



Tango 44

2G/3G/4G/5G & WiFi through hole mount puck antenna

Key Features

- 2G, 3G, 4G including NBLoT/Cat M Bands and 5G
- Low loss cable
- ISM bands, WiFi, Bluetooth and full Zigbee band allocation



General Description

The Tango 44 is a wide band antenna with an even spread performance across the usable spectrum which allows it to be used in the upper ISM bands, GPRS, UMTS, LTE, WiFi, Bluetooth and the Zigbee band allocation.

Supplied as standard with an SMA male connector in three cable lengths, 1, 2.5 and 5 m. Alternative cable lengths and connectors can be specified for volume orders.

Additional Considerations

- Wide operating temp range
- Weather resistant

T Through	2G GSM	3G UMTS	4G LTE
LTE Cat M	LTE NB IoT	5G LTE	WLAN 2400
WLAN 5800	BLE Bluetooth	ZB Zigbee	IP 67



Tango 44

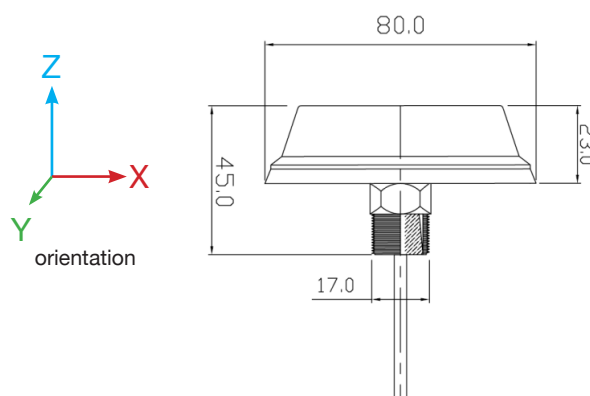
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Electrical Specifications

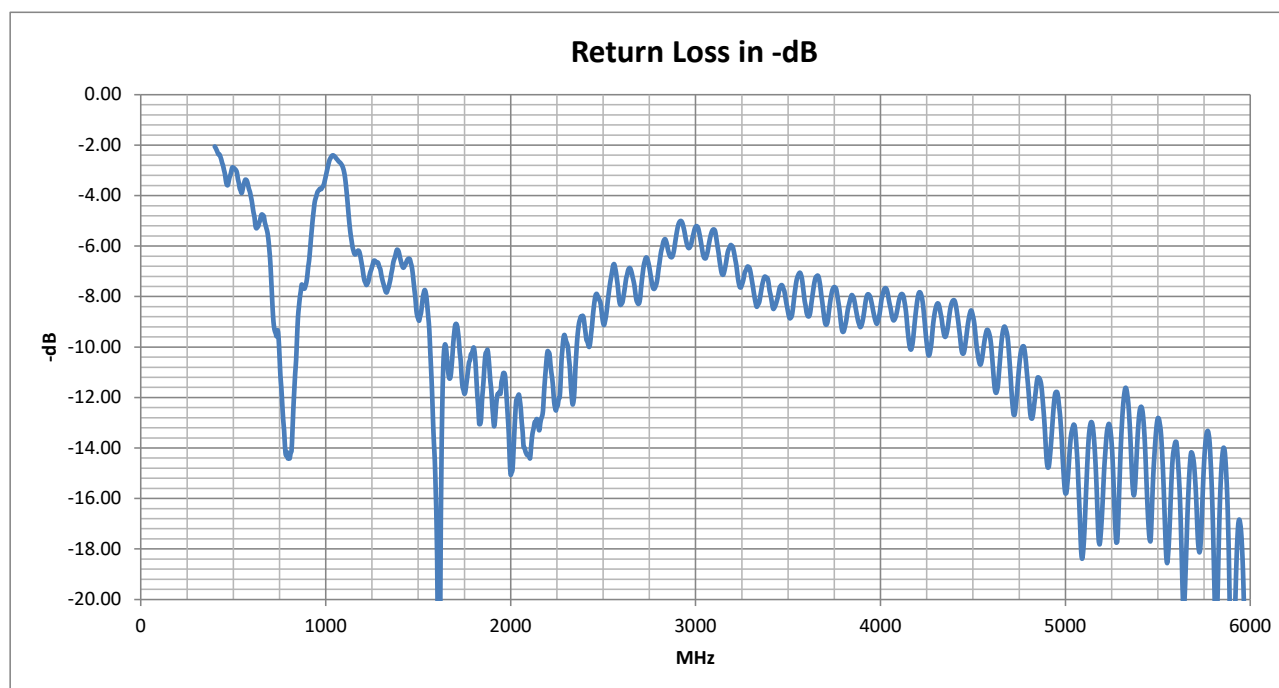
Operating Temperature:	-40 - +85 °C
Humidity:	40% - 95% RH
Polarization:	Linear Vertical
Maximum Power:	50 W
Impedance:	50 Ohms

Mechanical Specifications

Dimensions:	Ø 80 x 23 mm
Cable:	RG174
Connector:	SMA Male
Mounting Method:	M17 mm Ø Pitch 1.25
Maximum Material Thickness:	10 mm



Return Loss tested with 1m cable

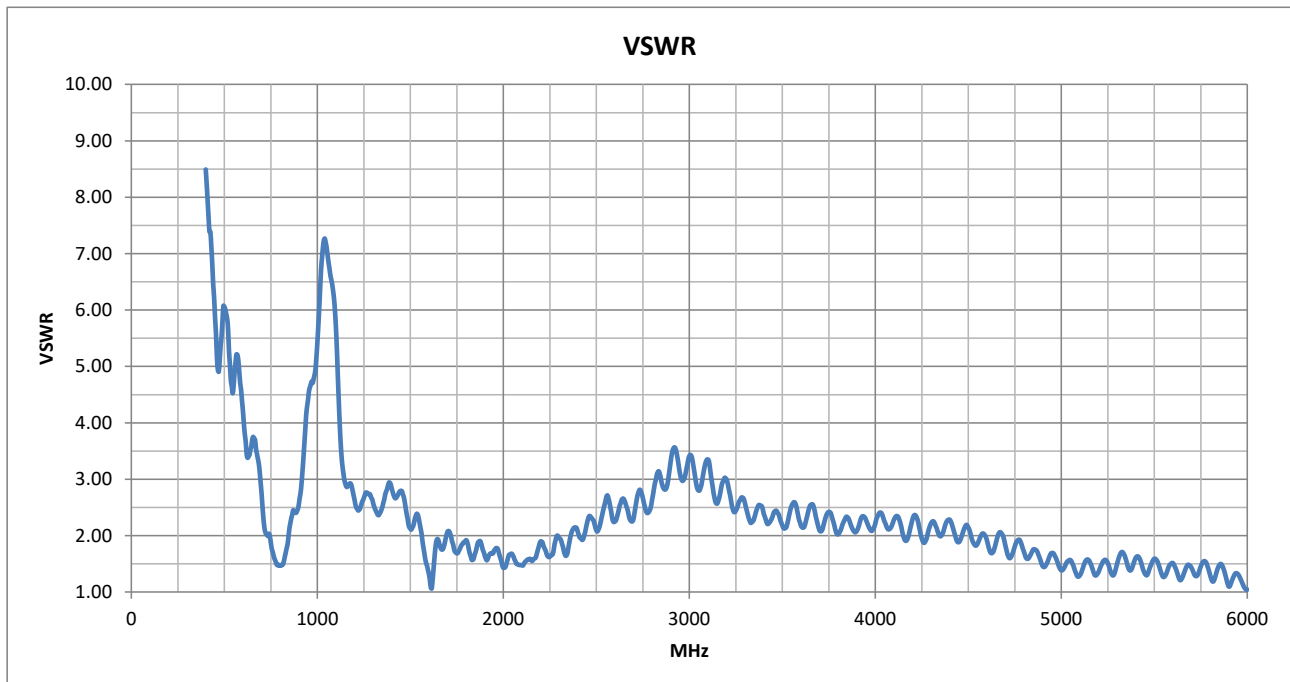




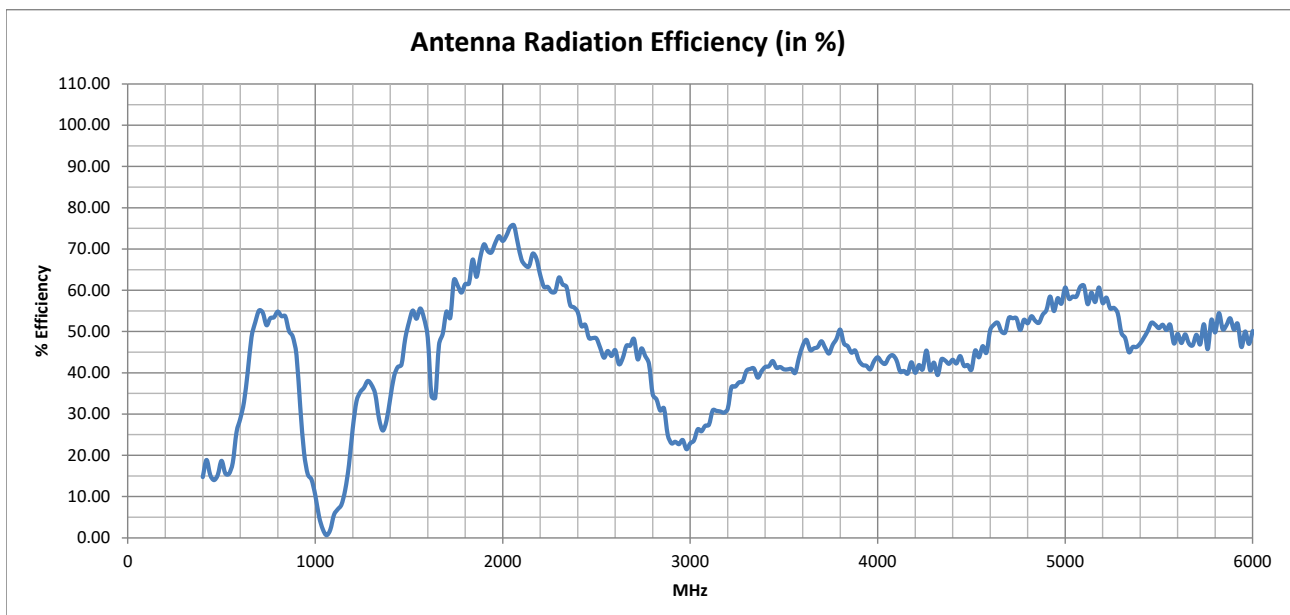
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VSWR tested with 1m cable



