



## Tango 41

5G/4G/Dual Band Wi-Fi/LoRa/SigFox Panel Mount Antenna



### Key Features

- Supports most 5G NR / 4G LTE / 3G UMTS / 2G GSM bands
- Supports most LTE Cat M, LTE Cat NB, NR Cat NB bands
- Supports Dual Band Wi-Fi 2.4 GHz & 5 GHz spectrum
- Supports ISM 2450 / ISM 5800 / WLAN 2400 / WLAN 5800 bands
- Supports Bluetooth / Zigbee / Z-Wave / IEEE 802.15.4 bands
- Supports LoRa / Sigfox / ISM 868 / ISM 915 bands
- Outdoor rugged antenna
- Integrated RF cable

### General Description

The Tango 41 is a wide band outdoor antenna range aimed at the 5G/4G/ dual band Wi-Fi frequencies but equally capable of ISM frequencies. The antenna has a high peak gain of 7 dBi in the upper frequency band and 1-4 dBi peak performance in the mid and lower frequency band.

The Tango 41 has an integrated RF cable terminated with an SMA male connector and features an IP 65 rated O-ring seal for outdoor use and the prevention of water and dust ingress. Alternative connectors and cable lengths can be specified for volume orders.

### Additional Considerations

- Integral rubber washer for exterior antenna use
- Omni directional radiation

T Through	5G New Radio	4G LTE	3G UMTS	2G GSM
LTE Cat M	NR NB IoT	ISM 868	ISM 915	LoRa Wireless
SF Sigfox	ISM 2450	ISM 5800	IEEE 802.15.4	BLE Bluetooth
WiFi 2.4G & 5G	ZB Zigbee	WLAN 2400	WLAN 5800	WiFi 4 802.11n
WiFi 5 802.11ac	WiFi 6 802.11ax	IP 65		



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### Electrical Specifications

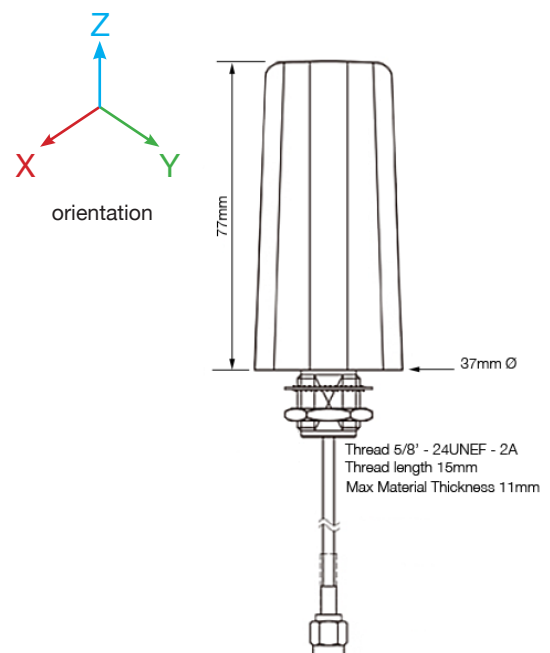
Impedance:	50 Ohm
Polarization:	Vertical
Max Input Power:	1 W
Ground plane independent:	Yes

### Environmental Specifications

Operating Temperature range:	-20 to +65 °C
Storage Temperature range:	-30 to +70 °C

### Mechanical Specifications

Dimensions:	H77 x 37 mm diameter
Weight:	140 g
Cable:	RG174
Connector:	SMA Male
Mounting method:	Screw
Housing materials:	PC (Cover), PU (Base)

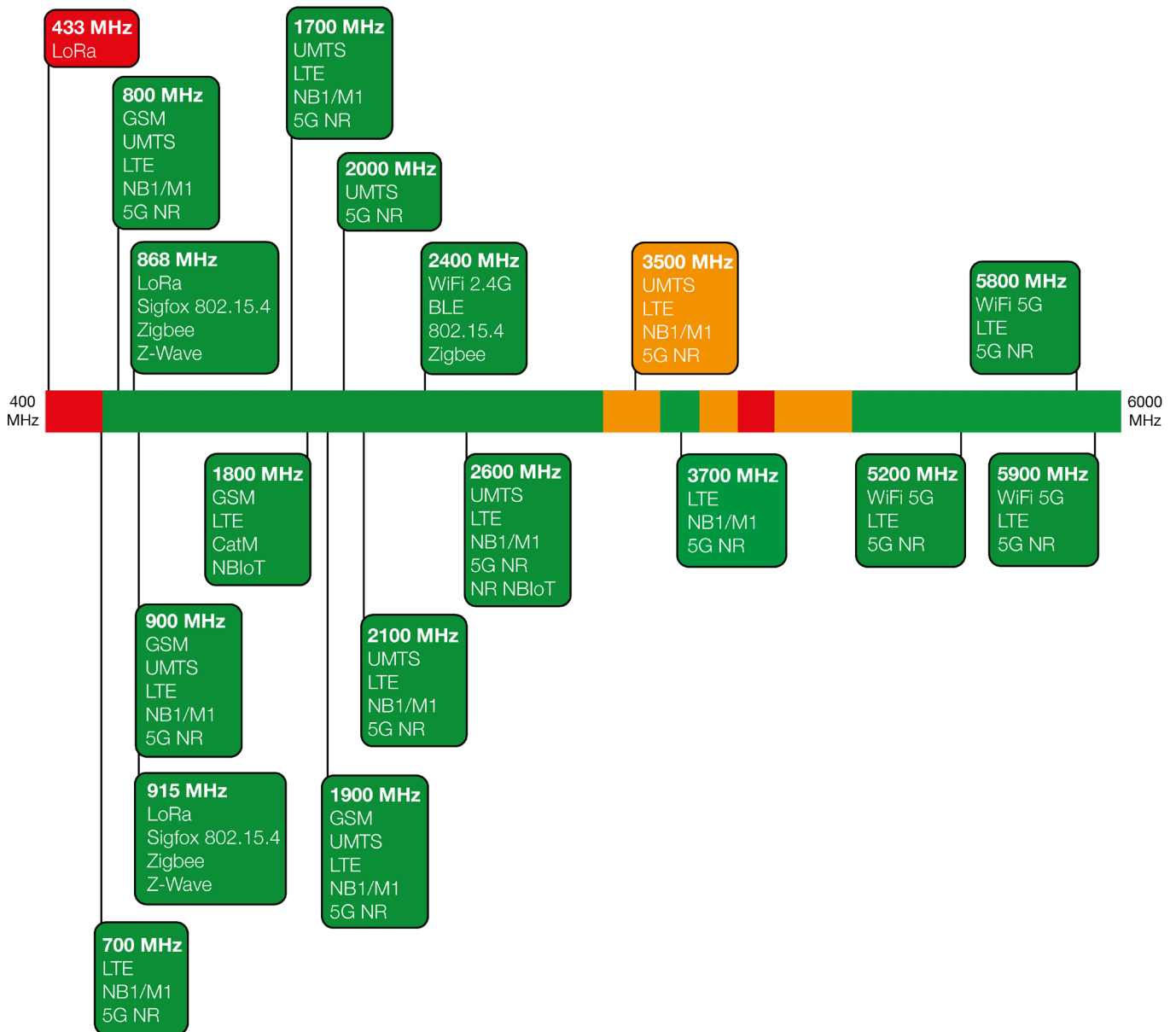




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### Spectrum Coverage



● 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)

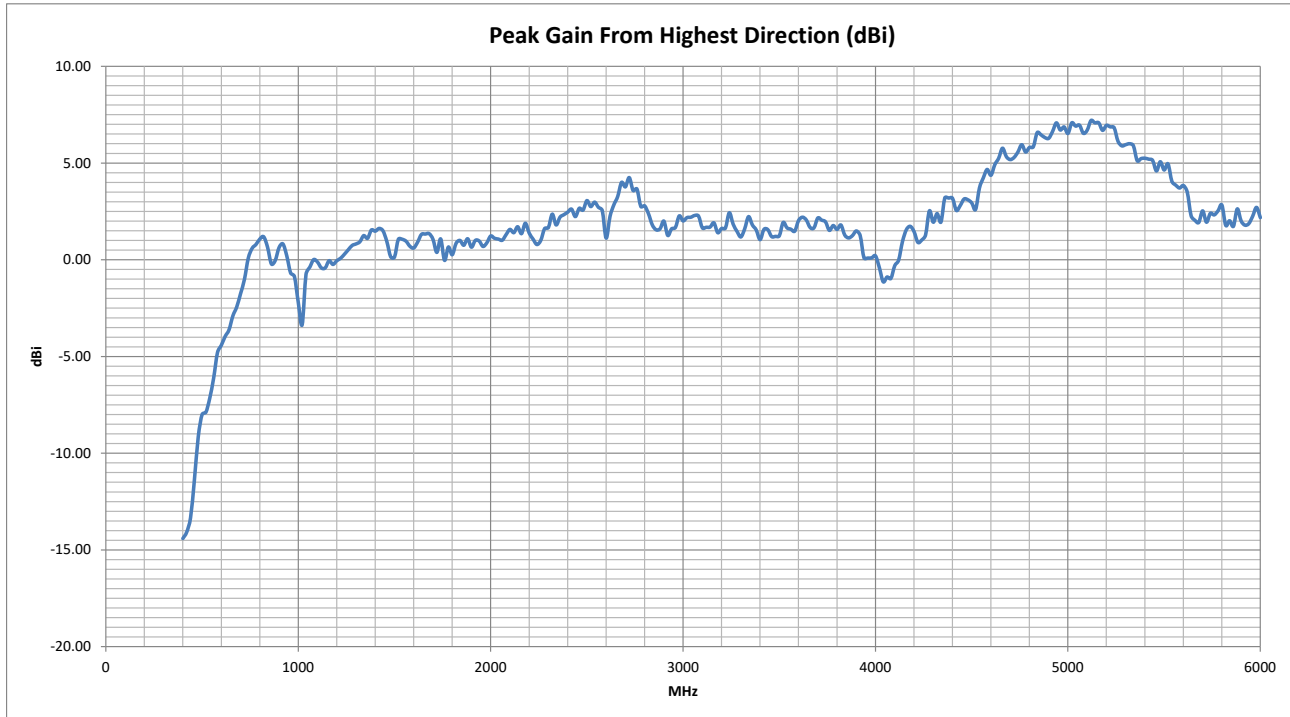
	433	868	915	2450	5800
Bluetooth				●	
IEEE 802.15.4		●	●	●	
LoRa		●	●		
Sigfox		●	●		
WiFi 2.4G				●	
WiFi 5G					●
Zigbee		●	●	●	
Z-Wave		●	●		



