



Antenna Part Specification

Project name:	S2
Material category:	R-BT antenna
Manufacturer:	Shenzhen Cicent Communication Technology Co., Ltd.
Manufacturer address:	505-506 ,ABlock,Donglian Building,Chuangye 2 road,Baoan District,Shenzhen,Guangdong,P.R china
Version:	V2.0
Date:	2025.8.23



Contents

I: The report of passive data	3
II: 3D Active test report of antenna	9
III: Antenna matching circuit	10
IV: Antenna structure diagram file	11

Change record			
Compile / change date	Reason for change	Changed content	Version
2025.7.14	First edition	First edition	V1.0
2025.8.23	Antenna modification	Document Update	V2.0

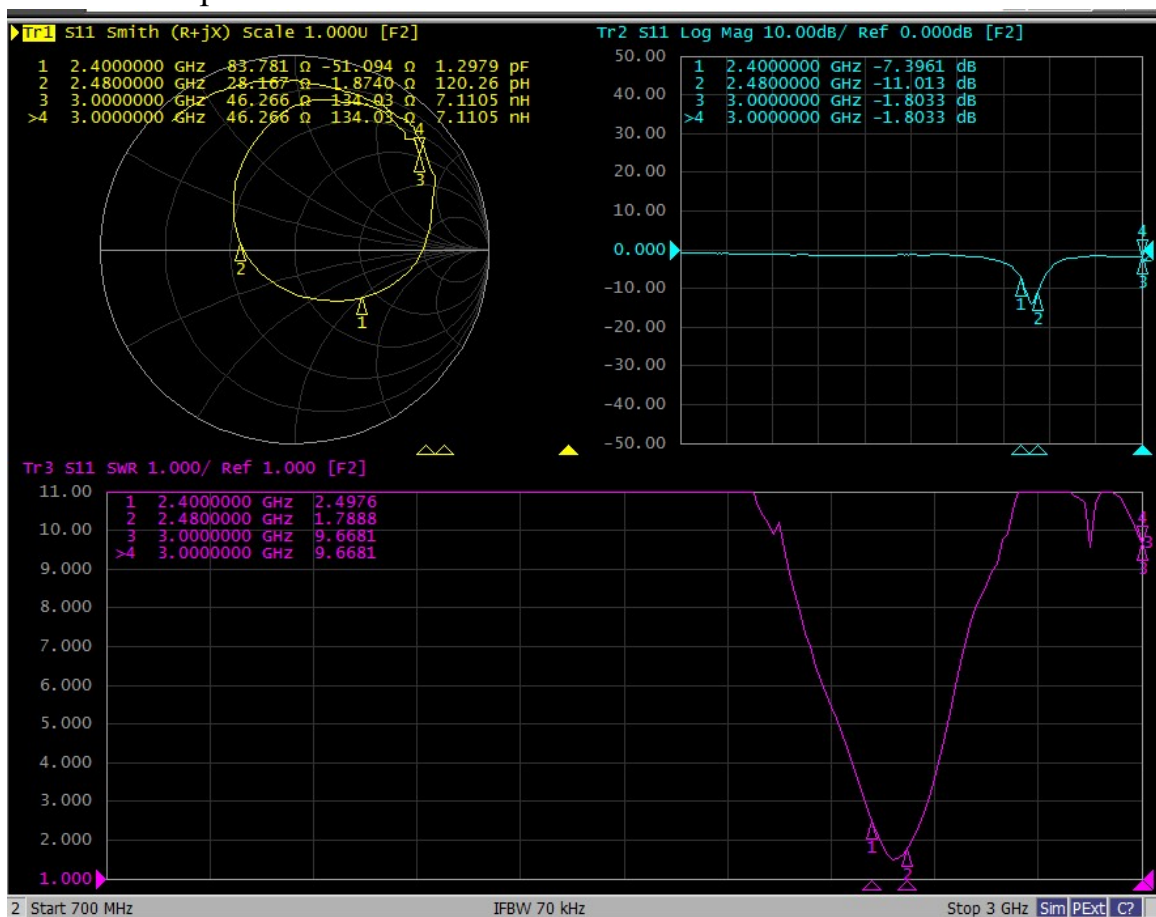


I: The report of passive data



Angilent E5071C

antenna S11 parameter: (free)

