

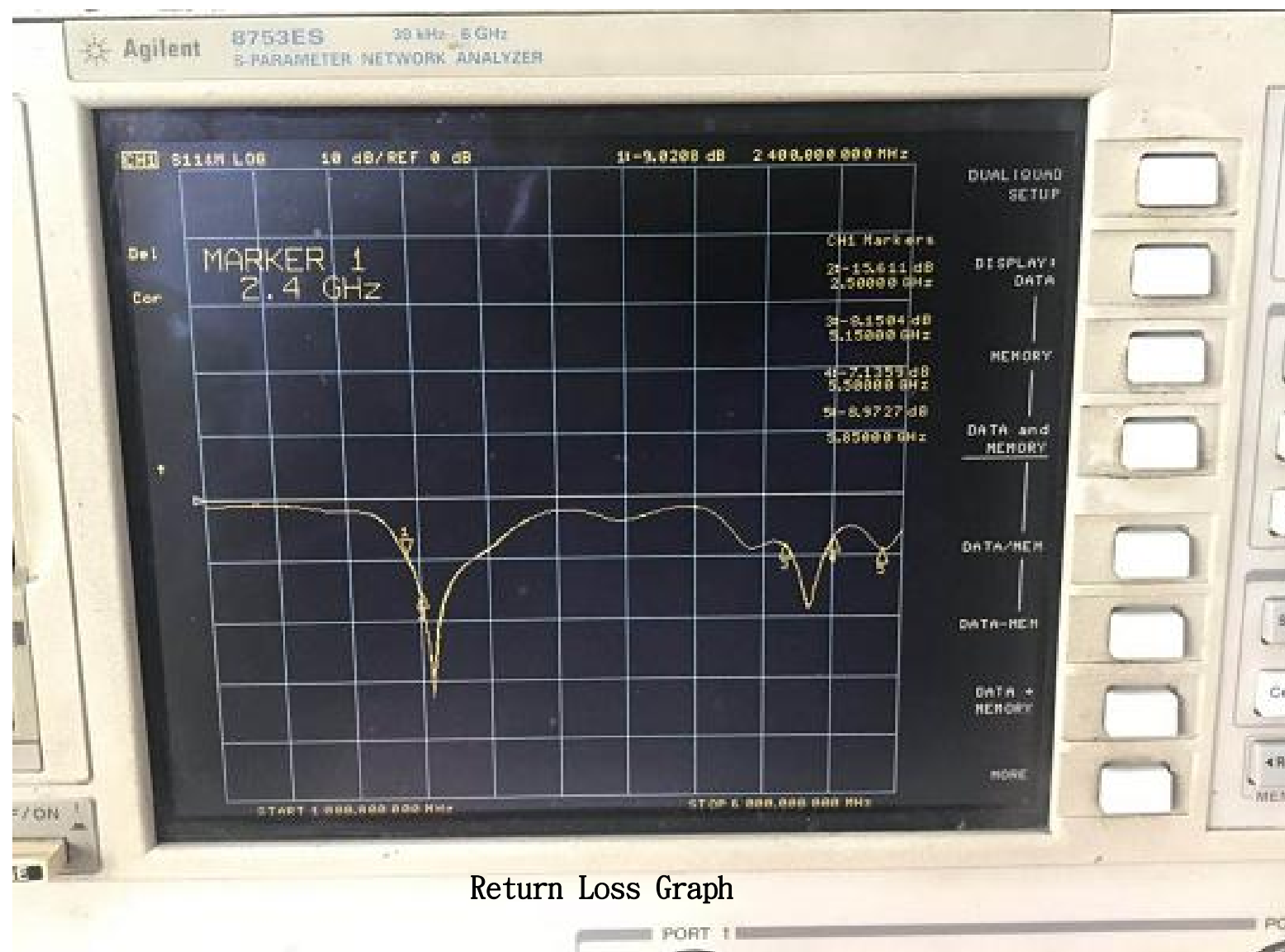
Antenna Test Report

test environment

- The antenna characteristics use the microwave anechoic chamber of the ETS test system, the size of the microwave anechoic chamber is 7m x 4m x 3m, and the test frequency is 700MHz---6GHz.
- S11 testing using Agilent E5071B network analyzer



wifi-1 2.4G+5G



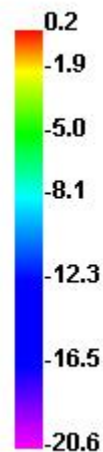
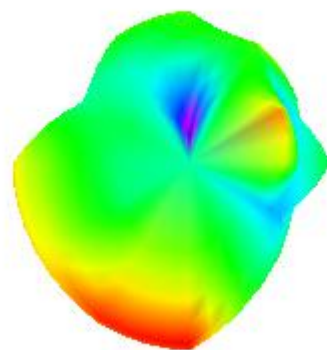
Return Loss Graph

2.4G WiFi Antenna efficiency

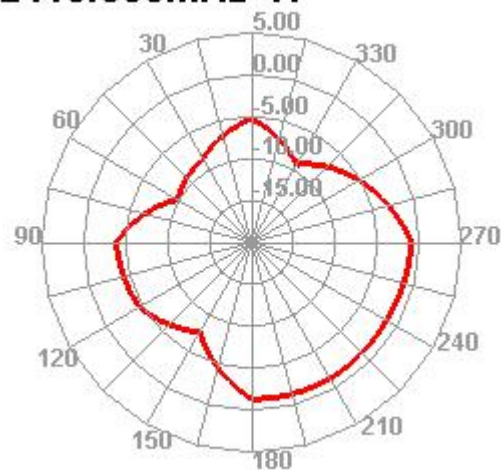
wifi-1

Passive Test For WII2.4			
Freq	Effi	Effi	Gain
(MHz)	(%)	(dB)	(dBi)
2400	40.76	-3.9	0
2410	42.45	-3.72	0.22
2420	43.38	-3.63	0.44
2430	47.9	-3.2	1.03
2440	51.62	-2.87	1.6
2450	54.02	-2.67	2.03
2460	54.21	-2.66	2.07
2470	53.49	-2.72	2.06
2480	57.48	-2.4	2.5
2490	61.63	-2.1	2.84
2500	61.09	-2.14	2.94

