

Antenna SPECIFICATIONS

天线规格书

DESCRIPTION 天线类型:PCB Antenna

OUR MODEL NO 天线型号:24051 PCB Antenna

DATE 日期:2026. 04. 15

Vibe Science Pte Ltd

160 Robinson Road, #14-04 Singapore Business Federation Center
Singapore

- 1. FEATURES 特性:

- ● Good batch consistency 批量一致性好

- ● Not easily damaged 不易损坏

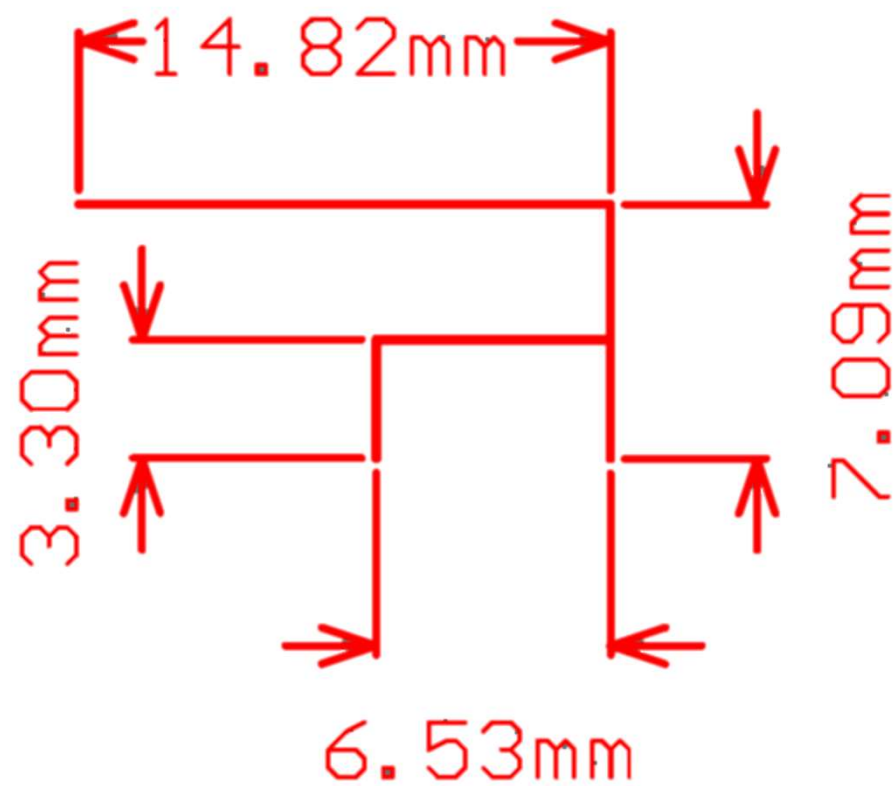
- ● Flexible design 设计灵活

- ● ● Flexible design 效率高

- 2. APPLICATIONS 应用范围:

- ● 2.4G Bluetooth 2.4G 蓝牙

Antenna size 天线尺寸



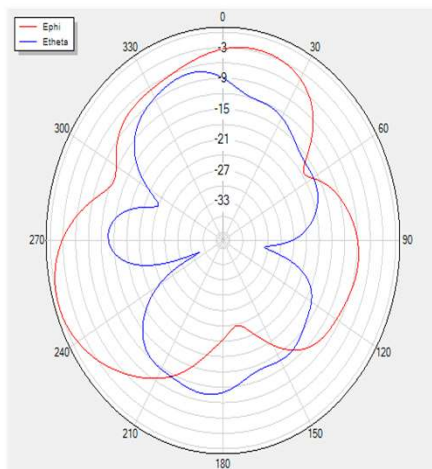
Passive debugging diagram: return loss, standing wave ratio, efficiency 无源调试图：回波损耗，驻波比，效率



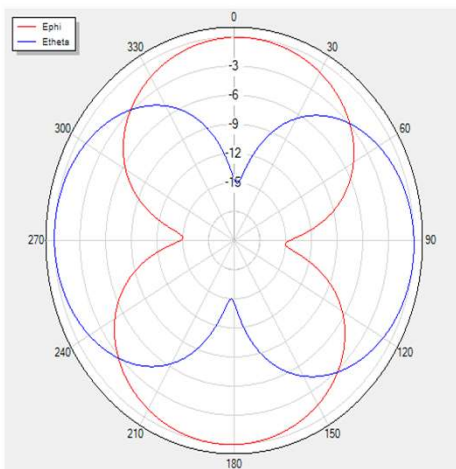
Gain&Efficiency				
frequency 频率(MHz)	gain 增益(dBi)	mingain 最小增益	efficiency 效率(dBi)	efficiency 效率(%)
2400	2.76	-20.73	-3.24	47.40
2410	2.66	-19.77	-3.32	46.53
2420	2.74	-21.8	-3.19	47.94
2430	2.86	-21.2	-3.26	47.18
2440	2.79	-19.64	-3.3	46.79
2450	2.8	-18.82	-3.15	48.41
2460	3.05	-18	-3.22	47.61
2470	3.23	-19	-3.18	48.14
2480	3.02	-19.2	-3.19	47.97
2490	3.07	-20.3	-3.28	47.00
2500	2.84	-21.17	-3.55	44.19
Horizontal				

