

Tango 25

Miniature 5G/4G/WiFi/Bluetooth/Zigbee Through-Hole Mount Antenna



Key Features

- Supports 5G NR / 4G LTE
- Supports Dual Band WiFi 4/5/6
- Supports Bluetooth / Zigbee / ISM 2450 / ISM 5800 / IEEE 802.15.4 Bands
- Supports WLAN2400 / WLAN5800 Bands
- Miniature Design
- Through Hole / Screw Mounting
- IP65 Rated

General Description

The Tango 25 is a miniature through-hole mount, WiFi/WLAN/Bluetooth/Zigbee/4G LTE/5G NR antenna. Measuring at an impressive 22 x 22 mm, this is one of the most compact screw mount WiFi antennas.

The Tango 25 is tuned to operate in a wide range from 2.3 to 6.0 GHz, making this antenna perfect for Dual-band WiFi, Bluetooth and Zigbee applications. Achieving a peak gain of 2 dBi and providing a semi covert antenna for public area use.

Supplied as standard with an SMA Male Reverse Polarity connector and 100 mm cable. Alternative cable lengths and connector types can be specified for volume orders.

Additional Considerations

- Made out of durable ABS for a long-lasting antenna
- Supplied with a short cable to allow flexibility in mounting
- 8 mm long screw thread for secure through-hole mounting
- Meets EU compliance criteria for electronic goods

T Through	4G LTE	5G New Radio	ISM 2.4G	ISM 5.8G
WLAN 2400	WLAN 5800	WiFi 4 802.11n	WiFi 5 802.11ac	WiFi 6 802.11ax
BLE Bluetooth	ZB Zigbee	IEEE 802.15.4	IP 65	WiFi 2.4G
WiFi 5G				



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Electrical Specifications

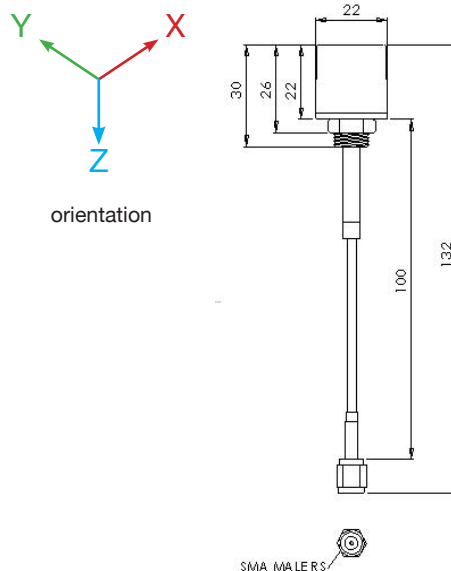
Impedance:	50 Ohm
Polarization:	Vertical
Max Input Power:	1 W
Ground plane independent:	Yes

Environmental Specifications

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

Mechanical Specifications

Dimensions:	L22 x 22 mm base diameter
Weight:	13 g
Cable:	PRO100
Connector:	SMA Male Reverse Polarity
Mounting method:	M11 1.0P 6g Screw
Housing materials:	ABS

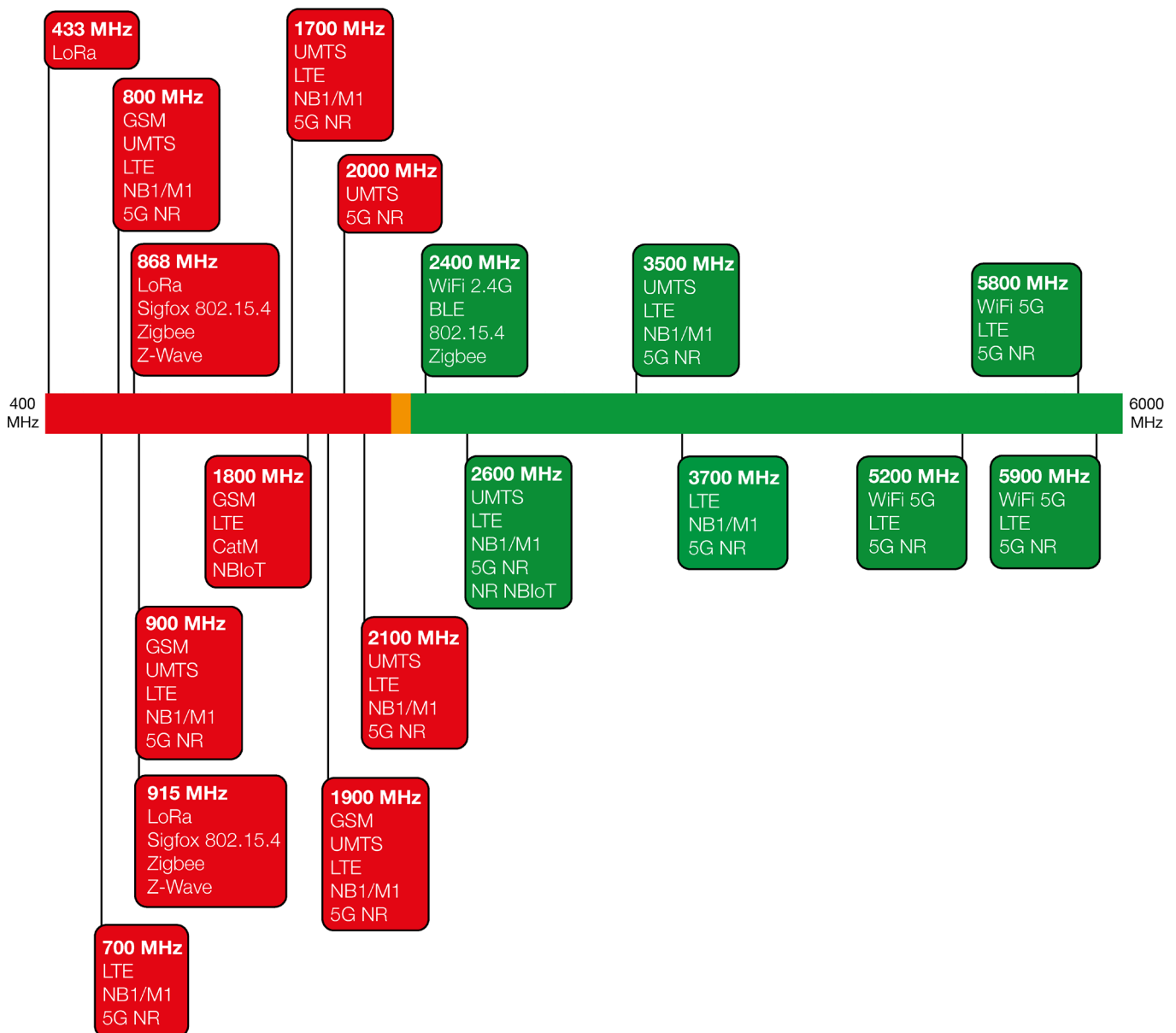




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Spectrum Coverage



● 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)

