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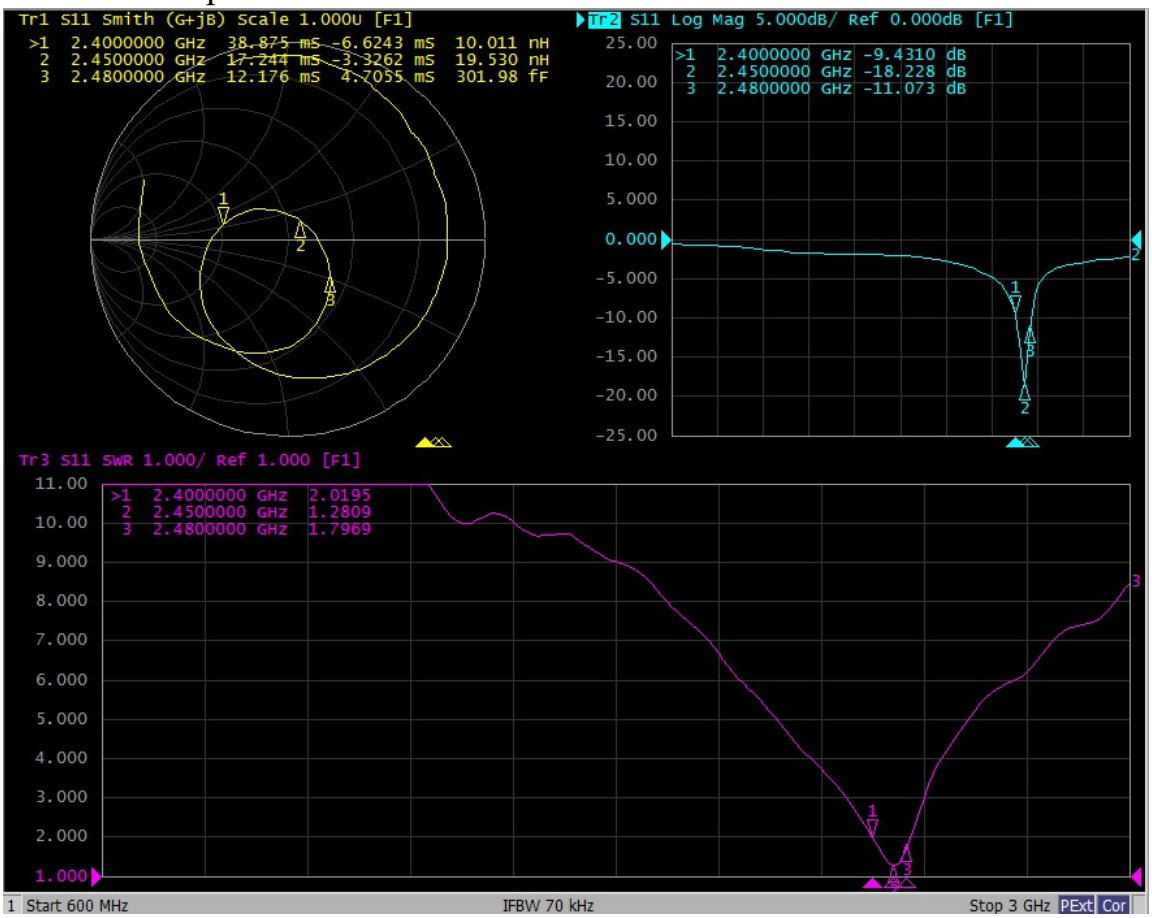
Change record			
Compile / change date	Reason for change	Changed content	Version
2025.10.27	First edition	First edition	V1.0
2026.1.7	Drawing Update	Data update	V2.0

