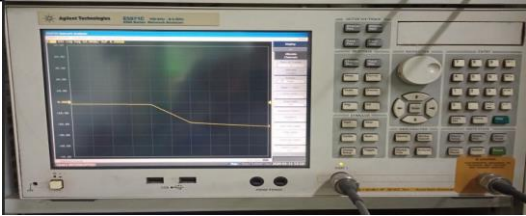
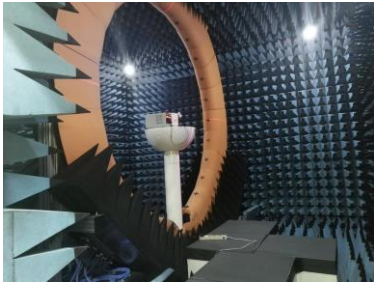


蓝牙天线测试报告

Bluetooth antenna test report

Time : 2021.12.03

Introduction to Project Testing

Frequency band and antenna material	Frequency of operation		
	BT	2.4GHz	
Test Requirements	/		
Instrument for testing	brand	Agilent Network analyzer	
	model	E5071C	
	brand	Darkroom SATIMO-24 (3D)	

Project development environment



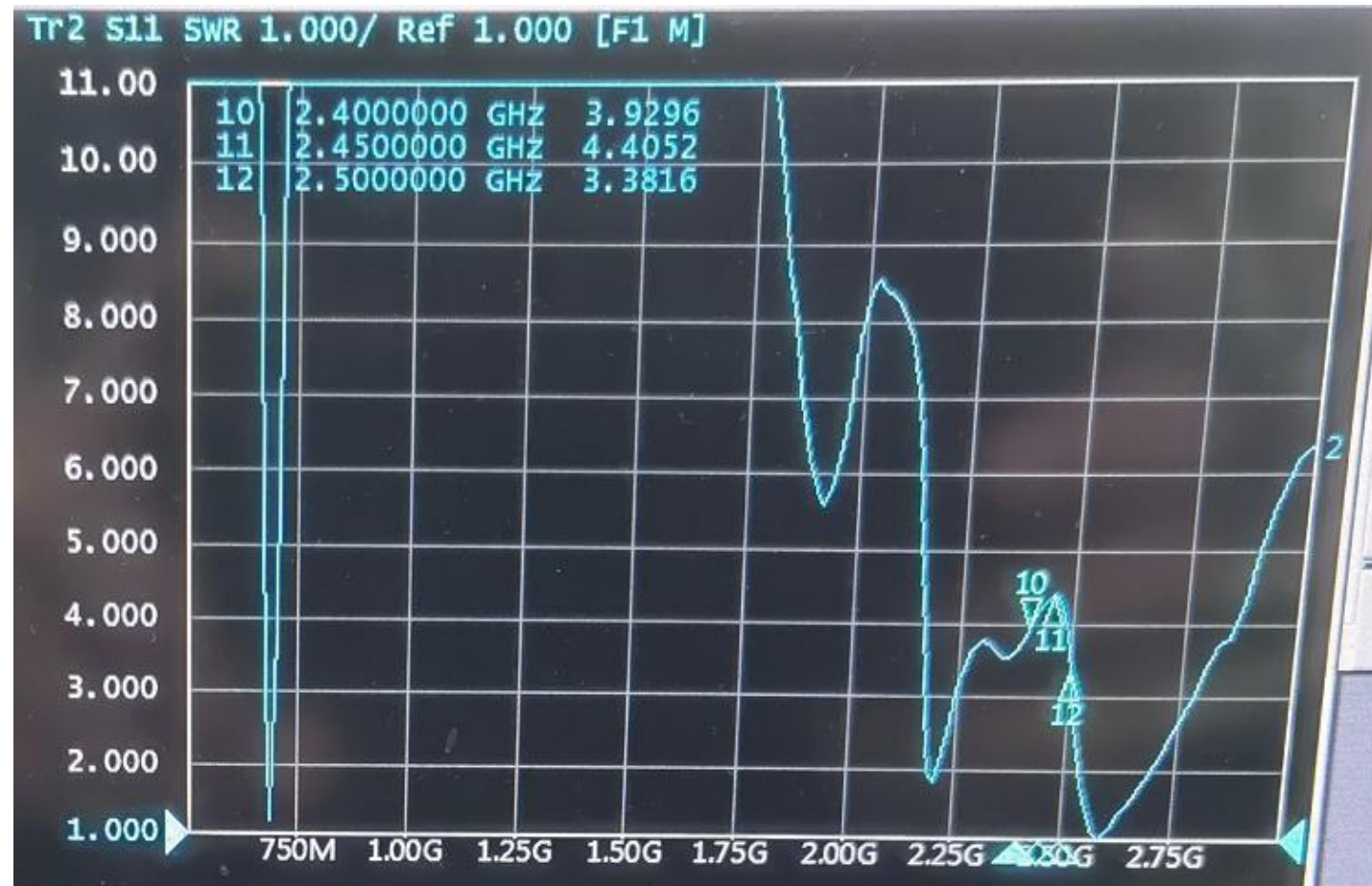
