

## VPJ69595B

### “Trigger” 5-Port Under-Dash Antenna Cellular/Wi-Fi/GNSS

The innovative Trigger family of multiport/multiband antennas provide an excellent solution for transportation, aftermarket fleet, public safety and IoT applications. The incorporation of both vertically and horizontally polarized cellular radiating elements has shown to provide improved signal received power and signal received quality. These parameters are critical for high density urban environments as well as long distance remote rural conditions. This translates to more consistent connectivity and data throughput for your mobile data applications.

The VPJ series Trigger antenna is configured for two-port operation over the 3G/4G/5G/ ISM/CBRS bands and two-port operation over the low//high frequency Wi-Fi bands. An additional fifth port provides an active antenna for enabling GNSS global navigation services.

### FEATURES AND BENEFITS

- Unique V-Pol / H-Pol cellular elements ensure highest signal retention and data throughput
- Ideal for vehicle under-dash locations mounted to ventilation ducting
- Dual axis bonding via VHB tape provides a rugged mount to jarring vehicle movements.

### APPLICATIONS

- Trucking
- FirstNet/Public safety
- Transportation/transit
- Aftermarket fleet
- Rugged LTE gateways

### ELECTRICAL SPECIFICATIONS

Antenna Model	VPJ69595B-92VC1 / VPJ69595B-92FAK			
Number of Ports	5			
Port Configuration	LTE (Cell) x2		Wi-Fi x2	
Operating Frequency (MHz)	698-960/1710-2620	2620-2700	2400-2500	4900-5900
Peak Gain (dBi)	5.0		5.0	
Efficiency - Typical (%)	50		40	
VSWR	<3.1:1			
Max Power - Ambient 25°C (W)	5			

## MECHANICAL SPECIFICATIONS

Dimensions - L x W x H- mm (inches)	132.3 x 59.3 x 123.4 (5.21 x 2.33 x 4.86)
Weight -g (lbs.)	225 (0.50)
Cable Type	LMR100 (or equivalent)
Mounting Tape (separate pack)	Double-sided foam tape (75 mm x 40 mm x 1.6 mm)
3M VHB 5962P	PC, UL94 - V0 Rating, UV Stable
Radome Material	PC
Radome Color	Black
Radome Texture	MT11010

## ENVIRONMENTAL SPECIFICATIONS

Operating Environment	Vehicular under dash; outdoor rated
Operating Temperature - °C (°F)	-40 to +85°C (-40 to +185°F)
Storage Temperature - °C (°F)	-40 to +85°C (-40 to +185°F)
Ingress Protection Rating	IP67
Material Substance Compliance	RoHS

## GNSS ANTENNA SPECIFICATIONS

Frequency of Operation (MHz)	1559 - 1606			
Band	BEIDOU	GPS	GLONASS	
Frequency Band (MHz)	1561.098 ±2.046	1575.42 ±1.023	1602 ±5	
GNSS Passive Gain (dBic)	5			
GNSS Active Gain (dBic)	32			
DC Voltage (Vdc)	2.5 - 7V			
LNA Gain, Typ. @ room temp. (dB)	28 ±3			
Noise Figure @ room temp., Max (dB)	≤ 2.5			
Polarization	RHCP			
Nominal Impedance (Ohms)	50			
Current Consumption, Max @ room temp (mA)	8.5 ±3 (@ 3.0V)			
Out-of-band Signal Rejection Min @ room temp (dB)	698-960 MHz: > 80	1428-1511 MHz: > 80	1710-2700 MHz: > 80	4900-5800 MHz: > 70
Input Max Power (dBm)	-10			
Cable Type	RG174			

## CONFIGURATION

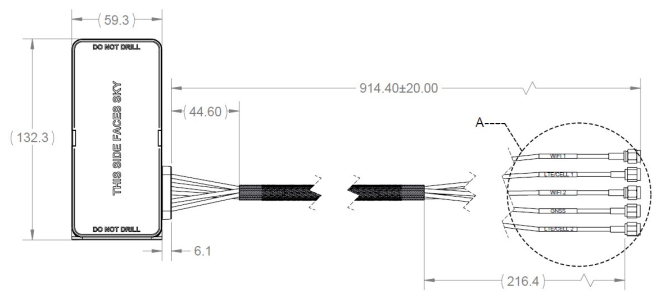
PART NUMBER	CABLE LENGTH	CONNECTORS			COLOR
	PIGTAIL	LTE/CELL (2X)	WI-FI (2X)	GNSS	
VPJ69595B-92VC1	914 mm (3 ft.)	SMA Male	RPSMA Male	SMA Male	Black
VPJ69595B-92FAK	914 mm (3 ft.)	Fakra Type D Jack (Purple)	Fakra Type I Jack (Beige)	Fakra Type C Jack (Blue)	Black

## PACKAGING INFORMATION

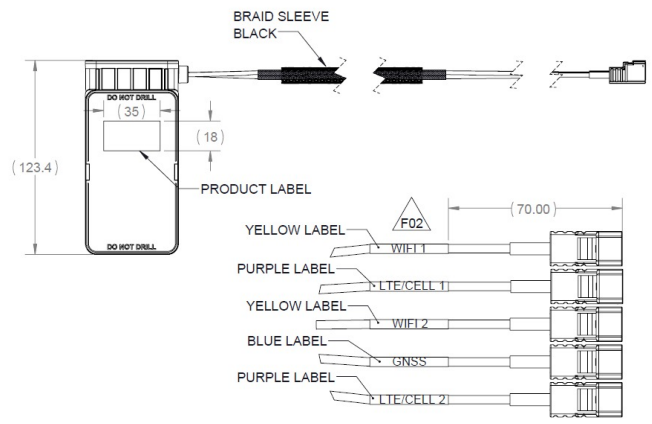
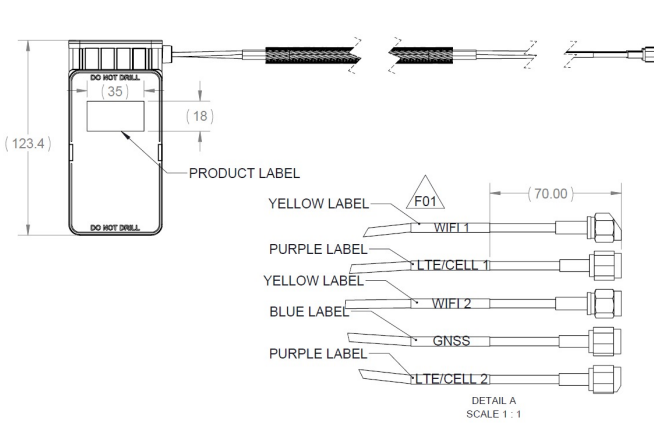
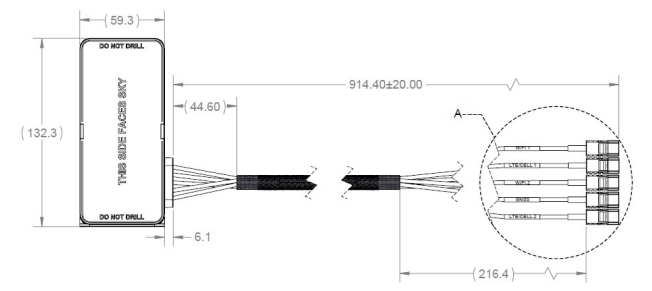
PACKAGE DIMENSIONS	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	40	720	880
Height - cm (in.)	15.6 (6.1)	154.8 (60.9)	186.0 (73.2)
Length - cm (in.)	80 (31.5)	120 (47.2)	120 (47.2)
Width - cm (in.)	60 (23.6)	80 (31.5)	80 (31.5)
Shipping Weight - kg (lb.)	12.5 (27.6)	245 (540.1)	295 (650.4)

