

Thundercomm

Rubik Pi 3 Antenna Specification

Ver:1.0
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General Specification

Item	Description
Manufacturer	Thundercomm
Product Name	PCB antenna
Band Frequency	WIFI 2.4G WIFI 5.0G
Antenna Concept	Monopole Antenna
Antenna Technology	PCB Antenna

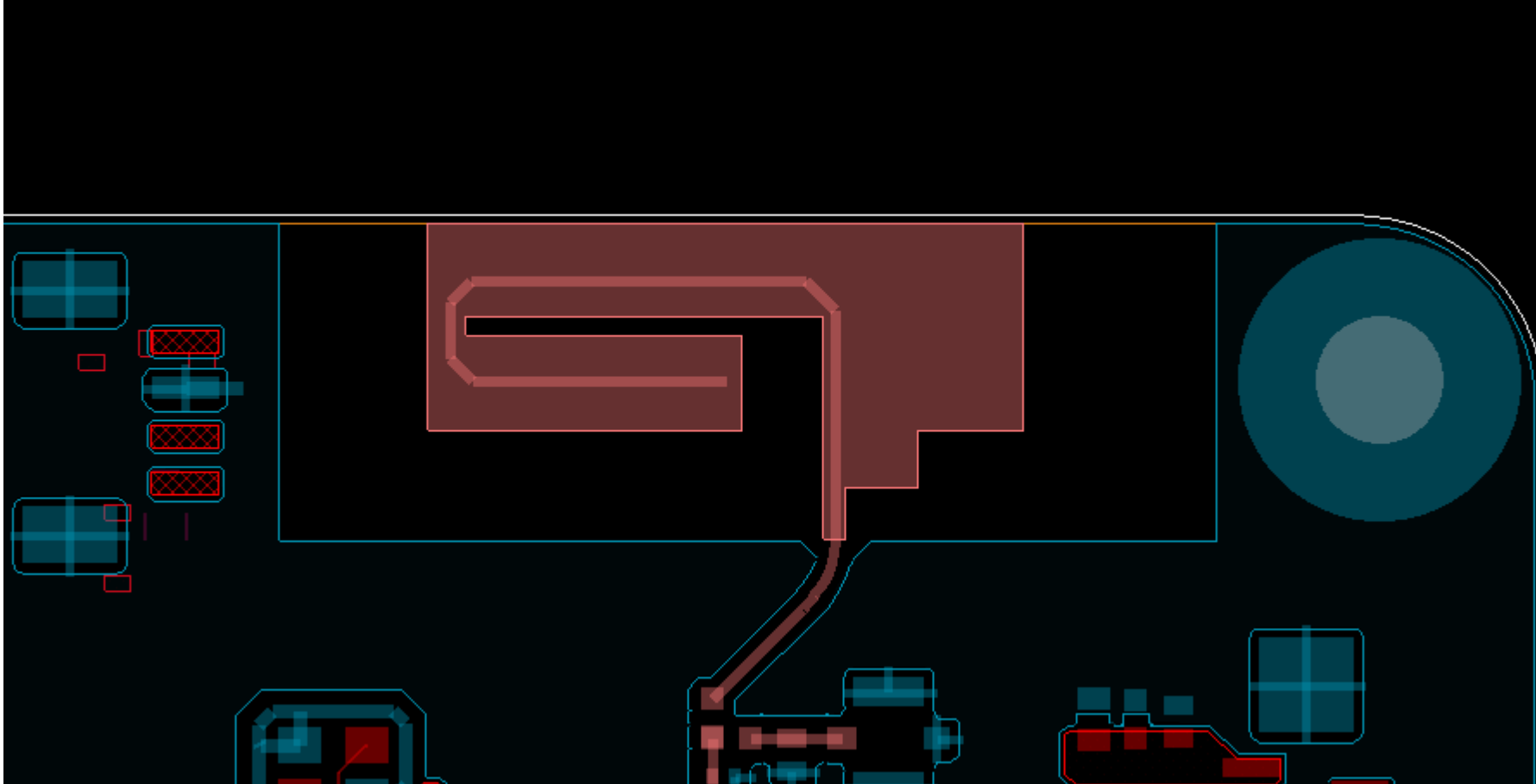
Antenna Efficiency and Gain

Freq. (MHz)	Effi. (%)	Effi. (dB)	Peak Gain (dBi)	Freq. (MHz)	Effi. (%)	Effi. (dB)	Peak Gain (dBi)	Freq. (MHz)	Effi. (%)	Effi. (dB)	Peak Gain (dBi)
2400	31.23	-5.05	-0.81	5150	58.69	-2.31	4.61	5470	48.79	-3.12	4.21
2410	31.35	-5.04	-0.72	5170	57.53	-2.4	4.49	5490	52.6	-2.79	4.6
2420	28.53	-5.45	-1.17	5190	57.93	-2.37	4.53	5510	49.62	-3.04	4.33
2430	26.91	-5.7	-1.36	5210	56.6	-2.47	4.44	5530	48.43	-3.15	4.18
