



# TM01 Antenna test Report

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# catalogue

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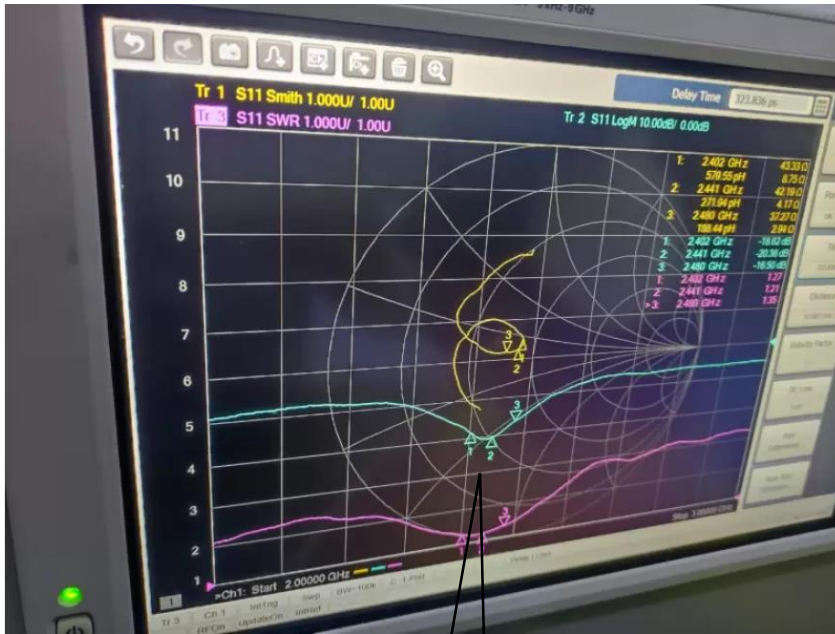
# 一, antenna S11 (free space)



antenna S11



# —, antenna S11 ( head mold )



antenna S11



## Free space

Freq(MHz)	Gain(dB)	Efficiency(dB)	Efficiency(%)
2300	3.751226031	-2.407727808	57.44169137
2310	3.949599978	-2.231880941	59.81524775
2320	3.748961761	-2.361311093	58.05891168
2330	3.476641802	-2.555365353	55.52179071
2340	3.474984739	-2.519820118	55.97807867
2350	3.661715002	-2.297038501	58.92453308
2360	3.960042032	-1.936362426	64.02708905
2370	4.089952294	-1.697398467	67.64880874
2380	3.950818526	-1.681937763	67.89006488
2390	3.671819632	-1.764005132	66.61921131
2400	3.349698052	-1.925820522	64.18269483
2410	3.162863538	-1.959548714	63.68616953
2420	3.04417926	-1.937927028	64.00402663
2430	2.939945807	-1.943429153	63.92299056
2440	2.893227937	-1.94685093	63.8726459
2450	2.863655215	-1.972745336	63.49294425
2460	2.768332414	-2.041366197	62.49760579
2470	2.666285263	-2.010240291	62.94713538
2480	2.559993711	-2.032146238	62.63042751
2490	2.311615308	-2.152088139	60.92438952
2500	2.14011794	-2.224477859	59.91729713
2510	2.040605422	-2.283224068	59.112264
2520	2.127681649	-2.1936909	60.34355749
2530	2.189851074	-2.039388235	62.52607634
2540	1.943404205	-2.106689263	61.56460164
2550	1.998553864	-2.178610292	60.55346101
2560	1.970740909	-2.38329653	57.76574078
2570	1.947742519	-2.601525359	54.93478942
2580	2.154781274	-2.584626119	55.14896777
2590	2.460826506	-2.4076523	57.44269008
2600	2.643655215	-2.206450328	60.1665303

