



Bluetooth Antenna
specification&Test report

Yichip Microelectronics

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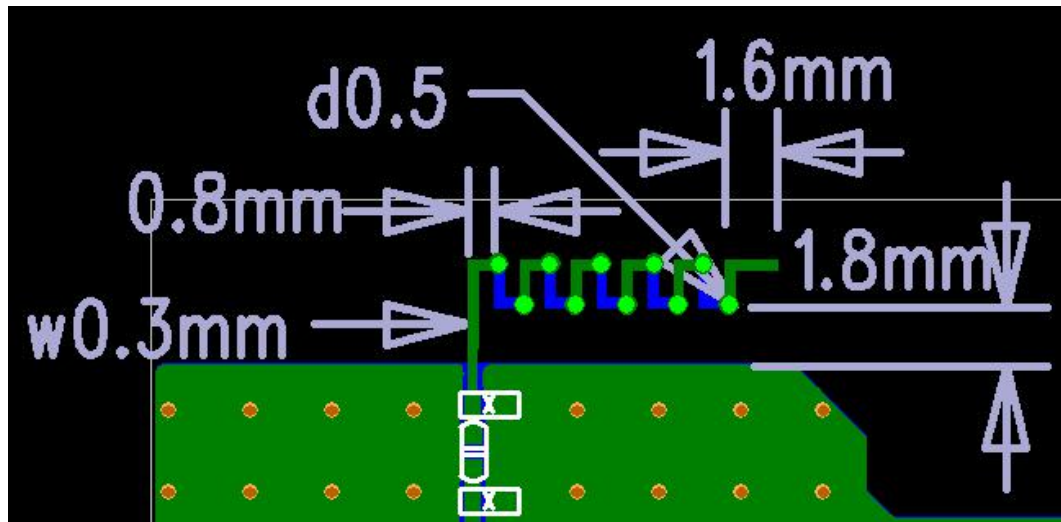
Manufacturer:Shenzhen Yinxiaoqian technology Co., Ltd
Address:202E, building A4, Hom Industrial Zone, 41 Wuhe Avenue (South)
Nankeng community, Bantian street, Longgang District, Shenzhen,
China

Test Ccompany	TA Technology (Shanghai) Co., Ltd.
Test Address	Building 1, No. 400, Fangchun Road, China (Shanghai) Pilot Free Trade Zone
Test Date	2020/7/24
Test Instrument	Keysight E5071B

antenna design specification

Antenna dimensions as blow picture show: the material is FR4 and the thickness is 1.6mm of PCB.

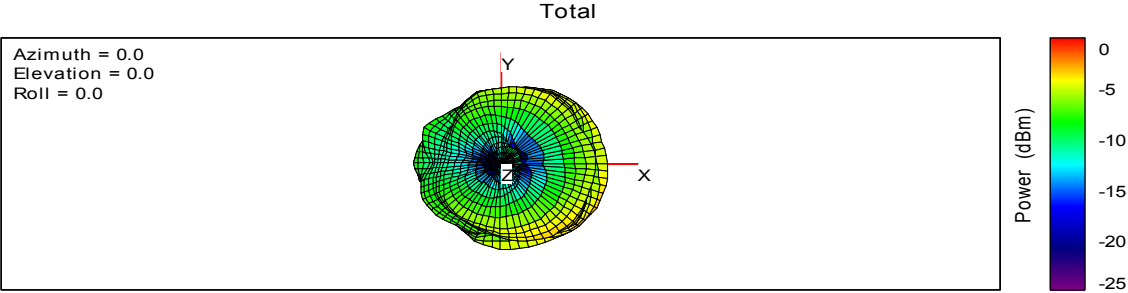
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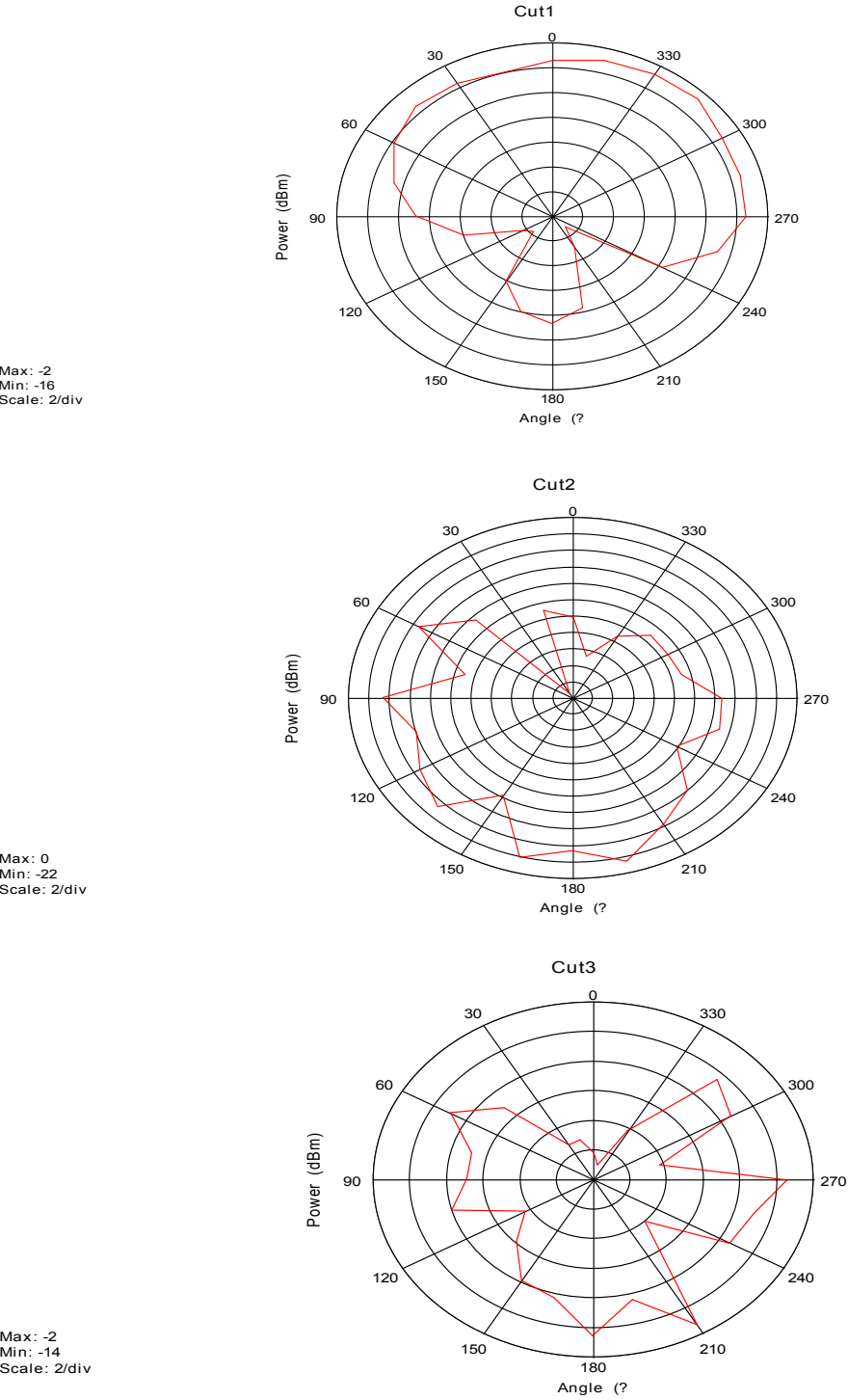
Gian and Efficiency

