



Tango 11A

2G/3G/4G/5G & Dual Band WiFi Puck Antenna

Key Features

- Quad Band GSM / GPRS 2G and UMTS 3G
- 4G and 5G LTE
- Dual Band WiFi 2.4 GHz and 4.9 GHz to 5.9 GHz
- Low profile



General Description

The Tango 11A puck antennas operate on 850/900/1800/1900/2100MHz bands supporting quad band GSM/ GPRS networks throughout Europe, Asia and Africa with the addition of 3G UMTS, 4G/5G LTE and Dual Band WiFi.

The tough case and through hole mount design makes it suitable for use in external environments like high sided vehicles.

The RF cable is fed via the through hole mount base to ensure no cable is visible when fixed and the rubber 'skirt' around the base protects against water ingress.

The antenna is finished with an SMA Male connector and comes in different cable lengths. Alternative connector types and cable lengths can be specified for volume orders.

Additional Considerations

- Internal or external use
- Strong puck design
- Meets all EU compliance criteria for electronic goods

T Through	2G GSM	3G UMTS	4G LTE
LTE Cat M	LTE NB IoT	5G LTE	WLAN 2400
BLE Bluetooth	WLAN 5800	WiFi 6 802.11ax	IP 67



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Electrical Specification

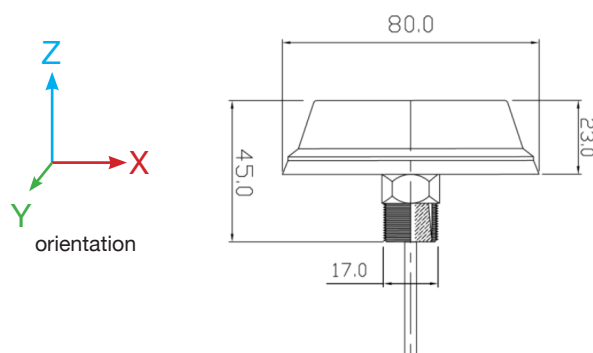
Humidity:	40 to 95% RH
Impedance:	50 Ohms
Polarization:	Linear vertical

Environmental Specification

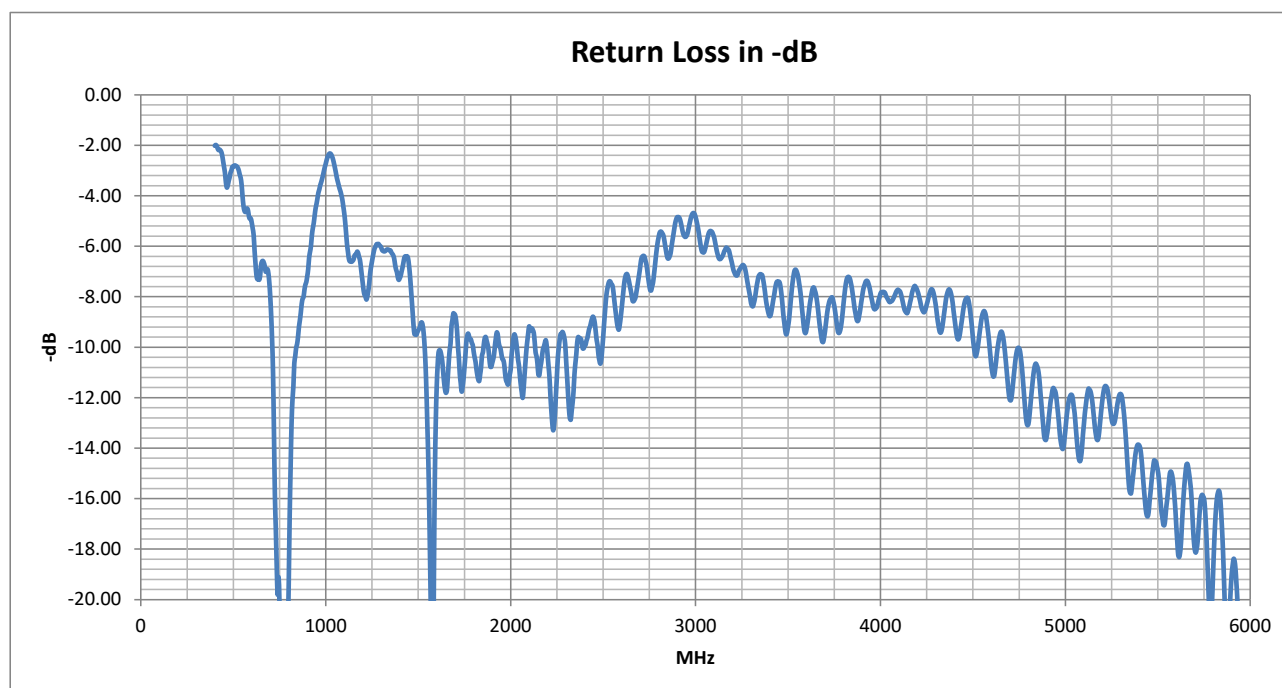
Temperature range:	-40 to 85 °C
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Mechanical Specification

Dimensions:	80 mm Ø x H23 mm
Cable:	RG174
Connector:	SMA Male
Mounting Method:	M 17 Screw Mount
Mounting screw length:	22 mm
Max Panel Thickness:	13 mm
Radome Material:	Nylon PA6



Return Loss tested with 1 m cable

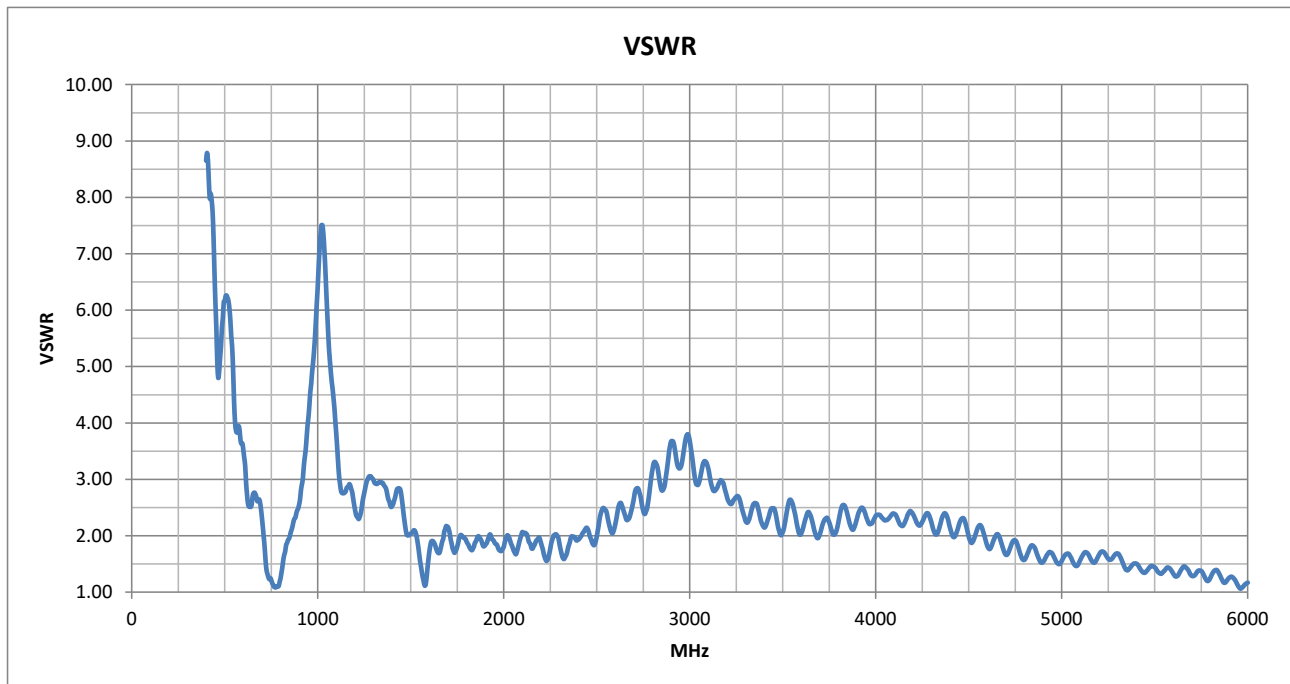




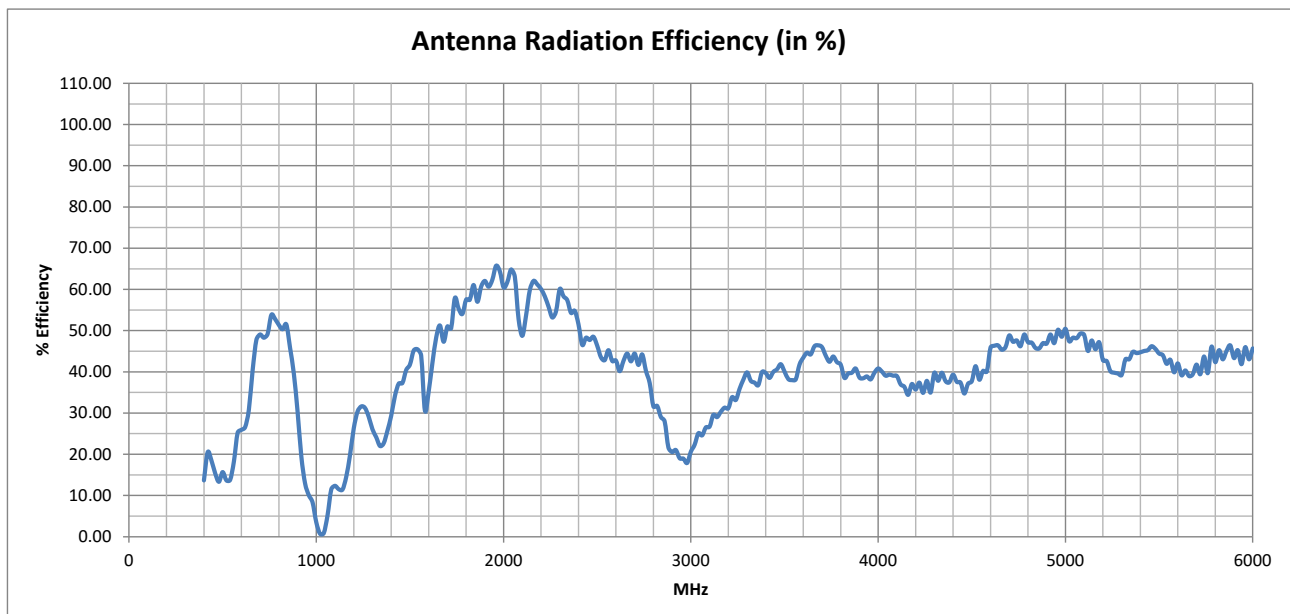
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VSWR tested with 1 m cable



Radiation Efficiency tested with 1 m 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	63.31 / 57.12 ●	2.02 / 2.05
2/n2	B2	North America/Latin America/Caribbean	1850-1910 MHz	1930-1990 MHz	60.31 / 62.75 ●	1.99 / 2.01
3/n3	B3	Europe/Africa/Asia/Oceania	1710-1785 MHz	1805-1880 MHz	54.42 / 58.77 ●	2.04 / 1.99
4	B4	North America/Latin America/Caribbean	1710-1755 MHz	2110-2155 MHz	53.73 / 56.10 ●	2.04 / 2.05
5/n5	B5	Country Specific	824-849 MHz	869-894 MHz	49.23 / 38.62 ●	1.99 / 2.48
7/n7		Latin America/Europe/Asia +	2500-2570 MHz	2620-2690 MHz	44.14 / 42.86 ●	2.49 / 2.58
8/n8	B8	Europe / Asia +	880-915 MHz	925-960 MHz	29.86 / 14.20 ○	2.91 / 4.54
11	B11	Country Specific	1427.9-1447.9 MHz	1475.9-1495.9 MHz	36.23 / 39.86 ●	2.84 / 2.07
12/n12	B12	North America/Caribbean +	699-716 MHz	729-746 MHz	48.38 / 50.45 ●	2.47 / 1.38
13/n13	B13	North America/Caribbean +	777-787 MHz	746-756 MHz	52.69 / 51.52 ●	1.11 / 1.25
14/n14	B14	Country Specific	788-798 MHz	758-768 MHz	52.12 / 51.96 ●	1.24 / 1.16
17	B17	North America/Caribbean +	704-716 MHz	734-746 MHz	48.70 / 50.45 ●	2.32 / 1.32
18/n18	B18	Country Specific	815-830 MHz	860-875 MHz	51.09 / 42.72 ●	1.83 / 2.30
19	B19	Country Specific	830-845 MHz	875-890 MHz	49.23 / 38.62 ●	1.94 / 2.45
20/n20	B20	Europe/Africa +	832-862 MHz	791-821 MHz	46.83 / 51.53 ●	2.17 / 1.72
21		Country Specific	1447.9-1462.9 MHz	1495.9-1510.9 MHz	38.31 / 42.48 ●	2.81 / 2.06
25/n25	B25	Country Specific	1850-1915 MHz	1525-1559 MHz	60.31 / 44.88 ●	1.99 / 2.07
26/n26	B26	Country Specific	814-849 MHz	859-894 MHz	49.77 / 41.84 ●	1.99 / 2.48
28/n28	B28	Latin America/Europe/Asia +	703-748 MHz	758-803 MHz	50.45 / 51.53 ●	2.32 / 1.34
29/n29		Country Specific	-	717-728 MHz	48.87 ●	1.78
30/n30		Country Specific	2305-2315 MHz	2350-2360 MHz	59.23 / 55.87 ●	1.77 / 1.95
31	B31	Country Specific	452.5-457.5 MHz	462.5-467.5 MHz	16.98 / 14.38 ○	6.13 / 5.08
32		Country Specific	-	1452-1496 MHz	39.18 ●	2.71
38/n38		Europe +	2570-2620 MHz		42.72 ●	2.54
39/n39		Country Specific	1880-1920 MHz		61.14 ●	1.98
40/n40		Asia +	2300-2400 MHz		56.09 ●	1.99
41/n41		Country Specific	2496-2690 MHz		43.86 ●	2.58
42		Country Specific	3400-3600 MHz		40.05 ●	2.64
43		Country Specific	3600-3800 MHz		44.13 ●	2.42
46/n46		Country Specific	5150-5925 MHz		43.03 ●	1.72
48/n48		Country Specific	3550-3700 MHz		43.23 ●	2.59
65/n65		Country Specific	1920-2010 MHz	2110-2200 MHz	62.59 / 57.62 ●	2.02 / 2.05
66/n66	B66	Country Specific	1710-1780 MHz	2110-2200 MHz	53.80 / 57.62 ●	2.04 / 2.05
71/n71	B71	Country Specific	663-698 MHz	617-652 MHz	45.74 / 30.94 ●	2.77 / 2.93

