

High Gain Miniature 5G/4G and Dual Band Wi-Fi Through-Hole Mount Antenna



Key Features

- Supports Dual Band Wi-Fi 2.4 GHz & 5 GHz spectrum
- Supports some of 5G NR / 4G LTE bands
- Supports ISM 2450 / ISM 5800 / WLAN 2400 / WLAN 5800 bands
- Supports Bluetooth / Zigbee / IEEE 802.15.4
- Miniature Design
- Through Hole / Screw Mounting

General Description

The Tango 25A is a miniature, through-hole mount, dual band Wi-Fi / WLAN antenna. Measuring at an impressive 22 x 22mm, this is one of the most compact screw mount Wi-Fi antennas on the market. Despite its small size, this antenna features a high gain of 9.34 dBi at the 2.4 GHz frequency.

The Tango 25A is tuned to operate within the 2.4 to 2.5 GHz and 5.1 to 5.9 GHz frequencies, making this antenna perfect for Wi-Fi, Bluetooth and Zigbee applications.

The antenna is supplied as standard, with 100mm of RG174 coaxial cable, terminated with a reverse polarity SMA male connector. Custom cable lengths and alternative connector types can be specified for volume orders.

Additional Considerations

- Made out of durable ABS
- Ground Plane Independent

T Through	5G New Radio	4G LTE	3G UMTS	ISM 2450
ISM 5800	IEEE 802.15.4	BLE Bluetooth	AoA Bluetooth	AoD Bluetooth
WiFi 2.4G & 5G	ZB Zigbee	WLAN 2400	WLAN 5800	WiFi 4 802.11n
WiFi 5 802.11ac	WiFi 6 802.11ax			



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Electrical Specifications

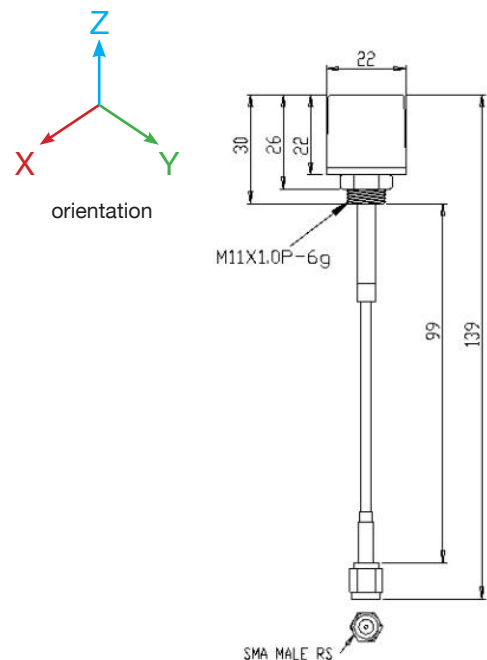
Impedance:	50 Ohm
Polarization:	Vertical
Max Input Power:	1 w
Ground plane independent:	Yes

Environmental Specifications

Operating Temperature range:	-30 to +60 °C
Storage Temperature range:	-30 to +60 °C

Mechanical Specifications

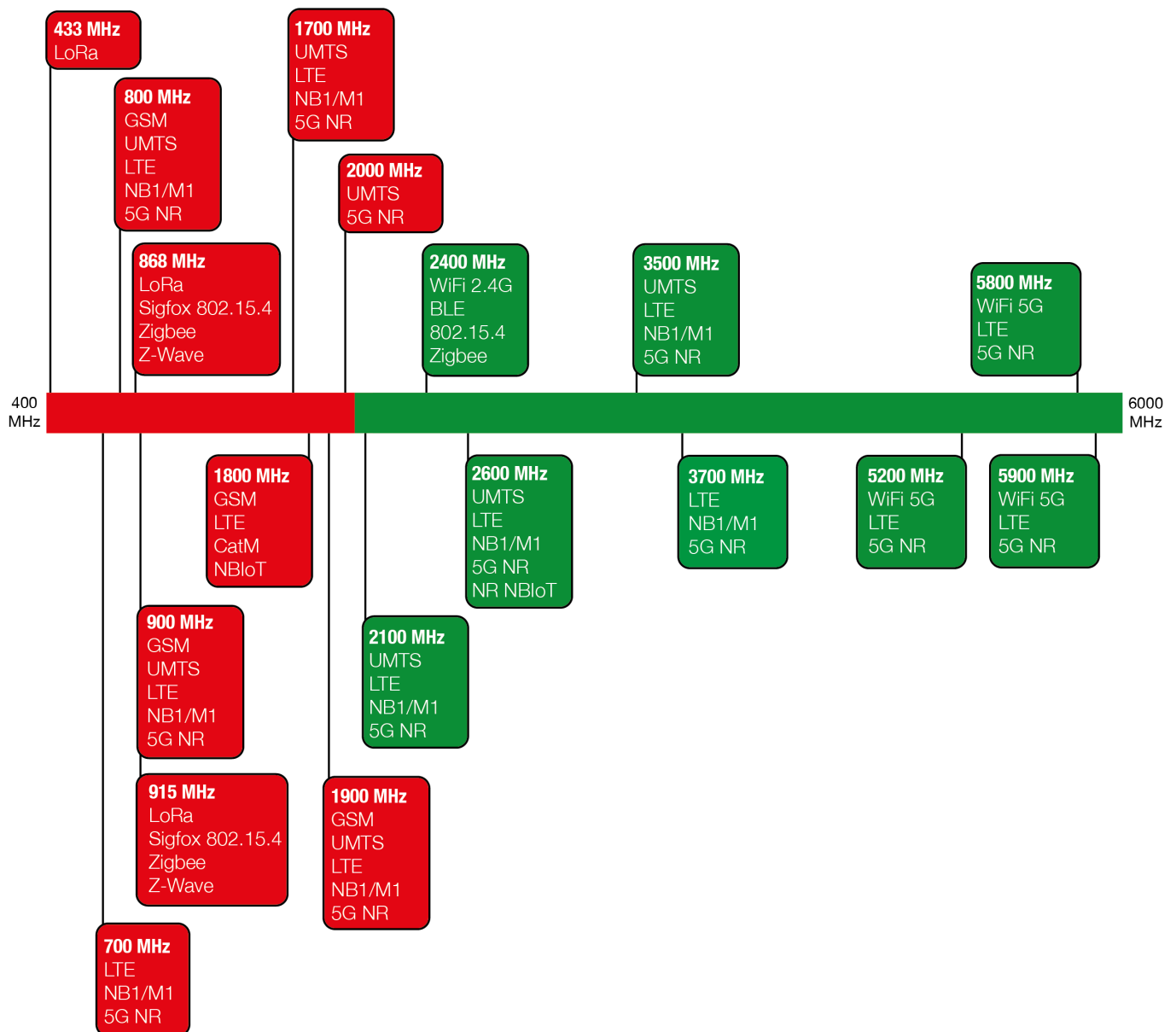
Dimensions:	H22 x 22 mm diameter
Weight:	11 g
Connector:	RG174
Mounting method:	SMA Male Reverse Polarity
Housing materials:	M11 1.0P-6g Screw
Radome material:	ABS





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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 (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:					●	●						