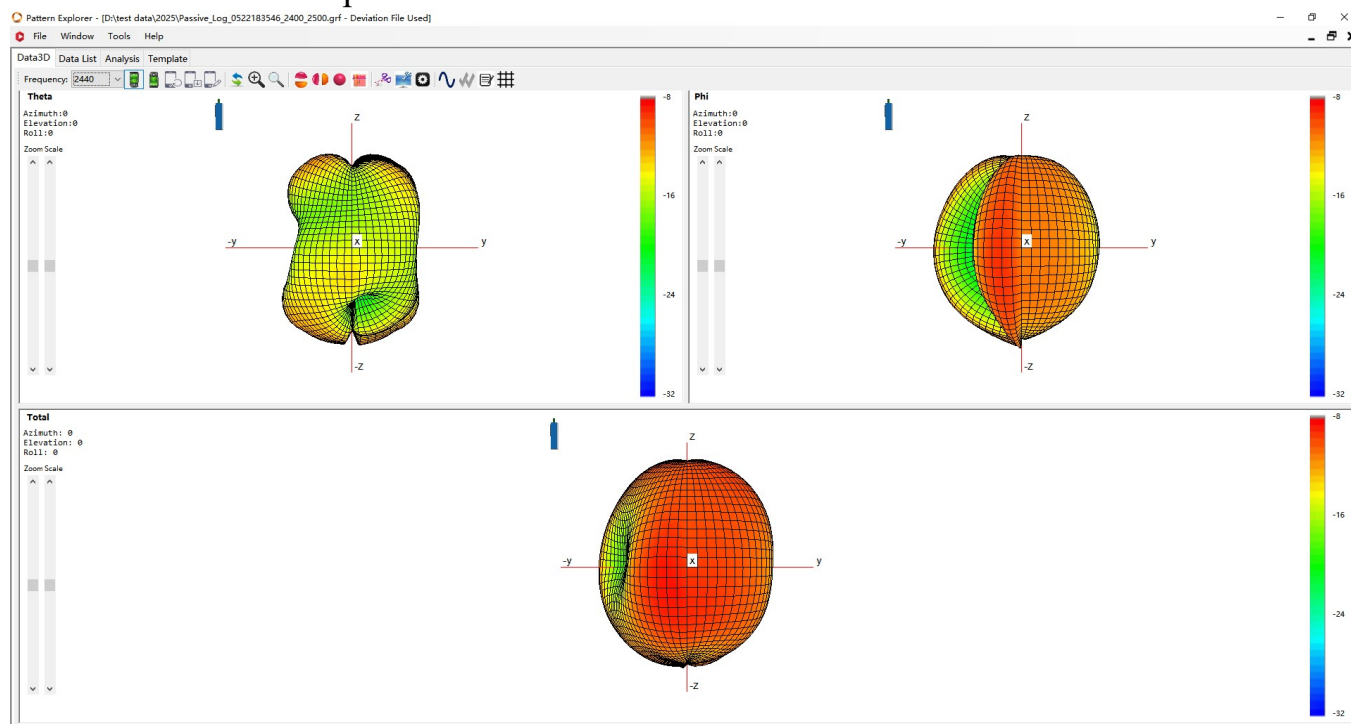




Antenna efficiency and gain: (free)

R- free			
Frequency (MHz)	Efficiency (dB)	Gain (dBi)	Efficiency (%)
2400	-12.05	-9.58	6.24
2410	-11.75	-9.25	6.69
2420	-11.48	-8.96	7.11
2430	-11.36	-8.76	7.31
2440	-11.23	-8.66	7.53
2450	-11.13	-8.55	7.71
2460	-11.08	-8.49	7.80
2470	-11.16	-8.57	7.65
2480	-11.30	-8.74	7.42
AVG	-11.39	-8.84	7.27

