



Tango 24

DUAL BAND WIFI 2.4/5.8 GHZ WITH LTE BANDS THROUGH HOLE MOUNT ANTENNA

Key Features

- 2.4GHz / 5.8GHz Dual Band WiFi Antenna
- Some LTE Bands Covered
- Compact Puck Design



General Description

The Tango 24 is a compact, puck shaped antenna, tuned to 2.4GHz - 5.8 GHz WiFi//Bluetooth/ Zigbee frequencies. The coverage also allows for the antenna to be used with some of the LTE bands.

The Tango 24 screw base, through hole design allows secure mounting onto the case of the product.

Typical applications include vending machines, point of sales terminals and kiosks.

Supplied as standard with an SMA Male connector with reverse polarity for WiFi and a standard SMA Male for LTE. Alternative connectors and cable lengths may be specified for volume orders.

Additional Considerations

- Bluetooth / Zigbee / ISM 2450MHz
- Screw threaded base for secure mounting
- Omni directional radiation

| | | | |
|--------------|--------------|-------------|------------------|
| T Through | WLAN 2400 | ISM 2450 | BLE Bluetooth |
| ZB Zigbee | WLAN 5800 | 4G LTE | 5G LTE |
| IP 67 | | | |



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Electrical Specifications

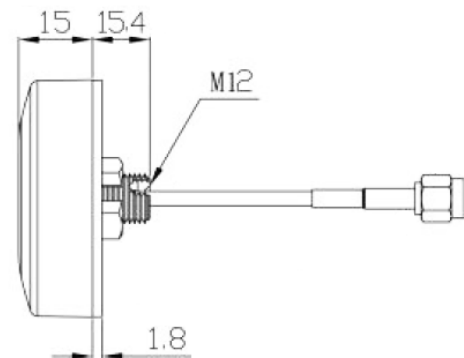
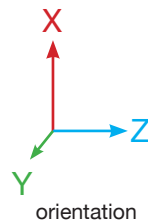
| | |
|-----------------|----------|
| Impedance: | 50 Ohm |
| Power capacity: | 50W |
| Polarization: | Vertical |

Environmental Specifications

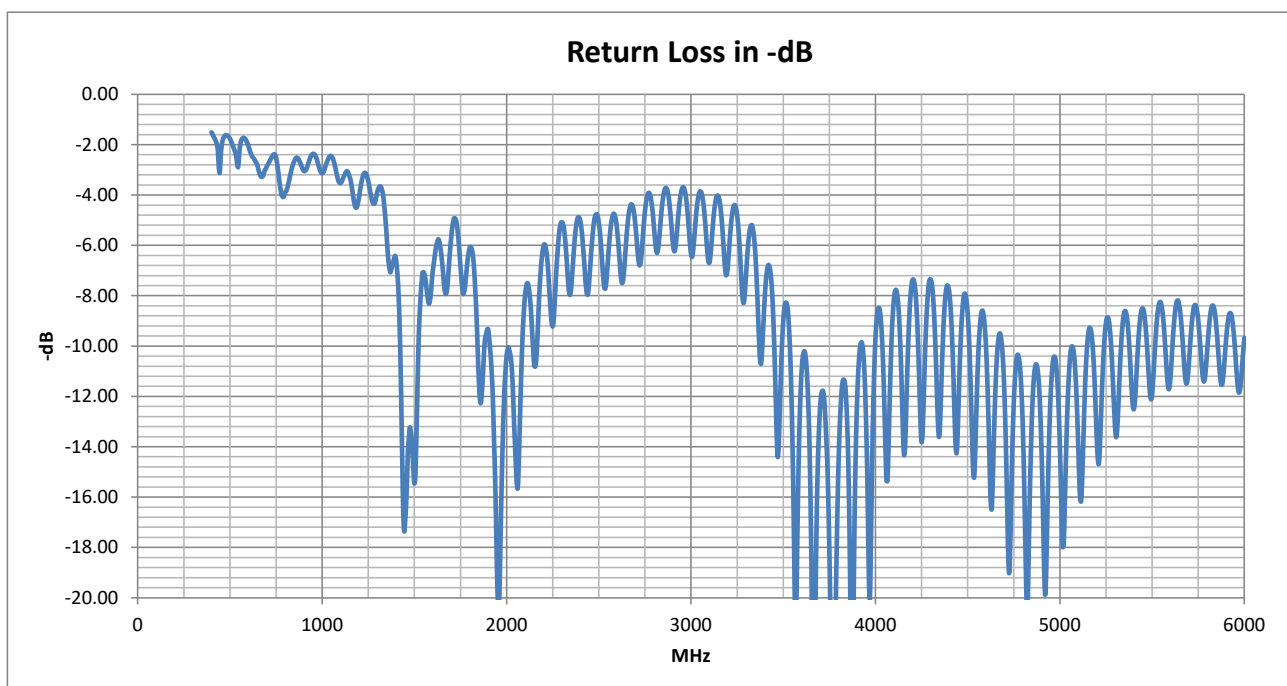
| | |
|------------------------|-------------|
| Operating Temperature: | -30 - +75°C |
| Storage Temperature: | -30 - +75°C |

Mechanical Specifications

| | |
|-----------------------------|---------------------------|
| Dimensions: | 46 Ø x H15mm |
| Connector: | SMA Male Reverse Polarity |
| Cable: | RG174 |
| Mounting Method: | M12 Screw |
| Maximum Material Thickness: | 3.5mm |

