



Oscar 1A

2G/3G/4G/(5G) OMNIDIRECTIONAL WALL MOUNT ANTENNA



Key Features

- Quad band GSM / GPRS (2G), UMTS (3G) & LTE (4G)
- Some 5G LTE Bands Covered
- 2.4GHz WiFi
- Improved signal quality with low loss cable
- Housed in a robust ABS casing

General Description

The Oscar 1A is a high performance Omnidirectional wall / bracket mount antenna, operating on global GSM/GPRS 3G, 4G, WiFi and some 5G frequencies.

Ruggedly constructed with black ABS plastic over the radiating element and with a lightweight yet durable aluminium mounting bracket.

The high quality monopole design provides communication reliability for applications like remote sensor monitoring, alarm & security systems plus a host of other IoT applications demanding an all-weather antenna.

Cables are terminated with either an SMA male or FME female connector type. Alternative cable lengths or connector types may be specified for short run volume orders.

Additional Considerations

- Bracket provides secure permanent fixing
- Does not require additional placement on metallic surface
- Meets all EU compliance criteria for electronic goods

O Wall/Pole	2G GSM	3G UMTS	4G LTE
5G LTE	LTE Cat M	LTE NB IoT	WLAN 2400



Oscar 1A

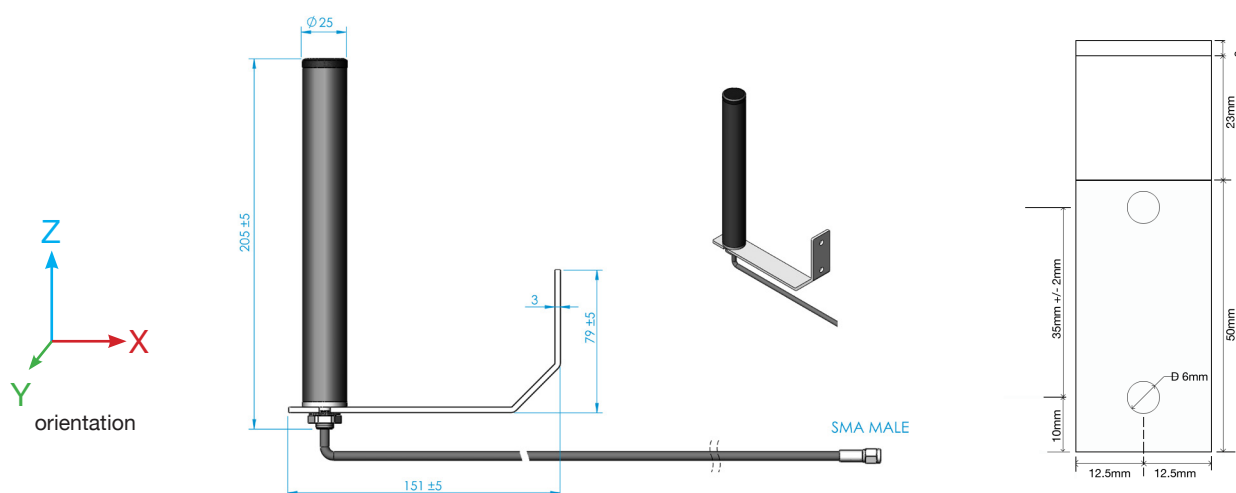
2G/3G/4G/(5G) OMNIDIRECTIONAL WALL MOUNT ANTENNA

Electrical Specifications

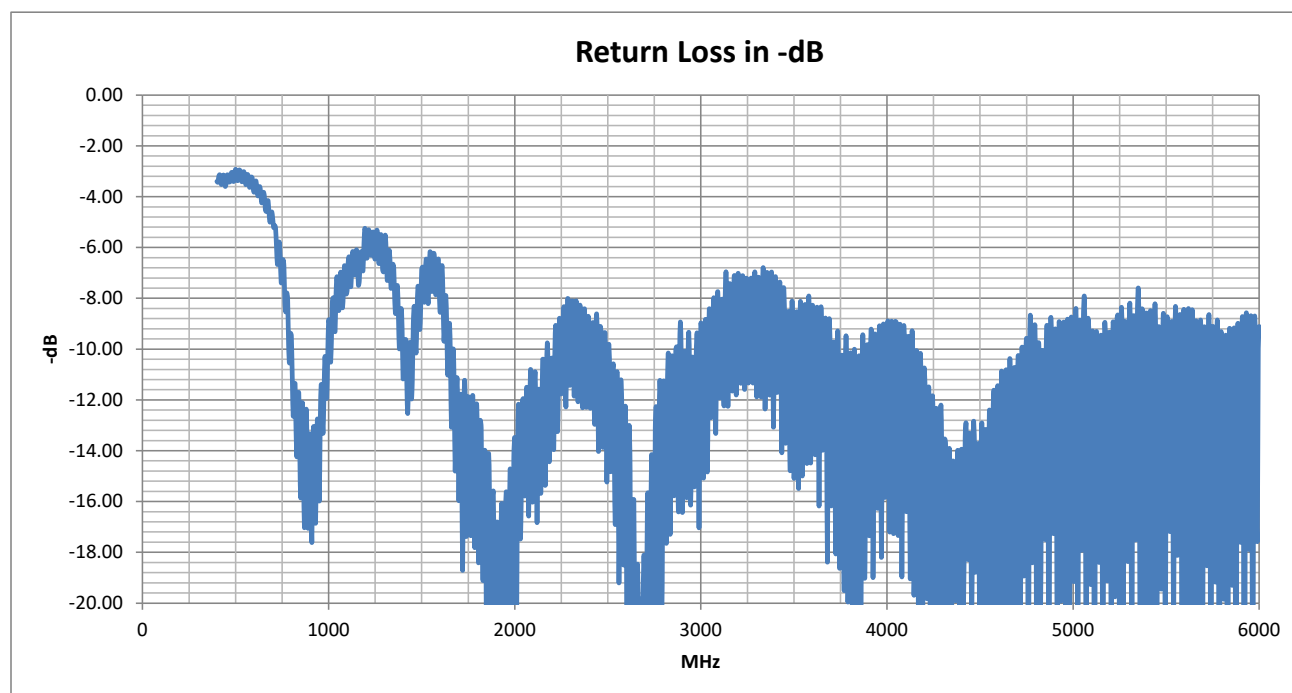
Operating Temperature range:	-20 to +60 °C
Impedance:	50 Ohms
Radiation:	Omnidirectional
Polarization:	Linear Vertical

Mechanical Specification

Dimensions:	25 mm Ø H205 mm
Weight:	250 g
Cable:	Low Loss CFD195 4.95 mm Ø
Main Materials:	ABS/Aluminium