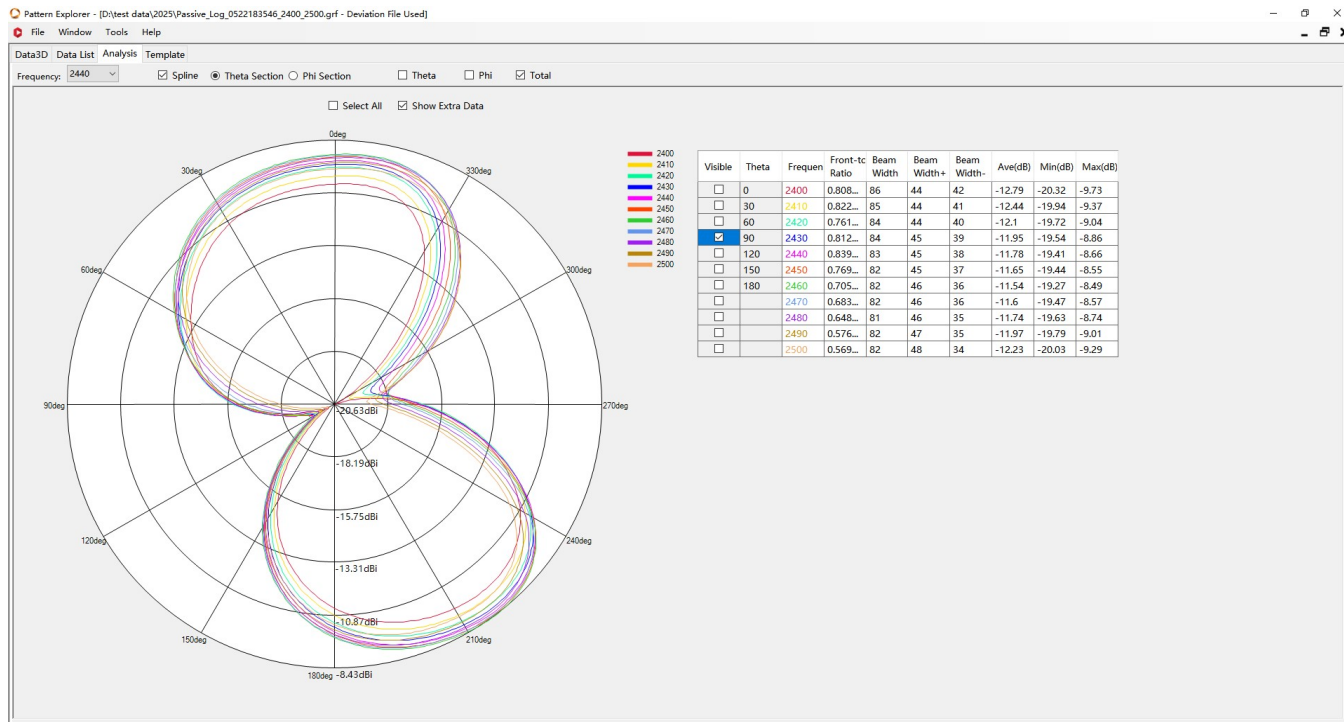
3D Antenna radiation pattern: (free)



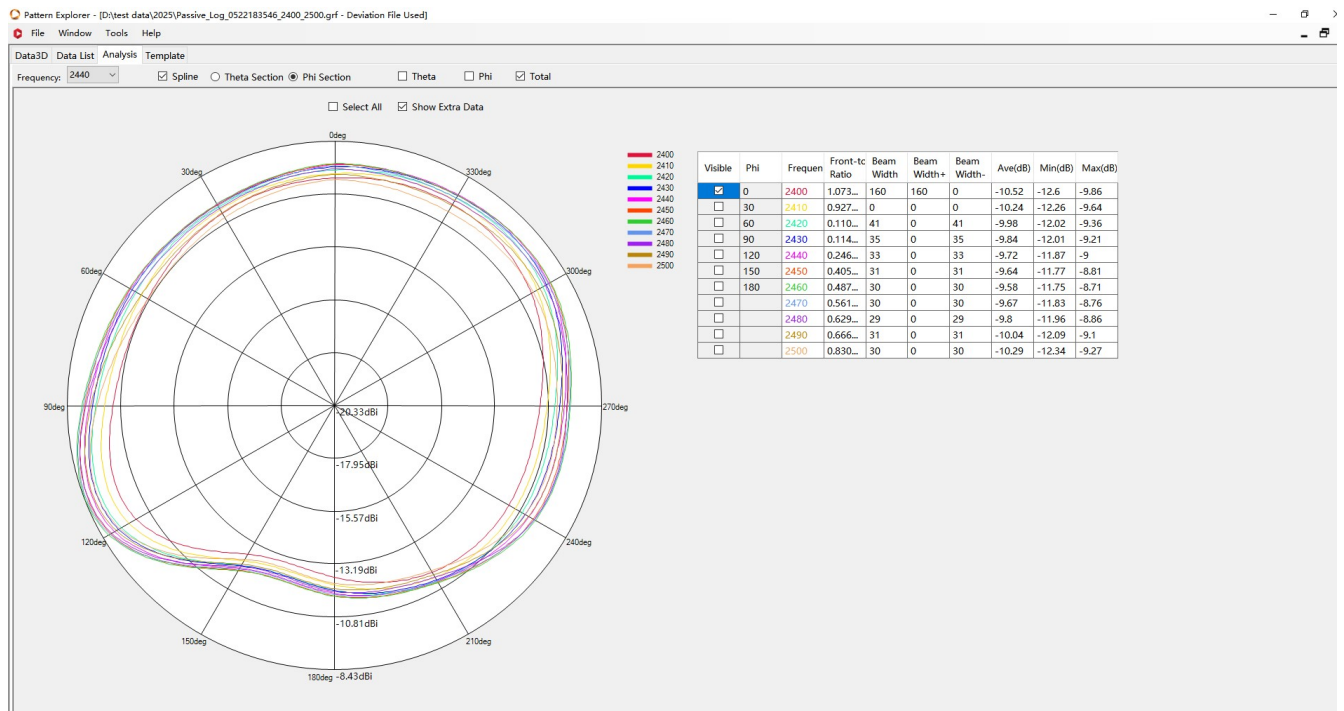


2D Antenna radiation pattern: (free)

