Multi-function Sharkfin Antenna
GPSB5G / Sharkee™

PANORAMA ANTENNAS

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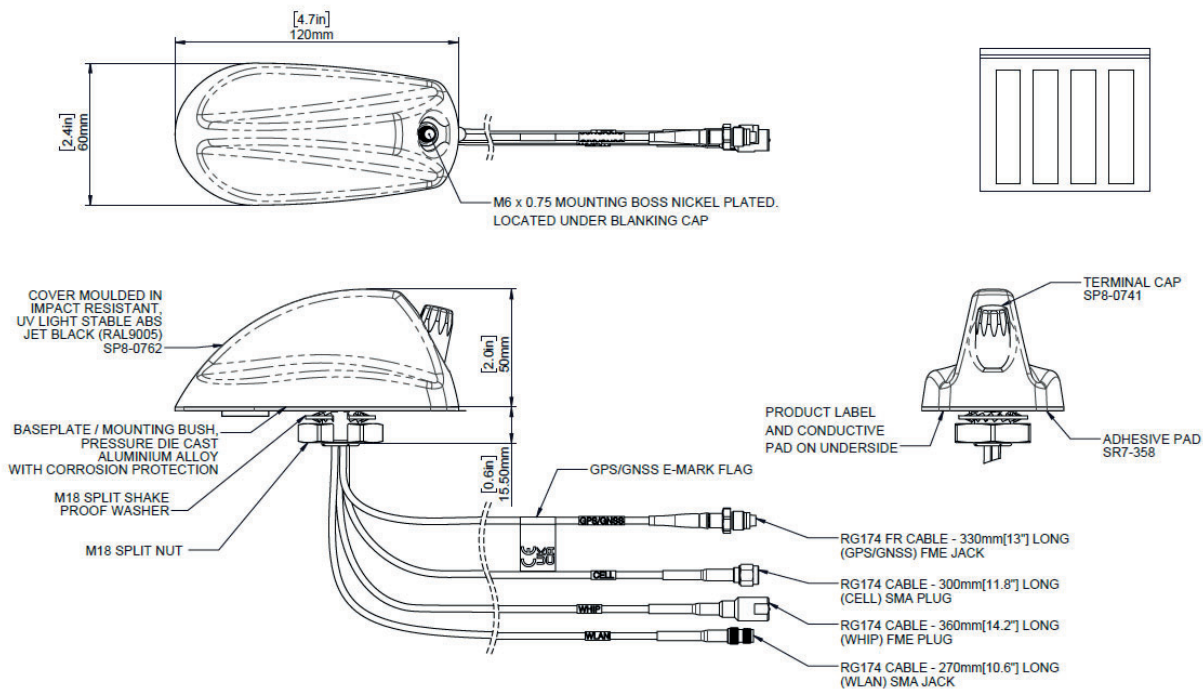- Optional VHF or UHF Whip

