



深圳市海凌科电子有限公司

SHEN ZHEN Hi-LinK ELECTRICAL CO, LTD

产品规格书

PRODUCT SPECIFICATION SHEET

Customer : _____

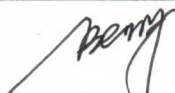
Product Name : 2.4G 3.76dBi-5GHz 4.69dBi Antenna

Product code : _____

Customer code : _____

Sample date : 2022-09-01

HLK Confirm :

Approval	Quality	Engineer	Signature
David	Henry	lisa	

Customer Confirm:

Approval	Quality	Engineer	Signature

Confirm result : PASS NG Others



深圳市海凌科电子有限公司

SHEN ZHEN Hi-LinK ELECTRICAL CO, LTD

SPECIFICATION ITEM

Item	Description
1.....	SPEC
2.....	SPEC ITEM
3.....	Engineer drawing
4.....	Performance



深圳市海凌科电子有限公司

SHEN ZHEN Hi-LinK ELECTRICAL CO, LTD

RF Antenna Cable Assembly

Specification

1. Electrical Properties

- 1.1 Frequency Range.....2. 4GHz-5GHz
- 1.2 Impedance.....50Ω Nominal
- 1.3 VSWR.....1. 92:1MAX
- 1.4 Return Loss.....-14dB Max
- 1.5 Gain(peak)2. 4G 3. 76dBi/5G 4. 69dBi
- 1.6 Cable loss.....0. 3dBi Max
- 1.7 Polarization.....Linear Vertical
- 1.8 Cable.....RG-178
- 1.9 Conn.....SMA-Male-RP

2. Physical Properties:

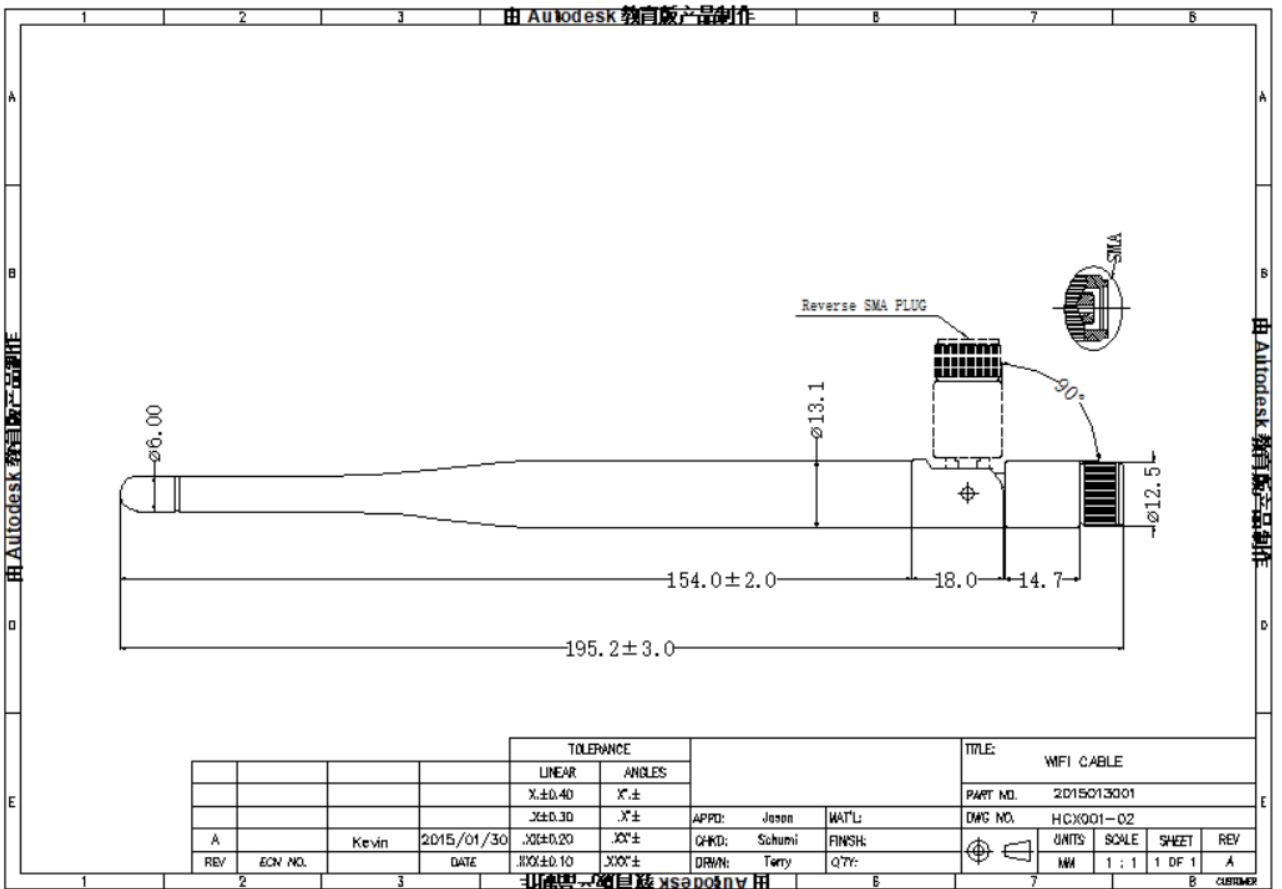
- 2.1 Antenna Material.....Cu
- 2.4 Operating Temp.....-20°C- +65°C
- 2.5 Storage Temp.....-30°C- +75°C
- 2.6 Color.....BLACK