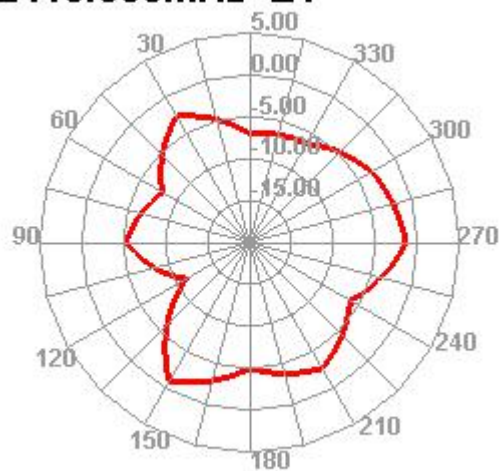
2410.000MHz



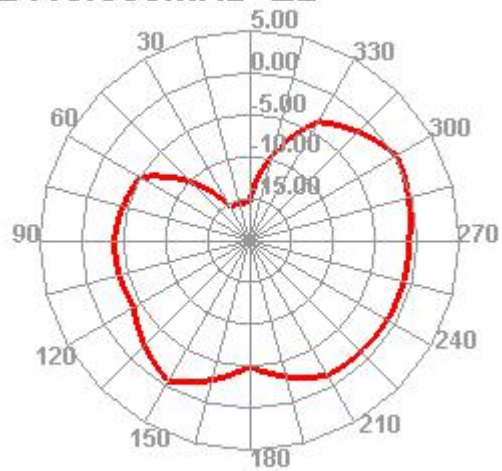
2410.000MHz H



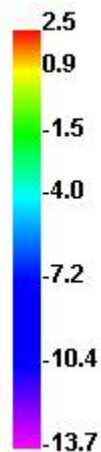
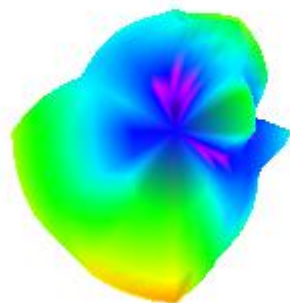
2410.000MHz E1



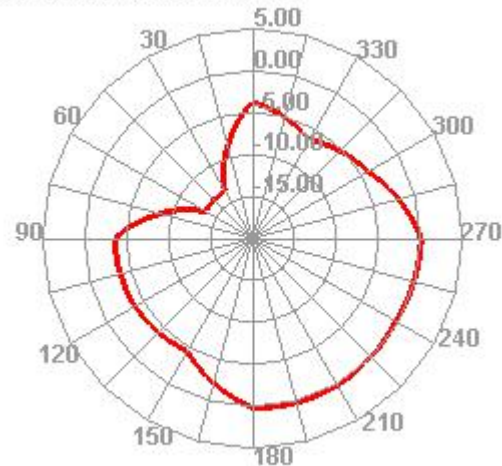
2410.000MHz E2



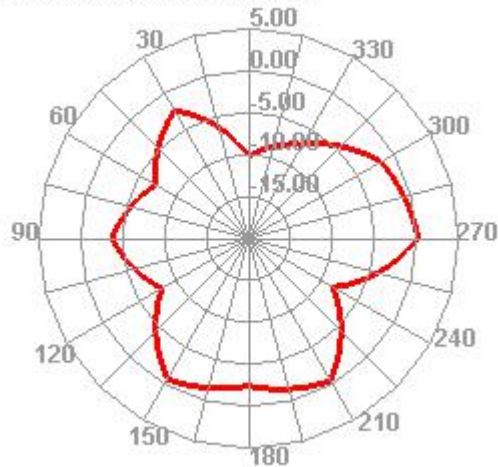
2480.000MHz



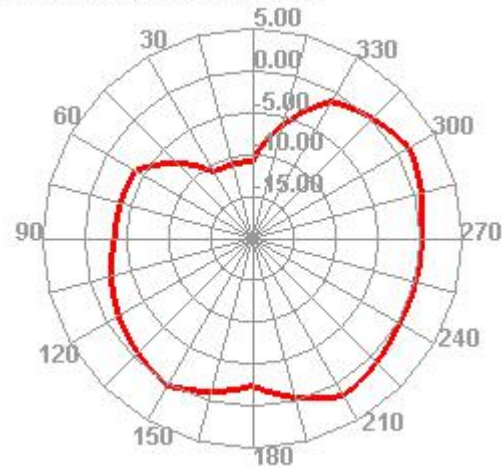
2480.000MHz H



2480.000MHz E1



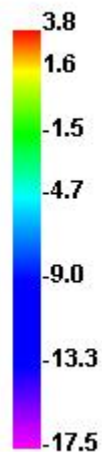
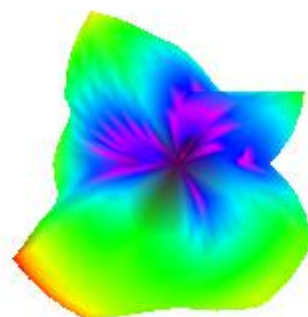
2480.000MHz E2



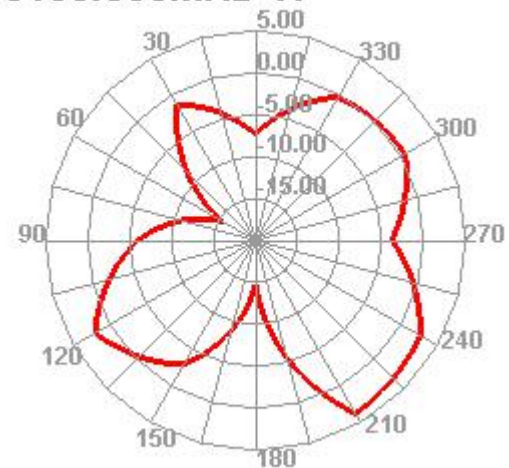
5GWiFi Antenna efficiency				WIFI-1 Passive Test For WII5.8							
Freq	Effi	Effi	Gain	Freq	Effi	Effi	Gain	Freq	Effi	Effi	Gain
(MHz)	(%)	(dB)	(dBi)	(MHz)	(%)	(dB)	(dBi)	(MHz)	(%)	(dB)	(dBi)
5150	66.74	-1.76	3.77	5390	60.78	-2.16	3.65	5630	61.33	-2.12	3.52
5160	60.43	-2.19	3.38	5400	64.91	-1.88	3.91	5640	59.89	-2.23	3.09
5170	56.71	-2.46	3.09	5410	72.63	-1.39	4.79	5650	64.52	-1.9	3.75
5180	54.98	-2.6	2.8	5420	77.7	-1.1	5.19	5660	60.59	-2.18	3.12
5190	66.96	-1.74	3.56	5430	70.33	-1.53	4.8	5670	62.53	-2.04	3.03
5200	65.3	-1.85	3.39	5440	71.5	-1.46	5.06	5680	57.46	-2.41	2.74
5210	64.17	-1.93	3.29	5450	65.21	-1.86	4.78	5690	56.09	-2.51	2.46
5220	58.75	-2.31	2.95	5460	69.19	-1.6	5.22	5700	56.25	-2.5	2.3
5230	60.85	-2.16	3.06	5470	72.51	-1.4	5.52	5710	53.82	-2.69	2.75
5240	66.08	-1.8	3.39	5480	68.57	-1.64	5.16	5720	56.32	-2.49	2.45
5250	64.69	-1.89	3.2	5490	73.55	-1.33	5.59	5730	56.09	-2.51	2.15
5260	64.2	-1.92	3.08	5500	67.87	-1.68	5.2	5740	54.18	-2.66	2.37
5270	59.08	-2.29	2.69	5510	64.8	-1.88	5.01	5750	53.79	-2.69	2.42
5280	56.44	-2.48	2.43	5520	70.88	-1.49	4.78	5760	48.62	-3.13	2.43
5290	60.21	-2.2	2.49	5530	67.1	-1.73	4.68	5770	50.43	-2.97	2.75
5300	57.13	-2.43	2.19	5540	72.56	-1.39	5.12	5780	48.22	-3.17	2.84
5310	63.59	-1.97	2.67	5550	70.8	-1.5	4.62	5790	49.24	-3.08	2.53
5320	65.44	-1.84	2.86	5560	68.84	-1.62	4.47	5800	47.58	-3.23	2.61
5330	57.86	-2.38	2.46	5570	69.35	-1.59	4.42	5810	45.44	-3.43	2.45
5340	60.92	-2.15	2.4	5580	66.65	-1.76	3.91	5820	44.36	-3.53	2.59
5350	56.8	-2.46	2.55	5590	67.24	-1.72	4.23	5830	43.14	-3.65	3
5360	68.21	-1.66	3.68	5600	71.03	-1.49	4.4	5840	45.79	-3.39	1.83
5370	70.21	-1.54	3.65	5610	63.01	-2.01	3.92	5850	44.15	-3.55	2.96
5380	62.36	-2.05	3.47	5620	67.25	-1.72	3.76				