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

[4.7in] 120mm

[2.4in] 60mm

M6 x 0.75 MOUNTING BOSS NICKEL PLATED. LOCATED UNDER BLANKING CAP

COVER MOULDED IN IMPACT RESISTANT, UV LIGHT STABLE ABS JET BLACK (RAL9005) SP8-0762

BASEPLATE / MOUNTING BUSH, PRESSURE DIE CAST ALUMINIUM ALLOY WITH CORROSION PROTECTION

M18 SPLIT SHAKE PROOF WASHER

M18 SPLIT NUT

[2.0in] 50mm

[0.6in] 15.50mm

GPS/GNSS E-MARK FLAG

RG174 FR CABLE - 330mm[13"] LONG (GPS/GNSS) FME JACK

RG174 CABLE - 300mm[11.8"] LONG (CELL) SMA PLUG

RG174 CABLE - 360mm[14.2"] LONG (WHIP) FME PLUG

RG174 CABLE - 270mm[10.6"] LONG (WLAN) SMA JACK

TERMINAL CAP SP8-0741

PRODUCT LABEL AND CONDUCTIVE PAD ON UNDERSIDE

ADHESIVE PAD SR7-358

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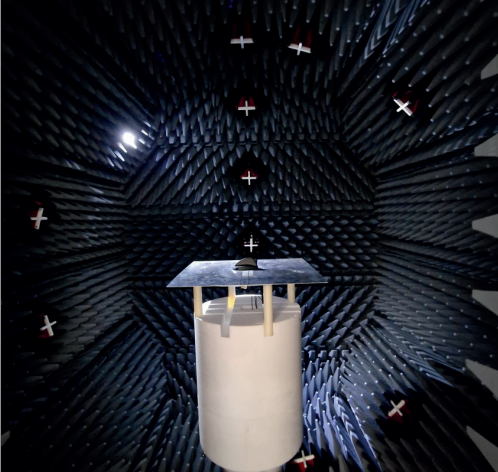
Terminations	
4G/5G	SMA Plug (m)
WiFi	SMA Socket (f)
GPS/GNSS	FME Socket (f)
Whip	FME Plug (m)

*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

400x400mm (15.75 x 15.75") ground plane 0.3m (1') FR RG174 Pigtails

4G/5G Antenna

Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)
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

