



Oscar 67

High Gain 9 dBi Directional ISM Outdoor Panel Antenna for 868/915 MHz



Key Features

- 700 – 960 MHz support
- Supports IEEE 802.15.4, LoRa, Sigfox, Zigbee and Z-Wave and Helium bands
- Wide beam-width directional coverage
- Engineering grade ASA plastic radome
- 9 dBi gain

General Description

The OSCAR 67 is a highly efficient wide beam directional antenna designed for use in the 868 and 915 MHz frequency bands. With a peak gain of 9 dBi, a VSWR of 1.35 and the ability to handle up to 100 watts of power, this antenna is perfect for your ISM, LoRa, Sigfox, Zigbee, Helium and Z-Wave applications.

The antenna's radome is made of Engineering grade ASA plastic and can be set up with vertical or horizontal polarization. Some common applications include Remote Sensor Telemetry, Smart Manufacturing and Medical Device Communication.

The OSCAR 68 comes with a wall mount and a pole mount, both are made of steel with an anti-rust treatment and can be adjusted to optimise signal strength.

Additional Considerations

- Optional Pole mount and wall mount included
- For associated low loss cables for this antenna, please see ordering information on page 20





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Electrical Specifications

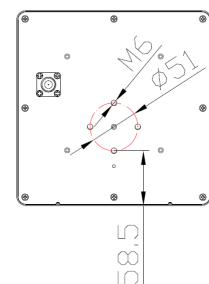
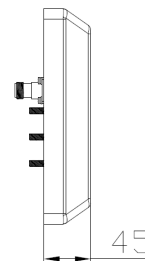
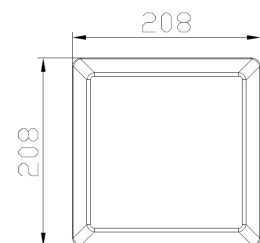
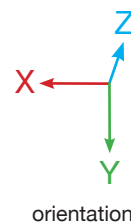
Impedance:	50 Ohm
Polarization:	Vertical/Linear
Max Input Power:	100 W
Ground plane independent:	Yes

Environmental Specifications

Operating Temperature range:	-45 to +75 °C
Storage Temperature range:	-50 to +75 °C

Mechanical Specifications

Dimensions:	208 x 208 x 45 mm
Weight:	1.2 Kg
Connector:	N Female, Long Neck
Mounting method:	Pole mount or Wall mount (optional)
Housing materials:	ASA plastic

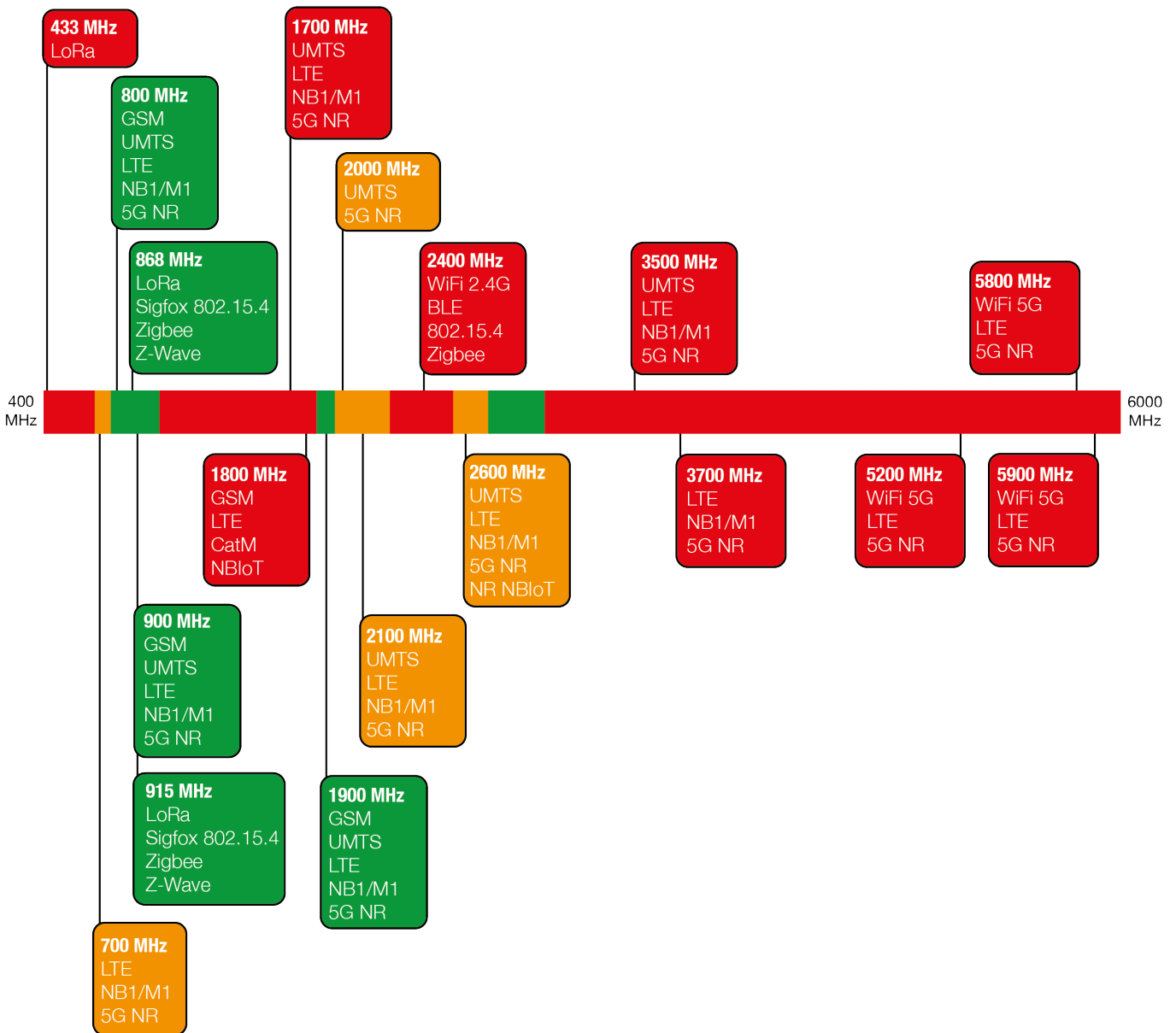




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Spectrum Coverage



● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable



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Usable Cellular Frequency Support (410 MHz – 1900 MHz)

	410	450	600	700	800	850	900	1500	1600	1700	1800	1900
GSM Bands:						●	●					●
UMTS Bands:				●	●	●	●					●
LTE Bands:				●	●	●	●			●		●
LTE Cat M Bands:				●	●	●	●					●
LTE Cat NB Bands:				●	●	●	●			●		●
5G NR Bands:				●	●	●	●			●		●
NR Cat NB Bands:				●	●	●	●			●		●

Usable Cellular Frequency Support (2000 MHz – 5900 MHz)

	2000	2100	2300	2400	2500	2600	3300	3500	3700	4700	5200	5900
GSM Bands:												
UMTS Bands:		●										
LTE Bands:	●	●										
LTE Cat M Bands:		●										
LTE Cat NB Bands:		●										
5G NR Bands:	●	●										
NR Cat NB Bands:		●										

Usable ISM Frequency Support (433 MHz - 5800 MHz)

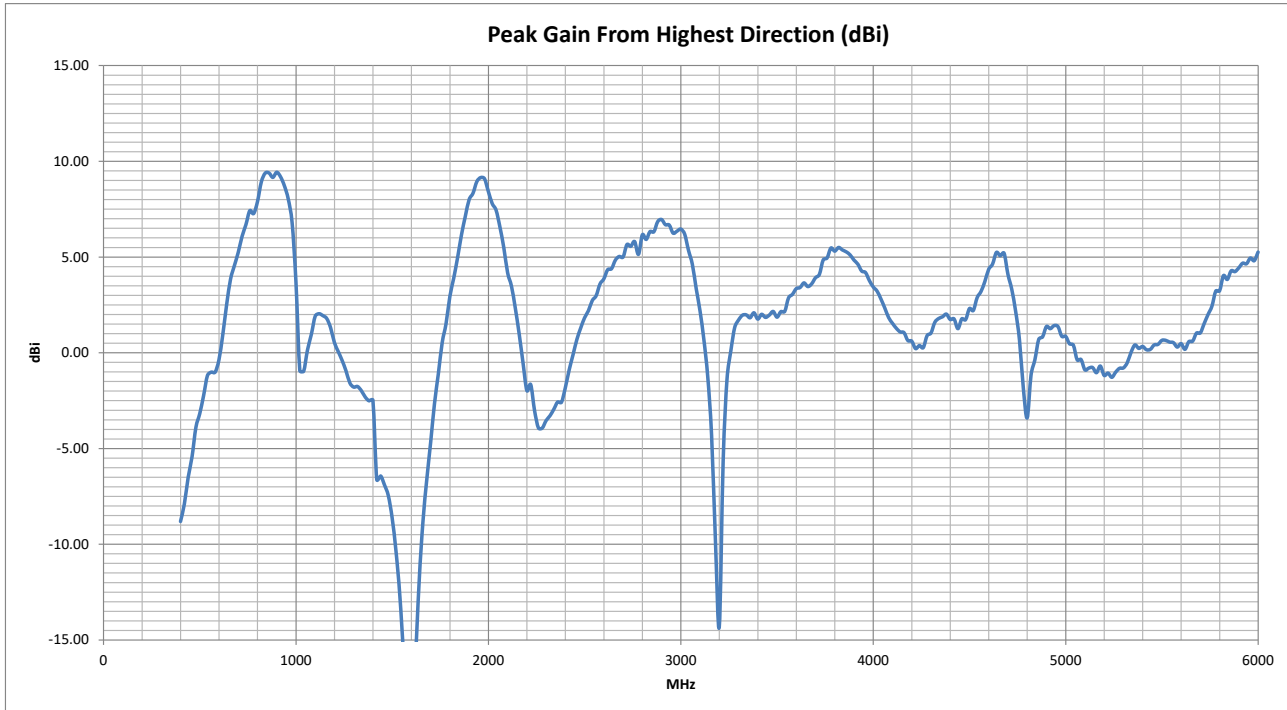
	433	868	915	2450	5800
Bluetooth					
IEEE 802.15.4		●	●		
LoRa		●	●		
Sigfox		●	●		
WiFi 2.4G					
WiFi 5G					
Zigbee		●	●		
Z-Wave		●	●		