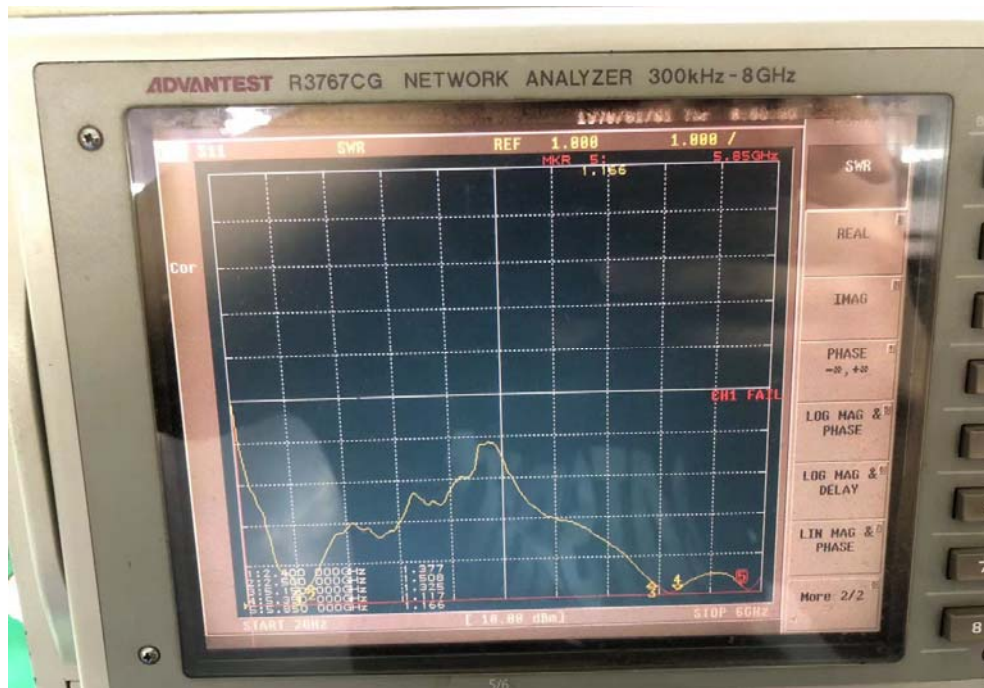
深圳市海凌科电子有限公司

SHEN ZHEN Hi-LinK ELECTRICAL CO, LTD

RF Antenna Assembly SPEC:2.4~5.8GHz



2.4-5.8Ghz Performance data:



