Specification

Specification document Customer Name

CUSTOMER NAME:

Product name PRODUCT NAME:	Small round 2.4-5.8G Antenna
Customer Document Number CUSTOMER P/N:	SD-YX2458-SJ400
Shengda Electronics Material Number: SD P/N:	REV: A

	Supplier Signature MANUFACTURER SIGNATURE	Customer Signature: CUSTOMER SIGNATURE
Reviewed by:		
Approver		

Address: Building 4, Hanguang Science and Technology Park, Zhangbei Chuangye 4th Road, Ailian Community, Longgang District, Shenzhen

Dongguan Address: 01,16th Floor, Building 1, Urban Intelligence Valley, No.19 Jinpeng Road, Jin Fenghuang Industrial Zone, Fenggang Town, Dongguan

Tel: 0755-89985492
Fax: 0755-89916753
Website:www.szsdtx.com

APPROVED BY:		
Date /DATE：	2025/12/24	V01 Version

Contents

Item ***Description***

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3.---------- test report

Shenzhen Address: Building 4, Hanguang Science and Technology Park, Zhangbei Chuangye 4th Road, Ailian Community, Longgang District, Shenzhen Dongguan Address: 16th Floor, Building 1, Urban Intelligence Valley, No.19 Jinpeng Road, Jin Fenghuang Industrial Zone, Fenggang Town, Dongguan 01
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1. 1 Specification Table:

Main Technical Specifications of the Product

The key technical indexes		Main technical specifications	
Frequency range (MHz)	2400-2500/5150-5850	Frequency Range (MHZ)	2400-2500/5150-5850
Characteristic impedance (Ω)	50	Impedance(Ω)	50
Peak gain (dBi)	2400-2500≤3.3 5150-5850≤3.5	Gain(dBi)	2400-2500≤3.3 5150-5850≤3.5
Voltage standing-wave ratio	2400-2500≤3.0 5150-5850≤2.5	VSWR	2400-2500≤3.0 5150-5850≤2.5
Cable length (mm)	400 ± 10	Line L Length	400 ± 10
Cable Specifica-tions	RG174	Cable specification	RG174
Antenna size (mm)	46*18 (± 2)	Antenna Size	46*18 (± 2)

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		(mm)	
Polarization Method	Perpendicular	Polarization	Vertical
Connection Method	SMA public header and public needle	Connector Type	SMA-J
Physical property		Physical Properties	
Antenna body material	ABS	Antenna Base	ABS
Working temp-erature	-40℃~+75℃	Operating Temp	-40℃~+75℃

2. Product Picture

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3. Test Report

3.1 The network analyzer tests the typical VSWR.

2.4-5.8G（2400-2500Mhz/5150-5850Mhz）：

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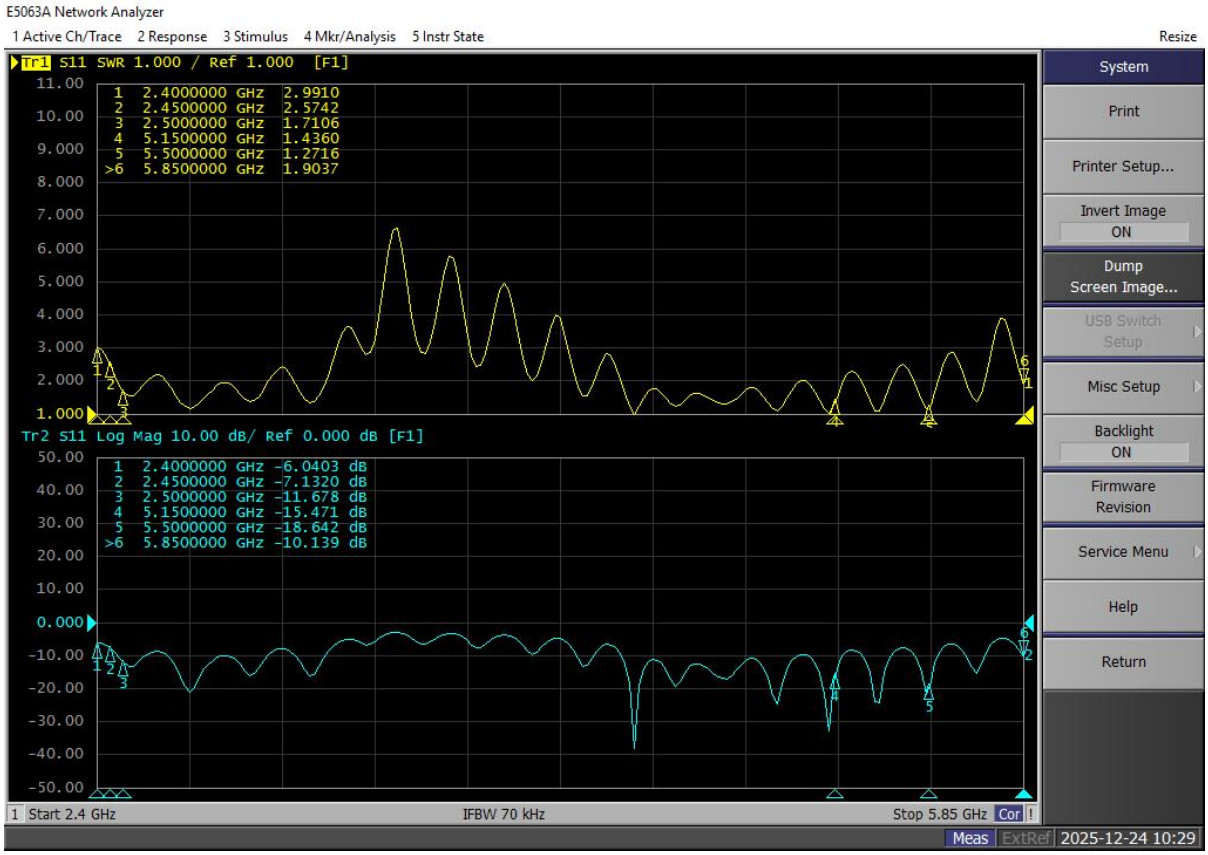