Frequency (MHz)	Efficiency(%)	Gain(dBi)
2300	13.17	-1.57
2320	19.08	-0.76
2340	22.65	-0.41
2360	22.62	-0.12
2380	18.03	-0.42
2400	14.86	-0.93
2420	12.54	-1.17
2440	9.92	-2.03
2460	7.46	-2.47
2480	6.11	-2.98
2500	5.39	-3.83

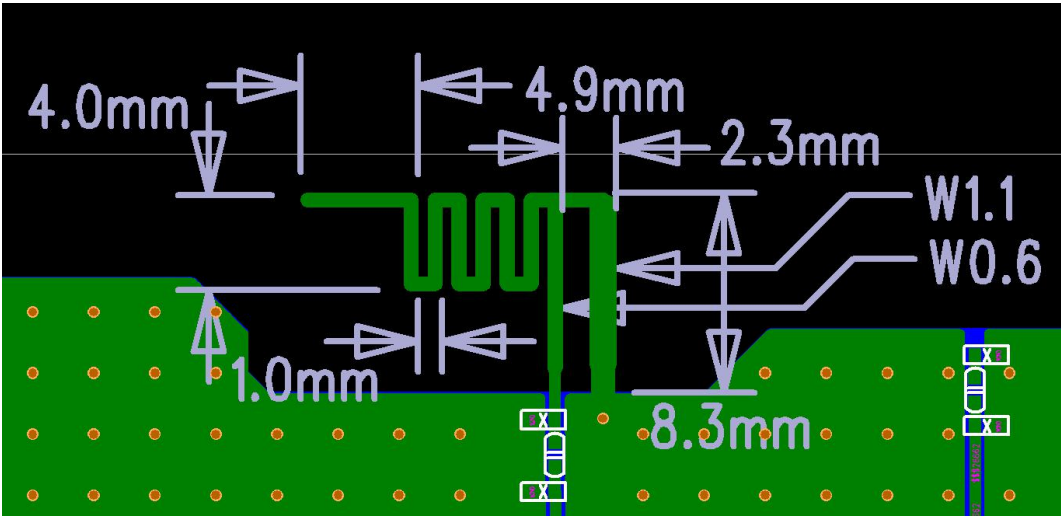
3D and 1D Radiation Patterns



2440M TRP 1



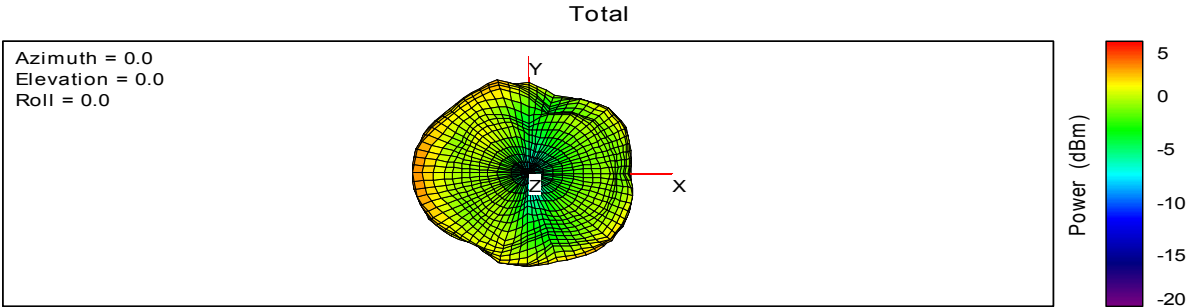
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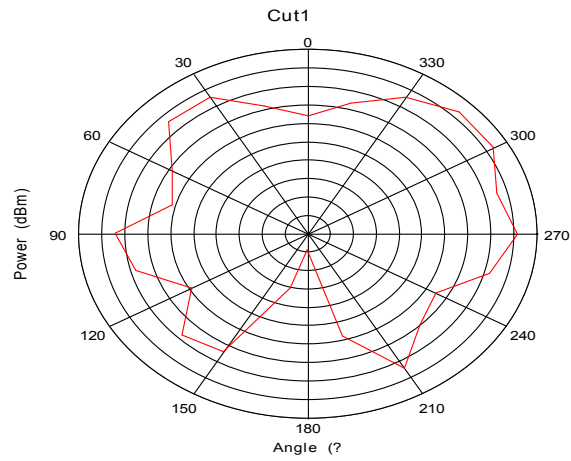


