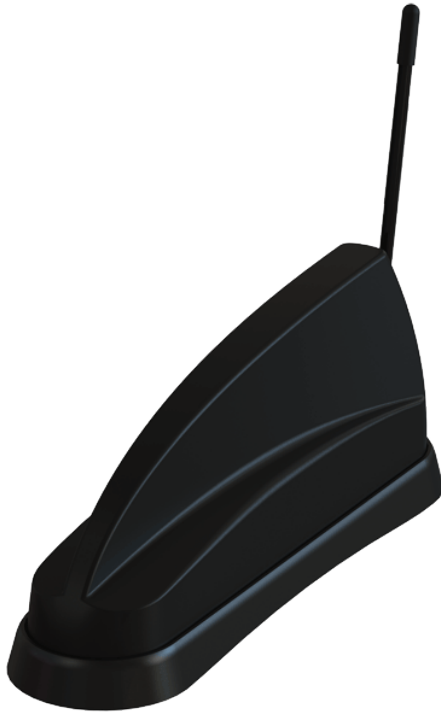


# 4G/5G Sharkfin MiMo Antenna

GPSD[X]-6-60[-X]



- OEM style sharkfin with 2x2 MiMo for 4G/5G
- GPS/GNSS and optional up to 4x MiMo WiFi
- Support for external whip

The GPSD 5G Sharkee™ range has become a byword for industry leading technology in a discrete OEM style shark fin housing. The GPSD-6-60 brings 5G capability to the GPSD family.

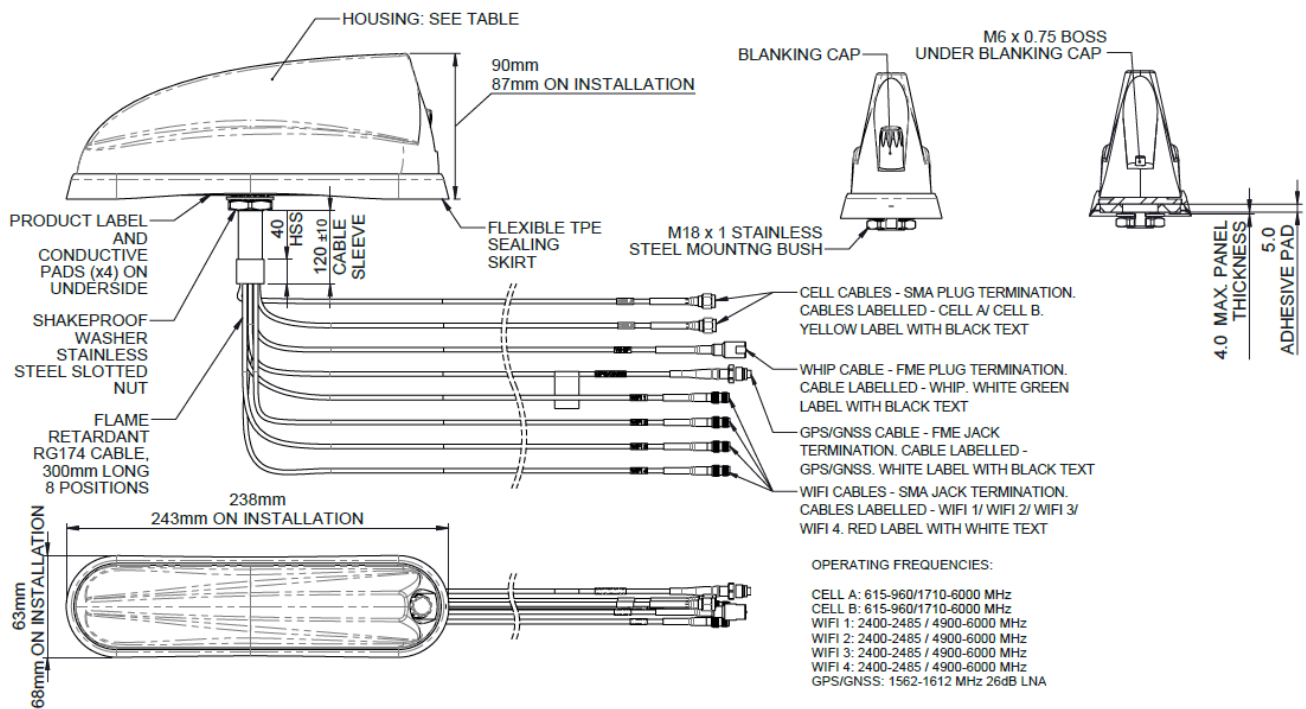
The antenna should be installed on a metal panel when a comms whip is used, but if whip is not required, then it may be fitted on a non-metallic panel and still offer similar performance.

The shark fin housing contains a 2x2 MiMo antenna function for 4G/5G (617-960/1710-6000MHz) and option of 2x2, 3x3 or 4x4 MiMo dual band WiFi, which supports WiFi 6e. An active antenna for GPS/GLONASS/Galileo/ BeiDou is included, with 26dB gain LNA and advanced filtering for LTE Band 13/14 operation. In addition, there is an integral stud mount for an external antenna whip that can support a range of VHF, UHF or 700/800MHz antennas. A blanking cap is supplied for when this is not required.

The GPSD shark fin design provides multiple antenna functions while remaining discreet and is suitable for public safety (overt/covert), industrial and transport applications where a cost effective, efficient and robust antenna is essential. Requiring only a single hole mounting, the GPSD reduces vehicle damage, installation time & cost and visual impact whilst protecting a vehicle's resale value.

## Technical Drawing

GPSD-6-60-QW Shown



# 4G/5G Sharkfin MiMo Antenna

GPSD[X]-6-60[-X]

Product Data

Part No.		GPSD[W]-6-60-QW	GPSD[W]-6-60-TW	GPSD[W]-6-60-DW	GPSD[W]-6-60	FIND[W]-6-60
<b>Electrical Data</b>						
Frequency Range (MHz)	Element 1	1562-1612			-	
	Elements 2 & 3	2x 617-960/1710-6000				
	Elements 4, 5 6 & 7	4 x 2.4/5.0/7.1GHz	3 x 2.4/5.0/7.1GHz	2 x 2.4/5.0/7.1GHz	-	-
	Whip Position	Dependent on selected whip				
Peak gain: Isotropic*	Elements 2 & 3	5dBi (617-960MHz) / 7dBi (1710-4900MHz) / 8dBi (5000-6000MHz)				
	Elements 4, 5, 6 & 7	5dBi (2396-2485MHz) / 11dBi (5150-7200MHz)				-
Isolation**	4G/5G	>12dB				
	WiFi	> 15dB				-
Typical Efficiency* w/o Cable Loss	Elements 2 & 3	> 70% (617-960Mz) / >55% (1710-6000MHz)				
	Elements 4, 5, 6 & 7	50% (2400-2485MHz) / 50%(5150-7125MHz)				
Correlation Co-efficient	Elements 2 & 3	<0.2				
Polarisation	Vertical					
Pattern	Omni-directional					
Impedance	50Ω					
Max Input Power (W)	10 (internal elements) / 60 Whip					
<b>GPS/GNSS Data</b>						
Frequency Range (MHz)	1562-1612					-
VSWR	<2:1					-
Gain: LNA	26dB					-
Polarisation	Right Hand Circular					-
Out of Band Rejection	>40dB (+/- 100MHz f)   Notch Filter @787MHz - 23dB					-
Operating Voltage	3-5V DC (fed via coax)					-
Current	<20mA					-
<b>Mechanical Data</b>						
Dimensions (mm) - Installed	Total Height	90 (3.54")				
	Length	243 (9.56")				
	Width	63 (2.48")				
Operating Temp (°C)	-40° / +80°C (-40° / 176°F)					
Material	ASA,Silicone Rubber, Aluminium Alloy					
Colour	Black or White (GPSDW part numbers)					
Ingress Protection	IP69K					
<b>Mounting Info</b>						
Fixing	Panel Mount					
Hole Size (mm)	19 (3/4")					
<b>Cable Data</b>						
Cable Type - All Feeds	FR RG174 (UN ECE R 118 Compliant)					
Dimensions (mm)	Diameter	2.8 (0.11")				
	Length	300 mm (12")				
	GPS/GNSS	FME (f)				-
Termination	4G/5G	2 x SMA plug				
	WiFi	4x SMA (f)	3x SMA (f)	2x SMA (f)	-	-
	Whip	FME (m)				

\*Peak gain and efficiency measured on a 600x600mm (2'x2') ground plane without additional cable

\*\* Isolation measured on a 600x600mm (2'x2') ground plane without additional cable

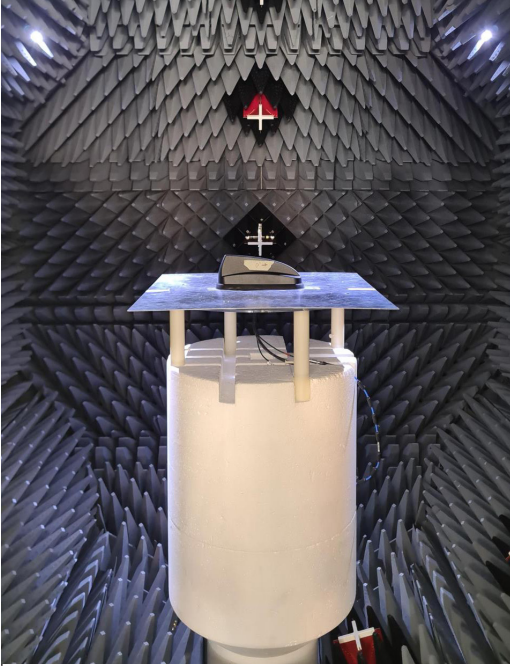
# 4G/5G Sharkfin MiMo Antenna

GPSD[X]-6-60[-X]

Electrical Data Cell -  
Ground Plane

Measurement Conditions

GPSD-6-60[-X] measured on 600x600mm (2'x2') ground plane without additional cable

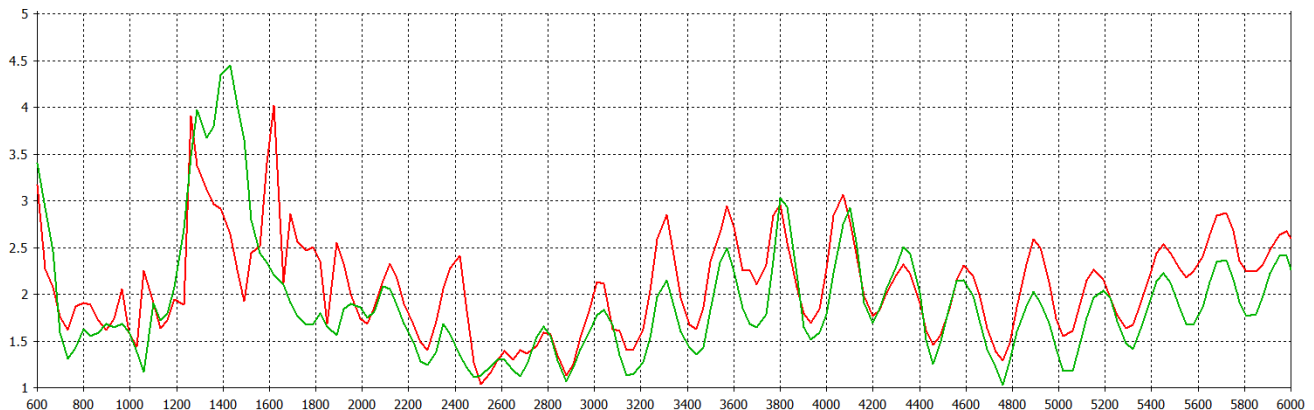


4G/5G Antennas

Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
617-698	71, 105	Cell A	3.5	57
		Cell B	3.5	57
699-798	12,13, 14 17,28	Cell A	4.6	68
		Cell B	5.2	76
807- 862	5,19,20,26,27	Cell A	5.4	72
		Cell B	5.7	78
880-960	8	Cell A	5.8	74
		Cell B	5.8	79
1427-1518	11, 21, 74,75,76	Cell A	6.2	63
		Cell B	4.1	38
1710-1920	2,3,4,9,25,35,39,66	Cell A	5.5	51
		Cell B	5.2	66
1920-2170	1,23	Cell A	4.6	58
		Cell B	5.3	63
2300-2400	30,40	Cell A	4.9	53
		Cell B	5.0	61
2496-2690	7,38,41	Cell A	6.2	63
		Cell B	4.7	69
3300-4200	22,42,43,48,77,78	Cell A	6.2	46
		Cell B	7.3	54
4400-5000	79	Cell A	6.1	46
		Cell B	6.5	51
5000-6000	96, 102, 104	Cell A	5.1	48
		Cell B	8.2	57

Electrical Data Cell -  
Ground Plane

Typical VSWR\*




\*VSWR measured on 600x600mm (2'x2') ground plane without additional cable

# 4G/5G Sharkfin MiMo Antenna

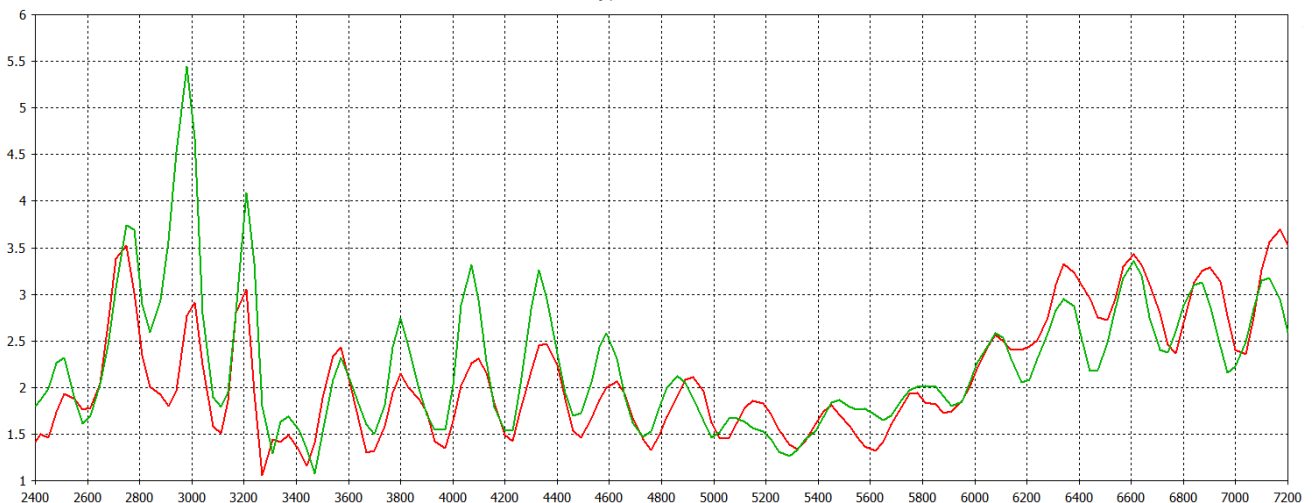
GPSD[X]-6-60[-X]

Electrical Data WiFi -  
Ground Plane

Measurement Conditions	WiFi Antennas				
GPSD-6-60[-X] measured on 600x600mm (2'x2') ground plane without additional cable	Frequency Range (MHz)	WiFi Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
	2396-2485	2.4GHz	WiFi 1	4.1	45
			WiFi 2	5.7	54
	5150-5250	UNII-1	WiFi 1	7.6	57
			WiFi 2	7.8	54
	5250-5350	UNII-2A	WiFi 1	8.1	64
			WiFi 2	9.8	58
	5350-5470	UNII-2B	WiFi 1	8.2	66
			WiFi 2	9.9	58
	5470-5725	UNII-2C	WiFi 1	8.3	65
			WiFi 2	8.9	56
	5725-5850	UNII-3	WiFi 1	8.3	61
			WiFi 2	9.4	59
	5850-5925	UNII-4	WiFi 1	7.7	59
			WiFi 2	9.6	58
	5925-6425	UNII-5	WiFi 1	7.7	48
			WiFi 2	9.6	51
6425-6525	UNII-6	WiFi 1	2.2	26	
		WiFi 2	6.8	37	
6525-6875	UNII-7	WiFi 1	2.7	28	
		WiFi 2	5.0	31	
6875-7125	UNII-8	WiFi 1	3.0	30	
		WiFi 2	4.1	30	

