

Mike 2A

5G/4G Magnetic 311mm Whip Antenna



Key Features

- Supports 5G NR / 4G LTE / 3G UMTS / 2G Quad-band GSM
- Supports LTE Cat M, LTE Cat NB, NR Cat NB
- Supports LoRa, Sigfox, IMT 868 MHz, ISM 915 MHz bands
- Strong magnetic base

General Description

The Mike 2A is a $\frac{1}{2}$ wave omni-directional antenna that operates on quad band 2G, 3G, 4G, 5G LTE and ISM 868 and 915 frequencies.

The Mike 2A comes with a magnetic base giving good stability. As standard, the Mike 2A comes with an SMA Male on RG174 cable or a low loss variant. The antenna is also available as standard with an FME Female connector on.

Alternative cable lengths and connector types can be fitted for small volume orders.

Additional Considerations

- Allows quick and easy implementation into target applications
- Magnetic mounting allows versatility in positioning

M Magnetic	5G New Radio	4G LTE	3G UMTS	2G GSM
LTE Cat M	LTE NB IoT	NR NB IoT	ISM 868	ISM 915
IEEE 802.15.4	LoRa Wireless	SF Sigfox	ZB Zigbee	Z Wave
HNT Helium	W Weightless			

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Electrical Specifications

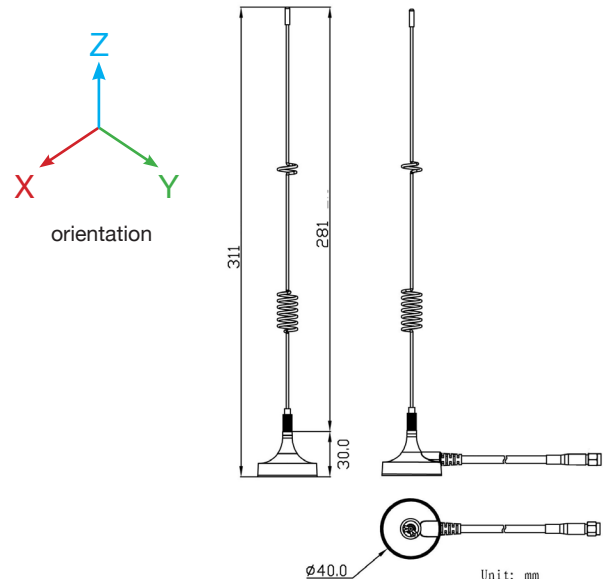
Impedance:	50 Ohm
Polarization:	Vertical
Max Input Power:	10 W
Ground plane independent:	Yes

Environmental Specifications

Operating Temperature range:	-40 to +85 °C
Storage Temperature range:	-40 to +85 °C

Mechanical Specifications

Dimensions:	311 mm (Height) x 40 mm (Base)
Weight:	4.8 g
Cable:	RG174 or Low Loss LMR100
Connector:	SMA Male
Mounting method:	Magnetic
Housing materials:	ABS

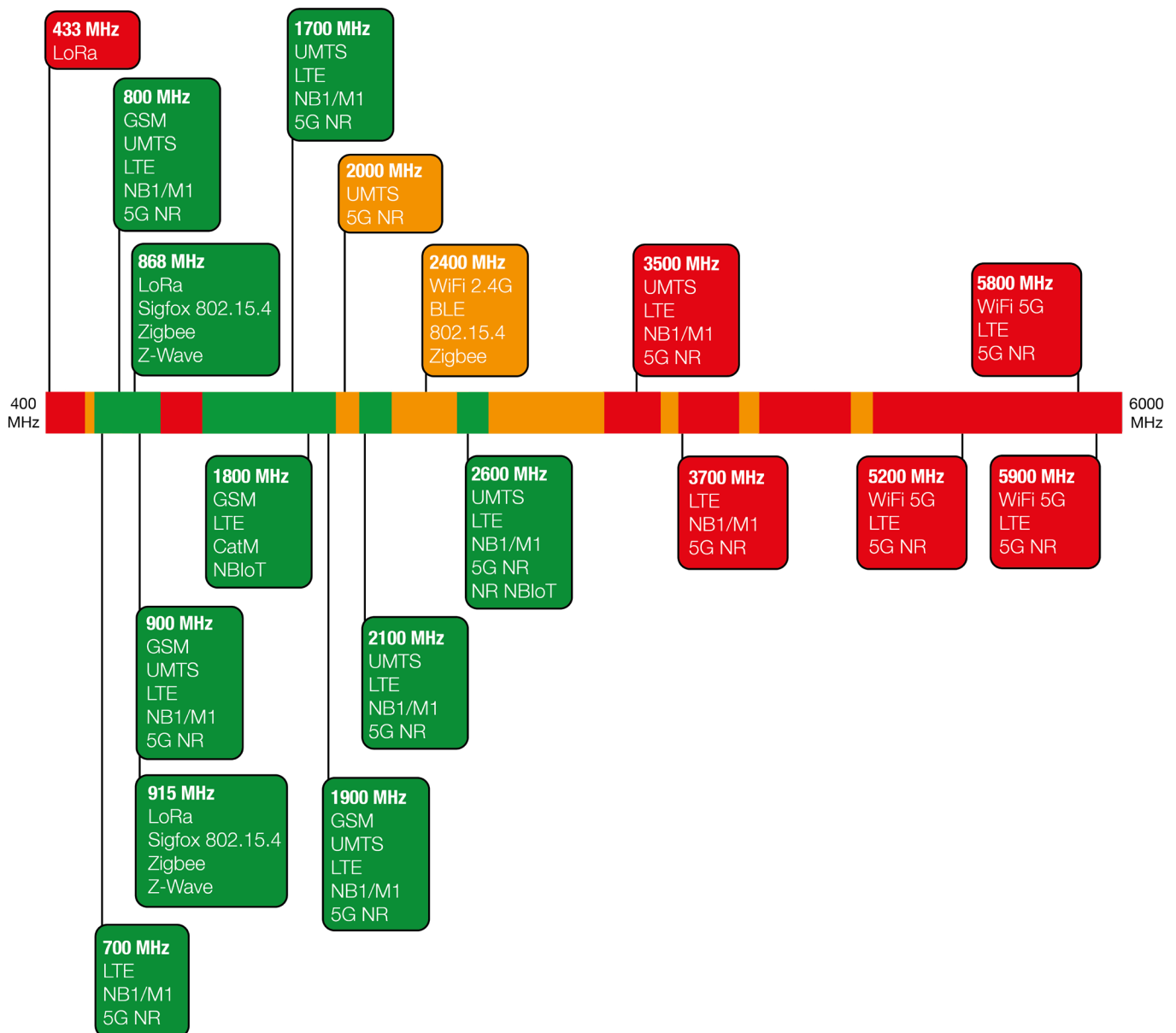




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Spectrum Coverage



● 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)

