

# Multi-function Sharkfin Antenna

GPSB5G / Sharkee™

- OEM Sharkfin styling
- GPS/GNSS, 4G/5G and dual band WiFi in one housing
- Active GPS/GNSS antenna 26dB LNA
- Optional VHF or UHF Whip



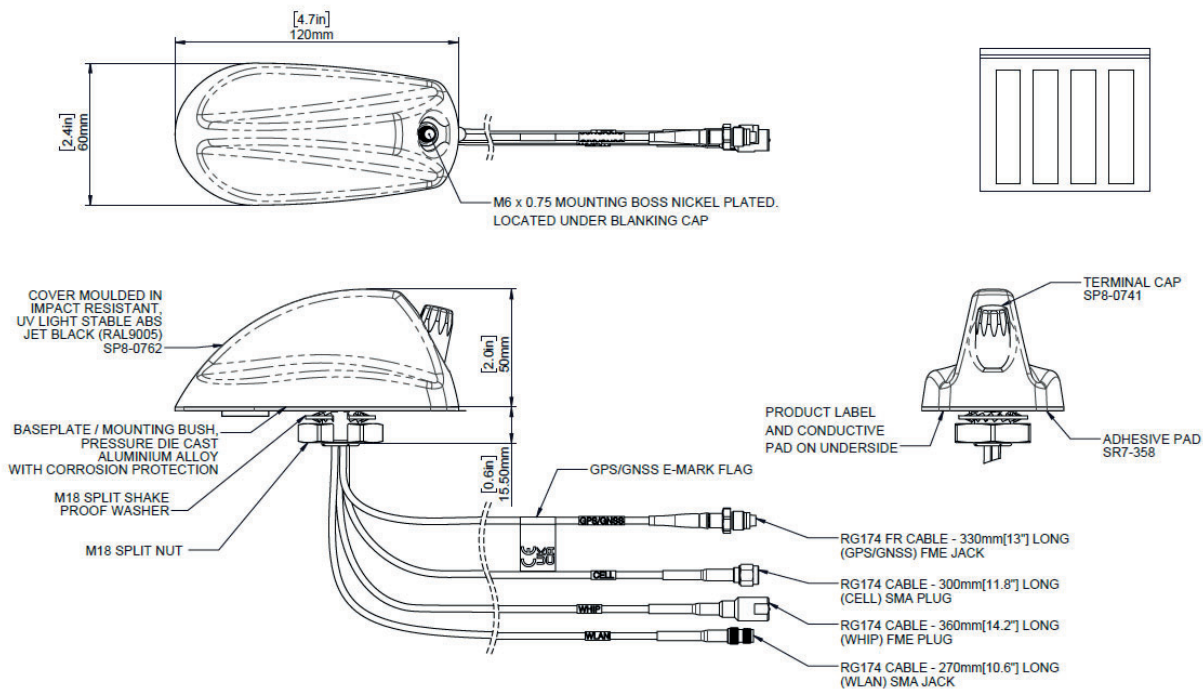
The GPSB5G Sharkee™ provides antenna coverage for multiple technologies within one antenna housing. The GPSB range is trusted by public safety, utilities and transportation companies all over the world and the GPSB5G upgrades the range with an improved GPS/GNSS module with advanced filtering and 4G/5G coverage.

The GPSB5G offers three internal antenna systems, GPS/GNSS, 4G/5G cellular (698-960/1710-3800MHz), dual band WiFi (2.4/5.0GHz) and an optional whip mounting for VHF or UHF whips.

Requiring only a single hole fixing, the GPSB5G reduces vehicle damage, cost of installation and visual impact whilst protecting vehicle resale value.

The GPSB5G is suitable for the public safety (covert and discreet), industrial and transportation sectors, where a cost effective, efficient and robust antenna is essential to the application. Fitted with flame retardant pigtail cables compliant to UNECE R118 the GPSB5G is suitable for fitment to M3 category vehicles.

## Technical Drawing



# Multi-function Sharkfin Antenna

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PANORAMA  ANTENNAS

## Product Data

Part No.

