

深圳市云顶通讯电子有限公司

TEL: +86 0755-23073599

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E-mail:wht0809@163.com

承認書 APPROVAL

客 户
:

品 名 规 格
DESCRIPTION:

MXQ-V1-90 2DB-WIFI2.4G/5G

料 号
PART NO.:

客 户 料 号
CUS PART NO.:

日 期
D A T E:

2023. 4. 13

云顶呈样签章

工 程 ENGINEERING DEPARTMENT	品 保 Q C DEPARTMENT	业 务 SALES DEPARTMENT
吴淑仪	刘丽	王洪涛

客户承认签章

工 程 ENGINEERING DEPARTMENT	品 保 Q C DEPARTMENT	采 购 PURCHASING DEPARTMENT

联系电话: 0755 23073599 150 1794 1162

※ 承认书一式三份, 惠蒙贵司承认签章

※ Approval in duplicate, please signed by your company.

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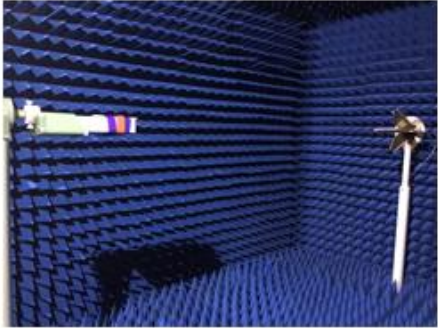
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1.测试项目与设备

	测试项目	设备
1. S11 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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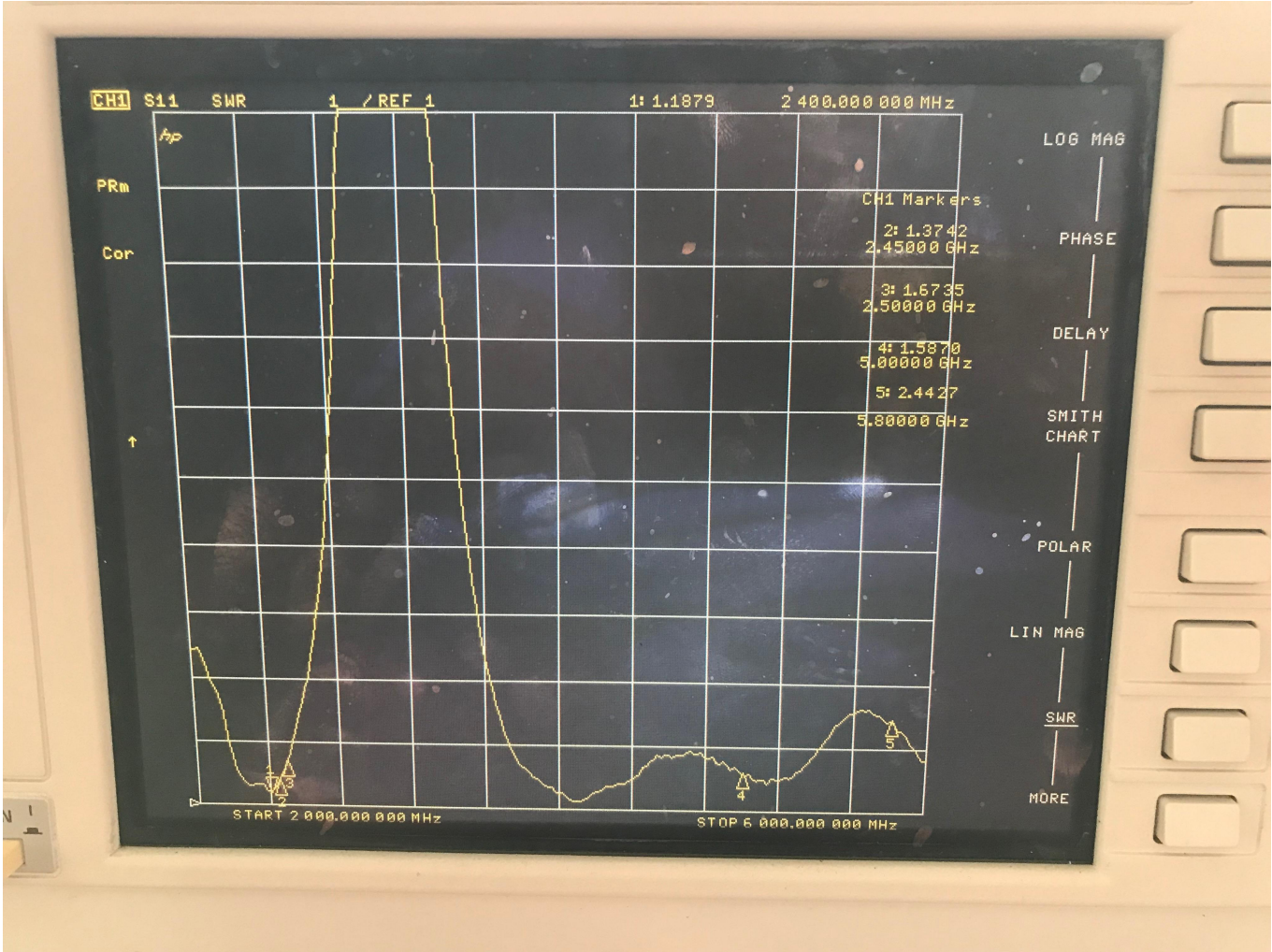
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2.天线性能