Electrical Data WiFi -  
Ground Plane

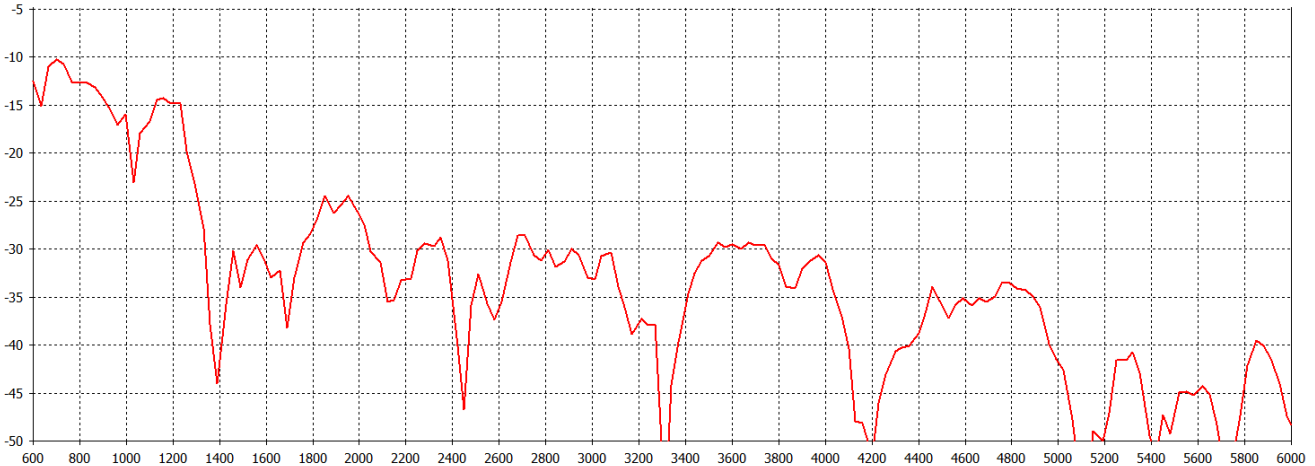
Typical VSWR\*



\*VSWR measured on 600x600mm (2'x2') ground plane without additional cable

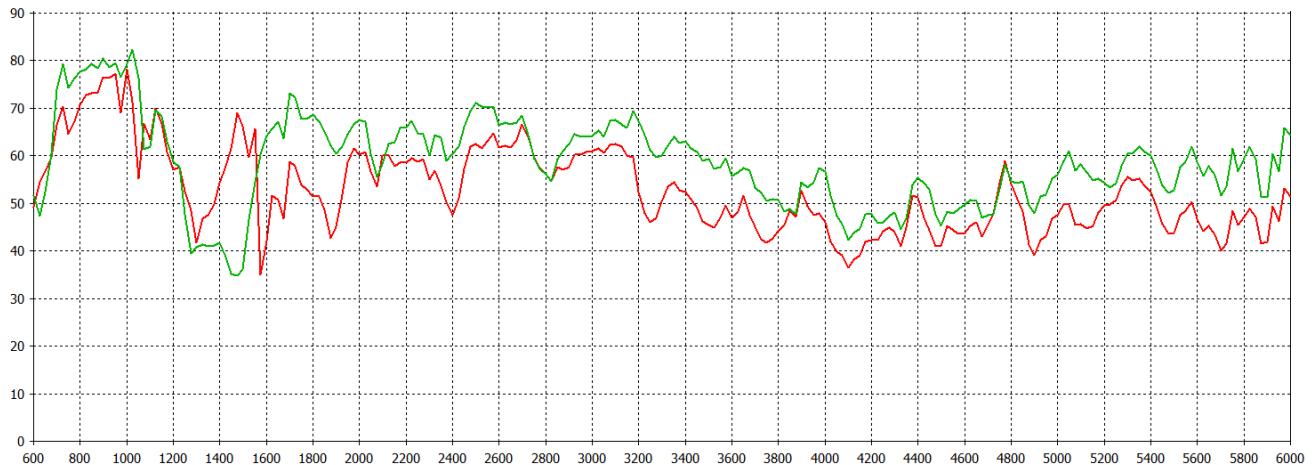
Electrical Data Cell -  
Ground Plane

Typical Isolation\*



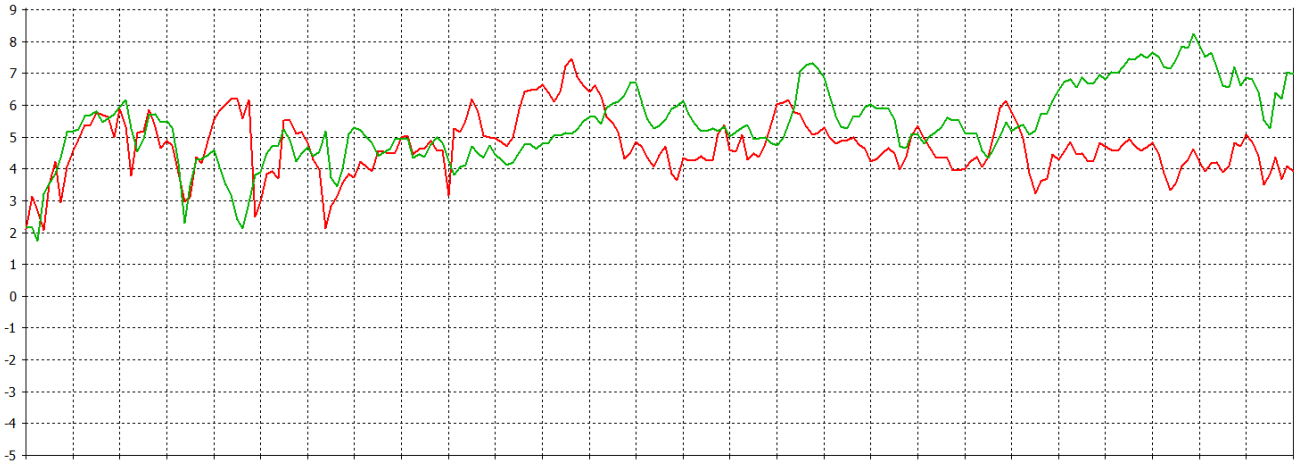
\*Isolation measured on 600x600mm (2'x2') ground plane without additional cable

Typical Efficiency\*



\*Efficiency measured on 600x600mm (2'x2') ground plane without additional cable

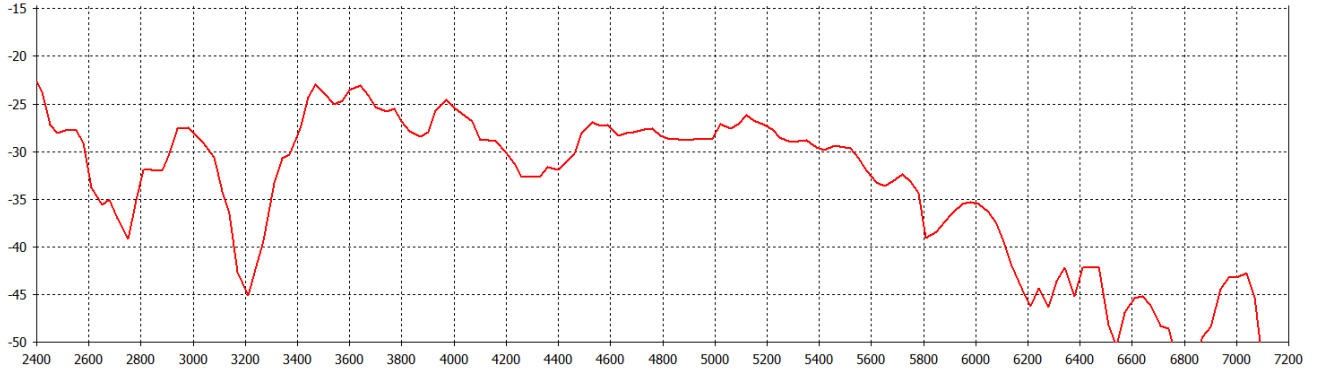
Typical Swept Peak Gain\*



\*Peak Gain measured on 600x600mm (2'x2') ground plane without additional cable

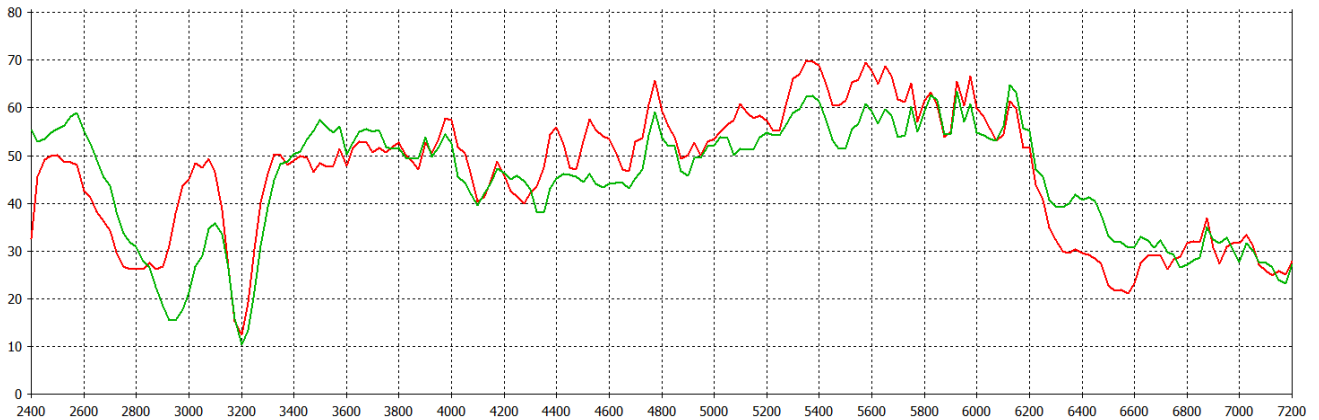


Typical Isolation\*



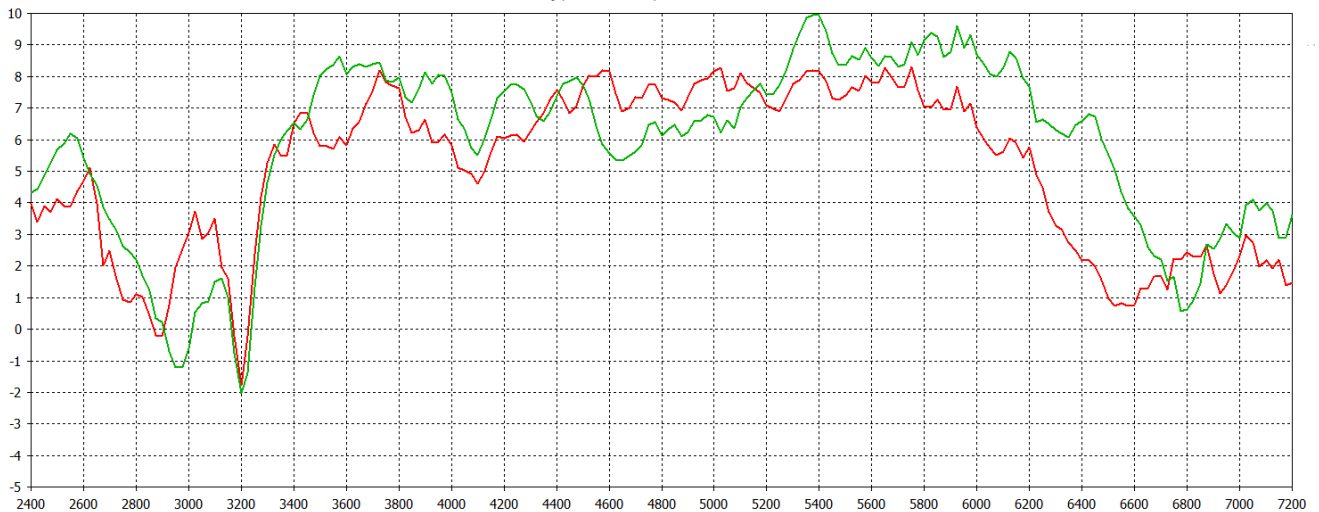
\*Isolation measured on 600x600mm (2'x2') ground plane without additional cable

Typical Efficiency\*



\*Efficiency measured on 600x600mm (2'x2') ground plane without additional cable

Typical Swept Peak Gain\*



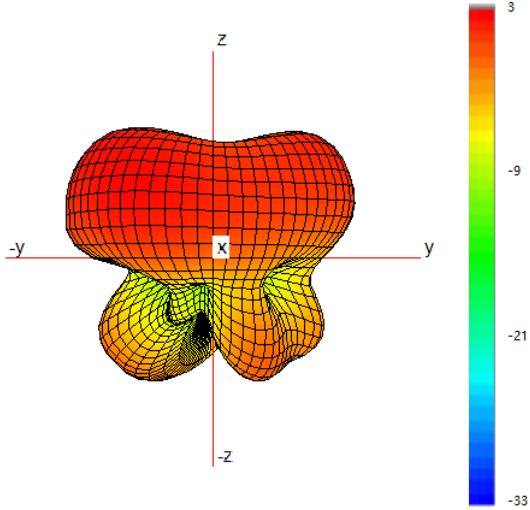
\*Peak Gain measured on 600x600mm (2'x2') ground plane without additional cable

# 4G/5G Sharkfin MiMo Antenna

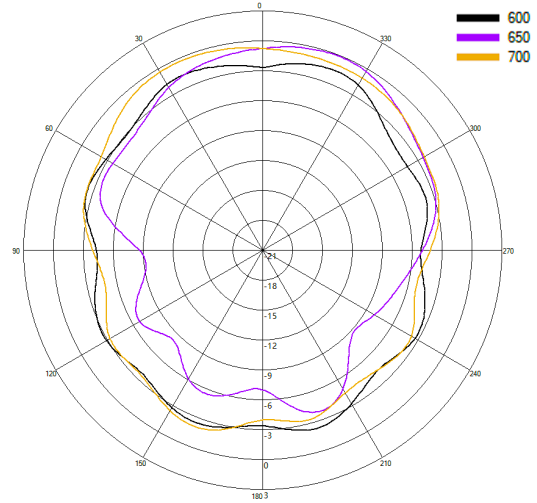
GPSD[X]-6-60[-X]

