



## Delta 35

High Gain 5G/4G Ultra Wide Band (UWB) 3-8 GHz 84 mm Hinged Monopole Antenna



### Key Features

- Supports 5G NR / 4G LTE / 3G UMTS Bands
- Supports UWB frequencies between 2.6 – 8 GHz (UWB Bands 1-9)
- Supports LTE Cat M, LTE Cat NB and NR Cat NB Bands
- Supports ISM 5800 MHz Band

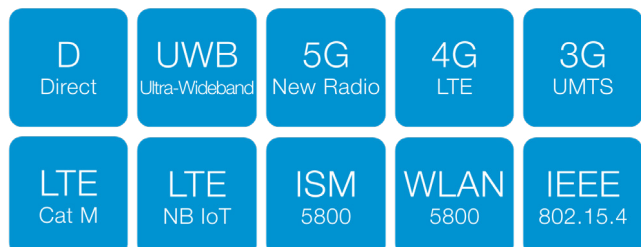
### General Description

The Delta 35 is a hinged monopole antenna designed to be mounted directly onto terminal equipment. Despite its small size, this antenna is designed to operate within a wide frequency range of 2.6 to 8 GHz. With an excellent radiation efficiency, a low VSWR and a peak gain of 9dBi, this antenna is a great choice for any UWB application such as high precision positioning management systems, sensor location collection and industrial automation. The antenna also covers many of the popular 4G LTE and 5G NR frequencies in use today.

This antenna is supplied with either an SMA Male or Reverse Polarity SMA Male Connector as standard, however other connector types can be specified for high volume orders.

### Additional Considerations

- Omnidirectional monopole
- Adjustable mount allows positioning for best signal
- Ground Plane independent





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### Electrical Specifications

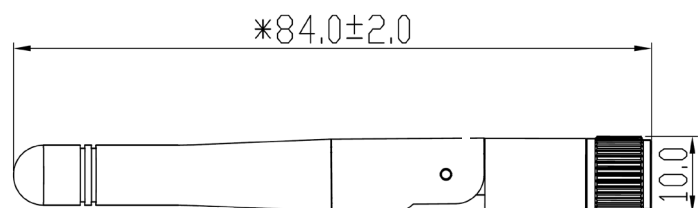
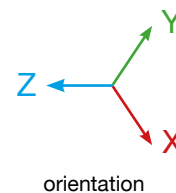
Impedance:	50 Ohm
Polarization:	Vertical
Max Input Power:	10 W
Ground plane independent:	Yes

### Environmental Specifications

Operating Temperature range:	-30 to +75 °C
Storage Temperature range:	-30 to +75 °C

### Mechanical Specifications

Dimensions:	84 mm Length
Weight:	6.3 g
Connector:	SMA Male / BNC Male
Mounting method:	Direct Connect
Housing materials:	ABS/TPEE Black

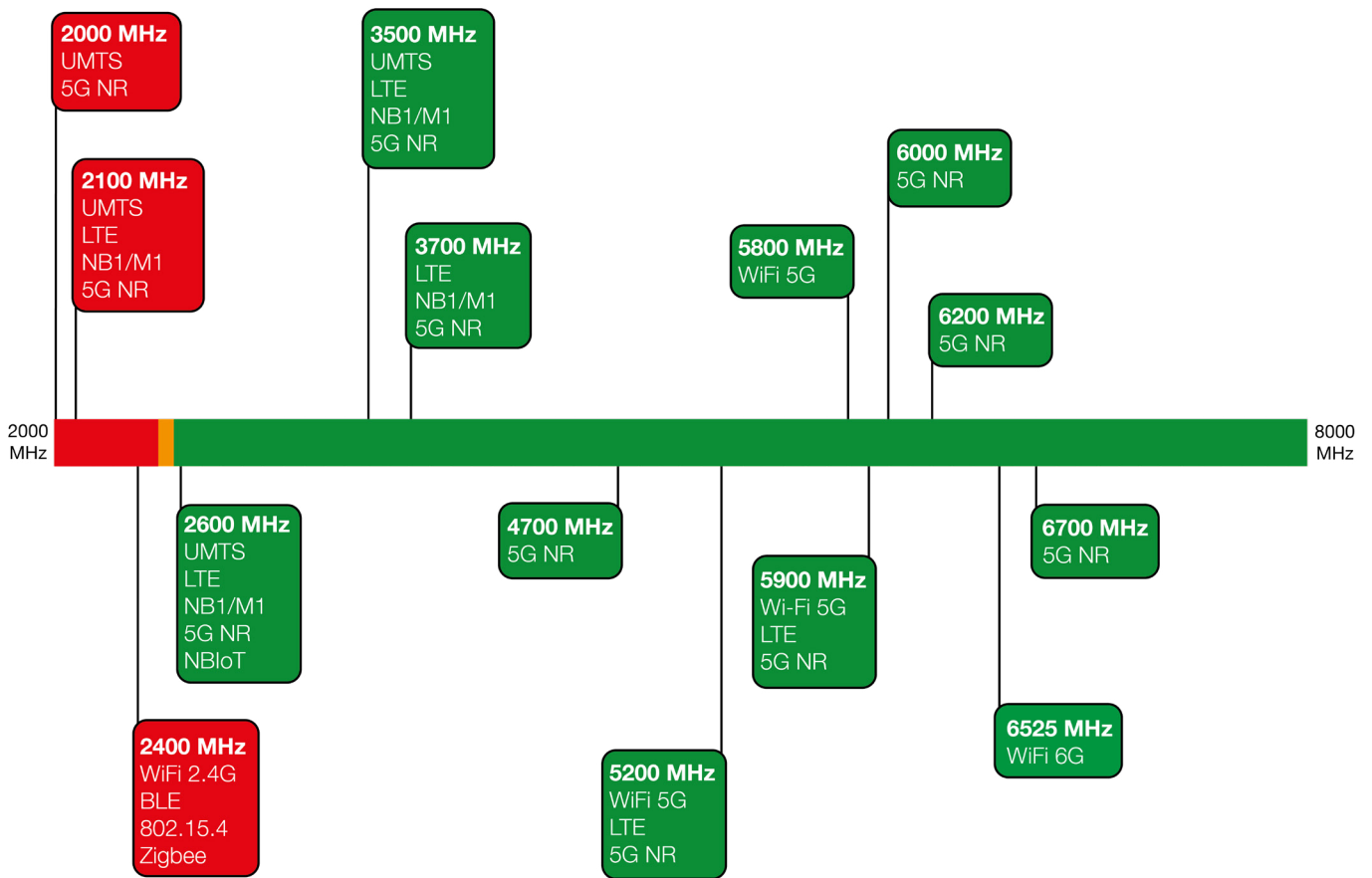




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### Spectrum Coverage



● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable



## Delta 35

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### Usable Cellular Frequency Support (2000 MHz – 6700 MHz)

	2000	2100	2300	2400	2500	2600	3300	3500	3700	4700	5200	5900	6000	6200	6700
GSM Bands:															
UMTS Bands:						●		●							
LTE Bands:						●	●	●	●		●	●			
LTE Cat M Bands:						●		●	●						
LTE Cat NB Bands:						●		●	●						
5G NR Bands:						●		●	●	●	●	●	●	●	●
NR Cat NB Bands:						●									

### Usable ISM Frequency Support (2450 MHz - 6525 MHz)

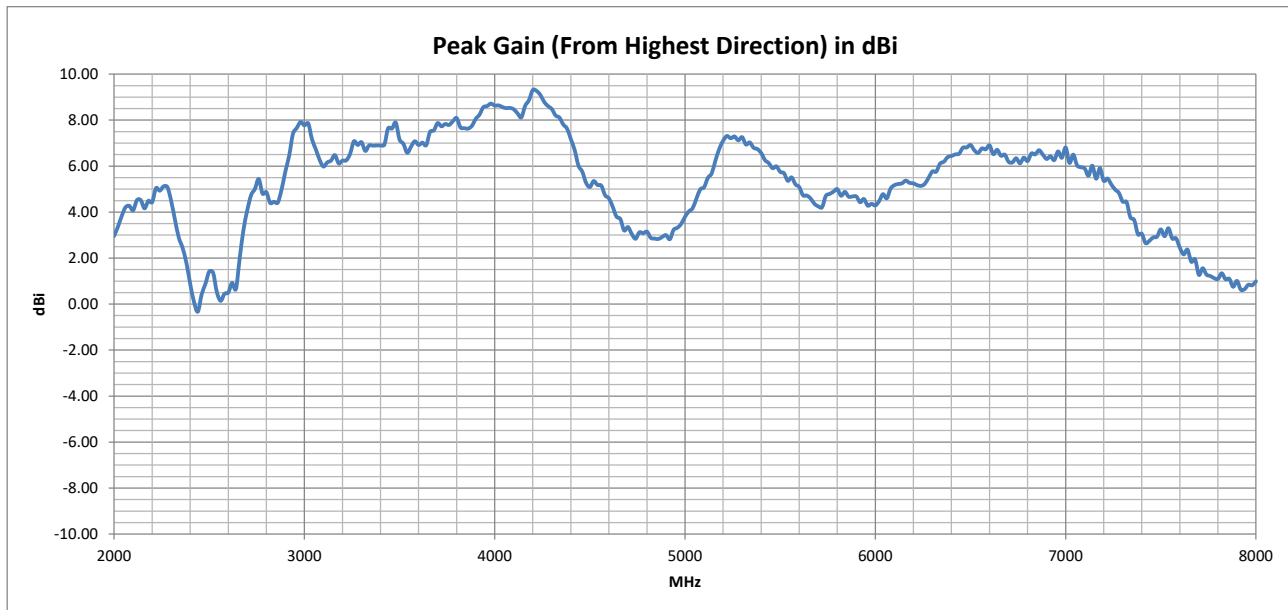
	2450	5800	6525
Bluetooth			
IEEE 802.15.4			
ISM 2.4G			
ISM 5.8G		●	
WiFi 2.4G			
WiFi 5G		●	
WiFi 6E			●
Zigbee			