3.2. Darkroom 2D,3D Radiation Pattern

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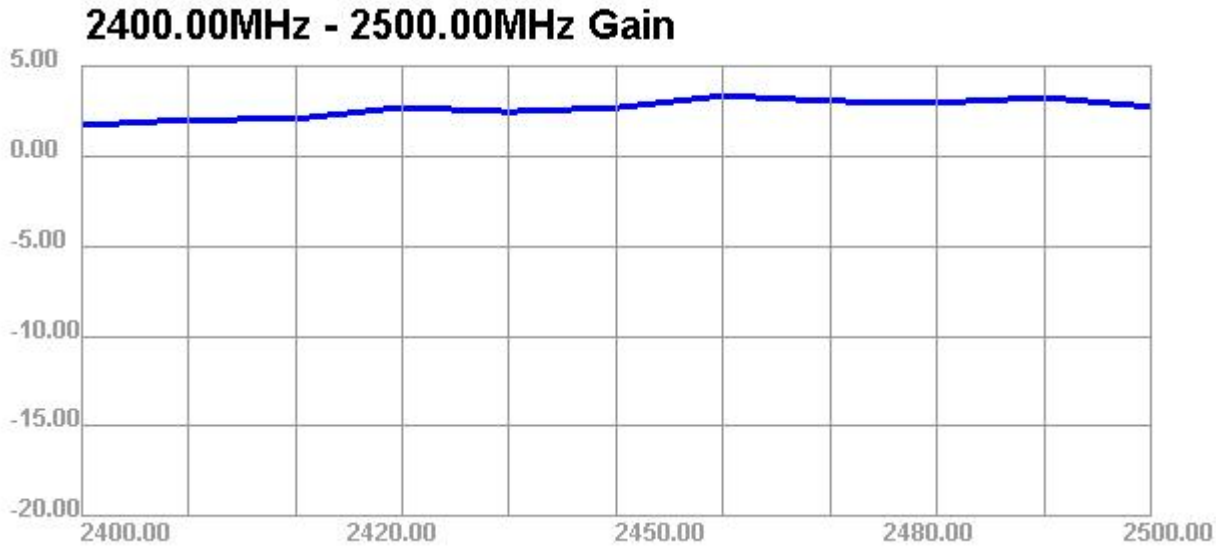

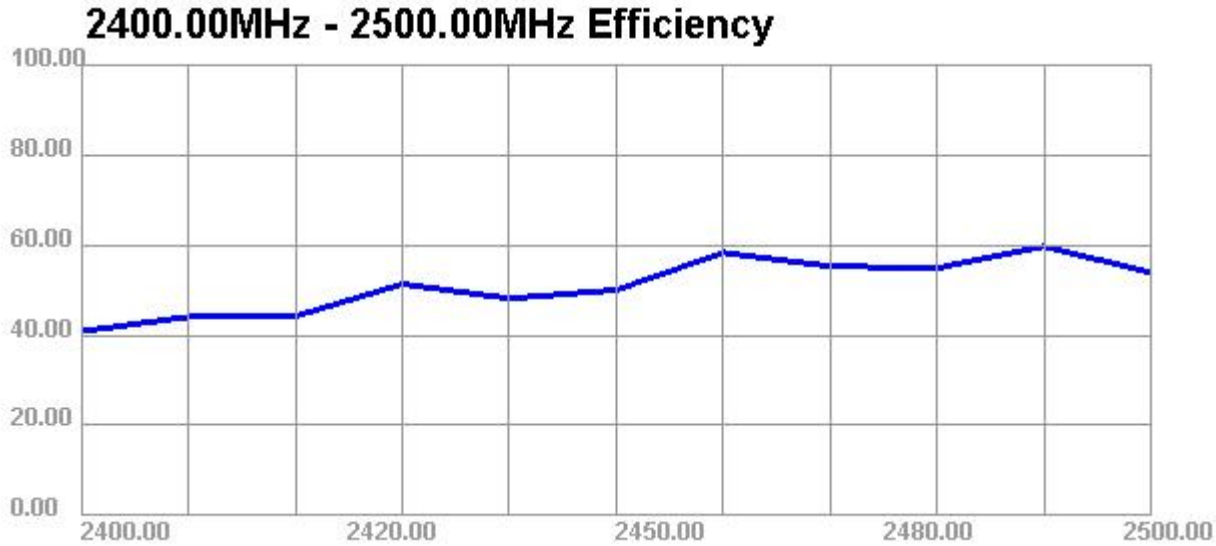

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Passive Test For 2.4G													
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	HNrd (dB)	AttH (dB)	AttV (dB)
2400	40.88	-3.88	1.69	-0.46	17.138	23.746	1.69	-18.87	5.58	15	13.95	45.93	45.59
2410	44.1	-3.56	2.01	-0.14	18.633	25.471	2.01	-18.02	5.57	45	13.65	45.77	45.58
2420	44.22	-3.54	2.05	-0.1	18.799	25.421	2.05	-18.46	5.6	45	13.17	45.88	45.74
2430	51.38	-2.89	2.7	0.55	22.014	29.361	2.7	-19.32	5.59	45	13.01	45.87	45.71
2440	48.17	-3.17	2.46	0.31	20.846	27.324	2.46	-22.02	5.63	45	13.09	45.89	45.74
2450	50.05	-3.01	2.68	0.53	21.95	28.096	2.68	-25.89	5.68	45	12.92	45.88	45.79
2460	58.33	-2.34	3.34	1.19	25.922	32.406	3.34	-27.07	5.69	45	12.42	46.12	46.03
2470	55.3	-2.57	3.05	0.9	24.842	30.462	3.05	-25.38	5.62	45	11.77	45.96	45.8
2480	54.92	-2.6	2.95	0.8	24.84	30.08	2.95	-24.17	5.56	45	11.81	45.97	45.85
2490	59.72	-2.24	3.24	1.09	27.143	32.582	3.24	-23.38	5.48	45	11.72	46.05	45.91
2500	53.86	-2.69	2.72	0.57	24.63	29.229	2.72	-23.49	5.41	45	11.41	45.95	45.87