3D Pattern Data on  
Ground Plane Cell A

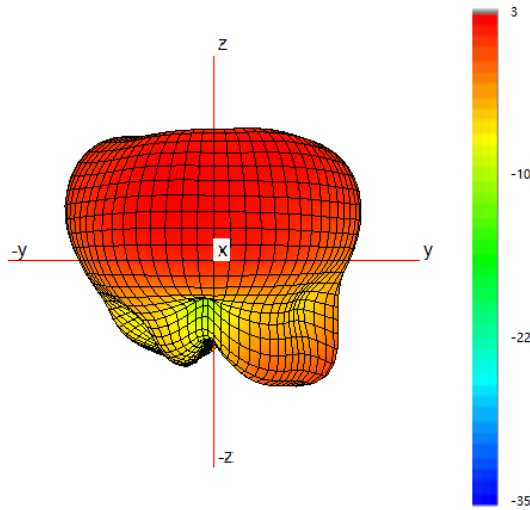
Typical 3D Pattern- Cell A - 650 MHz



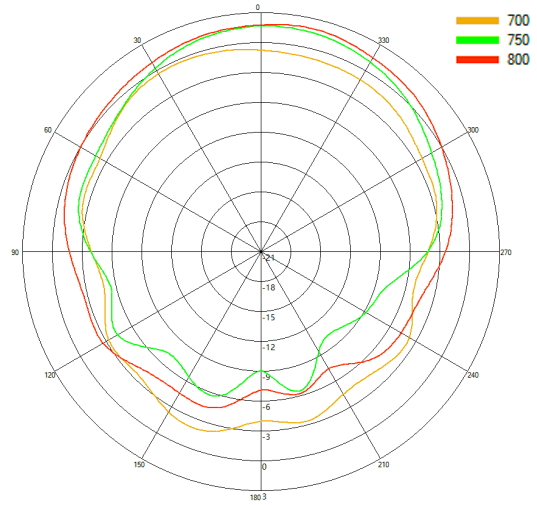
Typical H Plane- Cell A - Patterns- 600-700MHz



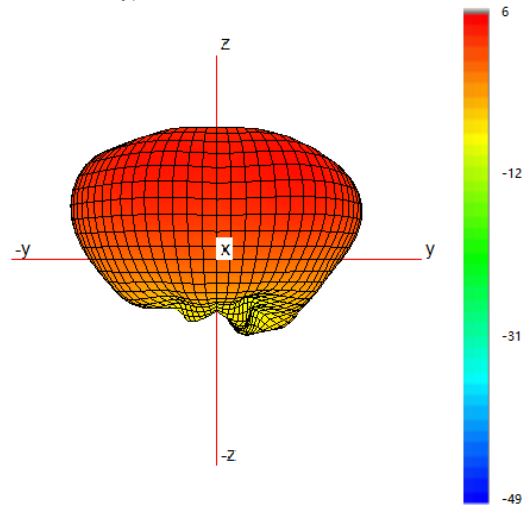
Typical 3D Pattern- Cell A - 750 MHz



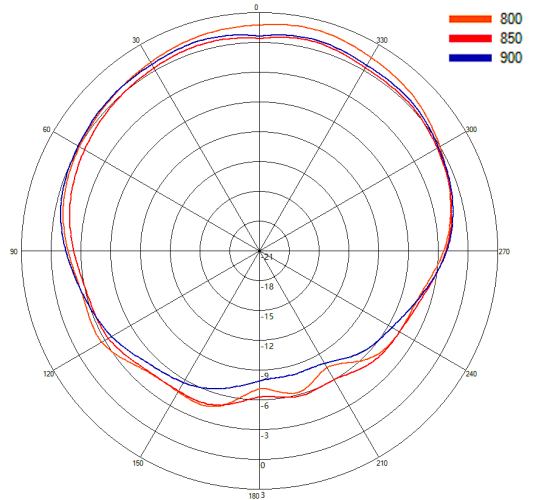
Typical H Plane- Cell A - Patterns- 700-800MHz



Typical 3D Pattern- Cell A - 850 MHz

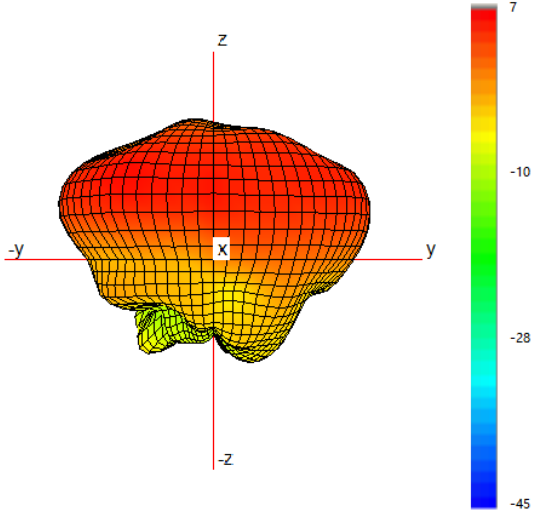


Typical H Plane- Cell A - Patterns- 800-900MHz

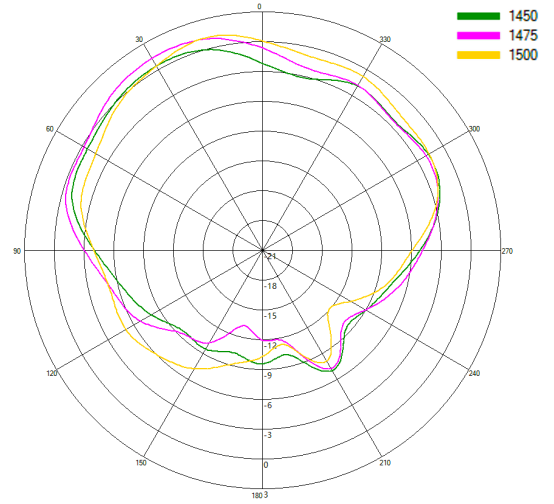


3D Pattern Data on  
Ground Plane Cell A

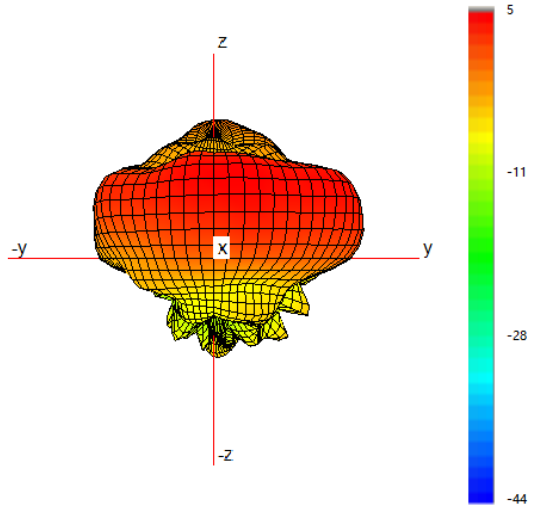
Typical 3D Pattern- Cell A - 1475 MHz



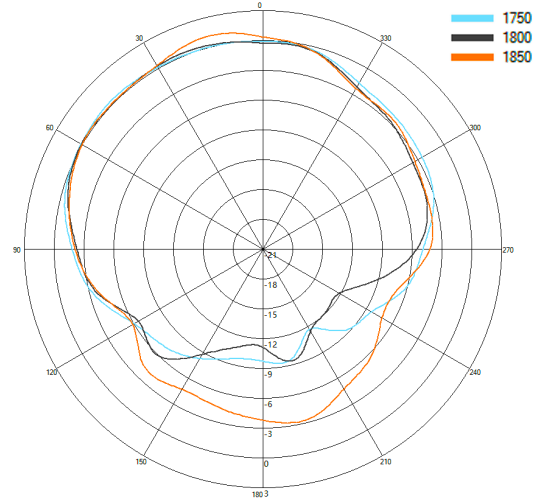
Typical H Plane- Cell A- Patterns- 1450-1500 MHz



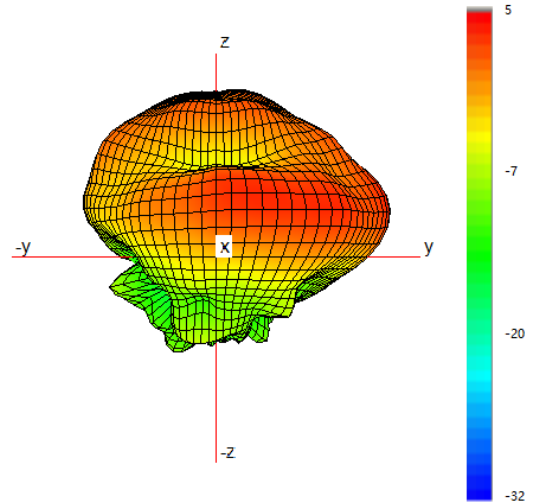
Typical 3D Pattern- Cell A - 1800 MHz



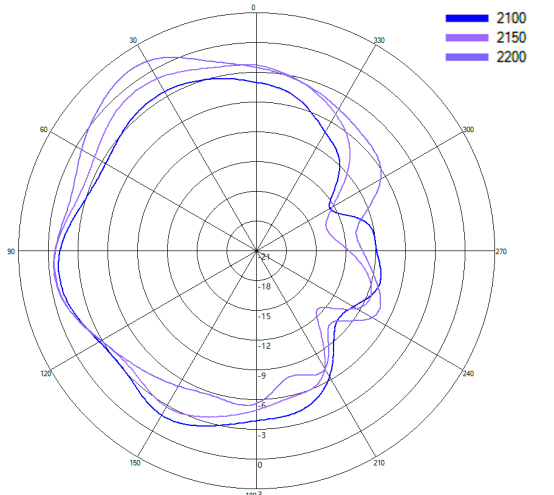
Typical H Plane- Cell A- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell A - 2150 MHz



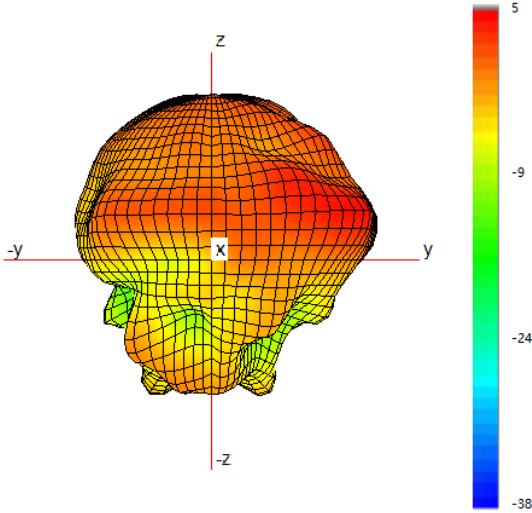
Typical H Plane- Cell A- Patterns- 2100-2200 MHz



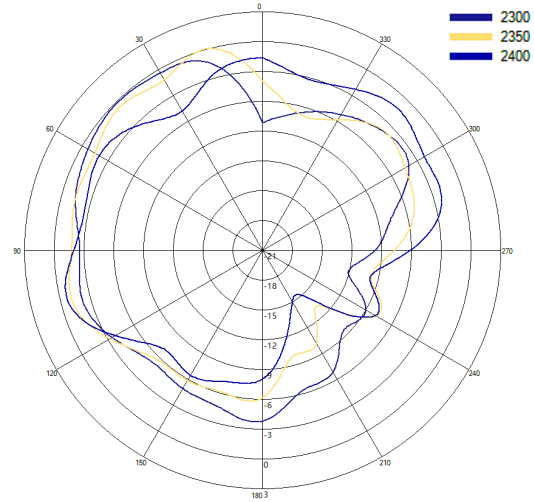


3D Pattern Data on  
Ground Plane Cell A

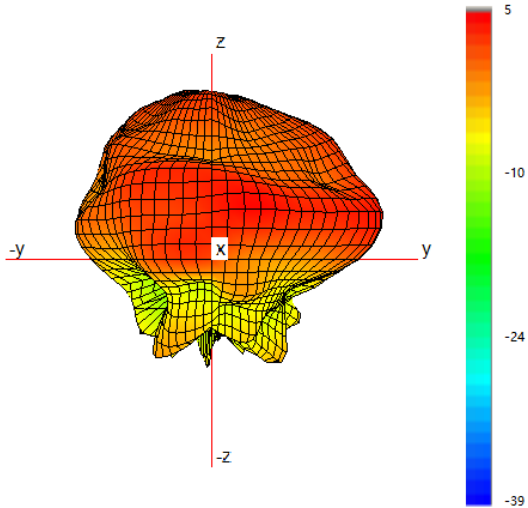
Typical 3D Pattern- Cell A - 2350 MHz



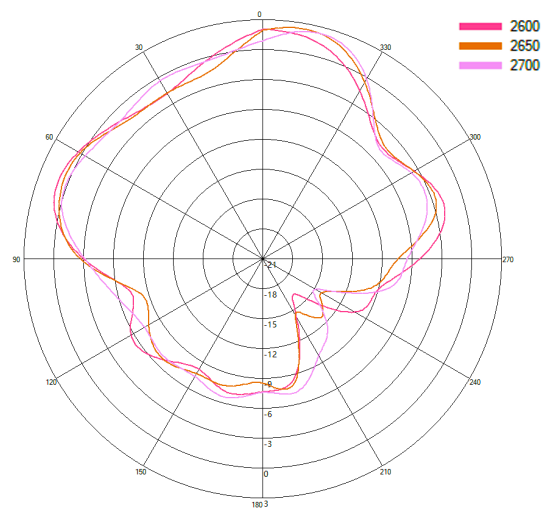
Typical H Plane- Cell A - Patterns- 2300-2400 MHz



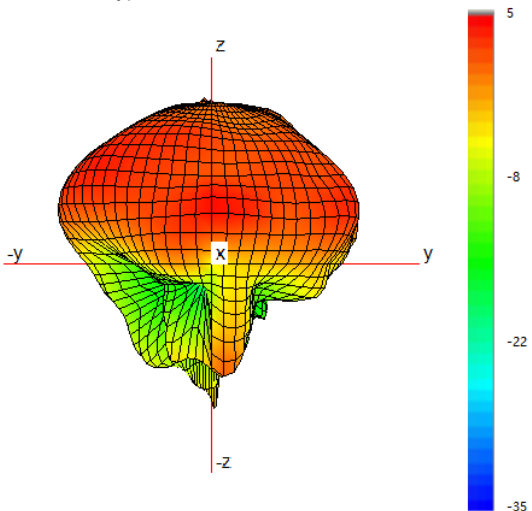
Typical 3D Pattern- Cell A - 2650 MHz



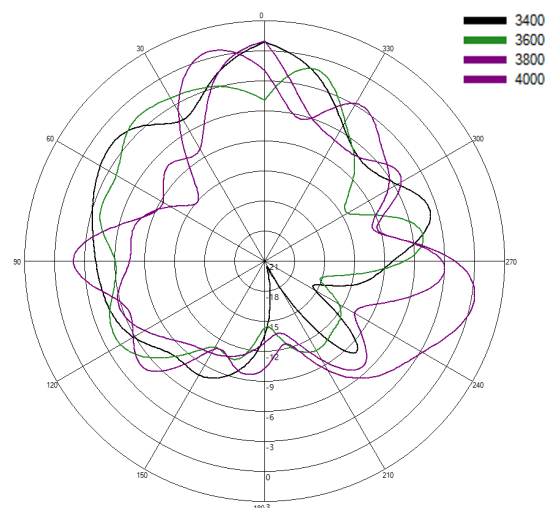
Typical H Plane- Cell A - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell A - 3600 MHz

