# Bluetooth Antenna Debugging Report

2.4Ghz Team

V1.0

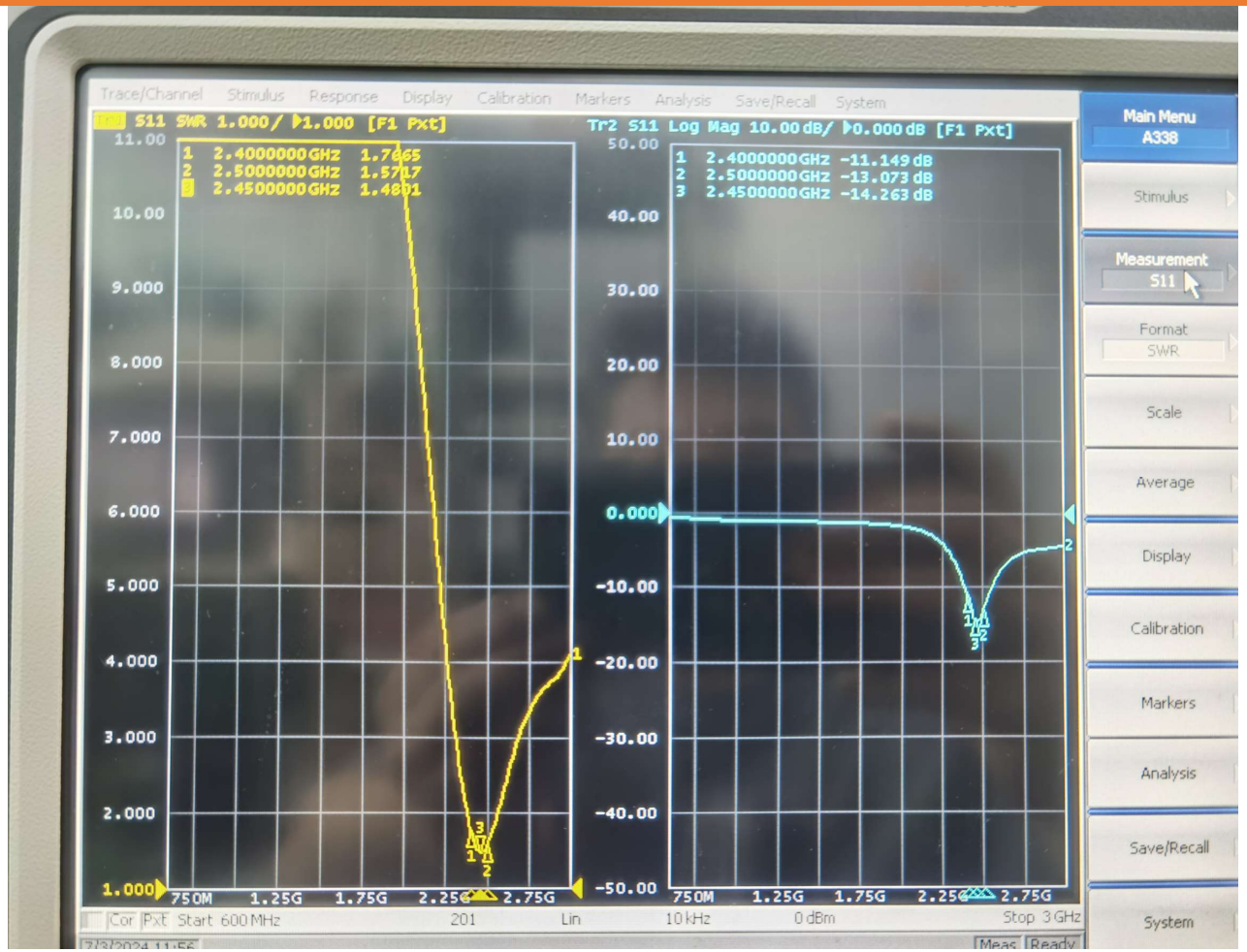
2024.7.03

# Contents

# Version Description

| Version | date | describe |
| --- | --- | --- |
| V1.0 | 2024.07.03 | Debugging report |

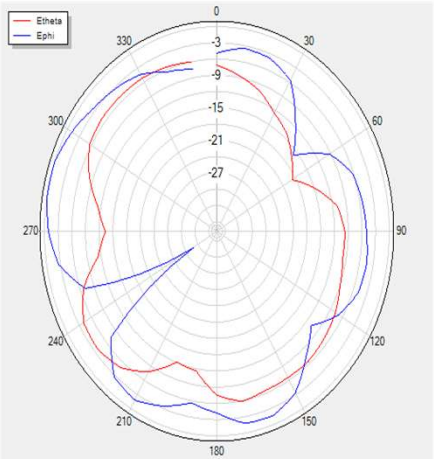
# • Passive debugging impedance




| Gain&Efficiency | | | | |
|---|---|---|---|---|
| frequency 频率(MHz) | gain 增益(dBi) | mingain 最小增益 | efficiency 效率(dBi) | efficiency 效率(%) |
| 2400 | 1.86 | -23.02 | -3.67 | 42.95 |
| 2410 | 1.64 | -26.55 | -3.62 | 43.47 |
| 2420 | 2.51 | -27.17 | -2.89 | 51.39 |
| 2430 | 2.09 | -25.34 | -3.24 | 47.47 |
| 2440 | 2.07 | -20.9 | -3.22 | 47.65 |
| 2450 | 2.12 | -18.24 | -3.25 | 47.33 |
| 2460 | 2.57 | -16.65 | -2.95 | 50.67 |
| 2470 | 2.4 | -18.87 | -3.15 | 48.44 |
| 2480 | 3 | -25.5 | -2.89 | 51.45 |
| 2490 | 3.15 | -26.95 | -2.68 | 53.91 |
| 2500 | 2.97 | -20.71 | -2.64 | 54.50 |
| Horizontal | | | | |

