

Echo 47

5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz



Key Features

- 600-6000 GHz
- Supports 5G NR / 4G LTE / 3G UMTS Bands
- Supports LTE Cat M, LTE Cat NB-IoT
- Supports Dual band Wi-Fi 2.4G & 5G
- Supports Bluetooth / Zigbee / IEEE 802.15.4 / ISM 2.4 GHz / ISM 5.8 GHz
- Supports LoRa / Sigfox / ISM 868 MHz / ISM 915 MHz
- Compact size
- Adhesive mount

Additional Considerations

- Omnidirectional
- Ground Plane independent
- Can be mounted on curved surfaces (inside radius of 100 mm)
- Covers all global 4G LTE and 5G NR bands

General Description

The Echo 47 is a wideband FPC antenna that operates efficiently from 600 MHz to 6000 MHz.

With an exceptional radiation efficiency of up to 95%, a low VSWR, and a gain of 3-6 dBi, this omnidirectional antenna ensures robust omnidirectional coverage across the most widely-used 5G NR and 4G LTE bands globally.

Made with a flexible polyimide (PI) substrate, etched with precision copper tracks for radiating elements, and backed with an adhesive layer for easy mounting, this ground plane independent antenna can be positioned on both flat and curved surfaces without compromising on RF performance, allowing for versatile placements in applications where mounting flexibility and space optimisation are critical.

Terminated with 100 mm of 1.13 mm coaxial cable, with connector options for I-PEX MHF1 (uFL) or I-PEX MHF4 as standard, the Echo 47 can be customised with other cable and connector types for high volume projects.

A Adhesive	E Embedded	5G New Radio	4G LTE	3G UMTS
2G GSM	LTE M	LTE NB-IoT	NR NB-IoT	IEEE 802.15.4
ISM 868	ISM 915	ISM 2.4G	ISM 5.8G	WiFi 2.4G & 5G
WiFi 4 802.11n	WiFi 5 802.11ac	WiFi 6 802.11ax	WLAN 2400	WLAN 5800
BLE Bluetooth	ZB Zigbee	Z Wave	LoRa Wireless	SF Sigfox
HNT Helium	W Weightless	UWB Ultra-Wideband		



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Electrical Specifications

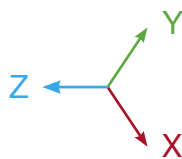
Impedance:	168 mm Length, 21.5 mm width
Polarisation:	Vertical
Max input power:	50 W
Ground plane independent:	Yes

Environmental Specifications

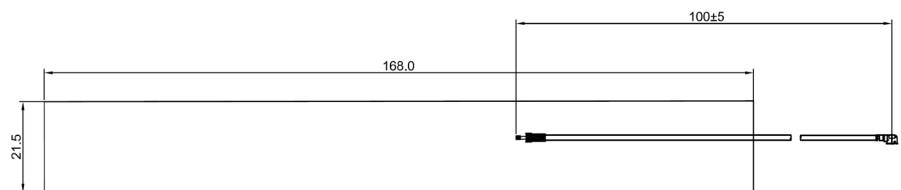
Operating temperature range:	-40 to +75 °C
Storage temperature range:	-40 to +80 °C

Mechanical Specifications

Dimensions:	168 mm Length, 21.5 mm width
Weight:	1 g
Connector:	I-PEX MHF1 (UFL), I-PEX MHF4
Mounting method:	Adhesive
Housing materials:	Halogen-free epoxy resin adhesive/ Polyimide film / Copper foil



orientation

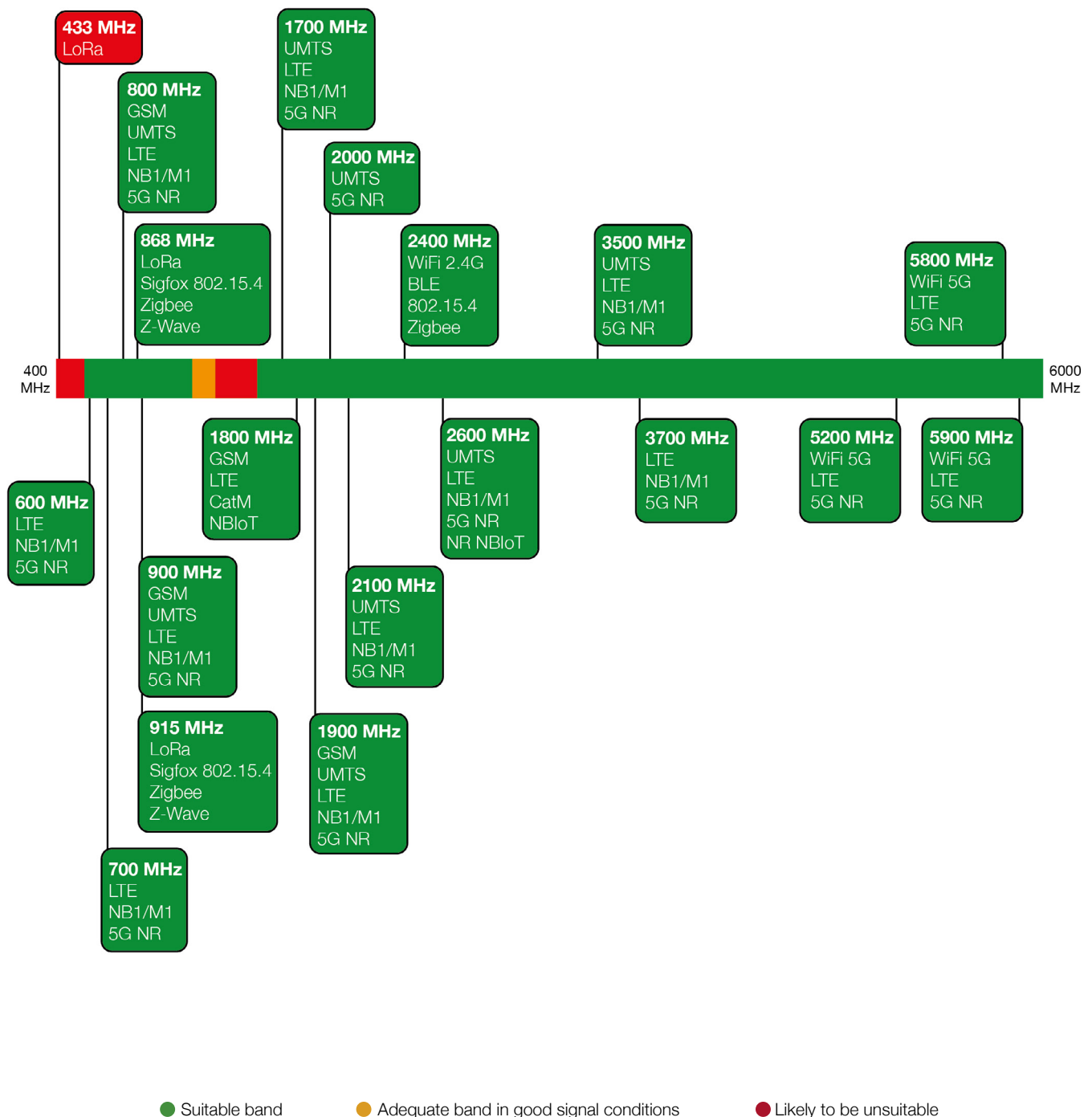




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Spectrum Coverage

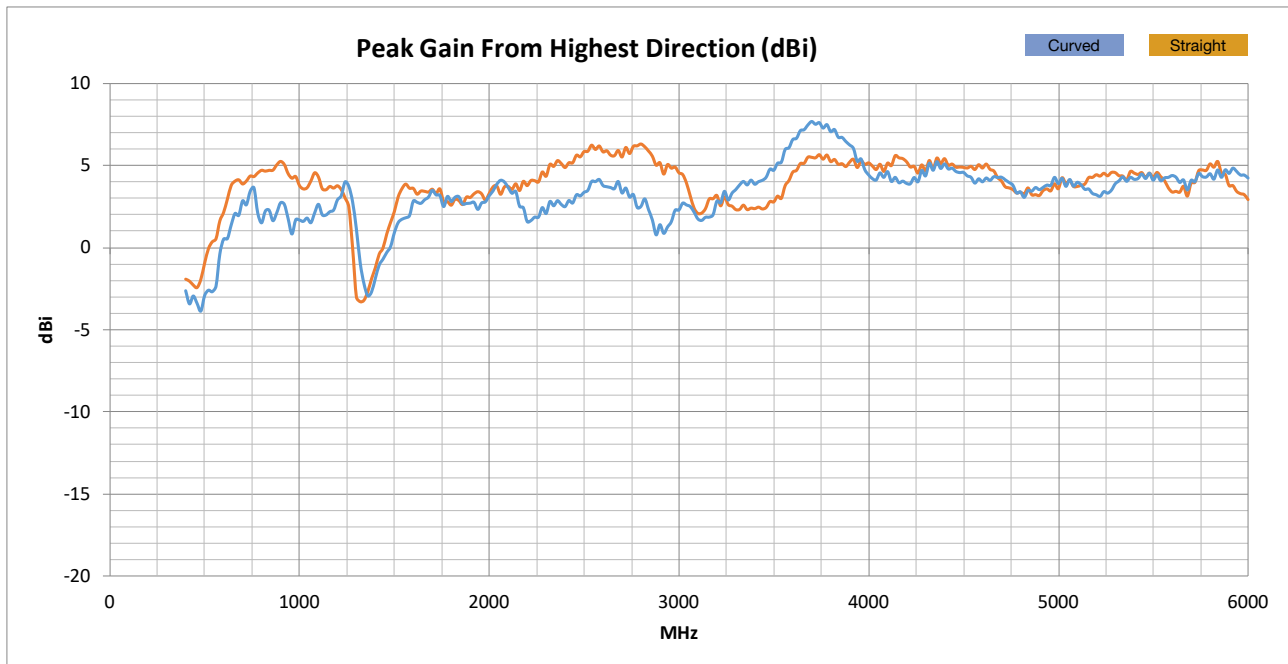




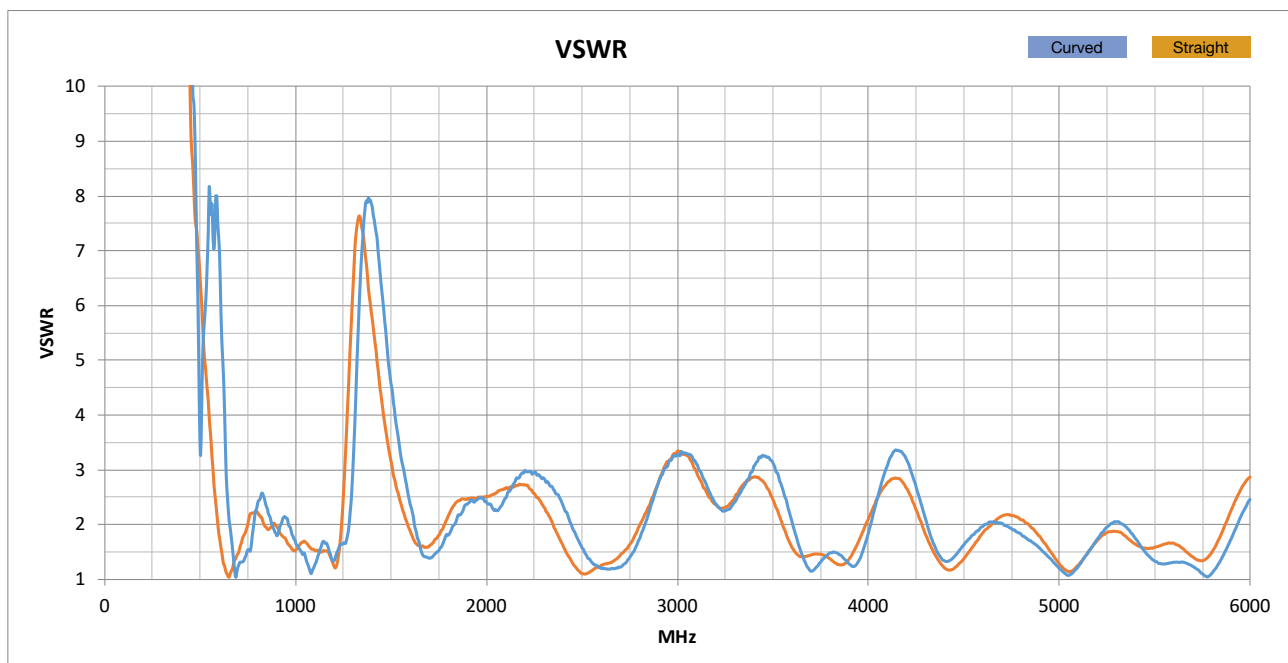
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Peak Gain vs. Frequency