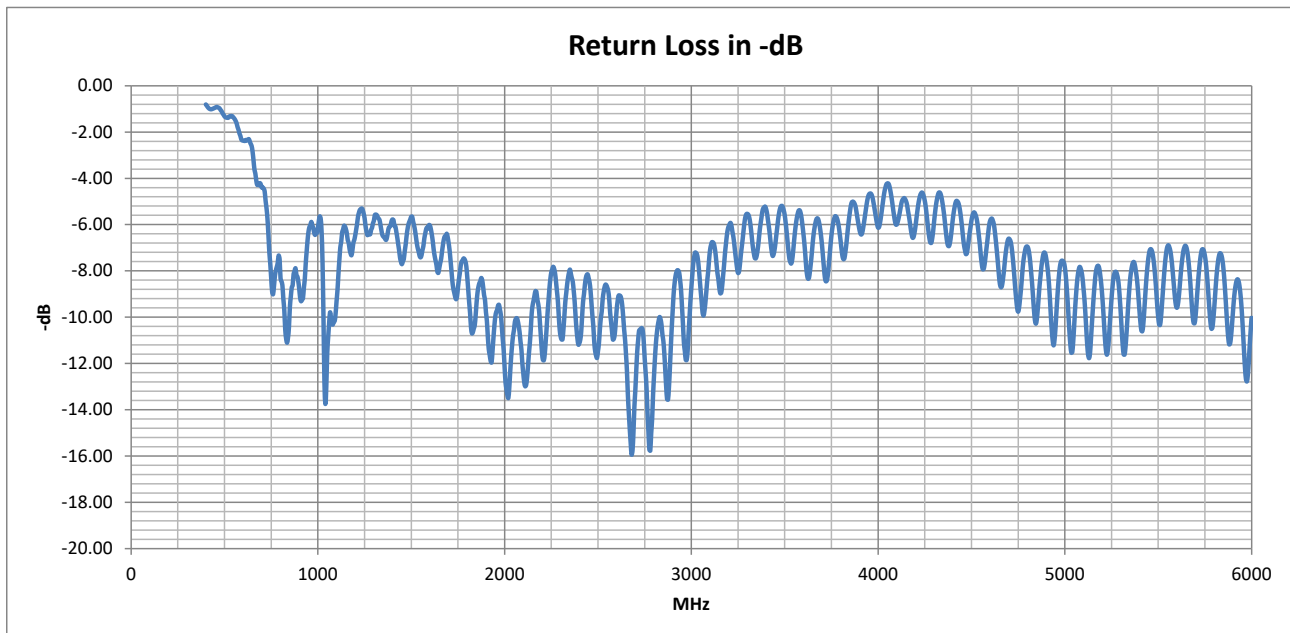
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### Peak Gain vs. Frequency



### Return Loss

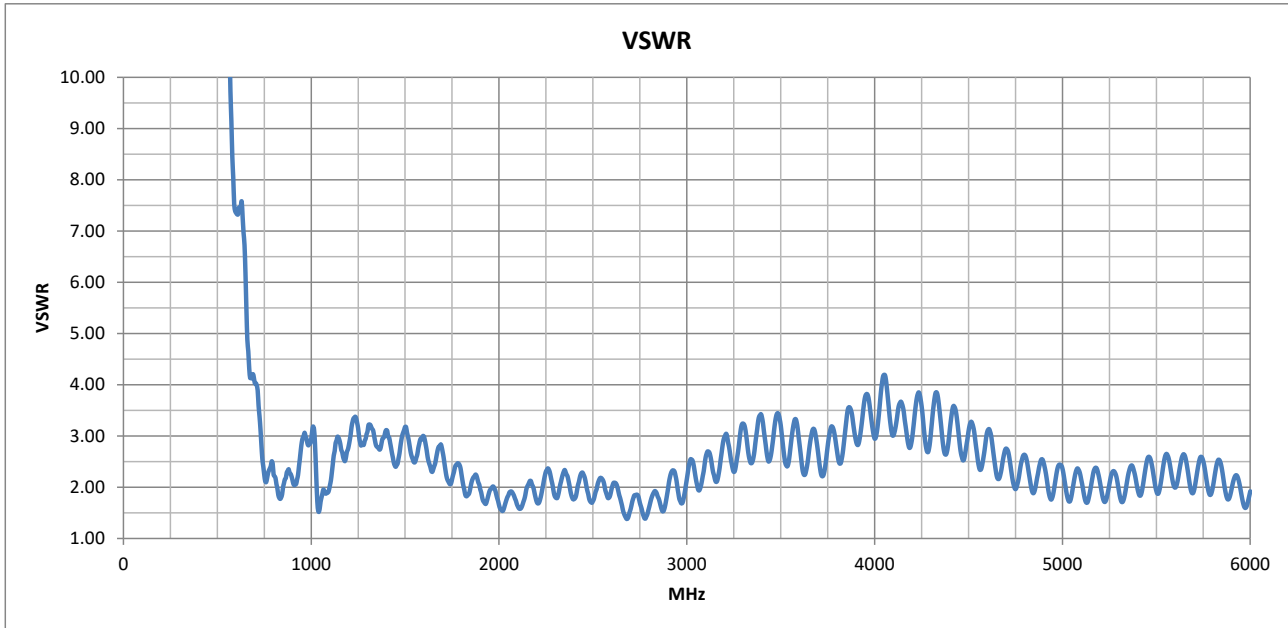




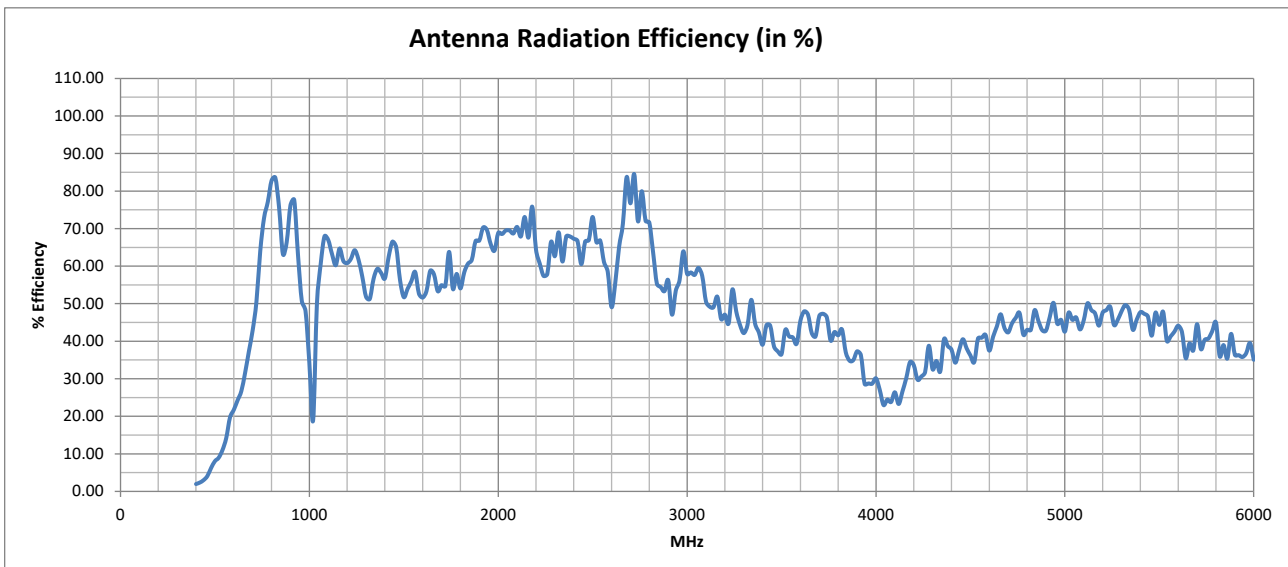
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### VSWR