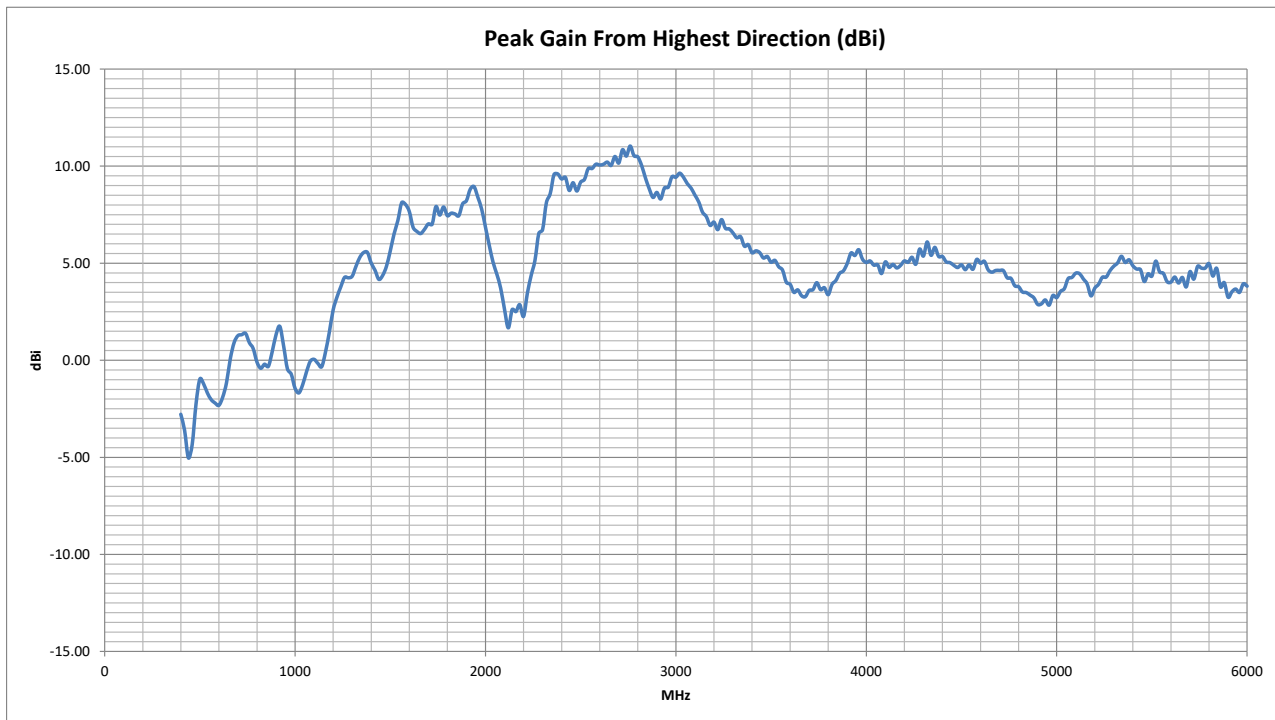
Usable ISM Frequency Support (433 MHz - 5800 MHz)