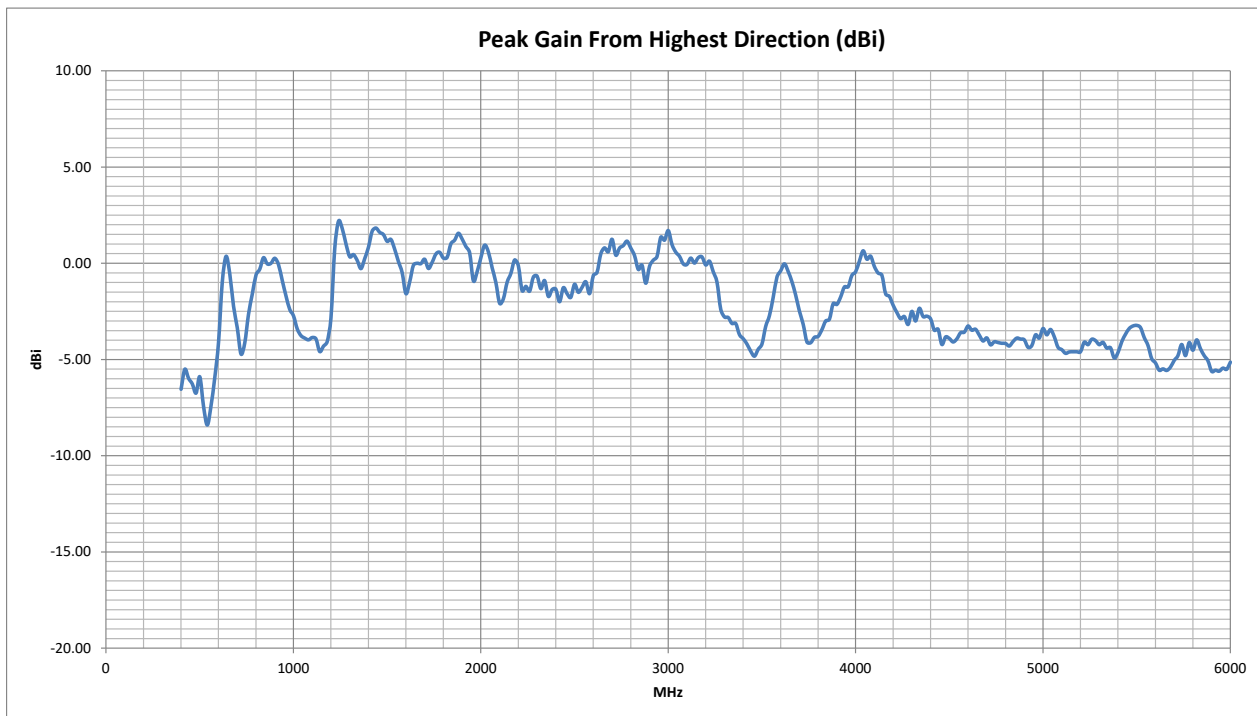
	433	868	915	2450	5800
Bluetooth					
IEEE 802.15.4		●	●		
LoRa		●	●		
Sigfox		●	●		
WiFi 2.4G					
WiFi 5G					
Zigbee		●	●		
Z-Wave		●	●		



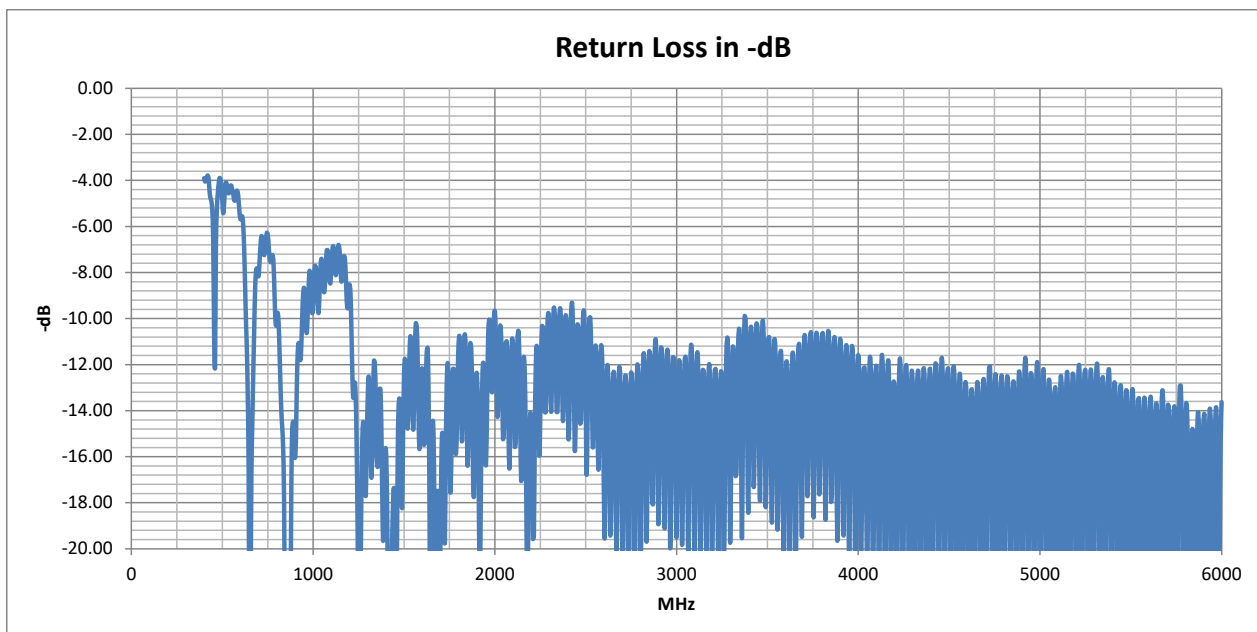
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Peak Gain vs. Frequency