radiation pattern方向图

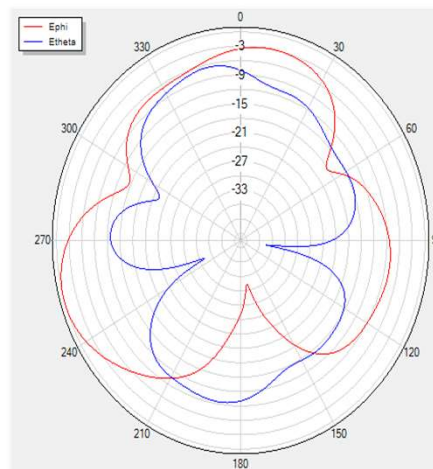
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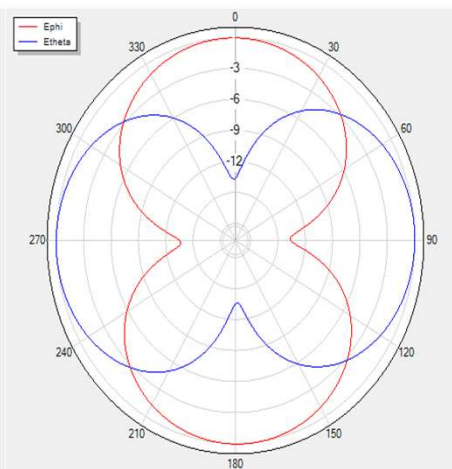
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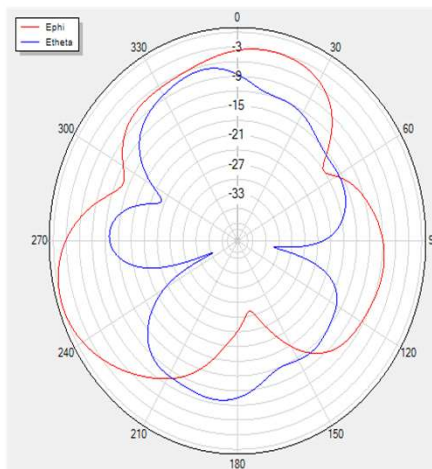
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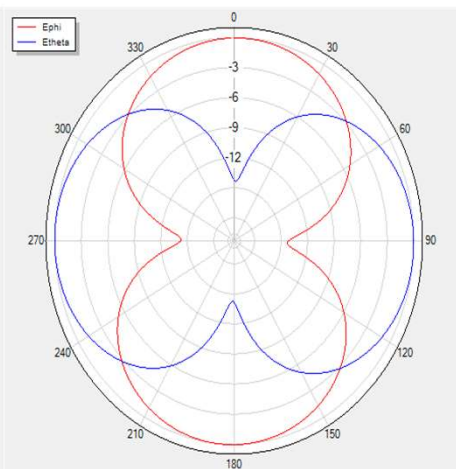
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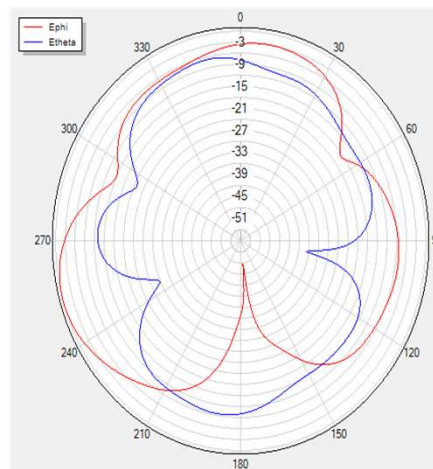
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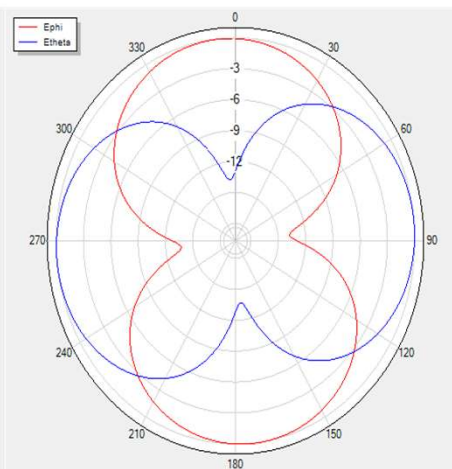
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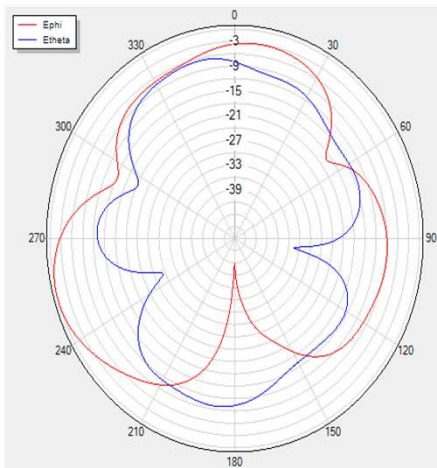
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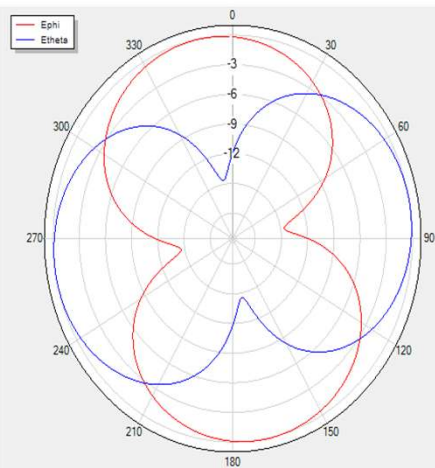
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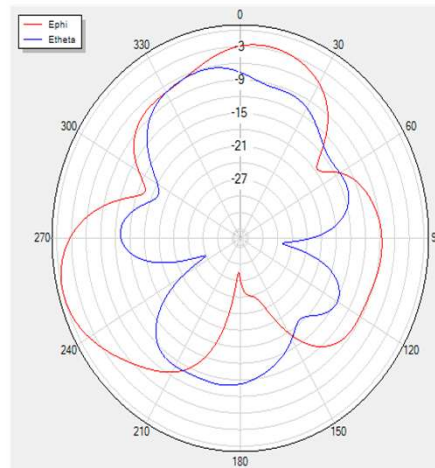
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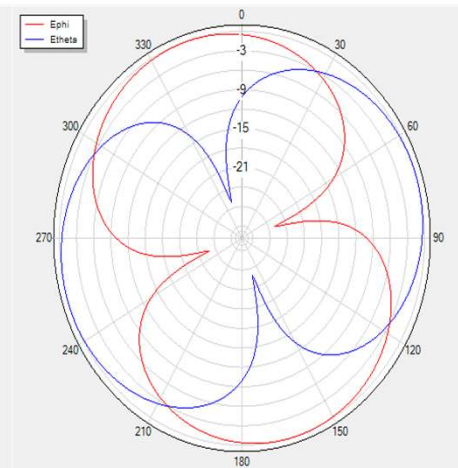
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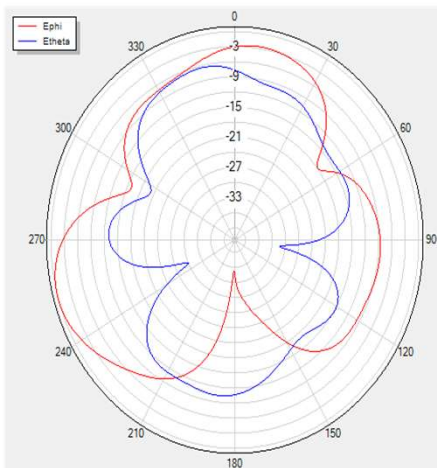
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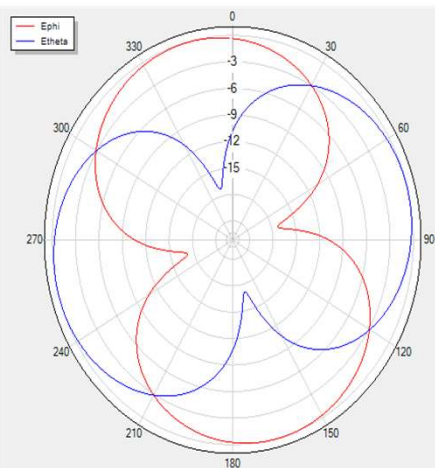