VSWR

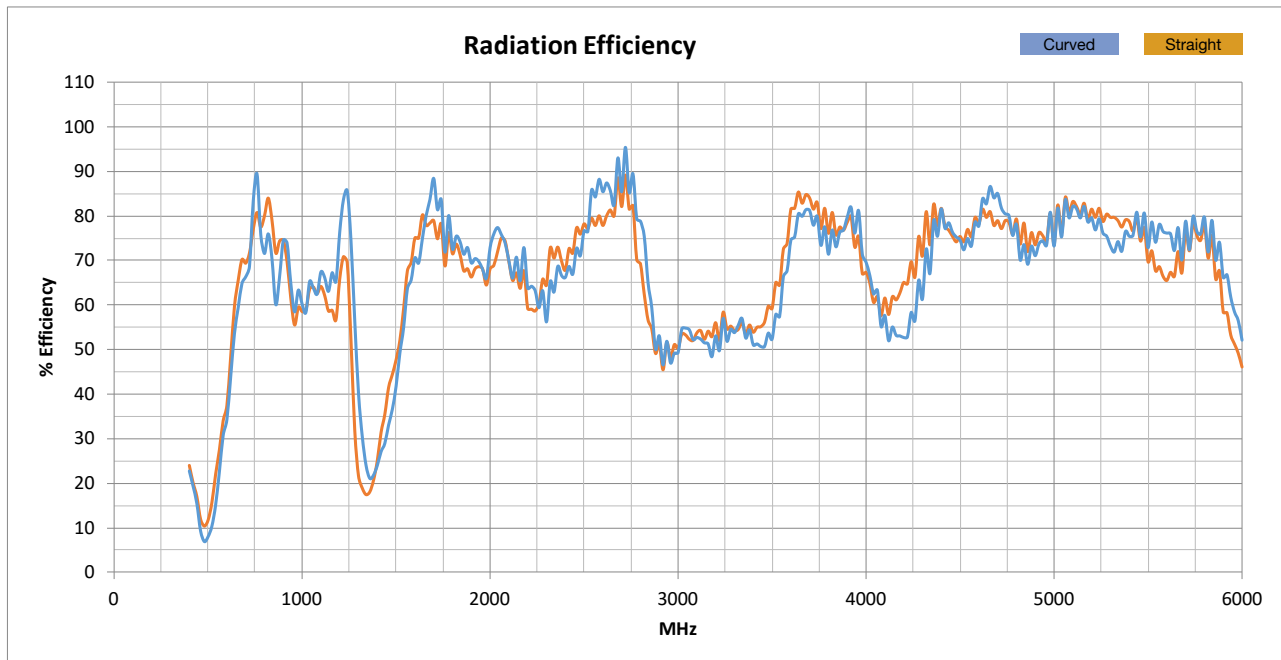




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Radiation Efficiency





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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:	●	●			●	●						



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Usable ISM Frequency Support (433 MHz - 6525 MHz)

	433	868	915	2450	5800	6525
Bluetooth				●		
Helium		●	●			
IEEE 802.15.4		●	●	●		
ISM 433						
ISM 868		●				
ISM 915			●			
ISM 2.4G				●		
ISM 5.8G					●	
LoRa		●	●			
SigFox		●	●			
Weightless		●	●			
Wi-Fi 2.4G				●		
Wi-Fi 5G					●	
Wi-Fi 6E						
Zigbee		●	●	●		
Z-Wave		●	●			



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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	67.62	65.77	2.50	2.74	●
PCS-1900	2	2	2	2	n2	n2	1850 - 1910 MHz	1930 - 1990 MHz	67.53	67.15	2.48	2.51	●
DCS-1800	3	3	3	3	n3	n3	1710 - 1785 MHz	1805 - 1880 MHz	74.46	70.49	2.06	2.47	●
	4	4	4	4			1710 - 1755 MHz	2110 - 2155 MHz	75.72	66.20	1.84	2.71	●
GSM-850	5	5	5	5	n5	n5	824 - 849 MHz	869 - 894 MHz	79.59	74.01	2.08	2.03	●
	6						830 - 840 MHz	875 - 885 MHz	80.15	74.14	2.01	2.03	●
	7	7	7	7	n7	n7	2500 - 2570 MHz	2620 - 2690 MHz	78.19	82.56	1.20	1.41	●
E-GSM-900	8	8	8	8	n8	n8	880 - 915 MHz	925 - 960 MHz	73.65	61.02	2.03	1.80	●
	9	9					1749.9 - 1784.9 MHz	1844.9 - 1879.9 MHz	72.51	68.34	2.06	2.47	●
	10	10					1710 - 1770 MHz	2110 - 2170 MHz	74.38	65.77	1.93	2.74	●
	11	11	11	11			1427.9 - 1447.9 MHz	1475.9 - 1495.9 MHz	35.12	45.34	4.90	3.61	●
	12	12	12	12	n12	n12	699 - 716 MHz	729 - 746 MHz	70.20	76.17	1.69	1.98	●
	13	13	13	13	n13		777 - 787 MHz	746 - 756 MHz	77.83	79.01	2.23	2.14	●
	14	14	14	14	n14	n14	788 - 798 MHz	758 - 768 MHz	79.10	80.16	2.25	2.21	●
		17		17			704 - 716 MHz	734 - 746 MHz	70.48	76.80	1.69	1.98	●
		18	18	18	n18	n18	815 - 830 MHz	860 - 875 MHz	82.93	72.62	2.13	1.98	●
	19	19	19	19			830 - 845 MHz	875 - 890 MHz	79.43	74.22	2.01	2.03	●
	20	20	20	20	n20	n20	832 - 862 MHz	791 - 821 MHz	76.26	81.26	2.00	2.24	●
	21	21	21	21			1447.9 - 1462.9 MHz	1495.9 - 1510.9 MHz	39.98	48.41	4.30	3.20	●
	22	22					3410 - 3490 MHz	3510 - 3590 MHz	56.41	68.97	2.87	2.36	●
		24	24	24	n24	n24	1626.5 - 1660.5 MHz	1525 - 1559 MHz	78.74	60.22	1.66	2.69	●
	25	25	25	25	n25	n25	1850 - 1915 MHz	1930 - 1995 MHz	67.52	67.11	2.48	2.51	●
	26	26	26	26	n26	n26	814 - 849 MHz	859 - 894 MHz	80.67	73.49	2.14	2.03	●
		27	27				807 - 824 MHz	852 - 869 MHz	82.84	72.63	2.17	1.95	●
		28	28	28	n28	n28	703 - 748 MHz	758 - 803 MHz	73.51	79.07	2.02	2.25	●

● 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	71.82	78.88	1.84	2.24	●
		29			n29		N/A	717 - 728 MHz	N/A	72.34	N/A	1.81	●
		30			n30		2305 - 2315 MHz	2350 - 2360 MHz	68.60	72.33	2.29	1.97	●
		31	31	31			452.5 - 457.5 MHz	462.5 - 467.5 MHz	13.11	11.45	8.93	8.29	●
	32	32					N/A	1452 - 1496 MHz	N/A	43.41	N/A	4.19	●
		33					1900 - 1920 MHz	1900 - 1920 MHz	67.15	67.15	2.48	2.48	●
		34			n34		2010 - 2025 MHz	2010 - 2025 MHz	68.86	68.86	2.54	2.54	●
		35					1850 - 1910 MHz	1850 - 1910 MHz	67.53	67.53	2.48	2.48	●
		36					1930 - 1990 MHz	1930 - 1990 MHz	67.15	67.15	2.51	2.51	●
		37					1910 - 1930 MHz	1910 - 1930 MHz	67.90	67.90	2.48	2.48	●
		38			n38		2570 - 2620 MHz	2570 - 2620 MHz	79.00	79.00	1.28	1.28	●
		39	39		n39		1880 - 1920 MHz	1880 - 1920 MHz	67.15	67.15	2.48	2.48	●
		40	40		n40		2300 - 2400 MHz	2300 - 2400 MHz	70.42	70.42	2.31	2.31	●
		41	41	41	n41	n41	2496 - 2690 MHz	2496 - 2690 MHz	79.97	79.97	1.41	1.41	●
		42	42	42			3400 - 3600 MHz	3400 - 3600 MHz	62.83	62.83	2.87	2.87	●
		43	43	43			3600 - 3800 MHz	3600 - 3800 MHz	82.04	82.04	1.58	1.58	●
		44					703 - 803 MHz	703 - 803 MHz	76.59	76.59	2.25	2.25	●
		45					1447 - 1467 MHz	1447 - 1467 MHz	40.31	40.31	4.33	4.33	●
		46			n46		5150 - 5925 MHz	5150 - 5925 MHz	73.89	73.89	2.45	2.45	●
		47			n47		5855 - 5925 MHz	5855 - 5925 MHz	62.60	62.60	2.45	2.45	●
		48	48	48	n48		3550 - 3700 MHz	3550 - 3700 MHz	80.42	80.42	2.00	2.00	●
		49					3550 - 3700 MHz	3550 - 3700 MHz	80.42	80.42	2.00	2.00	●
		50			n50		1432 - 1517 MHz	1432 - 1517 MHz	43.10	43.10	4.78	4.78	●
		51			n51		1427 - 1432 MHz	1427 - 1432 MHz	33.26	33.26	4.92	4.92	●
		52					3300 - 3400 MHz	3300 - 3400 MHz	54.67	54.67	2.87	2.87	●

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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
		53			n53		2483.5 - 2495 MHz	2483.5 - 2495 MHz	76.92	76.92	1.15	1.15	●
		54	54	54	n54	n54	1670 - 1675 MHz	1670 - 1675 MHz	78.14	78.14	1.59	1.59	●
		65		65	n65	n65	1920 - 2010 MHz	2110 - 2200 MHz	67.39	65.33	2.52	2.74	●
		66	66	66	n66	n66	1710 - 1780 MHz	2110 - 2200 MHz	74.37	65.33	2.01	2.74	●
		67			n67		N/A	738 - 758 MHz	N/A	78.43	N/A	2.17	●
		68					698 - 728 MHz	753 - 783 MHz	70.99	79.16	1.81	2.22	●
		69					N/A	2570 - 2620 MHz	N/A	79.00	N/A	1.28	●
		70		70	n70	n70	1695 - 1710 MHz	1995 - 2020 MHz	78.18	68.30	1.64	2.53	●
		71	71	71	n71	n71	663 - 698 MHz	617 - 652 MHz	68.99	55.92	1.48	1.35	●
		72	72	72			451 - 456 MHz	461 - 466 MHz	13.49	11.56	9.02	8.41	●
		73	73	73			450 - 455 MHz	460 - 465 MHz	13.75	11.64	9.09	8.49	●
		74	74	74	n74	n74	1427 - 1470 MHz	1475 - 1518 MHz	37.96	47.28	4.92	3.63	●
		75			n75		N/A	1432 - 1517 MHz	N/A	43.10	N/A	4.78	●
		76			n76		N/A	1427 - 1432 MHz	N/A	33.26	N/A	4.92	●
					n77		3300 - 4200 MHz	3300 - 4200 MHz	68.75	68.75	2.87	2.87	●
					n78		3300 - 3800 MHz	3300 - 3800 MHz	68.88	68.88	2.87	2.87	●
					n79		4400 - 5000 MHz	4400 - 5000 MHz	76.98	76.98	2.18	2.18	●
					n80		1710 - 1785 MHz	N/A	74.46	N/A	2.06	N/A	●
					n81		880 - 915 MHz	N/A	73.65	N/A	2.03	N/A	●
					n82		832 - 862 MHz	N/A	76.26	N/A	2.00	N/A	●
					n83		703 - 748 MHz	N/A	73.51	N/A	2.02	N/A	●
					n84		1920 - 1980 MHz	N/A	67.62	N/A	2.50	N/A	●
		85	85	85	n85		698 - 716 MHz	728 - 746 MHz	70.16	76.04	1.69	1.98	●
					n86		1710 - 1780 MHz	N/A	74.37	N/A	2.01	N/A	●
		87	87	87			410 - 415 MHz	420 - 425 MHz	21.50	19.66	13.64	12.88	●

