



深圳华讯视通科技有限公司

Shenzhen Huaxunshitong Technology Co.,Ltd.
No. 29, Industrial Zone, Huangtian Village,
Huangtian Community, Hangcheng Street,
Bao'an District, Shenzhen City. Floor F3-005

T89-C6M#07天线测试报告

2026.08.04





深圳华讯视通科技有限公司

Shenzhen Huaxunshitong Technology Co.,Ltd.

测试项目与设备

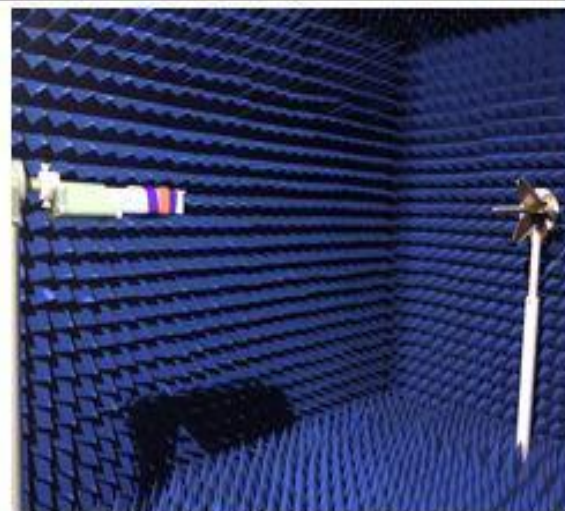
	测试项目	设备
1. S参数 (S-parameter)	1 · 回波损耗 (Return Loss) 2 · 电压驻波比 (VSWR)	网络分析仪: Agilent E5071B HP 8753D
2. 有源测试 (Active)	1 · 发射功率 (TRP) 2 · 接收灵敏度 (TIS)	1 · 暗室: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2.综合测试仪: Agilent 8960 E5515B × 2 StarPoint SP6011
3.无源测试 (Passive)	1.天线增益 (Gain) 2.天线效率 (Efficiency)	1 · 暗室: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2 · 网络分析仪: Agilent E5071B HP 8753D





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Shenzhen Huaxunshitong Technology Co.,Ltd.

GSM

Frequency Band	GSM850			PCS1900		
channel	L	M	H	L	M	H
TRP		/		22.5		22.0
TIS		/				-100.0





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LTE

Frequency Band	B1			B2		
channel	L	M	H	L	M	H
TRP	15.3		15.6	12.0		13.3
TIS			-88.3			-89.2
Frequency Band	B4			B7		
channel	L	M	H	L	M	H
TRP	12.0		12.3	11.2		10.2
TIS			-86.8			-80.0





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LTE

Frequency Band	B12			B13		
channel	L	M	H	L	M	H
TRP	7.8		7.86		3.5	
TIS			-77.2		-76.2	
Frequency Band	B17					
channel	L	M	H		/	
TRP	7.60		7.1		/	
TIS			-77.3		/	



GPS实测



自由状态



穿戴状态



增益与效率

Passive Test For 700-1000(10M)												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directiv (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
700	2.95	-15.31	-10.18	-12.33	1.003	1.943	-10.18	-27.15	5.13	0	44.3	44.38
710	4.08	-13.89	-8.92	-11.07	1.328	2.756	-8.92	-26.31	4.97	0	44.94	45.15
720	3.82	-14.18	-9.02	-11.17	1.201	2.62	-9.02	-26.43	5.16	0	44.58	44.28
730	3.15	-15.02	-9.52	-11.67	0.971	2.18	-9.52	-28.58	5.5	0	44.31	43.88
740	2.14	-16.7	-11.14	-13.29	0.665	1.472	-11.14	-29.47	5.56	0	43.96	43.28
750	1.71	-17.66	-12.34	-14.49	0.562	1.151	-12.34	-31.11	5.32	0	44.23	43.25
760	1.42	-18.48	-12.58	-14.73	0.464	0.954	-12.58	-33.25	5.9	0	44.36	43.47
770	0.91	-20.39	-15.06	-17.21	0.308	0.607	-15.06	-35.39	5.32	0	43.58	42.38
780	0.74	-21.31	-15.98	-18.13	0.258	0.481	-15.98	-35.82	5.34	0	43.38	42.22
790	0.76	-21.19	-16.32	-18.47	0.286	0.474	-16.32	-32.38	4.87	0	43.56	42.67
800	0.63	-21.99	-17.7	-19.85	0.258	0.374	-17.7	-31.55	4.29	0	42.72	42
810	0.63	-22.01	-18.09	-20.24	0.271	0.358	-18.09	-29.22	3.92	30	42.29	42.15
820	0.66	-21.77	-18.7	-20.85	0.284	0.38	-18.7	-29.4	3.07	30	42.18	42.13
830	0.85	-20.71	-17.89	-20.04	0.372	0.476	-17.89	-30.44	2.82	60	42.39	42.41
840	1.05	-19.8	-16.55	-18.7	0.468	0.579	-16.55	-27.73	3.25	0	42.51	42.62
850	1.26	-19.01	-15.56	-17.71	0.57	0.686	-15.56	-25.46	3.45	0	42.68	42.77
860	1.77	-17.51	-13.56	-15.71	0.808	0.966	-13.56	-23.65	3.96	0	42.82	43.1
870	2.18	-16.61	-12.92	-15.07	1.003	1.179	-12.92	-24.97	3.7	0	42.96	43.1
880	2.48	-16.05	-12.48	-14.63	1.119	1.362	-12.48	-25.49	3.57	0	43.16	43.39
890	2.54	-15.95	-12.39	-14.54	1.145	1.396	-12.39	-23.89	3.56	0	43.4	43.29
900	2.45	-16.11	-12.5	-14.65	1.095	1.352	-12.5	-24.29	3.61	30	43.53	43.46
910	2.17	-16.64	-13.22	-15.37	0.974	1.192	-13.22	-30.37	3.43	0	43.77	44.11
920	1.7	-17.68	-14.18	-16.33	0.761	0.943	-14.18	-27.91	3.5	0	44.16	44.23
930	1.35	-18.71	-14.03	-16.18	0.617	0.73	-14.03	-26.7	4.68	0	44.17	44.49
940	1.12	-19.49	-13.93	-16.08	0.527	0.597	-13.93	-29.99	5.56	0	44.31	44.56
950	1.07	-19.7	-13.82	-15.97	0.51	0.561	-13.82	-31.21	5.88	0	44.46	44.73
960	0.95	-20.23	-14.63	-16.78	0.468	0.481	-14.63	-34.98	5.6	0	44.12	44.24
970	0.91	-20.42	-14.65	-16.8	0.473	0.435	-14.65	-36.98	5.76	60	44.09	44.2
980	0.78	-21.09	-14.88	-17.03	0.448	0.329	-14.88	-35.98	6.21	0	44.13	43.98
990	0.65	-21.86	-14.91	-17.06	0.412	0.239	-14.91	-31.96	6.96	0	44.03	44.39
1000	0.86	-20.64	-13.93	-16.08	0.556	0.307	-13.93	-29.34	6.71	0	45.83	46.03