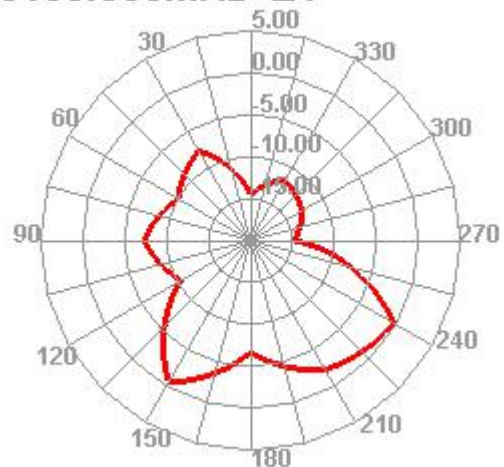
5150.000MHz



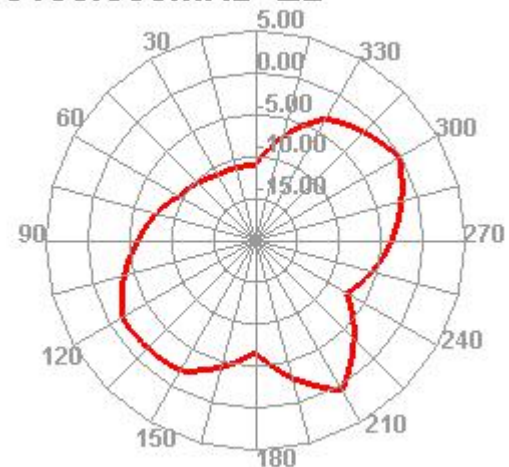
5150.000MHz H



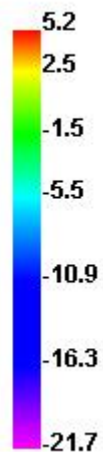
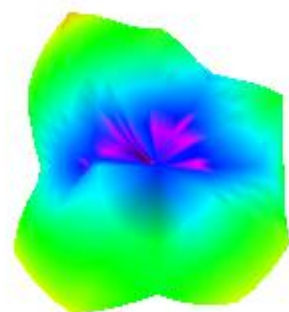
5150.000MHz E1



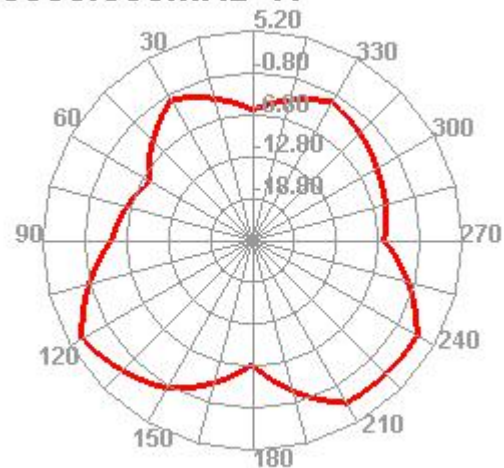
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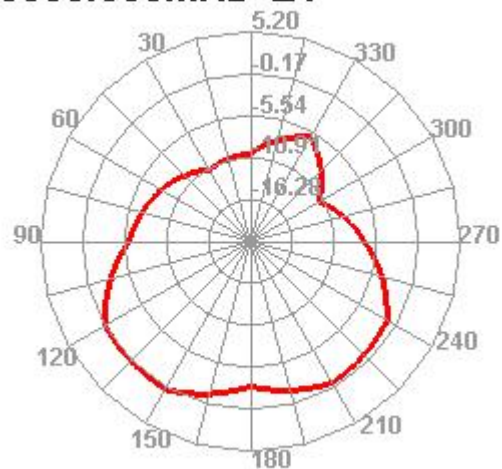
5500.000MHz



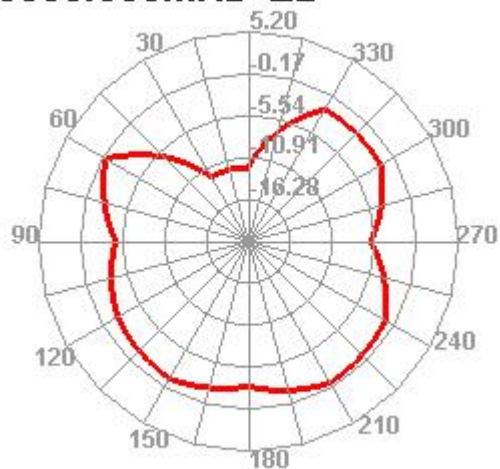
5500.000MHz H



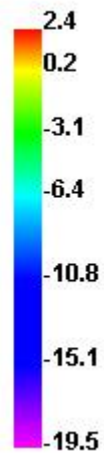
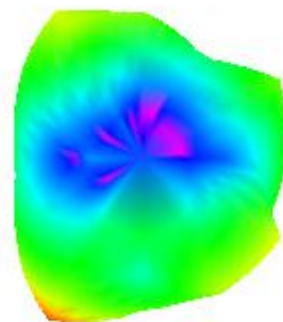
5500.000MHz E1



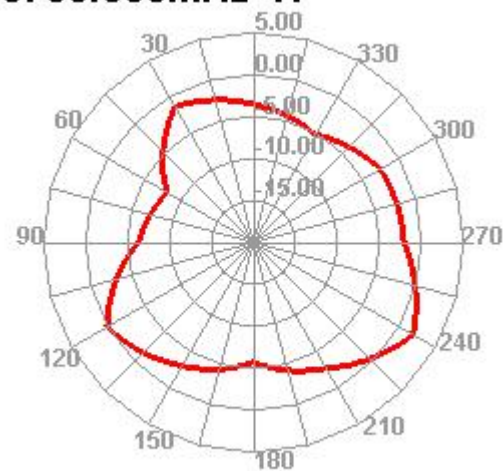
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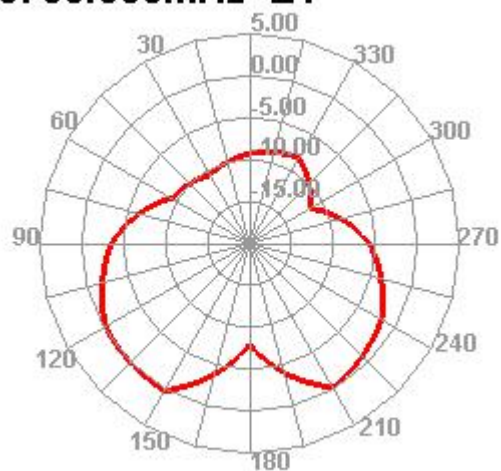
5750.000MHz