● 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
		88	88	88			412 - 417 MHz	422 - 427 MHz	21.11	19.35	13.54	12.67	●
					n89		824 - 849 MHz	N/A	79.59	N/A	2.08	N/A	●
					n90	n90	2496 - 2690 MHz	2496 - 2690 MHz	79.97	79.97	1.41	1.41	●
					n91		832 - 862 MHz	1427 - 1432 MHz	76.26	33.26	2.00	4.92	●
					n92		832 - 862 MHz	1432 - 1517 MHz	76.26	43.10	2.00	4.78	●
					n93		880 - 915 MHz	1427 - 1432 MHz	73.65	33.26	2.03	4.92	●
					n94		880 - 915 MHz	1432 - 1517 MHz	73.65	43.10	2.03	4.78	●
					n95		2010 - 2025 MHz	N/A	68.86	N/A	2.54	N/A	●
					n97		2300 - 2400 MHz	N/A	70.42	N/A	2.31	N/A	●
					n98		1880 - 1920 MHz	N/A	67.15	N/A	2.48	N/A	●
					n99		1626.5 - 1660.5 MHz	N/A	78.74	N/A	1.66	N/A	●
1900					n101		1900 - 1910 MHz	1900 - 1910 MHz	66.69	66.69	2.48	2.48	●
				103			787 - 788 MHz	757 - 758 MHz	78.40	80.25	2.24	2.17	●
					n105		663 - 703 MHz	612 - 652 MHz	69.05	54.59	1.54	1.47	●

● 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.

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	17.89	11.86	-2.20	●
ISM 868 MHz	863 - 870 MHz	72.49	1.96	4.87	●
ISM 915 MHz	902 - 928 MHz	70.65	1.95	5.22	●
ISM 2.4 GHz	2400 - 2500 MHz	74.06	1.61	5.84	●
WiFi 2.4G	2401 - 2483 MHz	73.49	1.60	5.62	●
WiFi 2.4G (USA)	2401 - 2473 MHz	73.13	1.60	5.62	●
WiFi 2.4G (Japan)	2401 - 2495 MHz	73.92	1.60	5.76	●
WiFi 5G (all channels)	5150 - 5990 MHz	72.17	2.84	5.24	●
WiFi 5G (Ch 32-48)	5150 - 5250 MHz	80.82	1.85	4.52	●
WiFi 5G (Ch 32-64)	5150 - 5330 MHz	80.30	1.88	4.57	●
WiFi 5G (Ch 32-161)	5150 - 5815 MHz	75.17	1.88	5.09	●
WiFi 5G (Ch 32-173)	5150 - 5875 MHz	74.78	2.03	5.24	●
ISM 5.8 GHz	5725 - 5875 MHz	73.71	2.03	5.24	●
UWB band 1	3168 - 3696 MHz	63.02	2.87	5.50	●
UWB band 2	3696 - 4224 MHz	70.82	2.85	5.65	●
UWB band 3	4224 - 4752 MHz	76.66	2.51	5.45	●
UWB band 4	4752 - 5280 MHz	78.49	2.17	4.57	●
UWB band 5	5280 - 5808 MHz	73.88	1.88	5.09	●

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable

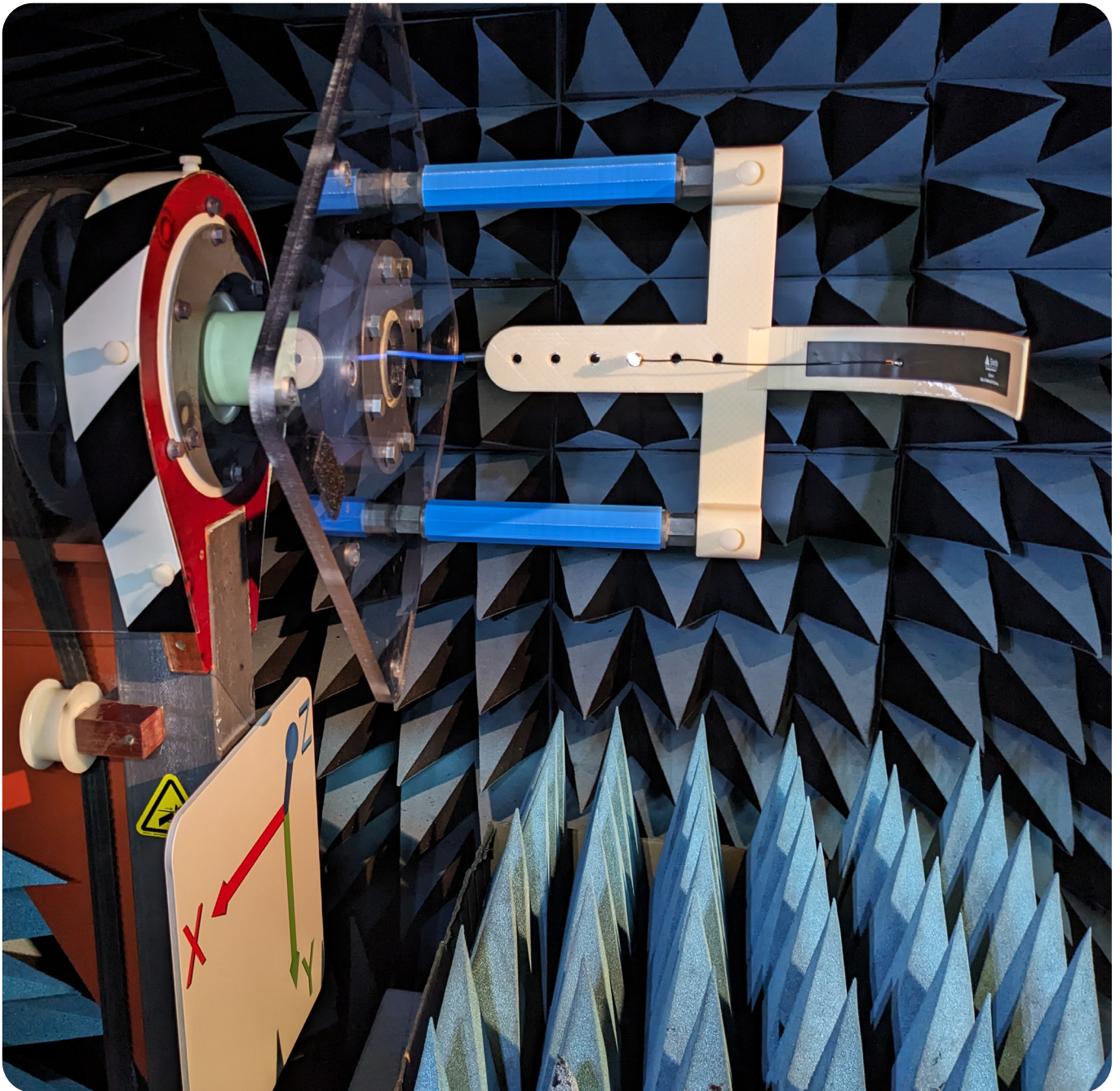
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Test Setup (Curved)

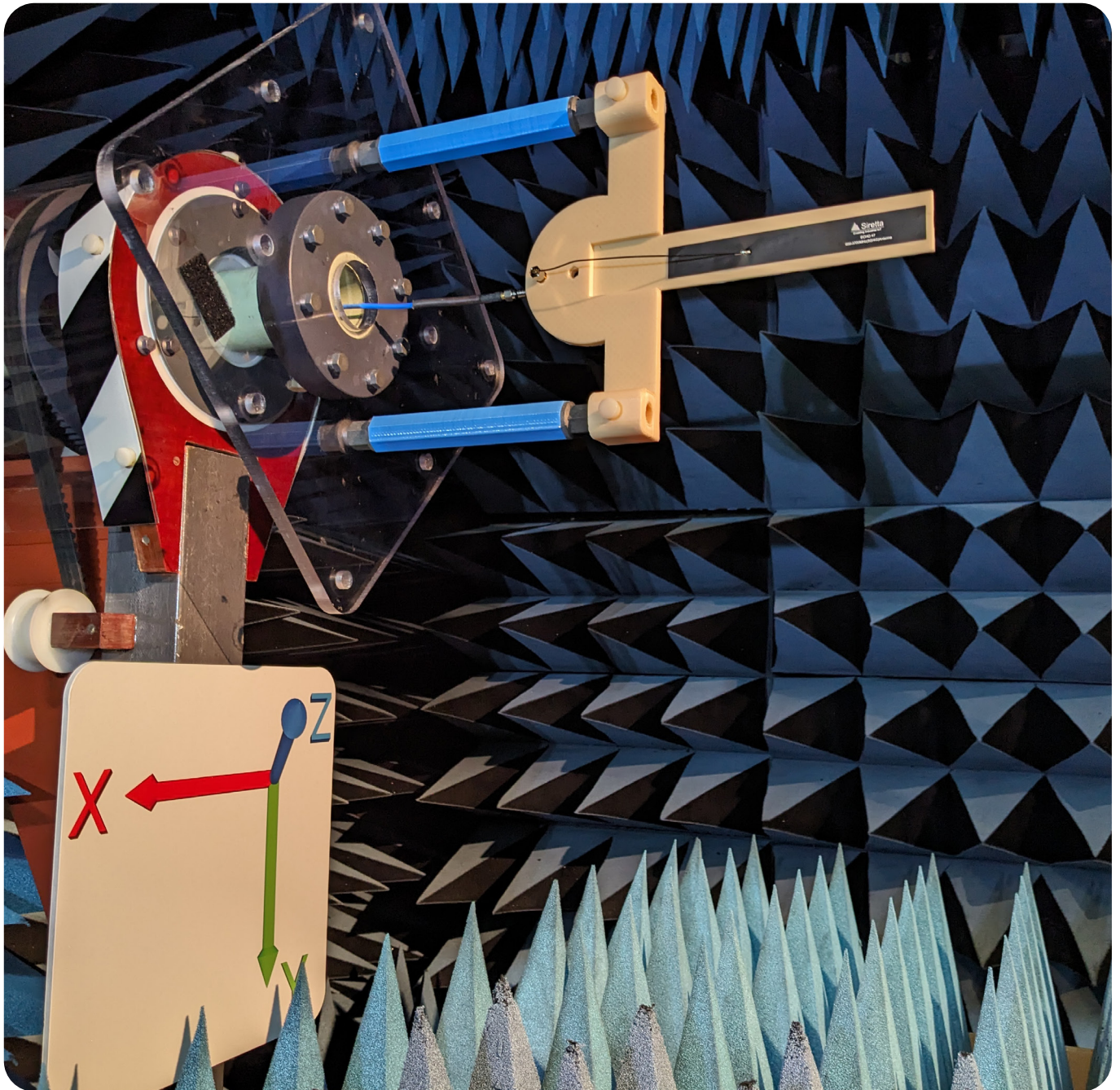




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Test Setup (Flat)

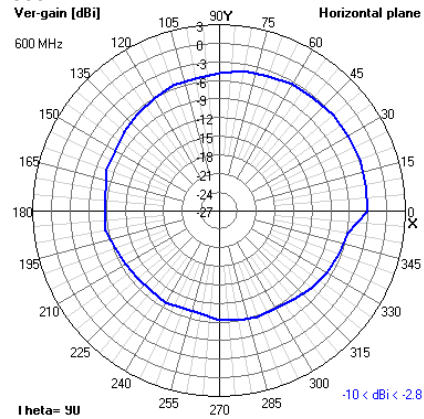


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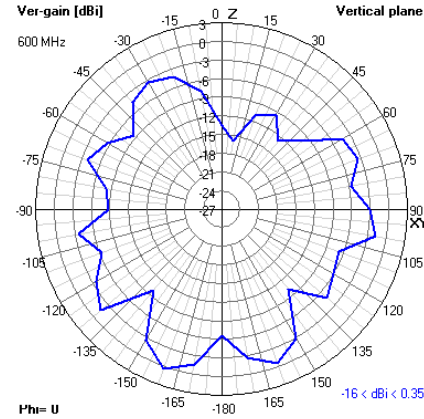
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2D Radiation Plots (tested on flat surface)