## Head mold

Freq(MHz)	Gain(dB)	Efficiency(dB)	Efficiency(%)
2300	3.075180785	-3.353629509	46.19947593
2310	3.172150081	-3.180884898	48.07413849
2320	2.84485838	-3.378137658	45.93949684
2330	2.332941708	-3.645317881	43.19845474
2340	2.075375776	-3.71006467	42.55920757
2350	2.039375409	-3.612575799	43.52536483
2360	2.17728493	-3.329142407	46.46070112
2370	2.152863538	-3.181942409	48.06243382
2380	2.091992982	-3.178283501	48.10294323
2390	2.030042842	-3.221606461	47.62547869
2400	1.667605902	-3.51547726	44.50945473
2410	1.531084804	-3.63152515	43.33586653
2420	1.375255839	-3.656492954	43.08744128
2430	1.19825725	-3.721322739	42.44902564
2440	1.227439468	-3.67351143	42.91892712
2450	1.165793313	-3.625366198	43.39736694
2460	0.97766873	-3.661516773	43.03762754
2470	0.941350259	-3.56837184	43.97064295
2480	0.79224723	-3.578534282	43.86787242
2490	0.597257232	-3.705143719	42.60745834
2500	0.511952263	-3.726862582	42.39491236
2510	0.618694652	-3.689556711	42.76065301
2520	0.963246599	-3.538780267	44.27126925
2530	1.260714409	-3.375333057	45.96917338
2540	1.298988828	-3.501217213	44.65584161
2550	1.267304546	-3.625589012	43.3951405
2560	1.021365588	-3.900550876	40.73286074
2570	0.726991628	-4.215670437	37.88200493
2580	0.718297391	-4.22543053	37.79696661
2590	0.907673743	-4.008575434	39.7321857
2600	1.217250533	-3.76902802	41.98529384

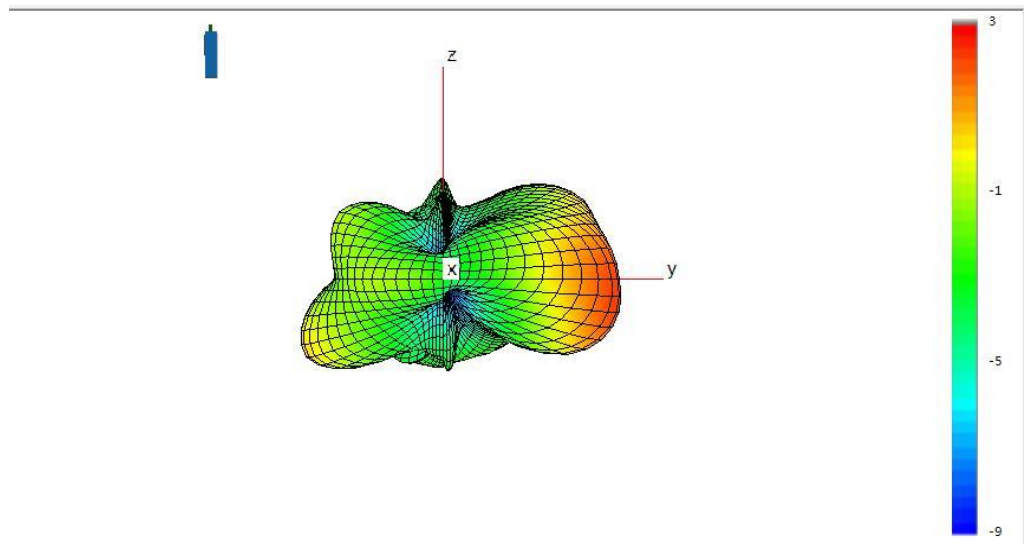
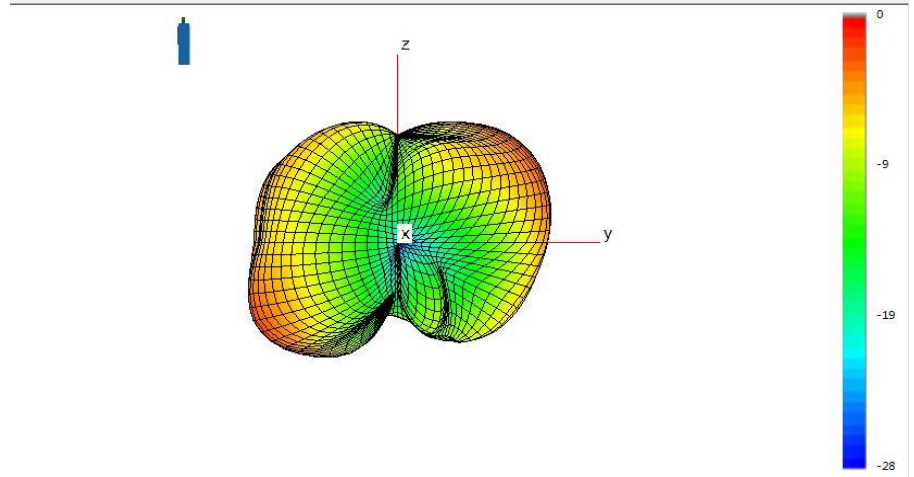
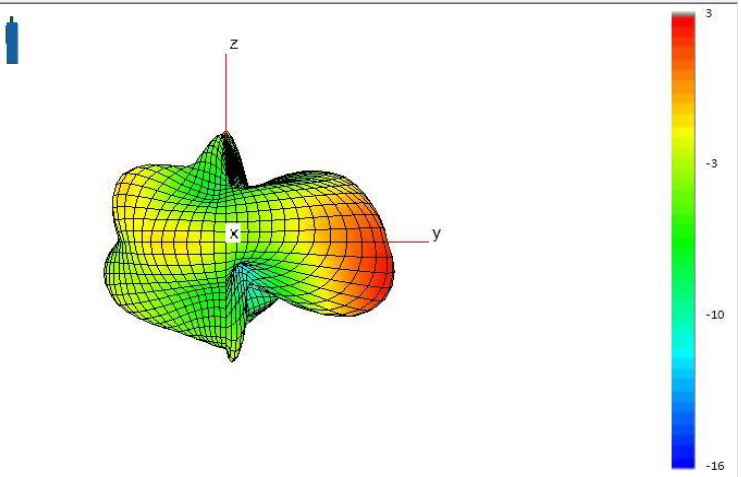