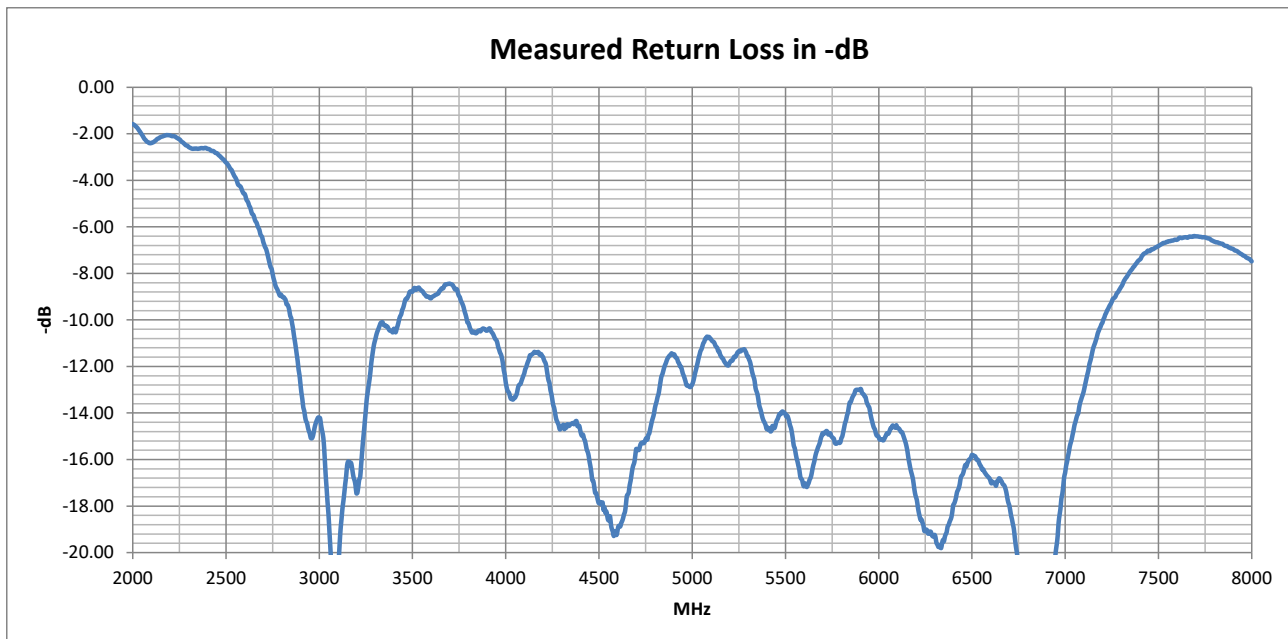
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### Peak Gain vs. Frequency



### Return Loss

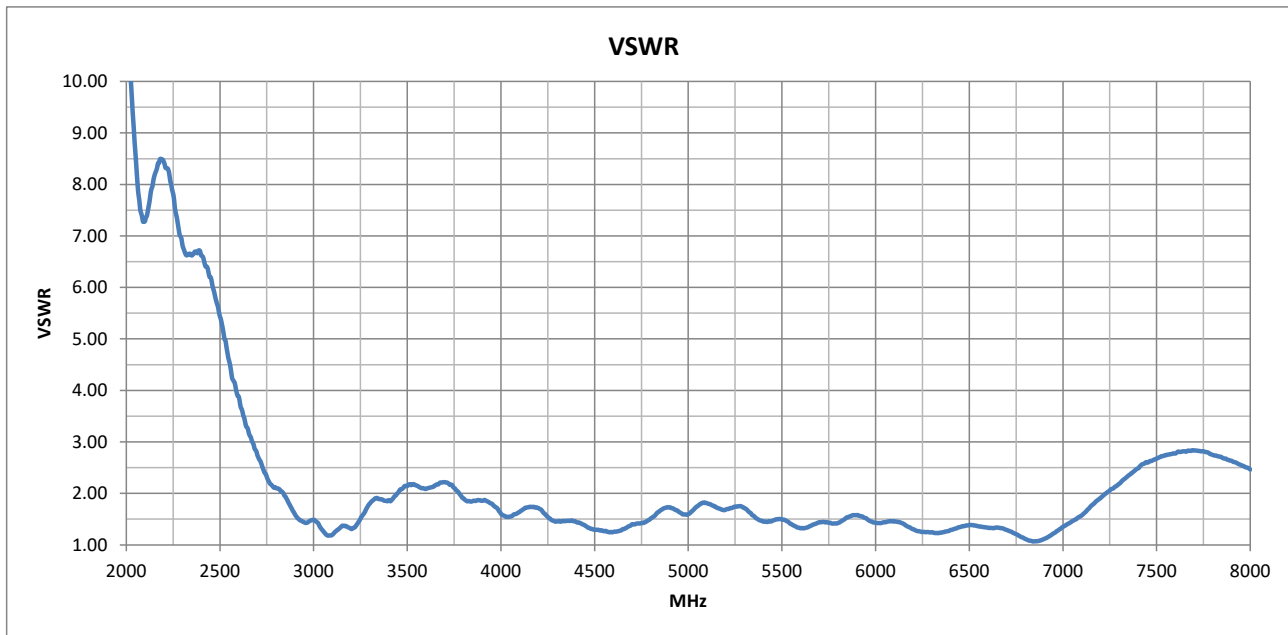




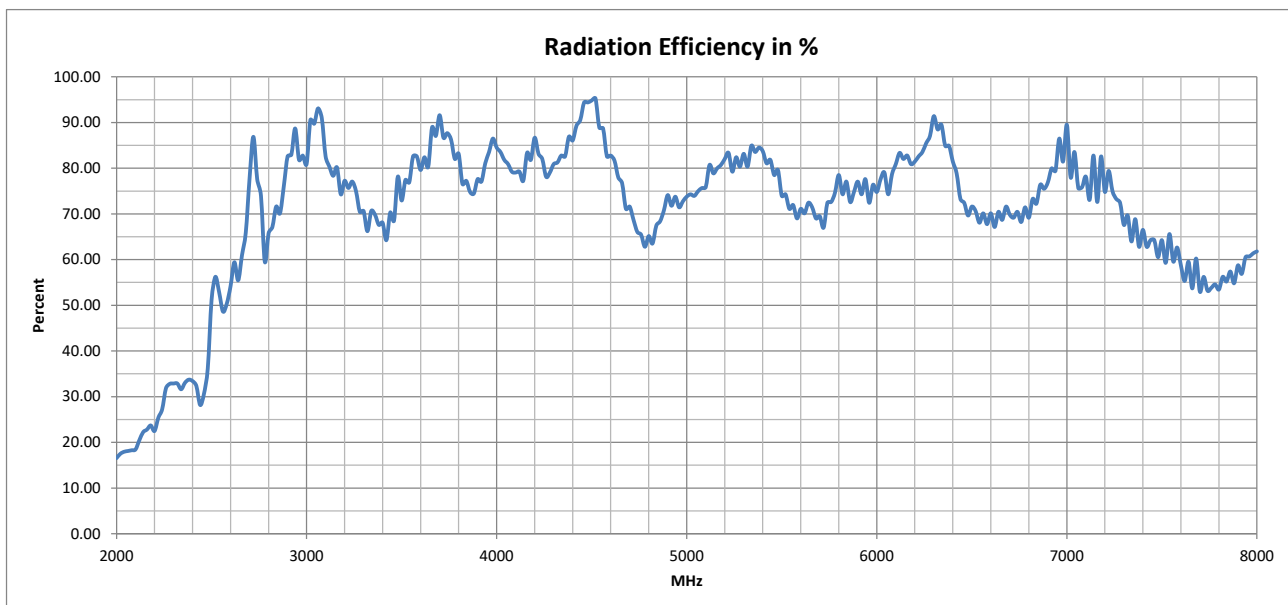
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### VSWR



### Radiation Efficiency





### Cellular Standards Band Support

GSM (2G) Band	UMTS (3G) Band	E-UTRA (4G) Band	Cat M E-UTRA Band	Cat NB E-UTRA Band	NR (5G) Band	Cat NB NR (5G) Band	Uplink	Downlink	Average Upload Efficiency (%)	Average Download Efficiency (%)	Maximum Upload VSWR	Maximum Download VSWR	Use Indicator
	7	7	7	7	n7	n7	2500 - 2570 MHz	2620 - 2690 MHz	52.43	61.02	5.44	3.60	●
	22	22					3410 - 3490 MHz	3510 - 3590 MHz	70.28	79.66	2.15	2.18	●
		30			n30		2305 - 2315 MHz	2350 - 2360 MHz	32.89	32.68	6.76	6.65	●
		34			n34		2010 - 2025 MHz	2010 - 2025 MHz	17.36	17.36	10.70	10.70	●
		38			n38		2570 - 2620 MHz	2570 - 2620 MHz	53.62	53.62	4.20	4.20	●
		40	40		n40		2300 - 2400 MHz	2300 - 2400 MHz	32.89	32.89	6.83	6.83	●
		41	41	41	n41	n41	2496 - 2690 MHz	2496 - 2690 MHz	55.78	55.78	5.50	5.50	●
		42	42	42			3400 - 3600 MHz	3400 - 3600 MHz	74.76	74.76	2.18	2.18	●
		43	43	43			3600 - 3800 MHz	3600 - 3800 MHz	85.45	85.45	2.22	2.22	●
		46			n46		5150 - 5925 MHz	5150 - 5925 MHz	76.65	76.65	1.75	1.75	●
		47			n47		5855 - 5925 MHz	5855 - 5925 MHz	74.95	74.95	1.58	1.58	●
		48	48	48	n48		3550 - 3700 MHz	3550 - 3700 MHz	83.83	83.83	2.22	2.22	●
		49					3550 - 3700 MHz	3550 - 3700 MHz	83.83	83.83	2.22	2.22	●
		52					3300 - 3400 MHz	3300 - 3400 MHz	68.73	68.73	1.91	1.91	●
		53			n53		2483.5 - 2495 MHz	2483.5 - 2495 MHz	43.09	43.09	5.70	5.70	●
		69					N/A	2570 - 2620 MHz	N/A	53.62	N/A	4.20	●
					n77		3300 - 4200 MHz	3300 - 4200 MHz	78.90	78.90	2.22	2.22	●
					n78		3300 - 3800 MHz	3300 - 3800 MHz	77.83	77.83	2.22	2.22	●
					n79		4400 - 5000 MHz	4400 - 5000 MHz	77.44	77.44	1.73	1.73	●
					n90	n90	2496 - 2690 MHz	2496 - 2690 MHz	55.78	55.78	5.50	5.50	●
					n95		2010 - 2025 MHz	N/A	17.36	N/A	10.70	N/A	●
					n96		5925 - 7125 MHz	5925 - 7125 MHz	77.12	77.12	1.66	1.66	●
					n97		2300 - 2400 MHz	N/A	32.89	N/A	6.83	N/A	●
					n102		5925 - 6425 MHz	5925 - 6425 MHz	81.58	81.58	1.55	1.55	●
					n104		6425 - 7125 MHz	6425 - 7125 MHz	73.93	73.93	1.66	1.66	●