Return Loss

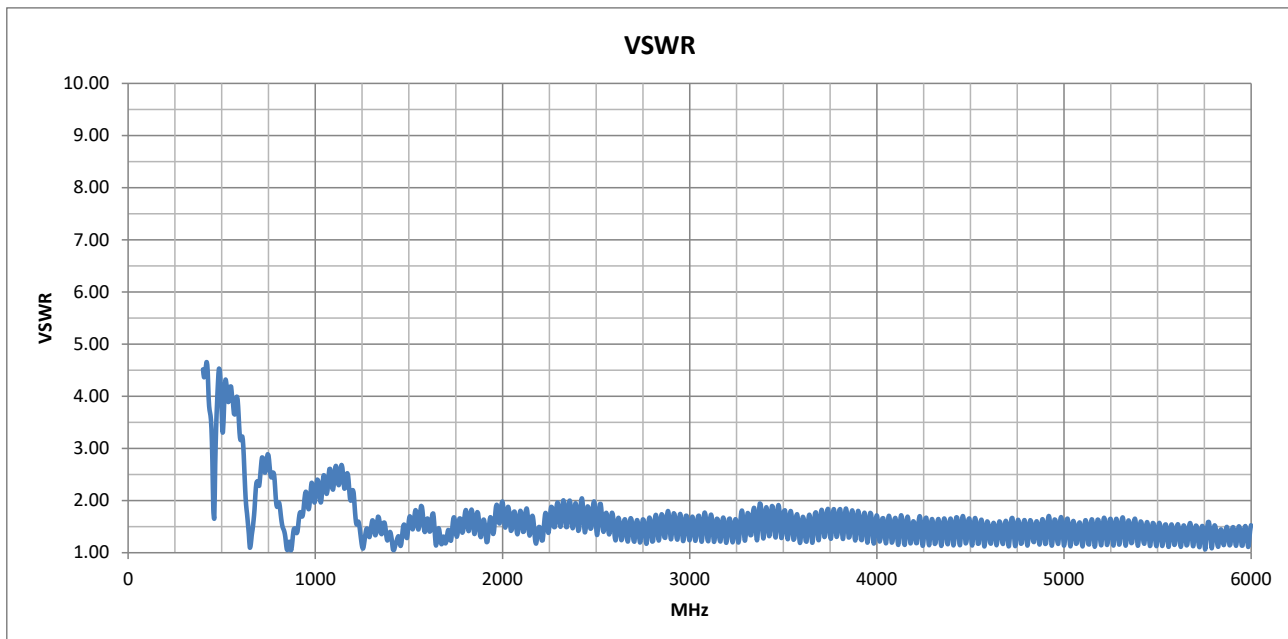




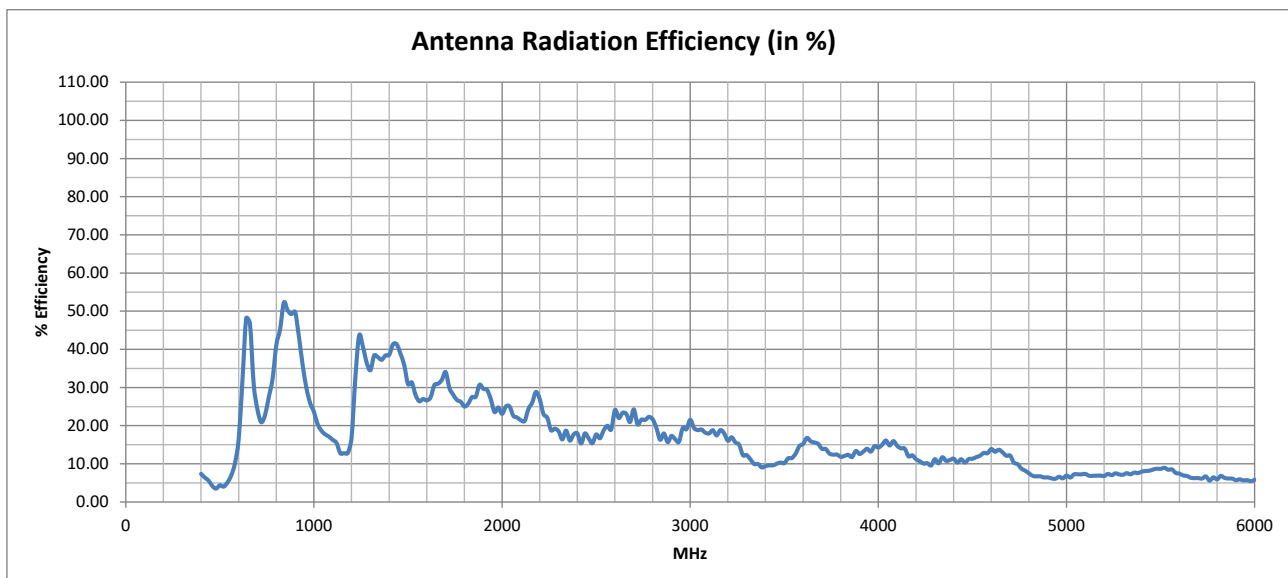
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VSWR



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	25.85	24.00	1.92	1.85	●
PCS-1900	2	2	2	2	n2	n2	1850 - 1910 MHz	1930 - 1990 MHz	29.28	25.11	1.78	1.92	●
DCS-1800	3	3	3	3	n3	n3	1710 - 1785 MHz	1805 - 1880 MHz	27.97	27.30	1.68	1.83	●
	4	4	4	4			1710 - 1755 MHz	2110 - 2155 MHz	28.95	23.19	1.68	1.85	●
GSM-850	5	5	5	5	n5	n5	824 - 849 MHz	869 - 894 MHz	50.27	49.44	1.51	1.47	●
	6						830 - 840 MHz	875 - 885 MHz	50.48	49.30	1.45	1.45	●
	7	7	7	7	n7	n7	2500 - 2570 MHz	2620 - 2690 MHz	18.32	22.50	1.93	1.67	●
E-GSM-900	8	8	8	8	n8	n8	880 - 915 MHz	925 - 960 MHz	48.57	35.37	1.72	2.17	●
	9	9					1749.9 - 1784.9 MHz	1844.9 - 1879.9 MHz	26.60	28.42	1.65	1.78	●
	10	10					1710 - 1770 MHz	2110 - 2170 MHz	28.39	24.00	1.68	1.85	●
	11	11	11	11			1427.9 - 1447.9 MHz	1475.9 - 1495.9 MHz	41.11	34.30	1.31	1.52	●
	12	12	12	12	n12	n12	699 - 716 MHz	729 - 746 MHz	22.94	22.67	2.82	2.89	●
	13	13	13	13	n13	n13	777 - 787 MHz	746 - 756 MHz	33.20	25.35	2.52	2.88	●
	14	14	14	14	n14		788 - 798 MHz	758 - 768 MHz	38.00	28.19	2.09	2.58	●
		17		17			704 - 716 MHz	734 - 746 MHz	22.52	22.97	2.82	2.89	●
		18	18	18	n18	n18	815 - 830 MHz	860 - 875 MHz	46.19	49.85	1.74	1.21	●
	19	19	19	19			830 - 845 MHz	875 - 890 MHz	50.98	49.34	1.45	1.47	●
	20	20	20	20	n20	n20	832 - 862 MHz	791 - 821 MHz	51.05	42.01	1.43	1.96	●
	21	21	21	21			1447.9 - 1462.9 MHz	1495.9 - 1510.9 MHz	39.38	31.07	1.29	1.70	●
	22	22					3410 - 3490 MHz	3510 - 3590 MHz	9.87	12.53	1.91	1.81	●
		24	24	24	n24		1626.5 - 1660.5 MHz	1525 - 1559 MHz	30.30	28.15	1.75	1.81	●
	25	25	25	25	n25	n25	1850 - 1915 MHz	1930 - 1995 MHz	29.29	25.00	1.78	1.93	●
	26	26	26	26	n26		814 - 849 MHz	859 - 894 MHz	48.79	49.61	1.77	1.47	●
		27	27				807 - 824 MHz	852 - 869 MHz	44.34	50.30	1.94	1.21	●
		28	28	28	n28	n28	703 - 748 MHz	758 - 803 MHz	22.33	33.53	2.89	2.58	●