Return Loss tested with 5 m cable

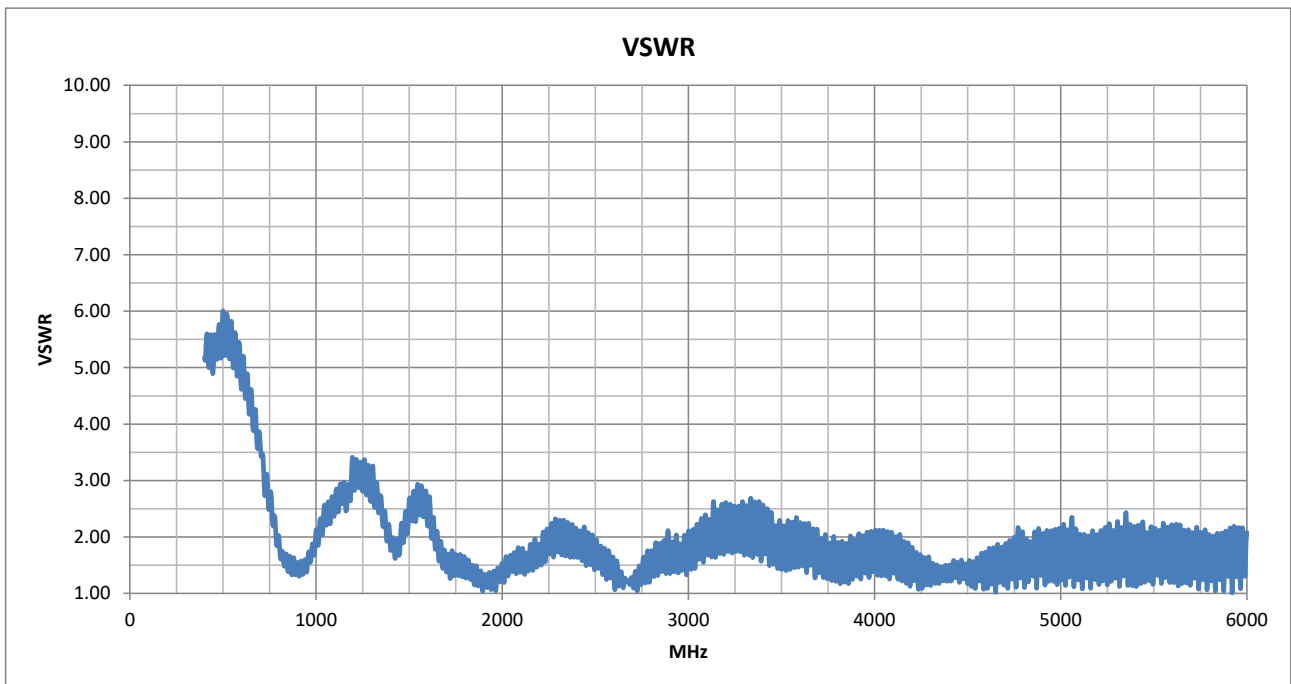




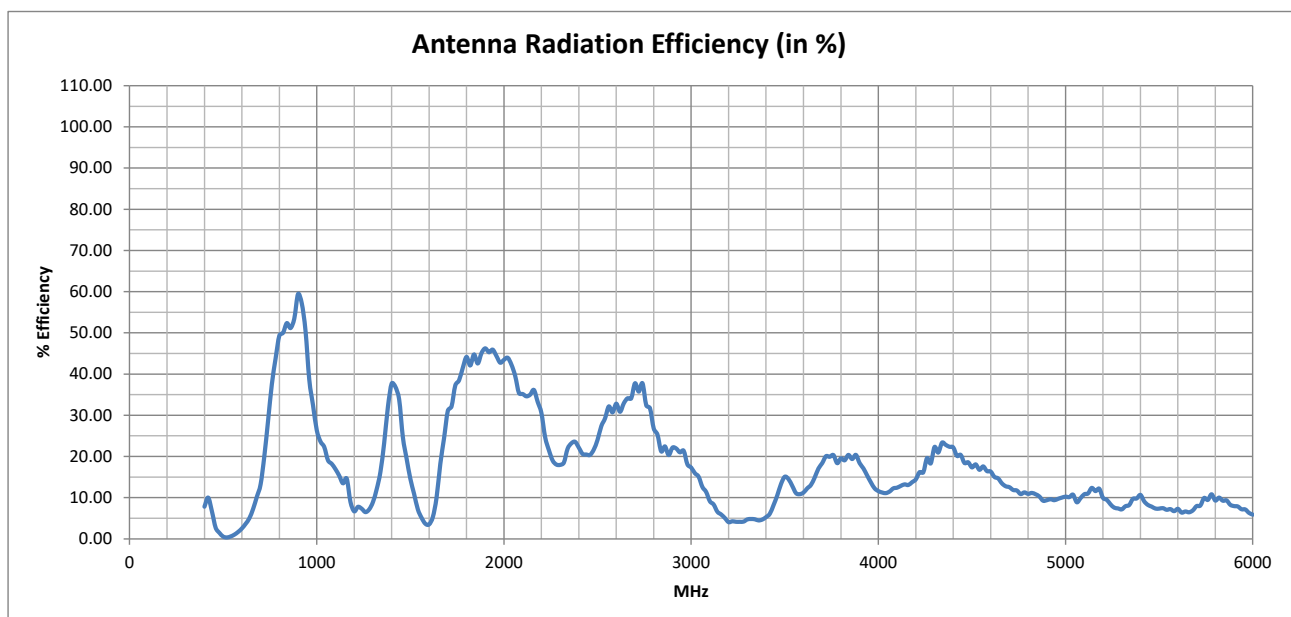
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VSWR tested with 5 m cable



Radiation Efficiency tested with 5 m cable





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LTE 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	44.5 / 34.8	1.45 / 1.86
2/n2	B2	North America/Latin America/Caribbean	1850-1910 MHz	1930-1990 MHz	44.7 / 44.3	1.49 / 1.45
3/n3	B3	Europe/Africa/Asia/Oceania	1710-1785 MHz	1805-1880 MHz	37.4 / 43.7	1.76 / 1.59
4	B4	North America/Latin America/Caribbean	1710-1755 MHz	2110-2155 MHz	34.7 / 35.2	1.76 / 1.86
5/n5	B5	Country Specific	824-849 MHz	869-894 MHz	51.1 / 55.3	1.74 / 1.63
7/n7		Latin America/Europe/Asia +	2500-2570 MHz	2620-2690 MHz	28.6 / 33.9	1.96 / 1.44
8/n8	B8	Europe / Asia +	880-915 MHz	925-960 MHz	56.6 / 48.7	1.63 / 1.74
11	B11	Country Specific	1427.9-1447.9 MHz	1475.9-1495.9 MHz	31.8 / 19.5	1.97 / 2.45
12/n12	B12	North America/Caribbean +	699-716 MHz	729-746 MHz	16.6 / 28.7	3.65 / 3.11
13/n13	B13	North America/Caribbean +	777-787 MHz	746-756 MHz	43.5 / 35.1	2.38 / 2.81
14/n14	B14	Country Specific	788-798 MHz	758-768 MHz	46.5 / 36.6	2.03 / 2.81
17	B17	North America/Caribbean +	704-716 MHz	734.746 MHz	16.6 / 28.7	3.65 / 3.11
18/n18	B18	Country Specific	815-830 MHz	860-875 MHz	50.5 / 52.3	1.74 / 1.66
19	B19	Country Specific	830-845 MHz	875-890 MHz	51.8 / 54.6	1.70 / 1.63
20/n20	B20	Europe/Africa +	832-862 MHz	791-821 MHz	51.1 / 47.6	1.70 / 2.03
21		Country Specific	1447.9-1462.9 MHz	1495.9-1510.9 MHz	29.7 / 14.7	2.25 / 2.69
25/n25	B25	Country Specific	1850-1915 MHz	1525-1559 MHz	44.7 / 7.71	1.49 / 2.94
26/n26	B26	Country Specific	814-849 MHz	859-894 MHz	50.7 / 54.1	1.74 / 1.66
28/n28	B28	Latin America/Europe/Asia +	703-748 MHz	758-803 MHz	24.8 / 41.8	3.65 / 2.81
29/n29		Country Specific	-	717-728 MHz	20.6	3.43
30/n30		Country Specific	2305-2315 MHz	2350-2360 MHz	18.2 / 22.5	2.29 / 2.25
31	B31	Country Specific	452.5-457.5 MHz	462.5-467.5 MHz	4.67 / 2.06	5.58 / 5.56
32		Country Specific	-	1452-1496 MHz	23.1	2.66
38/n38		Europe +	2570-2620 MHz		31.6	1.76
39/n39		Country Specific	1880-1920 MHz		45.5	1.40
40/n40		Asia +	2300-2400 MHz		21.2	2.30
41/n41		Country Specific	2496-2690 MHz		30.6	1.96
42		Country Specific	3400-3600 MHz		10.8	2.56
43		Country Specific	3600-3800 MHz		16.8	2.25
46/n46		Country Specific	5150-5925 MHz		8.56	2.43
48/n48		Country Specific	3550-3700 MHz		13.5	2.35
65/n65		Country Specific	1920-2010 MHz	2110-2200 MHz	44.2 / 34.1	1.54 / 1.96
66/n66	B66	Country Specific	1710-1780 MHz	2110-2200 MHz	36.0 / 34.1	1.76 / 1.96
71/n71	B71	Country Specific	663-698 MHz	617-652 MHz	10.2 / 4.60	4.26

