



好天线 · 优比造

东莞市优比电子有限公司

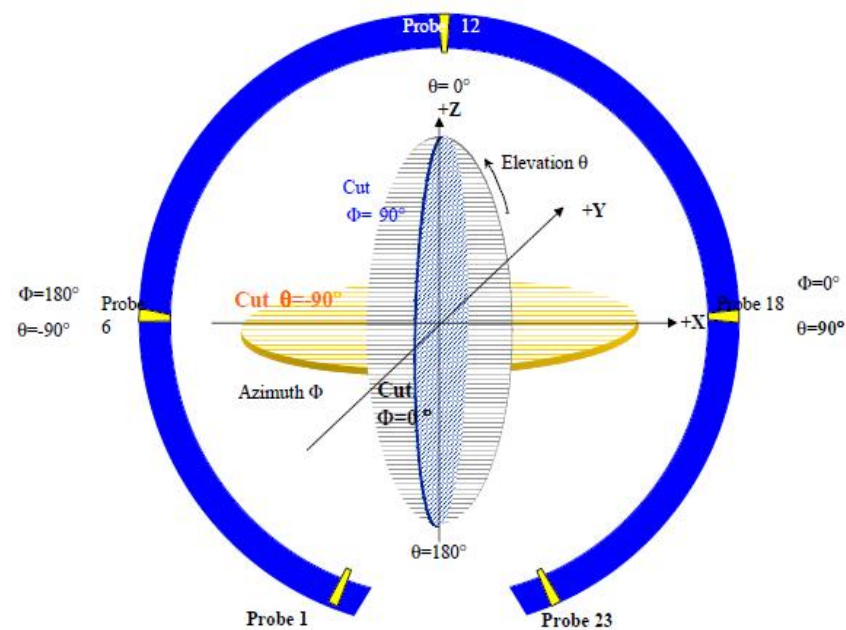
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- **RF Name:** XuanLuo
- **Client Name:** J S D
- **Project Name:** Light Collector
- **Debugging frequency band:** 868MHz&915Mhz
- **Valuation date:** 2025.05.06

Revision History

Version	Date	Author	Content
1.0	2025-04-27	XuanLuo	Preliminary Antenna Test Report
1.1	2025-05-06	XuanLuo	Added 868MHz and 915MHz data, and optimized matching parameters

Antenna Bearing



Testing environment

Antenna Position

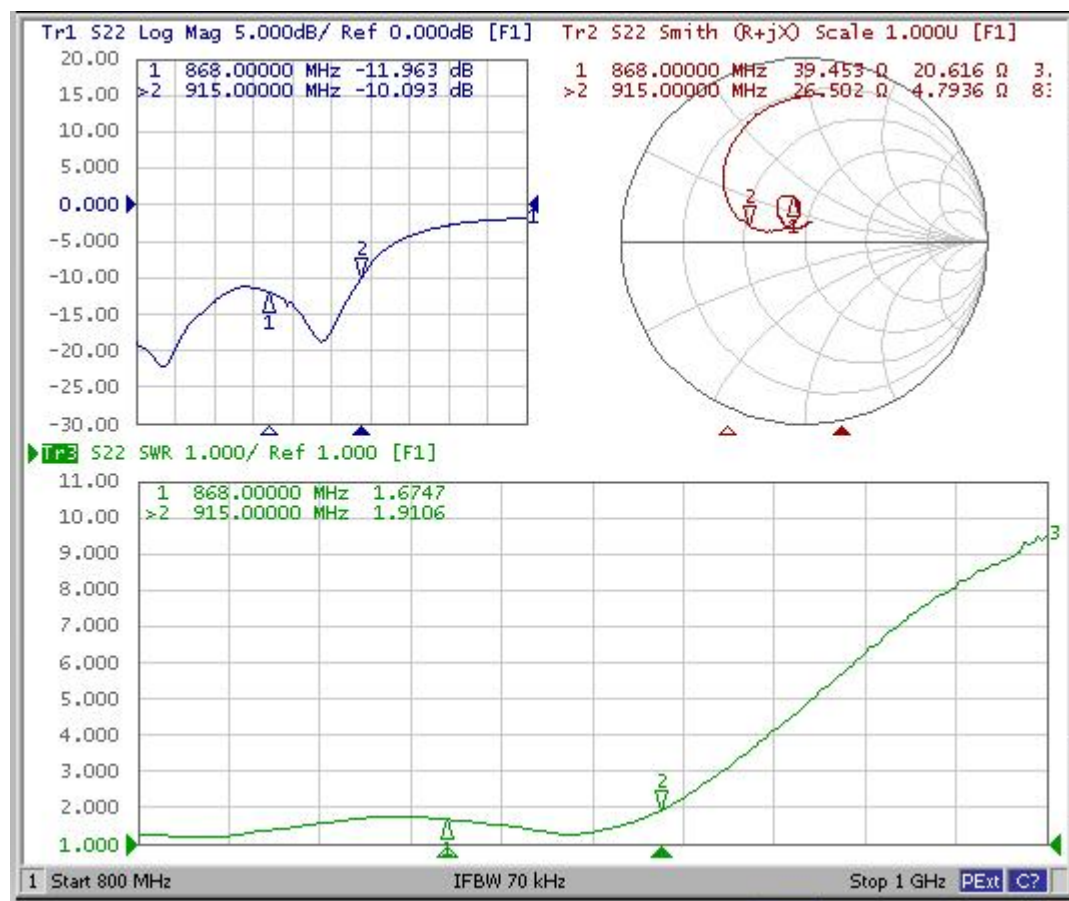
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Annex Antenna Physical Assembly Picture