GPSB5G

### Electrical Data

Frequency Range (MHz)	4G/5G Elements	698-960 / 1710-3800	
	WiFi Elements	2400-2495/5150-6000	
Typical VSWR*	4G/5G Elements	698-960 / 1427-3800	<2.5:1
	WiFi Elements	2.4/5.0GHz	<2:1
Nominal Impedance	50Ω		
Max Input Power (w)	5 Internal Elements / 60 (dependent on whip)		

### GPS/GNSS Data

Frequency Range (MHz)	1562-1612
Gain: LNA	26dB
Out of band rejection	>40dB (@ > +/- 100MHz f)
Typical Noise Figure	-2.7dB
Notch Filter rejection @787MHz	23dBm
Operating Voltage	3 - 5V DC
Typical Current (mA)	15

### Mechanical Data

Dimensions (mm)	Height	50 (2")
	Length	120 (4.7")
	Width	60 (2.4")
Operating Temp	-40° / +80°C (-40° / +176°F )	
Colour	Black	
Ingress Protection	IP66	

### Mounting Data

Mounting type	Panel mount
Max panel thickness (mm)	7 (0.27")
Mounting hole (mm)	19 (3/4")

### Cable Data

All Cables	Type	FR RG174 (UN ECE R118.03 Compliant)
	Diameter (mm)	2.8 (0.1")
	Length (m)	~ 0.3 (1')

### Terminations

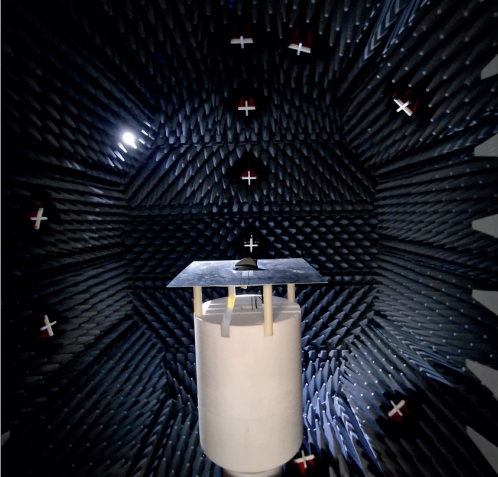
4G/5G	SMA Plug (m)
WiFi	SMA Socket (f)
GPS/GNSS	FME Socket (f)
Whip	FME Plug (m)

\*VSWR measured with 5m (16.4') of cable on a 400x400mm (15.75 x 15.75") ground plane

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Electrical Data Ground Plane

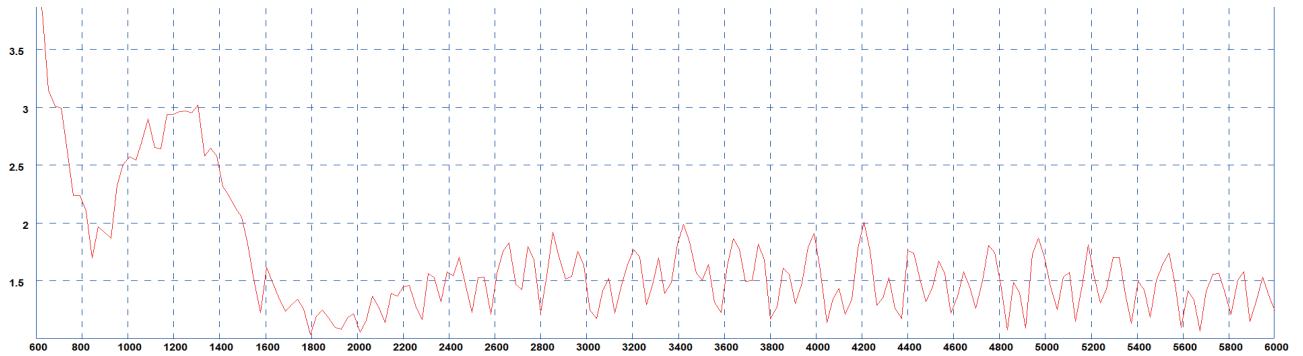
Measurement Conditions	4G/5G Antenna			
	Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)
400x400mm (15.75 x 15.75") ground plane 0.3m (1') FR RG174 Pigtailed 	699-798	12,13, 14 17,28	Cell	1.1
	807- 862	5,19,20,26,27	Cell	3.0
	880-960	8	Cell	3.1
	1710-1920	2,3,4,9,25,35,39,66	Cell	6.8
	1920-2170	1,23	Cell	7.0
	2300-2400	30,40	Cell	5.7
	2496-2690	7,38,41	Cell	6.2
	3300-3800	22,42,43,48,78,	Cell	4.8
WiFi Antenna				
Frequency Range (MHz)	WiFi Bands	Antenna Element	Peak Gain (dBi)	
2396-2485	2.5GHz	WiFi	6.4	
5150-5250	UNII-1	WiFi	5.2	
5250-5350	UNII-2A	WiFi	4.8	
5470-5725	UNII-2B	WiFi	5.2	
5725-5900	UNII-3	WiFi	3.1	