Theta=90°



Phi=0°





Phi=90°

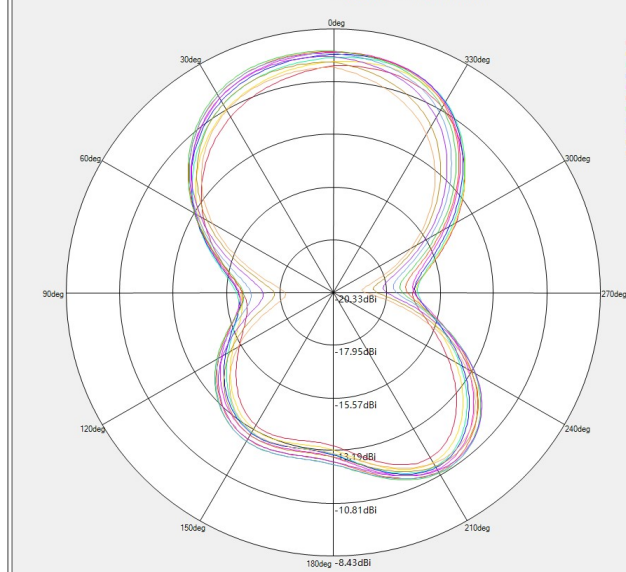
Pattern Explorer - [D:\test data\2025\Passive_Log_0522183546_2400_2500.grf - Deviation File Used]

File Window Tools Help

Data3D Data List Analysis Template

Frequency: 2440 ☒ Spline ☐ Theta Section ☒ Phi Section ☐ Theta ☐ Phi ☒ Total

☐ Select All ☒ Show Extra Data



2400
2410
2420
2430
2440
2450
2460
2470
2480
2490
2500

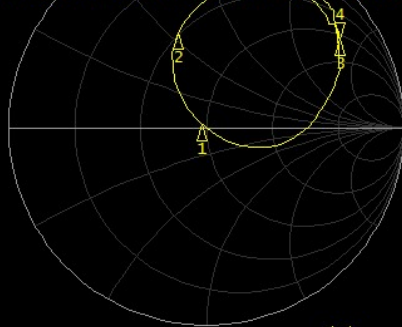
Visible	Phi	Frequen	Front-to-Ratio	Beam Width	Beam Width	Beam Width	Ave(dB)	Min(dB)	Max(dB)
☐	0	2400	2.056...	108	53	55	-12.51	-16.8	-10.08
☐	30	2410	2.033...	108	52	56	-12.28	-16.66	-9.89
☐	60	2420	2.011...	106	50	56	-12.12	-16.58	-9.72
☒	90	2430	2.118...	103	48	55	-12.04	-16.68	-9.57
☐	120	2440	2.134...	100	46	54	-11.98	-16.73	-9.48
☐	150	2450	2.032...	101	46	55	-11.95	-17.02	-9.45
☐	180	2460	1.992...	99	44	55	-11.93	-17.25	-9.42
☐		2470	1.933...	98	43	55	-12.06	-17.5	-9.52
☐		2480	1.931...	97	42	55	-12.24	-17.94	-9.66
☐		2490	1.899...	94	40	54	-12.54	-18.37	-9.91
☐		2500	1.834...	93	39	54	-12.82	-18.88	-10.14

antenna S11 parameter: (headform)

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

Tr1 S11 Smith (R+jX) Scale 1.000U [F2]

1 2.4000000 GHZ 47.779 Ω 1.7080 Ω 113.27 pH
2 2.4800000 GHZ 24.278 Ω 31.433 Ω 2.0172 nH
3 3.0000000 GHZ 55.566 Ω 146.86 Ω 7.7909 nH
>4 3.0000000 GHZ 55.566 Ω 146.86 Ω 7.7909 nH