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable



### ISM Standards Frequency Support

Application	Frequency Range	Efficiency (%)	Maximum VSWR	Peak Gain from highest direction (dBi)	Use Indicator
ISM 2.4 GHz	2400 - 2500 MHz	33.93	6.62	1.42	●
Wi-Fi 2.4G	2401 - 2483 MHz	31.68	6.62	0.96	●
Wi-Fi 2.4G (USA)	2401 - 2473 MHz	31.10	6.62	0.83	●
Wi-Fi 2.4G (Japan)	2401 - 2495 MHz	33.12	6.62	1.29	●
Wi-Fi 5G (all channels)	5150 - 5990 MHz	76.55	1.75	7.31	●
Wi-Fi 5G (Ch 32-48)	5150 - 5250 MHz	81.12	1.74	7.31	●
Wi-Fi 5G (Ch 32-64)	5150 - 5330 MHz	81.34	1.75	7.31	●
Wi-Fi 5G (Ch 32-161)	5150 - 5815 MHz	76.90	1.75	7.31	●
Wi-Fi 5G (Ch 32-173)	5150 - 5875 MHz	76.73	1.75	7.31	●
Wi-Fi 6E (Ch 1-93)	5925 - 6425 MHz	81.58	1.55	6.52	●
Wi-Fi 6E (all channels)	5925 - 7125 MHz	77.12	1.66	6.92	●
ISM 5.8 GHz	5725 - 5875 MHz	74.34	1.57	5.00	●
UWB band 1	3168 - 3696 MHz	75.42	2.22	7.89	●
UWB band 2	3696 - 4224 MHz	81.62	2.22	9.31	●
UWB band 3	4224 - 4752 MHz	82.84	1.64	9.23	●
UWB band 4	4752 - 5280 MHz	74.14	1.82	7.31	●
UWB band 5	5280 - 5808 MHz	75.86	1.75	7.26	●
UWB band 6	5808 - 6336 MHz	79.79	1.58	6.04	●
UWB band 7	6336 - 6864 MHz	72.80	1.39	6.92	●
UWB band 8	6864 - 7392 MHz	76.12	2.47	6.81	●
UWB band 9	7392 - 7920 MHz	58.55	2.84	3.30	●

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable

**NOTE:** For each frequency band, Siretta provides a traffic light indication to show the suitability of the antenna for use at that frequency band. Determination of exactly what makes an antenna good or bad at any frequency is subjective.

The view presented is that of Siretta's engineering team having taken into account the efficiency and VSWR measurements. The end user is advised to use their own criteria and/or testing to confirm suitability.



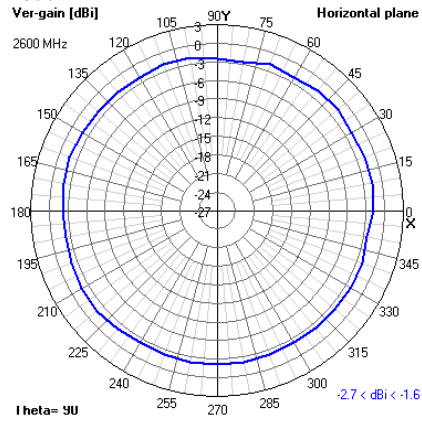


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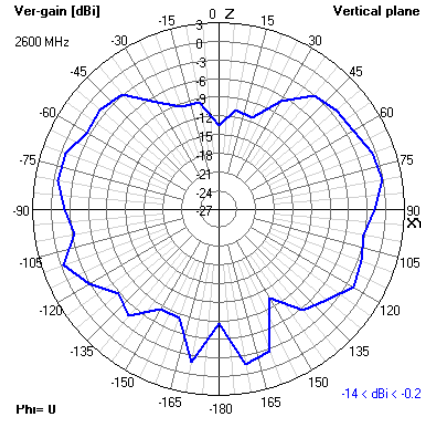
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### 2D Radiation Plots

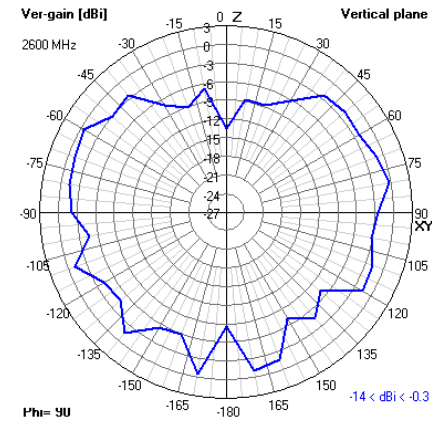
#### 2600 MHz XY



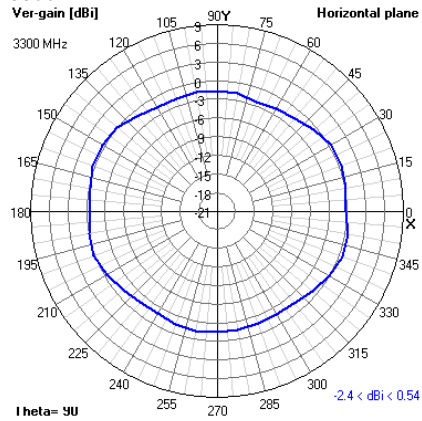
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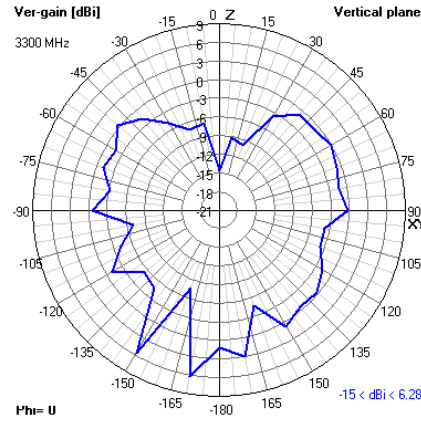
#### YZ



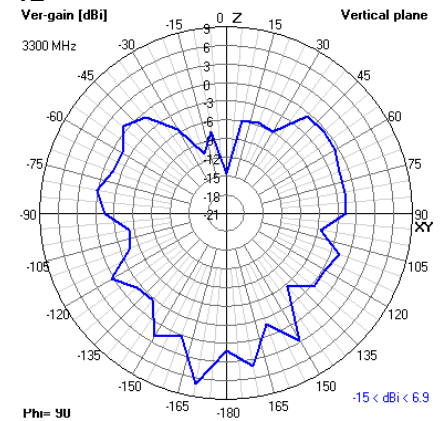
#### 3300 MHz XY



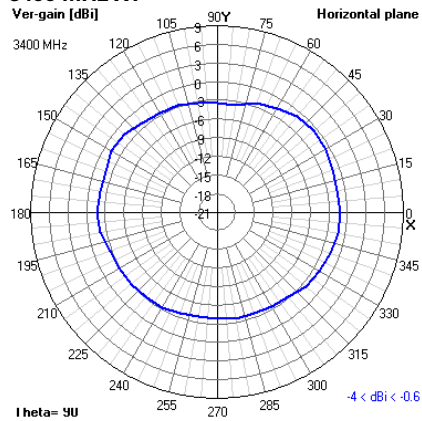
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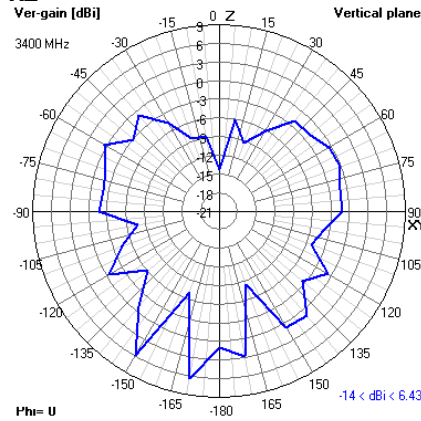
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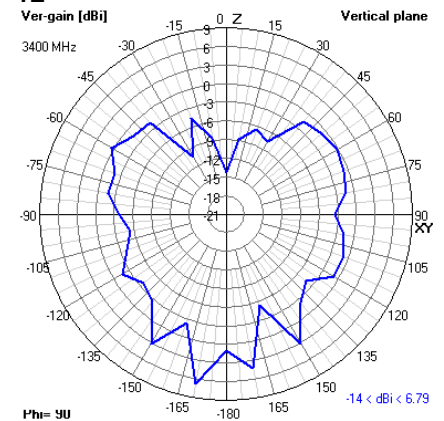
#### 3400 MHz XY