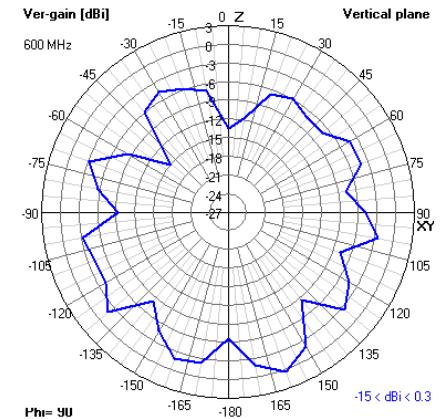
600 MHz XY



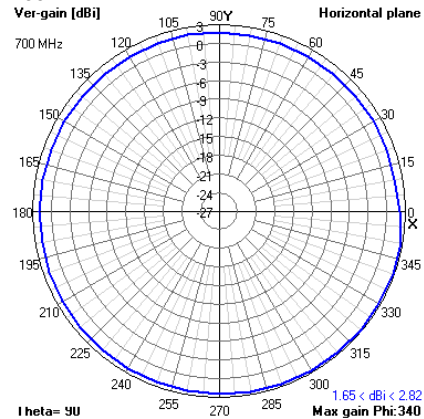
XZ



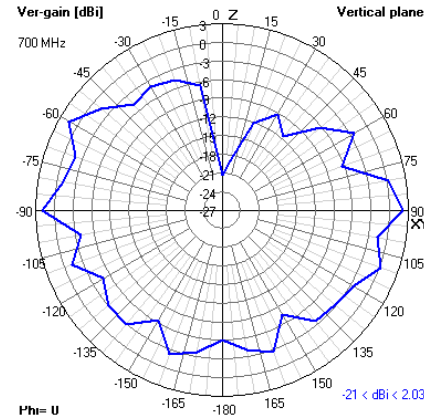
YZ



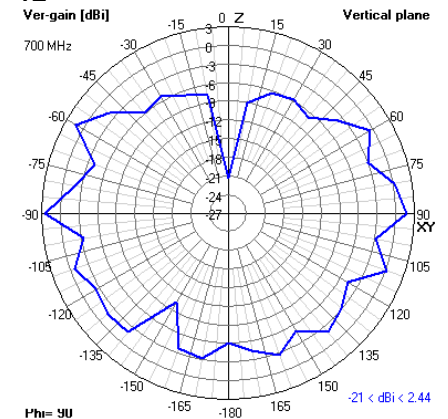
700 MHz XY



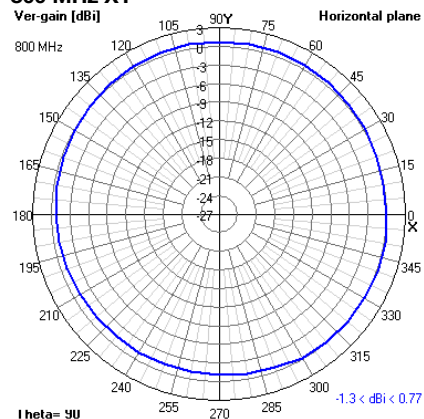
XZ



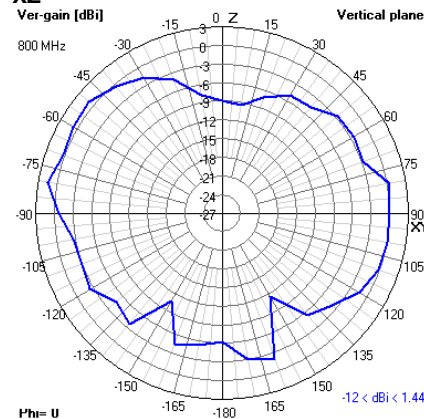
YZ



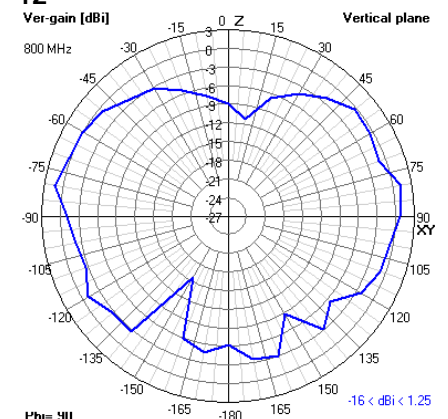
800 MHz XY



XZ



YZ

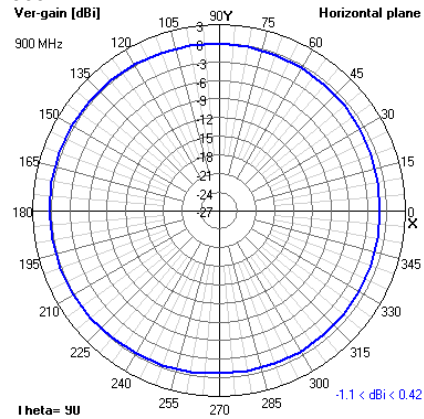


Echo 47

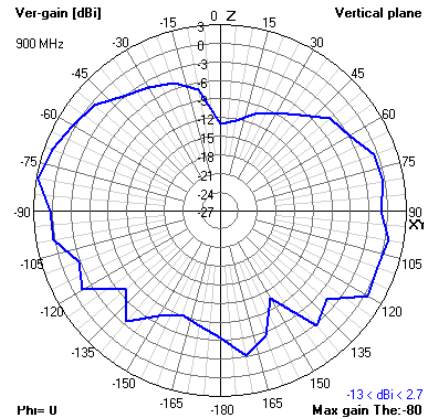
5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz

2D Radiation Plots (tested on flat surface)

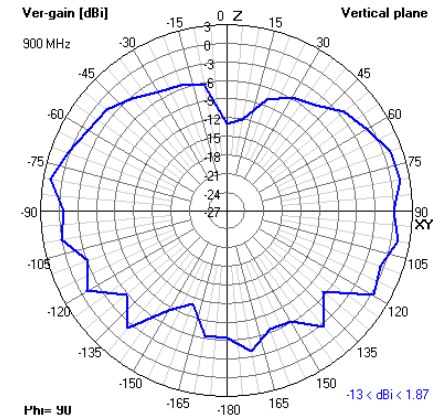
900 MHz XY



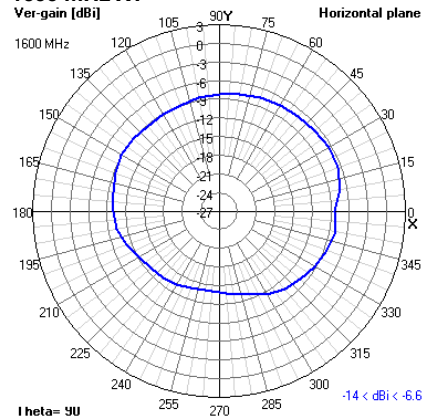
XZ



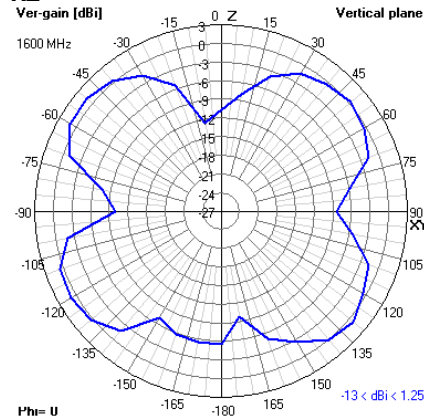
YZ



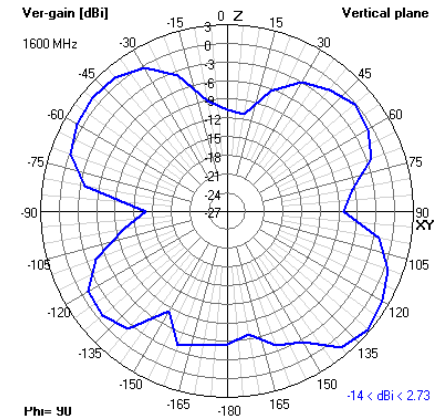
1600 MHz XY



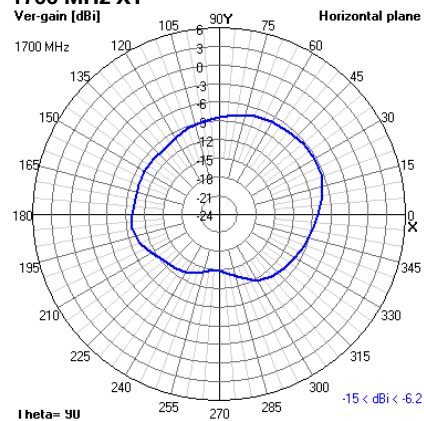
XZ



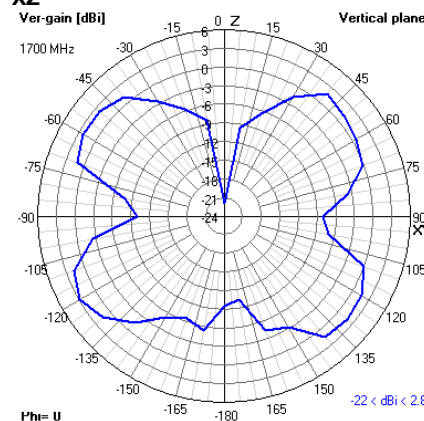
YZ



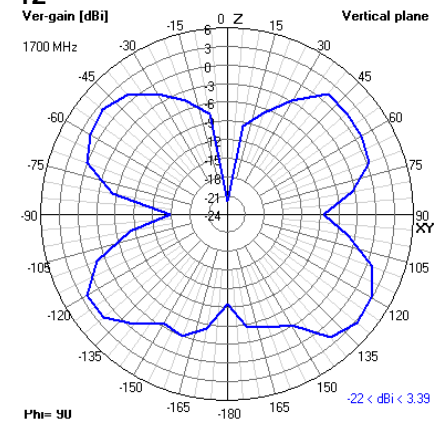
1700 MHz XY



XZ



YZ



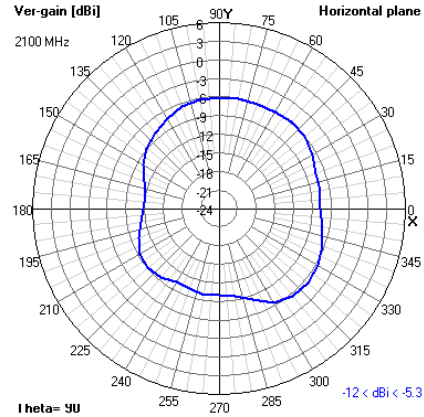
5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz

Echo 47

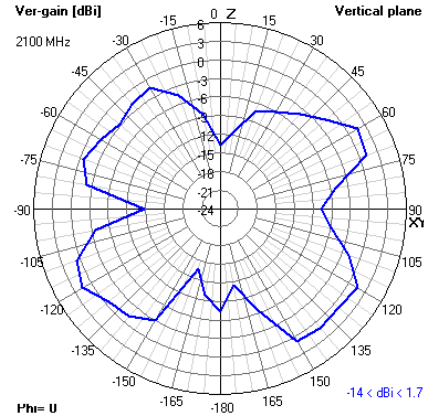
5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz

2D Radiation Plots (tested on flat surface)