# direction diagram

H Theta=90 freq=2400MHz

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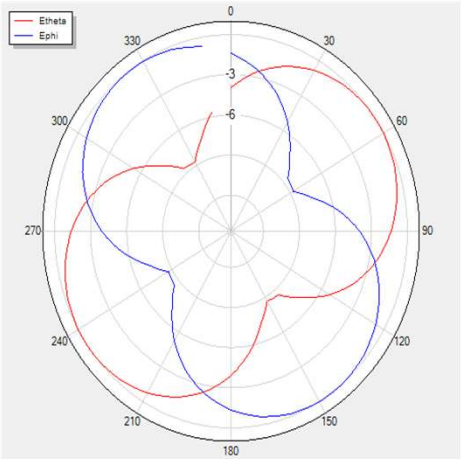


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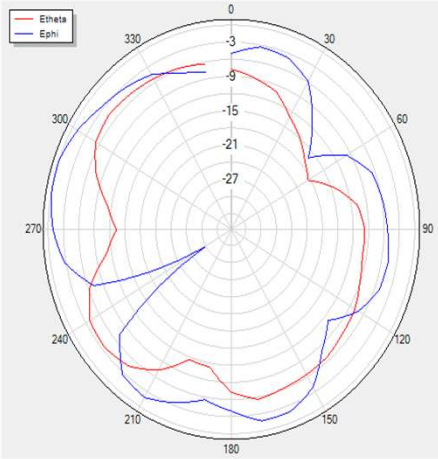


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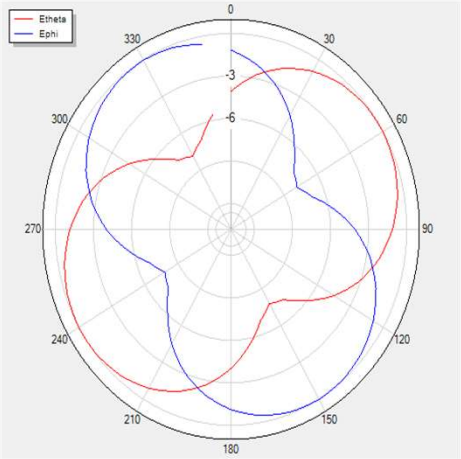


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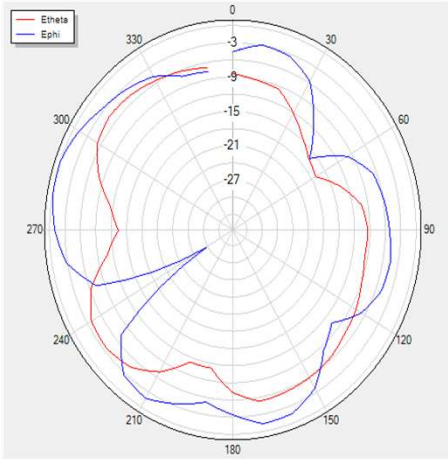


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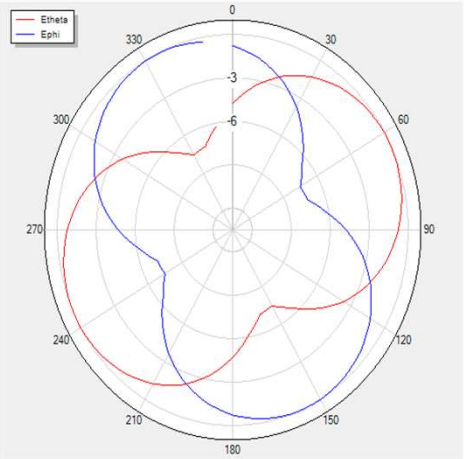


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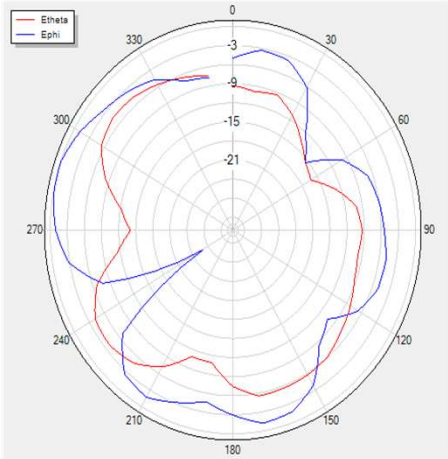


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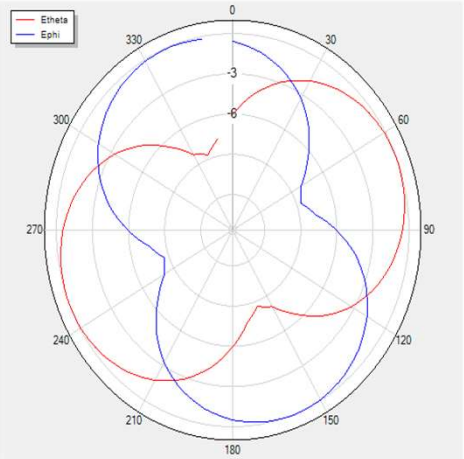

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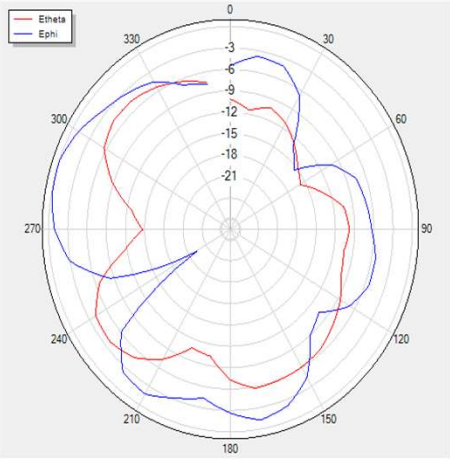