Antenna Photo



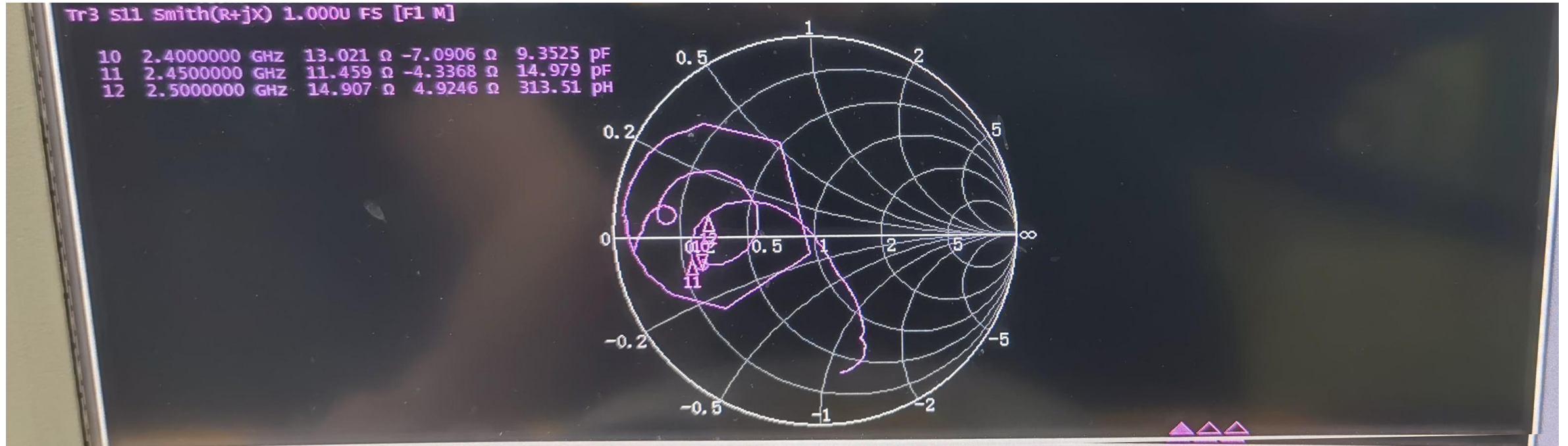
Loss of return



Standing wave ratio



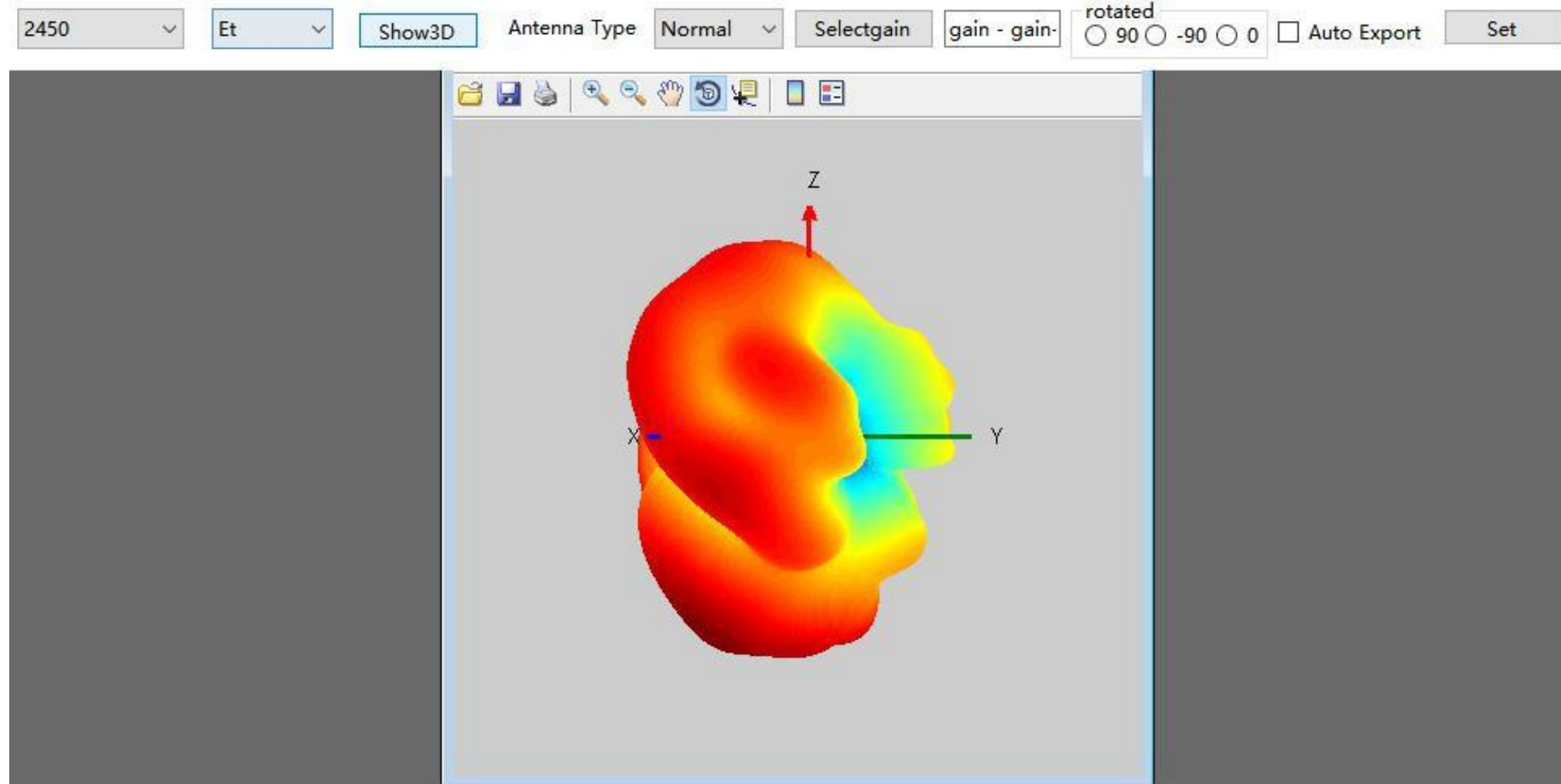
Smith diagram



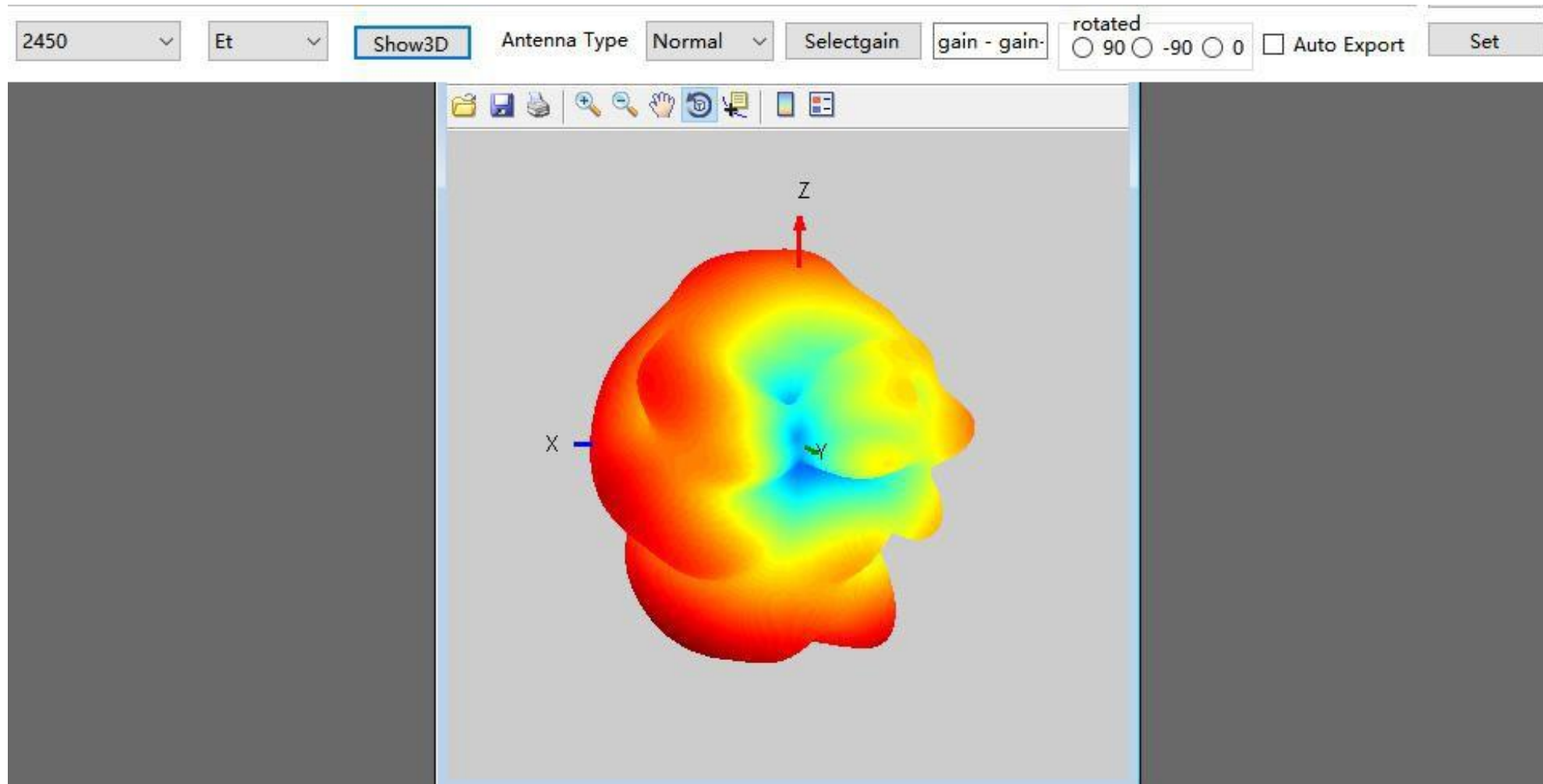
Antenna gain and efficiency

Gain&Efficiency 增益和效率				
frequency 频率(MHz)	gain 增益(dBi)	mingain 最小增益(dBi)	efficiency 效率(dBi)	efficiency 效率(%)
2400	-3.02	-27.05	-10	9.99
2410	-4.17	-25.41	-10.73	8.46
2420	-5.36	-24.26	-11.72	6.73
2430	-5.72	-24.47	-11.83	6.56