增益与效率

Passive Test For D3												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivi (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
1700	12.3	-9.1	-5.19	-7.34	7.272	5.029	-5.19	-18.22	3.91	60	50.56	50.76
1710	12.64	-8.98	-5.02	-7.17	7.52	5.12	-5.02	-17.63	3.96	30	50.68	50.58
1720	12.57	-9.01	-5.21	-7.36	7.448	5.123	-5.21	-17.28	3.79	30	50.66	50.74
1730	12.96	-8.87	-5.09	-7.24	7.645	5.317	-5.09	-16.95	3.78	90	50.63	50.79
1740	13.15	-8.81	-5.54	-7.69	7.722	5.428	-5.54	-16.33	3.27	90	50.93	50.48
1750	13.64	-8.65	-5.91	-8.06	7.978	5.664	-5.91	-17.41	2.74	90	51.18	51.06
1760	13.5	-8.7	-6.32	-8.47	7.825	5.674	-6.32	-17.51	2.37	90	51.44	50.93
1770	12.54	-9.02	-6.62	-8.77	7.27	5.265	-6.62	-19.67	2.4	0	51.35	51.44
1780	10.75	-9.69	-6.85	-9	6.313	4.439	-6.85	-21.61	2.84	120	51.41	51.39
1790	9.67	-10.14	-6.68	-8.83	5.565	4.107	-6.68	-25.51	3.46	30	51.42	51.58
1800	9.11	-10.4	-6.9	-9.05	5.197	3.913	-6.9	-22.24	3.5	30	51.3	51.49
1810	8.88	-10.52	-6.54	-8.69	4.892	3.989	-6.54	-21.27	3.98	30	51.51	51.58
1820	9.47	-10.23	-5.63	-7.78	4.899	4.576	-5.63	-21.34	4.6	30	51.55	51.83
1830	10.95	-9.61	-5.52	-7.67	5.357	5.595	-5.52	-19.48	4.08	60	51.89	52.62
1840	12.24	-9.12	-4.93	-7.08	5.811	6.427	-4.93	-18.94	4.19	60	51.93	52.2
1850	13.34	-8.75	-4.72	-6.87	5.948	7.391	-4.72	-18.86	4.03	60	51.96	52.02
1860	13.72	-8.63	-5.05	-7.2	5.912	7.804	-5.05	-22.43	3.57	60	51.72	52.31
1870	14.2	-8.48	-4.97	-7.12	5.896	8.302	-4.97	-27.99	3.51	60	51.56	51.35
1880	16.01	-7.96	-4.75	-6.9	6.488	9.52	-4.75	-26.5	3.2	60	51.54	52.32
1890	16.95	-7.71	-4.81	-6.96	7.03	9.924	-4.81	-24.06	2.9	60	51.56	51.7
1900	18.34	-7.37	-4.59	-6.74	7.915	10.428	-4.59	-23.15	2.77	60	51.87	51.96
1910	20.56	-6.87	-4.23	-6.38	9.119	11.441	-4.23	-18.51	2.64	60	51.92	52.75
1920	22.24	-6.53	-4.06	-6.21	10.109	12.134	-4.06	-18.31	2.46	60	52.13	52.95
1930	22.22	-6.53	-4.26	-6.41	10.381	11.84	-4.26	-17.31	2.27	60	52.26	52.74
1940	22.67	-6.45	-4.09	-6.24	10.81	11.858	-4.09	-15.32	2.36	60	52.26	52.72
1950	24.65	-6.08	-3.48	-5.63	12.105	12.543	-3.48	-14.75	2.61	60	52.33	52.41
1960	25.18	-5.99	-3.48	-5.63	12.599	12.58	-3.48	-15.65	2.51	60	52.2	52.13
1970	25.81	-5.88	-3.27	-5.42	13.059	12.747	-3.27	-15.95	2.62	60	52.38	52.63
1980	27.82	-5.56	-2.81	-4.96	14.165	13.654	-2.81	-16.28	2.75	60	52.69	53.26
1990	28.67	-5.43	-2.48	-4.63	15.262	13.407	-2.48	-16.9	2.95	60	52.96	53.07
2000	27.77	-5.56	-2.61	-4.76	15.122	12.646	-2.61	-16.06	2.95	60	52.96	53.44
2010	27.83	-5.56	-2.85	-5	15.503	12.323	-2.85	-15.58	2.7	60	52.95	53.45
2020	26.9	-5.7	-3.45	-5.6	15.176	11.725	-3.45	-14.92	2.25	60	52.89	53.62
2030	24.63	-6.09	-4.14	-6.29	13.87	10.759	-4.14	-15.13	1.95	90	52.97	53.36
2040	22.64	-6.45	-4.41	-6.56	12.629	10.01	-4.41	-14.76	2.04	90	53.17	53.74