Electrical Data - Ground Plane - Cell

Typical VSWR- 4G/5G Element
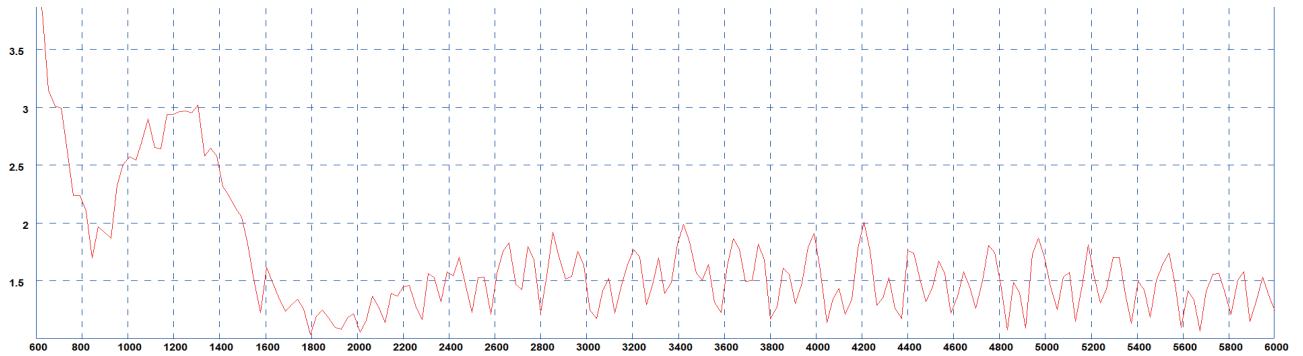
Typical Peak Gain - 4G/5G Element
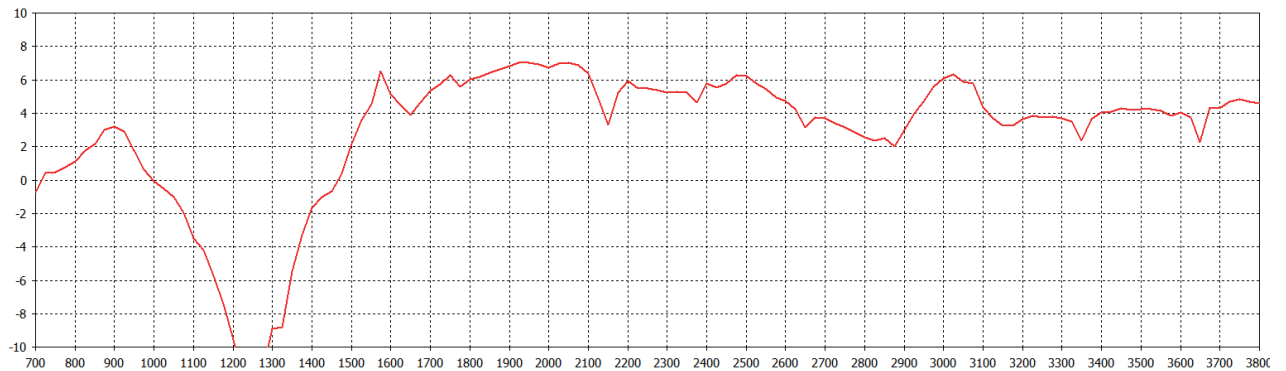
Typical VSWR- WiFi Element
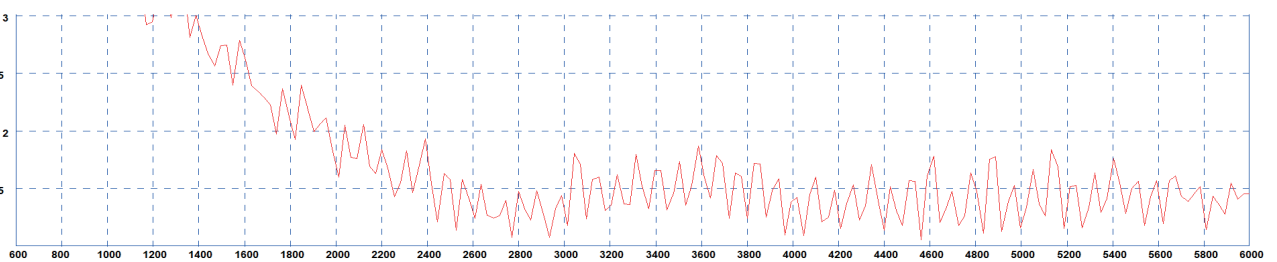
Typical Peak Gain - WiFi Element
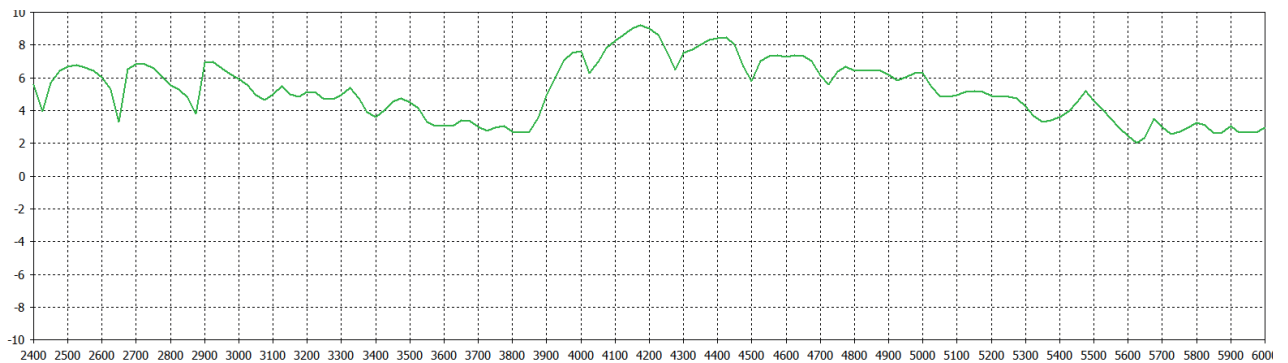
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Swept Peak Gain GPS/GNSS
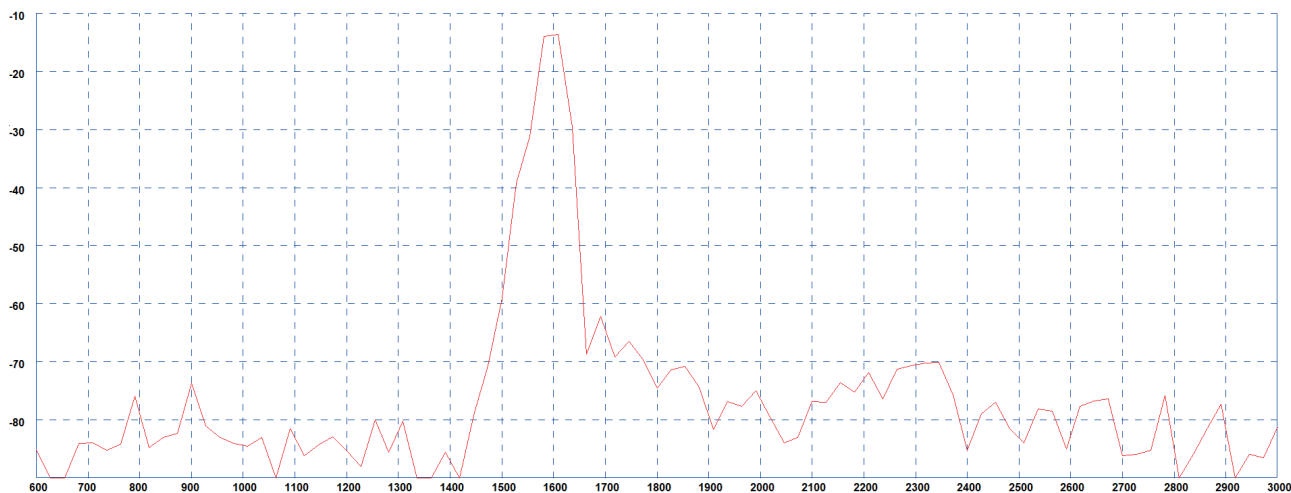
Typical E Plane Pattern - GPS/GNSS 1575 MHz
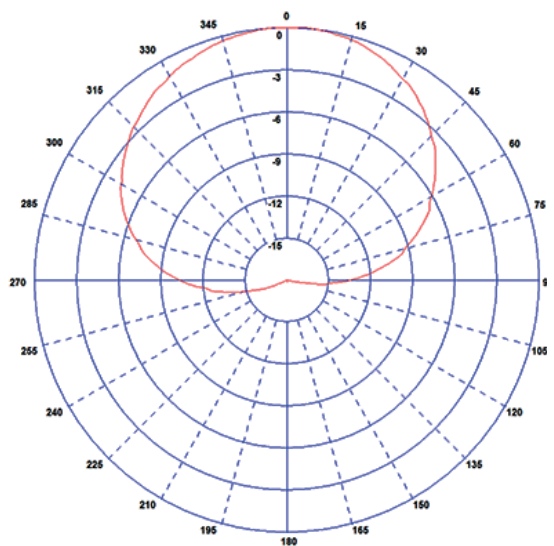
Typical E Plane Pattern - GPS/GNSS 1602 MHz