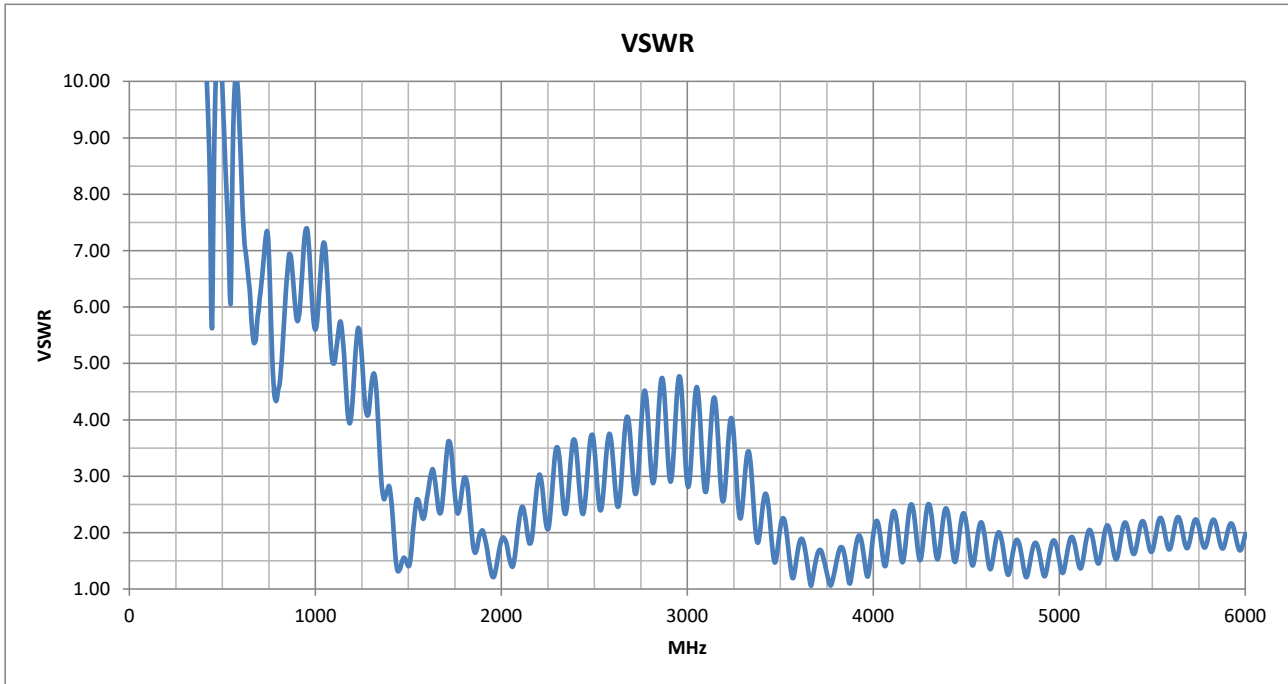


Return Loss tested with 1m cable

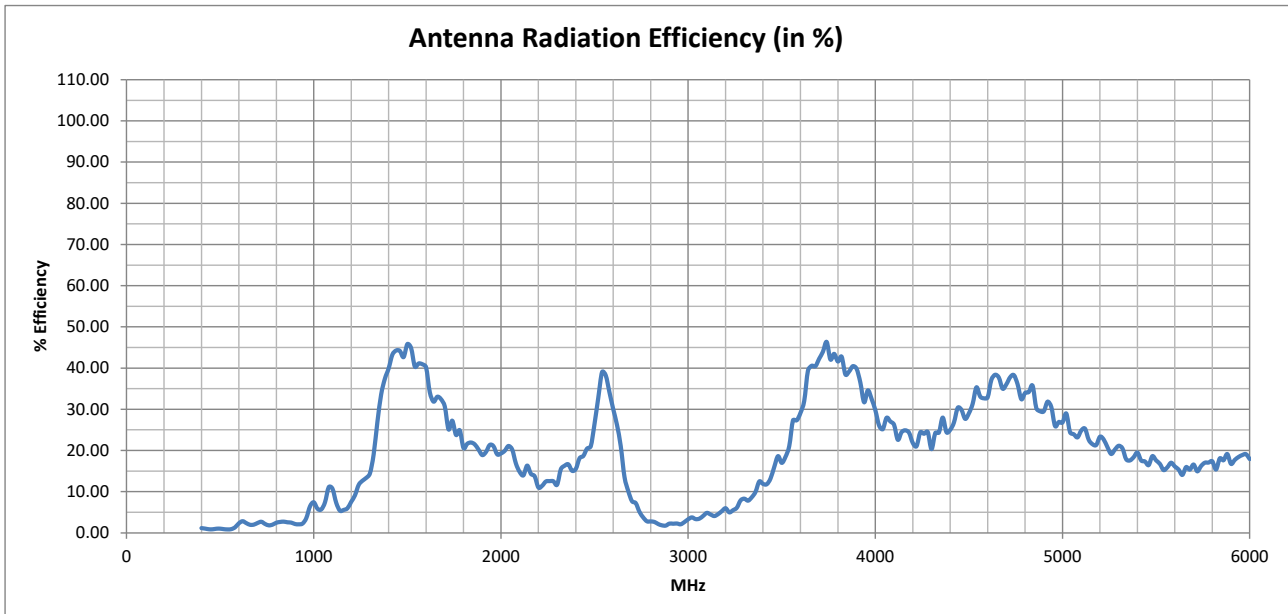




VSWR tested with 1m cable



Radiation Efficiency tested with 1m cable





LTE/5G Band Coverage

| LTE, CAT-M/5G Bands | NB-IoT Band | Regional Coverage | Uplink | Downlink | Avg Efficiency % over band | Max VSWR over Band |
|---------------------|-------------|---------------------------------------|---------------------|-------------------|----------------------------|--------------------|
| 2/n2 | B2 | North America/Latin America/Caribbean | 1850-1910 MHz | 1930-1990 MHz | 20.43 / 20.07 ● | 2.04 / 1.73 |
| 3/n3 | B3 | Europe/Africa/Asia/Oceania | 1710-1785 MHz | 1805-1880 MHz | 25.38 / 21.17 ● | 3.62 / 2.98 |
| 11 | B11 | Country Specific | 1427.9-1447.9 MHz | 1475.9-1495.9 MHz | 43.89 / 44.21 ● | 1.83 / 1.56 |
| 21 | | Country Specific | 1447.9-1462.9 MHz | 1495.9-1510.9 MHz | 43.69 / 44.45 ● | 1.49 / 1.50 |
| n24 | | ----- | 1626.5 - 1660.5 MHz | 1525 - 1559 MHz | 33.00 / 42.12 ● | 3.13 / 2.59 |
| 25/n25 | B25 | Country Specific | 1850-1915 MHz | 1525-1559 MHz | 20.43 / 42.12 ● | 2.04 / 2.59 |
| 38/n38 | | Europe + | 2570-2620 MHz | | 31.10 ● | 3.75 |
| 43 | | Country Specific | 3600-3800 MHz | | 40.10 ● | 1.89 |
| 46 | | Country Specific | 5150-5925 MHz | | 18.00 ● | 2.28 |
| 48/n48 | | Country Specific | 3550-3700 MHz | | 33.26 ● | 1.89 |
| n50 | | ----- | 1432 /1517 MHz | | 44.17 ● | 1.61 |
| n51 | | ----- | 1427 - 1432 MHz | | 43.76 ● | 1.83 |
| n53 | | ----- | 2483.5 - 2495 MHz | | 23.76 ● | 3.74 |
| 65/n65 | | Country Specific | 1920-2010 MHz | 2110-2200 MHz | 20.04 / 14.03 ○ | 1.92 / 2.99 |
| 66/n66 | B66 | Country Specific | 1710-1780 MHz | 2110-2200 MHz | 26.34 / 14.03 ○ | 3.62 / 2.99 |
| n74 | | | 1427 - 1470 MHz | 1475 - 1518 MHz | 43.58 / 44.38 ● | 1.83 / 1.83 |
| n75 | | ----- | 1432 -1517 MHz | | 44.17 ● | 1.61 |
| n76 | | ----- | 1427 - 1432 MHz | | 43.76 ● | 1.83 |
| n79 | | ----- | 4400 - 5000 MHz | | 32.19 ● | 2.36 |
| n80 | | ----- | 1710 - 1785 MHz | | 25.38 ● | 3.62 |
| n86 | | ----- | 1710 - 1780 MHz | | 26.34 ● | 3.62 |
| n90 | | ----- | 2496 - 2690 MHz | | 25.01 ● | 4.05 |
| n95 | | ----- | 2010 - 2025 MHz | | 20.09 ● | 1.92 |
| n99 | | ----- | 1626.5 - 1660.5 MHz | | 33.00 ● | 3.13 |

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

● Usable Band ○ Adequate in good signal area

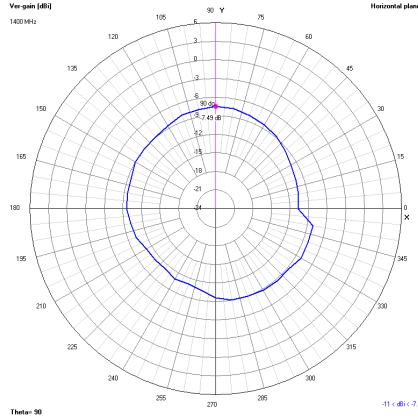


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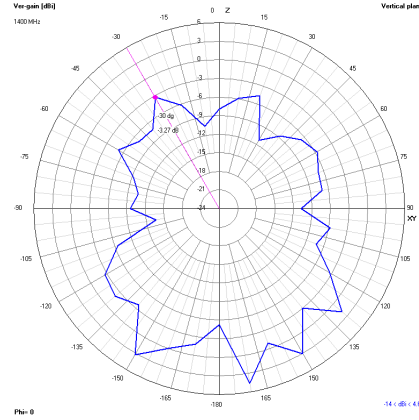
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Radiation Plots tested with 1 m cable

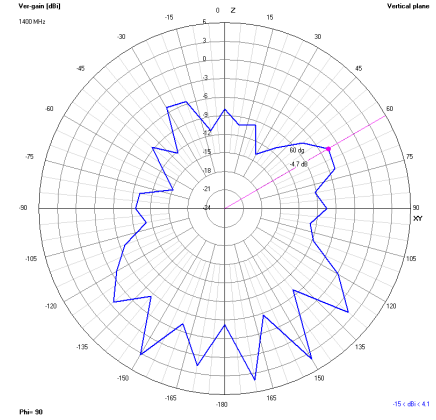
1400 MHz XY



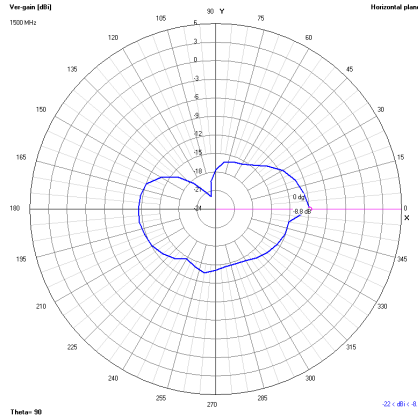
XZ



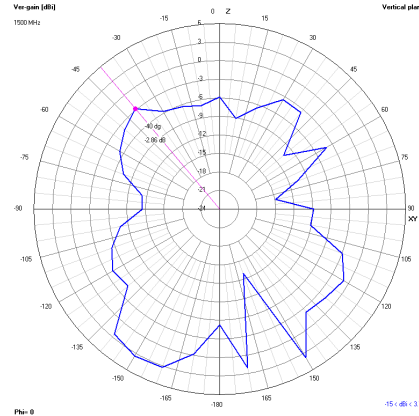
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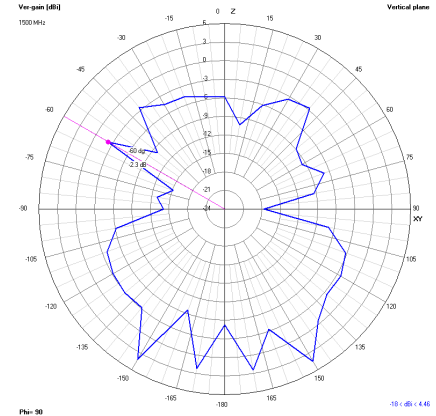
1500 MHz XY



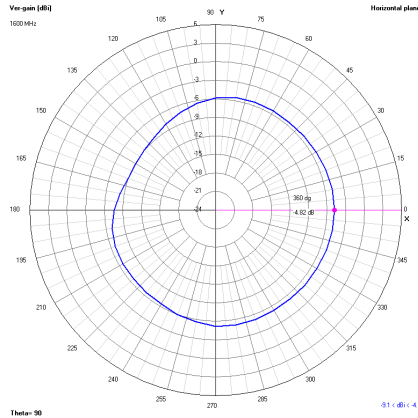
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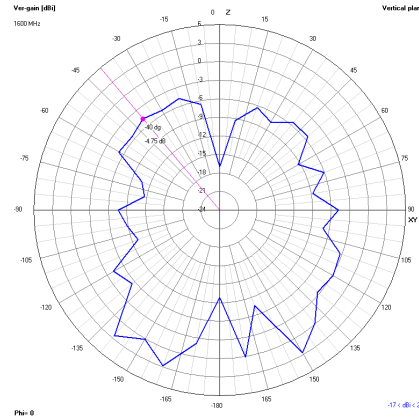
YZ



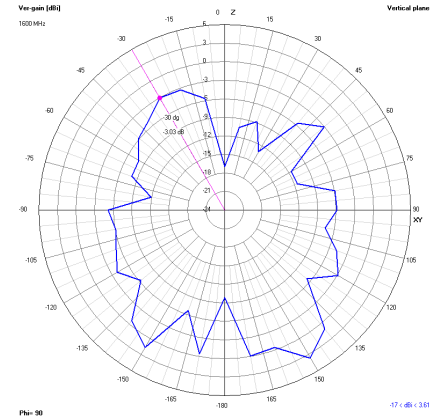
1600 MHz XY



XZ



YZ



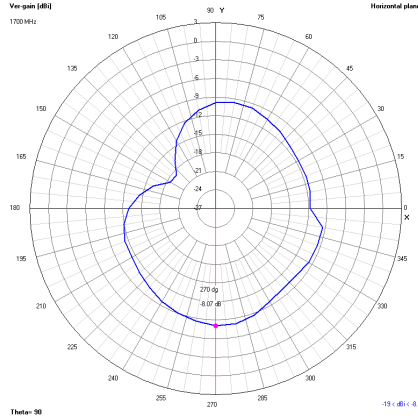


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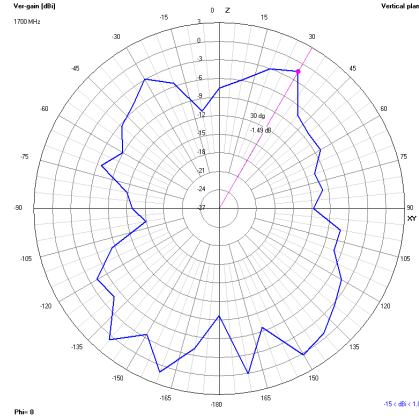
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Radiation Plots tested with 1 m cable

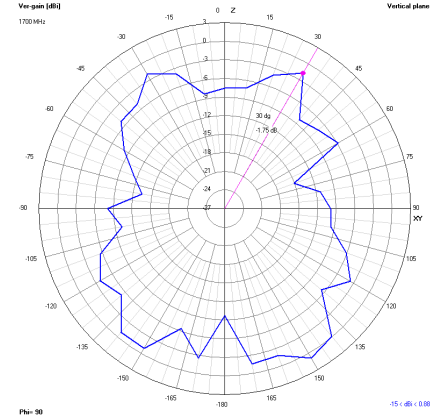
1700 MHz XY



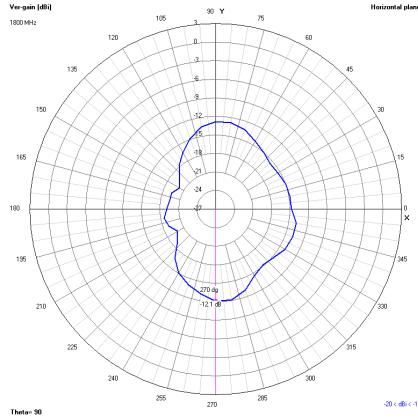
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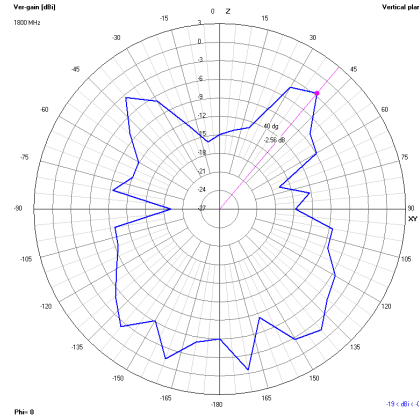
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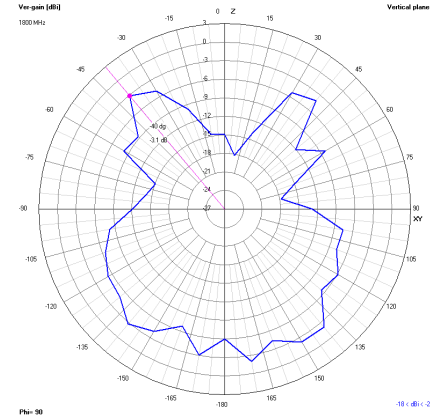
1800 MHz XY