2440	26.31	-5.8	-1.51	5230	56.67	-2.47	4.47	5550	51.97	-2.84	4.46
2450	25.51	-5.93	-1.64	5250	55.67	-2.54	4.41	5570	49.25	-3.08	4.22
2460	24.39	-6.13	-1.83	5270	54.97	-2.6	4.35	5590	54.05	-2.67	4.58
2470	23.36	-6.32	-1.99	5290	56.66	-2.47	4.52	5610	53.67	-2.7	4.57
2480	22.2	-6.54	-2.26	5310	55.82	-2.53	4.49	5630	51.01	-2.92	4.32
2490	21.65	-6.65	-2.31	5330	56.93	-2.45	4.54	5650	55.09	-2.59	4.64
2500	21.19	-6.74	-2.51	5350	58.35	-2.34	4.66	5670	53.65	-2.7	4.64
				5370	55.99	-2.52	4.49	5690	53.08	-2.75	4.52
				5390	59.15	-2.28	4.83	5710	58.35	-2.34	4.88
				5410	55.31	-2.57	4.52	5730	55.45	-2.56	4.63
				5430	55.47	-2.56	4.62	5750	58.63	-2.32	4.87
				5450	56.82	-2.46	4.73	5770	60.23	-2.2	4.89
								5790	55.8	-2.53	4.54
								5810	62.56	-2.04	4.9
								5830	57.22	-2.42	4.52
								5850	56.8	-2.46	4.42