2440	-6.61	-26.77	-12.69	5.38
2450	-6.41	-29.05	-12.73	5.34
2460	-7.37	-34.2	-13.77	4.19
2470	-7.36	-36.21	-13.28	4.70
2480	-7.5	-29.27	-13.72	4.25
2490	-7.63	-26.62	-13.6	4.36
2500	-7.96	-27.78	-13.67	4.30

Apple Picture (three sides)



Apple Picture (three sides/two sides)



Apple Picture (three sides/three sides)

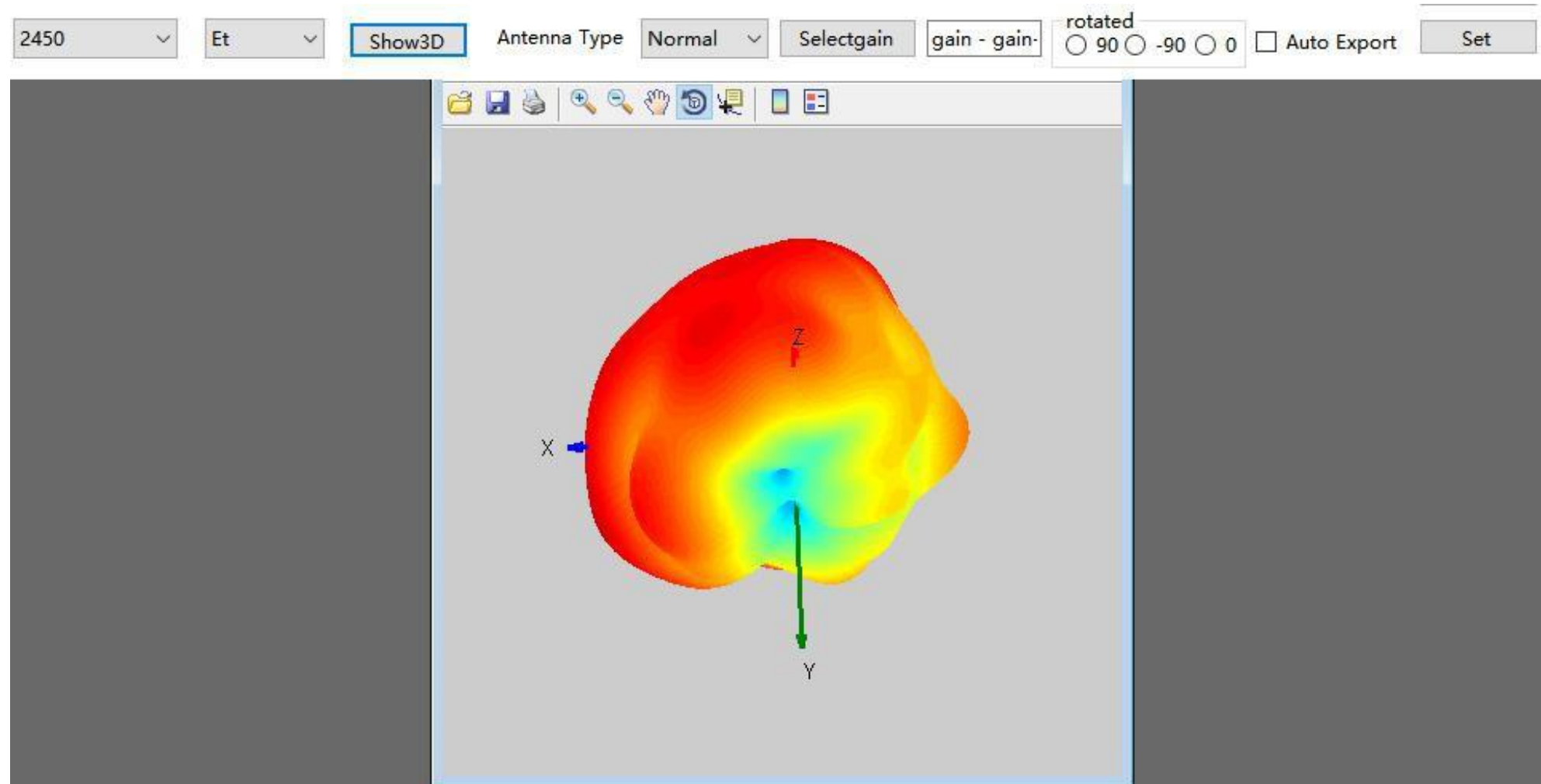
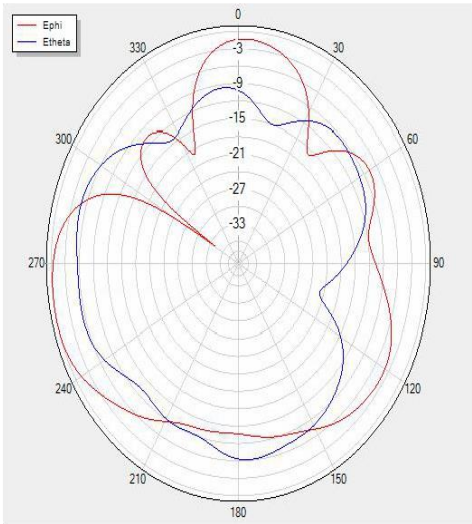
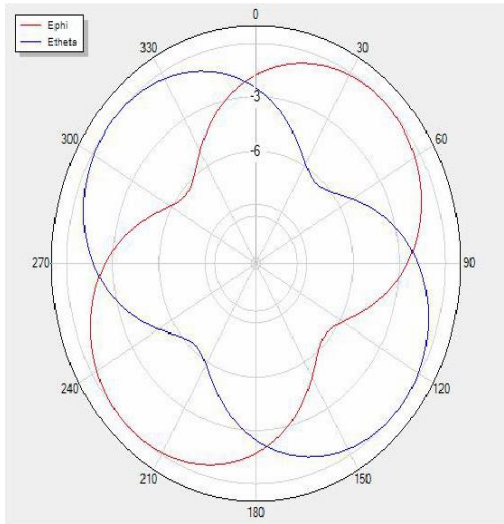