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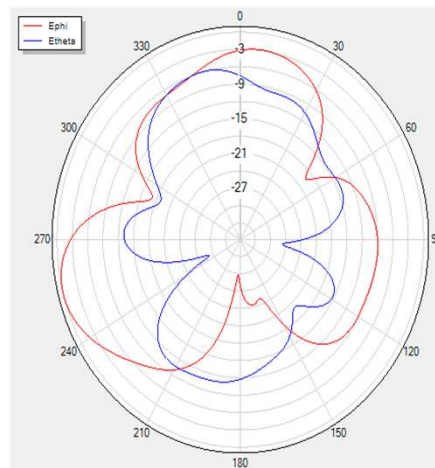
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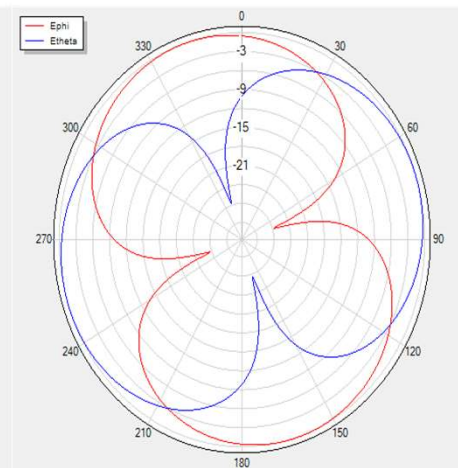
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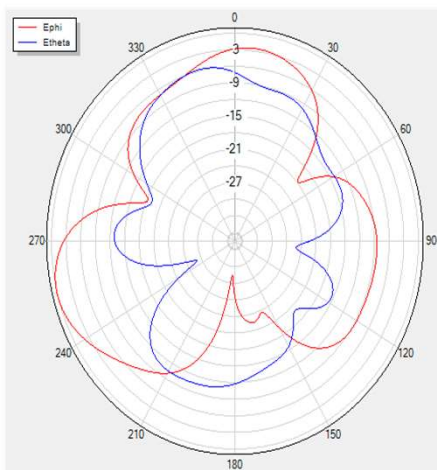
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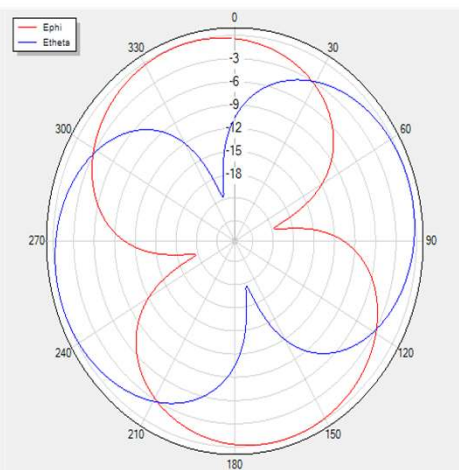
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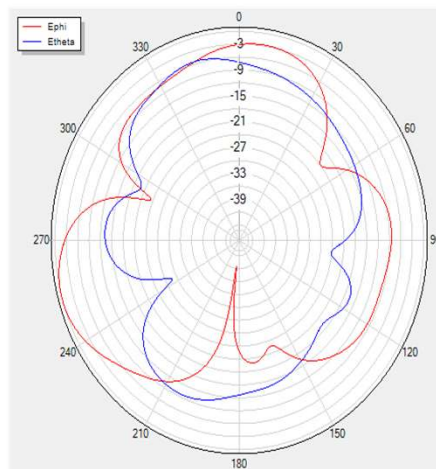
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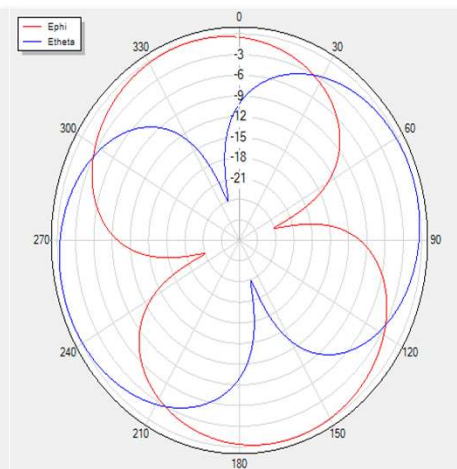
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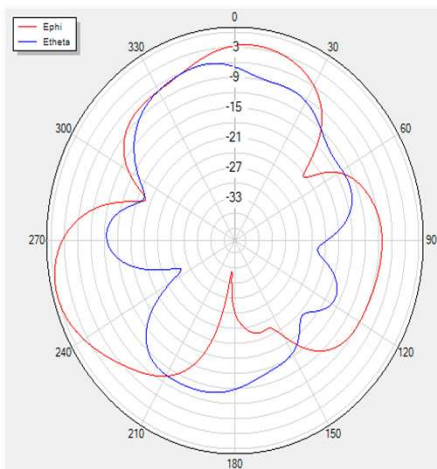
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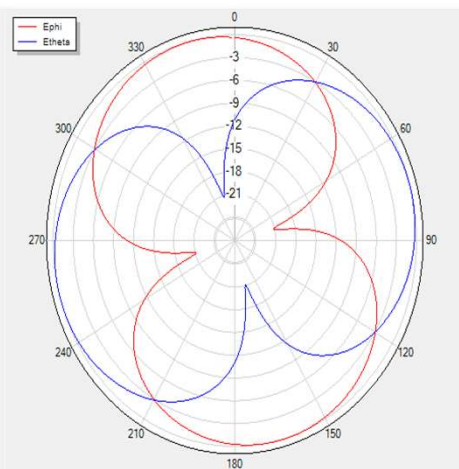
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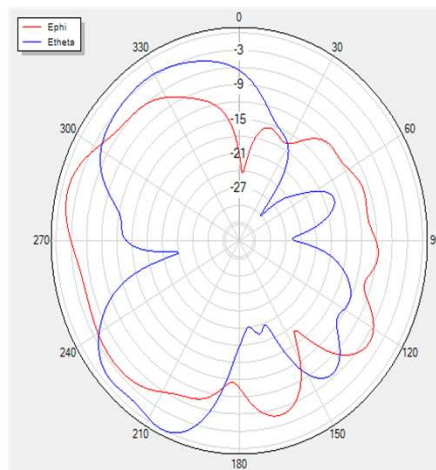
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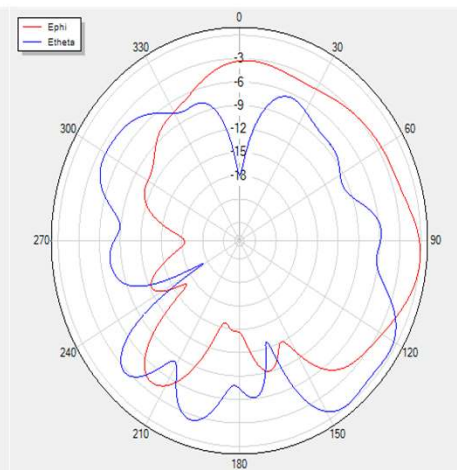
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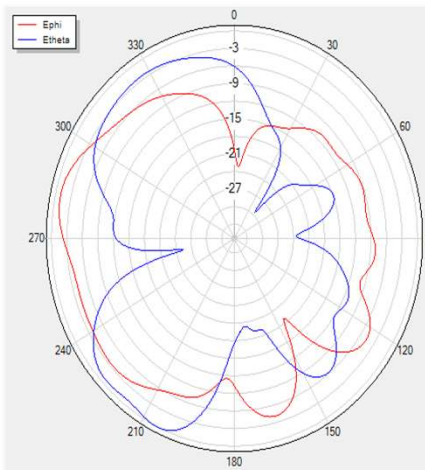
V Phi=90 freq=2400MHz



