



好天线 · 优比造

东莞市优比电子有限公司

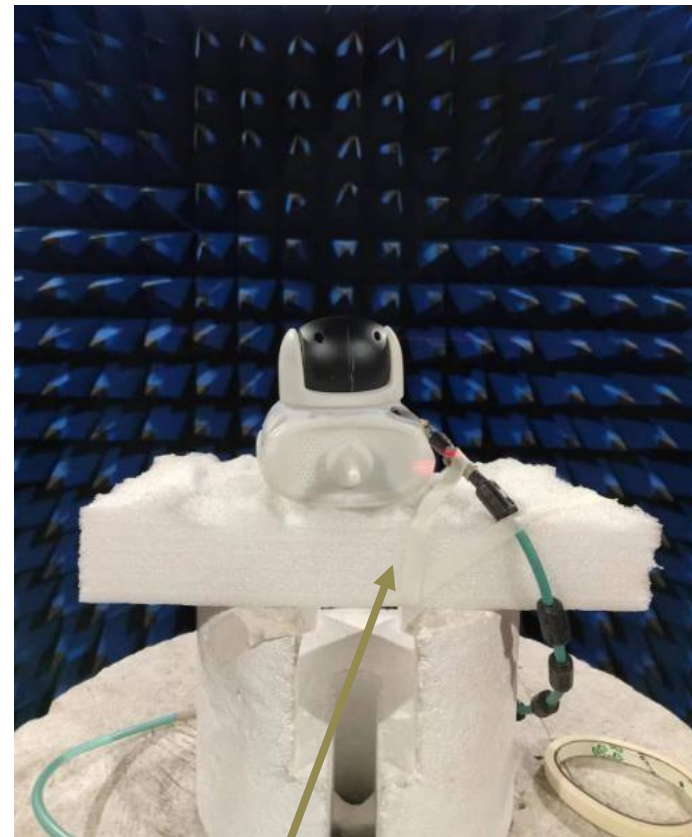
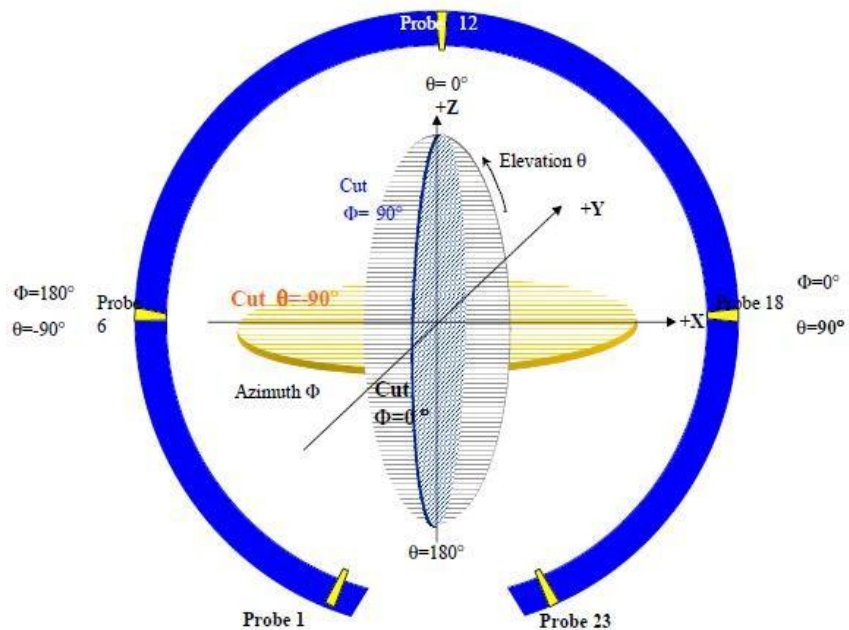
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PUWELL CLOUD Antenna Study

- **Client Name: PUWELL CLOUD**
- **Project Name:Mantis**
- **Debugging frequency band:2400-2500MHz**
- **Valuation date: 2024.06.29**