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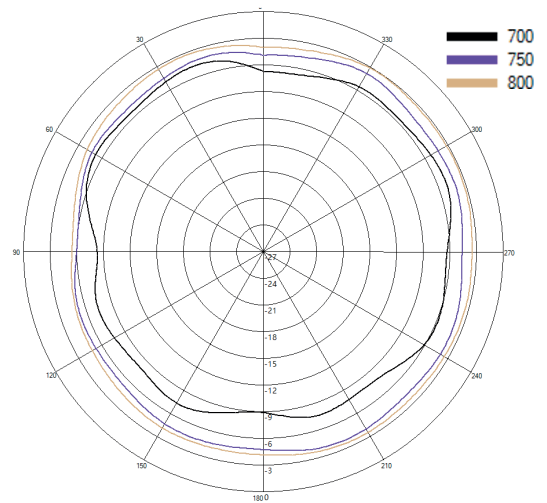Typical 3D Pattern - Cell 750 MHz
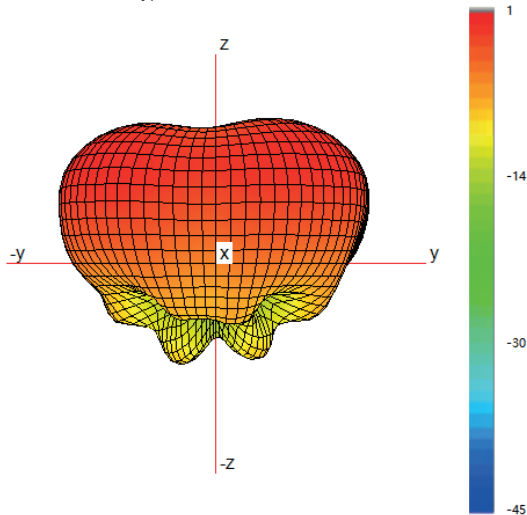
Typical H Plane Pattern - Cell 700-800 MHz

- 700
- 750
- 800

Typical 3D Pattern - Cell 850 MHz
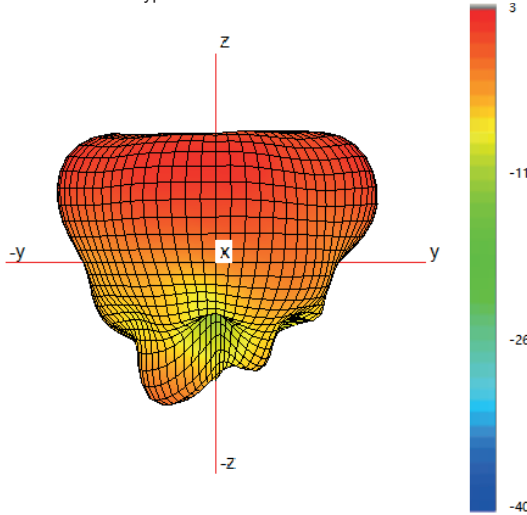
Typical H Plane Pattern - Cell 800-900 MHz