Gian and Efficiency

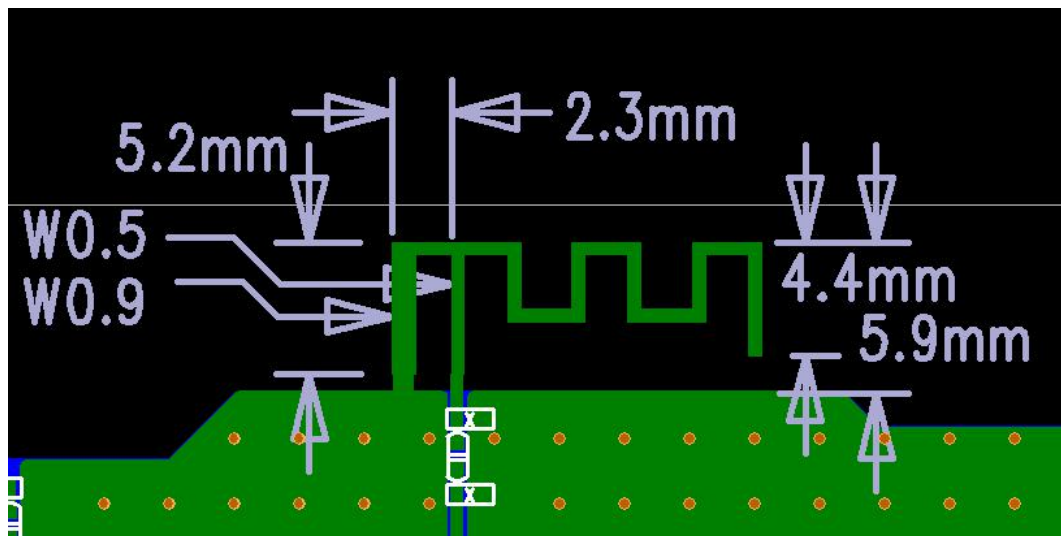
Frequency (MHz)	Efficiency(%)	Gain(dBi)
2300	28.41	-1.40
2320	38.63	-0.11
2340	42.82	0.36
2360	47.04	0.41
2380	47.39	0.58
2400	53.31	0.73
2420	63.69	2.10
2440	66.14	2.52
2460	64.61	2.72
2480	63.93	2.79
2500	65.00	2.97
2520	60.03	2.90
2540	58.27	3.12

3D and 1D Radiation Patterns





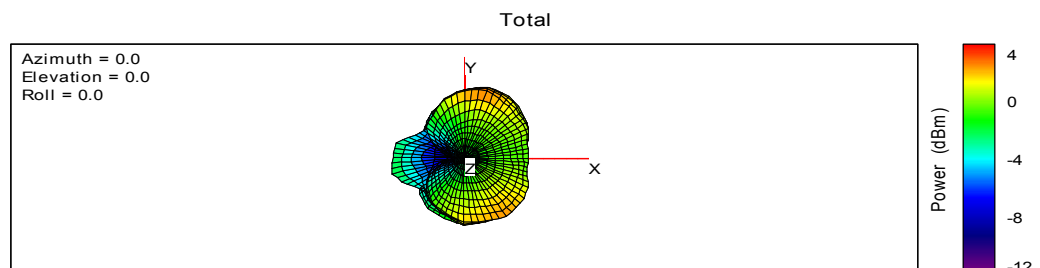
ANT3



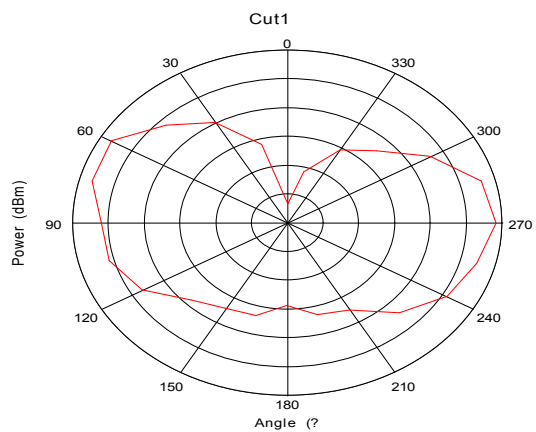
Gian and Efficiency

Frequency (MHz)	Efficiency(%)	Gain(dBi)
2280	33.54	0.70
2300	27.85	-0.04
2320	29.01	0.44
2340	26.23	0.07
2360	24.64	-0.83
2380	22.00	-1.24
2400	24.76	-1.52
2420	31.57	0.20
2440	38.13	0.87
2460	39.98	1.04
2480	41.93	1.30
2500	45.60	1.66
2520	44.01	2.12
2540	43.24	2.24