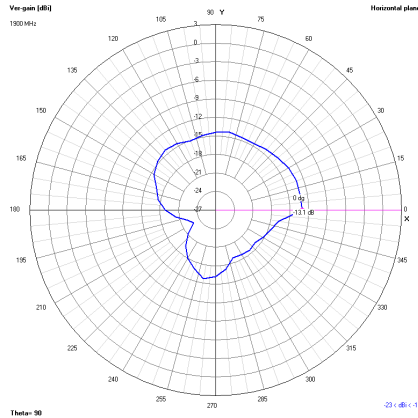
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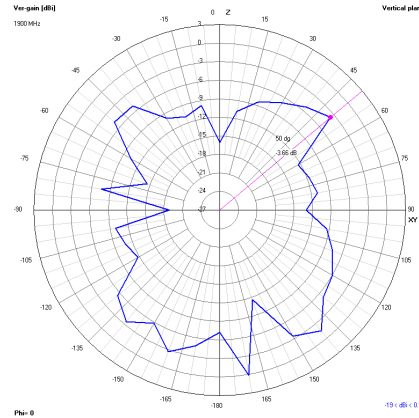
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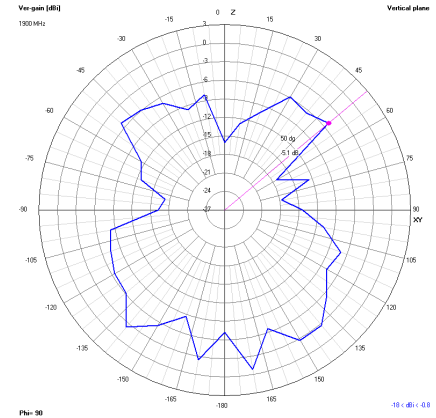
1900 MHz XY



XZ



YZ



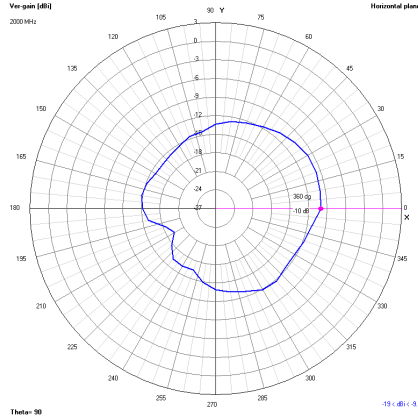


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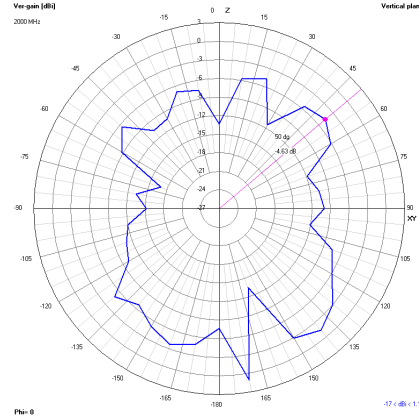
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Radiation Plots tested with 1 m cable

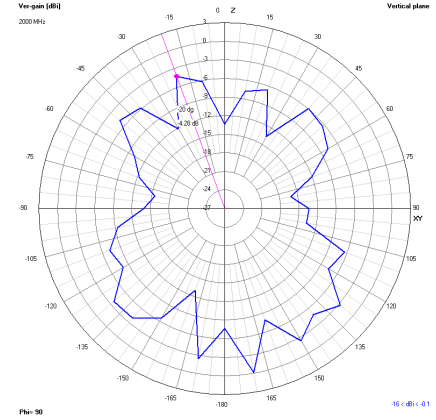
2000 MHz XY



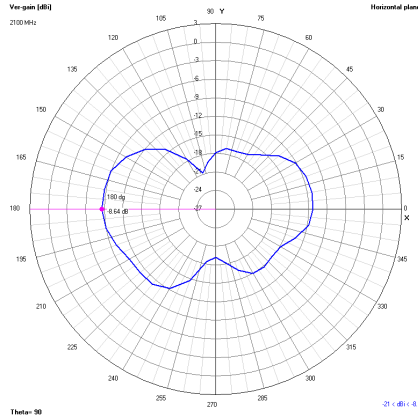
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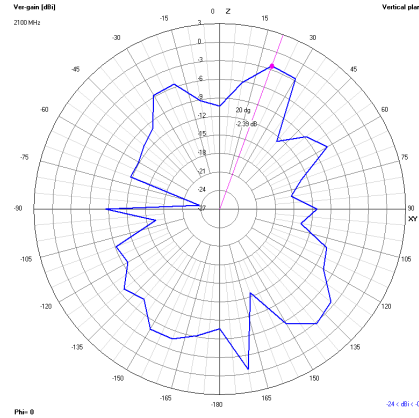
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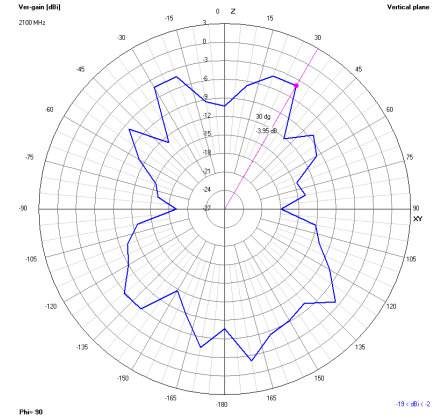
2100 MHz XY



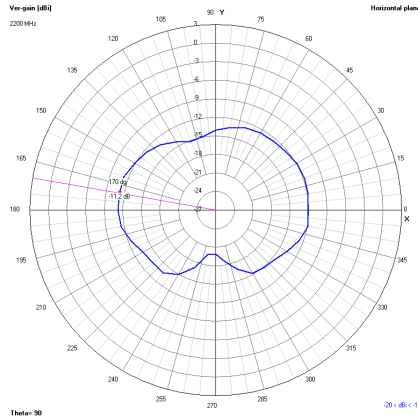
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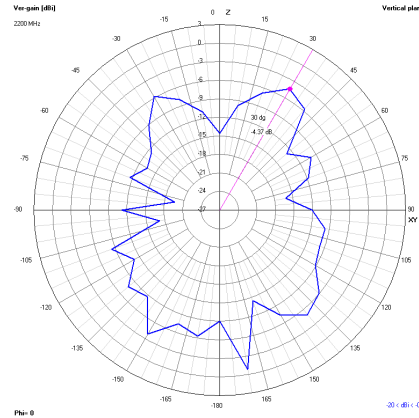
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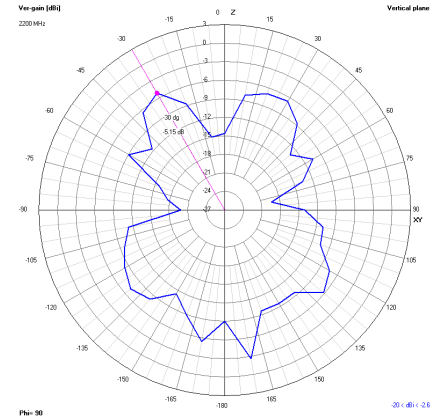
2200 MHz XY



XZ



YZ



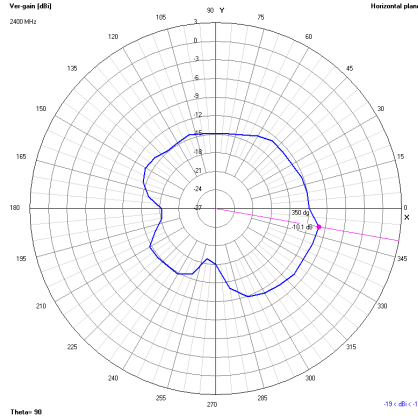


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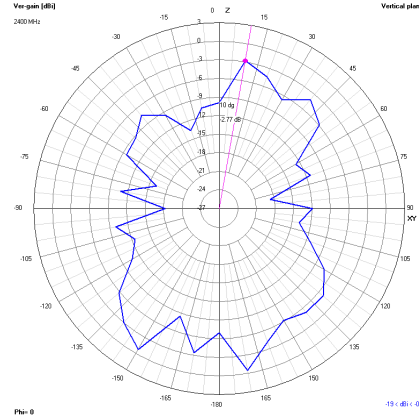
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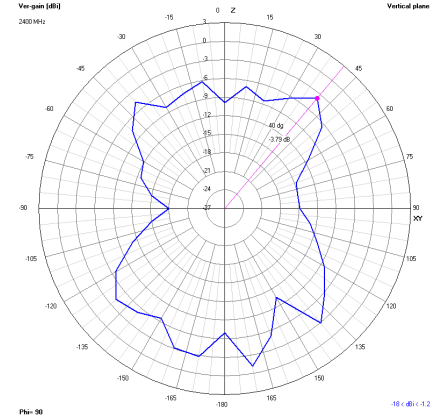
2400 MHz XY



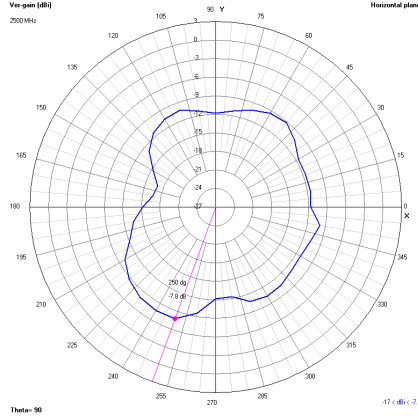
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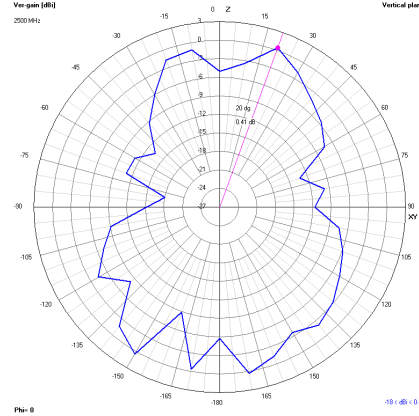
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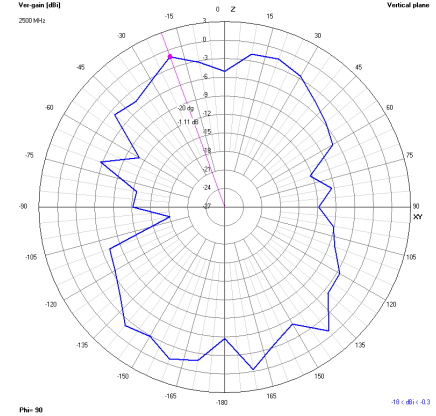
2500 MHz XY



