

天线测试报告

Antenna Test Report

Manufacturer:Shenzhen Pagelaer Technology Co., Ltd.

Address:Room 3611, Building B, Xintian Century Business Center, Shixia North 2nd Street,
Fubao Street, Futian District, Shenzhen

测试信息

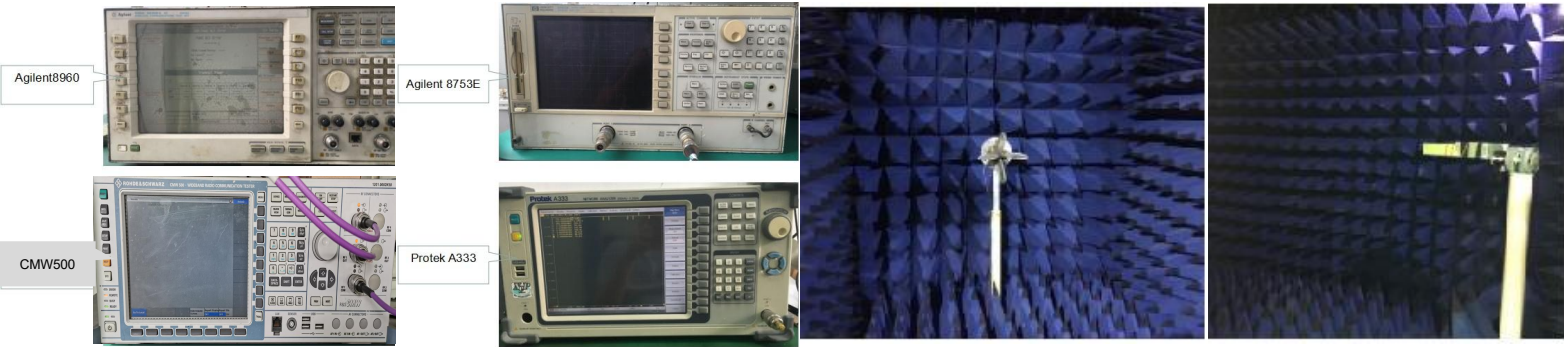
Test information

Antenna band		Antenna state	Antenna form	Matchc hanges	Note
Main ANT	2G	FPC	PIFA	NO	
	3G				
	4G				
AUX ANT	BT/WIFI	2.4/5G	FPC	PIFA	NO
	GPS	1.575G	FPC	PIFA	NO
	DIV		FPC	PIFA	NO

测试环境

Test environment

	测试项目	测试设备
S参数 (S-parameter)	1. 电压驻波比 (VSWR) 2. 回波损耗 (Rrtun Loss)	网络分析仪: Agilent8753ES
2. 有源测试 (Active)	1. 发射功率 (TRP) 2. 接收灵敏度 (TIS) 3. 屏灭/屏亮	1. 暗室: 5*3*3m (3D) Chamber 2. 综测仪: Agilent8960 CMW500
3. 无源测试 (Passive)	1. 天线增益 (Gain) 2. 天线效率 (Efficiency)	1. 暗室: 5*3*3m (3D) Chamber 2. 网络分析仪: Agilent 8753ES