I: The report of passive data

Angilent E5071C

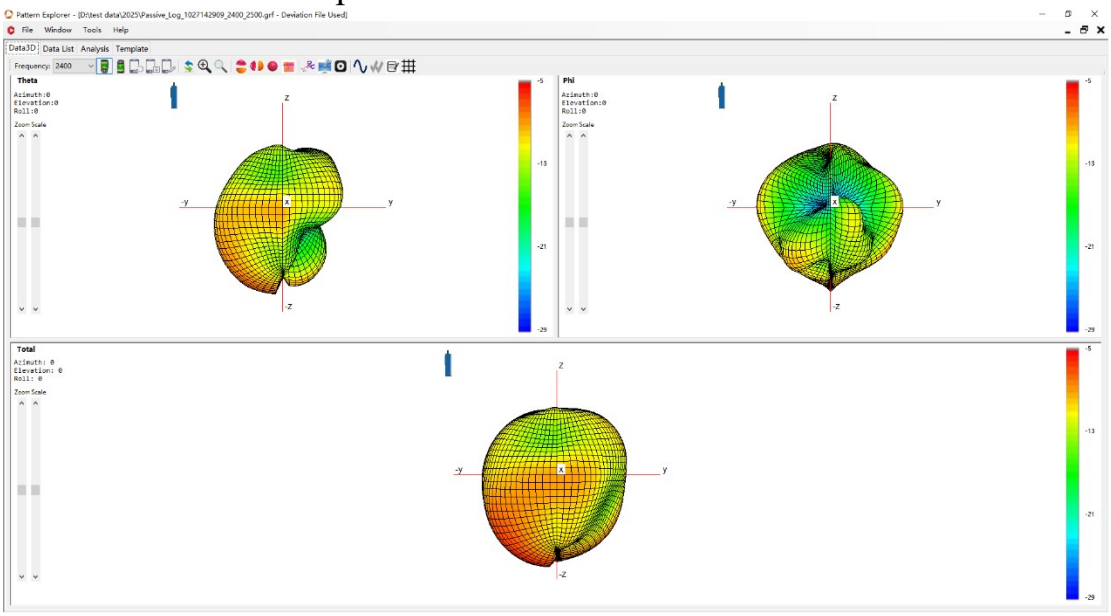
Antenna S11 parameter：



Antenna efficiency and gain:

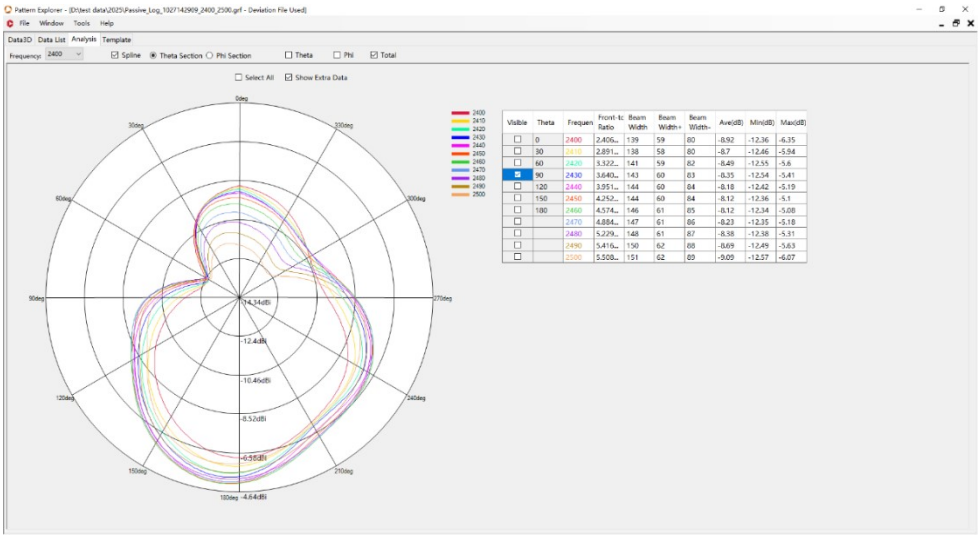
L			
Frequency (MHz)	Efficiency (%)	Efficiency (dB)	Gain (dBi)
2400	12.2%	-9.1	-5.7
2410	12.9%	-8.9	-5.4
2420	13.6%	-8.7	-5.1
2430	14.2%	-8.5	-4.9
2440	14.8%	-8.3	-4.7
2450	15.1%	-8.2	-4.7
2460	15.2%	-8.2	-4.7
2470	14.9%	-8.3	-4.8
2480	14.6%	-8.4	-5.0
AVG	14.2%	-8.5	-5.0