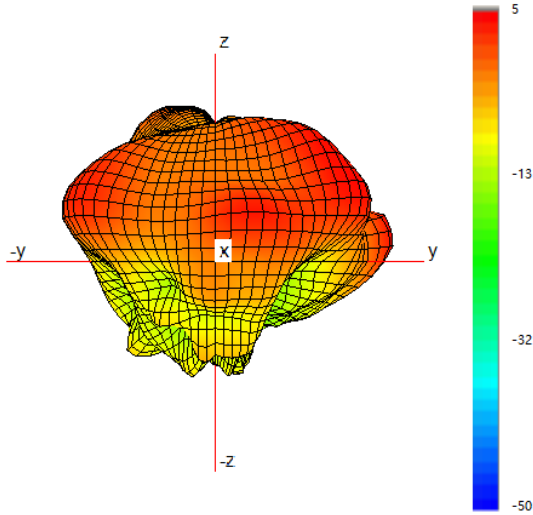


Typical H Plane- Cell A - Patterns- 3400-4000 MHz

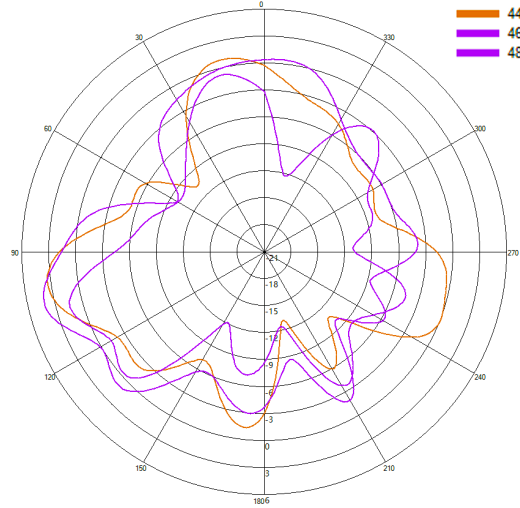


3D Pattern Data on  
Ground Plane Cell A

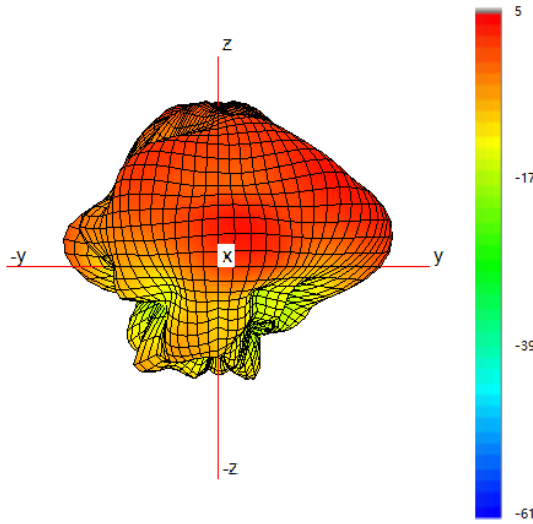
Typical 3D Pattern- Cell A - 4700 MHz



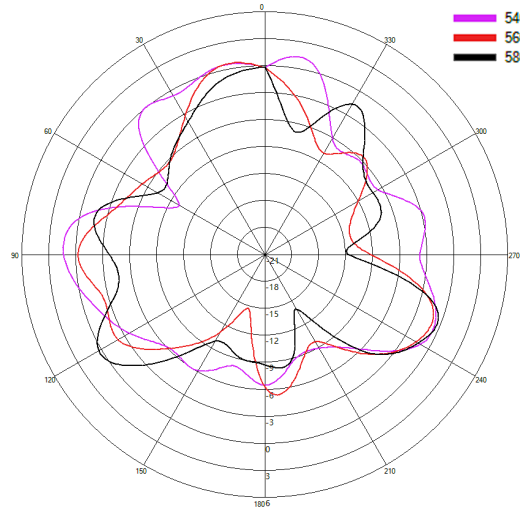
Typical H Plane- Cell A - Patterns- 4400-4800 MHz



Typical 3D Pattern- Cell A - 5600 MHz



Typical H Plane- Cell A - Patterns- 5400-5800 MHz

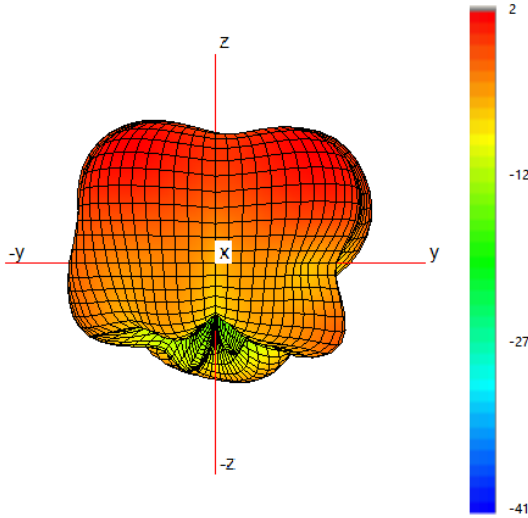


# 4G/5G Sharkfin MiMo Antenna

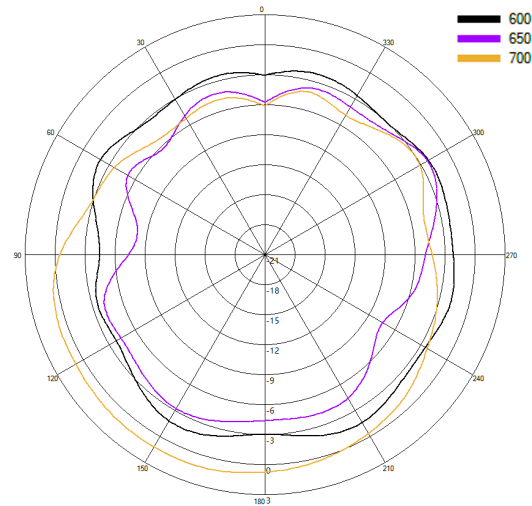
GPSD[X]-6-60[-X]

3D Pattern Data on  
Ground Plane Cell B

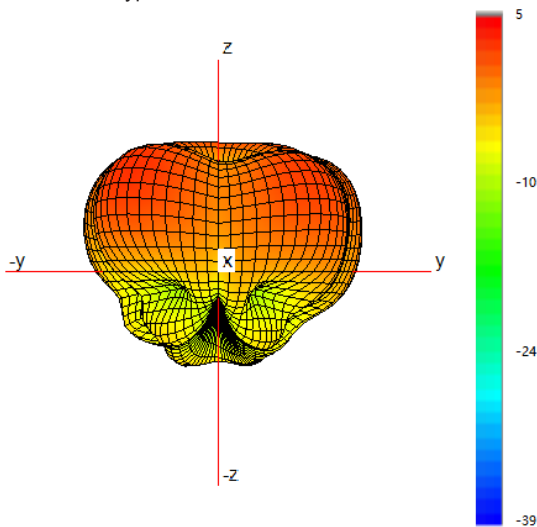
Typical 3D Pattern- Cell B - 650 MHz



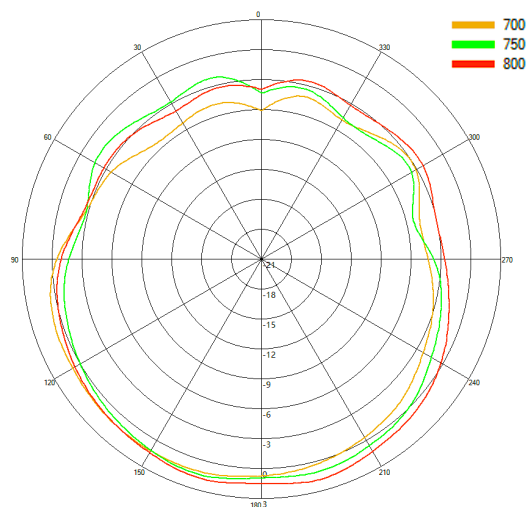
Typical H Plane- Cell B - Patterns- 600-700MHz



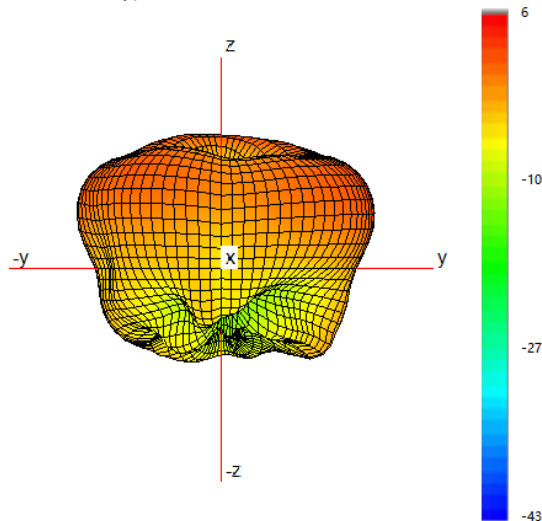
Typical 3D Pattern- Cell B - 750 MHz



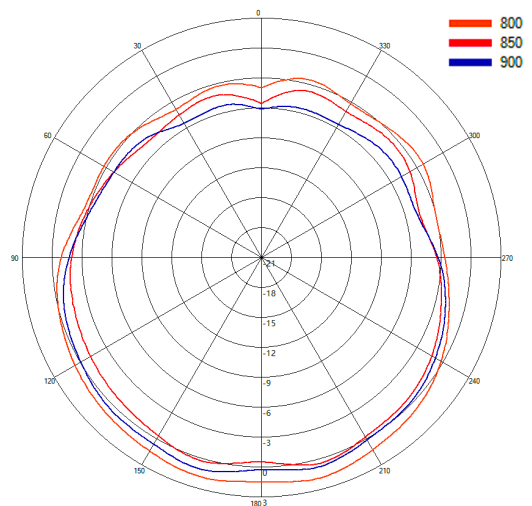
Typical H Plane- Cell B - Patterns- 700-800MHz



Typical 3D Pattern- Cell B - 850 MHz

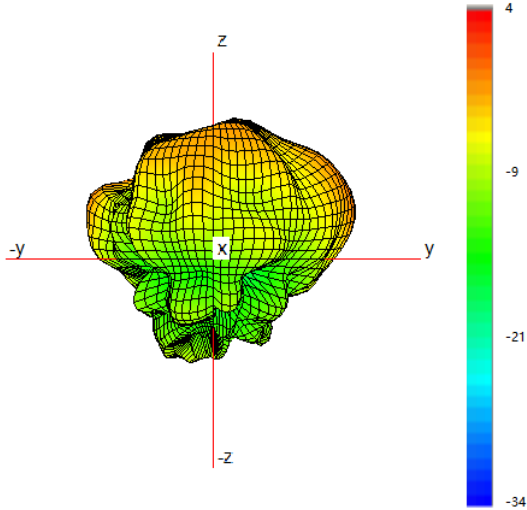


Typical H Plane- Cell B - Patterns- 800-900MHz

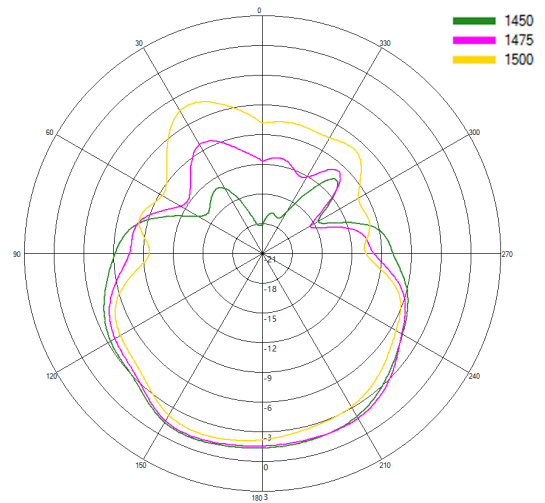


3D Pattern Data on  
Ground Plane Cell B

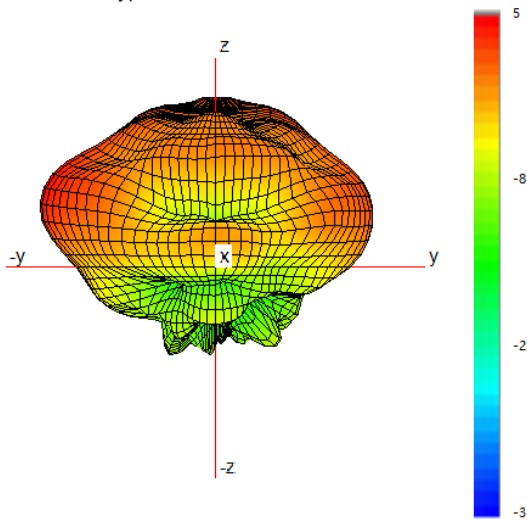
Typical 3D Pattern- Cell B - 1475 MHz



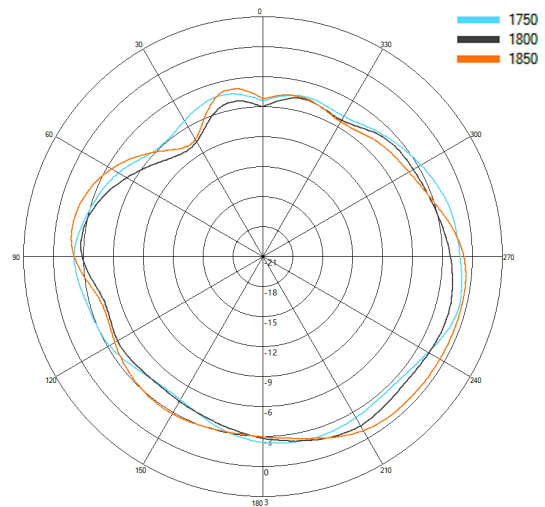
Typical H Plane- Cell B- Patterns- 1450-1500 MHz



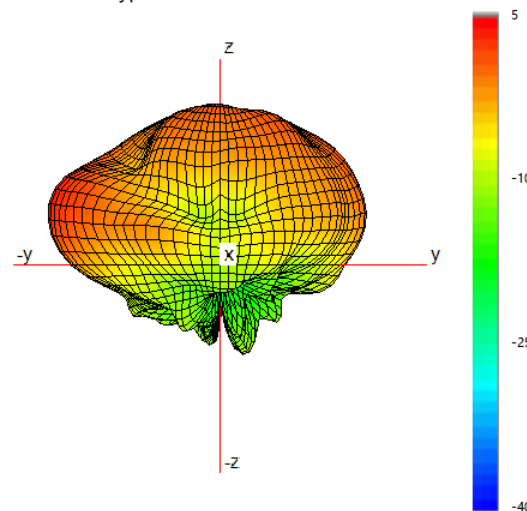
Typical 3D Pattern- Cell B - 1800 MHz



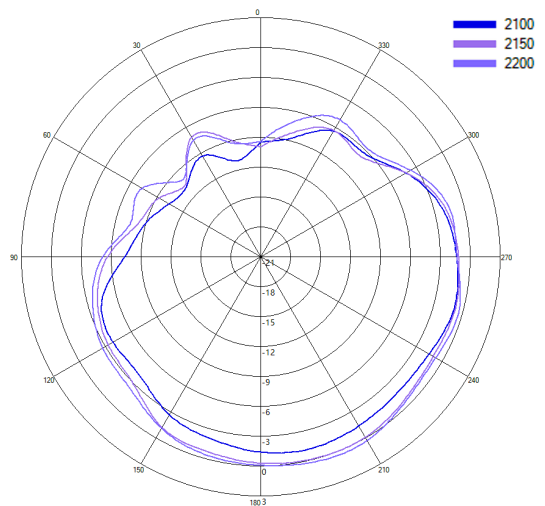
Typical H Plane- Cell B- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell B - 2150 MHz