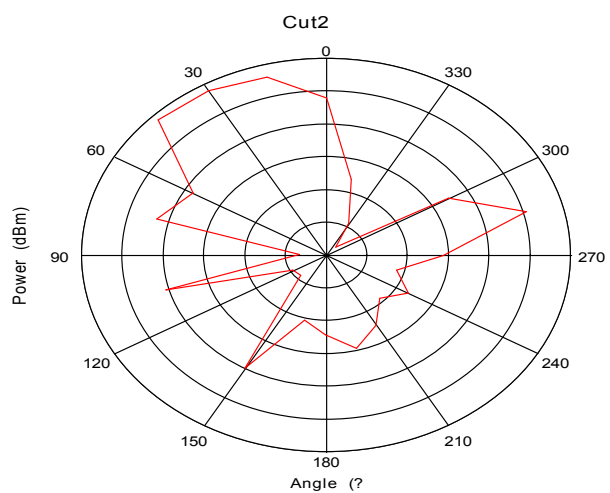
3D and 1D Radiation Patterns



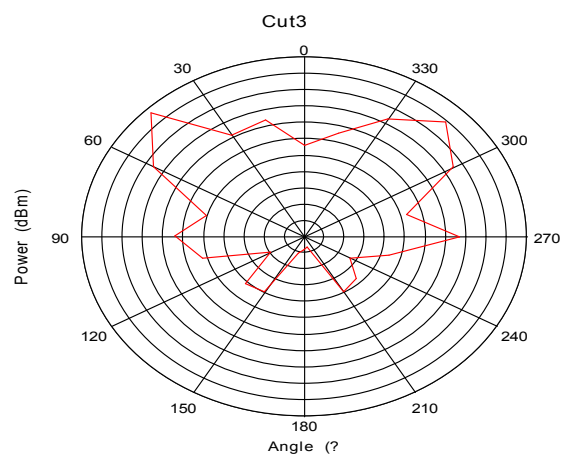
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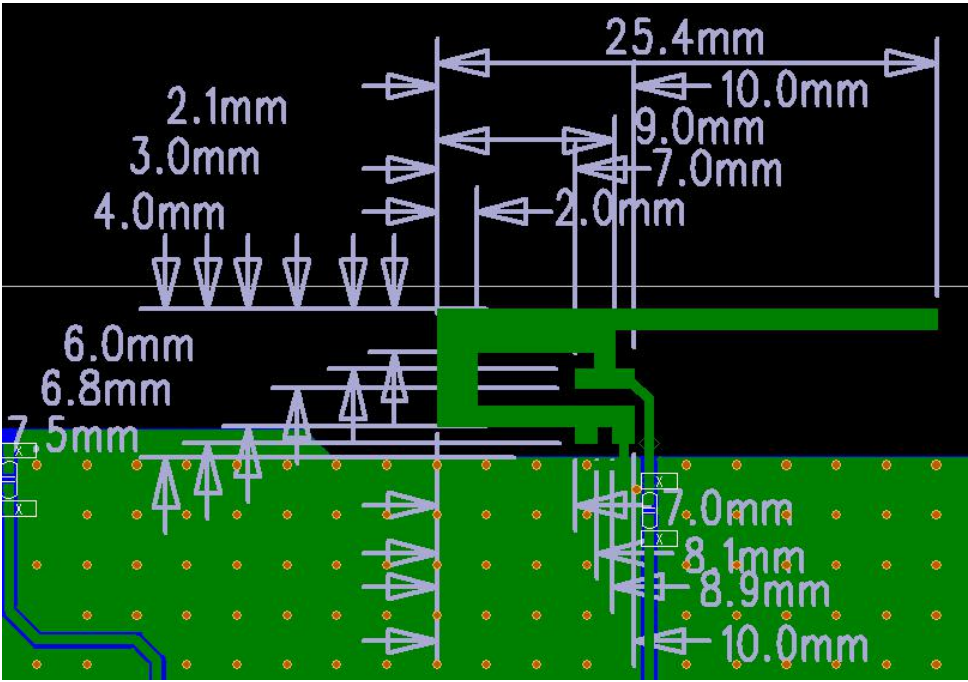
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Scale: 1/div



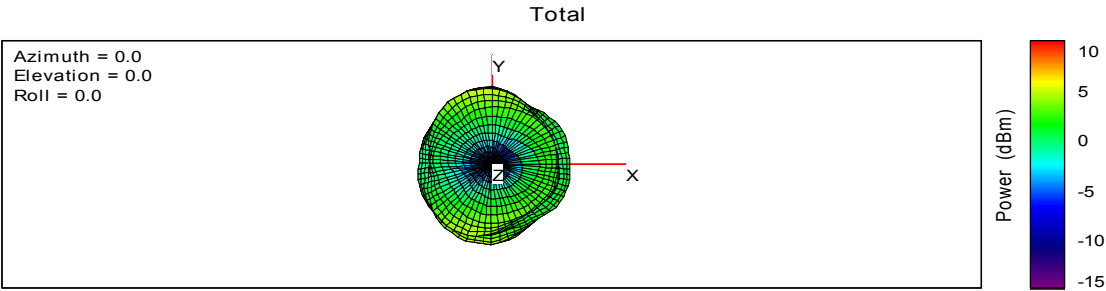
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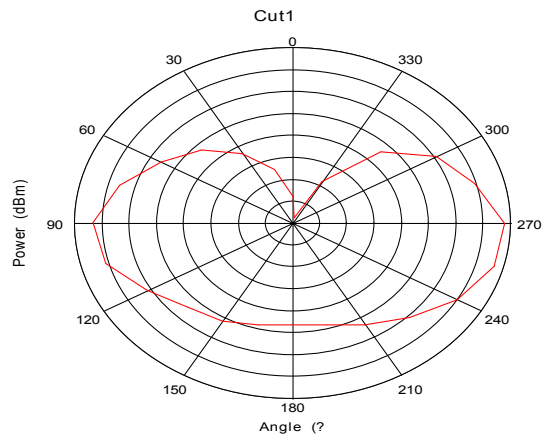


Gian and Efficiency

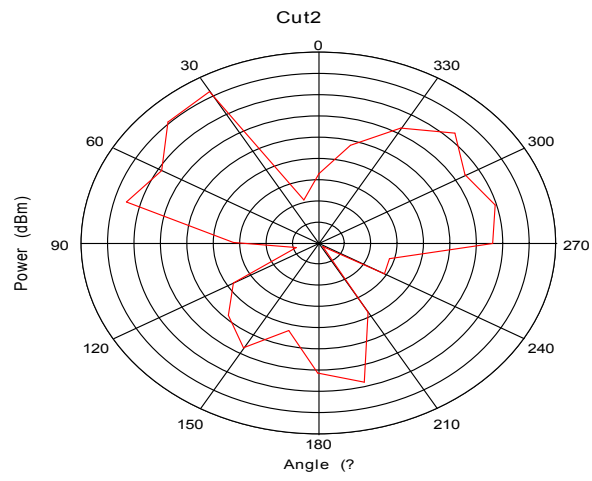
Frequency (MHz)	Efficiency(%)	Gain(dBi)
2300	43.36	2.00
2320	47.26	2.58
2340	45.70	2.08
2360	46.13	1.08
2380	44.94	1.76
2400	47.46	2.08
2420	53.66	2.83
2440	54.07	3.01
2460	49.87	3.01
2480	46.80	2.73
2500	46.67	2.44
2520	41.75	1.76
2540	39.78	1.30