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● Adequate band in good signal conditions

● Likely to be unsuitable



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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	21.94	30.78	2.82	2.58	●
		29			n29		N/A	717 - 728 MHz	N/A	21.23	N/A	2.82	●
		30			n30		2305 - 2315 MHz	2350 - 2360 MHz	17.45	16.73	1.63	2.00	●
		31	31	31			452.5 - 457.5 MHz	462.5 - 467.5 MHz	4.54	4.02	2.29	3.04	●
	32	32					N/A	1452 - 1496 MHz	N/A	36.40	N/A	1.54	●
		33					1900 - 1920 MHz	1900 - 1920 MHz	29.51	29.51	1.64	1.64	●
		34			n34		2010 - 2025 MHz	2010 - 2025 MHz	24.68	24.68	1.78	1.78	●
		35					1850 - 1910 MHz	1850 - 1910 MHz	29.28	29.28	1.78	1.78	●
		36					1930 - 1990 MHz	1930 - 1990 MHz	25.11	25.11	1.92	1.92	●
		37					1910 - 1930 MHz	1910 - 1930 MHz	29.10	29.10	1.57	1.57	●
		38			n38		2570 - 2620 MHz	2570 - 2620 MHz	21.67	21.67	1.76	1.76	●
		39	39		n39		1880 - 1920 MHz	1880 - 1920 MHz	29.84	29.84	1.64	1.64	●
		40	40		n40		2300 - 2400 MHz	2300 - 2400 MHz	17.41	17.41	2.00	2.00	●
		41	41	41	n41	n41	2496 - 2690 MHz	2496 - 2690 MHz	20.67	20.67	1.93	1.93	●
		42	42	42			3400 - 3600 MHz	3400 - 3600 MHz	11.22	11.22	1.91	1.91	●
		43	43	43			3600 - 3800 MHz	3600 - 3800 MHz	14.23	14.23	1.84	1.84	●
		44					703 - 803 MHz	703 - 803 MHz	27.72	27.72	2.89	2.89	●
		45					1447 - 1467 MHz	1447 - 1467 MHz	39.16	39.16	1.42	1.42	●
		46			n46		5150 - 5925 MHz	5150 - 5925 MHz	7.14	7.14	1.67	1.67	●
		47			n47		5855 - 5925 MHz	5855 - 5925 MHz	5.97	5.97	1.49	1.49	●
		48			n48		3550 - 3700 MHz	3550 - 3700 MHz	15.03	15.03	1.77	1.77	●
		49					3550 - 3700 MHz	3550 - 3700 MHz	15.03	15.03	1.77	1.77	●
		50			n50		1432 - 1517 MHz	1432 - 1517 MHz	36.14	36.14	1.70	1.70	●
		51			n51		1427 - 1432 MHz	1427 - 1432 MHz	41.30	41.30	1.20	1.20	●
		52					3300 - 3400 MHz	3300 - 3400 MHz	10.18	10.18	1.94	1.94	●

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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	16.45	16.45	1.98	1.98	●
		65		65	n65	n65	1920 - 2010 MHz	2110 - 2200 MHz	25.17	25.32	1.98	1.85	●
		66	66	66	n66	n66	1710 - 1780 MHz	2110 - 2200 MHz	28.10	25.32	1.68	1.85	●
		67			n67		N/A	738 - 758 MHz	N/A	24.66	N/A	2.89	●
		68					698 - 728 MHz	753 - 783 MHz	22.32	29.40	2.82	2.75	●
		69					N/A	2570 - 2620 MHz	N/A	21.67	N/A	1.76	●
		70		70	n70	n70	1695 - 1710 MHz	1995 - 2020 MHz	33.25	23.89	1.43	1.98	●
		71	71	71	n71		663 - 698 MHz	617 - 652 MHz	32.52	41.80	2.37	2.89	●
		72	72	72			451 - 456 MHz	461 - 466 MHz	4.65	4.07	2.57	2.82	●
		73	73	73			450 - 455 MHz	460 - 465 MHz	4.72	4.10	2.75	2.68	●
		74	74	74	n74		1427 - 1470 MHz	1475 - 1518 MHz	39.97	32.71	1.51	1.70	●
		75			n75		N/A	1432 - 1517 MHz	N/A	36.14	N/A	1.70	●
		76			n76		N/A	1427 - 1432 MHz	N/A	41.30	N/A	1.20	●
					n77		3300 - 4200 MHz	3300 - 4200 MHz	12.82	12.82	1.94	1.94	●
					n78		3300 - 3800 MHz	3300 - 3800 MHz	12.22	12.22	1.94	1.94	●
					n79		4400 - 5000 MHz	4400 - 5000 MHz	9.79	9.79	1.70	1.70	●
					n80		1710 - 1785 MHz	N/A	27.97	N/A	1.68	N/A	●
					n81		880 - 915 MHz	N/A	48.57	N/A	1.72	N/A	●
					n82		832 - 862 MHz	N/A	51.05	N/A	1.43	N/A	●
					n83		703 - 748 MHz	N/A	22.33	N/A	2.89	N/A	●
					n84		1920 - 1980 MHz	N/A	25.85	N/A	1.92	N/A	●
		85	85	85	n85		698 - 716 MHz	728 - 746 MHz	23.03	22.62	2.82	2.89	●
					n86		1710 - 1780 MHz	N/A	28.10	N/A	1.68	N/A	●
		87	87	87			410 - 415 MHz	420 - 425 MHz	6.75	6.28	4.56	4.65	●
		88	88	88			412 - 417 MHz	422 - 427 MHz	6.65	6.21	4.60	4.58	●

