



好天线 · 优比造

东莞市优比电子有限公司

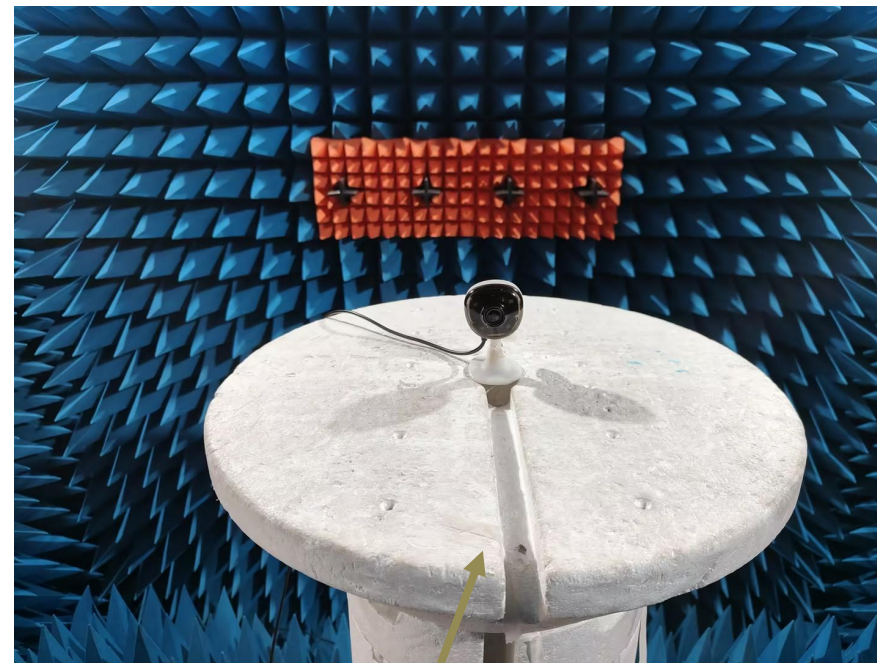
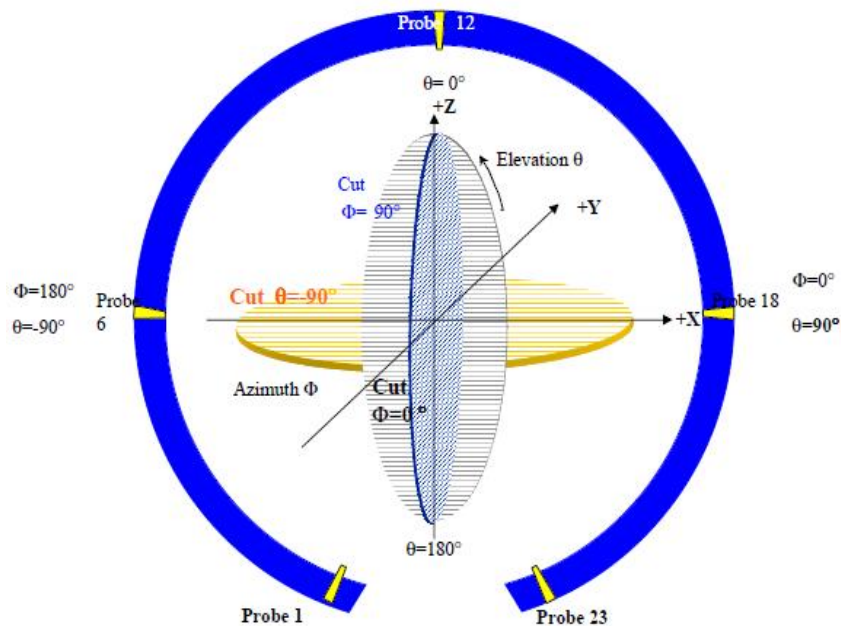
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Puwei Antenna Study

- **Client Name:** Puwei
- **Project Name:** KoalaWise smart security camera
- **Debugging frequency band:** 2400-2500MHz
- **Valuation date:** 2024.05.29