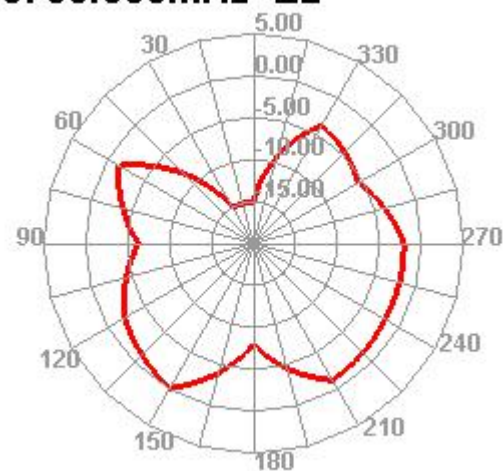
5750.000MHz H



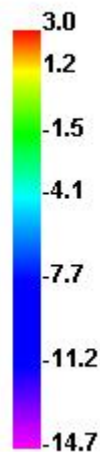
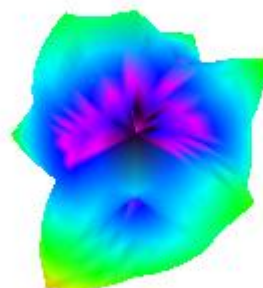
5750.000MHz E1



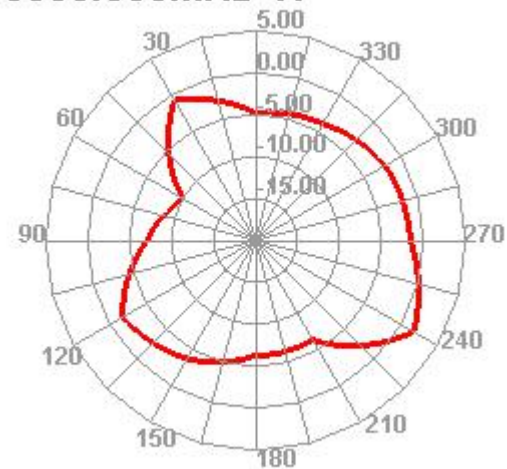
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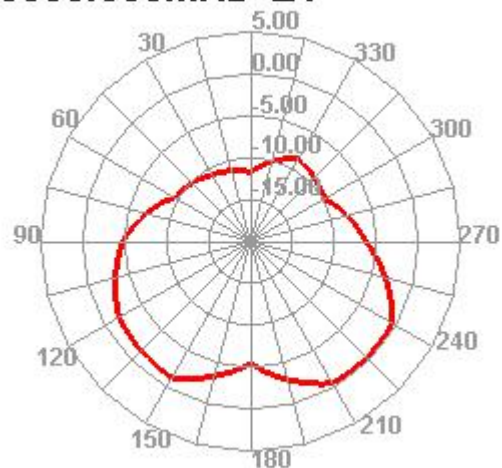
5850.000MHz



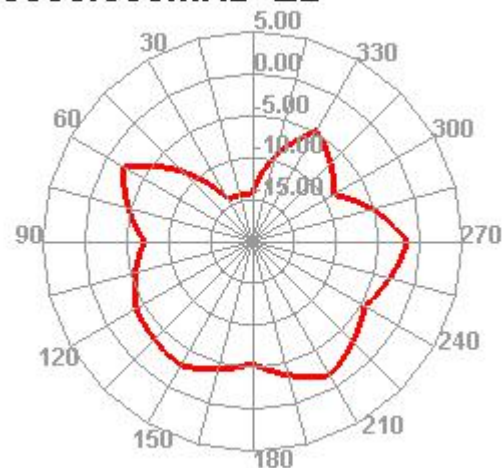
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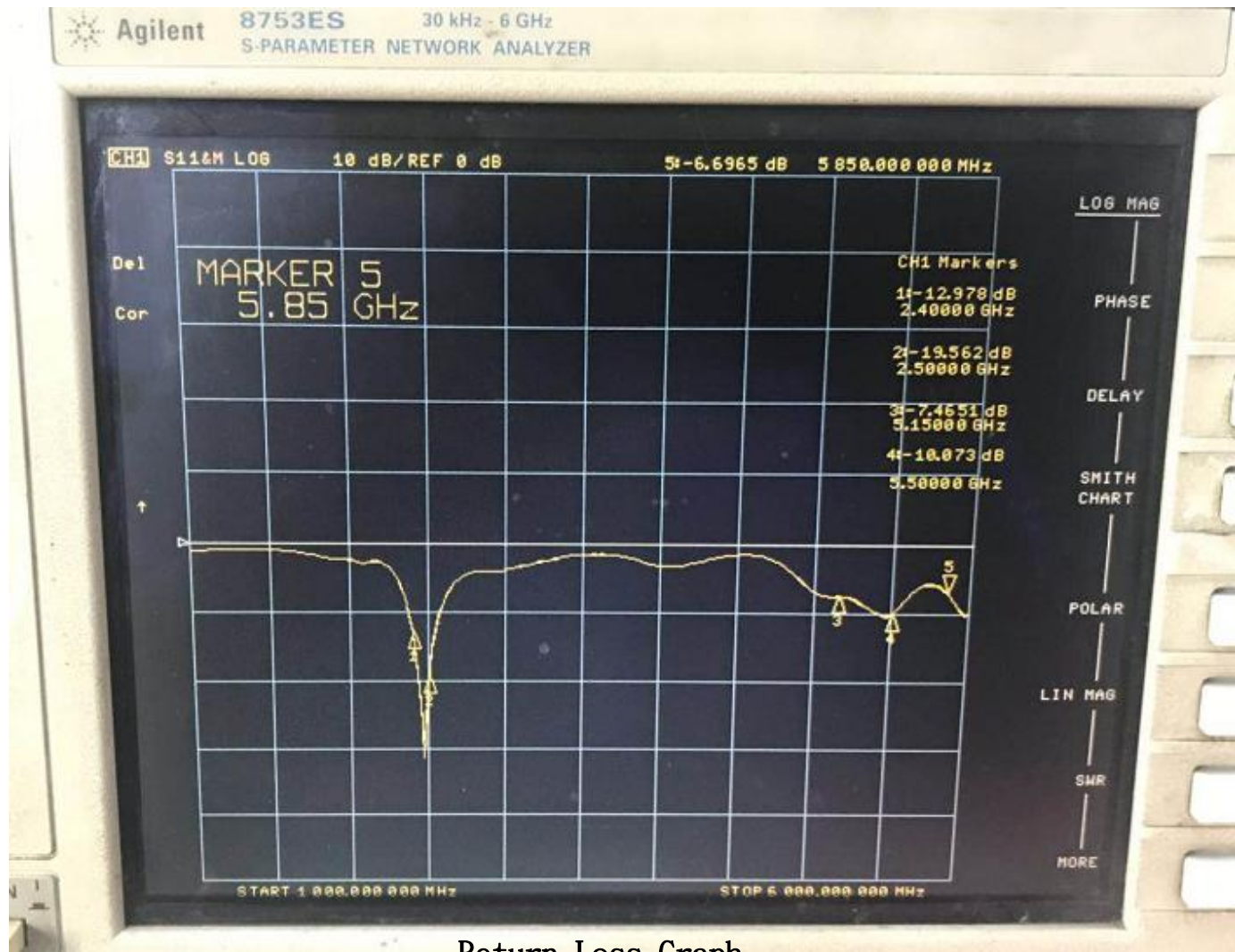
5850.000MHz E1