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	47.25 / 44.88 ●	1.88 / 2.07
n34		2010 – 2025 MHz		62.40 ●	2.01
n47		5855 – 5925 MHz		44.18 ●	1.27
n50		1432 – 1517 MHz		39.35 ●	2.84
n51		1427 – 1432 MHz		35.68 ●	2.84
n53		2483.5 – 2495 MHz		47.44 ●	1.91
n67		738 – 758 MHz		50.45 ●	1.26
n70	B70	1695 – 1710 MHz	1995 – 2020 MHz	49.65 / 62.25 ●	2.17 / 2.01
n74		1427 – 1470 MHz	1475 – 1518 MHz	37.28 / 41.19 ●	2.84 / 2.10
n75		1432 – 1517 MHz		39.35 ●	2.84
n76		1427 – 1432 MHz		35.68 ●	2.84
n77		3300 – 4200 MHz		40.12 ●	2.64
n78		3300 – 3800 MHz		41.33 ●	2.64
n79		4400 – 5000 MHz		44.46 ●	2.31
n80		1710 – 1785 MHz		54.42 ●	2.04
n81		880 – 915 MHz		29.86 ●	2.91
n82		832 – 862 MHz		46.83 ●	2.17
n83		703 – 748 MHz		50.11 ●	2.32
n84		1920 – 1980 MHz		63.31 ●	2.02
n85	B85	698 – 716 MHz	728 – 746 MHz	48.38 / 50.45 ●	2.47 / 1.38
n86		1710 – 1780 MHz		53.80 ●	2.04
n89		824 – 849 MHz		49.23 ●	1.99
n90		2496 – 2690 MHz		43.86 ●	2.58
n91		832 – 862 MHz	1427 – 1432 MHz	46.83 / 35.68 ●	2.17 / 2.84
n92		832 – 862 MHz	1432 – 1517 MHz	46.83 / 39.35 ●	2.17 / 2.84
n93		880 – 915 MHz	1427 – 1432 MHz	29.86 / 35.68 ●	2.91 / 2.84
n94		880 – 915 MHz	1432 – 1517 MHz	29.86 / 39.35 ●	2.91 / 2.84
n95		2010 – 2025 MHz		62.40 ●	2.01
n96		5925 – 7125 MHz		unmeasured	
n97		2300 – 2400 MHz		56.09 ●	1.99
n98		1880 – 1920 MHz		61.14 ●	1.98
n99		1626.5 – 1660.5 MHz		47.25 ●	1.88

Table data for bands as detailed in 3GPP TS 38.101

● Usable Band

○ Adequate in good signal area

✗ Not Usable

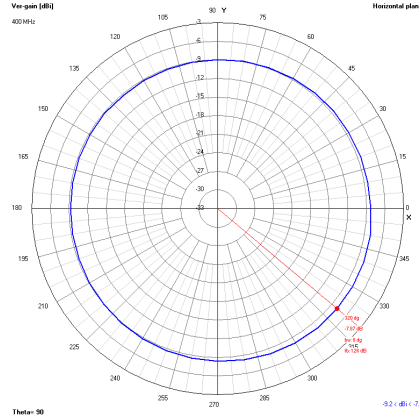


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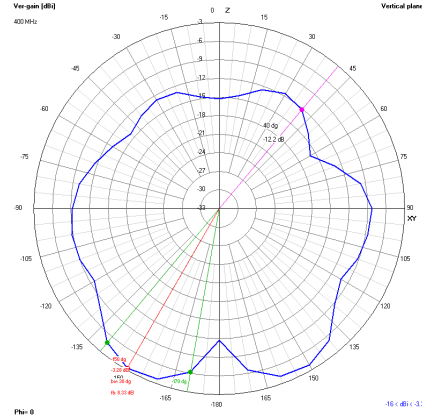
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Radiation Plots tested with 1 m cable

400 MHz XY



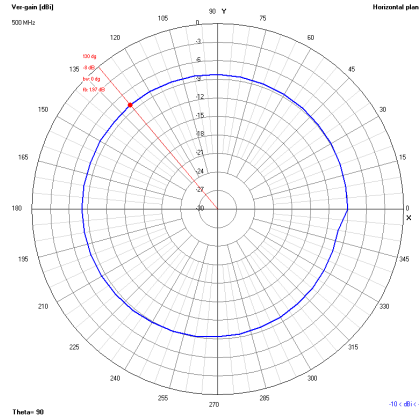
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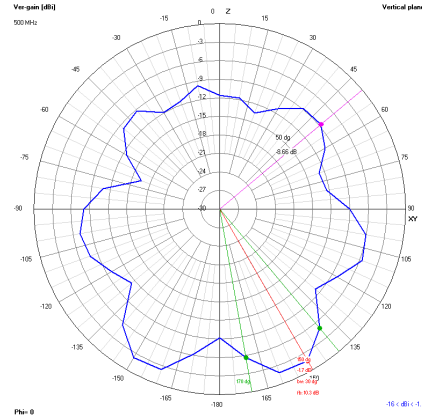
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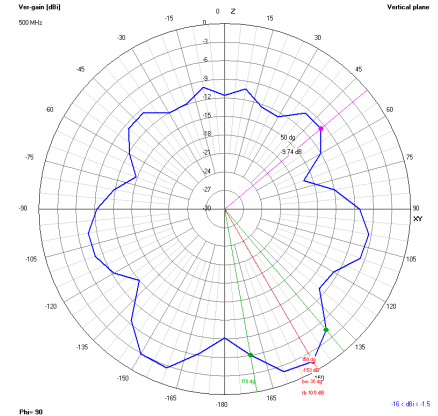
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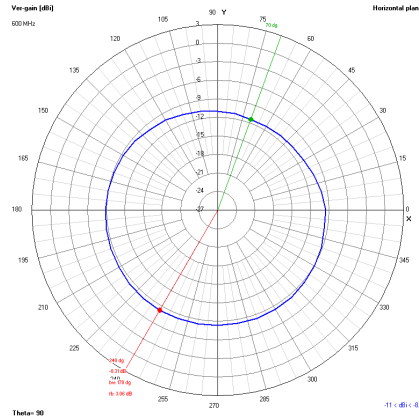
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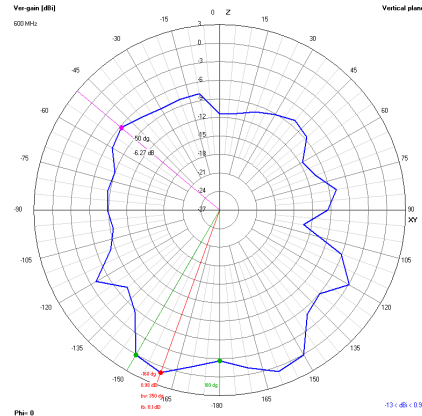
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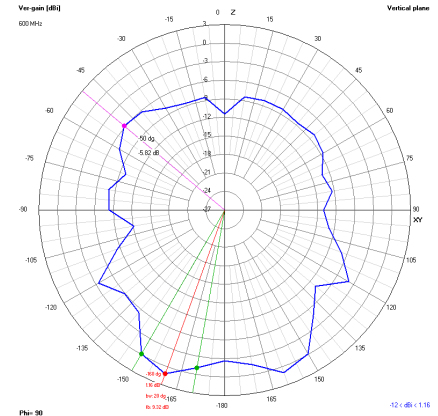
600 MHz XY



XZ



YZ



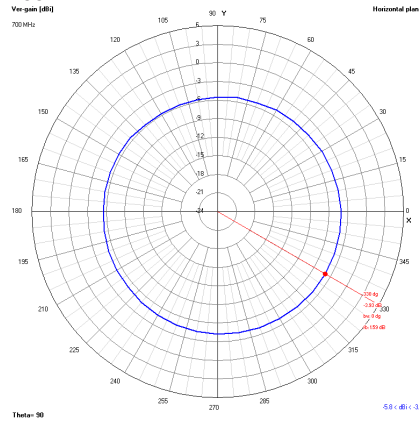


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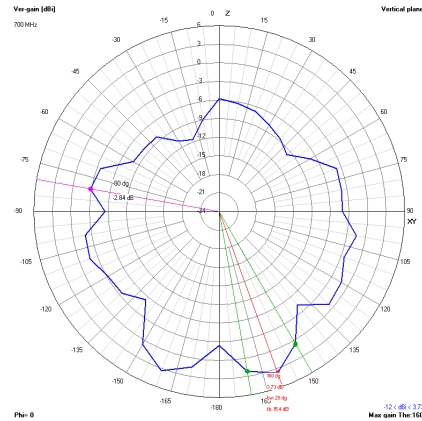
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Radiation Plots tested with 1 m cable