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

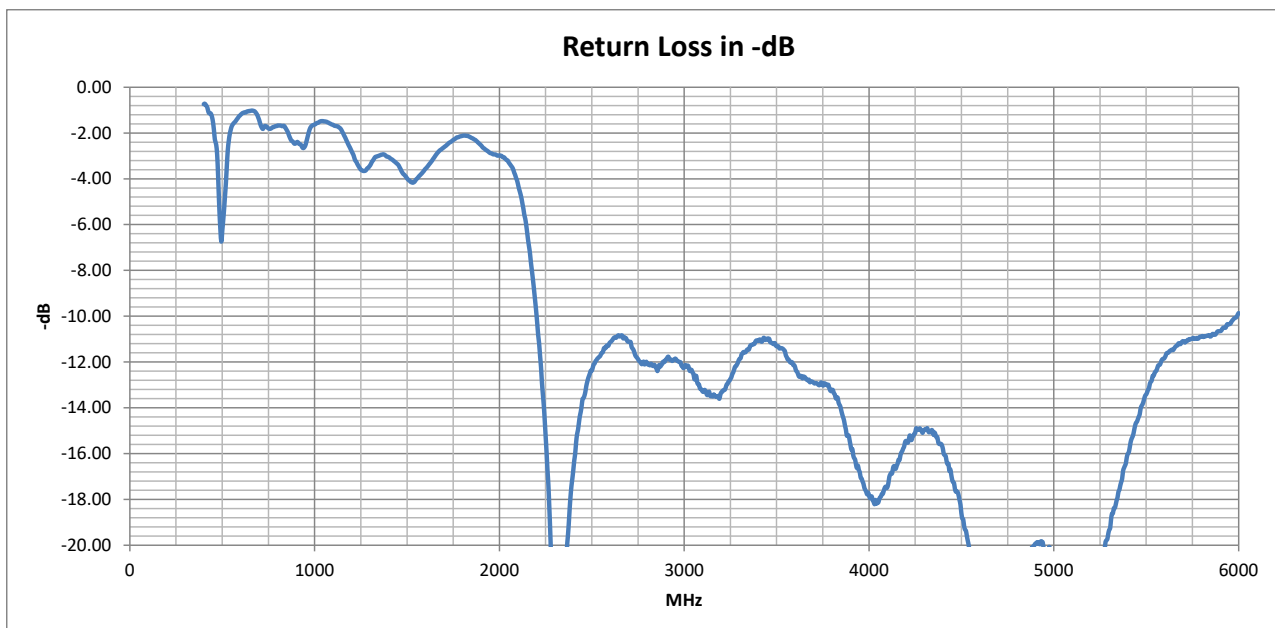


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Peak Gain vs. Frequency



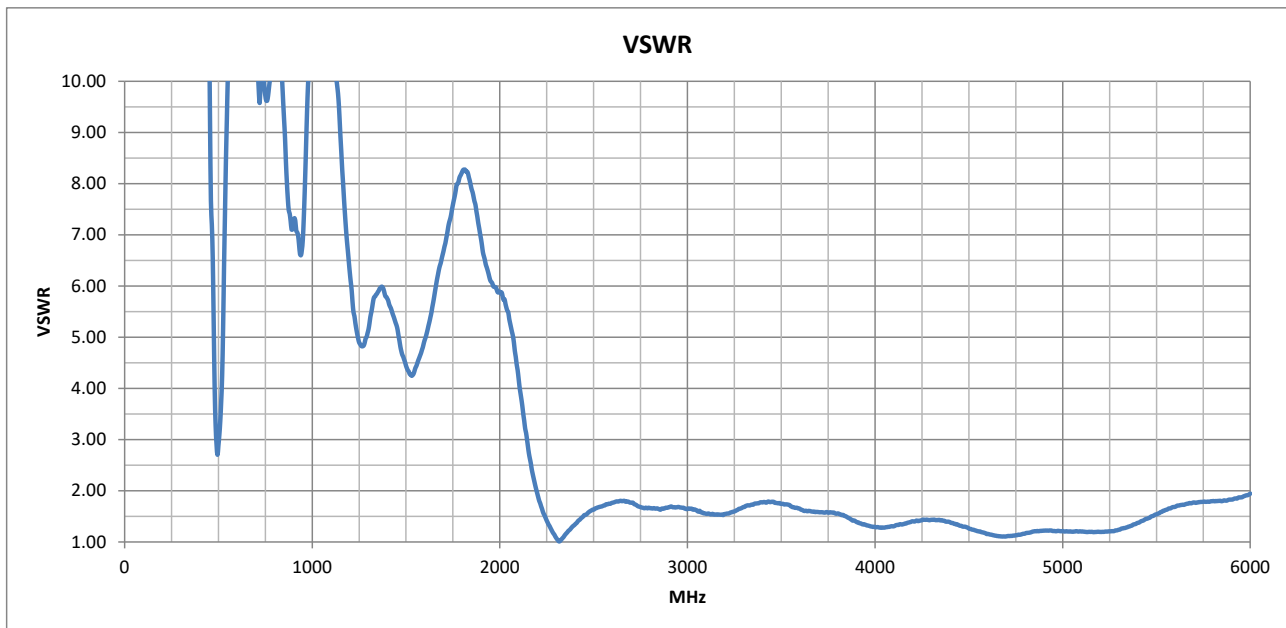
Return Loss



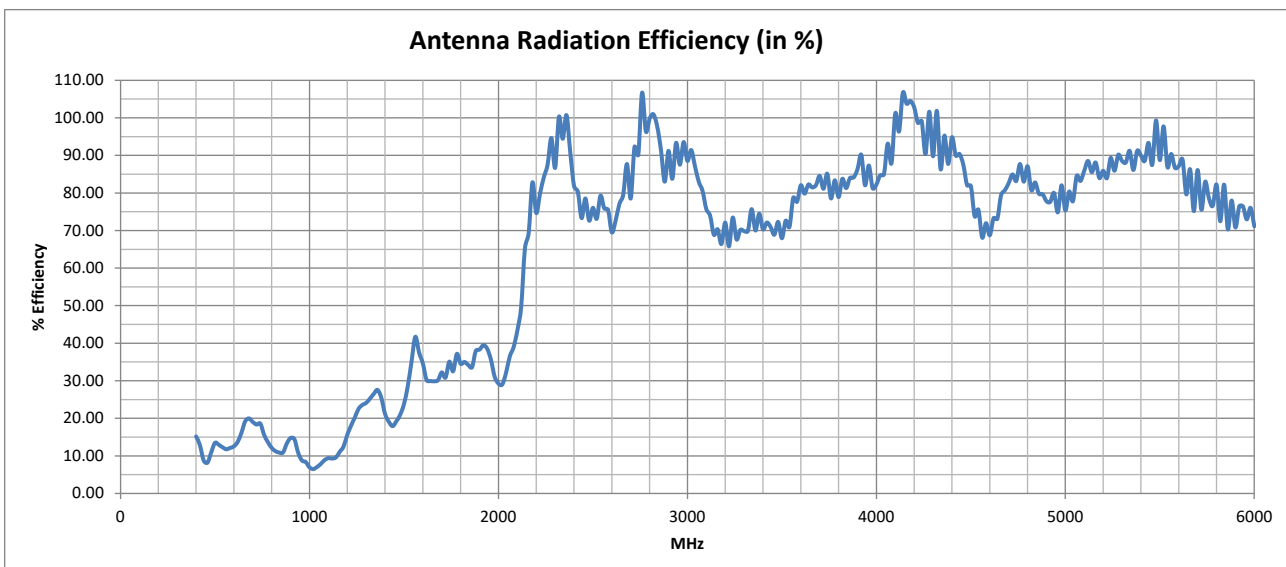


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VSWR



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	36.48	61.65	6.51	3.91	●
PCS-1900	2	2	2	2	n2	n2	1850 - 1910 MHz	1930 - 1990 MHz	36.67	35.04	7.89	6.37	●
DCS-1800	3	3	3	3	n3	n3	1710 - 1785 MHz	1805 - 1880 MHz	33.70	34.76	8.12	8.28	●
	4	4	4	4			1710 - 1755 MHz	2110 - 2155 MHz	32.94	58.40	7.68	3.91	●
GSM-850	5	5	5	5	n5	n5	824 - 849 MHz	869 - 894 MHz	10.96	13.28	10.35	7.77	●
	6						830 - 840 MHz	875 - 885 MHz	10.96	13.22	10.35	7.48	●
	7	7	7	7	n7	n7	2500 - 2570 MHz	2620 - 2690 MHz	76.06	79.82	1.74	1.81	●
E-GSM-900	8	8	8	8	n8	n8	880 - 915 MHz	925 - 960 MHz	14.28	10.83	7.42	7.84	●
	9	9					1749.9 - 1784.9 MHz	1844.9 - 1879.9 MHz	34.63	34.91	8.12	7.97	●
	10	10					1710 - 1770 MHz	2110 - 2170 MHz	33.06	61.65	7.98	3.91	●
	11	11	11	11			1427.9 - 1447.9 MHz	1475.9 - 1495.9 MHz	18.22	21.80	5.47	4.72	●
	12	12	12	12	n12	n12	699 - 716 MHz	729 - 746 MHz	18.75	18.37	12.35	10.32	●
	13	13	13	13	n13	n13	777 - 787 MHz	746 - 756 MHz	13.50	16.92	10.24	9.86	●
	14	14	14	14	n14		788 - 798 MHz	758 - 768 MHz	12.64	15.28	10.38	9.82	●
		17		17			704 - 716 MHz	734 - 746 MHz	18.67	18.33	11.26	10.29	●
		18	18	18	n18	n18	815 - 830 MHz	860 - 875 MHz	11.22	11.78	10.43	8.42	●
	19	19	19	19			830 - 845 MHz	875 - 890 MHz	10.93	13.42	10.35	7.48	●
	20	20	20	20	n20	n20	832 - 862 MHz	791 - 821 MHz	10.90	11.89	10.34	10.44	●
	21	21	21	21			1447.9 - 1462.9 MHz	1495.9 - 1510.9 MHz	18.93	24.63	5.25	4.50	●
	22	22					3410 - 3490 MHz	3510 - 3590 MHz	70.86	74.97	1.79	1.75	●
		24	24	24	n24		1626.5 - 1660.5 MHz	1525 - 1559 MHz	29.93	35.74	6.03	4.48	●
	25	25	25	25	n25	n25	1850 - 1915 MHz	1930 - 1995 MHz	36.85	34.65	7.89	6.37	●
	26	26	26	26	n26		814 - 849 MHz	859 - 894 MHz	11.06	12.73	10.43	8.52	●
		27	27				807 - 824 MHz	852 - 869 MHz	11.45	11.17	10.44	9.12	●
		28	28	28	n28	n28	703 - 748 MHz	758 - 803 MHz	18.43	13.71	11.49	10.44	●

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● Adequate band in good signal conditions