5850.000MHz E2



wifi-2 2.4G+5G



Return Loss Graph

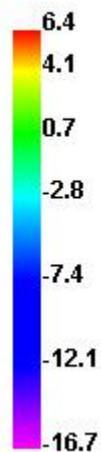
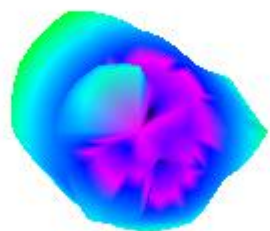


2.4G WiFi Antenna efficiency

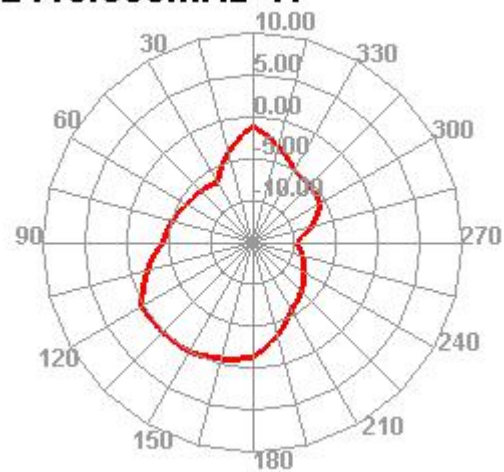
wifi-2

Passive Test For WII2.4			
Freq	Effi	Effi	Gain
(MHz)	(%)	(dB)	(dBi)
2400	58.94	-2.3	6.71
2410	55.46	-2.56	6.44
2420	49.78	-3.03	5.88
2430	50.43	-2.97	5.74
2440	50.51	-2.97	5.6
2450	48.43	-3.15	5.32
2460	46.2	-3.35	5.02
2470	41.67	-3.8	4.57
2480	41.17	-3.85	4.42
2490	44.24	-3.54	4.69
2500	42.98	-3.67	4.49

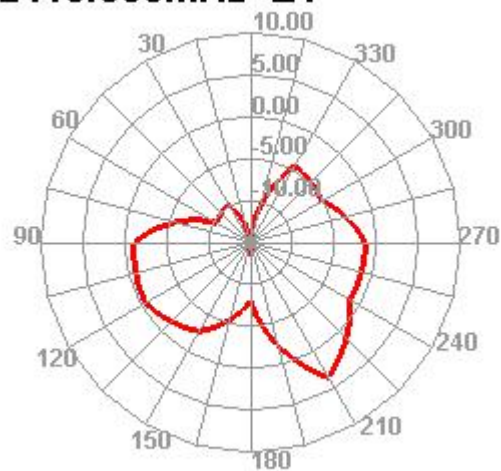
2410.000MHz



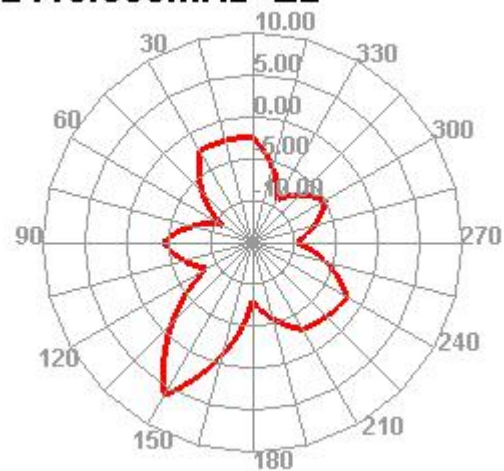
2410.000MHz H



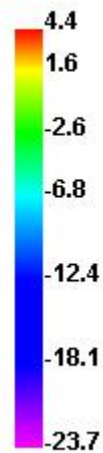
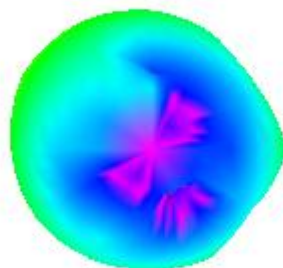
2410.000MHz E1



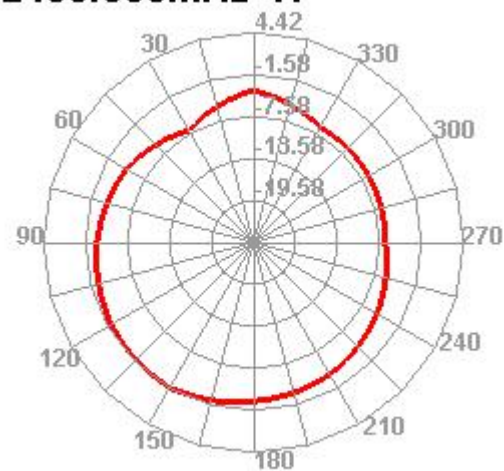
2410.000MHz E2



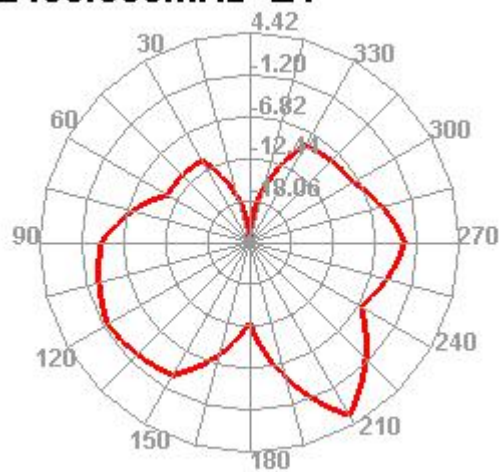
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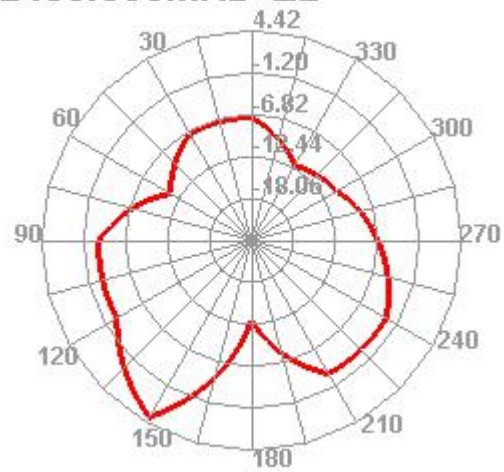
2480.000MHz H



