SolarGaurdX 200 Antenna Report

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Device Information

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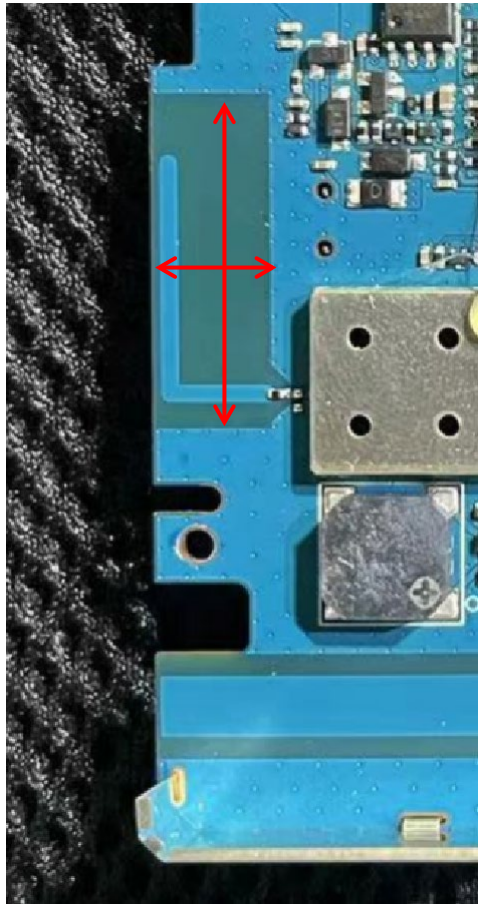
Device Model:	**SolarGuardX 200**

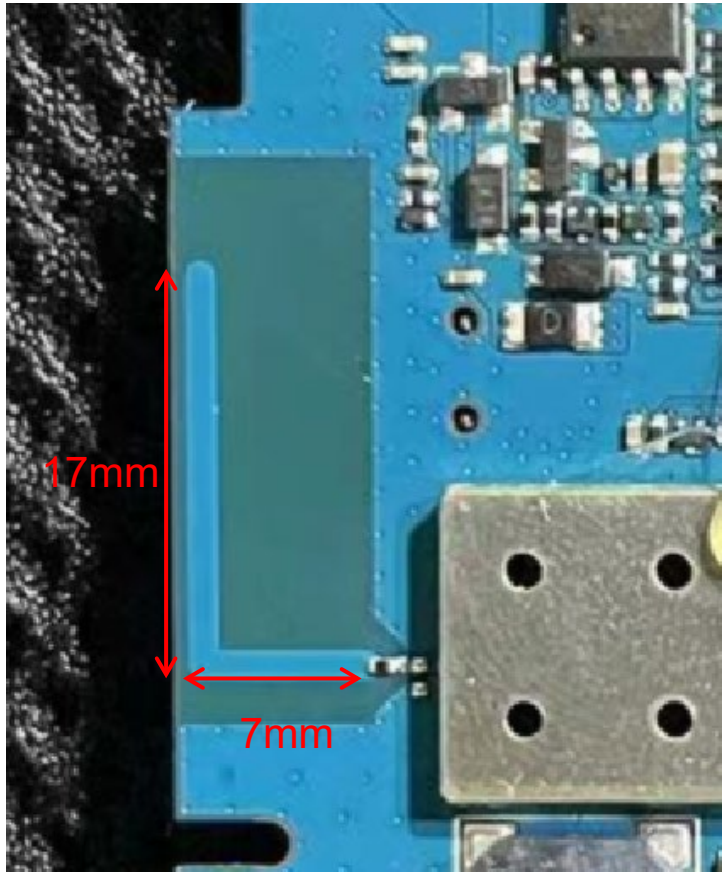
Antenna Detail	Antenna Type	Bands & Frequency
Bluetooth Antenna	PCB Printed Antenna	2402~2480MHz