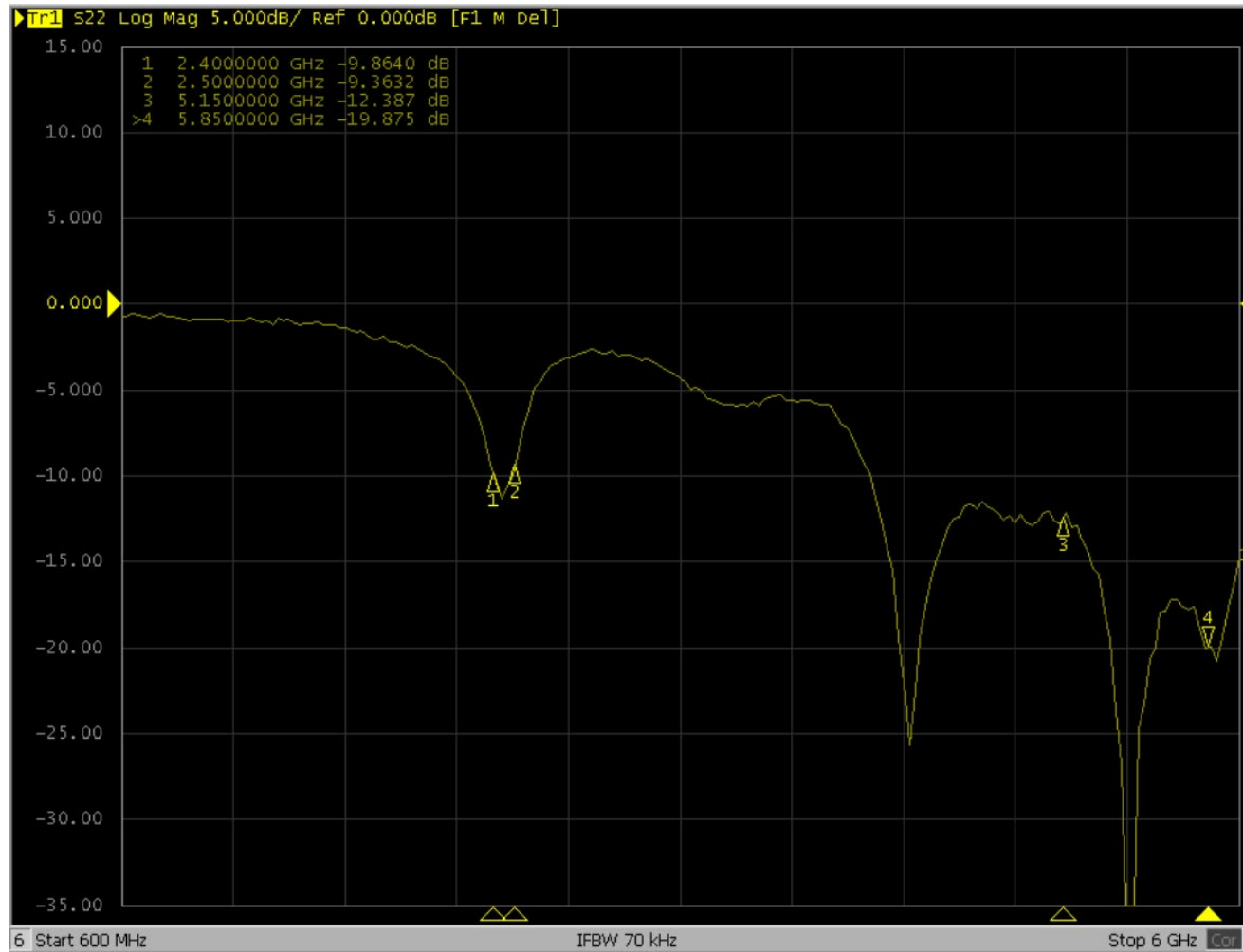
Summary of Peak Gain

Band	Frequency Range	Peak Gain (dBi)
WIFI 2.4G	2400~2500MHz	-0.72
WIFI 5.0G	5150~5250MHz	4.61
	5250~5350MHz	4.66
	5350~5450MHz	4.83
	5450~5725MHz	4.88
	5725~5850MHz	4.9