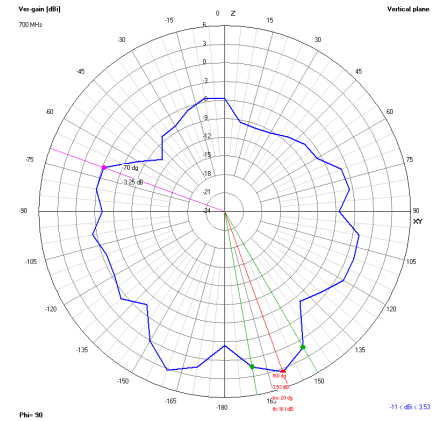
700 MHz XY



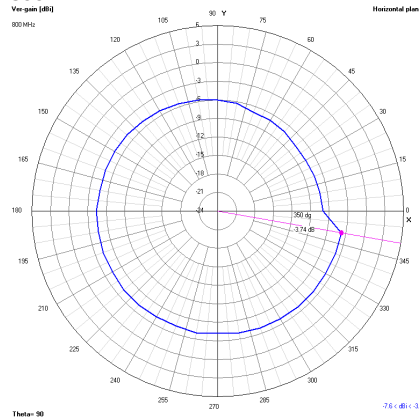
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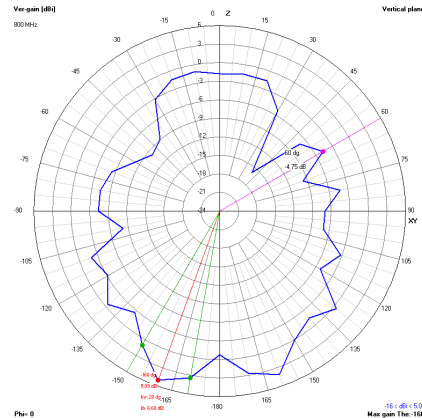
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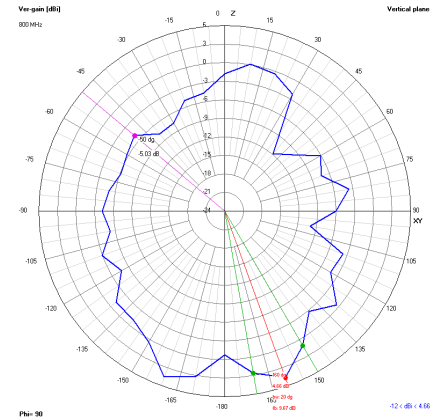
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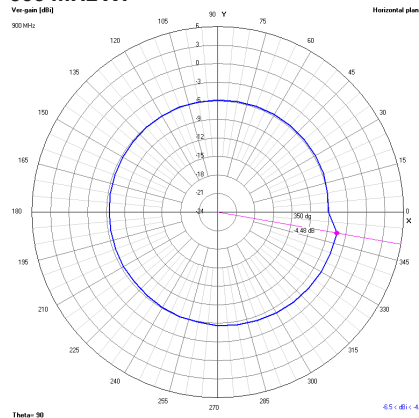
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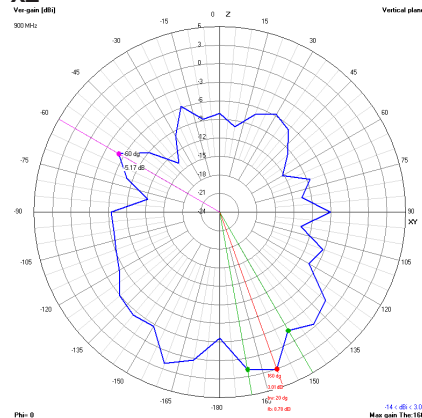
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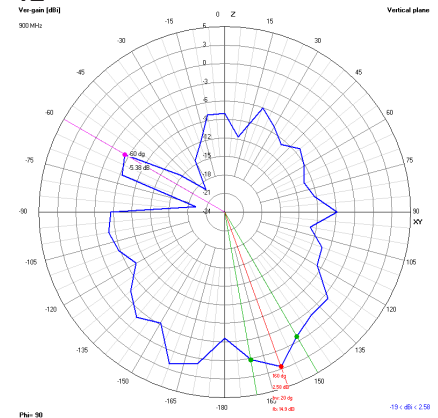
900 MHz XY



XZ



YZ



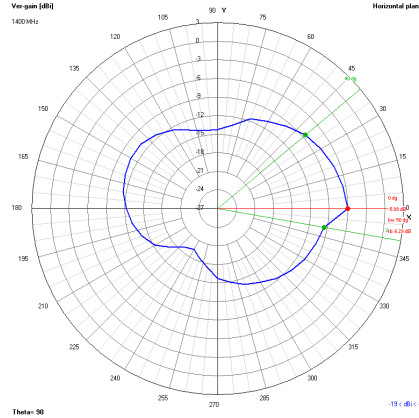


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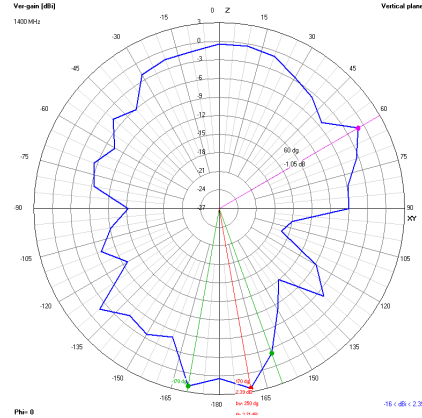
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Radiation Plots tested with 1 m cable

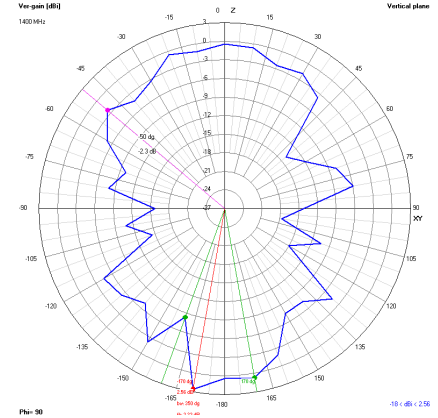
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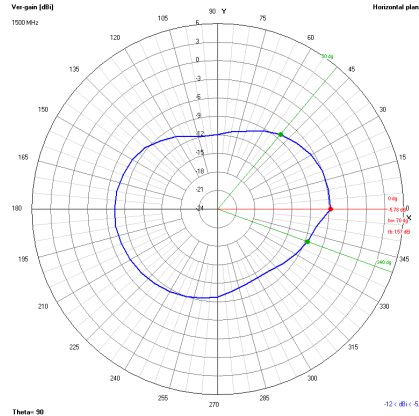
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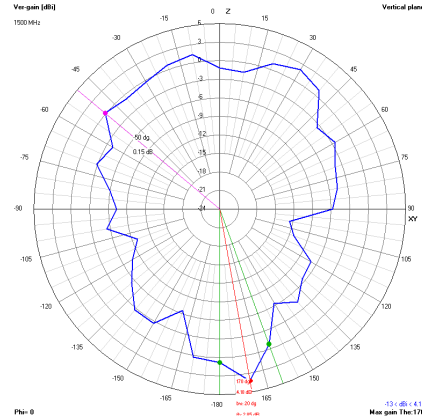
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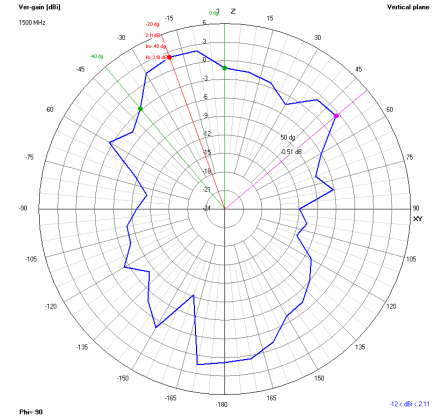
1500 MHz XY



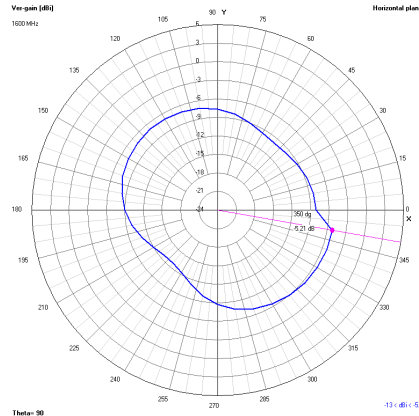
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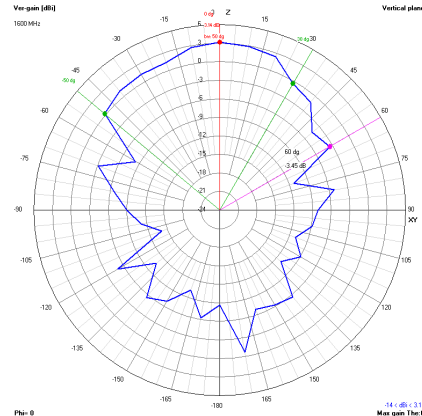
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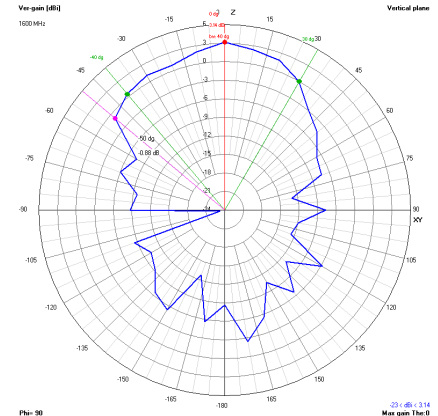
1600 MHz XY



XZ



YZ



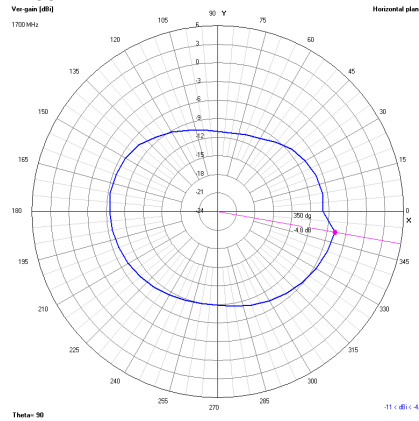


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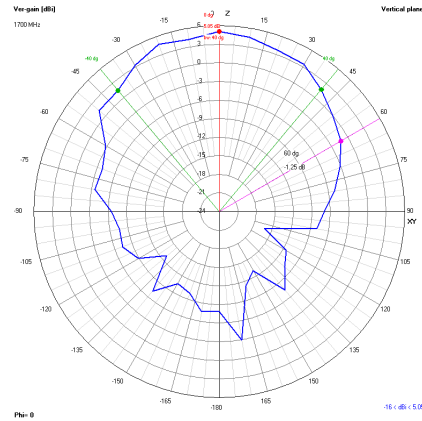
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Radiation Plots tested with 1 m cable

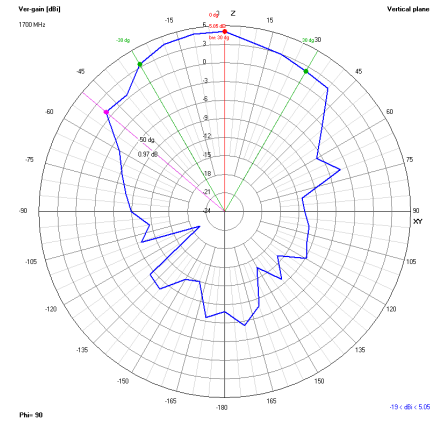
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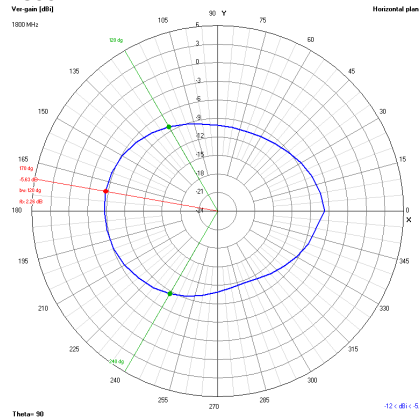
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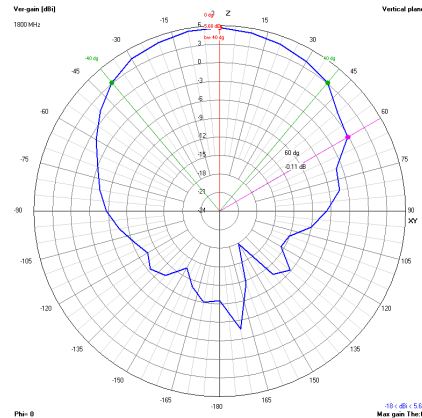
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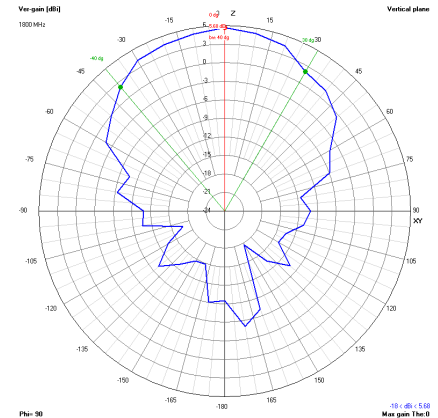
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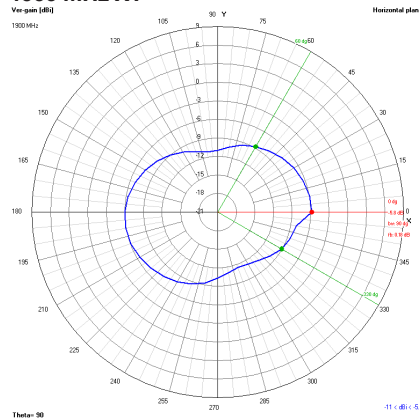
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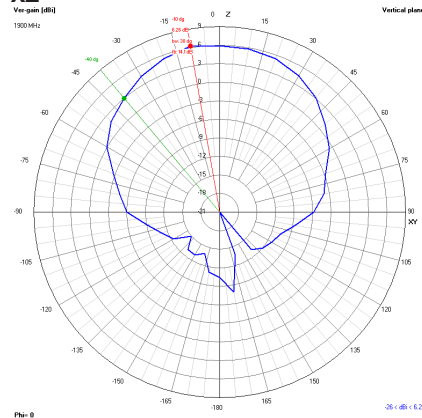
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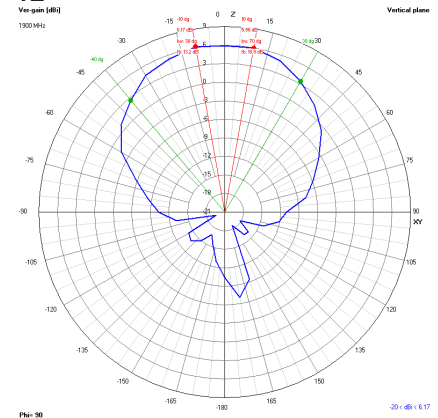
1900 MHz XY