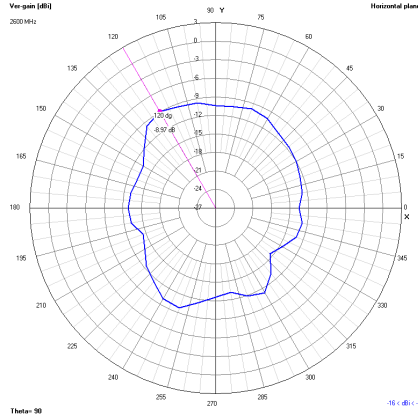
XZ



YZ



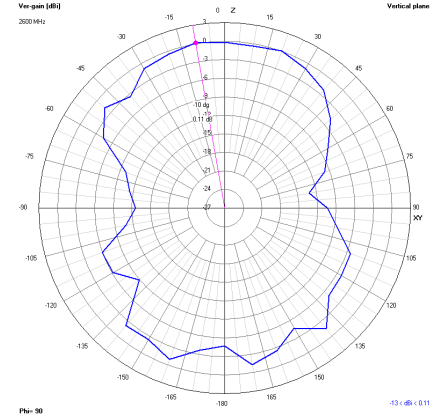
2600 MHz XY



XZ



YZ



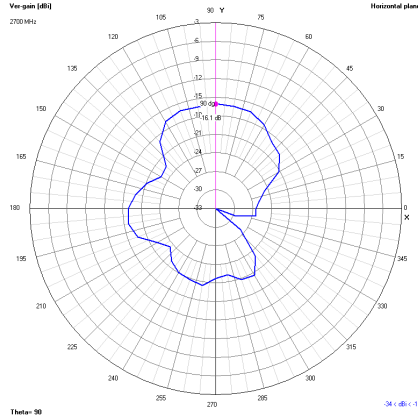


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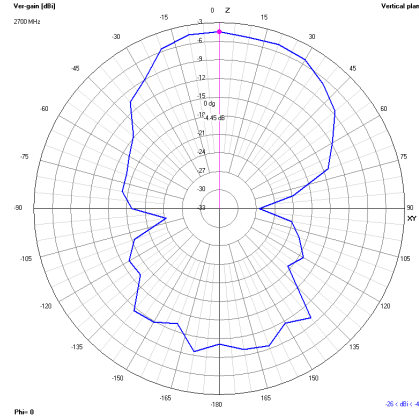
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Radiation Plots tested with 1 m cable

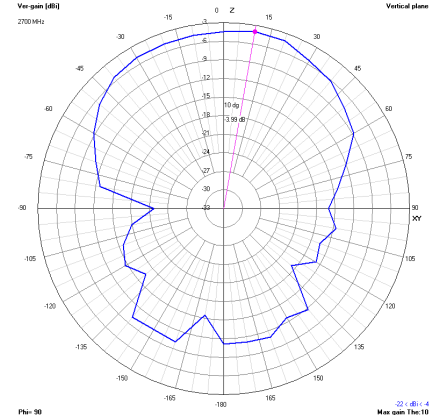
2700 MHz XY



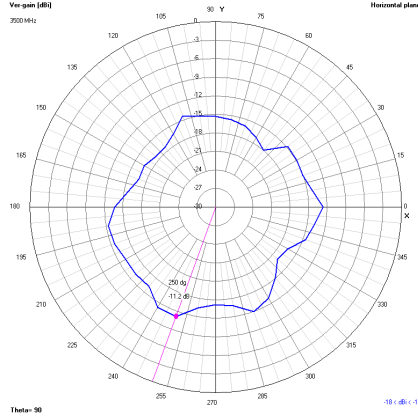
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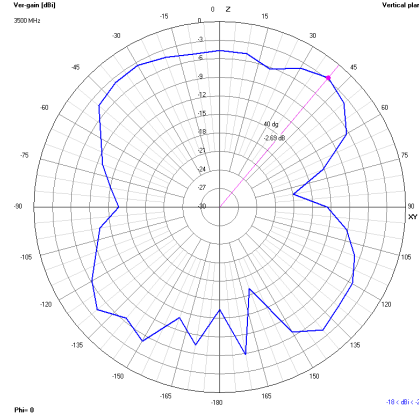
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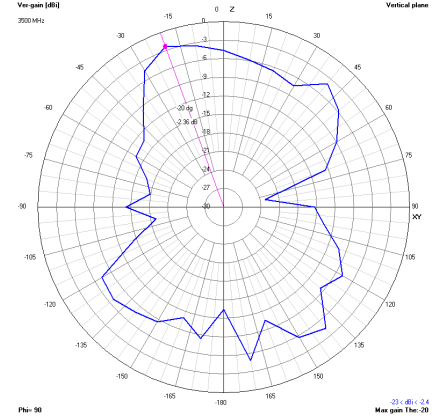
3500 MHz XY



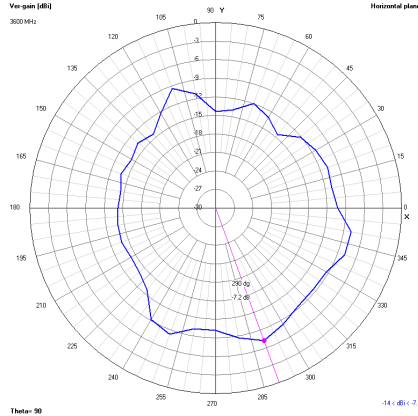
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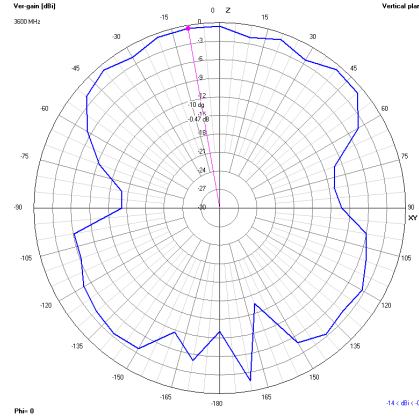
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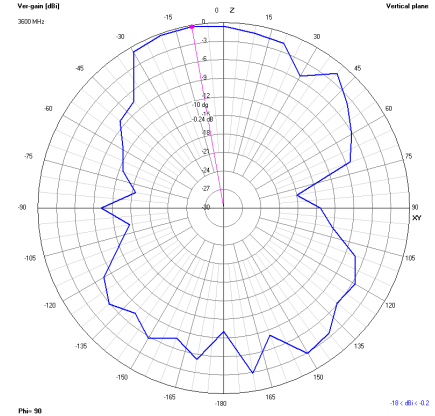
3600 MHz XY



XZ



YZ



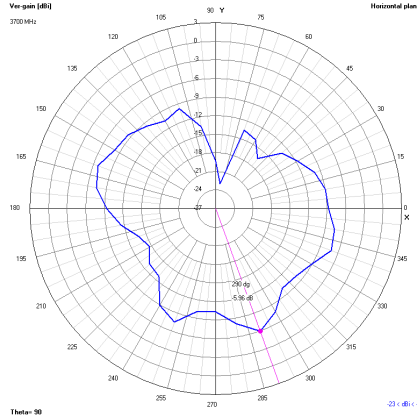


Tango 24

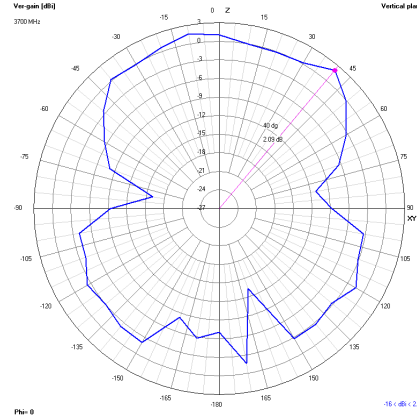
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Radiation Plots tested with 1 m cable

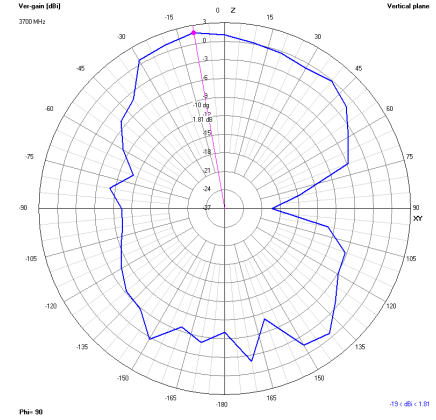
3700 MHz XY



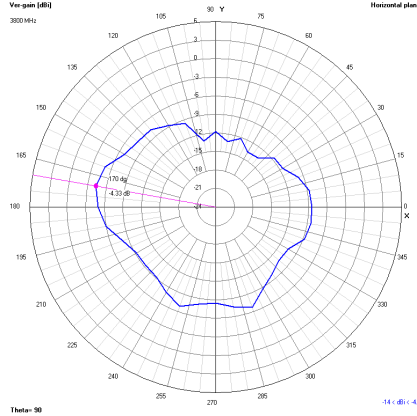
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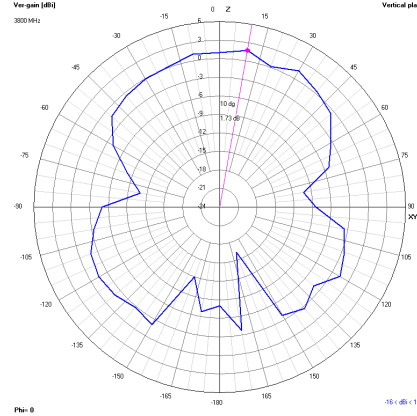
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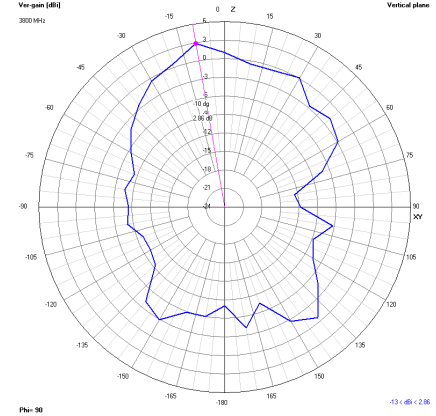
3800 MHz XY



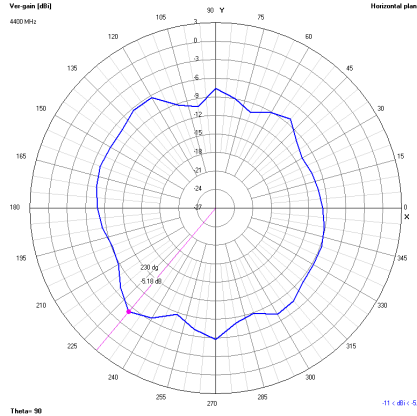
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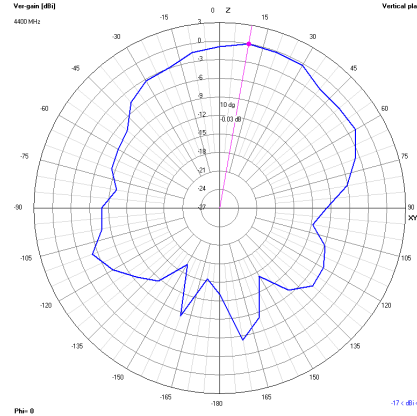
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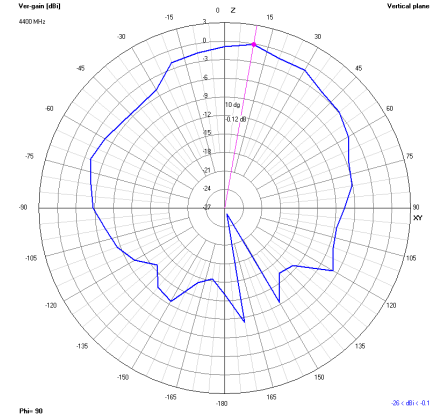
4400 MHz XY