- 800
- 850
- 900
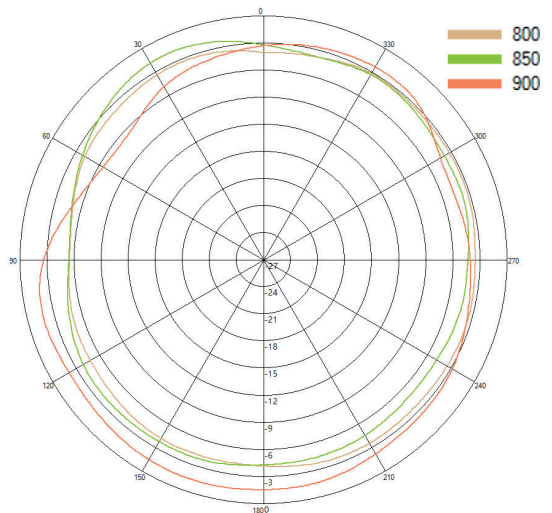
Typical 3D Pattern - Cell 950 MHz
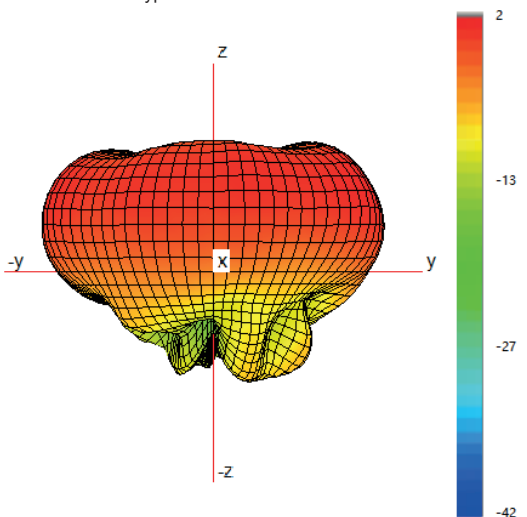
Typical H Plane Pattern - Cell 900-975 MHz

- 900
- 950
- 975

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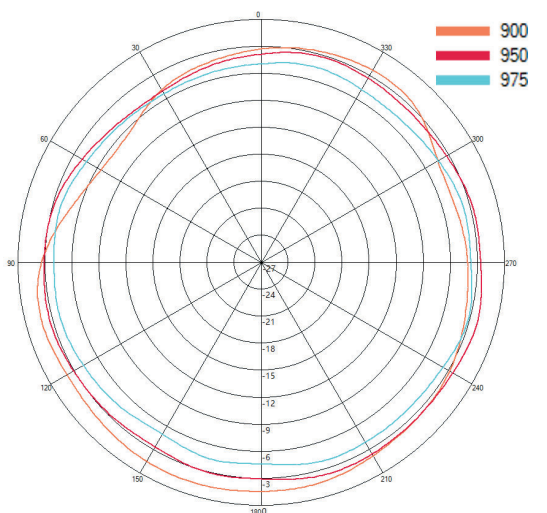
Pattern Data Ground Plane - Cell