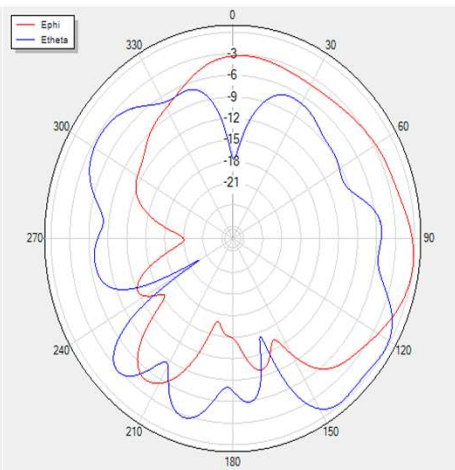
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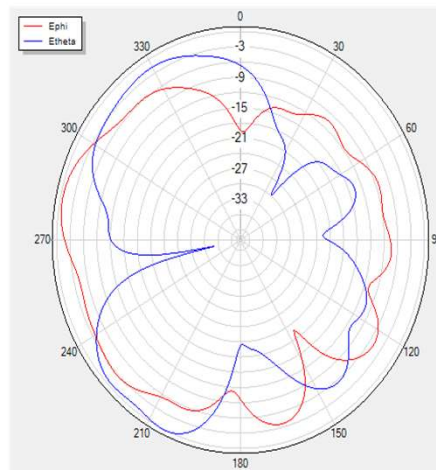
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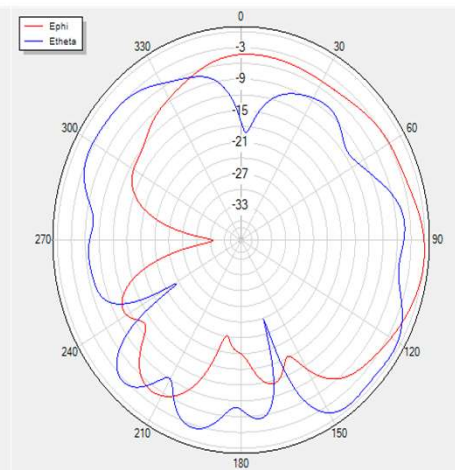
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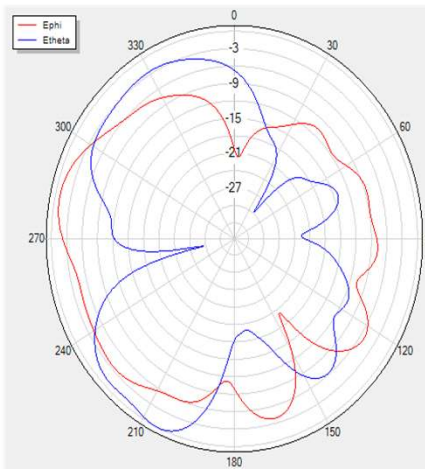
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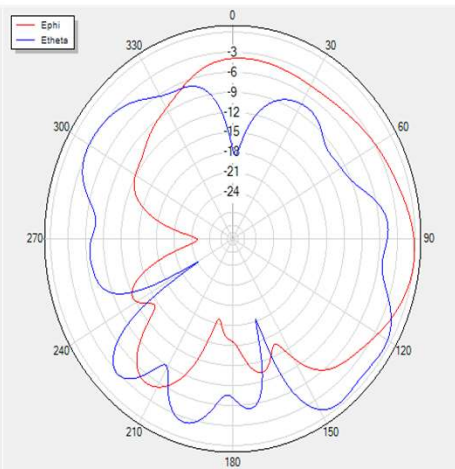
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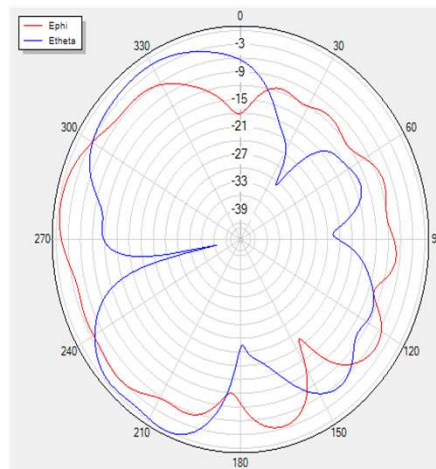
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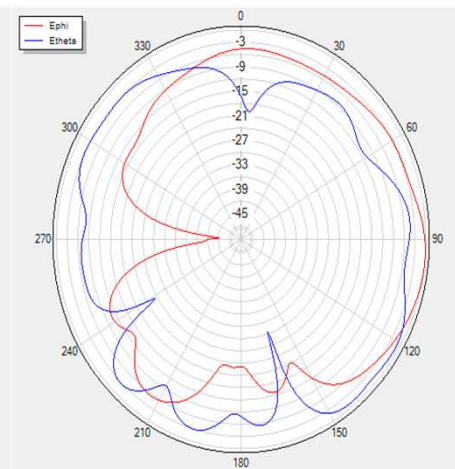
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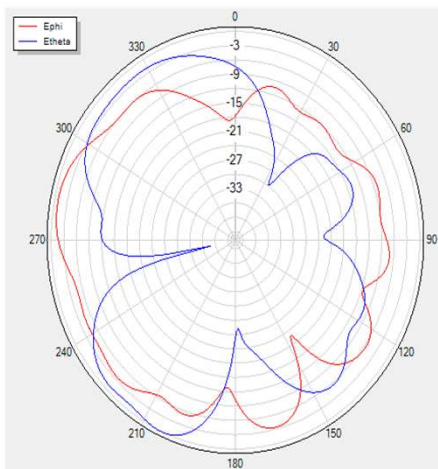
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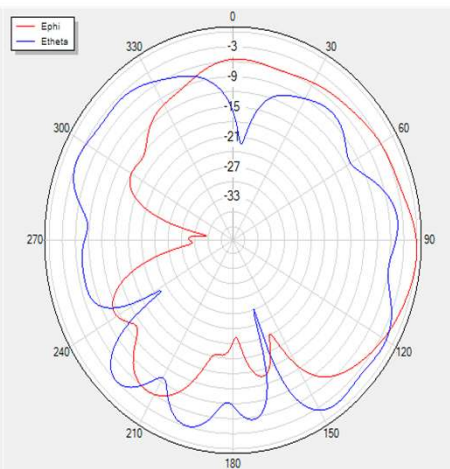
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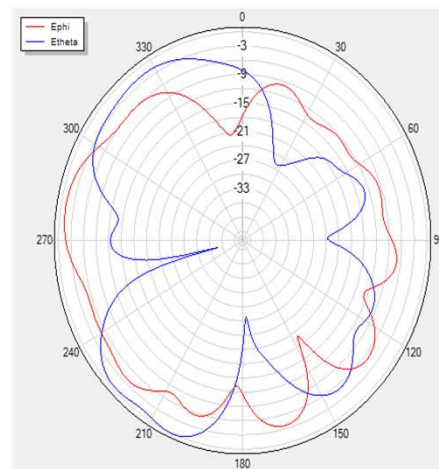
V Phi=90 freq=2450MHz



