



Shenzhen Meihejia Technology Co., Ltd.

Antenna test report

Address: Building 43, Zhongwu Industrial Zone, Xixiang Street, Bao's District, Shenzhen



customer name	Telconn	project name	PG7101A
Commissioning frequency band	GSM 850/900/1800/1900 + W1900/850	structure mode	coaxial cable +FPC
Radio frequency engineer	Cao gong	construction engineer	Liang gong
Antenna type	PIFA	date	2022-8-12

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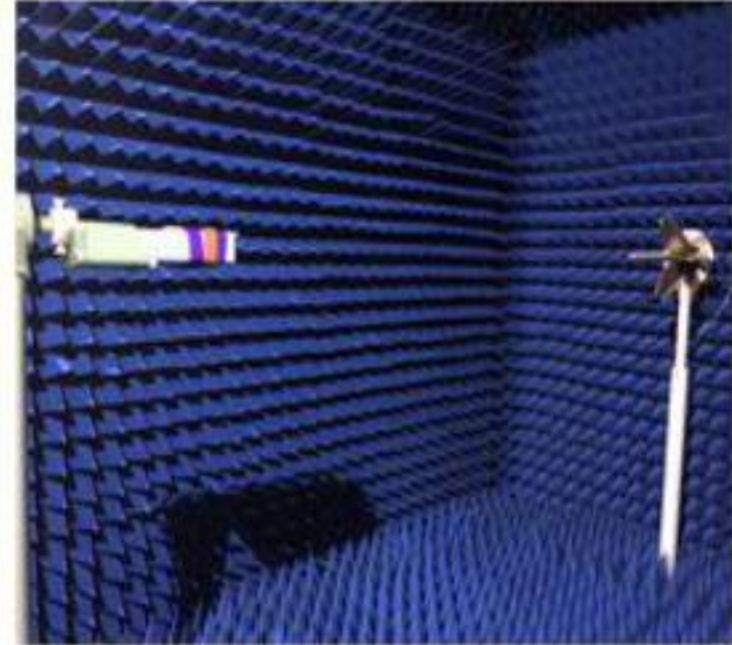


Test environment

	test project	equipment
1 (parameter)	1. (Return Loss) 2. (VSWR)	Agilent E5071B HP 8753D
2. (Active)	1. (TRP) 2. (TIS)	1. ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2. Agilent 8960 E5515B × 2 StarPoint SP6011
3. (Passive)	1. (Gain) 2. (Efficiency)	1. ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2. Agilent E5071B HP 8753D