SWR



3.天线效率与增益

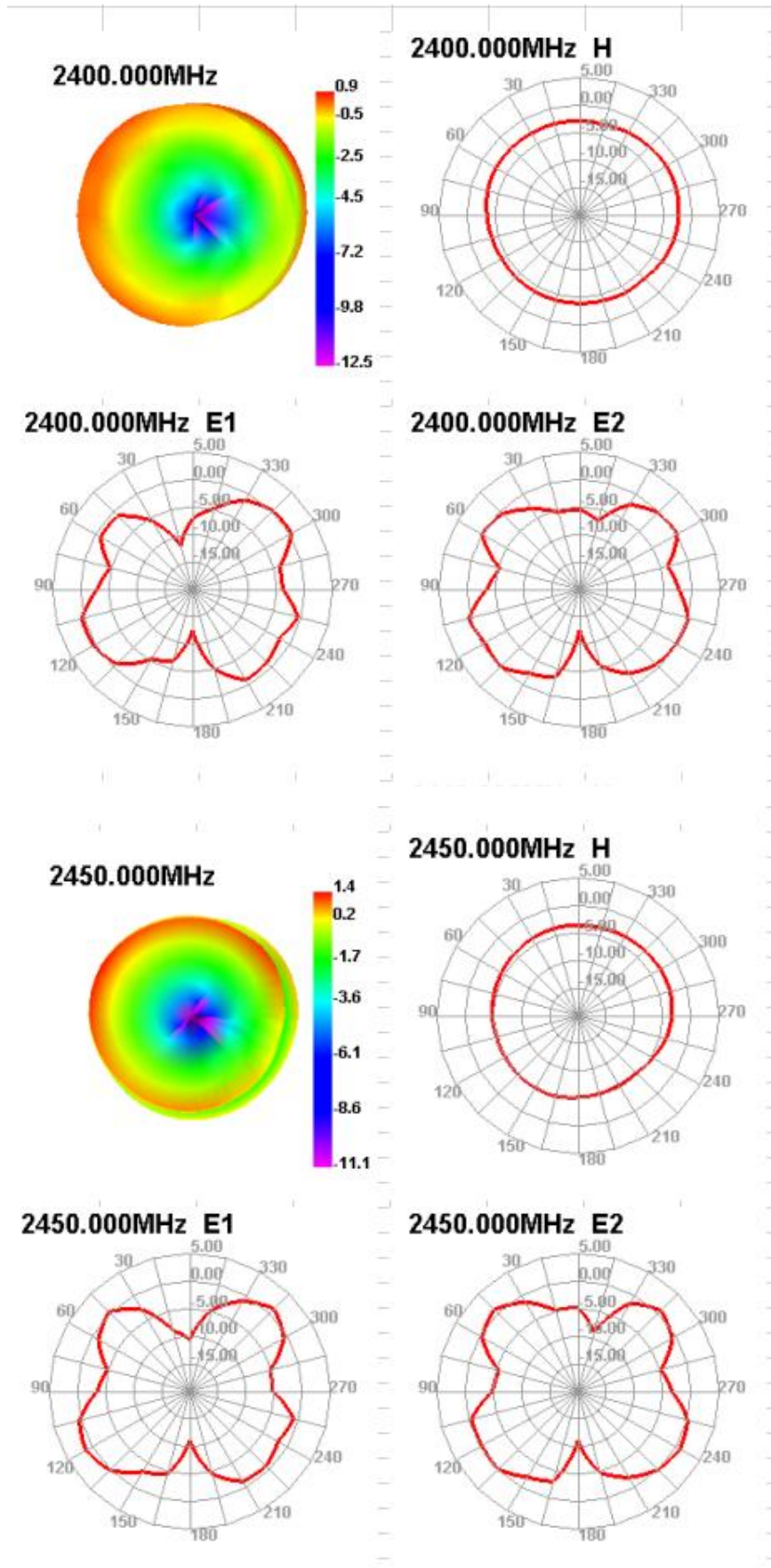
Passive Test For WIFI										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	42.6	-3.71	1.14	-1.01	20.069	22.531	1.14	-20.67	48.09	47.94
2410	42.07	-3.76	0.99	-1.16	19.589	22.482	0.99	-21.9	48.07	47.87
2420	40.27	-3.95	0.69	-1.46	18.558	21.717	0.69	-22.97	48.18	48
2430	42.37	-3.73	0.77	-1.38	19.394	22.972	0.77	-23.15	48.17	47.99
2440	45.92	-3.38	1.31	-0.84	20.978	24.94	1.31	-22.51	48.33	48.11
2450	46.54	-3.32	1.47	-0.68	21.196	25.349	1.47	-21.75	48.44	48.14
2460	46.21	-3.35	1.57	-0.58	20.994	25.217	1.57	-22.41	48.41	48.06
2470	48.25	-3.17	1.82	-0.33	21.846	26.402	1.82	-21.92	48.49	48.11
2480	47.73	-3.21	1.78	-0.37	21.52	26.213	1.78	-21.78	48.63	48.18
2490	48.07	-3.18	1.72	-0.43	21.536	26.53	1.72	-21.8	48.76	48.29
2500	47.76	-3.21	1.56	-0.59	21.341	26.418	1.56	-22.05	48.69	48.16