#### XZ



#### YZ



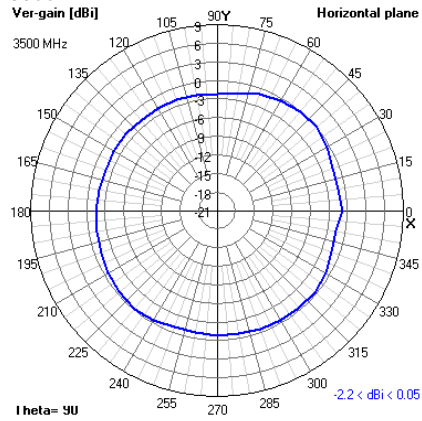


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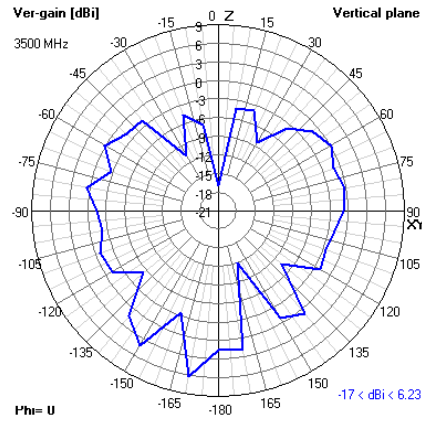
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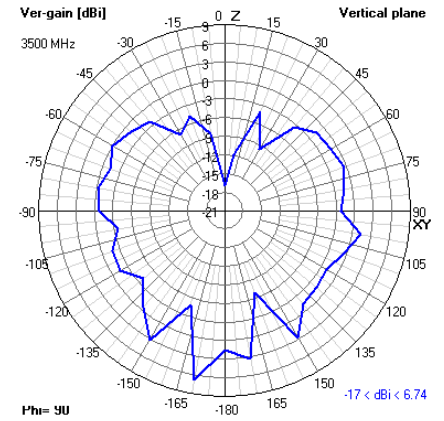
#### 3500 MHz XY



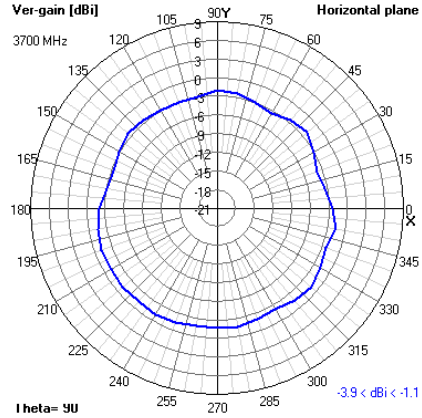
#### XZ



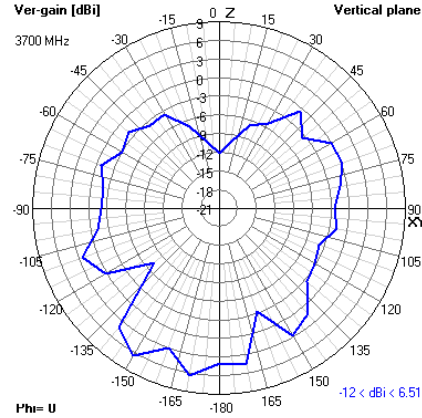
#### YZ



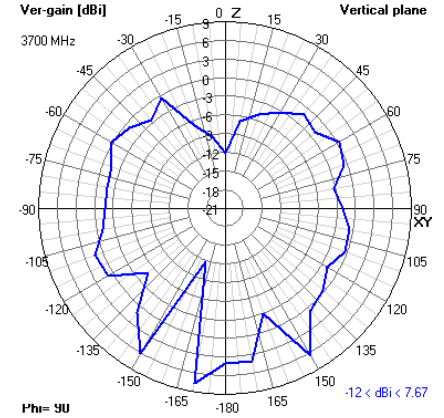
#### 3700 MHz XY



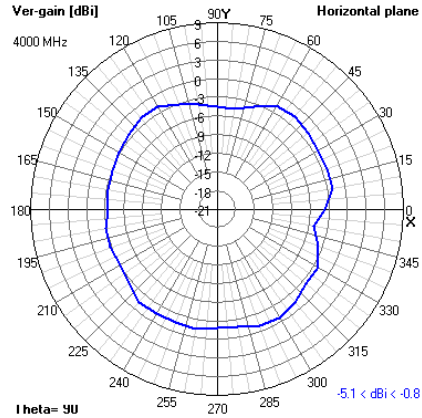
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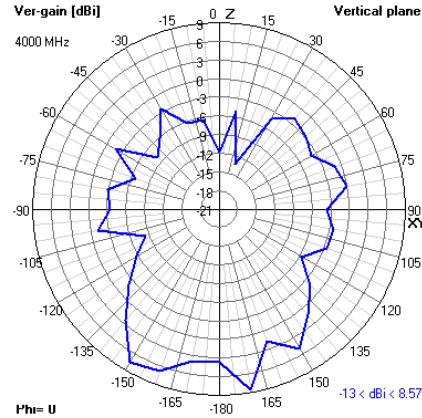
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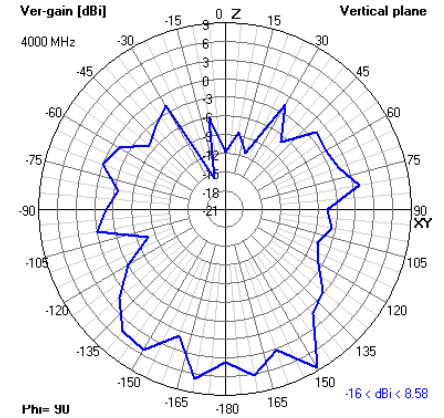
#### 4000 MHz XY



#### XZ



#### YZ



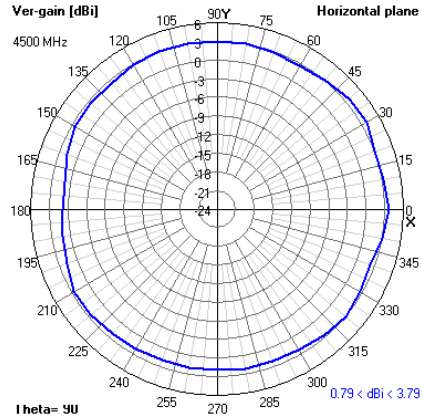


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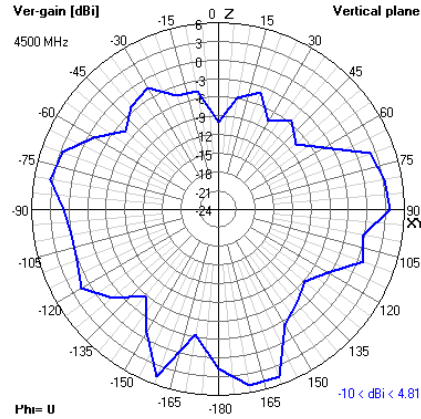
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### 2D Radiation Plots

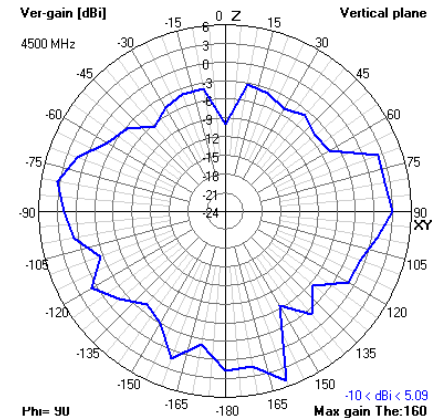
#### 4500 MHz XY



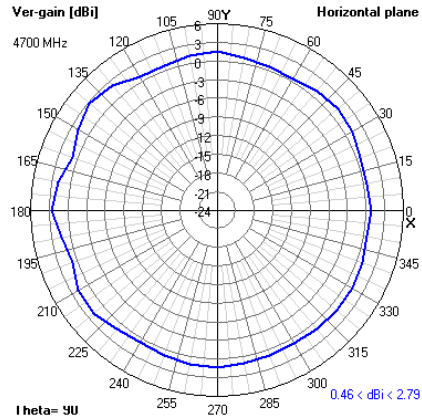
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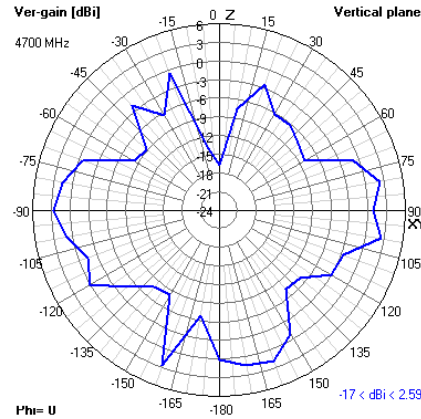
#### YZ



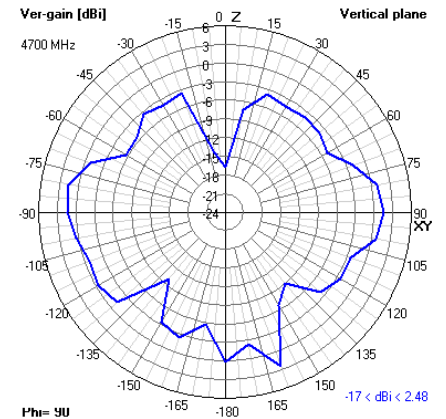
#### 4700 MHz XY



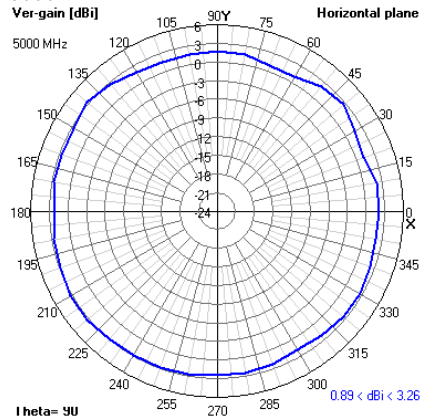
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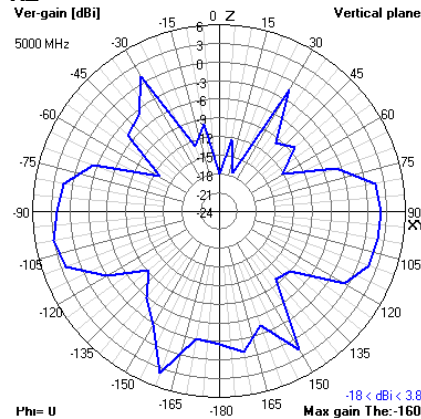
#### YZ