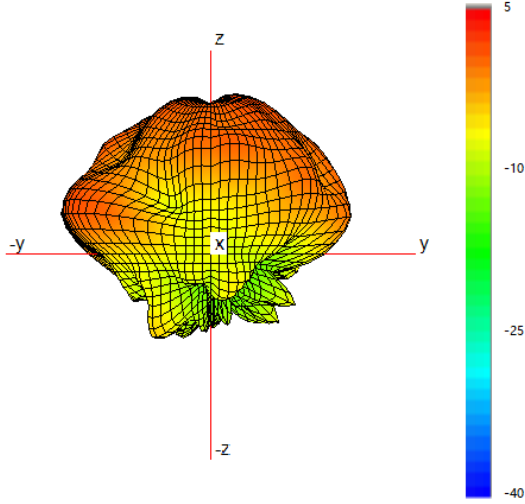


Typical H Plane- Cell B- Patterns- 2100-2200 MHz

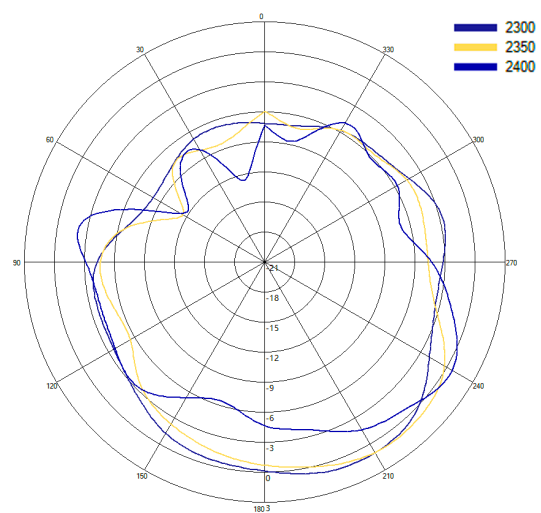


3D Pattern Data on  
Ground Plane Cell B

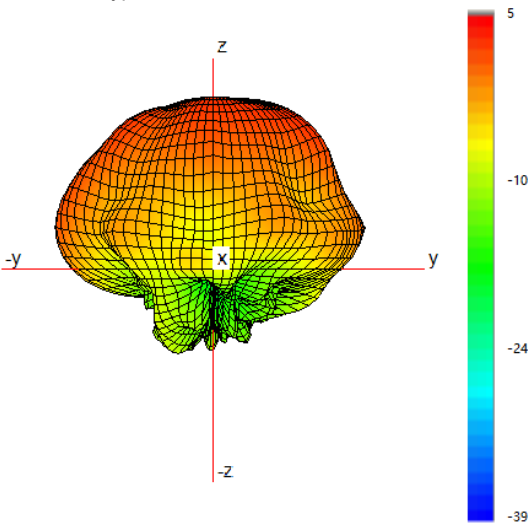
Typical 3D Pattern- Cell B - 2350 MHz



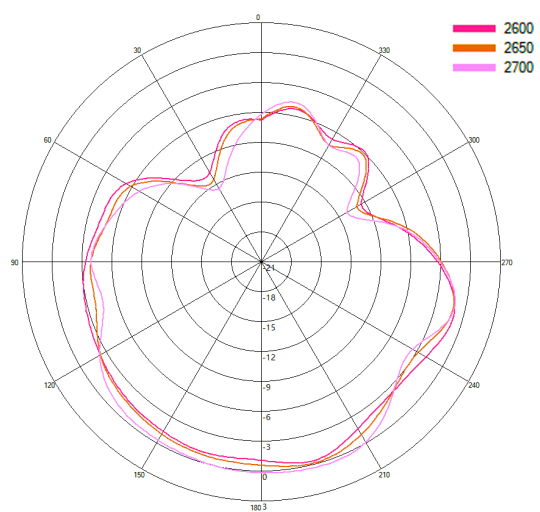
Typical H Plane- Cell B - Patterns- 2300-2400 MHz



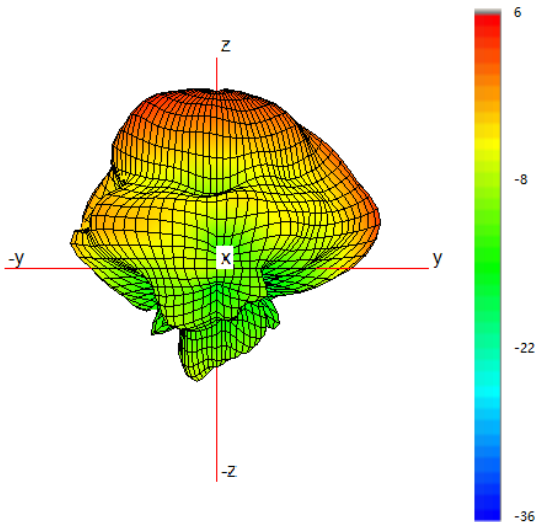
Typical 3D Pattern- Cell B - 2650 MHz



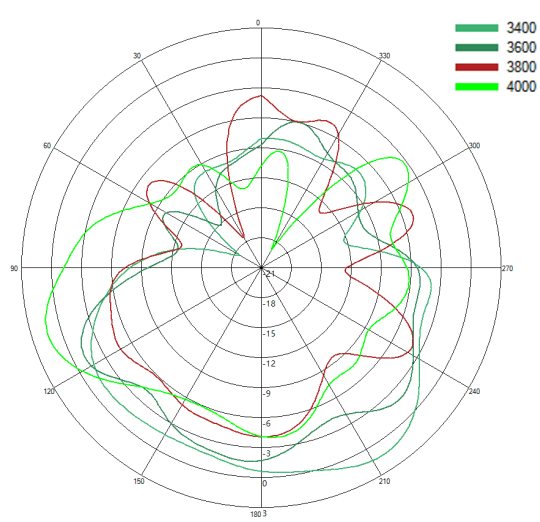
Typical H Plane- Cell B - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell B - 3600 MHz



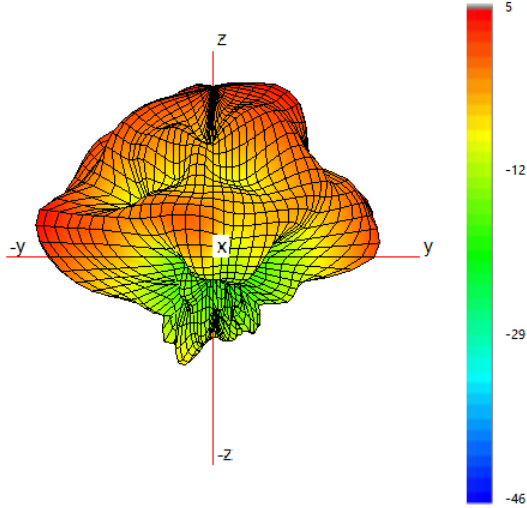
Typical H Plane- Cell B - Patterns- 3400-4000 MHz



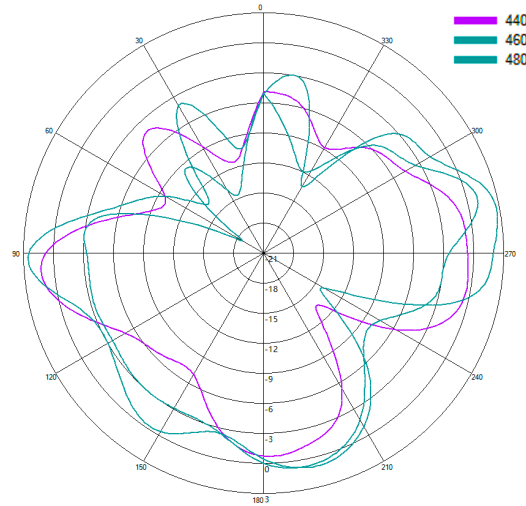


3D Pattern Data on  
Ground Plane Cell B

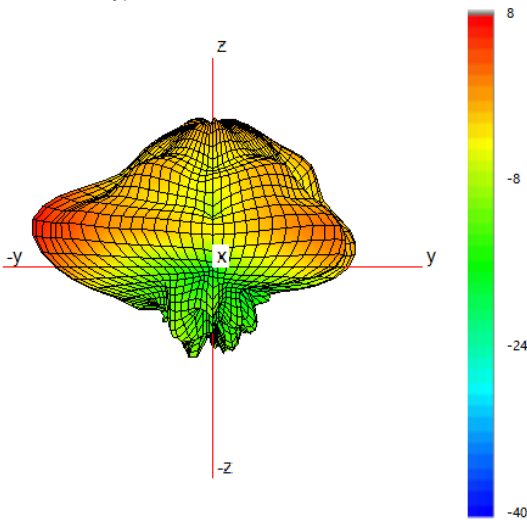
Typical 3D Pattern- Cell B - 4700 MHz



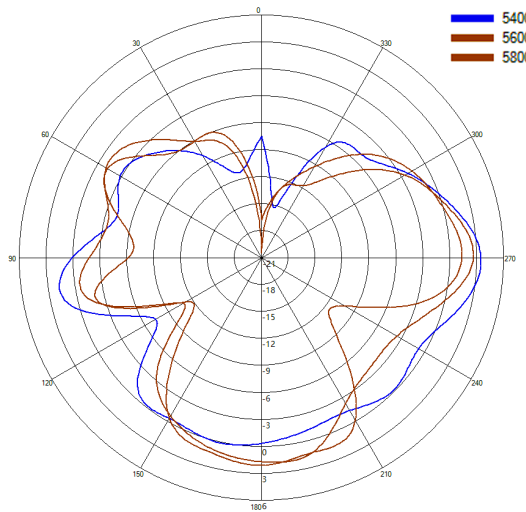
Typical H Plane- Cell B- Patterns- 4400-4800 MHz



Typical 3D Pattern- Cell B - 5600 MHz



Typical H Plane- Cell B - Patterns- 5400-5800 MHz

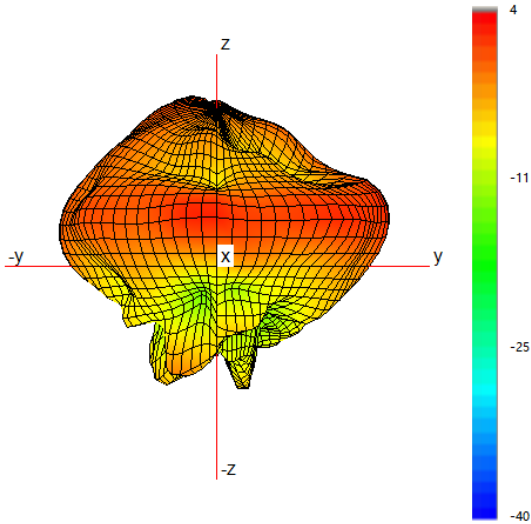


# 4G/5G Sharkfin MiMo Antenna

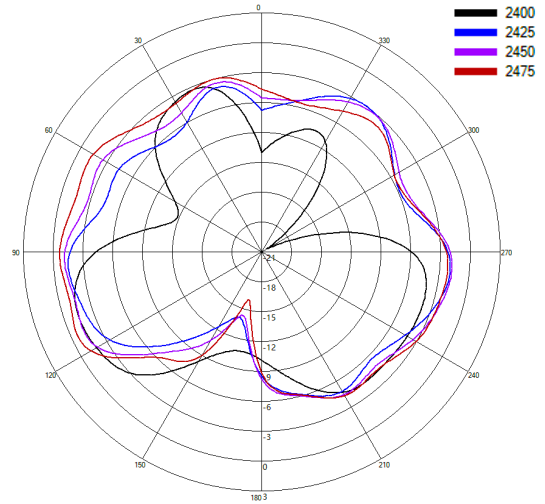
GPSD[X]-6-60[-X]

3D Pattern Data on  
Ground Plane WiFi- 1

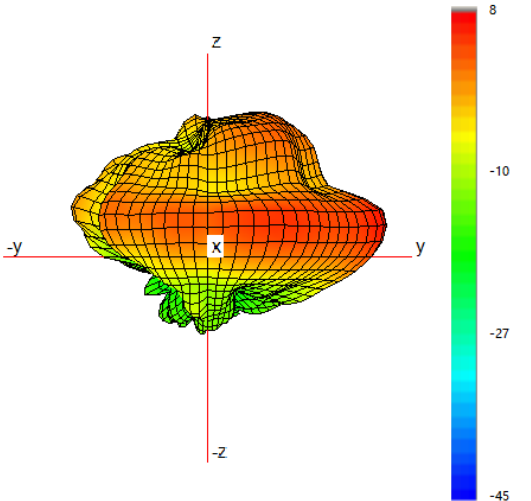
Typical 3D Pattern- WiFi - 1 - 2450 MHz



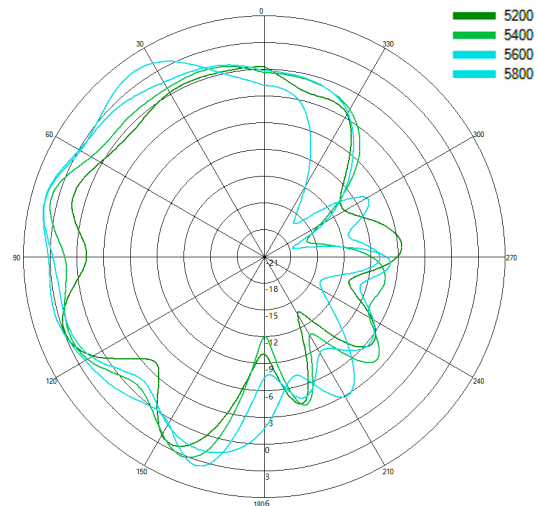
Typical H Plane- WiFi - 1 - Patterns- 2400-2475MHz



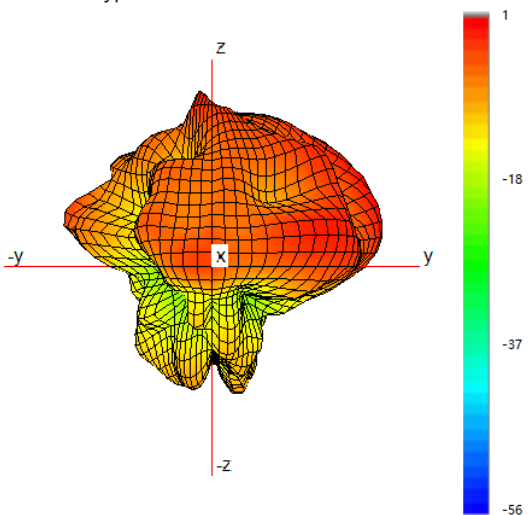
Typical 3D Pattern- WiFi - 1 - 5500 MHz



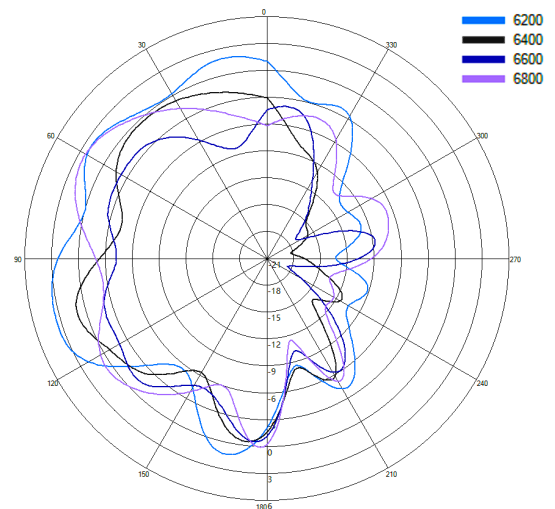
Typical H Plane- WiFi - 1 - Patterns- 5200-5800MHz