XZ



YZ



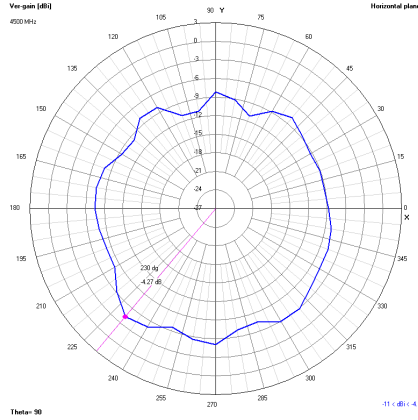


Tango 24

DUAL BAND WIFI 2.4/5.8 GHZ WITH LTE BANDS THROUGH HOLE MOUNT ANTENNA

Radiation Plots tested with 1 m cable

4500 MHz XY



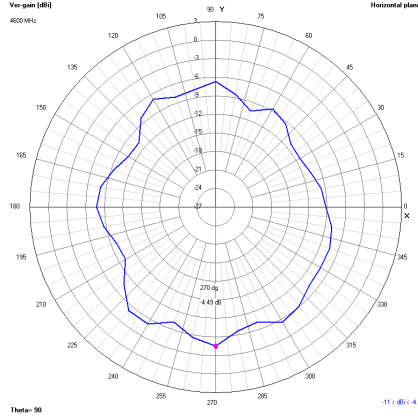
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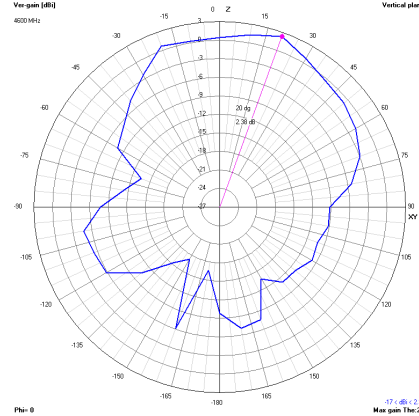
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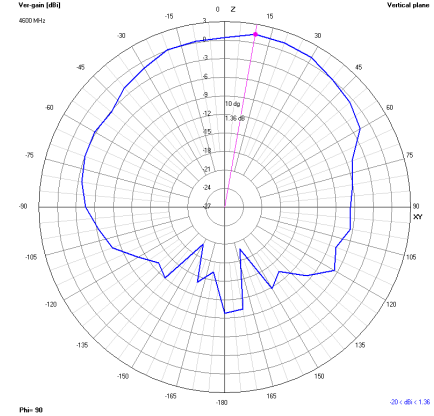
4600 MHz XY



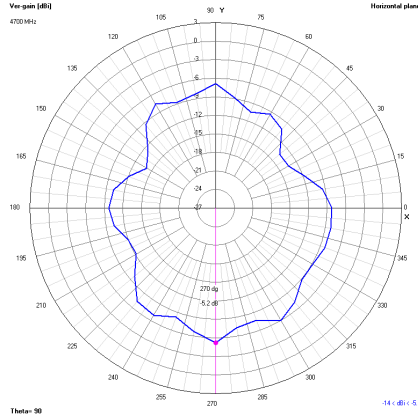
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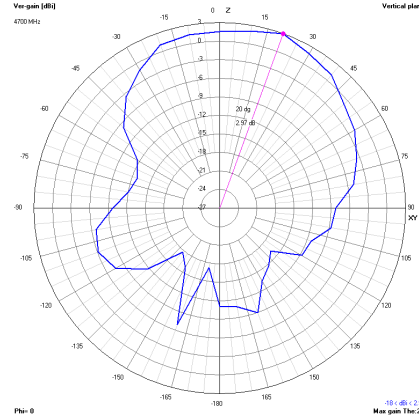
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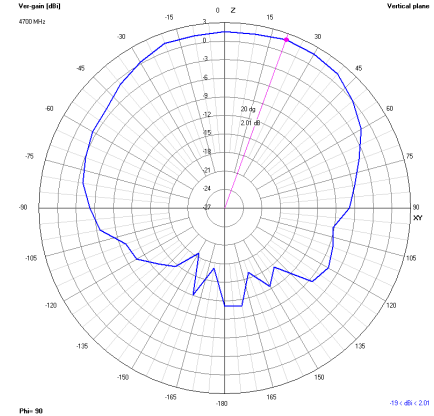
4700 MHz XY



XZ



YZ



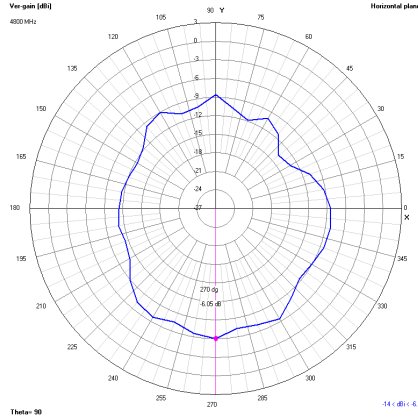


Tango 24

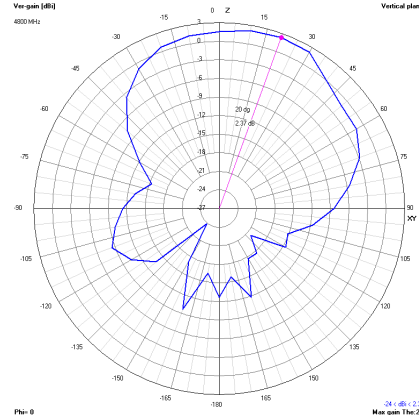
DUAL BAND WIFI 2.4/5.8 GHZ WITH LTE BANDS THROUGH HOLE MOUNT ANTENNA

Radiation Plots tested with 1 m cable

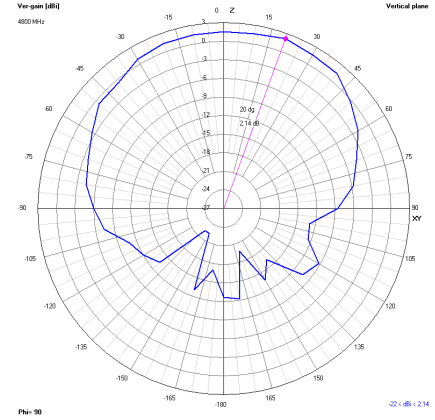
4800 MHz XY



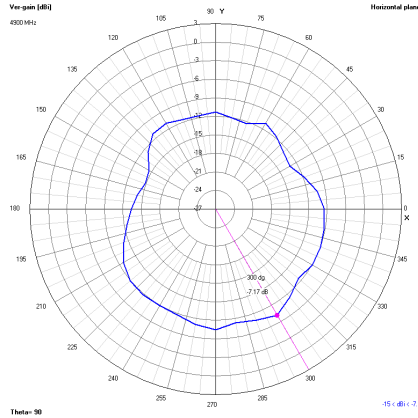
XZ



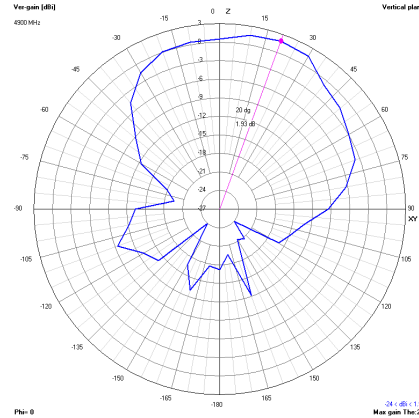
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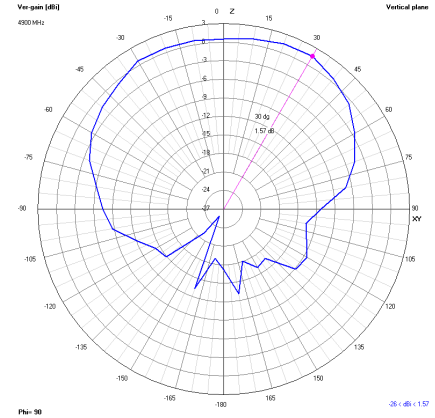
4900 MHz XY



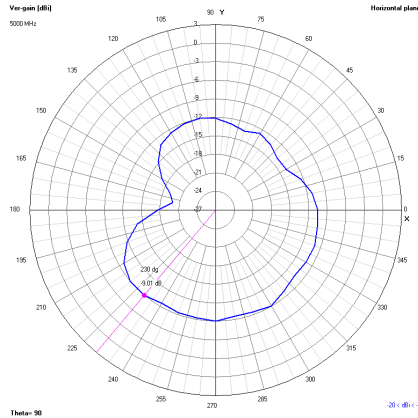
XZ



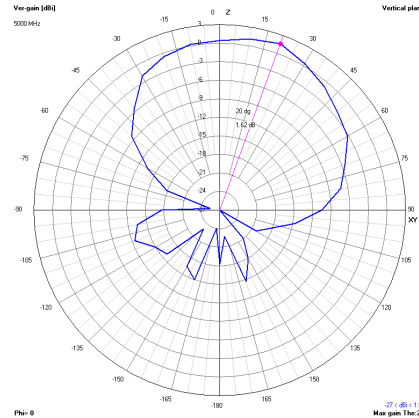
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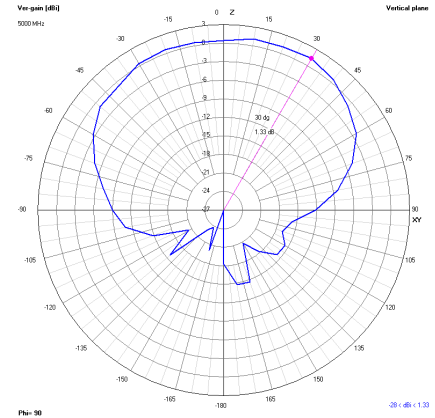
5000 MHz XY



XZ



YZ



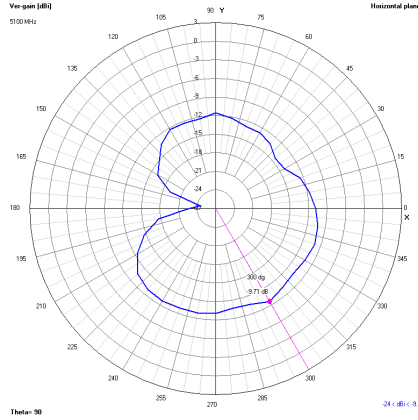


Tango 24

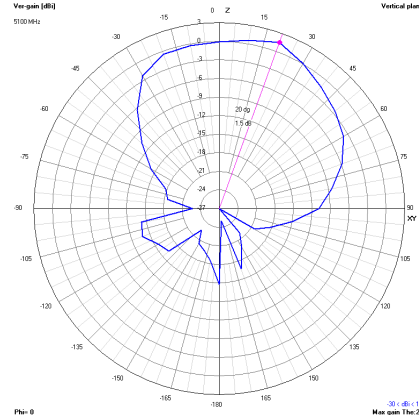
DUAL BAND WIFI 2.4/5.8 GHZ WITH LTE BANDS THROUGH HOLE MOUNT ANTENNA

Radiation Plots tested with 1 m cable

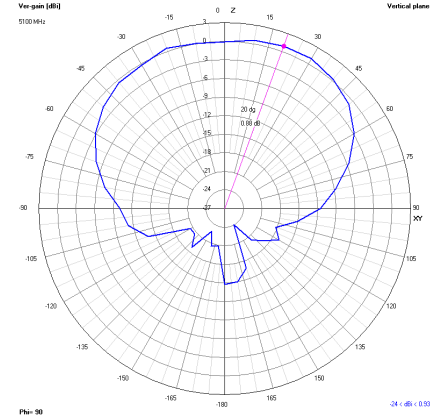
5100 MHz XY



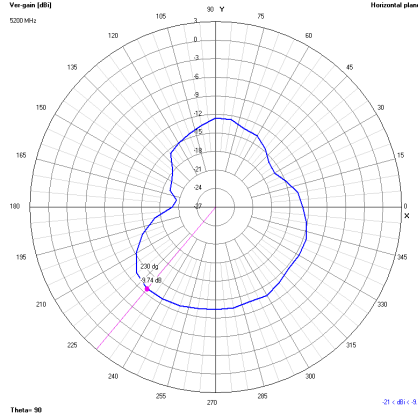
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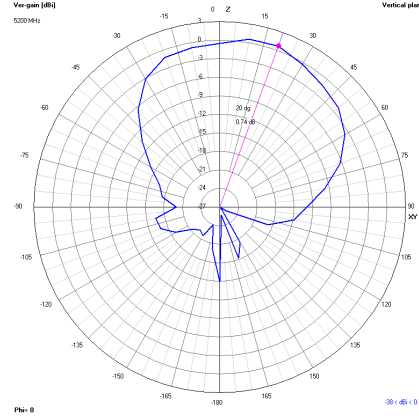
YZ