PCB Drawing



WIFI_2.4G/5G – RL

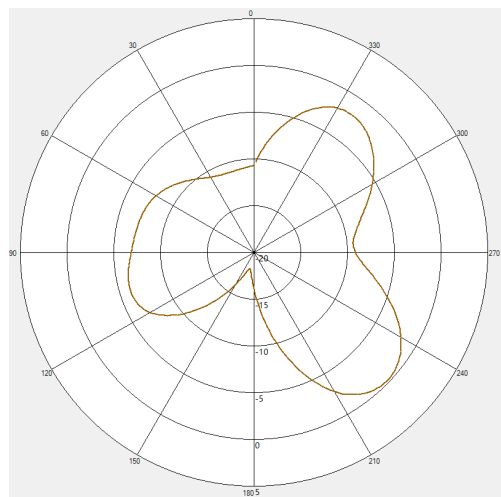


- Return Loss in Free Space

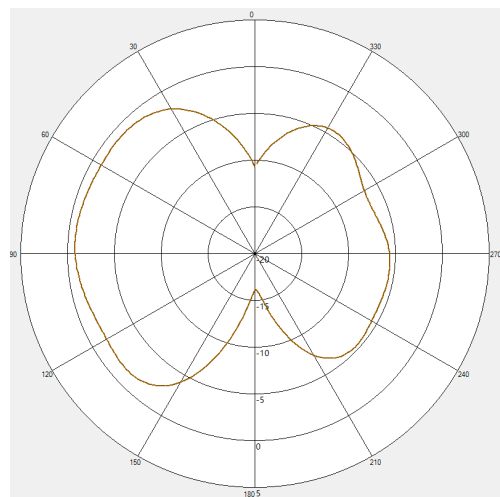
Antenna Pattern

2400MHz

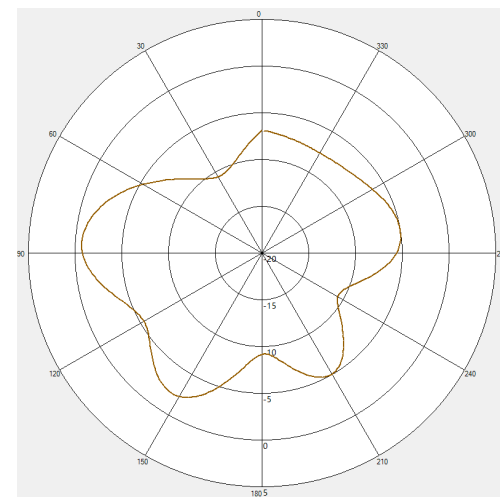
X-Z Plane



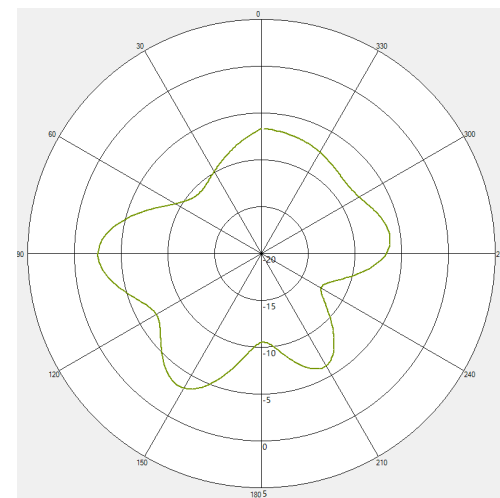
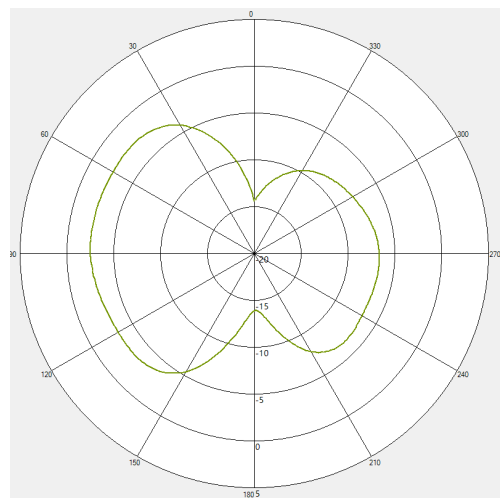
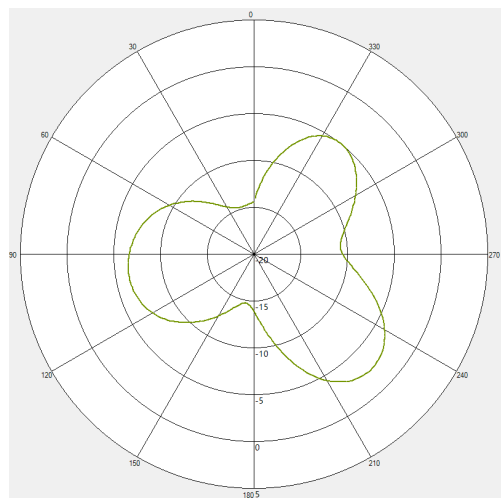
Y-Z Plane