## MECHANICAL DRAWING

### VPJ69595B-92VC1

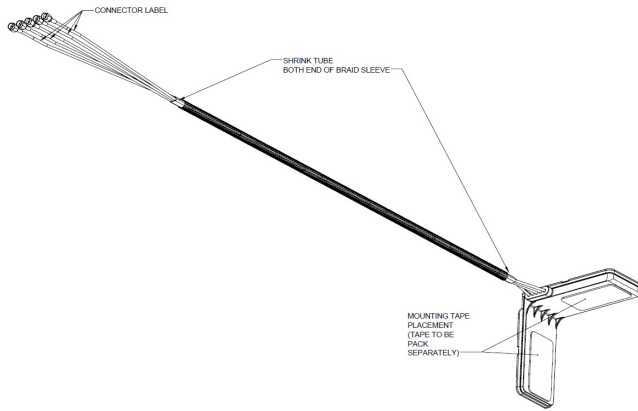


### VPJ69595B-92FAK

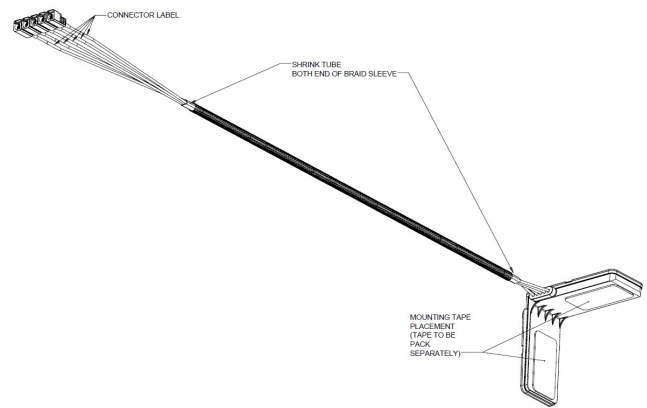


# MECHANICAL DRAWING

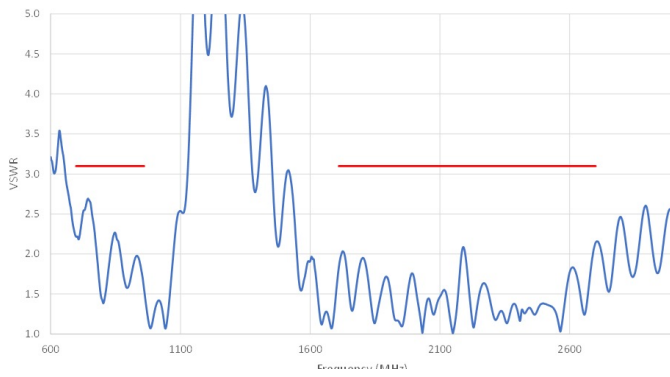
## VPJ69595B-92VC1



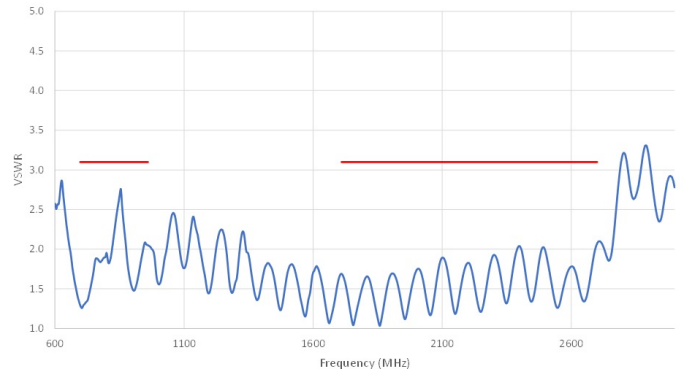
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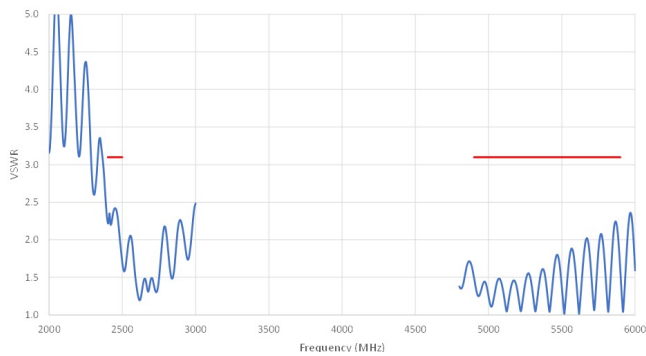
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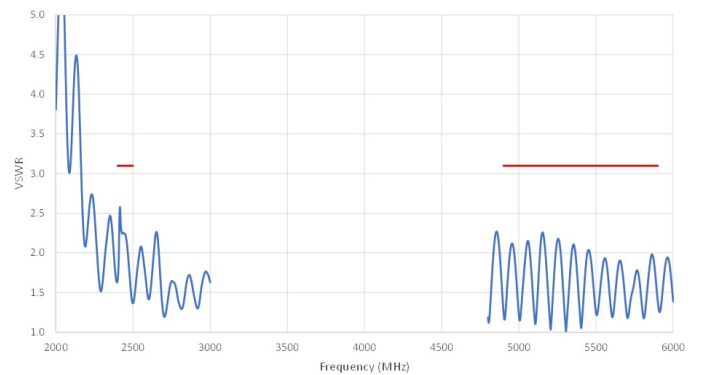
### Cell 2