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Passive Test For WIFI-5G										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
5100	33.12	-4.8	-0.57	-2.72	18.391	14.724	-0.57	-17.89	57.95	57.06
5110	34.7	-4.6	-0.38	-2.53	19.716	14.988	-0.38	-17.5	57.9	57.22
5120	35.97	-4.44	-0.29	-2.44	20.692	15.279	-0.29	-19.13	57.99	57.21
5130	41.48	-3.82	0.3	-1.85	24.024	17.46	0.3	-19.01	57.94	57.17
5140	43.59	-3.61	0.49	-1.66	25.33	18.258	0.49	-20.2	57.95	57.28
5150	46.22	-3.35	0.84	-1.31	26.981	19.242	0.84	-20.15	57.91	57.19
5160	47.3	-3.25	0.9	-1.25	27.594	19.707	0.9	-19.02	57.9	57.07
5170	48.61	-3.13	1.05	-1.1	28.392	20.222	1.05	-18.9	57.79	56.93
5180	51.56	-2.88	1.29	-0.86	29.979	21.576	1.29	-20.56	57.75	57.18
5190	51.26	-2.9	1.28	-0.87	29.843	21.421	1.28	-20.41	57.87	56.93
5200	51.42	-2.89	1.38	-0.77	29.906	21.512	1.38	-20.32	57.55	56.83
5210	52.04	-2.84	1.48	-0.67	30.283	21.754	1.48	-20.67	57.87	57.01
5220	53.24	-2.74	1.57	-0.58	30.925	22.31	1.57	-19.64	57.54	56.84
5230	52.56	-2.79	1.62	-0.53	30.512	22.048	1.62	-18.97	57.56	56.65
5240	50.65	-2.95	1.39	-0.76	29.14	21.51	1.39	-19.58	57.24	56.56
5250	52.31	-2.81	1.63	-0.52	29.812	22.501	1.63	-20.09	57.72	56.91
5260	48.83	-3.11	1.28	-0.87	27.779	21.053	1.28	-21.81	57.47	56.56
5270	45.76	-3.39	0.95	-1.2	26.078	19.685	0.95	-22.47	57.58	56.9
5280	46.47	-3.33	1.01	-1.14	26.548	19.922	1.01	-22.64	57.62	56.89
5290	44.87	-3.48	0.75	-1.4	25.567	19.298	0.75	-22.86	57.57	56.88
5300	38.64	-4.13	0.3	-1.85	22.096	16.548	0.3	-25.35	57.16	56.32
5310	39.79	-4	0.27	-1.88	22.82	16.975	0.27	-26.26	57.25	56.65
5320	41.33	-3.84	0.41	-1.74	23.71	17.623	0.41	-28.14	57.4	56.64
5330	39.68	-4.01	0.35	-1.8	22.709	16.97	0.35	-29.6	57.21	56.57
5340	39.94	-3.99	0.57	-1.58	22.793	17.145	0.57	-25.97	57.95	57.29
5350	42.31	-3.74	1.14	-1.01	24.205	18.104	1.14	-24.4	57.61	56.81
5360	42.54	-3.71	1.24	-0.91	24.357	18.186	1.24	-19.05	57.66	56.82
5370	41.16	-3.86	1.37	-0.78	23.586	17.576	1.37	-17.64	57.56	56.82
5380	42.22	-3.74	1.72	-0.43	24.255	17.968	1.72	-16.92	57.78	57.07
5390	42.96	-3.67	1.85	-0.3	24.774	18.191	1.85	-17.2	57.53	56.62
5400	49.79	-3.03	2.73	0.58	28.651	21.139	2.73	-16.35	58.32	57.48
5410	51.19	-2.91	2.89	0.74	29.402	21.787	2.89	-16.88	58.2	57.29
5420	52.73	-2.78	3.18	1.03	30.203	22.532	3.18	-18.83	58.1	57.18
5430	52.6	-2.79	3.2	1.05	30.071	22.528	3.2	-19.03	58.01	57.03
5440	50.97	-2.93	3.02	0.87	29.112	21.853	3.02	-19.26	58.25	57.27
5450	54.97	-2.6	3.24	1.09	31.179	23.793	3.24	-19.5	58.49	57.41
5460	55.12	-2.59	3.29	1.14	31.183	23.94	3.29	-18.22	58.4	57.24
5470	56.35	-2.49	3.35	1.2	31.818	24.533	3.35	-17.02	58.69	57.59
5480	55.69	-2.54	3.39	1.24	31.562	24.127	3.39	-17.17	58.76	57.56
5490	53.07	-2.75	3.14	0.99	30.031	23.042	3.14	-18.51	58.79	57.51
5500	51.58	-2.88	2.91	0.76	29.007	22.573	2.91	-17.23	58.91	57.66
5510	49.47	-3.06	2.83	0.68	27.755	21.718	2.83	-17.26	59.05	57.67
5520	48.13	-3.18	2.53	0.38	26.879	21.253	2.53	-17.68	59.04	57.71
5530	47.36	-3.25	2.45	0.3	26.3	21.055	2.45	-19.88	59.3	58.01
5540	46.64	-3.31	2.37	0.22	25.836	20.806	2.37	-18.17	59.47	58.29
5550	47.24	-3.26	2.39	0.24	26.198	21.044	2.39	-18.6	59.82	58.58
5560	44.83	-3.48	2.13	-0.02	24.91	19.92	2.13	-17.6	59.71	58.64
5570	44.76	-3.49	2.19	0.04	24.842	19.923	2.19	-17.38	60.02	59.04
5580	42.67	-3.7	1.91	-0.24	23.745	18.924	1.91	-17.61	59.68	58.73
5590	42.15	-3.75	2.01	-0.14	23.437	18.717	2.01	-18.73	59.8	59