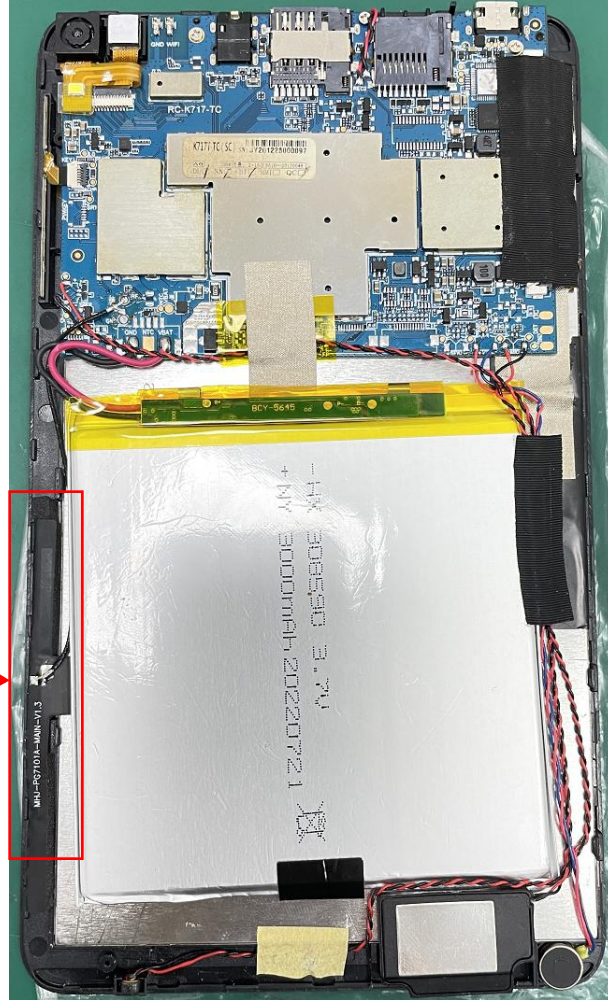
Test Equipment



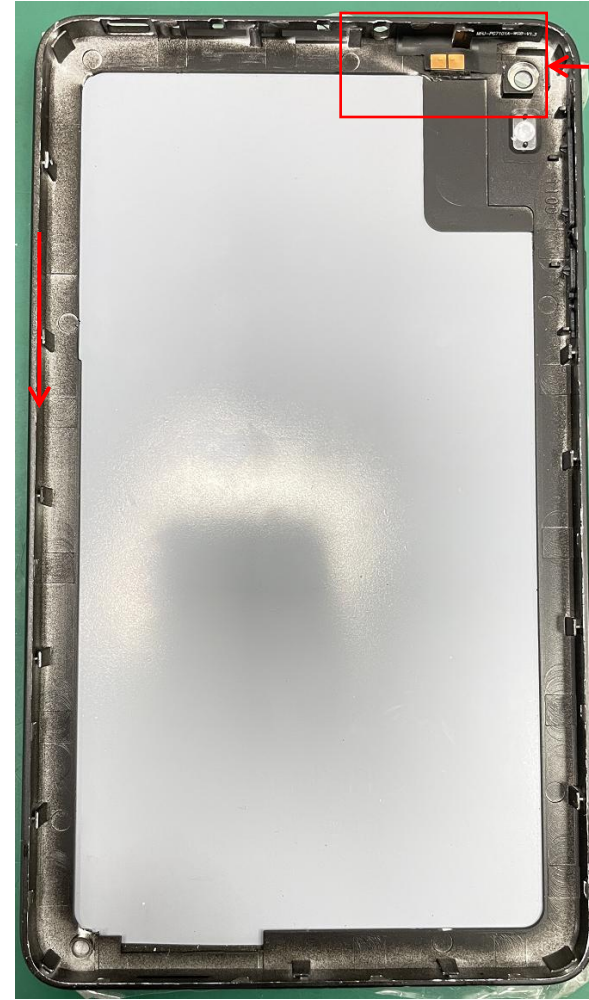
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Antenna position

main antenna



W/G/B antenna



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GSM

Frequency Band	EGSM 900			DCS 1800		
channel	1	62	124	512	698	885
TRP	27.6	26.7	26.6	26.2	26.3	26.6
TIS			-103.5			-103.8
Frequency Band	GSM 850			PCS 1900		
channel	128	190	251	512	661	810
TRP	25.3	26.5	27.8	27.0	27.1	27.3
TIS			-105.9			-102.3