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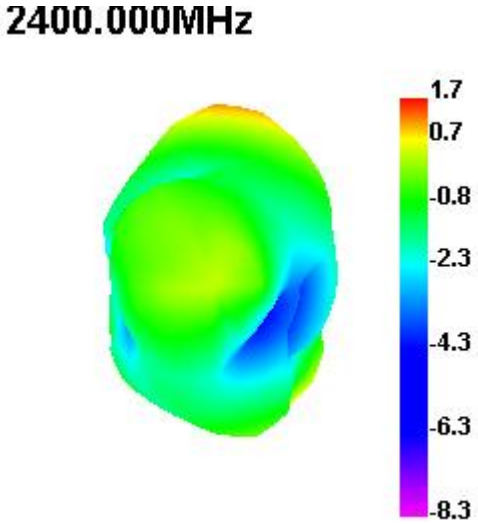

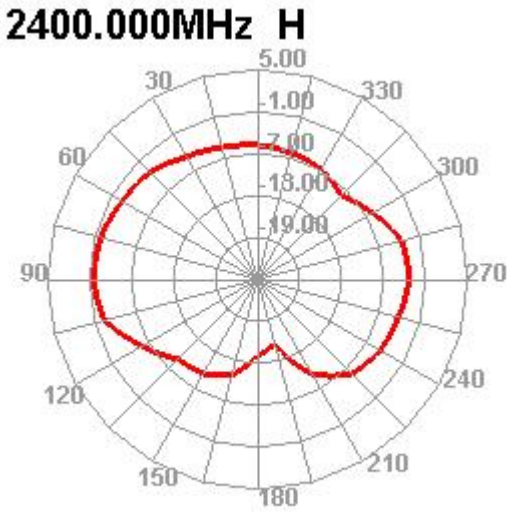

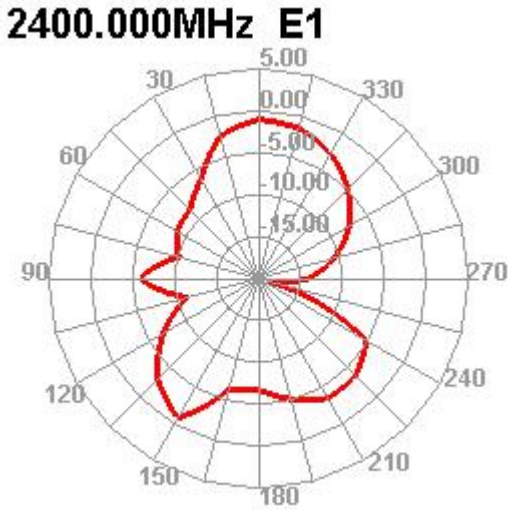

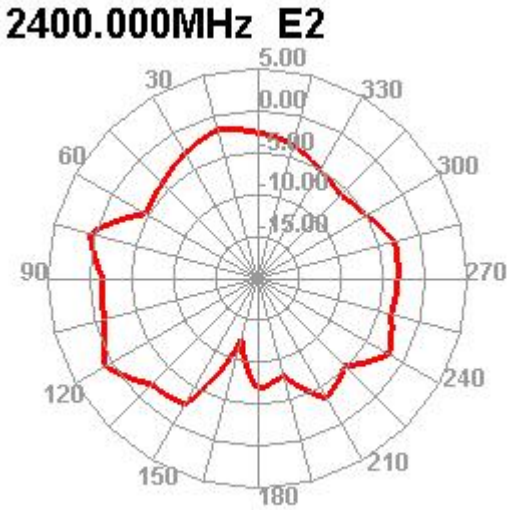

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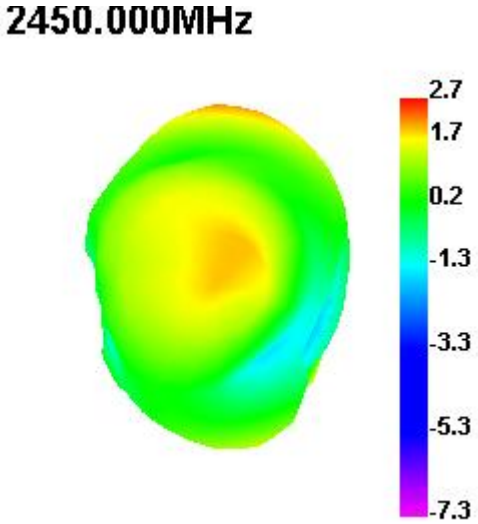

