



Delta 6A

2G/3G/4G/(5G) & ISM 915 MHz 196MM HINGED DIRECT CONNECT ANTENNA

Key Features

- Quad band GSM / GPRS (2G)
- 3G, 4G & some 5G Bands
- ISM: 915 MHz



General Description

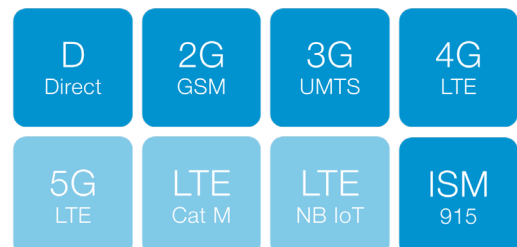
The Delta6A multi-band whip antenna has excellent performance across the frequency bands.

Terminated with an SMA Male or SMA-RP (reverse polarity) Male connector. The knuckle joint allows for antenna position adjustment through a 0, 45 & 90 degree angles and then swivels to allow vertical positioning.

Common IoT applications include: car park / utilities metering, wireless key entry, security systems, remote monitoring and many other IoT applications.

Additional Considerations

- Fits to most popular GSM / GPRS and 3G terminal equipment
- Adjustable mount allows positioning for best signal
- Does not rely on mounting on metallic surface
- Meets EU compliance criteria for electronic goods





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Electrical Specifications

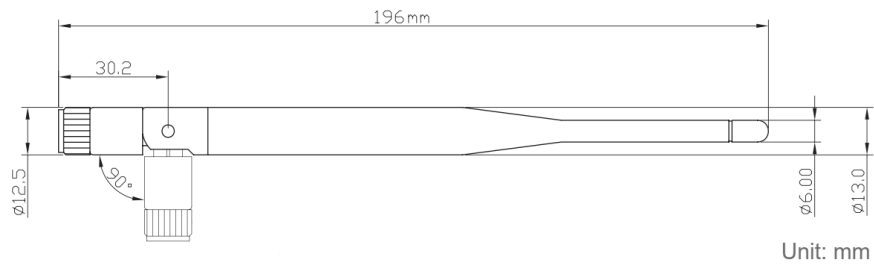
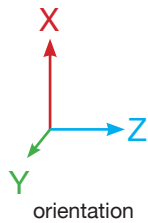
Impedance:	50 Ohm
Polarization:	Vertical
Ground Plane Independent:	Yes

Environmental Specification

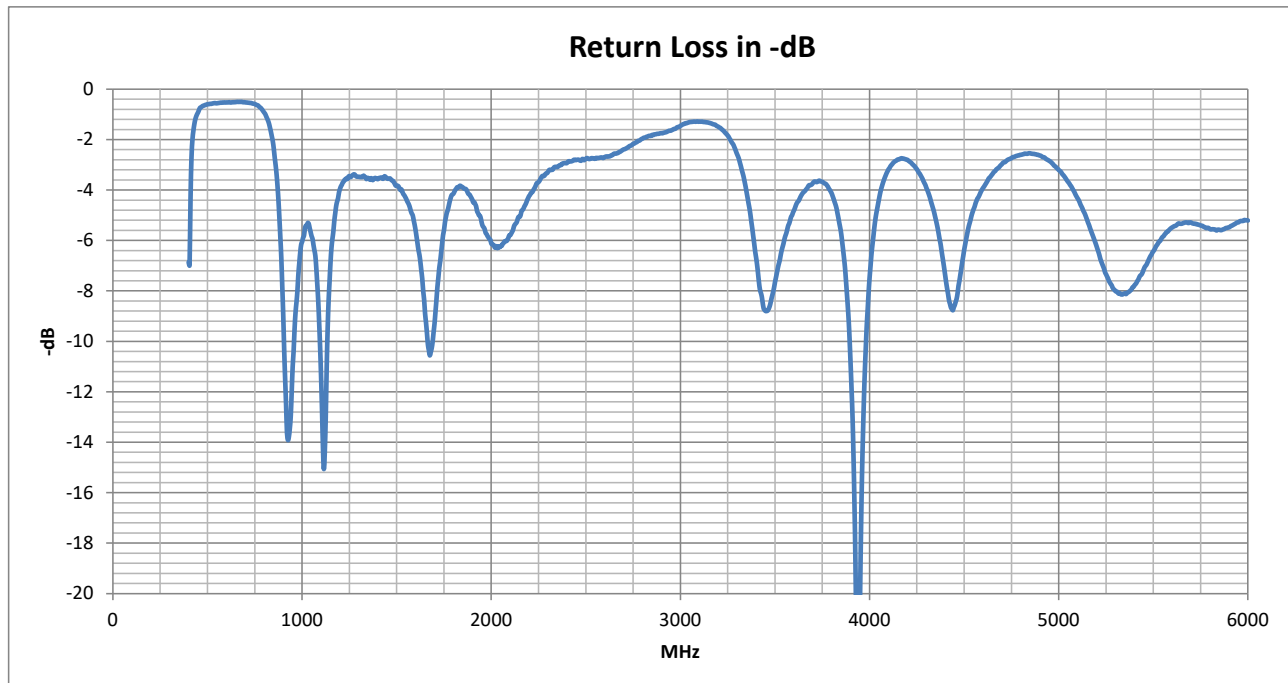
Operating temperature range:	-20 - +65 °C
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Mechanical Specifications

Dimensions:	L196 x 13mm Ø
Connector:	SMA
Cable:	RG316 (Internal)
Mounting Method:	Direct connect



Return Loss

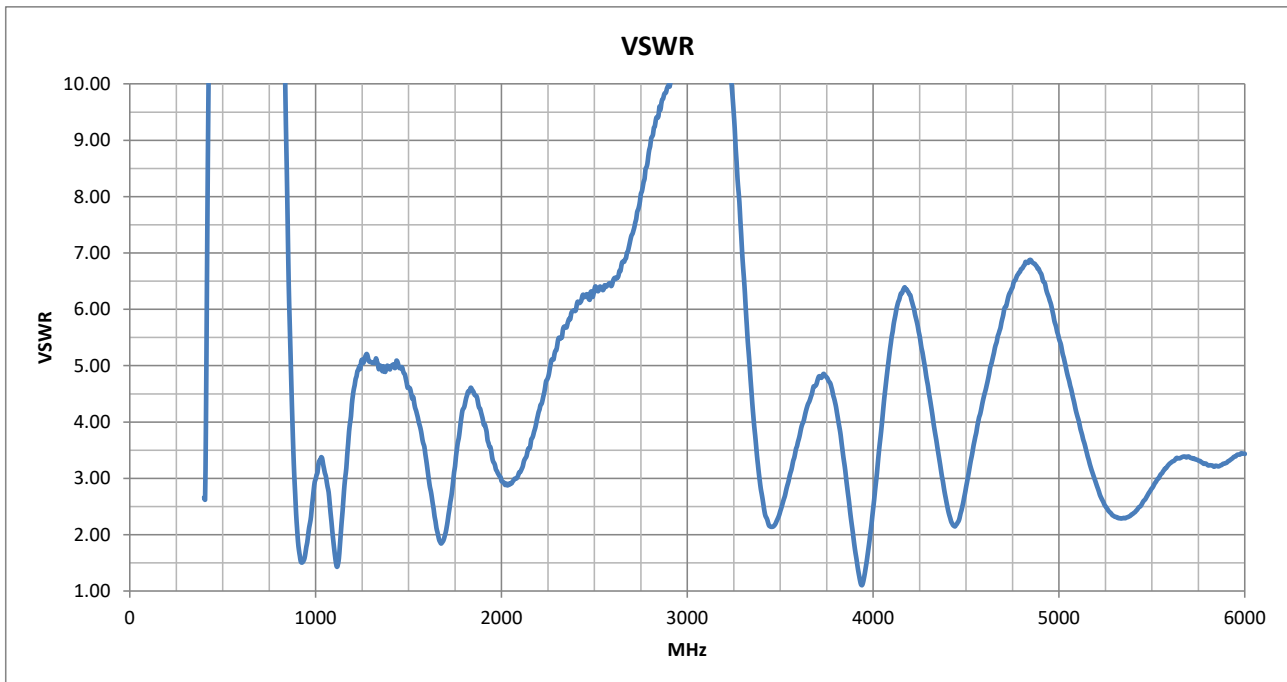




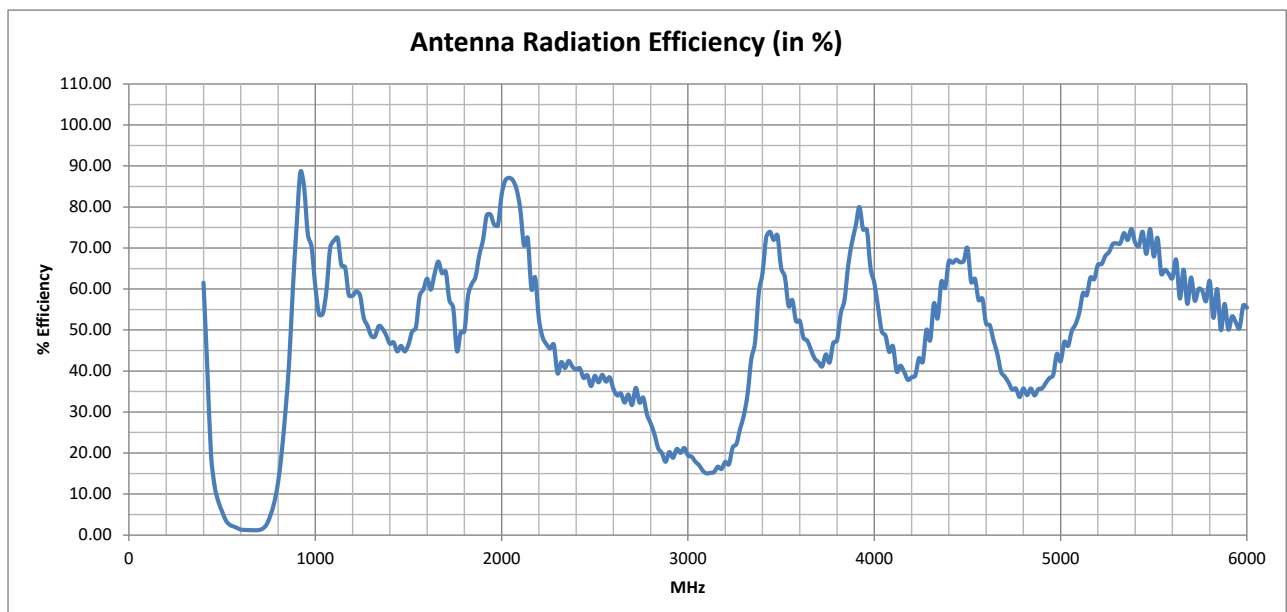
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VSWR