Typical 3D Pattern - Cell 1800 MHz
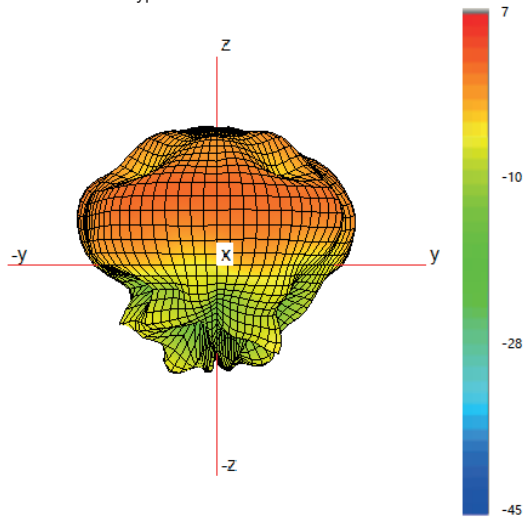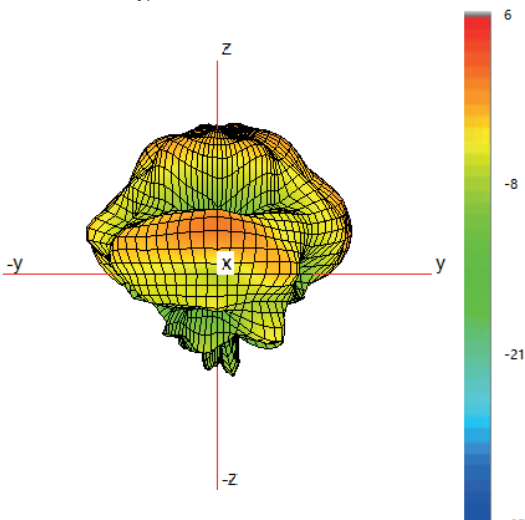
Typical H Plane Pattern - Cell 1700-1900 MHz

1700
1800
1900
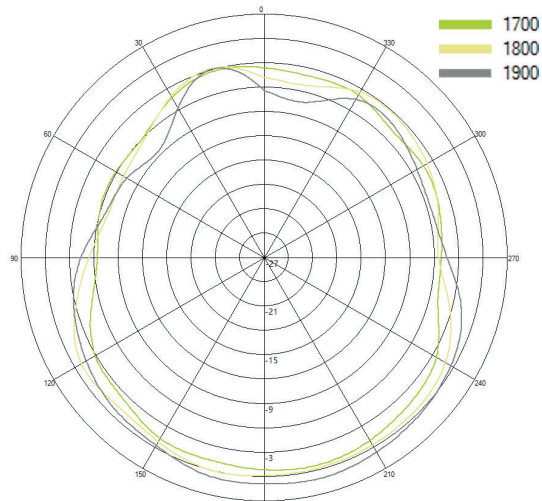
Typical 3D Pattern - Cell 2150 MHz
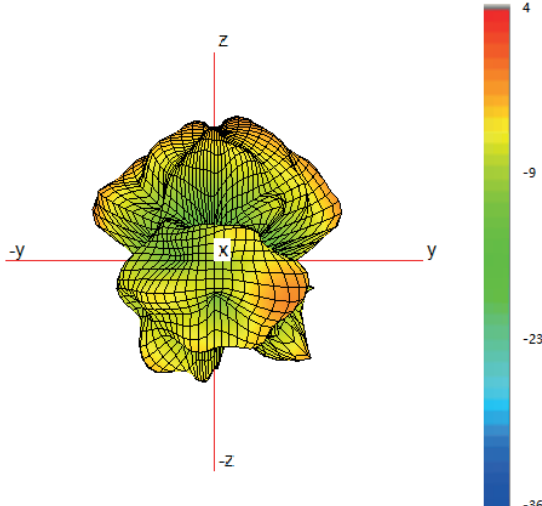
Typical H Plane Pattern - Cell 2000-2200 MHz

2000
2150
2200
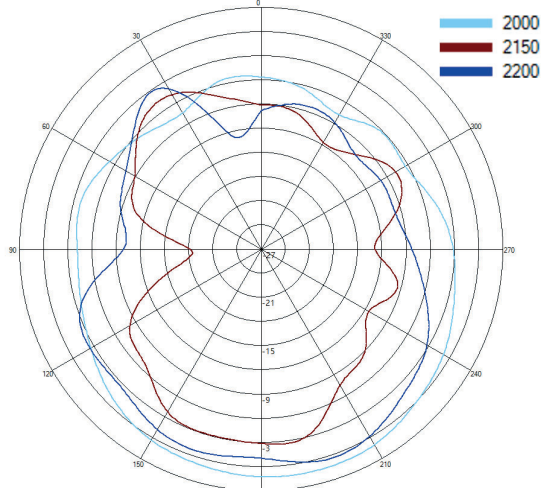
Typical 3D Pattern - Cell 2350 MHz