### Radiation Efficiency





## Tango 41

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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	67.60	70.00	2.01	2.12	●
PCS-1900	2	2	2	2	n2	n2	1850 - 1910 MHz	1930 - 1990 MHz	65.16	66.79	2.25	2.01	●
DCS-1800	3	3	3	3	n3	n3	1710 - 1785 MHz	1805 - 1880 MHz	57.56	60.64	2.47	2.25	●
	4	4	4	4			1710 - 1755 MHz	2110 - 2155 MHz	58.54	70.26	2.45	2.05	●
GSM-850	5	5	5	5	n5	n5	824 - 849 MHz	869 - 894 MHz	76.57	67.93	1.97	2.35	●
	6						830 - 840 MHz	875 - 885 MHz	77.52	66.80	1.80	2.35	●
	7	7	7	7	n7	n7	2500 - 2570 MHz	2620 - 2690 MHz	65.87	70.62	2.18	2.08	●
E-GSM-900	8	8	8	8	n8	n8	880 - 915 MHz	925 - 960 MHz	73.62	61.84	2.35	3.00	●
	9	9					1749.9 - 1784.9 MHz	1844.9 - 1879.9 MHz	56.31	62.92	2.47	2.25	●
	10	10					1710 - 1770 MHz	2110 - 2170 MHz	57.67	70.00	2.45	2.12	●
	11	11	11	11			1427.9 - 1447.9 MHz	1475.9 - 1495.9 MHz	65.67	55.09	2.71	3.13	●
	12	12	12	12	n12	n12	699 - 716 MHz	729 - 746 MHz	45.82	62.05	4.05	3.18	●
	13	13	13	13	n13	n13	777 - 787 MHz	746 - 756 MHz	77.69	68.82	2.45	2.37	●
	14	14	14	14	n14		788 - 798 MHz	758 - 768 MHz	80.80	73.38	2.51	2.23	●
		17		17			704 - 716 MHz	734 - 746 MHz	46.77	63.63	4.03	2.88	●
		18	18	18	n18	n18	815 - 830 MHz	860 - 875 MHz	82.18	64.42	2.06	2.32	●
	19	19	19	19			830 - 845 MHz	875 - 890 MHz	76.34	67.89	1.86	2.35	●
	20	20	20	20	n20	n20	832 - 862 MHz	791 - 821 MHz	71.04	82.68	2.16	2.50	●
	21	21	21	21			1447.9 - 1462.9 MHz	1495.9 - 1510.9 MHz	65.26	52.33	2.52	3.18	●
	22	22					3410 - 3490 MHz	3510 - 3590 MHz	40.91	41.17	3.44	3.33	●
		24	24	24	n24		1626.5 - 1660.5 MHz	1525 - 1559 MHz	57.73	56.31	2.49	2.79	●
	25	25	25	25	n25	n25	1850 - 1915 MHz	1930 - 1995 MHz	65.46	66.82	2.25	2.01	●
	26	26	26	26	n26		814 - 849 MHz	859 - 894 MHz	78.46	66.78	2.08	2.35	●
		27	27				807 - 824 MHz	852 - 869 MHz	83.18	64.78	2.20	2.27	●
		28	28	28	n28	n28	703 - 748 MHz	758 - 803 MHz	55.03	77.57	4.03	2.51	●

● 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	50.63	75.64	4.03	2.47	●
		29			n29		N/A	717 - 728 MHz	N/A	52.38	N/A	3.77	●
		30			n30		2305 - 2315 MHz	2350 - 2360 MHz	65.84	66.25	1.85	2.34	●
		31	31	31			452.5 - 457.5 MHz	462.5 - 467.5 MHz	3.82	4.64	18.81	18.66	●
	32	32					N/A	1452 - 1496 MHz	N/A	59.29	N/A	3.13	●
		33					1900 - 1920 MHz	1900 - 1920 MHz	68.57	68.57	1.96	1.96	●
		34			n34		2010 - 2025 MHz	2010 - 2025 MHz	68.64	68.64	1.57	1.57	●
		35					1850 - 1910 MHz	1850 - 1910 MHz	65.16	65.16	2.25	2.25	●
		36					1930 - 1990 MHz	1930 - 1990 MHz	66.79	66.79	2.01	2.01	●
		37					1910 - 1930 MHz	1910 - 1930 MHz	69.79	69.79	1.81	1.81	●
		38			n38		2570 - 2620 MHz	2570 - 2620 MHz	54.31	54.31	2.09	2.09	●
		39	39		n39		1880 - 1920 MHz	1880 - 1920 MHz	67.67	67.67	2.22	2.22	●
		40	40		n40		2300 - 2400 MHz	2300 - 2400 MHz	66.21	66.21	2.34	2.34	●
		41	41	41	n41	n41	2496 - 2690 MHz	2496 - 2690 MHz	64.75	64.75	2.18	2.18	●
		42	42	42			3400 - 3600 MHz	3400 - 3600 MHz	40.80	40.80	3.44	3.44	●
		43	43	43			3600 - 3800 MHz	3600 - 3800 MHz	44.52	44.52	3.19	3.19	●
		44					703 - 803 MHz	703 - 803 MHz	66.64	66.64	4.03	4.03	●
		45					1447 - 1467 MHz	1447 - 1467 MHz	64.80	64.80	2.60	2.60	●
		46			n46		5150 - 5925 MHz	5150 - 5925 MHz	43.23	43.23	2.65	2.65	●
		47			n47		5855 - 5925 MHz	5855 - 5925 MHz	37.78	37.78	2.24	2.24	●
		48			n48		3550 - 3700 MHz	3550 - 3700 MHz	43.71	43.71	3.33	3.33	●
		49					3550 - 3700 MHz	3550 - 3700 MHz	43.71	43.71	3.33	3.33	●
		50			n50		1432 - 1517 MHz	1432 - 1517 MHz	59.20	59.20	3.18	3.18	●
		51			n51		1427 - 1432 MHz	1427 - 1432 MHz	64.42	64.42	2.73	2.73	●
		52					3300 - 3400 MHz	3300 - 3400 MHz	44.61	44.61	3.43	3.43	●

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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	69.82	69.82	1.74	1.74	●
		65		65	n65	n65	1920 - 2010 MHz	2110 - 2200 MHz	67.49	70.45	2.01	2.12	●
		66	66	66	n66	n66	1710 - 1780 MHz	2110 - 2200 MHz	57.56	70.45	2.47	2.12	●
		67			n67		N/A	738 - 758 MHz	N/A	67.47	N/A	2.66	●
		68					698 - 728 MHz	753 - 783 MHz	48.23	74.33	4.07	2.40	●
		69					N/A	2570 - 2620 MHz	N/A	54.31	N/A	2.09	●
		70		70	n70	n70	1695 - 1710 MHz	1995 - 2020 MHz	54.84	68.62	2.78	1.73	●
		71	71	71	n71		663 - 698 MHz	617 - 652 MHz	37.45	26.30	4.74	7.58	●
		72	72	72			451 - 456 MHz	461 - 466 MHz	3.74	4.47	18.76	18.80	●
		73	73	73			450 - 455 MHz	460 - 465 MHz	3.69	4.36	18.73	18.89	●
		74	74	74	n74		1427 - 1470 MHz	1475 - 1518 MHz	64.92	53.91	2.73	3.18	●
		75			n75		N/A	1432 - 1517 MHz	N/A	59.20	N/A	3.18	●
		76			n76		N/A	1427 - 1432 MHz	N/A	64.42	N/A	2.73	●
					n77		3300 - 4200 MHz	3300 - 4200 MHz	37.62	37.62	4.19	4.19	●
					n78		3300 - 3800 MHz	3300 - 3800 MHz	43.05	43.05	3.44	3.44	●
					n79		4400 - 5000 MHz	4400 - 5000 MHz	42.45	42.45	3.59	3.59	●
					n80		1710 - 1785 MHz	N/A	57.56	N/A	2.47	N/A	●
					n81		880 - 915 MHz	N/A	73.62	N/A	2.35	N/A	●
					n82		832 - 862 MHz	N/A	71.04	N/A	2.16	N/A	●
					n83		703 - 748 MHz	N/A	55.03	N/A	4.03	N/A	●
					n84		1920 - 1980 MHz	N/A	67.60	N/A	2.01	N/A	●
		85	85	85	n85		698 - 716 MHz	728 - 746 MHz	45.64	61.73	4.07	3.23	●
					n86		1710 - 1780 MHz	N/A	57.56	N/A	2.47	N/A	●
		87	87	87			410 - 415 MHz	420 - 425 MHz	2.22	2.45	18.80	17.34	●
		88	88	88			412 - 417 MHz	422 - 427 MHz	2.26	2.51	18.44	17.24	●

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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
					n89		824 - 849 MHz	N/A	76.57	N/A	1.97	N/A	●
					n90	n90	2496 - 2690 MHz	2496 - 2690 MHz	64.75	64.75	2.18	2.18	●
					n91		832 - 862 MHz	1427 - 1432 MHz	71.04	64.42	2.16	2.73	●
					n92		832 - 862 MHz	1432 - 1517 MHz	71.04	59.20	2.16	3.18	●
					n93		880 - 915 MHz	1427 - 1432 MHz	73.62	64.42	2.35	2.73	●
					n94		880 - 915 MHz	1432 - 1517 MHz	73.62	59.20	2.35	3.18	●
					n95		2010 - 2025 MHz	N/A	68.64	N/A	1.57	N/A	●
					n97		2300 - 2400 MHz	N/A	66.21	N/A	2.34	N/A	●
					n98		1880 - 1920 MHz	N/A	67.67	N/A	2.22	N/A	●
					n99		1626.5 - 1660.5 MHz	N/A	57.73	N/A	2.49	N/A	●
					n101		1900 - 1910 MHz	1900 - 1910 MHz	67.70	67.70	1.96	1.96	●
				103			787 - 788 MHz	757 - 758 MHz	79.23	71.68	2.47	2.11	●