Radiation Efficiency





LTE/5G Band Coverage

LTE, CAT-M/5G Bands	NB-IoT Band	Regional Coverage	Uplink	Downlink	Avg Efficiency % over band	Max VSWR over Band
1/n1	B1	Europe / Asia	1920-1980 MHz	2110-2170 MHz	76.8 / 69.0 ●	3.82 / 3.76
2/n2	B2	North America/Latin America/Caribbean	1850-1910 MHz	1930-1990 MHz	68.47 / 78.06 ●	4.53 / 3.63
3/n3	B3	Europe/Africa/Asia/Oceania	1710-1785 MHz	1805-1880 MHz	53.47 / 60.11 ●	4.10 / 4.61
4	B4	North America/Latin America/Caribbean	1710-1755 MHz	2110-2155 MHz	55.44 / 70.62 ●	3.38 / 3.57
5/n5	B5	Country Specific	824-849 MHz	869-894 MHz	31.00 / 59.51 ✖	13.85 / 5.20
7/n7		Latin America/Europe/Asia +	2500-2570 MHz	2620-2690 MHz	38.20 / 33.36 ✖	6.43 / 7.17
8/n8	B8	Europe / Asia +	880-915 MHz	925-960 MHz	74.86 / 82.17 ●	3.48 / 2.00
11	B11	Country Specific	1427.9-1447.9 MHz	1475.9-1495.9 MHz	45.96 / 45.78 ●	5.09 / 4.87
12/n12	B12	North America/Caribbean +	699-716 MHz	729-746 MHz	1.35 / 3.08 ✖	33.4 / 31.6
13/n13	B13	North America/Caribbean +	777-787 MHz	746-756 MHz	8.57 / 3.79 ✖	24.3 / 29.9
14/n14	B14	Country Specific	788-798 MHz	758-768 MHz	10.4 / 5.20 ✖	22.3 / 28.4
17	B17	North America/Caribbean +	704-716 MHz	734.746 MHz	1.45 / 3.08 ✖	32.9 / 31.6
18/n18	B18	Country Specific	815-830 MHz	860-875 MHz	21.11 / 51.43 ✖	14.93 / 5.81
19	B19	Country Specific	830-845 MHz	875-890 MHz	31.00 / 59.51 ✖	11.39 / 4.01
20/n20	B20	Europe/Africa +	832-862 MHz	791-821 MHz	38.35 / 17.83 ✖	11.39 / 21.0
21		Country Specific	1447.9-1462.9 MHz	1495.9-1510.9 MHz	45.22 / 46.96 ●	5.01 / 4.61
25/n25	B25	Country Specific	1850-1915 MHz	1525-1559 MHz	68.47 / 52.86 ●	4.53 / 4.45
26/n26	B26	Country Specific	814-849 MHz	859-894 MHz	26.45 / 52.20 ✖	16.12 / 6.46
28/n28	B28	Latin America/Europe/Asia +	703-748 MHz	758-803 MHz	3.08 / 9.73 ✖	32.9 / 28.4
29/n29		Country Specific	-	717-728 MHz	1.86 ✖	32.2
30/n30		Country Specific	2305-2315 MHz	2350-2360 MHz	40.81 / 41.60 ●	5.50 / 5.80
31	B31	Country Specific	452.5-457.5 MHz	462.5-467.5 MHz	15.88 / 9.99 ✖	23.4 / 25.0
32		Country Specific	-	1452-1496 MHz	45.53 ●	4.97
38/n38		Europe +	2570-2620 MHz		36.39 ✖	6.57
39/n39		Country Specific	1880-1920 MHz		72.72 ●	4.25
40/n40		Asia +	2300-2400 MHz		41.03 🟡	5.98
41/n41		Country Specific	2496-2690 MHz		35.81 ✖	7.17
42		Country Specific	3400-3600 MHz		63.73 ●	3.7
43		Country Specific	3600-3800 MHz		45.43 ●	4.85
46/n46		Country Specific	5150-5925 MHz		63.88 ●	3.45
48/n48		Country Specific	3550-3700 MHz		49.27 ●	4.73
65/n65		Country Specific	1920-2010 MHz	2110-2200 MHz	79.47 / 66.34 ●	3.82 / 4.18
66/n66	B66	Country Specific	1710-1780 MHz	2110-2200 MHz	54.24 / 66.34 ●	3.98 / 4.18
71/n71	B71	Country Specific	663-698 MHz	617-652 MHz	1.20 / 1.25 ✖	33.5 / 34.5

Table data for bands as detailed in 3GPP TS 36.101 & 38.101

● Usable Band

🟡 Adequate in good signal area

✖ Not Usable



5G Extended Table for Band Coverage

LTE/5G Band	NB-IoT Band	Uplink	Downlink	Avg Efficiency % over band	Max VSWR over Band
n24		1626.5 – 1660.5 MHz	1525 – 1559 MHz	63.40 / 52.86	2.67 / 4.45
n34		2010 – 2025 MHz		85.53	2.93
n47		5855 – 5925 MHz		53.61	3.34
n50		1432 – 1517 MHz		46.46	5.09
n51		1427 – 1432 MHz		45.88	5.09
n53		2483.5 – 2495 MHz		37.56	6.32
n67		738 – 758 MHz		3.08	30.85
n70	B70	1695 – 1710 MHz	1995 – 2020 MHz	61.75 / 81.66	2.23 / 3.02
n74		1427 – 1470 MHz	1475 – 1518 MHz	45.67 / 46.75	5.09 / 4.87
n75		1432 – 1517 MHz		46.46	5.09
n76		1427 – 1432 MHz		45.88	5.09
n77		3300 – 4200 MHz		53.96	6.75
n78		3300 – 3800 MHz		52.35	6.75
n79		4400 – 5000 MHz		47.4	6.88
n80		1710 – 1785 MHz		53.47	4.10
n81		880 – 915 MHz		74.86	3.48
n82		832 – 862 MHz		38.35	11.39
n83		703 – 748 MHz		2.62	32.9
n84		1920 – 1980 MHz		76.83	3.82
n85	B85	698 – 716 MHz	728 – 746 MHz	1.35 / 3.08	33.5 / 31.7
n86		1710 – 1780 MHz		54.24	3.98
n89		824 – 849 MHz		31.00	13.85
n90		2496 – 2690 MHz		35.81	7.17
n91		832 – 862 MHz	1427 – 1432 MHz	38.35 / 45.88	11.39 / 5.09
n92		832 – 862 MHz	1432 – 1517 MHz	38.35 / 46.46	11.39 / 5.09
n93		880 – 915 MHz	1427 – 1432 MHz	74.86 / 45.88	3.48 / 5.09
n94		880 – 915 MHz	1432 – 1517 MHz	74.86 / 46.46	3.48 / 5.09
n95		2010 – 2025 MHz		85.53	2.93
n96		5925 – 7125 MHz		unmeasured	
n97		2300 – 2400 MHz		41.03	5.98
n98		1880 – 1920 MHz		72.72	4.25
n99		1626.5 – 1660.5 MHz		63.40	2.67

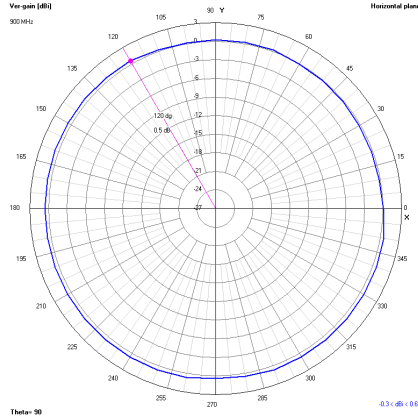
Table data for bands as detailed in 3GPP TS 38.101

● Usable Band ● Adequate in good signal area × Not Usable

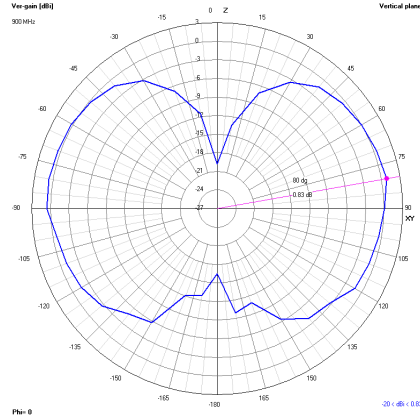


Radiation Plots

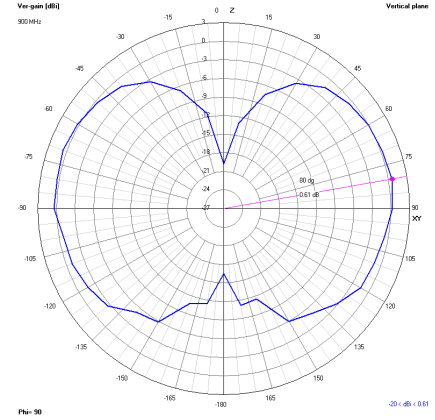
900 MHz XY



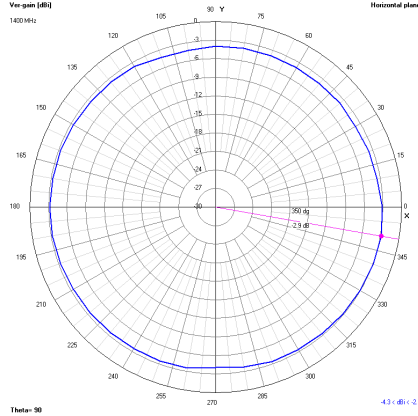
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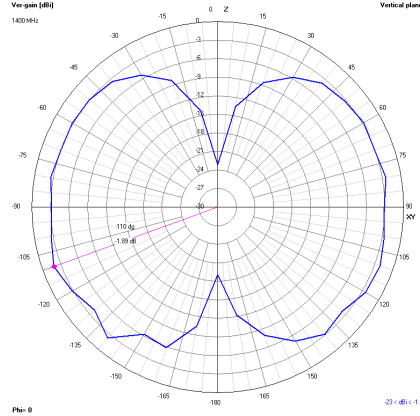
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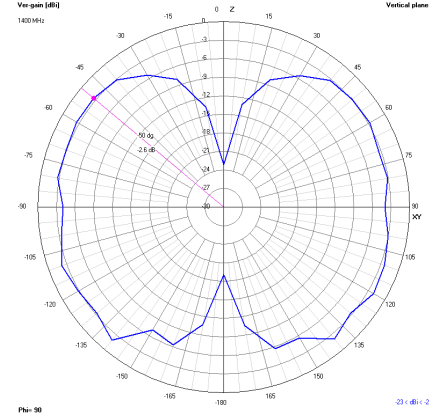
1400 MHz XY



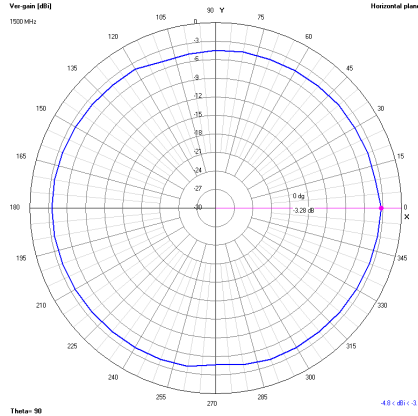
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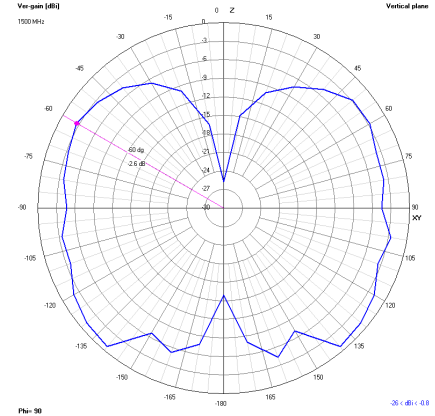
1500 MHz XY