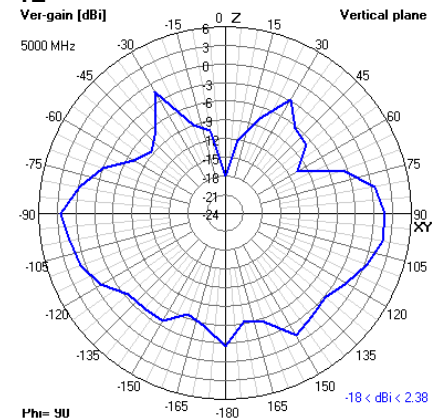
#### 5000 MHz XY



#### XZ



#### YZ



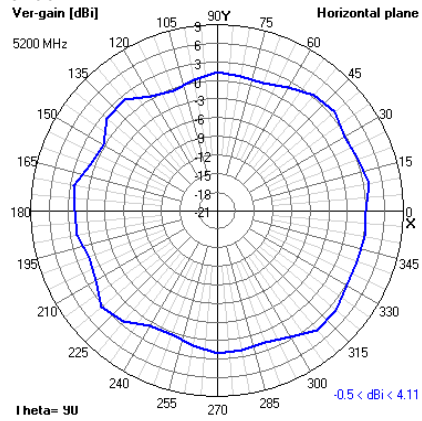


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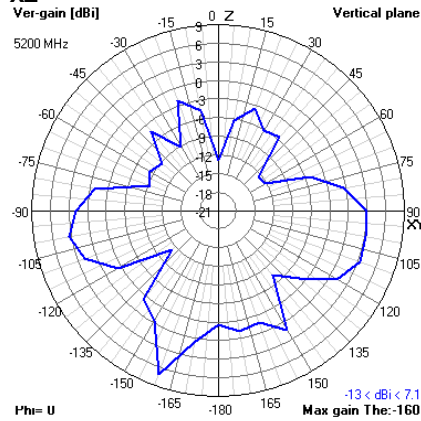
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### 2D Radiation Plots

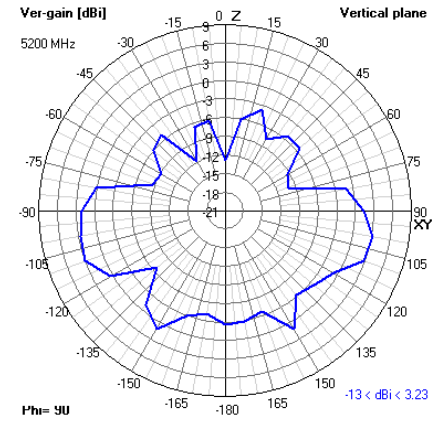
#### 5200 MHz XY



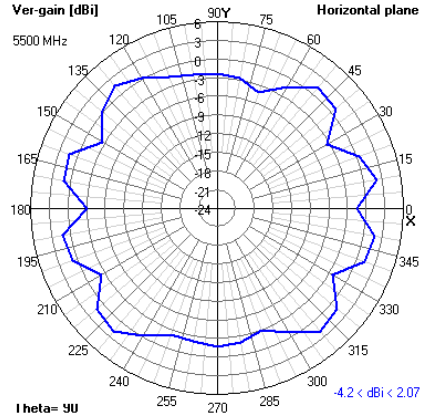
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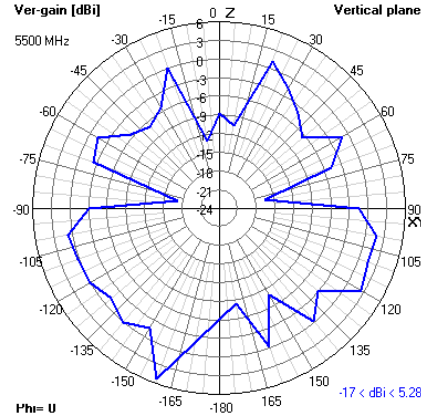
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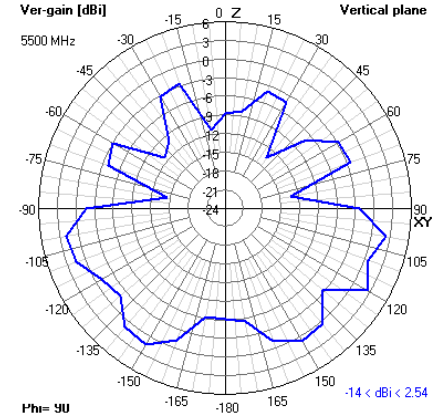
#### 5500 MHz XY



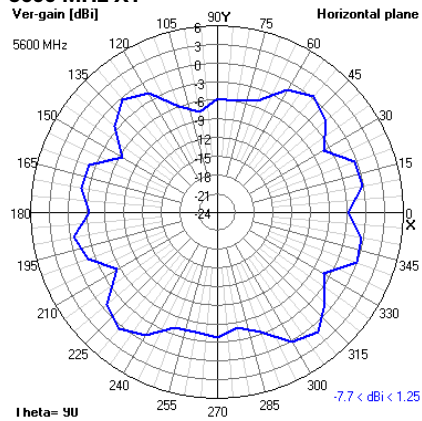
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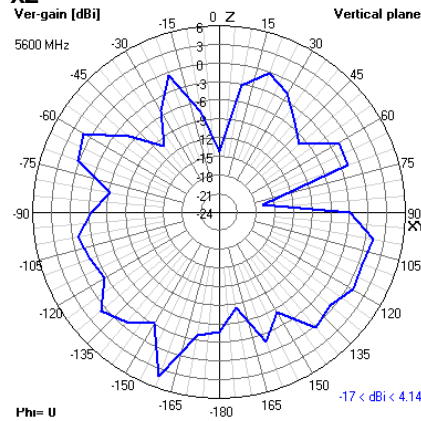
#### YZ



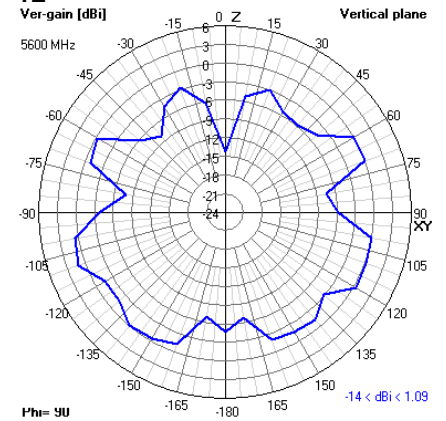
#### 5600 MHz XY



#### XZ



#### YZ



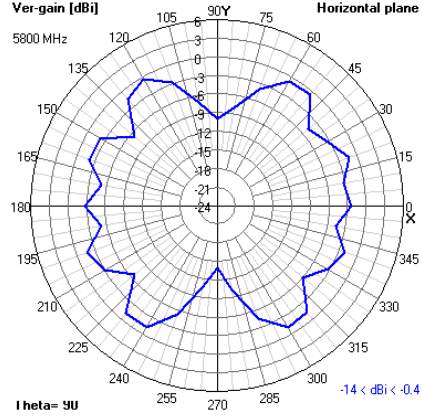


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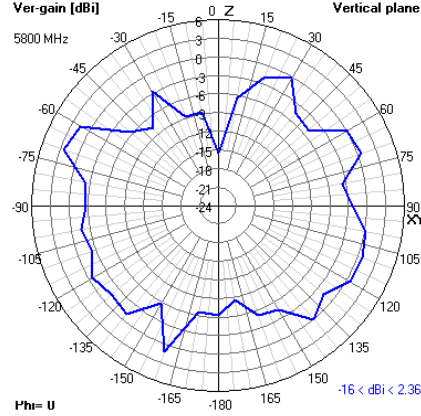
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### 2D Radiation Plots