Table data for bands as detailed in 3GPP TS 36.101

● 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	11.1 / 7.71	2.35 / 2.94
n34		2010 – 2025 MHz		43.2	1.65
n47		5855 – 5925 MHz		8.30	2.16
n50		1432 – 1517 MHz		23.3	2.69
n51		1427 – 1432 MHz		35.3	1.79
n53		2483.5 – 2495 MHz		22.8	2.03
n67		738 – 758 MHz		28.7	3.11
n70	B70	1695 – 1710 MHz	1995 – 2020 MHz	29.2 / 43.3	1.70 / 1.65
n74		1427 – 1470 MHz	1475 – 1518 MHz	28.7 / 17.3	2.25 / 2.69
n75		1432 – 1517 MHz		23.3	2.69
n76		1427 – 1432 MHz		35.3	1.79
n77		3300 – 4200 MHz		13.25	2.69
n78		3300 – 3800 MHz		12.16	2.69
n79		4400 – 5000 MHz		13.26	2.17
n80		1710 – 1785 MHz		37.4	1.76
n81		880 – 915 MHz		56.6	1.63
n82		832 – 862 MHz		51.1	1.70
n83		703 – 748 MHz		24.88	3.65
n84		1920 – 1980 MHz		44.5	1.45
n85	B85	698 – 716 MHz	728 – 746 MHz	14.5 / 28.7	3.87 / 3.11
n86		1710 – 1780 MHz		36.0	1.76
n89		824 – 849 MHz		51.8	1.74
n90		2496 – 2690 MHz		30.6	1.96
n91		832 – 862 MHz	1427 – 1432 MHz	51.1 / 35.3	1.70 / 1.79
n92		832 – 862 MHz	1432 – 1517 MHz	51.1 / 23.3	1.70 / 2.69
n93		880 – 915 MHz	1427 – 1432 MHz	56.6 / 35.3	1.63 / 1.79
n94		880 – 915 MHz	1432 – 1517 MHz	56.6 / 23.3	1.63 / 2.69
n95		2010 – 2025 MHz		43.2	1.65
n96		5925 – 7125 MHz		not measured	
n97		2300 – 2400 MHz		21.2	2.30
n98		1880 – 1920 MHz		45.5	1.40
n99		1626.5 – 1660.5 MHz		11.16	2.35

Table data for bands as detailed in 3GPP TS 38.101

● Usable Band

○ Adequate in good signal area

✗ Not Usable



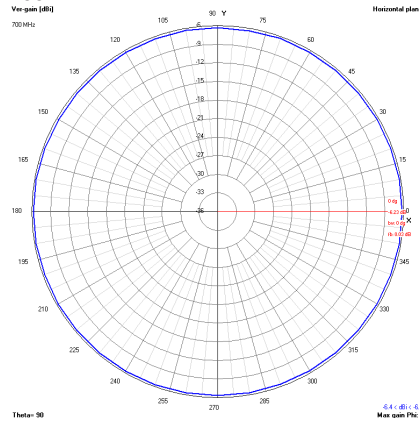


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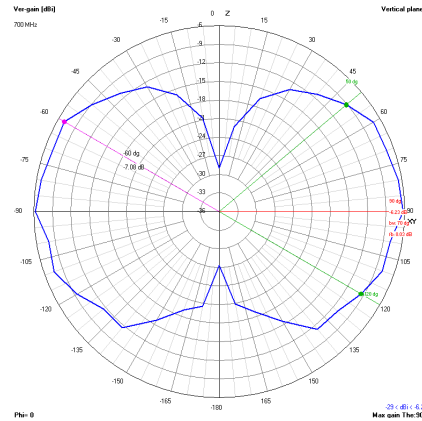
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Radiation Plots tested with 5 m cable

700 MHz XY



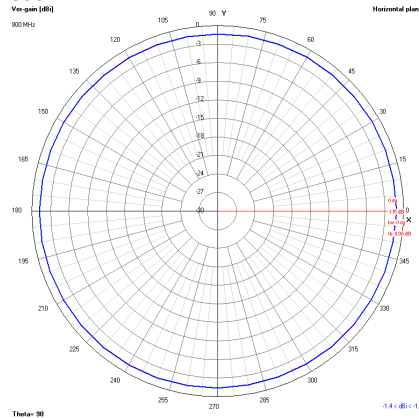
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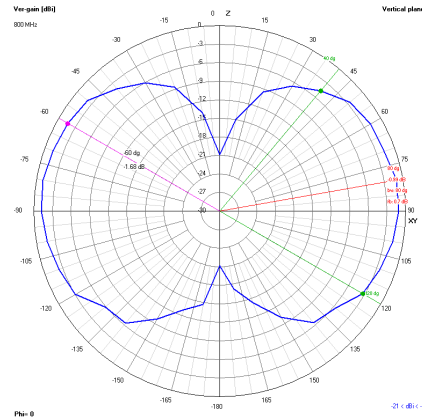
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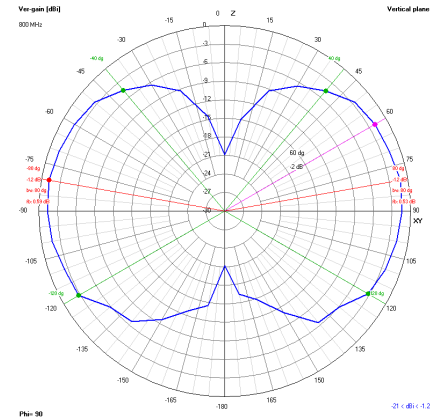
800 MHz XY