增益与效率

2040	22.64	-6.45	-4.41	-6.56	12.629	10.01	-4.41	-14.76	2.04	90	53.17	53.74
2050	22.31	-6.52	-4.55	-6.7	12.219	10.087	-4.55	-13.02	1.97	90	53.45	53.99
2060	23.31	-6.33	-4.33	-6.48	12.596	10.71	-4.33	-13.63	2	120	53.75	54.01
2070	22.39	-6.5	-4.62	-6.77	11.965	10.429	-4.62	-13.41	1.88	60	53.78	54.53
2080	19.33	-7.14	-5.5	-7.65	9.985	9.341	-5.5	-14.63	1.63	150	53.61	54.52
2090	17.13	-7.66	-6.22	-8.37	8.826	8.3	-6.22	-16	1.44	300	53.39	52.95
2100	15.5	-8.1	-6.77	-8.92	7.777	7.726	-6.77	-14.69	1.33	180	53.21	53.74

Passive Test For D4

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directiv (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2110	12.38	-9.07	-7.9	-10.05	6.173	6.21	-7.9	-15.78	1.17	180	52.81	53.4
2120	11.96	-9.22	-7.47	-9.62	5.857	6.099	-7.47	-13.11	1.75	180	53.09	54.12
2130	12.34	-9.09	-7.35	-9.5	6.021	6.318	-7.35	-12.26	1.74	180	53.4	53.93
2140	11.82	-9.27	-7.14	-9.29	5.6	6.225	-7.14	-11.64	2.13	180	53.42	53.81
2150	9.08	-10.42	-7.13	-9.28	4.224	4.859	-7.13	-14.08	3.29	30	53.14	53.74
2160	8.98	-10.46	-7.45	-9.6	4.163	4.822	-7.45	-15.03	3.01	60	53.36	54.43
2170	9.51	-10.22	-6.91	-9.06	4.257	5.251	-6.91	-14.83	3.31	60	53.24	54.18
2180	8.92	-10.5	-7.11	-9.26	3.949	4.967	-7.11	-14.61	3.39	60	53.12	53.45
2190	8.56	-10.67	-6.81	-8.96	3.668	4.893	-6.81	-16.27	3.87	60	53.06	53.71
2200	8.88	-10.52	-6.92	-9.07	3.751	5.129	-6.92	-17.09	3.6	60	53.52	54.5
2210	10.2	-9.91	-6.18	-8.33	4.161	6.038	-6.18	-16.7	3.74	60	53.71	54.72
2220	10.08	-9.96	-6.43	-8.58	4.17	5.914	-6.43	-17.73	3.53	60	53.67	54.38
2230	8.91	-10.5	-6.86	-9.01	3.696	5.213	-6.86	-20.17	3.64	90	53.53	54.57
2240	9.26	-10.33	-6.48	-8.63	3.874	5.385	-6.48	-19.23	3.86	90	53.59	54.86
2250	10.22	-9.91	-5.5	-7.65	4.181	6.035	-5.5	-21.3	4.41	60	53.72	55.1
2260	11.64	-9.34	-4.57	-6.72	4.649	6.991	-4.57	-23.72	4.77	60	53.84	55.61
2270	10.47	-9.8	-4.89	-7.04	4.078	6.395	-4.89	-25.06	4.91	60	53.94	55.12
2280	10.6	-9.75	-4.68	-6.83	4.115	6.483	-4.68	-21.77	5.07	60	54.09	55.43
2290	13.5	-8.7	-2.53	-4.68	5.133	8.369	-2.53	-19.36	6.16	60	54.85	56.01
2300	15.39	-8.13	-3.47	-5.62	6.107	9.287	-3.47	-19.91	4.65	60	55.12	56.6
2310	14.28	-8.45	-3.83	-5.98	5.72	8.561	-3.83	-20.78	4.63	60	54.91	56.5
2320	13.06	-8.84	-4.15	-6.3	5.292	7.764	-4.15	-23.79	4.69	30	54.8	56.13
2330	13.26	-8.77	-3.94	-6.09	5.225	8.039	-3.94	-18.86	4.83	90	55.05	56.33
2340	15.52	-8.09	-3.4	-5.55	6.208	9.313	-3.4	-19.34	4.69	90	55.41	57.9
2350	13.58	-8.67	-3.82	-5.97	5.271	8.312	-3.82	-21.27	4.85	60	55.72	57.75
2360	11.72	-9.31	-4.35	-6.5	4.539	7.182	-4.35	-24.48	4.96	60	55.95	57.79
2370	11.48	-9.4	-4.28	-6.43	4.449	7.033	-4.28	-22.32	5.12	60	55.79	57.25
2380	12.87	-8.9	-3.88	-6.03	5.059	7.812	-3.88	-17.35	5.02	60	55.95	57.45