XZ



YZ



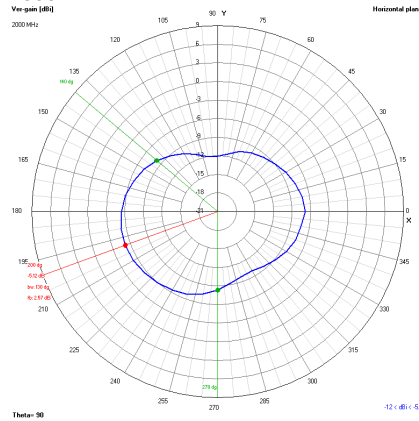


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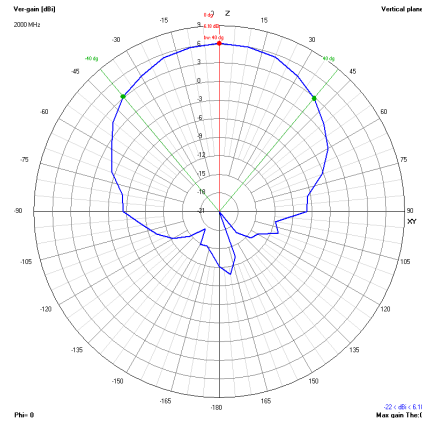
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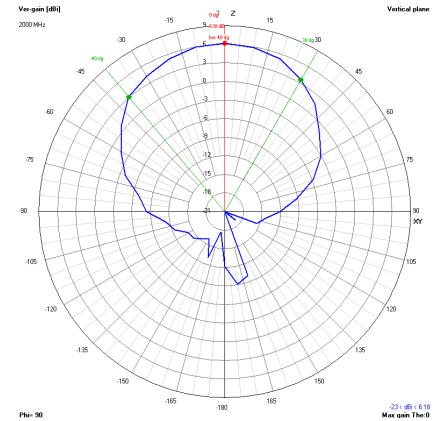
2000 MHz XY



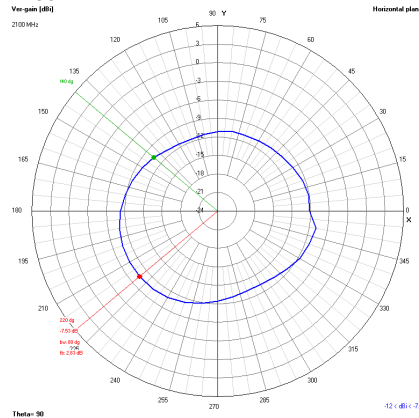
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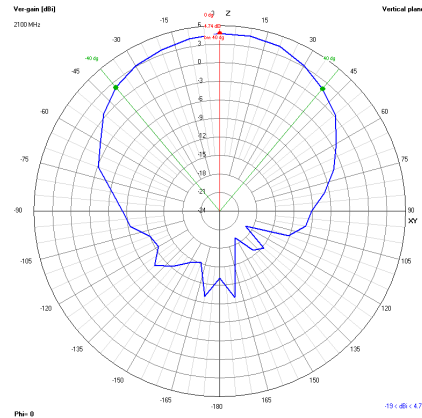
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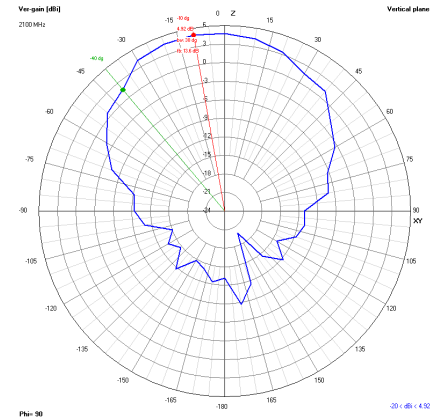
2100 MHz XY



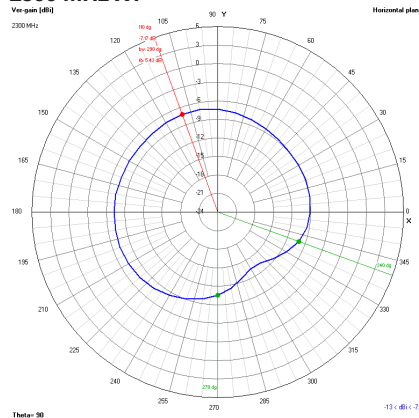
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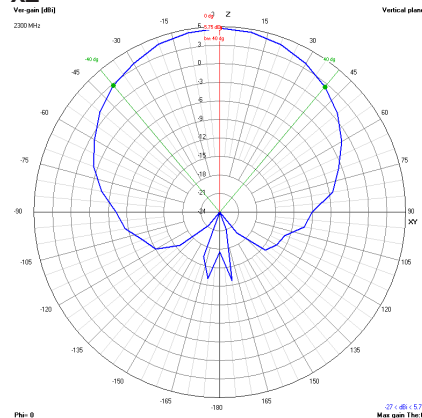
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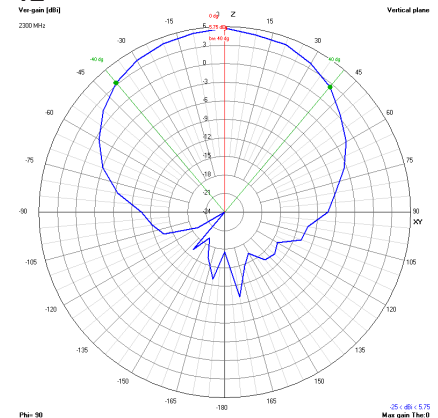
2300 MHz XY



XZ



YZ



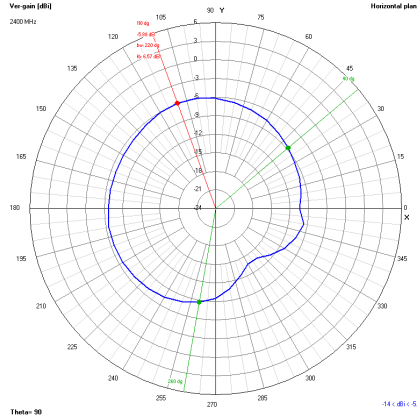


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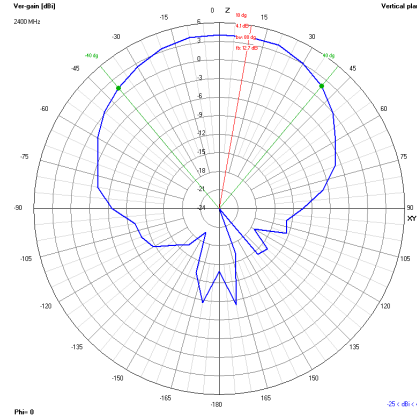
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Radiation Plots tested with 1 m cable

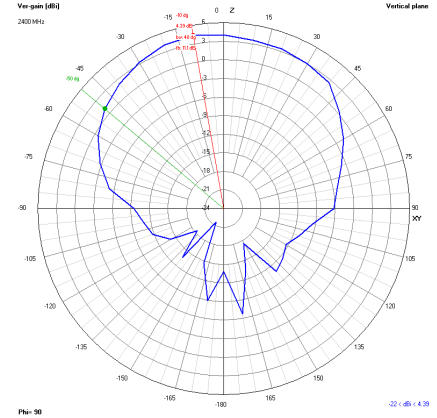
2400 MHz XY



XZ



YZ



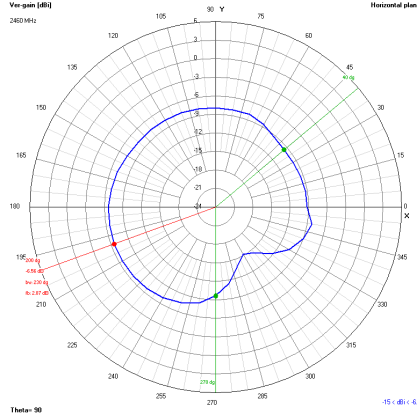
WiFi
Band
2.4
GHz

Eff %
51.52

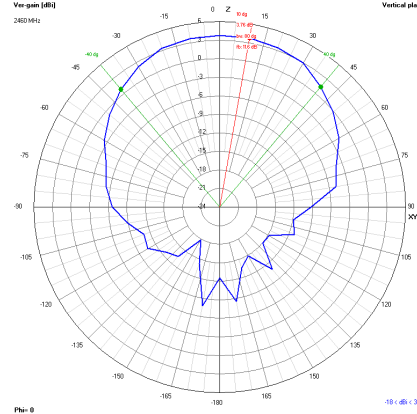
WiFi
Band
2.4
GHz

Eff %
51.52

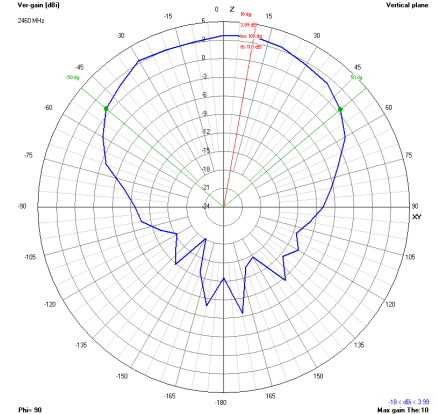
2460 MHz XY



XZ



YZ



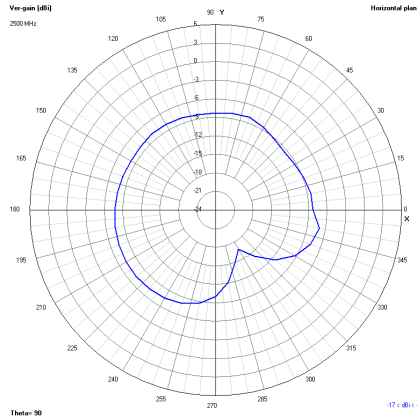
WiFi
Band
2.4
GHz

Eff %
47.75

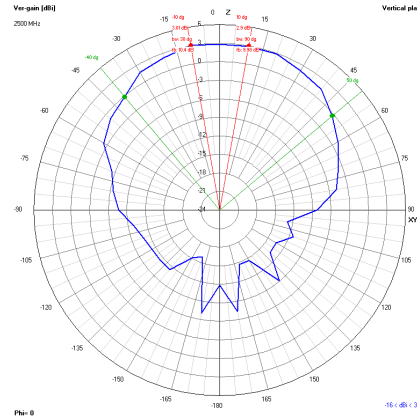
WiFi
Band
2.4
GHz

Eff %
47.75

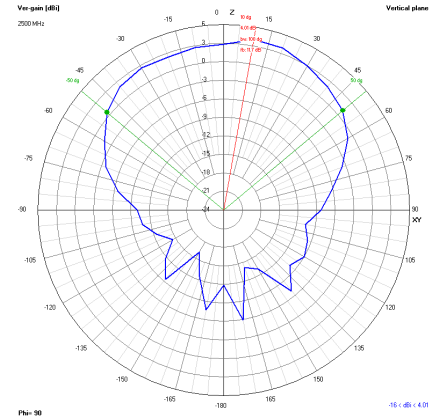
2500 MHz XY



XZ



YZ



WiFi
Band
2.4
GHz

Eff %
46.34

WiFi
Band
2.4
GHz

Eff %
46.34

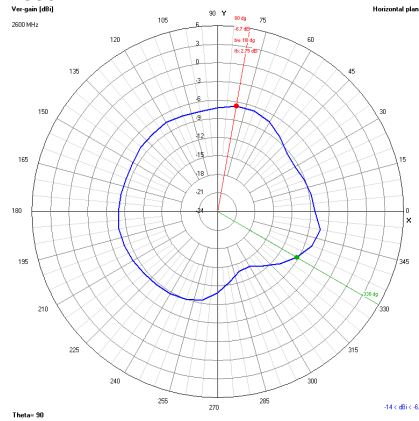


Tango 11A

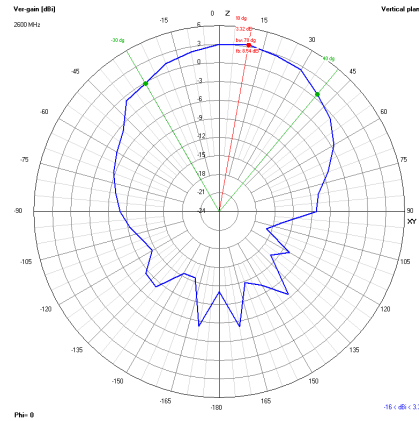
2G/3G/4G/5G & Dual Band WiFi Puck Antenna