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5600	40.9	-3.88	1.61	-0.54	22.571	18.329	1.61	-18.84	59.51	58.82
5610	42.67	-3.7	1.76	-0.39	23.468	19.202	1.76	-17.47	59.73	59.13
5620	43	-3.67	1.73	-0.42	23.701	19.298	1.73	-18.01	59.94	59.22
5630	44.33	-3.53	1.7	-0.45	24.497	19.837	1.7	-18.75	60.02	59.46
5640	47.14	-3.27	2.07	-0.08	26.097	21.038	2.07	-17.45	60.38	59.77
5650	46.61	-3.32	1.7	-0.45	25.689	20.916	1.7	-17.77	60.1	59.5
5660	47.18	-3.26	1.8	-0.35	26.027	21.149	1.8	-18.18	60.22	59.68
5670	47.97	-3.19	1.78	-0.37	26.662	21.31	1.78	-18.16	60	59.42
5680	48.69	-3.13	1.78	-0.37	27.152	21.538	1.78	-15.91	60.44	59.79
5690	47.26	-3.26	1.69	-0.46	26.143	21.116	1.69	-17.03	60.68	60.03
5700	47.13	-3.27	1.52	-0.63	26.105	21.029	1.52	-15.62	60.54	59.93
5710	52.47	-2.8	1.76	-0.39	29.297	23.173	1.76	-15.88	60.75	60.28
5720	50.96	-2.93	1.71	-0.44	28.227	22.734	1.71	-15.99	60.42	59.76
5730	49.15	-3.08	1.39	-0.76	27.27	21.882	1.39	-16.57	60.61	60.07
5740	51.61	-2.87	1.67	-0.48	28.569	23.043	1.67	-16.32	60.91	60.18
5750	51.82	-2.85	1.72	-0.43	28.517	23.306	1.72	-19.68	60.86	60.31
5760	49.86	-3.02	1.73	-0.42	27.141	22.715	1.73	-19.25	61.2	60.63
5770	52.66	-2.79	1.76	-0.39	28.47	24.187	1.76	-20.37	60.81	60.17
5780	55.98	-2.52	2.04	-0.11	30.175	25.809	2.04	-18.31	61.01	60.41
5790	51.59	-2.87	1.86	-0.29	27.459	24.135	1.86	-17.83	60.81	60.08
5800	55.96	-2.52	2.16	0.01	29.539	26.421	2.16	-18.45	61.14	60.57