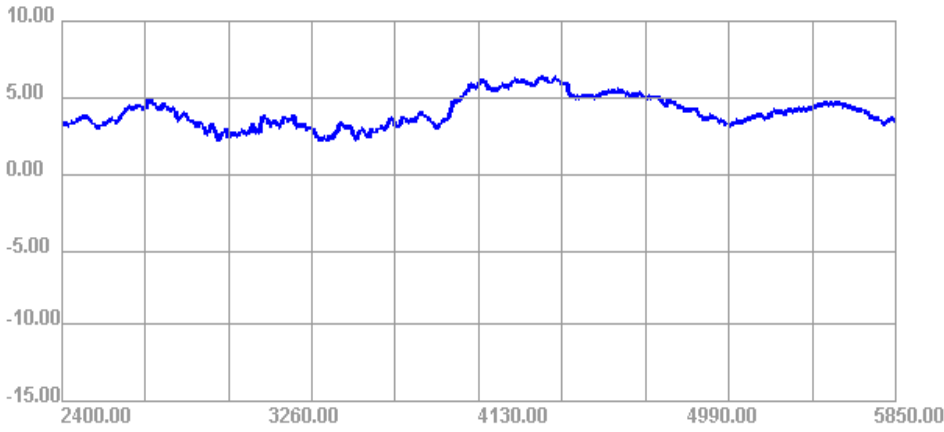
Passive Test For 2.4G~5.8G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	75.87	-1.2	3.44	1.29	33.174	42.692	3.44	-21.02	4.64	180	45.51	45.06
2450	76.95	-1.14	3.29	1.14	35.151	41.801	3.29	-29.14	4.43	60	45.36	44.92
2500	87.91	-0.56	3.76	1.61	40.89	47.023	3.76	-15.31	4.32	0	45.93	45.51
2550	75.09	-1.24	3.08	0.93	34.918	40.175	3.08	-13.95	4.33	0	45.05	44.56
2600	77.72	-1.09	3.53	1.38	35.684	42.037	3.53	-15.39	4.63	150	45.41	44.84
2650	79.18	-1.01	3.89	1.74	36.341	42.842	3.89	-18.46	4.9	90	45.84	45.1
2700	83.29	-0.79	4.33	2.18	38.723	44.57	4.33	-18.38	5.12	60	46.35	45.7
2750	80.56	-0.94	4.25	2.1	37.978	42.583	4.25	-19.58	5.19	60	46.48	45.87
2800	84.98	-0.71	4.28	2.13	40.404	44.58	4.28	-16.5	4.99	60	46.85	46.35
2850	82.08	-0.86	4.17	2.02	38.697	43.387	4.17	-10.87	5.03	120	46.81	46.56
2900	85.18	-0.7	3.86	1.71	41.267	43.912	3.86	-11.98	4.56	120	47.03	46.81
2950	84.69	-0.72	3.39	1.24	43.53	41.157	3.39	-12.3	4.11	120	47.35	47.21
3000	74.65	-1.27	2.6	0.45	38.888	35.757	2.6	-15.04	3.87	300	46.74	46.49
3050	65.72	-1.82	2.14	-0.01	33.564	32.157	2.14	-13.72	3.97	120	46.71	46.31
3100	72.73	-1.38	2.62	0.47	36.42	36.309	2.62	-12.96	4	60	46.88	46.42
3150	67.55	-1.7	2.86	0.71	32.88	34.668	2.86	-14.63	4.56	60	47.18	46.8
3200	61.38	-2.12	2.66	0.51	29.158	32.222	2.66	-13.9	4.78	60	47.03	46.71
3250	63.28	-1.99	3.62	1.47	29.518	33.759	3.62	-18.45	5.61	0	47.05	46.9
3300	62.13	-2.07	3.1	0.95	29.32	32.808	3.1	-15.48	5.17	60	47.24	47.17
3350	68.45	-1.65	3.67	1.52	32.478	35.974	3.67	-13.67	5.31	90	47.84	47.81
3400	74.94	-1.25	3.37	1.22	36.006	38.938	3.37	-13.49	4.62	90	48.17	48.08
3450	67.21	-1.73	2.66	0.51	33.188	34.022	2.66	-12.95	4.38	270	47.85	47.69
3500	60.71	-2.17	2.18	0.03	30.87	29.844	2.18	-13.03	4.34	240	47.37	47.35
3600	73.33	-1.35	2.93	0.78	36.531	36.798	2.93	-13.2	4.28	60	47.77	47.63
3700	76.34	-1.17	2.88	0.73	37.13	39.207	2.88	-17.15	4.06	300	47.83	47.58
3800	81.42	-0.89	3.29	1.14	39	42.415	3.29	-19.65	4.18	300	47.87	47.79
3900	87.58	-0.58	3.91	1.76	42.244	45.337	3.91	-12.98	4.48	120	48.03	48.16
4000	88.21	-0.54	3.66	1.51	38.337	49.873	3.66	-8.82	4.21	0	48.28	48.18