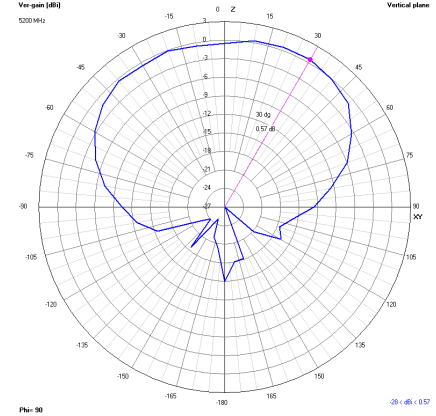
5200 MHz XY



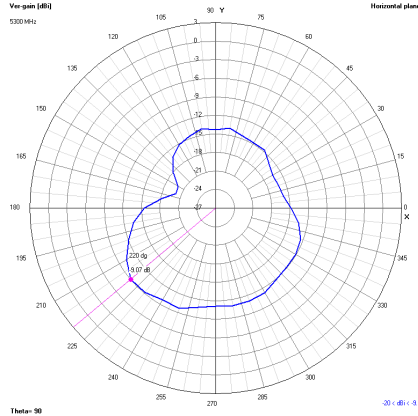
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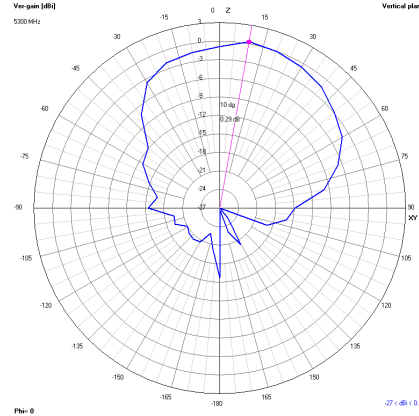
YZ



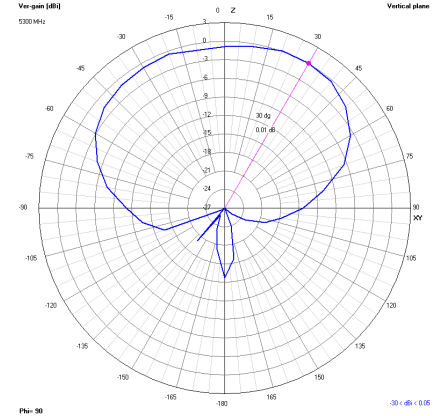
5300 MHz XY



XZ



YZ



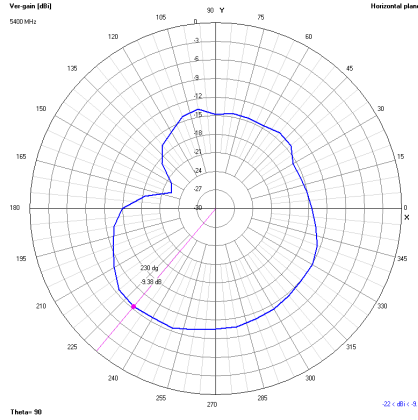


Tango 24

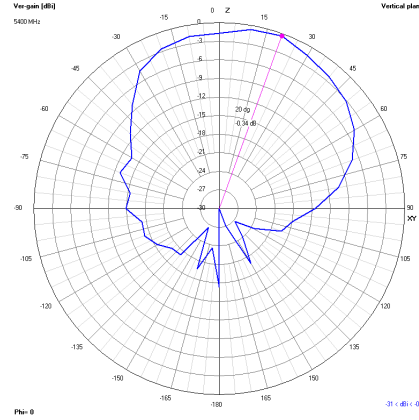
DUAL BAND WIFI 2.4/5.8 GHZ WITH LTE BANDS THROUGH HOLE MOUNT ANTENNA

Radiation Plots tested with 1 m cable

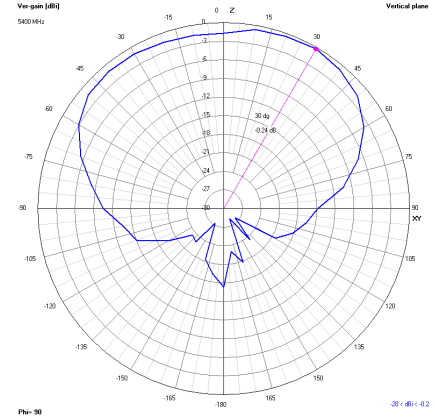
5400 MHz XY



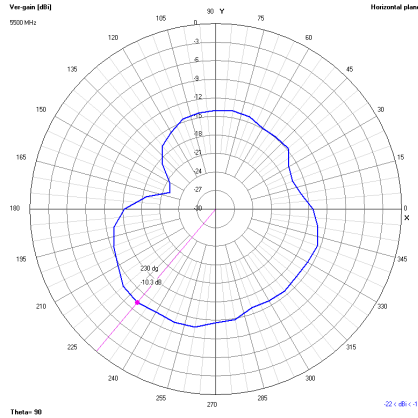
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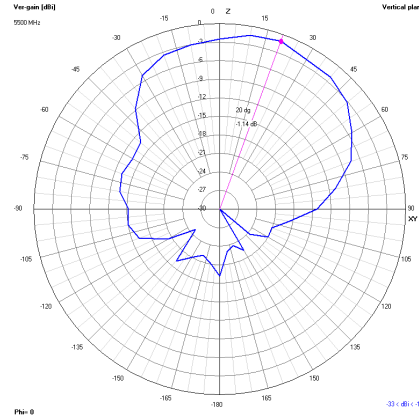
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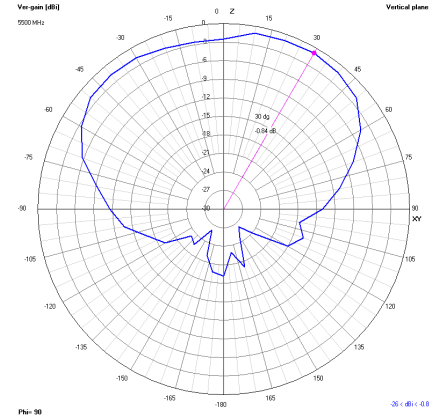
5500 MHz XY



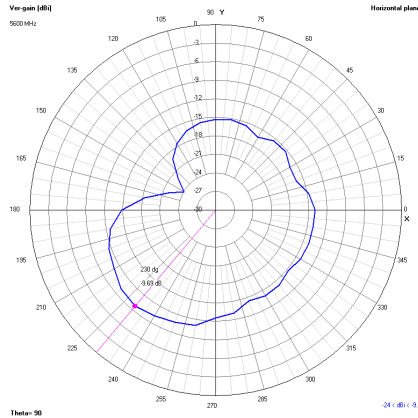
XZ



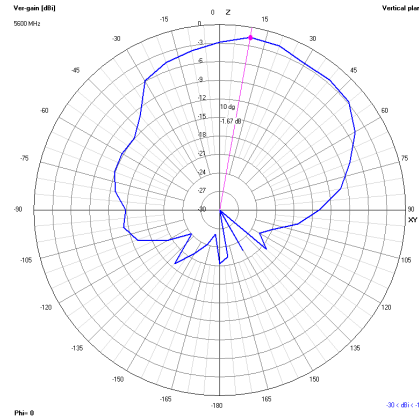
YZ



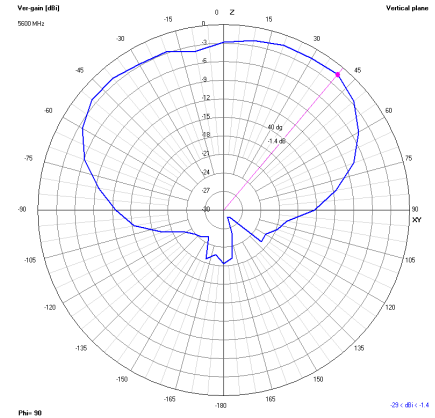
5600 MHz XY



XZ



YZ



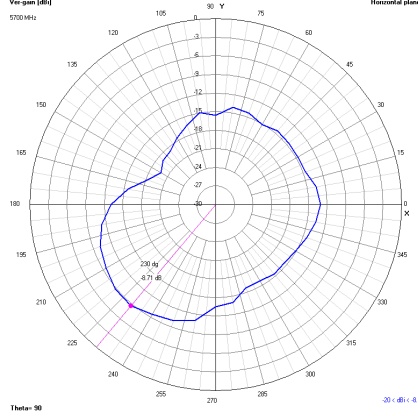


Tango 24

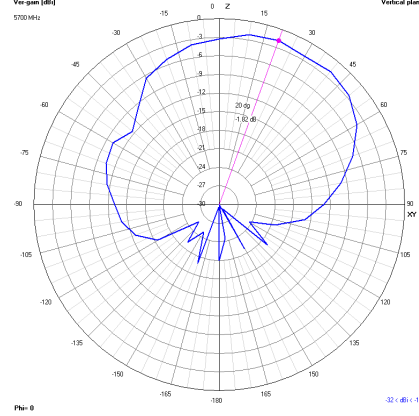
DUAL BAND WIFI 2.4/5.8 GHZ WITH LTE BANDS THROUGH HOLE MOUNT ANTENNA