### Wi-Fi 1

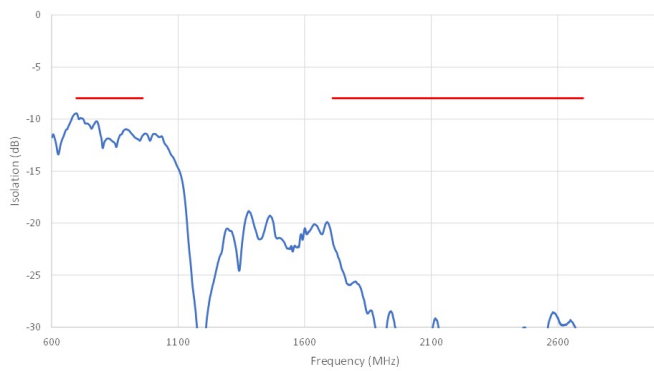


### Wi-Fi/Bluetooth

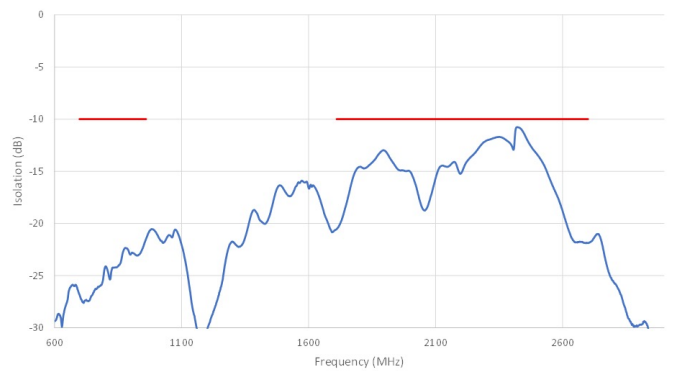


## ISOLATION

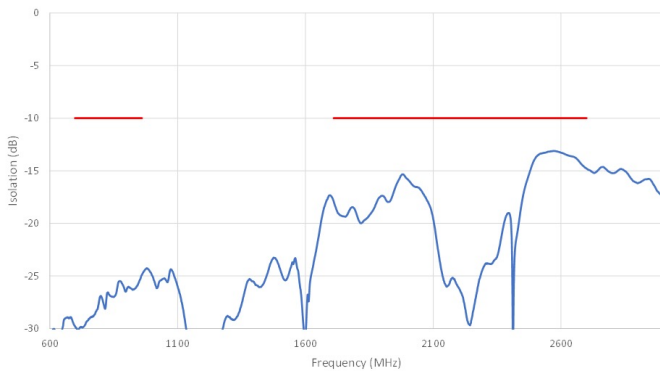
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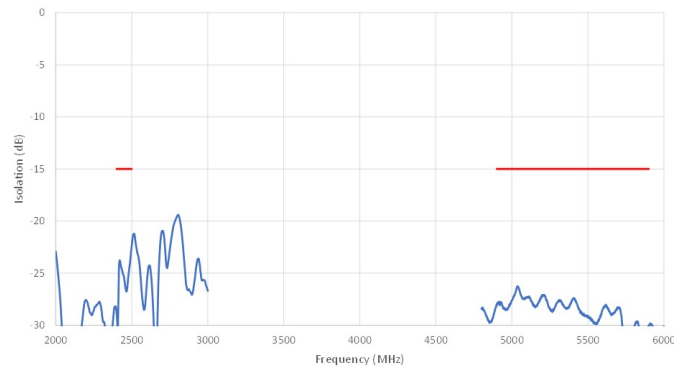
### Isolation, Cell 1 - Wi-Fi 1



### Isolation, Cell 1 - Wi-Fi/Bluetooth

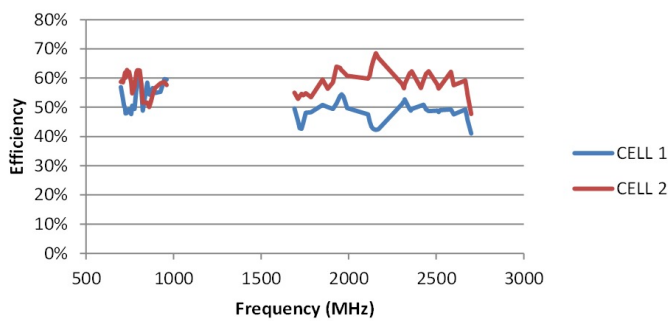


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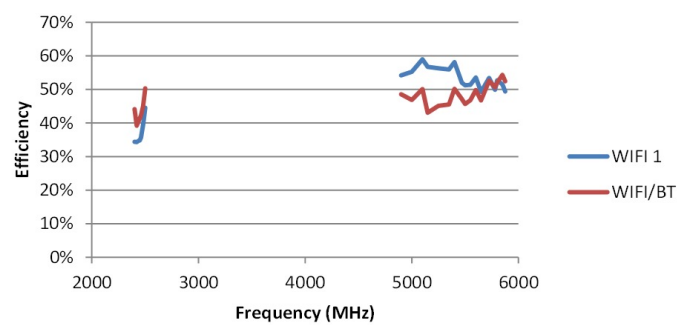


## EFFICIENCY

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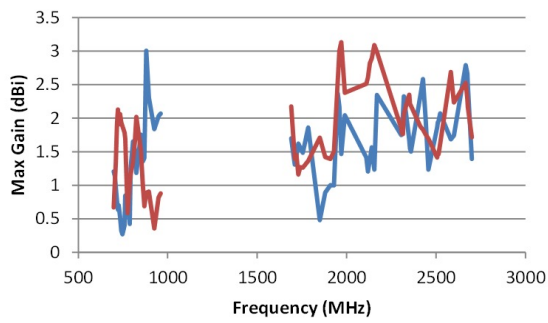