X-Y Plane



2500MHz



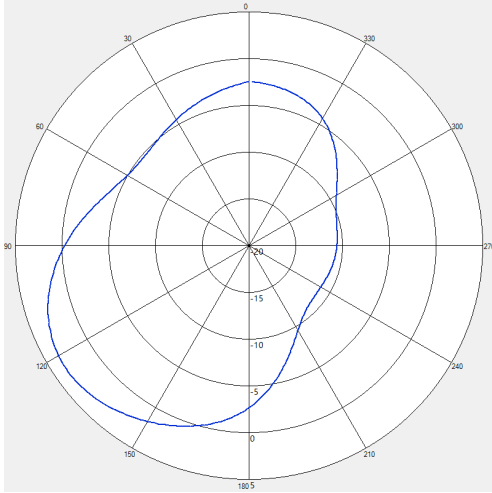
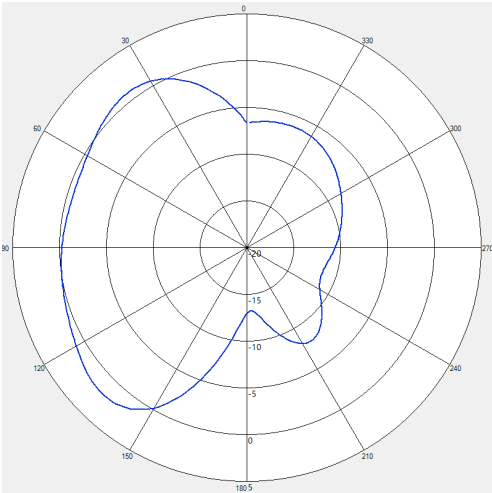
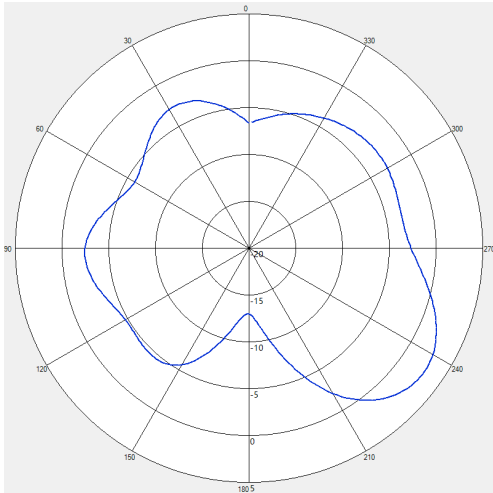
Antenna Pattern

X-Z Plane

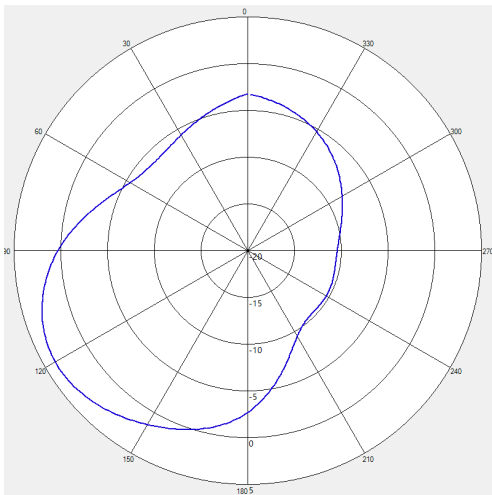
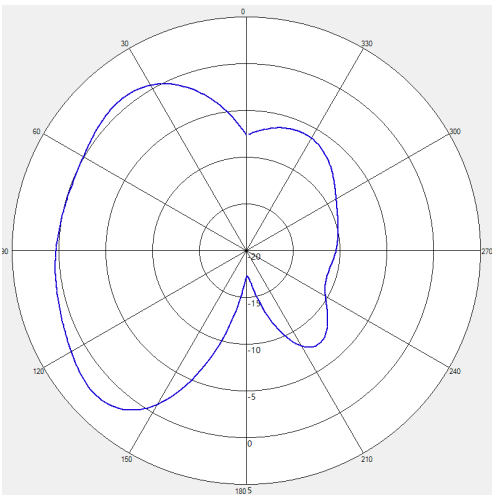
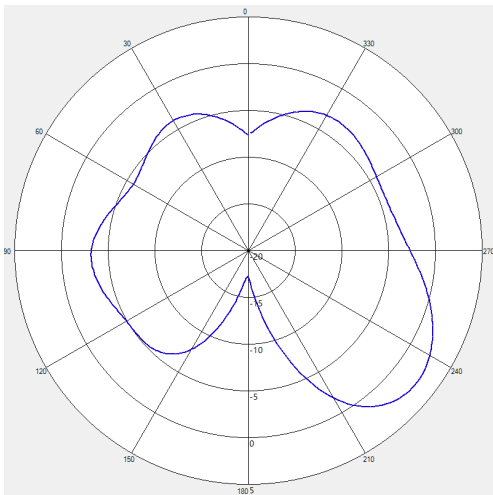
Y-Z Plane