Bluetooth Antenna Details

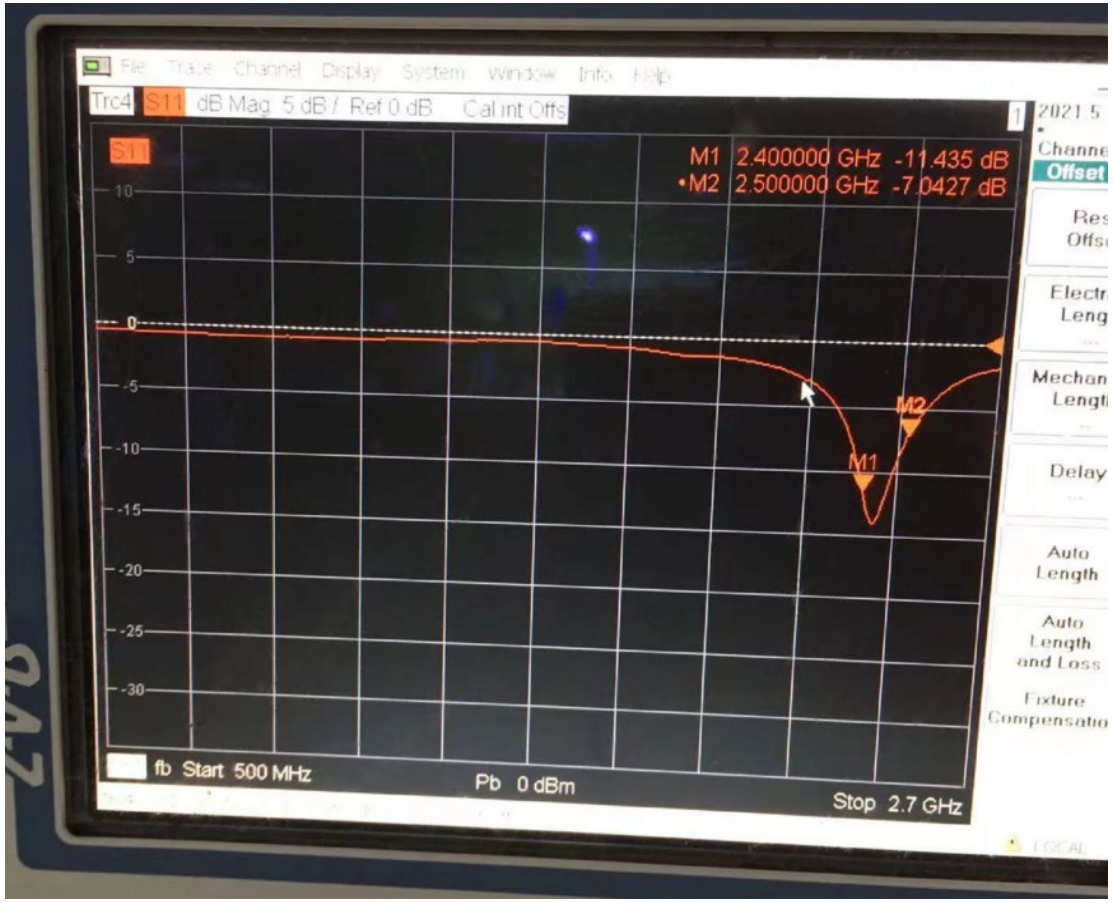
PCB Clearance Area for Antenna：23mm*8mm



Antenna Dimensions：



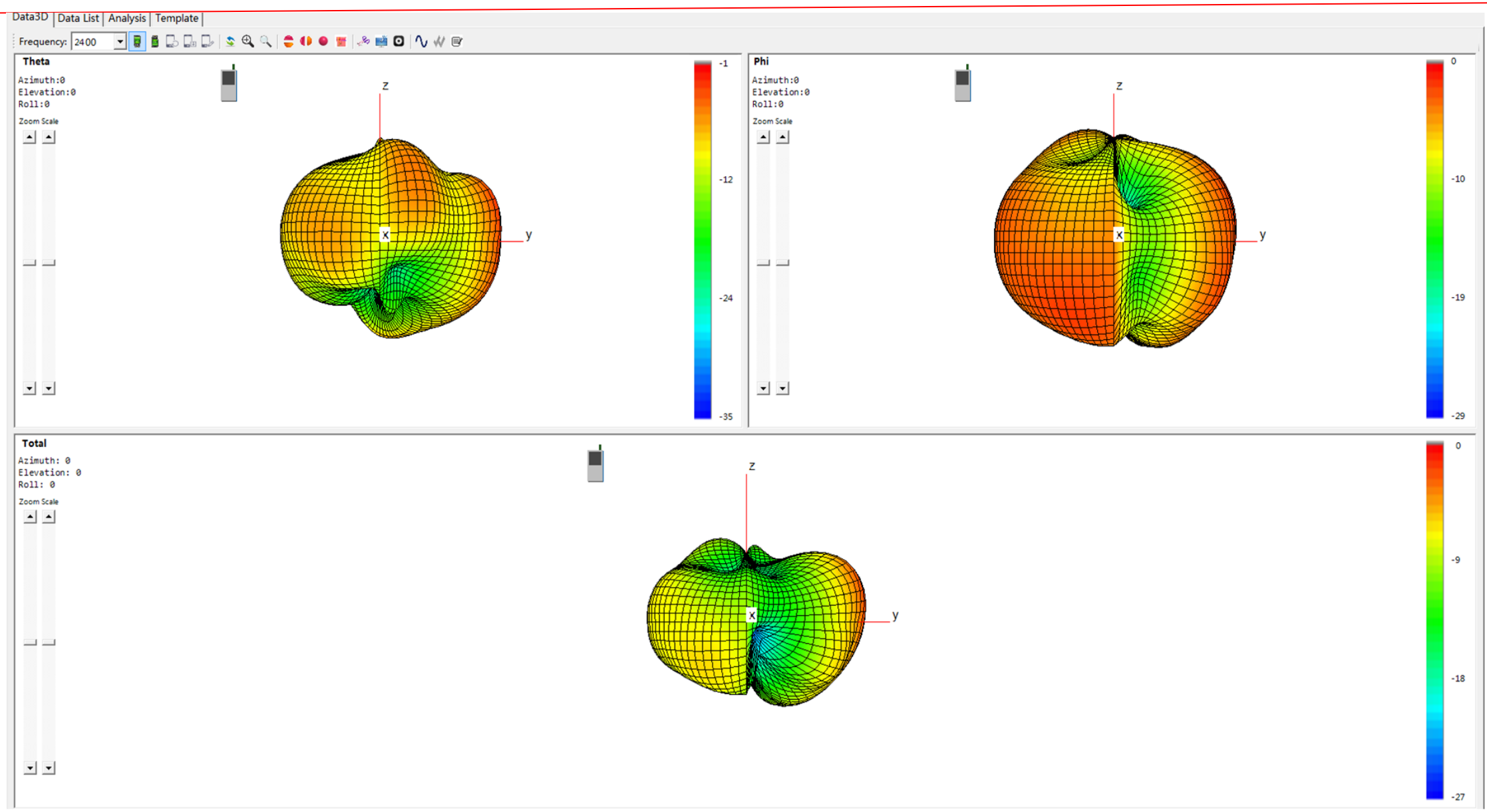
Bluetooth Antenna Performance —— S11



