

测试报告 (Test report)



客户名称(CN)		项目名称(RN)	2.4G Glue rod antenna
测试频段 Test frequency band	2.4G	天线类型 antenna form	Glue rod antenna
射频工程师 (RF)		结构工程师 (ME)	
日期(Date)	2025/08/19	制表人 Watchmaker	

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一、报告版本提要 (Summary of the report version)

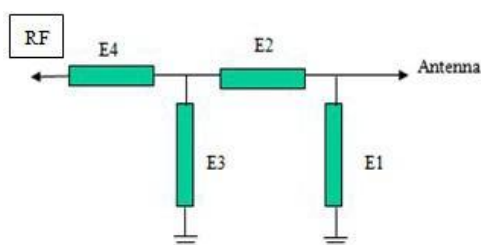
版本 Version number	日期 Date	内容概况 Content Overview
V1.0	2025/08/19	初始版本

二、天线实物图 (Physical diagram of the antenna)

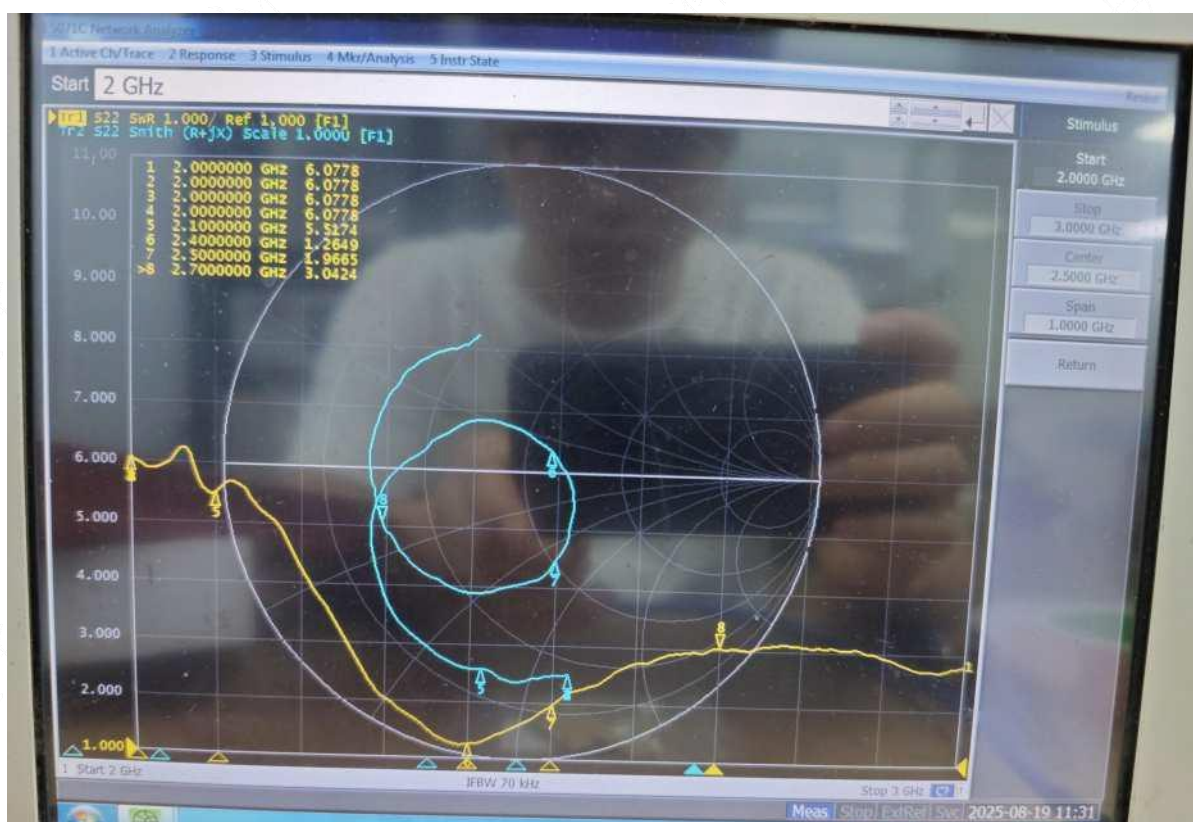


三、天线匹配电路 (Antenna matching circuit)