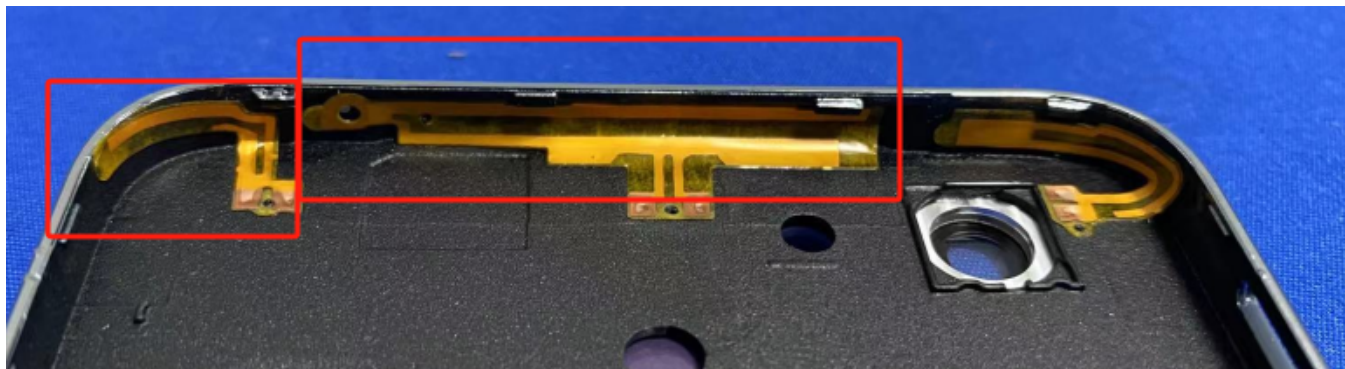


天线位置

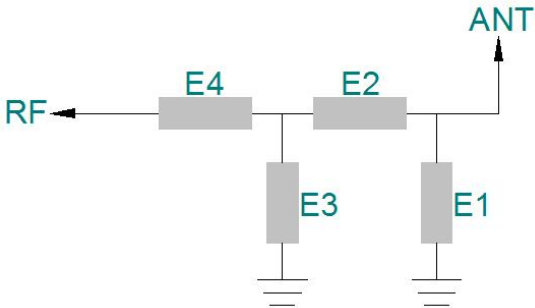
Antenna position

Bluetooth/WIFI ANT

2/3/4G ANT



匹配电路
Matching circuit



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

Matching circuit schematic & bit number diagram

Main ANT 无源测试数据 Main ANT Passive test data

ANT S11-VSWR&Return Loss



Frequency (MHZ)	703	960	1710	2170	2600
VSWR	2.06	5.83	1.46	2.33	1.27
Return Loss (DB)	-9.26	-3.02	-14.51	-7.95	-18.33

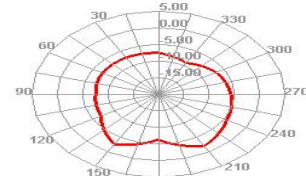
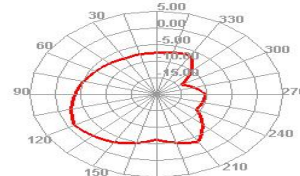
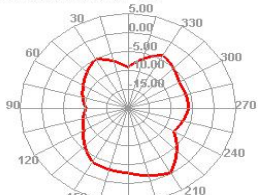
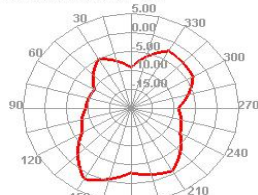
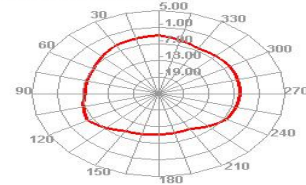
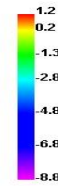
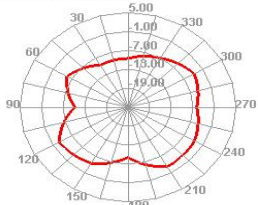
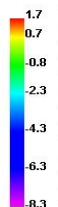
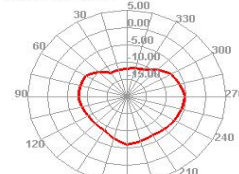
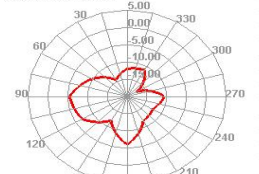
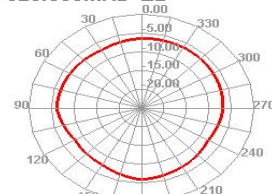
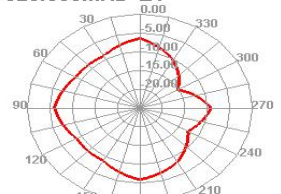
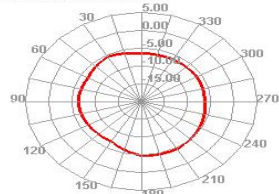
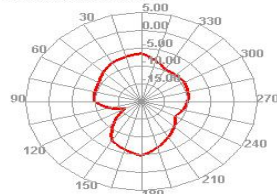
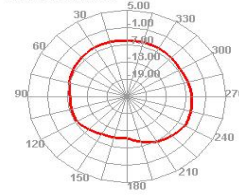
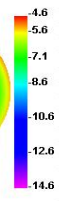
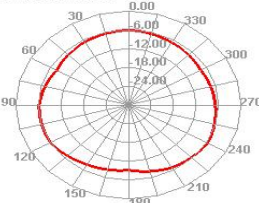
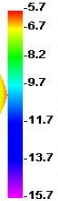
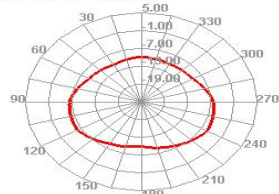
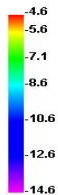
无源测试数据