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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
					n89		824 - 849 MHz	N/A	50.27	N/A	1.51	N/A	●
					n90	n90	2496 - 2690 MHz	2496 - 2690 MHz	20.67	20.67	1.93	1.93	●
					n91		832 - 862 MHz	1427 - 1432 MHz	51.05	41.30	1.43	1.20	●
					n92		832 - 862 MHz	1432 - 1517 MHz	51.05	36.14	1.43	1.70	●
					n93		880 - 915 MHz	1427 - 1432 MHz	48.57	41.30	1.72	1.20	●
					n94		880 - 915 MHz	1432 - 1517 MHz	48.57	36.14	1.72	1.70	●
					n95		2010 - 2025 MHz	N/A	24.68	N/A	1.78	N/A	●
					n97		2300 - 2400 MHz	N/A	17.41	N/A	2.00	N/A	●
					n98		1880 - 1920 MHz	N/A	29.84	N/A	1.64	N/A	●
					n99		1626.5 - 1660.5 MHz	N/A	30.30	N/A	1.75	N/A	●
					n101		1900 - 1910 MHz	1900 - 1910 MHz	29.58	29.58	1.64	1.64	●
				103			787 - 788 MHz	757 - 758 MHz	35.55	26.89	2.15	2.61	●

● 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	5.84	3.82	-5.8155	●
IMT 868 MHz	863 - 870 MHz	49.90	1.18	-0.015	●
ISM 915 MHz	902 - 928 MHz	44.89	1.78	0.227	●
ISM 2.4 GHz	2400 - 2500 MHz	16.63	2.04	-1.09	●
Wi-Fi 2.4G	2401 - 2483 MHz	16.59	2.04	-1.27	●
Wi-Fi 2.4G (USA)	2401 - 2473 MHz	16.73	2.04	-1.27	●
Wi-Fi 2.4G (Japan)	2401 - 2495 MHz	16.57	2.04	-1.26	●
Wi-Fi 5G (all channels)	5150 - 5990 MHz	7.03	1.67	-3.23	●
Wi-Fi 5G (Ch 32-48)	5150 - 5250 MHz	7.00	1.67	-4.09	●
Wi-Fi 5G (Ch 32-64)	5150 - 5330 MHz	7.14	1.67	-3.95	●
Wi-Fi 5G (Ch 32-161)	5150 - 5815 MHz	7.31	1.67	-3.23	●
Wi-Fi 5G (Ch 32-173)	5150 - 5875 MHz	7.23	1.67	-3.23	●
ISM 5.8 GHz	5725 - 5875 MHz	6.26	1.58	-3.98	●

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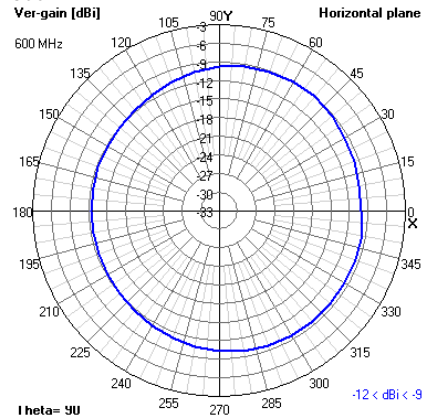


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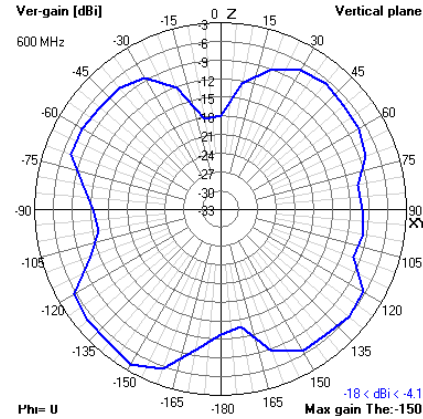
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2D Radiation Plots