4100	96.68	-0.15	5.8	3.65	40.917	55.758	5.8	-9.26	5.95	150	48.83	48.6
4200	94.37	-0.25	5.49	3.34	40.454	53.916	5.49	-11.7	5.74	0	48.36	48.43
4300	100.84	0.04	6.13	3.98	44.32	56.516	6.13	-10.51	6.09	120	48.74	48.83
4400	97.66	-0.1	6.18	4.03	43.43	54.228	6.18	-12.82	6.28	90	49.13	49.21
4500	81.35	-0.9	5.14	2.99	36.255	45.094	5.14	-16.38	6.04	60	48.63	48.61
4600	76.89	-1.14	5	2.85	35.24	41.653	5	-14.98	6.15	120	48.66	48.78
4700	72.74	-1.38	5.48	3.33	33.845	38.893	5.48	-13.56	6.87	60	48.56	48.62
4710	70.18	-1.54	5.36	3.21	32.662	37.519	5.36	-13.53	6.9	60	48.53	48.61
4720	71.39	-1.46	5.47	3.32	33.28	38.115	5.47	-13.08	6.93	90	48.58	48.63
4730	67.78	-1.69	5.24	3.09	31.732	36.052	5.24	-13.08	6.93	90	48.44	48.52
4740	68.36	-1.65	5.27	3.12	32.068	36.288	5.27	-12.73	6.92	240	48.46	48.51
4750	65.88	-1.81	5.1	2.95	30.978	34.903	5.1	-13	6.92	240	48.32	48.36
4760	67.72	-1.69	5.21	3.06	31.699	36.022	5.21	-13	6.91	240	48.44	48.54
4770	66.44	-1.78	5.15	3	30.904	35.537	5.15	-13.43	6.92	240	48.43	48.56
4780	67.72	-1.69	5.23	3.08	31.341	36.374	5.23	-13.41	6.92	240	48.55	48.69
4790	67.85	-1.68	5.26	3.11	31.279	36.574	5.26	-13.45	6.94	240	48.67	48.82
4800	66.36	-1.78	5.14	2.99	30.634	35.726	5.14	-13.52	6.92	240	48.72	48.88
4810	65.61	-1.83	5.12	2.97	30.301	35.305	5.12	-13.51	6.96	240	48.47	48.59
4820	62.58	-2.04	4.92	2.77	28.95	33.625	4.92	-14.01	6.95	240	48.64	48.82
4830	64.75	-1.89	5.06	2.91	30.059	34.688	5.06	-14.11	6.95	240	48.51	48.62
4840	62.72	-2.03	4.9	2.75	29.16	33.559	4.9	-16.77	6.92	240	48.77	48.96
4850	66.24	-1.79	5.08	2.93	30.831	35.411	5.08	-20.59	6.87	240	48.81	48.96
4860	64.65	-1.89	4.89	2.74	30.06	34.588	4.89	-23.74	6.78	240	48.91	49.1
4870	68.88	-1.62	5.1	2.95	32.031	36.853	5.1	-20.57	6.72	240	48.95	49.08
4880	65.29	-1.85	4.7	2.55	30.479	34.814	4.7	-17.2	6.55	240	49.36	49.56
4890	66.96	-1.74	4.7	2.55	31.43	35.53	4.7	-14.86	6.44	240	49.04	49.12
4900	64.67	-1.89	4.45	2.3	30.603	34.065	4.45	-14.67	6.34	240	49.24	49.37
4910	72.34	-1.41	4.9	2.75	34.511	37.832	4.9	-14.34	6.31	240	49.48	49.53
4920	67.16	-1.73	4.59	2.44	32.263	34.901	4.59	-14.39	6.32	240	49.11	49.2
4930	71.22	-1.47	4.85	2.7	34.336	36.889	4.85	-13.76	6.32	150	49.25	49.3