2480.000MHz E1



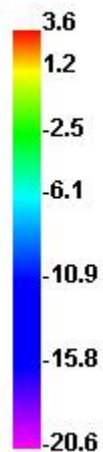
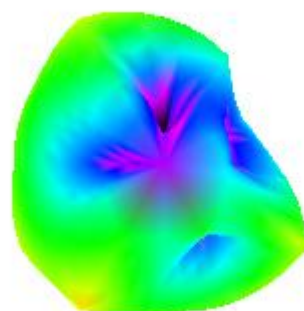
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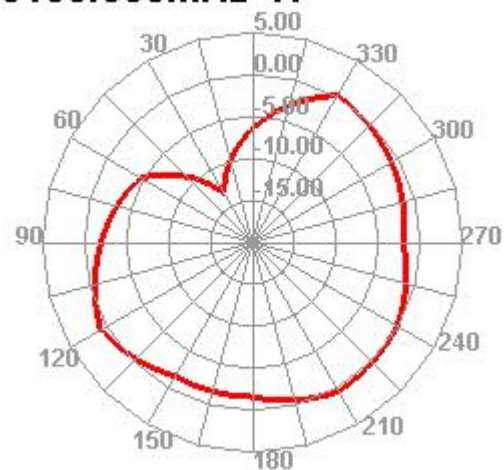
5GWiFi Antenna efficiency			WIFI-2	Passive Test For WII5.8							
Freq	Effi	Effi	Gain	Freq	Effi	Effi	Gain	Freq	Effi	Effi	Gain
(MHz)	(%)	(dB)	(dBi)	(MHz)	(%)	(dB)	(dBi)	(MHz)	(%)	(dB)	(dBi)
5150	59.84	-2.23	3.6	5390	63.72	-1.96	2.62	5630	60.54	-2.18	3.49
5160	57.69	-2.39	3.36	5400	74.98	-1.25	3.61	5640	57.36	-2.41	3.23
5170	54.96	-2.6	3.41	5410	77.56	-1.1	3.78	5650	60.97	-2.15	3.62
5180	57.45	-2.41	3.7	5420	79.5	-1	3.95	5660	56.9	-2.45	3.38
5190	59.58	-2.25	4.1	5430	74.18	-1.3	3.9	5670	60.67	-2.17	3.63
5200	57.64	-2.39	4.05	5440	73.59	-1.33	3.77	5680	55.34	-2.57	3.36
5210	56.03	-2.52	3.94	5450	73.04	-1.36	3.83	5690	52.42	-2.8	3.13
5220	51.05	-2.92	3.45	5460	73.42	-1.34	3.97	5700	52.55	-2.79	3.06
5230	59.85	-2.23	4.08	5470	74.83	-1.26	4.03	5710	48.86	-3.11	2.63
5240	60.72	-2.17	3.85	5480	72.41	-1.4	4.07	5720	51.46	-2.89	2.95
5250	59.48	-2.26	3.66	5490	73.76	-1.32	4.16	5730	51	-2.92	3.08
5260	59.15	-2.28	3.38	5500	73.13	-1.36	4.13	5740	48.22	-3.17	2.7
5270	52.84	-2.77	2.56	5510	69.01	-1.61	3.89	5750	48.05	-3.18	2.89
5280	58.22	-2.35	2.96	5520	73.18	-1.36	4.06	5760	41	-3.87	2.22
5290	61.43	-2.12	3.13	5530	68.43	-1.65	3.84	5770	43.23	-3.64	2.56
5300	58.53	-2.33	2.79	5540	72.42	-1.4	4.1	5780	40.6	-3.91	2.16
5310	63.31	-1.99	2.88	5550	73.52	-1.34	4.22	5790	42.7	-3.7	2.33
5320	63.56	-1.97	2.79	5560	71.12	-1.48	4.09	5800	41.88	-3.78	2.16
5330	61.62	-2.1	2.52	5570	71.13	-1.48	4.12	5810	38.98	-4.09	1.96
5340	65.54	-1.84	2.72	5580	67.45	-1.71	3.79	5820	38.68	-4.12	1.91
5350	64.73	-1.89	2.71	5590	66.19	-1.79	3.82	5830	36.97	-4.32	1.71
5360	70.32	-1.53	2.96	5600	69.94	-1.55	4.19	5840	40.03	-3.98	1.96
5370	70.96	-1.49	3.06	5610	62.22	-2.06	3.59	5850	38.21	-4.18	1.93
5380	67.12	-1.73	2.89	5620	67.49	-1.71	4.01				



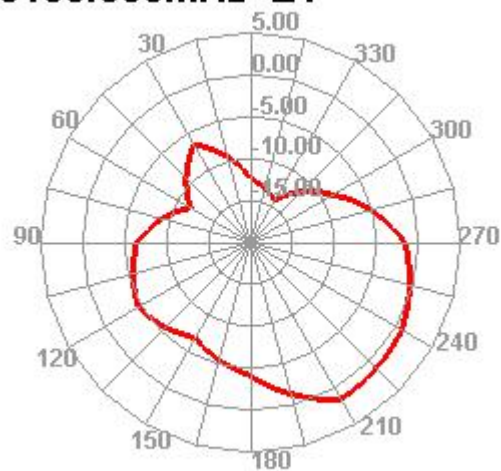
5150.000MHz



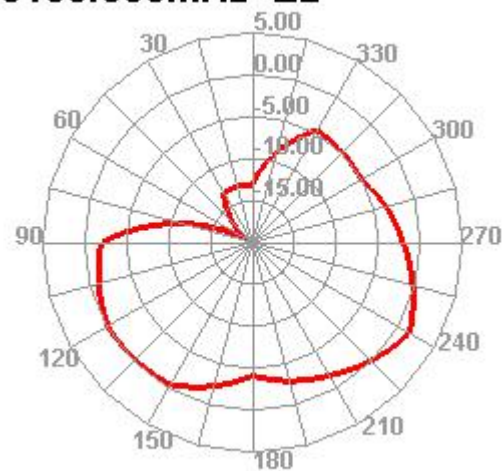
5150.000MHz H



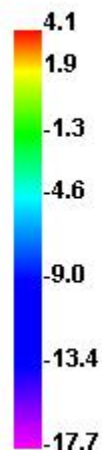
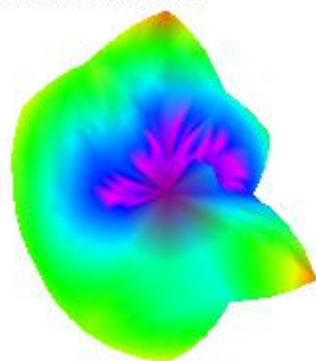
5150.000MHz E1