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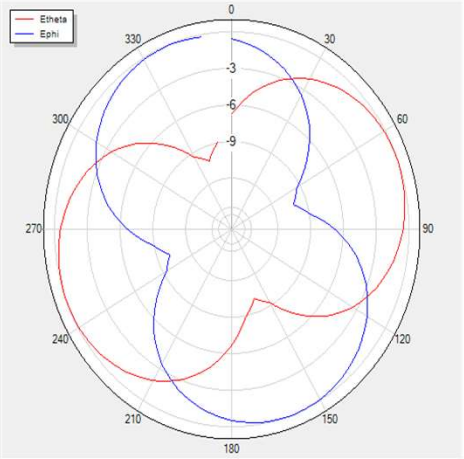


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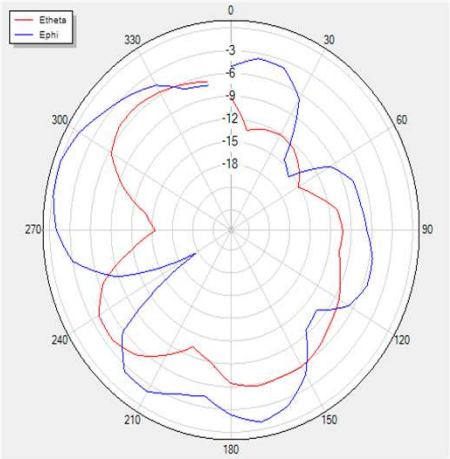


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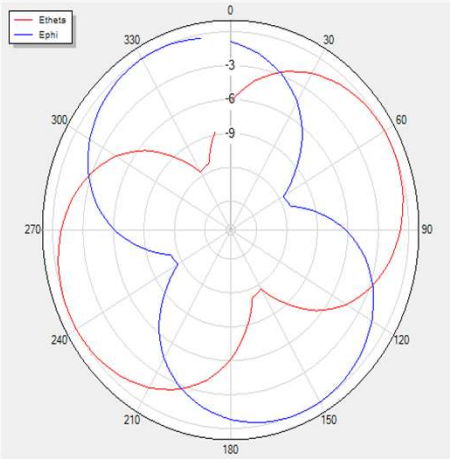


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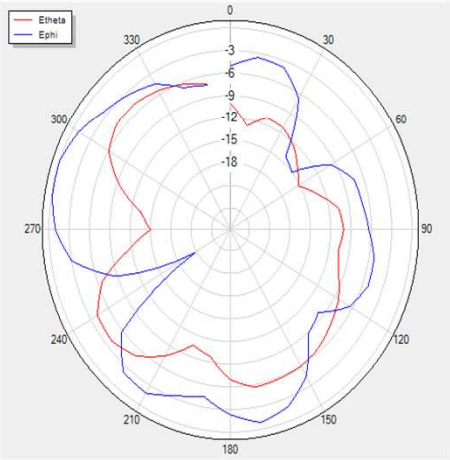


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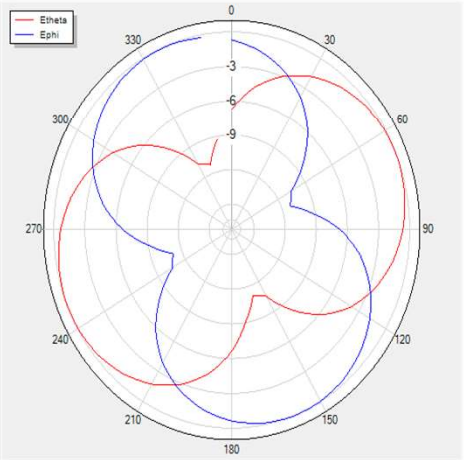


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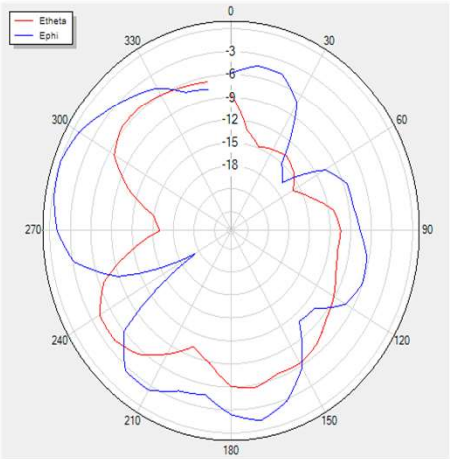


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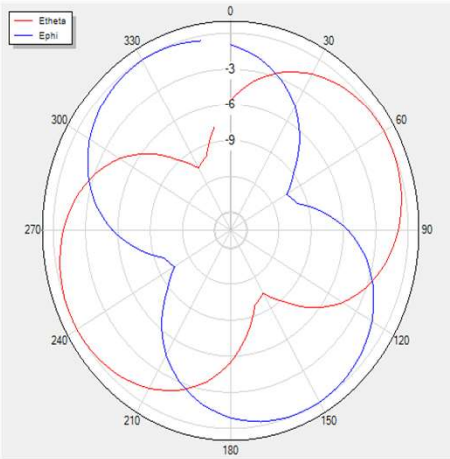

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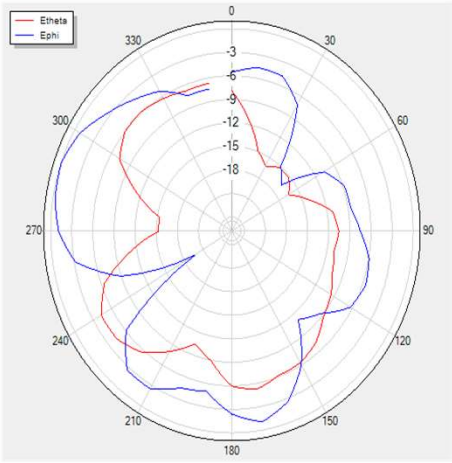