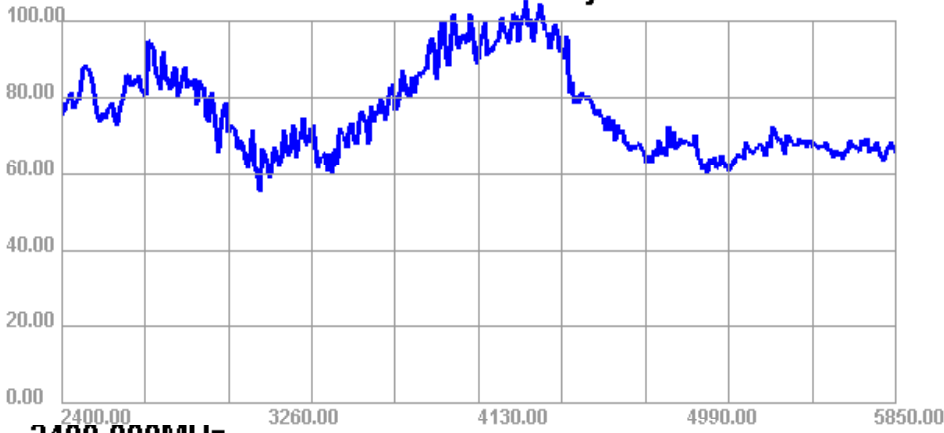
4960	69.23	-1.6	4.46	2.31	33.55	35.683	4.46	-13.29	6.05	120	49.36	49.43
4970	67.62	-1.7	4.25	2.1	32.917	34.707	4.25	-13.47	5.94	150	49.25	49.25
4980	68.73	-1.63	4.23	2.08	33.758	34.973	4.23	-13.55	5.86	150	49.18	49.21
4990	67.7	-1.69	4.15	2	33.563	34.138	4.15	-13.75	5.84	90	49.23	49.23
5000	68.2	-1.66	4.19	2.04	34.066	34.138	4.19	-13.7	5.85	90	49.33	49.3
5010	67.29	-1.72	4.17	2.02	33.69	33.599	4.17	-13.52	5.89	90	49.16	49.13
5020	70.37	-1.53	4.36	2.21	35.224	35.149	4.36	-12.94	5.89	90	49.38	49.4
5030	64.26	-1.92	3.93	1.78	32.095	32.164	3.93	-13.52	5.85	90	48.95	48.96
5040	64.14	-1.93	3.86	1.71	31.999	32.141	3.86	-13.98	5.79	60	48.95	48.98
5050	61.2	-2.13	3.61	1.46	30.454	30.751	3.61	-14.57	5.74	30	48.99	49.03
5060	62.79	-2.02	3.68	1.53	31.295	31.498	3.68	-14.96	5.7	0	49.14	49.1
5070	60.02	-2.22	3.53	1.38	30.071	29.947	3.53	-15.45	5.74	0	48.88	48.9
5080	64.11	-1.93	3.83	1.68	32.28	31.828	3.83	-15.18	5.76	0	49.26	49.27
5090	62.42	-2.05	3.73	1.58	31.508	30.911	3.73	-15.8	5.77	30	49.11	49.16
5100	64.37	-1.91	3.81	1.66	32.48	31.892	3.81	-16.01	5.72	60	49.4	49.42
5200	64.41	-1.91	3.42	1.27	31.871	32.541	3.42	-13.81	5.33	90	49.88	49.93
5300	66.8	-1.75	3.76	1.61	31.226	35.573	3.76	-15.46	5.51	150	49.91	49.86
5310	64.43	-1.91	3.59	1.44	29.825	34.607	3.59	-15.53	5.5	150	49.95	49.88
5320	68.39	-1.65	3.86	1.71	31.495	36.894	3.86	-14.89	5.51	150	49.83	49.77
5330	66.94	-1.74	3.75	1.6	30.716	36.22	3.75	-15.12	5.49	150	50.21	50.17
5340	72.54	-1.39	4.15	2	33.274	39.262	4.15	-15.19	5.54	150	49.99	50
5350	70.95	-1.49	4.14	1.99	32.457	38.494	4.14	-15.73	5.63	150	50.3	50.23
5360	68.86	-1.62	4.09	1.94	31.472	37.391	4.09	-15.96	5.71	150	49.98	49.95
5370	69.39	-1.59	4.13	1.98	31.723	37.671	4.13	-15.57	5.72	150	50.23	50.15
5380	68.01	-1.67	4.04	1.89	31.043	36.971	4.04	-15.69	5.71	150	49.84	49.86
5390	65.3	-1.85	3.88	1.73	29.825	35.477	3.88	-16.06	5.73	150	49.76	49.69
5400	70.22	-1.54	4.23	2.08	32.156	38.062	4.23	-16.15	5.76	270	49.93	49.9
5410	69.44	-1.58	4.18	2.03	31.825	37.611	4.18	-15.91	5.77	270	49.91	49.88
5420	67.87	-1.68	4.13	1.98	31.174	36.698	4.13	-15.38	5.81	270	49.8	49.8
5430	67.98	-1.68	4.16	2.01	31.383	36.596	4.16	-14.99	5.84	270	49.81	49.78
5440	67.11	-1.73	4.13	1.98	31.011	36.101	4.13	-14.31	5.86	270	49.78	49.83