Internal Antenna

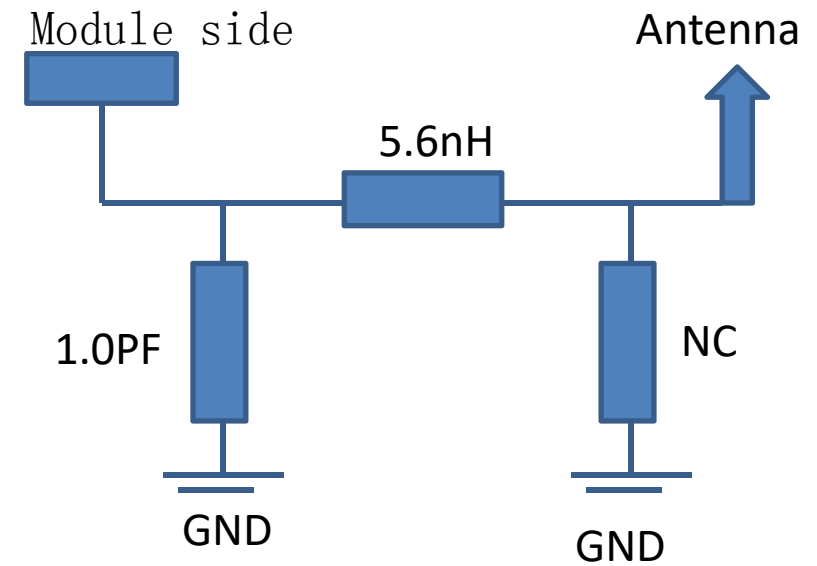
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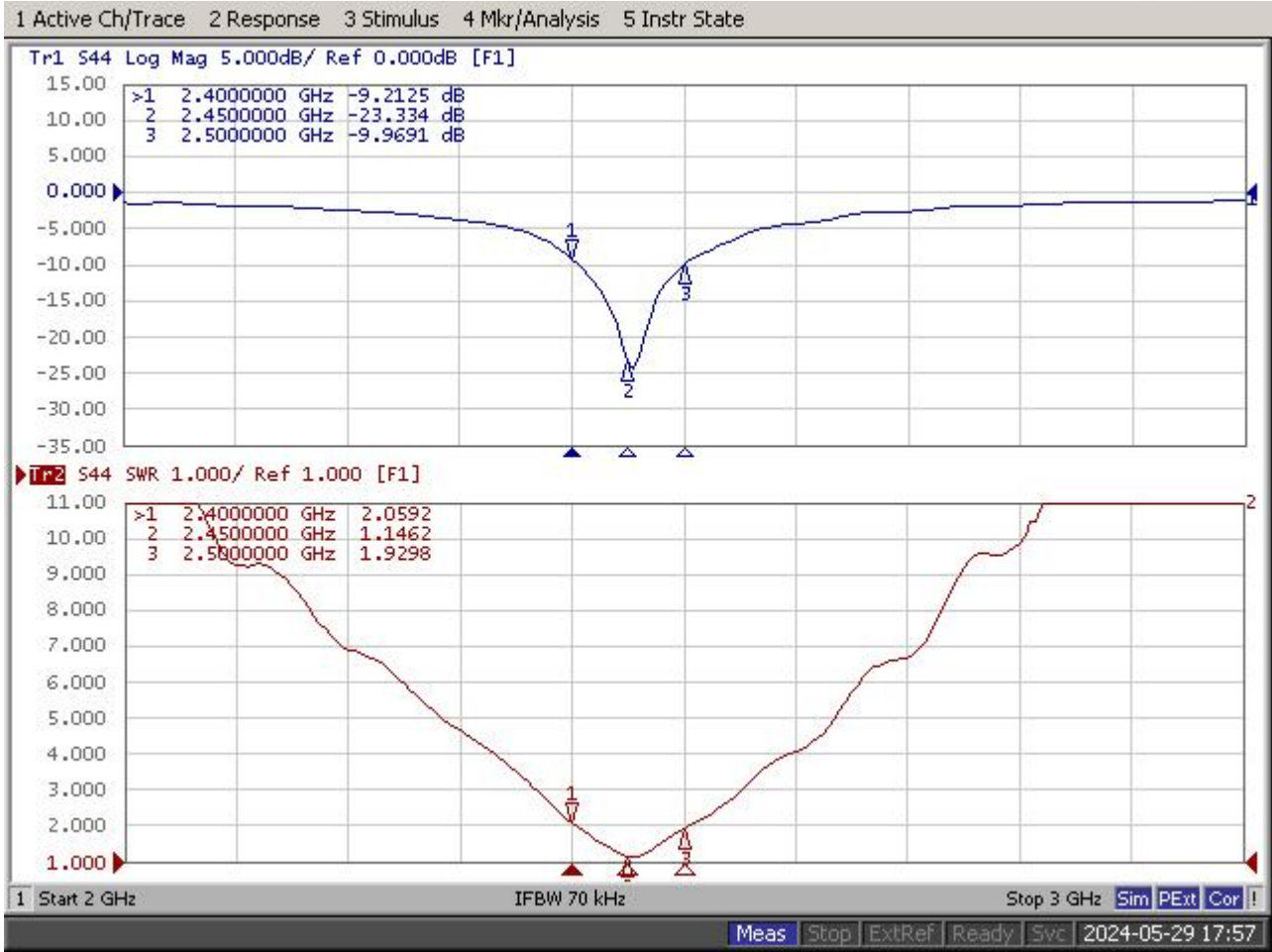
Testing environment