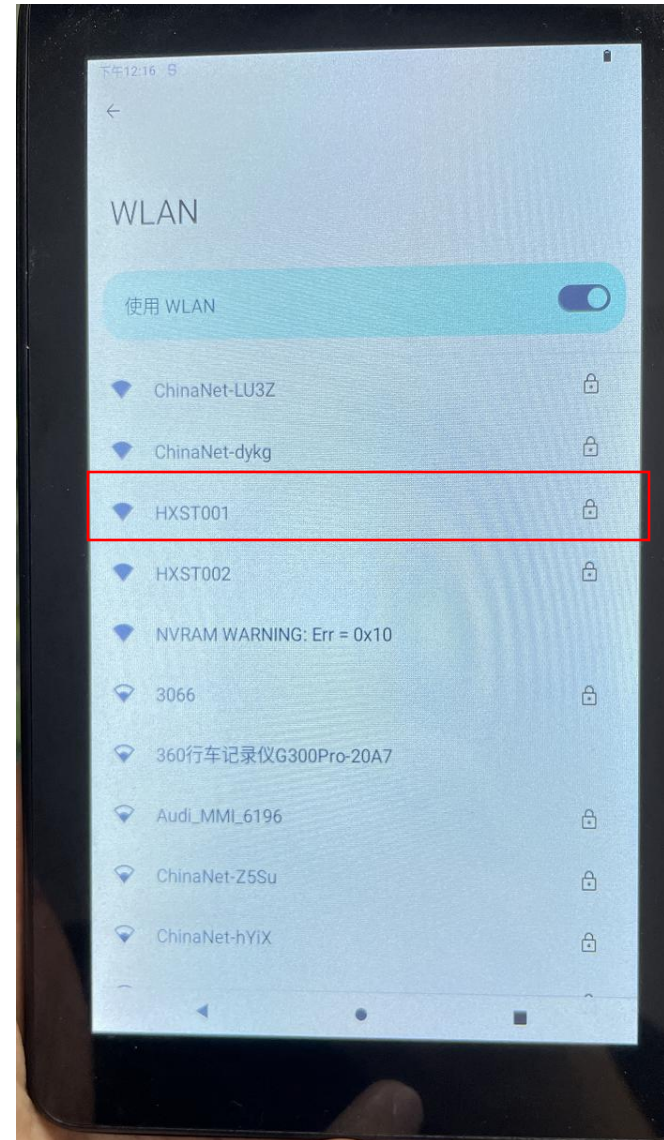
WCDMA

Frequency Band	WCDMA 1900			WCDMA 850		
channel	L	M	H	L	M	H
TRP	16.1	16.5	16.7	16.2	17.1	17.3
TIS			-103.5			-105.3

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Wifi Antenna test

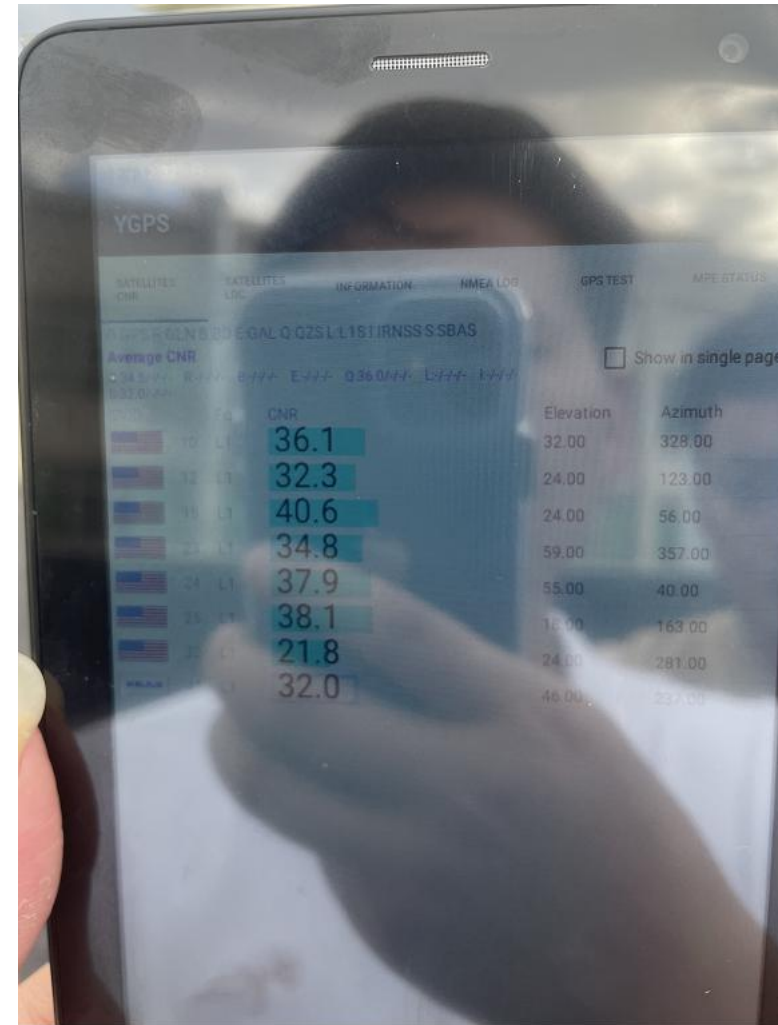
Test environment:
the office distance
from the router:
about 15 meters



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GPS star search test

The measured effect of GPS cold start is below:
CN value of 40 The actual location value is 1 bits
CN values of 35 The actual positioning is 4 bits
The actual positioning is 8 bits



Efficient (main antenna)