Typical 3D Pattern- WiFi - 1 - 6500 MHz

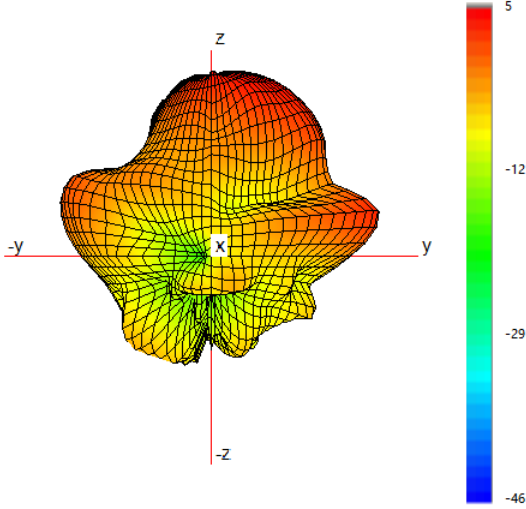


Typical H Plane- WiFi - 1 - Patterns- 6200-6800MHz

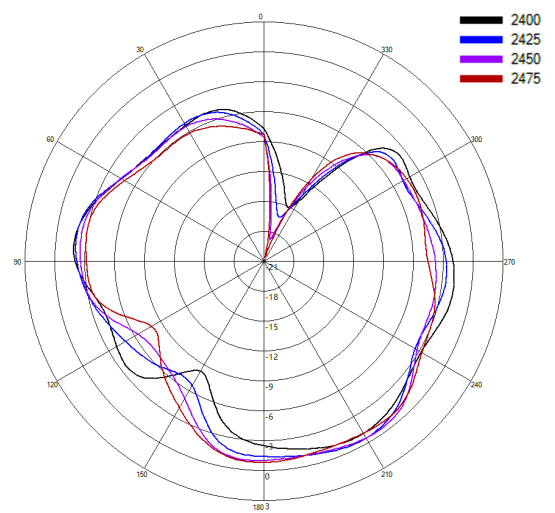


3D Pattern Data on  
Ground Plane WiFi- 2

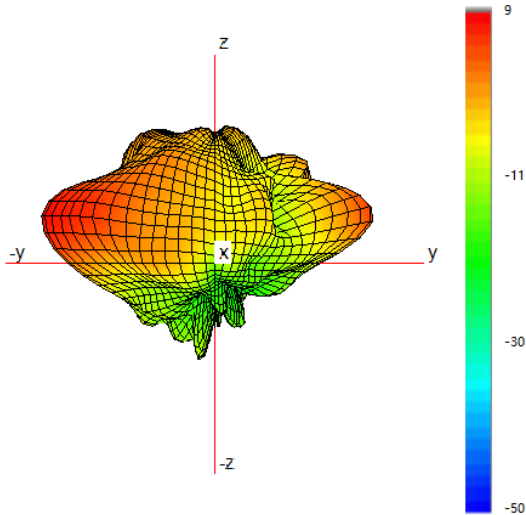
Typical 3D Pattern- WiFi - 2 - 2450 MHz



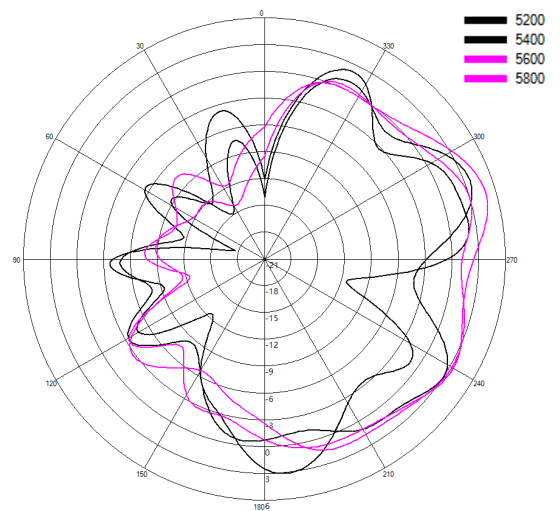
Typical H Plane- WiFi - 2 - Patterns- 2400-2475MHz



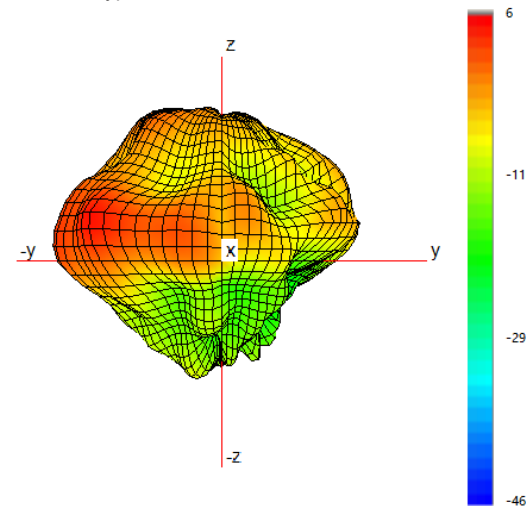
Typical 3D Pattern- WiFi - 2 - 5500 MHz



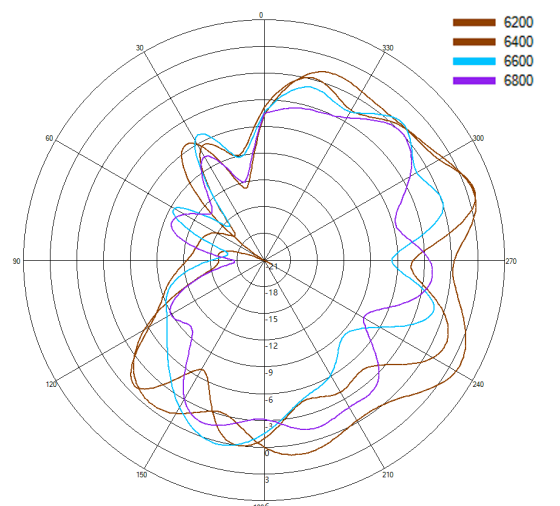
Typical H Plane- WiFi - 2 - Patterns- 5200-5800MHz



Typical 3D Pattern- WiFi - 2 - 6500 MHz



Typical H Plane- WiFi - 2 - Patterns- 6200-6800MHz



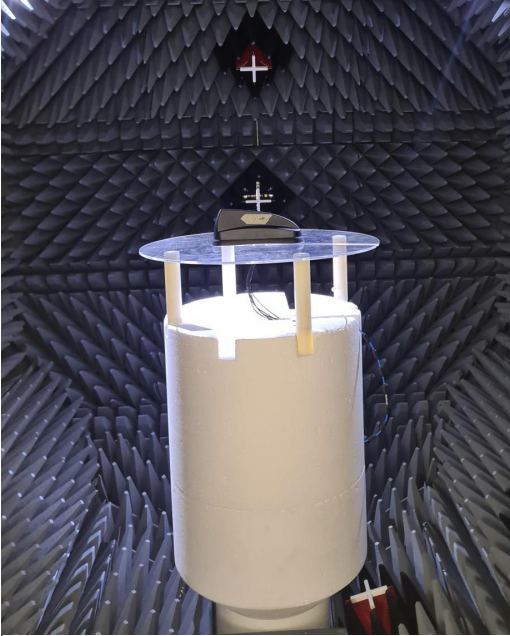
# 4G/5G Sharkfin MiMo Antenna

GPSD[X]-6-60[-X]

Electrical Data Cell -  
Ground Plane

Measurement Conditions

GPSD-6-60[-X] measured in free space without additional cable

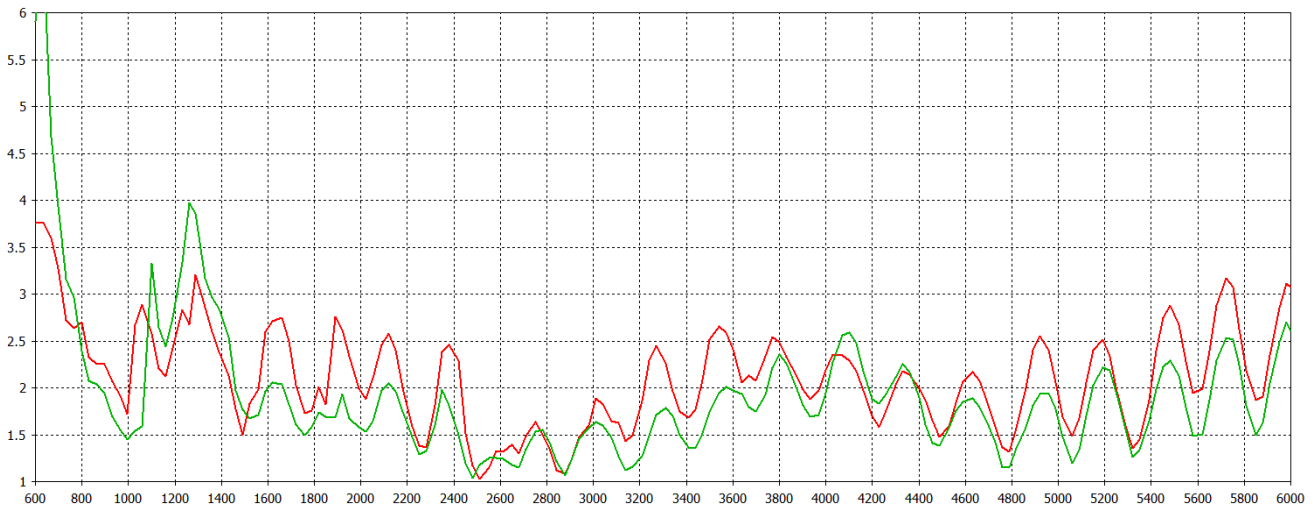


4G/5G Antennas

Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
617-698	71, 105	Cell A	1.3	44
		Cell B	0.7	35
699-798	12,13, 14 17,28	Cell A	2.1	55
		Cell B	2.2	58
807- 862	5,19,20,26,27	Cell A	3.0	67
		Cell B	3.5	69
880-960	8	Cell A	3.6	70
		Cell B	3.7	74
1427-1518	11, 21, 74,75,76	Cell A	3.2	66
		Cell B	2.8	68
1710-1920	2,3,4,9,25,35,39,66	Cell A	2.9	57
		Cell B	3.6	66
1920-2170	1,23	Cell A	3.7	59
		Cell B	4.1	65
2300-2400	30,40	Cell A	3.1	58
		Cell B	3.2	58
2496-2690	7,38,41	Cell A	4.0	65
		Cell B	3.8	67
3300-4200	22,42,43,48,77,78	Cell A	5.8	46
		Cell B	5.5	53
4400-5000	79	Cell A	5.2	50
		Cell B	4.2	54
5000-6000	96, 102, 104	Cell A	5.4	58
		Cell B	5.1	55

Electrical Data WiFi -  
Free Space

Typical VSWR\*



\*VSWR measured in free space without additional cable



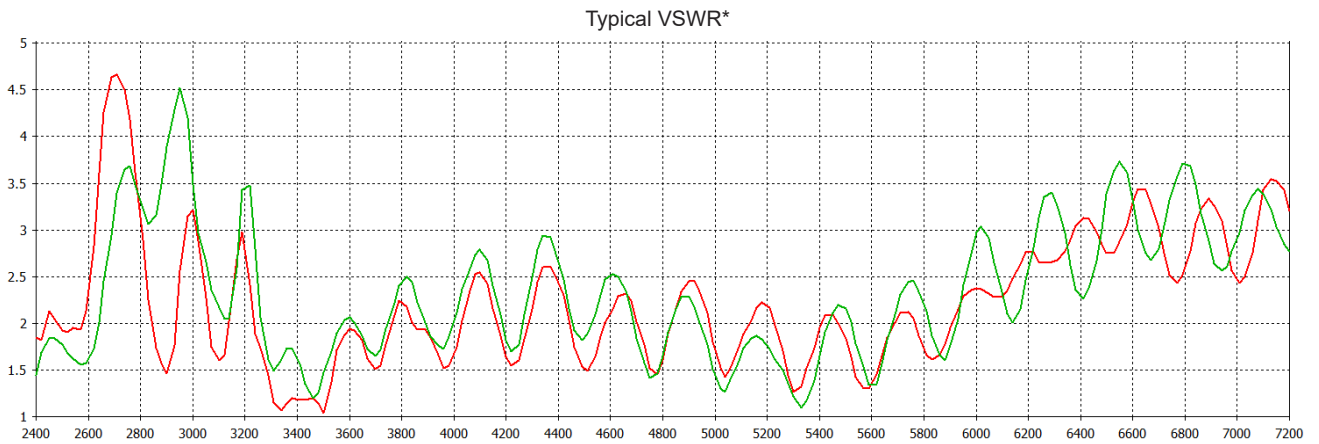
# 4G/5G Sharkfin MiMo Antenna

GPSD[X]-6-60[-X]

Electrical Data WiFi - Free Space

Measurement Conditions	WiFi Antennas				
GPSD-6-60[-X] measured in free space without additional cable	Frequency Range (MHz)	WiFi Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
	2396-2485	2.4GHz	WiFi 1	3.2	46
			WiFi 2	2.3	54
	5150-5250	UNII-1	WiFi 1	6.5	56
			WiFi 2	5.9	50
	5250-5350	UNII-2A	WiFi 1	7.4	64
			WiFi 2	6.4	57
	5350-5470	UNII-2B	WiFi 1	7.5	64
			WiFi 2	6.4	53
	5470-5725	UNII-2C	WiFi 1	7.5	62
			WiFi 2	5.7	52
	5725-5850	UNII-3	WiFi 1	6.9	58
			WiFi 2	6.6	52
	5850-5925	UNII-4	WiFi 1	5.7	55
			WiFi 2	7.0	53
	5925-6425	UNII-5	WiFi 1	6.2	51
			WiFi 2	7.1	48
6425-6525	UNII-6	WiFi 1	2.4	31	
		WiFi 2	4.7	35	
6525-6875	UNII-7	WiFi 1	3.5	31	
		WiFi 2	4.0	25	
6875-7125	UNII-8	WiFi 1	3.5	32	
		WiFi 2	2.1	22	

Electrical Data WiFi - Free Space



\*VSWR measured in free space without additional cable

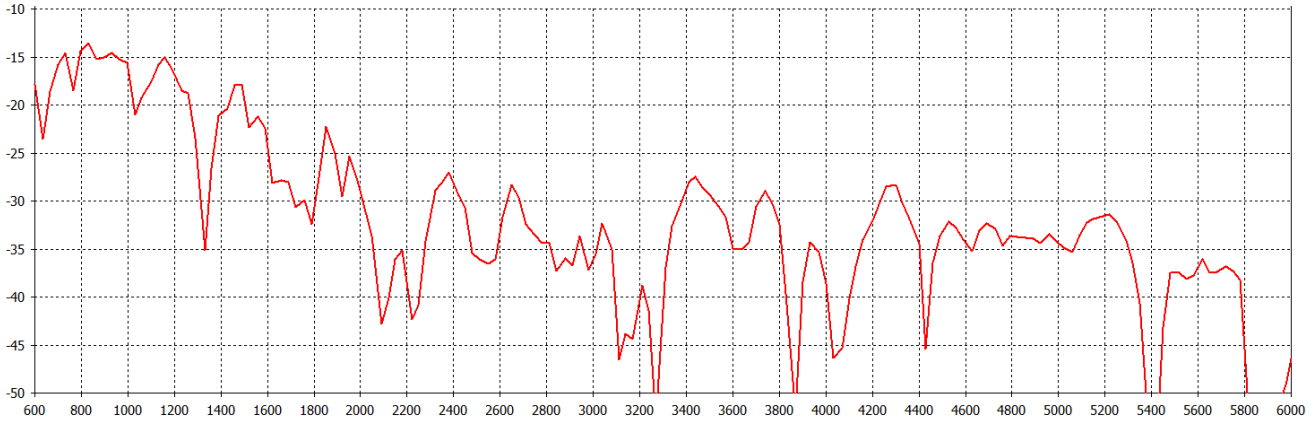


# 4G/5G Sharkfin MiMo Antenna

GPSD[X]-6-60[-X]