Passive test data

Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
700	-3.17	-5.92	25.58
710	-2.44	-5.38	28.97
720	-2.02	-5.03	31.43
730	-1.71	-4.82	32.98
740	-1.69	-4.84	32.80
750	-1.67	-4.85	32.71
760	-1.91	-5.12	30.79
770	-2.24	-5.43	28.61
780	-2.64	-5.83	26.10
820	-2.46	-5.62	27.41
830	-1.61	-4.84	32.83
840	-0.98	-4.25	37.62
850	-0.38	-3.73	42.40
860	-0.05	-3.49	44.72
870	-0.04	-3.54	44.31
880	-0.32	-3.84	41.34
890	-0.72	-4.30	37.16
900	-1.14	-4.81	33.05

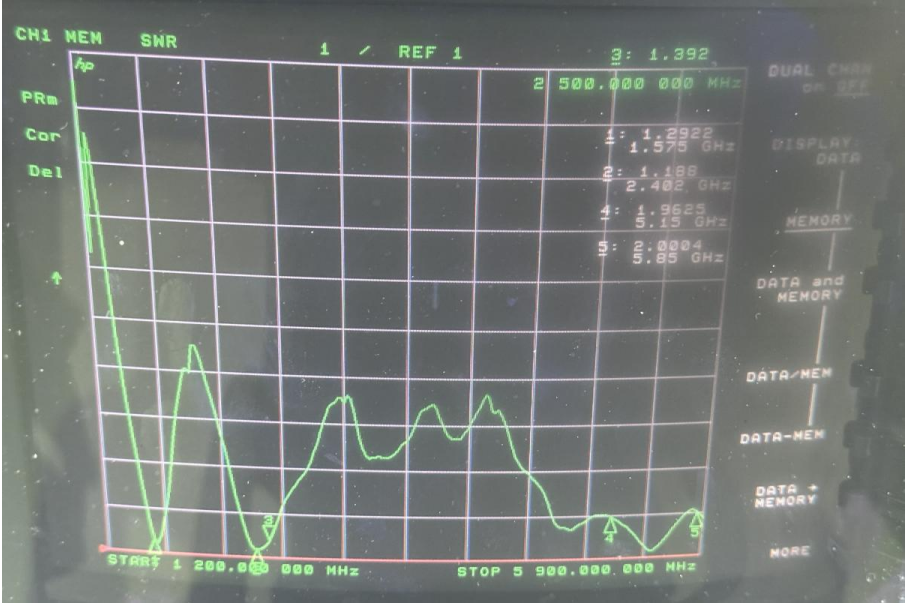
Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
1700	-0.81	-4.79	31.49
1720	-0.43	-4.48	34.84
1740	-0.04	-4.11	38.81
1760	0.30	-3.96	40.63
1780	0.59	-3.80	42.44
1800	1.37	-4.48	35.62
1820	1.86	-3.96	40.15
1840	2.12	-3.66	43.04
1860	2.31	-3.34	46.38
1880	2.39	-3.10	49.01
1900	2.60	-2.75	53.14
1920	2.47	-2.67	54.10
1940	2.09	-2.75	53.10
1960	1.79	-2.82	52.19
1980	1.25	-3.14	48.58
2000	0.70	-3.44	45.29
2020	0.30	-3.59	43.77
2040	-0.21	-3.76	42.10
2060	-0.25	-3.85	41.19
2080	-0.09	-3.83	41.41
2100	0.24	-3.66	43.04
2120	0.62	-3.35	46.27
2140	0.52	-3.32	46.54
2160	0.72	-3.29	46.92
2180	1.24	-3.10	49.00
2200	1.65	-2.87	51.63
2220	1.85	-2.81	52.33
2240	1.95	-2.76	52.97
2260	1.84	-2.85	51.83
2280	1.70	-2.89	51.36
2300	1.34	-3.11	48.86
2320	0.96	-3.40	45.76
2340	0.46	-3.64	43.23
2360	0.24	-3.77	41.99
2380	0.01	-4.18	38.24
2400	0.16	-4.40	36.27
2420	0.26	-4.77	33.32
2440	0.24	-5.31	29.44
2460	0.58	-5.69	27.01
2480	0.74	-5.59	27.59
2500	0.67	-4.93	32.17
2520	0.57	-4.45	35.86
2540	1.01	-4.20	38.00
2560	0.86	-4.12	38.72
2580	0.54	-4.09	38.96
2600	0.33	-4.17	38.30
2620	-0.08	-4.35	36.76
2640	-0.77	-4.70	33.86
2660	-0.95	-5.04	31.32
2680	-0.88	-5.21	30.15
2700	-0.53	-5.20	30.21