### Wi-Fi

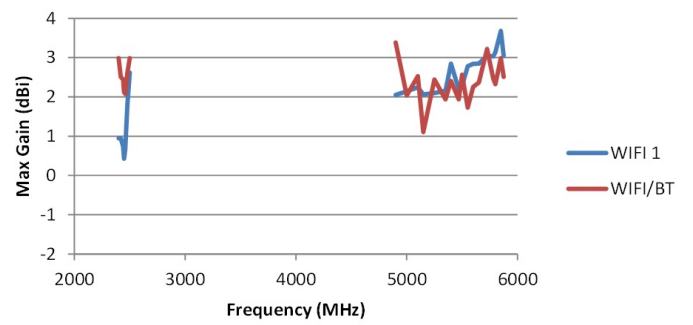


## EFFICIENCY

### LTE

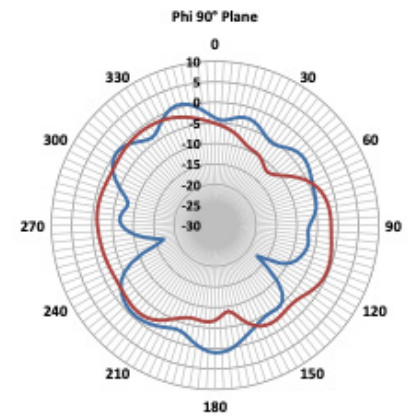
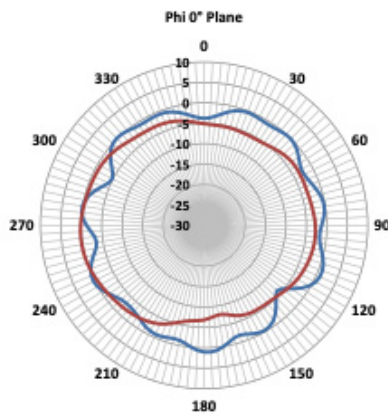
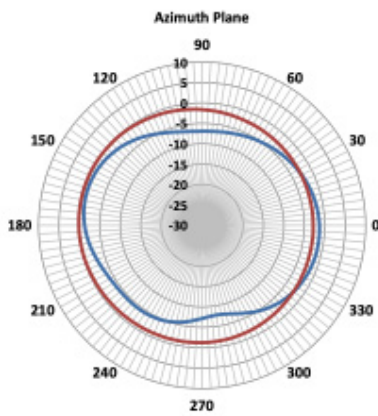


### Wi-Fi

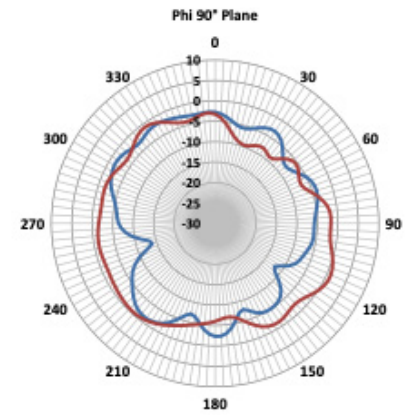
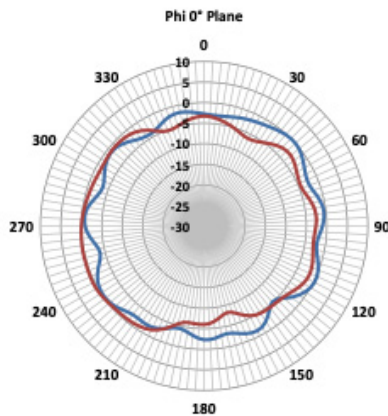
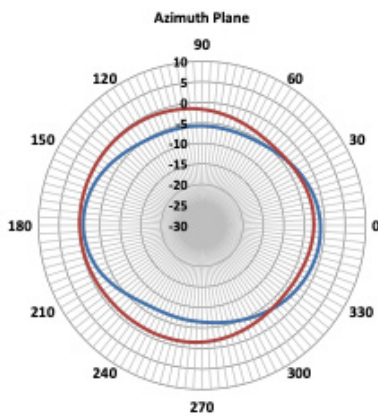


## RADIATION PATTERNS - LTE ANTENNAS

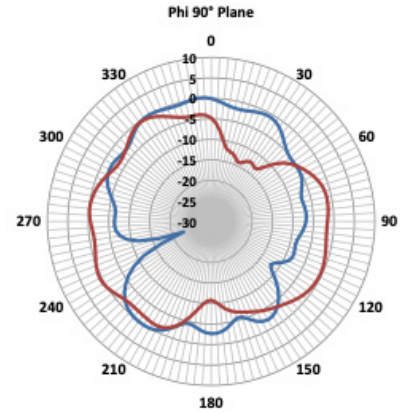
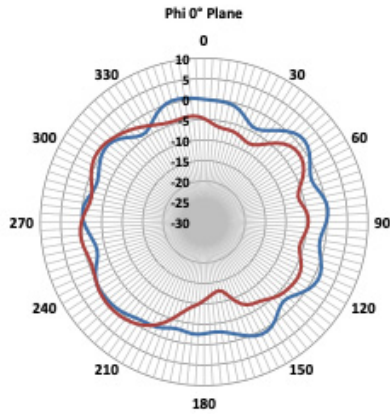
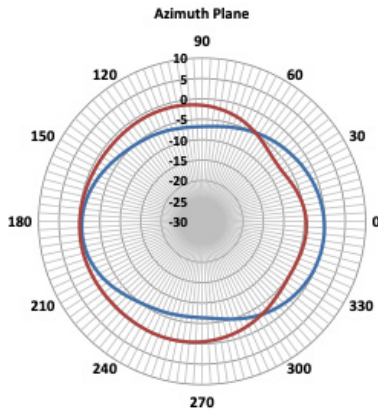
### 698 MHz