External Antenna

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The antenna position is shown in the figure



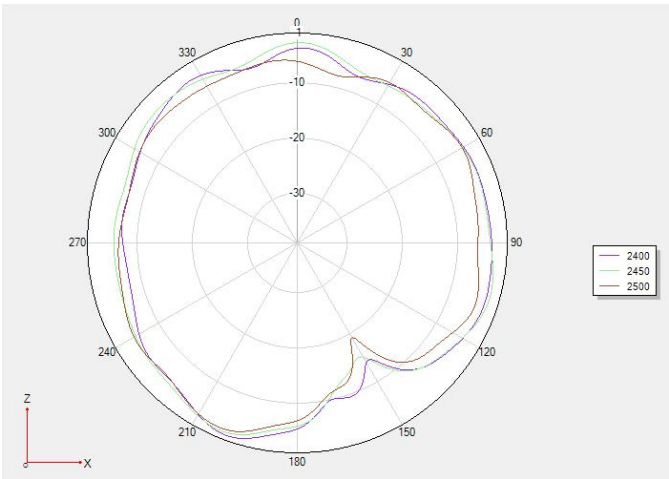
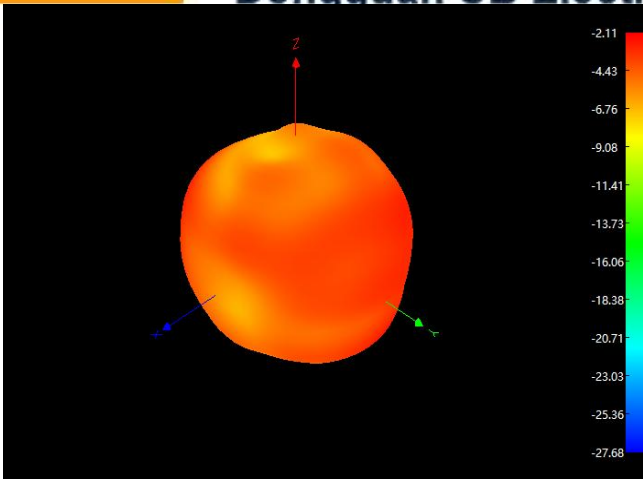
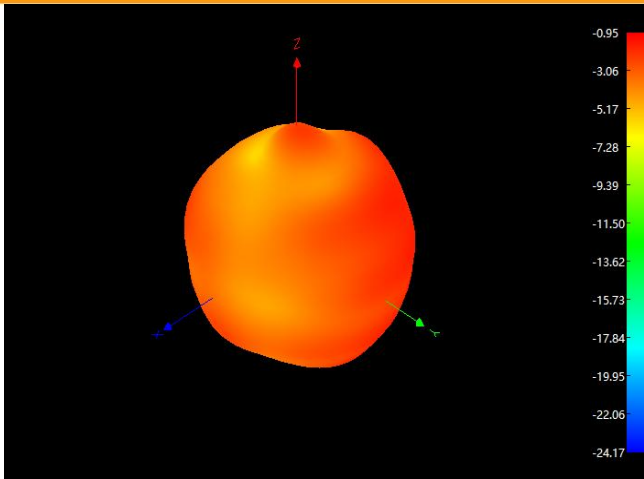
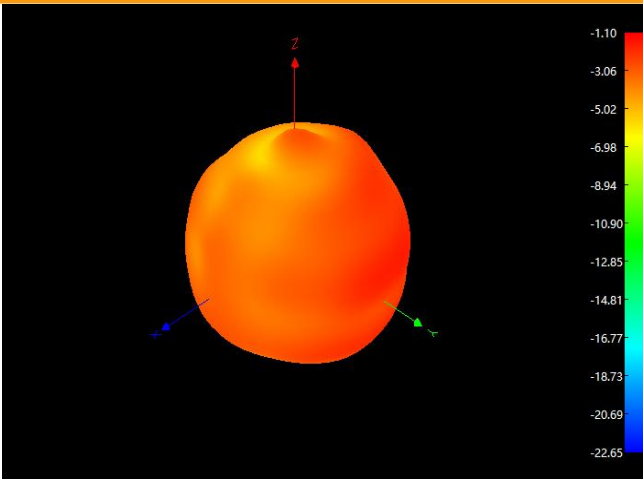
Freespace Environment Performance