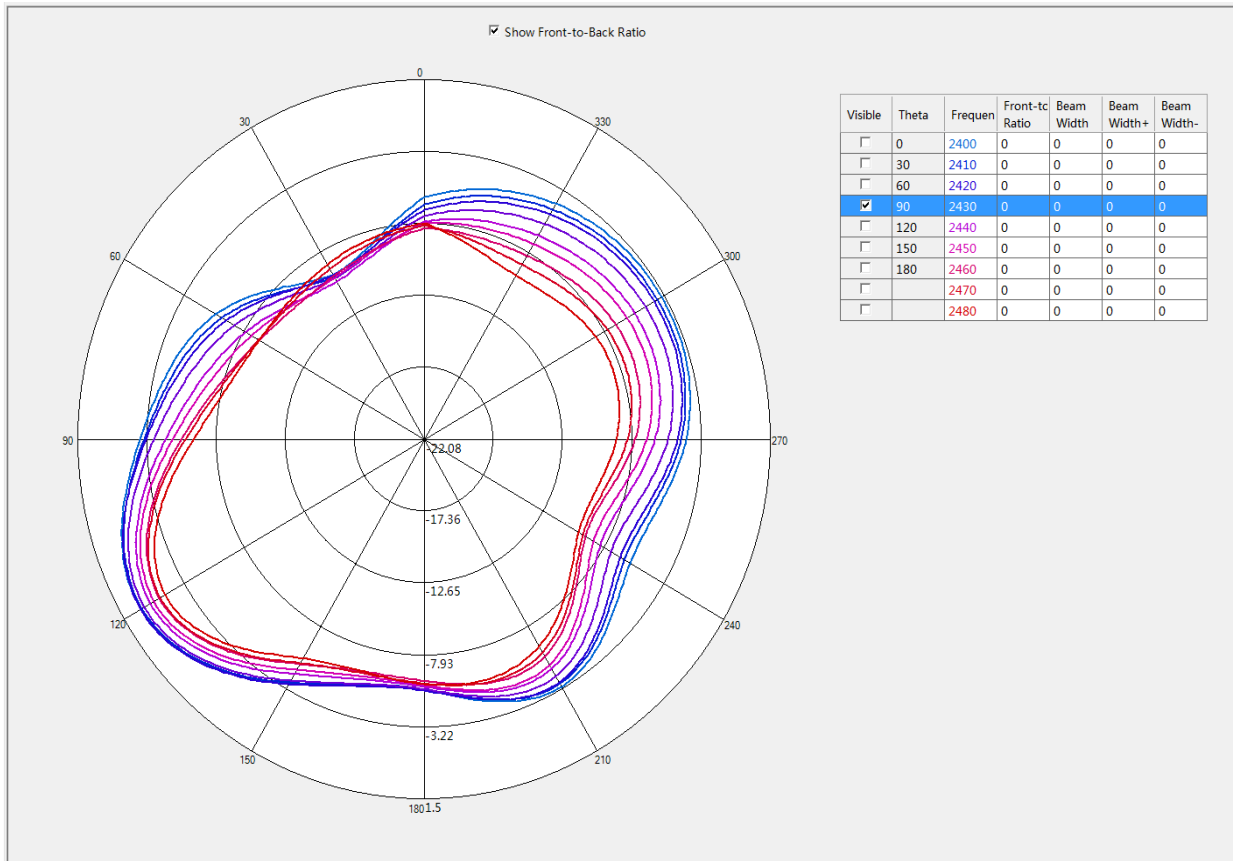
Bluetooth Antenna Performance —— Efficiency and Gain

Freq.(MHz)	Efficiency（%）	Efficiency (dB)	Gain(dBi)
2400	34.47%	-4.63	-0.23
2410	35.96%	-4.44	0.01
2420	37.48%	-4.26	0.23
2430	38.96%	-4.09	0.32
2440	40.42%	-3.93	0.42
2450	42.09%	-3.76	0.67
2460	45.53%	-3.42	1.03
2470	46.10%	-3.36	1.10
2480	45.70%	-3.40	1.05
Max	46.10%	-3.36	1.10