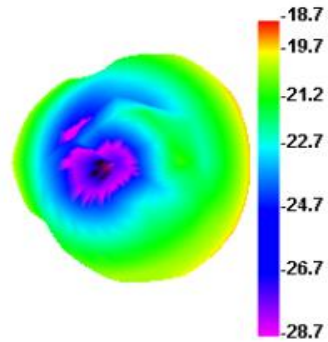
增益与效率

2390	13.09	-8.83	-3.47	-5.62	5.38	7.715	-3.47	-18.39	5.36	60	55.8	57.98
2400	10.84	-9.65	-4.05	-6.2	4.414	6.423	-4.05	-21.03	5.6	60	55.76	57.21
2410	12.38	-9.07	-3.45	-5.6	5.109	7.269	-3.45	-23.01	5.62	60	55.83	58.53
2420	13.19	-8.8	-2.94	-5.09	5.523	7.669	-2.94	-33.25	5.86	60	56.07	58.09
2430	13.57	-8.67	-2.61	-4.76	5.809	7.762	-2.61	-23.52	6.06	60	56.25	58.05
2440	13.93	-8.56	-2.81	-4.96	6.075	7.855	-2.81	-21.83	5.75	60	56.61	58.56
2450	16.21	-7.9	-2.7	-4.85	7.204	9.008	-2.7	-20.15	5.2	60	56.87	58.64
2460	15.92	-7.98	-2.42	-4.57	7.176	8.745	-2.42	-18.05	5.57	60	56.54	57.97
2470	15.29	-8.16	-2.76	-4.91	7.069	8.217	-2.76	-18.79	5.4	60	56.17	58.01
2480	15.63	-8.06	-3.23	-5.38	7.44	8.188	-3.23	-16.01	4.83	90	56.4	57.83
2490	17.43	-7.59	-3.04	-5.19	8.336	9.096	-3.04	-19.12	4.55	90	56.48	57.83
2500	20.48	-6.89	-2.72	-4.87	9.97	10.51	-2.72	-19.56	4.16	210	56.61	58.07
2510	18.74	-7.27	-2.75	-4.9	9.216	9.524	-2.75	-16.97	4.52	90	56.67	57.71
2520	17.26	-7.63	-3.08	-5.23	8.245	9.012	-3.08	-20.74	4.55	90	56.43	57.53
2530	17.77	-7.5	-2.36	-4.51	8.069	9.705	-2.36	-19.19	5.15	90	56.01	57.64
2540	17.2	-7.65	-2.26	-4.41	7.643	9.556	-2.26	-18.52	5.39	90	55.93	56.88
2550	16.9	-7.72	-2.25	-4.4	6.895	10.009	-2.25	-17.16	5.47	60	56.13	56.87
2560	17.37	-7.6	-2.06	-4.21	6.984	10.382	-2.06	-16.78	5.54	60	56.34	57.38
2570	19.95	-7	-1.48	-3.63	7.503	12.447	-1.48	-17.64	5.52	0	56.6	58.31
2580	18.39	-7.35	-2.25	-4.4	7.36	11.029	-2.25	-17.43	5.11	210	56.27	56.52
2590	18.07	-7.43	-2.21	-4.36	7.037	11.034	-2.21	-17.18	5.22	0	56.34	56.49
2600	17.5	-7.57	-2.3	-4.45	6.521	10.975	-2.3	-20.4	5.27	180	56.36	56.49
2610	18	-7.45	-1.99	-4.14	6.686	11.319	-1.99	-19.25	5.46	180	56.44	57
2620	16.42	-7.85	-2.91	-5.06	6.107	10.314	-2.91	-20.27	4.94	180	56.28	56.17
2630	16.53	-7.82	-2.66	-4.81	6.02	10.51	-2.66	-20.28	5.15	180	56.47	56.78
2640	16.37	-7.86	-2.66	-4.81	5.852	10.518	-2.66	-21.61	5.2	180	56.79	57.41
2650	15.79	-8.02	-3.44	-5.59	5.864	9.926	-3.44	-19.32	4.58	180	57.31	57.11
2660	18.99	-7.21	-2.13	-4.28	6.998	11.993	-2.13	-21.94	5.09	180	57.71	58.3
2670	20.92	-6.8	-2.05	-4.2	7.527	13.389	-2.05	-25.33	4.74	180	57.8	58.5
2680	19.34	-7.13	-2.3	-4.45	6.747	12.598	-2.3	-22.97	4.83	180	57.75	58.3
2690	17.63	-7.54	-3.31	-5.46	5.991	11.636	-3.31	-26	4.23	210	57.63	57.85
2700	16.14	-7.92	-3.95	-6.1	5.453	10.685	-3.95	-26.49	3.98	120	57.44	57.44
2710	16.92	-7.72	-3.88	-6.03	5.808	11.115	-3.88	-26.22	3.83	270	57.88	58.15
2720	17.03	-7.69	-3.97	-6.12	5.707	11.32	-3.97	-25.51	3.72	150	58.5	58.3
2730	18.36	-7.36	-3.73	-5.88	6.063	12.299	-3.73	-23.76	3.63	60	58.49	58.98
2740	19.06	-7.2	-3.82	-5.97	6.314	12.747	-3.82	-23.19	3.38	90	58.67	59.01
2750	18.46	-7.34	-4.27	-6.42	6.208	12.25	-4.27	-22.16	3.06	60	58.87	58.56