● 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	2.81	17.30	-13.5324	●
ISM 868 MHz	863 - 870 MHz	64.26	2.29	-0.125	●
ISM 915 MHz	902 - 928 MHz	76.27	2.21	0.82	●
ISM 2.4 GHz	2400 - 2500 MHz	66.19	2.28	3.06	●
Wi-Fi 2.4G	2401 - 2483 MHz	65.28	2.28	2.66	●
Wi-Fi 2.4G (USA)	2401 - 2473 MHz	65.03	2.28	2.66	●
Wi-Fi 2.4G (Japan)	2401 - 2495 MHz	65.85	2.28	2.9375	●
Wi-Fi 5G (all channels)	5150 - 5990 MHz	42.75	2.65	7.08	●
Wi-Fi 5G (Ch 32-48)	5150 - 5250 MHz	47.25	2.38	7.08	●
Wi-Fi 5G (Ch 32-64)	5150 - 5330 MHz	47.16	2.38	7.08	●
Wi-Fi 5G (Ch 32-161)	5150 - 5815 MHz	44.14	2.65	7.08	●
Wi-Fi 5G (Ch 32-173)	5150 - 5875 MHz	43.59	2.65	7.08	●
ISM 5.8 GHz	5725 - 5875 MHz	39.89	2.59	2.83	●

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable

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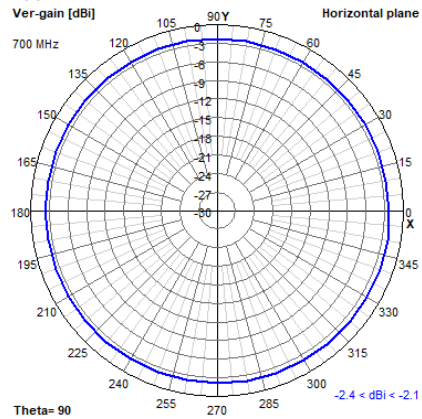


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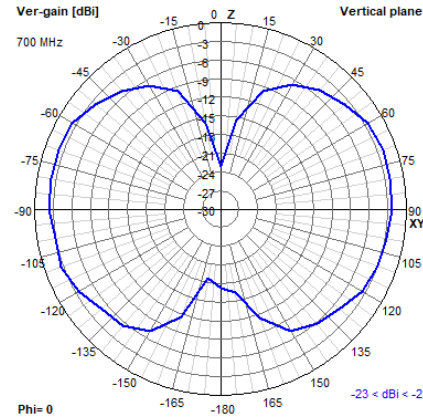
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### 2D Radiation Plots

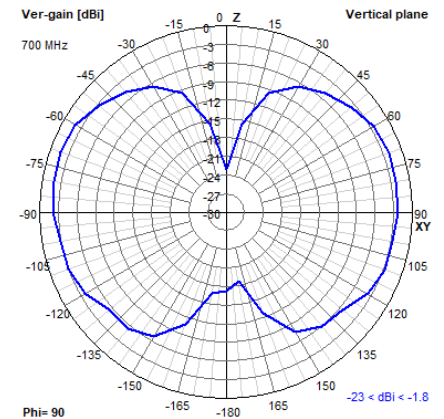
#### 700 MHz XY



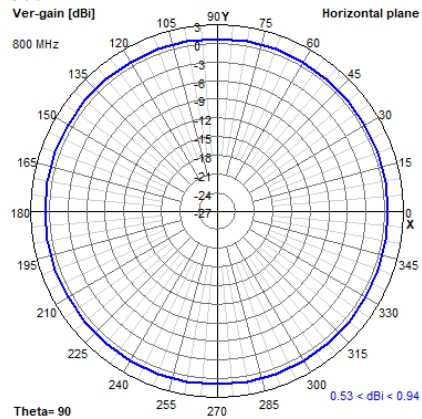
#### XZ



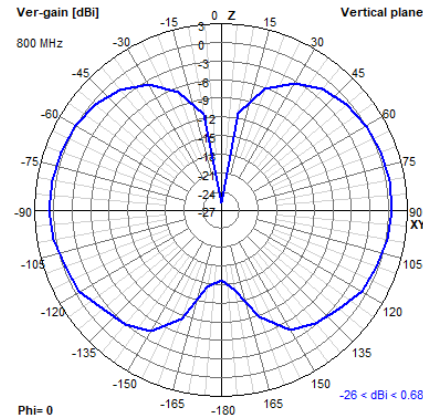
#### YZ



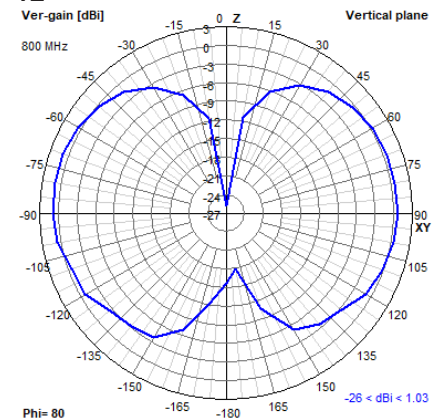
#### 800 MHz XY



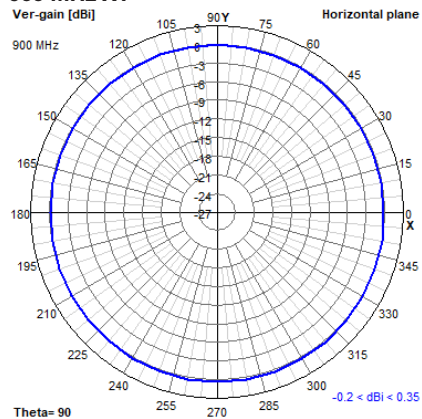
#### XZ



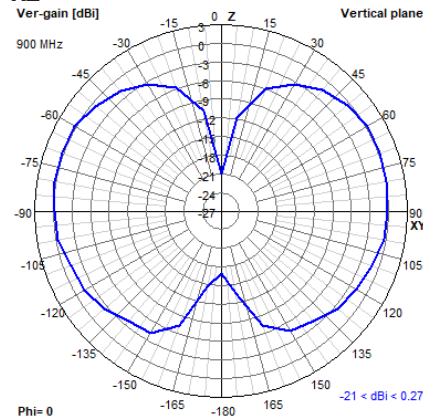
#### YZ



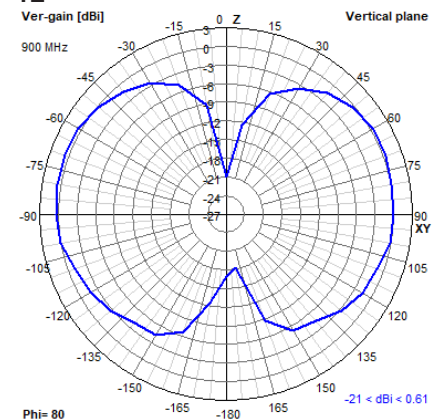
#### 900 MHz XY



#### XZ



#### YZ



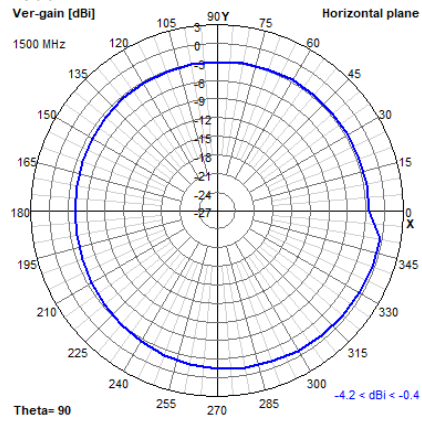


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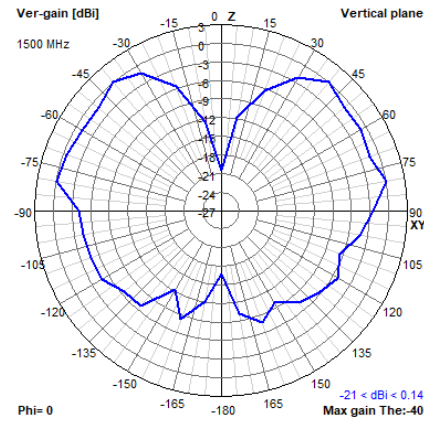
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### 2D Radiation Plots