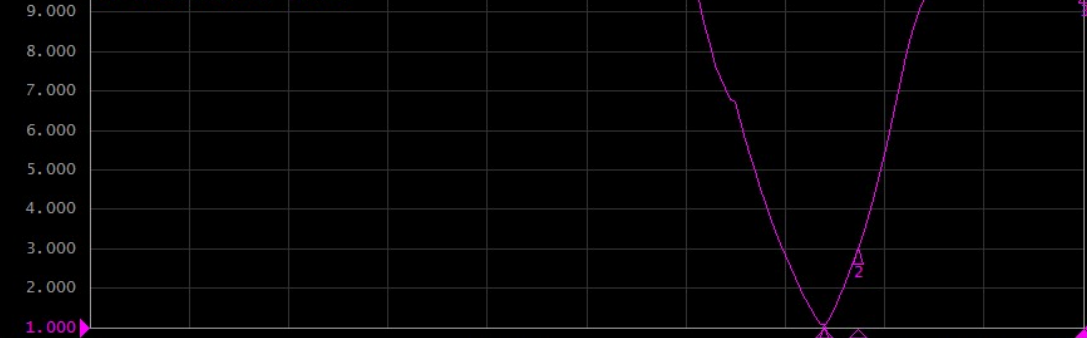
Tr2 S11 Log Mag 10.00dB/ Ref 0.000dB [F2]

1 2.4000000 GHZ -27.268 dB
2 2.4800000 GHZ -5.9668 dB
3 3.0000000 GHZ -1.8029 dB
>4 3.0000000 GHZ -1.8029 dB



Tr3 S11 SWR 1.000/ Ref 1.000 [F2]

1 2.4000000 GHZ 1.0898
2 2.4800000 GHZ 3.0320
3 3.0000000 GHZ 9.6645
>4 3.0000000 GHZ 9.6645



2 Start 700 MHz

IFBW 70 kHz

Stop 3 GHz Sim PExt C?

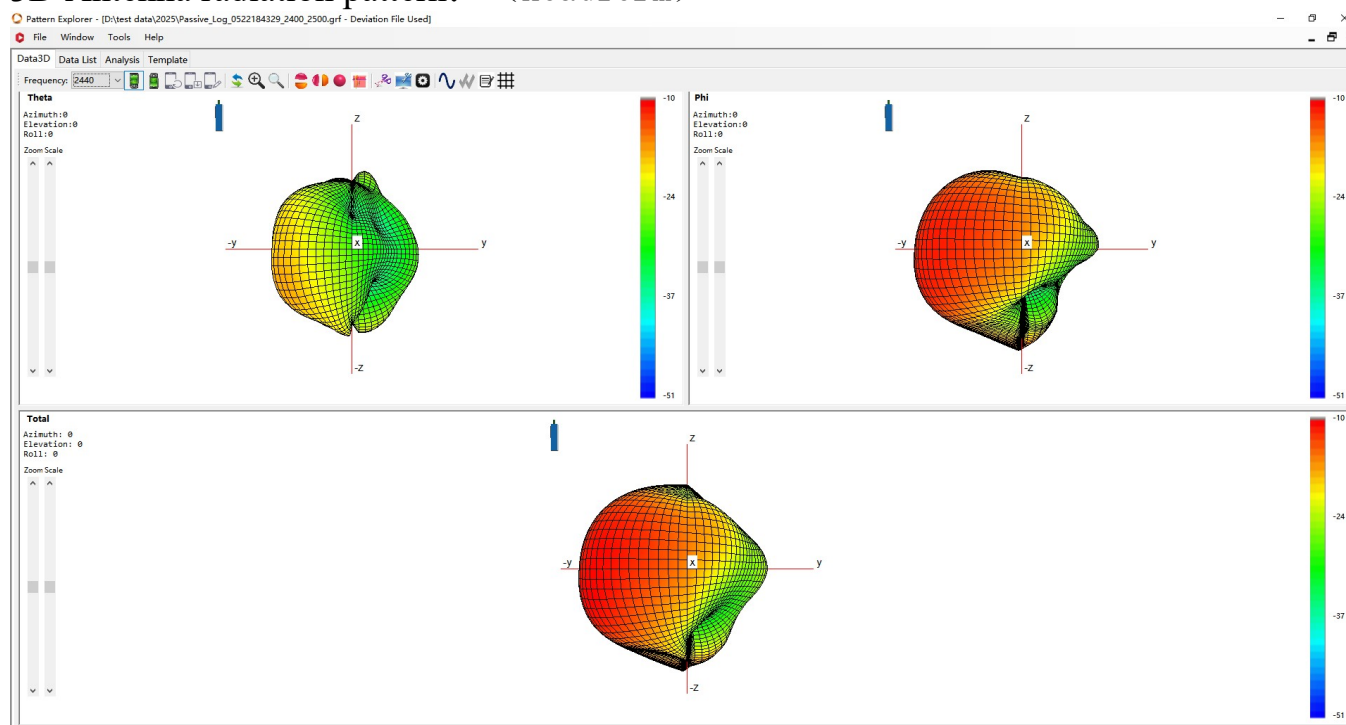
CC-JL-RD-36V1.0



Antenna efficiency and gain: (headform)