3D and 1D Radiation Patterns

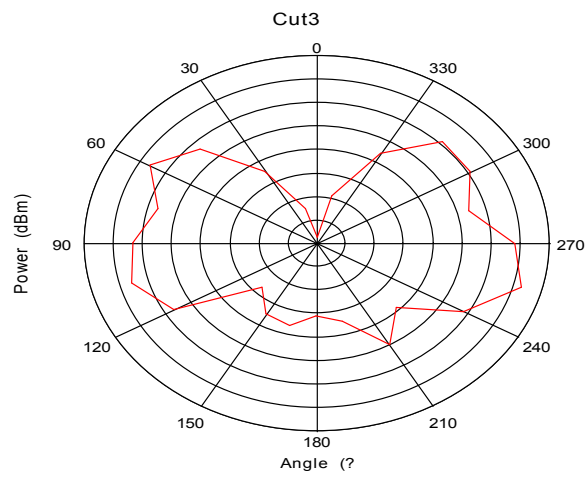




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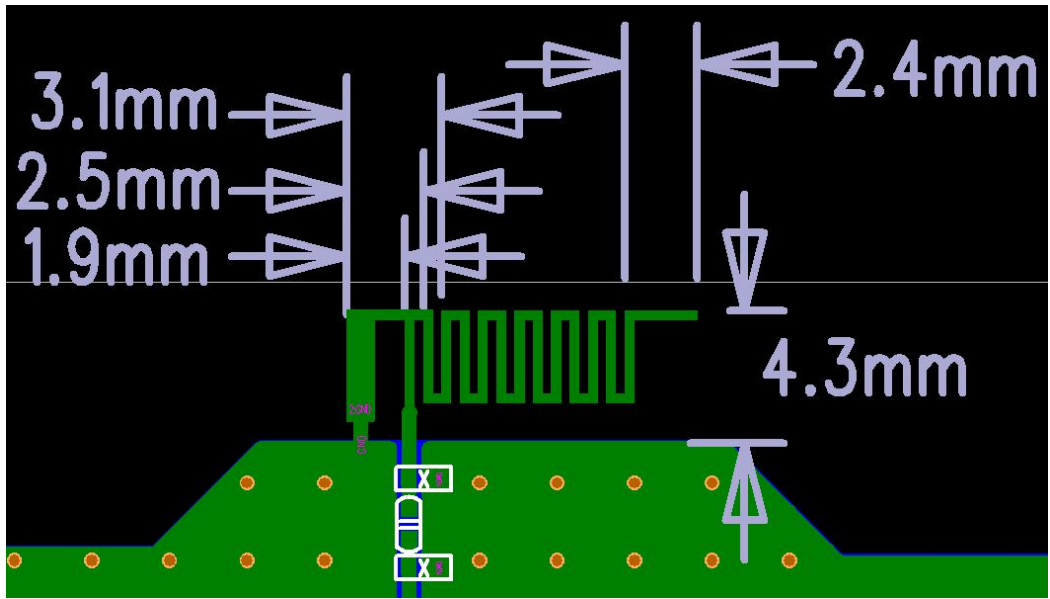


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Scale: 2/div



Max: 8
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Scale: 2/div

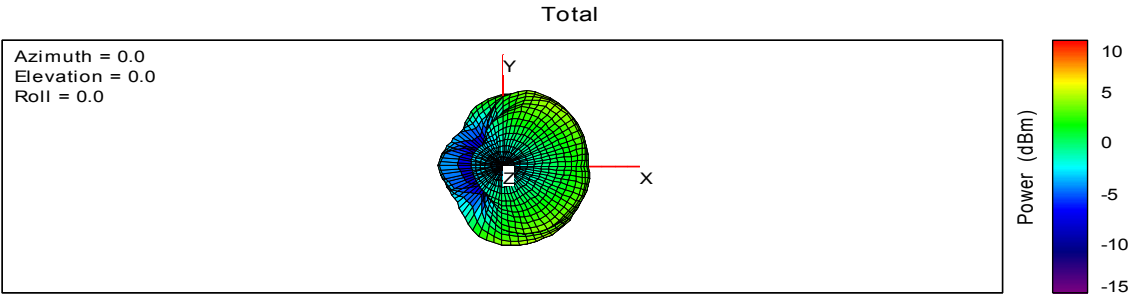
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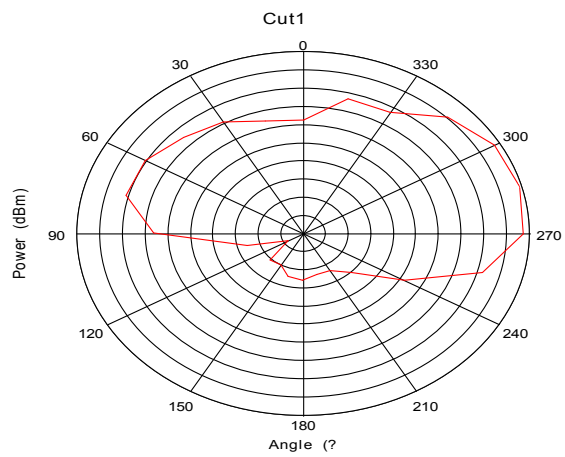


Gian and Efficiency

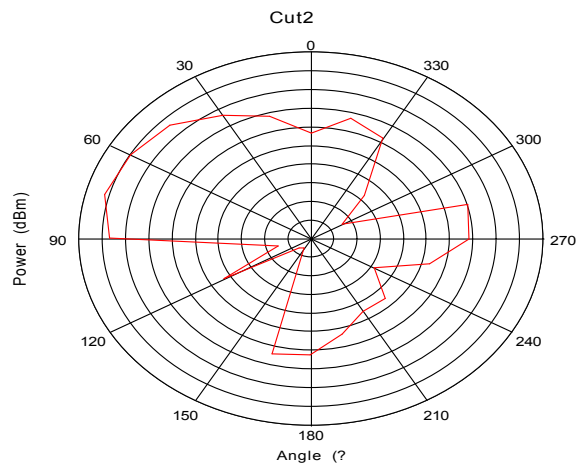
Frequency (MHz)	Efficiency(%)	Gain(dBi)
2300	34.81	-0.14
2320	38.90	0.50
2340	38.95	1.16
2360	40.11	1.28
2380	39.28	1.80
2400	41.77	2.20
2420	49.71	2.34
2440	50.23	2.58
2460	45.91	2.45
2480	42.46	2.09
2500	41.10	2.01
2520	35.58	0.96
2540	32.43	0.44