# —, 2440MHZ head mold direction data

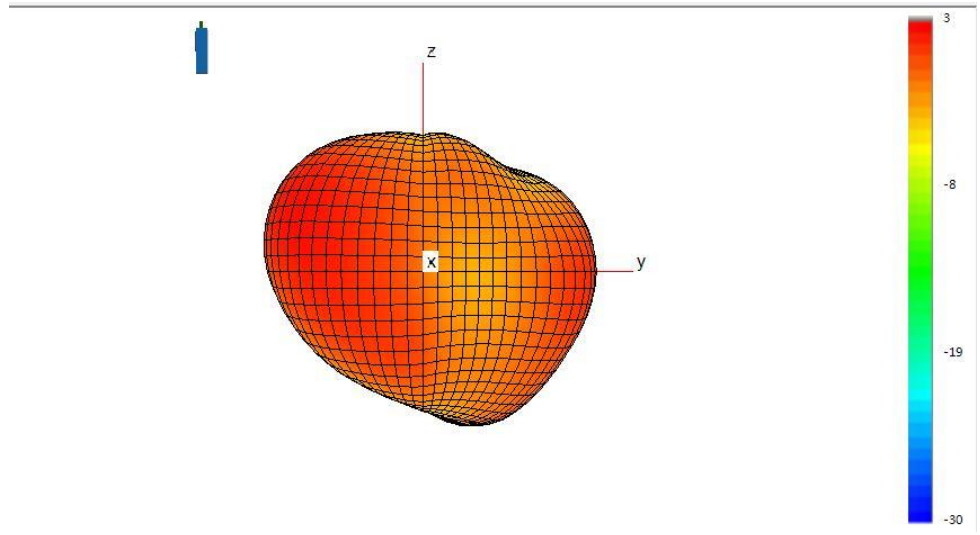
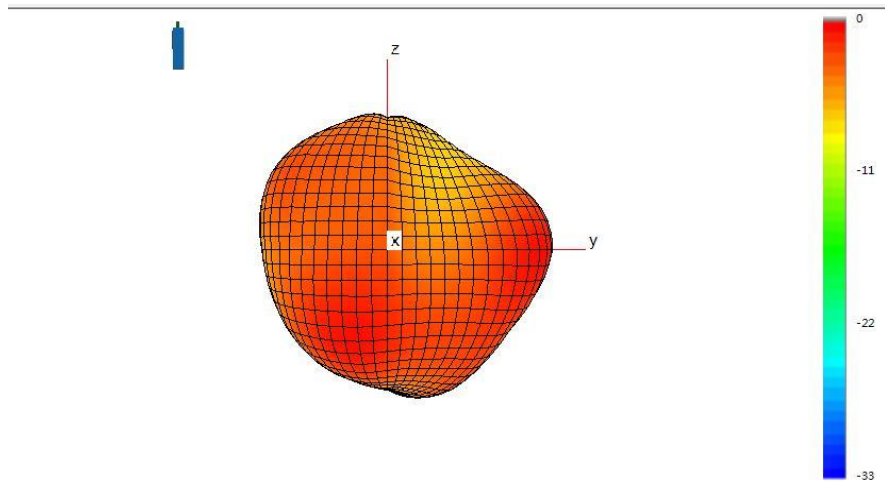
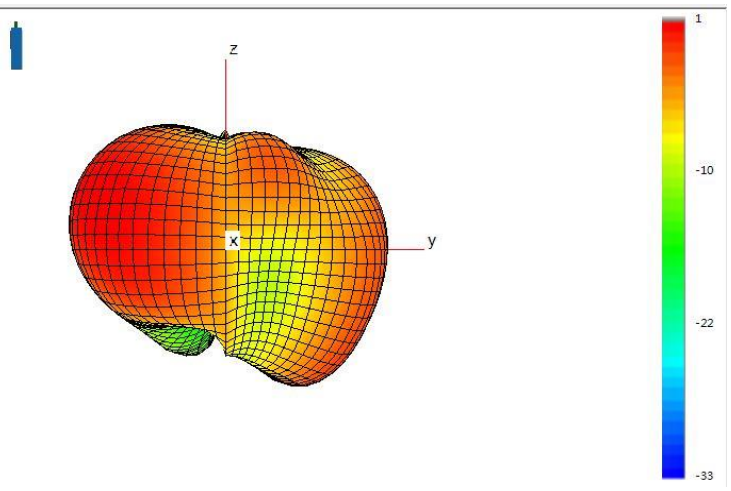
Polarization	Total		Channel	45		Freq	2440	
Phi\Theta	0	30	60	90	120	150	180	
	0	-12.56	-4.6	0.45	0.32	0.71	-0.23	-4.94
	30	-12.56	-7.99	-1.33	-1.73	1.23	0.57	-4.94
	60	-12.56	-8.49	-2.48	-1.14	-0.57	-1.61	-4.94
	90	-12.56	-8.29	-2.73	-0.43	-1.46	-0.03	-4.94
	120	-12.56	-9.81	-5.39	-4.3	-2.41	-1.75	-4.94
	150	-12.56	-13.27	-9.79	-6.9	-4.83	-8.72	-4.94
	180	-12.56	-17.81	-14.22	-15.59	-11.95	-20.04	-4.94
	210	-12.56	-15.87	-18.4	-19.32	-11.42	-12.17	-4.94
	240	-12.56	-13.17	-15.39	-16.97	-9.32	-14.22	-4.94
	270	-12.56	-9.04	-9.41	-10.06	-16.89	-6.89	-4.94
	300	-12.56	-5.96	-2.7	-2.56	-7.78	-2.83	-4.94
	330	-12.56	-4.69	0.84	0.36	-1.34	-1.3	-4.94
	360	-12.56	-4.6	0.45	0.32	0.71	-0.23	-4.94