Bluetooth Antenna Performance —— Antenna Pattern 1

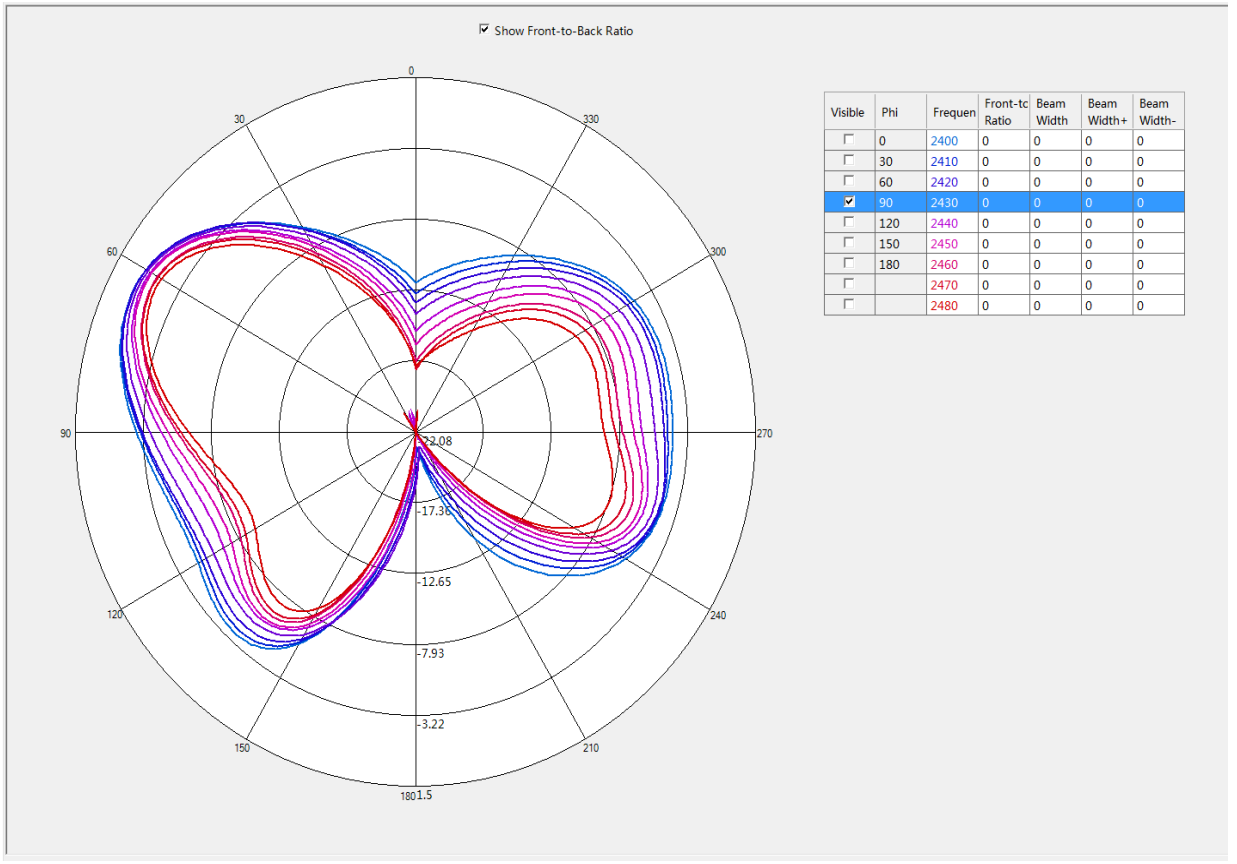


Bluetooth Antenna Performance —— Antenna Pattern 2



Visible	Theta	Frequen	Front-tc Ratio	Beam Width	Beam Width+	Beam Width-
☐	0	2400	0	0	0	0
☐	30	2410	0	0	0	0
☐	60	2420	0	0	0	0
☑	90	2430	0	0	0	0
☐	120	2440	0	0	0	0
☐	150	2450	0	0	0	0
☐	180	2460	0	0	0	0
☐		2470	0	0	0	0
☐		2480	0	0	0	0