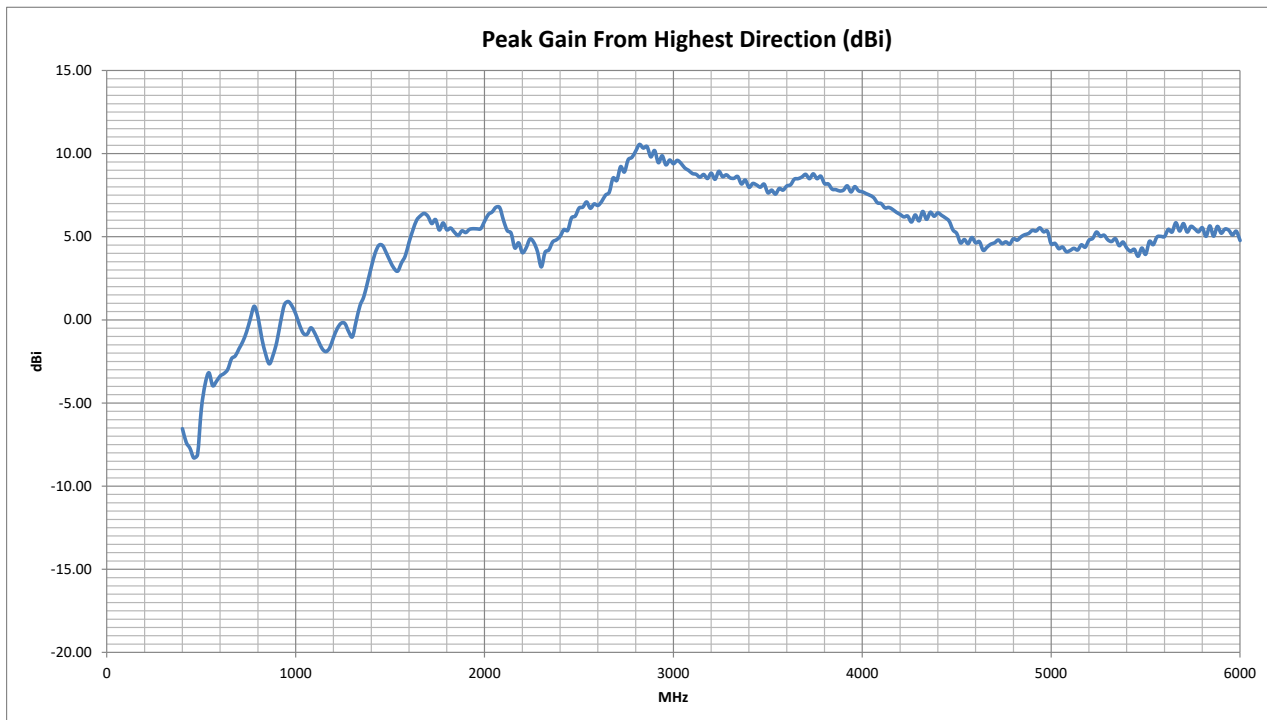
	433	868	915	2450	5800
Bluetooth				●	
IEEE 802.15.4				●	
LoRa					
Sigfox					
WiFi 2.4G				●	
WiFi 5G					●
Zigbee				●	
Z-Wave					



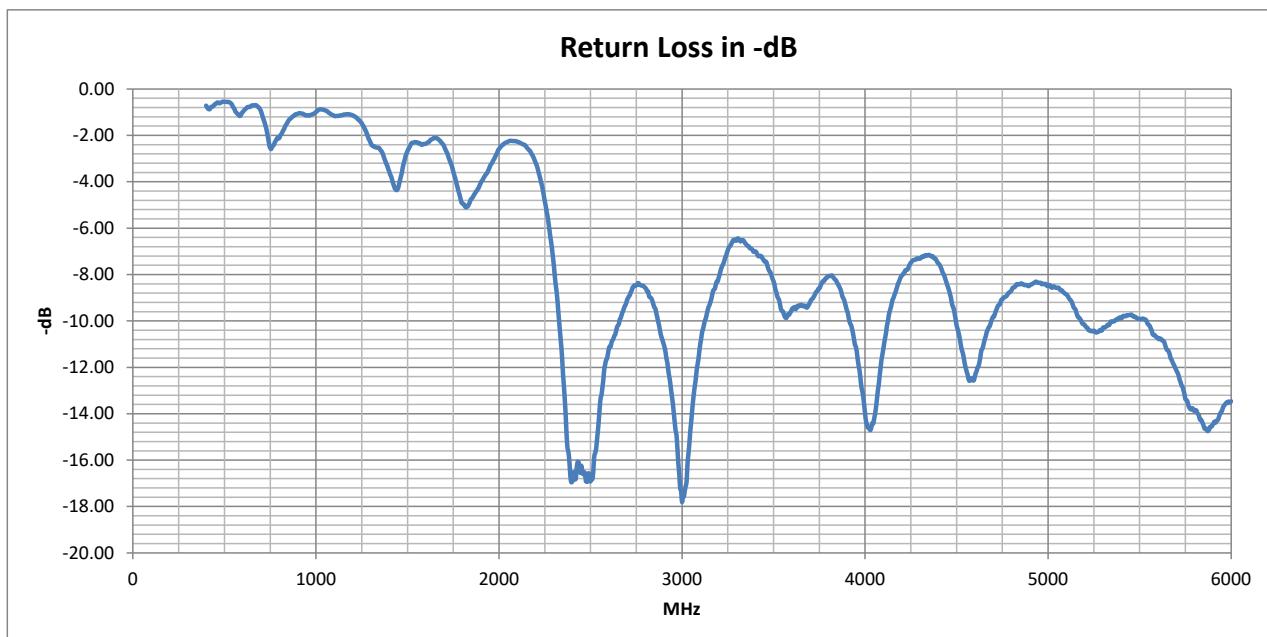
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Peak Gain vs. Frequency