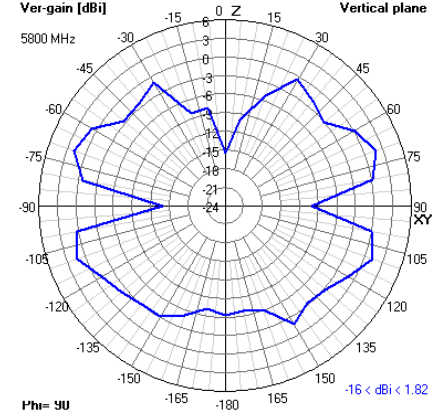
#### 5800 MHz XY



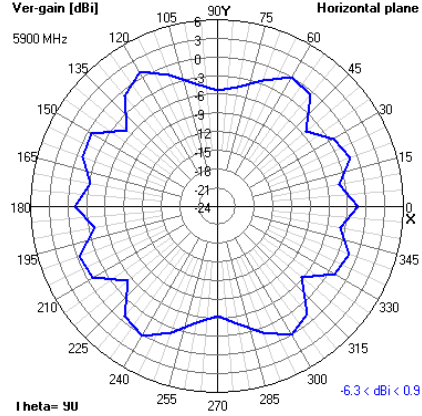
#### XZ



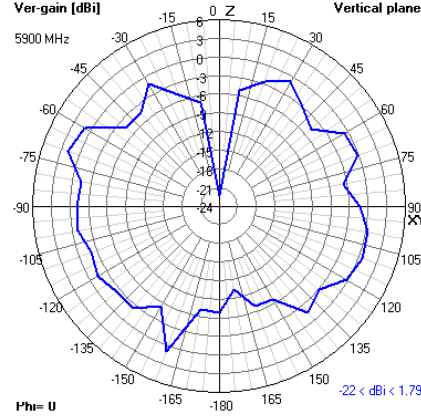
#### YZ



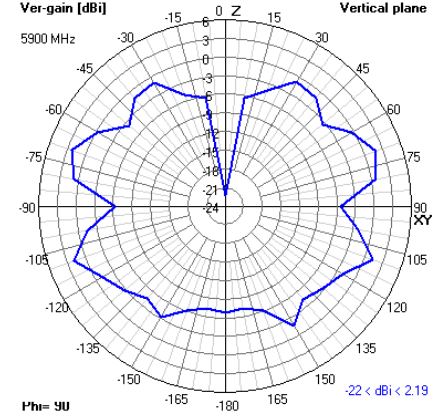
#### 5900 MHz XY



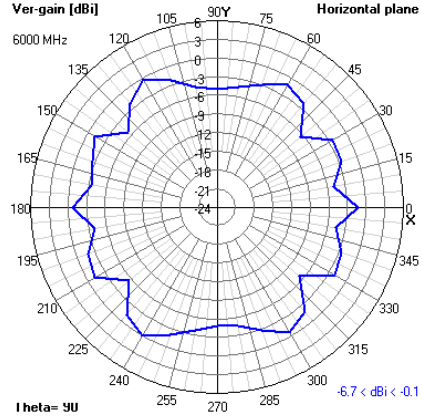
#### XZ



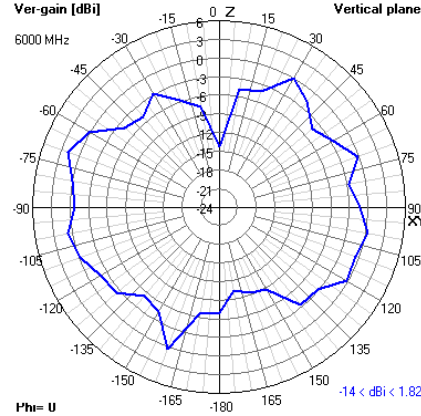
#### YZ



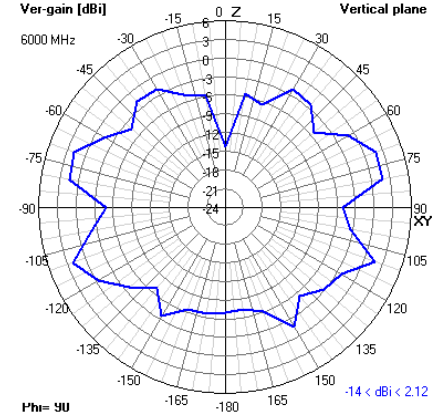
#### 6000 MHz XY



#### XZ



#### YZ





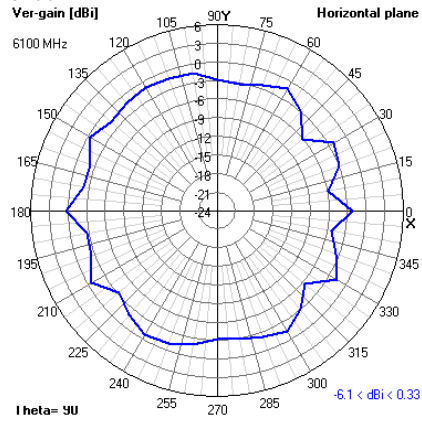


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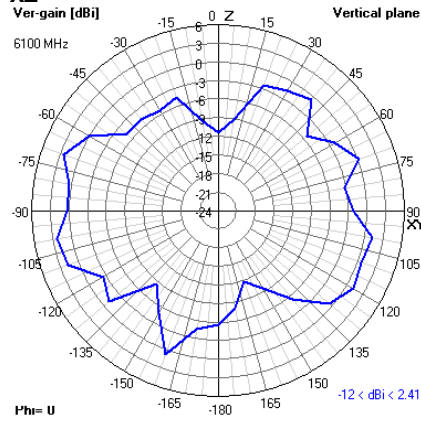
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### 2D Radiation Plots

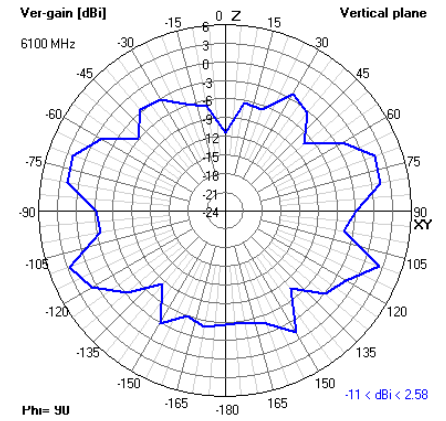
#### 6100 MHz XY



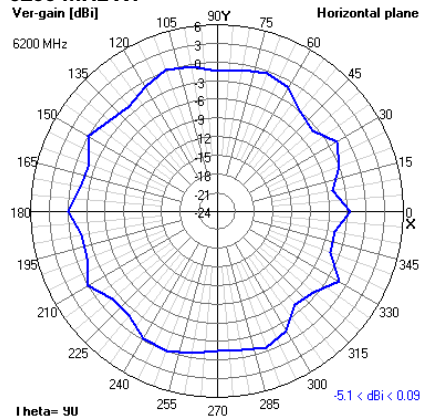
#### XZ



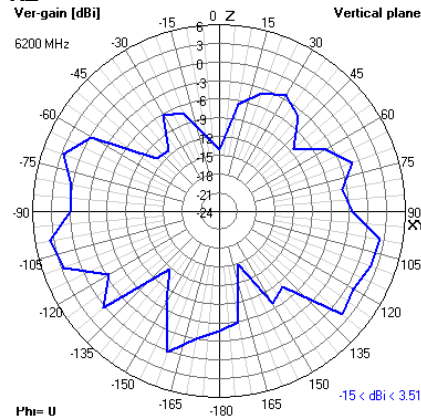
#### YZ



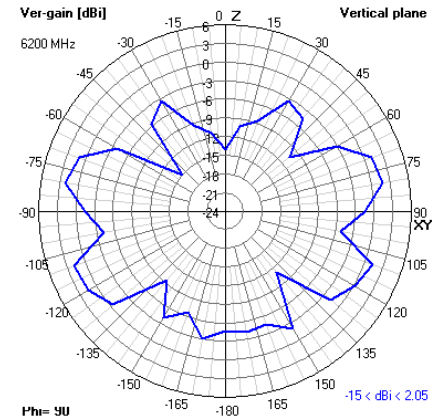
#### 6200 MHz XY



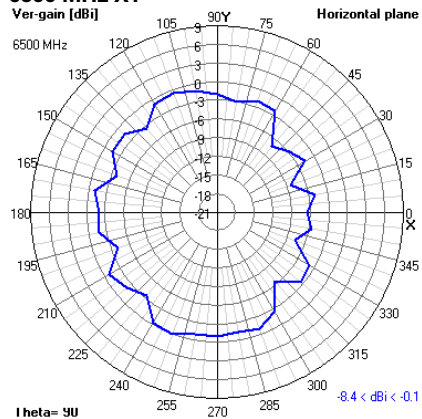
#### XZ



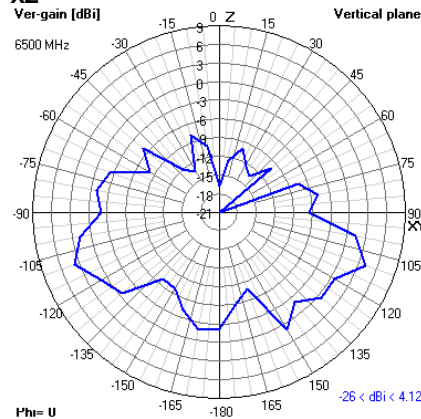
#### YZ



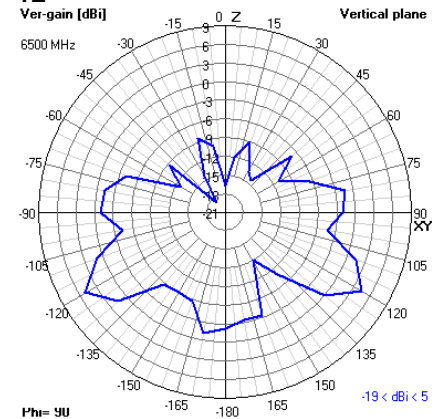
#### 6500 MHz XY



#### XZ



#### YZ



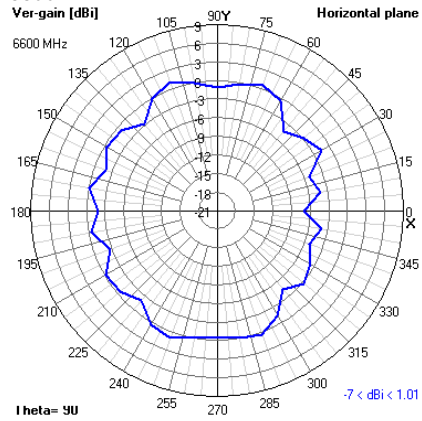


## Delta 35

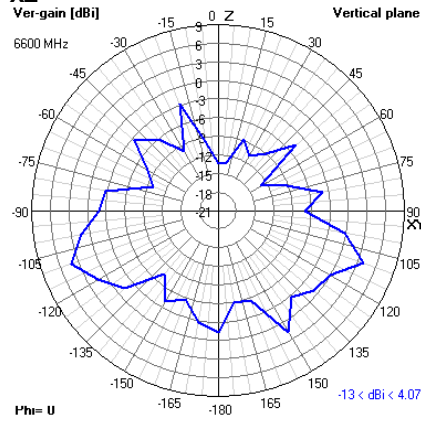
High Gain 5G/4G Ultra Wide Band (UWB) 3-8 GHz 84 mm Hinged Monopole Antenna