R- headform			
Frequency (MHz)	Efficiency (dB)	Gain (dBi)	Efficiency (%)
2400	-9.91	-15.49	2.83
2410	-9.93	-15.57	2.77
2420	-10.03	-15.71	2.68
2430	-10.25	-15.91	2.56
2440	-10.43	-16.12	2.44
2450	-10.64	-16.34	2.32
2460	-10.88	-16.57	2.20
2470	-11.15	-16.87	2.06
2480	-11.25	-17.00	2.00
AVG	-10.50	-16.18	2.43

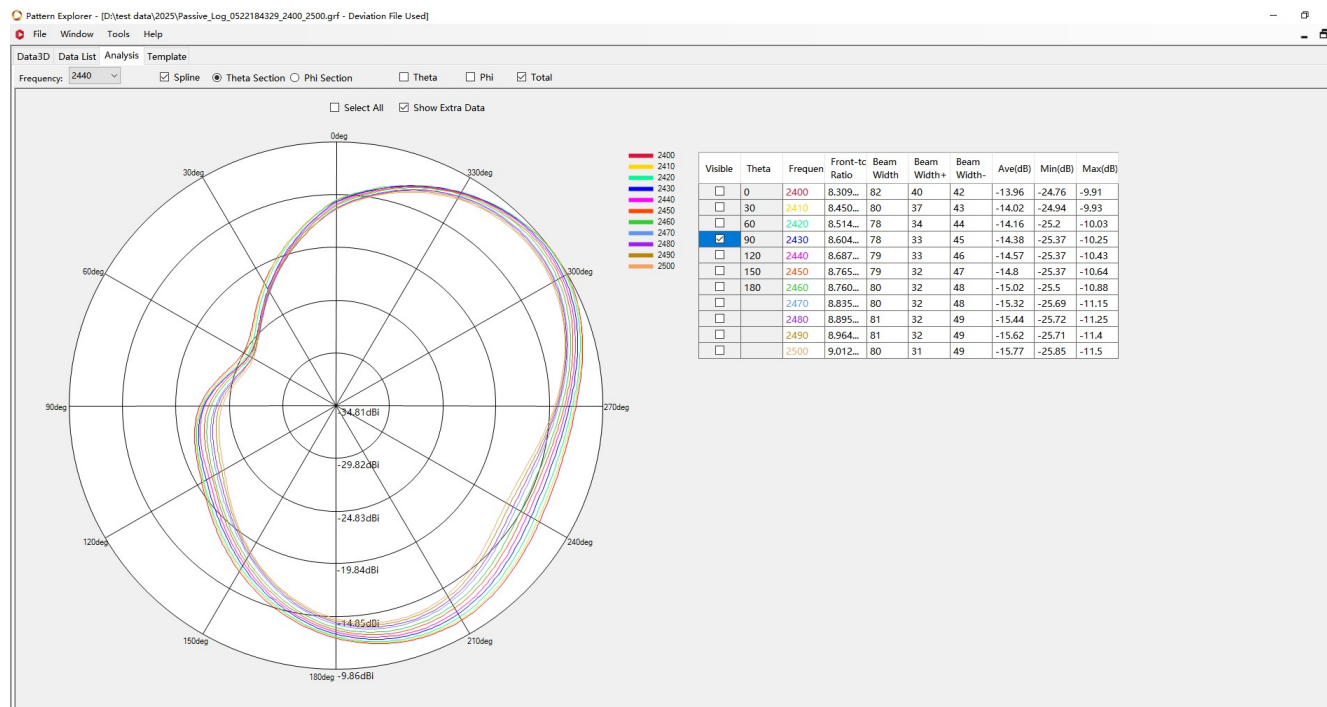
3D Antenna radiation pattern: (headform)