Radiation Plots tested with 1 m cable

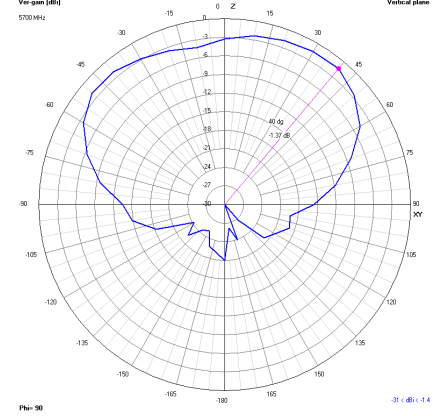
5700 MHz XY



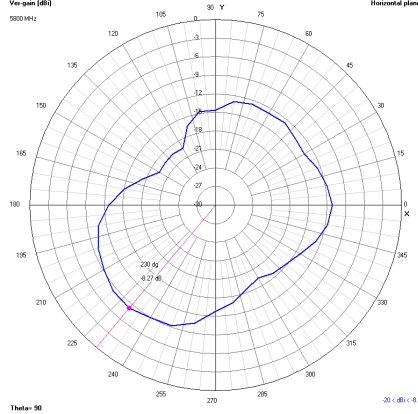
XZ



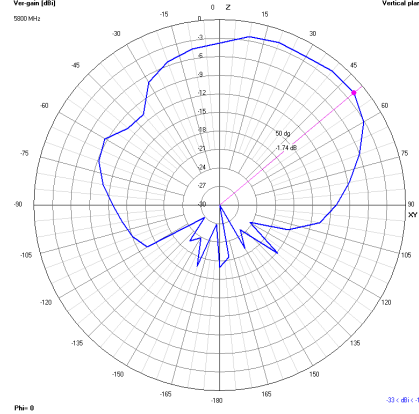
YZ



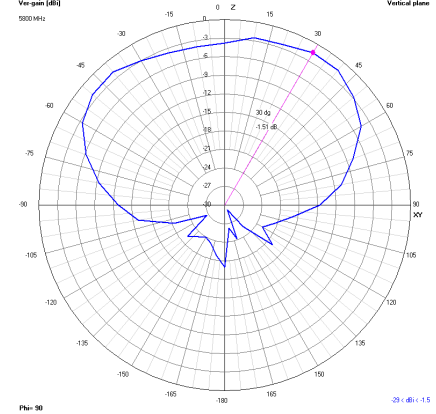
5800 MHz XY



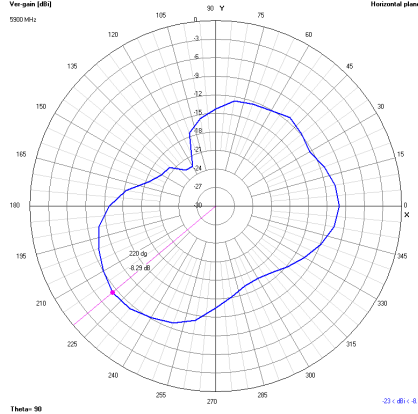
XZ



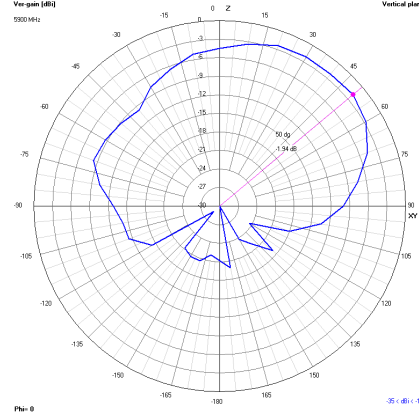
YZ



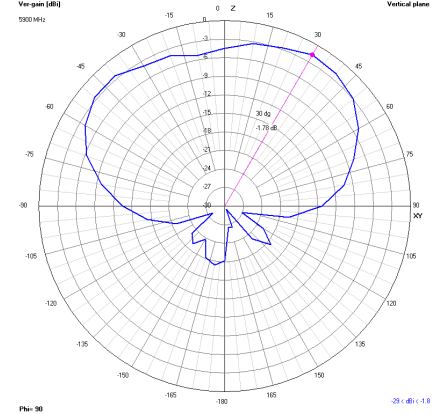
5900 MHz XY



XZ



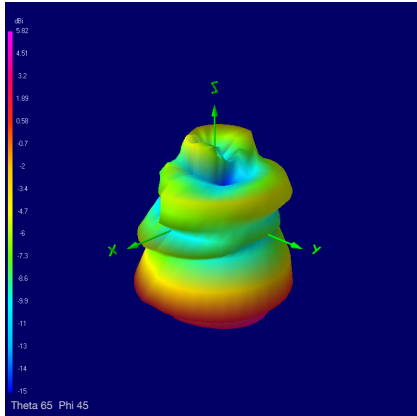
YZ



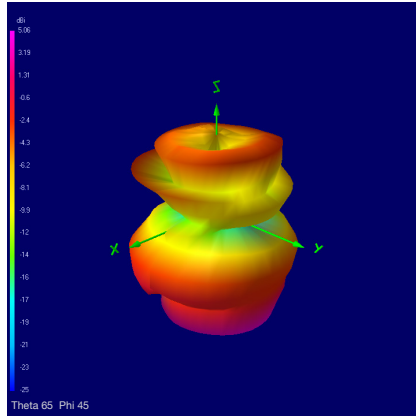


3D Radiation Plots tested with 1 m cable

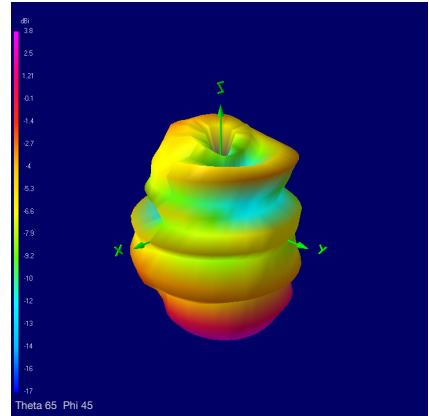
1400 MHz



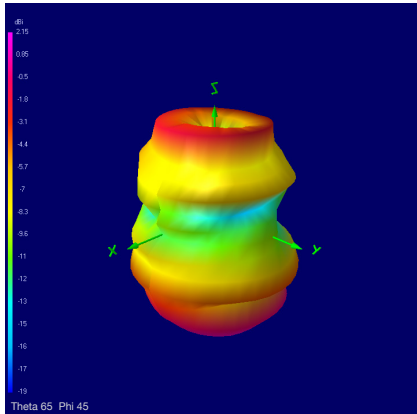
1500 MHz



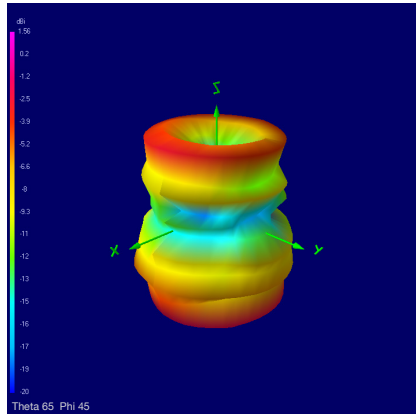
1600 MHz



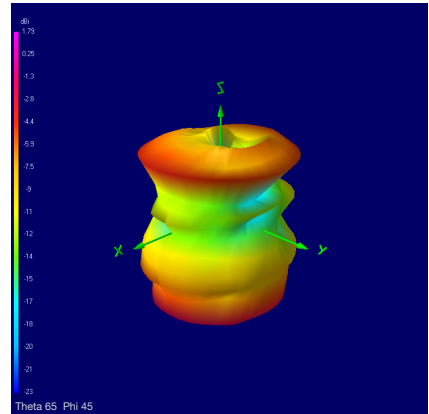
1700 MHz



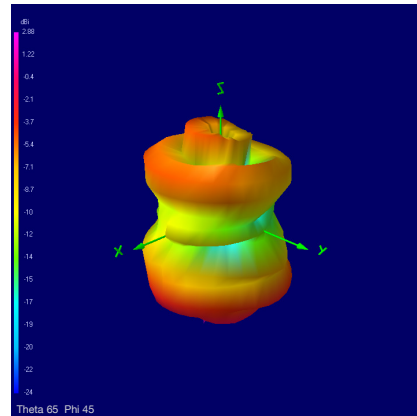
1800 MHz



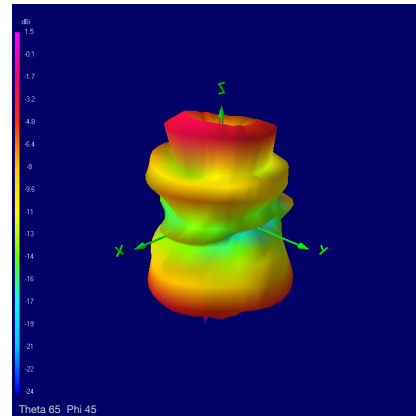
1900 MHz



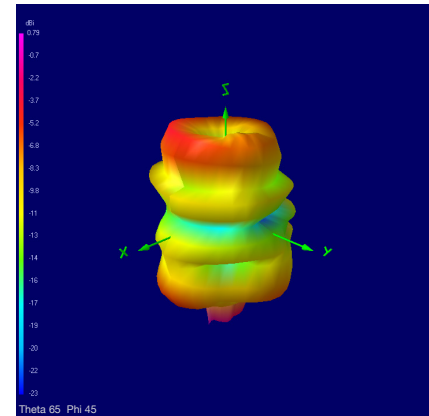
2000 MHz



2100 MHz



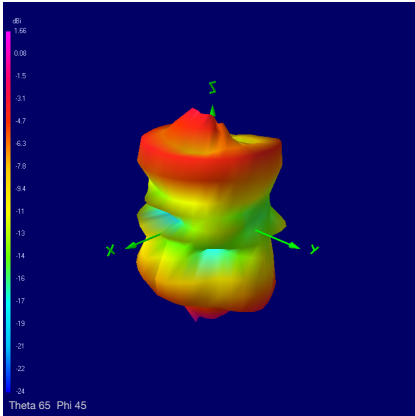
2200 MHz



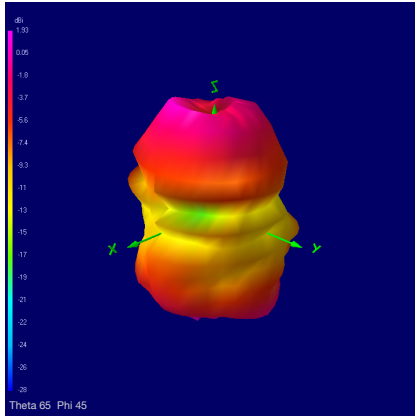


3D Radiation Plots tested with 1 m cable

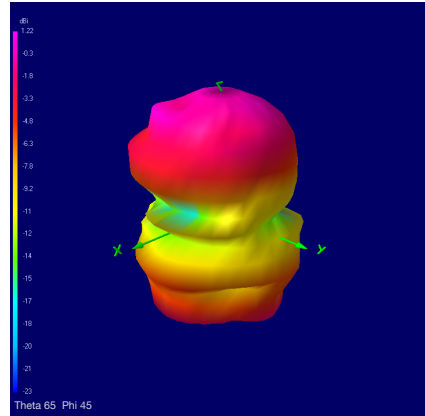
2400 MHz



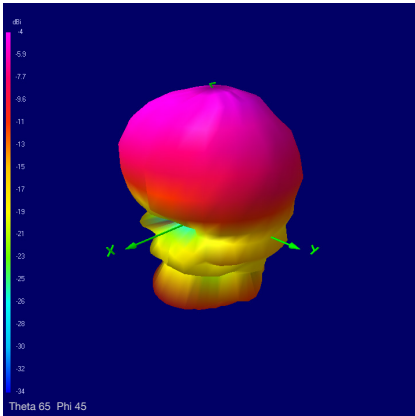
2500 MHz



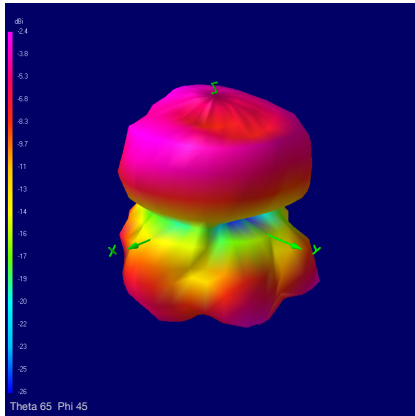
2600 MHz



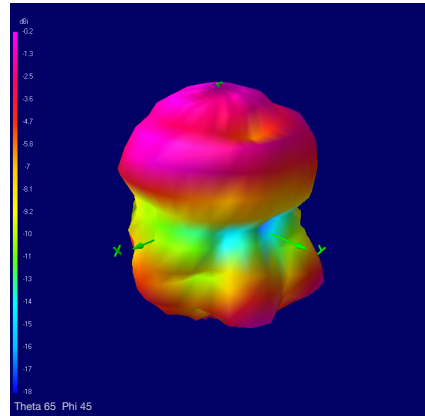
2700 MHz



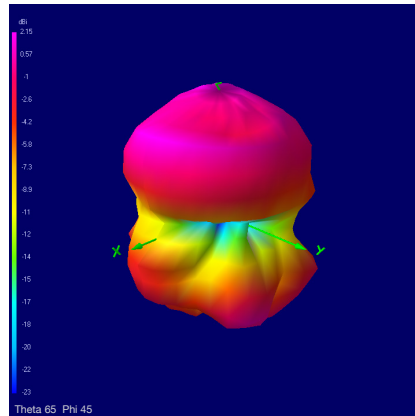
3500 MHz



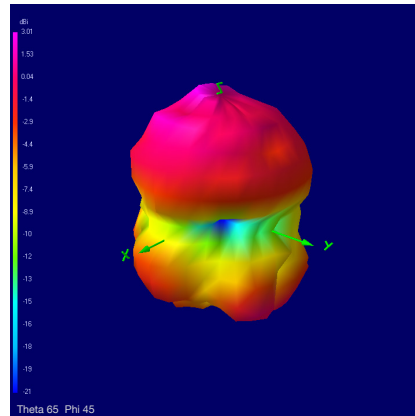
3600 MHz



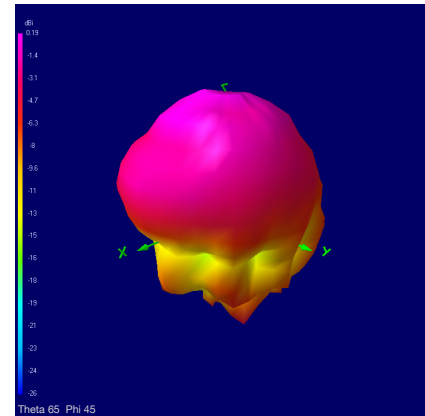
3700 MHz



3800 MHz



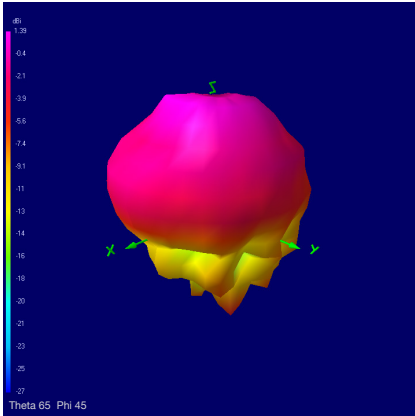
4400 MHz



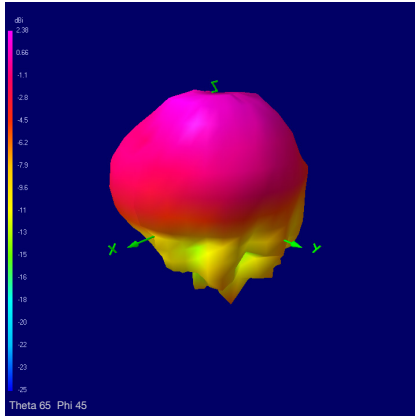