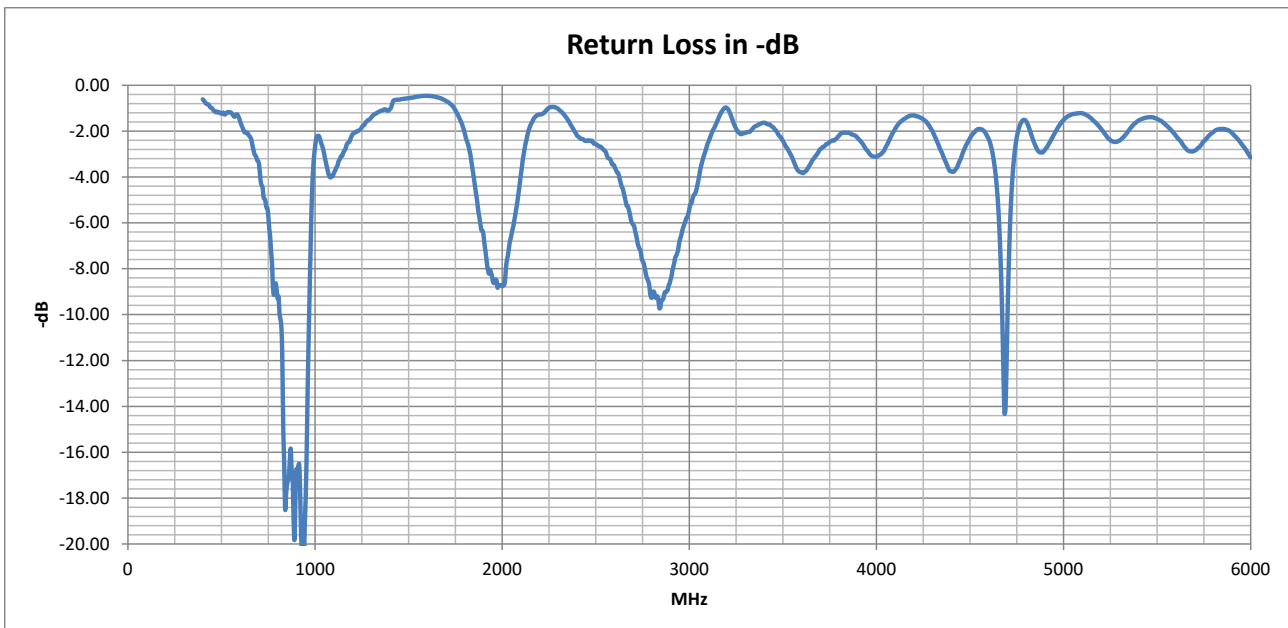
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Peak Gain vs. Frequency



Return Loss

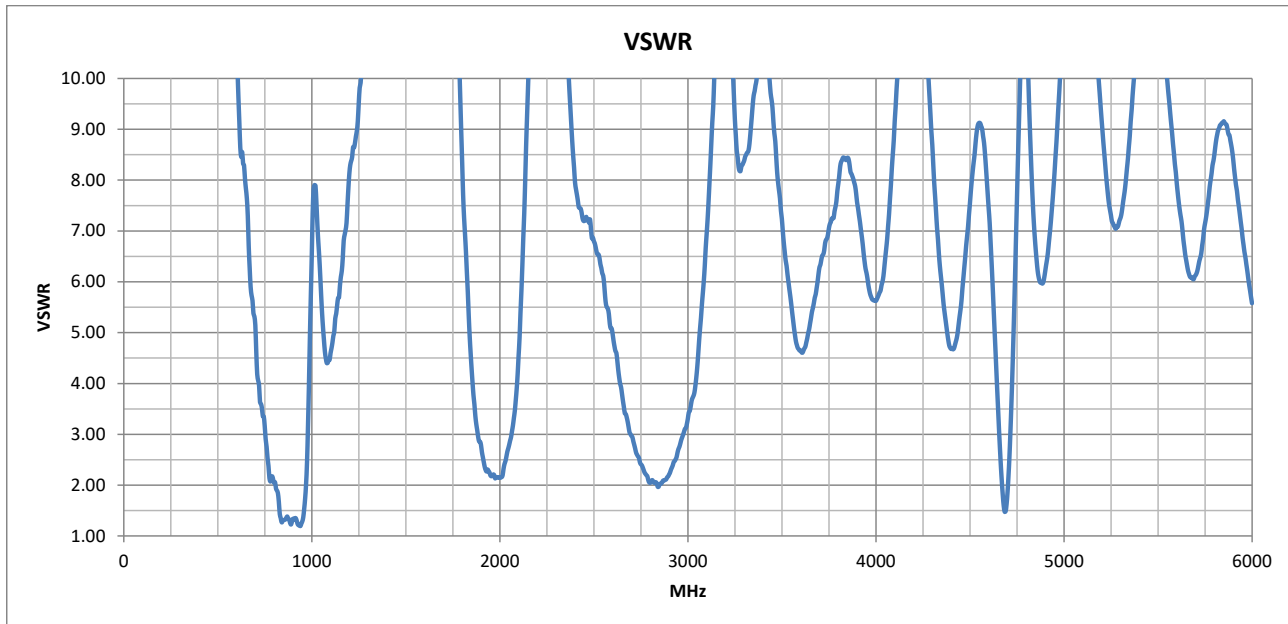




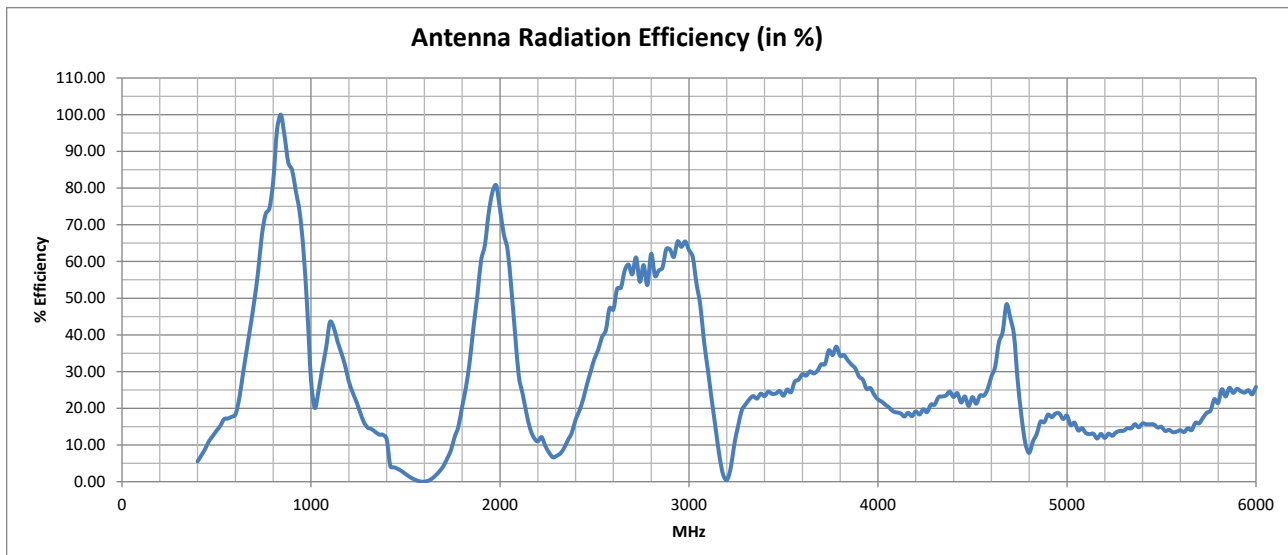
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VSWR



Radiation Efficiency





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Cellular Standards Band Support