Passive test data



ANT 无源测试数据

ANT Passive test data



Frequency (MHZ)	2400	2500	5150	5850
VSWR	1.18	1.39	1.96	2
Return Loss (DB)	-21.31	-15.8	-9.76	-9.54

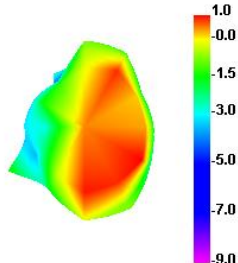
无源测试数据
Passive test data

Passive Test For WIFI2.4								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)
2400	38.11	-4.19	0.95	-1.2	25.64	12.474	0.95	-14.38
2410	39.81	-4	1.21	-0.94	26.779	13.03	1.21	-14.32
2420	39.45	-4.04	1.25	-0.9	26.62	12.835	1.25	-14.3
2430	38.3	-4.17	1.05	-1.1	25.801	12.497	1.05	-13.53
2440	42.62	-3.7	1.49	-0.66	28.426	14.192	1.49	-12.52
2450	44.03	-3.56	1.63	-0.52	29.258	14.773	1.63	-11.59
2460	40.88	-3.88	1.22	-0.93	27.082	13.802	1.22	-11.71
2470	41.79	-3.79	1.28	-0.87	27.528	14.266	1.28	-11.51
2480	44.02	-3.56	1.4	-0.75	28.802	15.214	1.4	-11.48
2490	44.81	-3.49	1.31	-0.84	29.015	15.798	1.31	-11.53
2500	39.97	-3.98	0.84	-1.31	25.717	14.252	0.84	-12.13