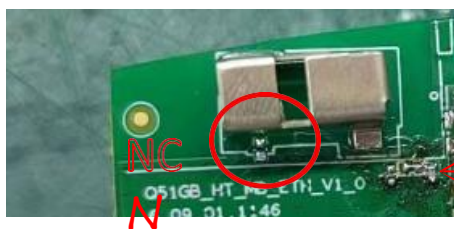
Internal Antenna

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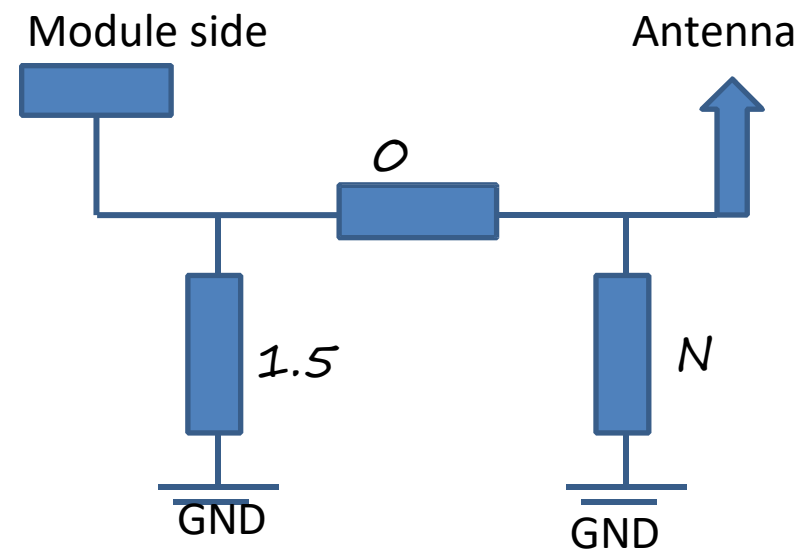


External Antenna

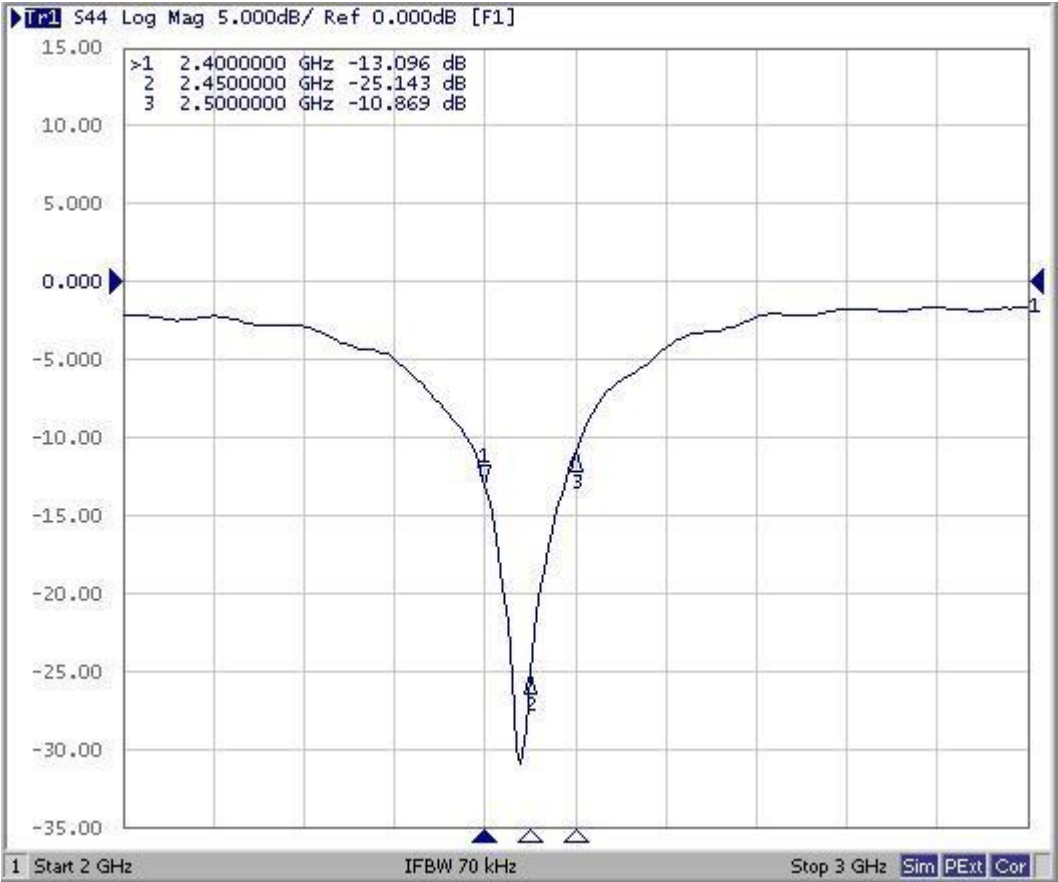
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1.5PF capacitors are connected in parallel close to the module