Radiation Plots tested with 1 m cable

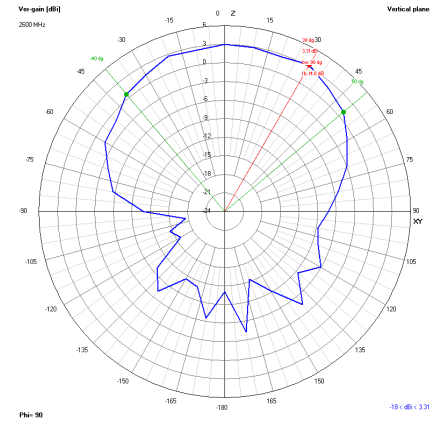
2600 MHz XY



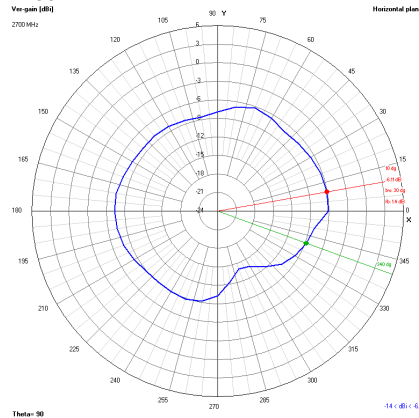
XZ



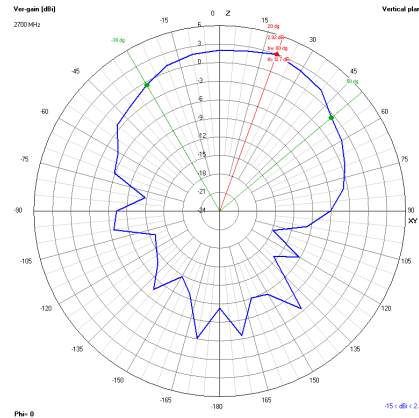
YZ



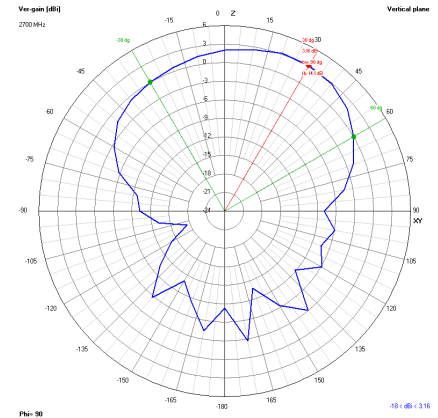
2700 MHz XY



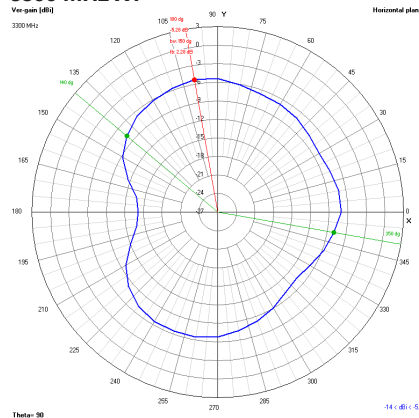
XZ



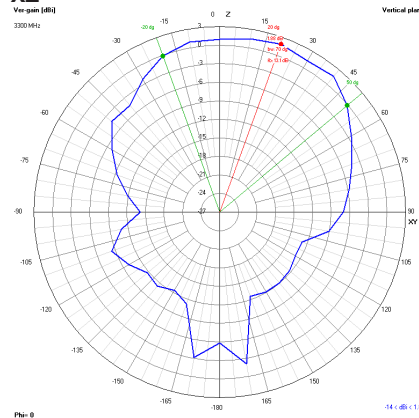
YZ



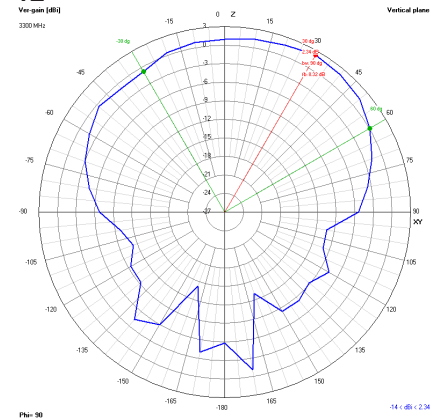
3300 MHz XY



XZ



YZ



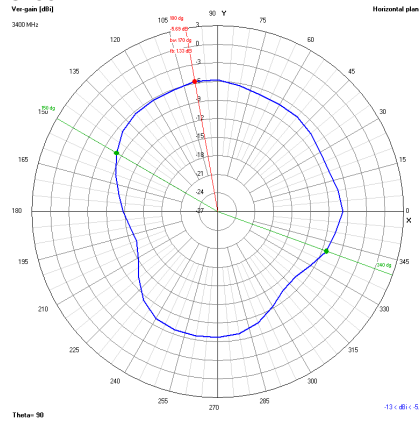


Tango 11A

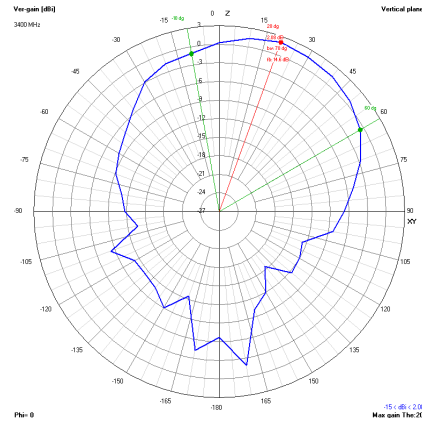
2G/3G/4G/5G & Dual Band WiFi Puck Antenna

Radiation Plots tested with 1 m cable

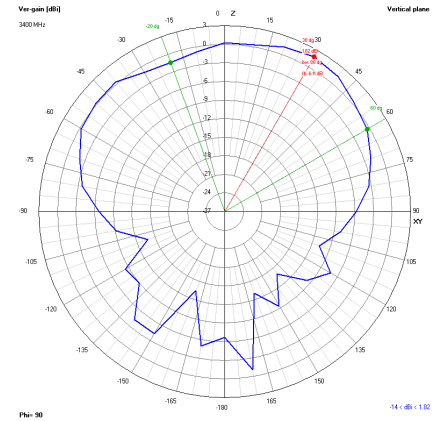
3400 MHz XY



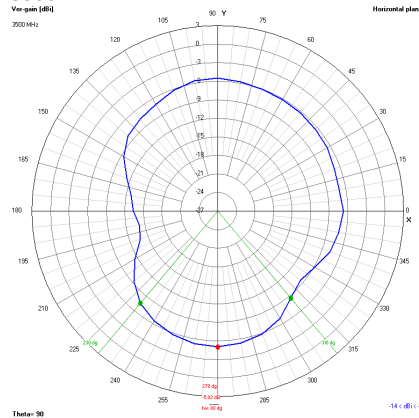
XZ



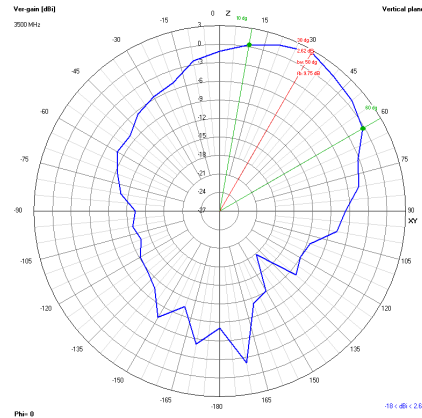
YZ



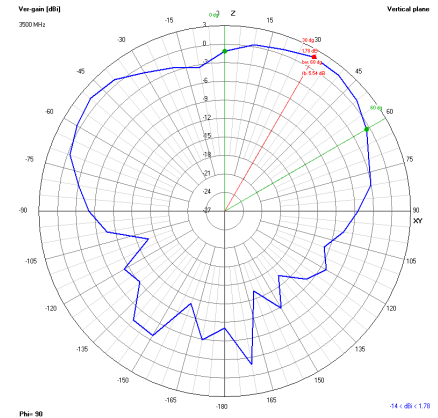
3500 MHz XY



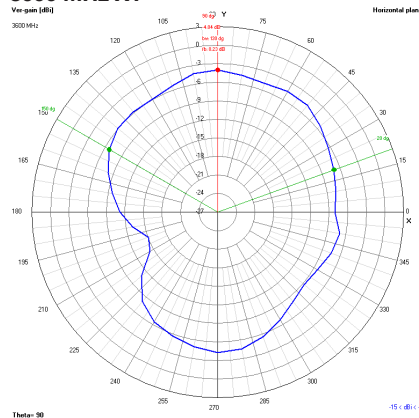
XZ



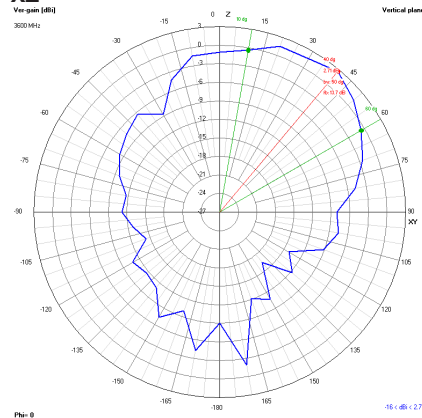
YZ



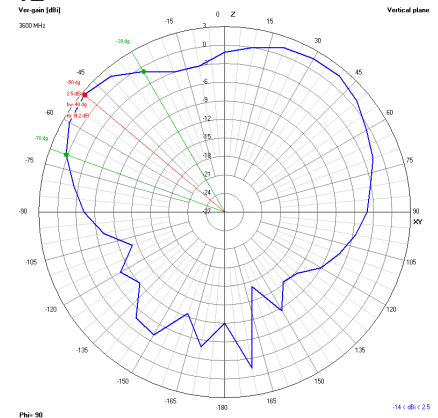
3600 MHz XY



XZ



YZ



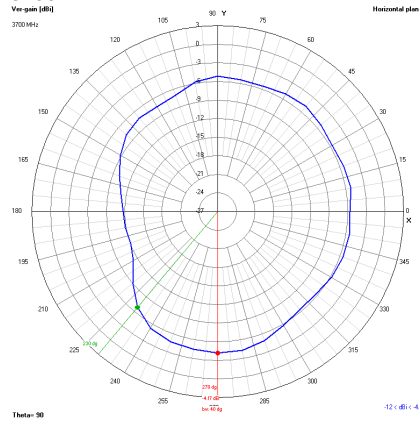


Tango 11A

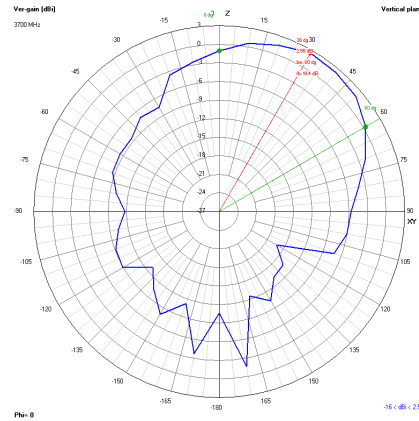
2G/3G/4G/5G & Dual Band WiFi Puck Antenna