# Multi-function Sharkfin Antenna

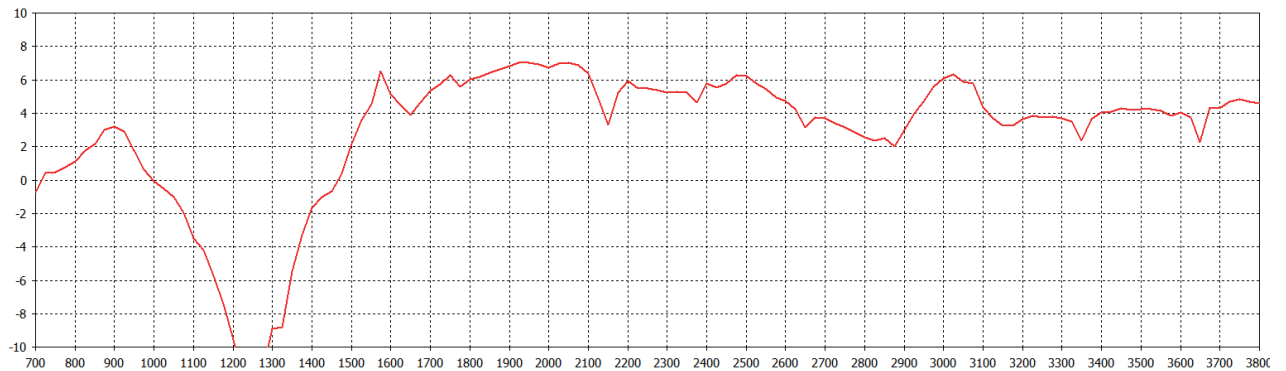
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Electrical Data - Ground Plane - Cell