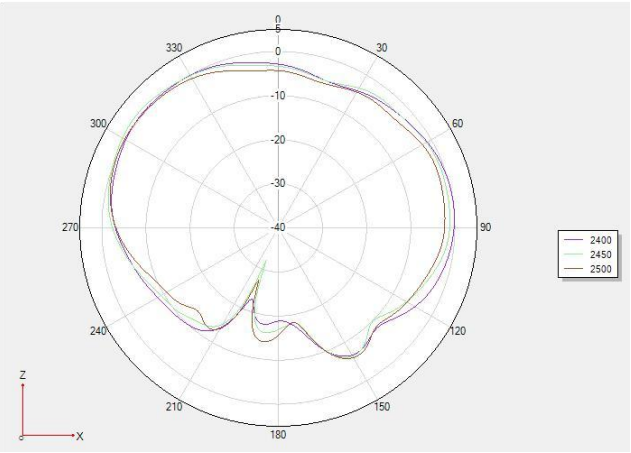
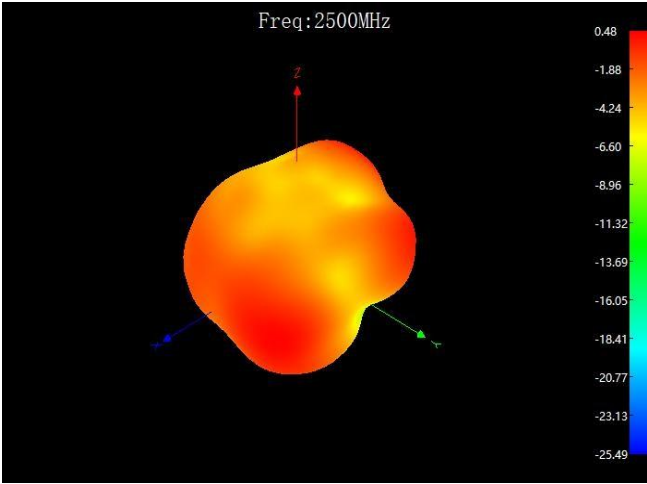
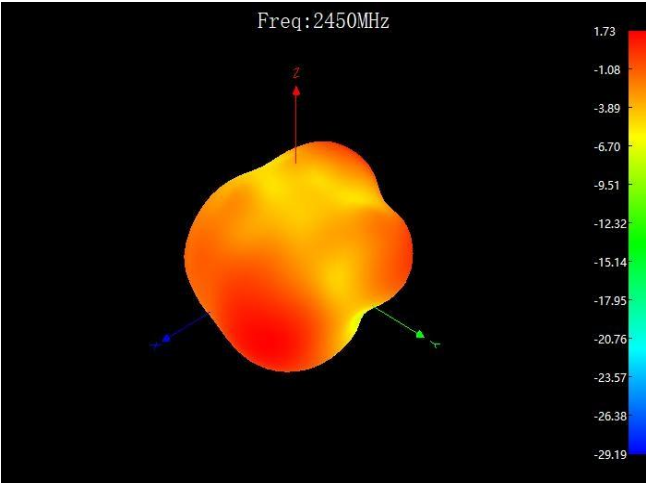
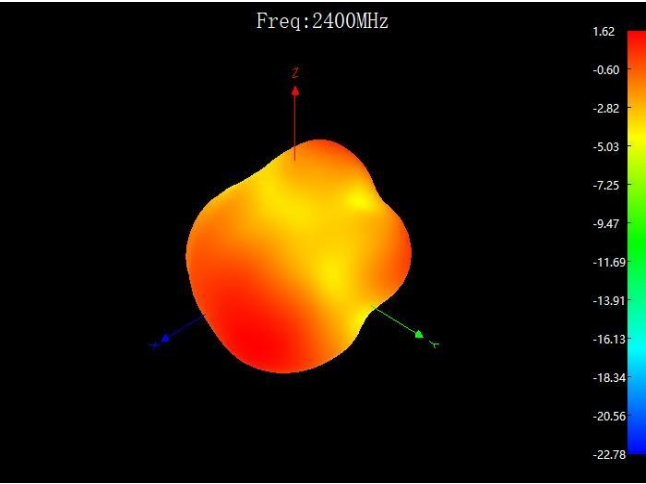