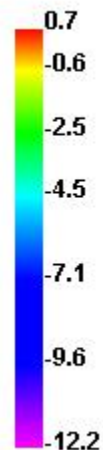
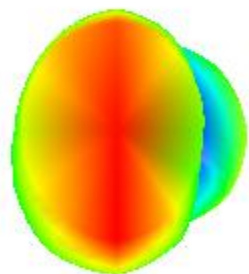
Passive Test For D1										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
800	30.67	-5.13	-1.51	-3.66	17.724	12.947	-1.51	-11.35	42.72	42
820	32.65	-4.86	-0.77	-2.92	20.524	12.125	-0.77	-12.96	42.18	42.13
840	36.41	-4.39	-0.85	-3	22.9	13.508	-0.85	-13.22	42.51	42.62
860	33.35	-4.77	-2.05	-4.2	19.065	14.289	-2.05	-12.83	42.82	43.1
880	28.91	-5.39	-2.99	-5.14	15.783	13.123	-2.99	-12.91	43.16	43.39
900	26	-5.85	-3.22	-5.37	13.955	12.045	-3.22	-13.54	43.53	43.46
920	23.83	-6.23	-3.22	-5.37	12.131	11.702	-3.22	-14.26	44.16	44.23
940	18.33	-7.37	-3.64	-5.79	8.514	9.812	-3.64	-16.99	44.31	44.56
960	11.74	-9.3	-5.14	-7.29	5.034	6.707	-5.14	-17.24	44.12	44.24
980	6.7	-11.74	-7.32	-9.47	2.906	3.792	-7.32	-19.43	44.13	43.98
1000	5.67	-12.46	-8.84	-10.99	2.775	2.895	-8.84	-22.08	45.83	46.03

Efficient (main antenna)

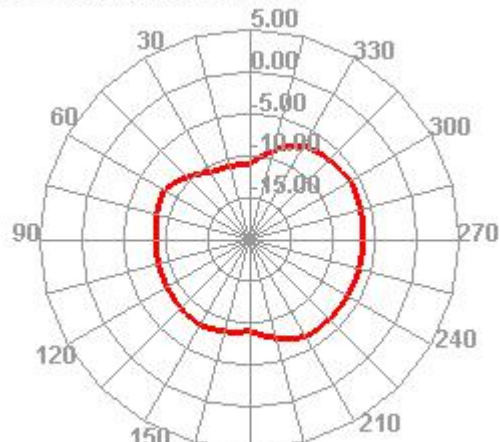
Passive Test For D3										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
1700	53.77	-2.69	1.06	-1.09	18.33	35.443	1.06	-15.12	50.56	50.76
1720	47.63	-3.22	1.02	-1.13	15.291	32.338	1.02	-14.51	50.66	50.74
1740	46.26	-3.35	0.51	-1.64	15.493	30.765	0.51	-14.32	50.93	50.48
1760	44.61	-3.51	0.78	-1.37	14.946	29.665	0.78	-14.55	51.44	50.93
1780	43.21	-3.64	0.54	-1.61	14.502	28.707	0.54	-16.7	51.41	51.39
1800	34.29	-4.65	-0.51	-2.66	12.869	21.423	-0.51	-14.19	51.3	51.49
1820	36.75	-4.35	-0.63	-2.78	14.338	22.416	-0.63	-13.78	51.55	51.83
1840	31.96	-4.95	-1.16	-3.31	13.232	18.727	-1.16	-14.63	51.93	52.2
1860	32.36	-4.9	-1.36	-3.51	14.143	18.214	-1.36	-12.08	51.72	52.31
1880	28.34	-5.48	-2.1	-4.25	13.427	14.912	-2.1	-13.69	51.54	52.32
1900	30.99	-5.09	-1.48	-3.63	15.453	15.541	-1.48	-13.08	51.87	51.96
1920	30.3	-5.19	-1.23	-3.38	16.201	14.096	-1.23	-12.72	52.13	52.95
1940	34.5	-4.62	0.14	-2.01	19.351	15.148	0.14	-12.39	52.26	52.72
1960	30.32	-5.18	0.44	-1.71	17.631	12.691	0.44	-14.04	52.2	52.13
1980	38.14	-4.19	1.45	-0.7	23.017	15.123	1.45	-10.93	52.69	53.26
2000	35.74	-4.47	0.69	-1.46	21.909	13.828	0.69	-12.22	52.96	53.44
2020	38.93	-4.1	1.5	-0.65	25.016	13.911	1.5	-11.76	52.89	53.62
2040	41.53	-3.82	2.03	-0.12	26.588	14.937	2.03	-11.51	53.17	53.74
2060	47.22	-3.26	2.89	0.74	30.403	16.818	2.89	-11.34	53.75	54.01
2080	50.7	-2.95	2.54	0.39	33.399	17.297	2.54	-12.43	53.61	54.52
2100	47.38	-3.24	2.03	-0.12	29.286	18.096	2.03	-15.45	53.21	53.74

Efficient (main antenna)