● Likely to be unsuitable



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		28A					703 - 733 MHz	758 - 788 MHz	18.53	14.34	11.49	10.25	●
		29			n29		N/A	717 - 728 MHz	N/A	18.37	N/A	10.19	●
		30			n30		2305 - 2315 MHz	2350 - 2360 MHz	93.46	99.12	1.06	1.19	●
		31	31	31			452.5 - 457.5 MHz	462.5 - 467.5 MHz	8.31	8.85	10.40	7.44	●
	32	32					N/A	1452 - 1496 MHz	N/A	20.61	N/A	5.20	●
		33					1900 - 1920 MHz	1900 - 1920 MHz	38.86	38.86	6.92	6.92	●
		34			n34		2010 - 2025 MHz	2010 - 2025 MHz	29.15	29.15	5.88	5.88	●
		35					1850 - 1910 MHz	1850 - 1910 MHz	36.67	36.67	7.89	7.89	●
		36					1930 - 1990 MHz	1930 - 1990 MHz	35.04	35.04	6.37	6.37	●
		37					1910 - 1930 MHz	1910 - 1930 MHz	39.19	39.19	6.66	6.66	●
		38			n38		2570 - 2620 MHz	2570 - 2620 MHz	72.55	72.55	1.79	1.79	●
		39	39		n39		1880 - 1920 MHz	1880 - 1920 MHz	38.49	38.49	7.36	7.36	●
		40	40		n40		2300 - 2400 MHz	2300 - 2400 MHz	94.07	94.07	1.34	1.34	●
		41	41	41	n41	n41	2496 - 2690 MHz	2496 - 2690 MHz	76.50	76.50	1.81	1.81	●
		42	42	42			3400 - 3600 MHz	3400 - 3600 MHz	72.82	72.82	1.79	1.79	●
		43	43	43			3600 - 3800 MHz	3600 - 3800 MHz	81.86	81.86	1.65	1.65	●
		44					703 - 803 MHz	703 - 803 MHz	16.12	16.12	11.49	11.49	●
		45					1447 - 1467 MHz	1447 - 1467 MHz	19.06	19.06	5.26	5.26	●
		46			n46		5150 - 5925 MHz	5150 - 5925 MHz	84.93	84.93	1.85	1.85	●
		47			n47		5855 - 5925 MHz	5855 - 5925 MHz	74.05	74.05	1.85	1.85	●
		48			n48		3550 - 3700 MHz	3550 - 3700 MHz	80.69	80.69	1.70	1.70	●
		49					3550 - 3700 MHz	3550 - 3700 MHz	80.69	80.69	1.70	1.70	●
		50			n50		1432 - 1517 MHz	1432 - 1517 MHz	21.22	21.22	5.42	5.42	●
		51			n51		1427 - 1432 MHz	1427 - 1432 MHz	18.51	18.51	5.48	5.48	●
		52					3300 - 3400 MHz	3300 - 3400 MHz	72.00	72.00	1.78	1.78	●

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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	74.19	74.19	1.63	1.63	●
		65		65	n65	n65	1920 - 2010 MHz	2110 - 2200 MHz	34.26	67.41	6.51	3.91	●
		66	66	66	n66	n66	1710 - 1780 MHz	2110 - 2200 MHz	33.48	67.41	8.04	3.91	●
		67			n67		N/A	738 - 758 MHz	N/A	17.35	N/A	10.22	●
		68					698 - 728 MHz	753 - 783 MHz	18.62	14.84	12.55	10.15	●
		69					N/A	2570 - 2620 MHz	N/A	72.55	N/A	1.79	●
		70		70	n70	n70	1695 - 1710 MHz	1995 - 2020 MHz	31.89	29.18	6.84	5.89	●
		71	71	71	n71		663 - 698 MHz	617 - 652 MHz	19.58	15.55	17.07	16.87	●
		72	72	72			451 - 456 MHz	461 - 466 MHz	8.36	8.65	11.02	7.58	●
		73	73	73			450 - 455 MHz	460 - 465 MHz	8.38	8.51	11.43	7.67	●
		74	74	74	n74		1427 - 1470 MHz	1475 - 1518 MHz	18.74	23.65	5.48	4.73	●
		75			n75		N/A	1432 - 1517 MHz	N/A	21.22	N/A	5.42	●
		76			n76		N/A	1427 - 1432 MHz	N/A	18.51	N/A	5.48	●
					n77		3300 - 4200 MHz	3300 - 4200 MHz	82.29	82.29	1.79	1.79	●
					n78		3300 - 3800 MHz	3300 - 3800 MHz	76.27	76.27	1.79	1.79	●
					n79		4400 - 5000 MHz	4400 - 5000 MHz	80.17	80.17	1.39	1.39	●
					n80		1710 - 1785 MHz	N/A	33.70	N/A	8.12	N/A	●
					n81		880 - 915 MHz	N/A	14.28	N/A	7.42	N/A	●
					n82		832 - 862 MHz	N/A	10.90	N/A	10.34	N/A	●
					n83		703 - 748 MHz	N/A	18.43	N/A	11.49	N/A	●
					n84		1920 - 1980 MHz	N/A	36.48	N/A	6.51	N/A	●
		85	85	85	n85		698 - 716 MHz	728 - 746 MHz	18.77	18.37	12.55	10.32	●
					n86		1710 - 1780 MHz	N/A	33.48	N/A	8.04	N/A	●
		87	87	87			410 - 415 MHz	420 - 425 MHz	13.74	12.37	22.92	19.21	●
		88	88	88			412 - 417 MHz	422 - 427 MHz	13.51	11.95	22.26	18.03	●

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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
					n89		824 - 849 MHz	N/A	10.96	N/A	10.35	N/A	●
					n90	n90	2496 - 2690 MHz	2496 - 2690 MHz	76.50	76.50	1.81	1.81	●
					n91		832 - 862 MHz	1427 - 1432 MHz	10.90	18.51	10.34	5.48	●
					n92		832 - 862 MHz	1432 - 1517 MHz	10.90	21.22	10.34	5.42	●
					n93		880 - 915 MHz	1427 - 1432 MHz	14.28	18.51	7.42	5.48	●
					n94		880 - 915 MHz	1432 - 1517 MHz	14.28	21.22	7.42	5.42	●
					n95		2010 - 2025 MHz	N/A	29.15	N/A	5.88	N/A	●
					n97		2300 - 2400 MHz	N/A	94.07	N/A	1.34	N/A	●
					n98		1880 - 1920 MHz	N/A	38.49	N/A	7.36	N/A	●
					n99		1626.5 - 1660.5 MHz	N/A	29.93	N/A	6.03	N/A	●
					n101		1900 - 1910 MHz	1900 - 1910 MHz	38.57	38.57	6.92	6.92	●
				103			787 - 788 MHz	757 - 758 MHz	13.07	15.94	10.25	9.62	●

● 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	10.01	15.42	-4.533	●
ISM 868 MHz	863 - 870 MHz	11.66	8.18	0.065	●
ISM 915 MHz	902 - 928 MHz	14.32	7.33	1.75	●
ISM 2.4 GHz	2400 - 2500 MHz	76.74	1.63	9.42	●
Wi-Fi 2.4G	2401 - 2483 MHz	77.13	1.61	9.42	●
Wi-Fi 2.4G (USA)	2401 - 2473 MHz	77.65	1.58	9.42	●
Wi-Fi 2.4G (Japan)	2401 - 2495 MHz	76.75	1.63	9.42	●
Wi-Fi 5G (all channels)	5150 - 5990 MHz	84.17	1.92	5.36	●
Wi-Fi 5G (Ch 32-48)	5150 - 5250 MHz	86.10	1.21	4.285	●
Wi-Fi 5G (Ch 32-64)	5150 - 5330 MHz	87.11	1.27	5.19	●
Wi-Fi 5G (Ch 32-161)	5150 - 5815 MHz	86.55	1.80	5.36	●
Wi-Fi 5G (Ch 32-173)	5150 - 5875 MHz	85.65	1.81	5.36	●
ISM 5.8 GHz	5725 - 5875 MHz	77.82	1.81	4.98	●