The antenna position is shown in the figure

Return Loss & VSWR

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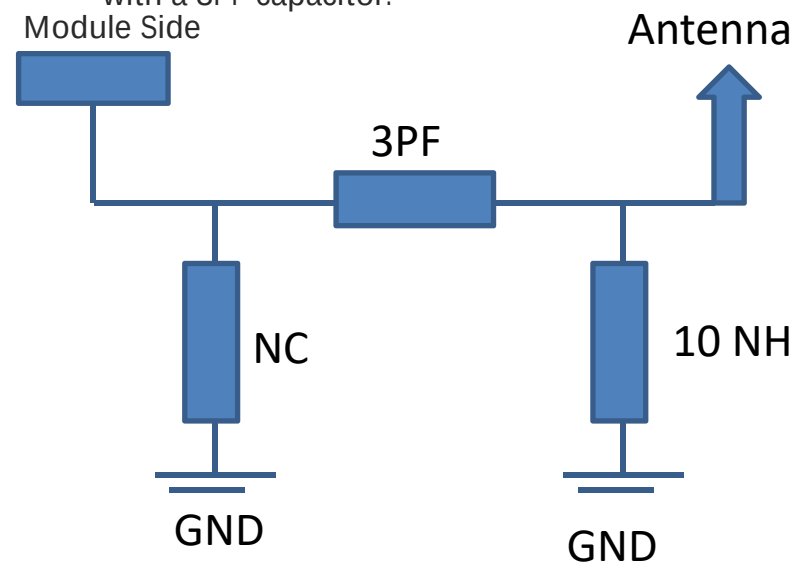