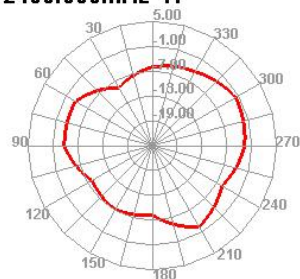
无源测试数据

Passive test data

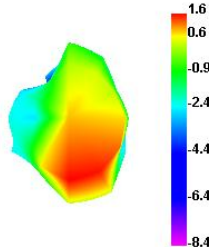
2400.000MHz



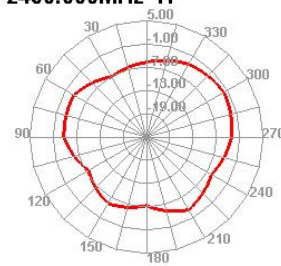
2400.000MHz H



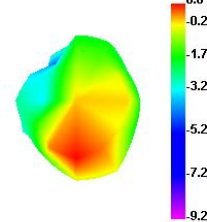
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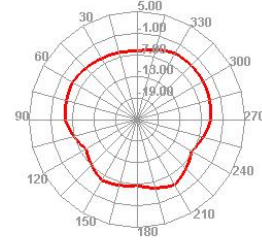
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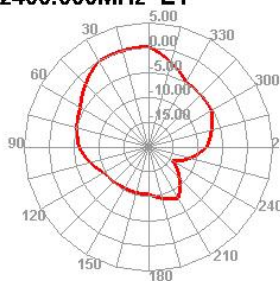
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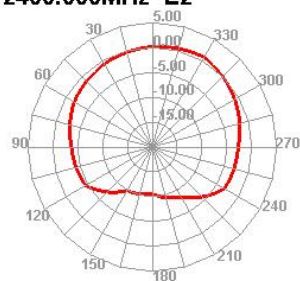
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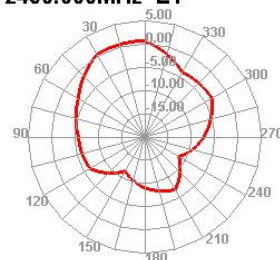
2400.000MHz E1



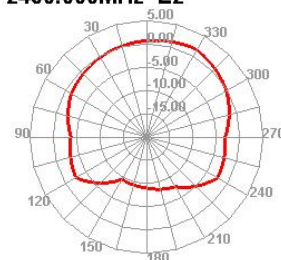
2400.000MHz E2



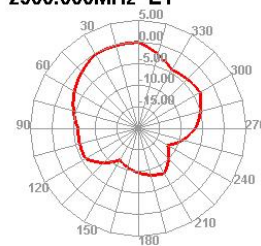
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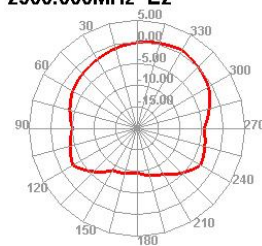
2450.000MHz E2



2500.000MHz E1



2500.000MHz E2



无源测试数据

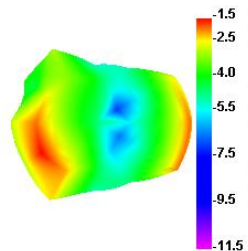
Passive test data

Passive Test For WIFI5G								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
5150	19.24	-7.16	-1.51	-3.66	13.332	5.91	-1.51	-22.08
5170	24	-6.2	-0.43	-2.58	16.741	7.261	-0.43	-20.42
5190	21.18	-6.74	-1.05	-3.2	14.688	6.496	-1.05	-20.63
5210	29.13	-5.36	-0.01	-2.16	20.035	9.098	-0.01	-19.12
5230	22.67	-6.45	-1.06	-3.21	15.688	6.977	-1.06	-20.83
5250	31.26	-5.05	0.68	-1.47	21.951	9.311	0.68	-19.01
5270	26.95	-5.7	0.25	-1.9	18.988	7.957	0.25	-21.24
5290	36.75	-4.35	1.75	-0.4	25.911	10.839	1.75	-23.13
5310	31.18	-5.06	1.31	-0.84	22.143	9.035	1.31	-20.24
5330	34.56	-4.61	1.75	-0.4	24.732	9.826	1.75	-17.3
5350	33.62	-4.73	1.6	-0.55	24.055	9.564	1.6	-19.36
5370	35.53	-4.49	1.89	-0.26	25.194	10.335	1.89	-23.16
5390	31.96	-4.95	1.35	-0.8	22.543	9.421	1.35	-24.37
5410	40.58	-3.92	2.26	0.11	28.695	11.888	2.26	-23.55
5430	34.15	-4.67	1.29	-0.86	24.068	10.078	1.29	-22.01
5450	39.69	-4.01	1.71	-0.44	27.775	11.917	1.71	-18.13
5470	35.32	-4.52	1.08	-1.07	24.647	10.676	1.08	-17.87
5490	36.38	-4.39	0.84	-1.31	25.365	11.014	0.84	-19.88
5510	37.8	-4.22	0.92	-1.23	26.363	11.44	0.92	-18.31
5530	39.28	-4.06	0.92	-1.23	27.163	12.117	0.92	-17.86
5550	42.61	-3.7	1.28	-0.87	29.388	13.226	1.28	-14.54
5570	38.56	-4.14	0.75	-1.4	26.624	11.937	0.75	-14.32
5590	40.99	-3.87	1.13	-1.02	28.2	12.791	1.13	-15.49
5610	36.73	-4.35	0.82	-1.33	25.277	11.45	0.82	-22.75
5630	39.13	-4.07	1.53	-0.62	26.933	12.2	1.53	-20.96
5650	35.51	-4.5	1.39	-0.76	24.75	10.764	1.39	-17.1
5670	34.14	-4.67	1.38	-0.77	24.046	10.091	1.38	-17.6
5690	32.89	-4.83	1.5	-0.65	23.405	9.488	1.5	-20.62
5710	29.62	-5.28	1.16	-0.99	21.158	8.46	1.16	-21.3
5730	33.35	-4.77	1.87	-0.28	23.829	9.517	1.87	-16.75
5750	27.11	-5.67	1.02	-1.13	19.439	7.668	1.02	-18.43
5770	29.87	-5.25	1.57	-0.58	21.493	8.381	1.57	-16.75
5790	26.37	-5.79	1.17	-0.98	19.018	7.357	1.17	-19.43
5810	30.08	-5.22	2.03	-0.12	21.731	8.349	2.03	-19.55
5830	29.56	-5.29	2.14	-0.01	21.489	8.07	2.14	-18.24
5850	34.77	-4.59	2.84	0.69	25.344	9.426	2.84	-20.24