GSM (2G) Band	UMTS (3G) Band	E-UTRA (4G) Band	Cat M E-UTRA Band	Cat NB E-UTRA Band	NR (5G) Band	Cat NB NR (5G) Band	Uplink	Downlink	Average Upload Efficiency (%)	Average Download Efficiency (%)	Maximum Upload VSWR	Maximum Download VSWR	Use Indicator
	1	1	1	1	n1	n1	1920 - 1980 MHz	2110 - 2170 MHz	74.85	19.08	2.36	12.07	●
PCS-1900	2	2	2	2	n2	n2	1850 - 1910 MHz	1930 - 1990 MHz	50.78	76.94	4.30	2.31	●
DCS-1800	3	3	3	3	n3	n3	1710 - 1785 MHz	1805 - 1880 MHz	10.18	34.93	23.56	7.71	●
	4	4	4	4			1710 - 1755 MHz	2110 - 2155 MHz	7.86	20.73	23.56	10.37	●
GSM-850	5	5	5	5	n5	n5	824 - 849 MHz	869 - 894 MHz	98.43	87.39	1.71	1.38	●
	6						830 - 840 MHz	875 - 885 MHz	98.93	87.23	1.43	1.34	●
	7	7	7	7	n7	n7	2500 - 2570 MHz	2620 - 2690 MHz	38.33	55.86	6.80	4.60	●
E-GSM-900	8	8	8	8	n8	n8	880 - 915 MHz	925 - 960 MHz	84.54	71.39	1.35	1.54	●
	9	9					1749.9 - 1784.9 MHz	1844.9 - 1879.9 MHz	13.23	43.02	15.91	4.60	●
	10	10					1710 - 1770 MHz	2110 - 2170 MHz	9.03	19.08	23.56	12.07	●
	11	11	11	11			1427.9 - 1447.9 MHz	1475.9 - 1495.9 MHz	3.95	2.65	27.58	30.35	●
	12	12	12	12	n12	n12	699 - 716 MHz	729 - 746 MHz	52.26	65.67	5.18	3.61	●
	13	13	13	13	n13	n13	777 - 787 MHz	746 - 756 MHz	75.35	70.33	2.15	3.31	●
	14	14	14	14	n14		788 - 798 MHz	758 - 768 MHz	79.27	73.13	2.18	2.82	●
		17		17			704 - 716 MHz	734 - 746 MHz	53.23	66.83	4.73	3.53	●
		18	18	18	n18	n18	815 - 830 MHz	860 - 875 MHz	95.85	91.45	1.89	1.38	●
	19	19	19	19			830 - 845 MHz	875 - 890 MHz	99.04	86.87	1.43	1.34	●
	20	20	20	20	n20	n20	832 - 862 MHz	791 - 821 MHz	97.42	86.44	1.40	2.16	●
	21	21	21	21			1447.9 - 1462.9 MHz	1495.9 - 1510.9 MHz	3.59	2.00	28.62	31.44	●
	22	22					3410 - 3490 MHz	3510 - 3590 MHz	24.23	26.14	10.45	6.78	●
		24	24	24	n24		1626.5 - 1660.5 MHz	1525 - 1559 MHz	1.05	0.78	35.92	35.77	●
	25	25	25	25	n25	n25	1850 - 1915 MHz	1930 - 1995 MHz	51.71	76.92	4.30	2.31	●
	26	26	26	26	n26		814 - 849 MHz	859 - 894 MHz	97.34	88.92	1.90	1.38	●
		27	27				807 - 824 MHz	852 - 869 MHz	92.37	93.87	2.01	1.38	●
		28	28	28	n28	n28	703 - 748 MHz	758 - 803 MHz	60.09	76.26	4.84	2.82	●

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable



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Cellular Standards Band Support

GSM (2G) Band	UMTS (3G) Band	E-UTRA (4G) Band	Cat M E-UTRA Band	Cat NB E-UTRA Band	NR (5G) Band	Cat NB NR (5G) Band	Uplink	Downlink	Average Upload Efficiency (%)	Average Download Efficiency (%)	Maximum Upload VSWR	Maximum Download VSWR	Use Indicator
		28A					703 - 733 MHz	758 - 788 MHz	56.67	74.24	4.84	2.82	●
		29			n29		N/A	717 - 728 MHz	N/A	58.44	N/A	4.02	●
		30			n30		2305 - 2315 MHz	2350 - 2360 MHz	7.40	10.86	16.10	11.62	●
		31	31	31			452.5 - 457.5 MHz	462.5 - 467.5 MHz	10.52	11.39	16.67	15.30	●
	32	32					N/A	1452 - 1496 MHz	N/A	3.03	N/A	30.36	●
		33					1900 - 1920 MHz	1900 - 1920 MHz	62.34	62.34	2.79	2.79	●
		34			n34		2010 - 2025 MHz	2010 - 2025 MHz	68.42	68.42	2.42	2.42	●
		35					1850 - 1910 MHz	1850 - 1910 MHz	50.78	50.78	4.30	4.30	●
		36					1930 - 1990 MHz	1930 - 1990 MHz	76.94	76.94	2.31	2.31	●
		37					1910 - 1930 MHz	1910 - 1930 MHz	64.99	64.99	2.55	2.55	●
		38			n38		2570 - 2620 MHz	2570 - 2620 MHz	47.89	47.89	5.50	5.50	●
		39	39		n39		1880 - 1920 MHz	1880 - 1920 MHz	58.87	58.87	3.08	3.08	●
		40	40		n40		2300 - 2400 MHz	2300 - 2400 MHz	10.74	10.74	16.74	16.74	●
		41	41	41	n41	n41	2496 - 2690 MHz	2496 - 2690 MHz	47.01	47.01	6.86	6.86	●
		42	42	42			3400 - 3600 MHz	3400 - 3600 MHz	25.16	25.16	10.62	10.62	●
		43	43	43			3600 - 3800 MHz	3600 - 3800 MHz	32.17	32.17	7.93	7.93	●
		44					703 - 803 MHz	703 - 803 MHz	68.45	68.45	4.84	4.84	●
		45					1447 - 1467 MHz	1447 - 1467 MHz	3.54	3.54	28.87	28.87	●
		46			n46		5150 - 5925 MHz	5150 - 5925 MHz	16.54	16.54	12.48	12.48	●
		47			n47		5855 - 5925 MHz	5855 - 5925 MHz	24.89	24.89	9.12	9.12	●
		48			n48		3550 - 3700 MHz	3550 - 3700 MHz	29.17	29.17	6.29	6.29	●
		49					3550 - 3700 MHz	3550 - 3700 MHz	29.17	29.17	6.29	6.29	●
		50			n50		1432 - 1517 MHz	1432 - 1517 MHz	2.95	2.95	31.80	31.80	●
		51			n51		1427 - 1432 MHz	1427 - 1432 MHz	4.08	4.08	27.04	27.04	●
		52					3300 - 3400 MHz	3300 - 3400 MHz	22.93	22.93	10.63	10.63	●

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● Likely to be unsuitable



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Cellular Standards Band Support

GSM (2G) Band	UMTS (3G) Band	E-UTRA (4G) Band	Cat M E-UTRA Band	Cat NB E-UTRA Band	NR (5G) Band	Cat NB NR (5G) Band	Uplink	Downlink	Average Upload Efficiency (%)	Average Download Efficiency (%)	Maximum Upload VSWR	Maximum Download VSWR	Use Indicator
		53			n53		2483.5 - 2495 MHz	2483.5 - 2495 MHz	31.65	31.65	7.09	7.09	●
		65		65	n65	n65	1920 - 2010 MHz	2110 - 2200 MHz	75.19	16.67	2.36	13.61	●
		66	66	66	n66	n66	1710 - 1780 MHz	2110 - 2200 MHz	9.78	16.67	23.56	13.61	●
		67			n67		N/A	738 - 758 MHz	N/A	69.44	N/A	3.42	●
		68					698 - 728 MHz	753 - 783 MHz	54.53	73.43	5.22	3.01	●
		69					N/A	2570 - 2620 MHz	N/A	47.89	N/A	5.50	●
		70		70	n70	n70	1695 - 1710 MHz	1995 - 2020 MHz	4.49	71.72	26.14	2.32	●
		71	71	71	n71		663 - 698 MHz	617 - 652 MHz	42.71	27.51	6.93	8.94	●
		72	72	72			451 - 456 MHz	461 - 466 MHz	10.36	11.29	16.97	15.39	●
		73	73	73			450 - 455 MHz	460 - 465 MHz	10.26	11.22	17.17	15.45	●
		74	74	74	n74		1427 - 1470 MHz	1475 - 1518 MHz	3.72	2.26	28.99	31.86	●
		75			n75		N/A	1432 - 1517 MHz	N/A	2.95	N/A	31.80	●
		76			n76		N/A	1427 - 1432 MHz	N/A	4.08	N/A	27.04	●
					n77		3300 - 4200 MHz	3300 - 4200 MHz	26.06	26.06	13.24	13.24	●
					n78		3300 - 3800 MHz	3300 - 3800 MHz	27.52	27.52	10.63	10.63	●
					n79		4400 - 5000 MHz	4400 - 5000 MHz	23.60	23.60	11.51	11.51	●
					n80		1710 - 1785 MHz	N/A	10.18	N/A	23.56	N/A	●
					n81		880 - 915 MHz	N/A	84.54	N/A	1.35	N/A	●
					n82		832 - 862 MHz	N/A	97.42	N/A	1.40	N/A	●
					n83		703 - 748 MHz	N/A	60.09	N/A	4.84	N/A	●
					n84		1920 - 1980 MHz	N/A	74.85	N/A	2.36	N/A	●
		85	85	85	n85		698 - 716 MHz	728 - 746 MHz	52.06	65.43	5.22	3.61	●
					n86		1710 - 1780 MHz	N/A	9.78	N/A	23.56	N/A	●
		87	87	87			410 - 415 MHz	420 - 425 MHz	6.58	7.41	24.23	21.16	●
		88	88	88			412 - 417 MHz	422 - 427 MHz	6.74	7.59	23.49	21.12	●

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable



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Cellular Standards Band Support

GSM (2G) Band	UMTS (3G) Band	E-UTRA (4G) Band	Cat M E-UTRA Band	Cat NB E-UTRA Band	NR (5G) Band	Cat NB NR (5G) Band	Uplink	Downlink	Average Upload Efficiency (%)	Average Download Efficiency (%)	Maximum Upload VSWR	Maximum Download VSWR	Use Indicator
					n89		824 - 849 MHz	N/A	98.43	N/A	1.71	N/A	●
					n90	n90	2496 - 2690 MHz	2496 - 2690 MHz	47.01	47.01	6.86	6.86	●
					n91		832 - 862 MHz	1427 - 1432 MHz	97.42	4.08	1.40	27.04	●
					n92		832 - 862 MHz	1432 - 1517 MHz	97.42	2.95	1.40	31.80	●
					n93		880 - 915 MHz	1427 - 1432 MHz	84.54	4.08	1.35	27.04	●
					n94		880 - 915 MHz	1432 - 1517 MHz	84.54	2.95	1.35	31.80	●
					n95		2010 - 2025 MHz	N/A	68.42	N/A	2.42	N/A	●
					n97		2300 - 2400 MHz	N/A	10.74	N/A	16.74	N/A	●
					n98		1880 - 1920 MHz	N/A	58.87	N/A	3.08	N/A	●
					n99		1626.5 - 1660.5 MHz	N/A	1.05	N/A	35.92	N/A	●
					n101		1900 - 1910 MHz	1900 - 1910 MHz	61.30	61.30	2.79	2.79	●
				103			787 - 788 MHz	757 - 758 MHz	77.24	72.22	2.16	2.85	●

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable

NOTE: For each frequency band, Siretta provides a traffic light indication to show the suitability of the antenna for use at that frequency band. Determination of exactly what makes an antenna good or bad at any frequency is subjective.