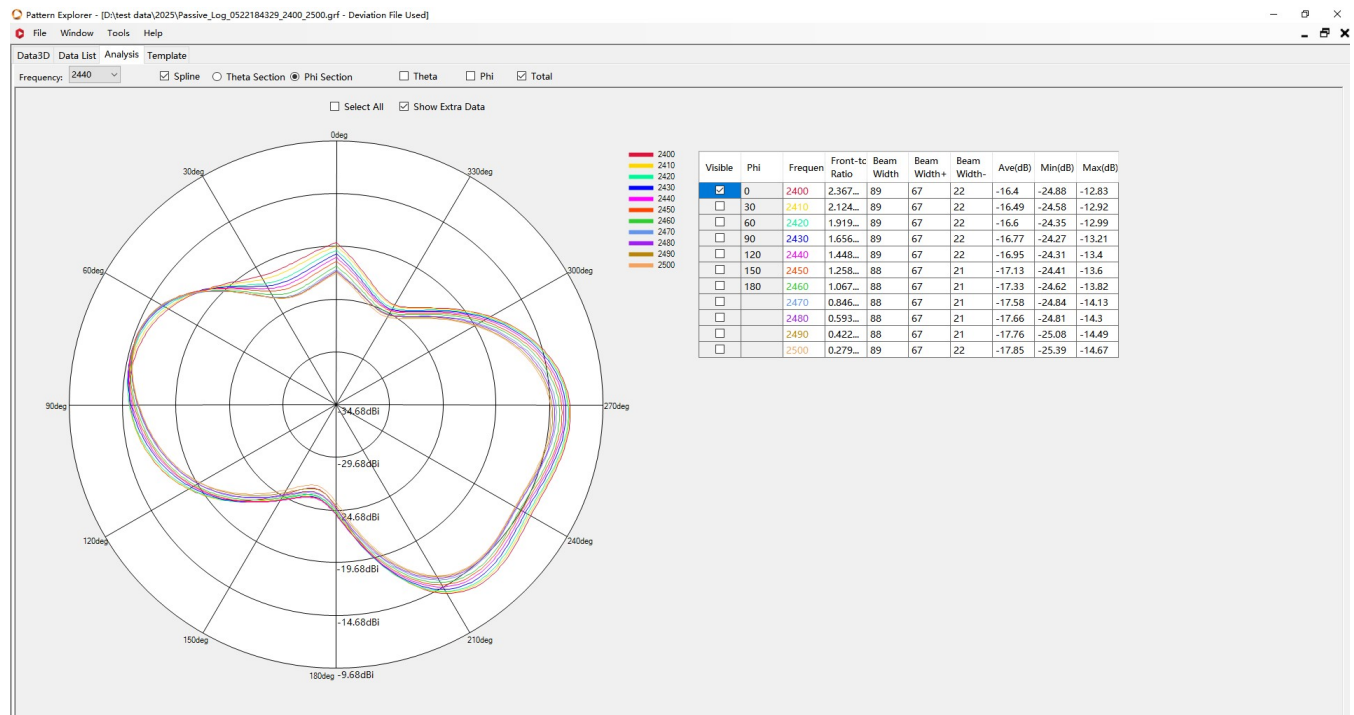


2D Antenna radiation pattern: (headform)