XZ



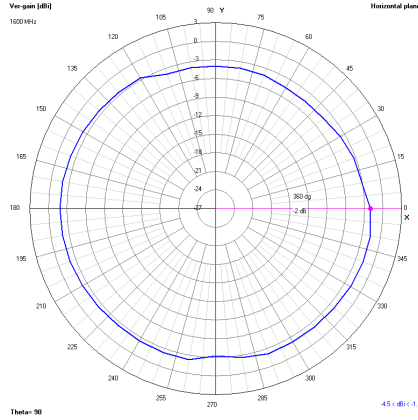
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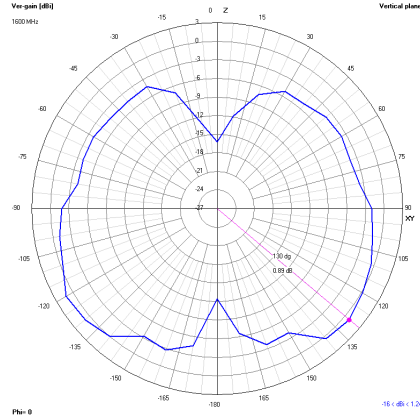


Radiation Plots

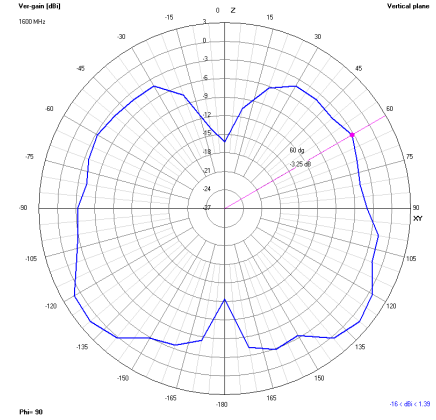
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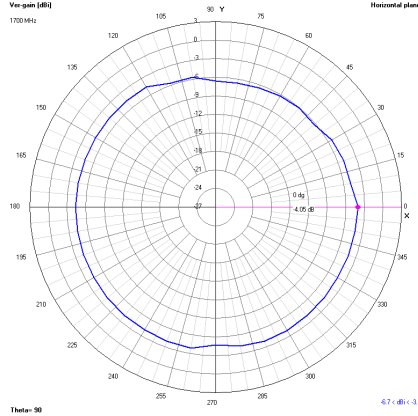
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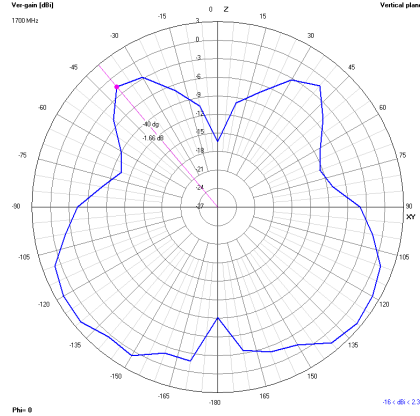
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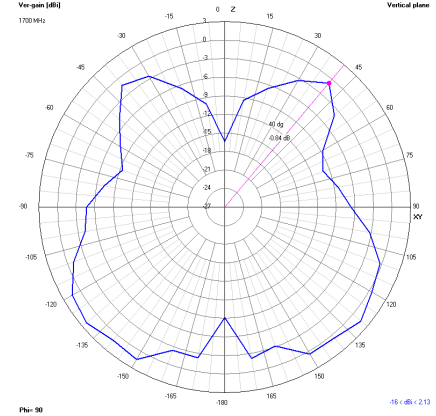
1700 MHz XY



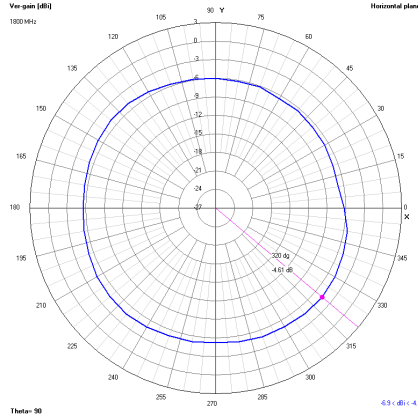
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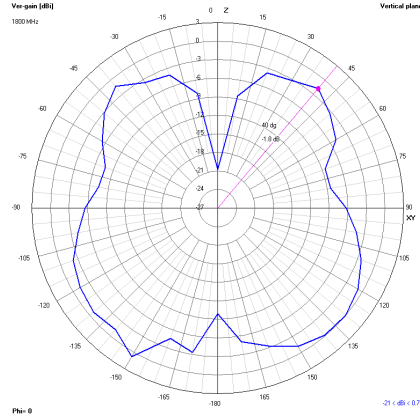
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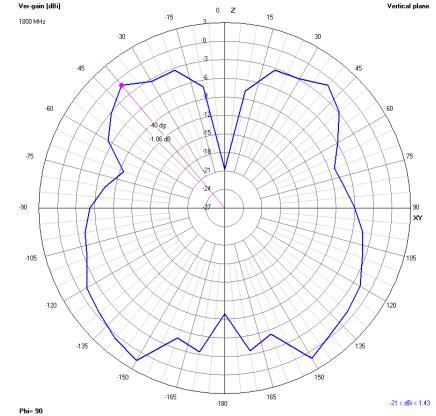
1800 MHz XY



XZ



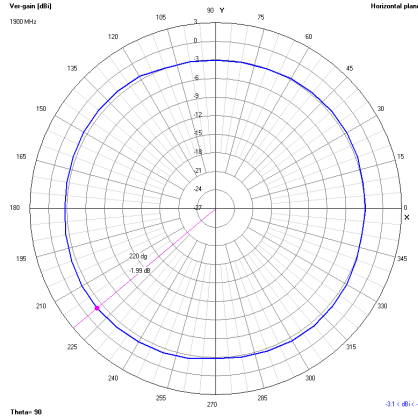
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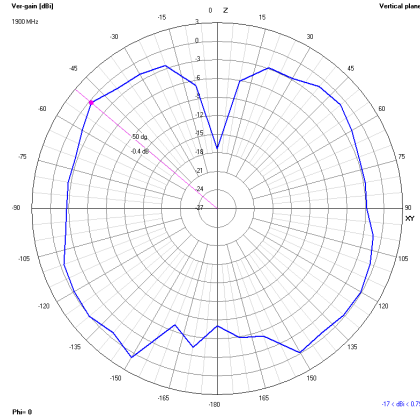


Radiation Plots

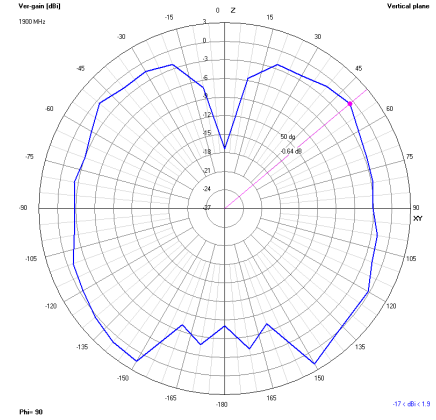
1900 MHz XY



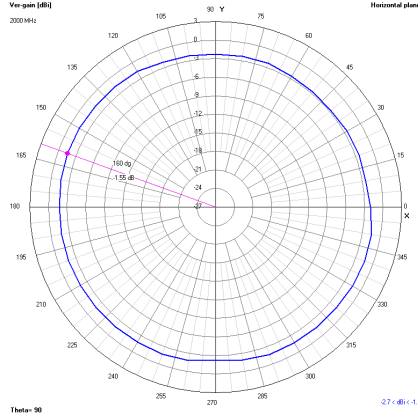
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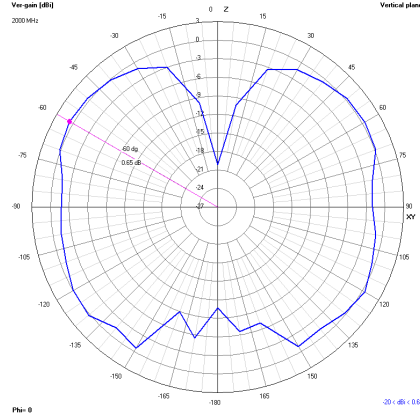
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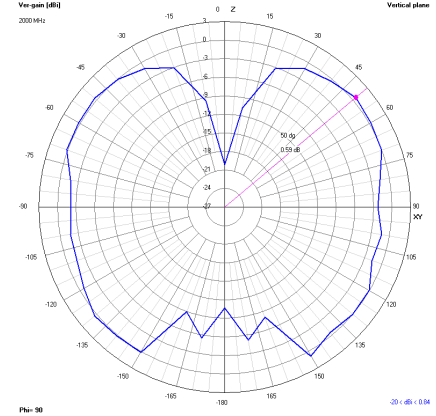
2000 MHz XY



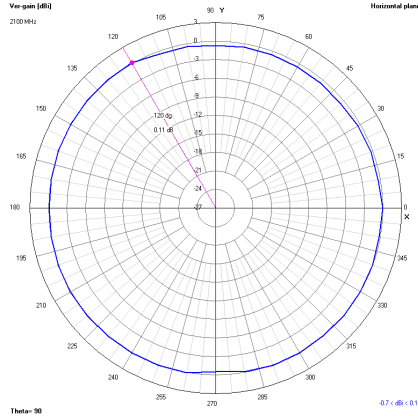
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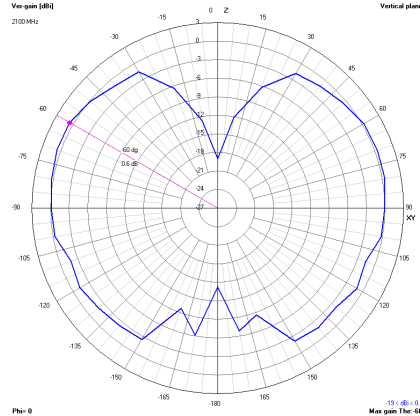
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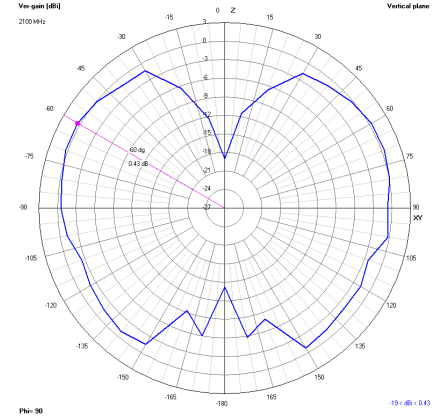
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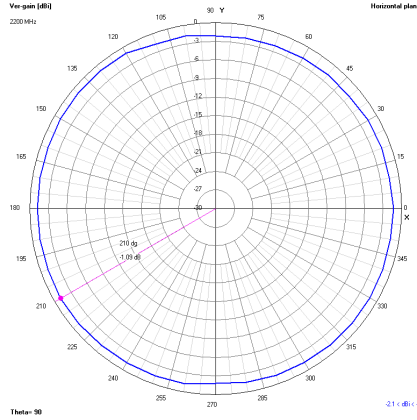
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Radiation Plots