3D Antenna radiation pattern：



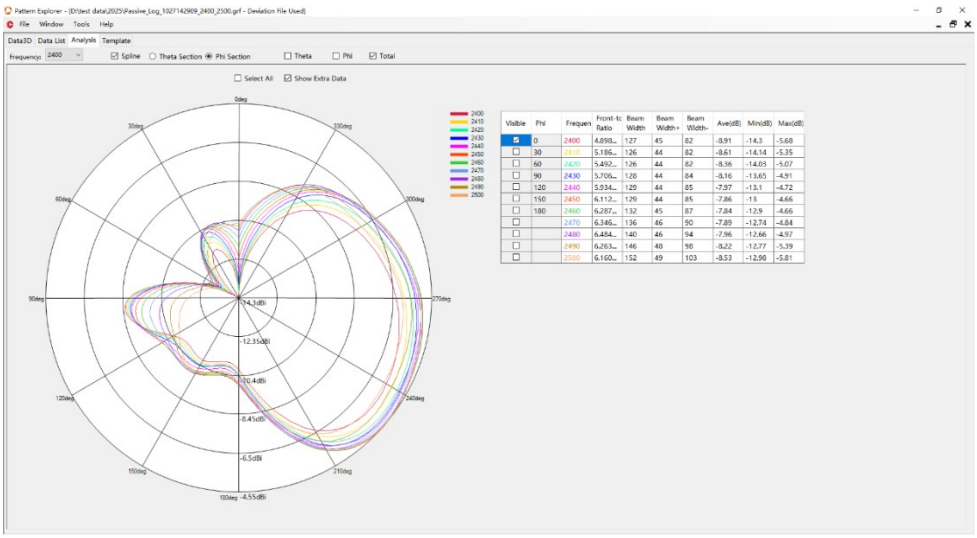
2D Antenna radiation pattern:

Theta=90°



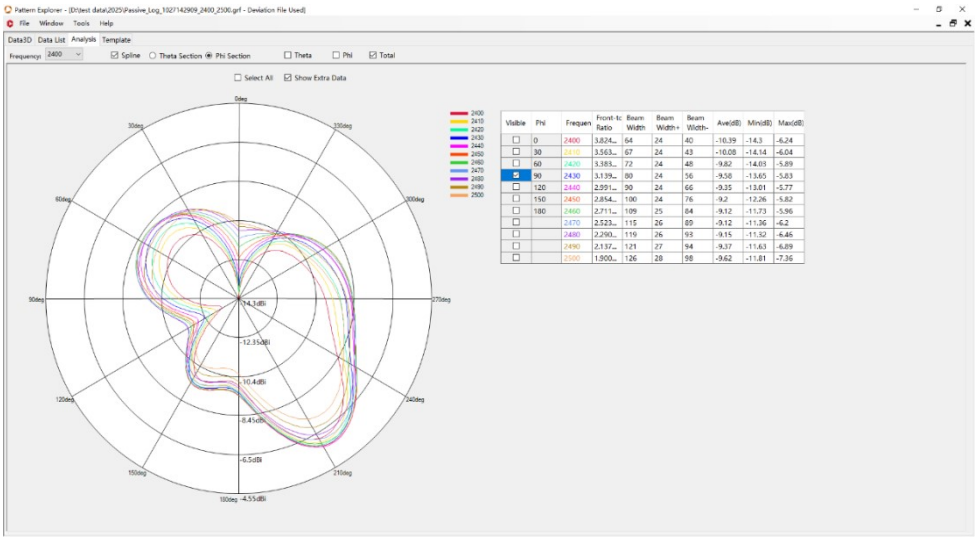
Visible	Theta	Frequen	Front-to Ratio	Beam Width	Beam Width+	Beam Width-	Ave(dB)	Min(dB)	Max(dB)
☐	0	2400	2.406...	139	59	80	-8.92	-12.36	-6.35
☐	30	2410	2.891...	138	58	80	-8.7	-12.46	-5.94
☐	60	2420	3.322...	141	59	82	-8.49	-12.55	-5.6
☑	90	2430	3.640...	143	60	83	-8.35	-12.54	-5.41
☐	120	2440	3.951...	144	60	84	-8.18	-12.42	-5.19
☐	150	2450	4.252...	144	60	84	-8.12	-12.36	-5.1
☐	180	2460	4.574...	146	61	85	-8.12	-12.34	-5.08
☐		2470	4.884...	147	61	86	-8.23	-12.35	-5.18
☐		2480	5.229...	148	61	87	-8.38	-12.38	-5.31
☐		2490	5.416...	150	62	88	-8.69	-12.49	-5.63
☐		2500	5.508...	151	62	89	-9.09	-12.57	-6.07