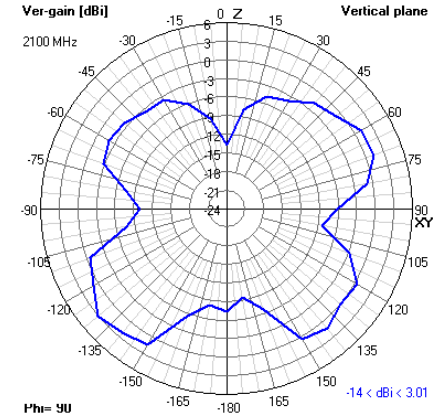
2100 MHz XY



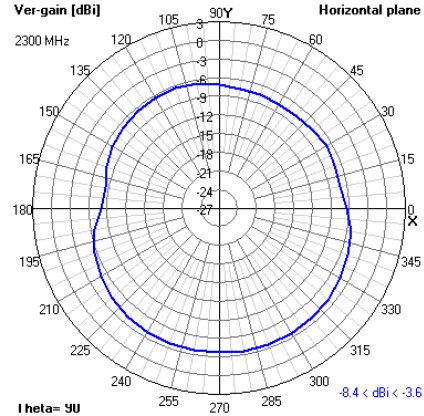
XZ



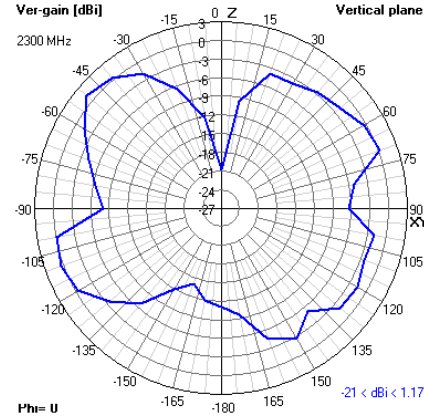
YZ



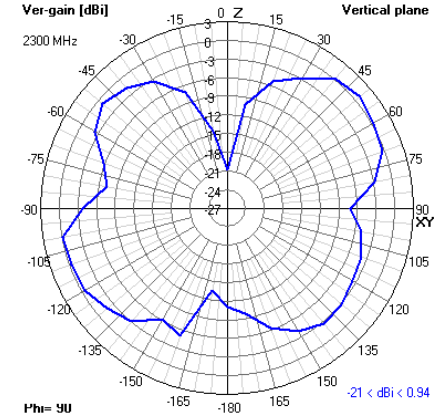
2300 MHz XY



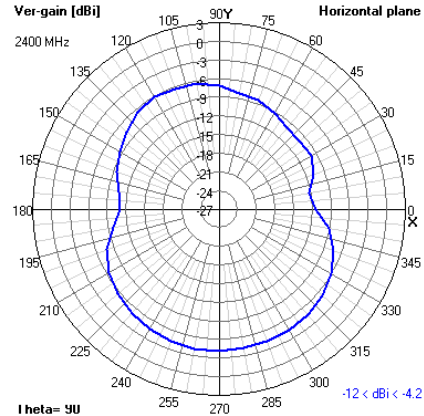
XZ



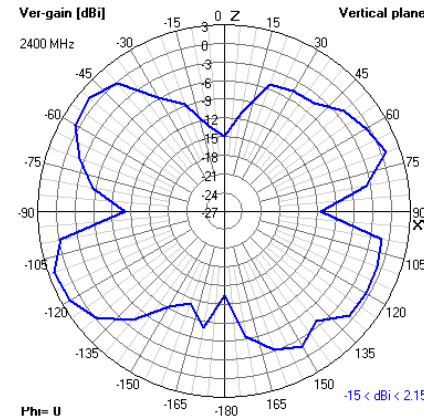
YZ



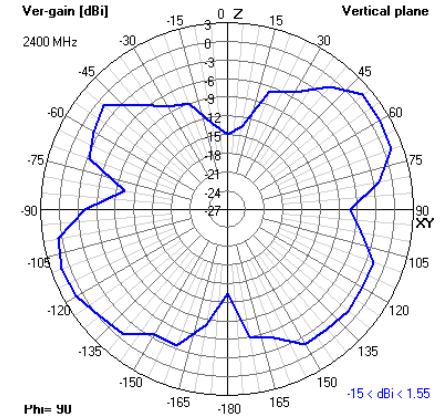
2400 MHz XY



XZ



YZ



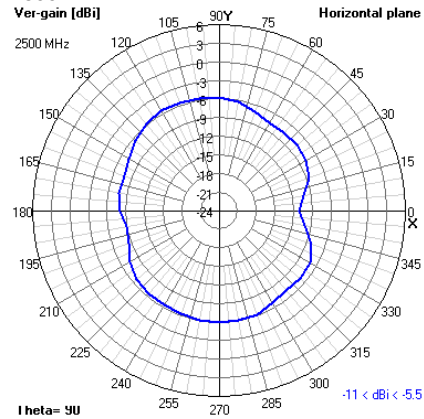


Echo 47

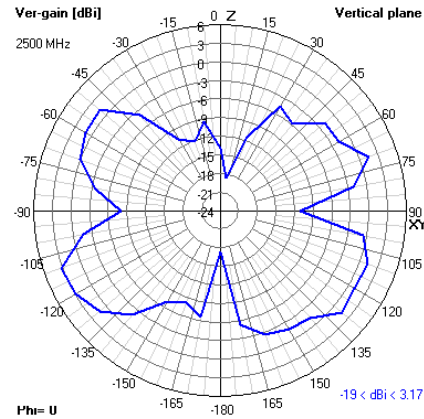
5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz

2D Radiation Plots (tested on flat surface)

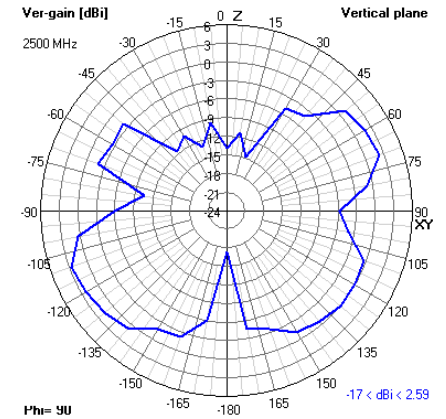
2500 MHz XY



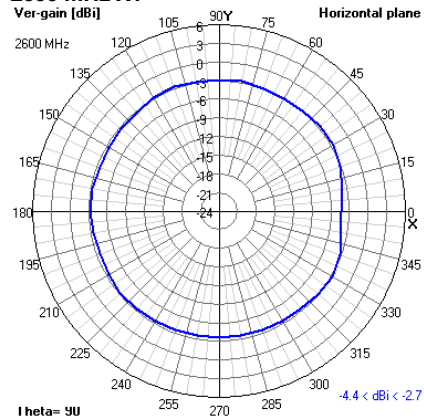
XZ



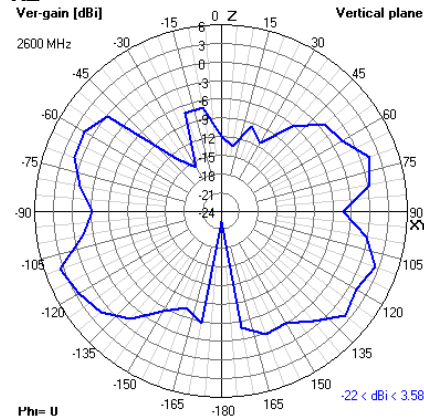
YZ



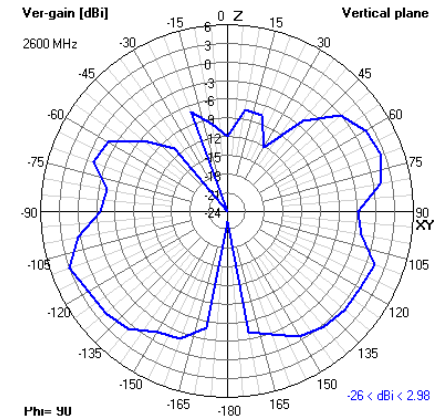
2600 MHz XY



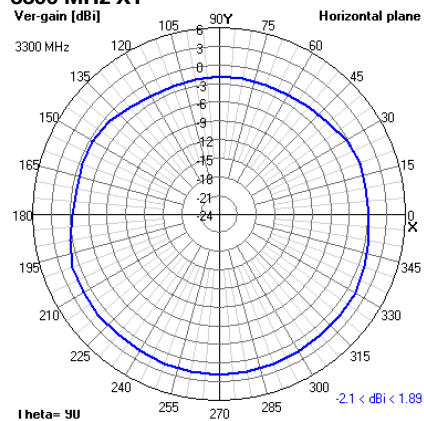
XZ



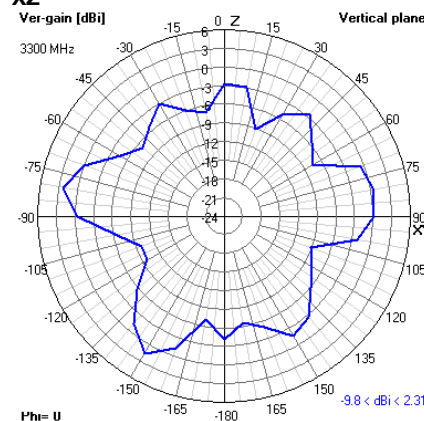
YZ



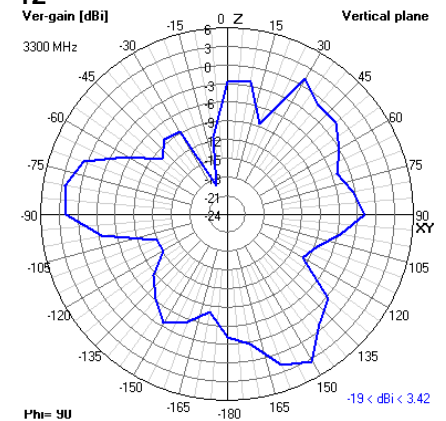
3300 MHz XY



XZ



YZ

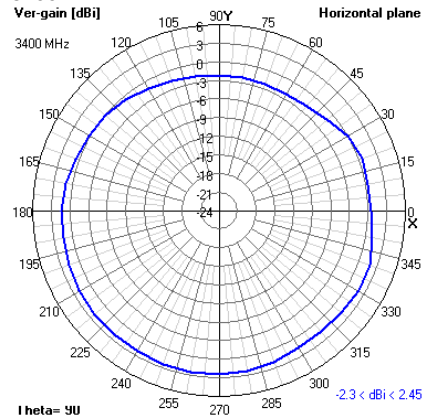


Echo 47

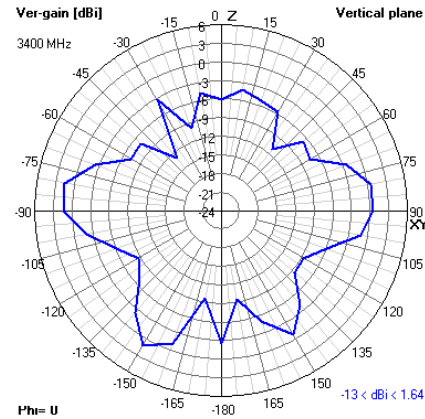
5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz

2D Radiation Plots (tested on flat surface)