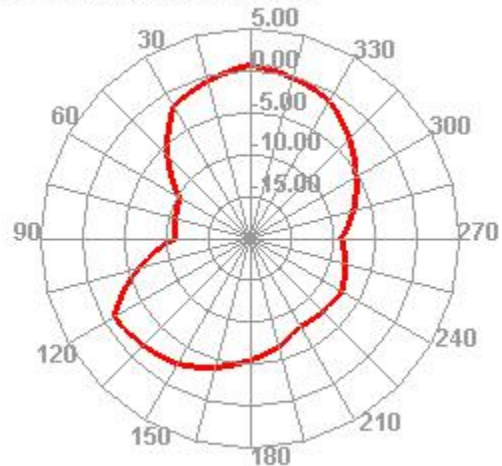
2000.000MHz



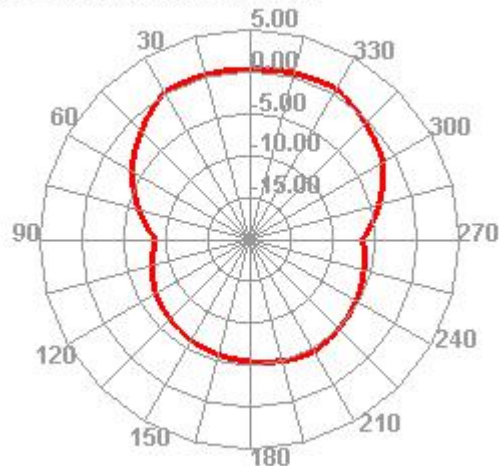
2000.000MHz H



2000.000MHz E1



2000.000MHz E2



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Efficient (WiFi/BT antenna)

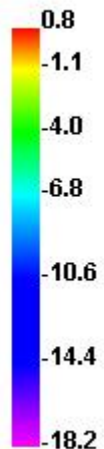
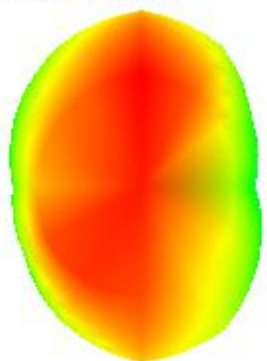
Passive Test For WIFI2.4										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	54.44	-2.64	1.66	-0.49	36.506	17.938	1.66	-16.22	52.03	53.99
2410	55.22	-2.58	1.7	-0.45	36.94	18.279	1.7	-15.81	51.99	53.84
2420	49.02	-3.1	1.01	-1.14	32.633	16.388	1.01	-16.9	52.04	53.98
2430	46.25	-3.35	0.76	-1.39	30.616	15.63	0.76	-18.17	52.23	54.02
2440	59.38	-2.26	1.82	-0.33	38.93	20.45	1.82	-19.7	52.54	54.25
2450	57.83	-2.38	1.5	-0.65	37.734	20.095	1.5	-22.79	52.64	54.11
2460	51.9	-2.85	0.78	-1.37	33.475	18.423	0.78	-21.13	52.59	54.02
2470	55.06	-2.59	0.93	-1.22	35.294	19.762	0.93	-19.49	52.66	54.04
2480	65.98	-1.81	1.58	-0.57	41.665	24.312	1.58	-16.43	53.06	54.43
2490	71.08	-1.48	2.06	-0.09	44.878	26.204	1.66	-15.9	53.33	54.57
2500	60.95	-2.15	1.45	-0.7	38.271	22.674	1.45	-17.91	53.11	54.29

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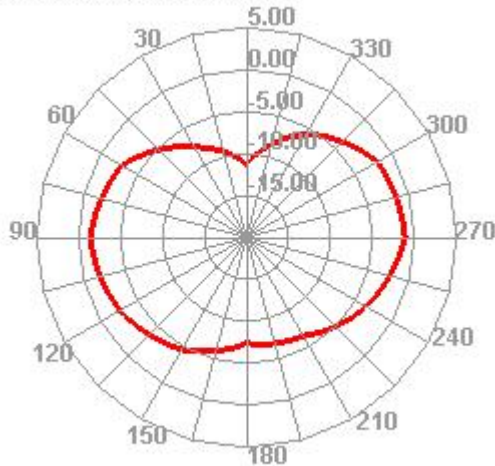


Efficient (WiFi/BT antenna)