### 2D Radiation Plots

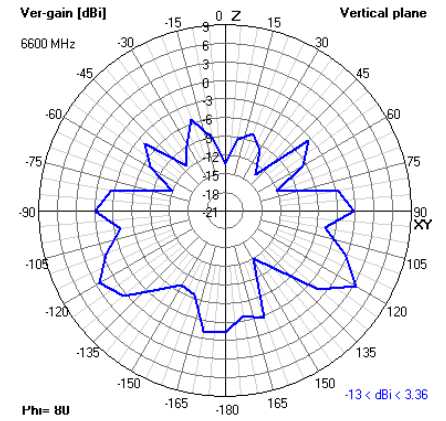
#### 6600 MHz XY



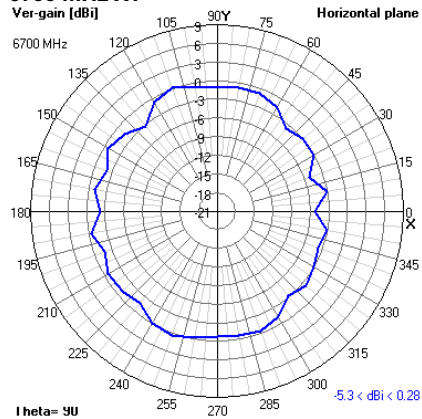
#### XZ



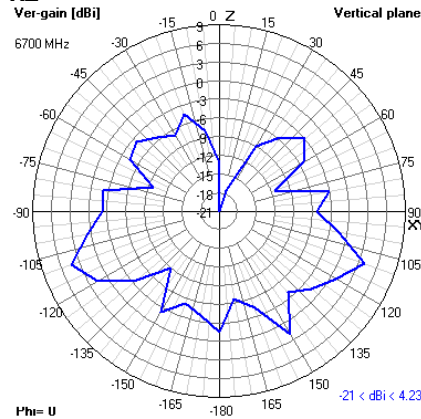
#### YZ



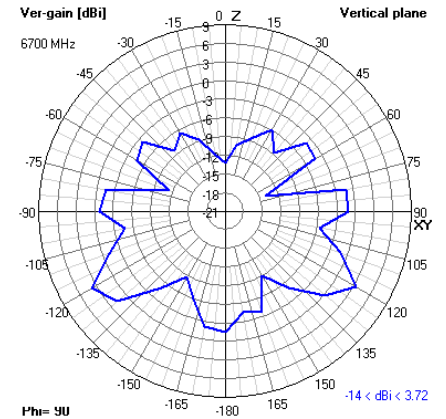
#### 6700 MHz XY



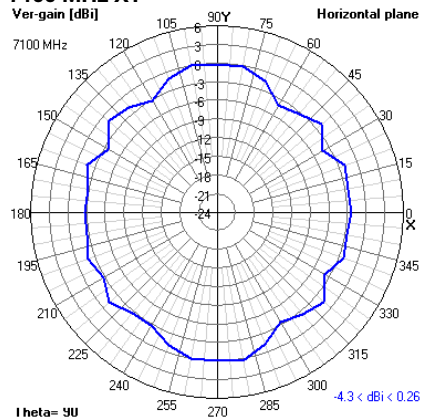
#### XZ



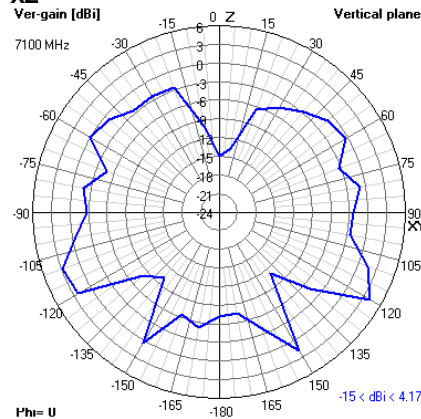
#### YZ



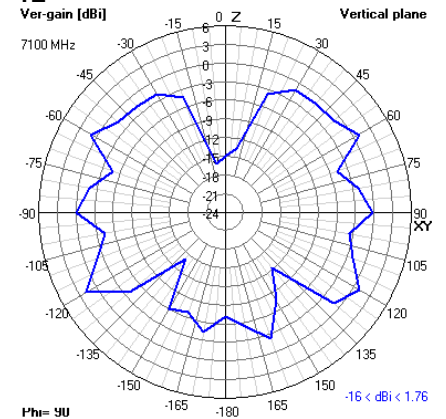
#### 7100 MHz XY



#### XZ



#### YZ



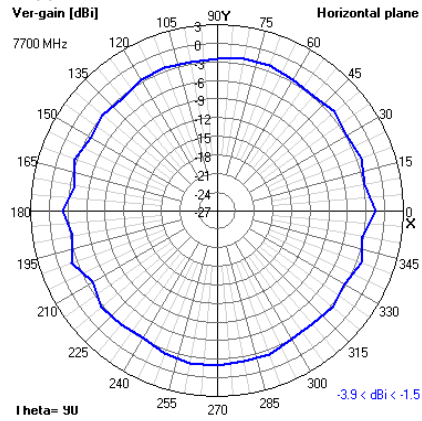


## Delta 35

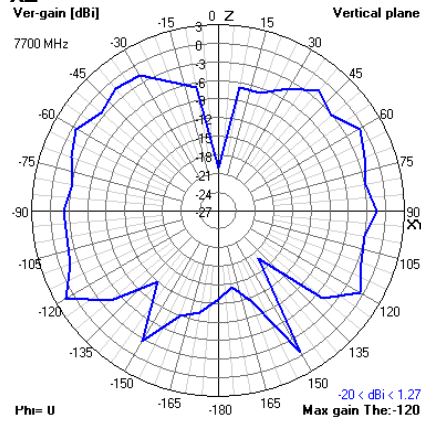
High Gain 5G/4G Ultra Wide Band (UWB) 3-8 GHz 84 mm Hinged Monopole Antenna

### 2D Radiation Plots

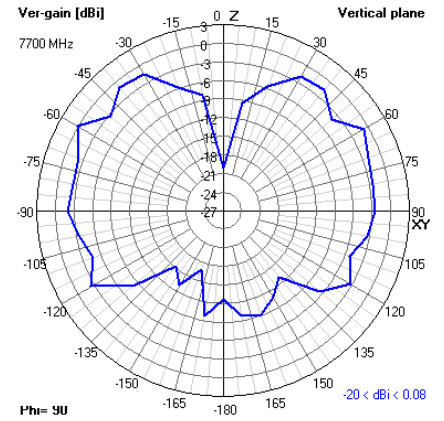
#### 7700 MHz XY



#### XZ



#### YZ





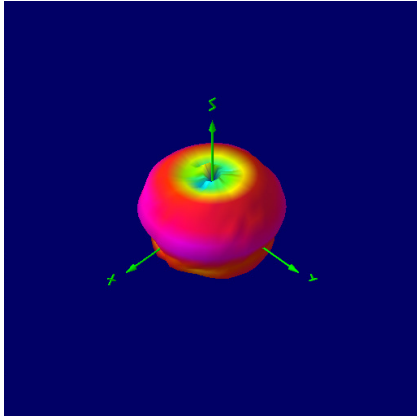


## Delta 35

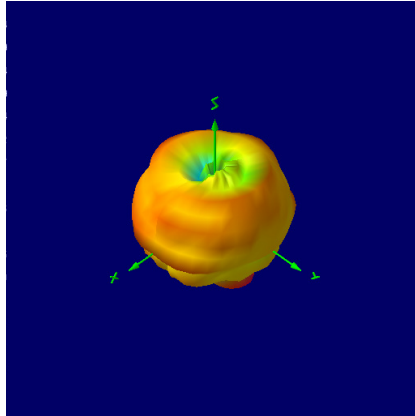
High Gain 5G/4G Ultra Wide Band (UWB) 3-8 GHz 84 mm Hinged Monopole Antenna