3D and 1D Radiation Patterns

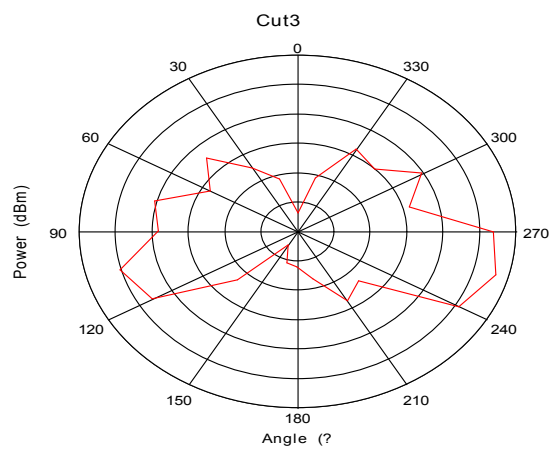




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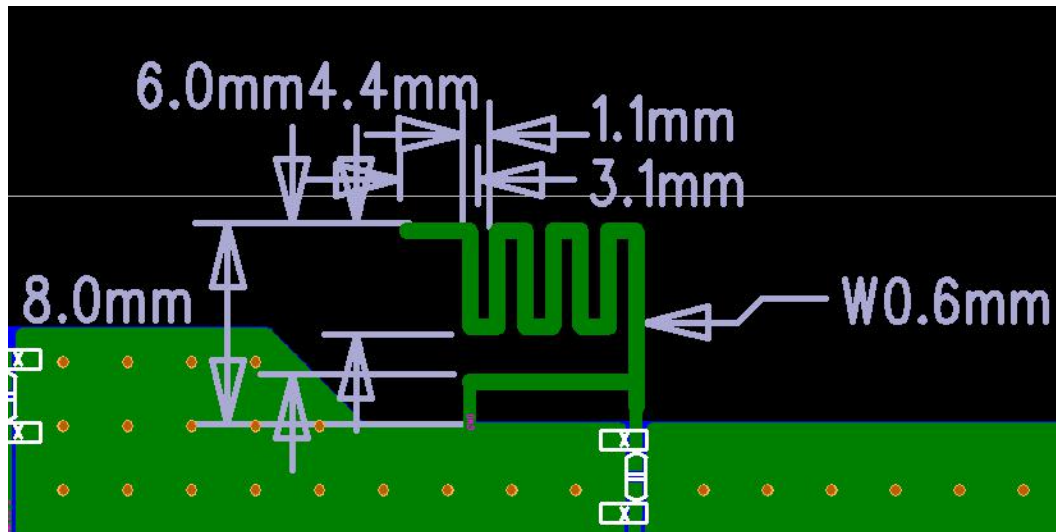


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Max: 6
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Scale: 2/div

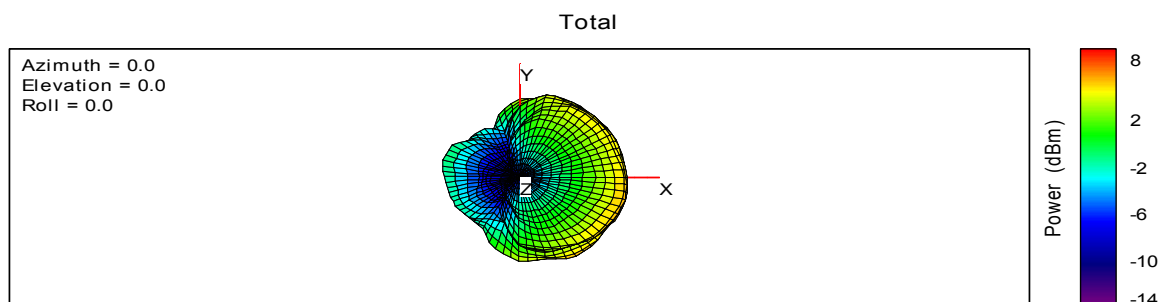
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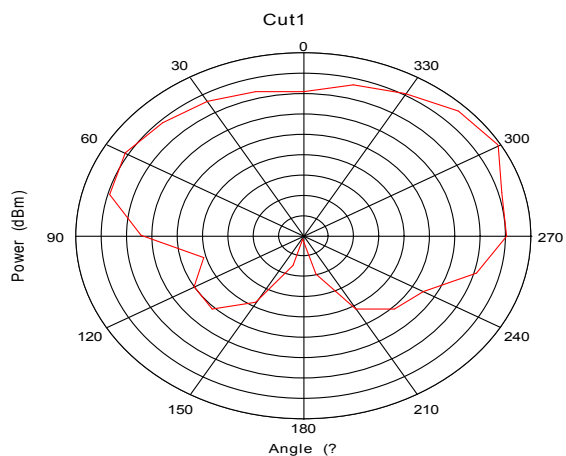
Gian and Efficiency

Frequency (MHz)	Efficiency(%)	Gain(dBi)
2300	42.68	0.78
2320	46.24	1.56
2340	44.62	2.23
2360	44.44	2.69
2380	42.81	3.27
2400	46.29	3.85
2420	56.89	4.41
2440	60.27	4.33
2460	57.59	3.73
2480	55.54	3.66
2500	56.50	4.05
2520	50.26	3.52
2540	47.76	3.49