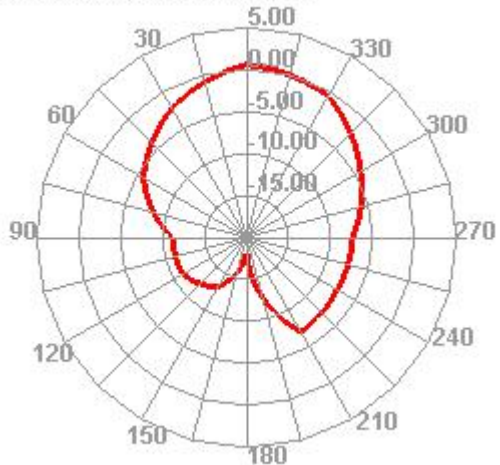
2430.000MHz



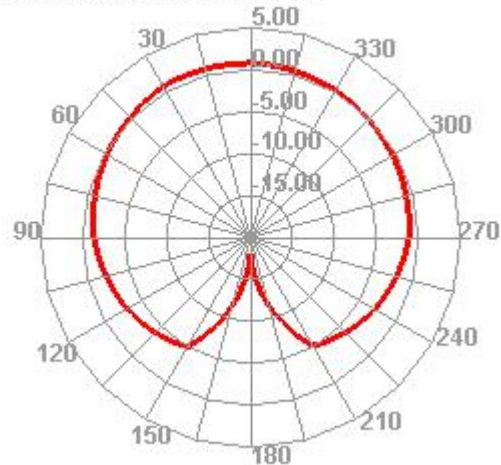
2430.000MHz H



2430.000MHz E1



2430.000MHz E2



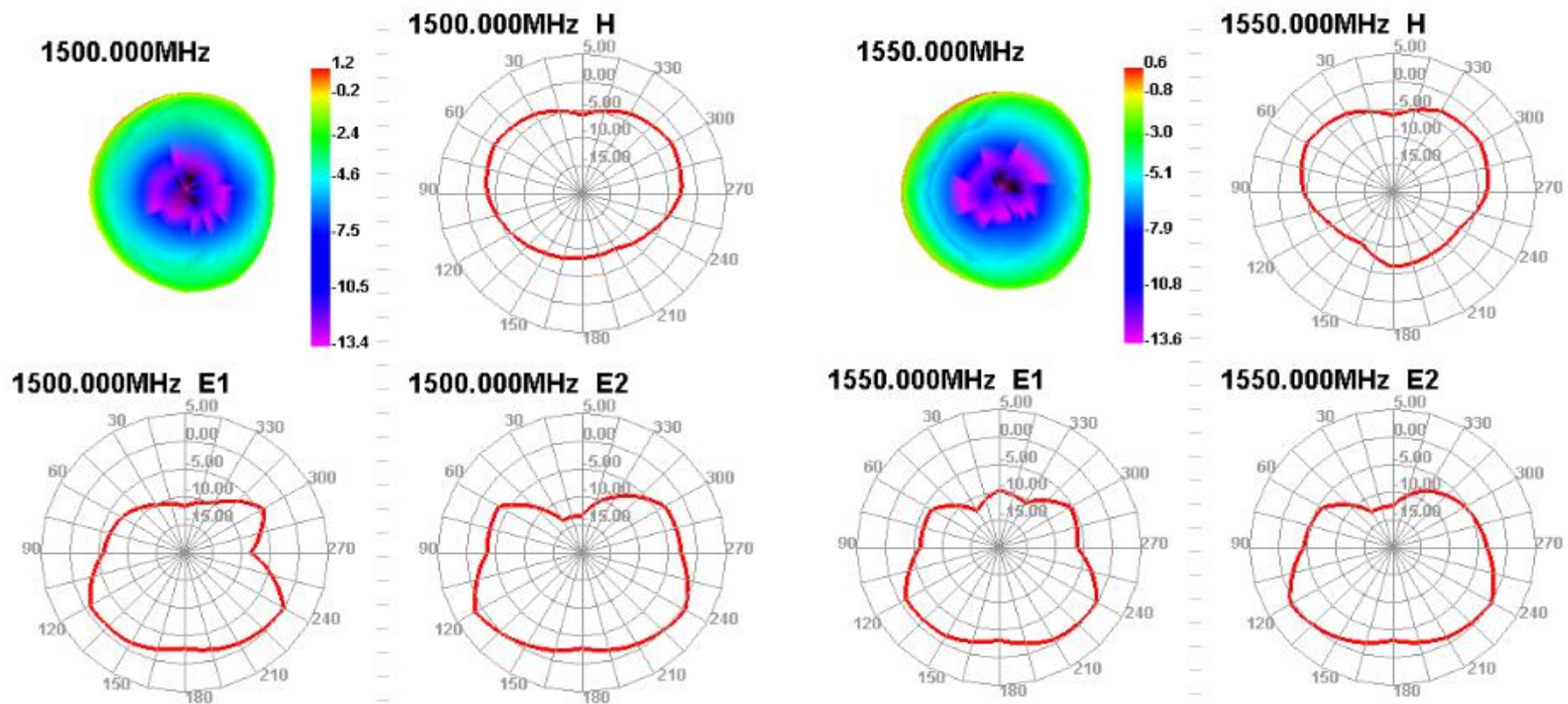
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Efficient (GPS antenna)