Return Loss

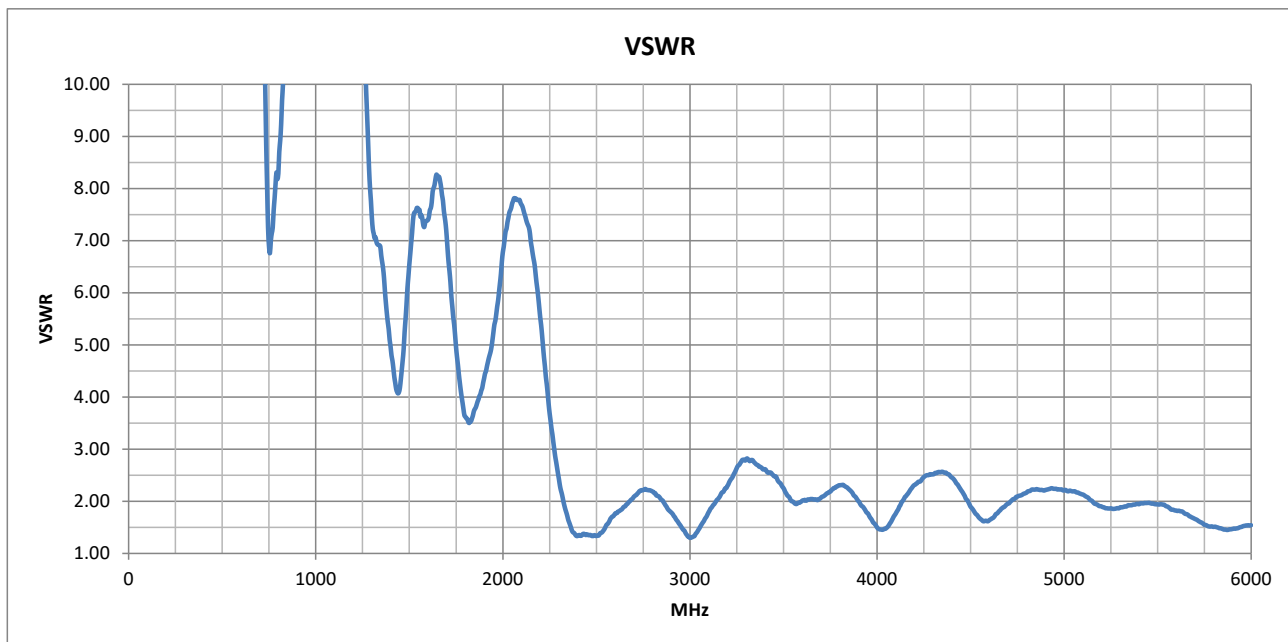




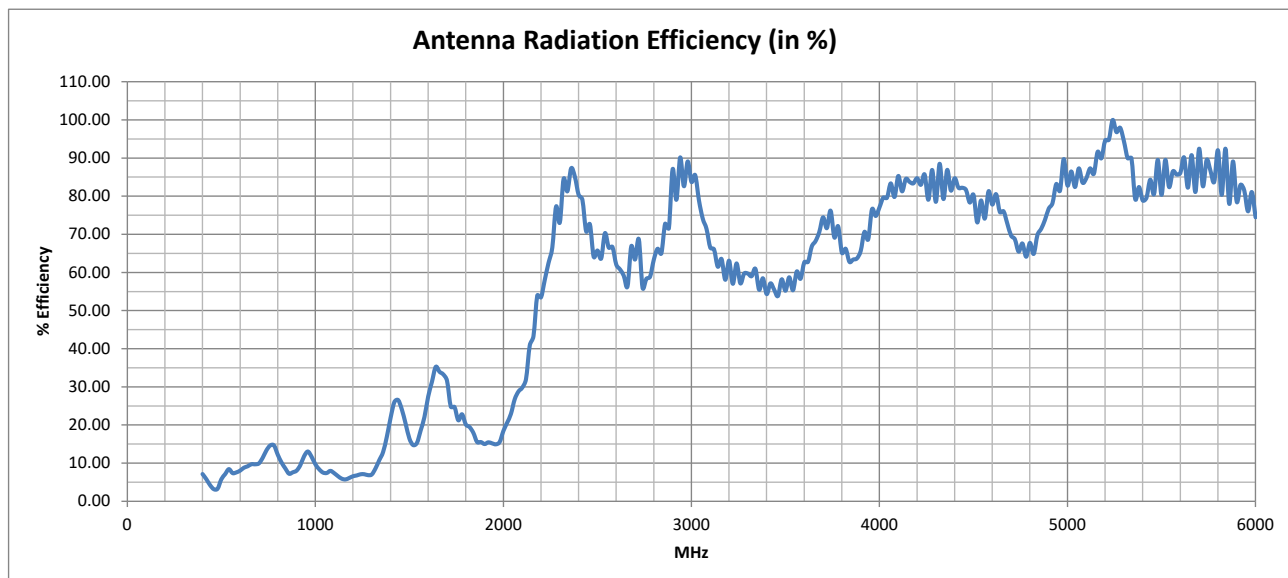
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VSWR



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	15.20	39.07	6.02	7.59	●
PCS-1900	2	2	2	2	n2	n2	1850 - 1910 MHz	1930 - 1990 MHz	15.47	15.34	4.49	6.36	●
DCS-1800	3	3	3	3	n3	n3	1710 - 1785 MHz	1805 - 1880 MHz	23.64	17.53	6.59	4.05	●
	4	4	4	4			1710 - 1755 MHz	2110 - 2155 MHz	24.71	37.09	6.59	7.59	●
GSM-850	5	5	5	5	n5	n5	824 - 849 MHz	869 - 894 MHz	8.89	7.62	12.64	15.95	●
	6						830 - 840 MHz	875 - 885 MHz	9.00	7.59	11.55	15.66	●
	7	7	7	7	n7	n7	2500 - 2570 MHz	2620 - 2690 MHz	66.69	60.67	1.62	2.04	●
E-GSM-900	8	8	8	8	n8	n8	880 - 915 MHz	925 - 960 MHz	8.13	11.78	16.68	16.33	●
	9	9					1749.9 - 1784.9 MHz	1844.9 - 1879.9 MHz	22.11	15.92	4.96	4.05	●
	10	10					1710 - 1770 MHz	2110 - 2170 MHz	23.94	39.07	6.59	7.59	●
	11	11	11	11			1427.9 - 1447.9 MHz	1475.9 - 1495.9 MHz	26.25	19.18	4.20	6.34	●
	12	12	12	12	n12	n12	699 - 716 MHz	729 - 746 MHz	10.48	13.08	18.28	10.11	●
	13	13	13	13	n13	n13	777 - 787 MHz	746 - 756 MHz	14.32	14.06	8.17	7.18	●
	14	14	14	14	n14		788 - 798 MHz	758 - 768 MHz	13.04	14.61	8.31	7.21	●
		17		17			704 - 716 MHz	734 - 746 MHz	10.67	13.31	16.29	9.07	●
		18	18	18	n18	n18	815 - 830 MHz	860 - 875 MHz	9.99	7.35	10.59	14.73	●
	19	19	19	19			830 - 845 MHz	875 - 890 MHz	8.81	7.64	12.15	15.94	●
	20	20	20	20	n20	n20	832 - 862 MHz	791 - 821 MHz	8.13	11.61	13.73	9.76	●
	21	21	21	21			1447.9 - 1462.9 MHz	1495.9 - 1510.9 MHz	24.60	16.21	4.63	6.98	●
	22	22					3410 - 3490 MHz	3510 - 3590 MHz	55.98	58.20	2.58	2.18	●
		24	24	24	n24		1626.5 - 1660.5 MHz	1525 - 1559 MHz	34.32	16.06	8.26	7.63	●
	25	25	25	25	n25	n25	1850 - 1915 MHz	1930 - 1995 MHz	15.45	15.50	4.58	6.60	●
	26	26	26	26	n26		814 - 849 MHz	859 - 894 MHz	9.29	7.53	12.64	15.95	●
		27	27				807 - 824 MHz	852 - 869 MHz	10.63	7.39	9.95	14.38	●
		28	28	28	n28	n28	703 - 748 MHz	758 - 803 MHz	12.00	13.90	16.70	8.53	●