Element	E1	E2	E3	
Value	/	/	/	

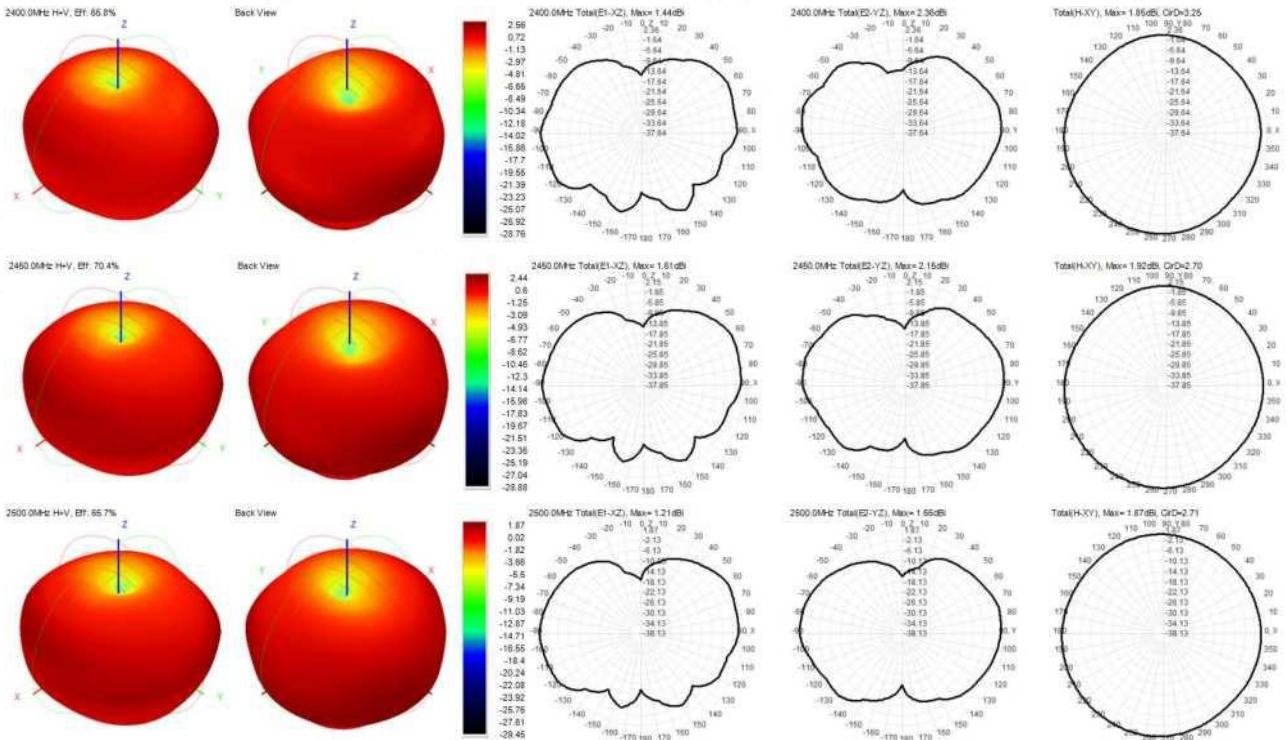


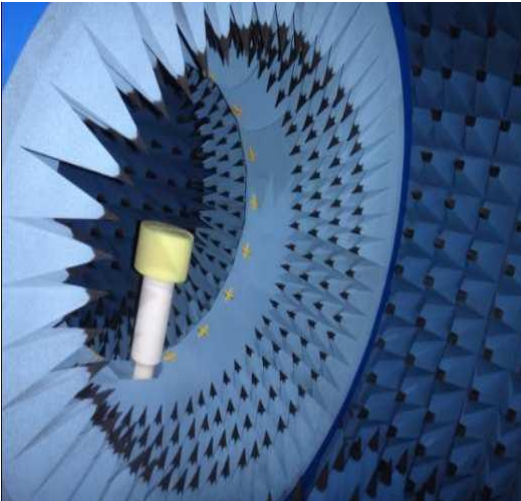
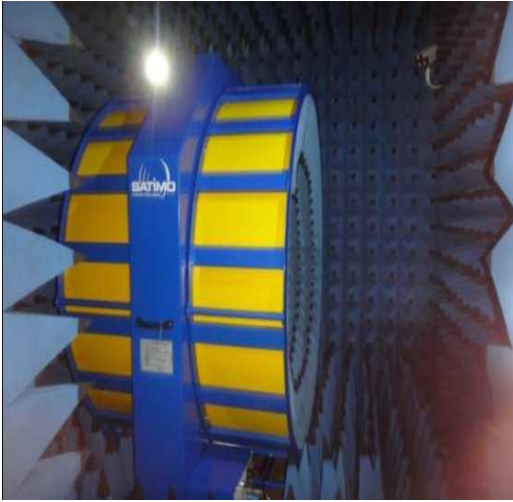
四、天线驻波比、回波损耗 (Standing wave ratio, return loss)



五、增益、效率、辐射方向图 (Gain, efficiency, radiation pattern)