Antenna Position

Annex Antenna Physical Assembly Picture

靠近868MHz&915MHz天线处并10NH电感然后串3PF电容

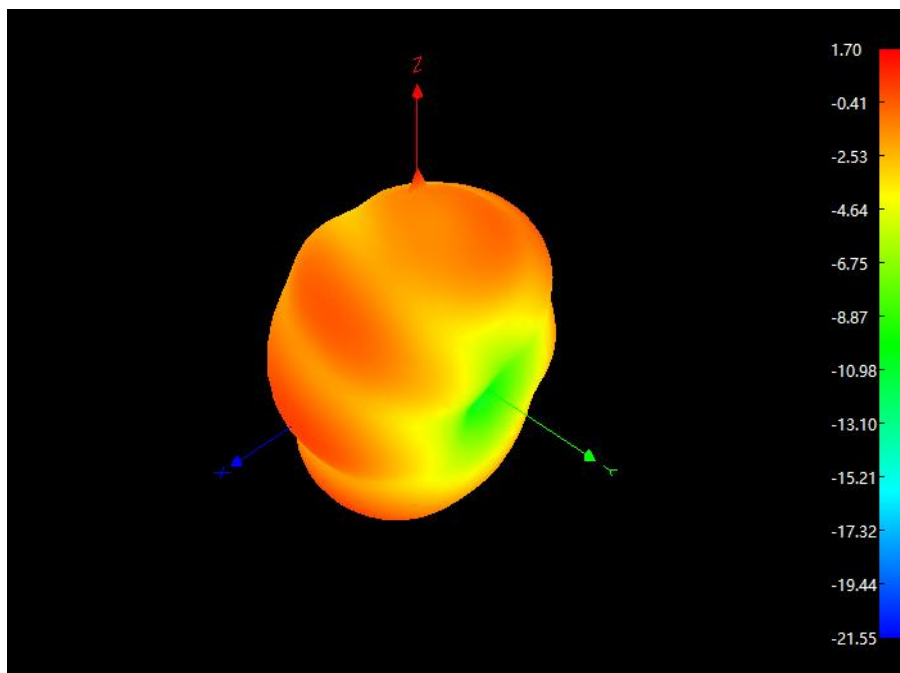
At the position near the 868MHz & 915MHz antenna: connect a 10NH inductor in parallel first, then in series with a 3PF capacitor.



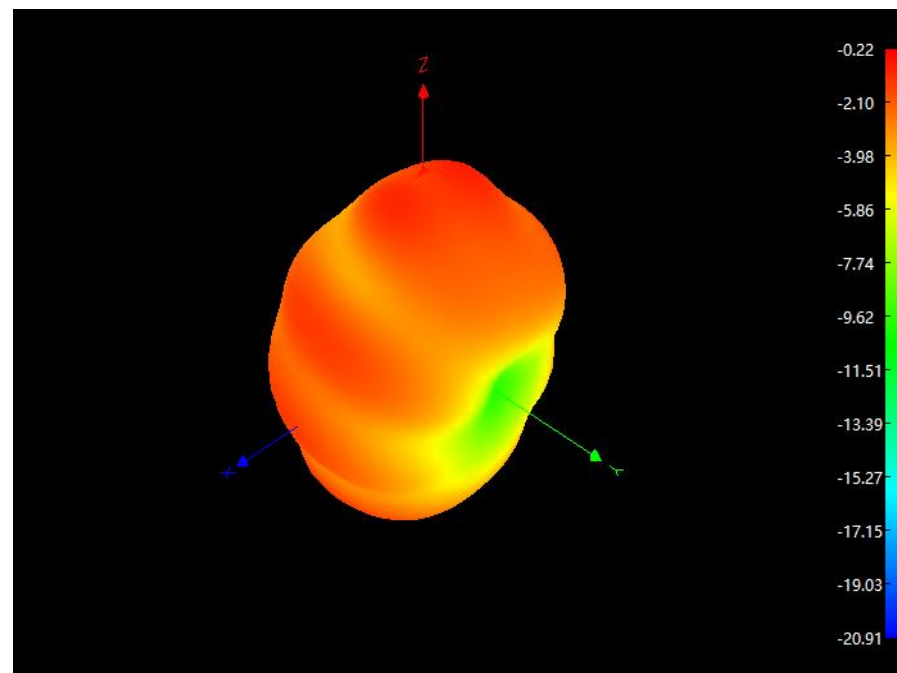
Free space Environment Performance

868MHz天线			
Frequency/Mhz	Efficiency / dB	Efficiency / %	MaxGain/dBi
860	-2.9	51.4	1.8
861	-2.8	53.1	1.9
862	-2.7	53.7	1.9
863	-2.7	53.2	1.8
864	-2.8	52.1	1.6
865	-3.0	50.7	1.3
866	-3.0	50.2	1.4
867	-3.0	50.5	1.5
868	-2.9	51.3	1.7
869	-2.8	52.7	2.0
870	-2.7	54.2	2.3