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable

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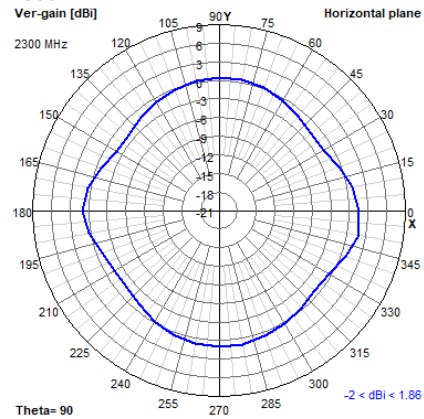
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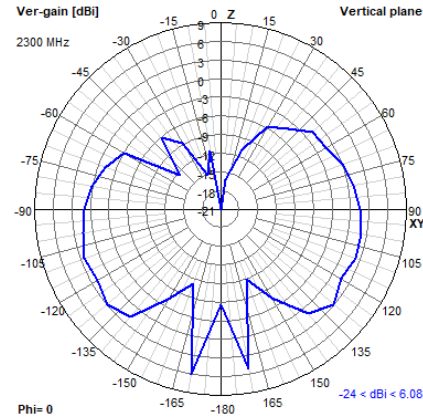
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2D Radiation Plots

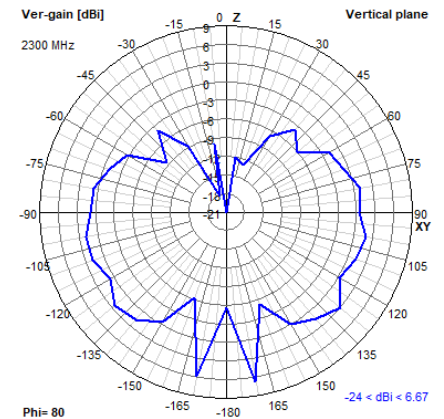
2300 MHz XY



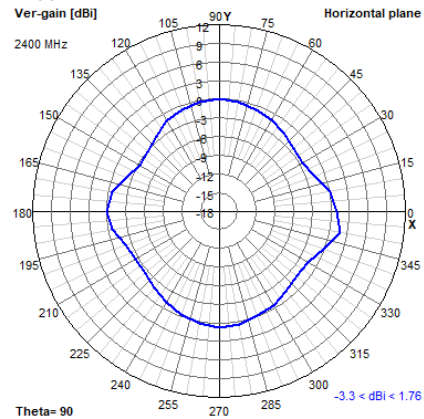
XZ



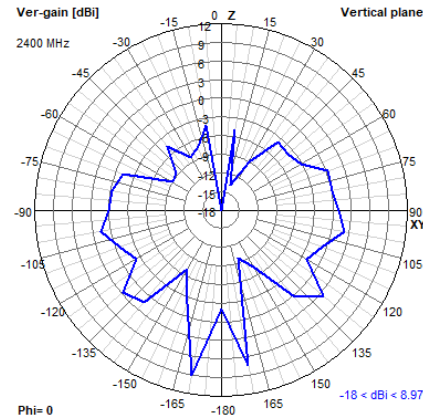
YZ



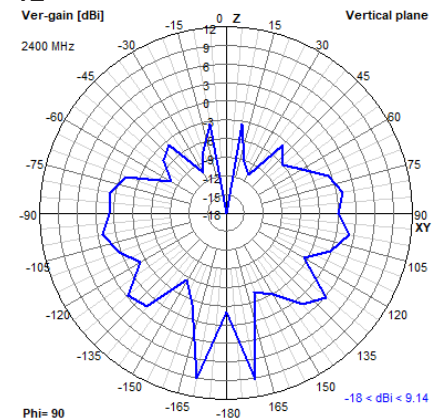
2400 MHz XY



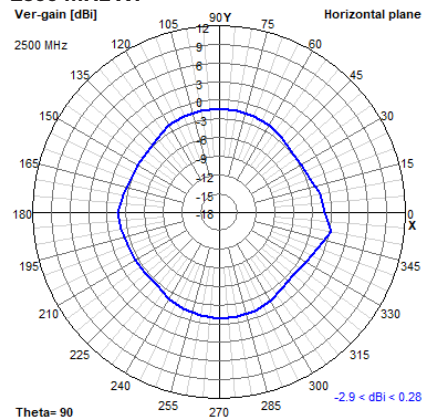
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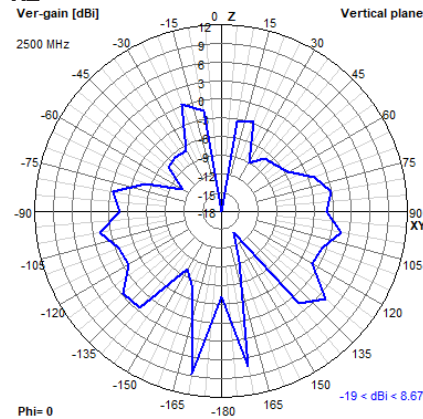
YZ



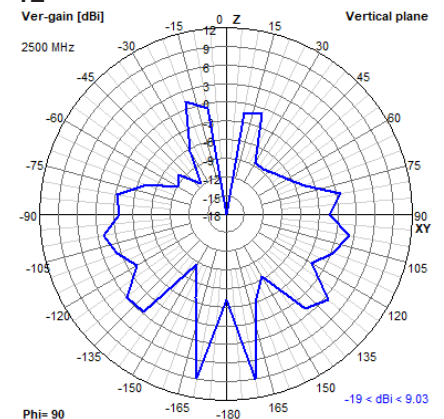
2500 MHz XY



XZ



YZ

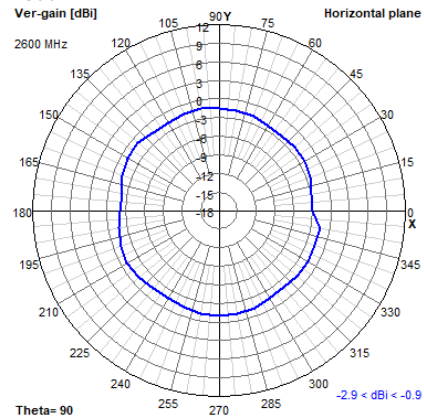




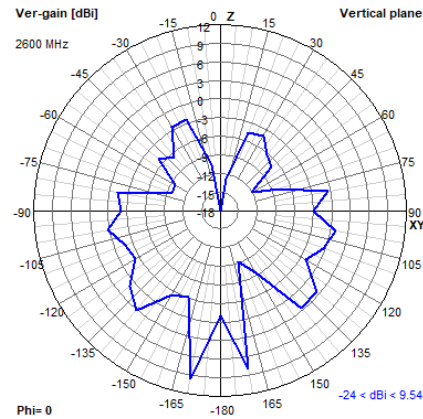
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2D Radiation Plots