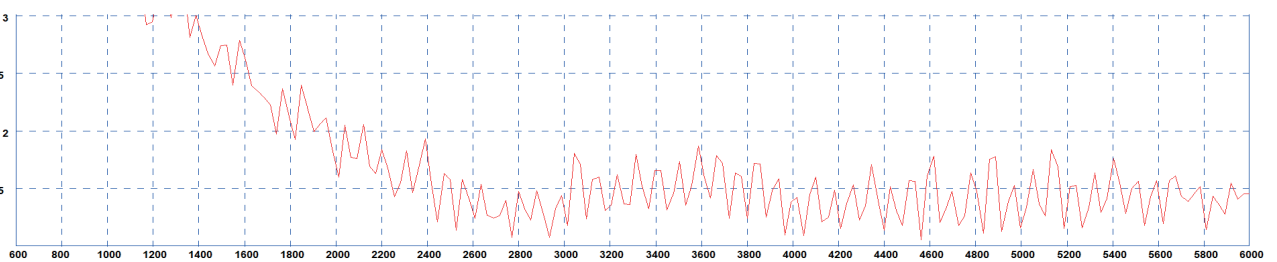
Typical VSWR- 4G/5G Element



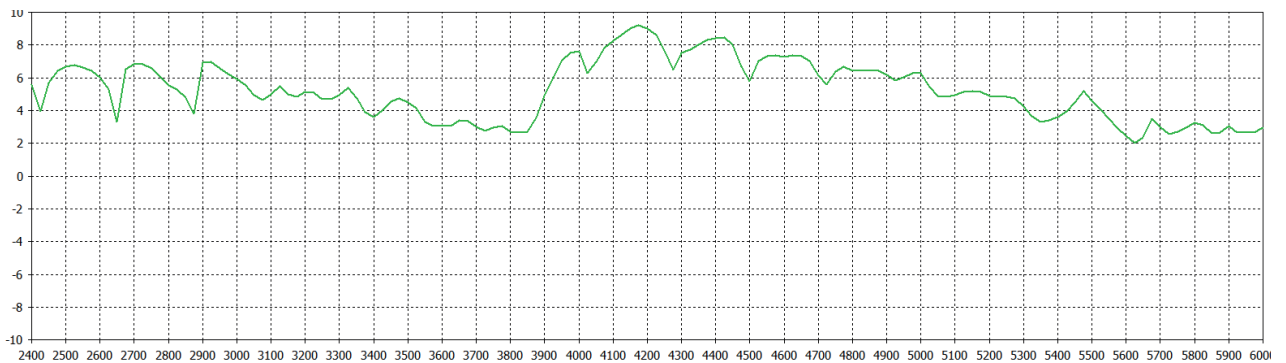
Typical Peak Gain - 4G/5G Element



Typical VSWR- WiFi Element



Typical Peak Gain - WiFi Element

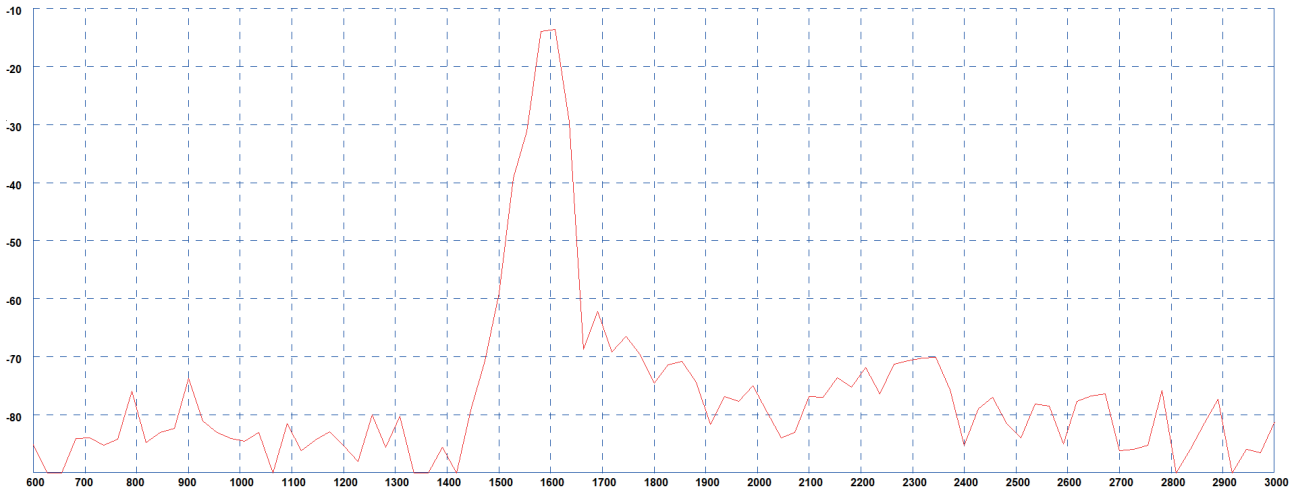


# Multi-function Sharkfin Antenna

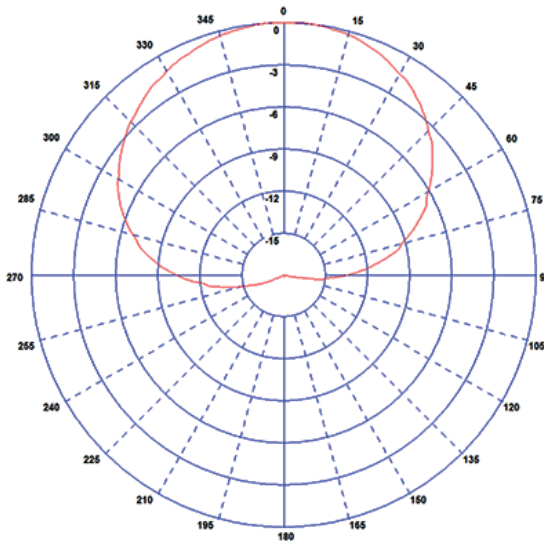
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Electrical Data Ground  
Plane GPS/GNSS