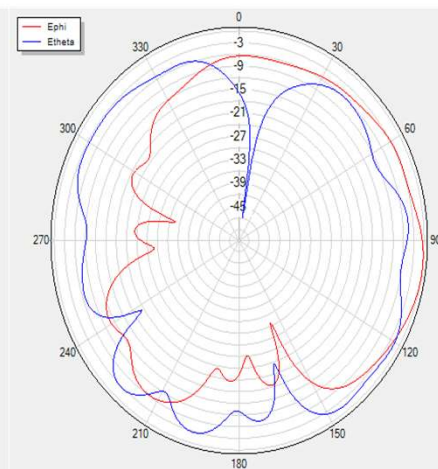
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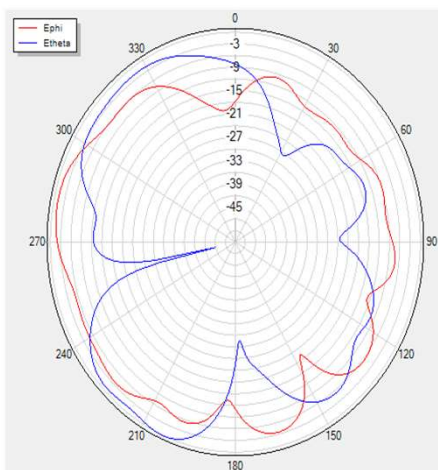
V Phi=90 freq=2470MHz