3D Radiation Plots tested with 1 m cable

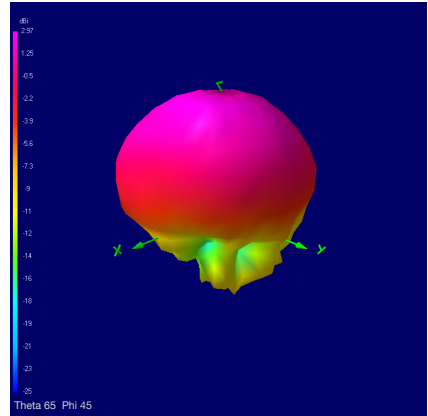
4500 MHz



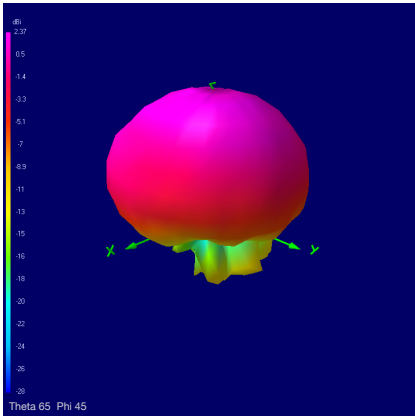
4600 MHz



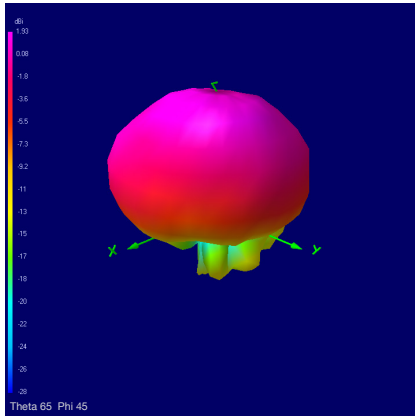
4700 MHz



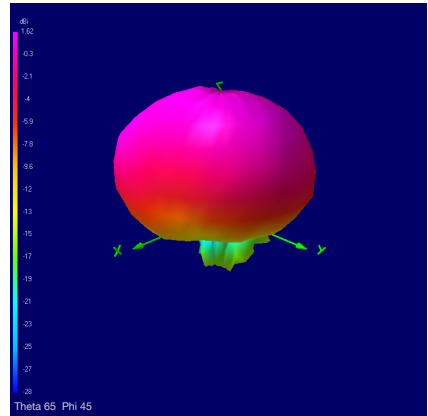
4800 MHz



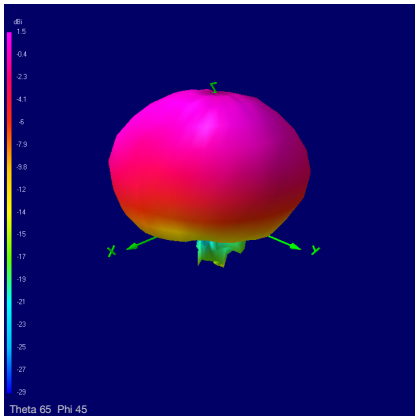
4900 MHz



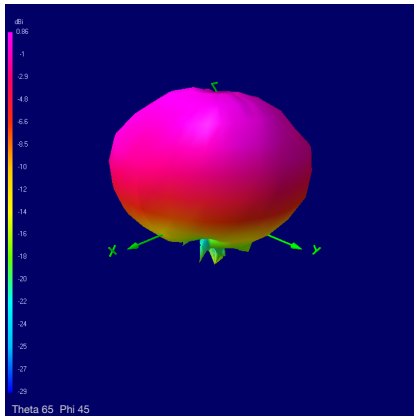
5000 MHz



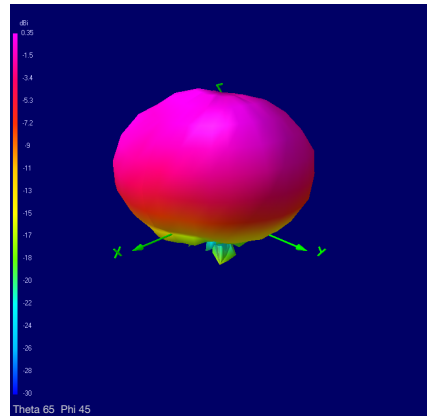
5100 MHz



5200 MHz



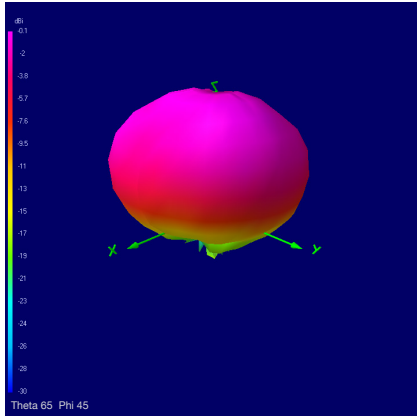
5300 MHz



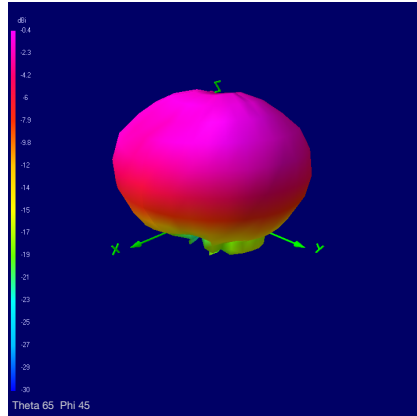


3D Radiation Plots tested with 1 m cable

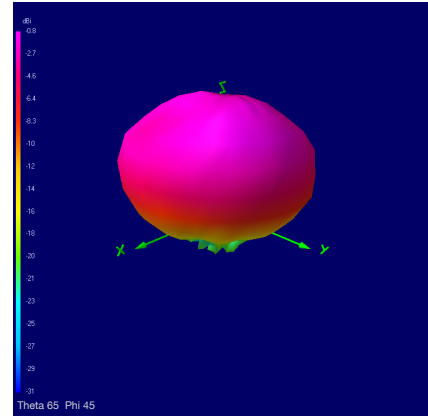
5400 MHz



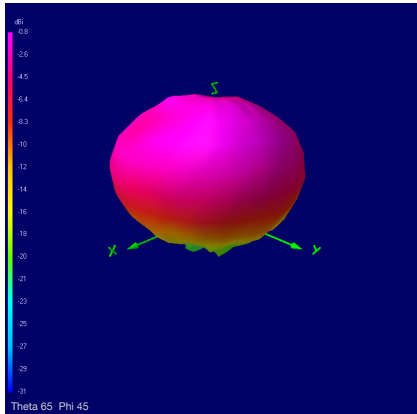
5500 MHz



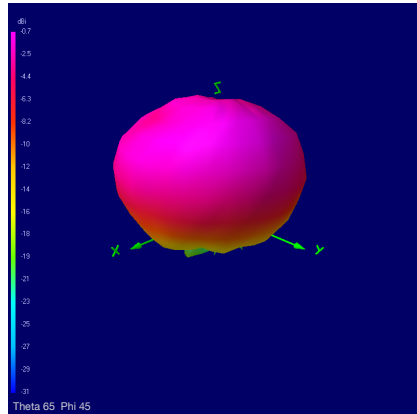
5600 MHz



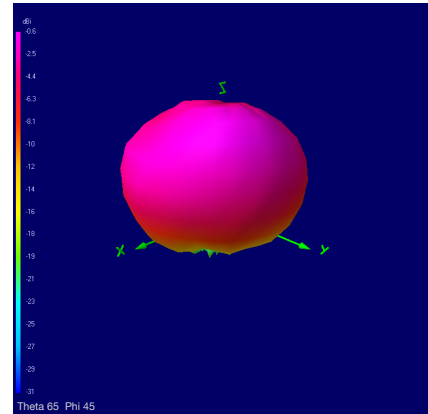
5700 MHz



5800 MHz



5900 MHz



Ordering Details

| Part Number | Description |
|---------------------------|---|
| TANGO24/1M/SMAM/S/RP/17 | DUAL BAND WIFI 2.4/5.8 GHZ WITH LTE BANDS THROUGH HOLE MOUNT ANTENNA SMA MALE RP CONNECTOR 1M CABLE |
| TANGO24/2M/SMAM/S/RP/17 | DUAL BAND WIFI 2.4/5.8 GHZ WITH LTE BANDS THROUGH HOLE MOUNT ANTENNA SMA MALE RP CONNECTOR 2M CABLE |
| TANGO24/2.5M/SMAM/S/RP/17 | DUAL BAND WIFI 2.4/5.8 GHZ WITH LTE BANDS THROUGH HOLE MOUNT ANTENNA SMA MALE RP CONNECTOR 2.5M CABLE |
| TANGO24/1M/SMAM/S/S/17 | DUAL BAND WIFI 2.4/5.8 GHZ WITH LTE BANDS THROUGH HOLE MOUNT ANTENNA SMA MALE CONNECTOR 1M CABLE |
| TANGO24/2M/SMAM/S/S/17 | DUAL BAND WIFI 2.4/5.8 GHZ WITH LTE BANDS THROUGH HOLE MOUNT ANTENNA SMA MALE CONNECTOR 2M CABLE |