5450	69.14	-1.6	4.27	2.12	31.995	37.149	4.27	-13.99	5.87	270	49.96	49.92
5460	67.89	-1.68	4.22	2.07	31.345	36.545	4.22	-13.5	5.91	270	49.86	49.89
5470	69.01	-1.61	4.27	2.12	31.794	37.215	4.27	-13.24	5.88	270	49.95	49.96
5480	67.04	-1.74	4.18	2.03	30.819	36.219	4.18	-13.41	5.92	270	49.95	49.97
5490	68.94	-1.62	4.31	2.16	31.673	37.266	4.31	-12.67	5.93	270	49.96	50.02
5500	67.6	-1.7	4.27	2.12	30.943	36.656	4.27	-12.14	5.97	270	50.05	50.1
5510	68.03	-1.67	4.4	2.25	31.079	36.955	4.4	-11.74	6.08	270	49.97	50.01
5520	67.42	-1.71	4.46	2.31	30.618	36.798	4.46	-12.02	6.17	270	49.99	50.04
5530	67.02	-1.74	4.5	2.35	30.344	36.672	4.5	-12.21	6.24	270	50.29	50.37
5540	67.58	-1.7	4.56	2.41	30.451	37.124	4.56	-12.21	6.27	60	50.1	50.16
5550	66.86	-1.75	4.58	2.43	30.066	36.795	4.58	-12.3	6.33	150	50.39	50.49
5560	68.57	-1.64	4.69	2.54	30.838	37.729	4.69	-12.12	6.33	150	50.33	50.36
5570	65.87	-1.81	4.56	2.41	29.592	36.277	4.56	-12.11	6.37	150	50.23	50.33
5580	66.59	-1.77	4.68	2.53	29.867	36.727	4.68	-12.11	6.45	0	50.38	50.45
5590	64.43	-1.91	4.55	2.4	28.985	35.444	4.55	-12.41	6.46	150	50.29	50.37
5600	66.3	-1.78	4.69	2.54	29.891	36.414	4.69	-12.29	6.48	120	50.3	50.36
5610	64.7	-1.89	4.61	2.46	29.299	35.405	4.61	-12.85	6.5	120	50.3	50.36
5620	66.02	-1.8	4.67	2.52	29.956	36.064	4.67	-13.11	6.47	120	50.44	50.47
5630	63.78	-1.95	4.44	2.29	29.07	34.707	4.44	-13.87	6.4	120	50.23	50.26
5640	66.19	-1.79	4.53	2.38	30.379	35.808	4.53	-13.93	6.32	120	50.63	50.65
5650	65.52	-1.84	4.37	2.22	30.242	35.28	4.37	-13.07	6.21	300	50.34	50.36
5660	69.03	-1.61	4.46	2.31	32.116	36.913	4.46	-12.89	6.07	300	50.49	50.51
5670	67.39	-1.71	4.3	2.15	31.51	35.882	4.3	-12.62	6.02	300	50.44	50.44
5680	67.57	-1.7	4.28	2.13	31.64	35.928	4.28	-12.58	5.98	120	50.46	50.48
5690	66.26	-1.79	4.19	2.04	31.091	35.17	4.19	-12.54	5.98	120	50.37	50.35
5700	66.04	-1.8	4.14	1.99	31.117	34.922	4.14	-12.76	5.94	300	50.48	50.46
5710	68.86	-1.62	4.23	2.08	32.519	36.345	4.23	-12.81	5.85	150	50.44	50.44
5720	67.3	-1.72	4.04	1.89	31.869	35.431	4.04	-12.68	5.76	150	50.41	50.41
5730	69.32	-1.59	4.09	1.94	32.843	36.479	4.09	-12.22	5.68	150	50.63	50.6
5740	65.68	-1.83	3.74	1.59	31.15	34.531	3.74	-12.14	5.56	150	50.47	50.45
5750	67.91	-1.79	3.79	1.63	31.666	35.258	3.79	-11.97	5.5	150	50.66	50.58