# —, 2440MHZ head mold directivity diagram (free space)



# —, 2440MHZ head mold directivity diagram (head mold)





## 二, TRP&TIS

CH	TX	RX	TRP (free space)	TIS (free space)	TRP (head mold)	TIS (head mold)
0	4.7	-95	1.65	-92.81	0.3	-89.88
39	4.49	-95	2.01	-92.90	0.28	-89.42
78	4.2	-95	1.73	-92.60	0.22	-90.42

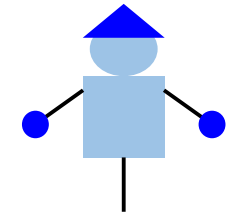
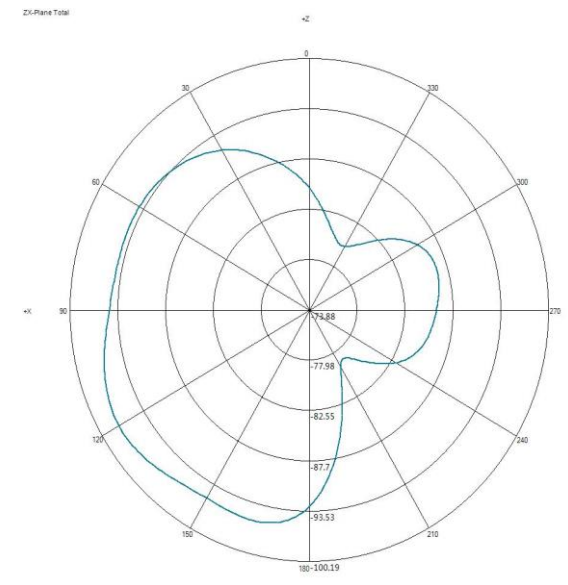
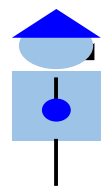
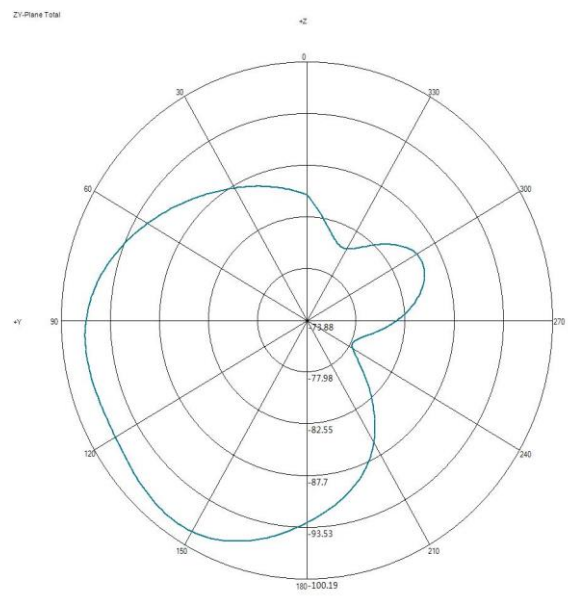
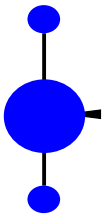
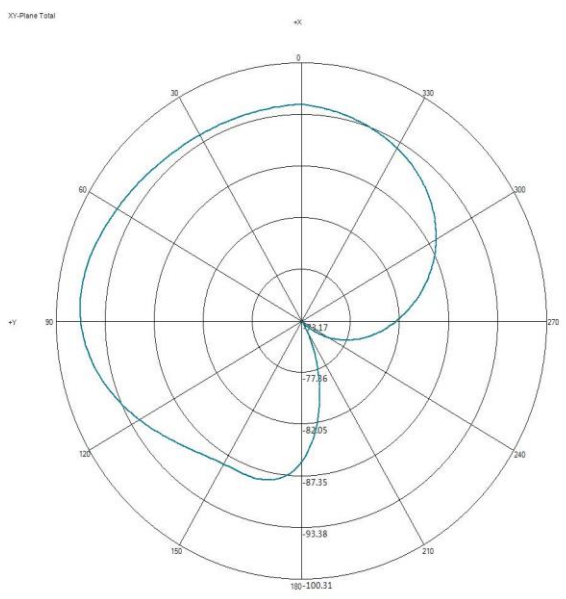