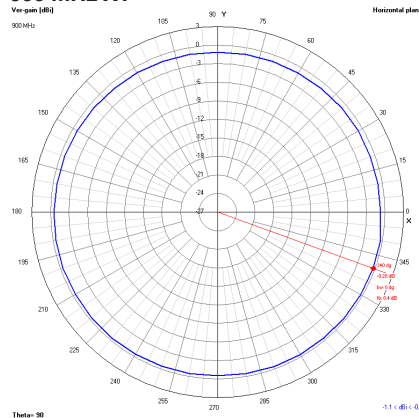
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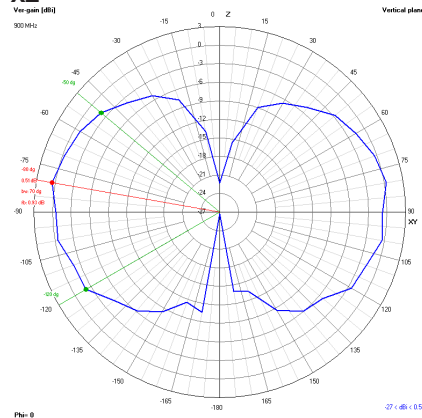
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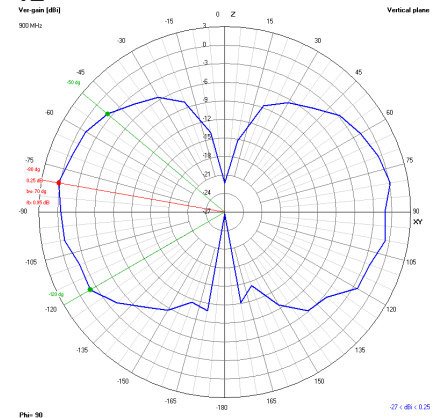
900 MHz XY



XZ



YZ



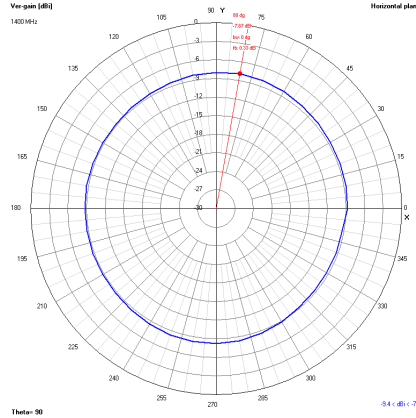


Oscar 1A

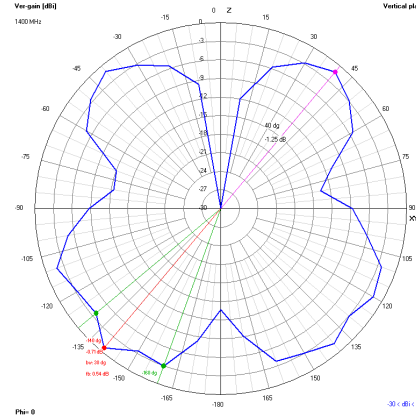
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Radiation Plots tested with 5 m cable

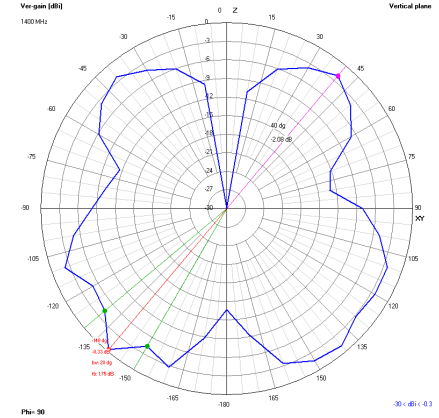
1400 MHz XY



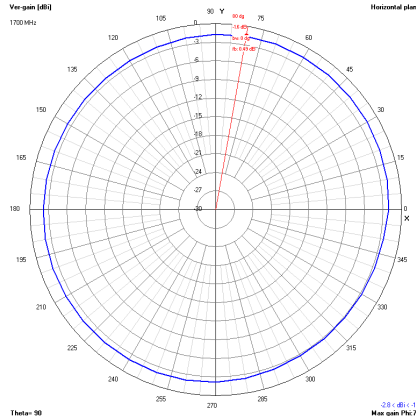
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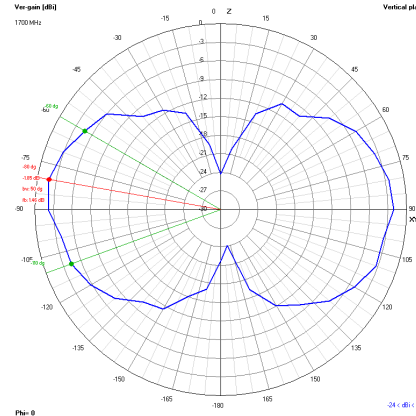
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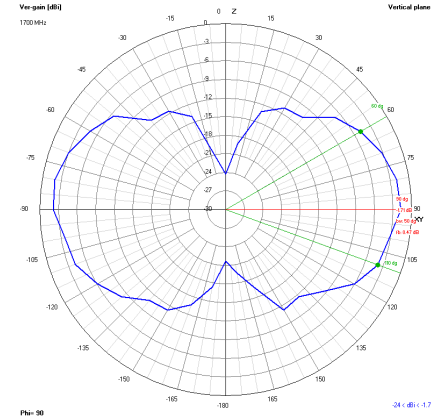
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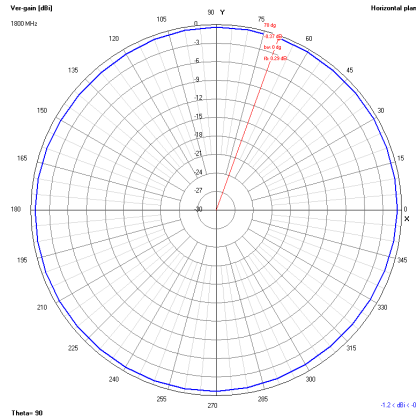
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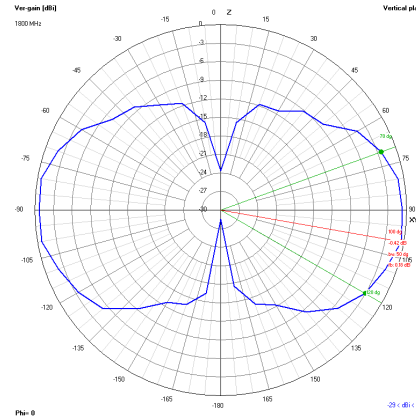
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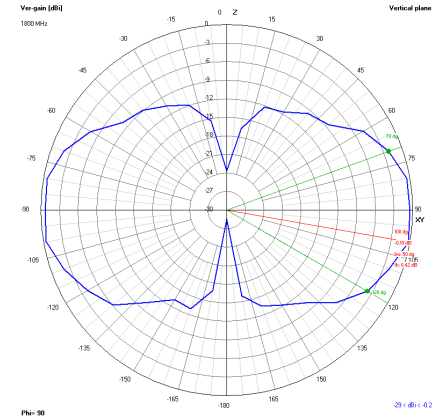
1800 MHz XY