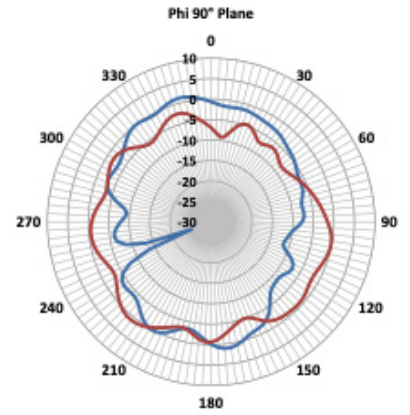
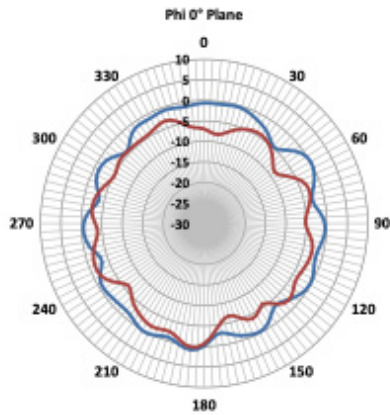
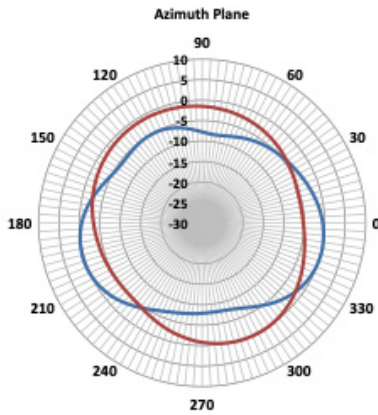
### 746 MHz



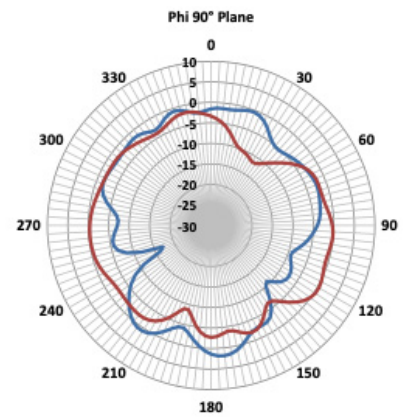
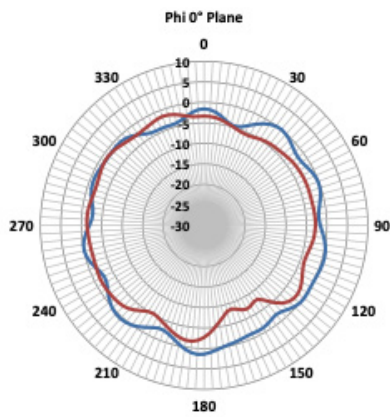
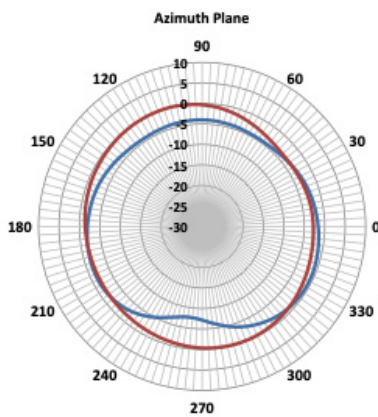
## 806 MHz



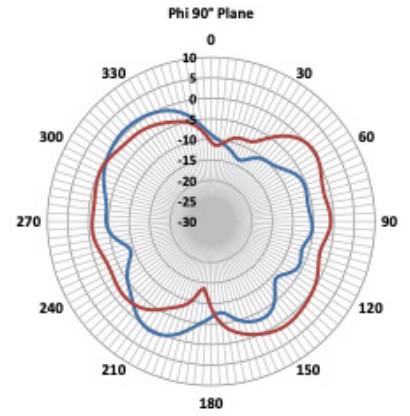
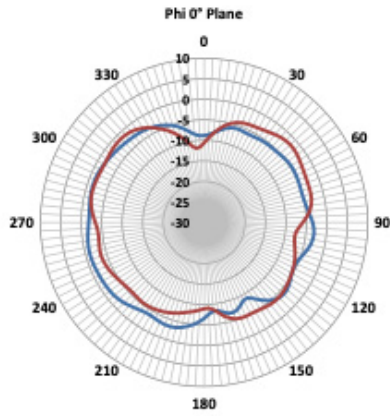
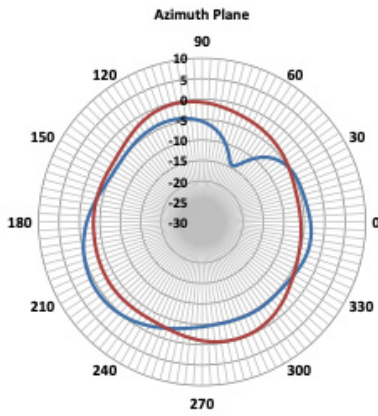
## 860 MHz



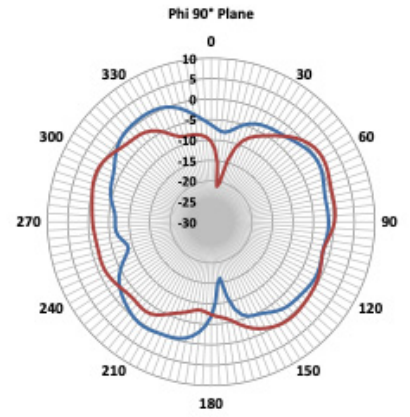
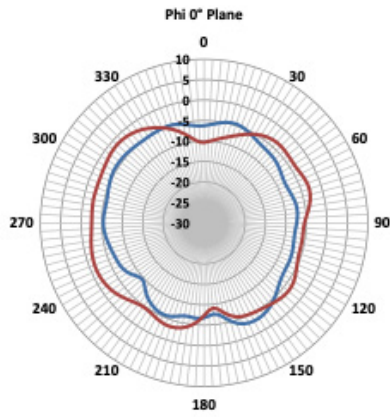
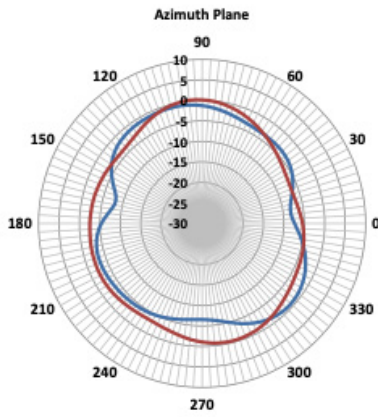
## 960 MHz