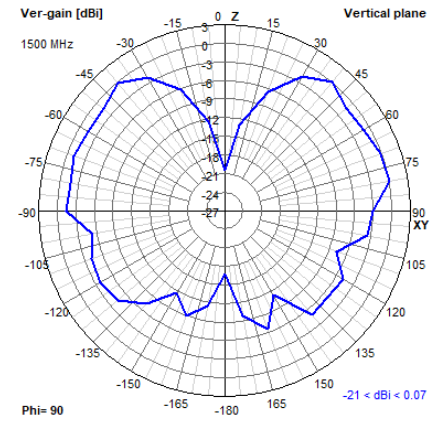
#### 1500 MHz XY



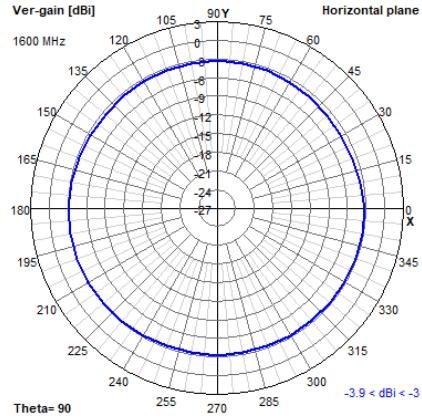
#### XZ



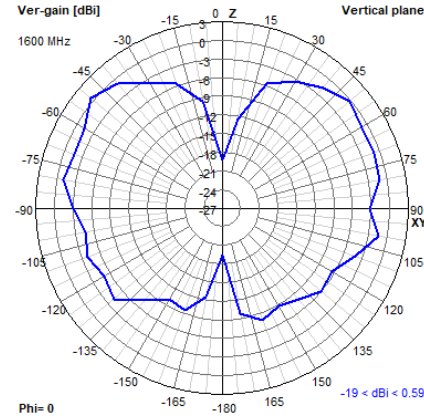
#### YZ



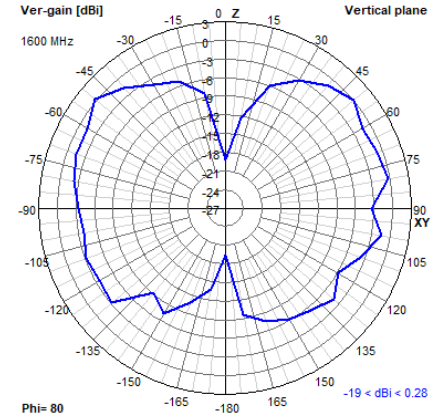
#### 1600 MHz XY



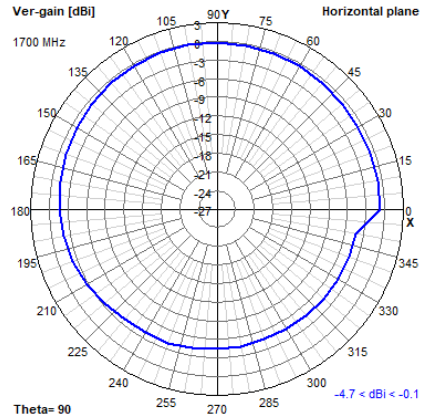
#### XZ



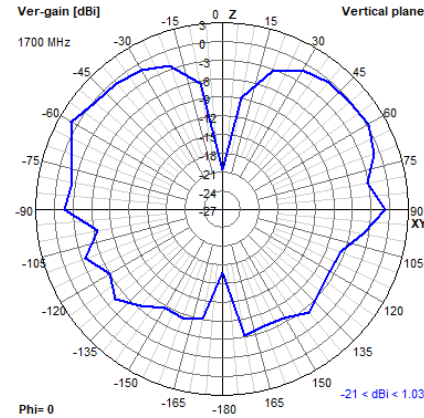
#### YZ



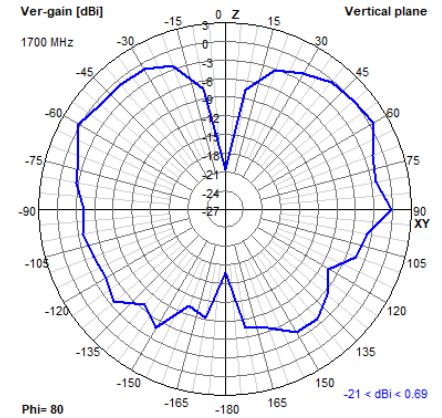
#### 1700 MHz XY



#### XZ



#### YZ



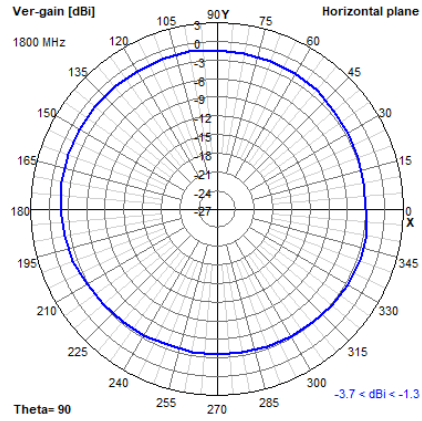


## Tango 41

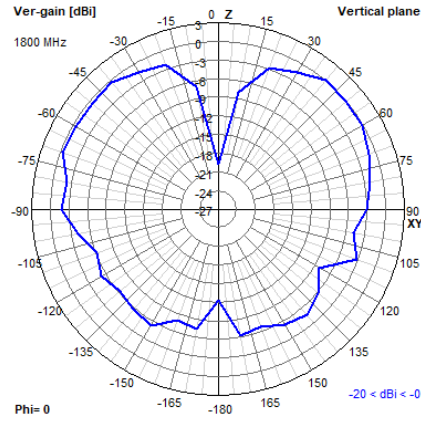
5G/4G/Dual Band Wi-Fi/LoRa/SigFox Panel Mount Antenna

### 2D Radiation Plots

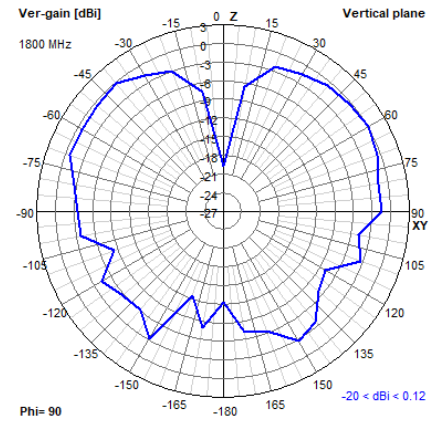
#### 1800 MHz XY



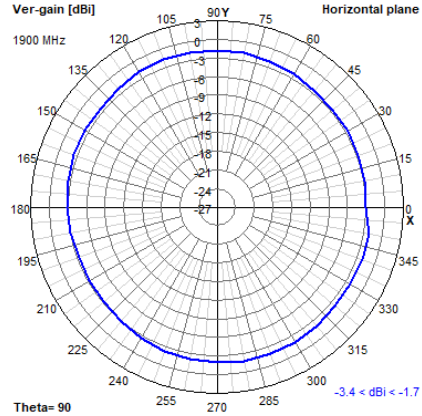
#### XZ



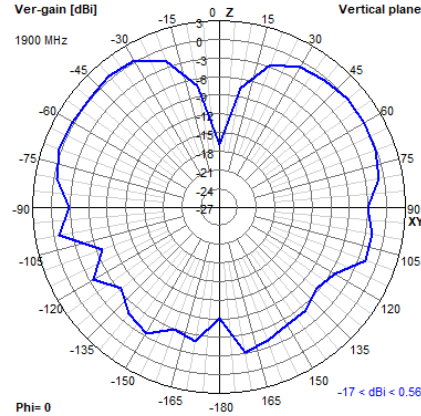
#### YZ



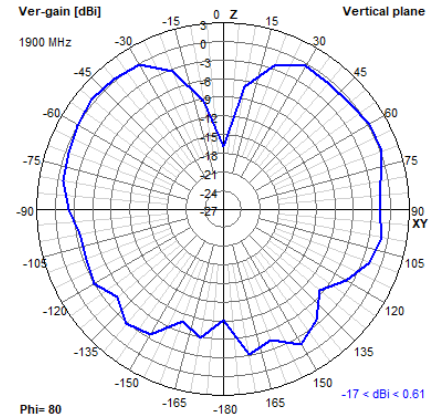
#### 1900 MHz XY



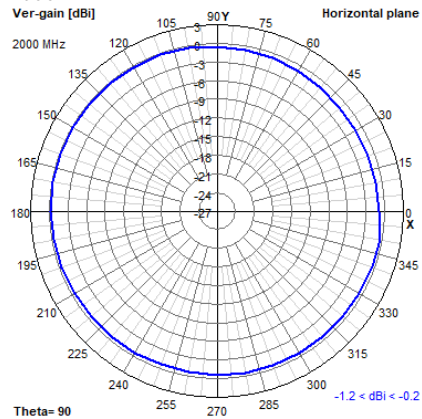
#### XZ



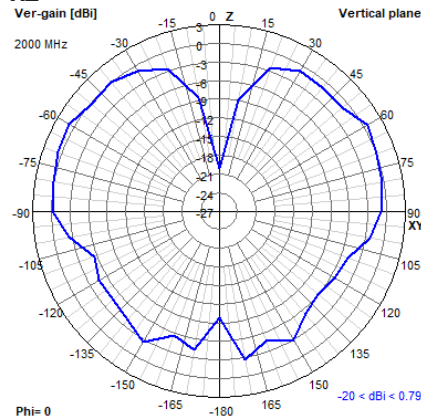
#### YZ



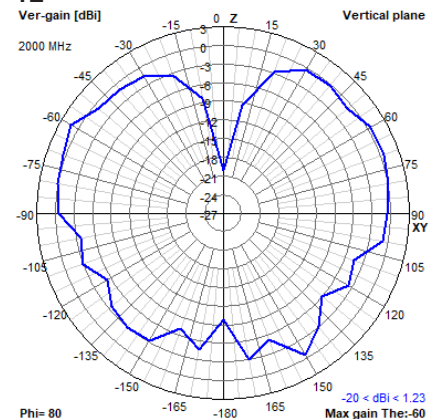
#### 2000 MHz XY



#### XZ



#### YZ



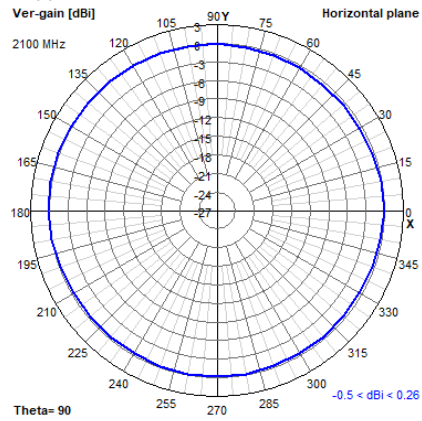


## Tango 41

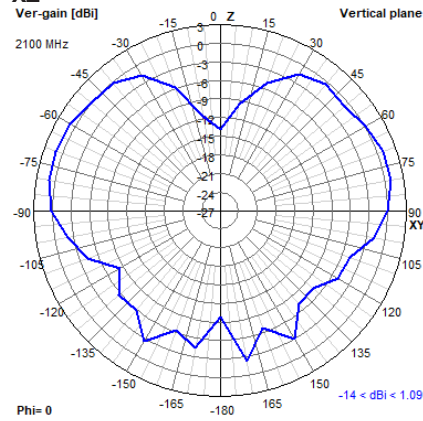
5G/4G/Dual Band Wi-Fi/LoRa/SigFox Panel Mount Antenna