● Suitable band

● 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	11.32	14.49	16.70	8.22	●
		29			n29		N/A	717 - 728 MHz	N/A	11.66	N/A	12.53	●
		30			n30		2305 - 2315 MHz	2350 - 2360 MHz	78.82	85.79	2.31	1.64	●
		31	31	31			452.5 - 457.5 MHz	462.5 - 467.5 MHz	3.42	3.19	28.62	29.75	●
	32	32					N/A	1452 - 1496 MHz	N/A	21.37	N/A	6.35	●
		33					1900 - 1920 MHz	1900 - 1920 MHz	15.22	15.22	4.66	4.66	●
		34			n34		2010 - 2025 MHz	2010 - 2025 MHz	20.34	20.34	7.35	7.35	●
		35					1850 - 1910 MHz	1850 - 1910 MHz	15.47	15.47	4.49	4.49	●
		36					1930 - 1990 MHz	1930 - 1990 MHz	15.34	15.34	6.36	6.36	●
		37					1910 - 1930 MHz	1910 - 1930 MHz	15.36	15.36	4.81	4.81	●
		38			n38		2570 - 2620 MHz	2570 - 2620 MHz	63.66	63.66	1.81	1.81	●
		39	39		n39		1880 - 1920 MHz	1880 - 1920 MHz	15.24	15.24	4.66	4.66	●
		40	40		n40		2300 - 2400 MHz	2300 - 2400 MHz	82.98	82.98	2.42	2.42	●
		41	41	41	n41	n41	2496 - 2690 MHz	2496 - 2690 MHz	63.71	63.71	2.04	2.04	●
		42	42	42			3400 - 3600 MHz	3400 - 3600 MHz	57.10	57.10	2.61	2.61	●
		43	43	43			3600 - 3800 MHz	3600 - 3800 MHz	69.60	69.60	2.31	2.31	●
		44					703 - 803 MHz	703 - 803 MHz	13.07	13.07	16.70	16.70	●
		45					1447 - 1467 MHz	1447 - 1467 MHz	24.34	24.34	4.79	4.79	●
		46			n46		5150 - 5925 MHz	5150 - 5925 MHz	87.14	87.14	2.00	2.00	●
		47			n47		5855 - 5925 MHz	5855 - 5925 MHz	82.51	82.51	1.48	1.48	●
		48			n48		3550 - 3700 MHz	3550 - 3700 MHz	64.85	64.85	2.06	2.06	●
		49					3550 - 3700 MHz	3550 - 3700 MHz	64.85	64.85	2.06	2.06	●
		50			n50		1432 - 1517 MHz	1432 - 1517 MHz	21.13	21.13	7.25	7.25	●
		51			n51		1427 - 1432 MHz	1427 - 1432 MHz	26.26	26.26	4.22	4.22	●
		52					3300 - 3400 MHz	3300 - 3400 MHz	58.18	58.18	2.82	2.82	●

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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	64.88	64.88	1.35	1.35	●
		65		65	n65	n65	1920 - 2010 MHz	2110 - 2200 MHz	16.02	43.68	7.04	7.59	●
		66	66	66	n66	n66	1710 - 1780 MHz	2110 - 2200 MHz	23.73	43.68	6.59	7.59	●
		67			n67		N/A	738 - 758 MHz	N/A	13.86	N/A	8.36	●
		68					698 - 728 MHz	753 - 783 MHz	10.92	14.55	18.64	7.97	●
		69					N/A	2570 - 2620 MHz	N/A	63.66	N/A	1.81	●
		70		70	n70	n70	1695 - 1710 MHz	1995 - 2020 MHz	30.56	19.24	7.30	7.23	●
		71	71	71	n71		663 - 698 MHz	617 - 652 MHz	9.75	9.08	24.98	24.48	●
		72	72	72			451 - 456 MHz	461 - 466 MHz	3.50	3.18	28.09	29.75	●
		73	73	73			450 - 455 MHz	460 - 465 MHz	3.55	3.17	27.74	29.75	●
		74	74	74	n74		1427 - 1470 MHz	1475 - 1518 MHz	25.11	17.53	4.92	7.30	●
		75			n75		N/A	1432 - 1517 MHz	N/A	21.13	N/A	7.25	●
		76			n76		N/A	1427 - 1432 MHz	N/A	26.26	N/A	4.22	●
					n77		3300 - 4200 MHz	3300 - 4200 MHz	68.07	68.07	2.82	2.82	●
					n78		3300 - 3800 MHz	3300 - 3800 MHz	62.32	62.32	2.82	2.82	●
					n79		4400 - 5000 MHz	4400 - 5000 MHz	75.72	75.72	2.45	2.45	●
					n80		1710 - 1785 MHz	N/A	23.64	N/A	6.59	N/A	●
					n81		880 - 915 MHz	N/A	8.13	N/A	16.68	N/A	●
					n82		832 - 862 MHz	N/A	8.13	N/A	13.73	N/A	●
					n83		703 - 748 MHz	N/A	12.00	N/A	16.70	N/A	●
					n84		1920 - 1980 MHz	N/A	15.20	N/A	6.02	N/A	●
		85	85	85	n85		698 - 716 MHz	728 - 746 MHz	10.45	13.04	18.64	10.28	●
					n86		1710 - 1780 MHz	N/A	23.73	N/A	6.59	N/A	●
		87	87	87			410 - 415 MHz	420 - 425 MHz	6.29	5.59	20.58	21.93	●
		88	88	88			412 - 417 MHz	422 - 427 MHz	6.15	5.43	20.33	22.22	●