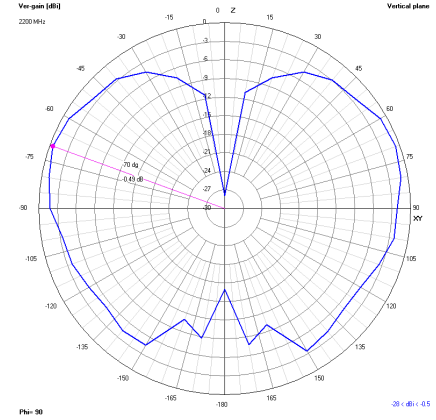
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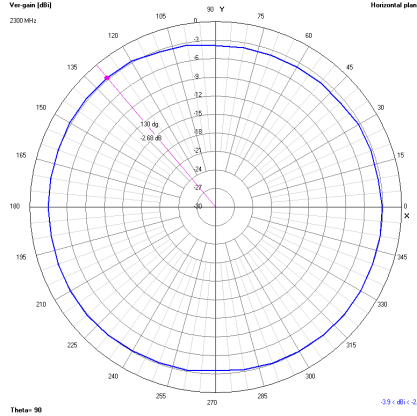
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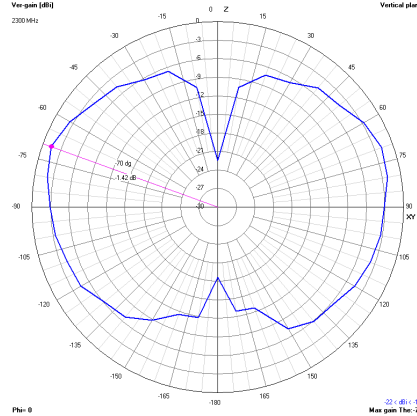
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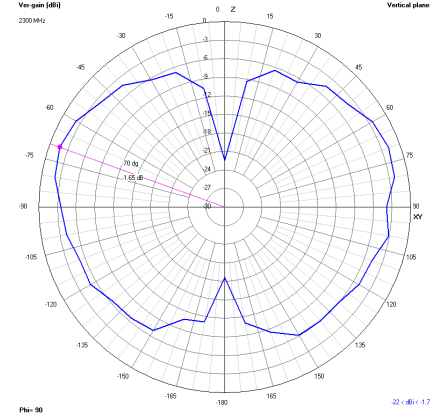
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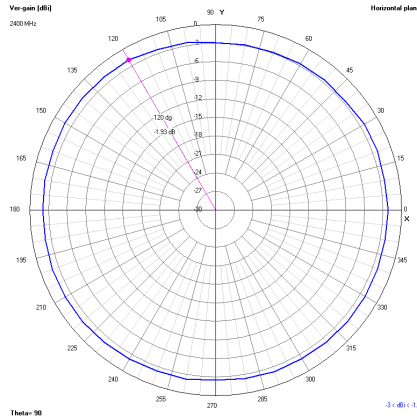
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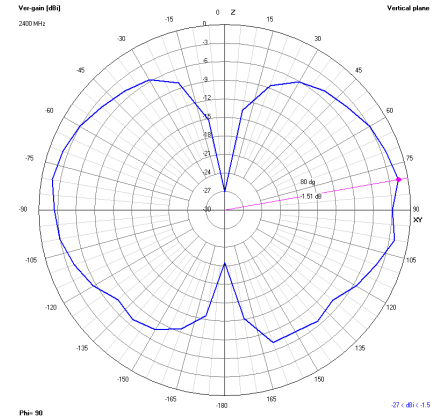
2400 MHz XY



XZ



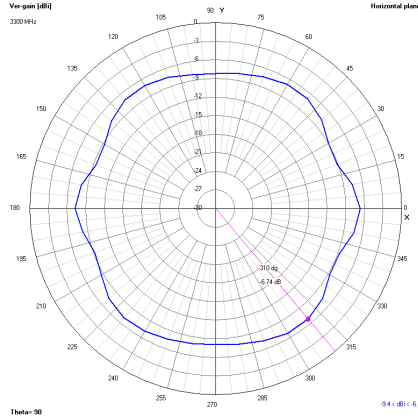
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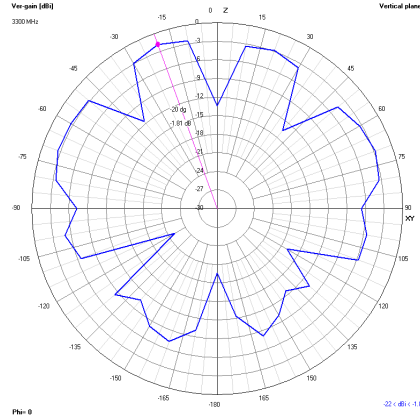


Radiation Plots

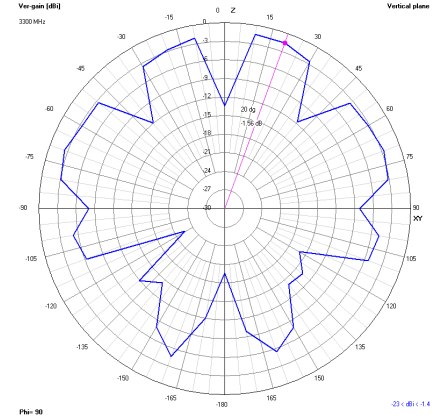
3300 MHz XY



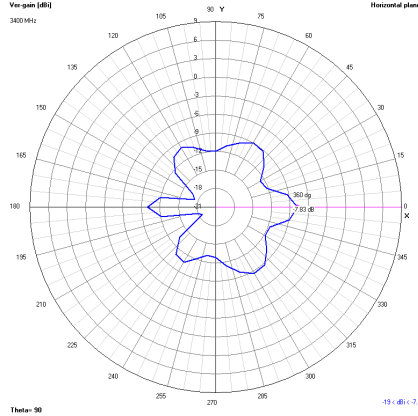
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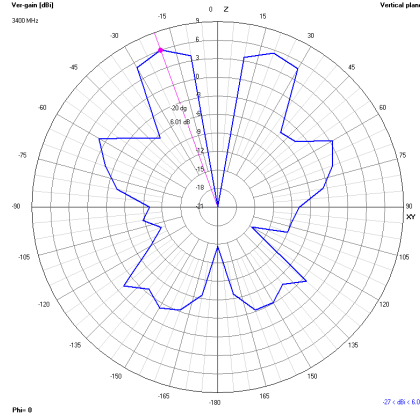
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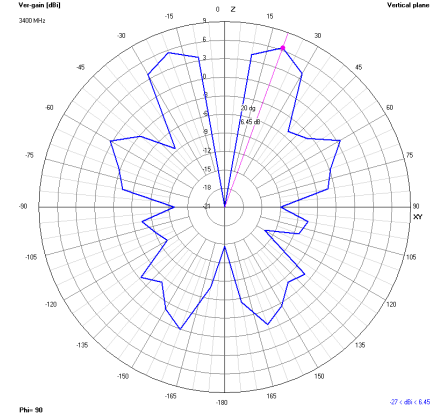
3400 MHz XY



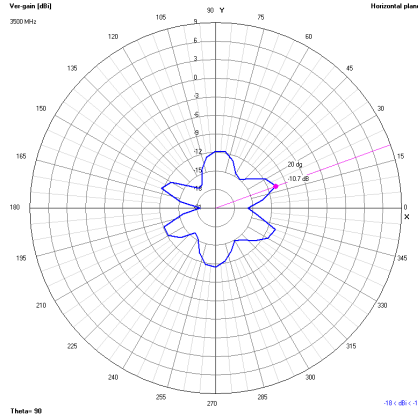
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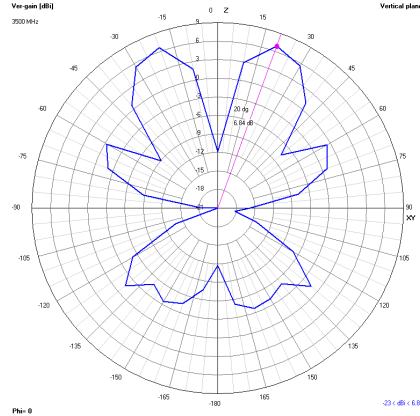
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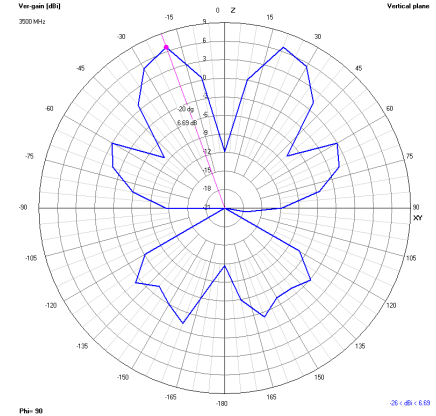
3500 MHz XY



XZ



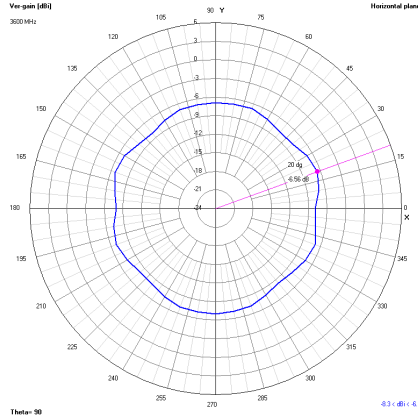
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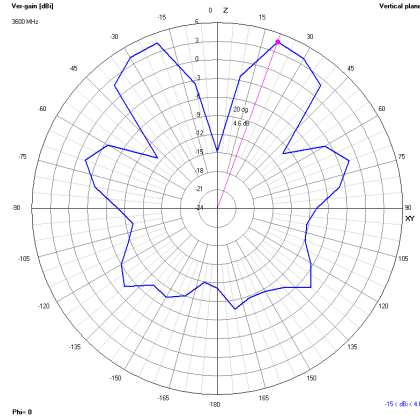


Radiation Plots

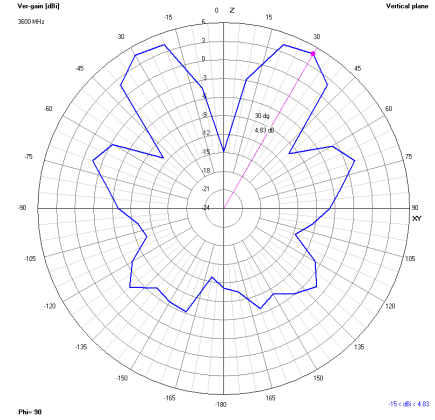
3600 MHz XY



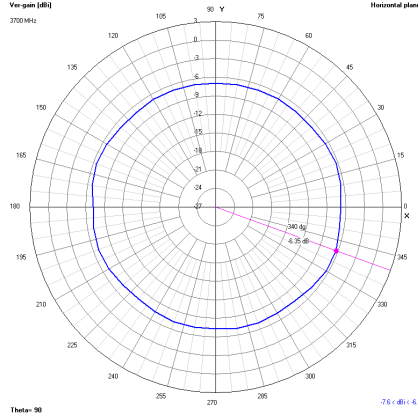
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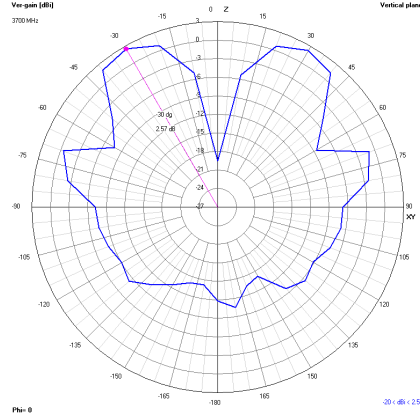
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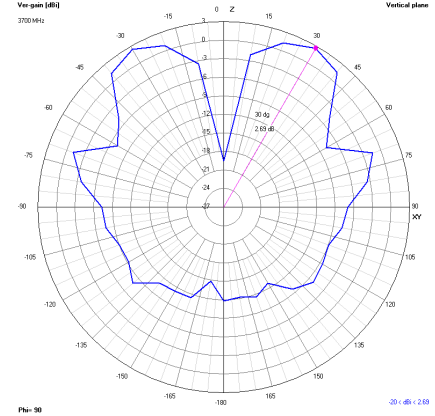
3700 MHz XY