The antenna position is shown in the figure

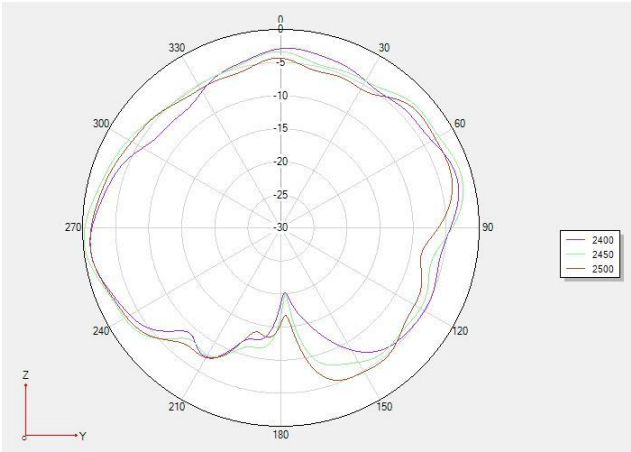


优化后天线			
Frequency/Mhz	Efficiency / dB	Efficiency / %	MaxGain/dBi
2400	-3.48	44.87	1.62
2410	-3.39	45.81	1.79
2420	-3.31	46.67	1.75
2430	-3.3	46.77	1.7
2440	-3.32	46.56	1.76
2450	-3.35	46.24	1.73
2460	-3.43	45.39	1.54
2470	-3.44	45.29	1.5
2480	-3.58	43.85	1.14
2490	-3.68	42.85	0.85
2500	-3.82	41.5	0.48
AVG	-3.46	45.07	1.44

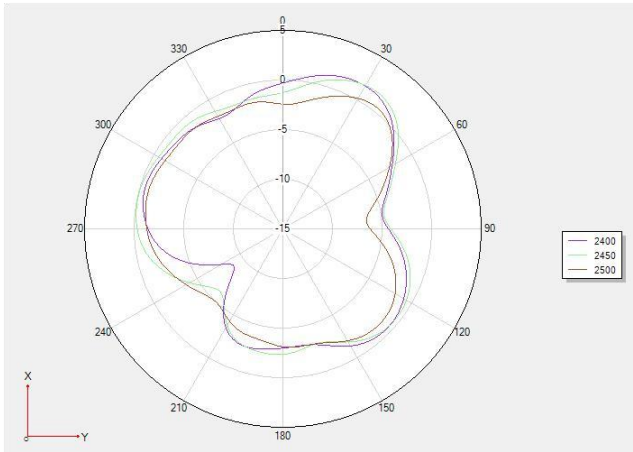
Freespace Environment 2/3D



Phi 0



Phi 90



Theta 90

Measurement	Standard	Band	Channel	Frequency	Max	Min	Total	传导
TRP	WIFI (AP)	WIFI_B (11M)	1	2412	21.03	5.35	16.5	19.0
TRP	WIFI (AP)	WIFI_B (11M)	6	2437	23.86	9.8	19.39	20.7
TRP	WIFI (AP)	WIFI_B (11M)	11	2462	23.31	9.91	19.06	21.3
TIS(EIRP)	WIFI (AP)	WIFI_B (11M)	1	2412	-68.14	-84.53	-80.82	
TIS(EIRP)	WIFI (AP)	WIFI_B (11M)	6	2437	-72.52	-85.69	-81.55	
TIS(EIRP)	WIFI (AP)	WIFI_B (11M)	11	2462	-71.01	-84.89	-80.81	

Conclusion

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- The antenna assembly diagram is shown on the third page of the annex, and the antenna π type matching circuit is close to the module position and 1.5PF capacitance.
- According to the data analysis, the test performance of the whole machine is good, the conduction is uneven, and the first channel is low.