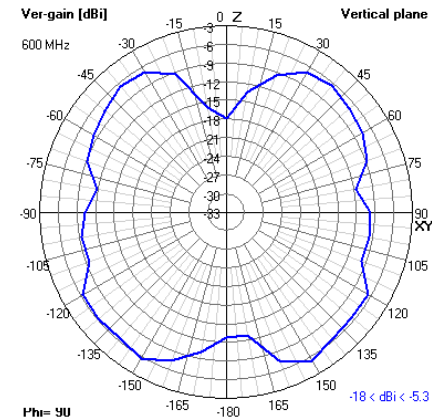
600 MHz XY



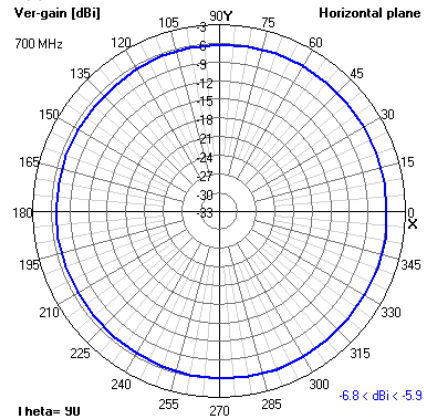
XZ



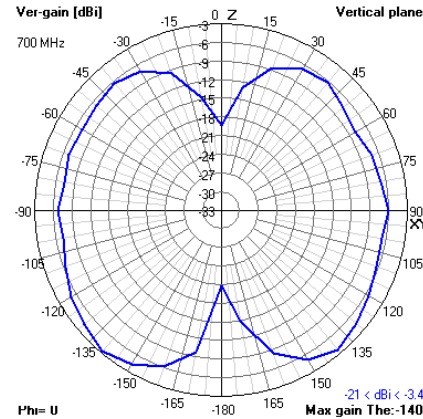
YZ



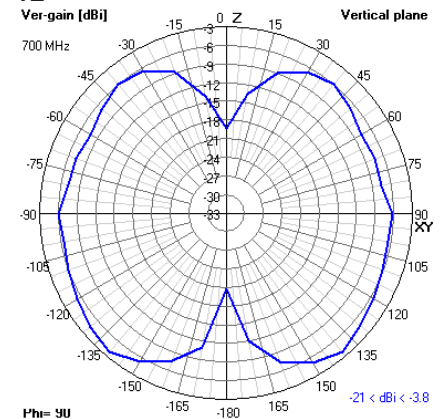
700 MHz XY



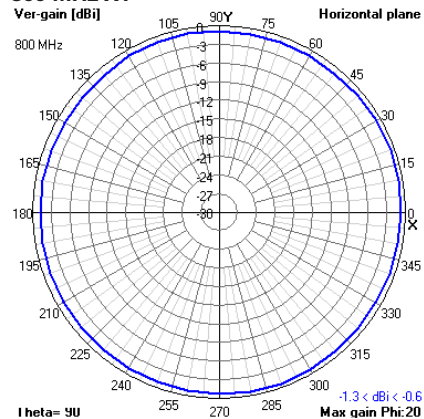
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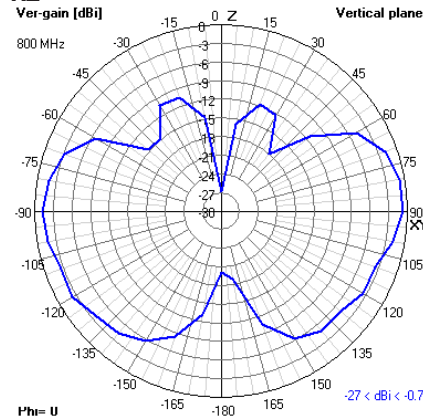
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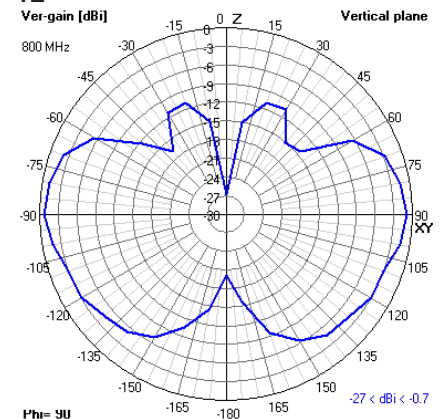
800 MHz XY



XZ



YZ



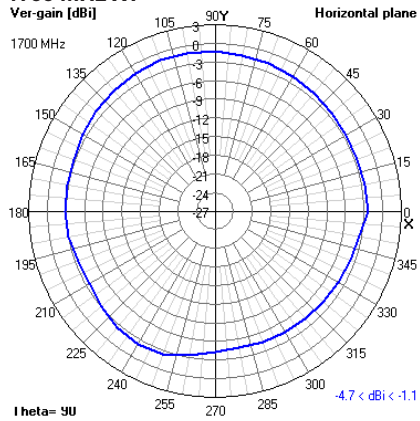


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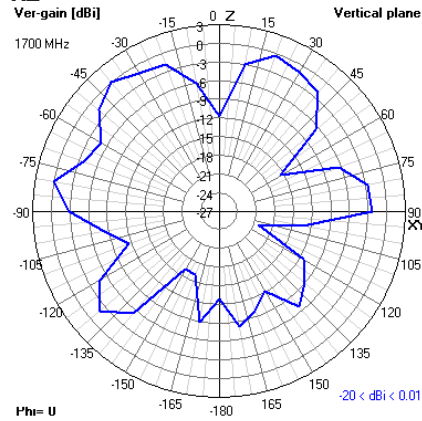
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2D Radiation Plots