XZ



YZ



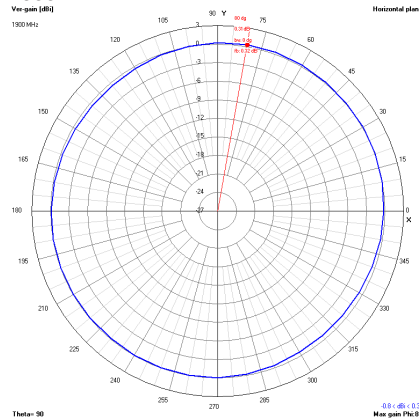


Oscar 1A

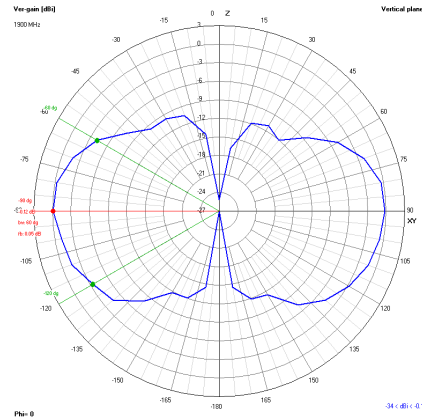
2G/3G/4G/(5G) OMNIDIRECTIONAL WALL MOUNT ANTENNA

Radiation Plots tested with 5 m cable

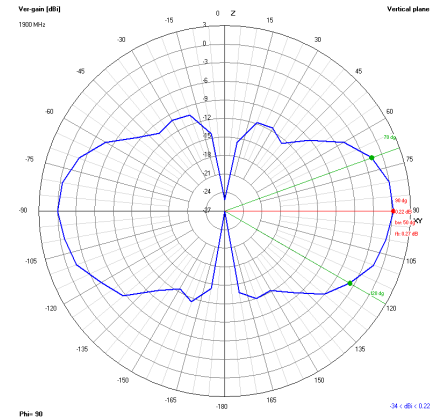
1900 MHz XY



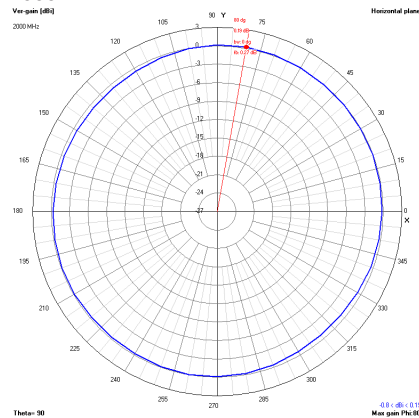
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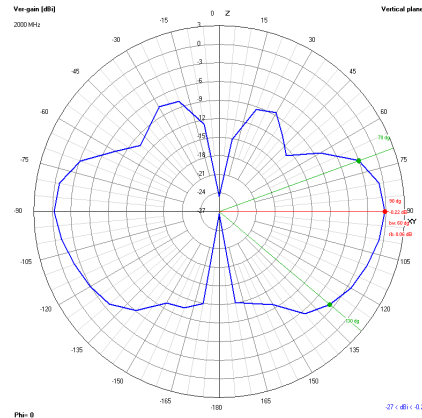
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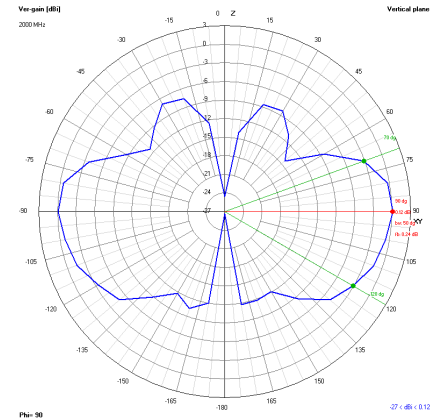
2000 MHz XY



XZ



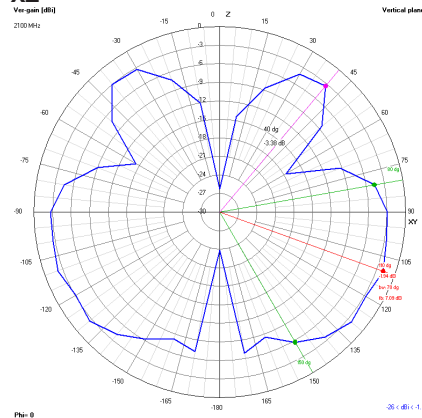
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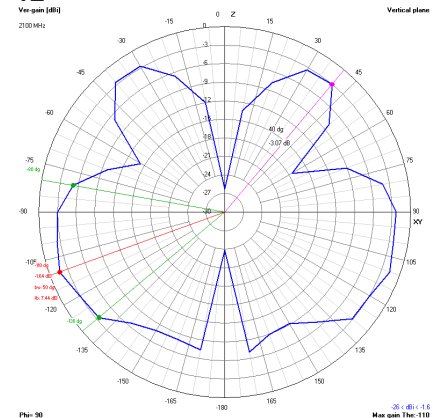
2100 MHz XY



XZ



YZ



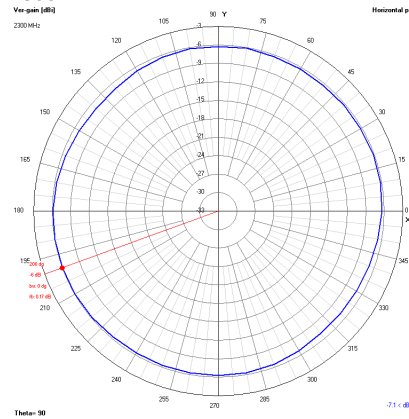


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2G/3G/4G/(5G) OMNIDIRECTIONAL WALL MOUNT ANTENNA

Radiation Plots tested with 5 m cable

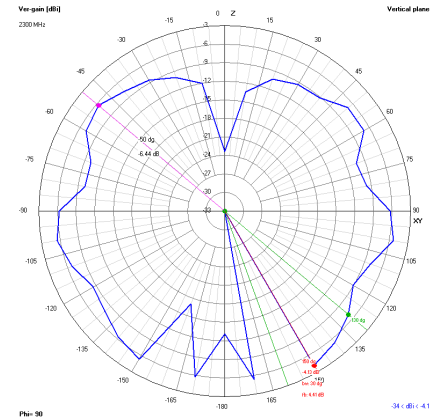
2300 MHz XY



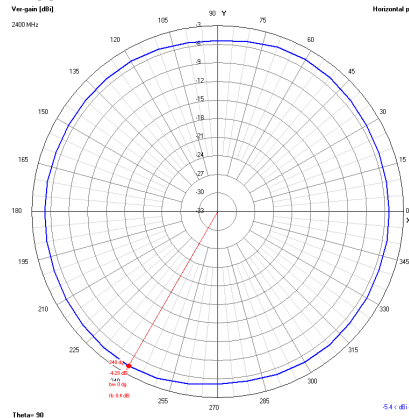
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YZ