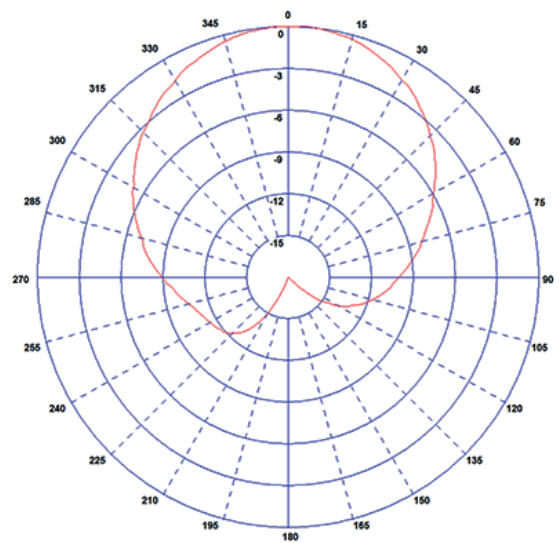
Swept Peak Gain GPS/GNSS



Typical E Plane Pattern - GPS/GNSS 1575 MHz



Typical E Plane Pattern - GPS/GNSS 1602 MHz

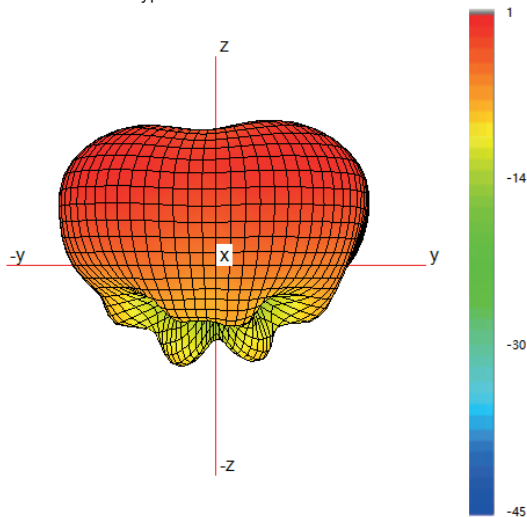


# Multi-function Sharkfin Antenna

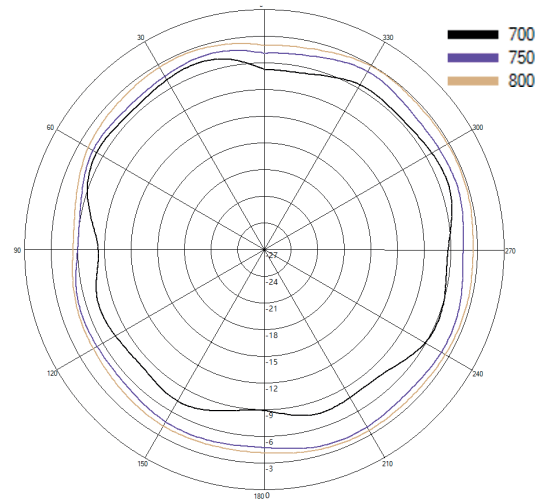
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Pattern Data - Ground Plane Cell

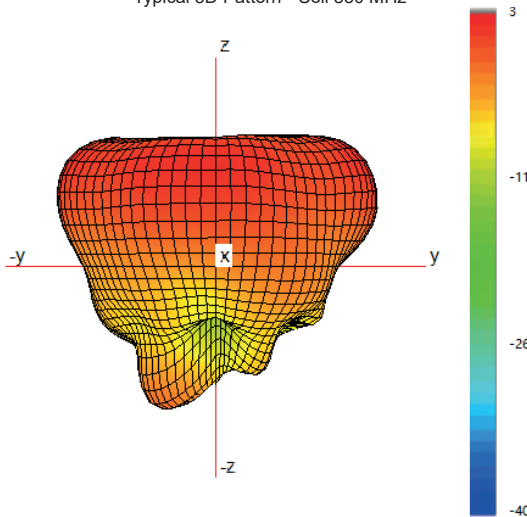
Typical 3D Pattern - Cell 750 MHz



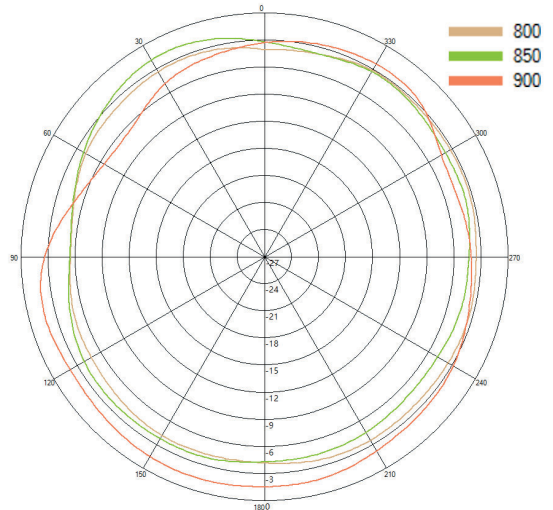
Typical H Plane Pattern - Cell 700-800 MHz



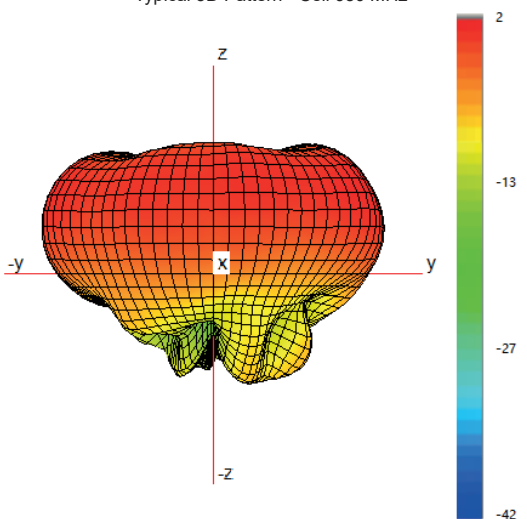
Typical 3D Pattern - Cell 850 MHz



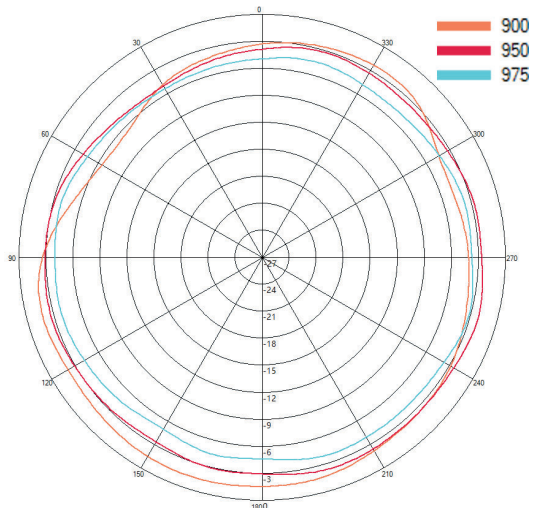
Typical H Plane Pattern - Cell 800-900 MHz