Theta=90°

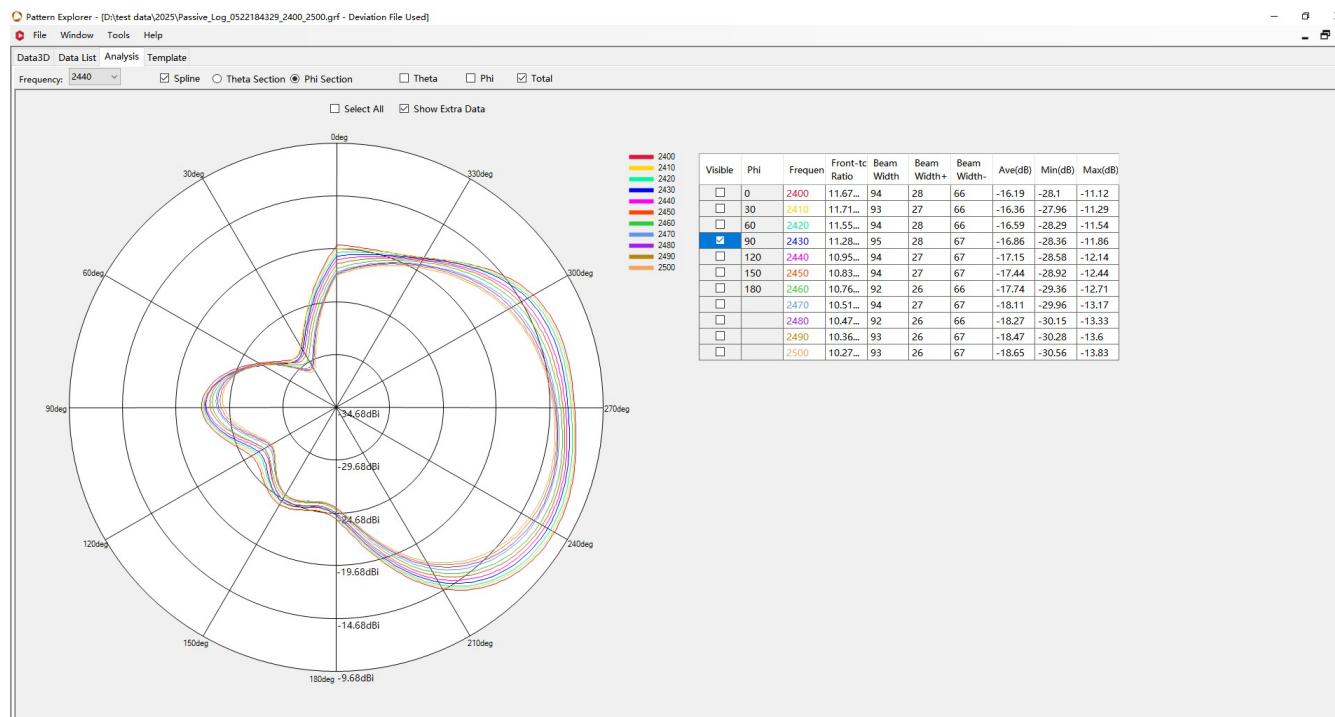


Phi=0°



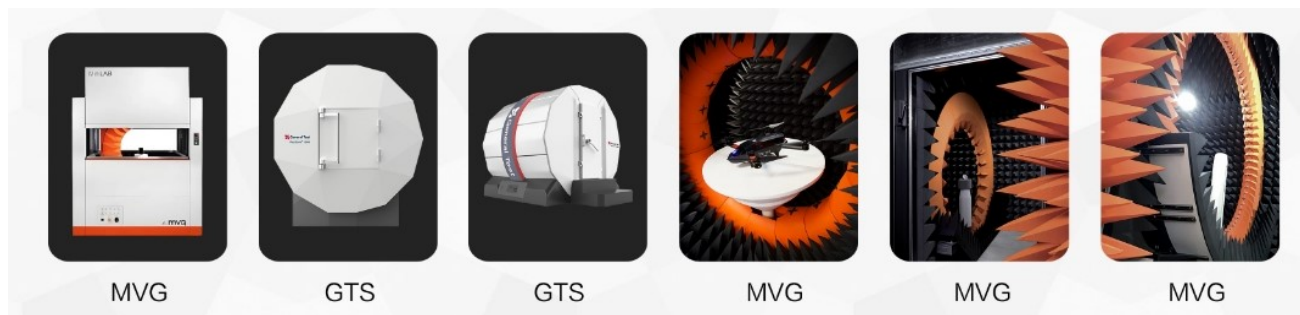


Phi=90°



II: 3D Active test report of antenna

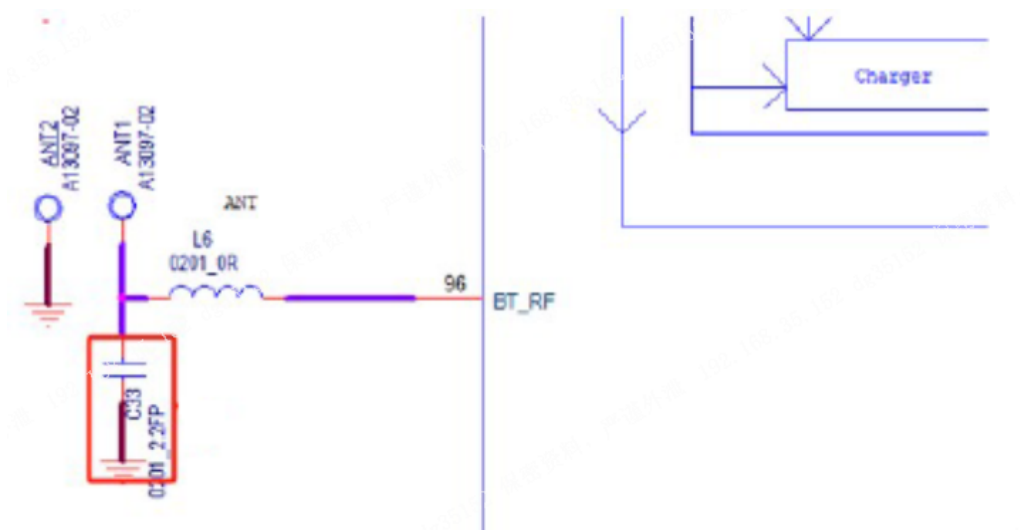
		free		headform		conduction	
	Channel	TRP (%)	TIS (%)	TRP (%)	TIS (%)	power	sensitivity
R	CH 0	4.0	-86.5	-1.9	-80.5	13.7	-95.5
	CH 39	4.0	-87.7	-2.0	-81.4	14.3	-95.5
	CH 78	3.7	-88.4	-2.0	-82.0	14.2	-95.5



OTA Standard Chamber



III: Antenna matching circuit





IV: Antenna structure diagram file