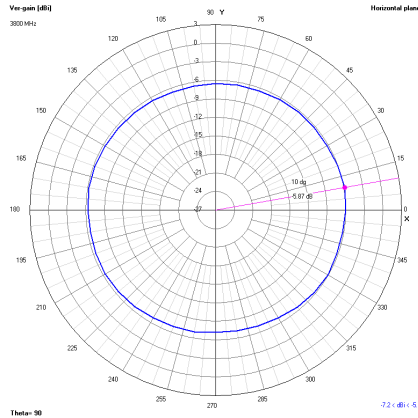
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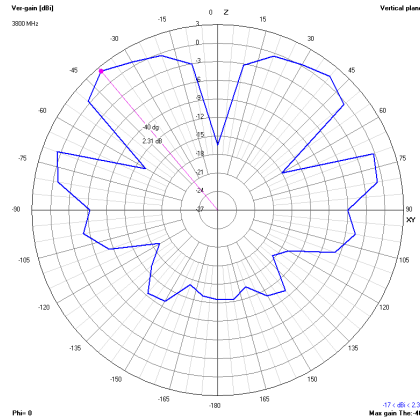
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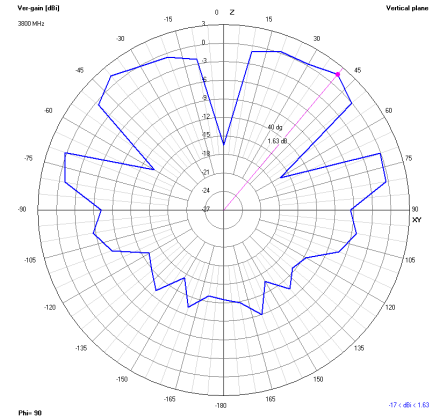
3800 MHz XY



XZ



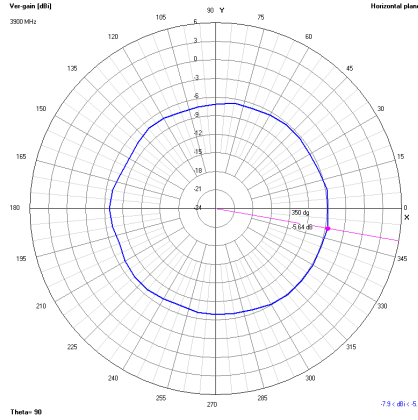
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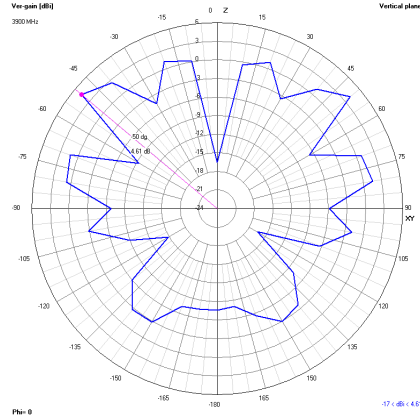


Radiation Plots

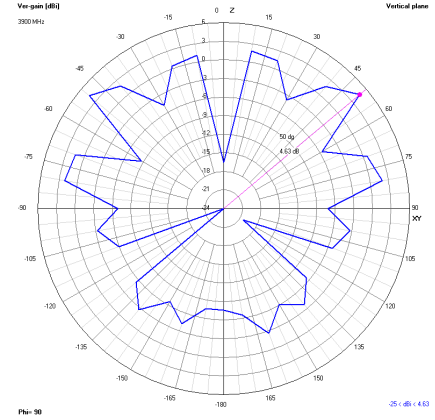
3900 MHz XY



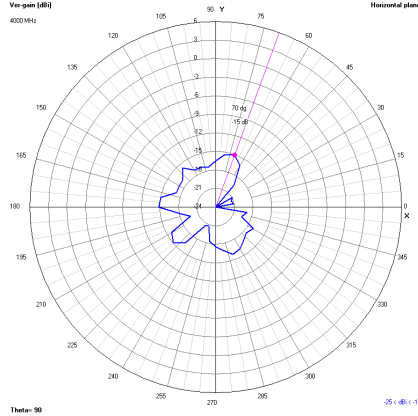
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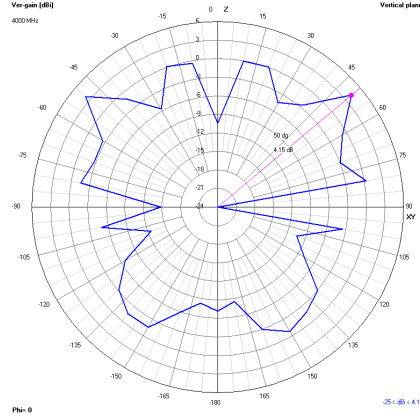
YZ



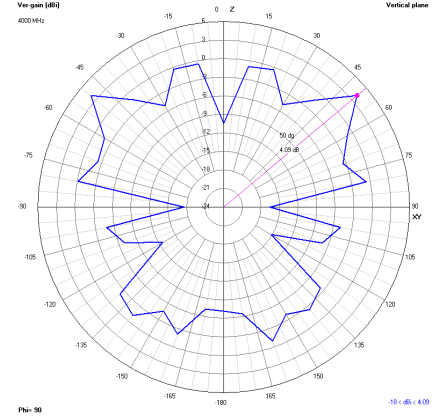
4000 MHz XY



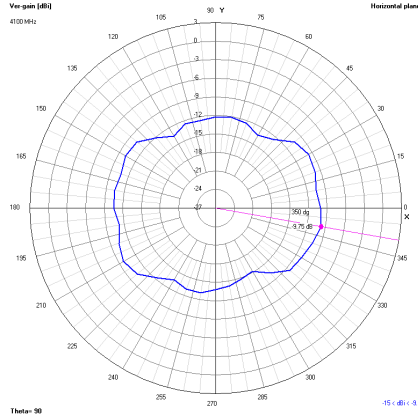
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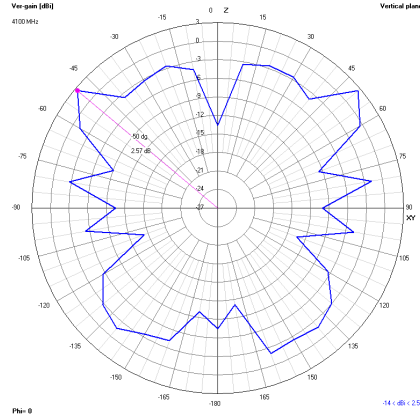
YZ