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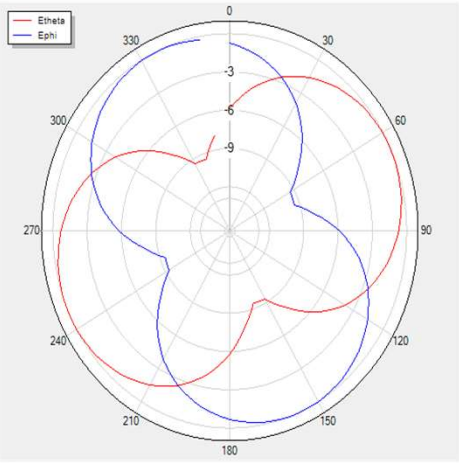


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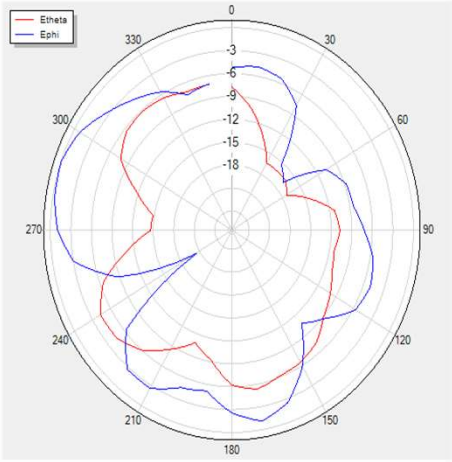


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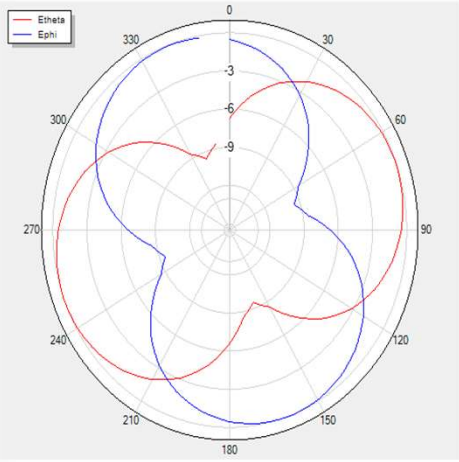


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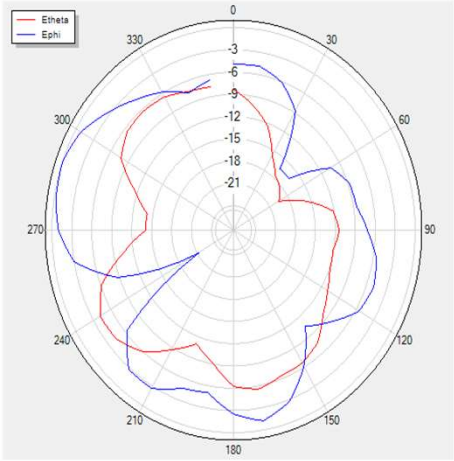


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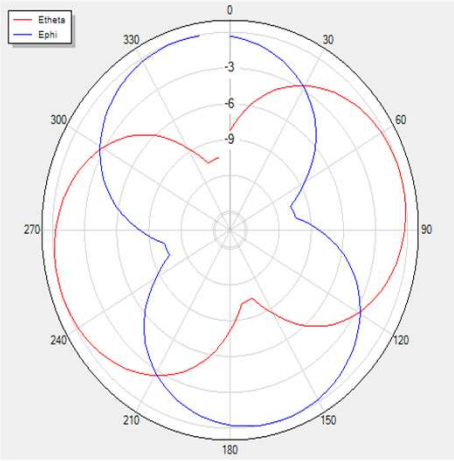


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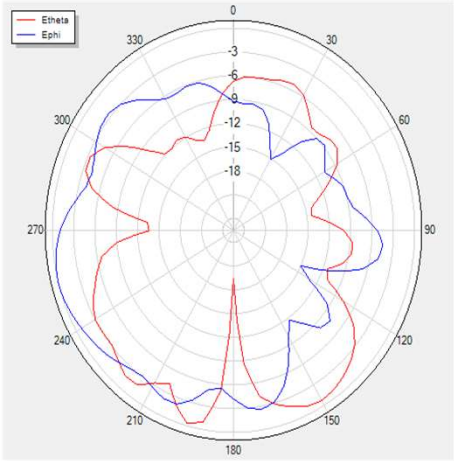
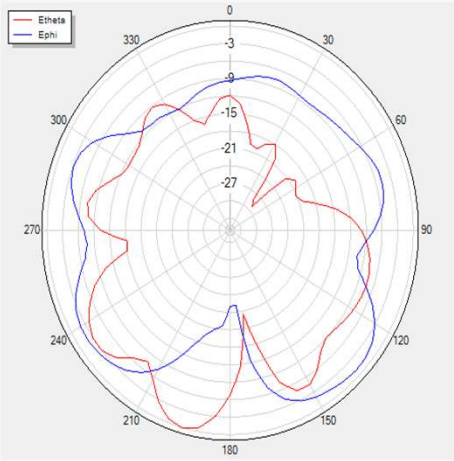



V Phi=0 freq=2400MHz



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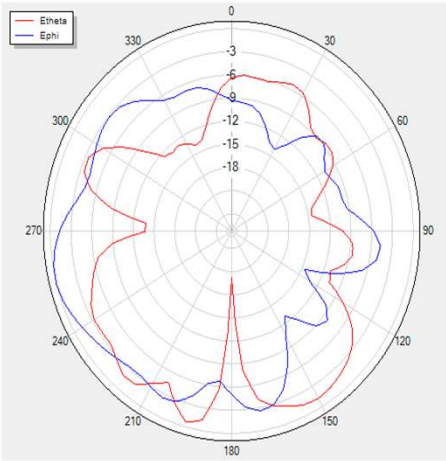