Radiation Efficiency tested with 1m cable





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LTE/5G Band Coverage

LTE, CAT-M/5G Bands	NB-IoT Band	Regional Coverage	Uplink	Downlink	Avg Efficiency % over band	Max VSWR over Band
1/n1	B1	Europe / Asia	1920-1980 MHz	2110-2170 MHz	70.81 / 67.15 ●	1.78 / 1.60
2/n2	B2	North America/Latin America/Caribbean	1850-1910 MHz	1930-1990 MHz	67.85 / 71.04 ●	1.91 / 1.78
3/n3	B3	Europe/Africa/Asia/Oceania	1710-1785 MHz	1805-1880 MHz	58.79 / 64.36 ●	2.07 / 1.91
4	B4	North America/Latin America/Caribbean	1710-1755 MHz	2110-2155 MHz	57.94 / 67.04 ●	2.07 / 1.59
5/n5	B5	Country Specific	824-849 MHz	869-894 MHz	52.51 / 47.71 ●	2.13 / 2.47
7/n7		Latin America/Europe/Asia +	2500-2570 MHz	2620-2690 MHz	45.47 / 45.39 ●	2.71 / 2.66
8/n8	B8	Europe / Asia +	880-915 MHz	925-960 MHz	41.57 / 22.62 ●	2.93 / 4.63
11	B11	Country Specific	1427.9-1447.9 MHz	1475.9-1495.9 MHz	40.82 / 47.51 ●	2.80 / 2.49
12/n12	B12	North America/Caribbean +	699-716 MHz	729-746 MHz	53.97 / 53.10 ●	2.95 / 2.04
13/n13	B13	North America/Caribbean +	777-787 MHz	746-756 MHz	53.83 / 52.37 ●	1.55 / 1.98
14/n14	B14	Country Specific	788-798 MHz	758-768 MHz	54.14 / 52.73 ●	1.49 / 1.77
17	B17	North America/Caribbean +	704-716 MHz	734.746 MHz	54.83 / 53.10 ●	2.76 / 2.04
18/n18	B18	Country Specific	815-830 MHz	860-875 MHz	54.08 / 49.44 ●	1.70 / 2.45
19	B19	Country Specific	830-845 MHz	875-890 MHz	52.51 / 47.71 ●	1.99 / 2.44
20/n20	B20	Europe/Africa +	832-862 MHz	791-821 MHz	51.57 / 53.92 ●	2.37 / 1.63
21		Country Specific	1447.9-1462.9 MHz	1495.9-1510.9 MHz	43.89 / 51.88 ●	2.80 / 2.15
25/n25	B25	Country Specific	1850-1915 MHz	1525-1559 MHz	67.85 / 54.59 ●	1.91 / 2.39
26/n26	B26	Country Specific	814-849 MHz	859-894 MHz	53.09 / 49.21 ●	2.13 / 2.47
28/n28	B28	Latin America/Europe/Asia +	703-748 MHz	758-803 MHz	53.60 / 53.80 ●	2.76 / 1.77
29/n29		Country Specific	-	717-728 MHz	53.73 ●	2.15
30/n30		Country Specific	2305-2315 MHz	2350-2360 MHz	62.24 / 58.59 ●	1.95 / 1.97
31	B31	Country Specific	452.5-457.5 MHz	462.5-467.5 MHz	14.60 / 14.62 ●	5.87 / 5.17
32		Country Specific	-	1452-1496 MHz	45.98 ●	2.80
38/n38		Europe +	2570-2620 MHz		44.23 ●	2.59
39/n39		Country Specific	1880-1920 MHz		69.51 ●	1.87
40/n40		Asia +	2300-2400 MHz		58.7 ●	2.15
41/n41		Country Specific	2496-2690 MHz		45.68 ●	2.71
42		Country Specific	3400-3600 MHz		41.93 ●	2.60
43		Country Specific	3600-3800 MHz		46.91 ●	2.56
46/n46		Country Specific	5150-5925 MHz		50.95 ●	1.71
48/n48		Country Specific	3550-3700 MHz		44.93 ●	2.60
65/n65		Country Specific	1920-2010 MHz	2110-2200 MHz	71.41 / 66.57 ●	1.78 / 1.90
66/n66	B66	Country Specific	1710-1780 MHz	2110-2200 MHz	58.24 / 66.57 ●	2.07 / 1.90
71/n71	B71	Country Specific	663-698 MHz	617-652 MHz	51.99 / 37.68 ●	3.72 / 3.75

Table data for bands as detailed in 3GPP TS 36.101 & 38.101

● Usable Band

● Adequate in good signal area

● Not Usable



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5G Extended Table for Band Coverage

LTE/5G Band	NB-IoT Band	Uplink	Downlink	Avg Efficiency % over band	Max VSWR over Band
n24		1626.5 – 1660.5 MHz	1525 – 1559 MHz	38.36 / 54.59 ●	1.94 / 2.39
n34		2010 – 2025 MHz		73.52 ●	1.60
n47		5855 – 5925 MHz		50.65 ●	1.50
n50		1432 – 1517 MHz		46.35 ●	2.80
n51		1427 – 1432 MHz		40.24 ●	2.74
n53		2483.5 – 2495 MHz		48.36 ●	2.29
n67		738 – 758 MHz		53.10 ●	2.04
n70	B70	1695 – 1710 MHz	1995 – 2020 MHz	52.53 / 72.78 ●	2.08 / 1.54
n74		1427 – 1470 MHz	1475 – 1518 MHz	42.69 / 49.40 ●	2.80 / 2.49
n75		1432 – 1517 MHz		46.35 ●	2.80
n76		1427 – 1432 MHz		40.24 ●	2.74
n77		3300 – 4200 MHz		43.24 ●	2.60
n78		3300 – 3800 MHz		43.55 ●	2.60
n79		4400 – 5000 MHz		50.31 ●	2.28
n80		1710 – 1785 MHz		58.79 ●	2.07
n81		880 – 915 MHz		41.57 ●	2.93
n82		832 – 862 MHz		51.57 ●	2.37
n83		703 – 748 MHz		53.60 ●	2.76
n84		1920 – 1980 MHz		70.81 ●	1.78
n85	B85	698 – 716 MHz	728 – 746 MHz	53.97 / 53.10 ●	2.95 / 2.04
n86		1710 – 1780 MHz		58.24 ●	2.07
n89		824 – 849 MHz		52.51 ●	2.13
n90		2496 – 2690 MHz		45.68 ●	2.71
n91		832 – 862 MHz	1427 – 1432 MHz	51.57 / 40.24 ●	2.37 / 2.74
n92		832 – 862 MHz	1432 – 1517 MHz	51.57 / 46.35 ●	2.37 / 2.80
n93		880 – 915 MHz	1427 – 1432 MHz	41.57 / 40.24 ●	2.93 / 2.74
n94		880 – 915 MHz	1432 – 1517 MHz	41.57 / 46.35 ●	2.93 / 2.80
n95		2010 – 2025 MHz		73.52 ●	1.60
n96		5925 – 7125 MHz		unmeasured	
n97		2300 – 2400 MHz		58.70 ●	2.15
n98		1880 – 1920 MHz		69.51 ●	1.87
n99		1626.5 – 1660.5 MHz		38.36 ●	1.94

Table data for bands as detailed in 3GPP TS 38.101

● Usable Band

○ Adequate in good signal area

✗ Not Usable



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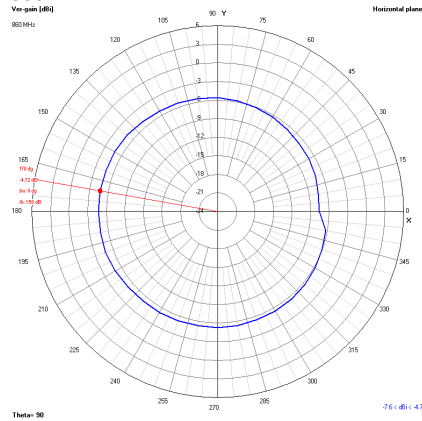


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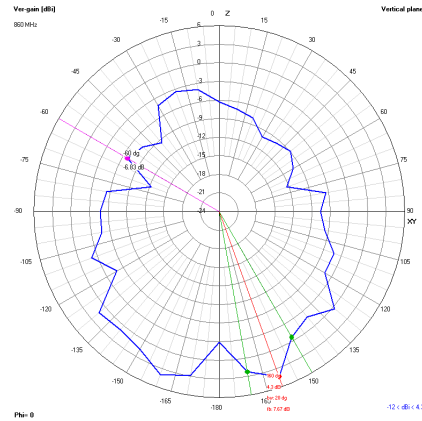
2G/3G/4G/5G & WiFi through hole mount puck Antenna