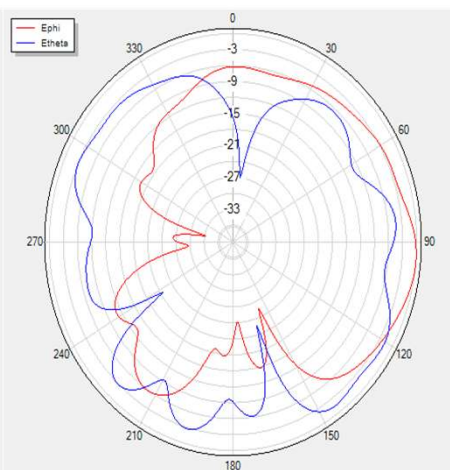
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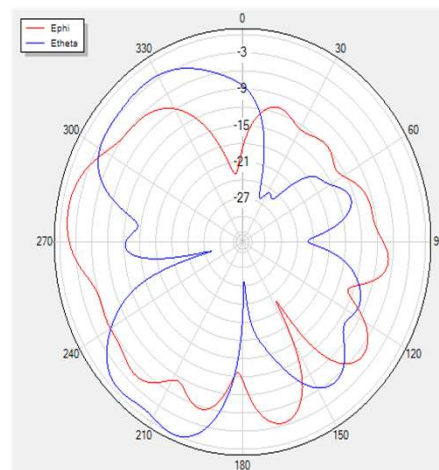
V Phi=90 freq=2460MHz



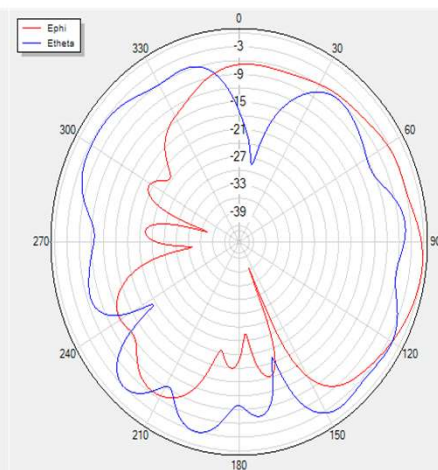
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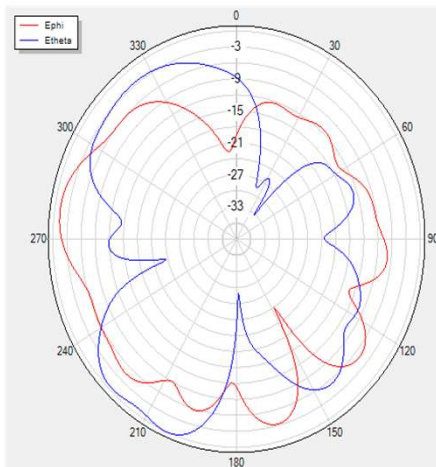
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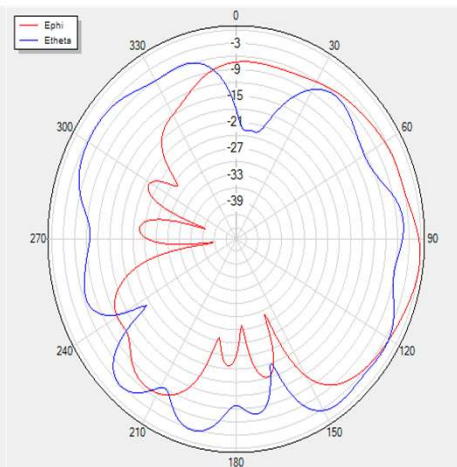
V Phi=0 freq=2480MHz