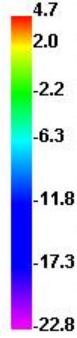
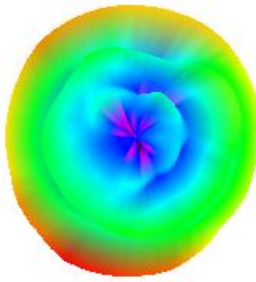
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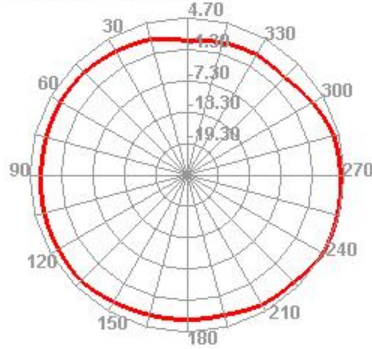
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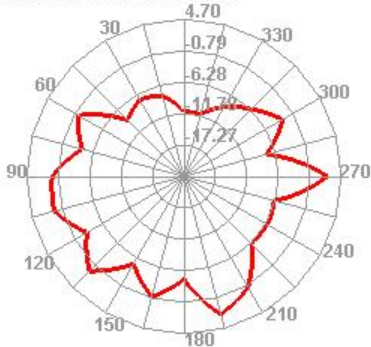
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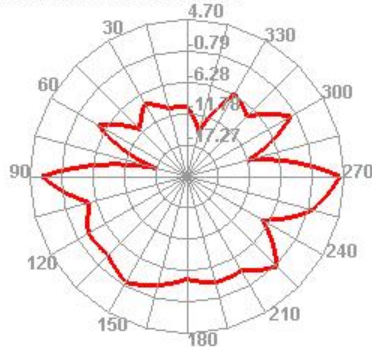
5100.000MHz H



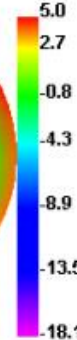
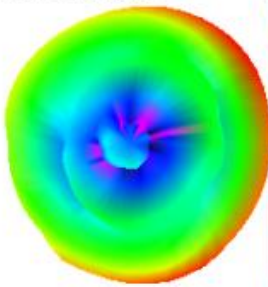
5100.000MHz E1



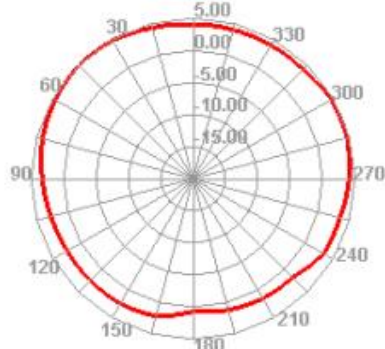
5100.000MHz E2



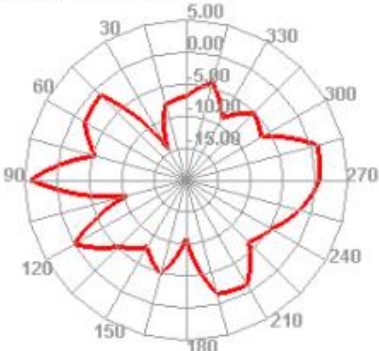
5450.000MHz



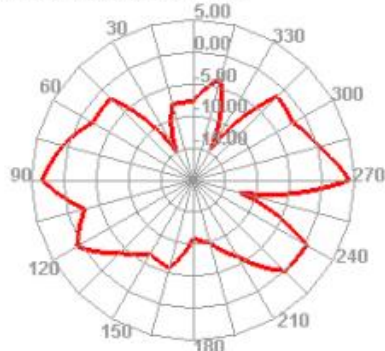
5450.000MHz H



5450.000MHz E1



5450.000MHz E2



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4.天线结构图