### 3D Radiation Plots

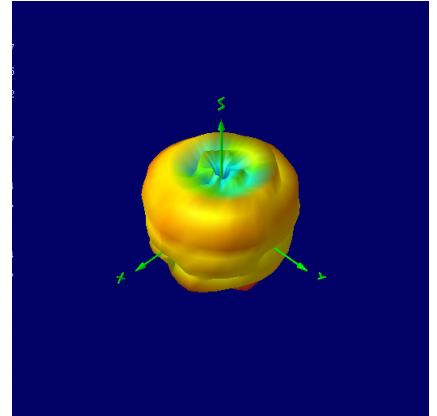
2600 MHz



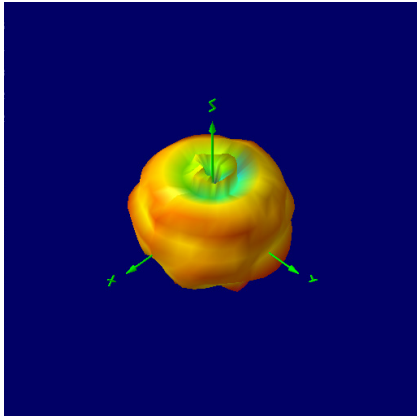
3300 MHz



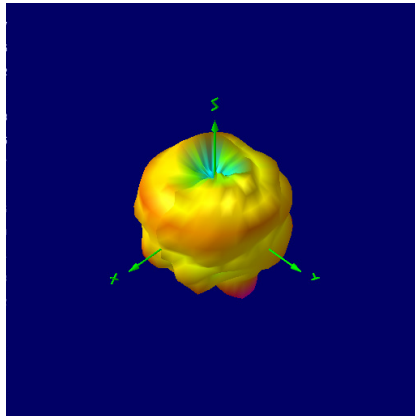
3400 MHz



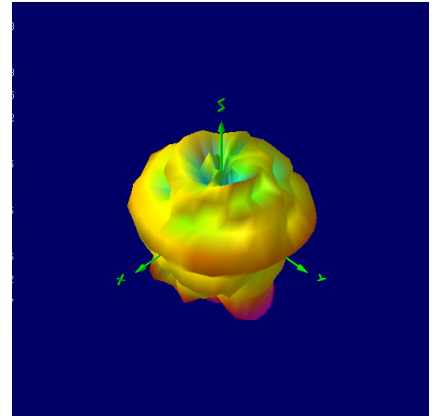
3500 MHz



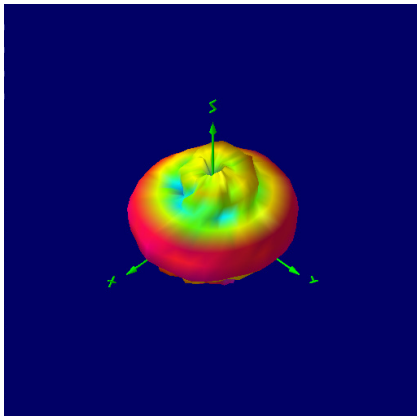
3700 MHz



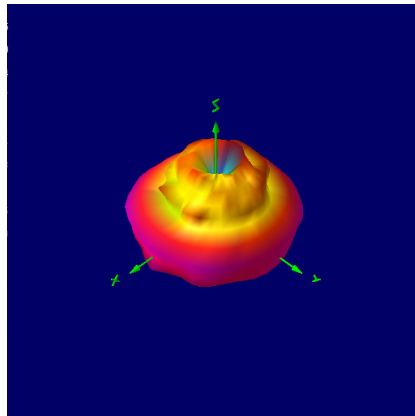
4000 MHz



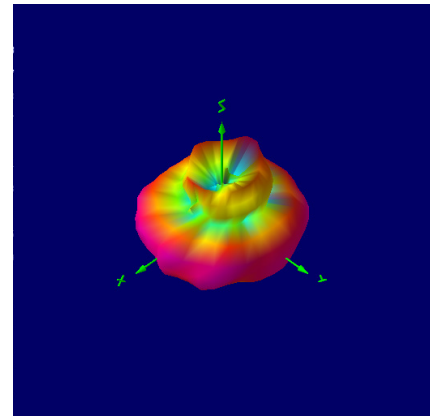
4500 MHz



4700 MHz



5000 MHz



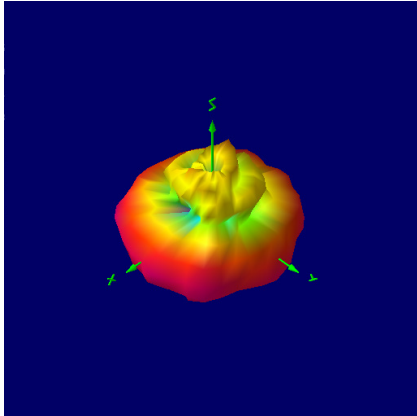


## Delta 35

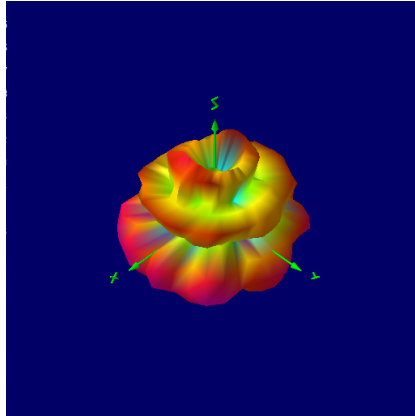
High Gain 5G/4G Ultra Wide Band (UWB) 3-8 GHz 84 mm Hinged Monopole Antenna

### 3D Radiation Plots

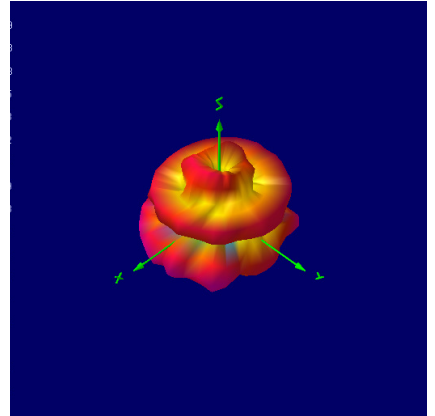
5200 MHz



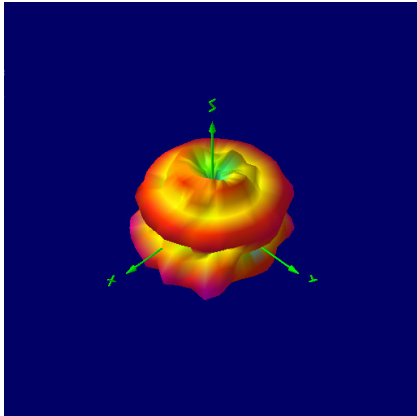
5500 MHz



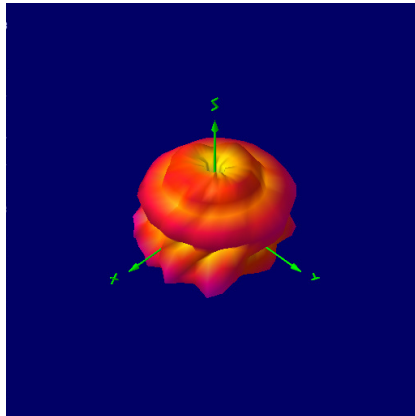
5600 MHz



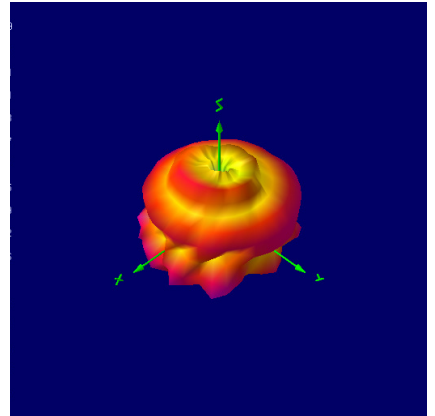
5800 MHz



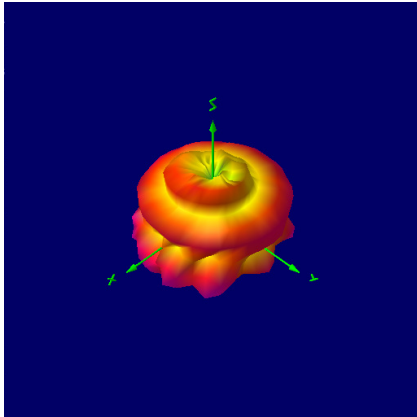
5900 MHz



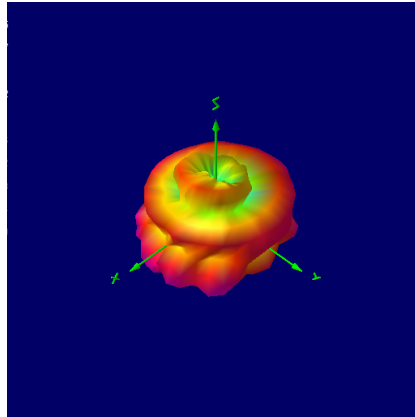
6000 MHz



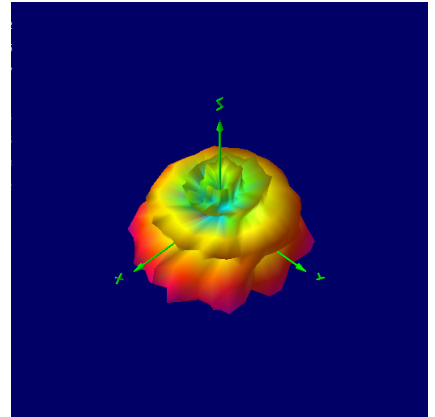
6100 MHz



6200 MHz



6500 MHz



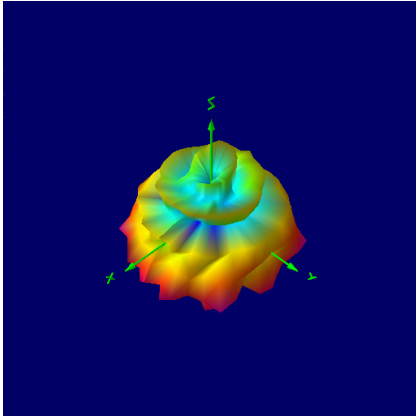


## Delta 35

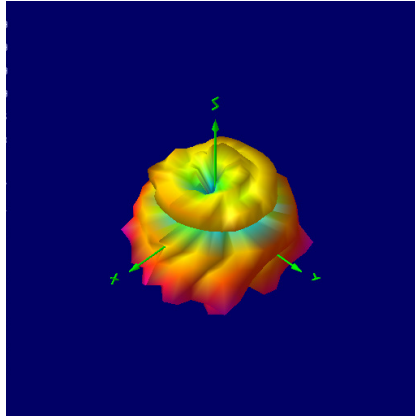
High Gain 5G/4G Ultra Wide Band (UWB) 3-8 GHz 84 mm Hinged Monopole Antenna

### 3D Radiation Plots

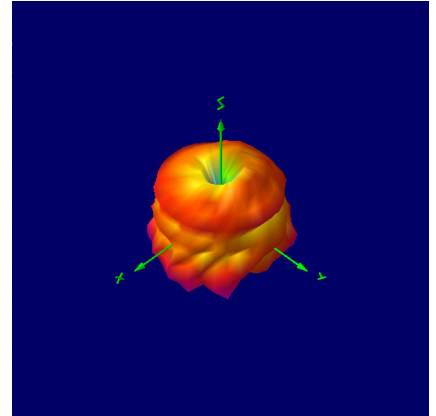
6600 MHz



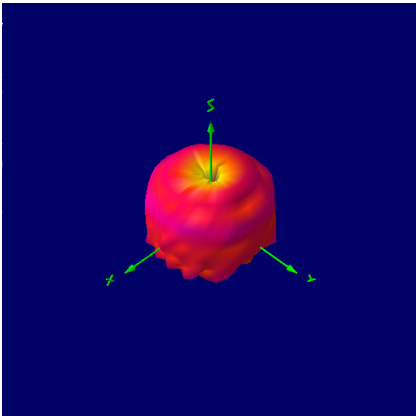
6700 MHz



7100 MHz



7700 MHz



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

### Ordering Details:

Part Number	Description
DELTA35/SMAM/RP/S/36	High Gain 5G/4G Ultra Wide Band (UWB) 3-8 GHz 84 mm Hinged Monopole Antenna RP-SMAM connector
DELTA35/SMAM/S/36	High Gain 5G/4G Ultra Wide Band (UWB) 3-8 GHz 84 mm Hinged Monopole Antenna SMAM connector