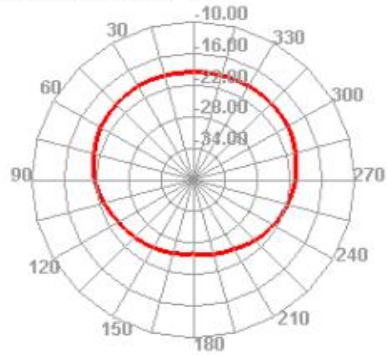


增益与效率

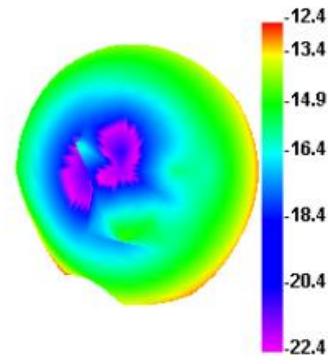
820.000MHz



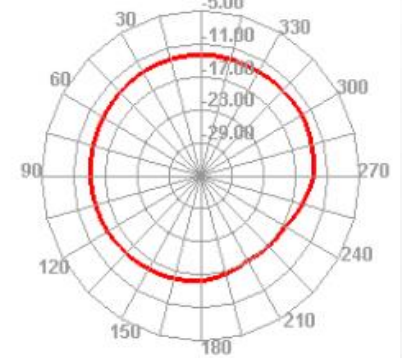
820.000MHz H



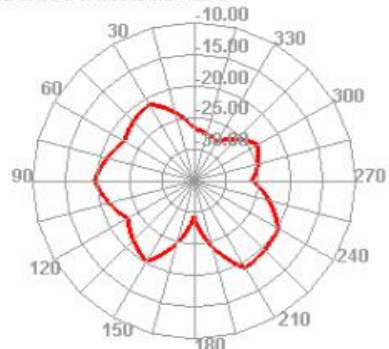
890.000MHz



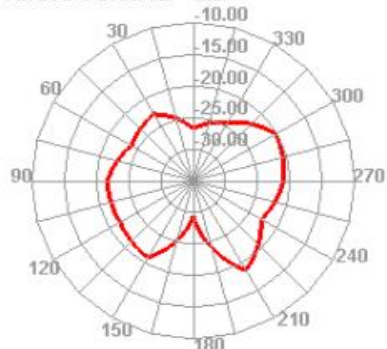
890.000MHz H



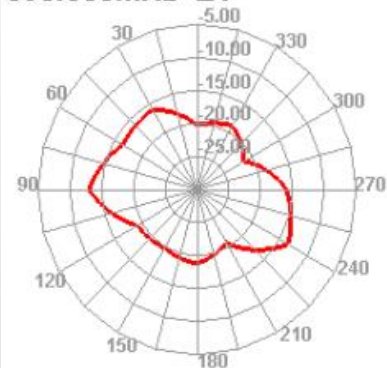
820.000MHz E1



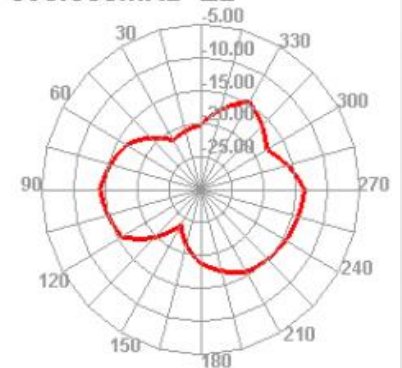
820.000MHz E2



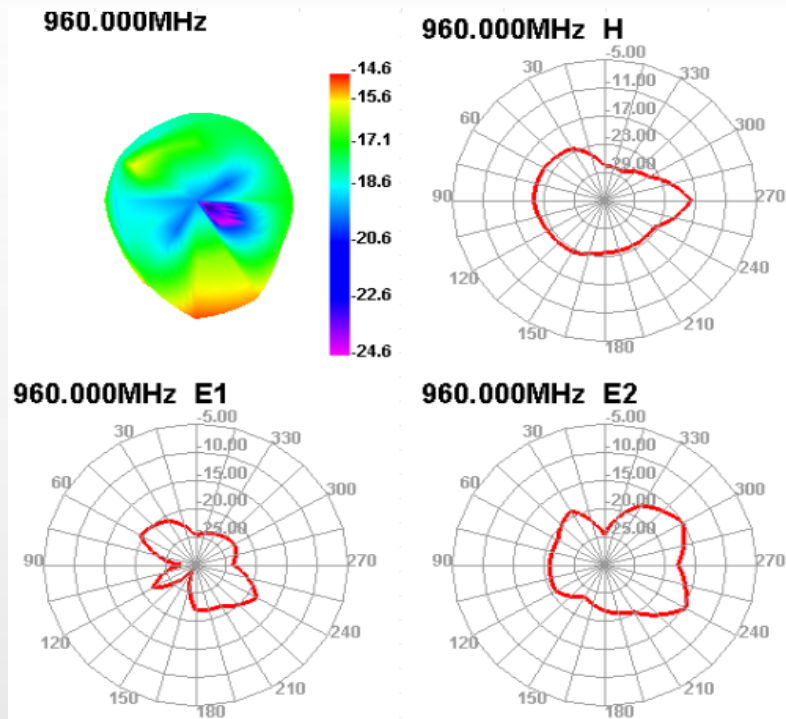
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890.000MHz E2