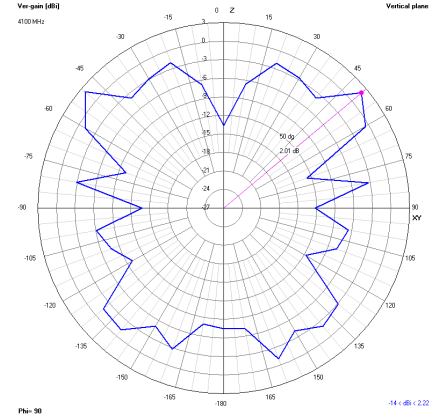
4100 MHz XY



XZ



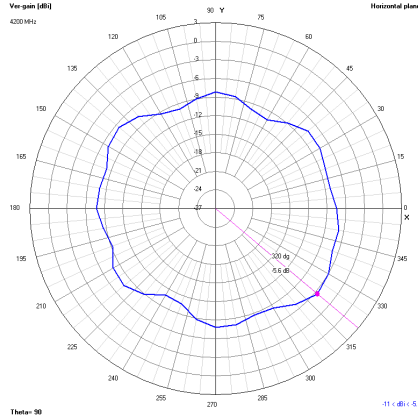
YZ



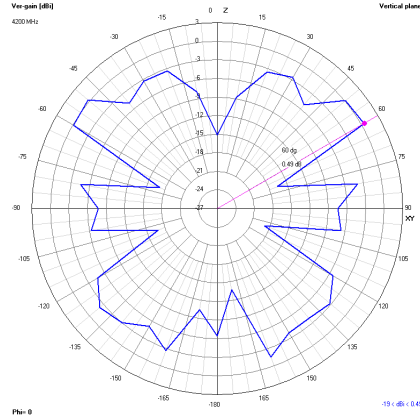


Radiation Plots

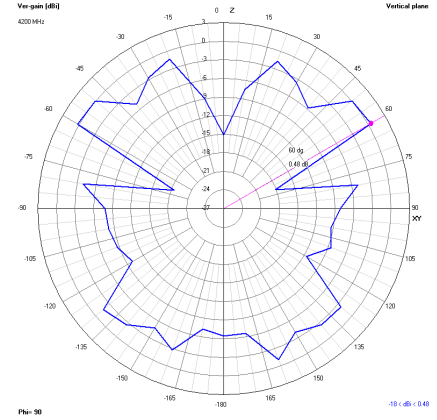
4200 MHz XY



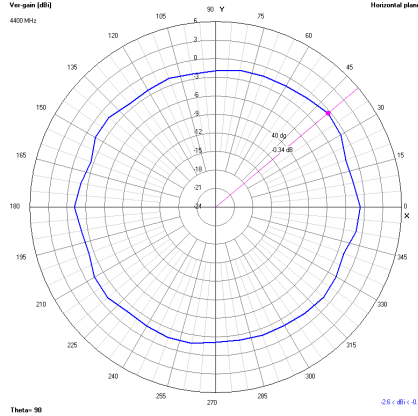
XZ



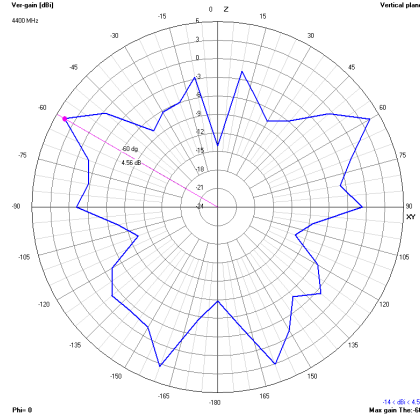
YZ



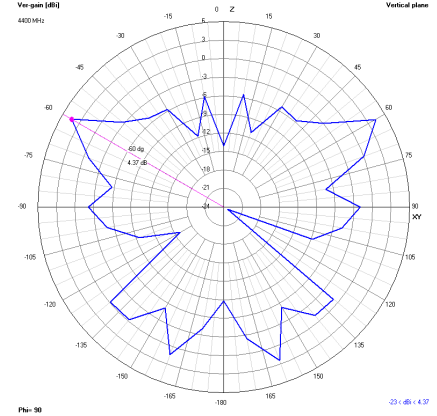
4400 MHz XY



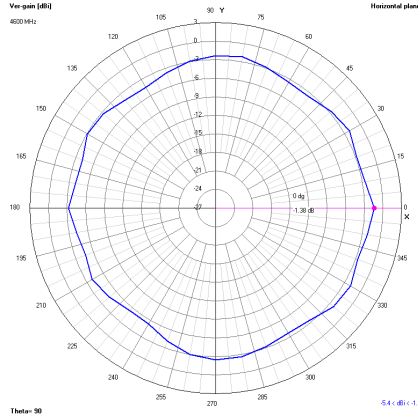
XZ



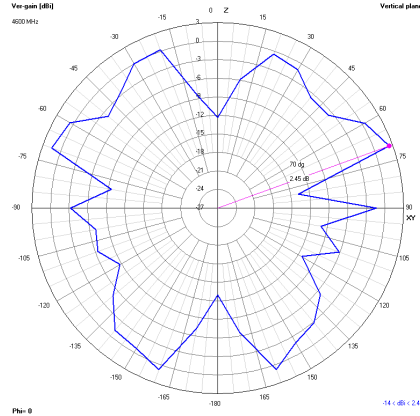
YZ



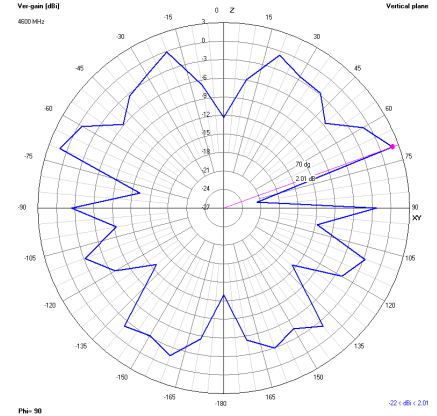
4600 MHz XY



XZ



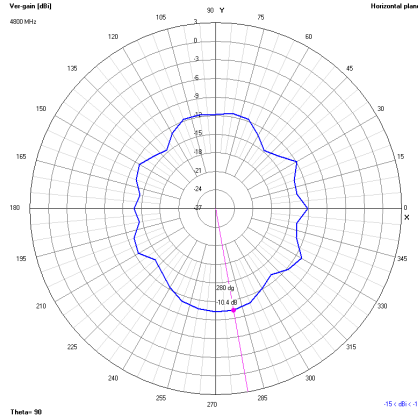
YZ



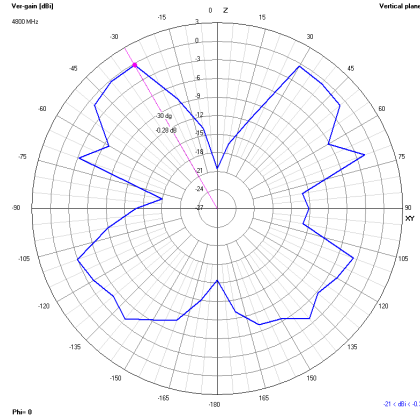


Radiation Plots

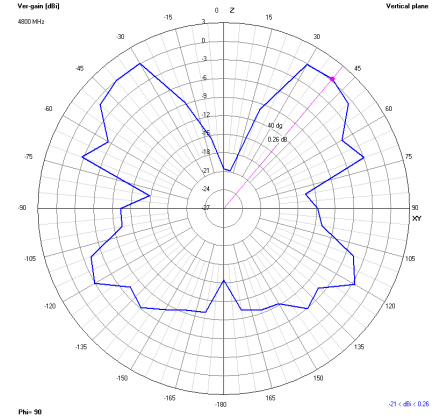
4800 MHz XY



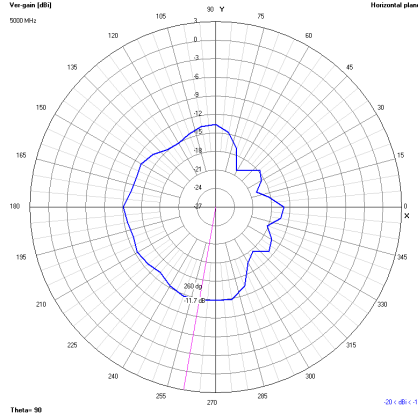
XZ



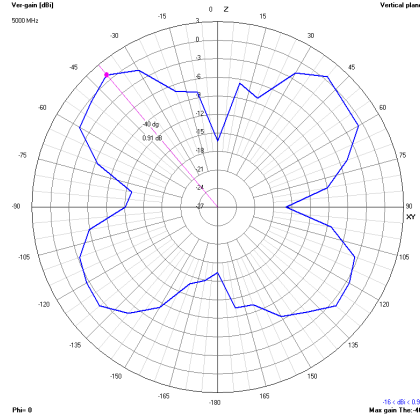
YZ



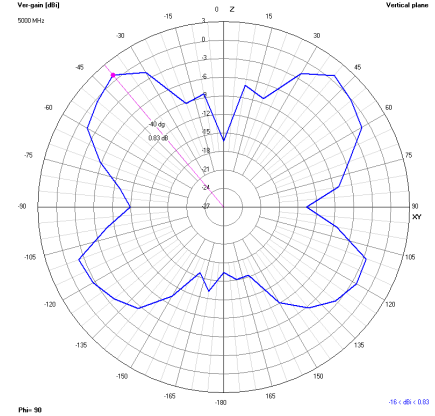
5000 MHz XY



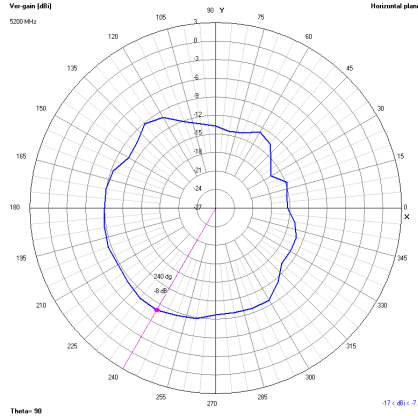
XZ



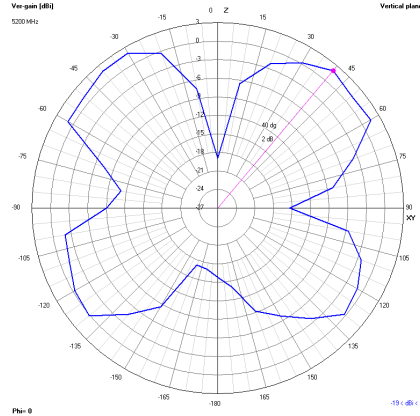
YZ



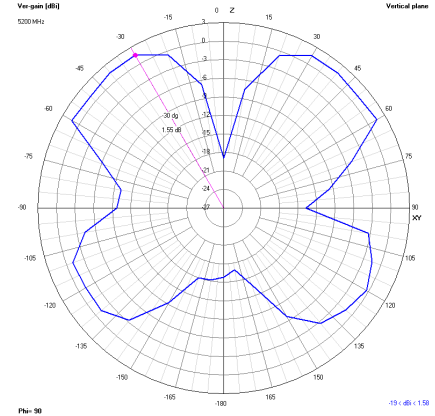
5200 MHz XY



XZ



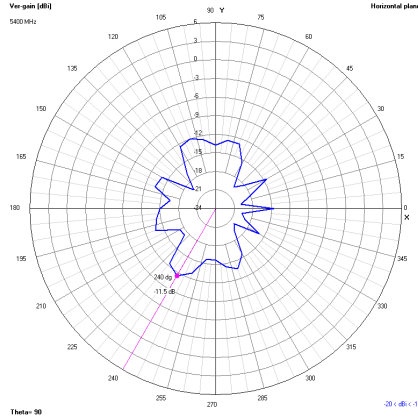
YZ



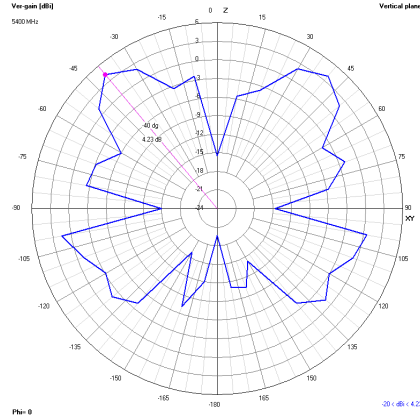


Radiation Plots

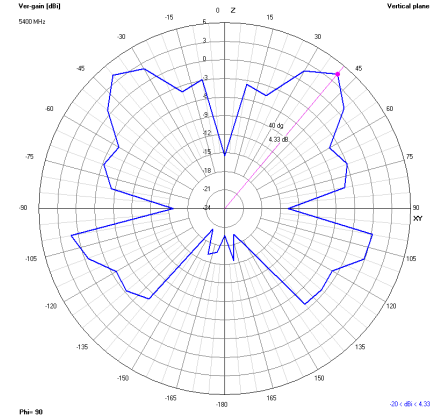
5400 MHz XY



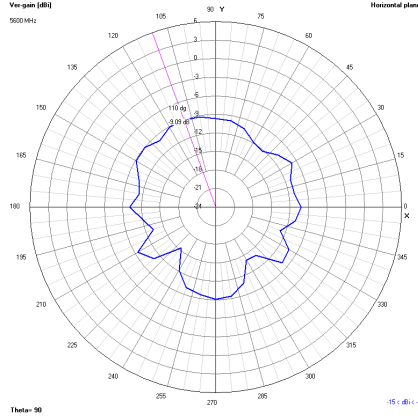
XZ



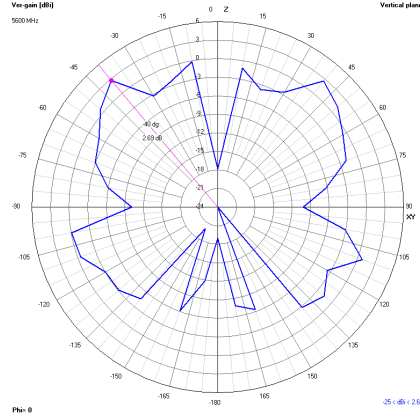
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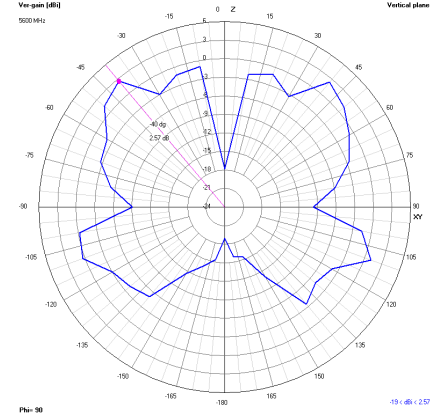
5600 MHz XY