Radiation Plots tested with 1 m cable

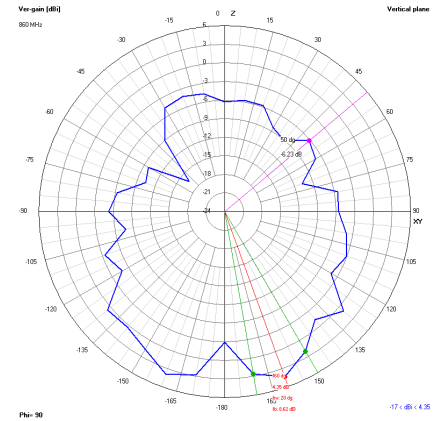
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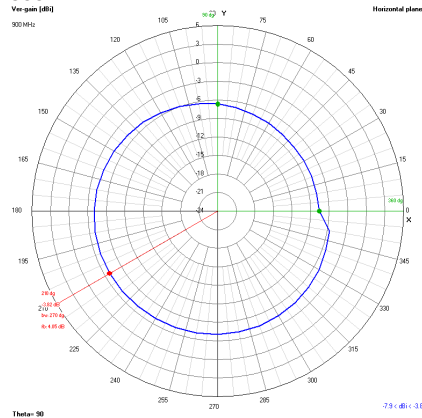
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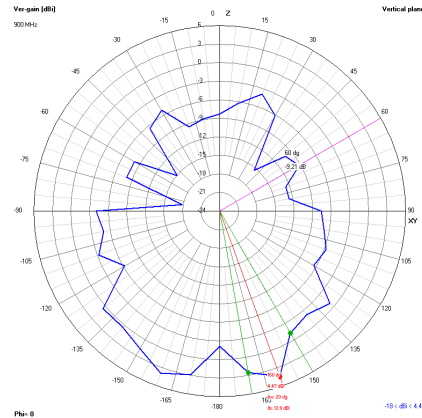
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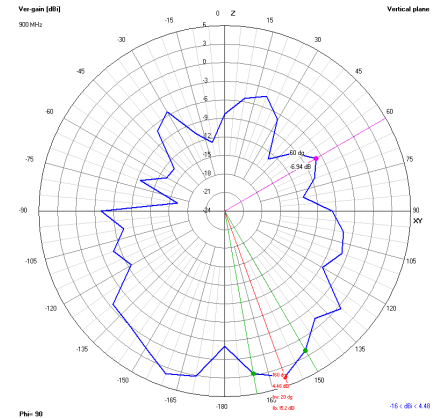
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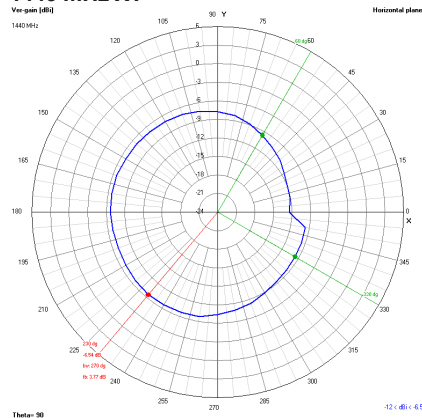
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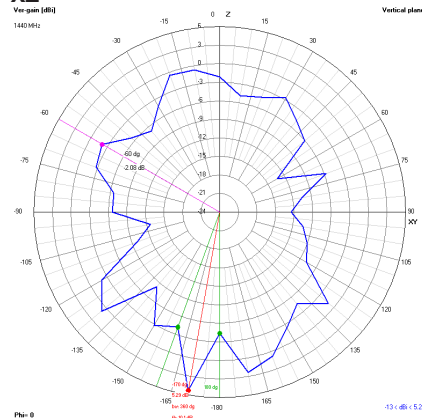
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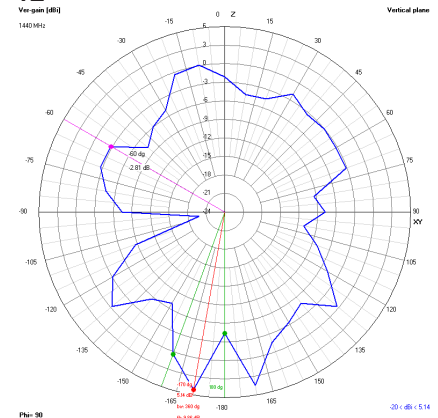
1440 MHz XY



XZ



YZ



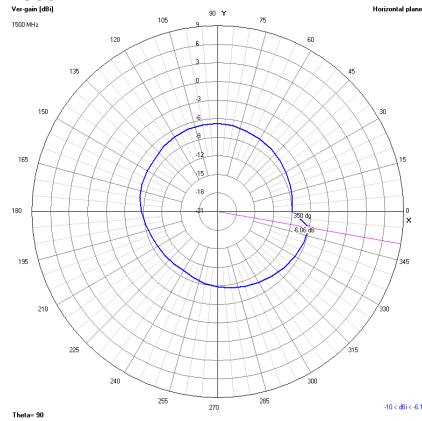


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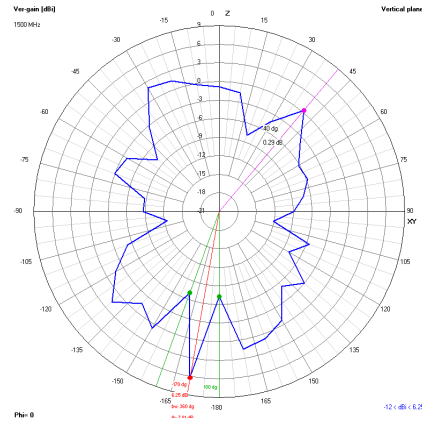
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Radiation Plots tested with 1 m cable

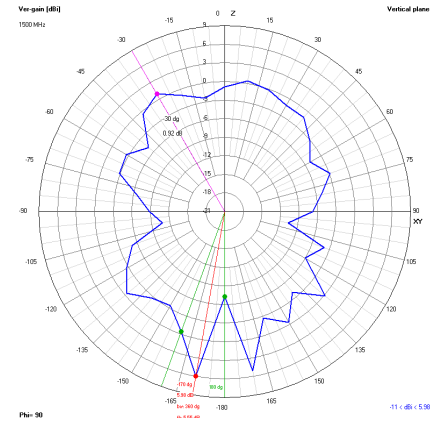
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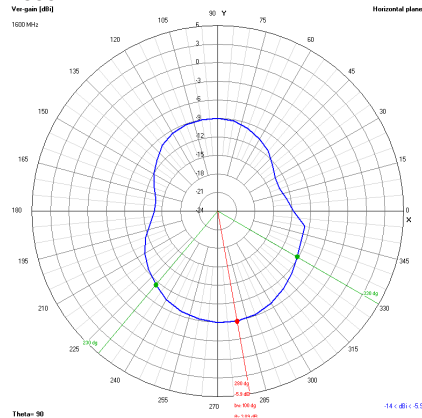
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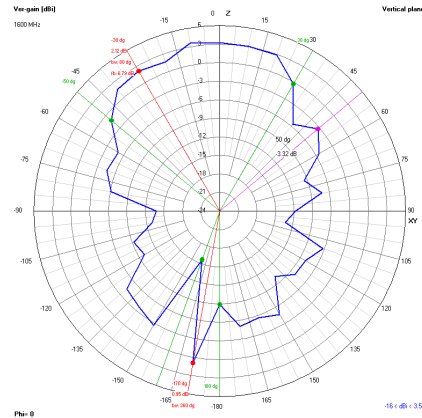
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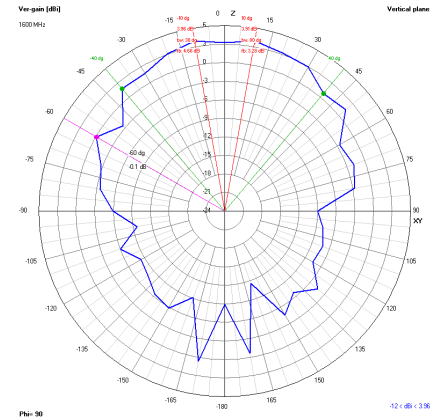
1600 MHz XY



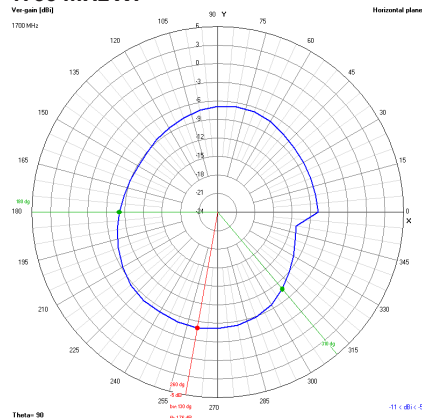
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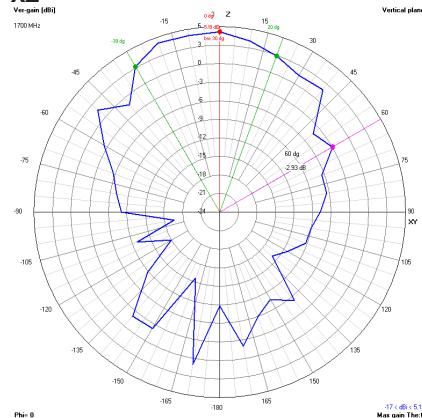
YZ