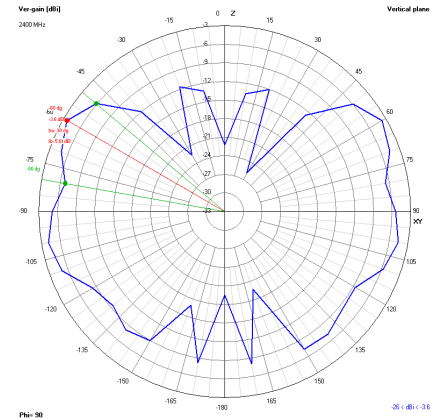
2400 MHz XY



XZ



YZ



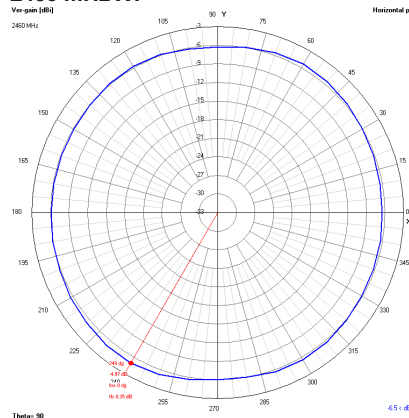
WiFi
Band
2.4
GHz

Eff %
22.13

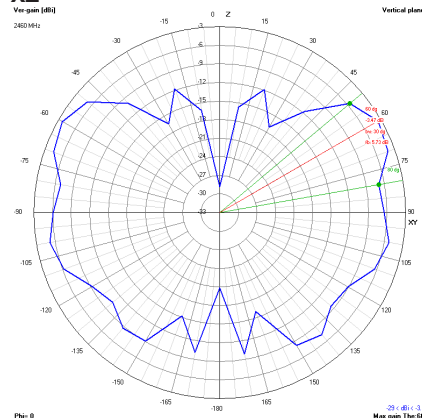
WiFi
Band
2.4
GHz

Eff %
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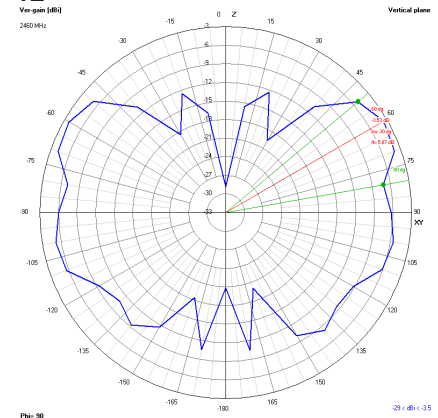
2460 MHz XY



XZ



YZ



WiFi
Band
2.4
GHz

Eff %
20.37

WiFi
Band
2.4
GHz

Eff %
20.37

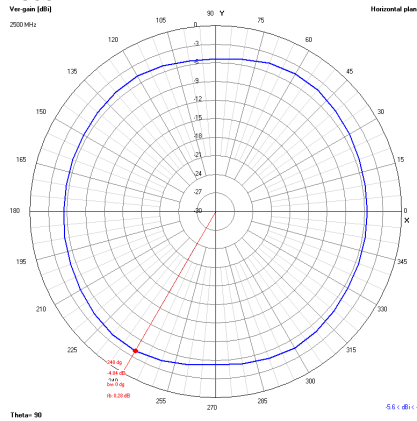


Oscar 1A

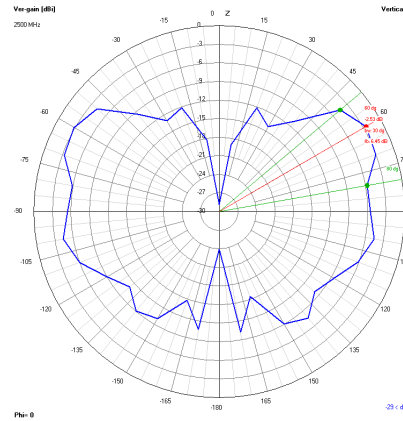
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Radiation Plots tested with 5 m cable

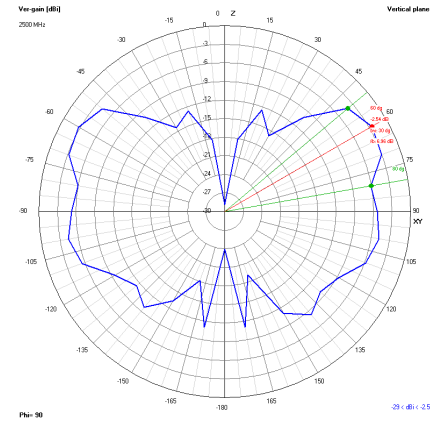
2500 MHz XY



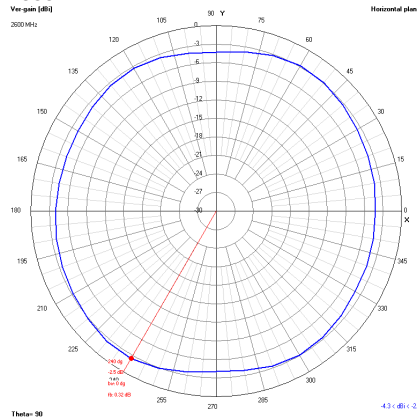
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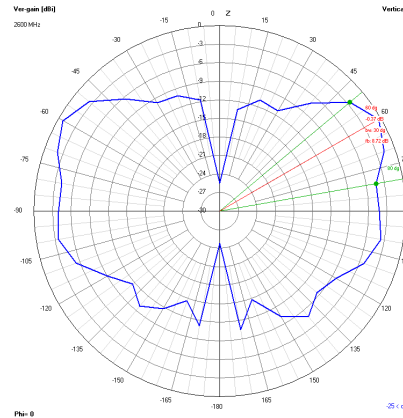
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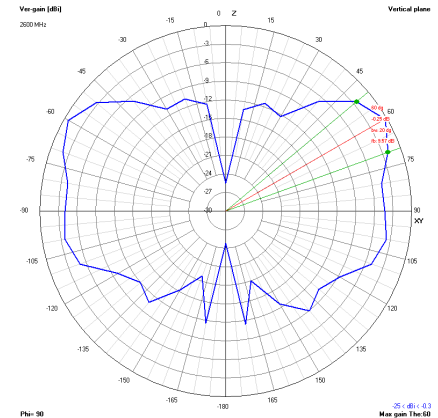
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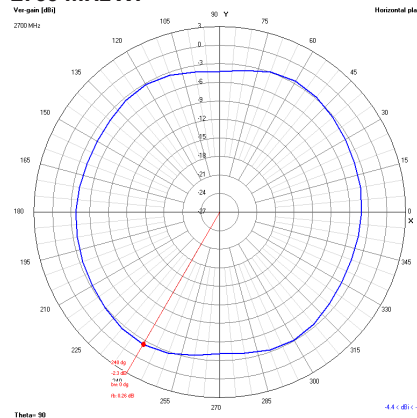
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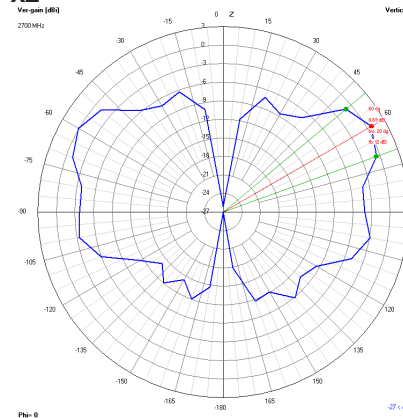
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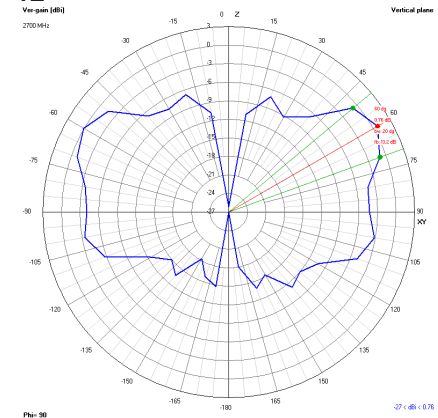
2700 MHz XY