Typical 3D Pattern - Cell 950 MHz



Typical H Plane Pattern - Cell 900-975 MHz



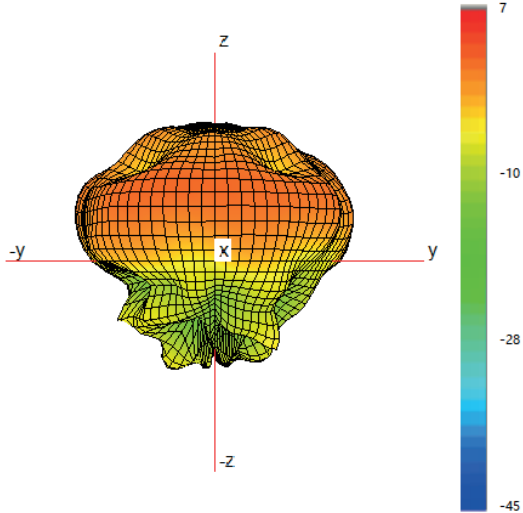


# Multi-function Sharkfin Antenna

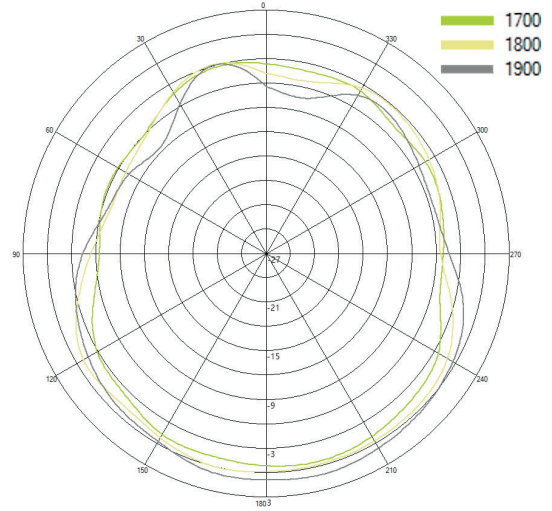
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Pattern Data Ground  
Plane - Cell

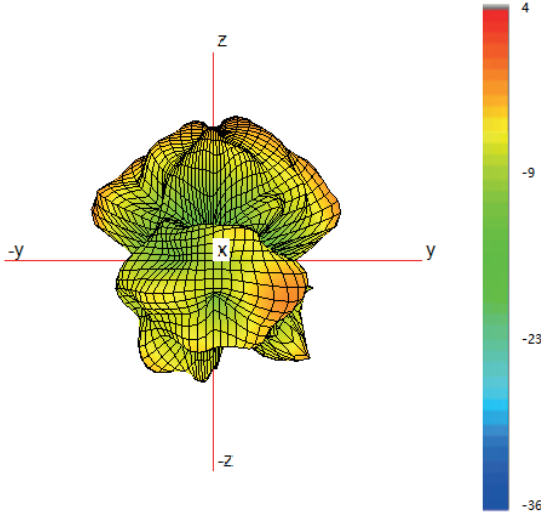
Typical 3D Pattern - Cell 1800 MHz



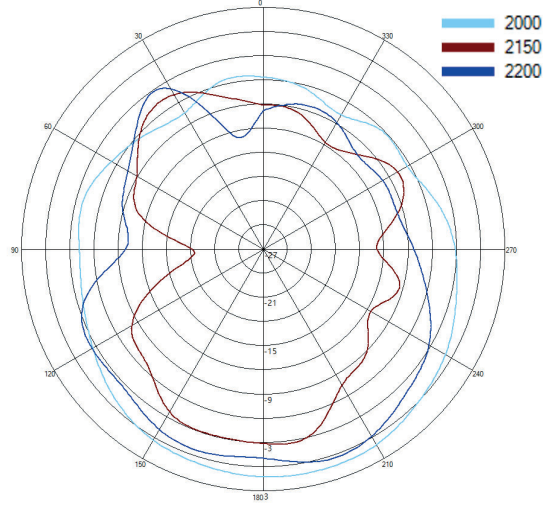
Typical H Plane Pattern - Cell 1700-1900 MHz