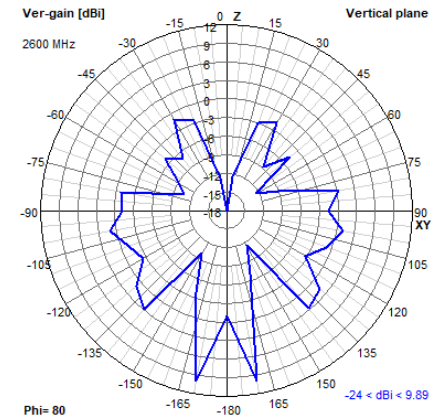
2600 MHz XY



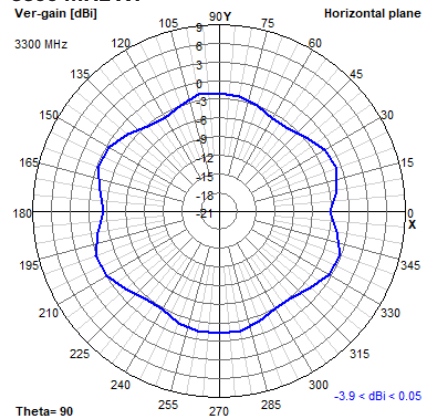
XZ



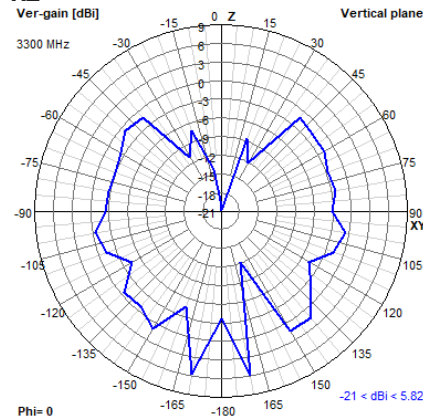
YZ



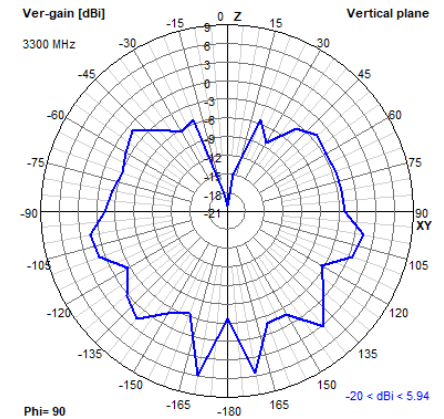
3300 MHz XY



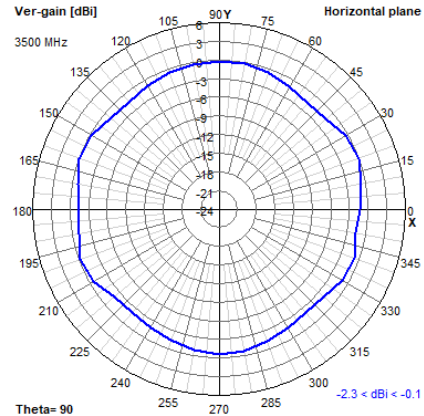
XZ



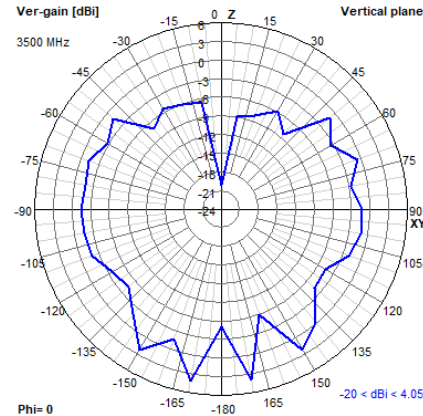
YZ



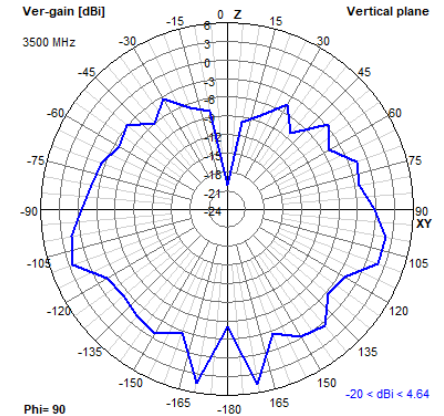
3500 MHz XY



XZ



YZ

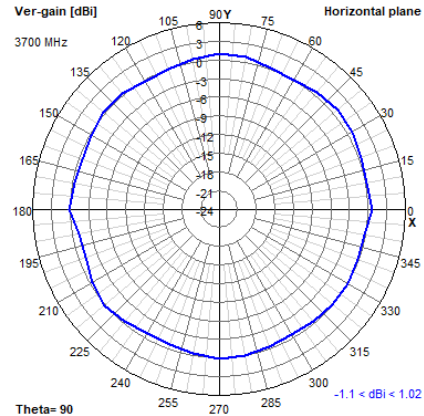




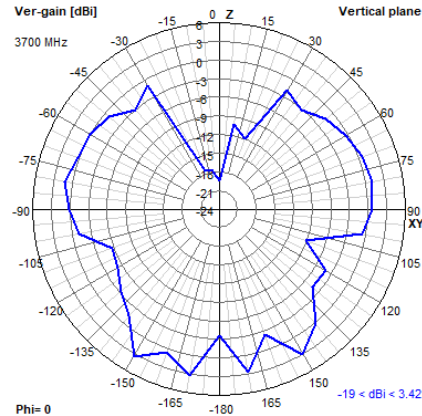
High Gain Miniature 5G/4G and Dual Band Wi-Fi Through-Hole Mount Antenna