Typical H Plane Pattern - Cell 2300-2400 MHz
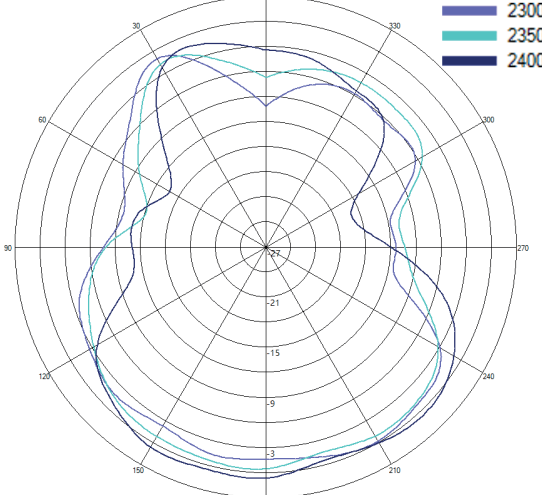
2300
2350
2400

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Typical 3D Pattern - Cell 2600 MHz

Typical H Plane Pattern - Cell 2500-2700 MHz

- 2500
- 2600
- 2700

Typical 3D Pattern - Cell 3600 MHz

Typical H Plane Pattern - Cell 3500-3700 MHz

- 3500
- 3600
- 3700

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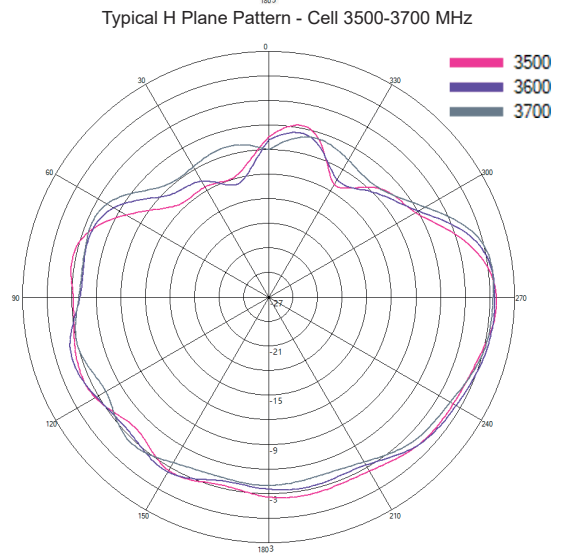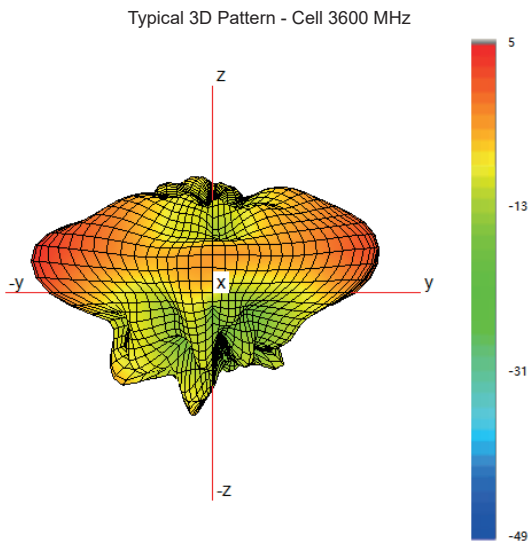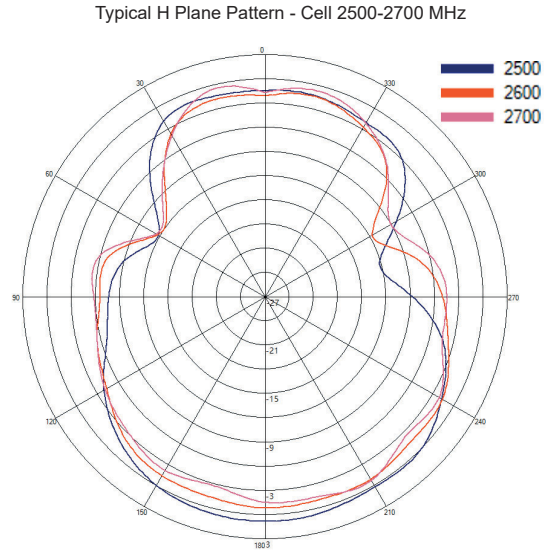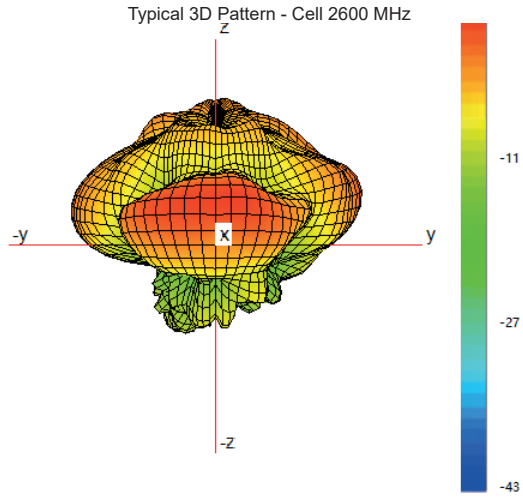
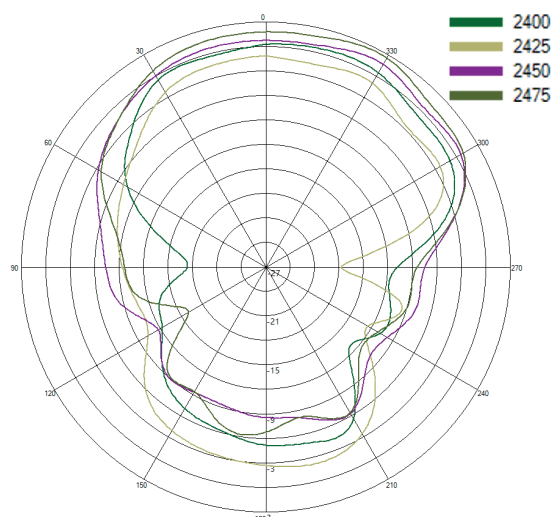**Pattern Data Ground Plane - WiFi**