Radiation Plots tested with 1 m cable

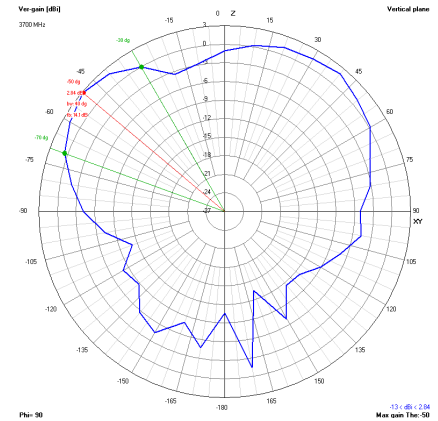
3700 MHz XY



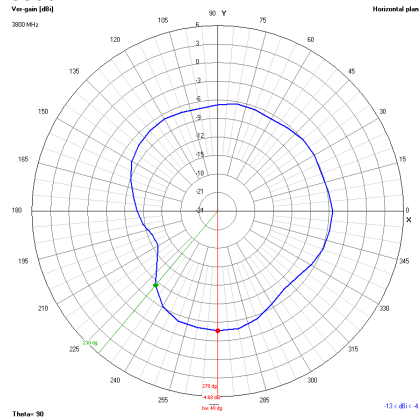
XZ



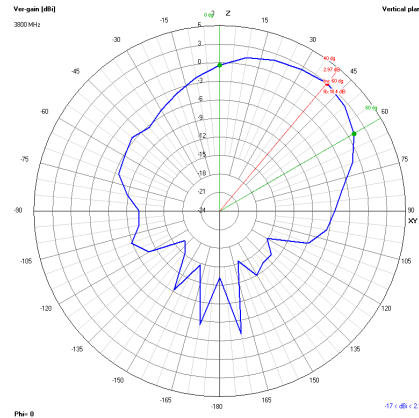
YZ



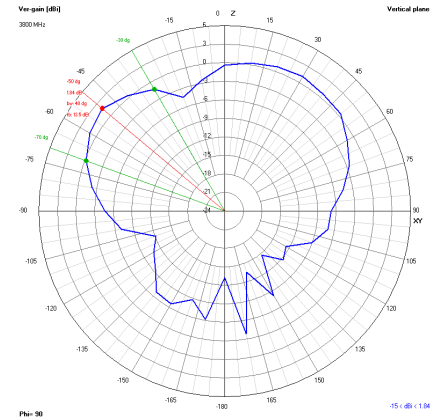
3800 MHz XY



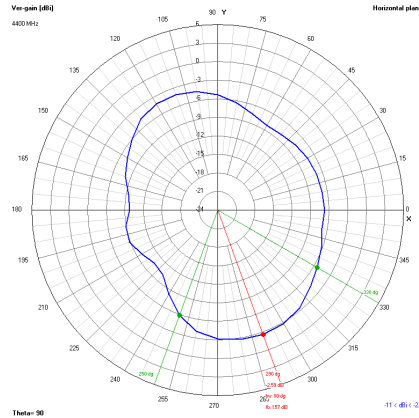
XZ



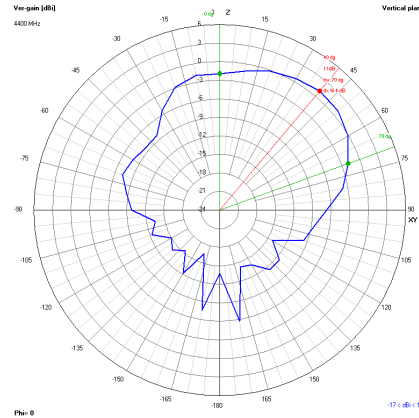
YZ



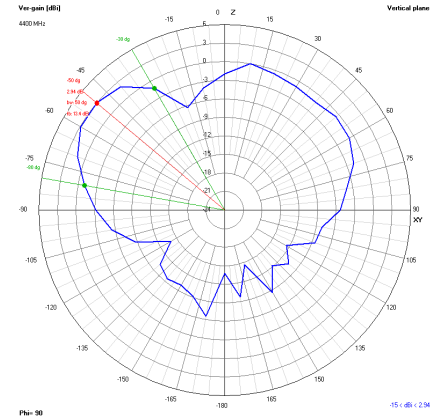
4400 MHz XY



XZ



YZ



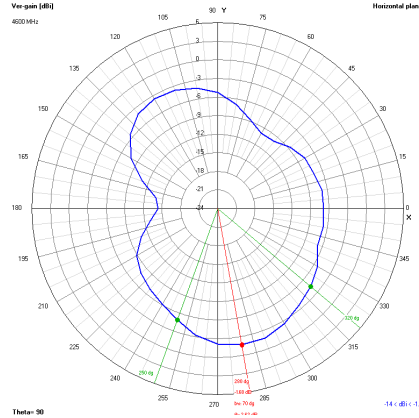


Tango 11A

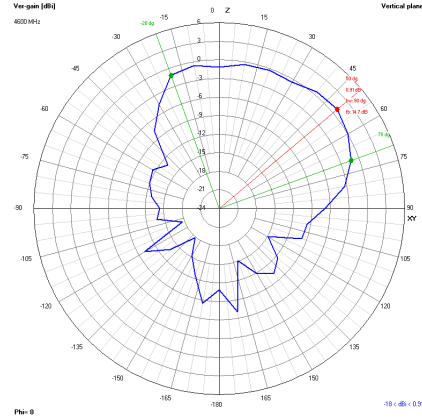
2G/3G/4G/5G & Dual Band WiFi Puck Antenna

Radiation Plots tested with 1 m cable

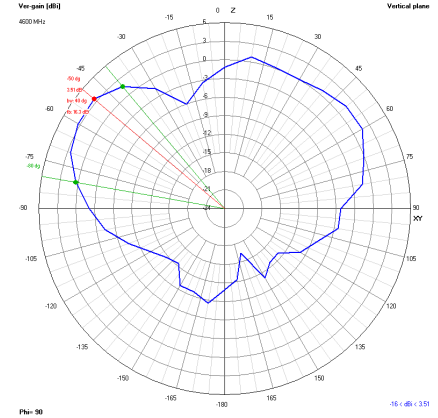
4600 MHz XY



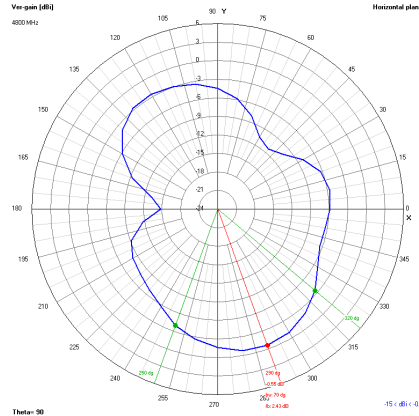
XZ



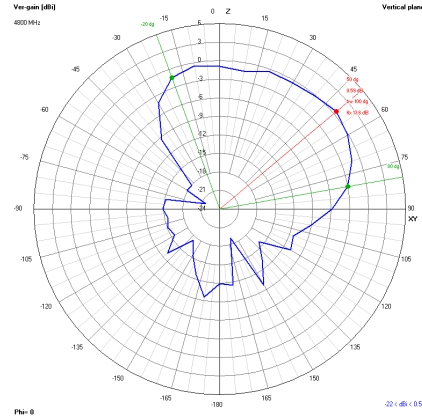
YZ



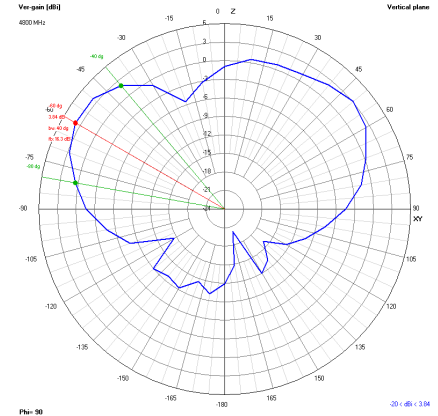
4800 MHz XY



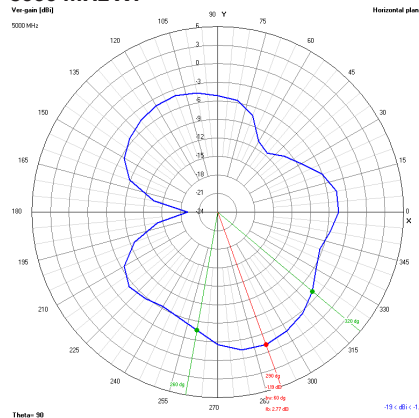
XZ



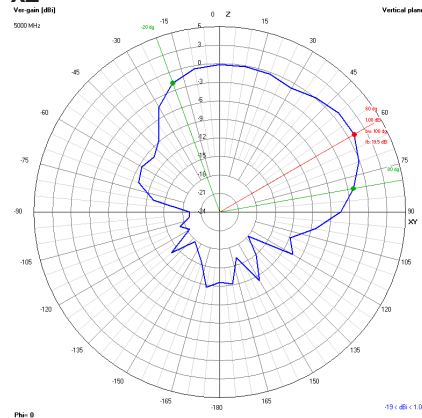
YZ



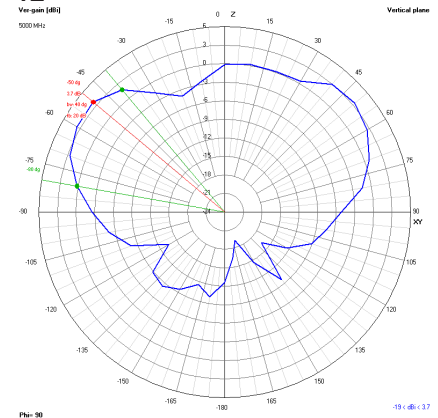
5000 MHz XY



XZ



YZ



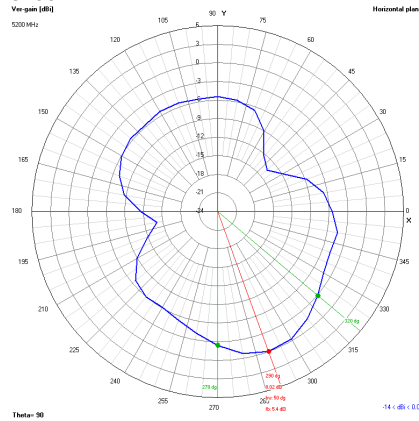


Tango 11A

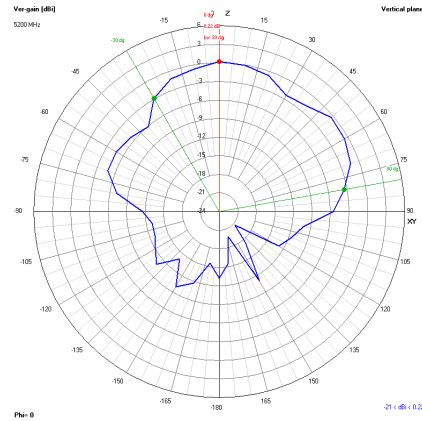
2G/3G/4G/5G & Dual Band WiFi Puck Antenna

Radiation Plots tested with 1 m cable

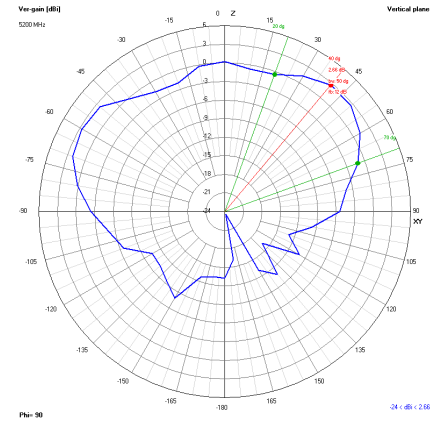
5200 MHz XY



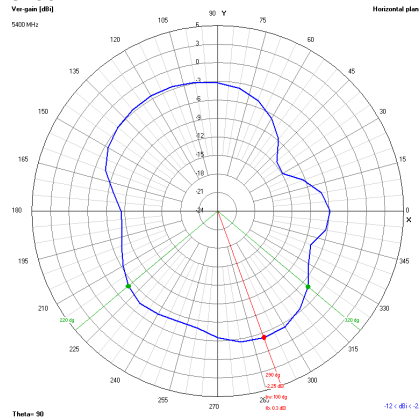
XZ



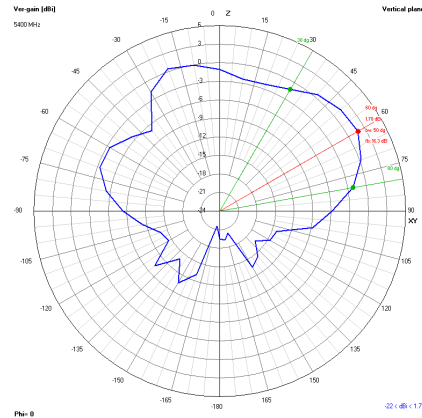
YZ



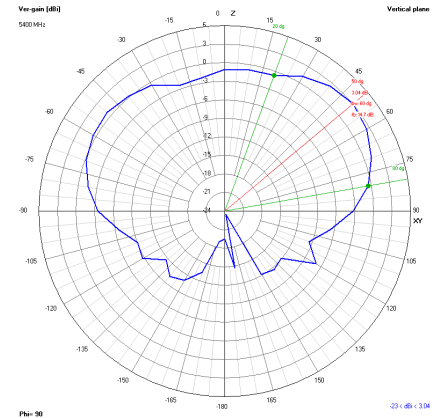
5400 MHz XY



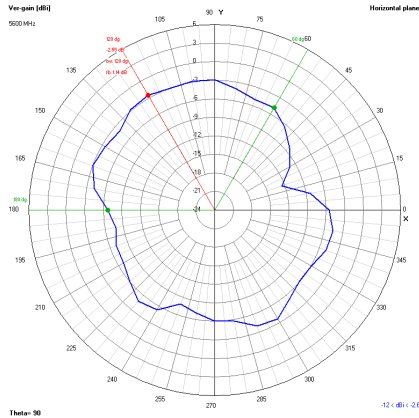
XZ



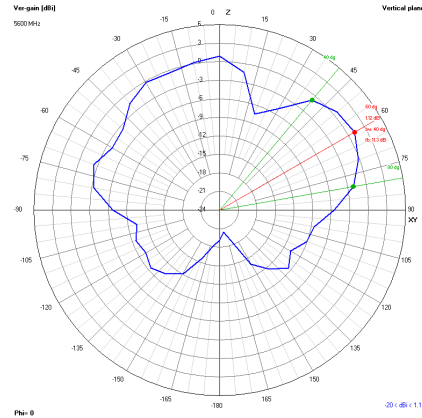
YZ



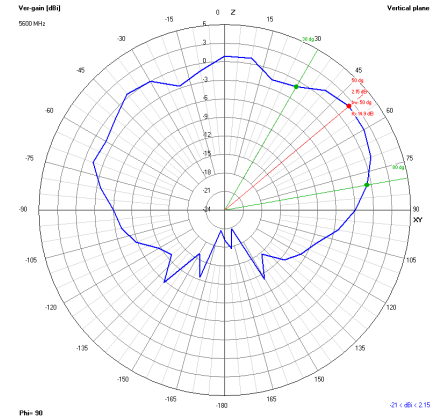
5600 MHz XY



XZ



YZ



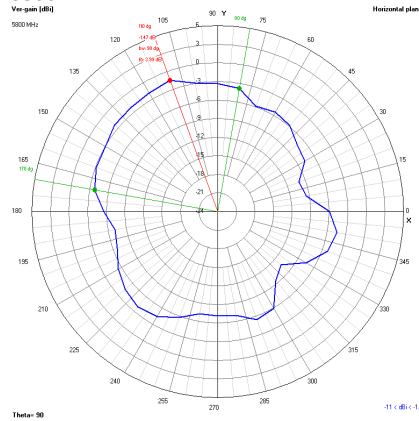


Tango 11A

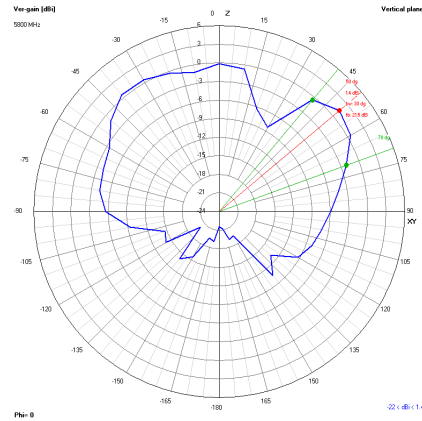
2G/3G/4G/5G & Dual Band WiFi Puck Antenna