Diagram of direction

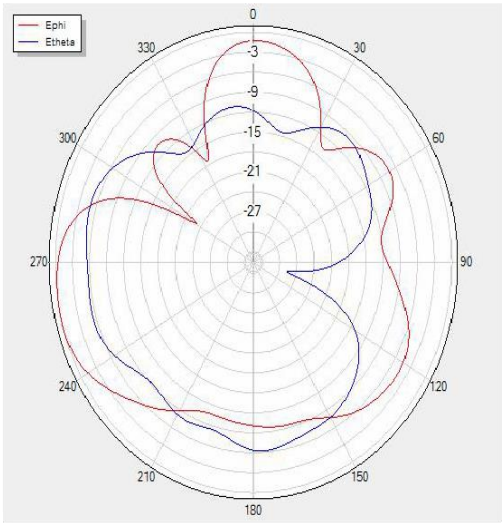
H Theta=90 freq=2400MHz



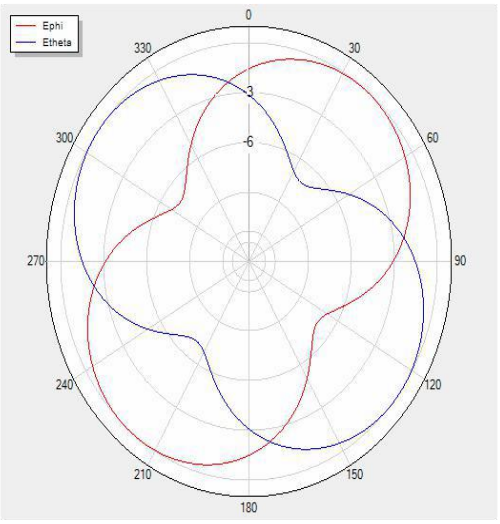
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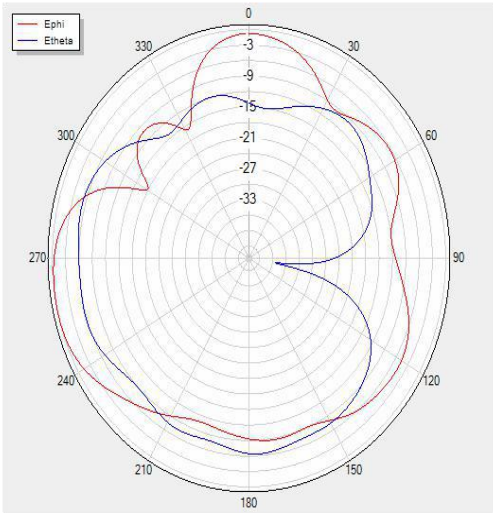
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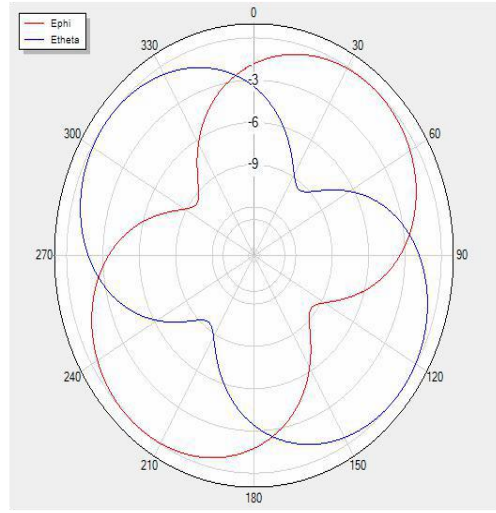
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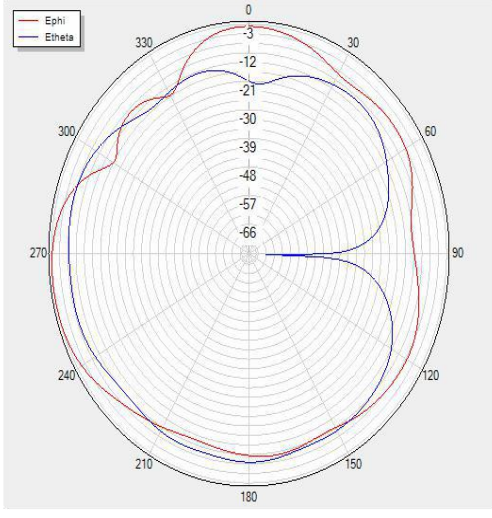
H Theta=90 freq=2420MHz



H Theta=0 freq=2420MHz



H Theta=90 freq=2430MHz



H Theta=0 freq=2430MHz

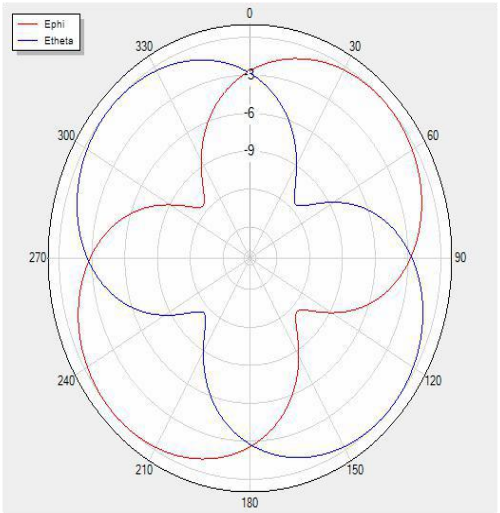
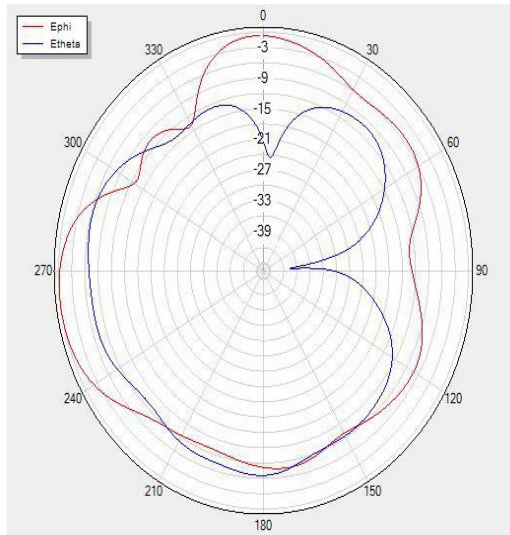
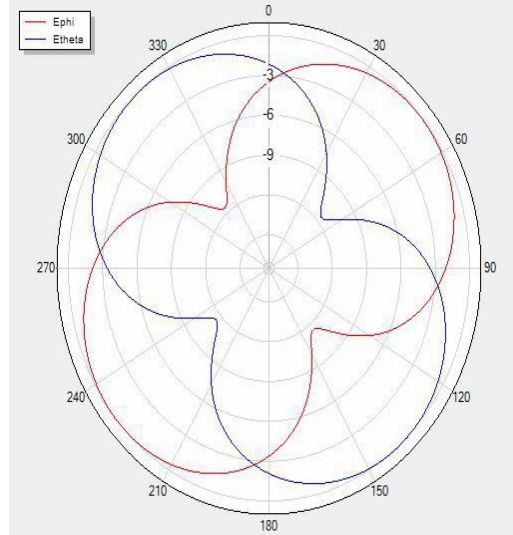