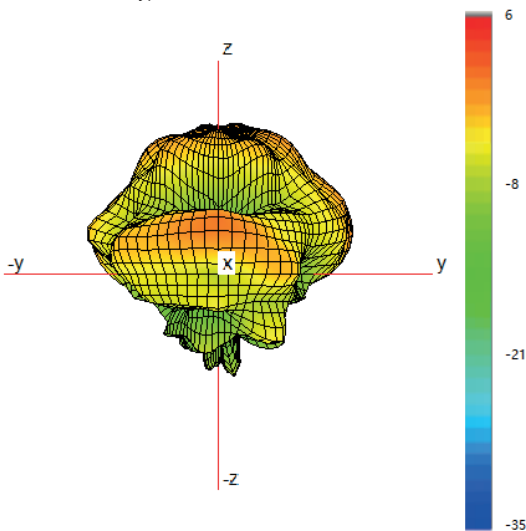
Typical 3D Pattern - Cell 2150 MHz



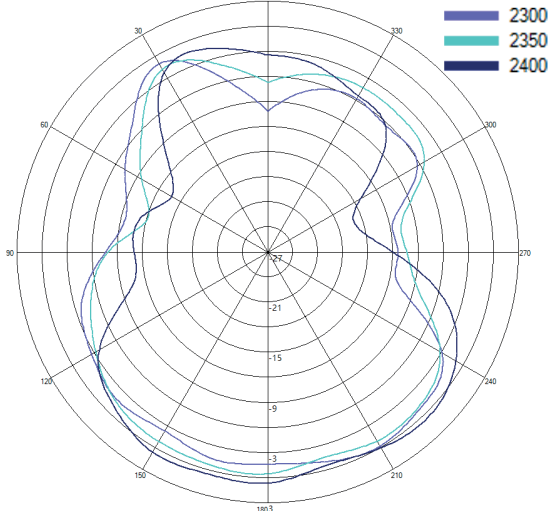
Typical H Plane Pattern - Cell 2000-2200 MHz



Typical 3D Pattern - Cell 2350 MHz



Typical H Plane Pattern - Cell 2300-2400 MHz

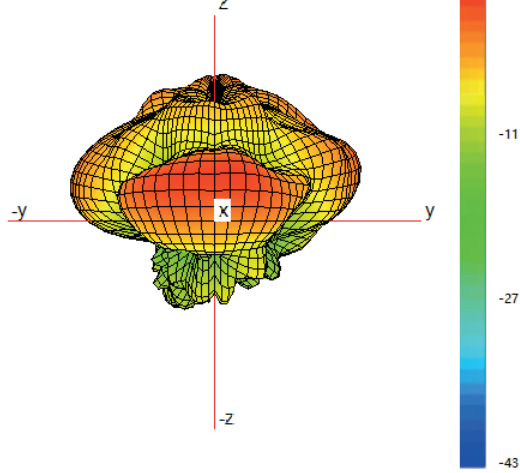


# Multi-function Sharkfin Antenna

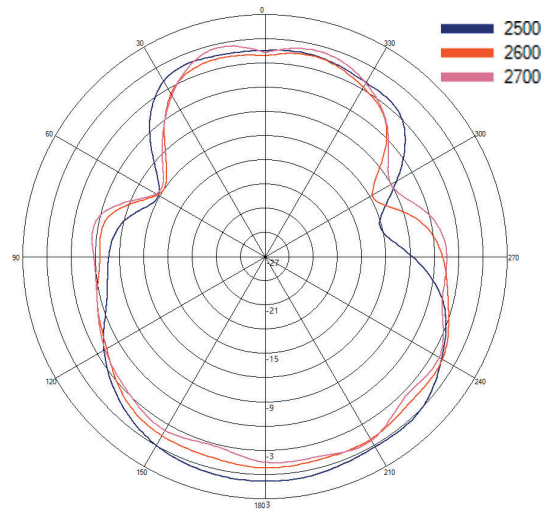
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Pattern Data Ground - Plane Cell