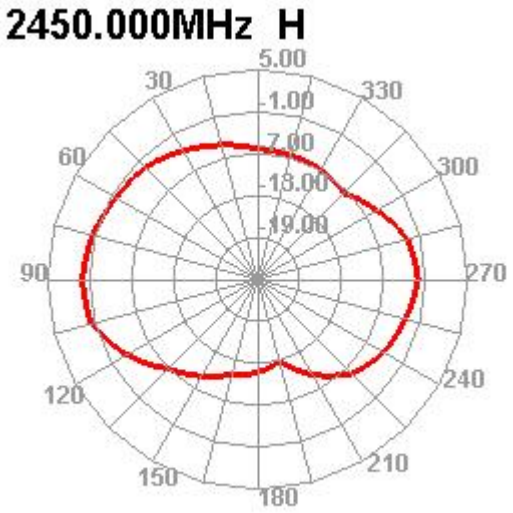

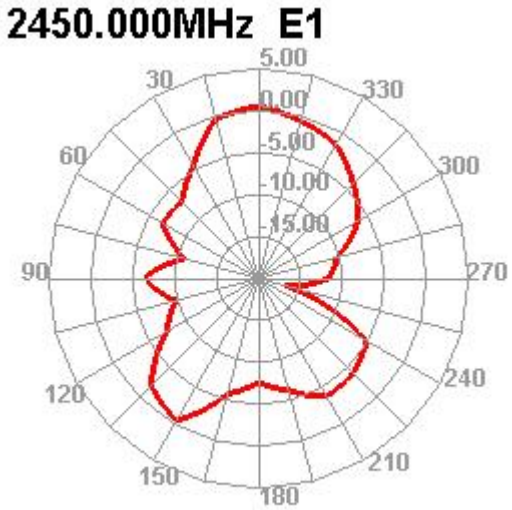

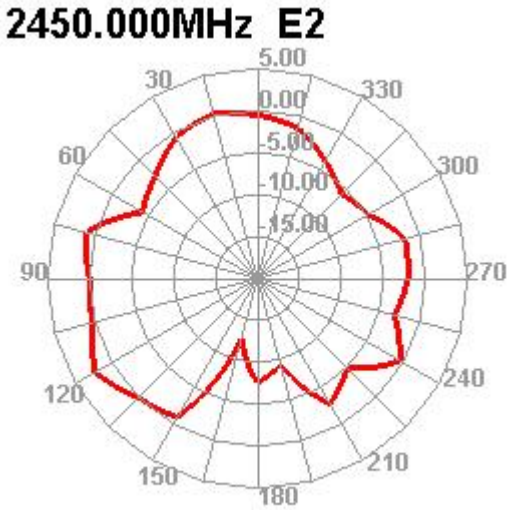

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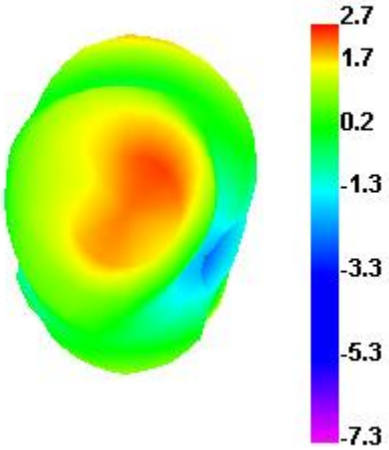
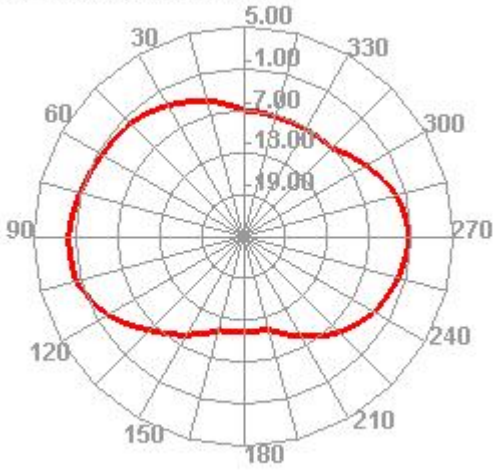
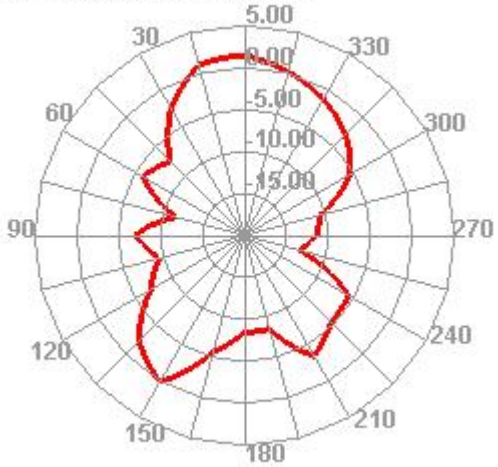
2500.000MHz



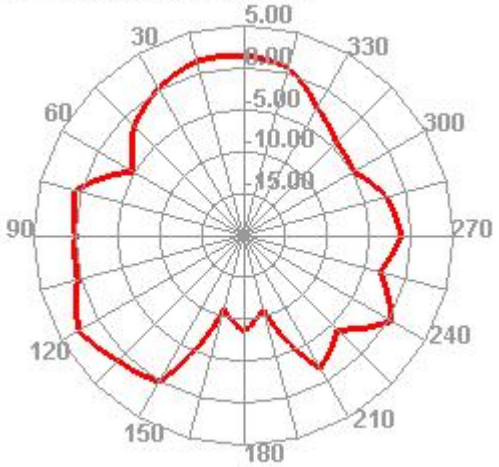
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



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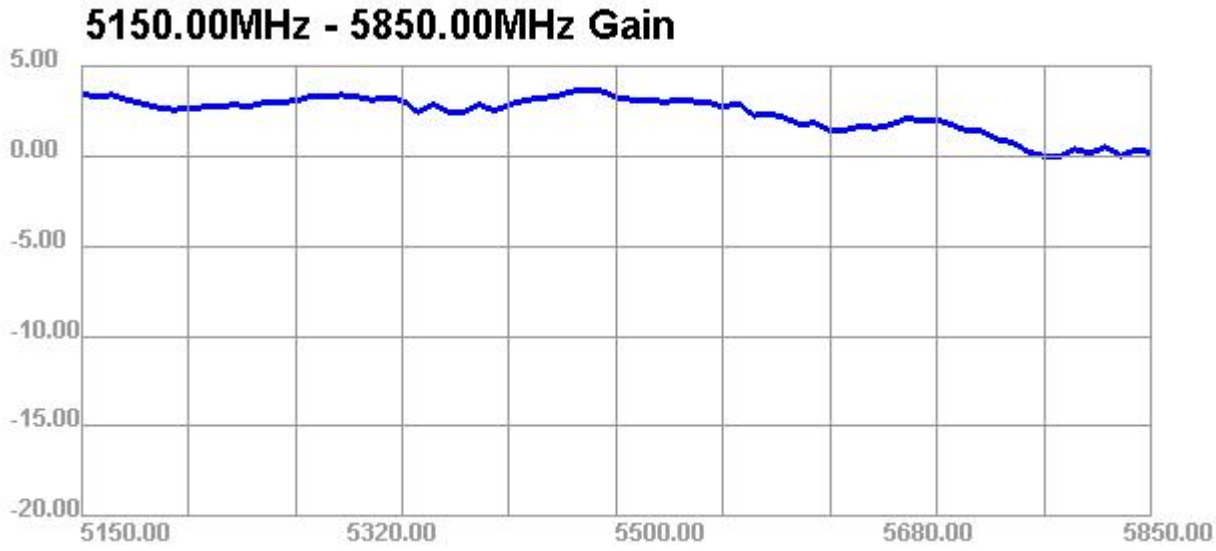