### 2D Radiation Plots

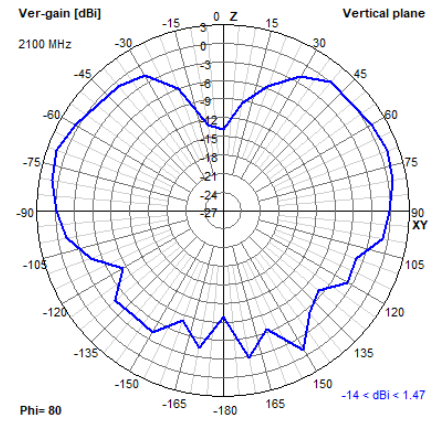
#### 2100 MHz XY



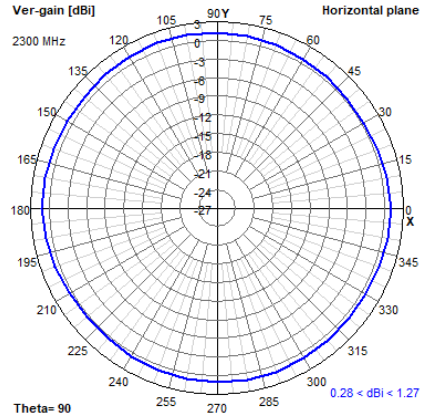
#### XZ



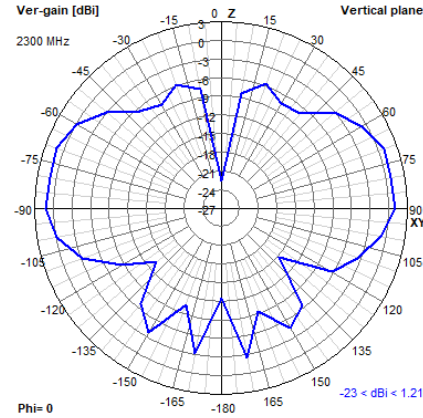
#### YZ



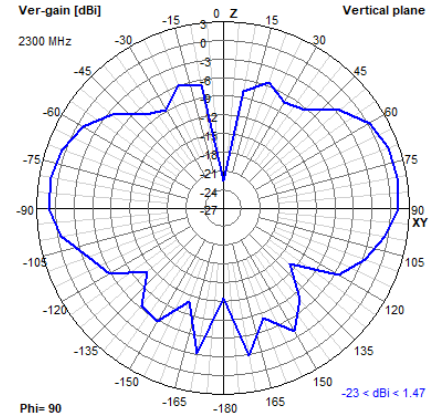
#### 2300 MHz XY



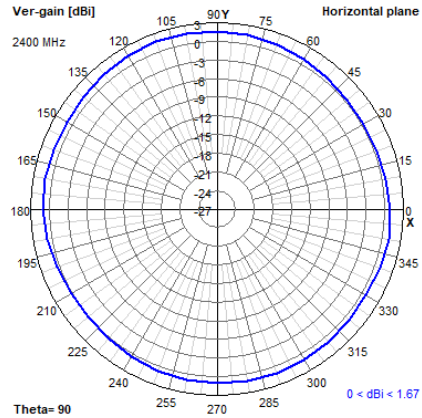
#### XZ



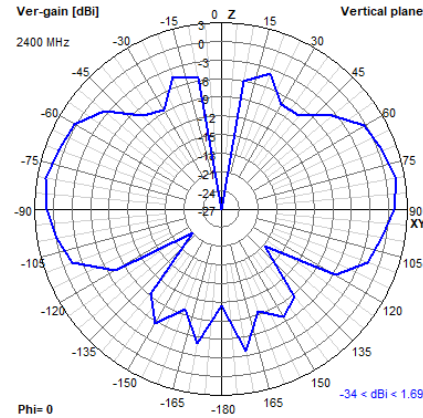
#### YZ



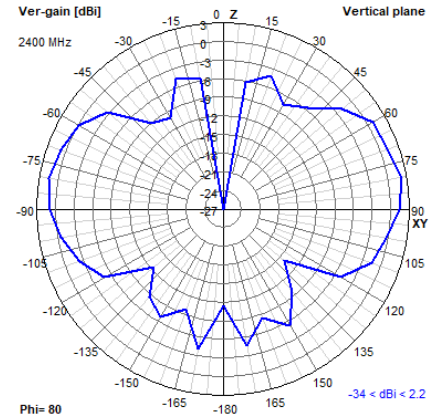
#### 2400 MHz XY



#### XZ



#### YZ



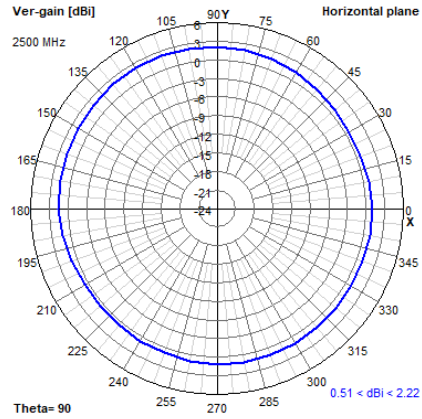


## Tango 41

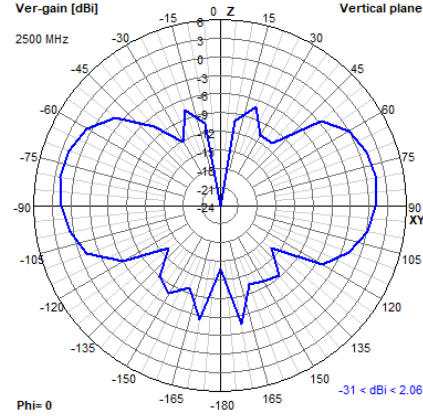
5G/4G/Dual Band Wi-Fi/LoRa/SigFox Panel Mount Antenna