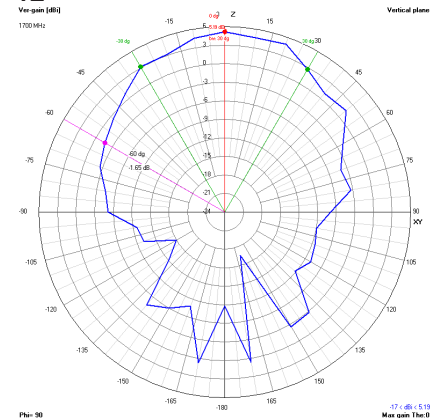
1700 MHz XY



XZ



YZ



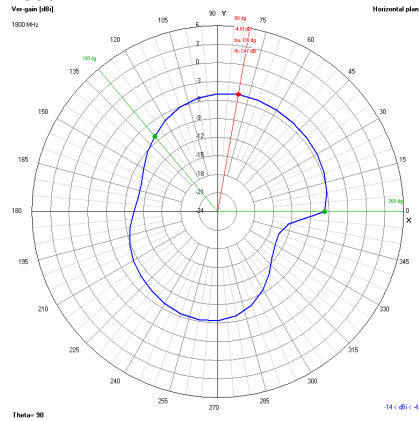


Tango 44

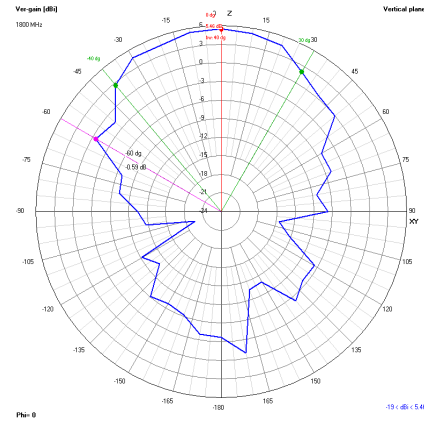
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Radiation Plots tested with 1 m cable

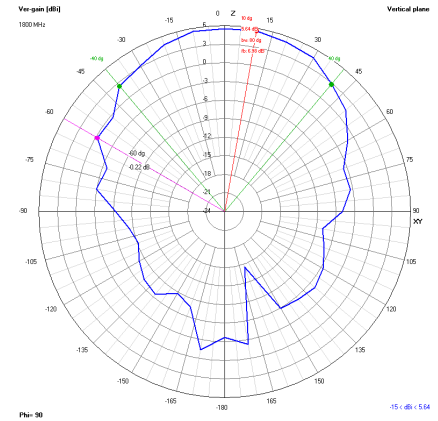
1800 MHz XY



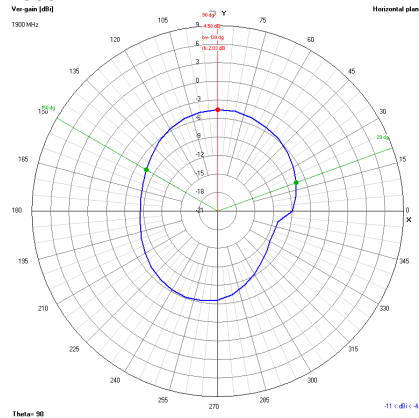
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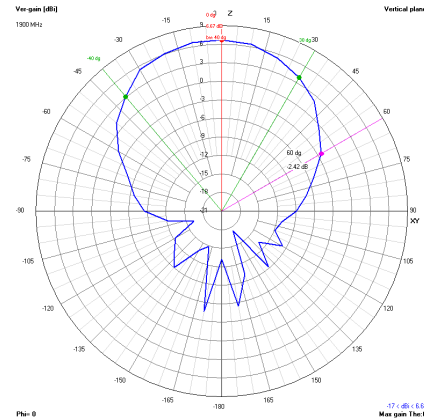
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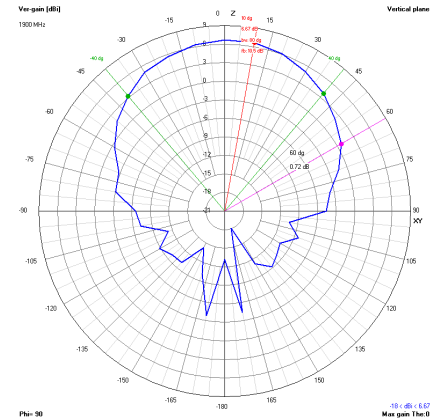
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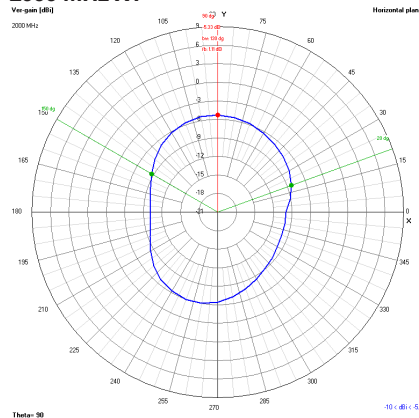
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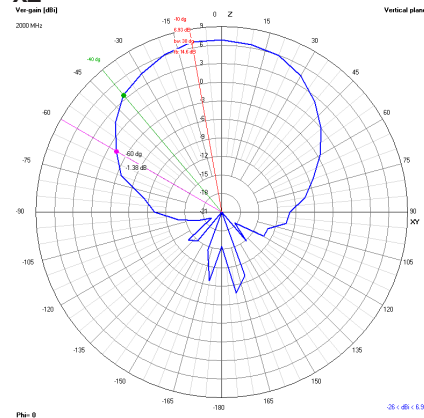
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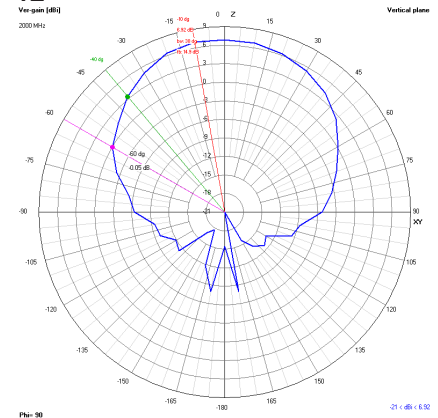
2000 MHz XY



XZ



YZ



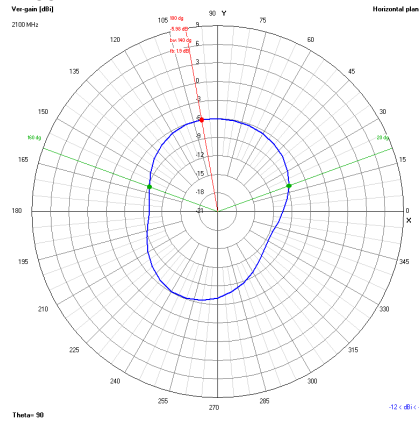


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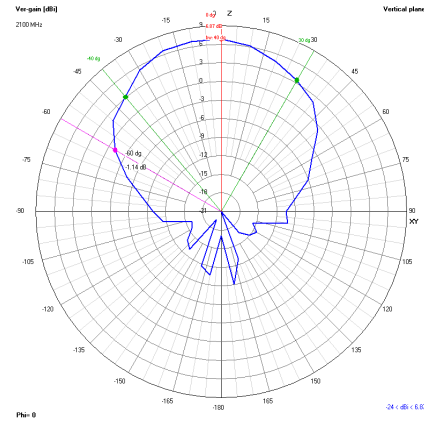
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Radiation Plots tested with 1 m cable

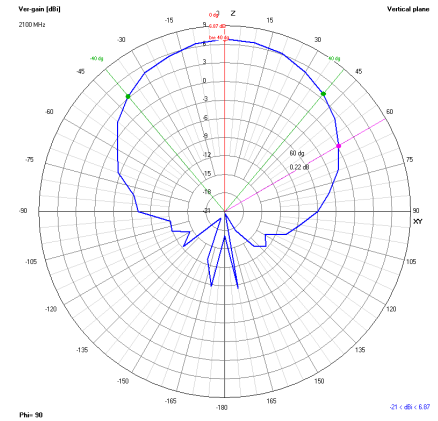
2100 MHz XY



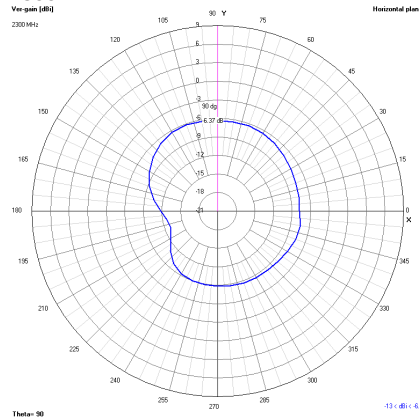
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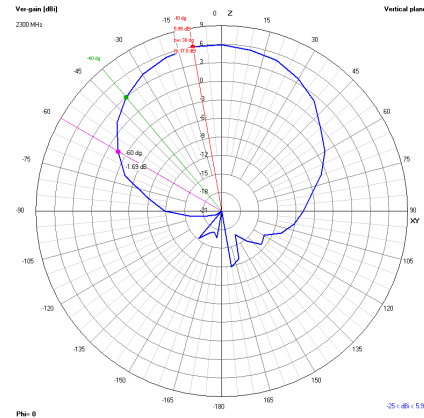
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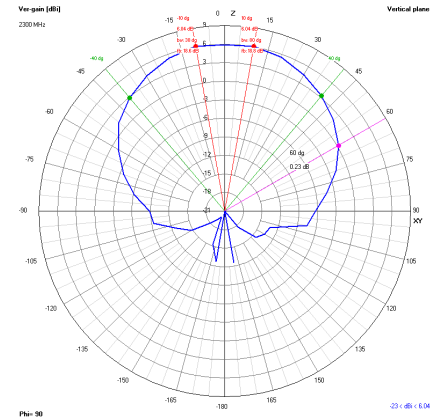
2300 MHz XY