The view presented is that of Siretta's engineering team having taken into account the efficiency and VSWR measurements. The end user is advised to use their own criteria and/or testing to confirm suitability.



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ISM Standards Frequency Support

Application	Frequency Range	Efficiency (%)	Maximum VSWR	Peak Gain from highest direction (dBi)	Use Indicator
ISM 433 MHz	433.05 - 434.79 MHz	8.42	19.84	-6.864	●
IMT 868 MHz	863 - 870 MHz	91.82	1.38	9.3555	●
ISM 915 MHz	902 - 928 MHz	80.54	1.35	9.406	●
ISM 2.4 GHz	2400 - 2500 MHz	24.70	7.96	1.83	●
WiFi 2.4G	2401 - 2483 MHz	23.28	7.93	1.3795	●
WiFi 2.4G (USA)	2401 - 2473 MHz	22.38	7.93	1.09	●
WiFi 2.4G (Japan)	2401 - 2495 MHz	24.34	7.93	1.6975	●
WiFi 5G (all channels)	5150 - 5990 MHz	17.15	12.48	5.035	●
WiFi 5G (Ch 32-48)	5150 - 5250 MHz	12.53	11.91	-0.69	●
WiFi 5G (Ch 32-64)	5150 - 5330 MHz	13.15	11.91	-0.245	●
WiFi 5G (Ch 32-161)	5150 - 5815 MHz	15.20	12.48	3.8325	●
WiFi 5G (Ch 32-173)	5150 - 5875 MHz	15.97	12.48	4.28	●
ISM 5.8 GHz	5725 - 5875 MHz	22.20	9.16	4.28	●

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable

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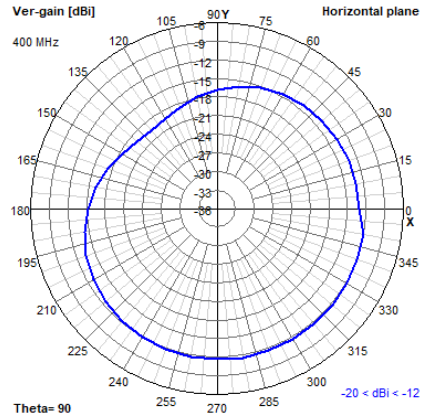


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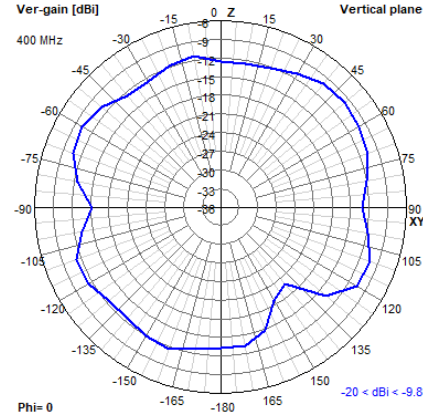
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2D Radiation Plots

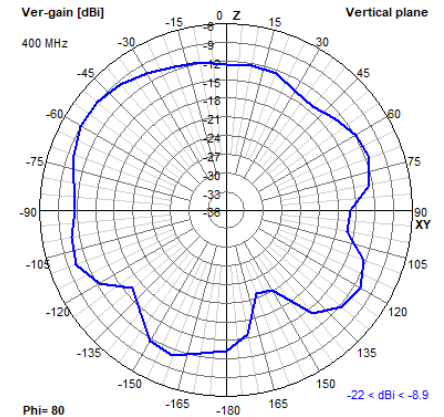
400 MHz XY



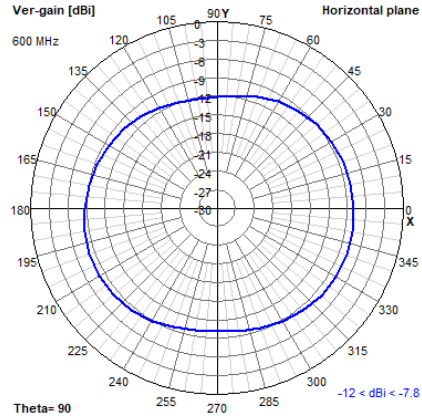
XZ



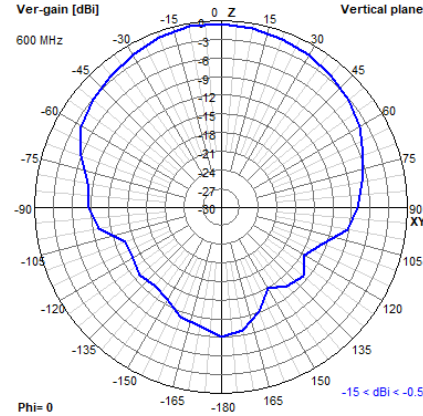
YZ



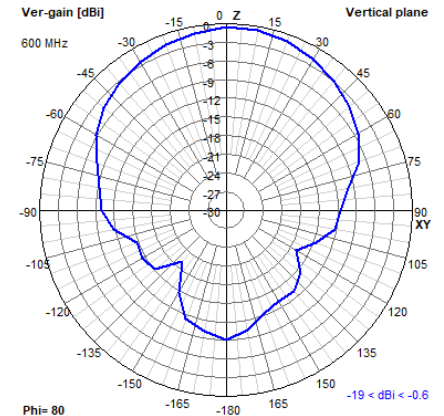
600 MHz XY



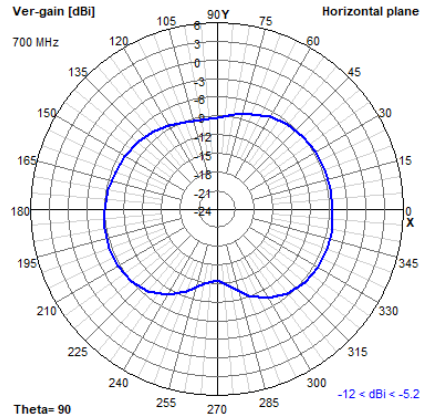
XZ



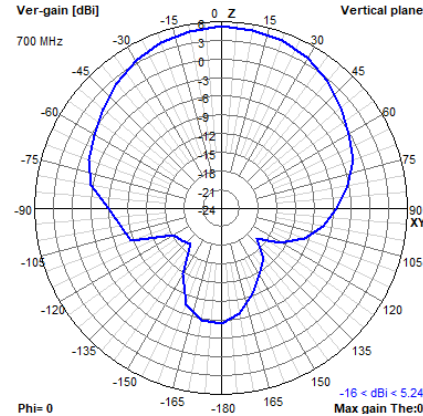
YZ



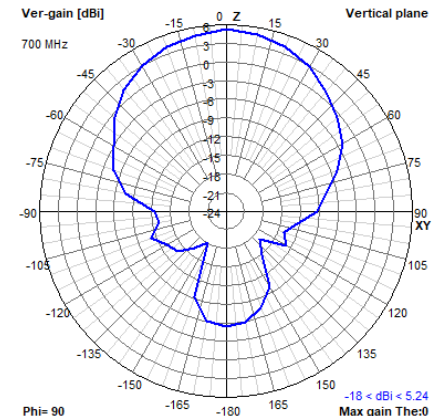
700 MHz XY



XZ



YZ



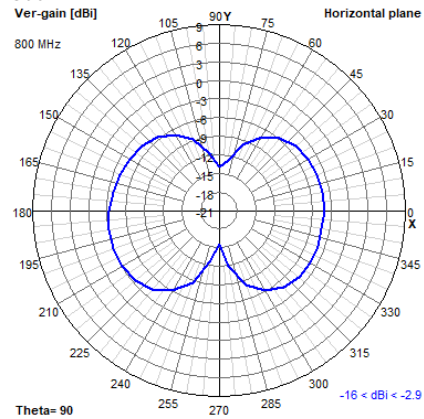


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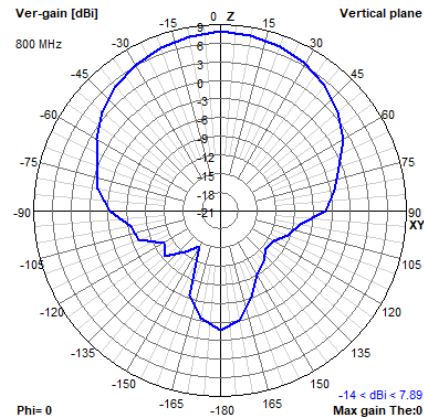
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2D Radiation Plots