5770	68.31	-1.65	3.7	1.55	32.587	35.726	3.7	-12.03	5.36	150	50.49	50.48
5780	66.36	-1.78	3.57	1.42	31.646	34.715	3.57	-12.16	5.35	150	50.48	50.44
5790	63.91	-1.94	3.38	1.23	30.467	33.448	3.38	-12.48	5.33	150	50.58	50.5
5800	63.41	-1.98	3.3	1.15	30.105	33.302	3.3	-12.39	5.28	150	50.5	50.47
5810	65.52	-1.84	3.39	1.24	31.075	34.443	3.39	-11.7	5.23	150	51.02	50.85
5820	67.2	-1.73	3.52	1.37	31.818	35.38	3.52	-11.25	5.25	150	50.61	50.6
5830	68.11	-1.67	3.61	1.46	32.172	35.939	3.61	-11.18	5.28	150	50.94	50.82
5840	66.27	-1.79	3.59	1.44	31.218	35.055	3.59	-11.27	5.38	240	50.85	50.76
5850	65.76	-1.82	3.54	1.39	30.939	34.822	3.54	-11.48	5.36	240	51.22	51.05

2400.00MHz - 5850.00MHz Gain

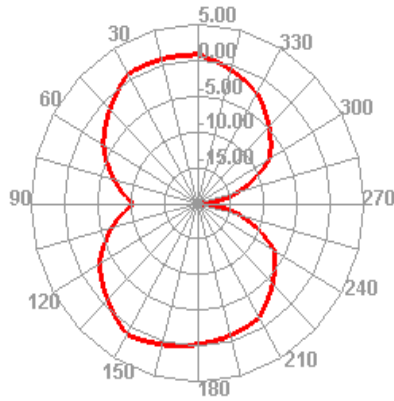
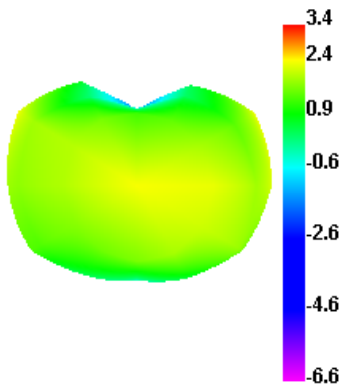