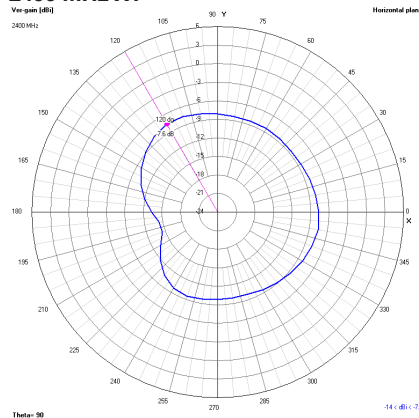
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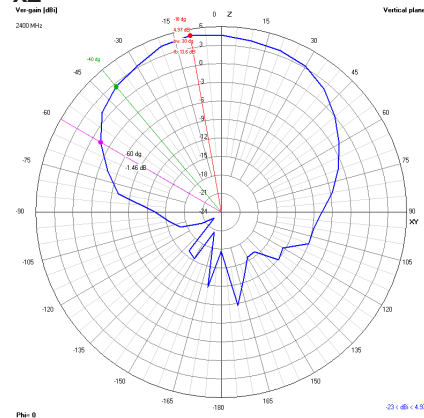
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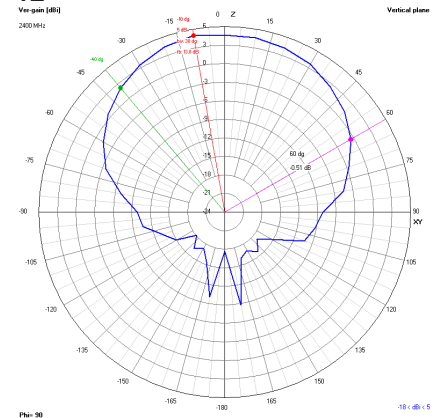
2400 MHz XY



XZ



YZ



WiFi Band
2.4 GHz
Eff %
54.70

WiFi Band
2.4 GHz
Eff %
54.70

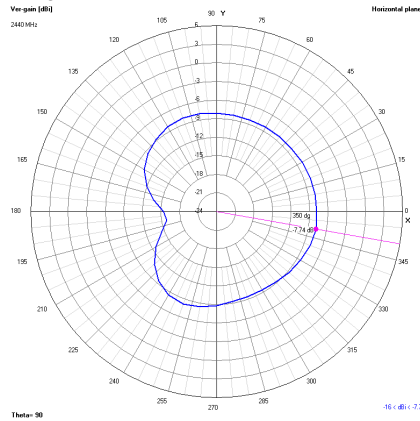


Tango 44

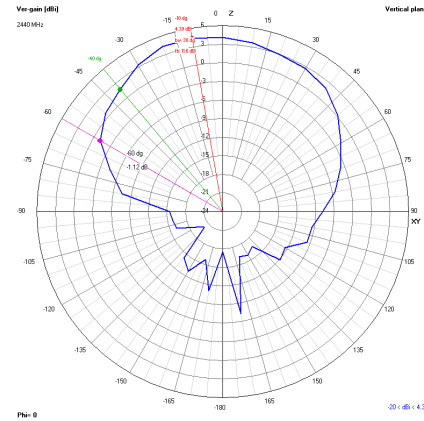
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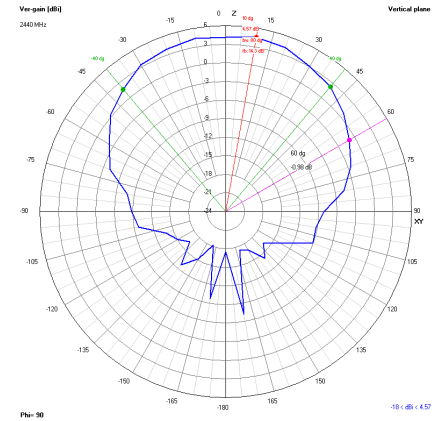
2440 MHz XY



XZ



YZ



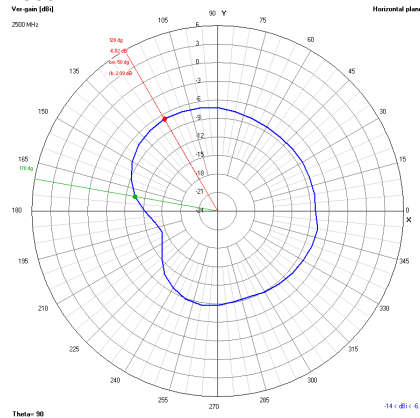
WiFi
Band
2.4
GHz

Eff %
51.64

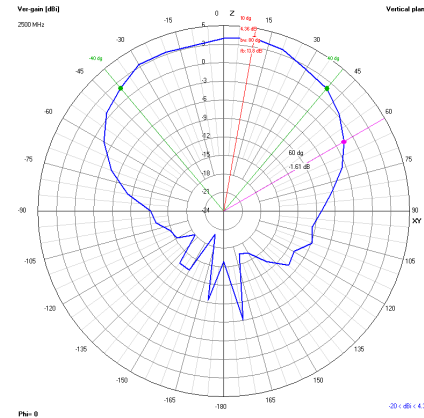
WiFi
Band
2.4
GHz

Eff %
51.64

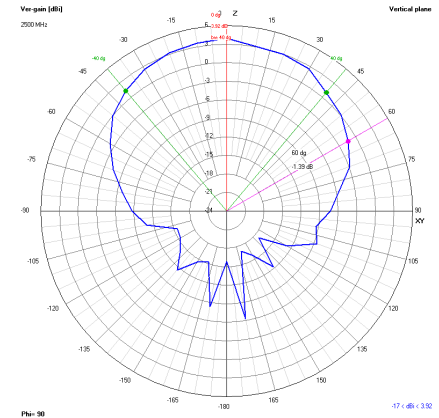
2500 MHz XY



XZ



YZ



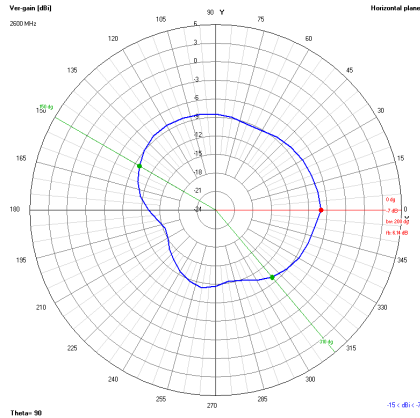
WiFi
Band
2.4
GHz

Eff %
48.31

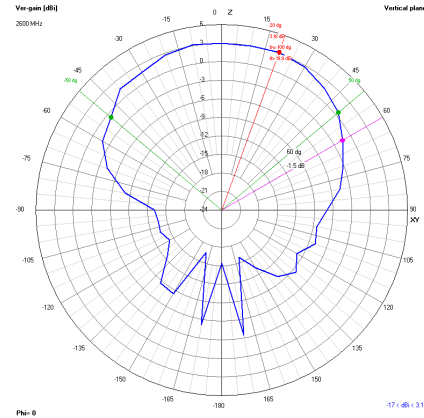
WiFi
Band
2.4
GHz

Eff %
48.31

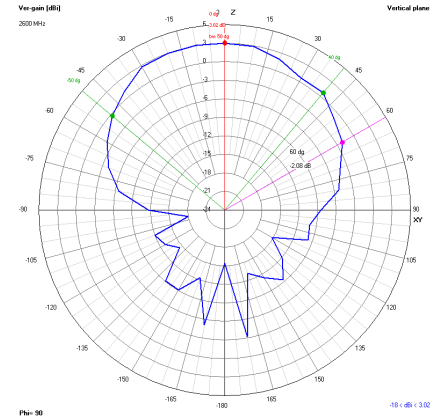
2600 MHz XY



XZ



YZ



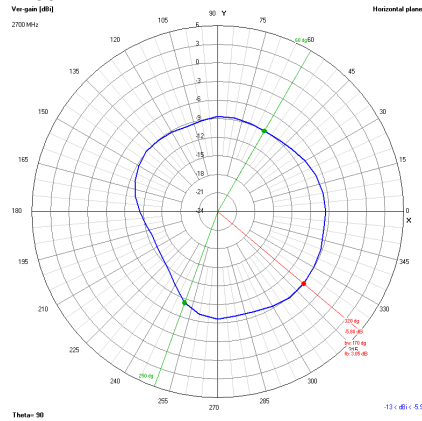


Tango 44

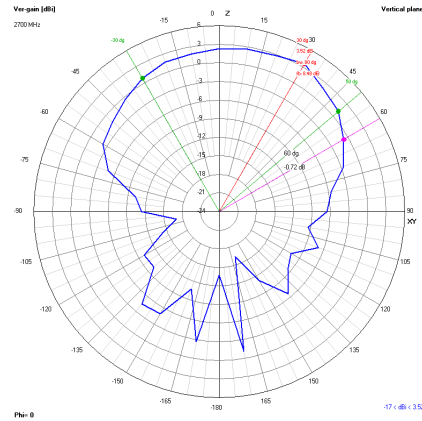
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Radiation Plots tested with 1 m cable