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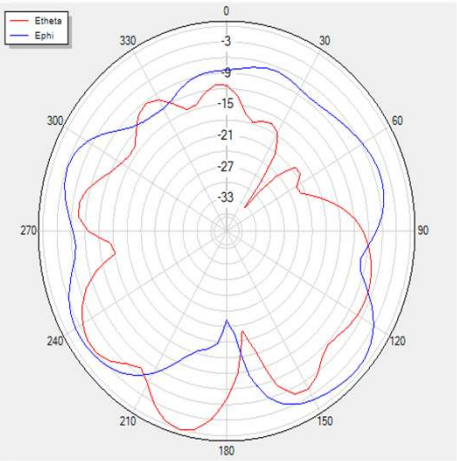


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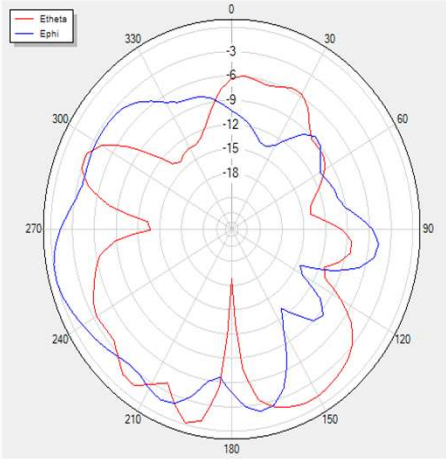


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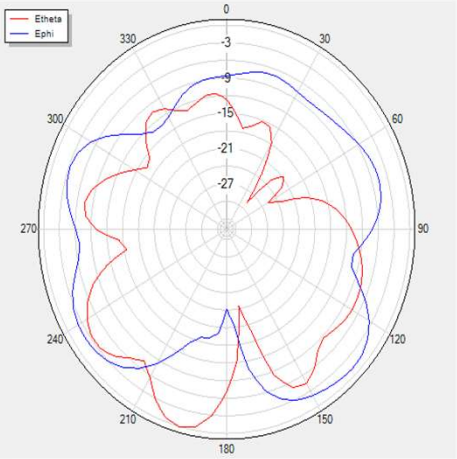


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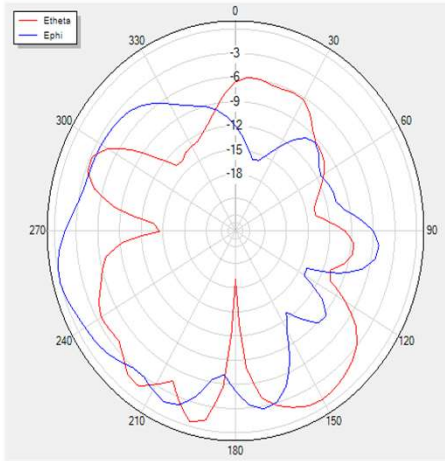


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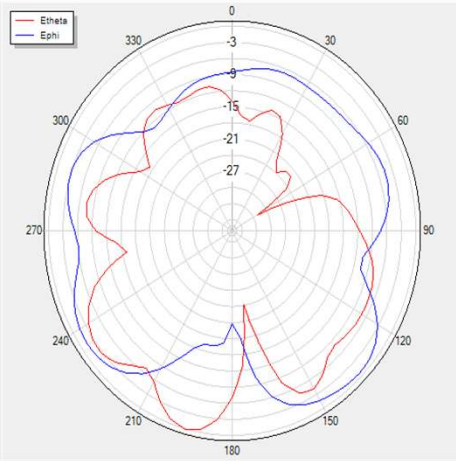


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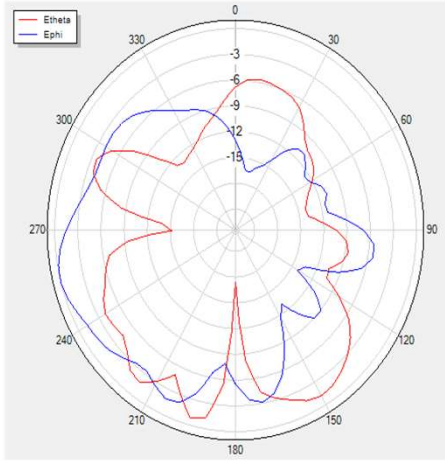


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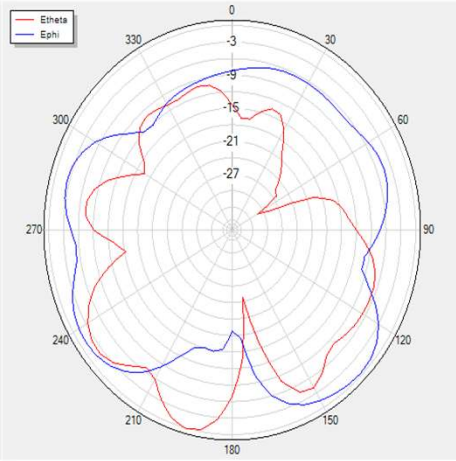

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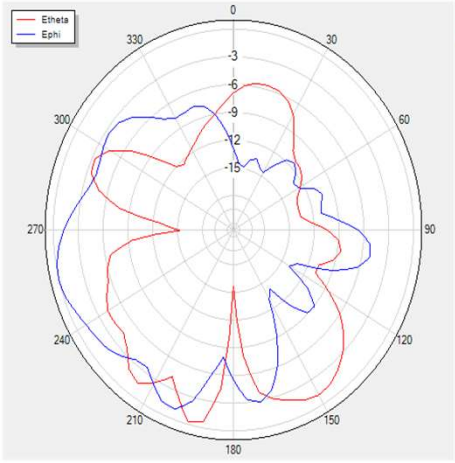