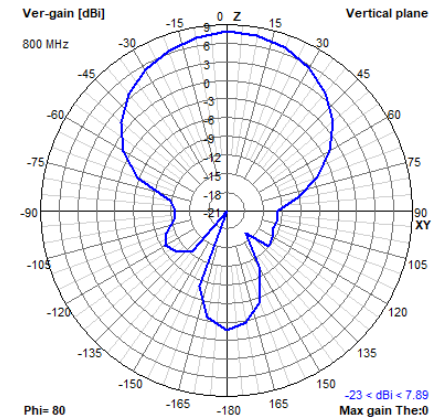
800 MHz XY



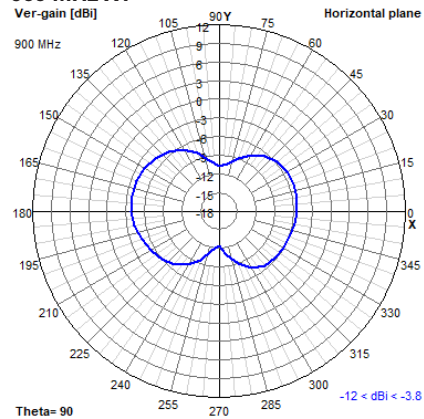
XZ



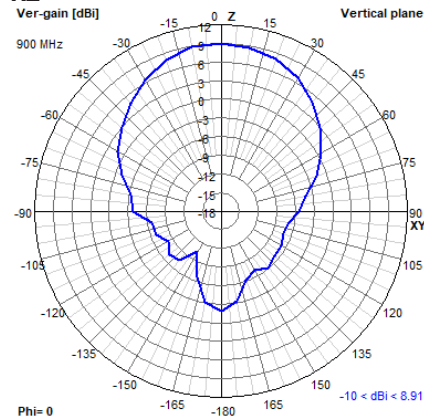
YZ



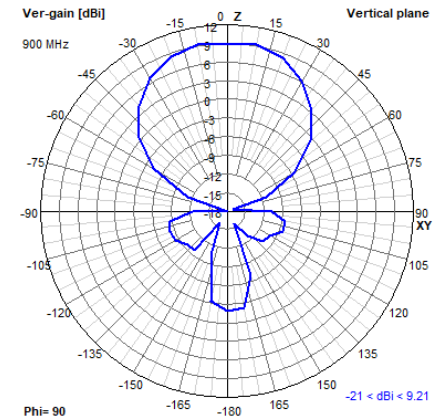
900 MHz XY



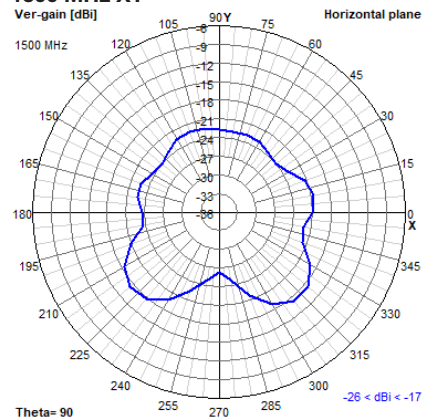
XZ



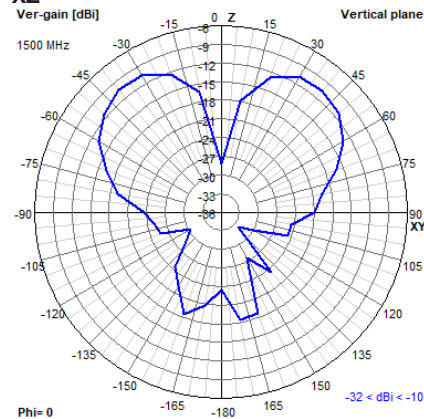
YZ



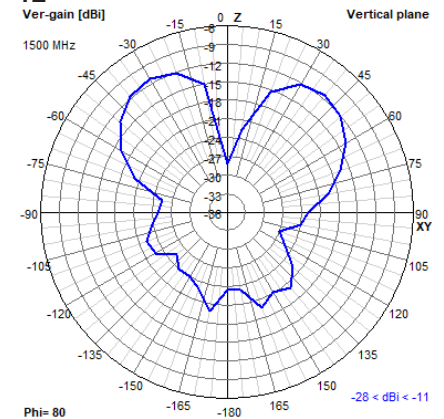
1500 MHz XY



XZ



YZ



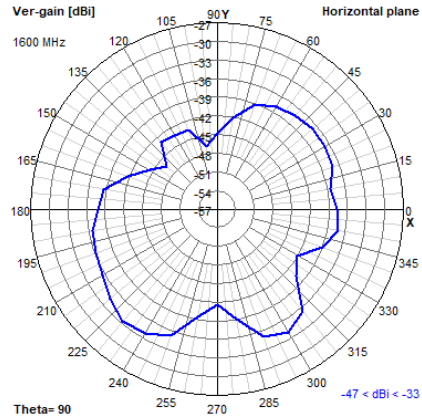


Oscar 67

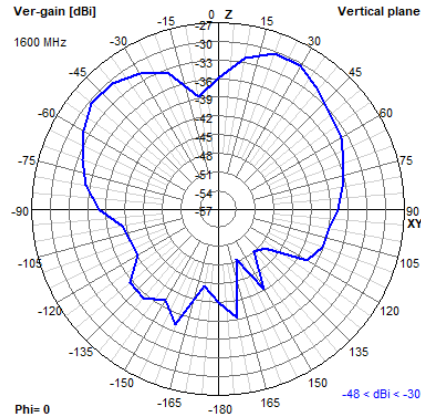
High Gain 9 dBi Directional ISM Outdoor Panel Antenna for 868/915 MHz