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● 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	8.89	N/A	12.64	N/A	●
					n90	n90	2496 - 2690 MHz	2496 - 2690 MHz	63.71	63.71	2.04	2.04	●
					n91		832 - 862 MHz	1427 - 1432 MHz	8.13	26.26	13.73	4.22	●
					n92		832 - 862 MHz	1432 - 1517 MHz	8.13	21.13	13.73	7.25	●
					n93		880 - 915 MHz	1427 - 1432 MHz	8.13	26.26	16.68	4.22	●
					n94		880 - 915 MHz	1432 - 1517 MHz	8.13	21.13	16.68	7.25	●
					n95		2010 - 2025 MHz	N/A	20.34	N/A	7.35	N/A	●
					n97		2300 - 2400 MHz	N/A	82.98	N/A	2.42	N/A	●
					n98		1880 - 1920 MHz	N/A	15.24	N/A	4.66	N/A	●
					n99		1626.5 - 1660.5 MHz	N/A	34.32	N/A	8.26	N/A	●
					n101		1900 - 1910 MHz	1900 - 1910 MHz	15.11	15.11	4.49	4.49	●
				103			787 - 788 MHz	757 - 758 MHz	13.71	14.46	8.22	6.90	●

● 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	4.69	22.84	-7.604	●
IMT 868 MHz	863 - 870 MHz	7.33	14.49	-2.385	●
ISM 915 MHz	902 - 928 MHz	9.16	16.68	0.304	●
ISM 2.4 GHz	2400 - 2500 MHz	71.93	1.37	6.72	●
WiFi 2.4G	2401 - 2483 MHz	73.25	1.37	6.312	●
WiFi 2.4G (USA)	2401 - 2473 MHz	74.37	1.37	6.2015	●
WiFi 2.4G (Japan)	2401 - 2495 MHz	72.18	1.37	6.6	●
WiFi 5G (all channels)	5150 - 5990 MHz	86.55	2.00	5.84	●
WiFi 5G (Ch 32-48)	5150 - 5250 MHz	93.98	2.00	5.28	●
WiFi 5G (Ch 32-64)	5150 - 5330 MHz	94.38	2.00	5.28	●
WiFi 5G (Ch 32-161)	5150 - 5815 MHz	87.69	2.00	5.84	●
WiFi 5G (Ch 32-173)	5150 - 5875 MHz	87.43	2.00	5.84	●
ISM 5.8 GHz	5725 - 5875 MHz	86.12	1.61	5.65	●

● 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.

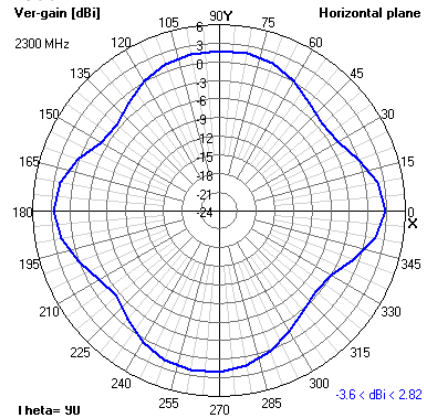
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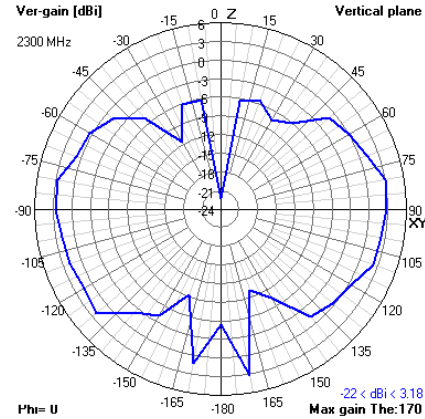
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2D Radiation Plots