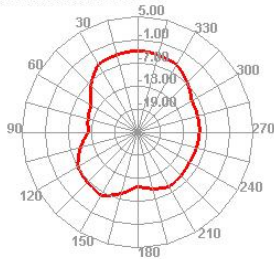
无源测试数据

Passive test data

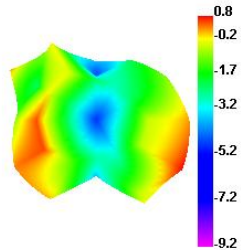
5150.000MHz



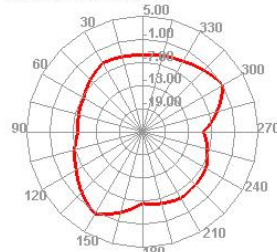
5150.000MHz H



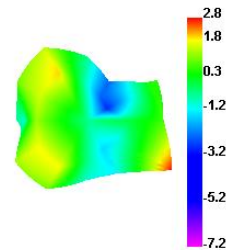
5490.000MHz



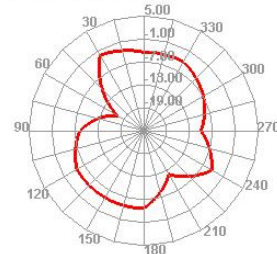
5490.000MHz H



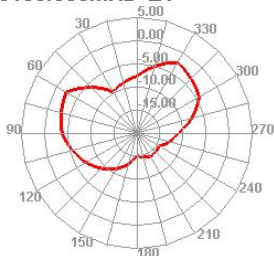
5850.000MHz



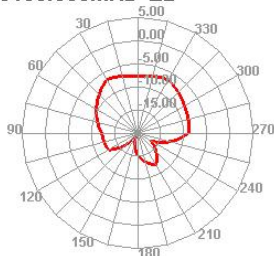
5850.000MHz H



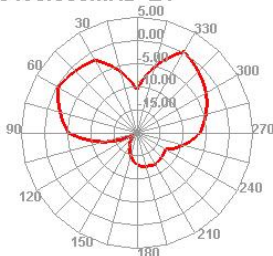
5150.000MHz E1



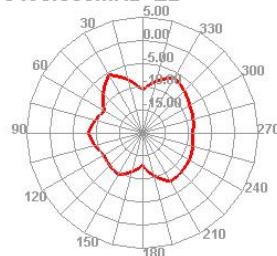
5150.000MHz E2



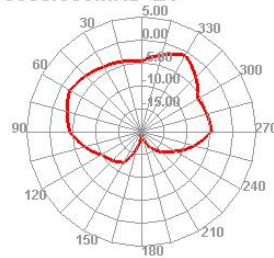
5490.000MHz E1



5490.000MHz E2



5850.000MHz E1



5850.000MHz E2