2D Radiation Plots

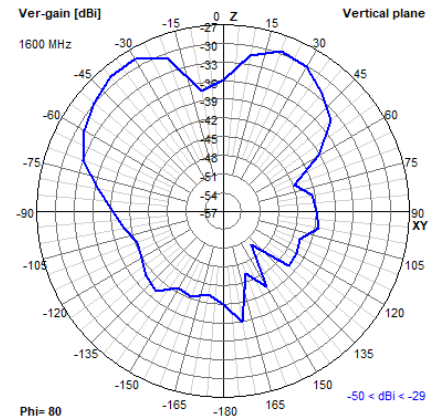
1600 MHz XY



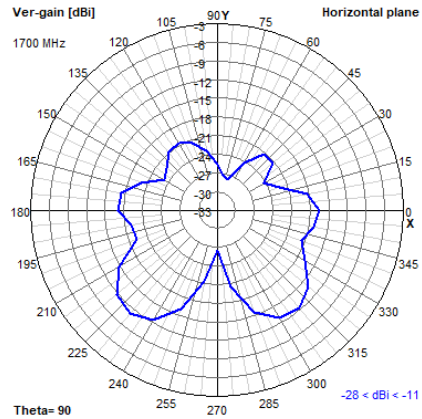
XZ



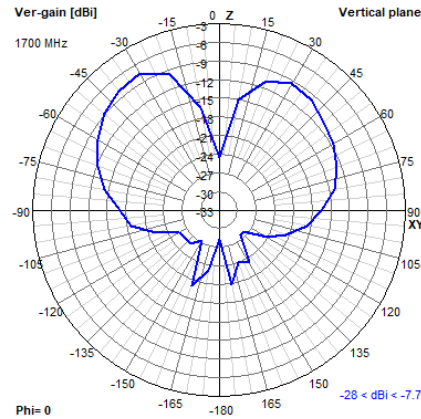
YZ



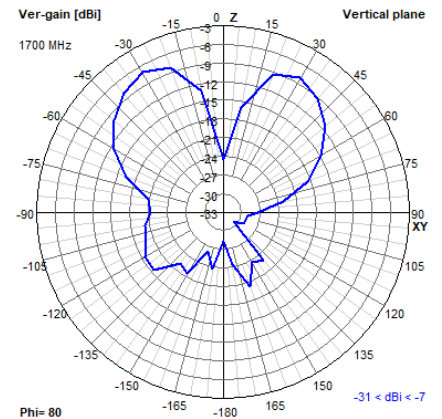
1700 MHz XY



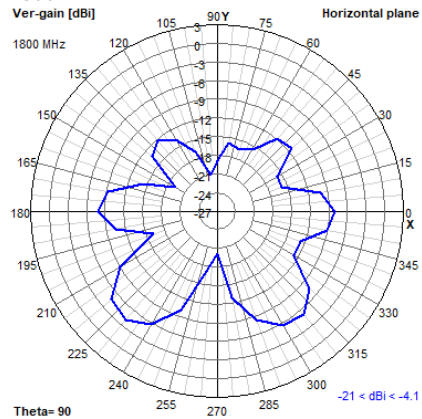
XZ



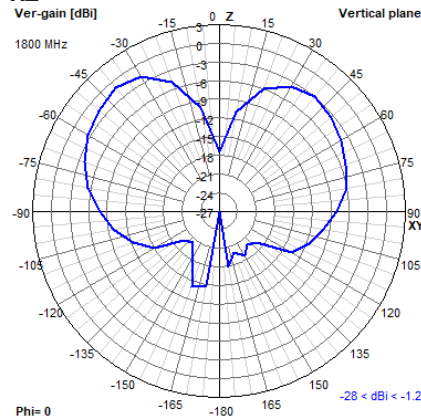
YZ



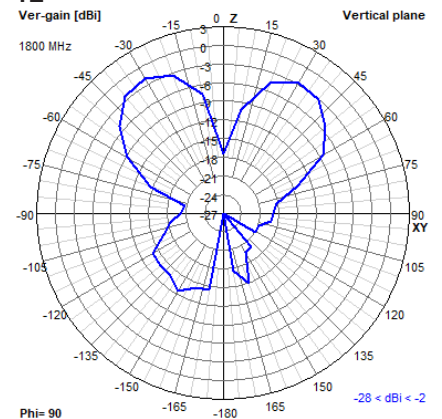
1800 MHz XY



XZ



YZ



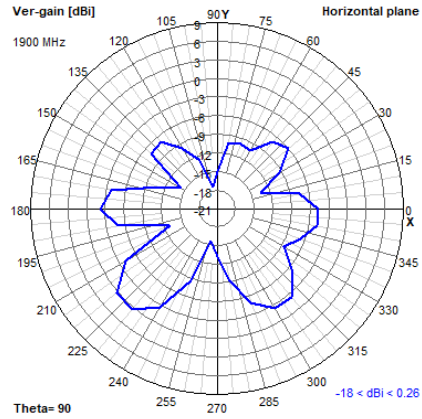


Oscar 67

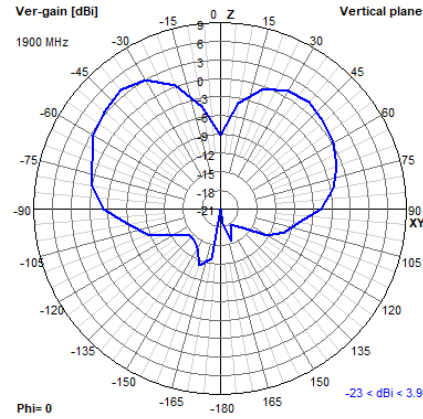
High Gain 9 dBi Directional ISM Outdoor Panel Antenna for 868/915 MHz

2D Radiation Plots

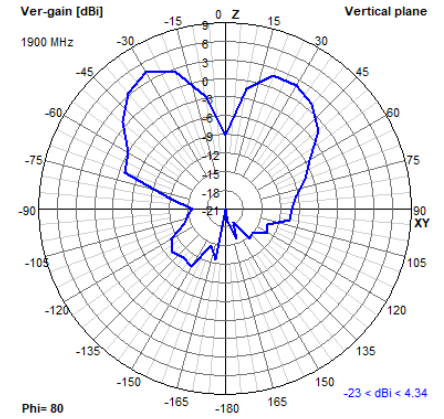
1900 MHz XY



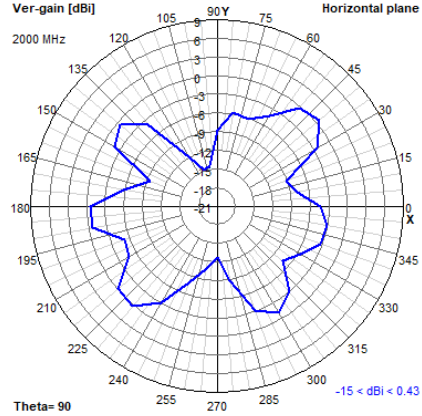
XZ



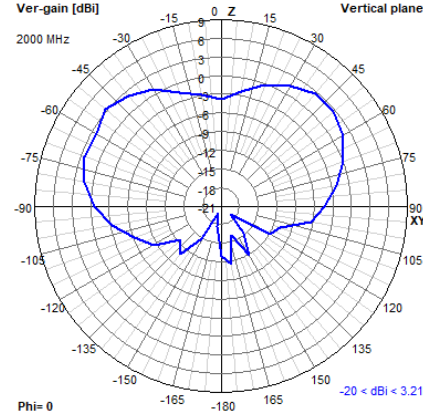
YZ



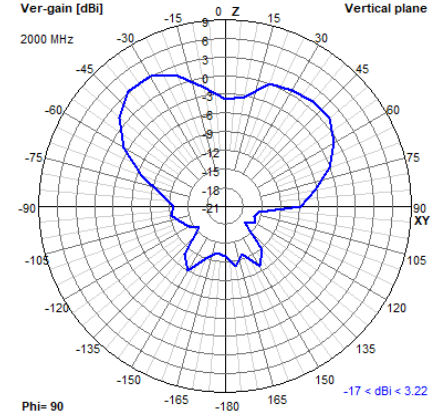
2000 MHz XY



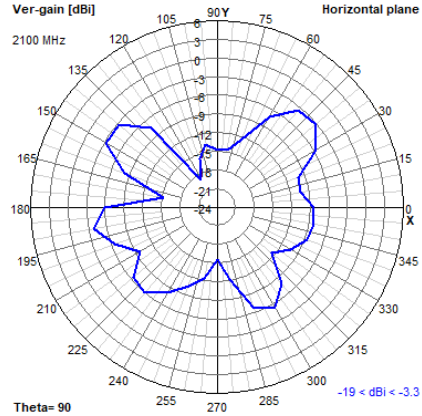
XZ



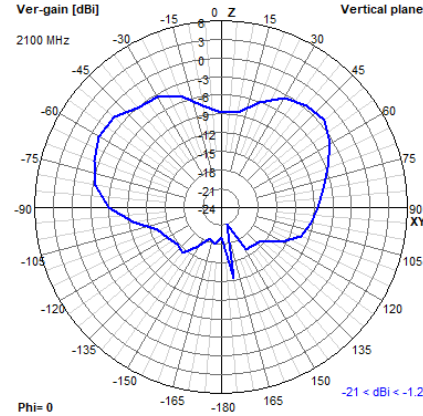
YZ



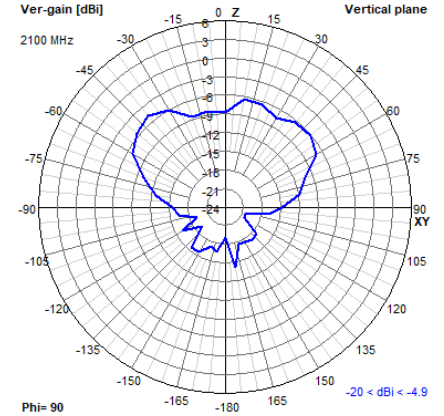
2100 MHz XY



XZ



YZ



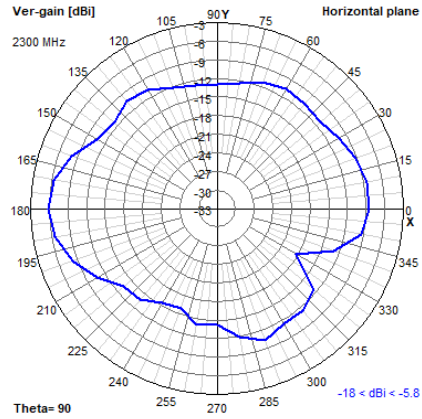


Oscar 67

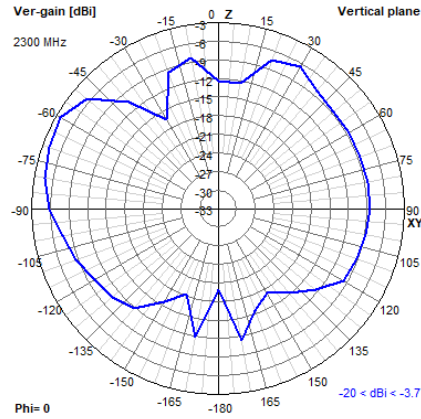
High Gain 9 dBi Directional ISM Outdoor Panel Antenna for 868/915 MHz