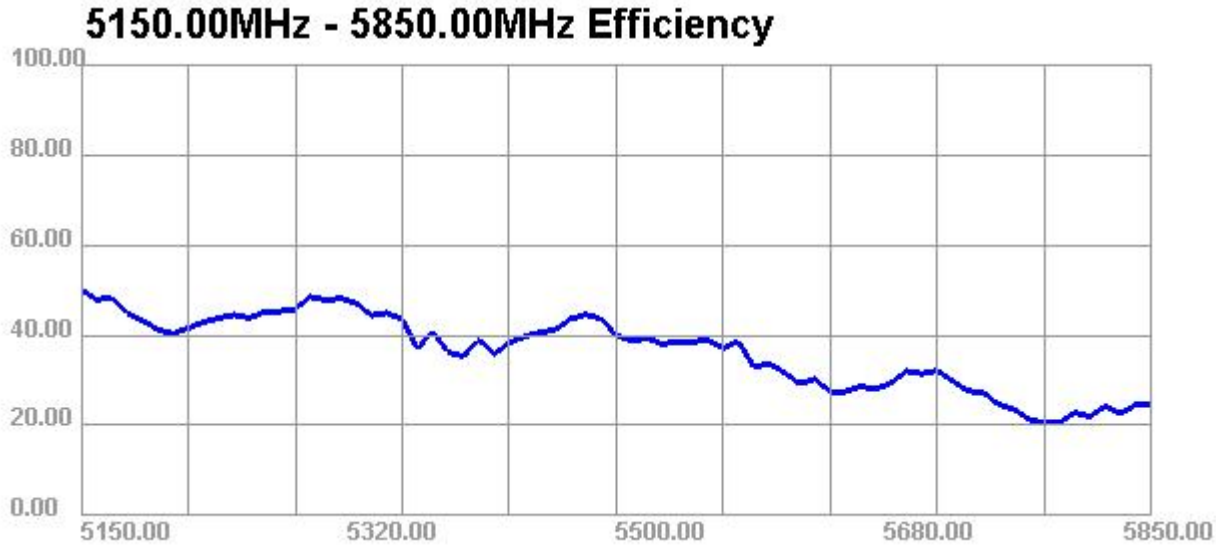

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Passive Test For 5.8G													
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain(dBd)	UHIS(%)	DHIS(%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3 dB)	HNrd (dB)	Att H (dB)	Att V (dB)
5150	50.2	-2.99	3.43	1.28	26.76	23.437	3.43	-16.53	6.43	30	12.37	51.13	51.05
5160	47.9	-3.2	3.31	1.16	25.354	22.544	3.31	-17.38	6.51	30	12.18	51.05	51.33
5170	48.33	-3.16	3.38	1.23	25.411	22.915	3.38	-17.57	6.54	30	11.75	51.18	51.25
5180	44.85	-3.48	3.09	0.94	23.435	21.414	3.09	-18.22	6.57	30	11.59	51.22	51.39
5190	43.3	-3.64	2.92	0.77	22.529	20.767	2.92	-18.5	6.55	45	11.36	50.88	50.99
5200	41.28	-3.84	2.7	0.55	21.446	19.831	2.7	-18.69	6.54	45	11.43	51.08	51.22
5210	40.38	-3.94	2.57	0.42	21.004	19.381	2.57	-18.93	6.51	45	11.55	50.82	50.88
5220	41.55	-3.81	2.64	0.49	21.593	19.953	2.64	-18.46	6.45	45	11.89	51.02	51.12
5230	42.98	-3.67	2.71	0.56	22.318	20.665	2.71	-18.15	6.38	45	12.21	51.38	51.5
5240	43.81	-3.58	2.76	0.61	22.734	21.08	2.76	-17.55	6.35	45	12.85	51.51	51.42
5250	44.49	-3.52	2.83	0.68	23.052	21.442	2.83	-16.83	6.35	45	13.68	51.36	51.35
5260	43.82	-3.58	2.76	0.61	22.571	21.253	2.76	-16.93	6.35	45	13.95	51.46	51.31
5270	45.3	-3.44	2.96	0.81	23.161	22.135	2.96	-17.43	6.4	45	14.97	51.27	51.12
5280	45.31	-3.44	2.99	0.84	23.02	22.288	2.99	-17.61	6.42	45	15.29	51.4	51.21
5290	45.85	-3.39	3.05	0.9	23.151	22.699	3.05	-18.14	6.44	45	16	51.29	51.08
530	48.	-3.	3.3	1.1	24.3	24.1	3.3	-17.	6.46	45	16.	51.	51.