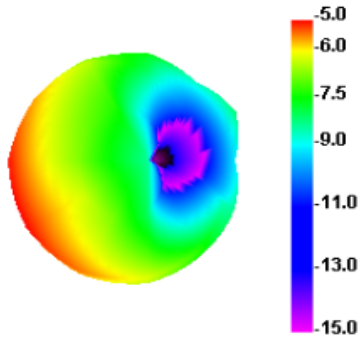


增益与效率

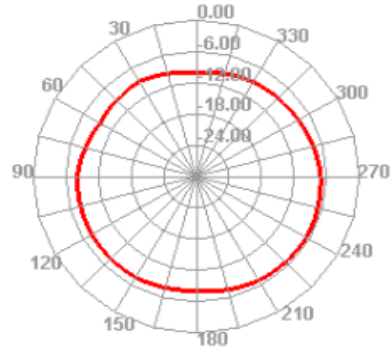


增益与效率

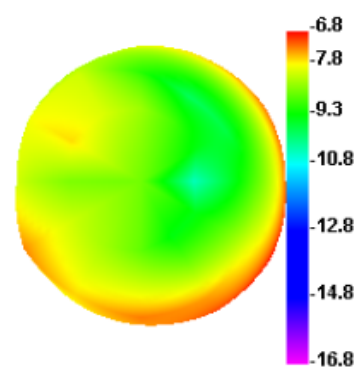
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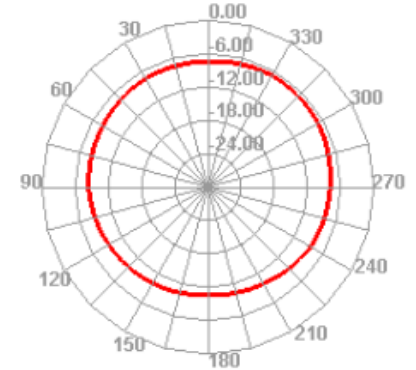
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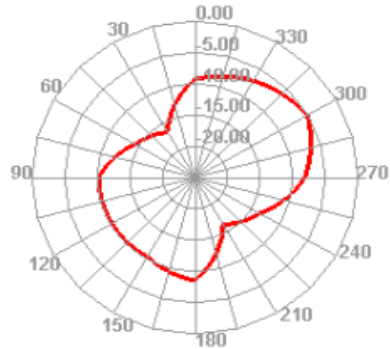
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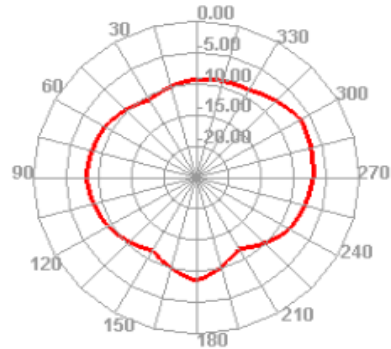
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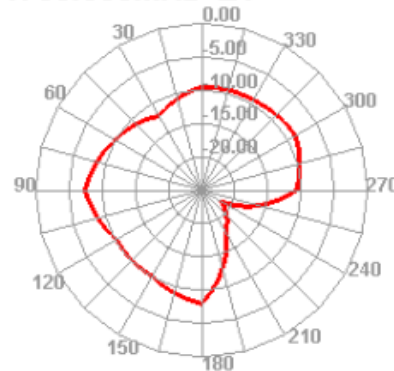
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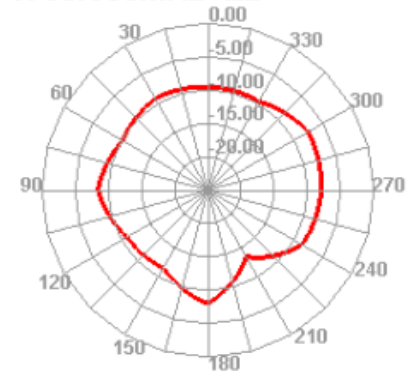
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1780.000MHz E1

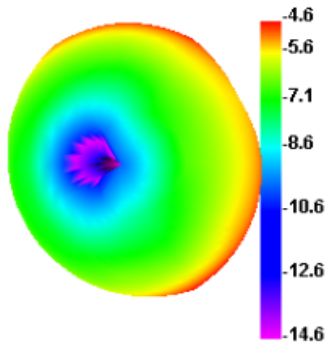


1780.000MHz E2

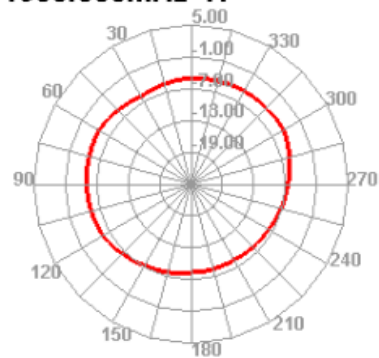


增益与效率

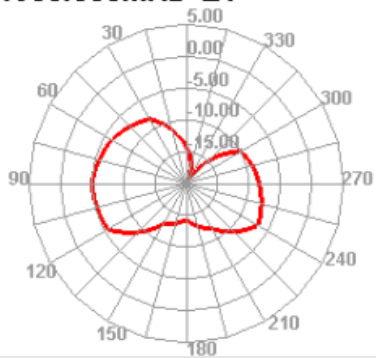
1900.000MHz



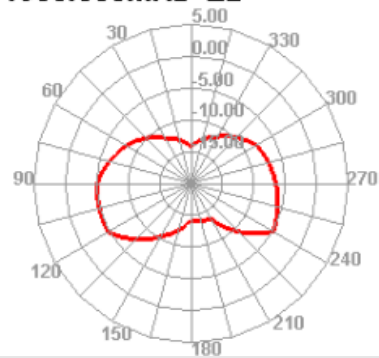
1900.000MHz H



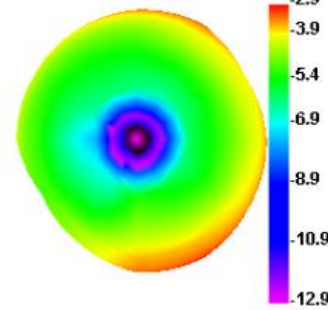
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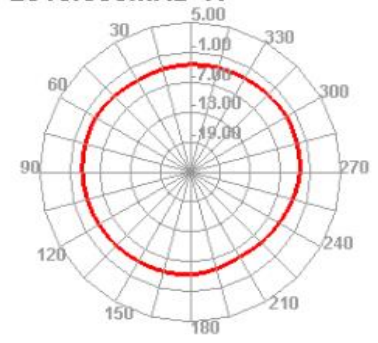
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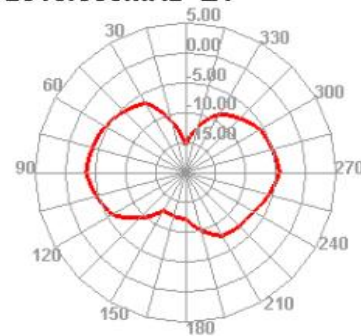
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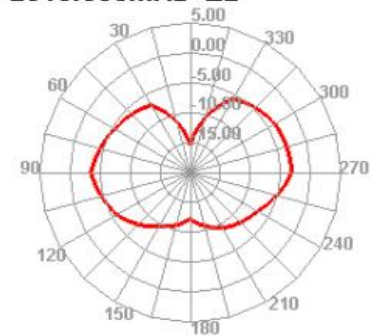
2010.000MHz H



2010.000MHz E1

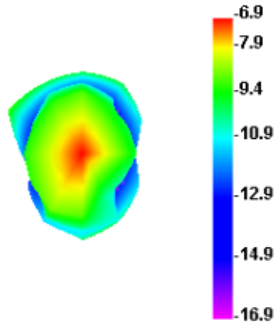


2010.000MHz E2

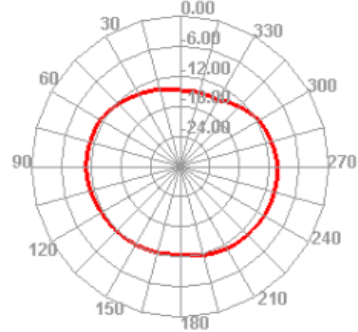


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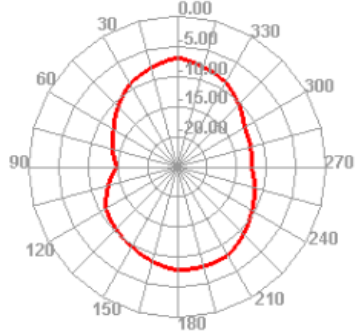
2170.000MHz