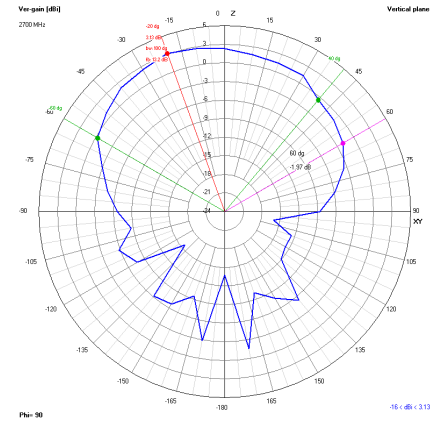
2700 MHz XY



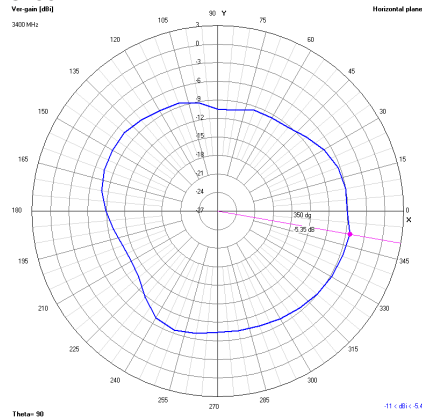
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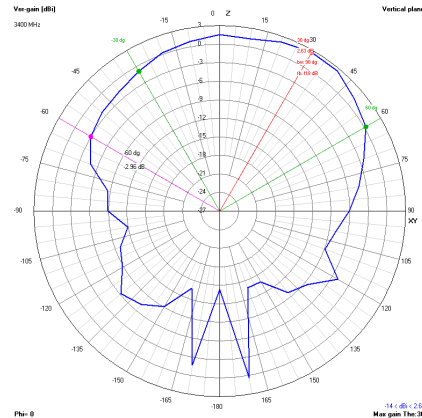
YZ



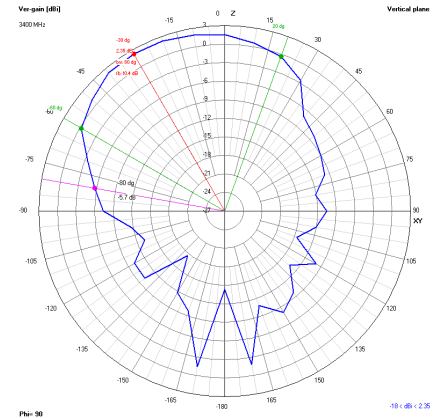
3400 MHz XY



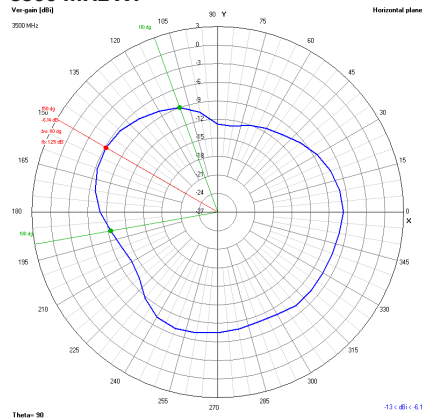
XZ



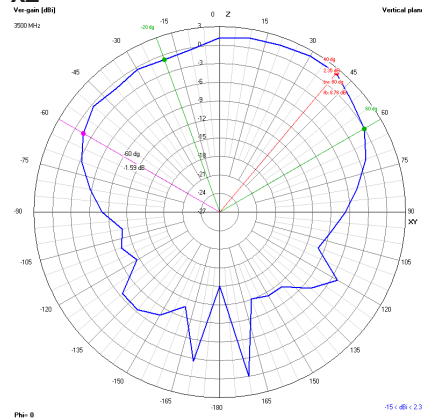
YZ



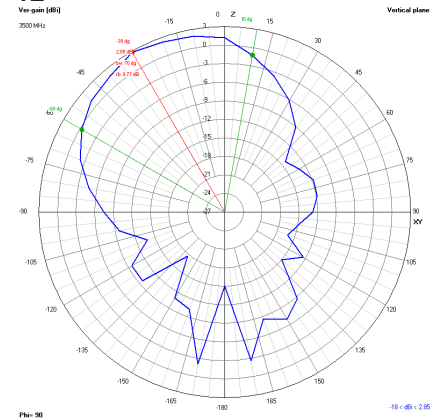
3500 MHz XY



XZ



YZ



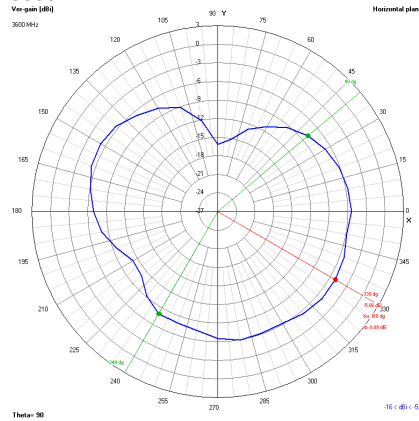


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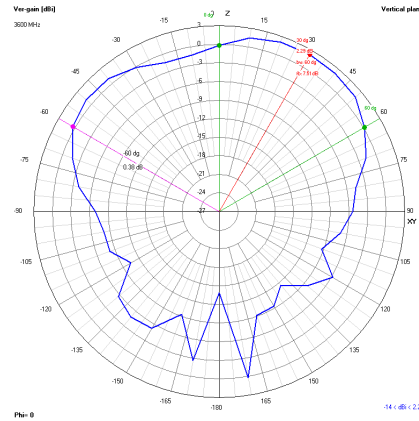
2G/3G/4G/5G & WiFi through hole mount puck Antenna

Radiation Plots tested with 1 m cable

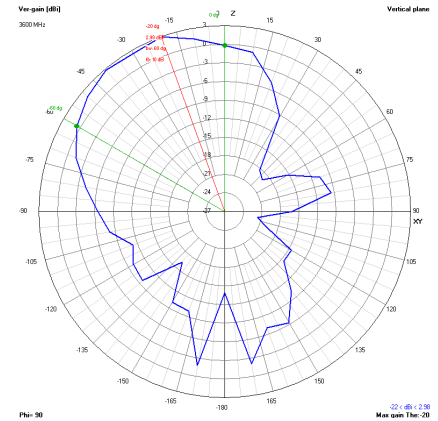
3600 MHz XY



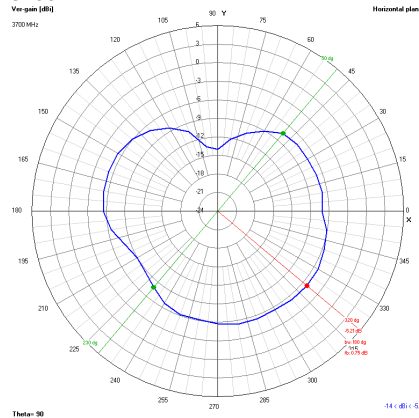
XZ



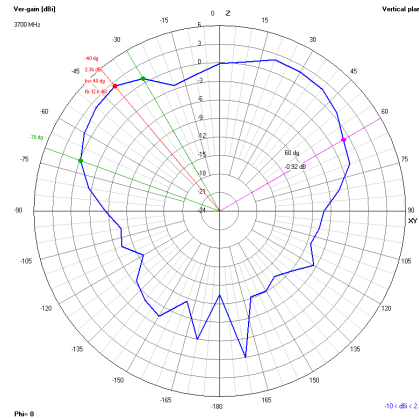
YZ



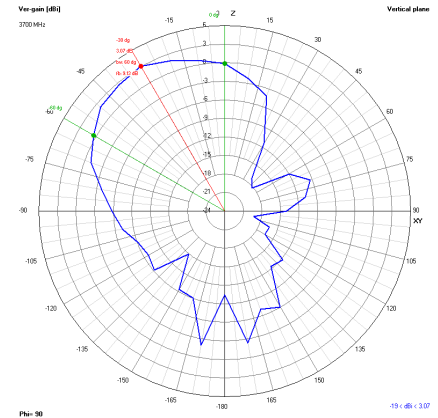
3700 MHz XY



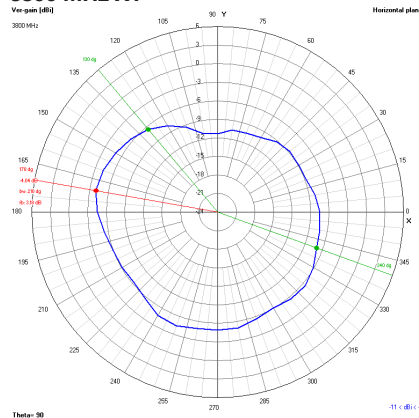
XZ



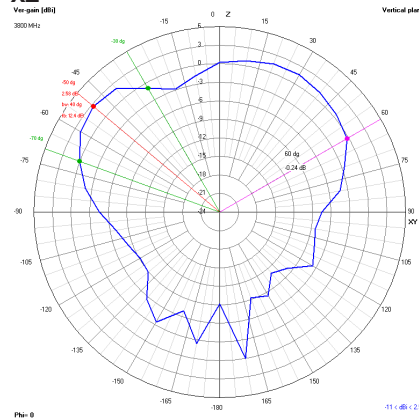
YZ



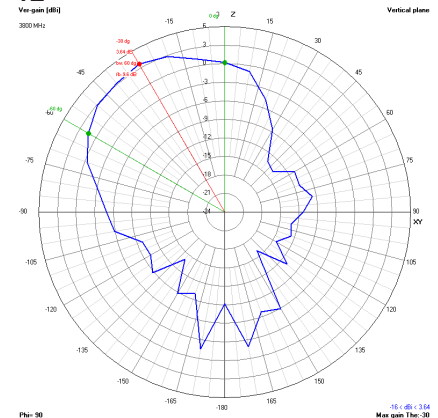
3800 MHz XY



XZ



YZ



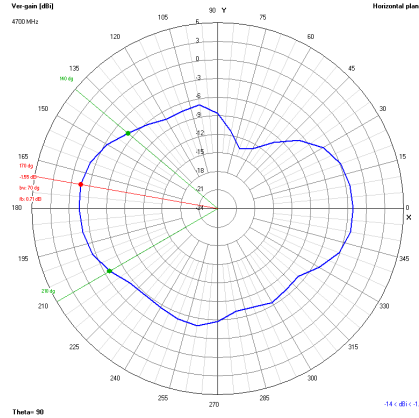


Tango 44

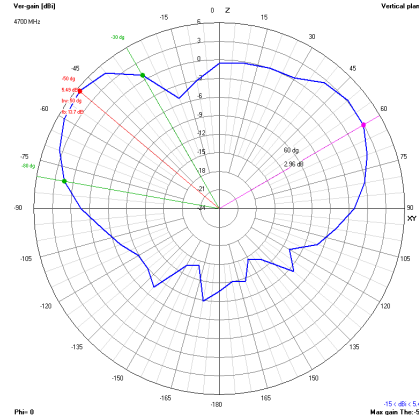
2G/3G/4G/5G & WiFi through hole mount puck Antenna