XZ



YZ



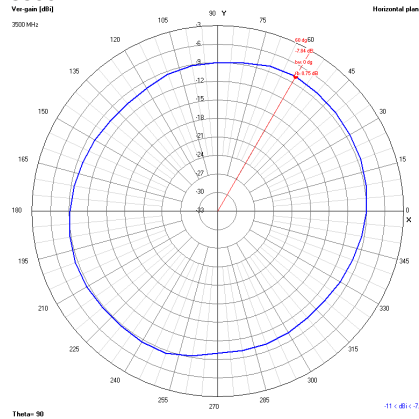


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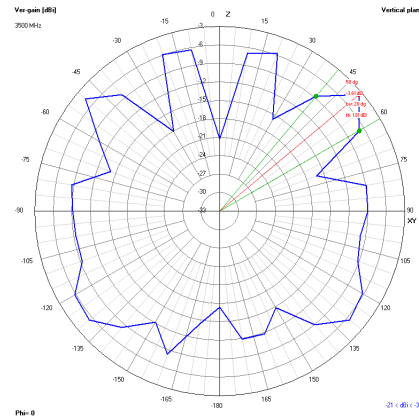
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Radiation Plots tested with 5 m cable

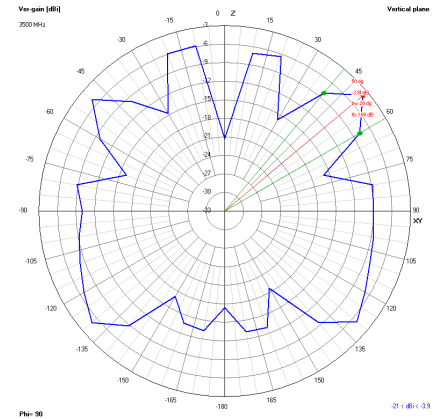
3500 MHz XY



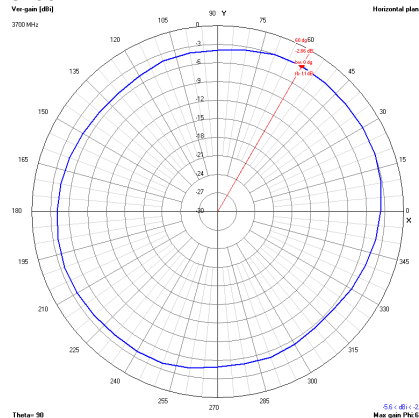
XZ



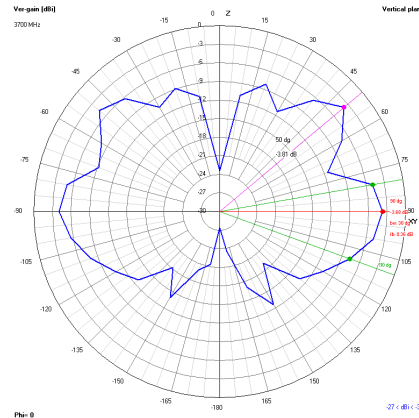
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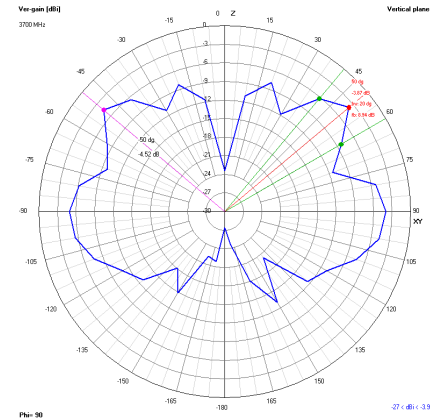
3700 MHz XY



XZ

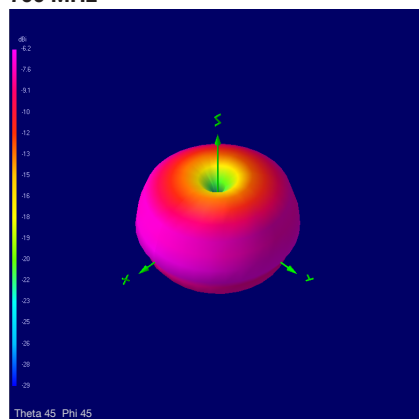


YZ

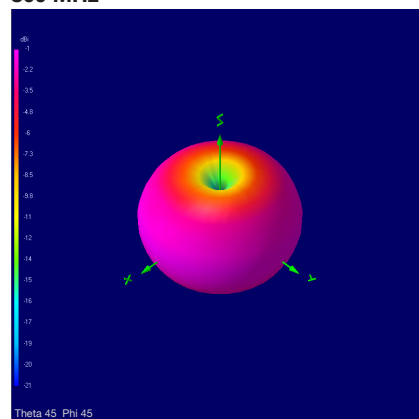


3D Radiation Plots tested with 5 m cable

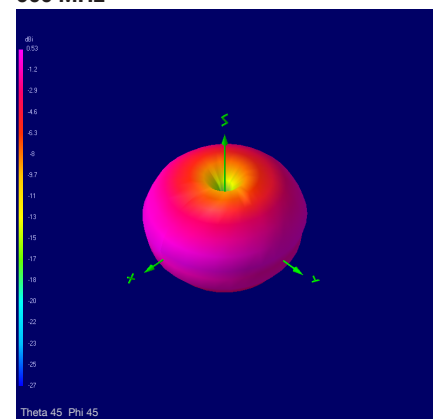
700 MHz



800 MHz



900 MHz



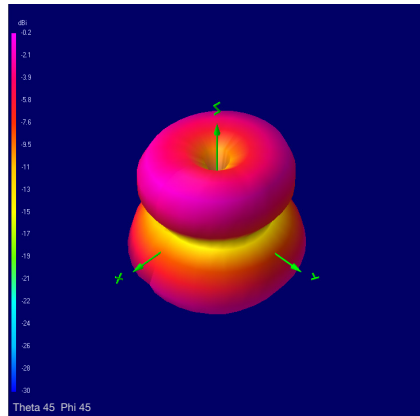


Oscar 1A

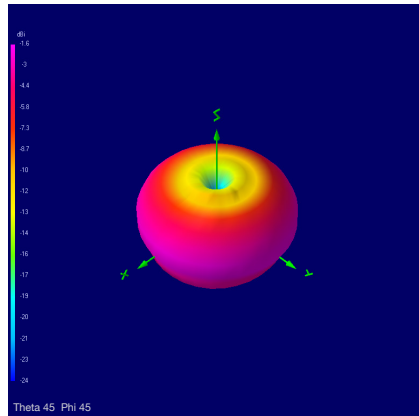
2G/3G/4G/(5G) OMNIDIRECTIONAL WALL MOUNT ANTENNA