Passive Test For GPS										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHis (%)	DHis (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
1500	52.4	-2.81	1.23	-0.92	13.95	38.452	1.23	-13.39	46.61	46.48
1505	49.68	-3.04	0.97	-1.18	12.896	36.786	0.97	-13.66	46.5	46.38
1510	52.97	-2.76	1.27	-0.88	13.587	39.382	1.27	-13.6	46.39	46.28
1515	51.41	-2.89	1.09	-1.06	13.002	38.407	1.09	-14.26	46.41	46.29
1520	53.35	-2.73	1.24	-0.91	13.457	39.893	1.24	-14.33	46.44	46.3
1525	49.81	-3.03	1.02	-1.13	12.547	37.268	1.02	-14.75	46.43	46.35
1530	49.91	-3.02	1.01	-1.14	12.511	37.401	1.01	-13.97	46.42	46.41
1535	47.3	-3.25	0.64	-1.51	11.872	35.428	0.64	-14.09	46.45	46.42
1540	45.42	-3.43	0.59	-1.56	11.212	34.212	0.59	-13.77	46.49	46.44
1545	45.67	-3.4	0.66	-1.49	11.125	34.54	0.66	-13.62	46.59	46.55
1550	47.48	-3.24	0.59	-1.56	11.382	36.096	0.59	-13.62	46.7	46.67
1555	49.76	-3.03	0.9	-1.25	11.729	38.035	0.9	-12.86	46.63	46.61
1560	46.61	-3.31	0.58	-1.57	10.777	35.835	0.58	-13.61	46.56	46.56
1565	44.6	-3.51	0.29	-1.86	10.218	34.38	0.29	-13.78	46.68	46.61
1570	39.39	-4.05	-0.22	-2.37	8.991	30.395	-0.22	-14.1	46.8	46.66
1575	42.19	-3.75	-0.1	-2.25	9.661	32.532	-0.1	-13.76	46.68	46.6
1580	40.23	-3.95	-0.32	-2.47	9.331	30.902	-0.32	-14.36	46.57	46.55
1585	42.3	-3.74	-0.08	-2.23	9.954	32.346	-0.08	-14.32	46.59	46.59
1590	42.28	-3.74	-0.09	-2.24	10.164	32.115	-0.09	-14.8	46.61	46.63
1595	41.33	-3.84	-0.31	-2.46	9.998	31.329	-0.31	-15.67	46.61	46.63
1600	39.77	-4	-0.33	-2.48	9.743	30.027	-0.33	-15.95	46.61	46.64