Radiation Plots tested with 1 m cable

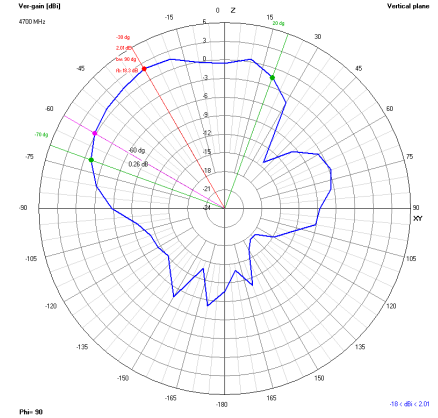
4700 MHz XY



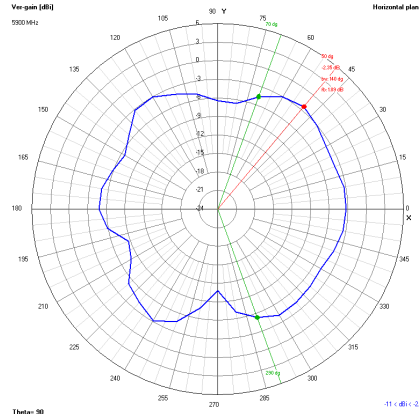
XZ



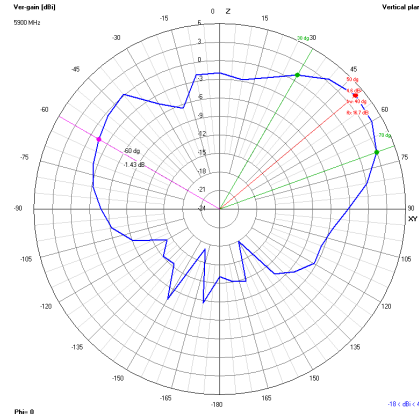
YZ



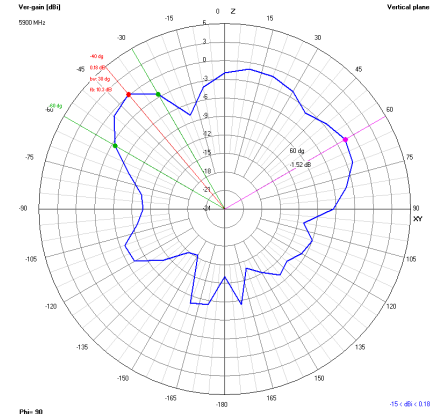
5900 MHz XY



XZ

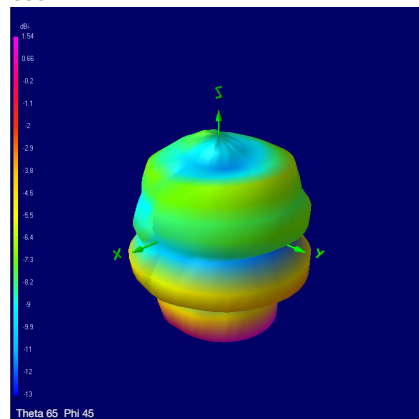


YZ

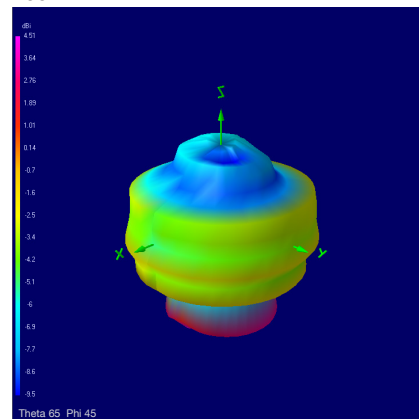


3D Radiation Plots tested with 1 m cable

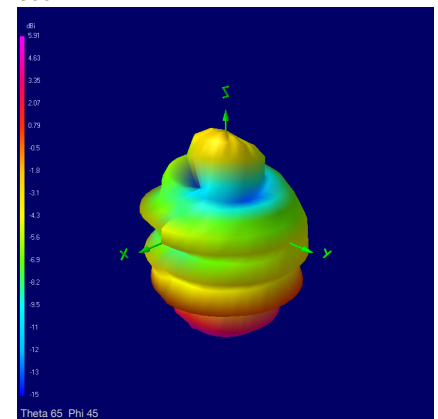
600 MHz



700 MHz



800 MHz



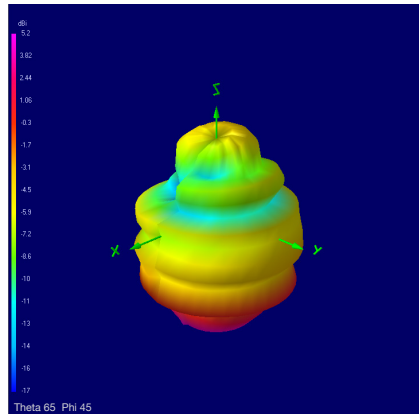


Tango 44

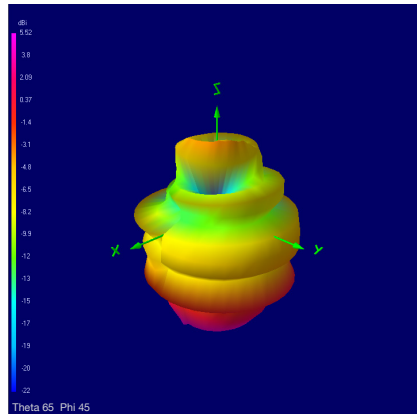
2G/3G/4G/5G & WiFi through hole mount puck Antenna