Radiation Plots tested with 1 m cable

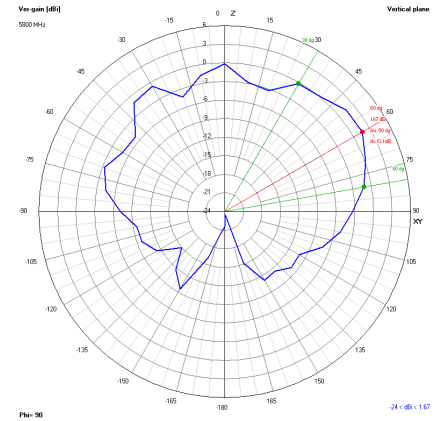
5800 MHz XY



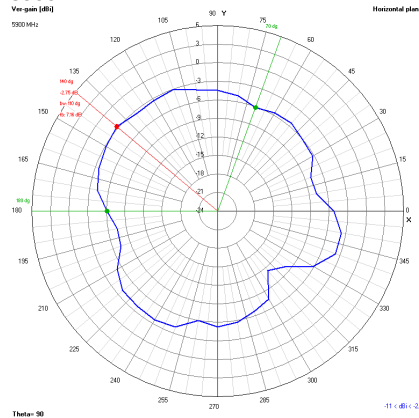
XZ



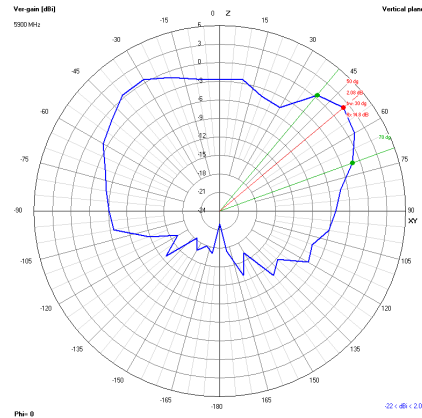
YZ



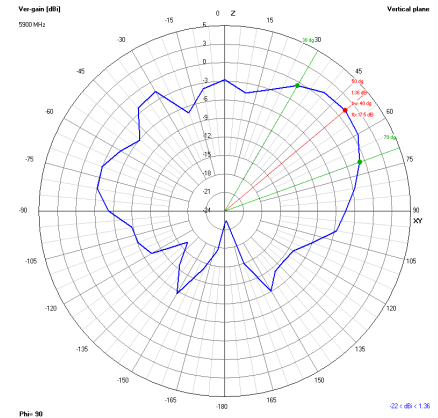
5900 MHz XY



XZ

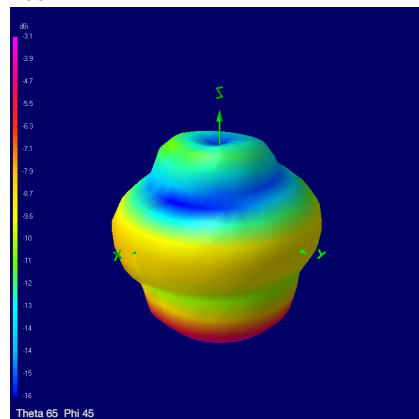


YZ

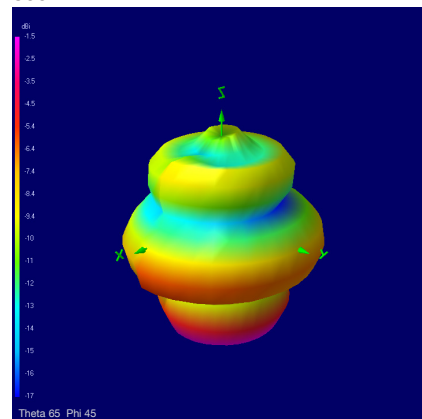


3D Radiation Plots tested with 1 m cable

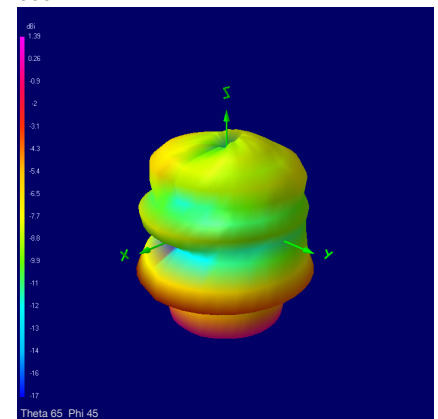
400 MHz



500 MHz



600 MHz



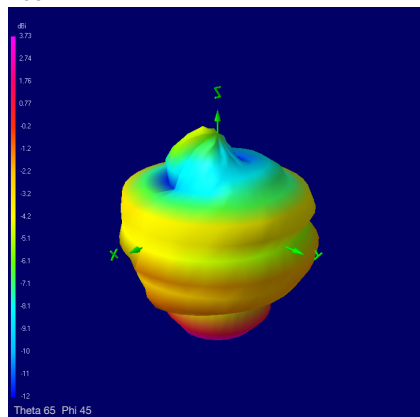


Tango 11A

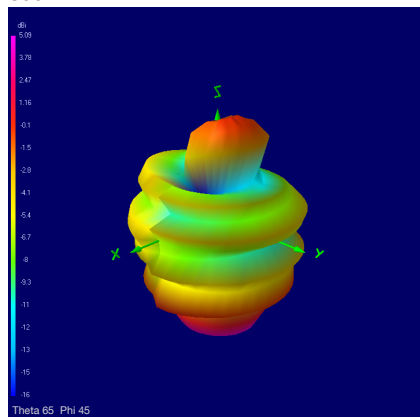
2G/3G/4G/5G & Dual Band WiFi Puck Antenna

3D Radiation Plots tested with 1 m cable

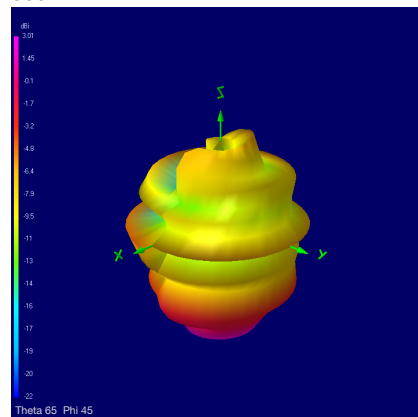
700 MHz



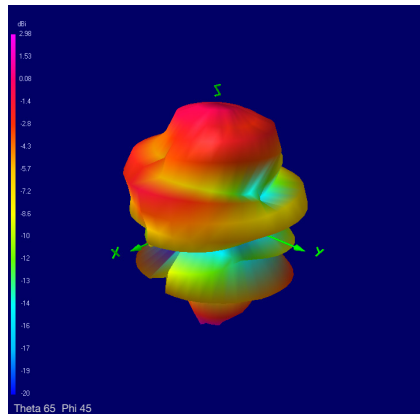
800 MHz



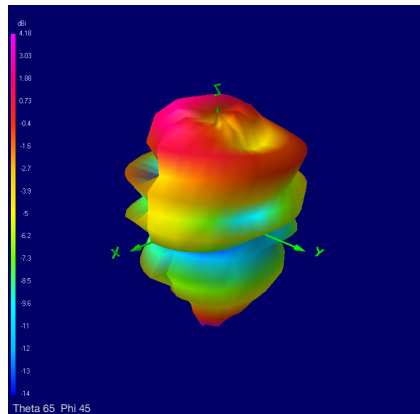
900 MHz



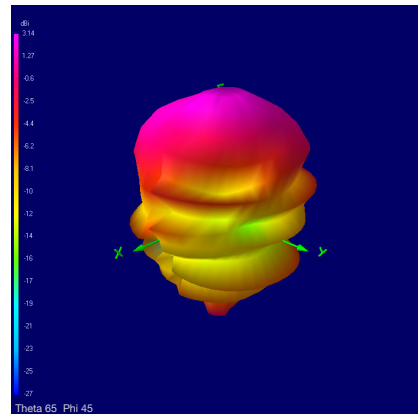
1400 MHz



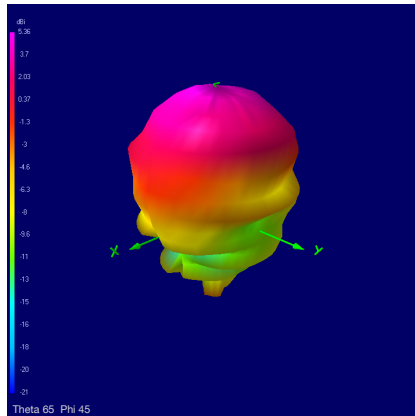
1500 MHz



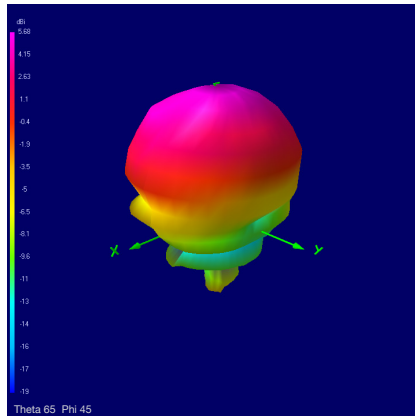
1600 MHz



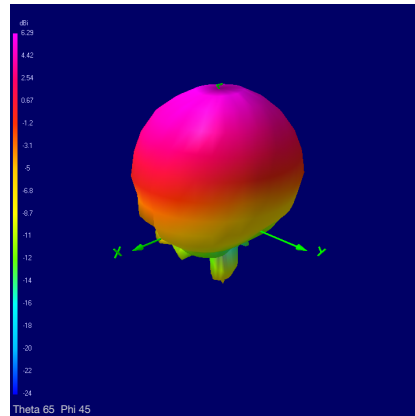
1700 MHz



1800 MHz



1900 MHz



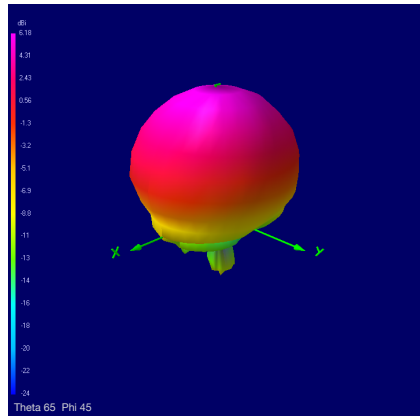


Tango 11A

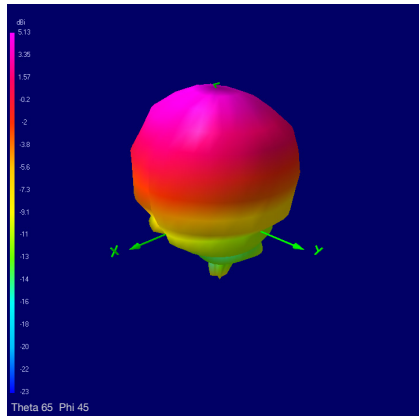
2G/3G/4G/5G & Dual Band WiFi Puck Antenna