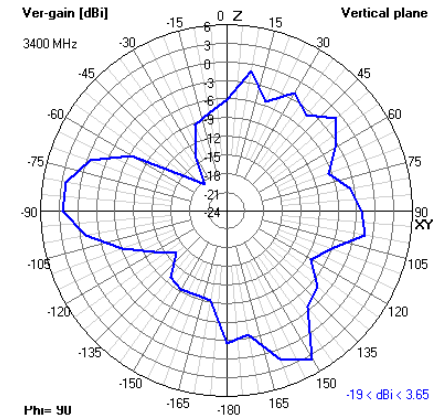
3400 MHz XY



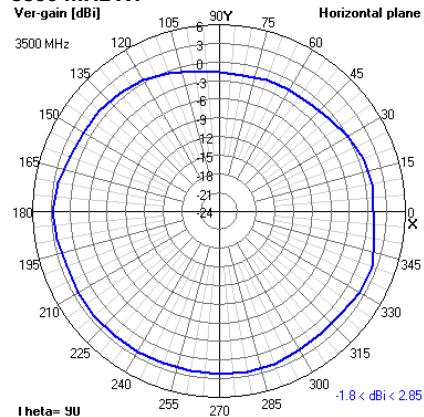
XZ



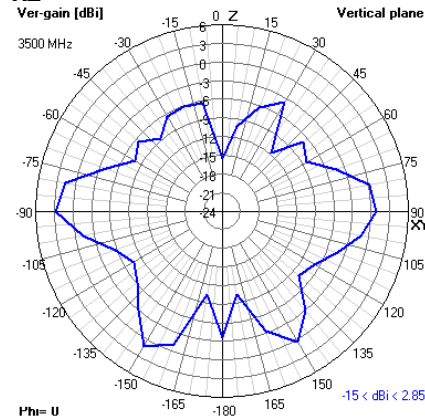
YZ



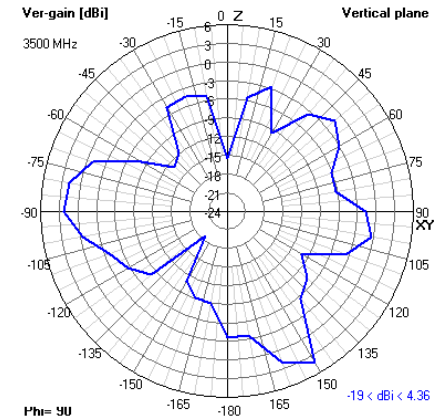
3500 MHz XY



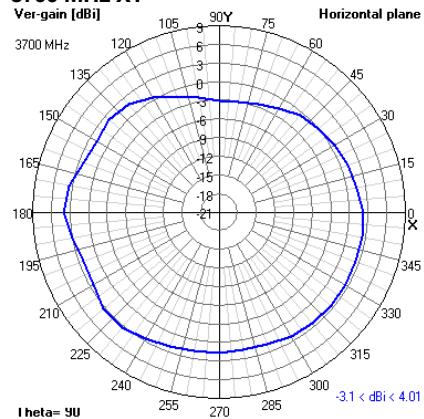
XZ



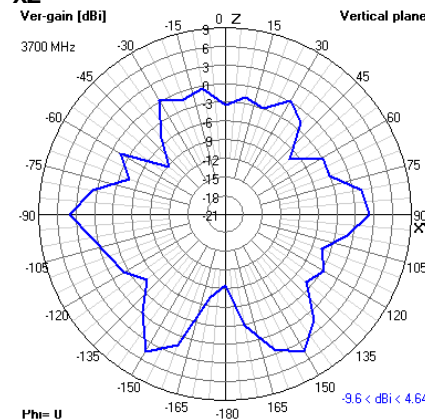
YZ



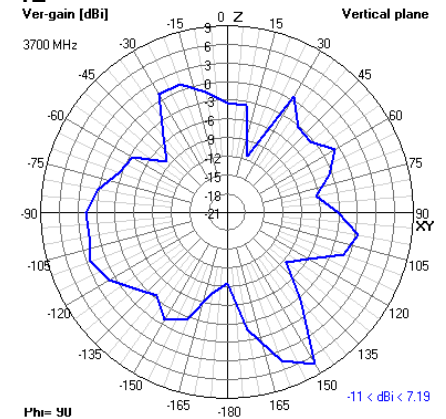
3700 MHz XY



XZ



YZ



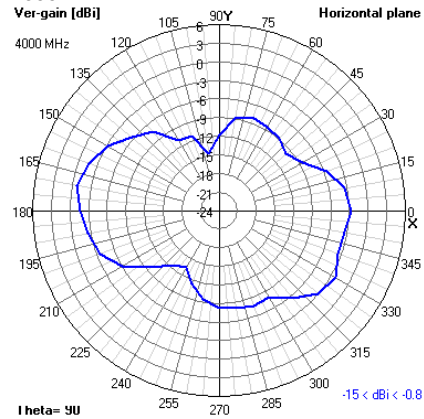


Echo 47

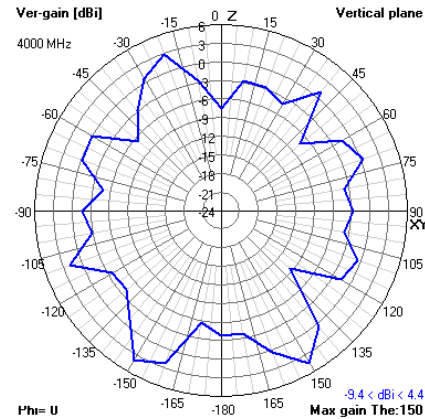
5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz

2D Radiation Plots (tested on flat surface)

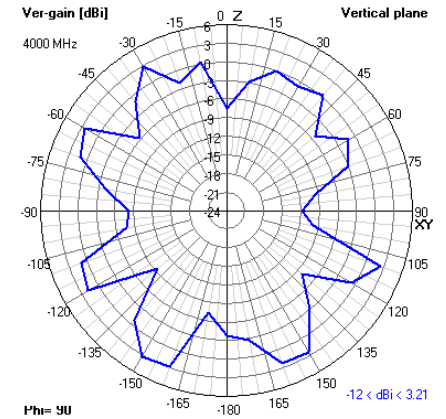
4000 MHz XY



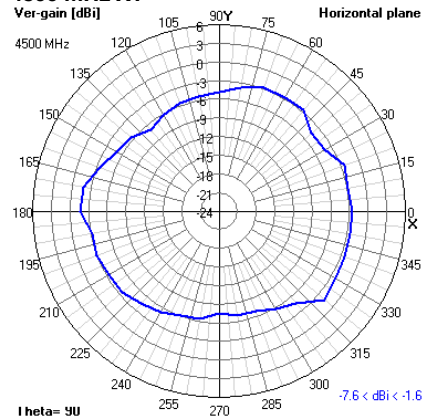
XZ



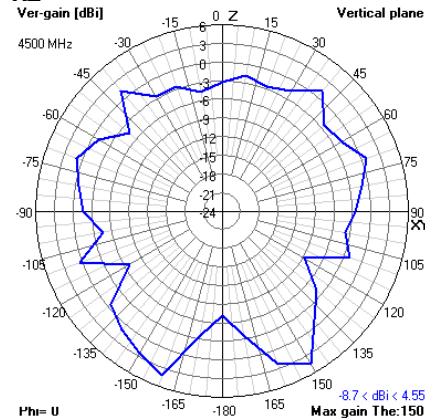
YZ



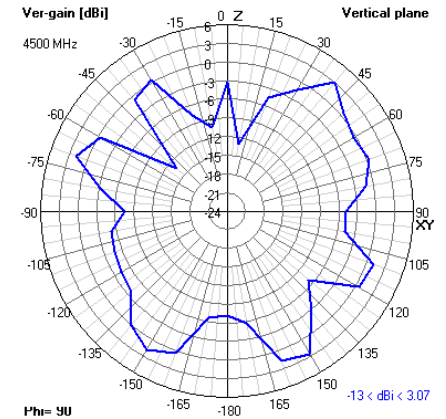
4500 MHz XY



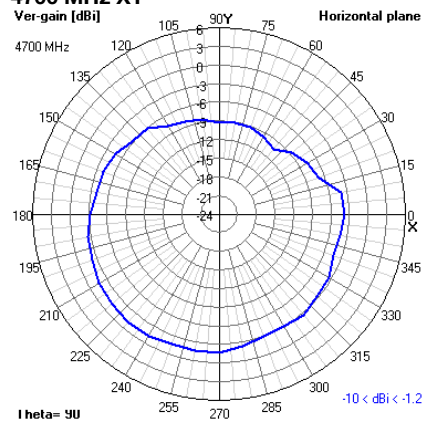
XZ



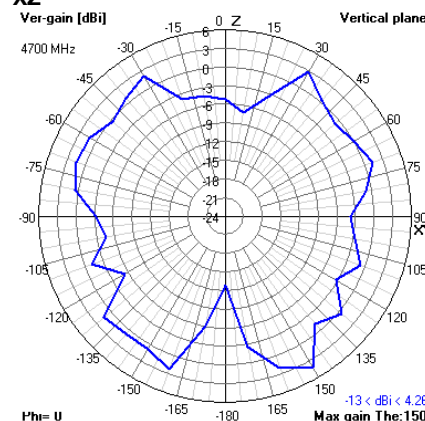
YZ



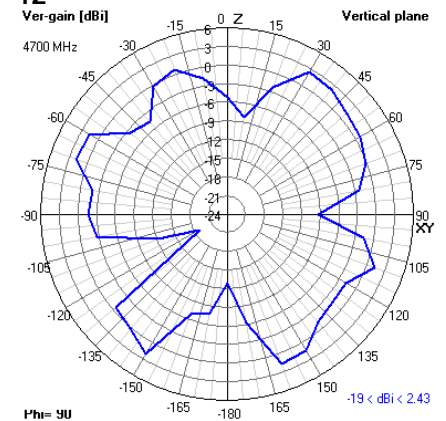
4700 MHz XY



XZ



YZ



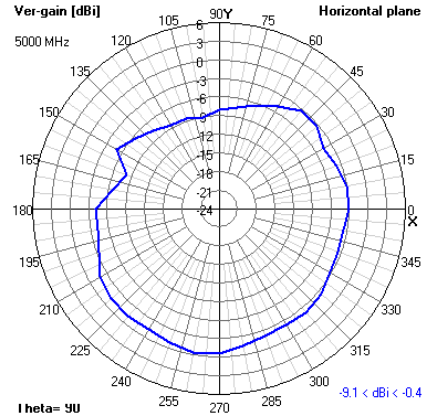


Echo 47

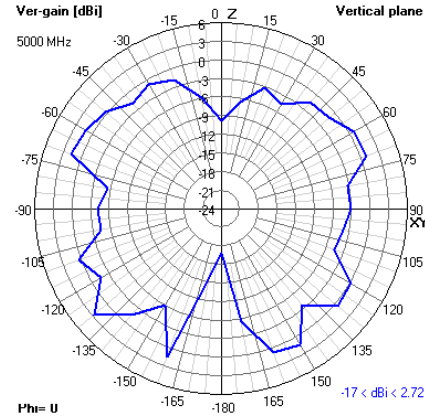
5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz

2D Radiation Plots (tested on flat surface)