0	55	14	2	7	52	98	2	83			51	74	48

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5310	47.78	-3.21	3.28	1.13	23.815	23.963	3.28	-18.62	6.49	45	17.45	51.44	51.2
5320	48.24	-3.17	3.38	1.23	23.911	24.327	3.38	-18.88	6.54	45	17.97	52	51.67
5330	47.04	-3.28	3.29	1.14	23.145	23.895	3.29	-19.61	6.56	45	18.79	51.6	51.22
5340	44.45	-3.52	3.11	0.96	21.716	22.734	3.11	-19.93	6.64	45	19.86	51.69	51.38
5350	44.98	-3.47	3.23	1.08	21.784	23.195	3.23	-20	6.7	45	20.42	51.71	51.31
5360	43.48	-3.62	3.11	0.96	20.898	22.577	3.11	-21.27	6.72	30	21.54	51.76	51.37
5370	37.07	-4.31	2.44	0.29	17.727	19.346	2.44	-21.5	6.75	30	21.05	51.68	51.34
5380	40.8	-3.89	2.86	0.71	19.446	21.35	2.86	-21.37	6.75	30	21.29	51.96	51.57
5390	36.31	-4.4	2.44	0.29	17.181	19.126	2.44	-21.98	6.84	30	21.38	51.72	51.4
5400	35.29	-4.52	2.38	0.23	16.585	18.708	2.38	-22.18	6.91	30	21.54	51.75	51.51
5410	39.05	-4.08	2.88	0.73	18.22	20.825	2.88	-21.52	6.97	30	21.28	51.99	51.53
5420	35.82	-4.46	2.51	0.36	16.628	19.195	2.51	-21.3	6.96	30	20.63	51.74	51.53
5430	38.31	-4.17	2.85	0.7	17.717	20.592	2.85	-20.64	7.01	30	20.29	51.68	51.35
5440	39.73	-4.01	3.09	0.94	18.323	21.405	3.09	-20.83	7.1	30	20.54	51.57	51.38
5450	40.57	-3.92	3.21	1.06	18.694	21.879	3.21	-20.36	7.13	30	20.07	51.63	51.35
5460	41.2	-3.85	3.3	1.15	19.025	22.179	3.3	-21.34	7.15	30	20.98	51.67	51.53
5470	43.64	-3.6	3.57	1.42	20.127	23.515	3.57	-22.61	7.17	30	22.43	51.76	51.51
5480	44.56	-3.51	3.68	1.53	20.499	24.062	3.68	-23.44	7.19	30	23.28	51.82	51.7
5490	43.74	-3.59	3.61	1.46	20.058	23.681	3.61	-23.78	7.2	30	23.47	51.91	51.76
550	39.	-3.	3.2	1.1	18.2	21.6	3.2	-24.	7.24	30	23.	51.	51.

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0	92	99	5		93	23	5	21			38	79	5
5510	38.77	-4.12	3.12	0.97	17.765	21.002	3.12	-23.56	7.23	30	22.52	51.76	51.7
5520	39.36	-4.05	3.12	0.97	18.028	21.333	3.12	-21.5	7.17	30	20.45	52.02	51.76
5530	38.11	-4.19	3.02	0.87	17.45	20.663	3.02	-21.69	7.21	30	20.44	52.02	51.91
5540	38.52	-4.14	3.04	0.89	17.619	20.9	3.04	-21.03	7.18	45	19.79	52.07	51.78
5550	38.58	-4.14	3.03	0.88	17.6	20.984	3.03	-20.66	7.17	45	19.48	52.24	52.16
5560	38.95	-4.1	2.99	0.84	17.799	21.149	2.99	-20.46	7.09	45	19.43	52.32	51.99
5570	37.14	-4.3	2.72	0.57	16.945	20.191	2.72	-20.12	7.02	45	18.88	52.05	51.94
5580	38.67	-4.13	2.91	0.76	17.662	21.01	2.91	-19.49	7.03	45	18.38	52.57	52.21
5590	32.88	-4.83	2.24	0.09	15.007	17.872	2.24	-20.52	7.07	45	18.46	52.07	51.79
5600	33.72	-4.72	2.36	0.21	15.387	18.337	2.36	-20.3	7.08	45	17.34	52.5	52.23
5610	31.8	-4.98	2.14	-0.01	14.5	17.296	2.14	-21.1	7.11	45	16.9	52.12	51.87
5620	29.29	-5.33	1.75	-0.4	13.388	15.904	1.75	-21.65	7.08	45	16.66	52.55	52.16
5630	30.29	-5.19	1.85	-0.3	13.868	16.426	1.85	-22.36	7.03	45	16.42	52.28	51.99
5640	27.51	-5.6	1.41	-0.74	12.604	14.91	1.41	-23.51	7.02	30	16.85	52.72	52.31
5650	27.57	-5.6	1.46	-0.69	12.658	14.91	1.46	-24.02	7.05	30	16.02	52.33	52.04
5660	28.67	-5.43	1.63	-0.52	13.158	15.509	1.63	-24.46	7.06	30	15.75	52.42	52.12
5670	28.12	-5.51	1.56	-0.59	12.969	15.15	1.56	-24.59	7.07	30	15.67	52.19	51.81
5680	29.43	-5.31	1.73	-0.42	13.611	15.821	1.73	-24.83	7.04	30	15.29	52.19	51.83
5690	32.1	-4.93	2.07	-0.08	14.891	17.209	2.07	-24.62	7.01	45	15.08	52.29	51.99