2D Radiation Plots

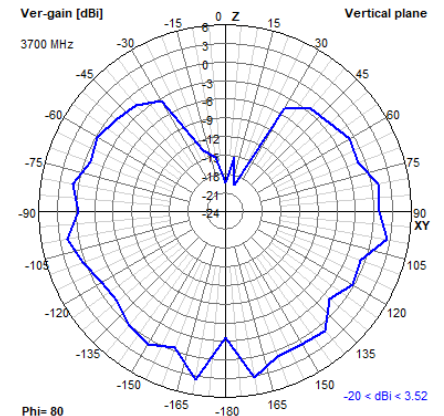
3700 MHz XY



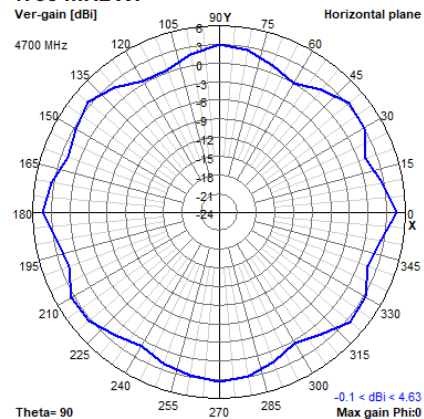
XZ



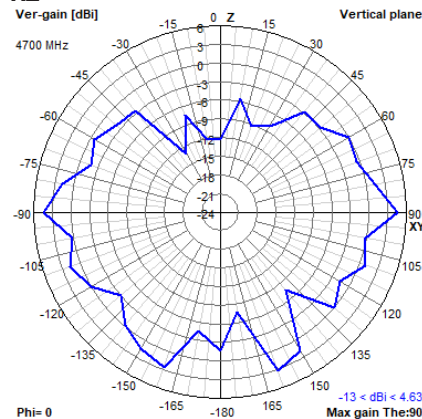
YZ



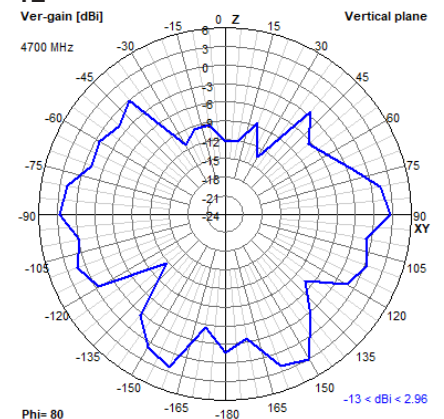
4700 MHz XY



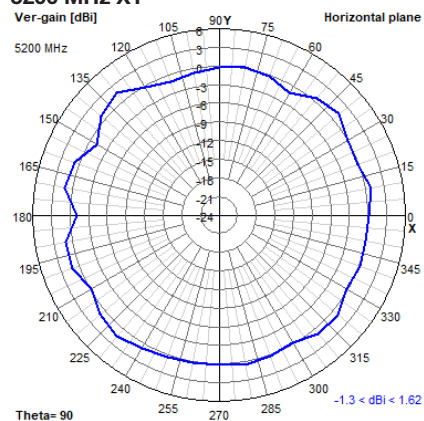
XZ



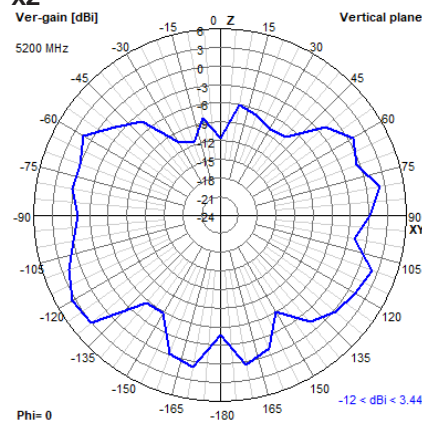
YZ



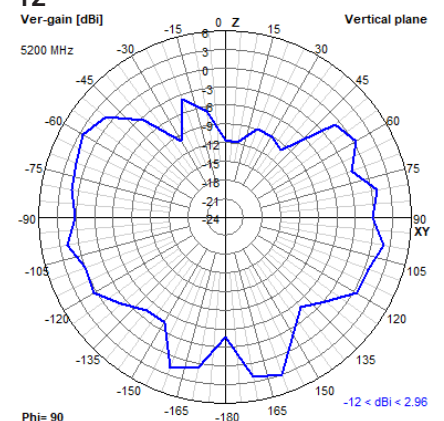
5200 MHz XY



XZ



YZ

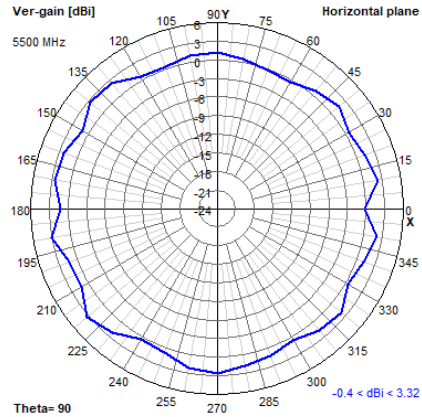




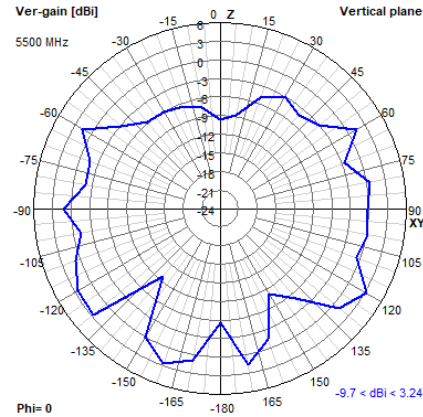
High Gain Miniature 5G/4G and Dual Band Wi-Fi Through-Hole Mount Antenna

2D Radiation Plots

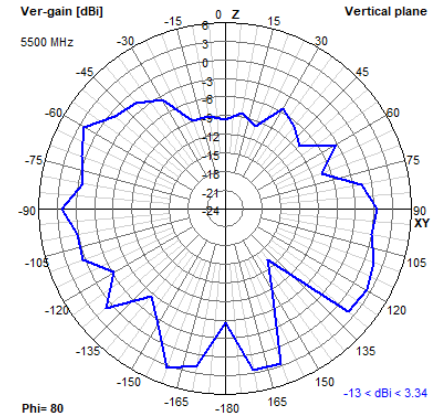
5500 MHz XY



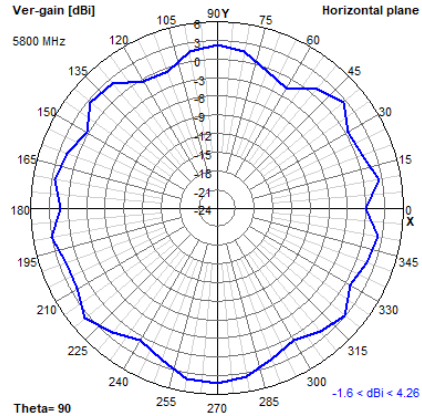
XZ



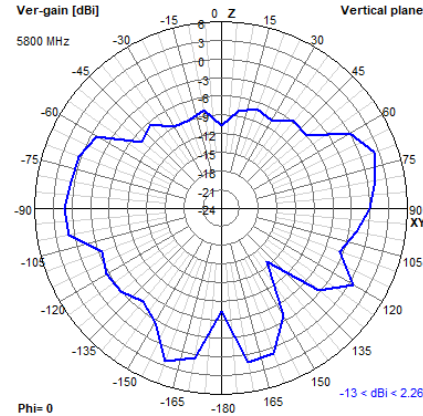
YZ



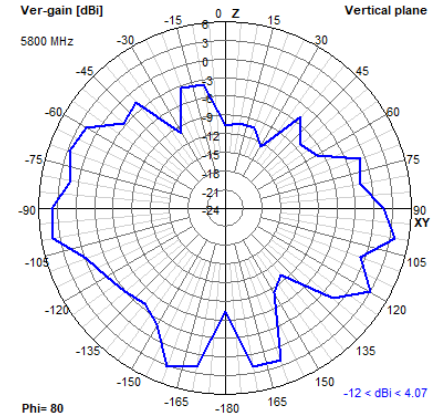
5800 MHz XY



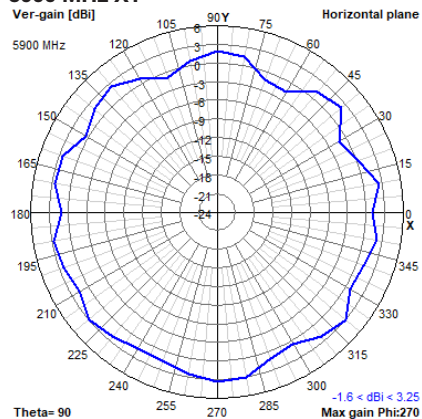
XZ



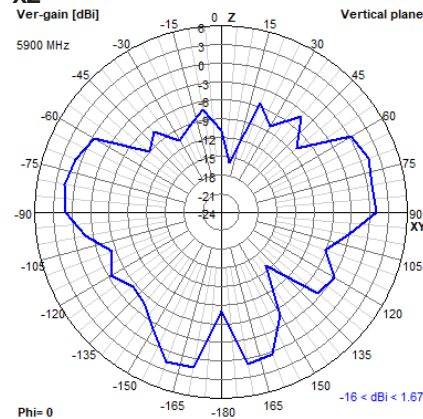
YZ



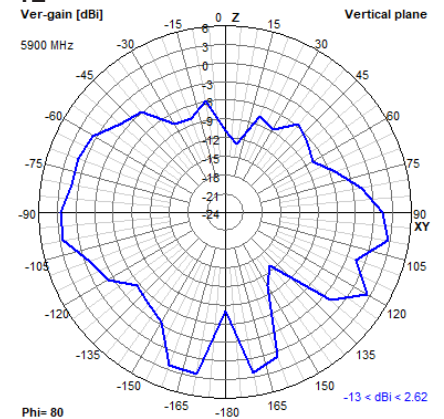
5900 MHz XY



XZ



YZ

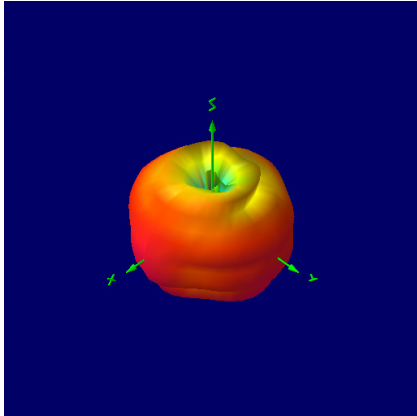




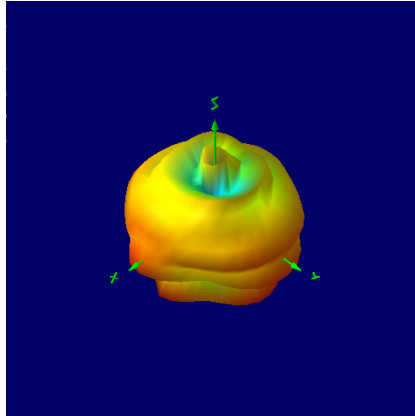
High Gain Miniature 5G/4G and Dual Band Wi-Fi Through-Hole Mount Antenna