X-Y Plane

5150MHz



5250MHz



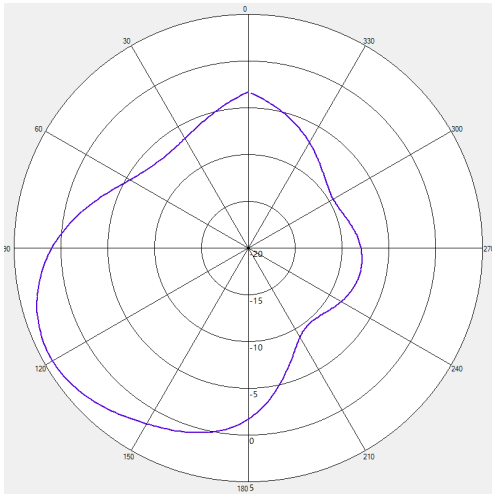
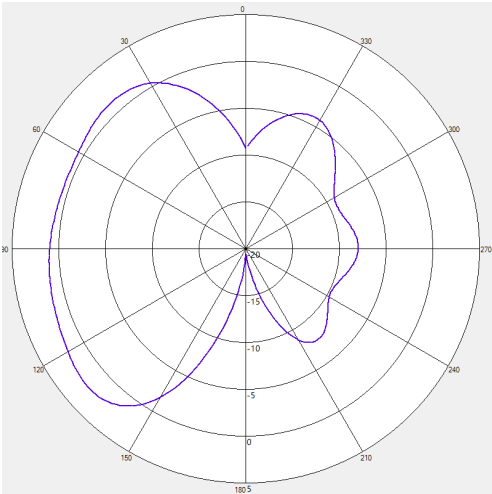
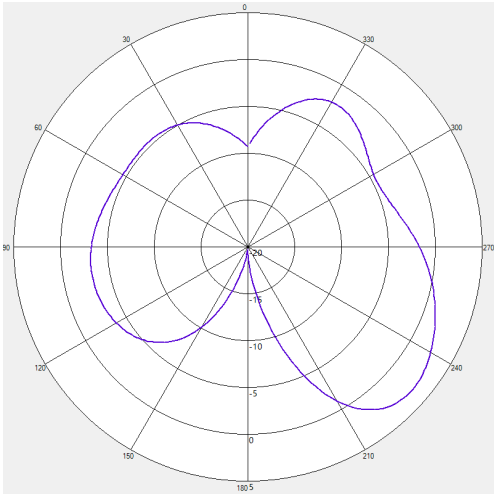
Antenna Pattern