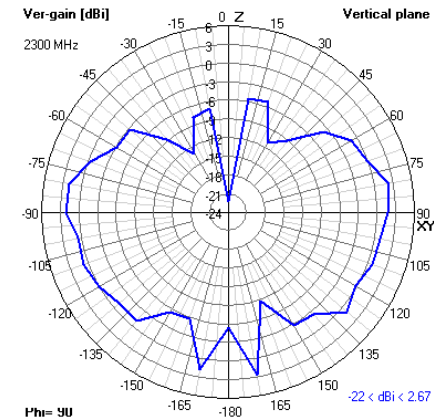
2300 MHz XY



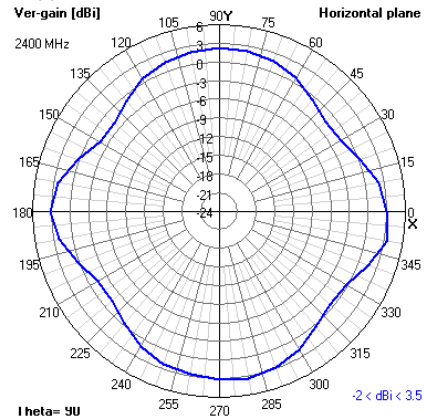
XZ



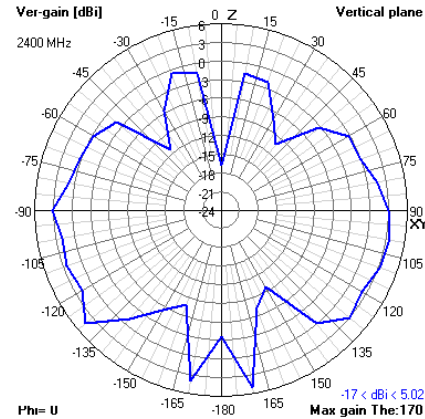
YZ



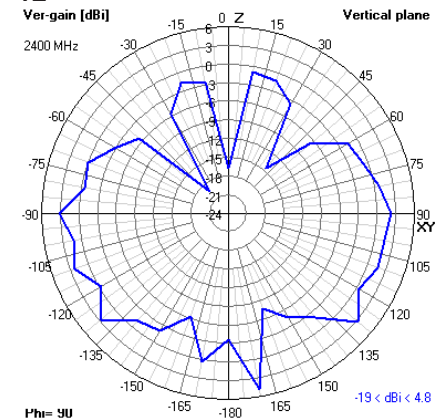
2400 MHz XY



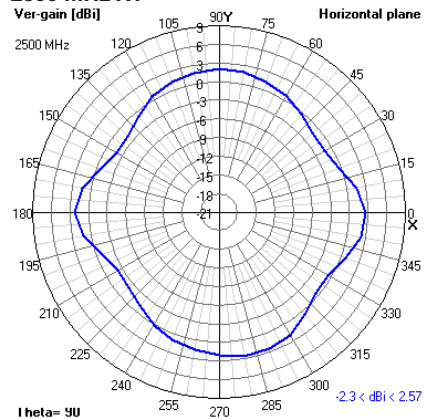
XZ



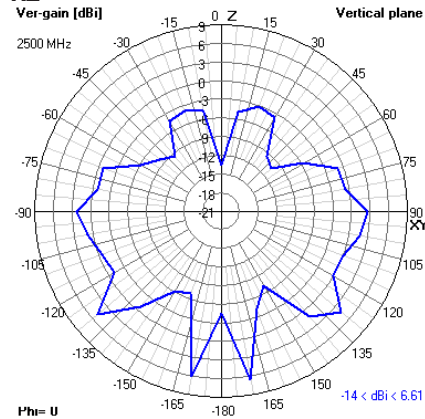
YZ



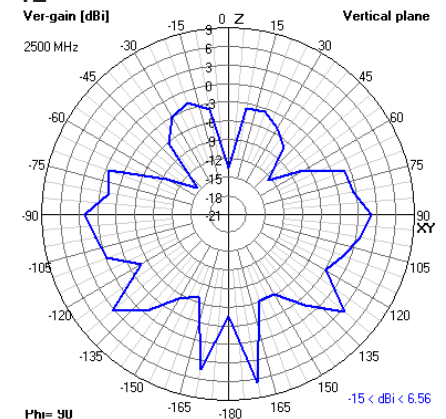
2500 MHz XY



XZ



YZ



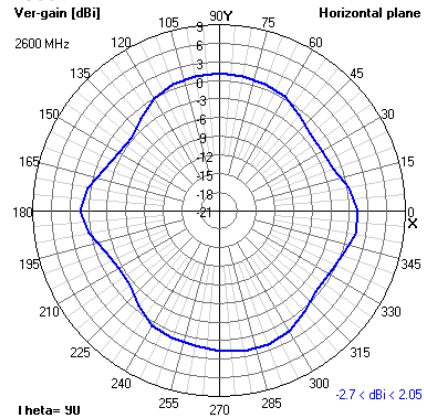


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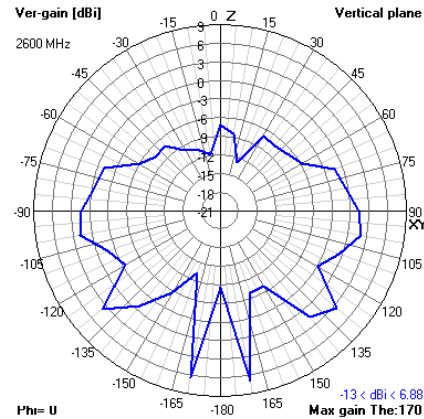
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2D Radiation Plots