3D Radiation Plots tested with 1 m cable

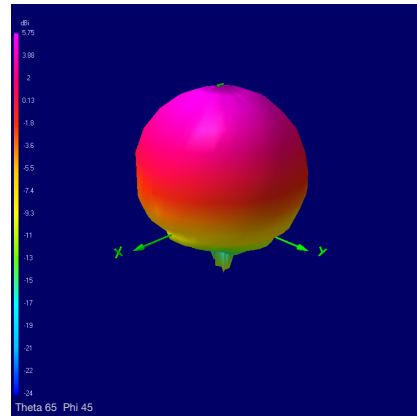
2000 MHz



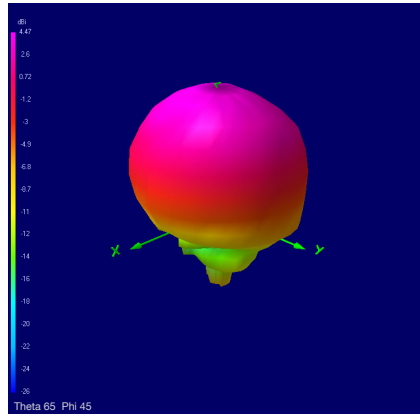
2100 MHz



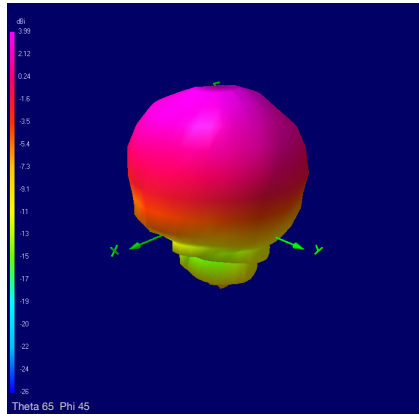
2300 MHz



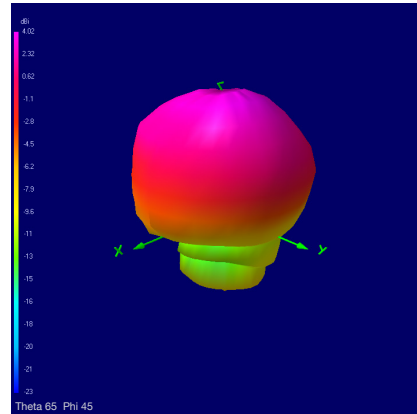
2400 MHz



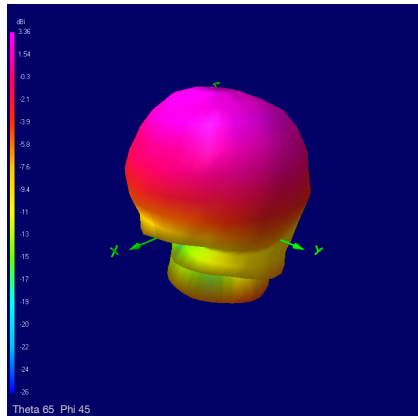
2460 MHz



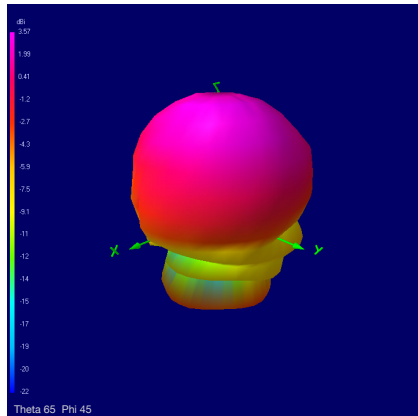
2500 MHz



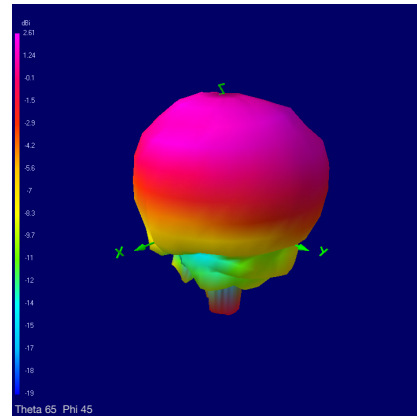
2600 MHz



2700 MHz



3300 MHz



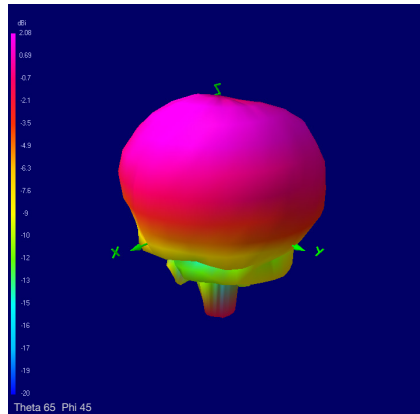


Tango 11A

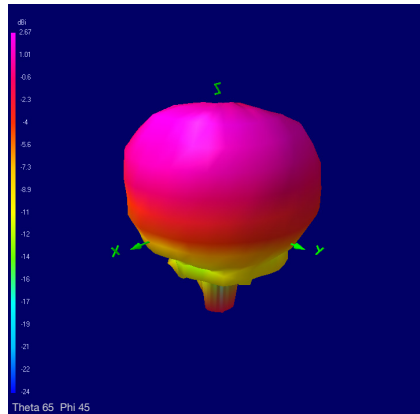
2G/3G/4G/5G & Dual Band WiFi Puck Antenna

3D Radiation Plots tested with 1 m cable

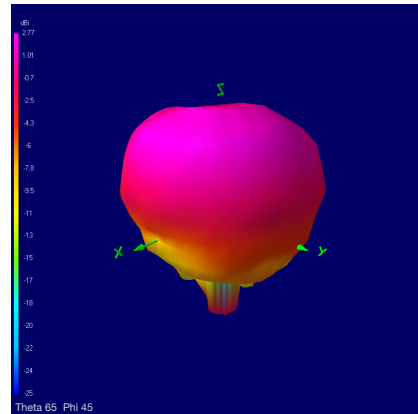
3400 MHz



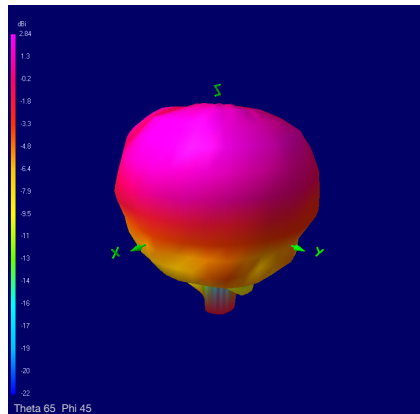
3500 MHz



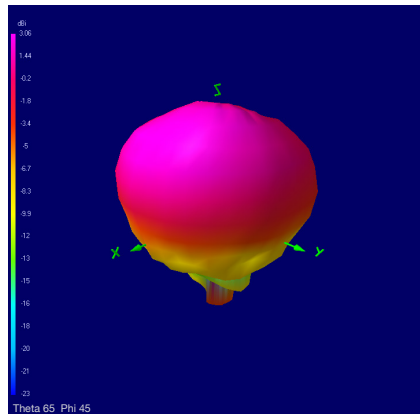
3600 MHz



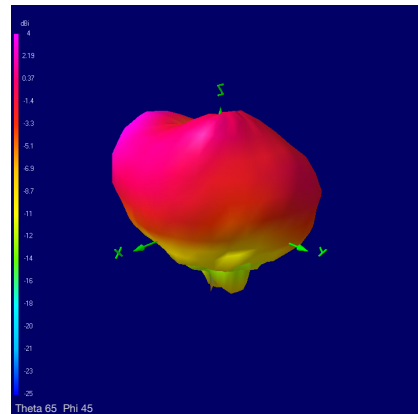
3700 MHz



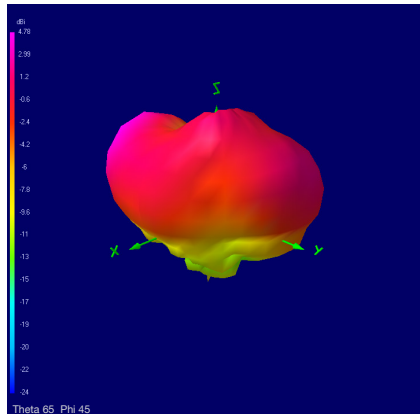
3800 MHz



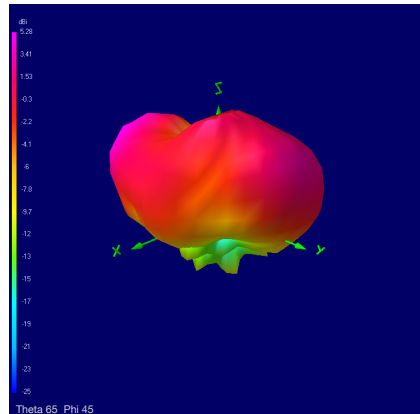
4400 MHz



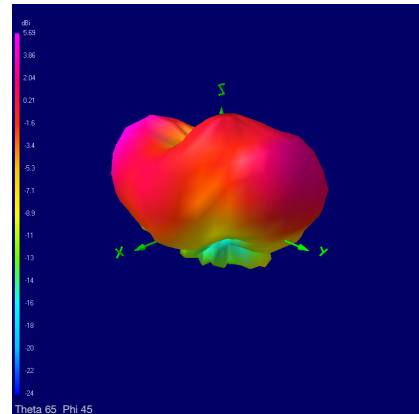
4600 MHz



4800 MHz



5000 MHz



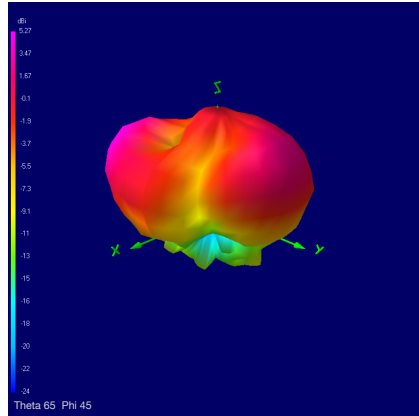


Tango 11A

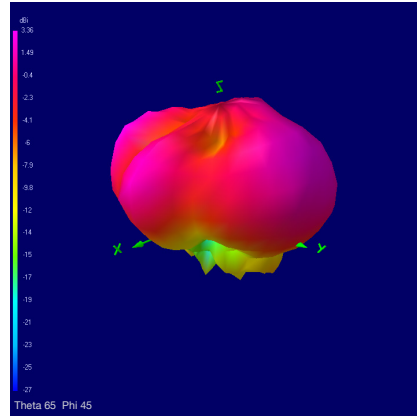
2G/3G/4G/5G & Dual Band WiFi Puck Antenna

3D Radiation Plots tested with 1 m cable

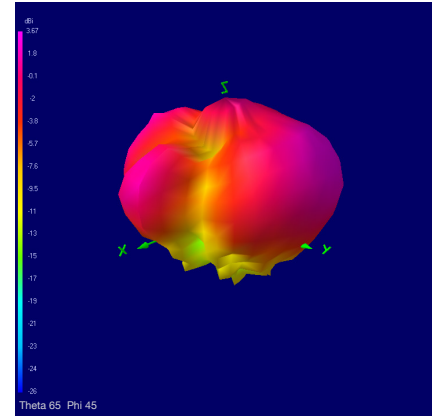
5200 MHz



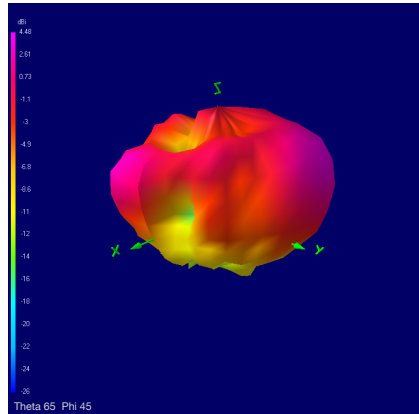
5400 MHz



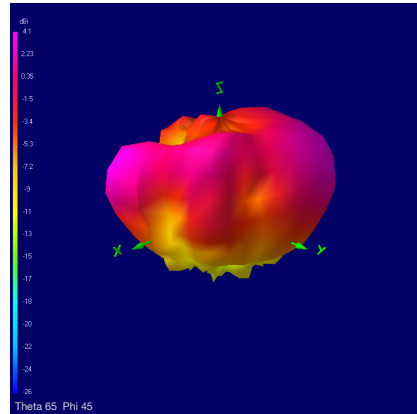
5600 MHz



5800 MHz



5900 MHz



Ordering Details

Part Number	Description
TANGO11A/1.5M/SMAM/S/S/19	2G/3G/4G/5G & Dual Band WiFi Puck Antenna IP65 SMA Male Connector 1.5m Cable
TANGO11A/2.5M/SMAM/S/S/19	2G/3G/4G/5G & Dual Band WiFi Puck Antenna IP65 SMA Male Connector 2.5m Cable
TANGO11A/5M/SMAM/S/S/19	2G/3G/4G/5G & Dual Band WiFi Puck Antenna IP65 SMA Male Connector 5m Cable