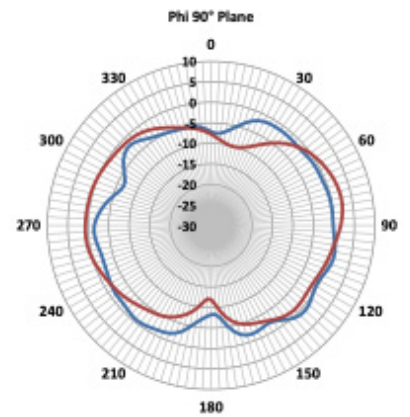
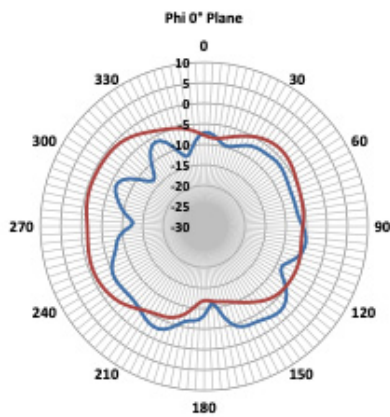
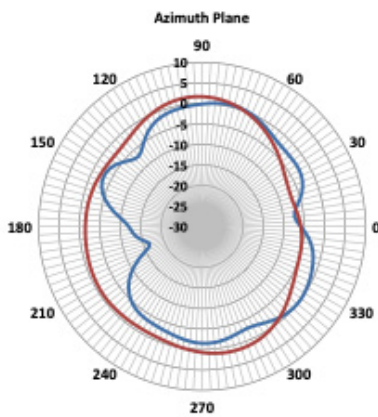
## 1710 MHz



## 1880 MHz

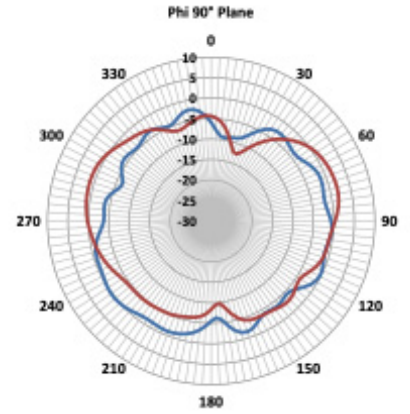
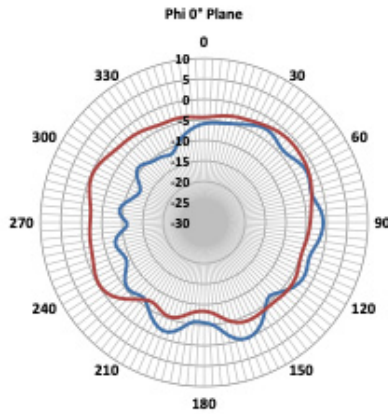
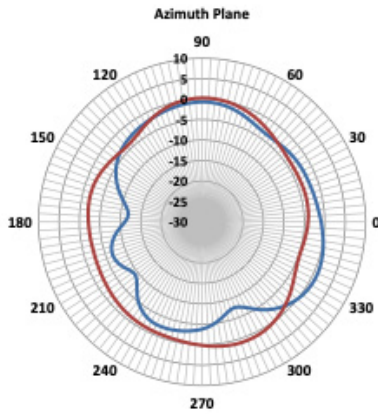


## 2110 MHz

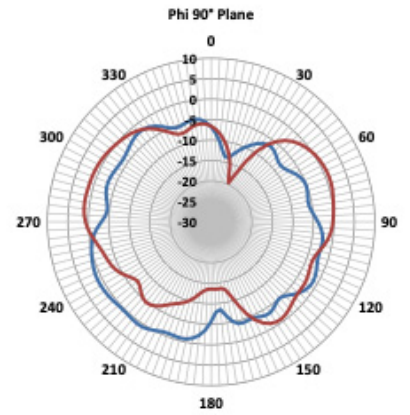
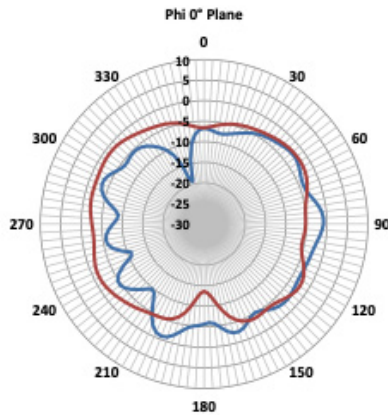
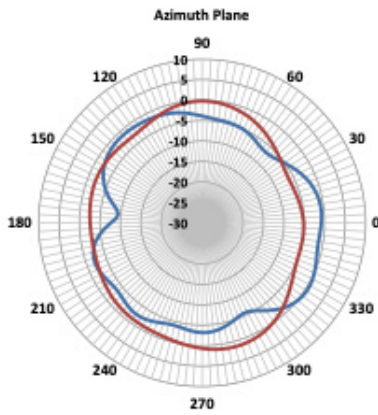




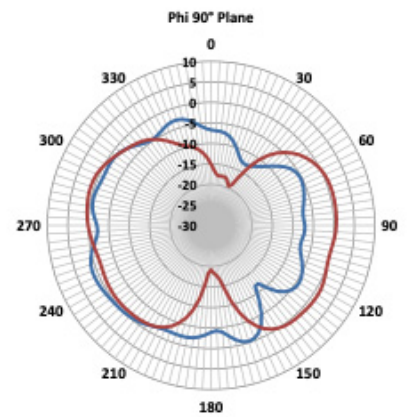
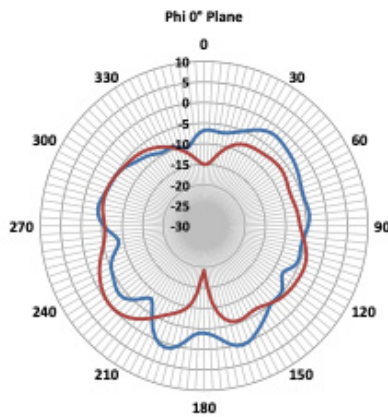
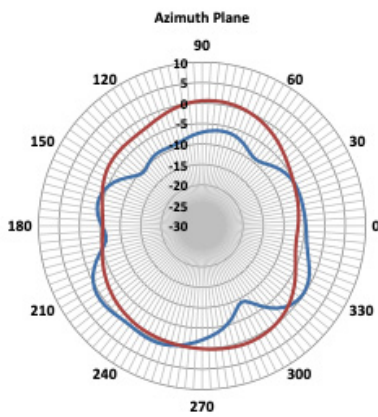
## 2305 MHz