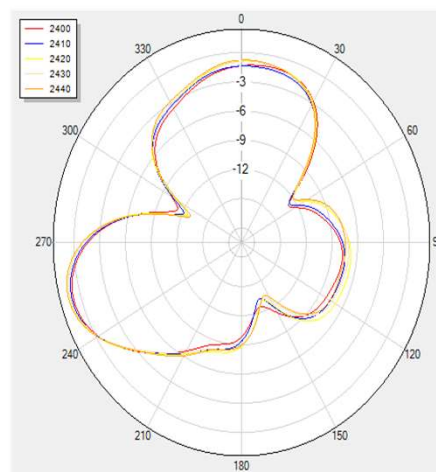
V $\Phi=90$ freq=2490MHz



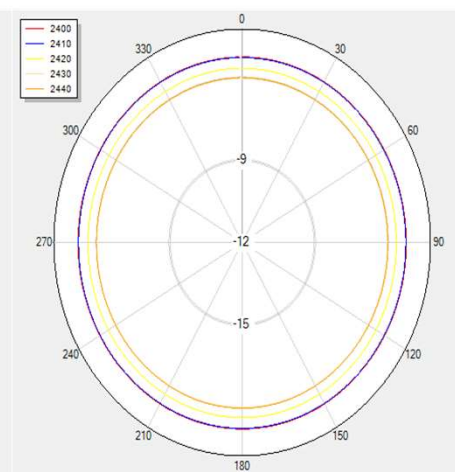
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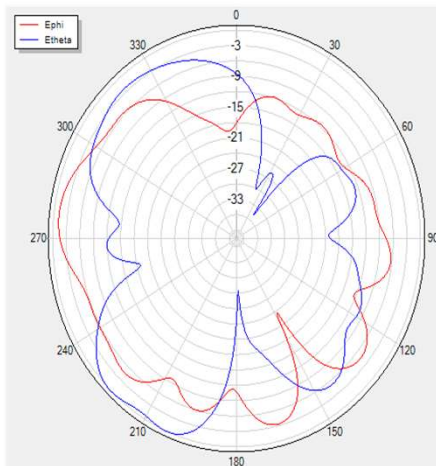
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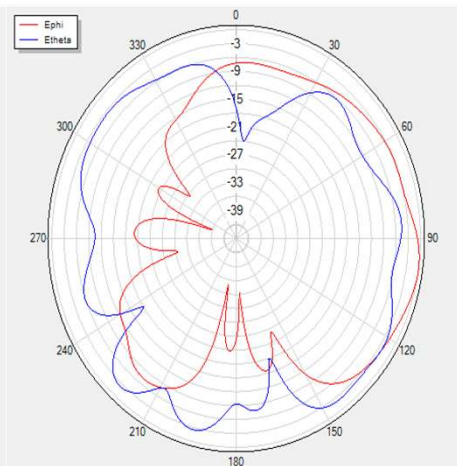
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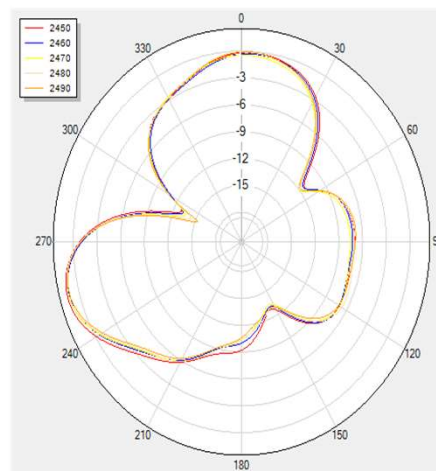
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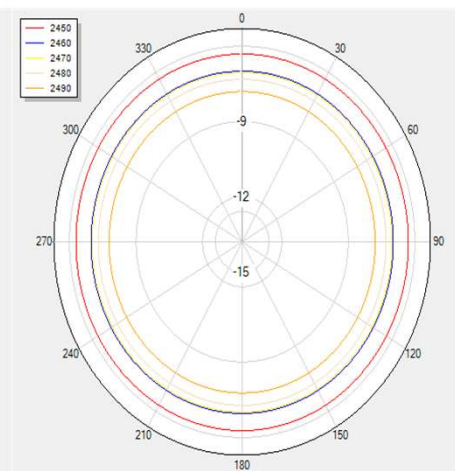
V $\Phi=0$ freq=2500MHz