Typical 3D Pattern - WiFi 2450 MHz
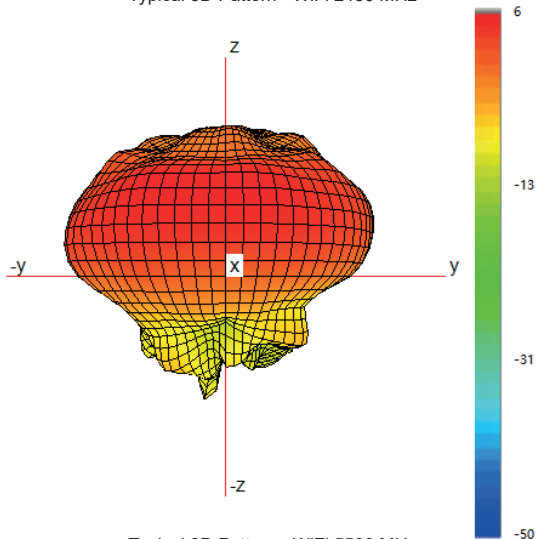
Typical H Plane Pattern - WiFi 2400-2475 MHz

- 2400
- 2425
- 2450
- 2475

Typical 3D Pattern - WiFi 5500 MHz
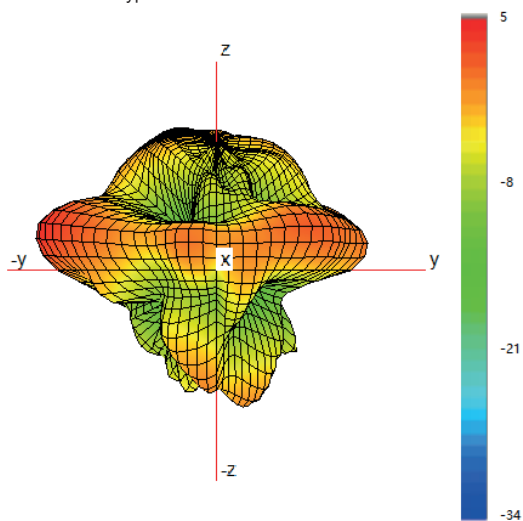
Typical H Plane Pattern - WiFi 5400-5800 MHz

- 5400
- 5500
- 5600
- 5700
- 5800

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