2D Radiation Plots

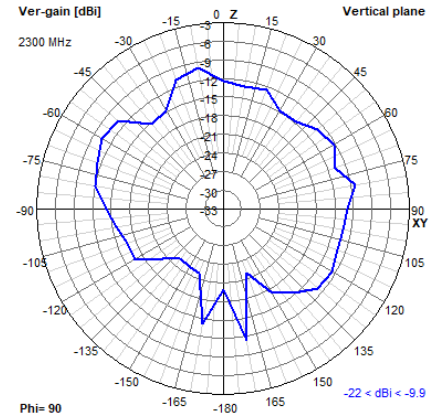
2300 MHz XY



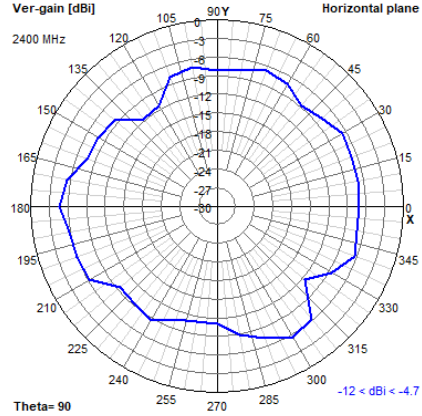
XZ



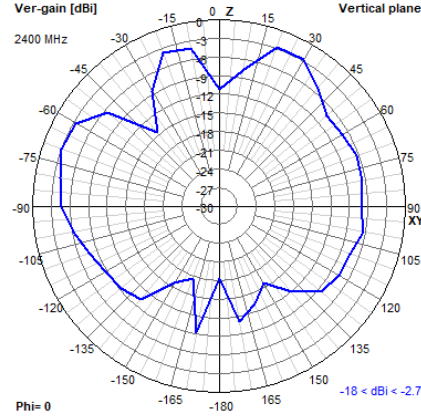
YZ



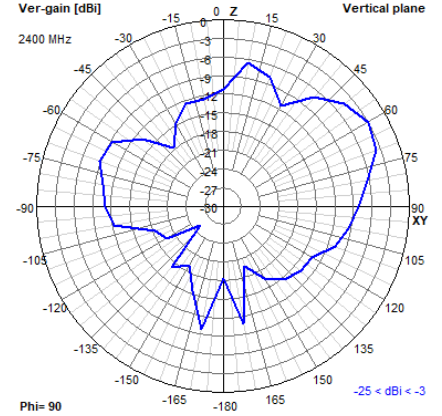
2400 MHz XY



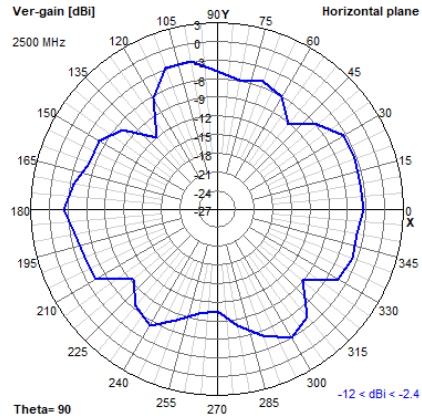
XZ



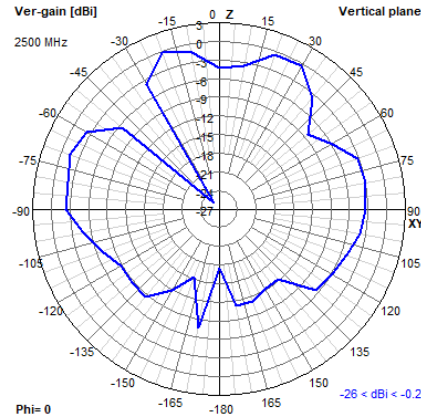
YZ



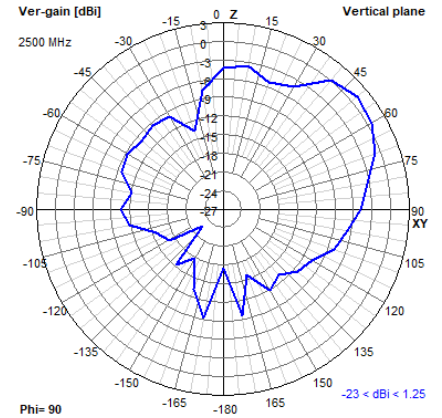
2500 MHz XY



XZ



YZ



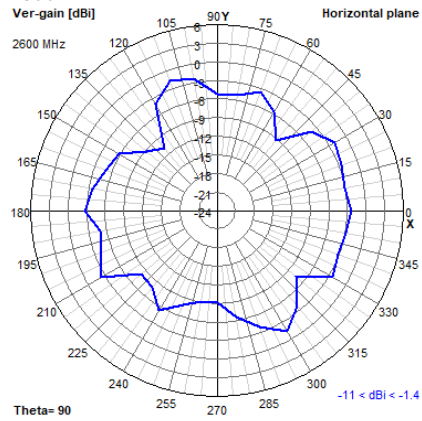


Oscar 67

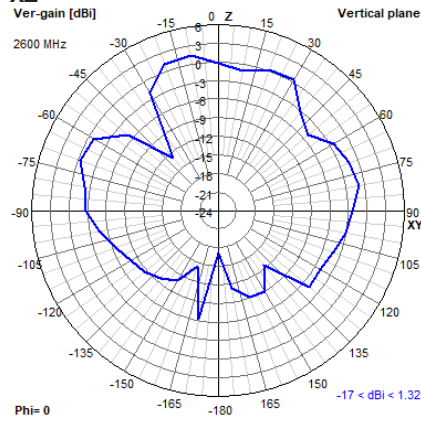
High Gain 9 dBi Directional ISM Outdoor Panel Antenna for 868/915 MHz

2D Radiation Plots

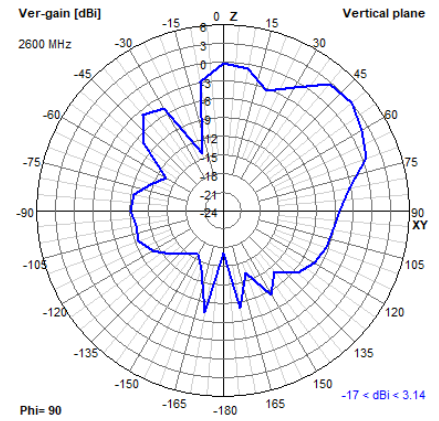
2600 MHz XY



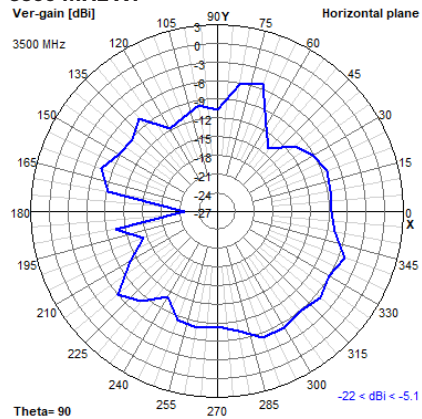
XZ



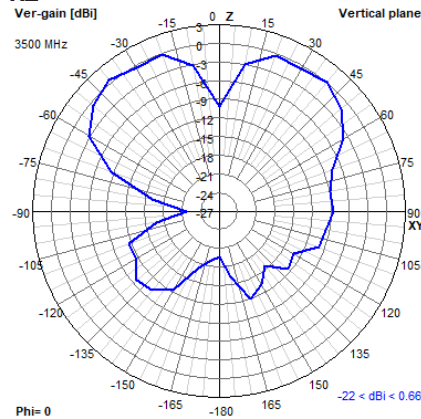
YZ



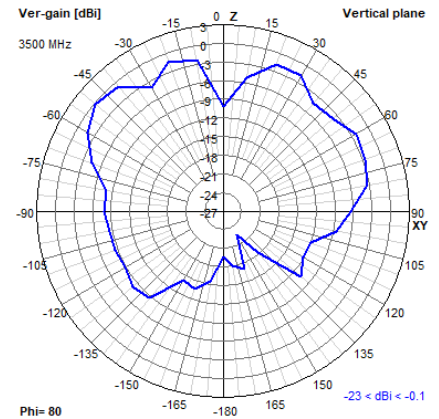
3500 MHz XY



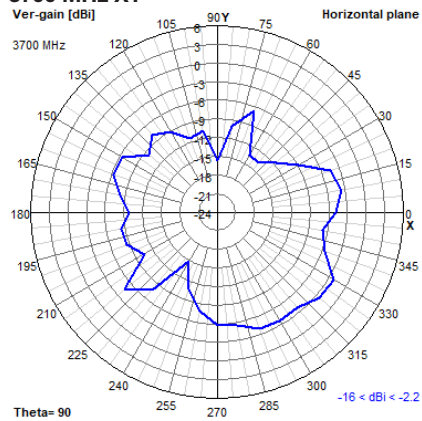
XZ



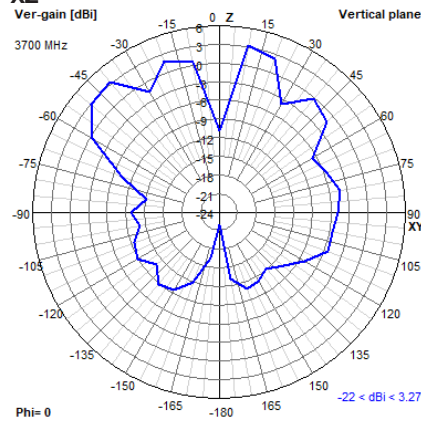
YZ



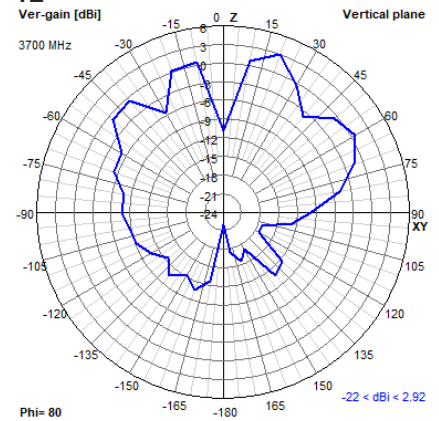
3700 MHz XY



XZ



YZ



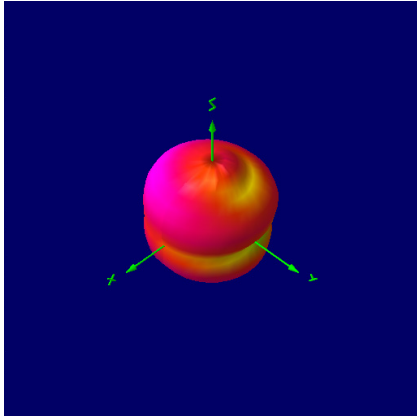


Oscar 67

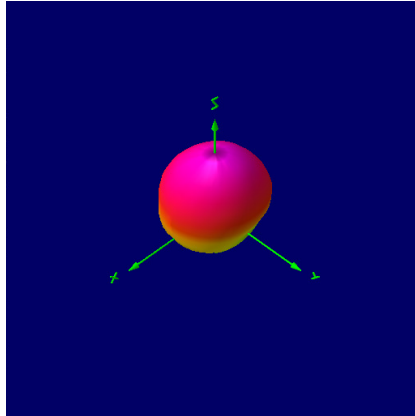
High Gain 9 dBi Directional ISM Outdoor Panel Antenna for 868/915 MHz