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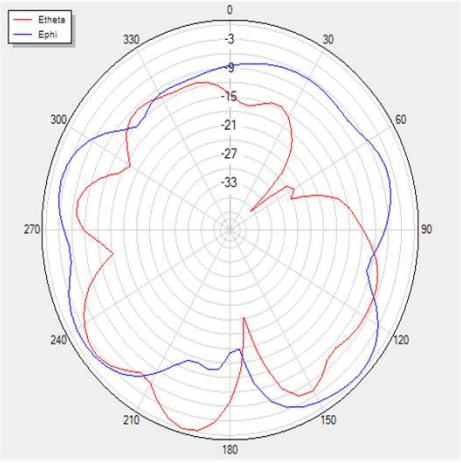
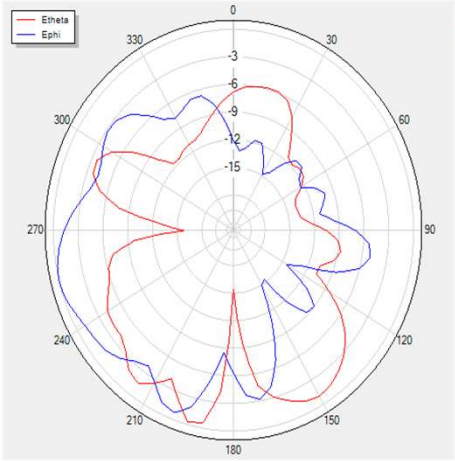



V Phi=90 freq=2460MHz

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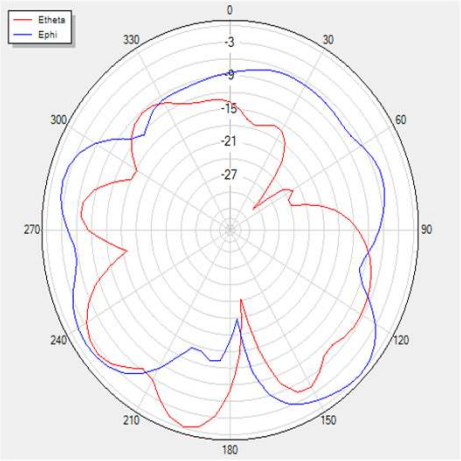


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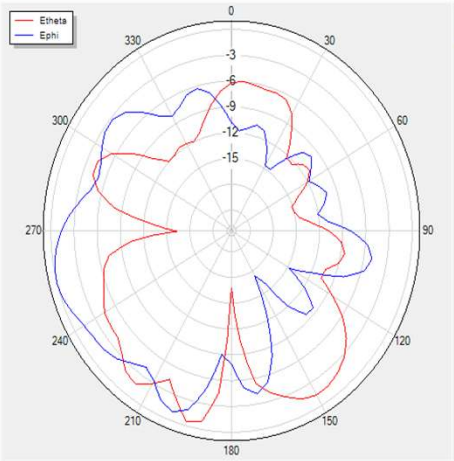


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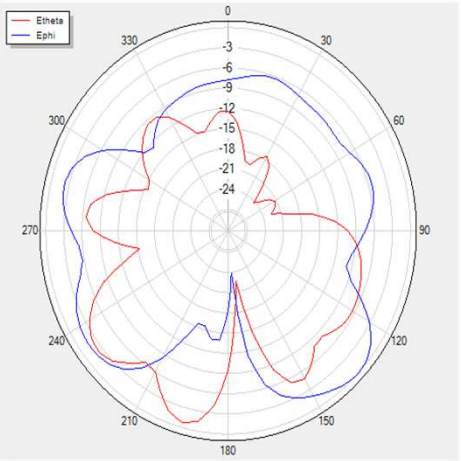


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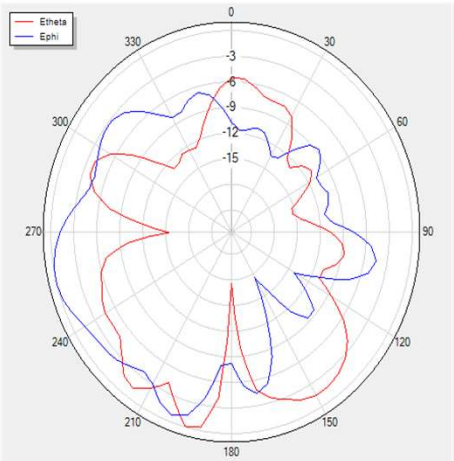


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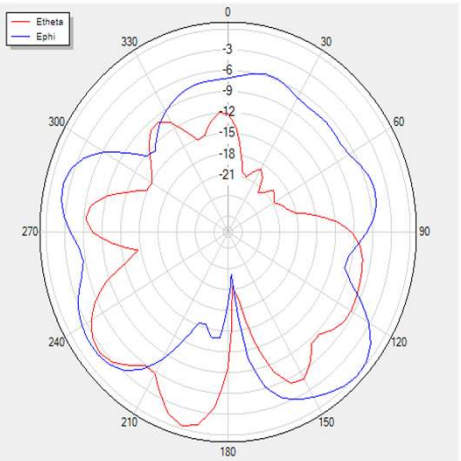