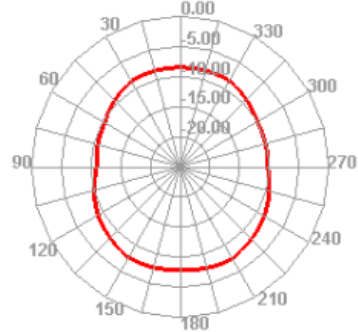
2170.000MHz H



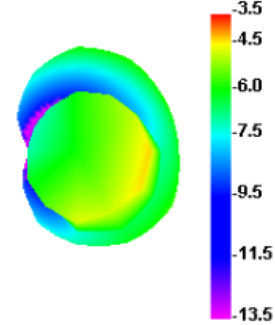
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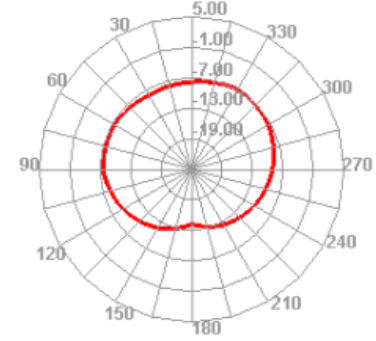
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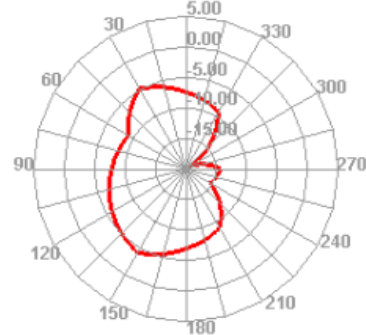
2300.000MHz



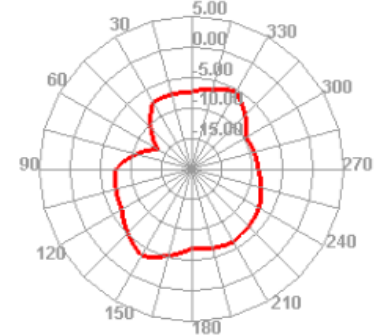
2300.000MHz H



2300.000MHz E1

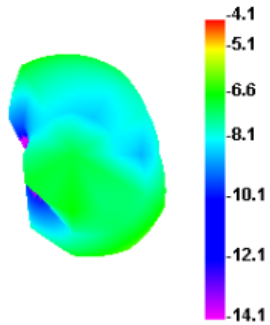


2300.000MHz E2

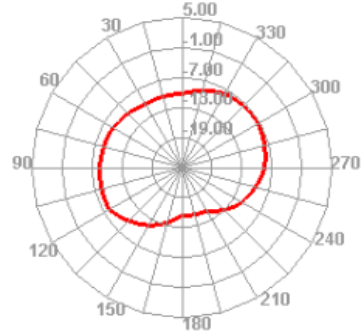


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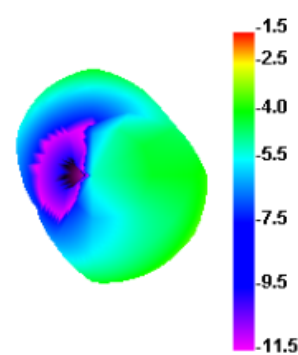
2400.000MHz



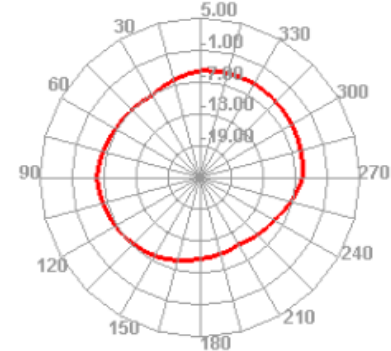
2400.000MHz H



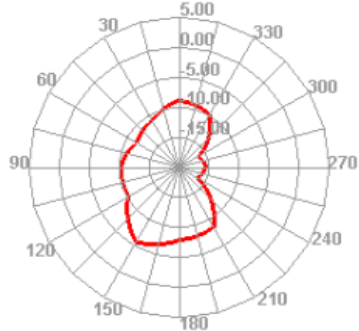
2570.000MHz



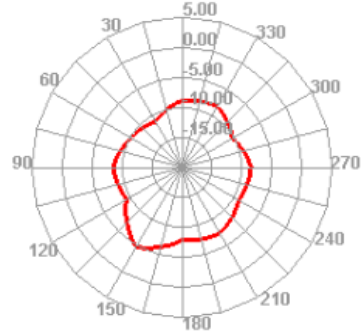
2570.000MHz H



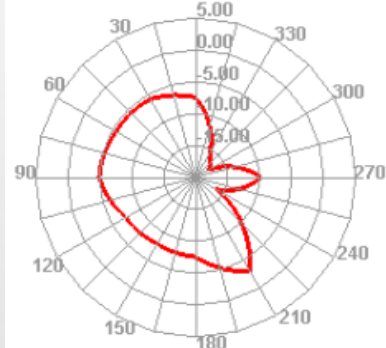
2400.000MHz E1



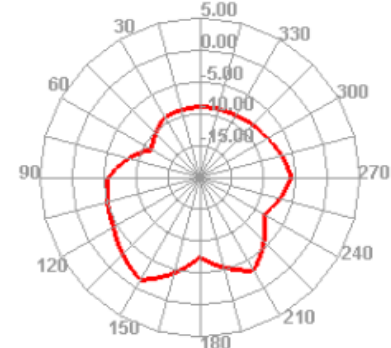
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2570.000MHz E1