2400.00MHz - 5850.00MHz Efficiency

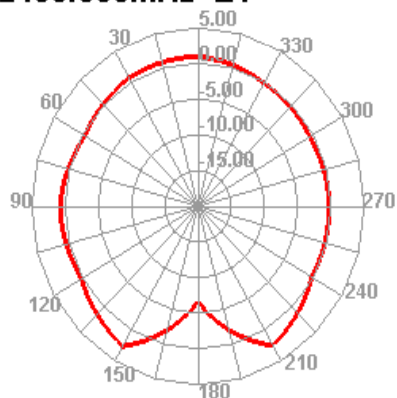


2400.000MHz

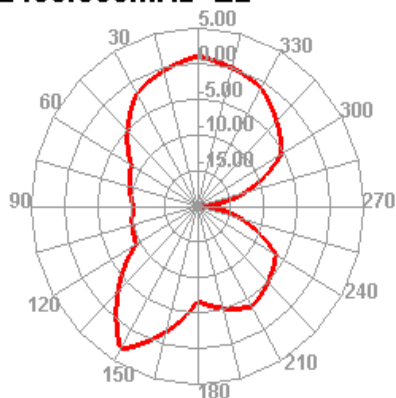
2400.000MHz H



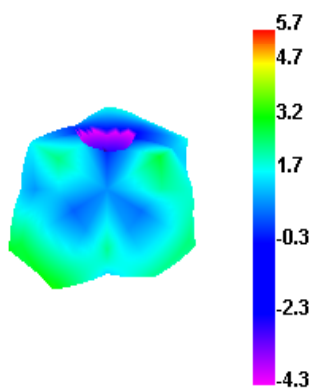
2400.000MHz E1



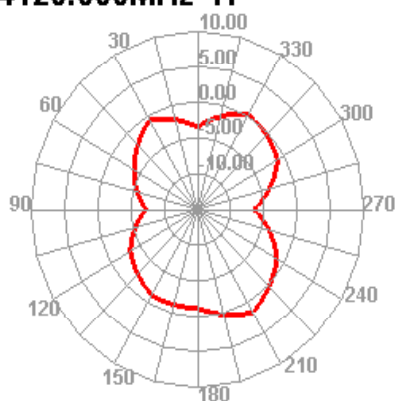
2400.000MHz E2



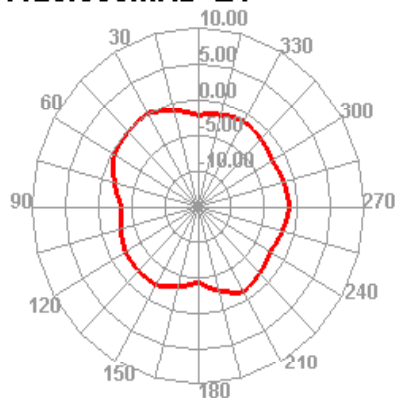
4120.000MHz



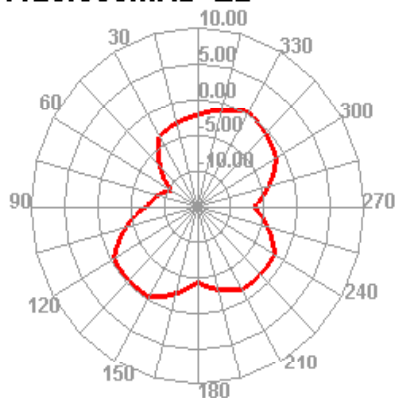
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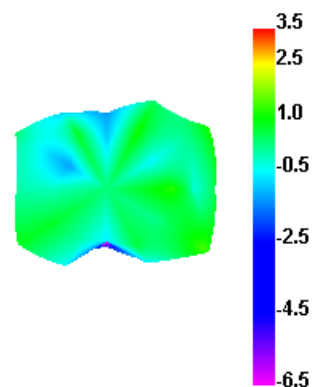
4120.000MHz E1



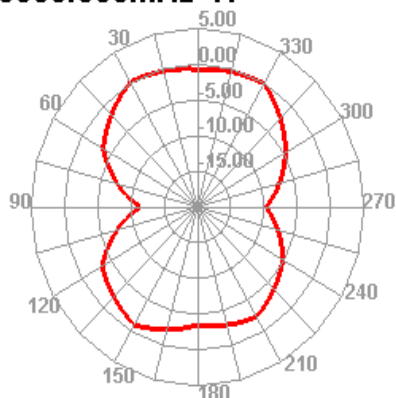
4120.000MHz E2



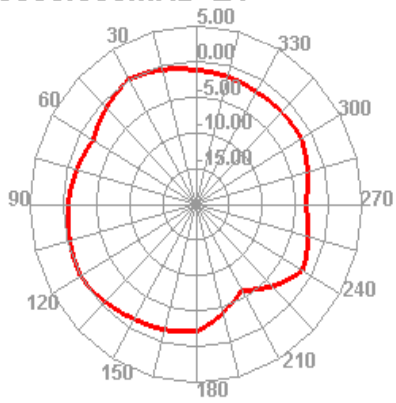
5850.000MHz



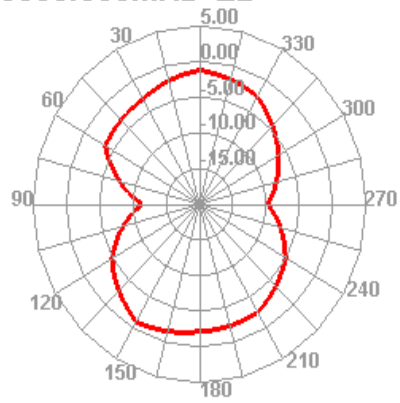
5850.000MHz H



5850.000MHz E1



5850.000MHz E2





深圳市海凌科电子有限公司

SHEN ZHEN Hi-LinK ELECTRICAL CO, LTD

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