# 二, 2440MHZ head mold direction data

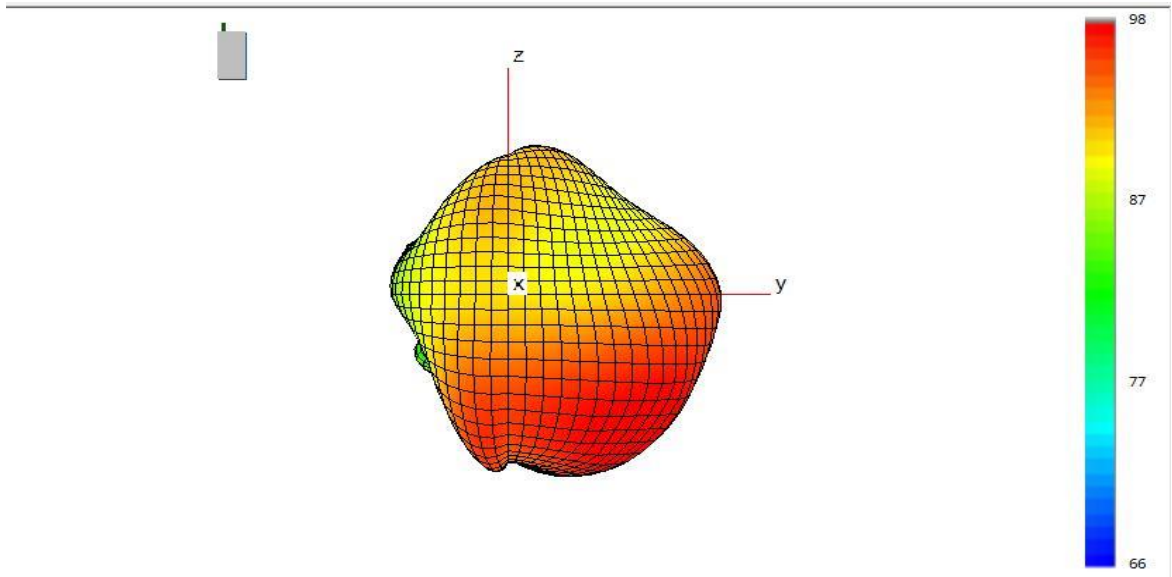
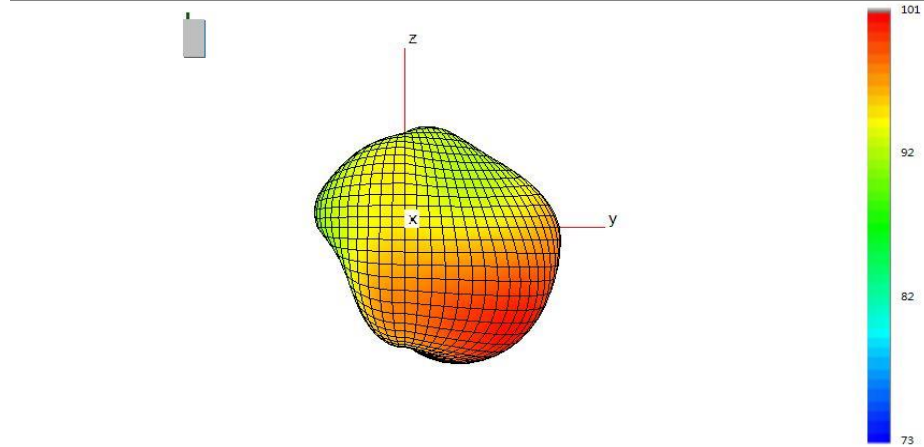
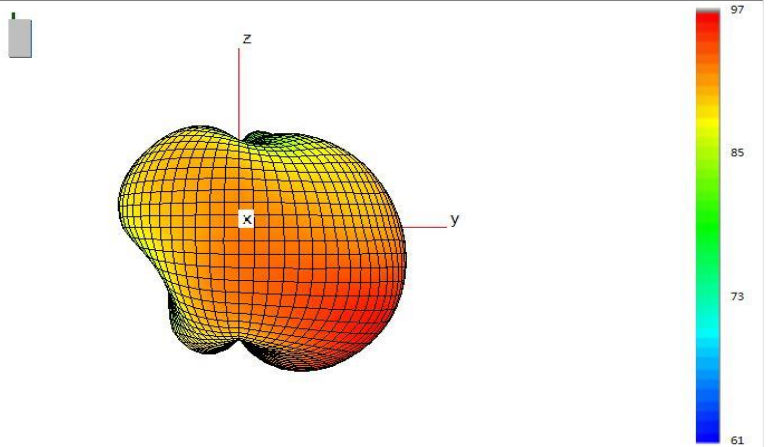
Polarization	Total		Channel	39		Freq	2441	
Phi\Theta	0	30	60	90	120	150	180	
	0	-84.72	-91.57	-94.25	-94.75	-97.47	-95.54	-92.93
	30	-84.72	-92.4	-92.15	-94.49	-99.64	-97.48	-92.93
	60	-84.72	-90.85	-92.46	-95.75	-100.03	-99.06	-92.93
	90	-84.72	-87.52	-92.09	-96.8	-96.83	-98.17	-92.93
	120	-84.72	-85.68	-87.21	-92.26	-93.31	-95.82	-92.93
	150	-84.72	-83.43	-79.04	-88.47	-88.16	-87.79	-92.93
	180	-84.72	-80.03	-85.59	-85.84	-83	-79.31	-92.93
	210	-84.72	-74.84	-78.6	-73.99	-84.89	-84.51	-92.93
	240	-84.72	-78.57	-80.94	-75.75	-83.92	-78.43	-92.93
	270	-84.72	-80.7	-85.46	-81.68	-78.27	-86.17	-92.93
	300	-84.72	-86.24	-88.66	-88.31	-81.76	-87.94	-92.93
	330	-84.72	-89.63	-92.74	-92.64	-92.1	-93.01	-92.93
	360	-84.72	-91.57	-94.25	-94.75	-97.47	-95.54	-92.93



# 二, 2440MHZ head mold directivity diagram (active)



# 二, 2440MHZ head mold directivity diagram



# THANKS

通力電子控股有限公司