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5700	31.5	-5.02	1.98	-0.17	14.59	16.91	1.98	-25.55	7	45	15.48	52.42	52.14
5710	32.15	-4.93	2.02	-0.13	14.942	17.207	2.02	-24.51	6.95	45	15.44	52.35	52.03
5720	29.84	-5.25	1.72	-0.43	13.876	15.966	1.72	-24.61	6.97	45	15.32	52.14	51.88
5730	27.67	-5.58	1.39	-0.76	12.879	14.787	1.39	-24.31	6.97	45	15	52.58	52.26
5740	27.35	-5.63	1.36	-0.79	12.742	14.608	1.36	-23.59	6.99	45	15.06	52.32	52.14
5750	24.62	-6.09	0.91	-1.24	11.528	13.096	0.91	-23.52	6.99	45	14.44	52.5	52.25
5760	23.72	-6.25	0.73	-1.42	11.124	12.592	0.73	-23.63	6.98	45	14.67	52.45	52.16
5770	21.43	-6.69	0.22	-1.93	10.063	11.366	0.22	-23.95	6.91	45	14.48	52.33	52.15
5780	20.45	-6.89	-0.02	-2.17	9.566	10.882	-0.02	-23.39	6.88	45	14.28	52.54	52.32
5790	20.52	-6.88	-0.01	-2.16	9.596	10.927	-0.01	-22.91	6.87	45	13.45	52.38	52.23
5800	22.88	-6.4	0.37	-1.78	10.715	12.168	0.37	-22.32	6.78	45	13.14	52.93	52.62
5810	22	-6.57	0.15	-2	10.346	11.658	0.15	-22.02	6.72	45	12.44	52.61	52.45
5820	24.34	-6.14	0.5	-1.65	11.521	12.819	0.5	-21.67	6.64	60	12.83	53.16	52.86
5830	22.67	-6.45	0.02	-2.13	10.761	11.909	0.02	-21.93	6.47	120	13.26	52.69	52.63
5840	24.59	-6.09	0.31	-1.84	11.721	12.868	0.31	-22.14	6.4	120	13.73	53.2	52.8
5850	24.59	-6.09	0.21	-1.94	11.723	12.869	0.21	-21.57	6.3	105	14.17	52.73	52.56

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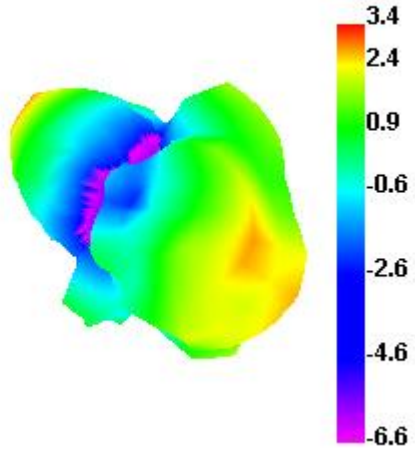
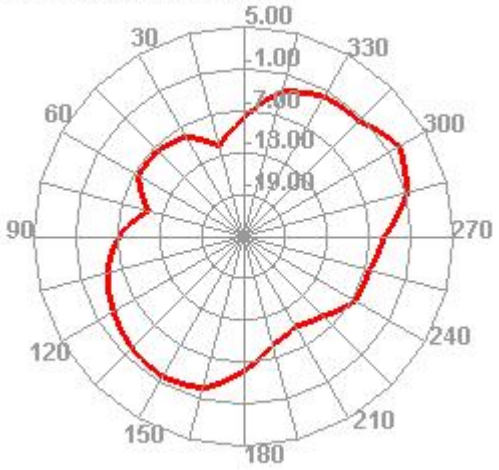
5150.000MHz



5150.000MHz H



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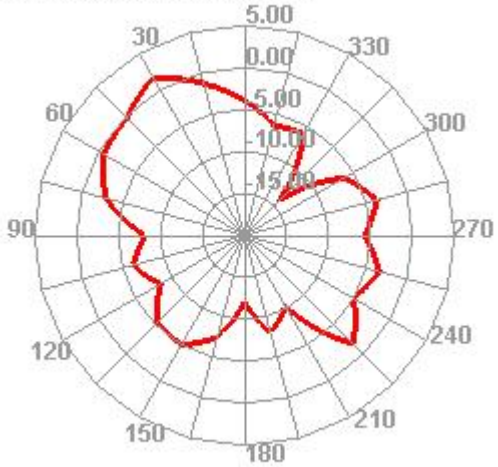

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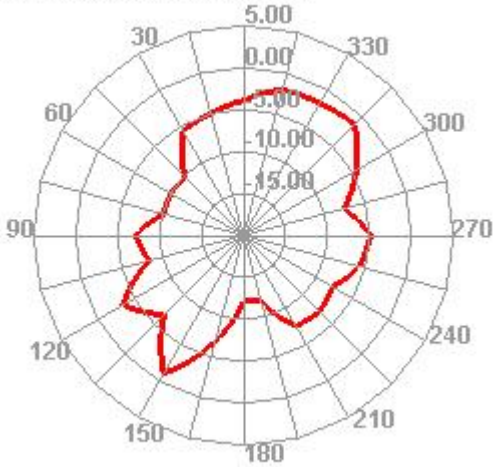

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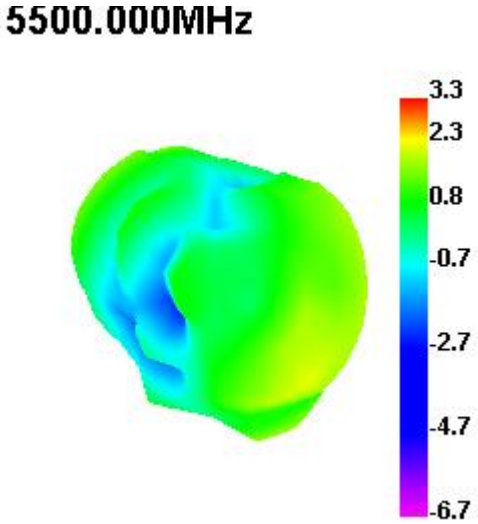