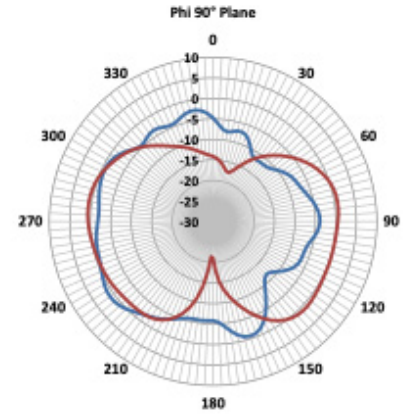
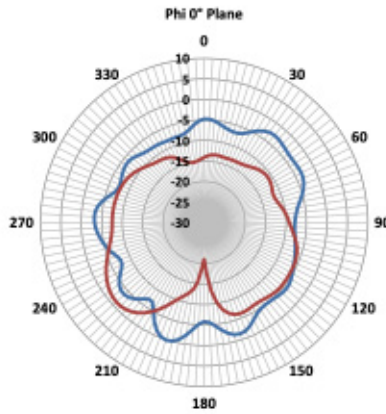
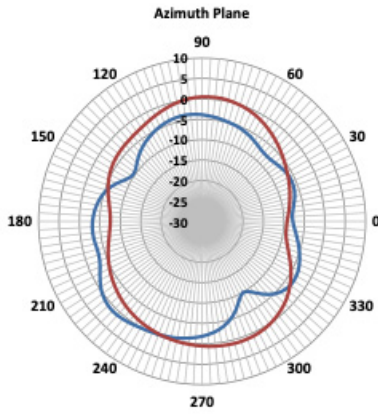
## 2412 MHz



## 2600 MHz

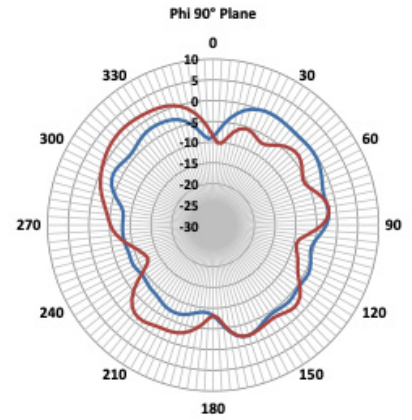
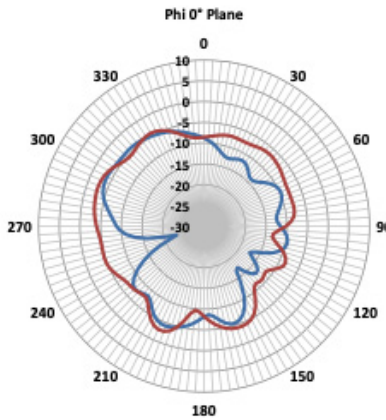
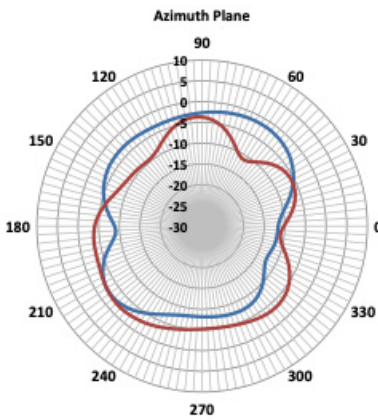


## 2700 MHz

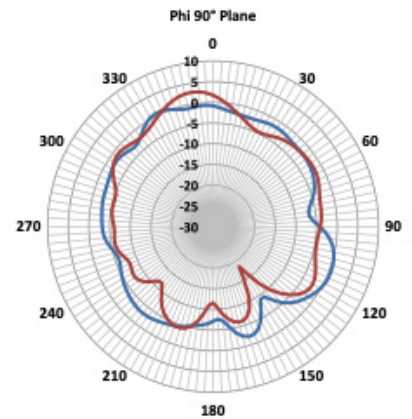
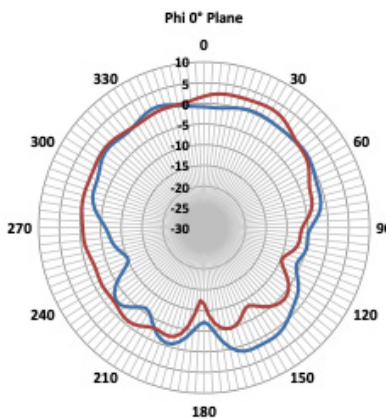
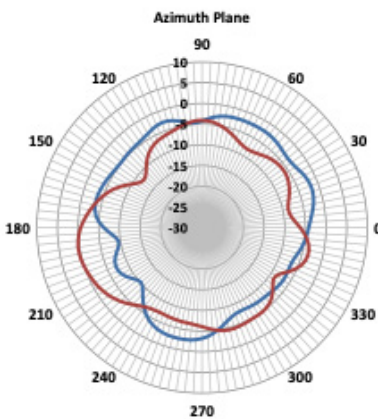


