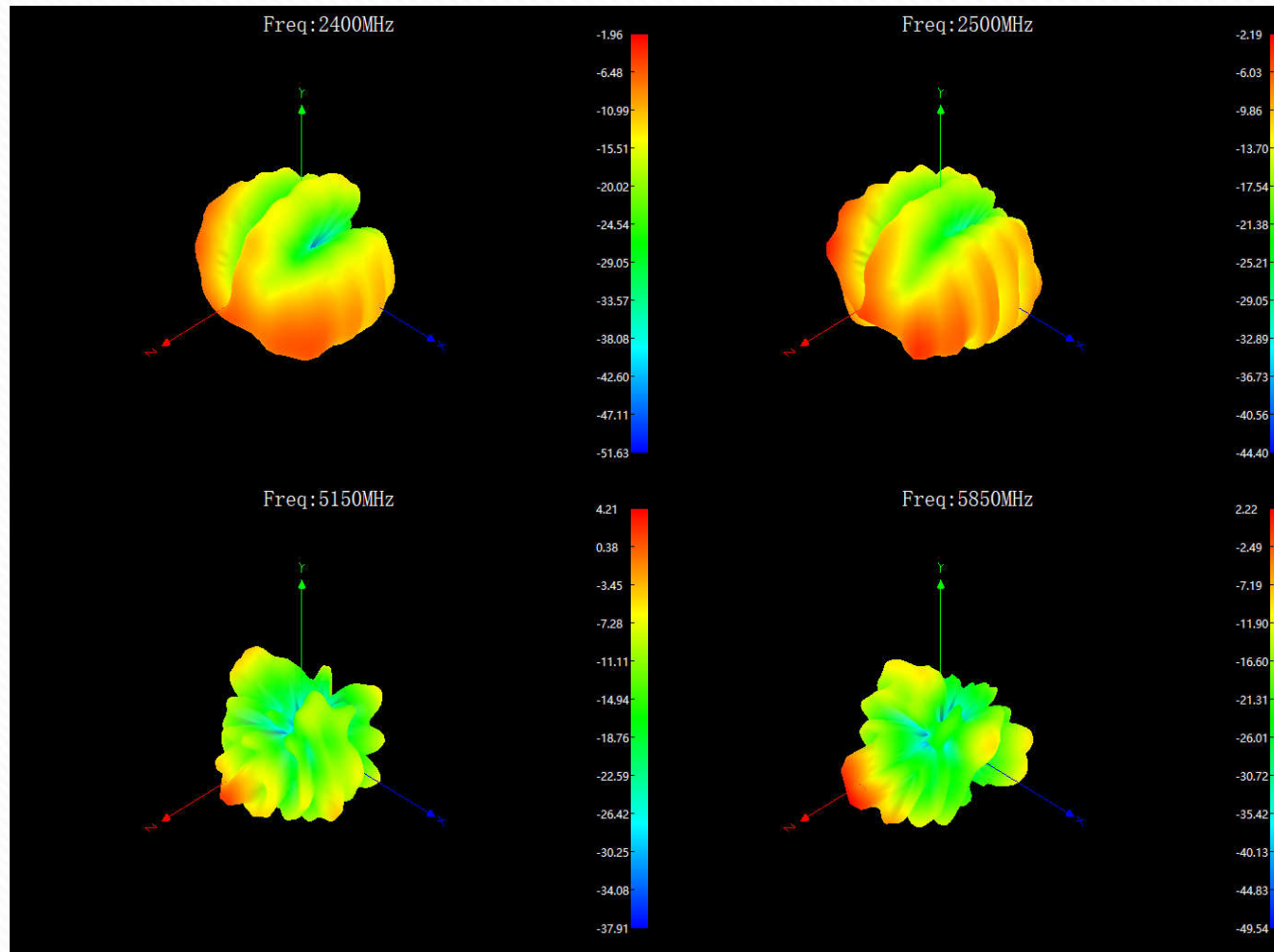
Directional pattern

WiFi Antenna-Theta



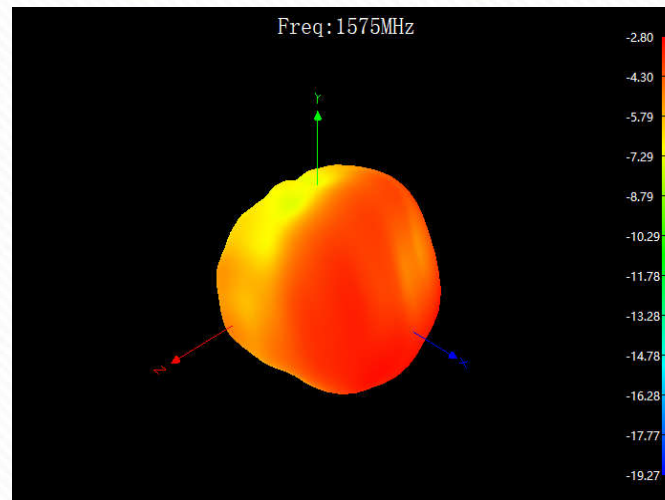
Directional pattern

WiFi Antenna-Phi



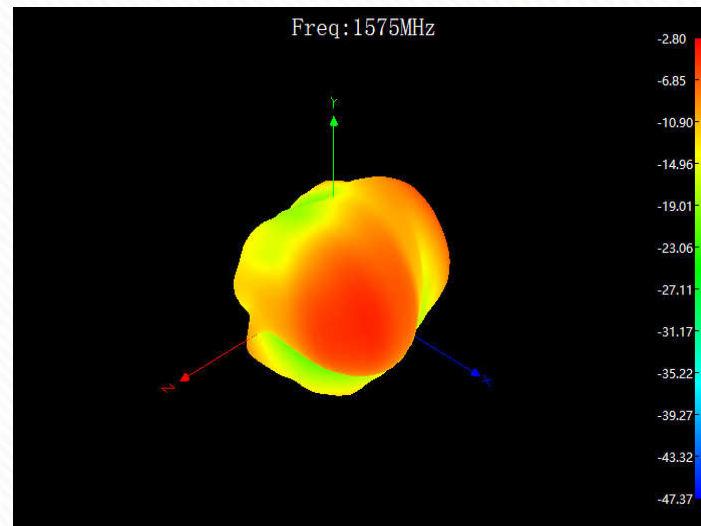
Directional pattern

GPS Antenna-Total



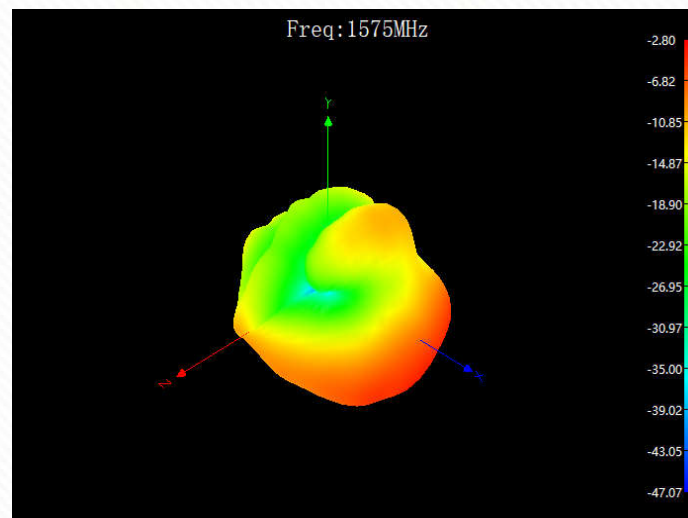
Directional pattern

GPS Antenna-Theta



Directional pattern

GPS Antenna-Phi



- 1: For A920PRO project, the antenna has good performance, and the parameters such as efficiency, gain and active test can achieve the use requirements
- 2: In terms of structure, the antenna is installed on the inside of the casing, which can well meet the requirements of production and assembly

Thank You

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NFC Antenna: PVC-covered copper wire winding

Dimension : 75.3mm*66.5mm*0.35mm

Antenna type: LOOP type antenna

Signature: Xie Hua *xiehua*