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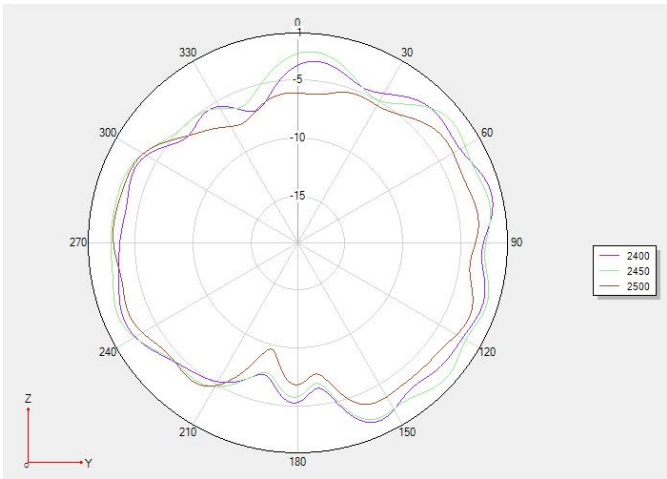
Matched antenna			
Frequency/Mhz	Efficiency / dB	Efficiency / %	MaxGain/dBi
2400	-4.72	33.73	-1.1
2410	-4.59	34.75	-1.81
2420	-4.25	37.58	-0.65
2430	-4.23	37.76	-1.56
2440	-4.17	38.28	-0.6
2450	-4.17	38.28	-0.95
2460	-4.39	36.39	-1.24
2470	-4.22	37.84	-0.96
2480	-4.6	34.67	-1.63
2490	-4.49	35.56	-1.53
2500	-4.85	32.73	-2.11
2400	-4.72	33.73	-1.1
AVG	-4.425	36.143	-1.285

Item	Measurement	Band	Channel	Frequency	Max	Min	Total
1	TRP	WIFI_B (11M)	1	2412	16.84	2.77	15.46
2	TRP	WIFI_B (11M)	6	2437	18.86	6.16	16.55
3	TRP	WIFI_B (11M)	11	2462	18.19	6.06	16
4	TIS(EIRP)	WIFI_B (11M)	1	2412	-66.14	-81.3	-78.83
5	TIS(EIRP)	WIFI_B (11M)	6	2437	-68.1	-80.92	-78.68
6	TIS(EIRP)	WIFI_B (11M)	11	2462	-66.53	-79.04	-76.76

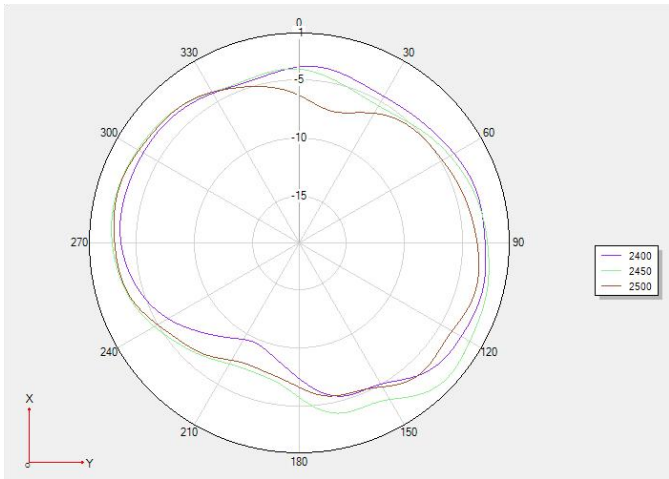
Freespace Environment 2/3D



Phi 0



Phi 90



Theta 90

Conclusion

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- The overall effect of the antenna is good. The matching position requires an additional 5.6NH inductor and 1PF capacitor. Please refer to page 3 for specific assembly instructions.
- The overall efficiency of the antenna is greater than 30%, the overall TRP of the antenna is greater than 15, and the TIS is greater than -75