3D Radiation Plots

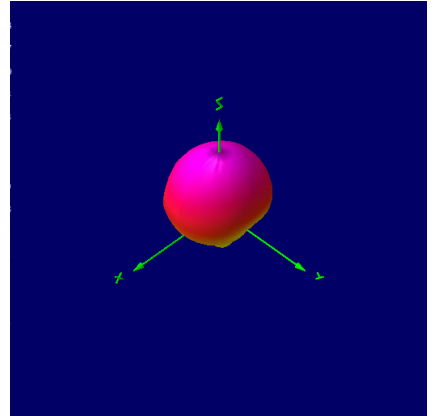
400 MHz



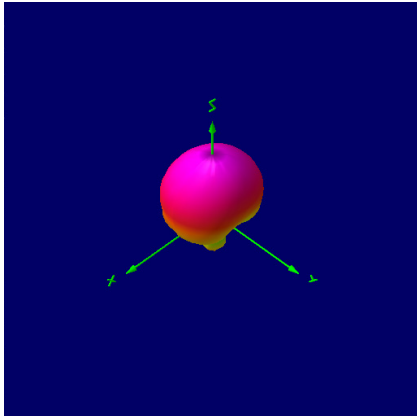
600 MHz



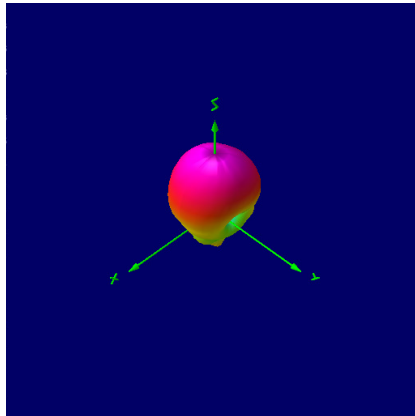
700 MHz



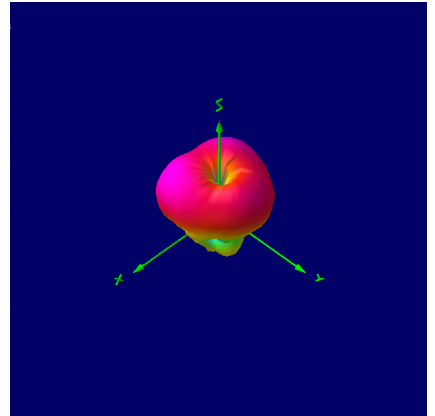
800 MHz



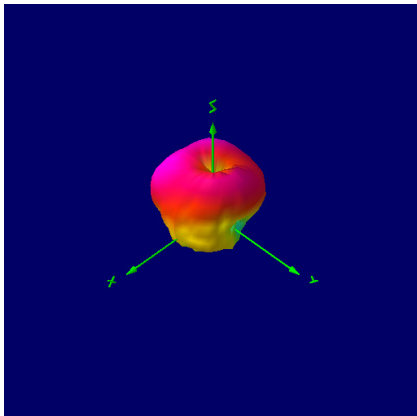
900 MHz



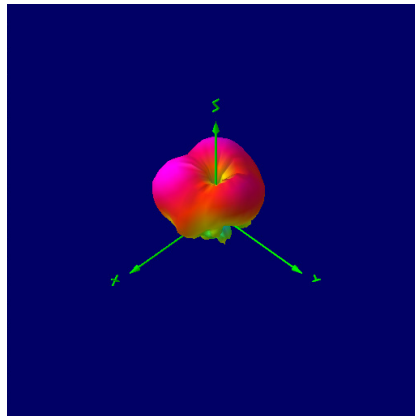
1500 MHz



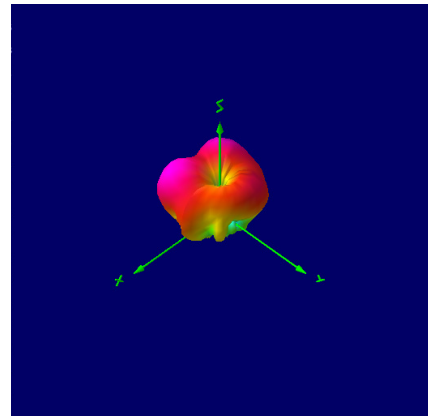
1600 MHz



1700 MHz



1800 MHz



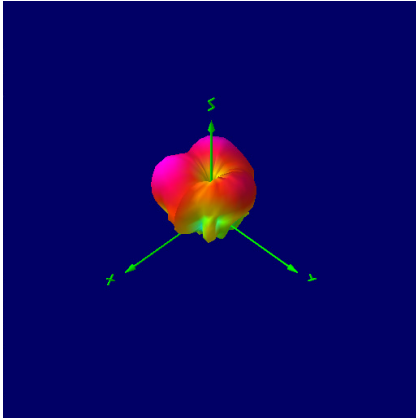


Oscar 67

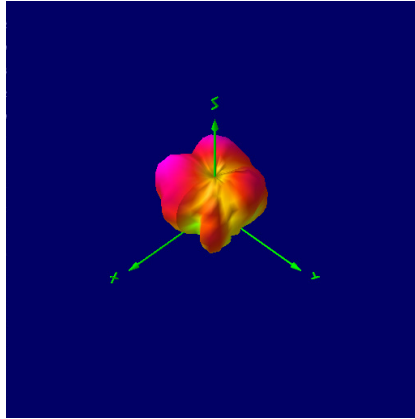
High Gain 9 dBi Directional ISM Outdoor Panel Antenna for 868/915 MHz

3D Radiation Plots

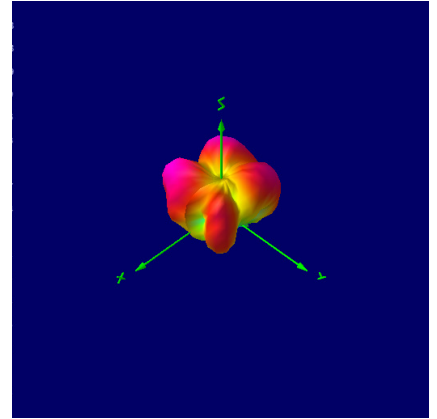
1900 MHz



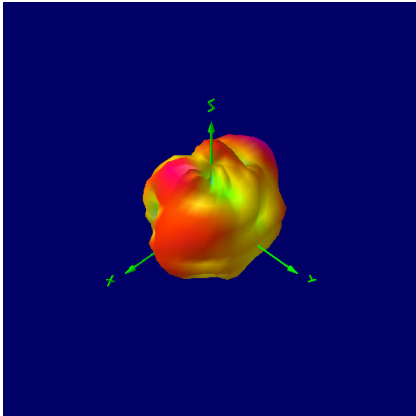
2000 MHz



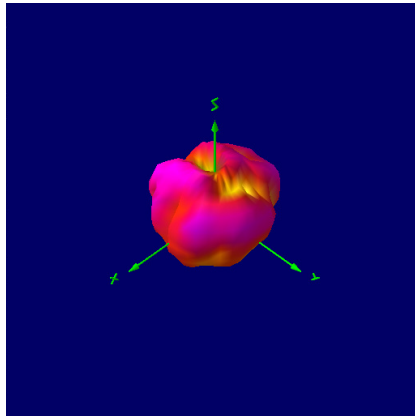
2100 MHz



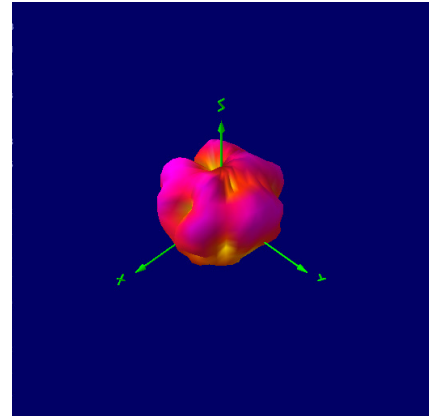
2300 MHz



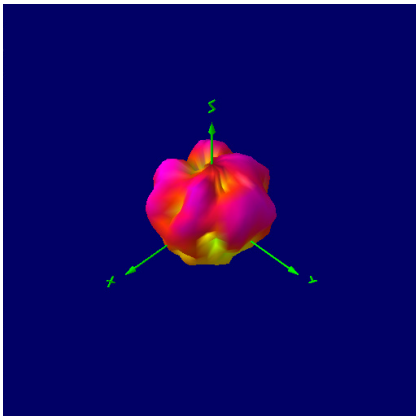
2400 MHz



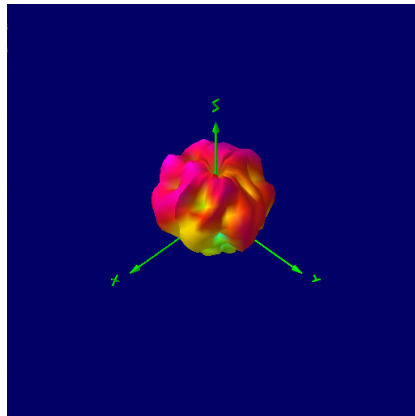
2500 MHz



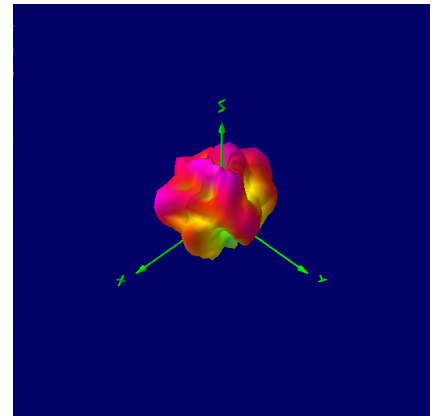
2600 MHz



3500 MHz



3700 MHz



NOTE: All 3D radiation plots are shown with Theta = 45 and Phi = 45.