Phi=0°



Visible	Phi	Frequen	Front-to Ratio	Beam Width	Beam Width+	Beam Width-	Ave(dB)	Min(dB)	Max(dB)
☑	0	2400	4.898...	127	45	82	-8.91	-14.3	-5.68
☐	30	2410	5.186...	126	44	82	-8.61	-14.14	-5.35
☐	60	2420	5.492...	126	44	82	-8.36	-14.05	-5.07
☐	90	2430	5.706...	128	44	84	-8.16	-13.65	-4.91
☐	120	2440	5.934...	129	44	85	-7.97	-13.1	-4.72
☐	150	2450	6.112...	129	44	85	-7.86	-13	-4.66
☐	180	2460	6.287...	132	45	87	-7.84	-12.9	-4.66
☐		2470	6.346...	136	46	90	-7.89	-12.74	-4.84
☐		2480	6.454...	140	46	94	-7.96	-12.66	-4.97
☐		2490	6.263...	146	48	98	-8.22	-12.77	-5.39
☐		2500	6.160...	152	49	103	-8.53	-12.98	-5.81

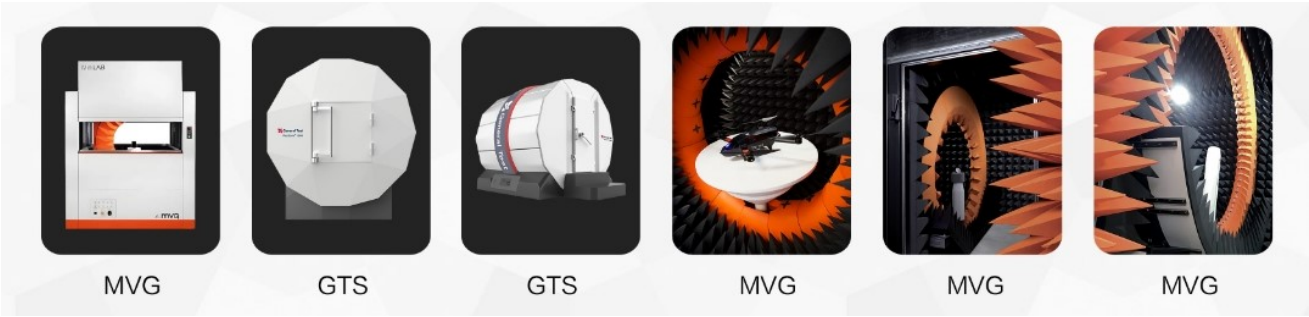
Phi=90°



Visible	Phi	Frequen	Front-to Ratio	Beam Width	Beam Width+	Beam Width-	Ave(dB)	Min(dB)	Max(dB)
☐	0	2400	3.824...	64	24	40	-10.39	-14.3	-6.24
☐	30	2410	3.563...	67	24	43	-10.08	-14.14	-6.04
☐	60	2420	3.383...	72	24	48	-9.82	-14.05	-5.89
☑	90	2430	3.139...	80	24	56	-9.56	-13.65	-5.83
☐	120	2440	2.991...	90	24	66	-9.35	-13.01	-5.77
☐	150	2450	2.854...	100	24	76	-9.2	-12.26	-5.82
☐	180	2460	2.711...	109	25	84	-9.12	-11.73	-5.96
☐		2470	2.523...	115	26	89	-9.12	-11.36	-6.2
☐		2480	2.290...	119	26	93	-9.15	-11.32	-6.46
☐		2490	2.137...	121	27	94	-9.37	-11.63	-6.89
☐		2500	1.900...	126	28	98	-9.62	-11.81	-7.36

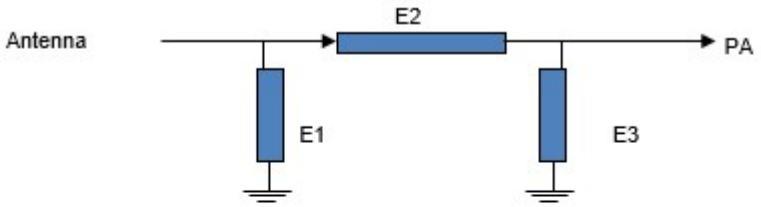
II：Active test data

		free	
9#	Channel	TRP	TIS
L	CH 0	6.4	-91.0
	CH 39	6.8	-92.0
	CH 78	6.7	-91.0
		head model	
9#	Channel	TRP	TIS
L	CH 0	2.0	-85.4
	CH 39	2.6	-86.9
	CH 78	2.7	-86.0