3D Radiation Plots tested with 5 m cable

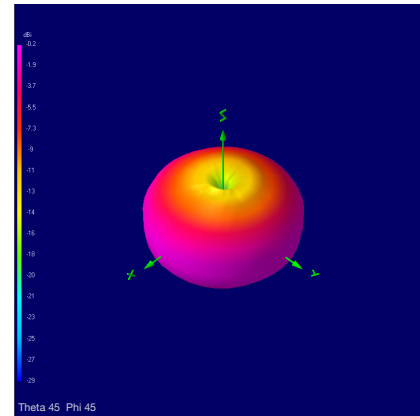
1400 MHz



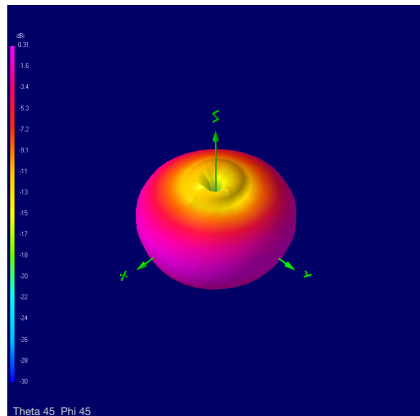
1700 MHz



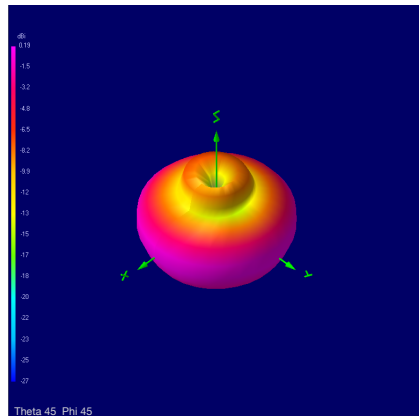
1800 MHz



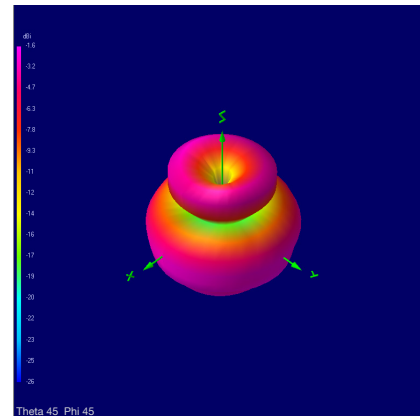
1900 MHz



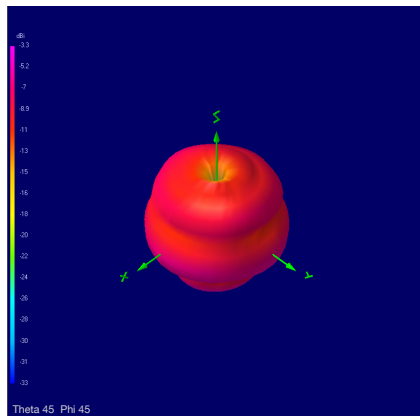
2000 MHz



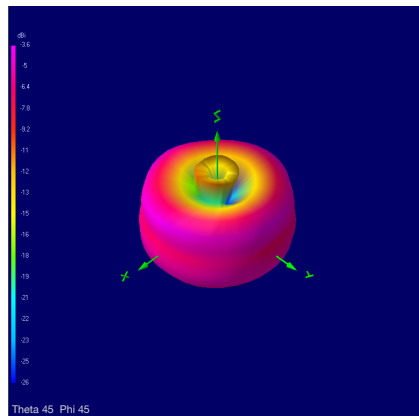
2100 MHz



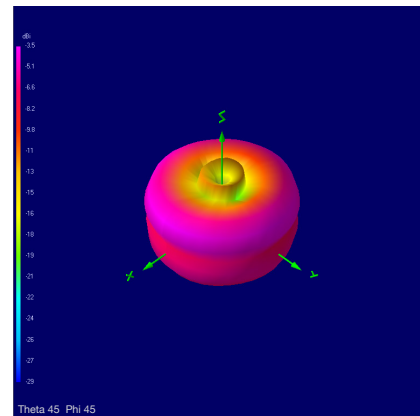
2300 MHz



2400 MHz



2460 MHz



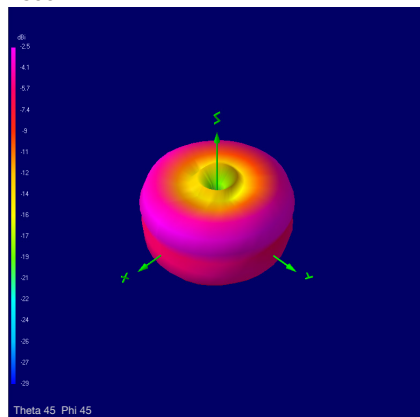


Oscar 1A

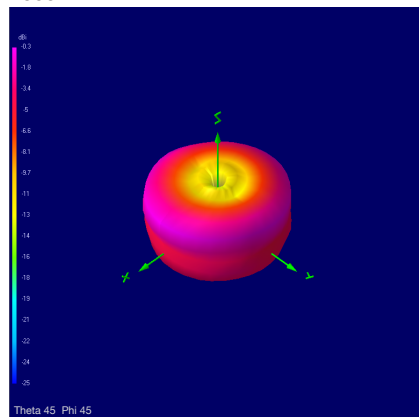
2G/3G/4G/(5G) OMNIDIRECTIONAL WALL MOUNT ANTENNA

3D Radiation Plots tested with 5 m cable

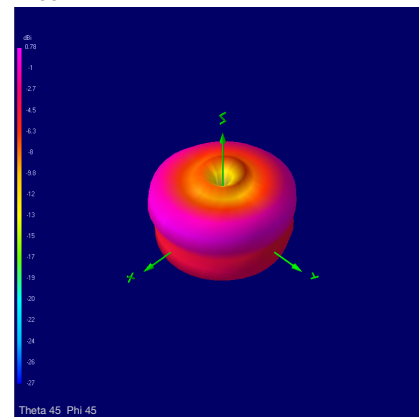
2500 MHz



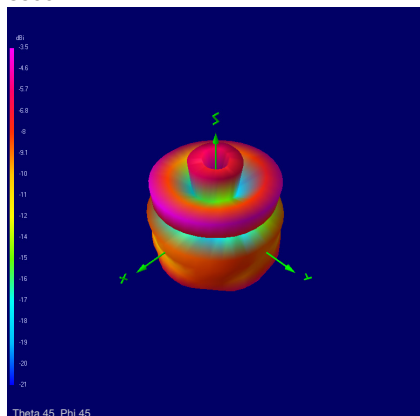
2600 MHz



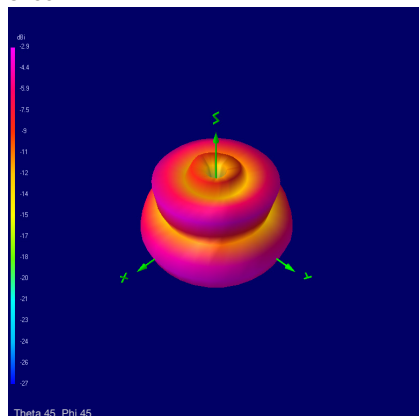
2700 MHz



3500 MHz



3700 MHz



Ordering Details

Part Number	Description
OSCAR1A/5M/FMEF/S/S/31	2G/3G/4G/5G WALL MOUNT OMNIDIRECTIONAL WALLMOUNT ANTENNA FME FEMALE CONNECTOR 5M CABLE
OSCAR1A/10M/FMEF/S/S/31	2G/3G/4G/5G WALL MOUNT OMNIDIRECTIONAL WALLMOUNT ANTENNA FME FEMALE CONNECTOR 10M CABLE
OSCAR1A/5M/SMAM/S/S/31	2G/3G/4G/5G WALL MOUNT OMNIDIRECTIONAL WALLMOUNT ANTENNA SMA MALE CONNECTOR 5M CABLE
OSCAR1A/10M/SMAM/S/S/31	2G/3G/4G/5G WALL MOUNT OMNIDIRECTIONAL WALLMOUNT ANTENNA SMA MALE CONNECTOR 10M CABLE