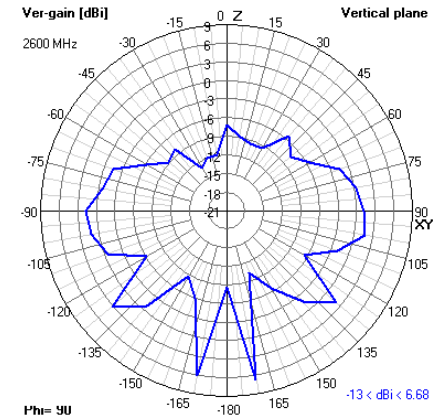
2600 MHz XY



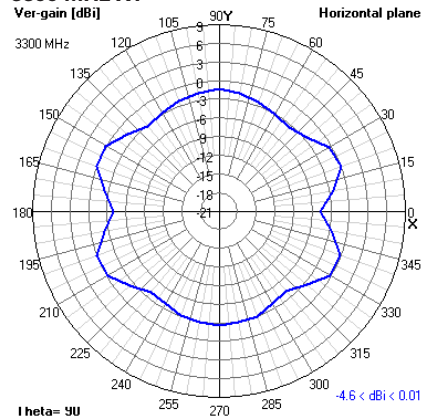
XZ



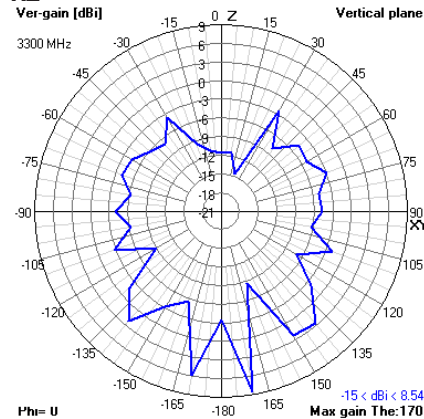
YZ



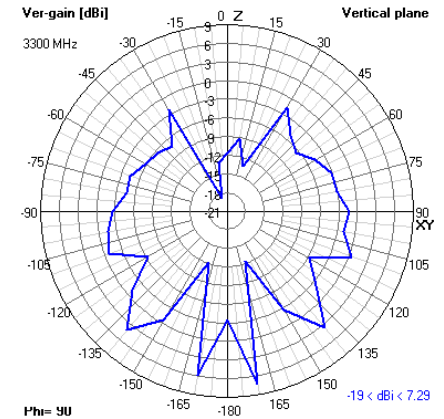
3300 MHz XY



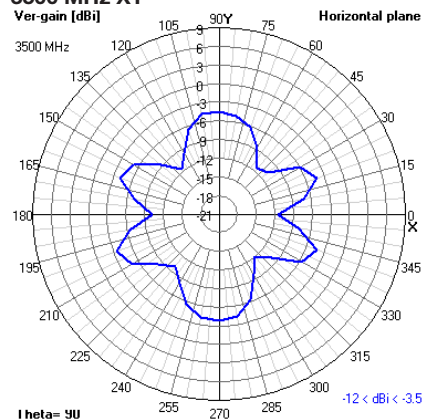
XZ



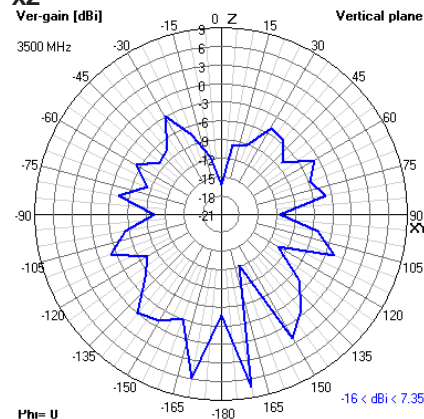
YZ



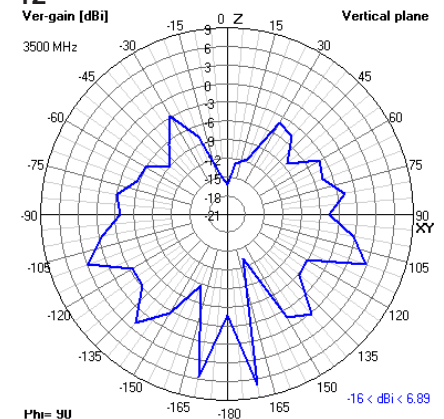
3500 MHz XY



XZ



YZ





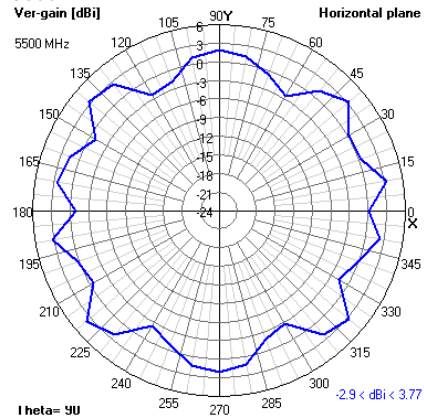


Tango 25

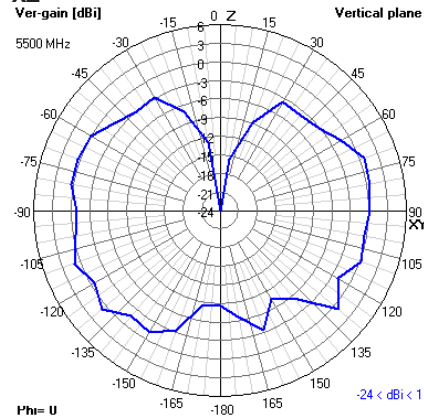
Miniature 5G/4G/WiFi/Bluetooth/Zigbee Through-Hole Mount Antenna

2D Radiation Plots

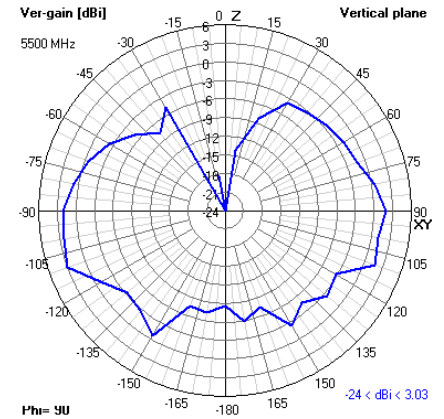
5500 MHz XY



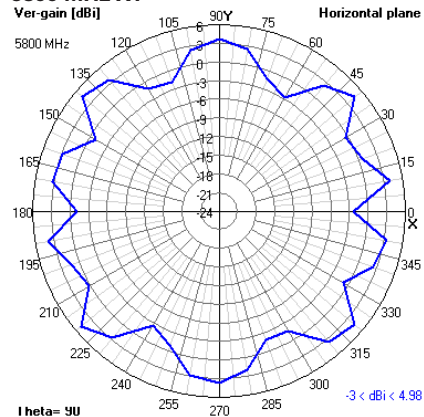
XZ



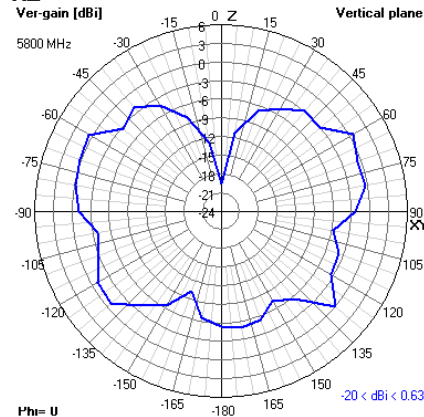
YZ



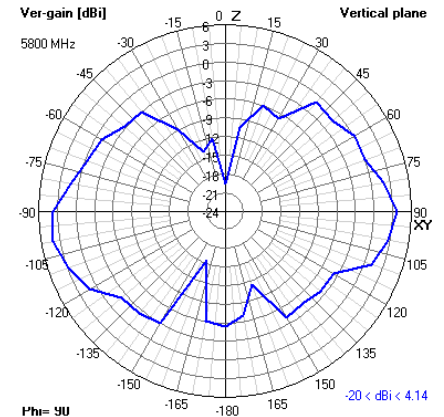
5800 MHz XY



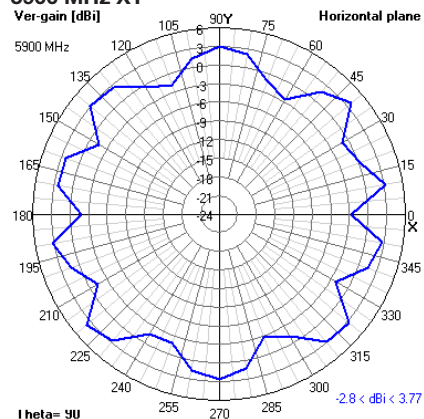
XZ



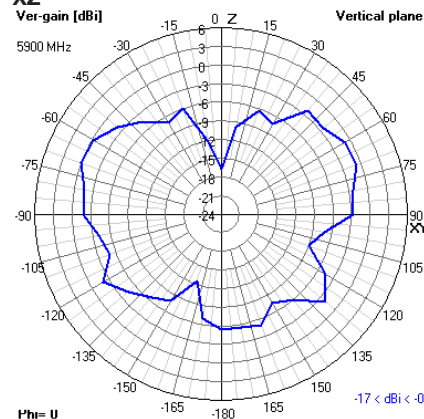
YZ



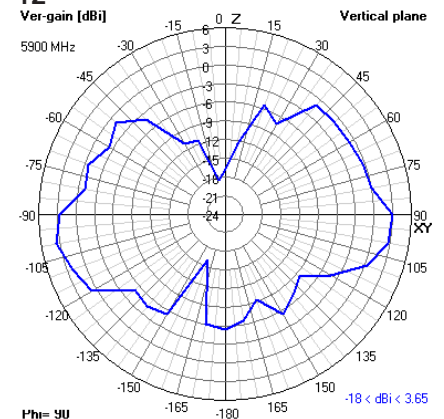
5900 MHz XY



XZ



YZ



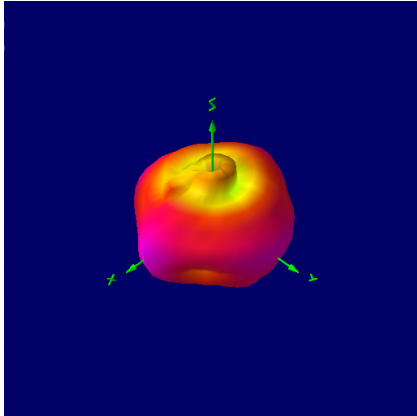


Tango 25

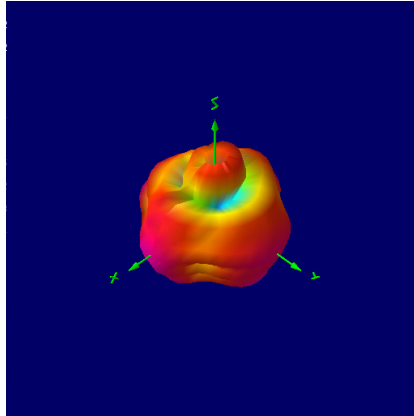
Miniature 5G/4G/WiFi/Bluetooth/Zigbee Through-Hole Mount Antenna