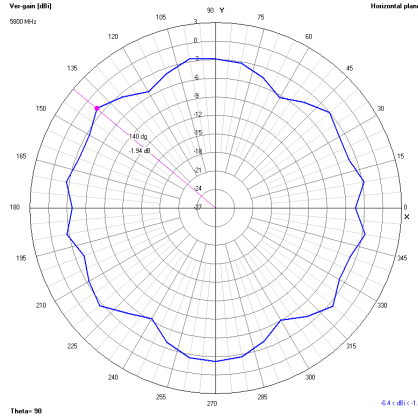
XZ



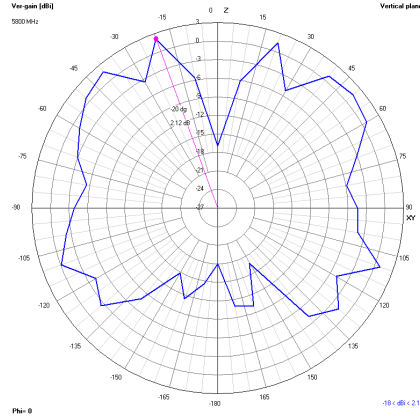
YZ



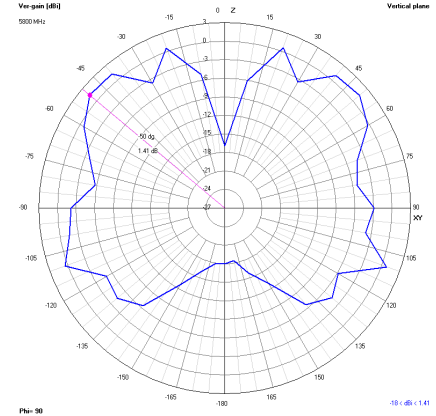
5800 MHz XY



XZ



YZ



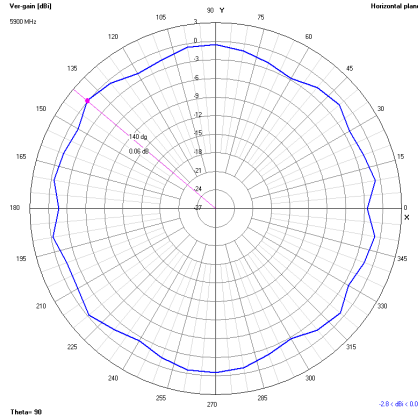


Delta 6A

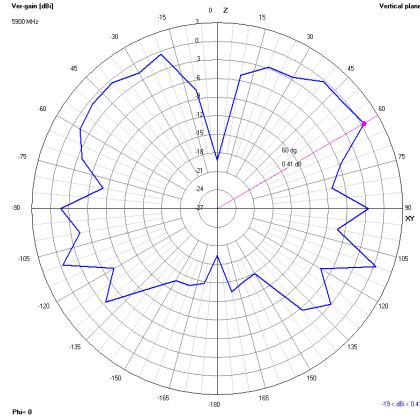
2G/3G/4G/(5G) & ISM 915 MHz 196MM HINGED DIRECT CONNECT ANTENNA

Radiation Plots

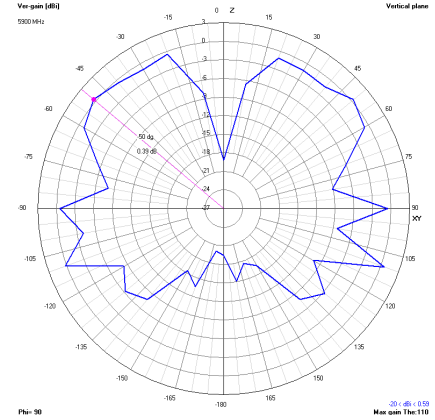
5900 MHz XY



XZ



YZ



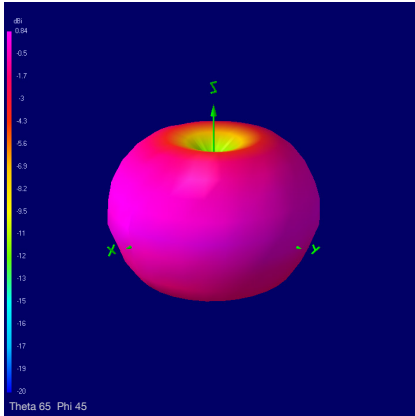


Delta 6A

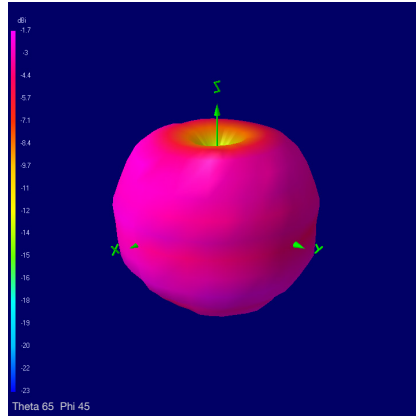
2G/3G/4G/(5G) & ISM 915 MHz 196MM HINGED DIRECT CONNECT ANTENNA