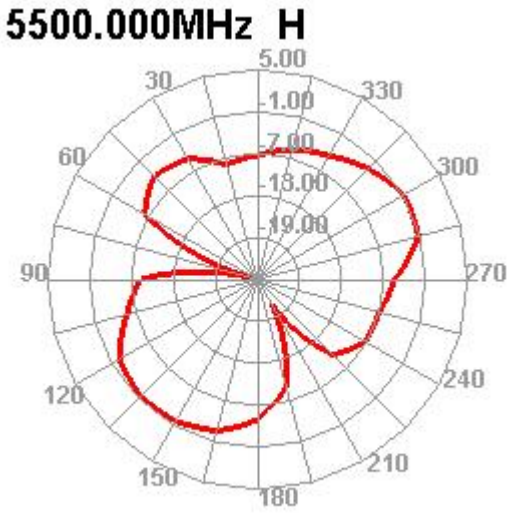

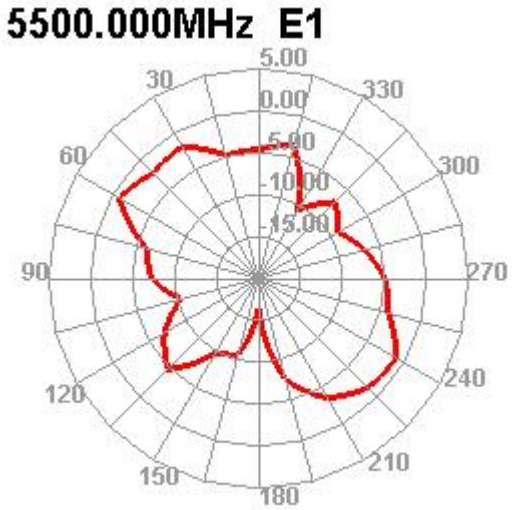

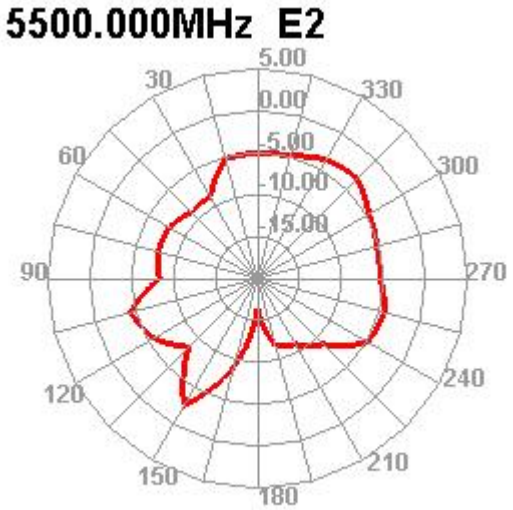

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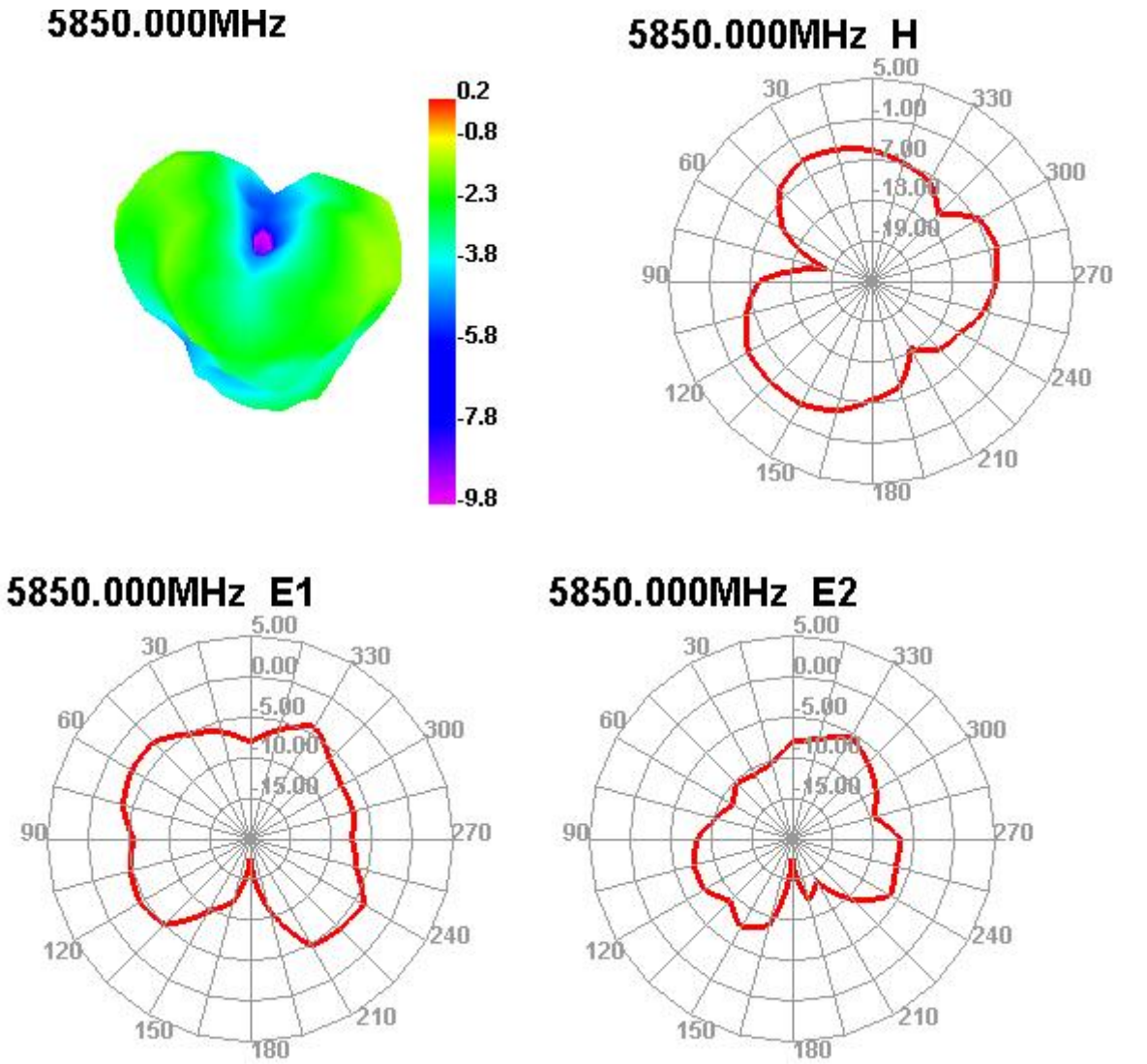

Note: The above parameters are for reference only; actual samples shall prevail!

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