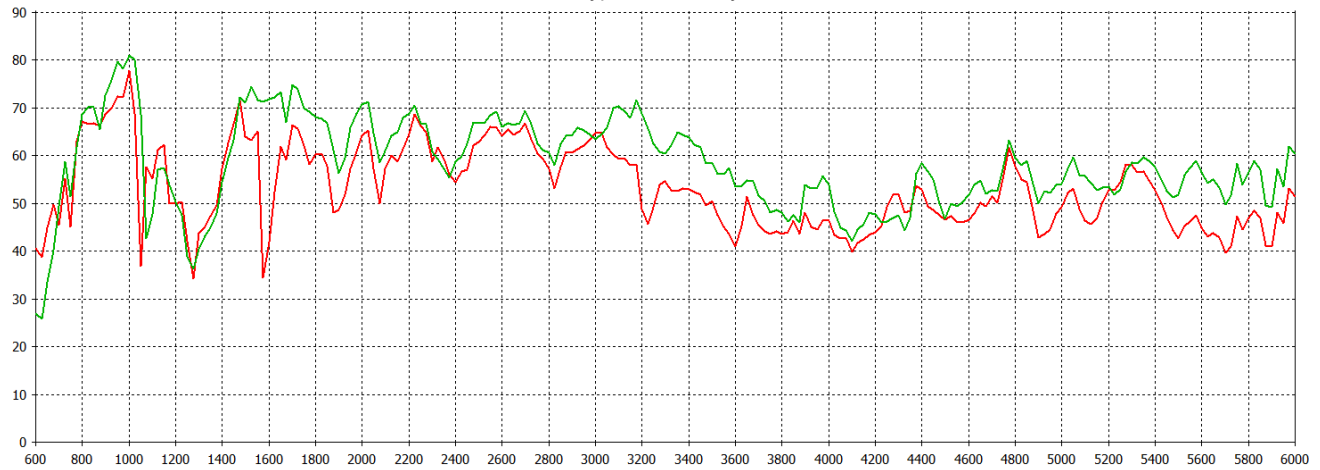
Electrical Data WiFi -  
Free Space

Typical Isolation\*



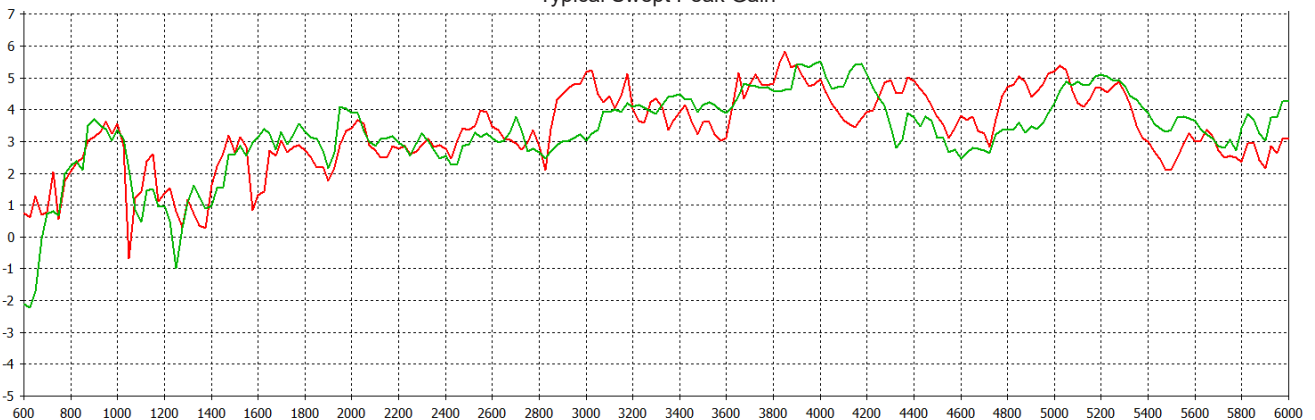
\*Isolation measured in free space without additional cable

Typical Efficiency\*



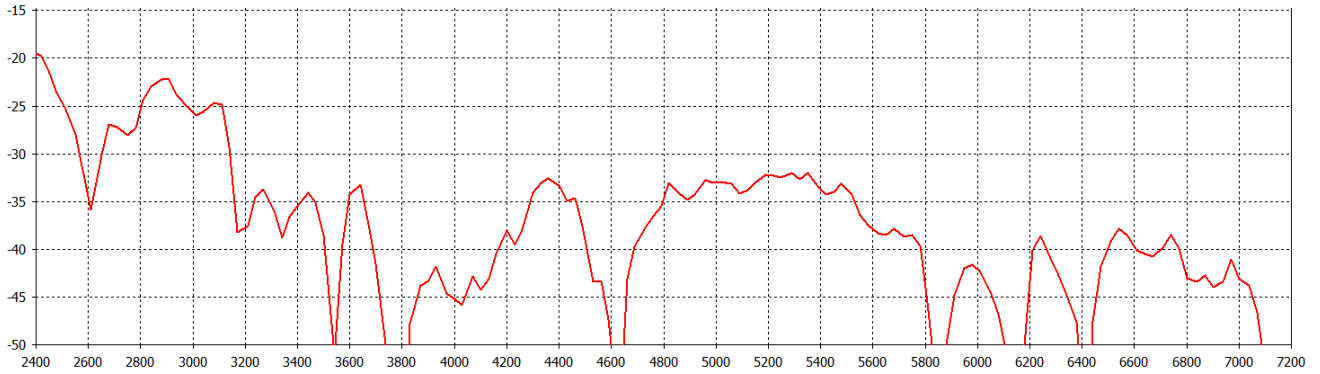
\*Efficiency measured in free space without additional cable

Typical Swept Peak Gain\*



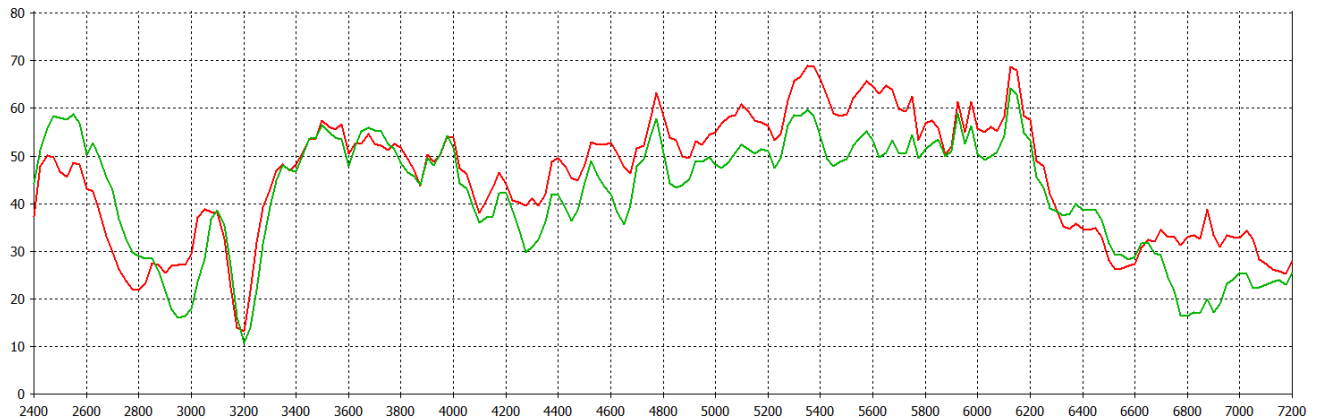
\*Peak Gain measured in free space without additional cable

Typical Isolation\*



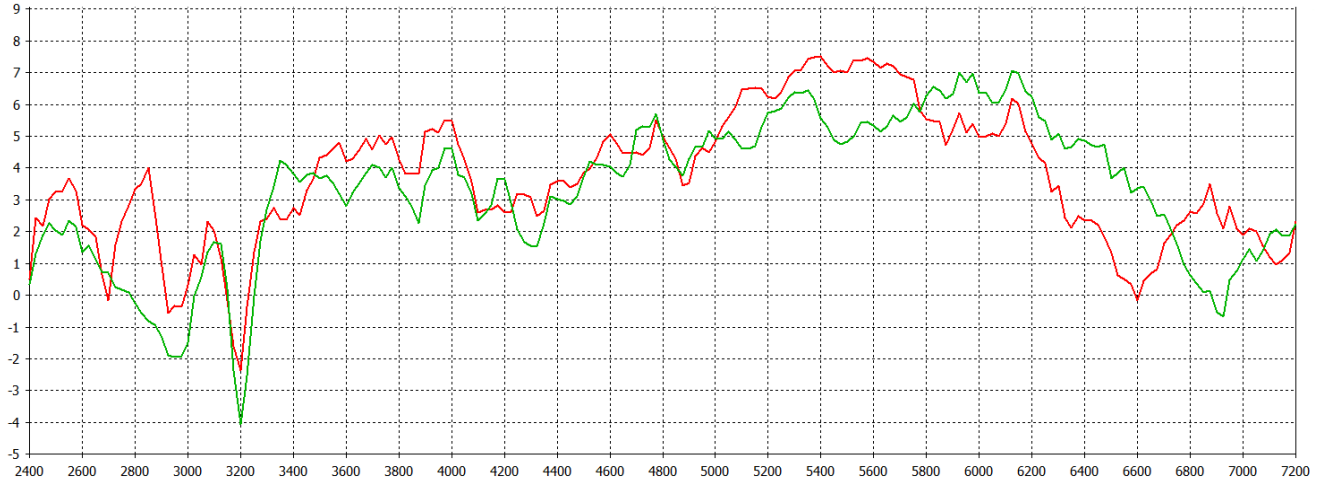
\*Isolation measured in free space without additional cable

Typical Efficiency\*



\*Efficiency measured in free space without additional cable

Typical Swept Peak Gain\*



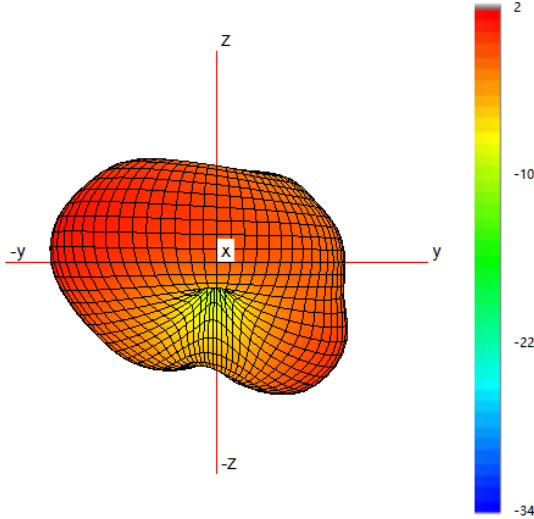
\*Peak Gain measured in free space without additional cable

# 4G/5G Sharkfin MiMo Antenna

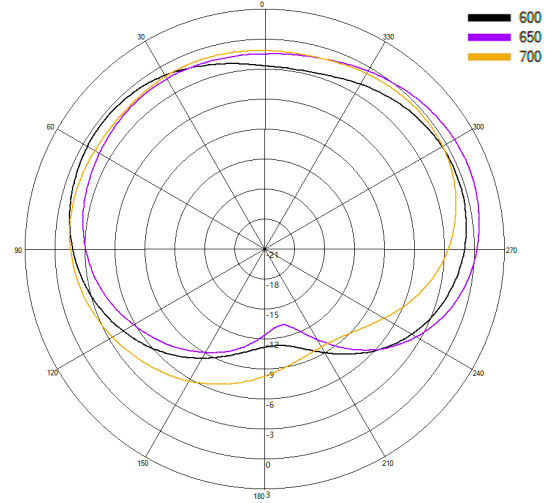
GPSD[X]-6-60[-X]

3D Pattern Data in  
Free Space Cell A

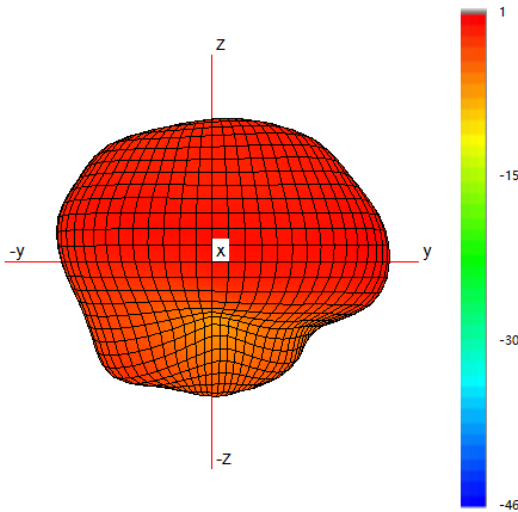
Typical 3D Pattern- Cell A - 650 MHz



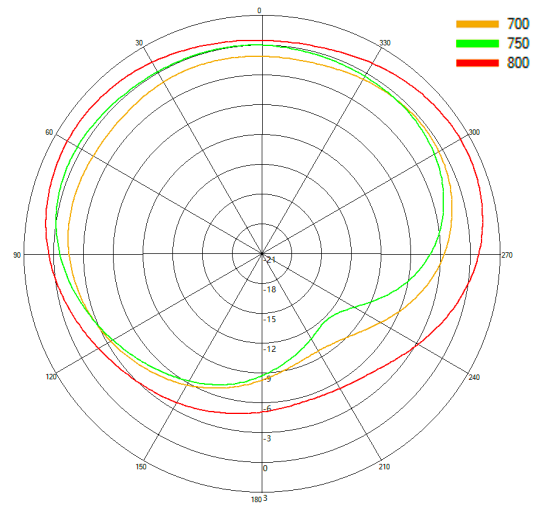
Typical H Plane- Cell A - Patterns- 600-700MHz



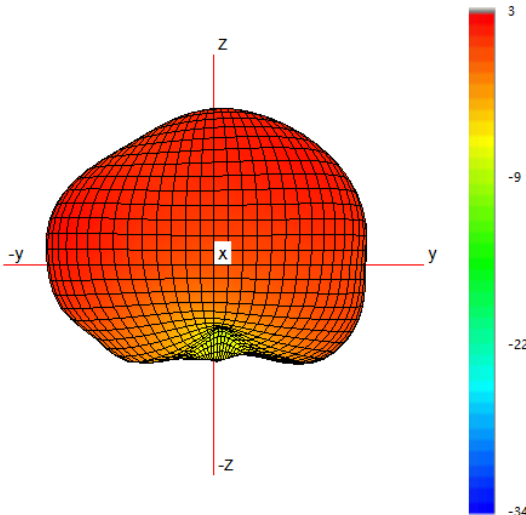
Typical 3D Pattern- Cell A - 750 MHz



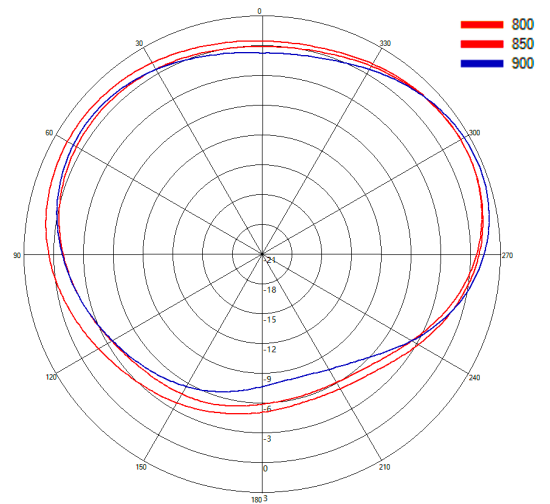
Typical H Plane- Cell A - Patterns- 700-800MHz