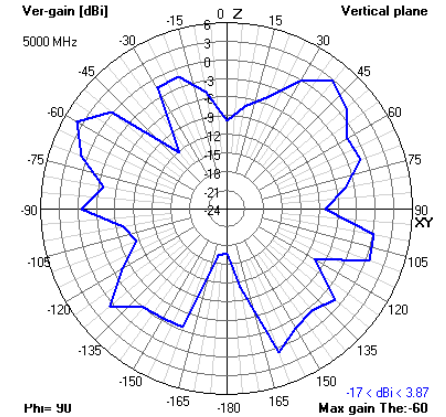
5000 MHz XY



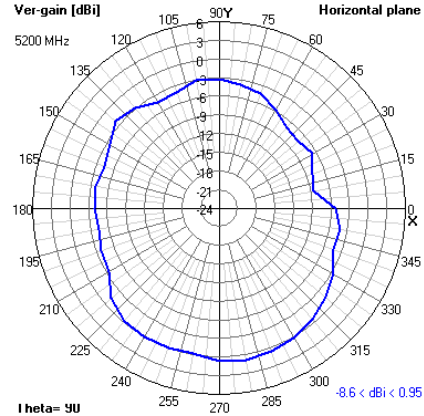
XZ



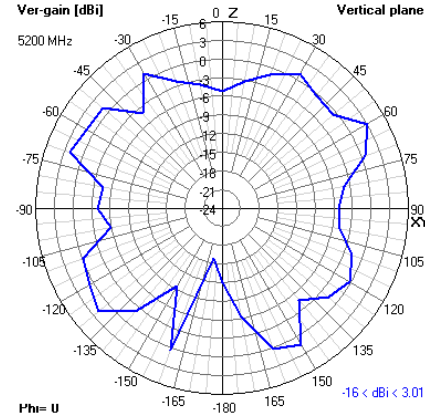
YZ



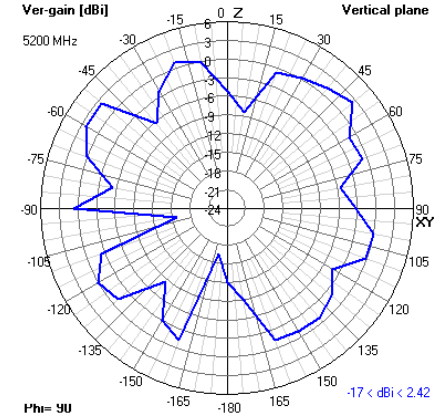
5200 MHz XY



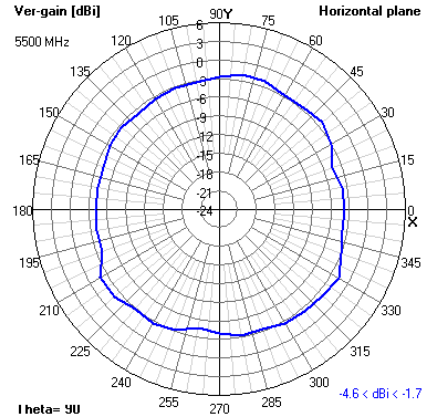
XZ



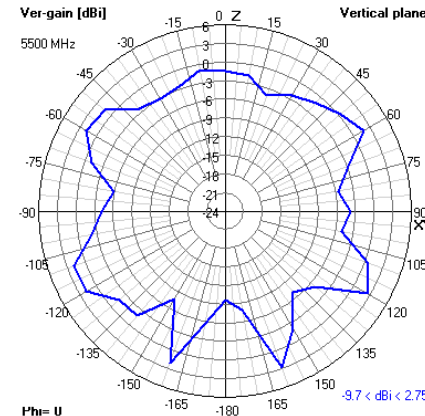
YZ



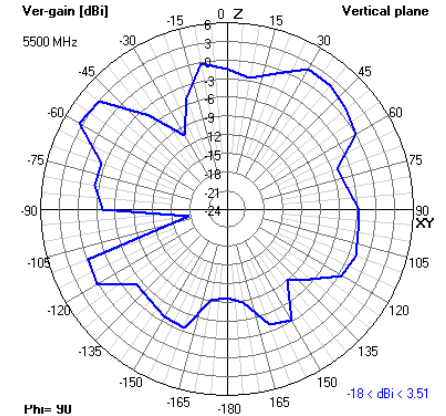
5500 MHz XY



XZ



YZ

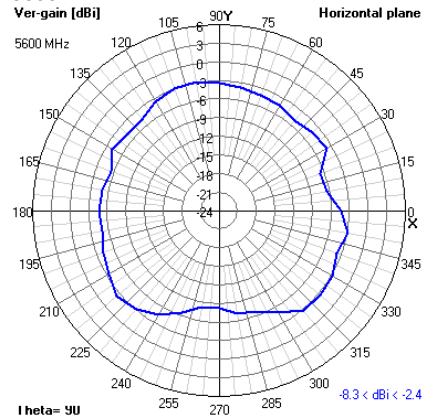


Echo 47

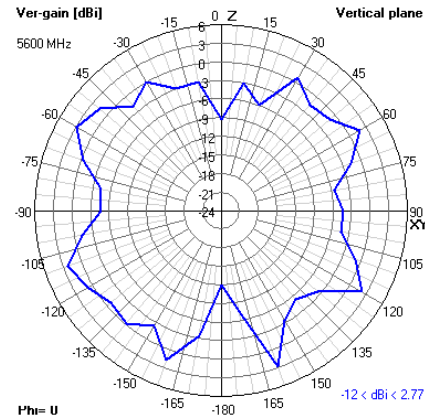
5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz

2D Radiation Plots (tested on flat surface)

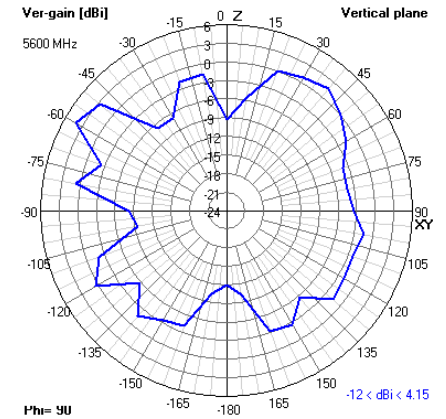
5600 MHz XY



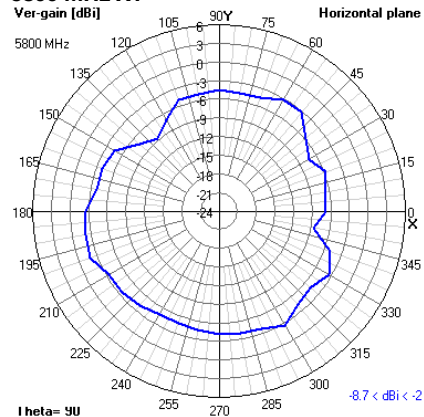
XZ



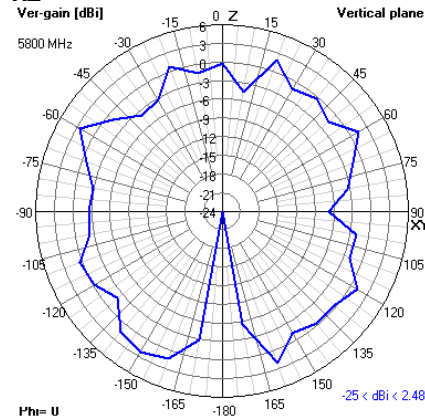
YZ



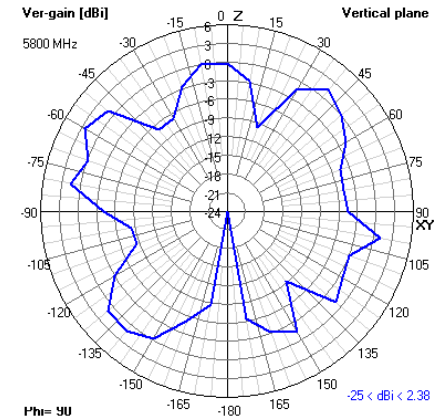
5800 MHz XY



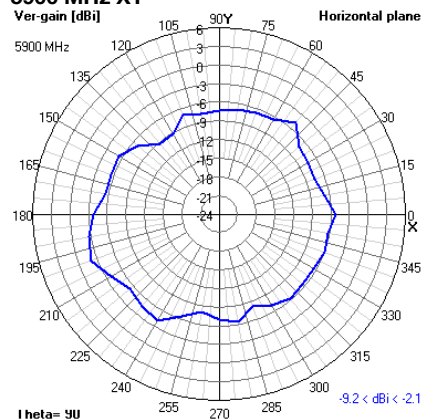
XZ



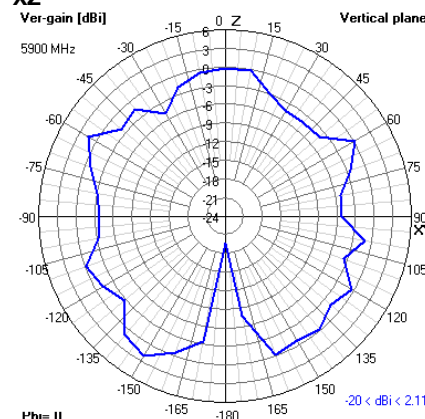
YZ



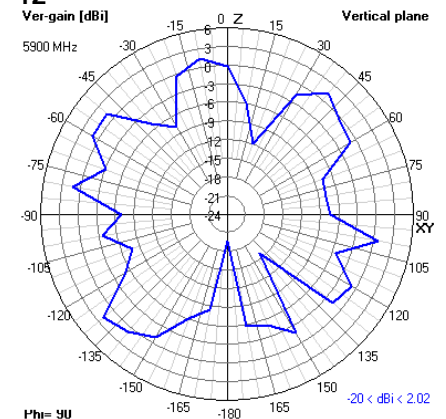
5900 MHz XY



XZ



YZ



NOTE: To view the radiation plots from our tests carried out on a curved surface, please contact support@siretta.com.

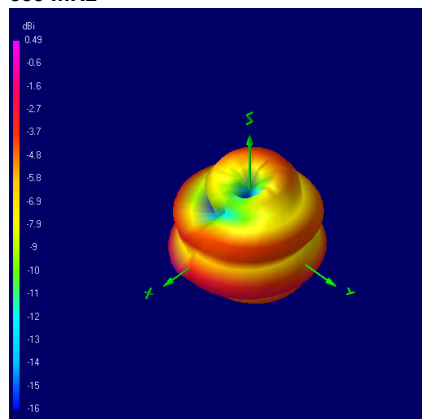


Echo 47

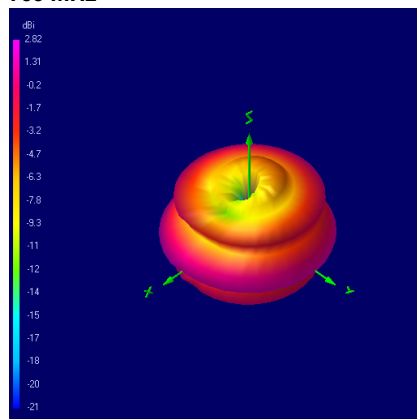
5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz

3D Radiation Plots

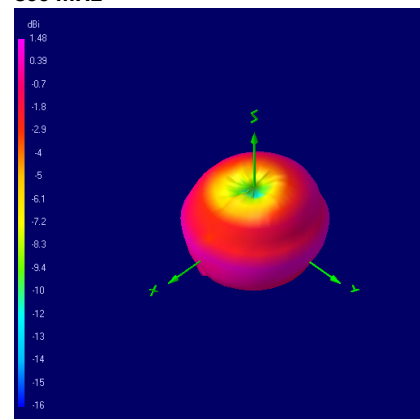
600 MHz



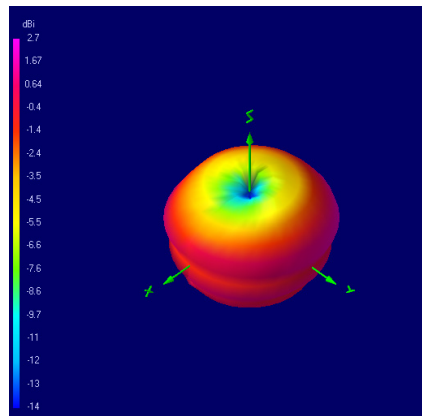
700 MHz



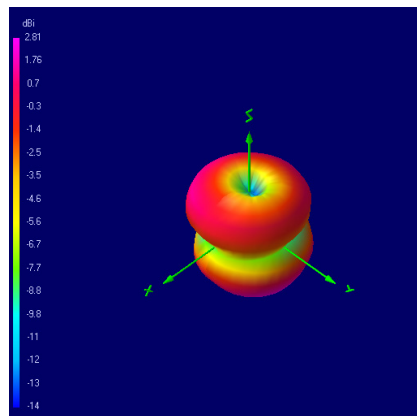
800 MHz



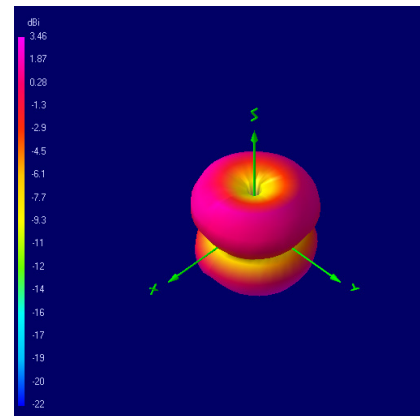
900 MHz



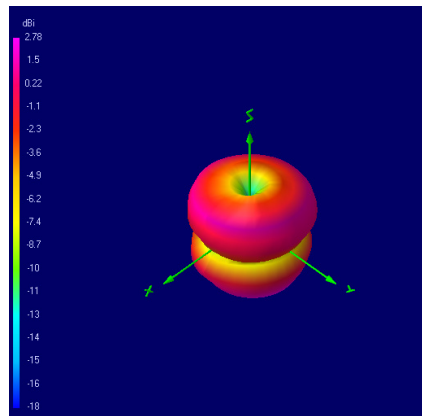
1600 MHz



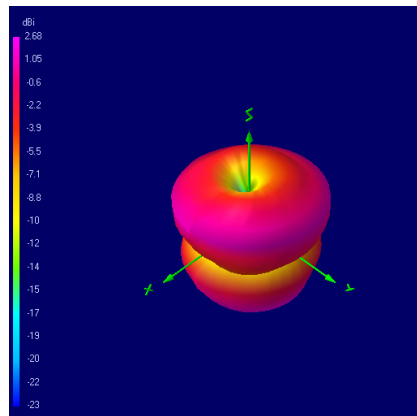
1700 MHz



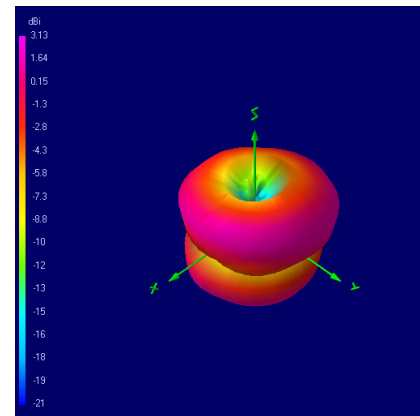
1800 MHz



1900 MHz



2000 MHz



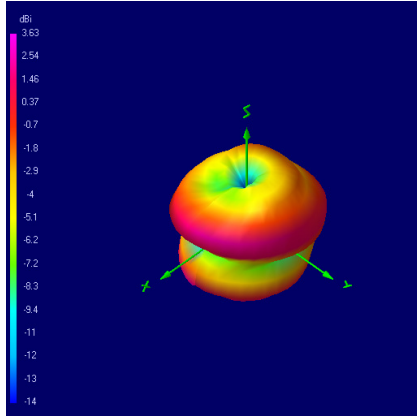


Echo 47

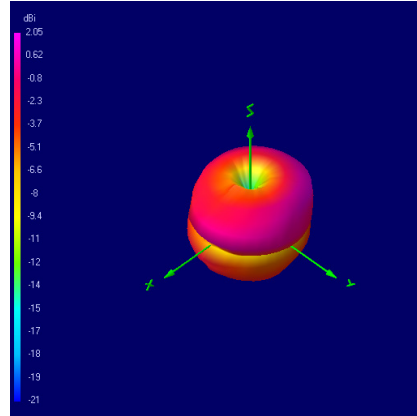
5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz

3D Radiation Plots

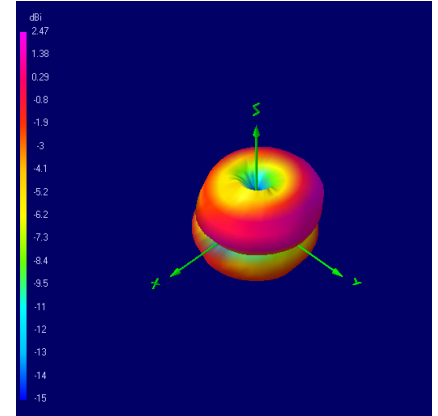
2100 MHz



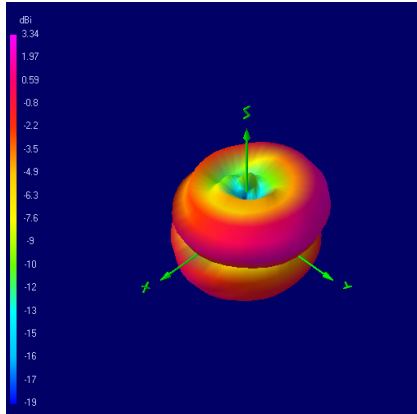
2300 MHz



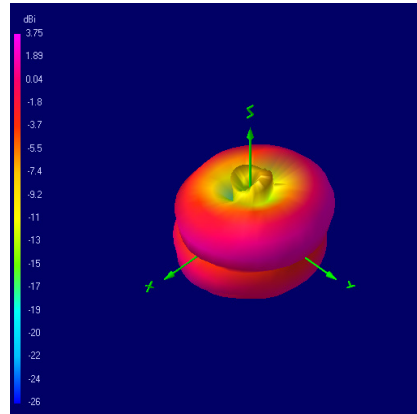
2400 MHz



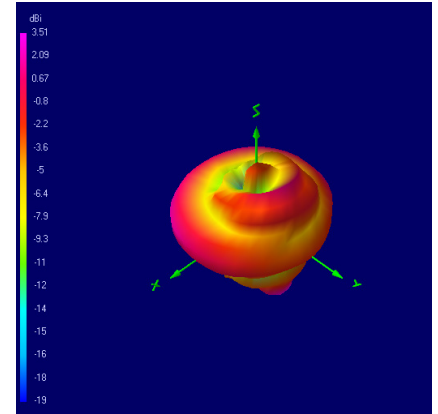
2500 MHz



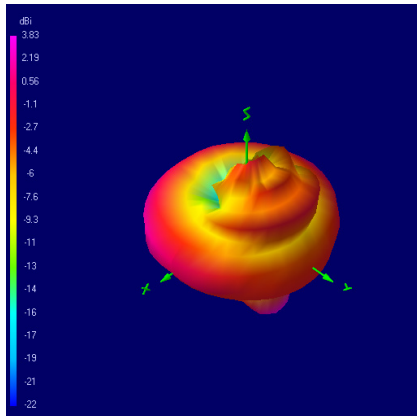
2600 MHz



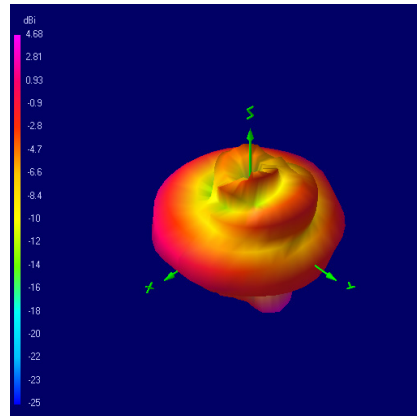
3300 MHz



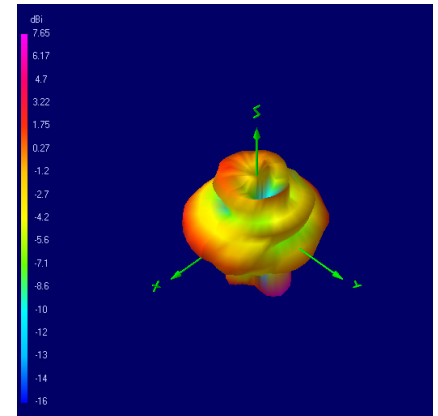
3400 MHz



3500 MHz



3700 MHz



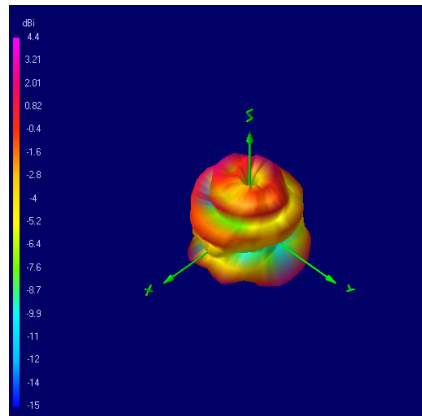


Echo 47

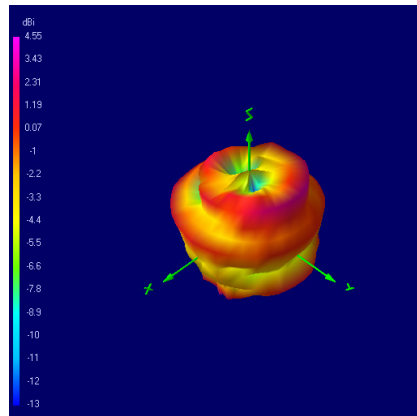
5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz

3D Radiation Plots

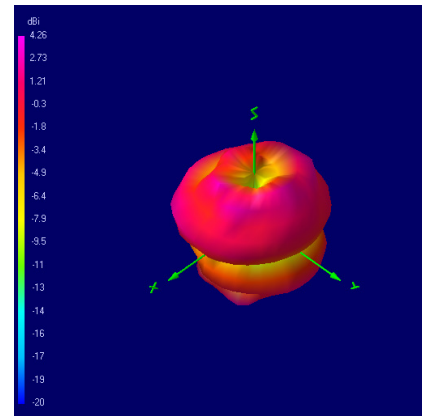
4000 MHz



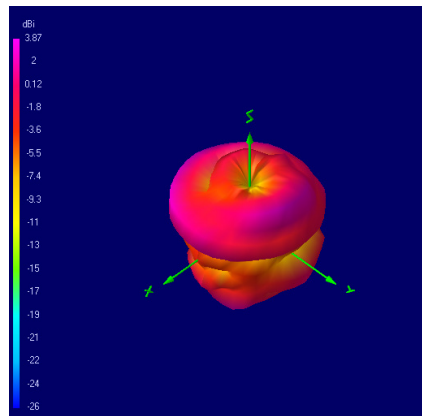
4500 MHz



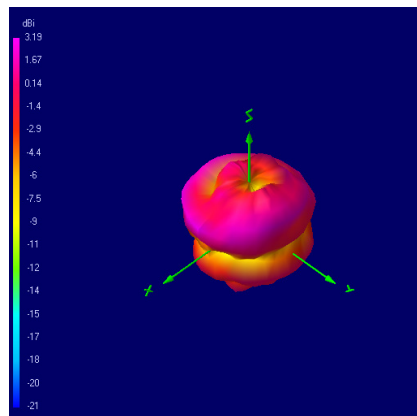
4700 MHz



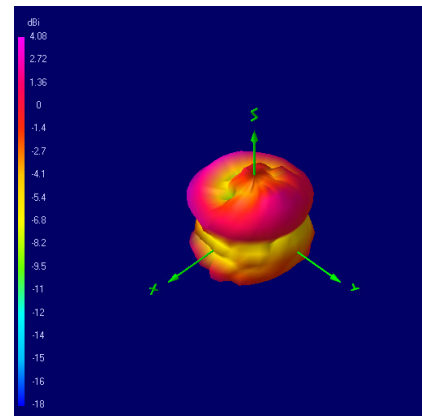
5000 MHz



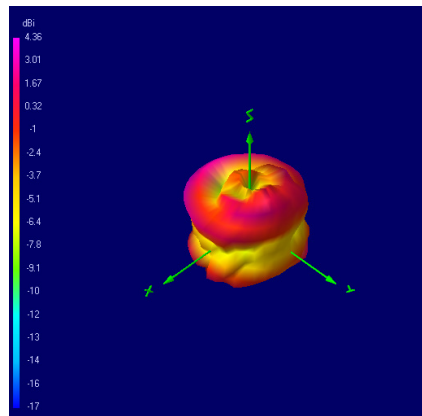
5200 MHz



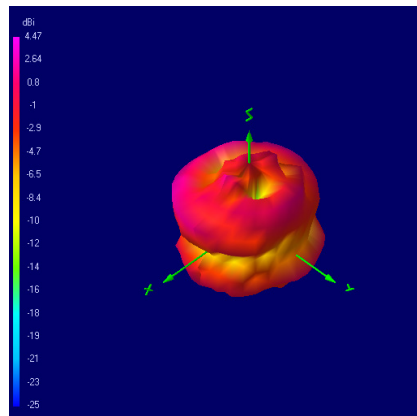
5500 MHz



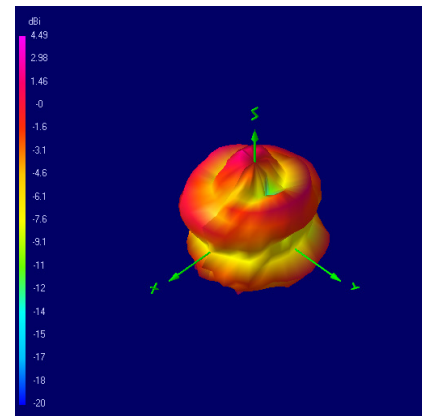
5600 MHz



5800 MHz



5900 MHz



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





Echo 47

5G/4G Flexible Printed Circuit Wideband Antenna for 600-6000 MHz

Ordering Details:

Part Number	Description
ECHO47/0.1M/UFL/36	5G/4G Flexible Printed Circuit Wideband Antenna 600-6000 MHz 0.1m Cable 1.13 UFL/I-PEX Connector
ECHO47/0.1M/MHF4/36	5G/4G Flexible Printed Circuit Wideband Antenna 600-6000 MHz 0.1m Cable 1.13 I-PEX MHF4 Connector