3D Radiation Plots

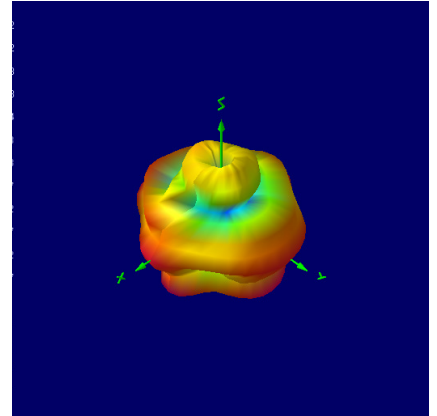
2300 MHz



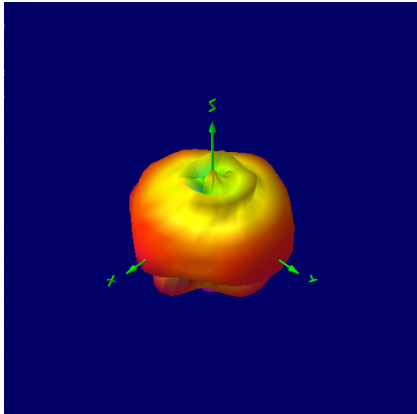
2400 MHz



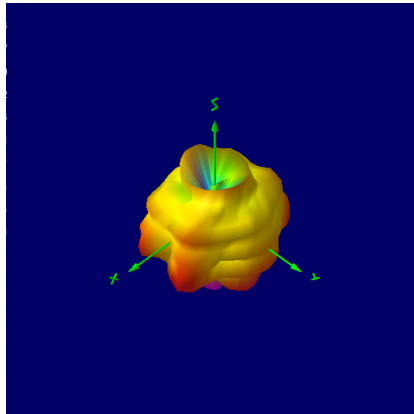
2500 MHz



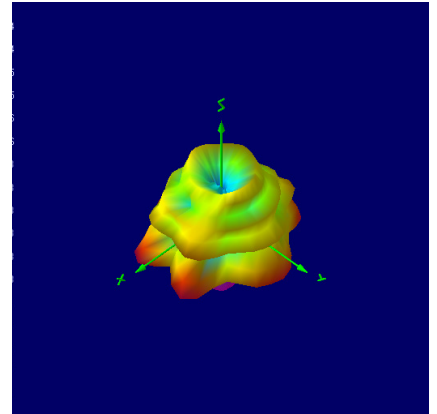
2600 MHz



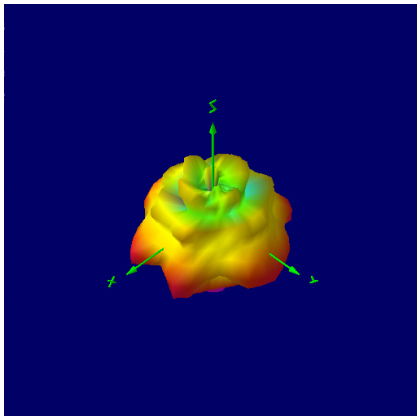
3300 MHz



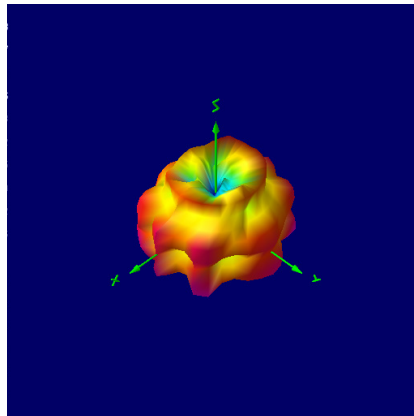
3500 MHz



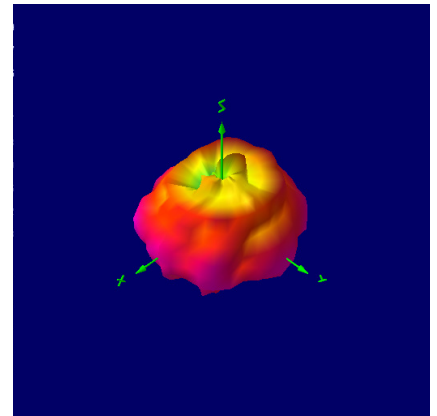
3700 MHz



4700 MHz



5200 MHz



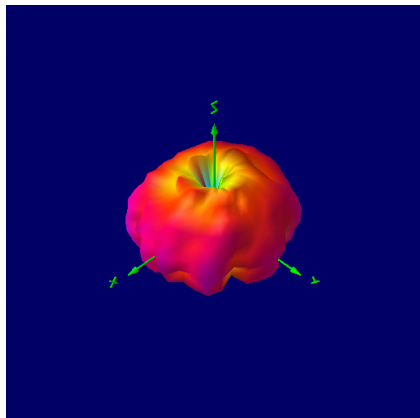


Tango 25

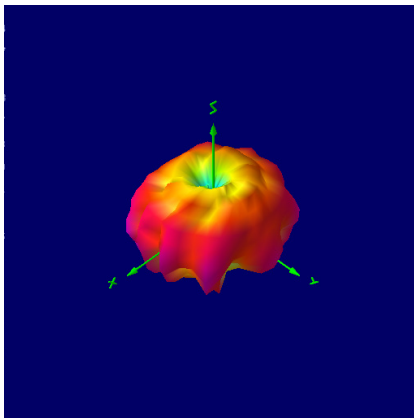
Miniature 5G/4G/WiFi/Bluetooth/Zigbee Through-Hole Mount Antenna

3D Radiation Plots

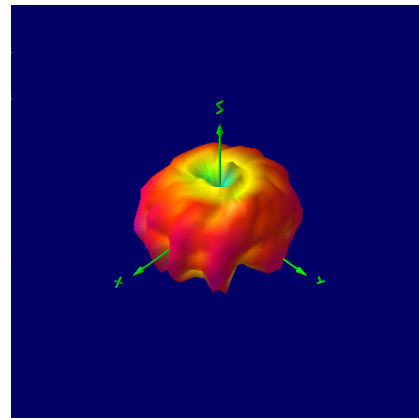
5500 MHz



5800 MHz



5900 MHz



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

Ordering Details:

Part Number	Description
TANGO25/0.1M/SMAM/S/RP/29	Miniature 5G/4G/WiFi/Bluetooth/Zigbee Through-Hole Mount Antenna