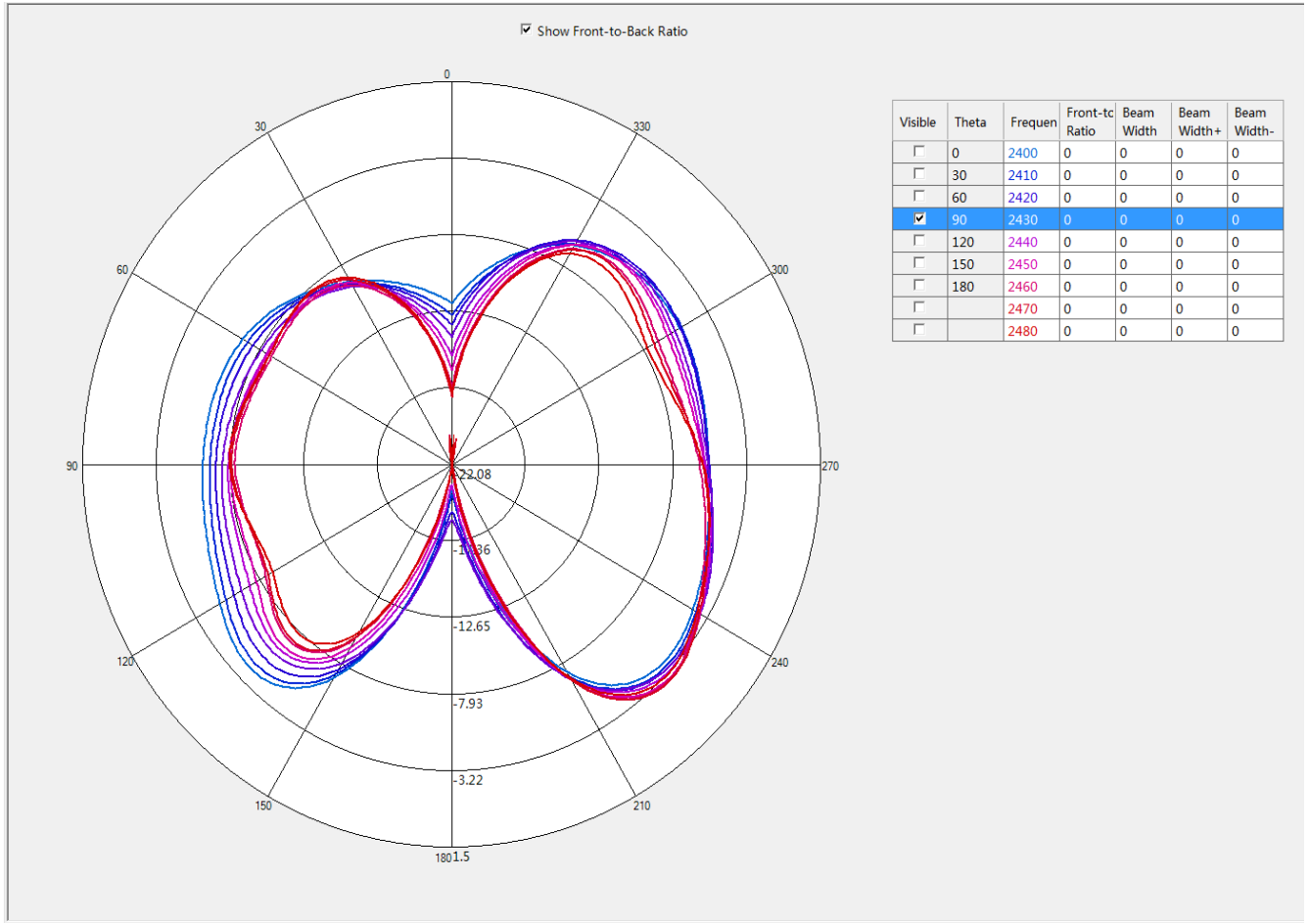
Theta=90°



Visible	Phi	Frequen	Front-tc Ratio	Beam Width	Beam Width+	Beam Width-
☐	0	2400	0	0	0	0
☐	30	2410	0	0	0	0
☐	60	2420	0	0	0	0
☑	90	2430	0	0	0	0
☐	120	2440	0	0	0	0
☐	150	2450	0	0	0	0
☐	180	2460	0	0	0	0
☐		2470	0	0	0	0
☐		2480	0	0	0	0

Phi=90°

Bluetooth Antenna Performance —— Antenna Pattern 3



Visible	Theta	Frequen	Front-to Ratio	Beam Width	Beam Width+	Beam Width-
☐	0	2400	0	0	0	0
☐	30	2410	0	0	0	0
☐	60	2420	0	0	0	0
☑	90	2430	0	0	0	0
☐	120	2440	0	0	0	0
☐	150	2450	0	0	0	0
☐	180	2460	0	0	0	0
☐		2470	0	0	0	0
☐		2480	0	0	0	0

Phi=0°

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Thank you!

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