3D Radiation Plots tested with 1 m cable

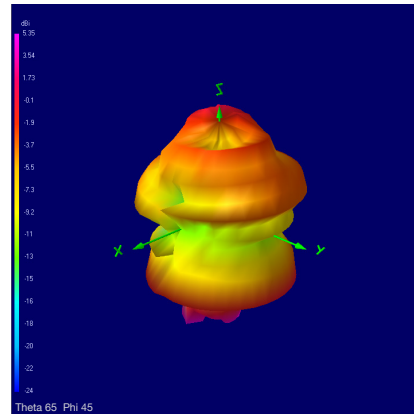
860 MHz



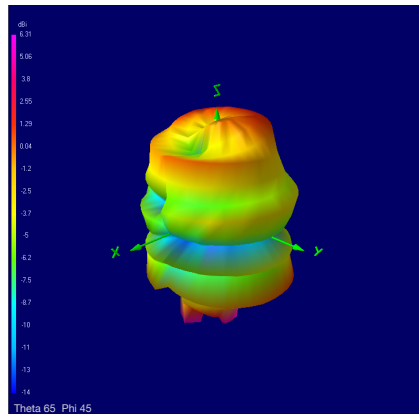
900 MHz



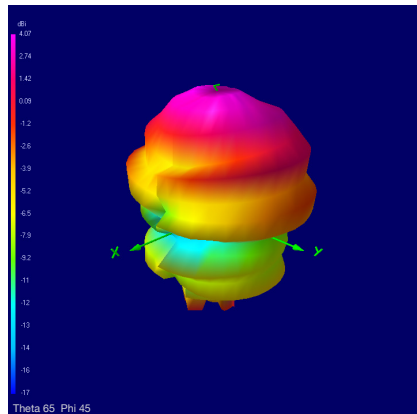
1440 MHz



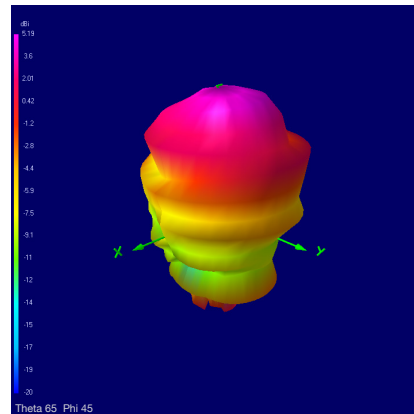
1500 MHz



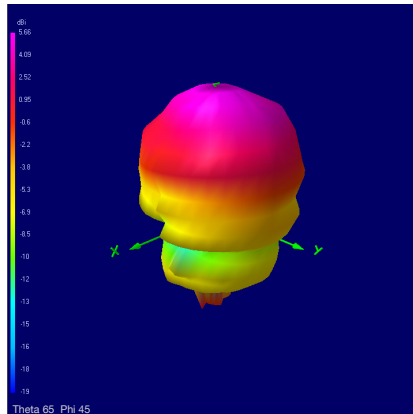
1600 MHz



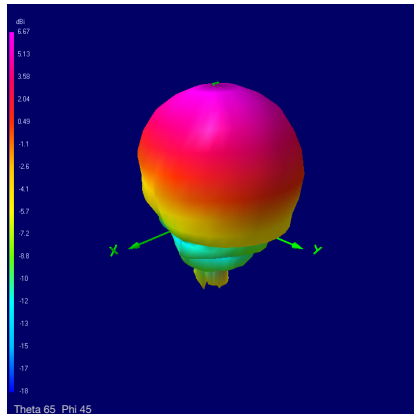
1700 MHz



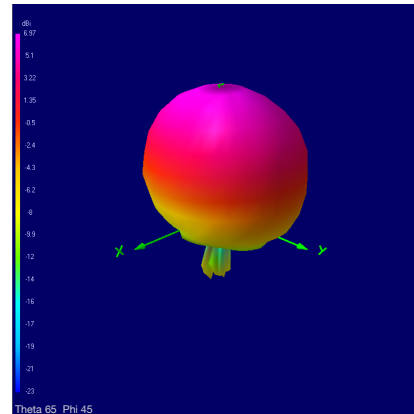
1800 MHz



1900 MHz



2000 MHz



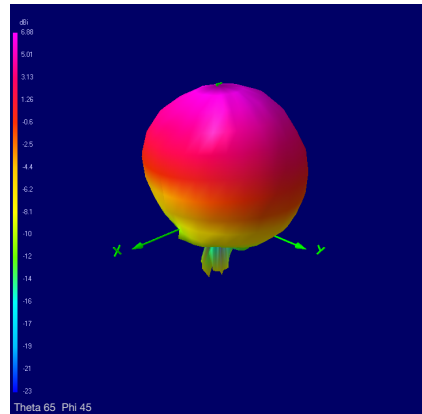


Tango 44

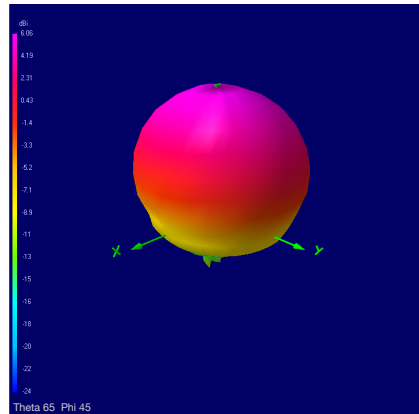
2G/3G/4G/5G & WiFi through hole mount puck Antenna

3D Radiation Plots tested with 1 m cable

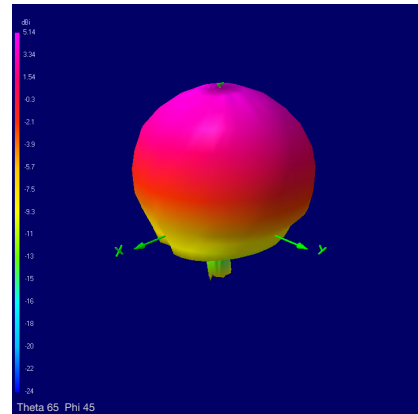
2100 MHz



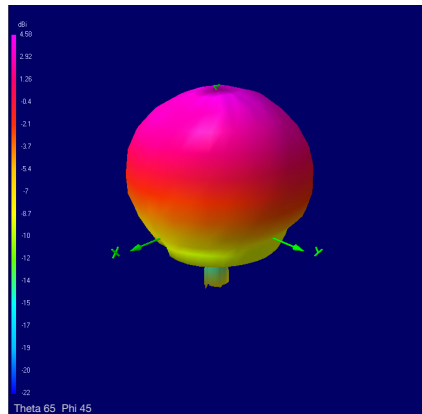
2300 MHz



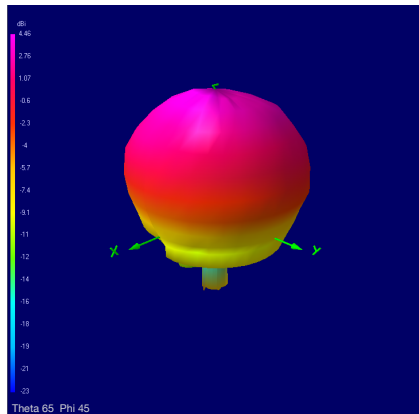
2400 MHz



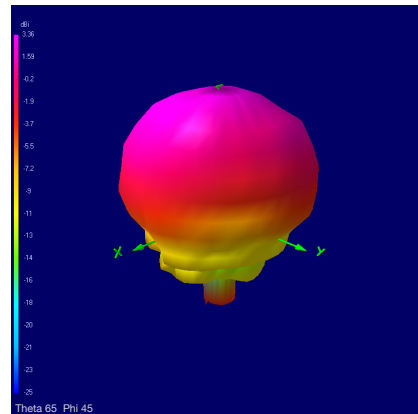
2440 MHz



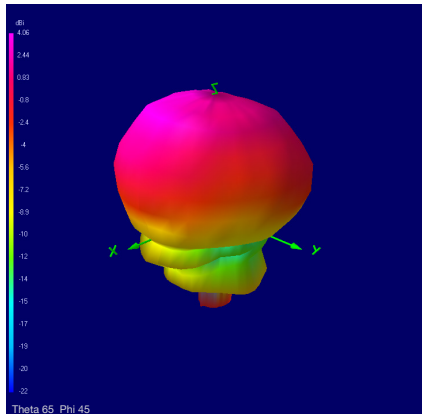
2500 MHz



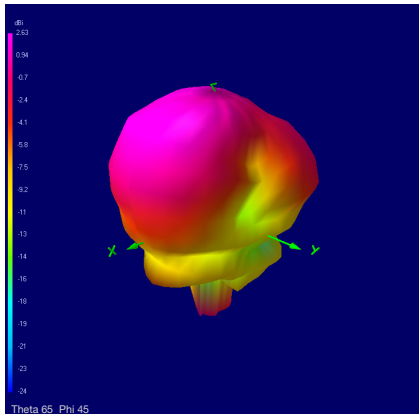
2600 MHz



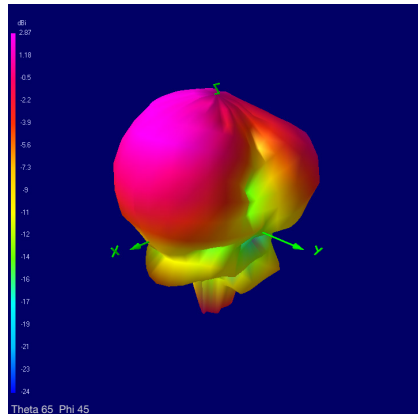
2700 MHz



3400 MHz



3500 MHz



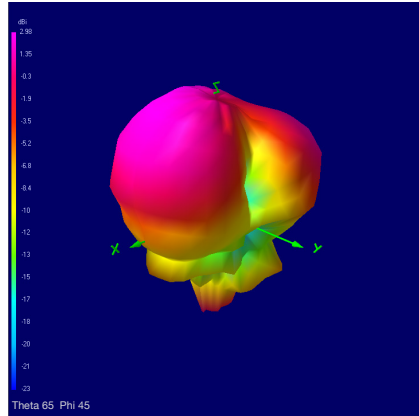


Tango 44

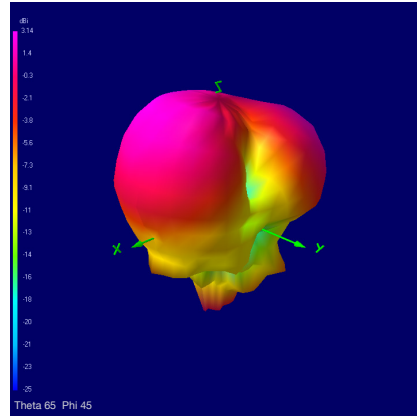
2G/3G/4G/5G & WiFi through hole mount puck Antenna

3D Radiation Plots tested with 1 m cable

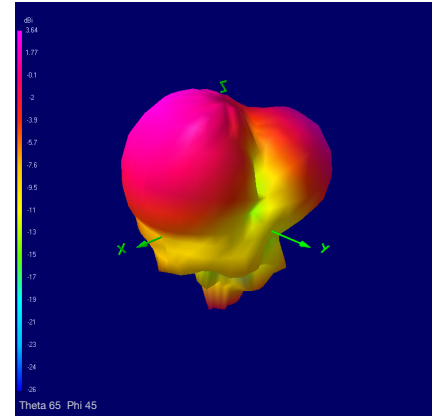
3600 MHz



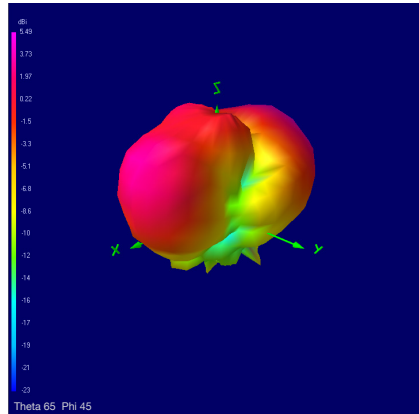
3700 MHz



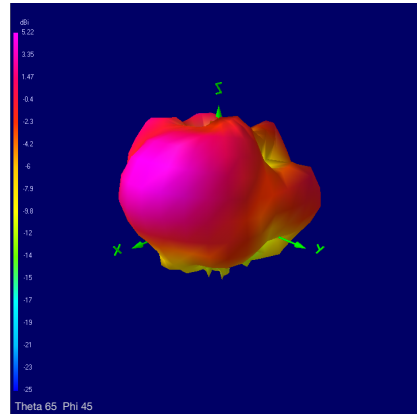
3800 MHz



4700 MHz



5900 MHz



Ordering Details

Part Number	Description
TANGO44/1M/LL/SMAM/S/S/19	2G/3G/4G/5G & WIFI THROUGH HOLE MOUNT PUCK ANTENNA SMA MALE CONNECTOR 1M LOW LOSS CABLE
TANGO44/2.5M/LL/SMAM/S/S/19	2G/3G/4G/5G & WIFI THROUGH HOLE MOUNT PUCK ANTENNA SMA MALE CONNECTOR 2.5M LOW LOSS CABLE
TANGO44/5M/LL/SMAM/S/S/19	2G/3G/4G/5G & WIFI THROUGH HOLE MOUNT PUCK ANTENNA SMA MALE CONNECTOR 5M LOW LOSS CABLE