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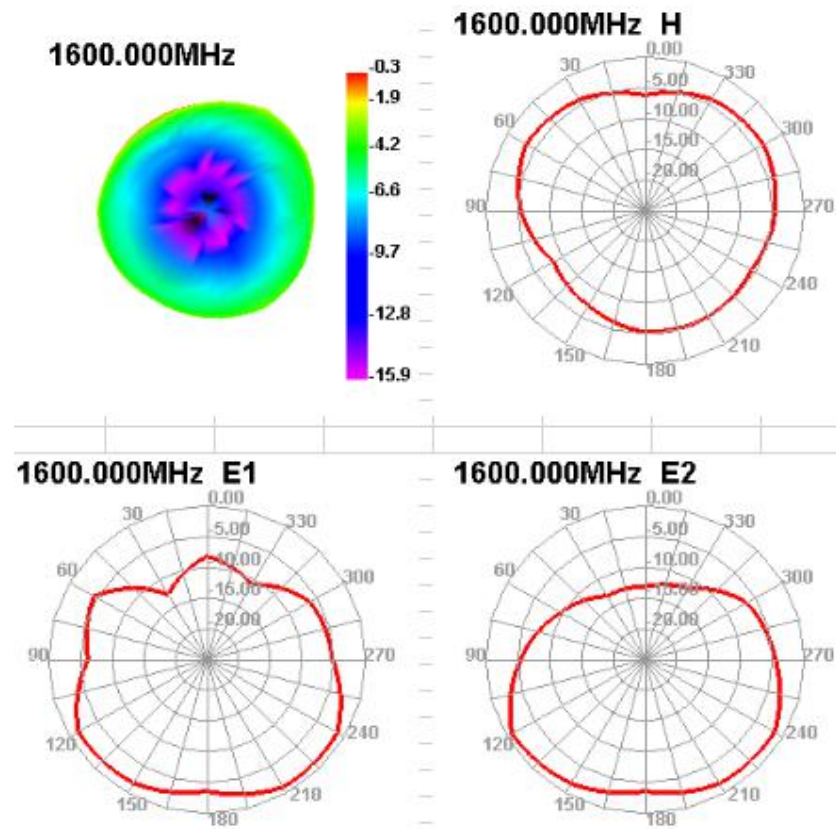
Efficient (GPS antenna)



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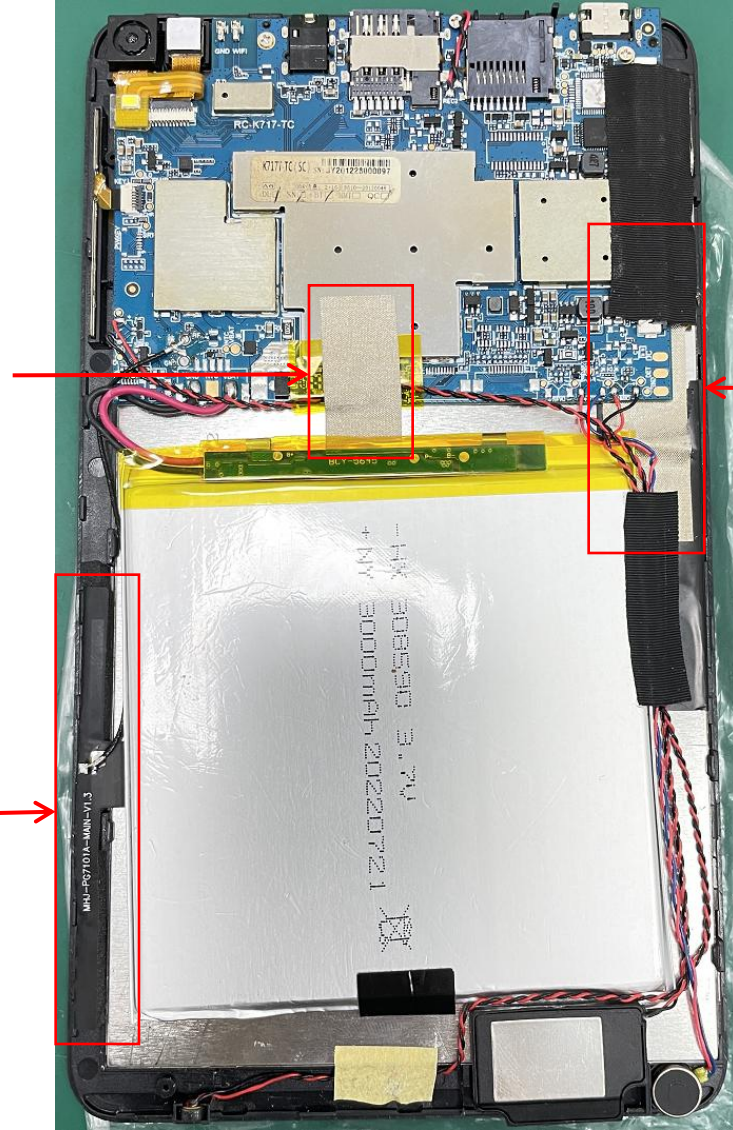
Efficient (GPS antenna)



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Environmental treatment

1. Ground the motherboard with conductive cloth.
2. Stick foam under the main antenna to raise it



3. The screen is shielded by conductive cloth.

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Provide better service for our customers

contacts; linkman: Xiong Qian 17688765727

address: Building 43, Zhongwu Industrial Zone, Xixiang Street, Bao's District, Shenzhen