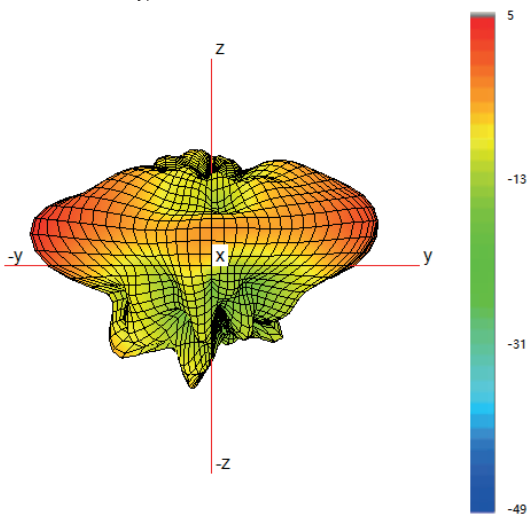
Typical 3D Pattern - Cell 2600 MHz



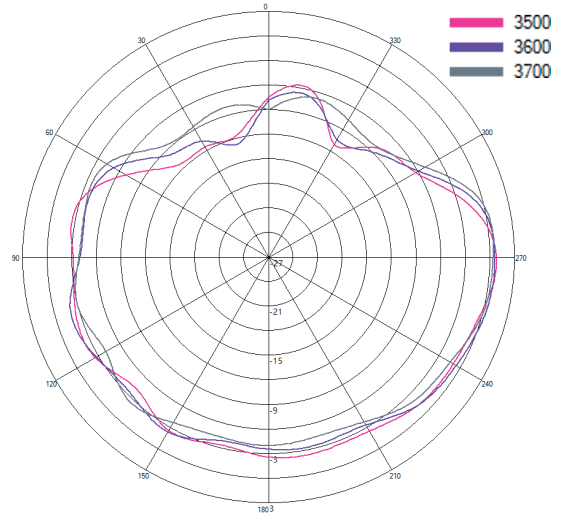
Typical H Plane Pattern - Cell 2500-2700 MHz



Typical 3D Pattern - Cell 3600 MHz



Typical H Plane Pattern - Cell 3500-3700 MHz



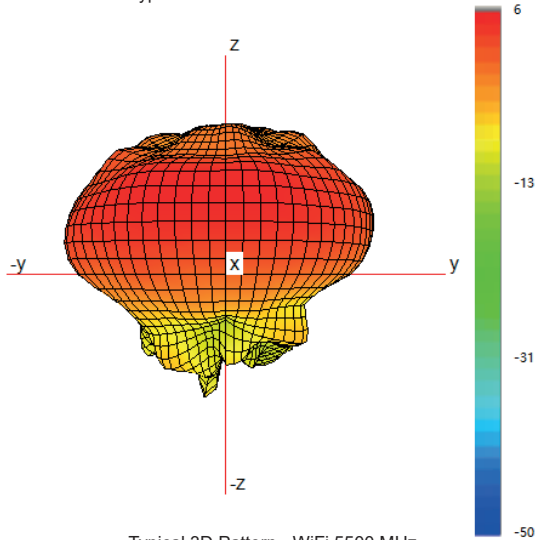


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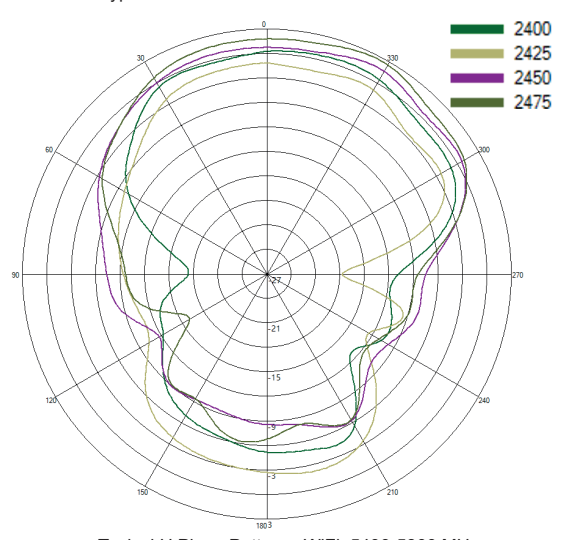
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Pattern Data Ground Plane - WiFi

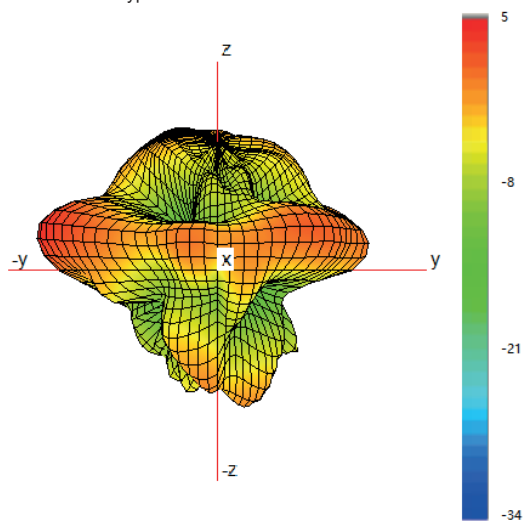
Typical 3D Pattern - WiFi 2450 MHz



Typical H Plane Pattern - WiFi 2400-2475 MHz



Typical 3D Pattern - WiFi 5500 MHz



Typical H Plane Pattern - WiFi 5400-5800 MHz