3D Radiation Plots

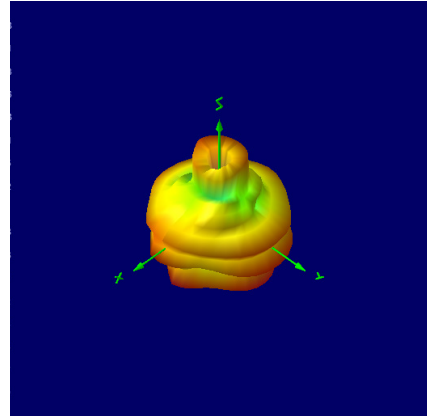
2300 MHz



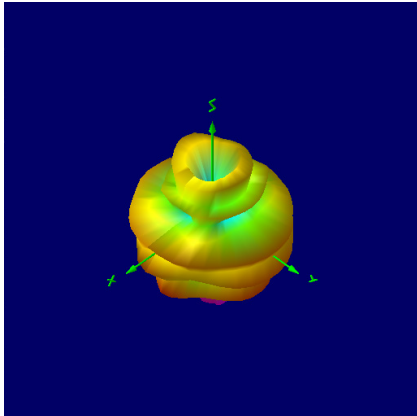
2400 MHz



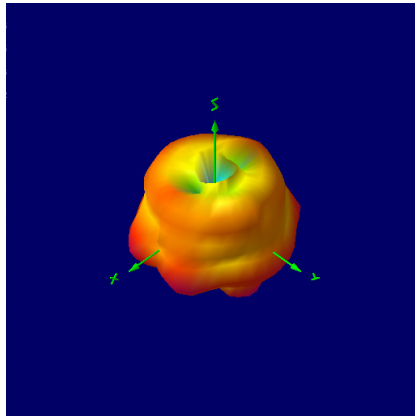
2500 MHz



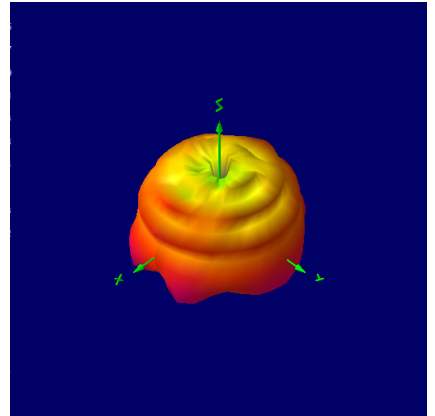
2600 MHz



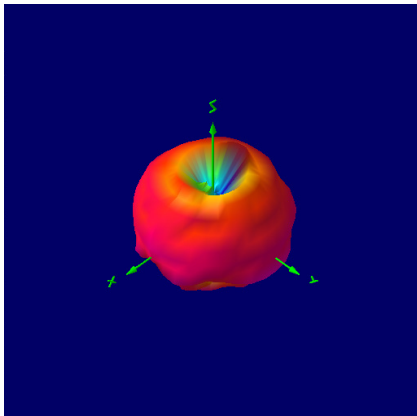
3300 MHz



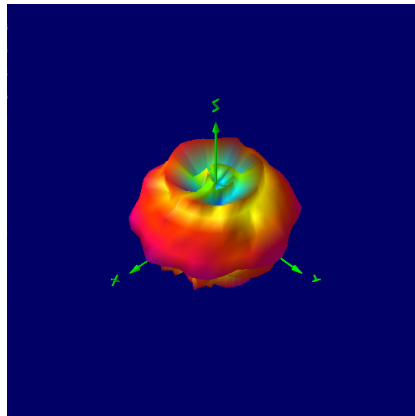
3500 MHz



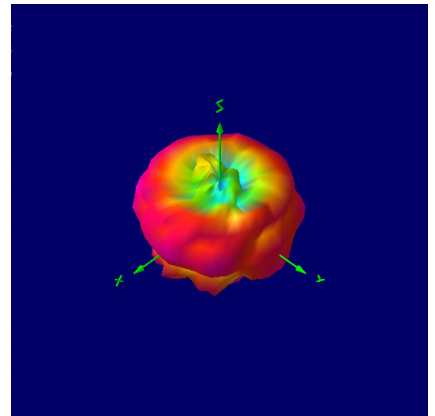
3700 MHz



4700 MHz



5200 MHz

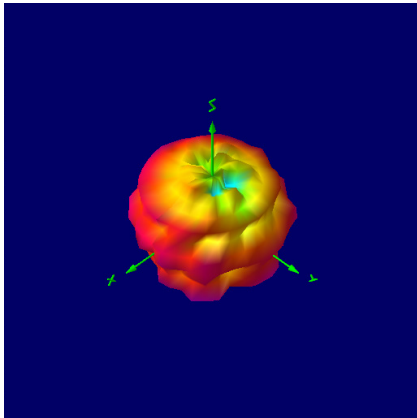




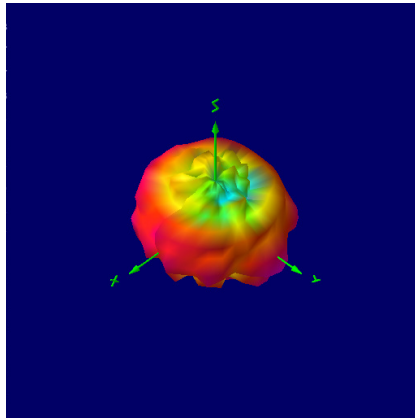
High Gain Miniature 5G/4G and Dual Band Wi-Fi Through-Hole Mount Antenna

3D Radiation Plots

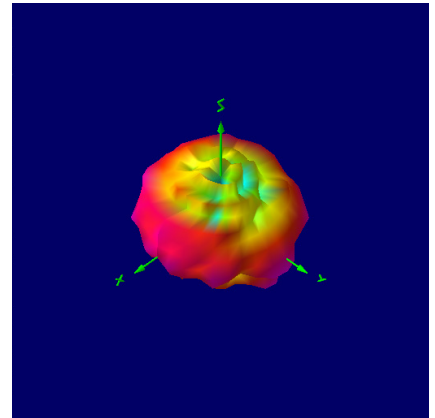
5500 MHz



5800 MHz



5900 MHz



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

Ordering Details:

Part Number	Description
TANGO25A/0.1M/SMAM/S/RP/29	High Gain Miniature 5G/4G and Dual Band Wi-Fi Through-Hole Mount Antenna 0.1M Cable RP SMA Male