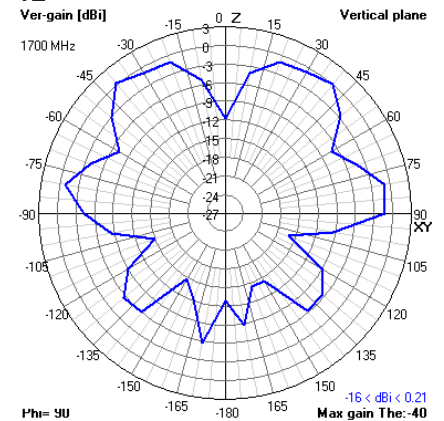
1700 MHz XY



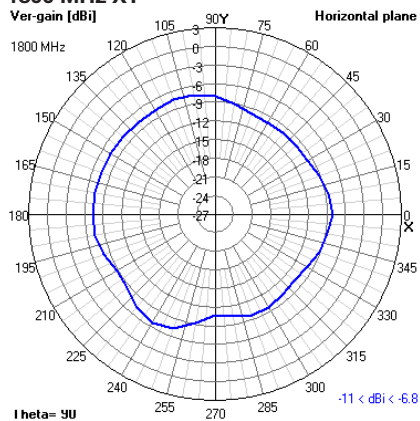
XZ



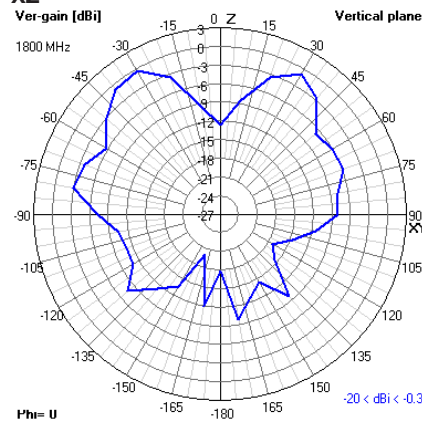
YZ



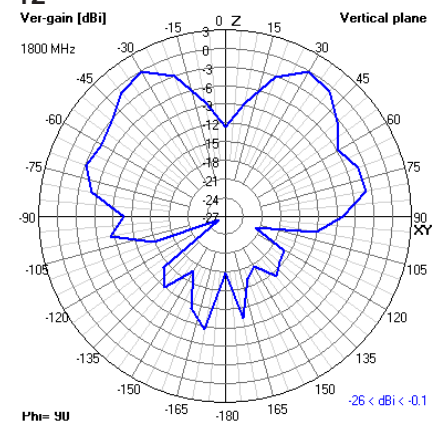
1800 MHz XY



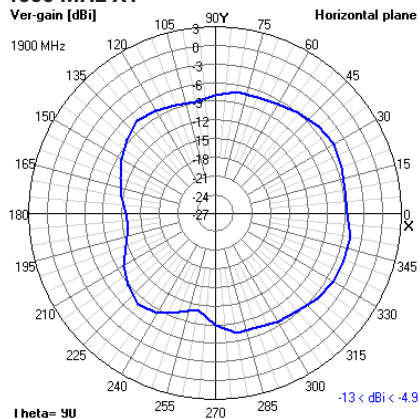
XZ



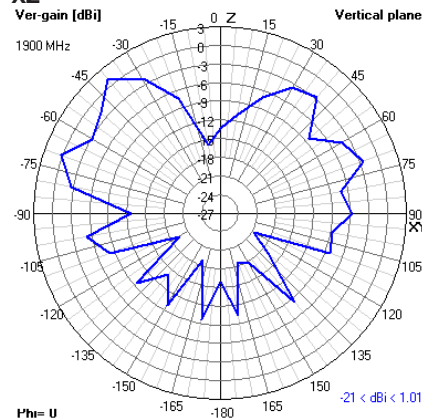
YZ



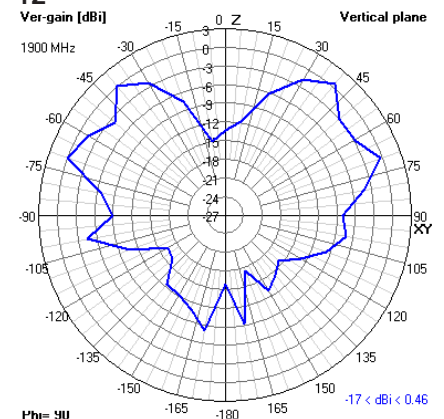
1900 MHz XY



XZ



YZ



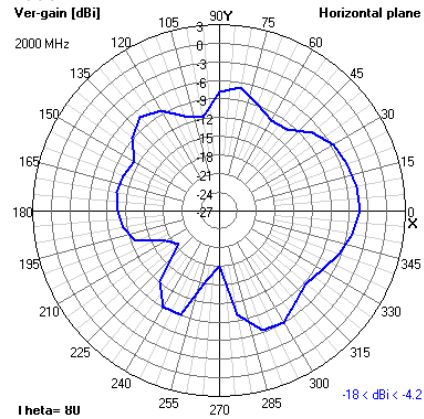


Mike 2A

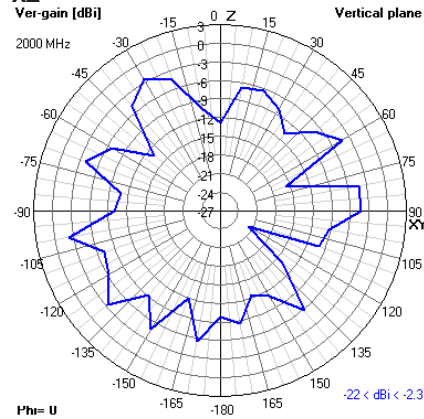
5G/4G Magnetic 311mm Whip Antenna

2D Radiation Plots

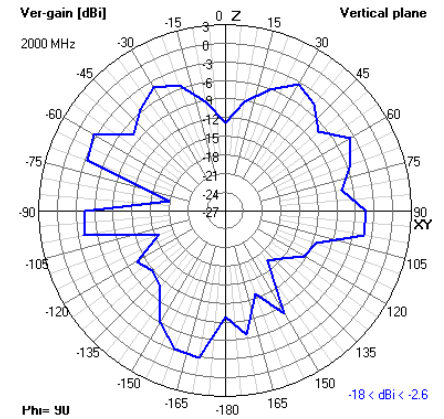
2000 MHz XY



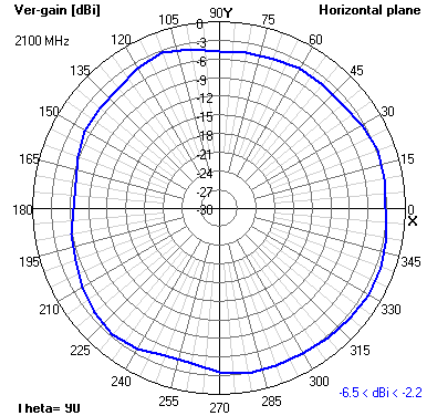
XZ



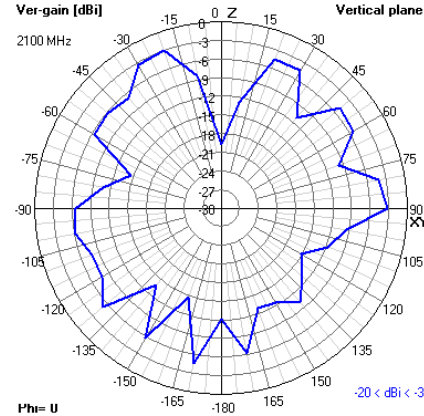
YZ



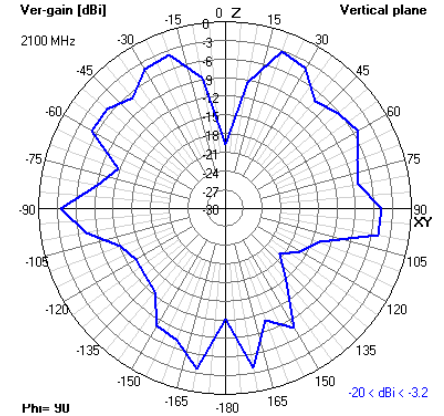
2100 MHz XY



XZ



YZ



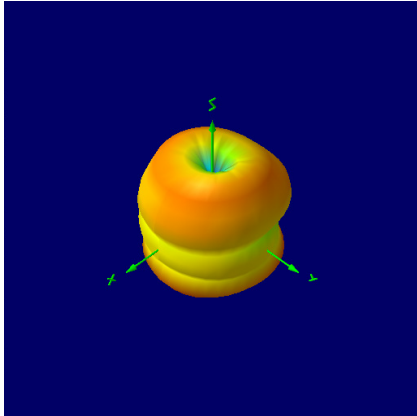


Mike 2A

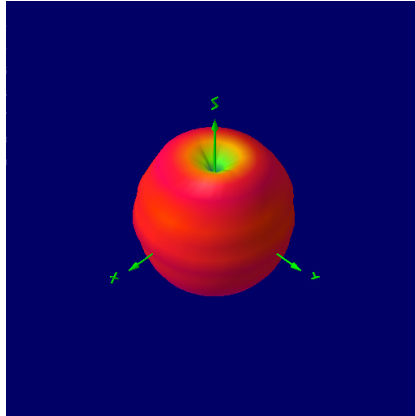
5G/4G Magnetic 311mm Whip Antenna

3D Radiation Plots

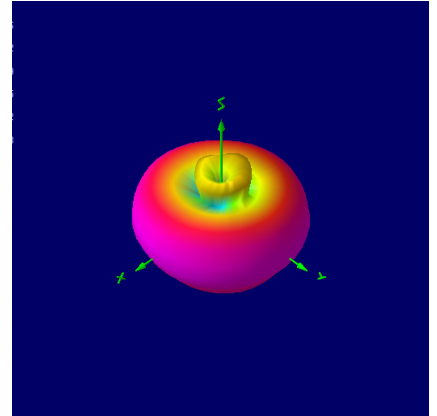
600 MHz



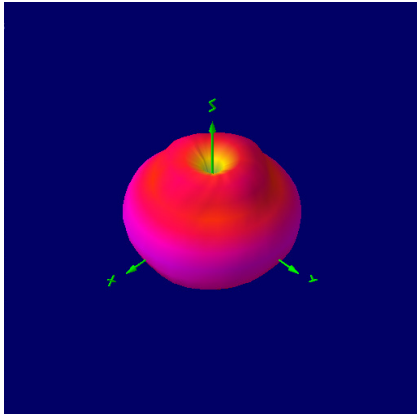
700 MHz



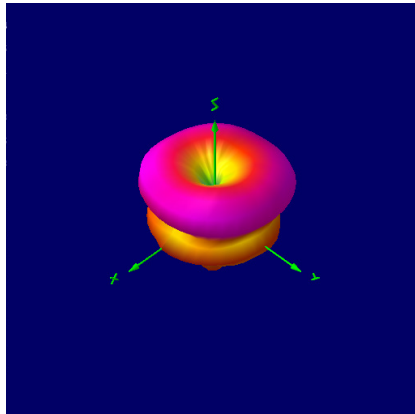
800 MHz