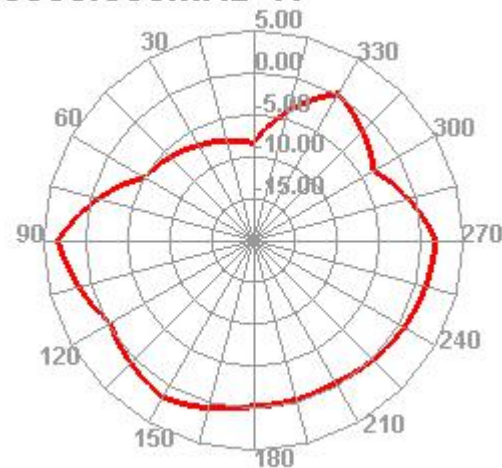
5150.000MHz E2



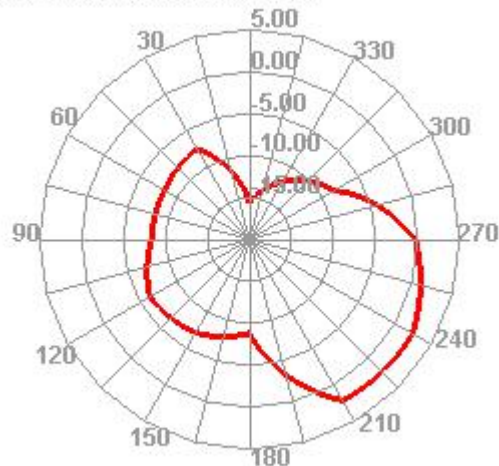
5500.000MHz



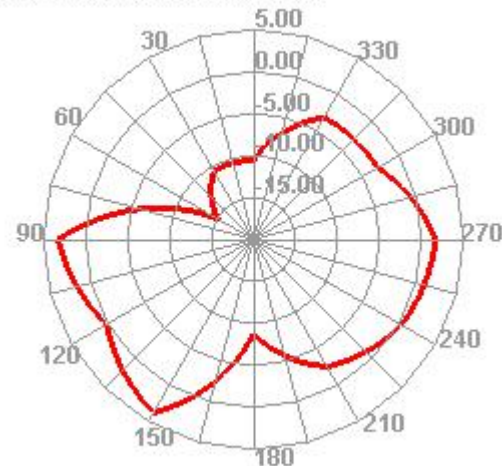
5500.000MHz H



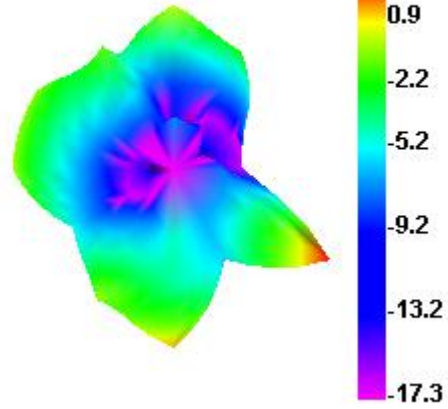
5500.000MHz E1



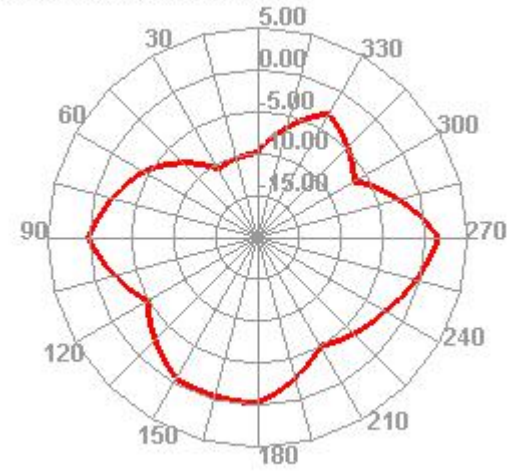
5500.000MHz E2



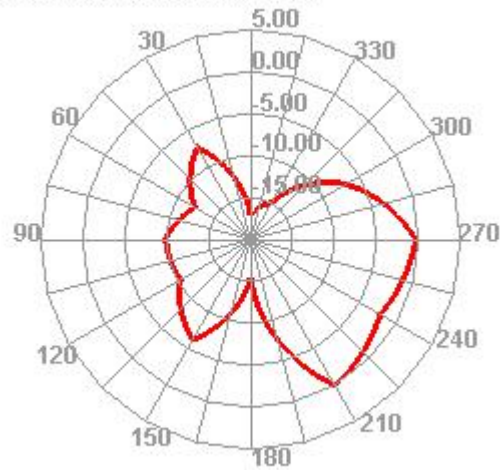
5750.000MHz



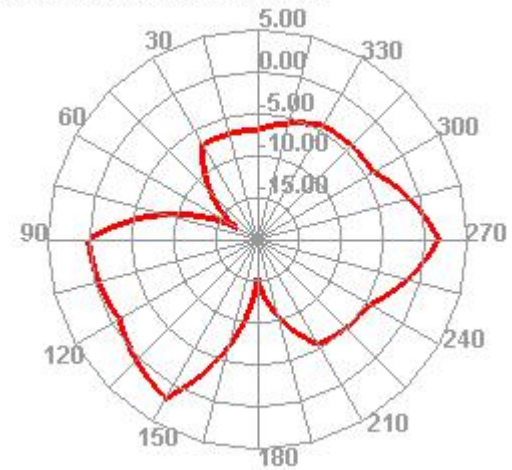
5750.000MHz H



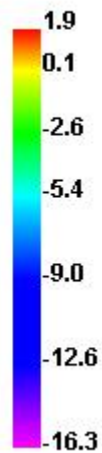
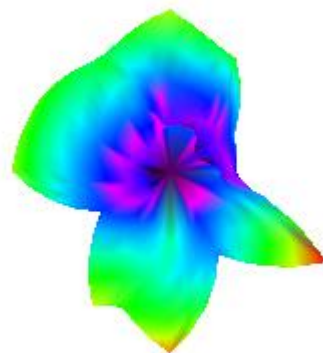
5750.000MHz E1