### 2D Radiation Plots

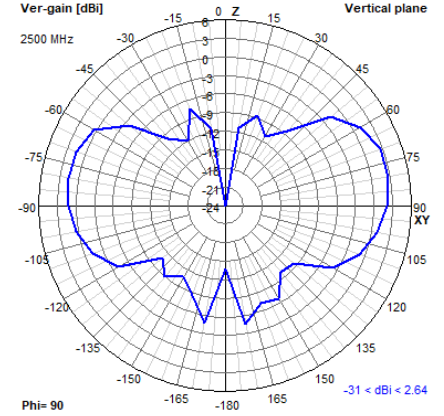
#### 2500 MHz XY



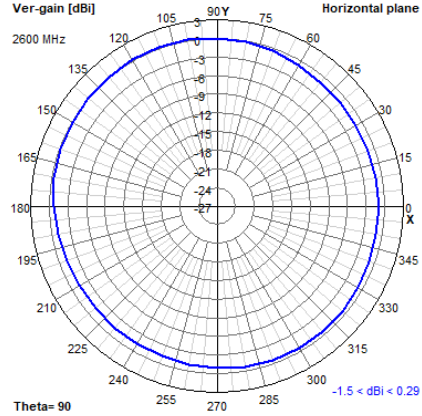
#### XZ



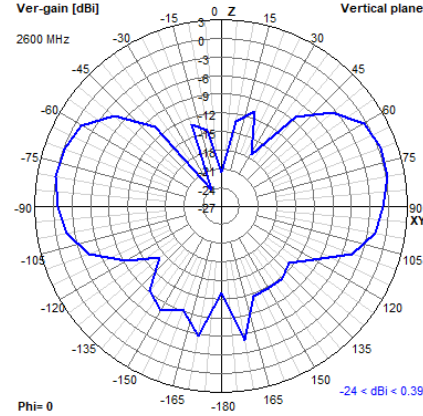
#### YZ



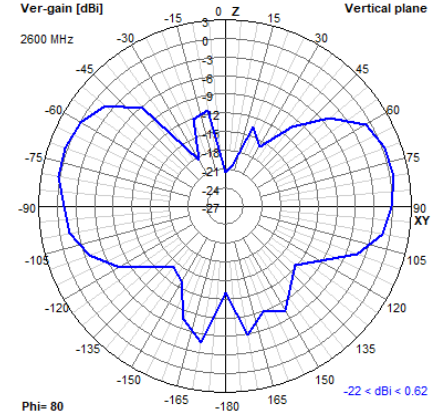
#### 2600 MHz XY



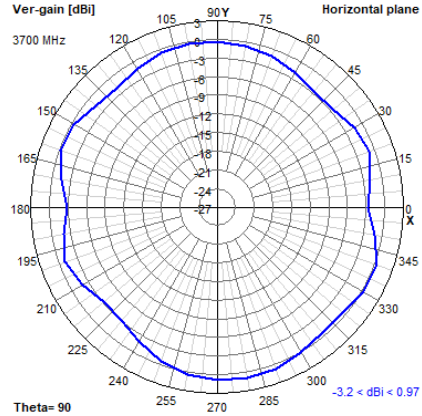
#### XZ



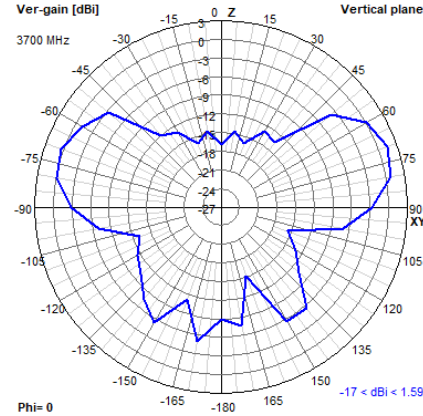
#### YZ



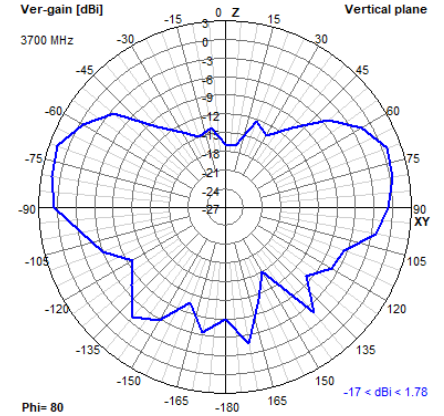
#### 3700 MHz XY



#### XZ



#### YZ





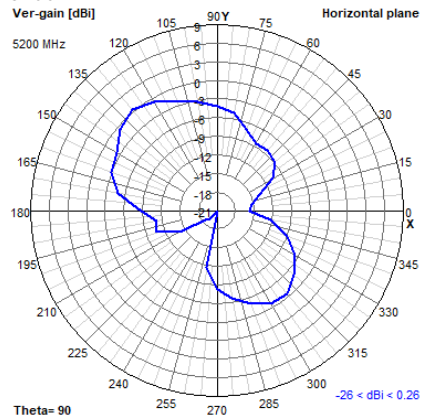


## Tango 41

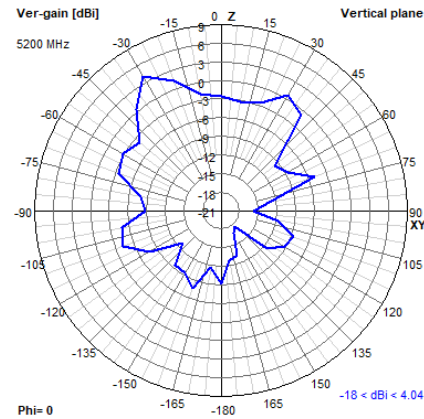
5G/4G/Dual Band Wi-Fi/LoRa/SigFox Panel Mount Antenna

### 2D Radiation Plots

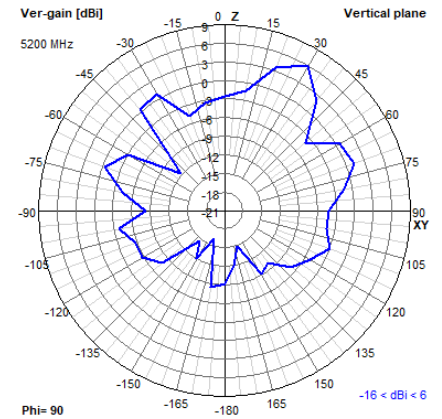
#### 5200 MHz XY



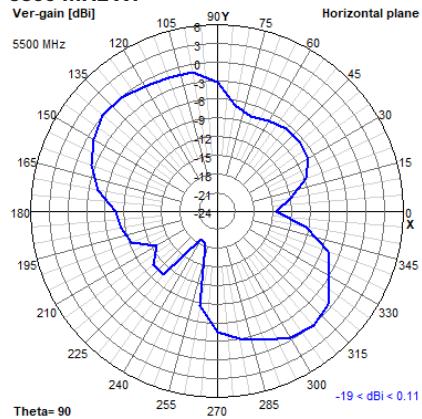
#### XZ



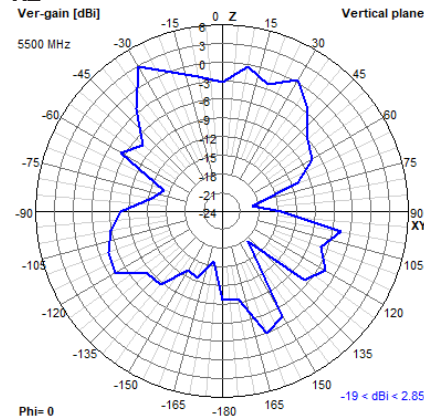
#### YZ



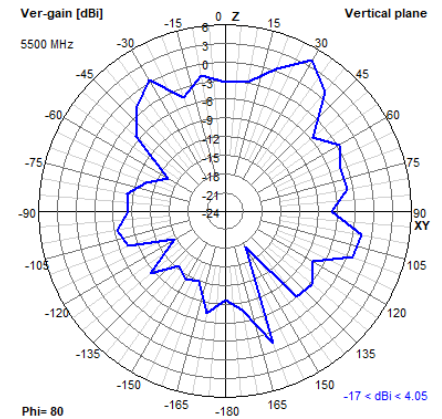
#### 5500 MHz XY



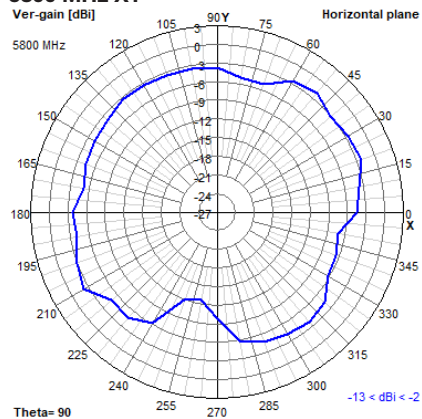
#### XZ



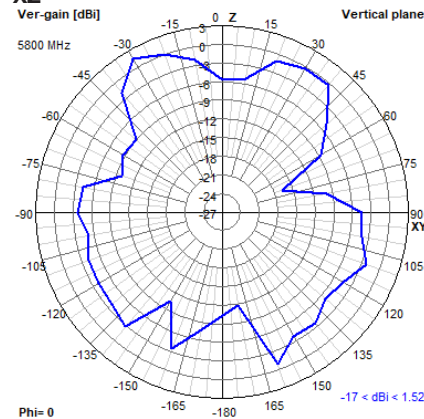
#### YZ



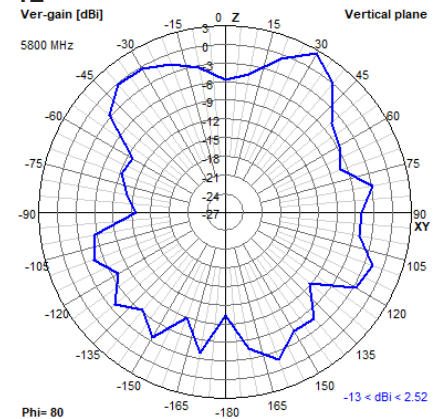
#### 5800 MHz XY



#### XZ



#### YZ



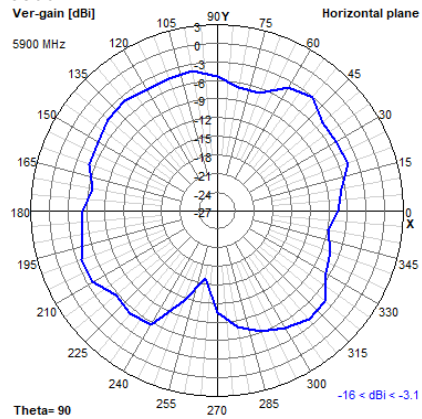


## Tango 41

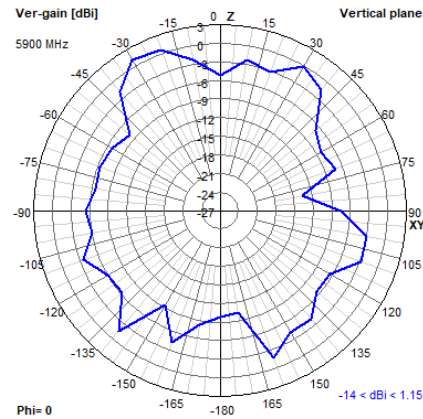
5G/4G/Dual Band Wi-Fi/LoRa/SigFox Panel Mount Antenna

### 2D Radiation Plots

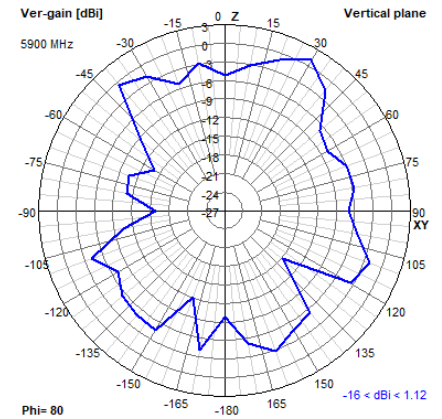
#### 5900 MHz XY



#### XZ



#### YZ



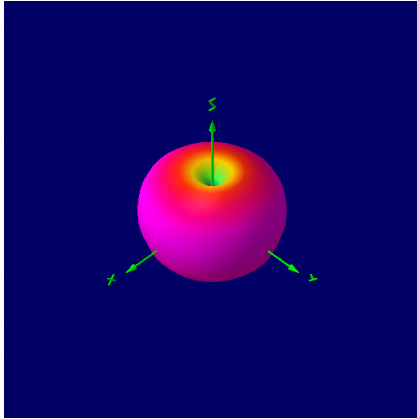


## Tango 41

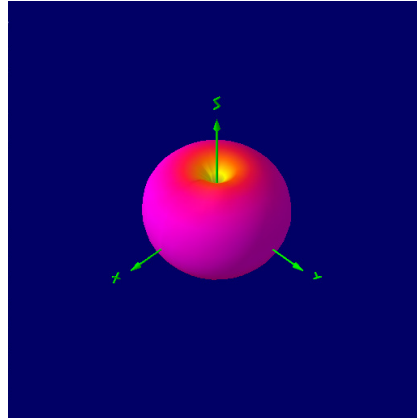
5G/4G/Dual Band Wi-Fi/LoRa/SigFox Panel Mount Antenna