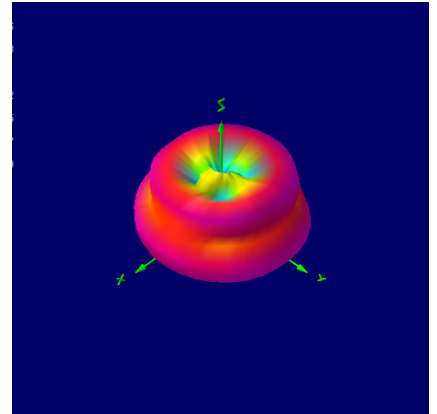
900 MHz



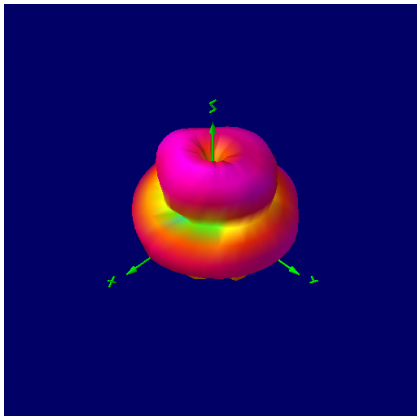
1500 MHz



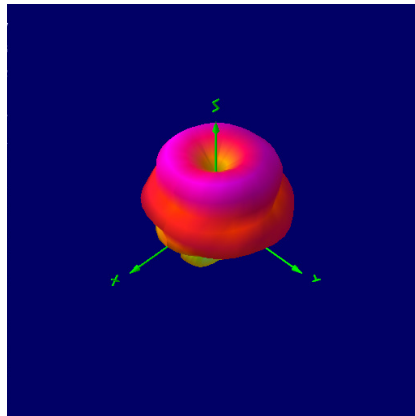
1600 MHz



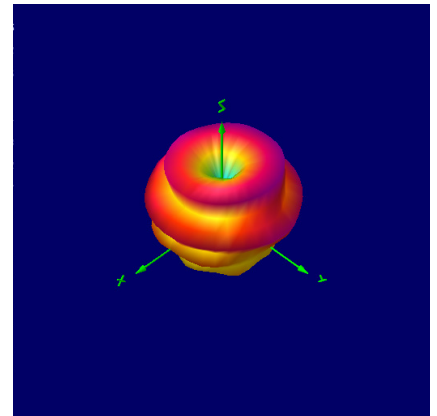
1700 MHz



1800 MHz



1900 MHz



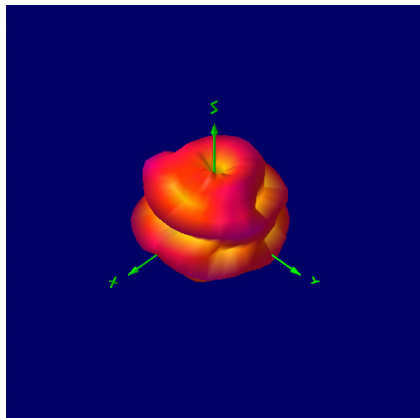


Mike 2A

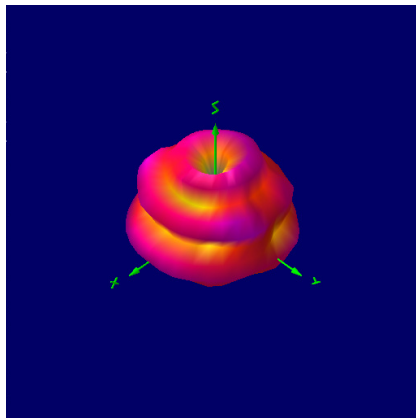
5G/4G Magnetic 311mm Whip Antenna

3D Radiation Plots

2000 MHz



2100 MHz



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

Ordering Details:

Part Number	Description
MIKE2A/3M/SMAM/S/S/26	5G/4G Magnetic 311mm Whip Antenna SMA Male Connector 3M Cable
MIKE2A/5M/SMAM/S/S/26	5G/4G Magnetic 311mm Whip Antenna SMA Male Connector 5M Cable
MIKE2A/3M/LL1/SMAM/S/S/26	5G/4G Magnetic 311mm Whip Antenna SMA Male Connector 3M Low Loss Cable
MIKE2A/5M/LL1/SMAM/S/S/26	5G/4G Magnetic 311mm Whip Antenna SMA Male Connector 5M Low Loss Cable
MIKE2A/3M/FMEF/S/S/26	5G/4G Magnetic 311mm Whip Antenna FME Female Connector 3M Cable
MIKE2A/5M/FMEF/S/S/26	5G/4G Magnetic 311mm Whip Antenna FME Female Connector 5M Cable