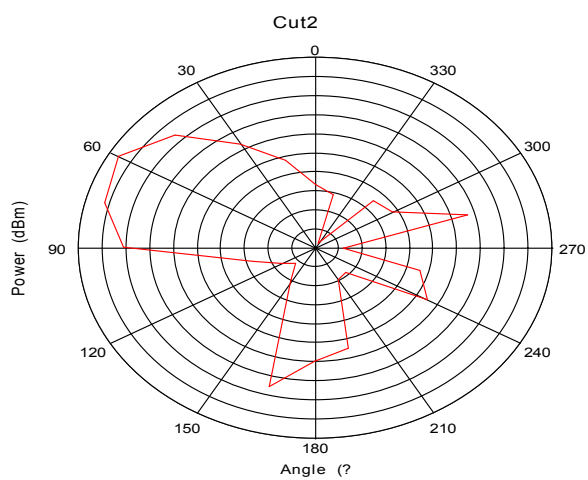
3D and 1D Radiation Patterns



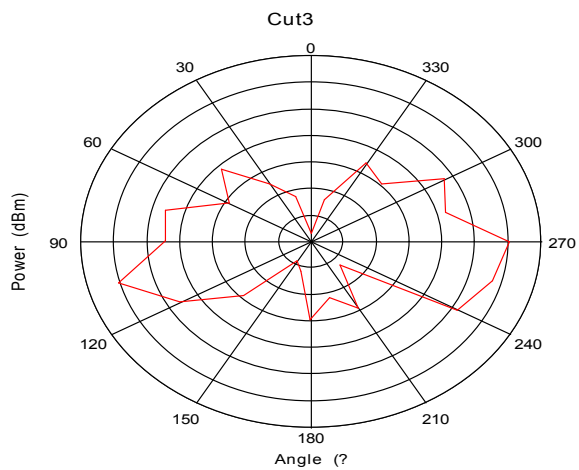
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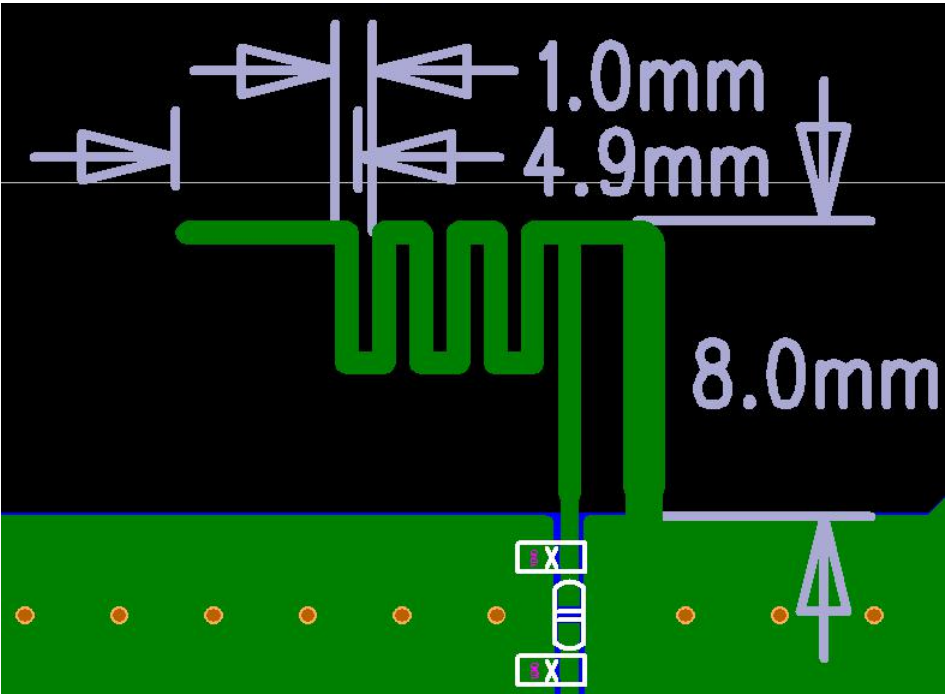
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Scale: 2/div



Max: 6
Min: -8
Scale: 2/div



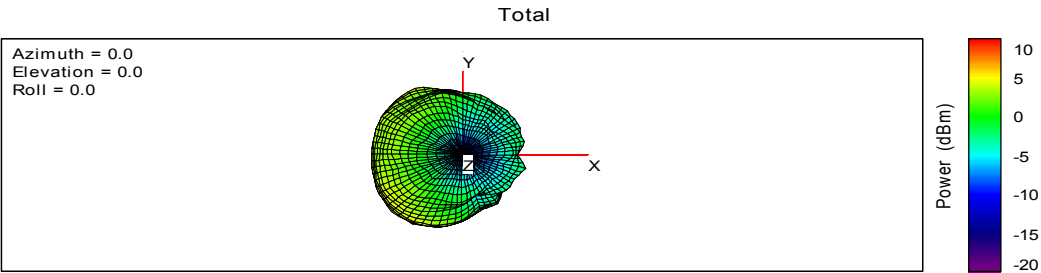
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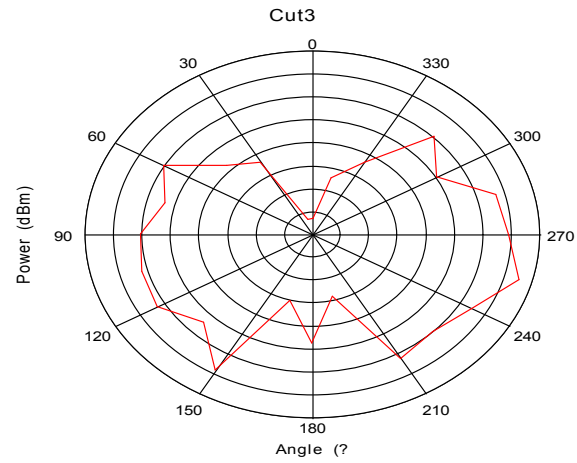
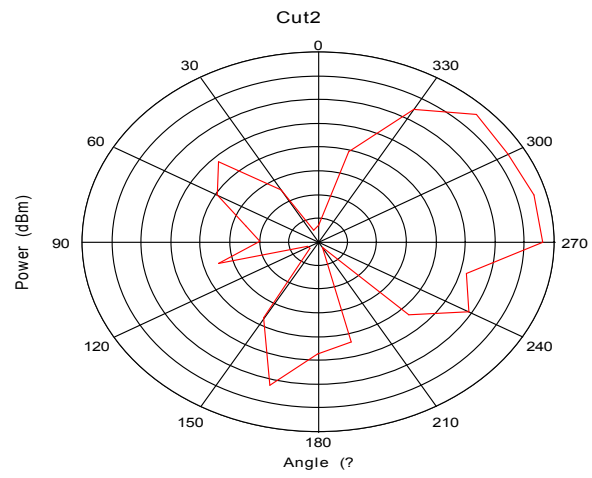
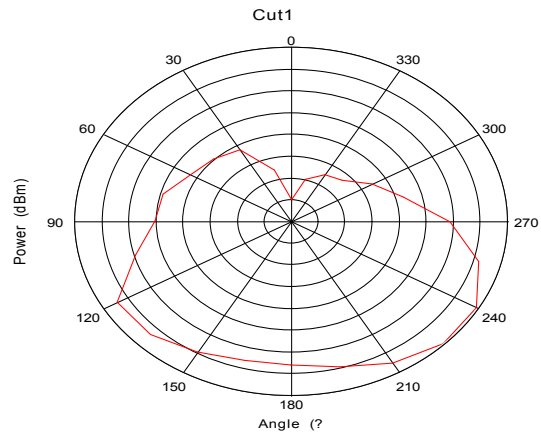