Diagram of direction

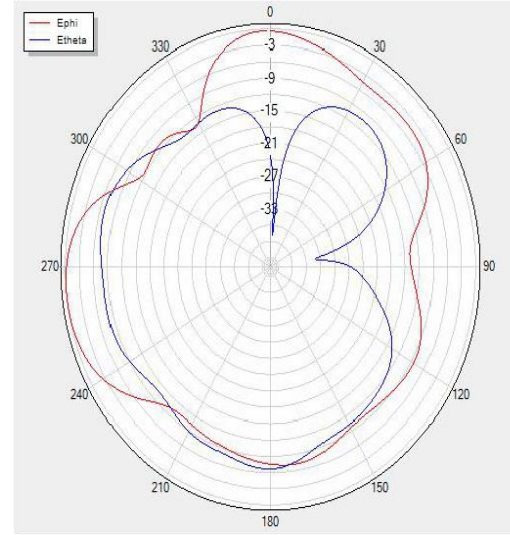
H Theta=90 freq=2440MHz



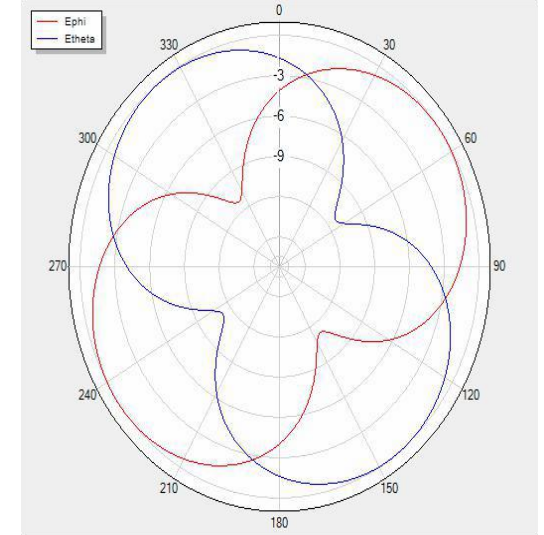
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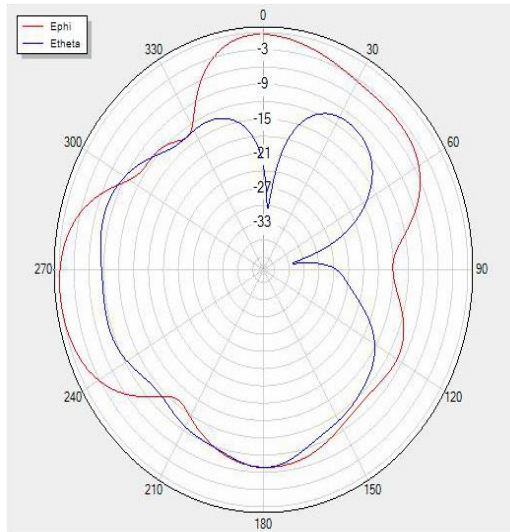
H Theta=90 freq=2450MHz



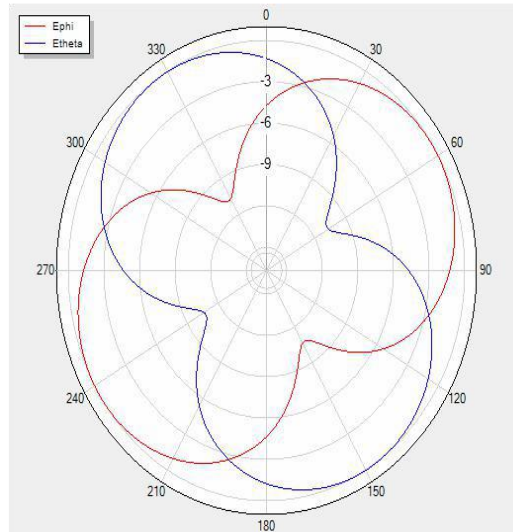
H Theta=0 freq=2450MHz



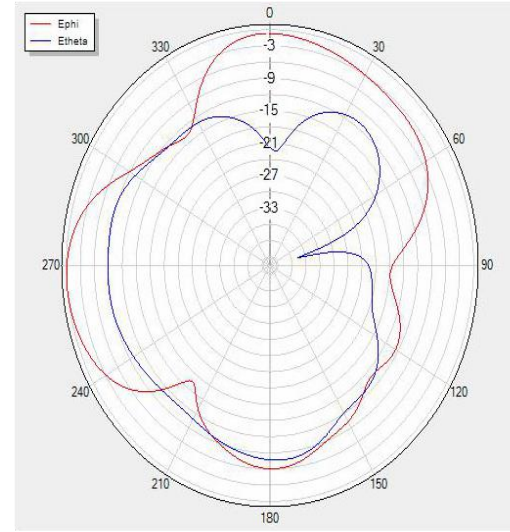
H Theta=90 freq=2460MHz



H Theta=0 freq=2460MHz



H Theta=90 freq=2470MHz



H Theta=0 freq=2470MHz

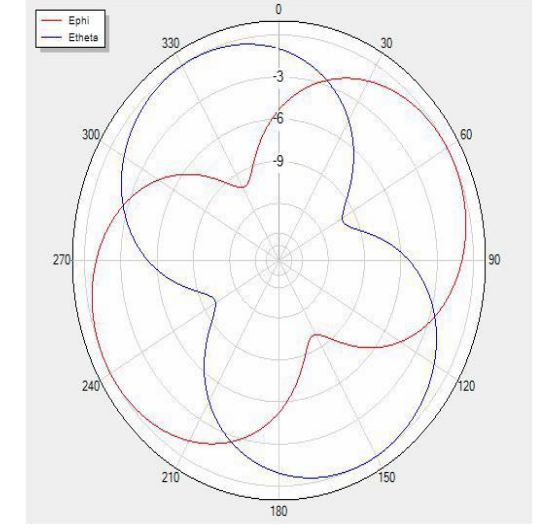
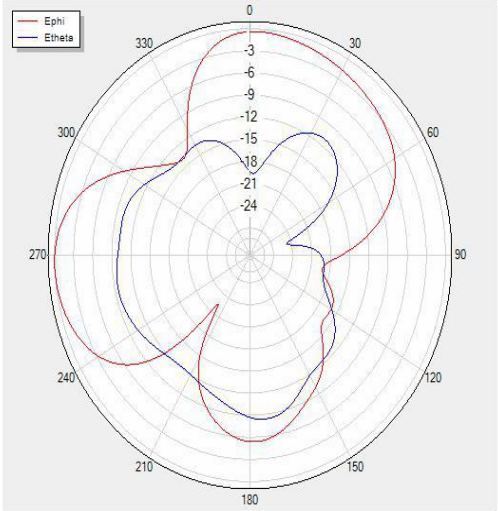
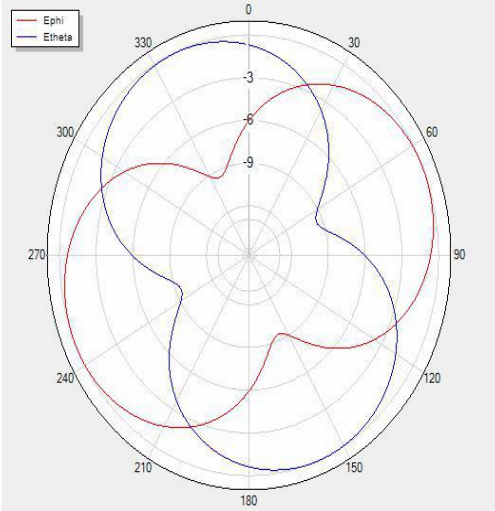