### 3D Radiation Plots

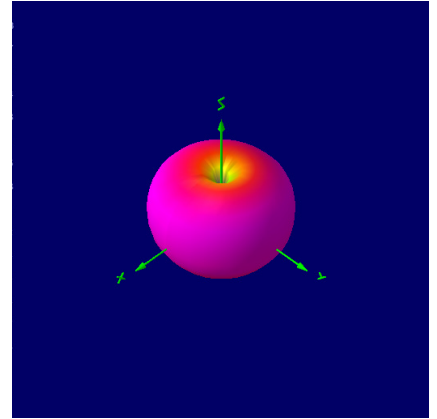
700 MHz



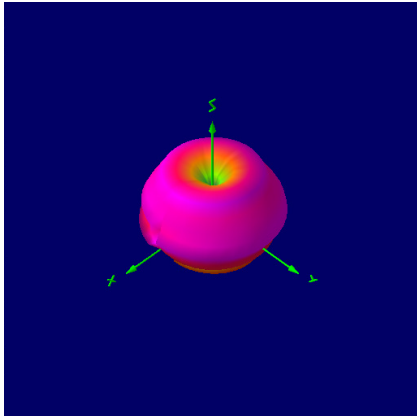
800 MHz



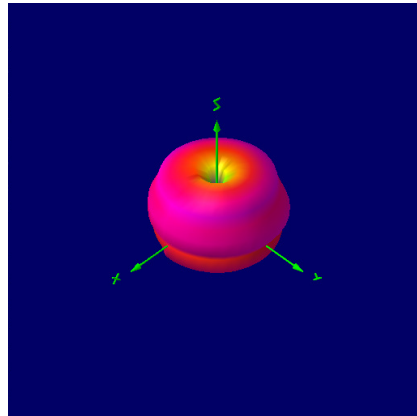
900 MHz



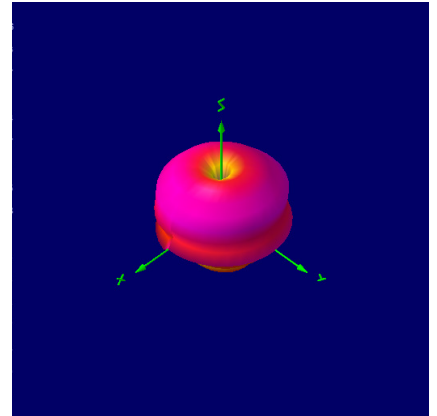
1500 MHz



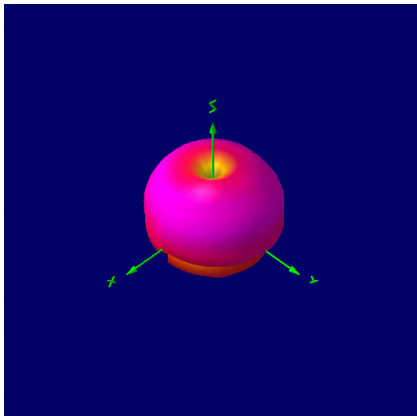
1600 MHz



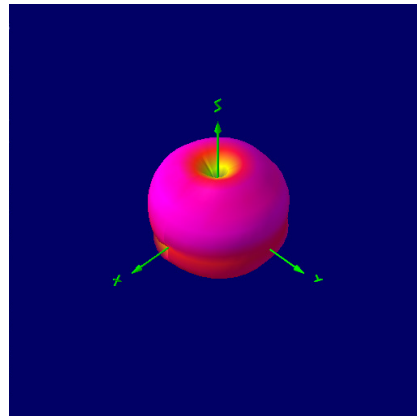
1700 MHz



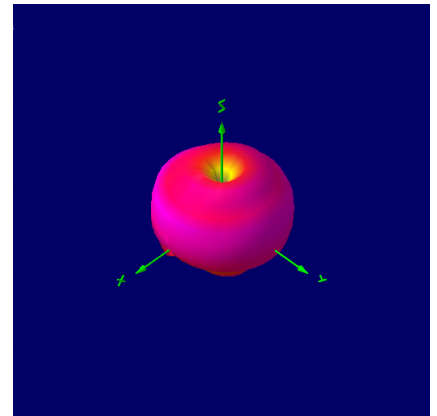
1800 MHz



1900 MHz



2000 MHz



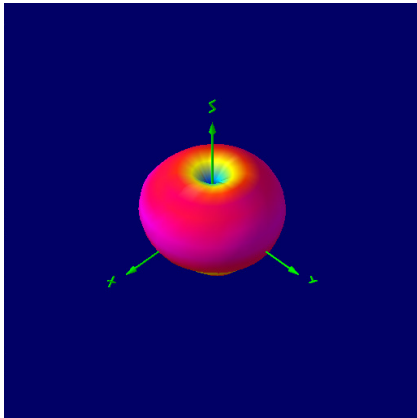


## Tango 41

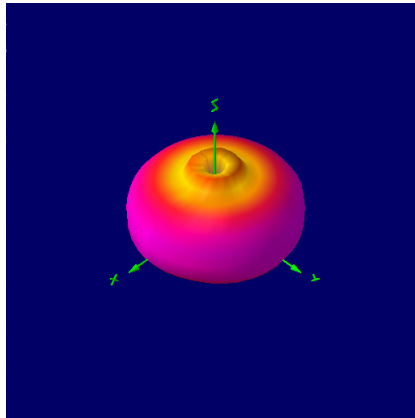
5G/4G/Dual Band Wi-Fi/LoRa/SigFox Panel Mount Antenna

### 3D Radiation Plots

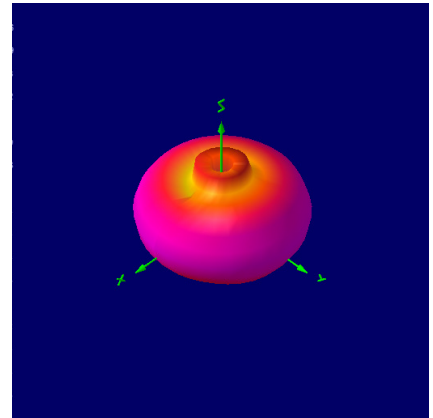
2100 MHz



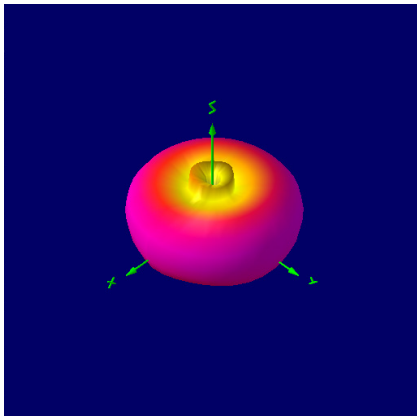
2300 MHz



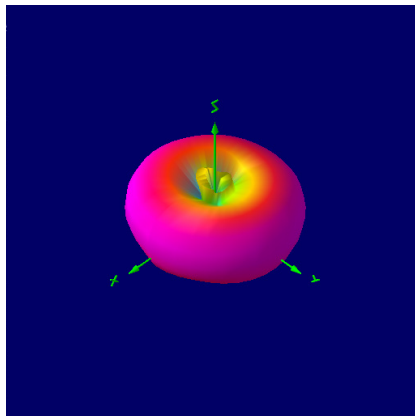
2400 MHz



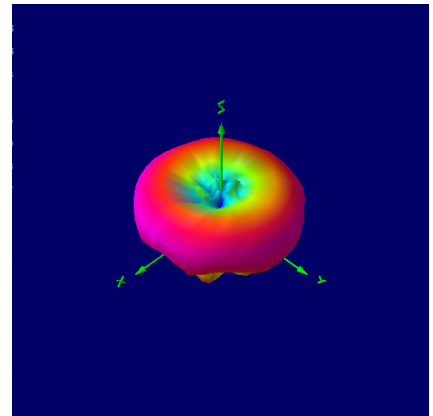
2500 MHz



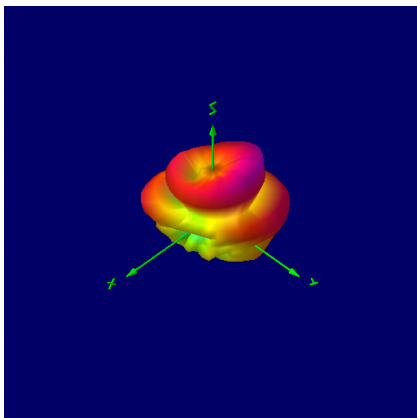
2600 MHz



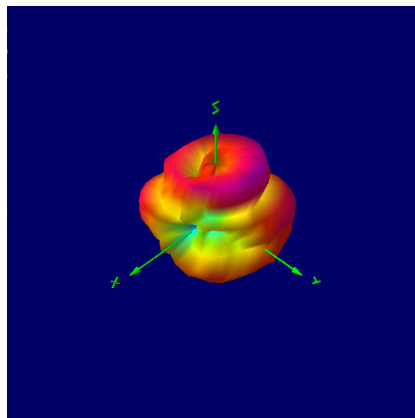
3700 MHz



5200 MHz



5500 MHz



5800 MHz