X-Z Plane

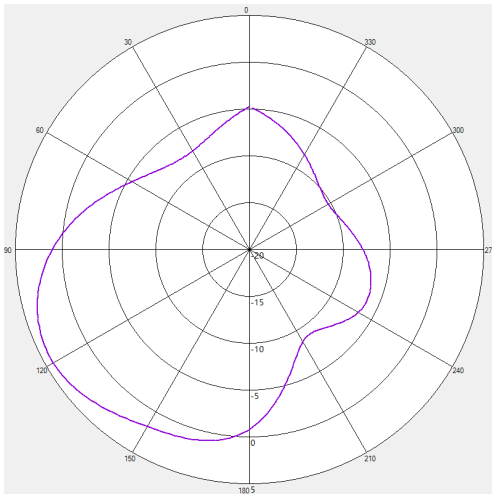
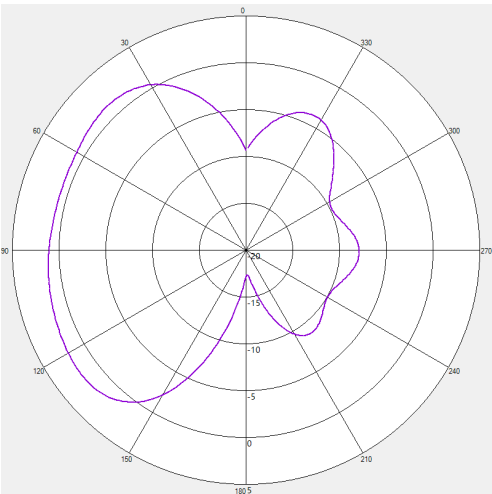
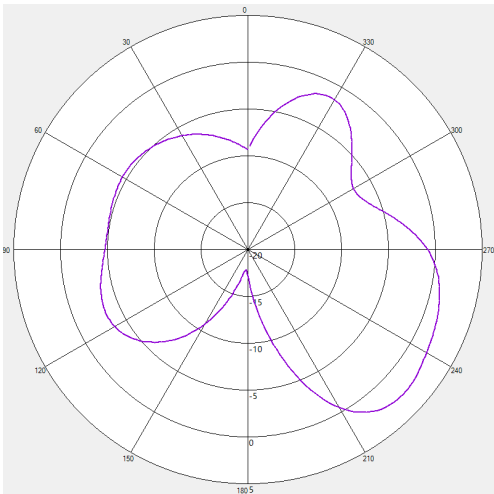
Y-Z Plane

X-Y Plane

5350MHz



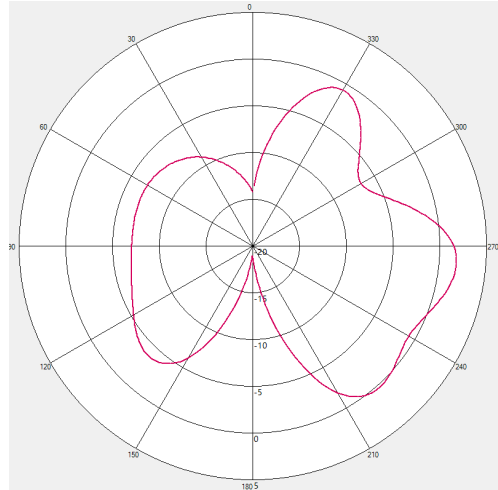
5450MHz



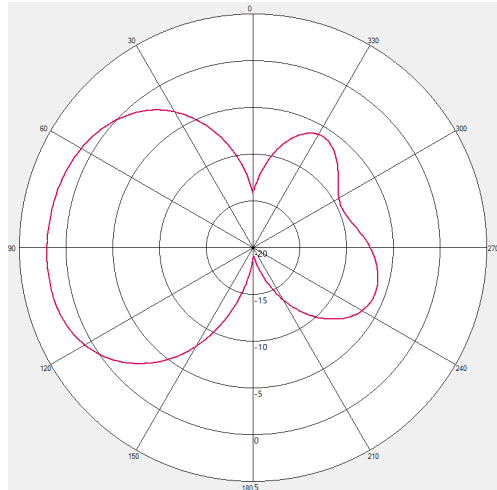
Antenna Pattern

5750MHz

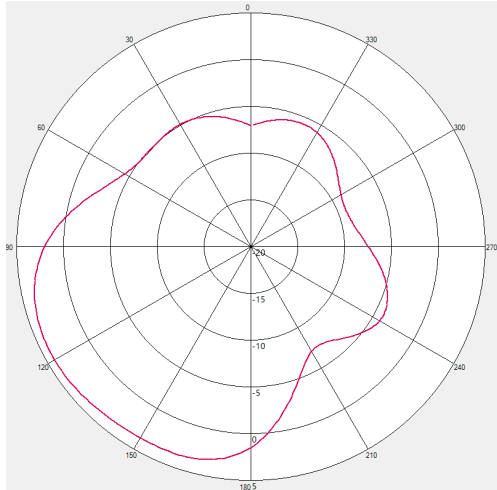
X-Z Plane



Y-Z Plane



X-Y Plane



5850MHz