Diagram of direction

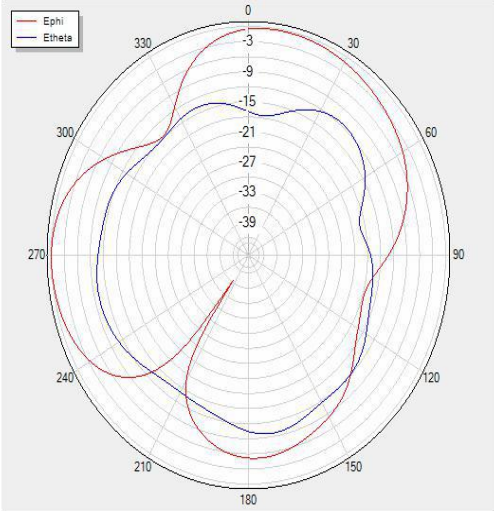
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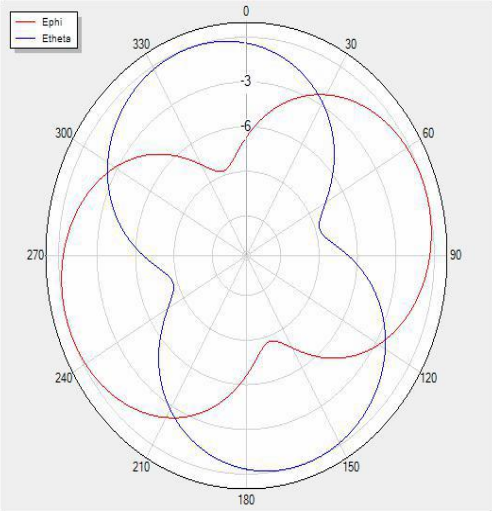
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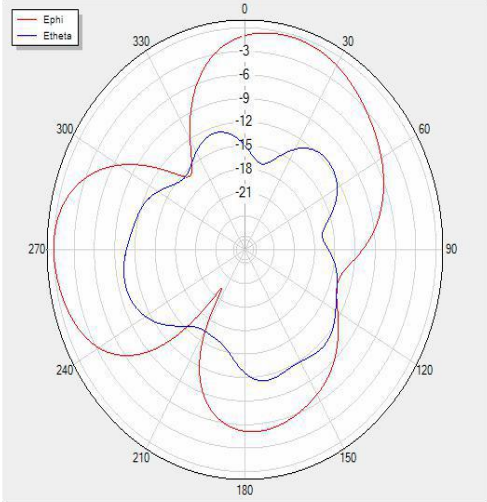
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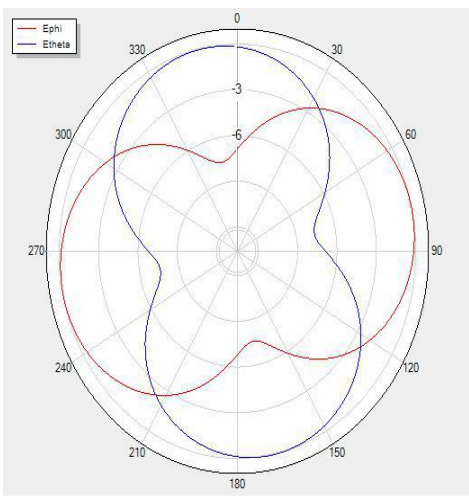
H Theta=0 freq=2490MHz



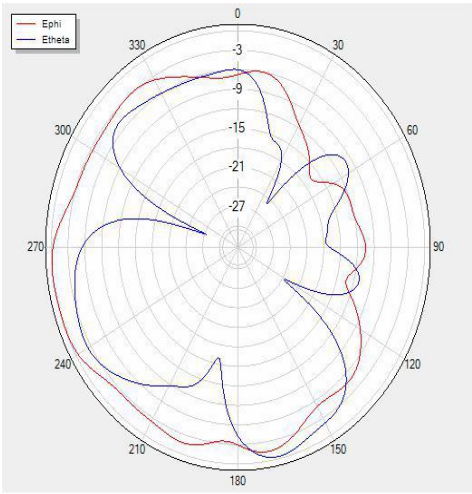
H Theta=90 freq=2500MHz



H Theta=0 freq=2500MHz



V Phi=90 freq=2400MHz



V Phi=0 freq=2400MHz

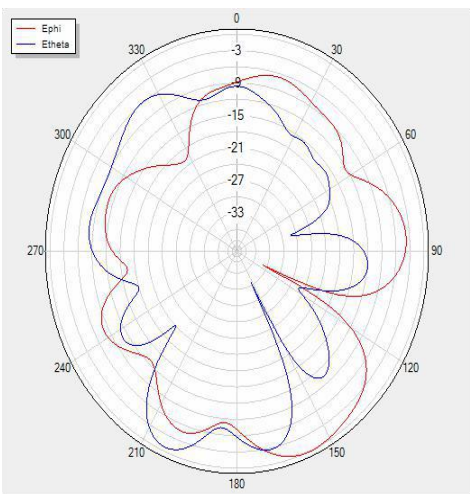
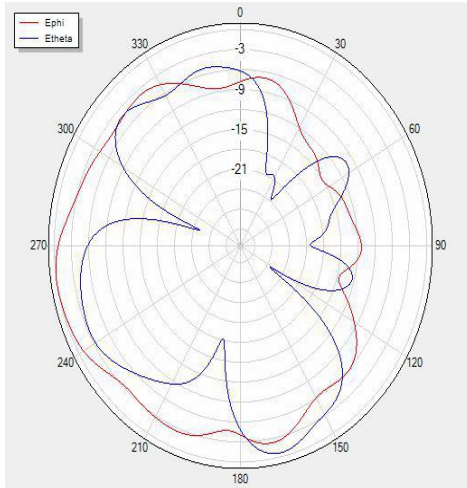
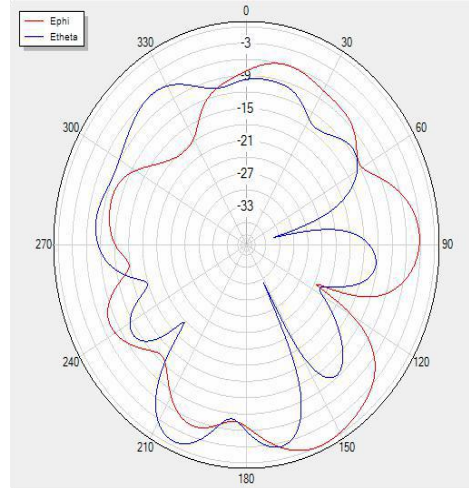