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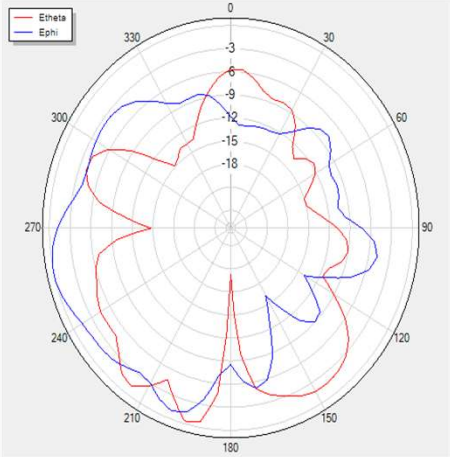
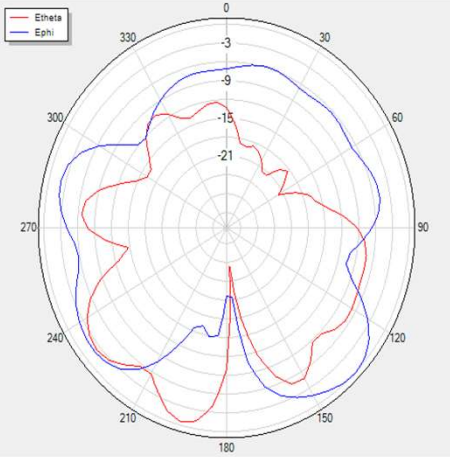



V Phi=0 freq=2490MHz

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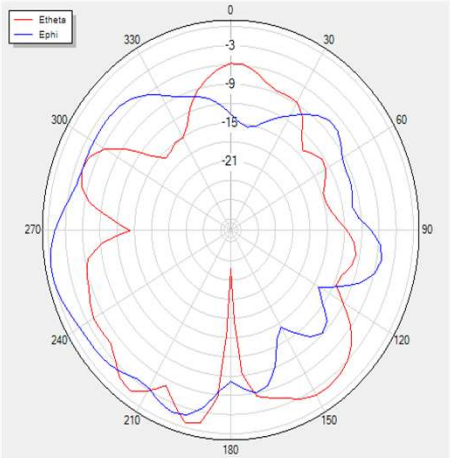
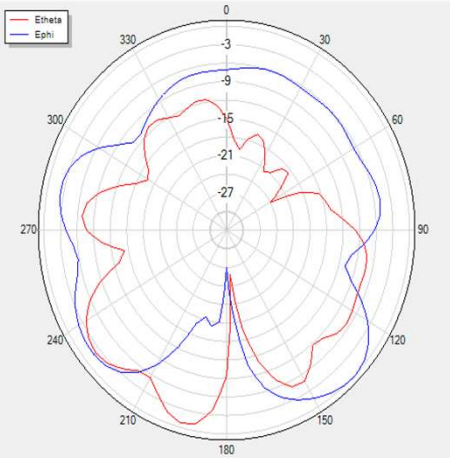



V Phi=0 freq=2500MHz

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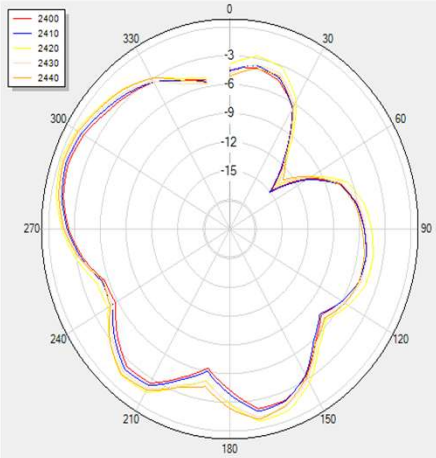


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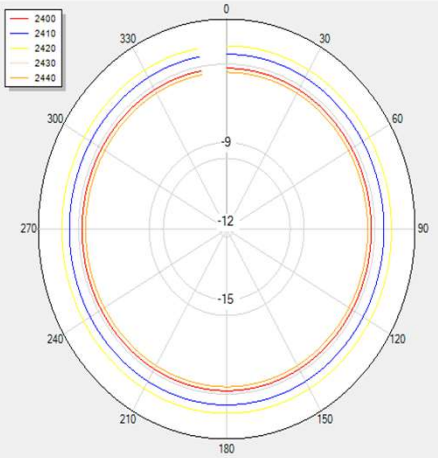


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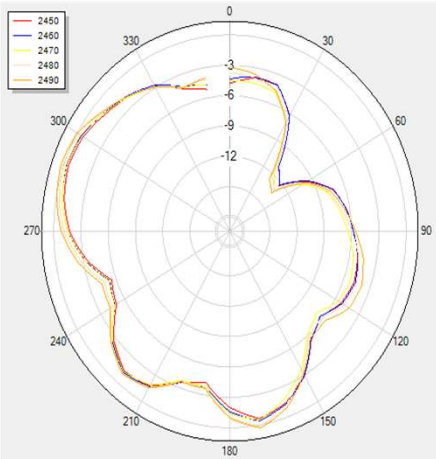


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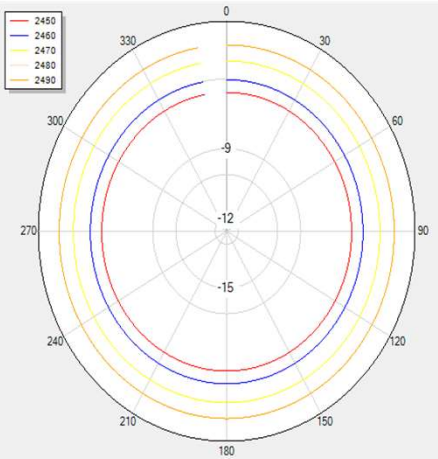