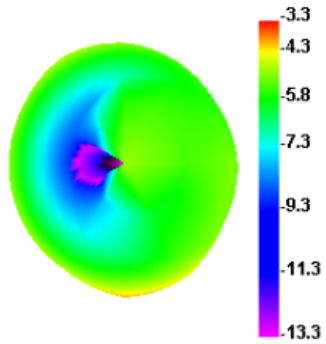


2570.000MHz E2

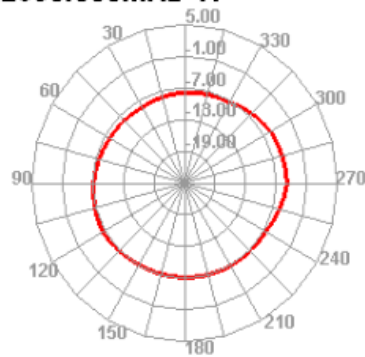


增益与效率

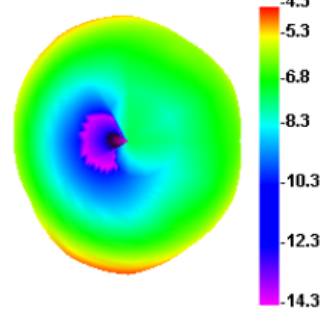
2690.000MHz



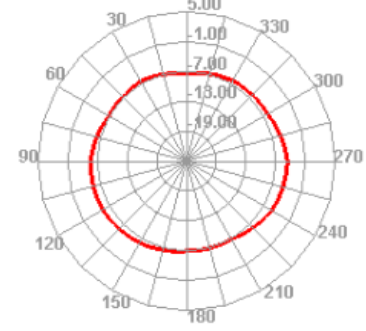
2690.000MHz H



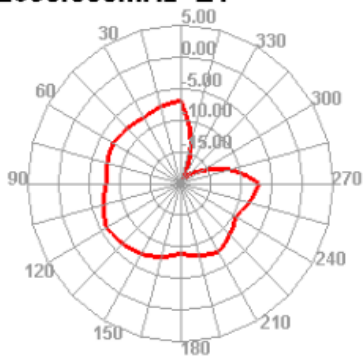
2750.000MHz



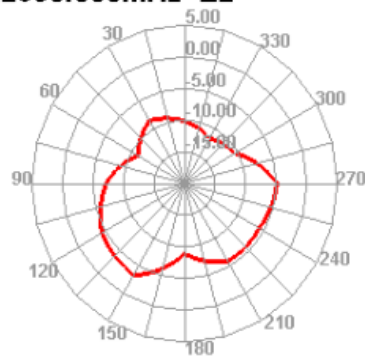
2750.000MHz H



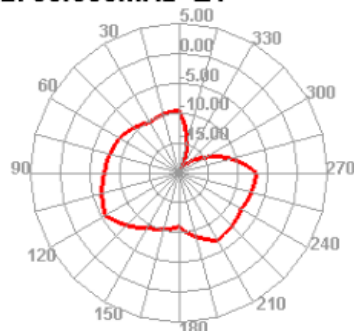
2690.000MHz E1



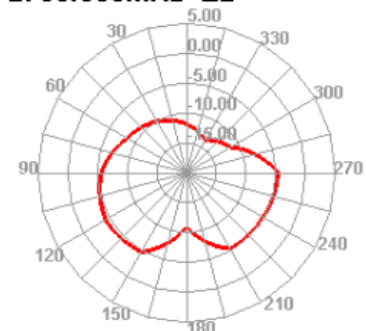
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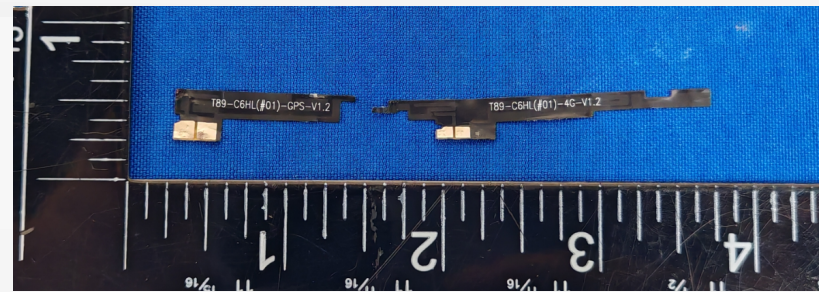
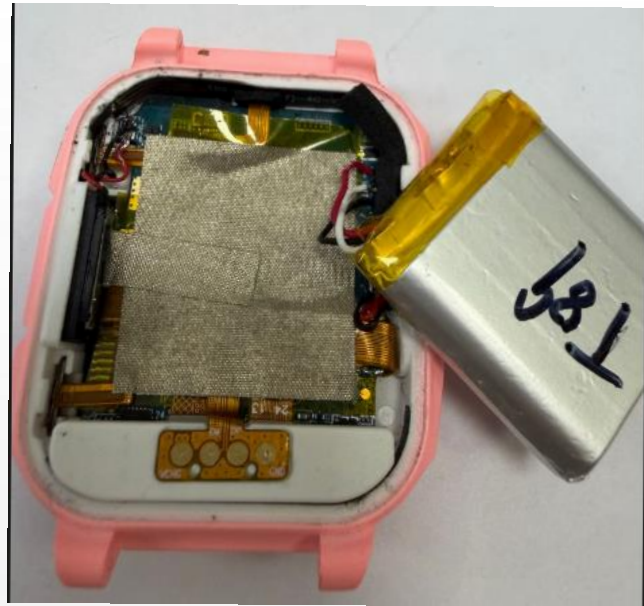


2750.000MHz E1



2750.000MHz E2







深圳华讯视通科技有限公司
Shenzhen Huaxunshitong Technology Co.,Ltd.

Thanks !