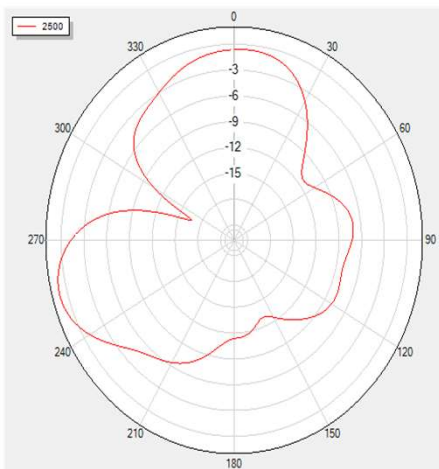
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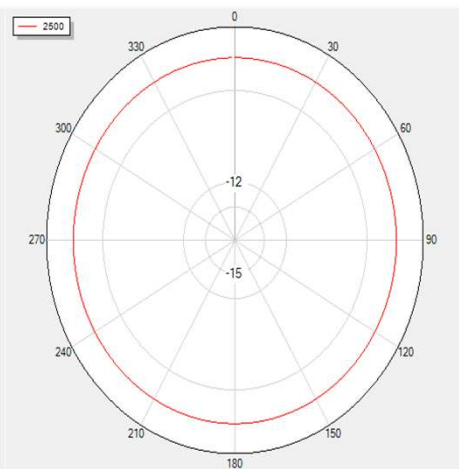
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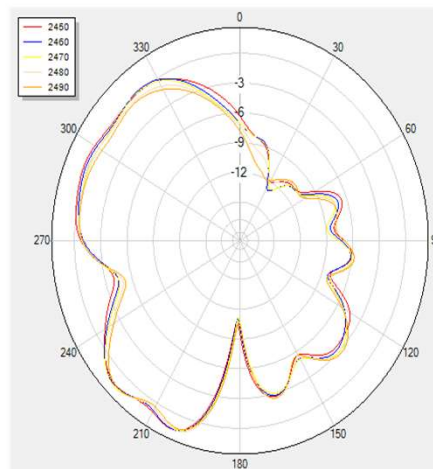
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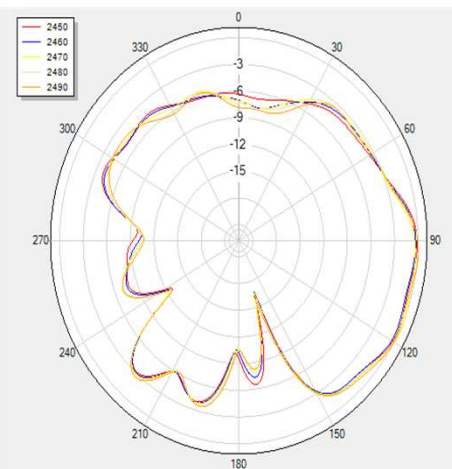
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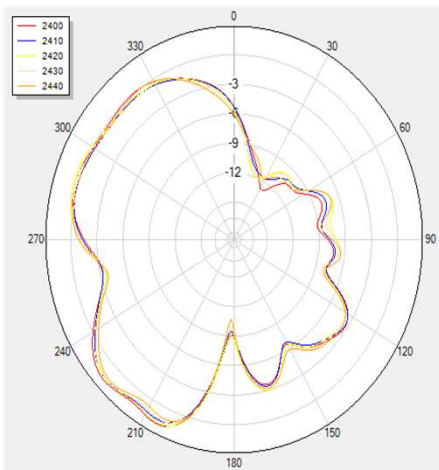
V Phi=90



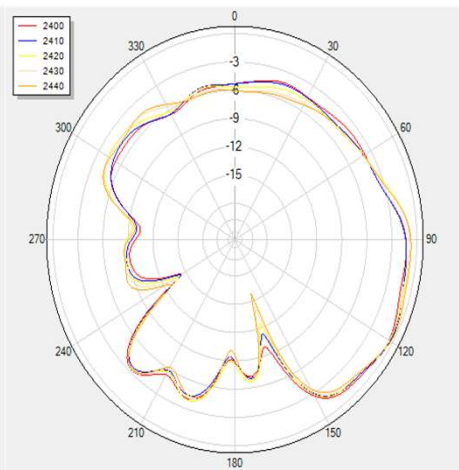
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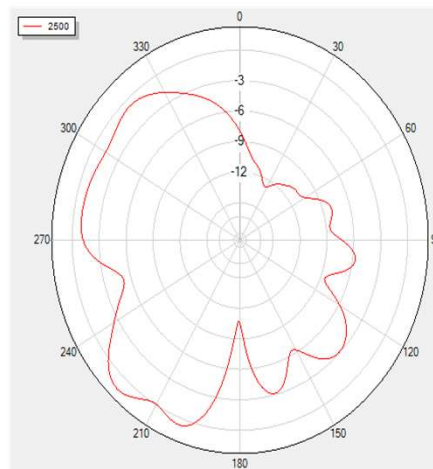
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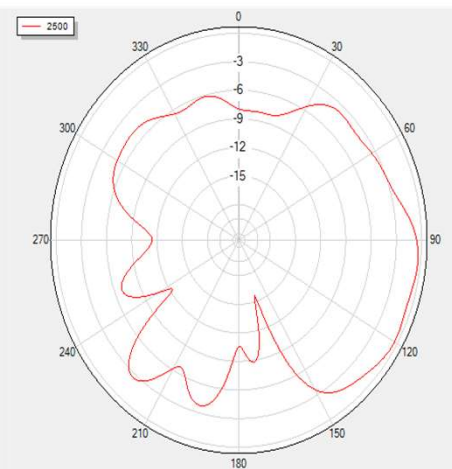
V Phi=0



V Phi=90



V Phi=0



Conclusion

1. The maximum performance efficiency of the antenna: 48.41%
该天线最高性能效率: 48.41%
2. The maximum antenna gain of the antenna (dBi) : 3.23 dBi
该天线性能最高增益: 3.23 dBi