Diagram of direction

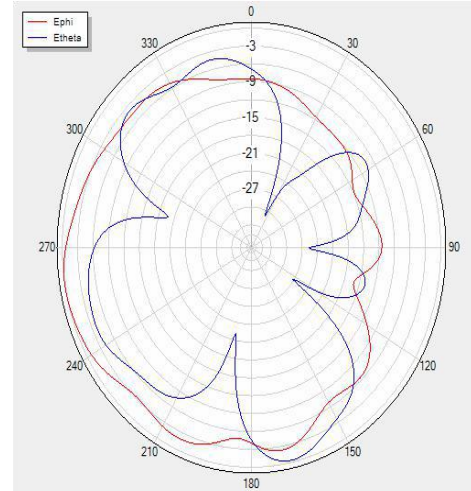
V Phi=90 freq=2410MHz



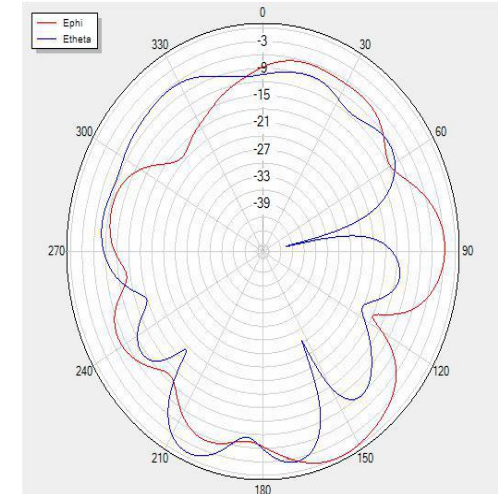
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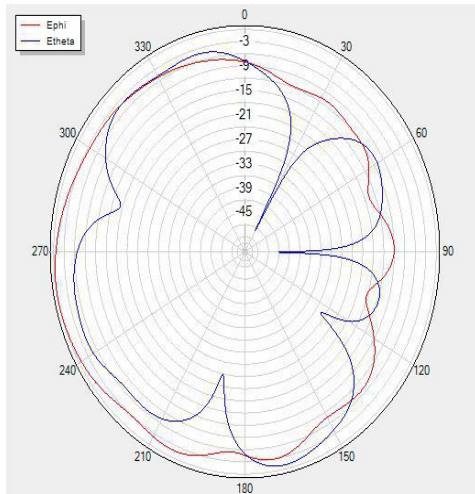
V Phi=90 freq=2420MHz



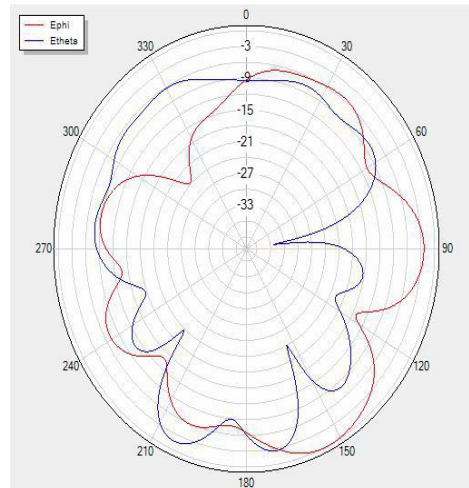
V Phi=0 freq=2420MHz



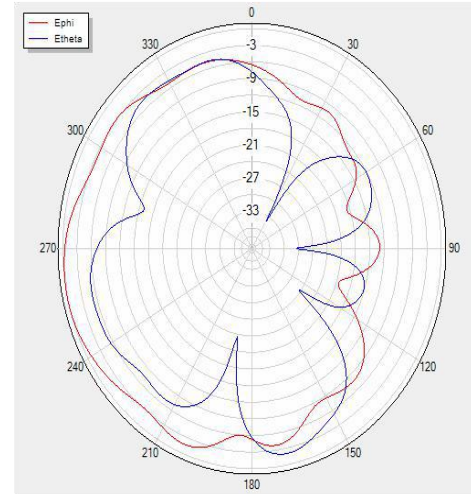
V Phi=90 freq=2430MHz



V Phi=0 freq=2430MHz



V Phi=90 freq=2440MHz



V Phi=0 freq=2440MHz

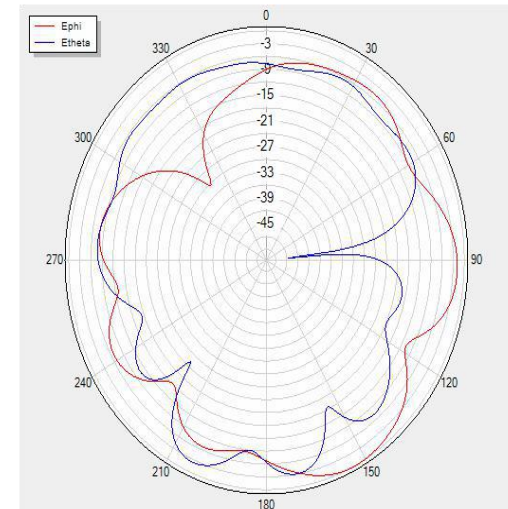
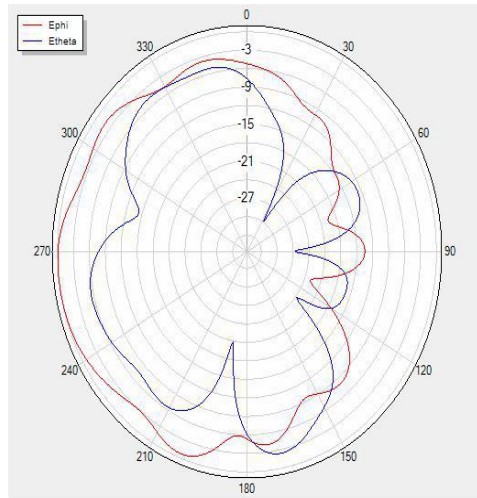
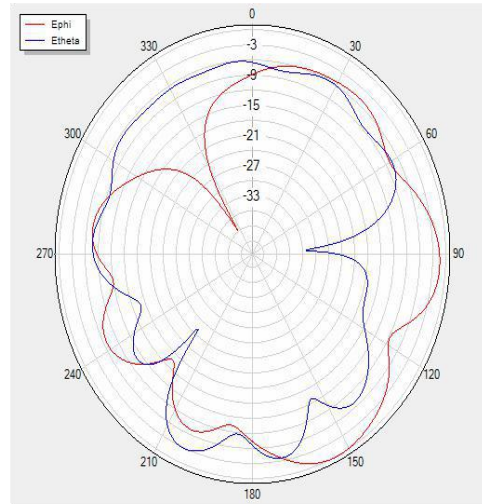