915MHz天线			
Frequency/Mhz	Efficiency / dB	Efficiency / %	MaxGain/dBi
910	-3.2	47.4	1.1
911	-3.4	45.8	0.9
912	-3.5	44.8	0.7
913	-3.6	43.9	0.5
914	-3.7	42.8	0.2
915	-3.9	41.1	-0.2
916	-3.9	40.4	-0.4
917	-4.1	39.3	-0.6
918	-4.2	38.0	-0.8
919	-4.3	37.1	-0.7
920	-4.4	36.6	-0.6



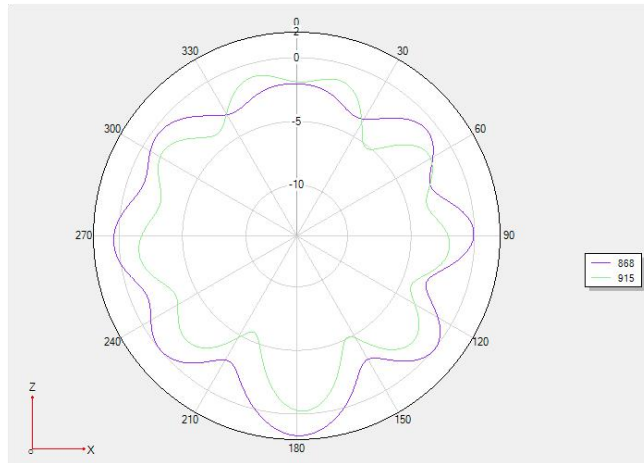
868MHz



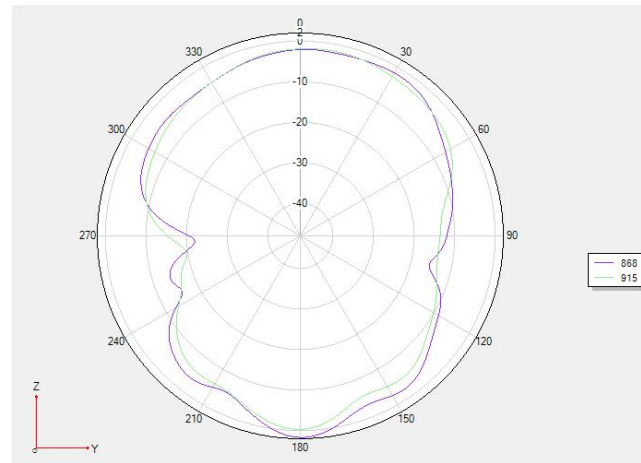
915MHz

Free space Environment 2D/3D

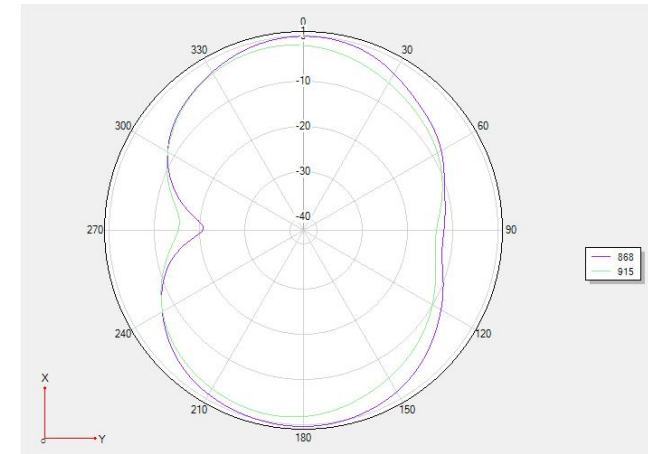
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Phi 0



Phi 90



Theta 90

- 根据无源数据可以看出：优化匹配之后868MHz天线效率是51%，915MHz天线效率是41%，此性能偏优。

According to the passive data: after optimizing the matching, the 868MHz antenna efficiency is 51% and the 915MHz antenna efficiency is 41%, showing superior performance.