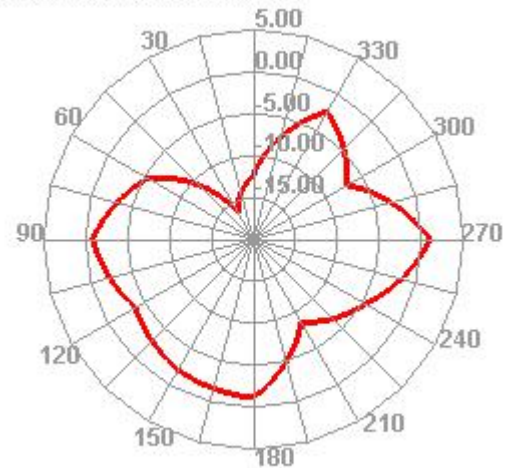
5750.000MHz E2



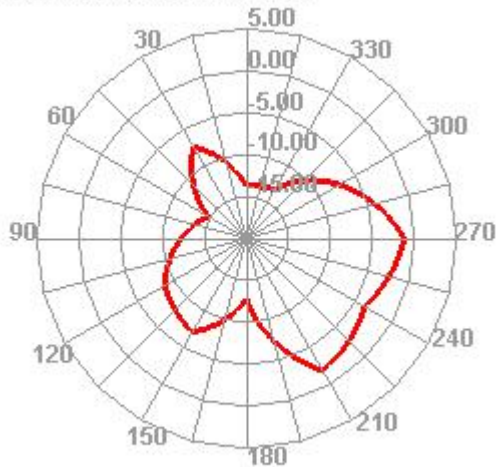
5850.000MHz



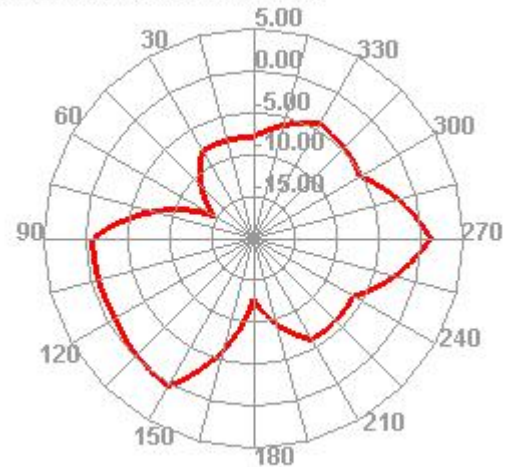
5850.000MHz H



5850.000MHz E1

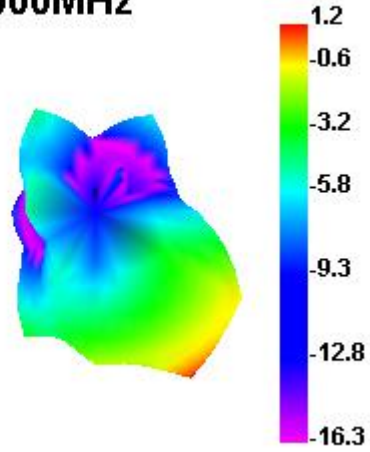


5850.000MHz E2

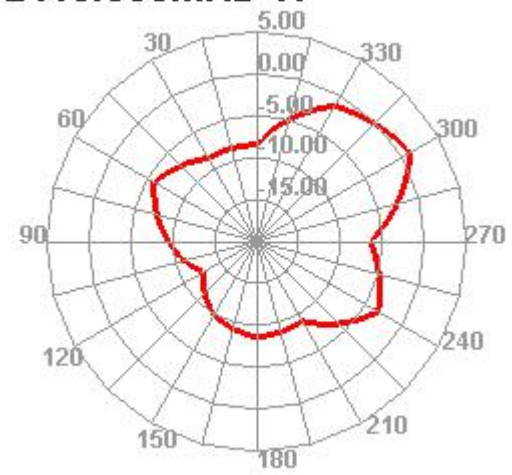


Passive Test For WII2.4			
Freq	Effi	Effi	Gain
(MHz)	(%)	(dB)	(dBi)
2400	25.27	-5.97	1.05
2410	26.6	-5.75	1.15
2420	26	-5.85	0.89
2430	29.96	-5.23	1.26
2440	34.6	-4.61	1.65
2450	37.21	-4.29	1.77
2460	40.04	-3.98	1.91
2470	38.87	-4.1	1.6
2480	41.15	-3.86	1.58
2490	46.35	-3.34	1.92
2500	46.84	-3.29	1.79

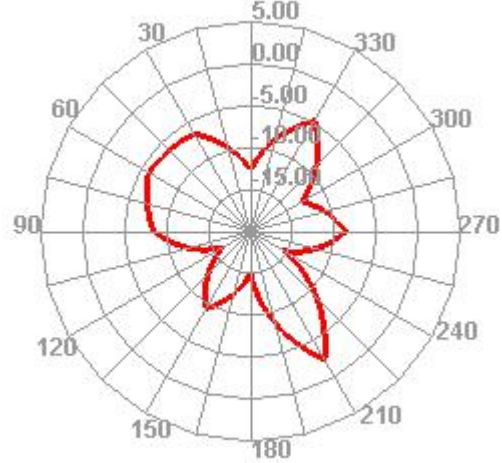
2410.000MHz



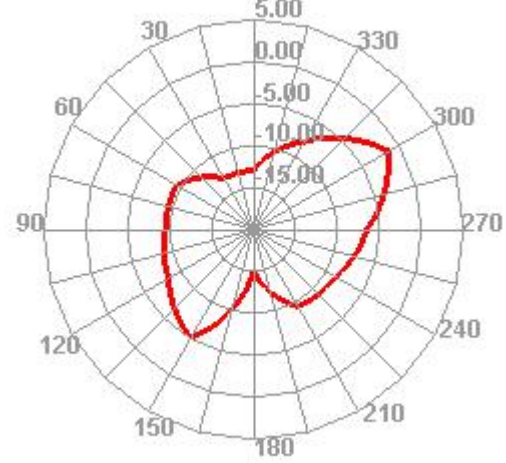
2410.000MHz H



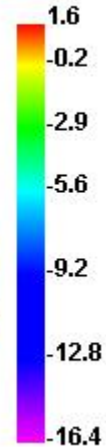
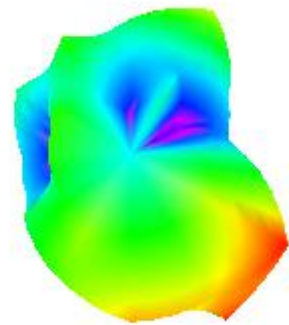
2410.000MHz E1



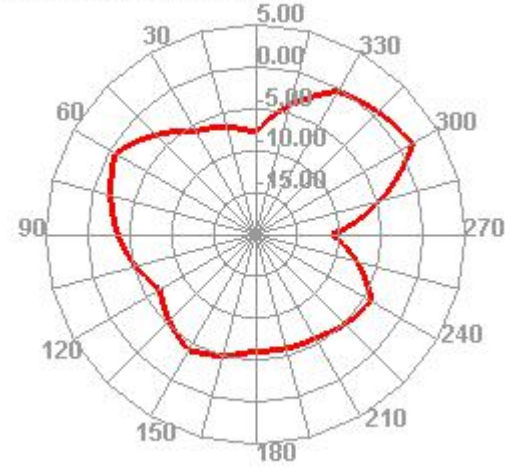
2410.000MHz E2



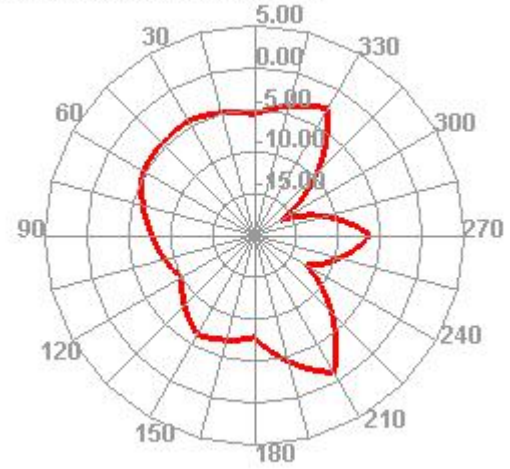
2480.000MHz



2480.000MHz H



2480.000MHz E1



2480.000MHz E2