Diagram of direction

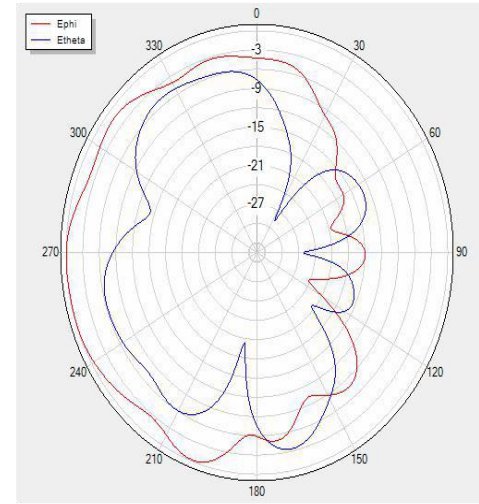
V Phi=90 freq=2450MHz



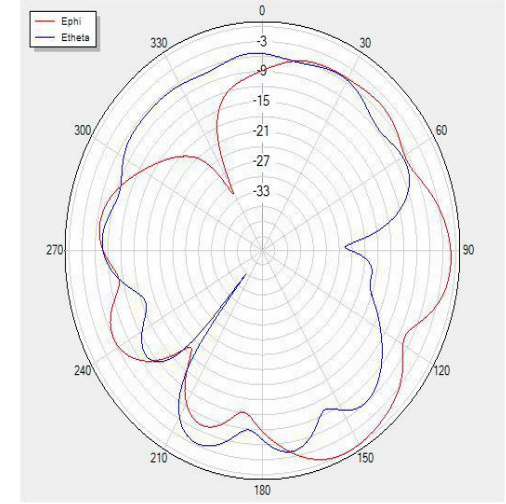
V Phi=0 freq=2450MHz



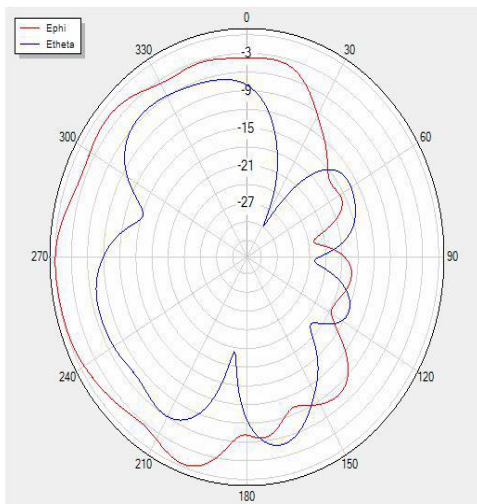
V Phi=90 freq=2460MHz



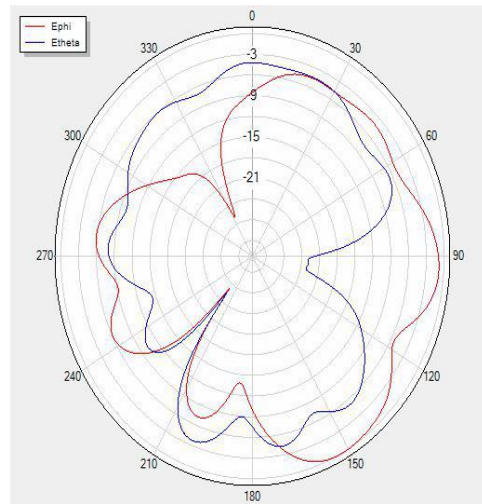
V Phi=0 freq=2460MHz



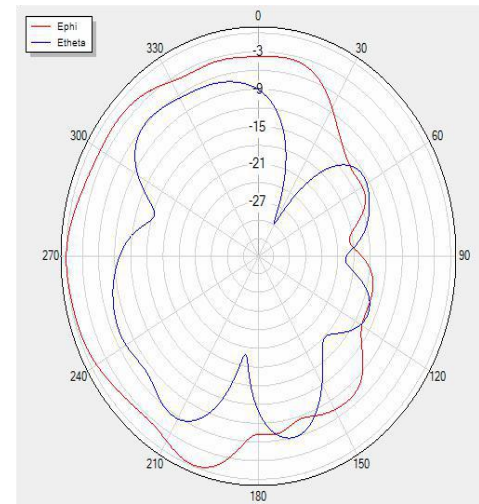
V Phi=90 freq=2470MHz



V Phi=0 freq=2470MHz



V Phi=90 freq=2480MHz



V Phi=0 freq=2480MHz

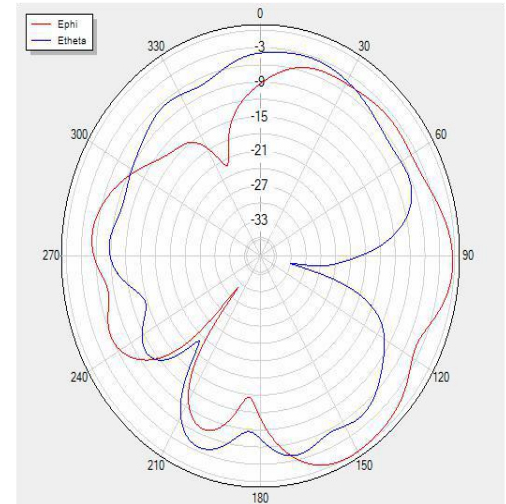
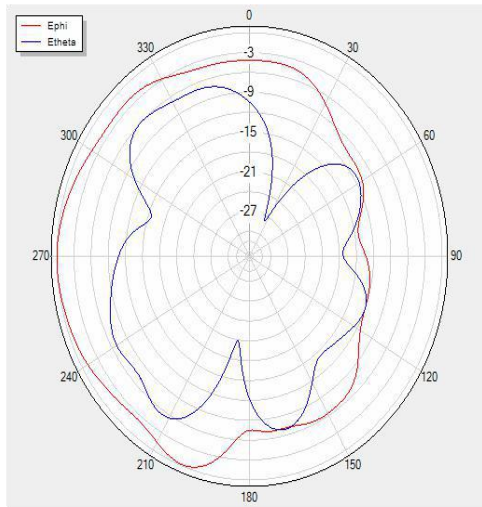
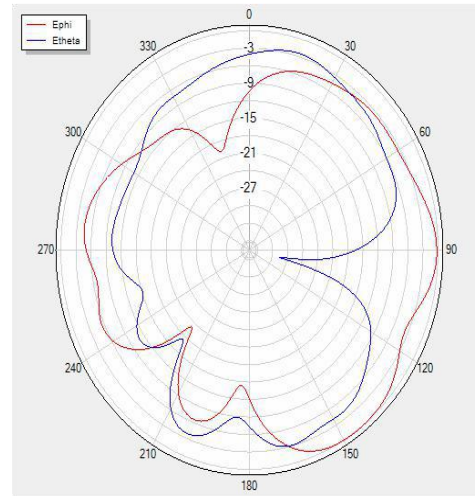


Diagram of direction

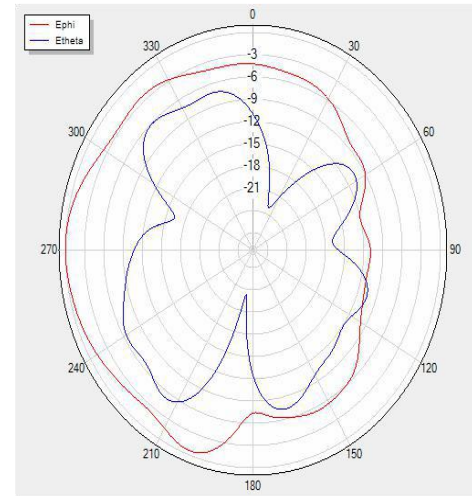
V Phi=90 freq=2490MHz



V Phi=0 freq=2490MHz



V Phi=90 freq=2500MHz



V Phi=0 freq=2500MHz