3D Radiation Plots

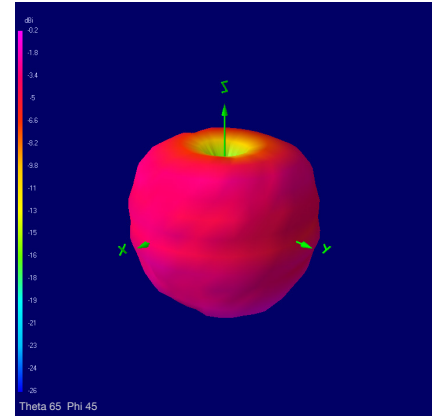
900 MHz



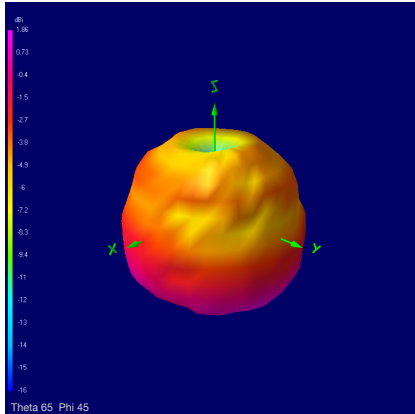
1400 MHz



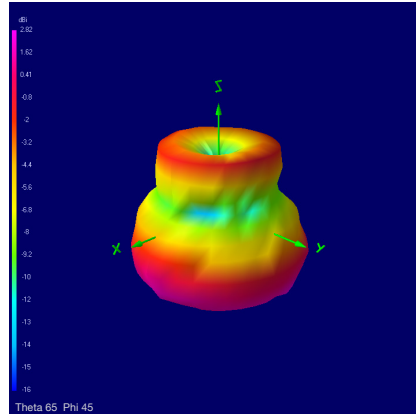
1500 MHz



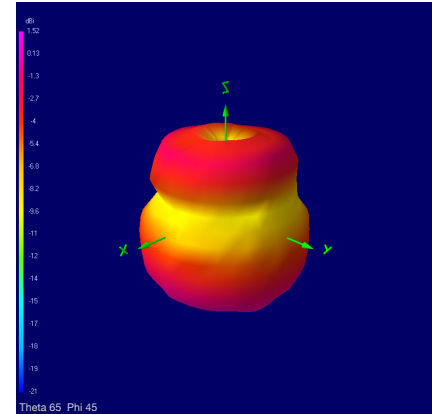
1600 MHz



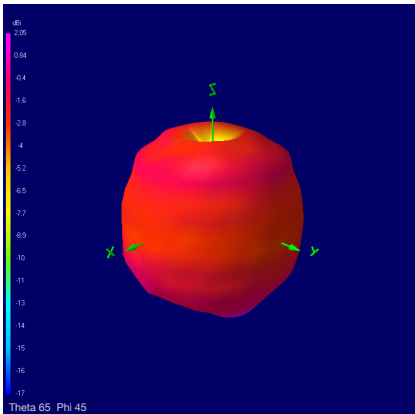
1700 MHz



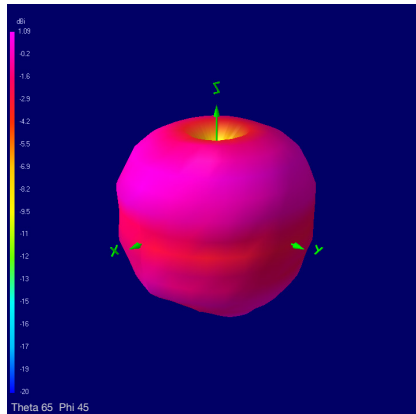
1800 MHz



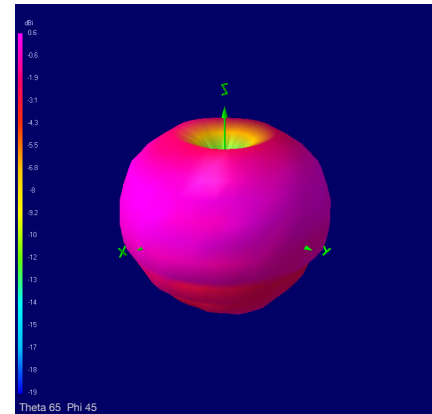
1900 MHz



2000 MHz



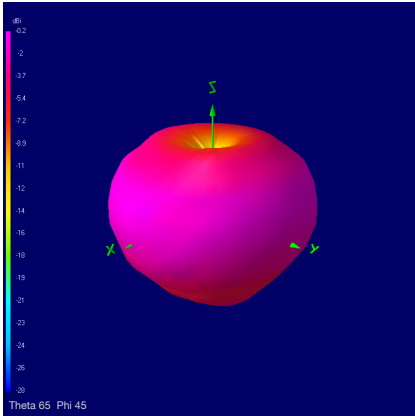
2100 MHz



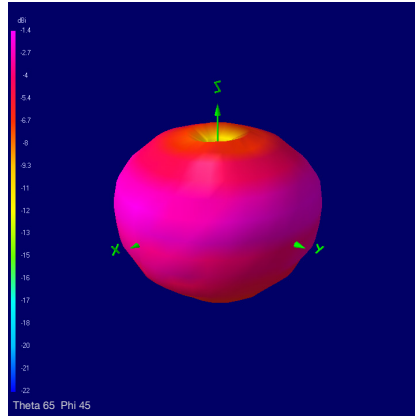


3D Radiation Plots

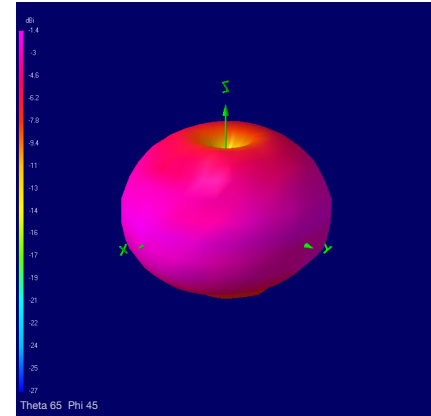
2200 MHz



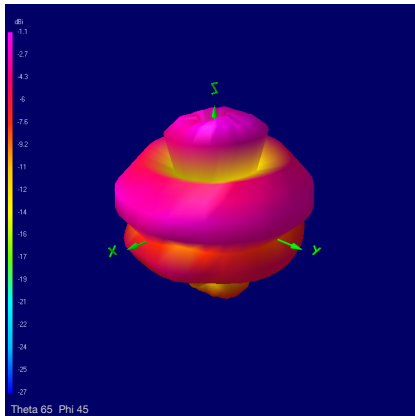
2300 MHz



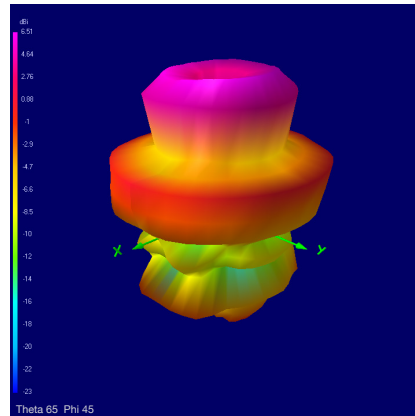
2400 MHz



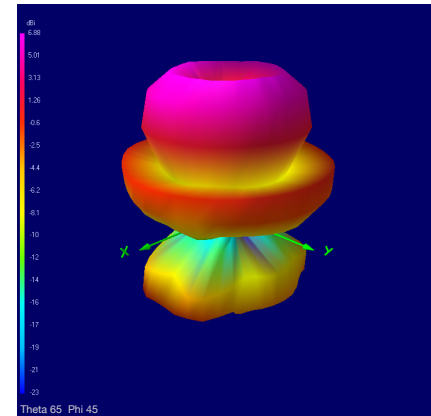
3300 MHz



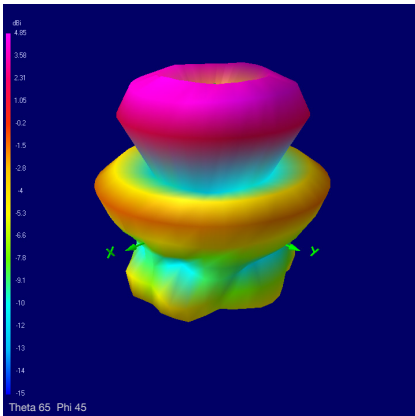
3400 MHz



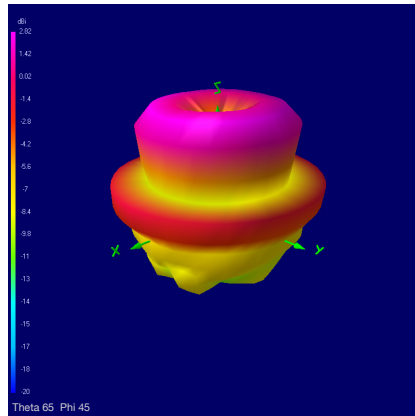
3500 MHz



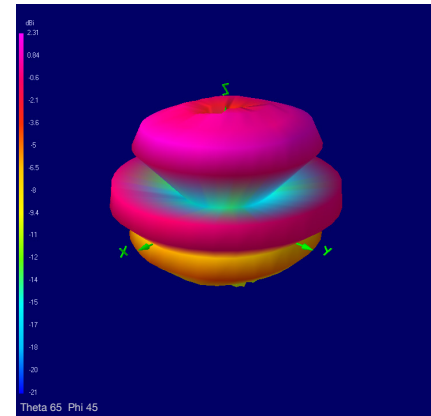
3600 MHz



3700 MHz



3800 MHz



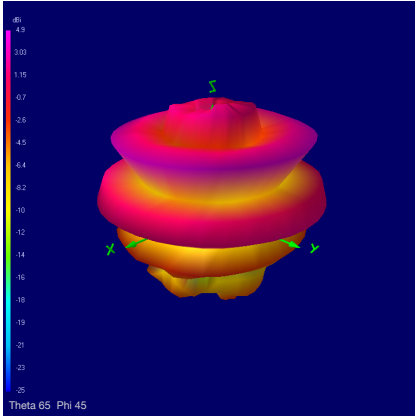


Delta 6A

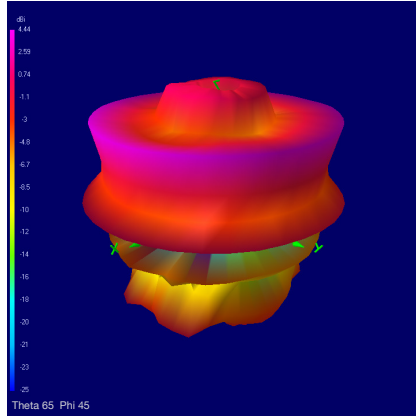
2G/3G/4G/(5G) & ISM 915 MHz 196MM HINGED DIRECT CONNECT ANTENNA

3D Radiation Plots

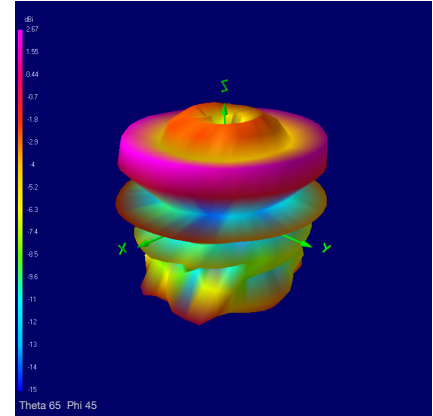
3900 MHz



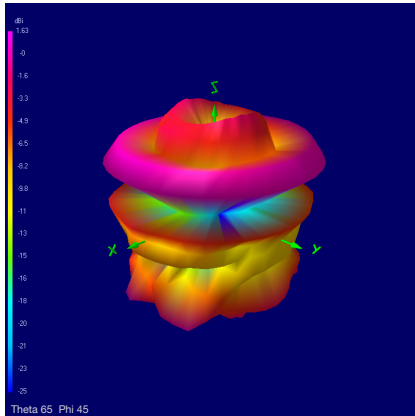
4000 MHz



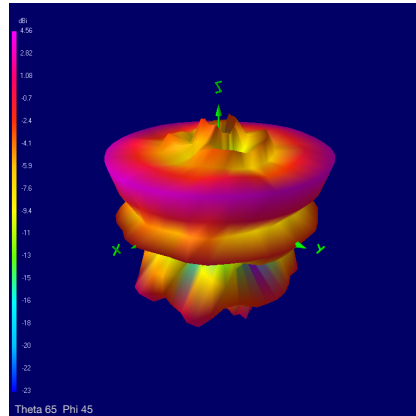
4100 MHz



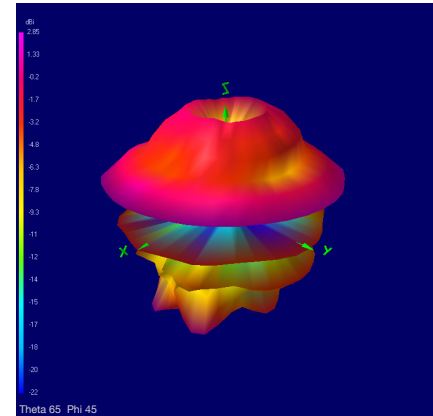
4200 MHz



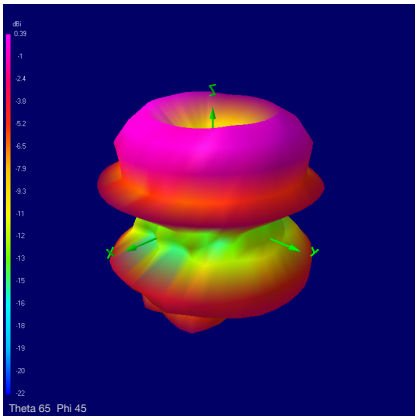
4400 MHz



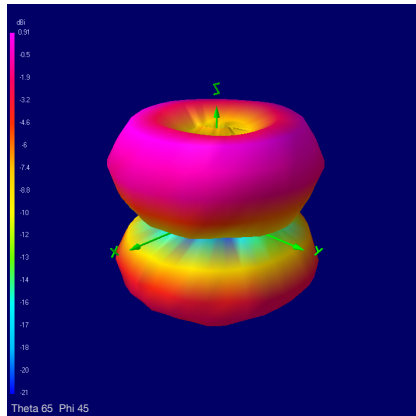
4600 MHz



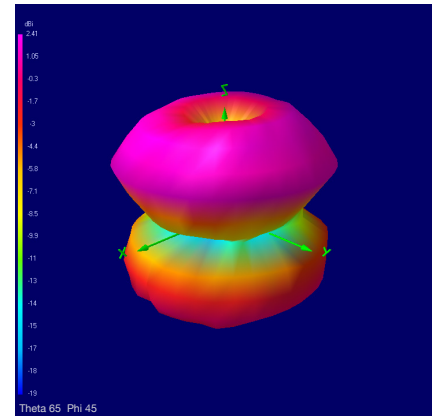
4800 MHz



5000 MHz



5200 MHz



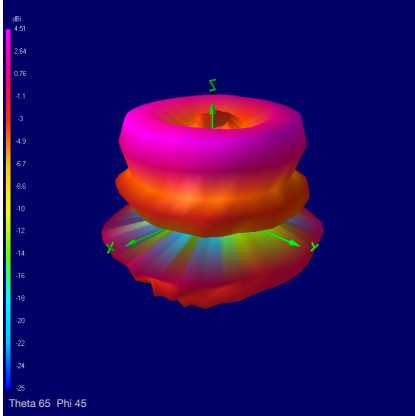


Delta 6A

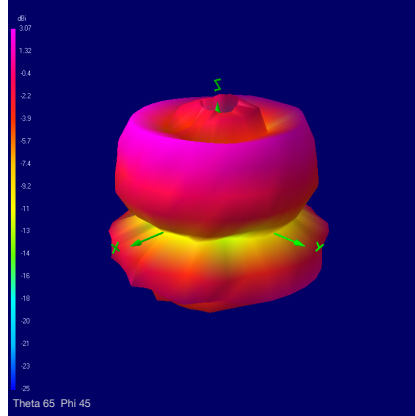
2G/3G/4G/(5G) & ISM 915 MHz 196MM HINGED DIRECT CONNECT ANTENNA

3D Radiation Plots

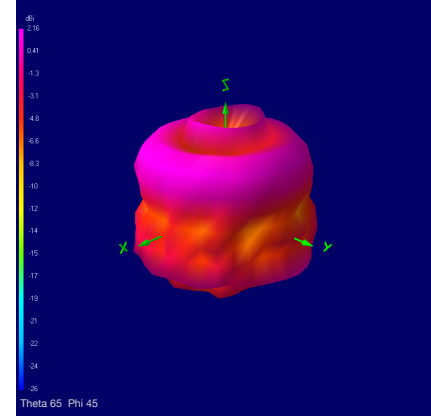
5400 MHz



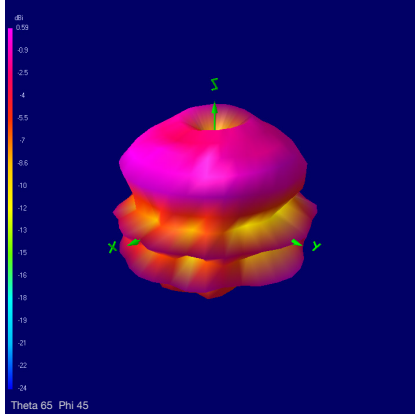
5600 MHz



5800 MHz



5900 MHz



Ordering Details

Part number	Description
DELTA6A/X/SMAM/S/S/11	2G/3G/4G/(5G) & ISM 915MHz 196MM HINGED DIRECT CONNECT ANTENNA SMA MALE

Registered in England No. 08405712
VAT Registration No. GB163 04 0349



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