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Frequency (MHz)	2400	2405	2410	2415	2420	2425	2430	2435	2440	2445	2450	2455	2460	2465	2470	2475	2480	2485	2490	2495	2500
Efficiency (dBi)	-1.81	-1.70	-1.65	-1.61	-1.53	-1.46	-1.44	-1.45	-1.45	-1.47	-1.52	-1.62	-1.74	-1.85	-1.91	-1.97	-2.00	-1.99	-1.92	-1.85	-1.82
Gain (dBi)	2.56	2.61	2.64	2.65	2.70	2.75	2.77	2.70	2.64	2.56	2.44	2.25	2.08	1.90	1.81	1.73	1.74	1.77	1.80	1.85	1.87
Efficiency (%)	65.84	67.63	68.46	69.04	70.35	71.47	71.84	71.67	71.54	71.22	70.44	68.92	67.03	65.31	64.42	63.55	63.14	63.27	64.20	65.36	65.71
Directivity (dB)	4.37	4.31	4.29	4.26	4.23	4.21	4.20	4.15	4.10	4.04	3.96	3.87	3.82	3.75	3.72	3.69	3.74	3.76	3.72	3.70	3.69
Peak Gain Position (Theta)	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	90.00	90.00	90.00	90.00	90.00	90.00
Peak Gain Position (Phi)	255.00	255.00	255.00	255.00	255.00	255.00	255.00	255.00	255.00	255.00	255.00	255.00	255.00	255.00	120.00	255.00	255.00	255.00	255.00	255.00	255.00
Efficiency ThetaPol (%)	59.63	61.47	62.51	63.33	64.78	66.06	66.64	66.74	66.82	66.65	66.04	64.76	63.06	61.46	60.67	59.95	59.65	59.79	60.76	61.99	62.43
Efficiency PhiPol (%)	6.21	6.16	5.95	5.71	5.58	5.41	5.21	4.93	4.71	4.58	4.40	4.16	3.97	3.84	3.74	3.60	3.49	3.48	3.43	3.37	3.28
Upper Hem. Efficiency (%)	39.57	40.46	40.87	41.31	42.32	43.34	43.92	44.20	44.47	44.51	44.14	43.15	41.78	40.39	39.44	38.46	37.83	37.63	38.01	38.65	38.89
Lower Hem. Efficiency (%)	26.27	27.17	27.59	27.73	28.03	28.13	27.92	27.46	27.07	26.72	26.30	25.77	25.25	24.92	24.98	25.09	25.31	25.64	26.19	26.71	26.82
T90(H)角度	3.25	3.21	3.19	3.13	3.06	3.05	2.91	2.88	2.77	2.71	2.70	2.75	2.74	2.75	2.84	2.89	2.96	2.93	2.84	2.78	2.71
Gain 15deg (dBi)																					
E1(XZ)波瓣宽度	74.00	69.00	68.00	66.00	67.00	66.00	67.00	68.00	69.00	70.00	55.00	56.00	54.00	55.00	71.00	71.00	70.00	70.00	69.00	69.00	69.00
E1(XZ)前后比	4.82	5.19	5.46	5.71	5.86	6.01	6.04	6.10	6.15	6.19	6.28	6.40	6.63	6.70	6.97	7.24	7.34	7.35	7.35	7.28	7.25
E2(YZ)波瓣宽度	37.00	38.00	38.00	39.00	40.00	40.00	41.00	42.00	44.00	45.00	48.00	48.00	50.00	50.00	48.00	48.00	47.00	48.00	49.00	49.00	50.00
E2(YZ)前后比	10.15	10.33	10.41	10.33	10.38	10.32	10.23	10.27	10.30	10.22	10.26	10.52	10.72	10.80	11.06	10.82	10.55	10.16	10.11	10.16	10.30
最大增益外轴比(P)	15.35	15.97	16.99	18.11	18.69	19.48	20.67	21.44	21.97	22.32	23.54	23.50	23.74	24.76	18.31	15.72	15.61	15.63	16.08	16.47	17.02
顶点(Theta=0)轴轴比(P)	3.80	4.85	6.34	7.18	7.86	8.15	8.86	9.05	9.39	9.71	9.77	9.44	9.35	9.74	10.25	10.25	10.21	11.20	12.39	14.53	13.95
角10度最差(大)轴轴比(P)	30.89	30.23	47.93	46.53	54.28	59.10	55.12	57.56	53.61	58.42	58.17	55.01	59.39	59.23	67.06	55.88	80.35	59.01	57.62	58.73	56.97
Hc(XY)波瓣宽度	258.00	337.00	339.00	346.00	354.00	356.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00
Hc(XY)前后比	0.34	0.28	0.29	0.23	0.20	0.23	0.14	0.16	0.15	0.08	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
左旋圆极化效率(%)	35.31	36.11	35.97	35.90	36.17	36.41	36.28	36.07	35.80	35.72	35.50	35.12	34.51	33.95	33.81	33.52	33.41	33.42	33.58	33.82	33.56
右旋圆极化效率(%)	30.53	31.52	32.49	33.13	34.18	35.05	35.56	35.60	35.73	35.50	34.94	33.80	32.52	31.35	30.61	30.03	29.73	29.85	30.61	31.54	32.15





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