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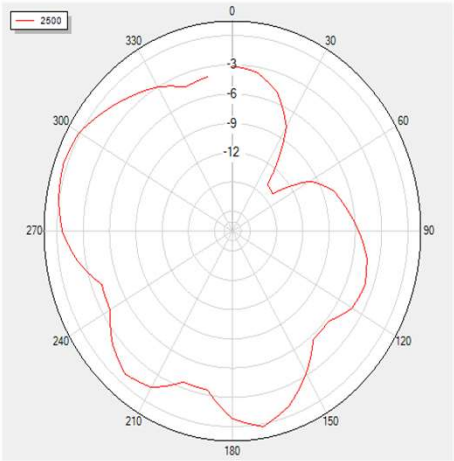


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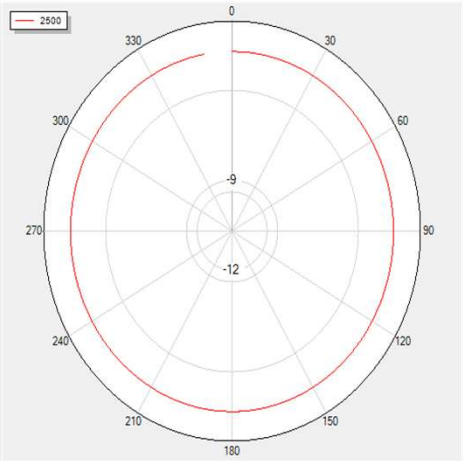


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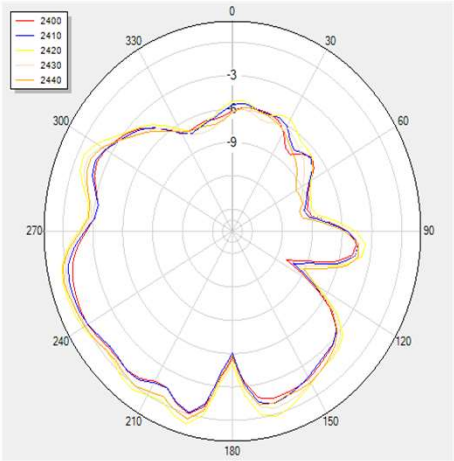


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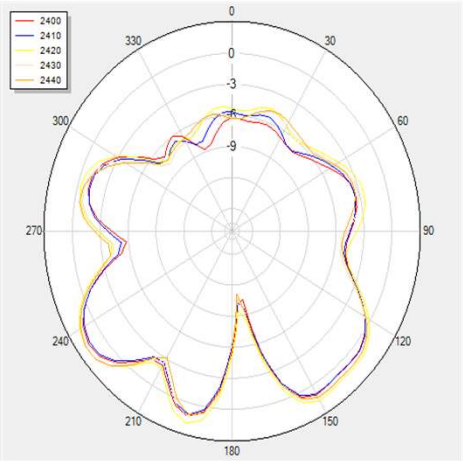


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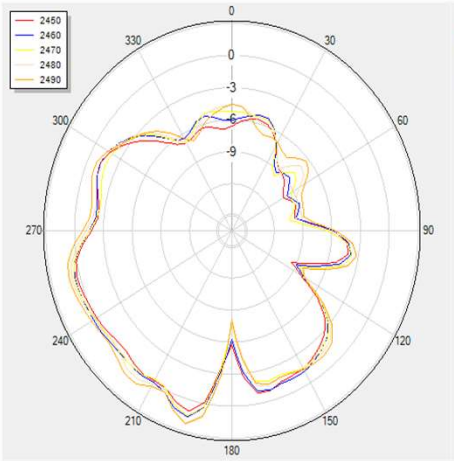
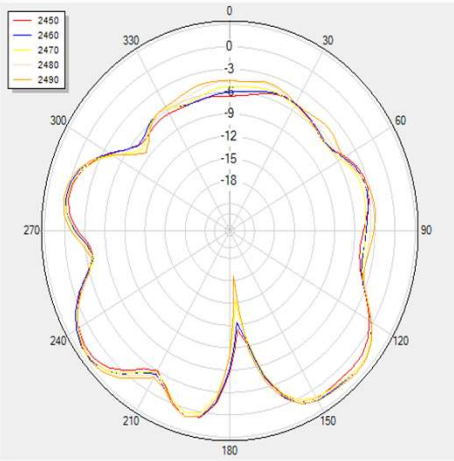
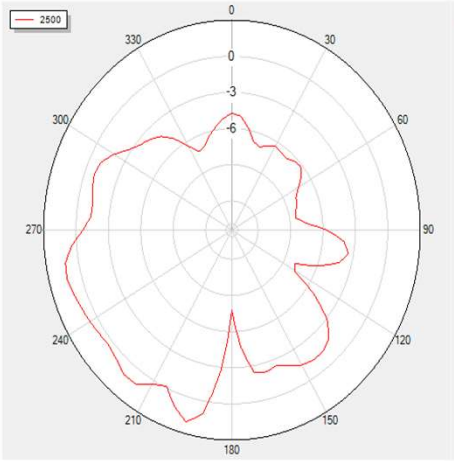


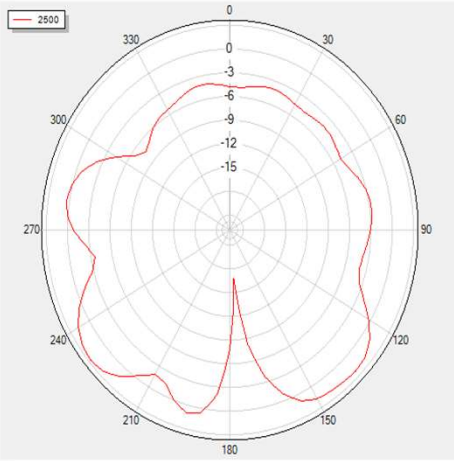

V Phi=0




V Phi=90




V Phi=0



# Conclusion

1. According to the latest matching RF performance, all requirements are met and stable OK
2. Please ensure that the software and hardware are completely consistent before importing the basis for subsequent production to ensure consistency.