## RADIATION PATTERNS - WI-FI ANTENNAS

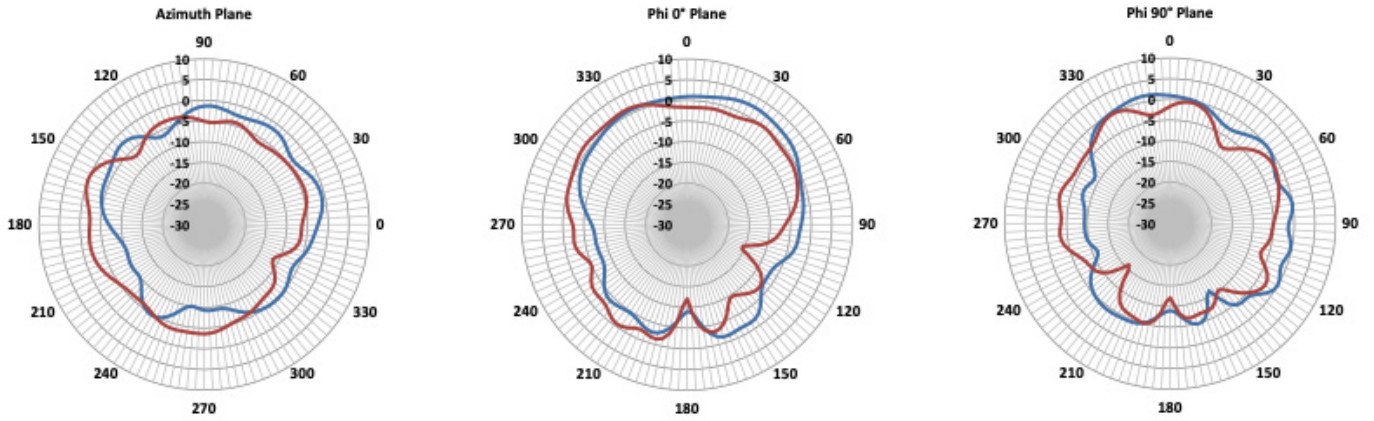
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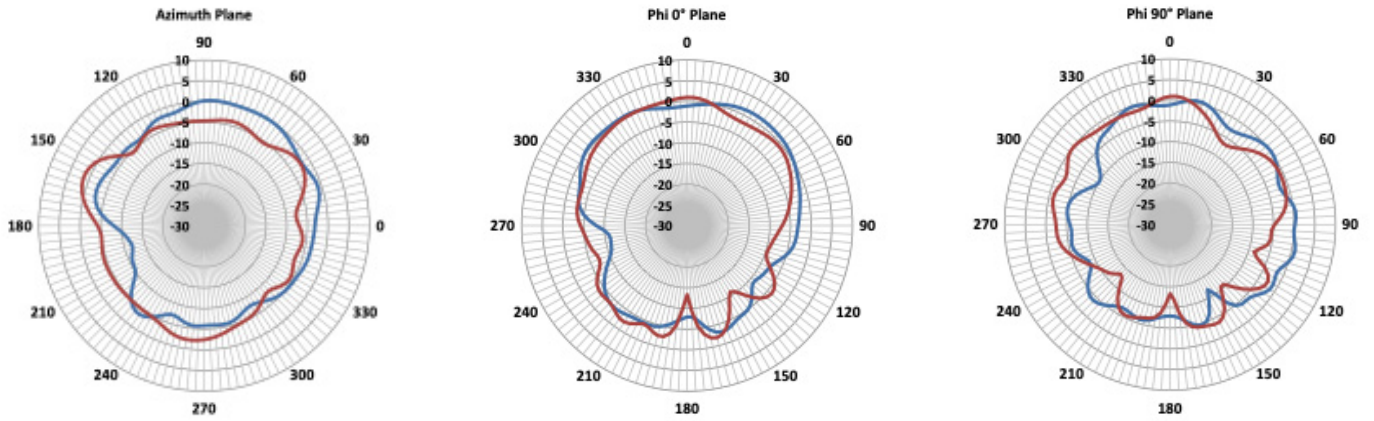
### 4900 MHz



## 5550 MHz

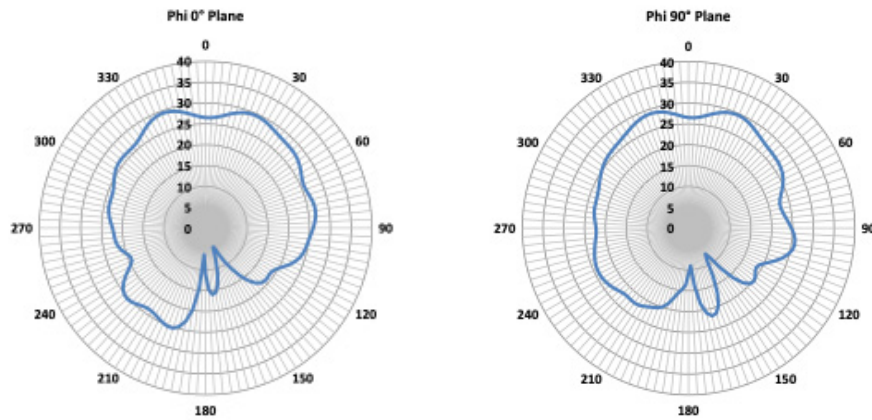


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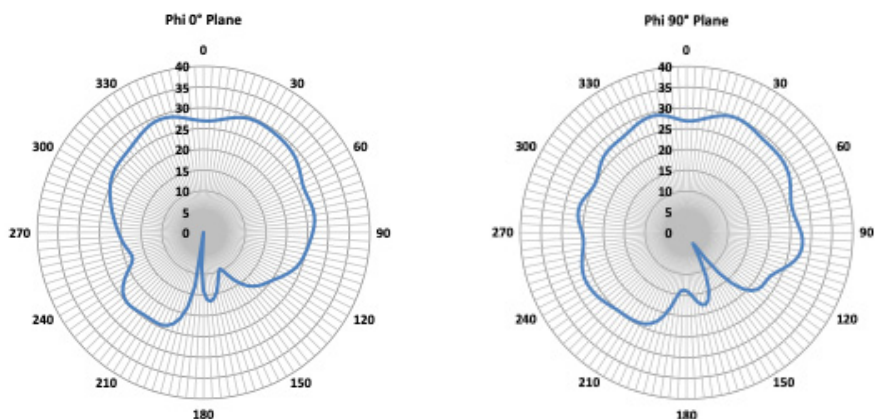


## RADIATION PATTERNS - GNSS (RHCP) ANTENNAS

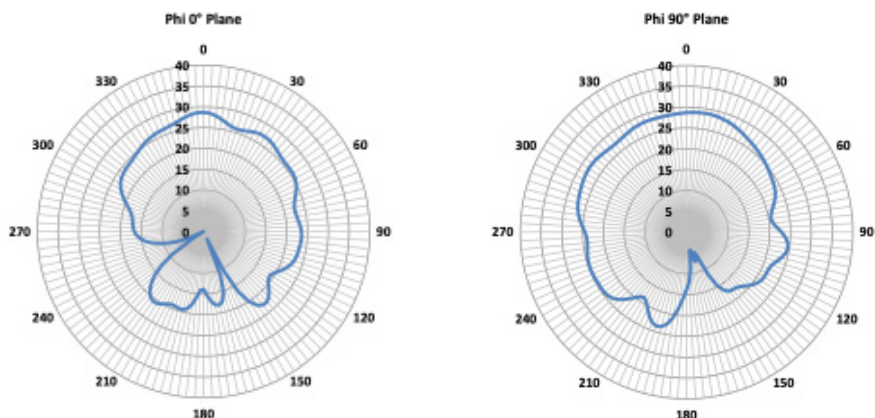
## 1561.098 MHz



## 1575.42 MHz



## 1602 MHz



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UK:	+44 (0) 800-267666
France:	+33 (0) 1-3420-8686
Netherlands:	+31 (0) 73-6246-999
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11/21 Original