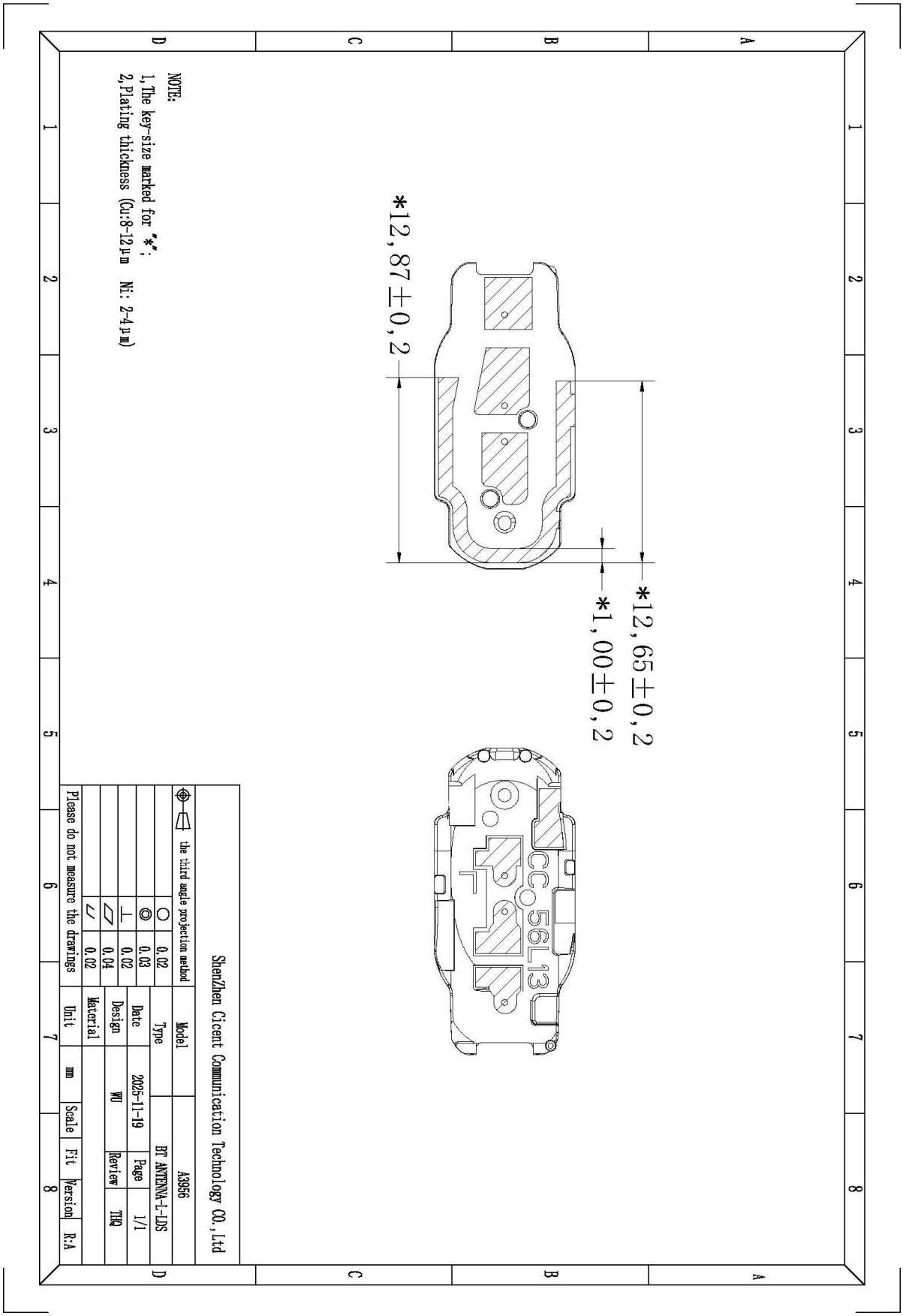


OTA Standard Chamber

III：Antenna matching



Element	Value
E1(0201)	0.2pF
E2(0201)	3nH
E3(0201)	N/A

Note: The left ear antenna matching circuit is connected in parallel with a 0.2pF capacitor at position E1 and in series with a 3nH inductor at position E2.

Ⅴ：Antenna structure diagram file