Gian and Efficiency

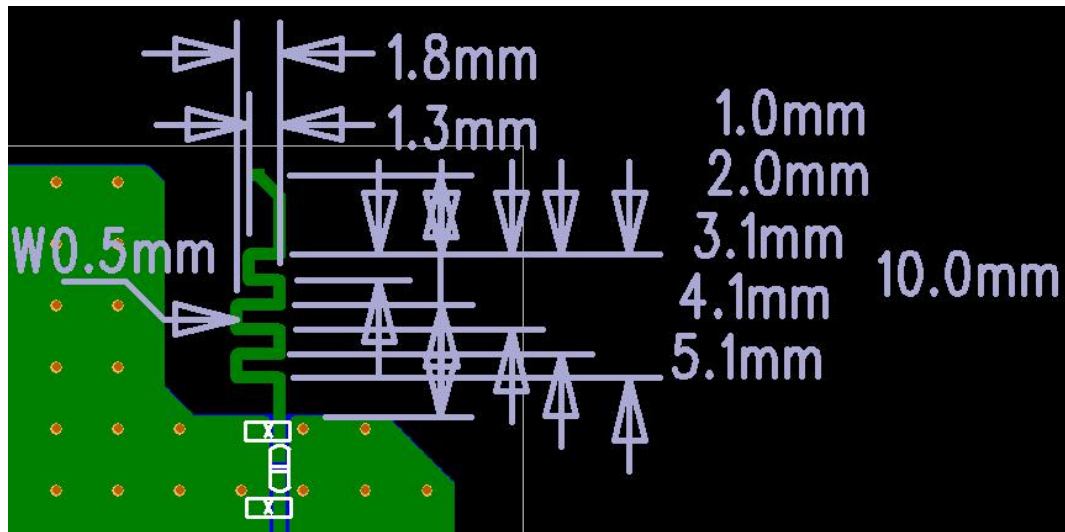
Frequency (MHz)	Efficiency(%)	Gain(dBi)
2300	51.44	2.59
2320	58.82	3.33
2340	57.60	3.39
2360	55.64	3.16
2380	48.67	2.63
2400	47.27	2.25
2420	51.45	2.14
2440	54.40	2.19
2460	56.94	2.51
2480	60.41	3.02
2500	64.59	3.26
2520	63.59	3.50
2540	64.52	3.71

3D and 1D Radiation Patterns





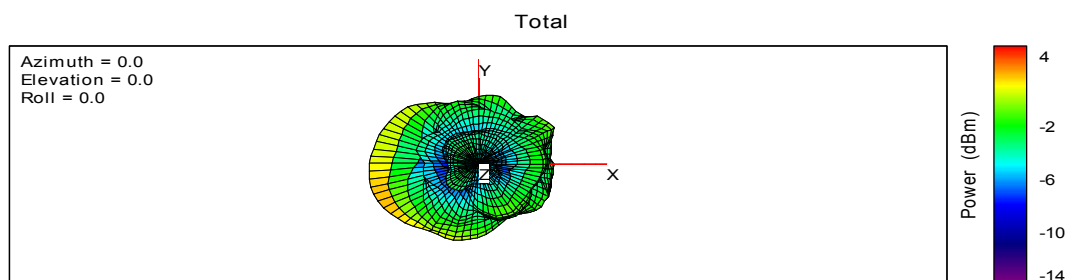
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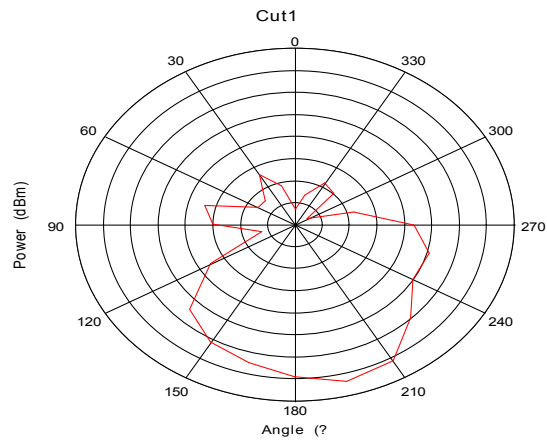
Gian and Efficiency

Frequency (MHz)	Efficiency(%)	Gain(dBi)
2300	12.77	-2.33
2320	20.15	-0.40
2340	25.71	0.95
2360	30.32	1.59
2380	30.90	1.63
2400	33.26	2.52
2420	38.93	3.55
2440	38.73	3.34
2460	36.32	2.93
2480	35.23	2.87
2500	35.82	2.53
2520	33.02	1.93
2540	31.62	1.42

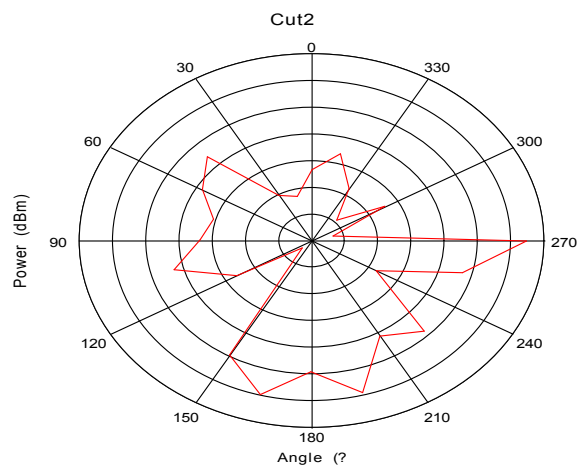
3D and 1D Radiation Patterns



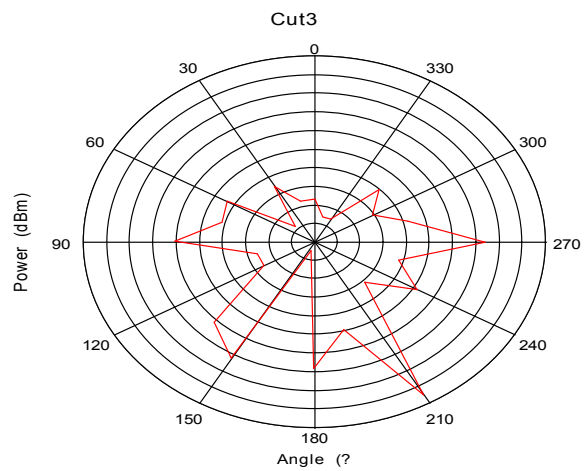
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Scale: 1/div



Max: 4
Min: -10
Scale: 2/div



Max: 3
Min: -7
Scale: 1/div



ANT1-ANT8 5dbm TRP test result:

Band	ANT	Frequency	Result (dBm)	Note
BT	ANT1	2440	-6.50	1
	ANT2	2440	-0.58	2
	ANT3	2440	-2.91	3
	ANT4	2440	0.92	4
	ANT5	2440	0.09	5
	ANT6	2440	0.34	6
	ANT7	2440	0.14	7
	ANT8	2440	-2.14	8