Typical 3D Pattern- Cell A - 850 MHz

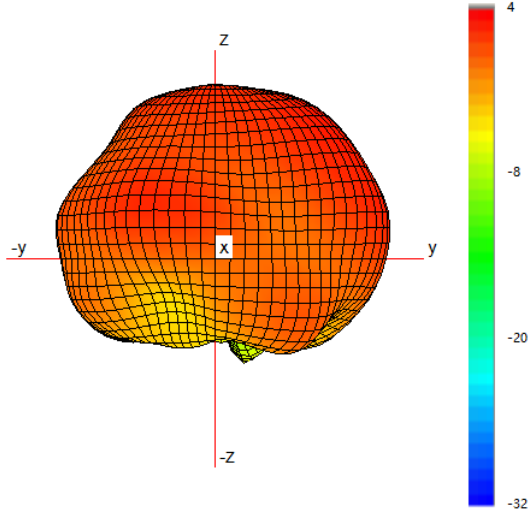


Typical H Plane- Cell A - Patterns- 800-900MHz

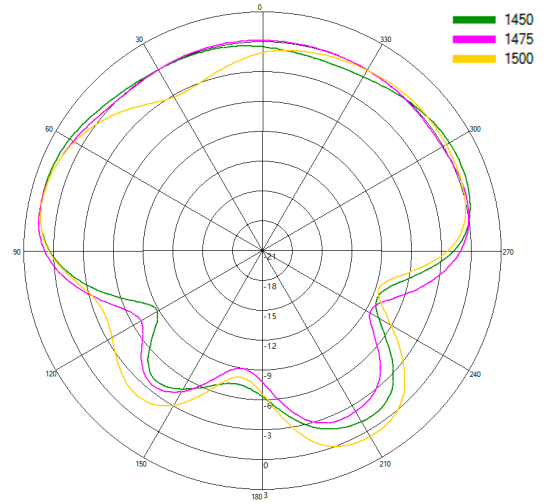


3D Pattern Data in  
Free Space Cell A

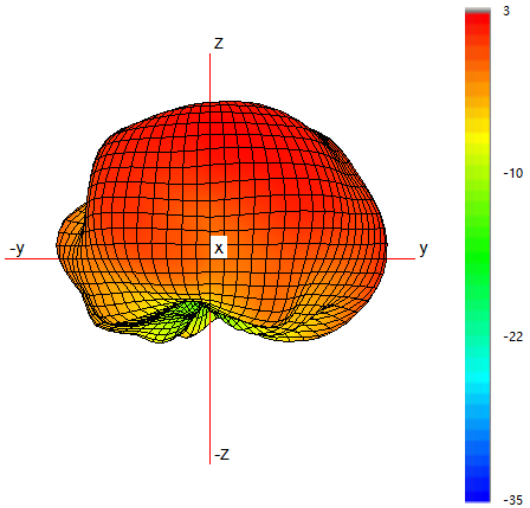
Typical 3D Pattern- Cell A - 1475 MHz



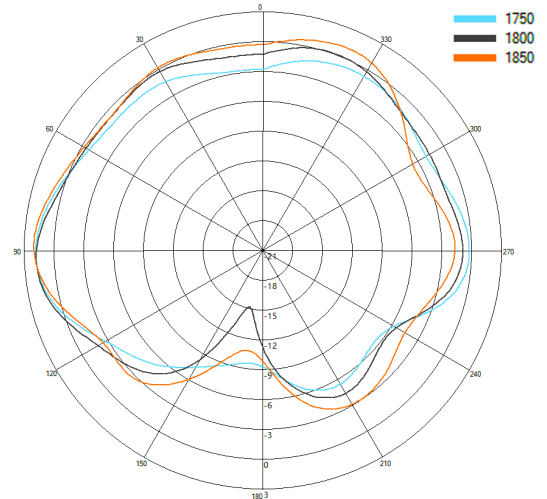
Typical H Plane- Cell A- Patterns- 1450-1500 MHz



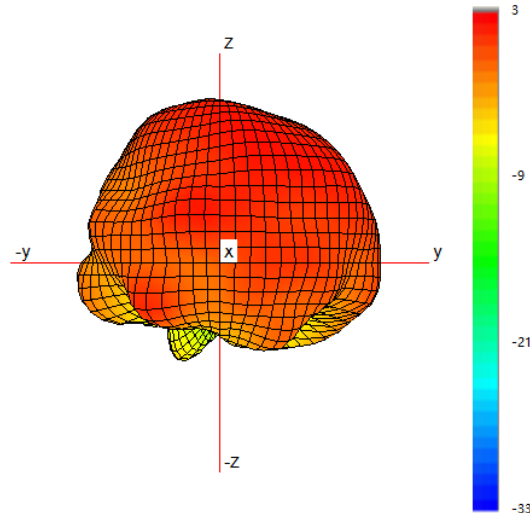
Typical 3D Pattern- Cell A - 1800 MHz



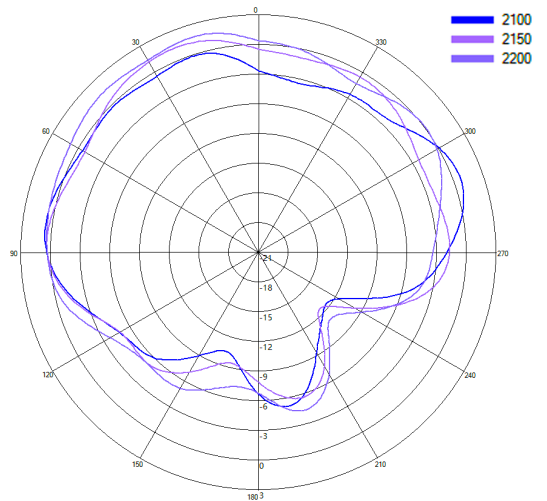
Typical H Plane- Cell A- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell A - 2150 MHz



Typical H Plane- Cell A- Patterns- 2100-2200 MHz

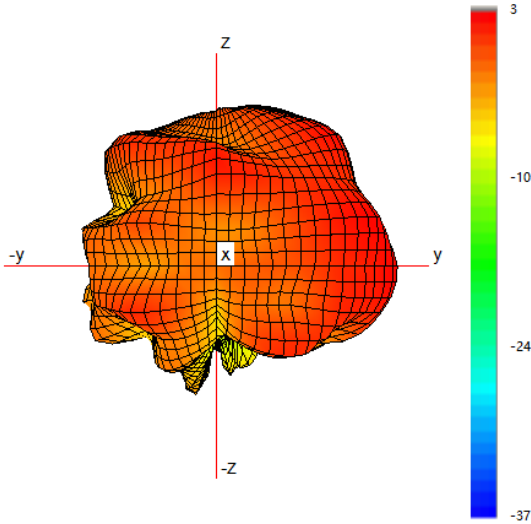


# 4G/5G Sharkfin MiMo Antenna

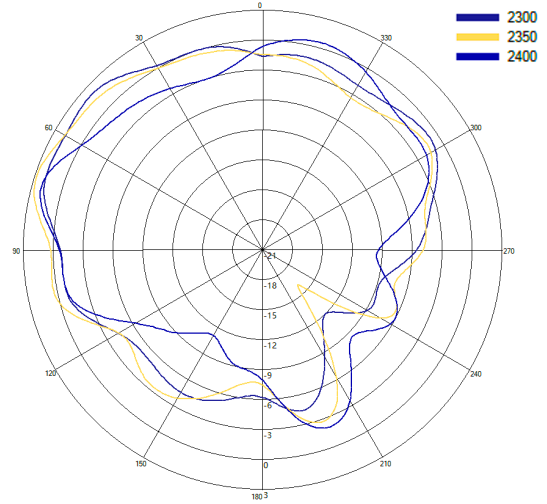
GPSD[X]-6-60[-X]

3D Pattern Data in  
Free Space Cell A

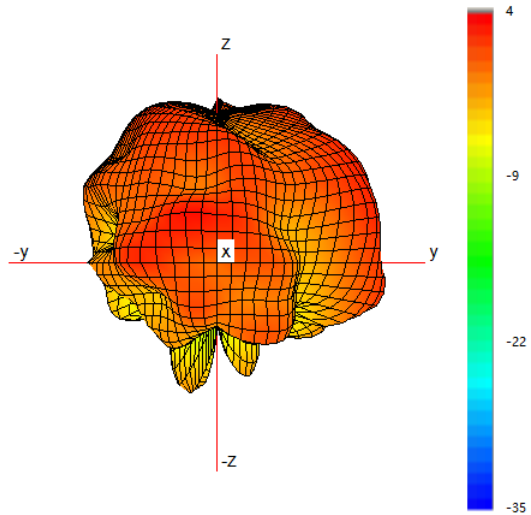
Typical 3D Pattern- Cell A - 2350 MHz



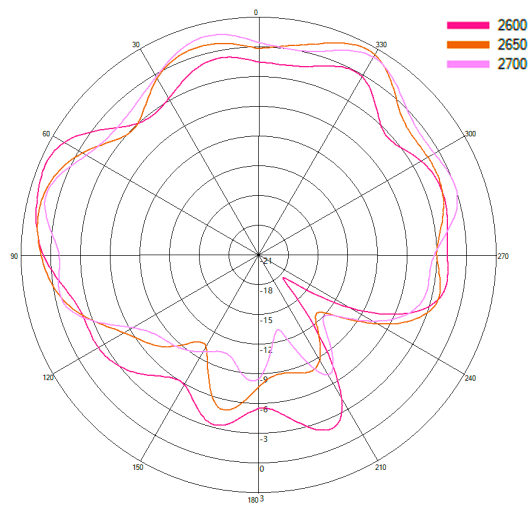
Typical H Plane- Cell A - Patterns- 2300-2400 MHz



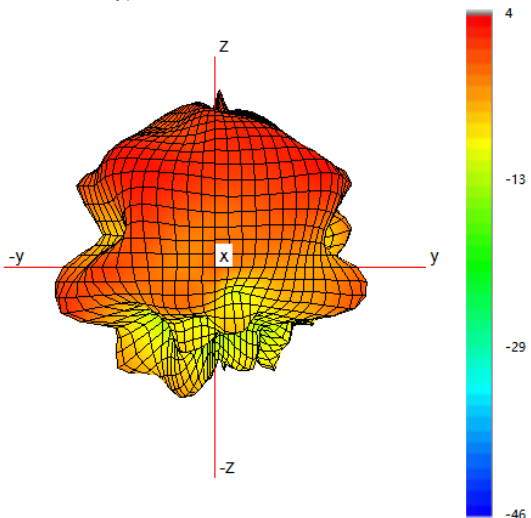
Typical 3D Pattern- Cell A - 2650 MHz



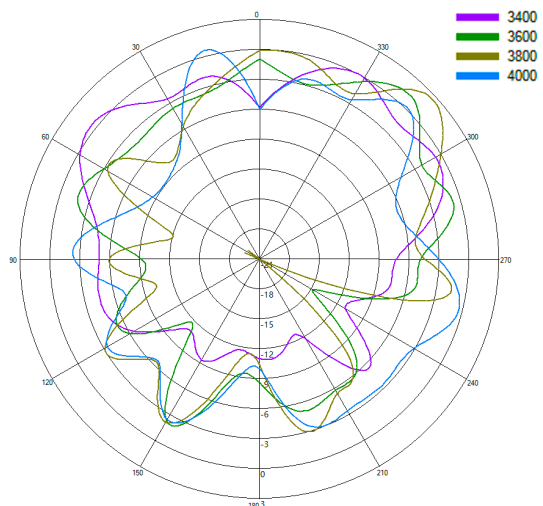
Typical H Plane- Cell A - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell A - 3600 MHz

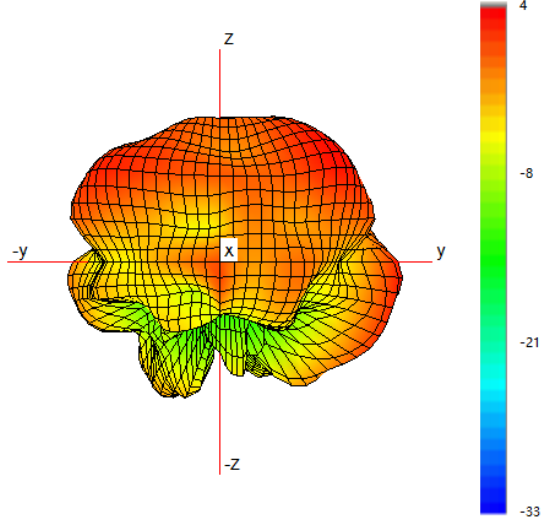


Typical H Plane- Cell A - Patterns- 3400-4000 MHz

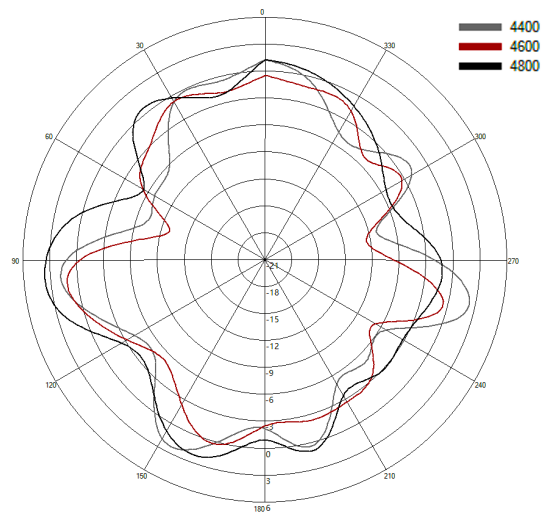




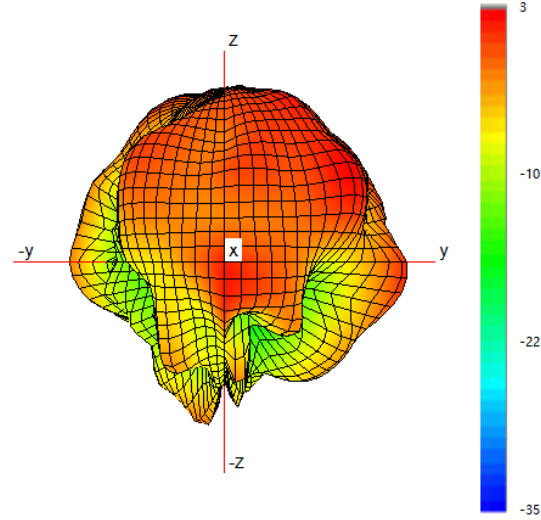
Typical 3D Pattern- Cell A - 4700 MHz



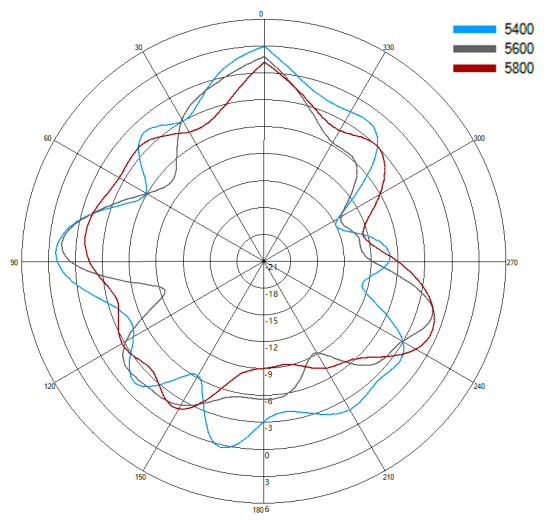
Typical H Plane- Cell A - Patterns- 4400-4800 MHz



Typical 3D Pattern- Cell A - 5600 MHz



Typical H Plane- Cell A - Patterns- 5400-5800 MHz

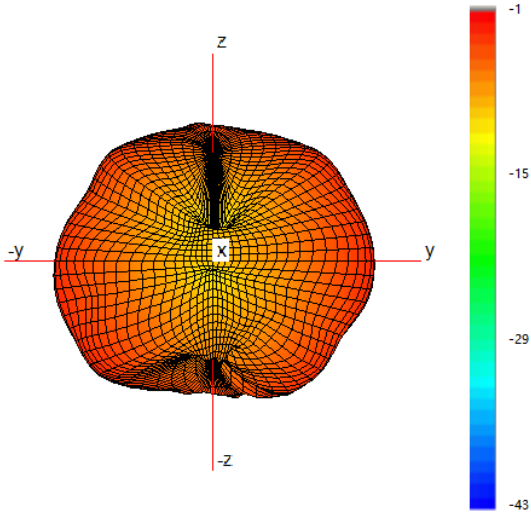


# 4G/5G Sharkfin MiMo Antenna

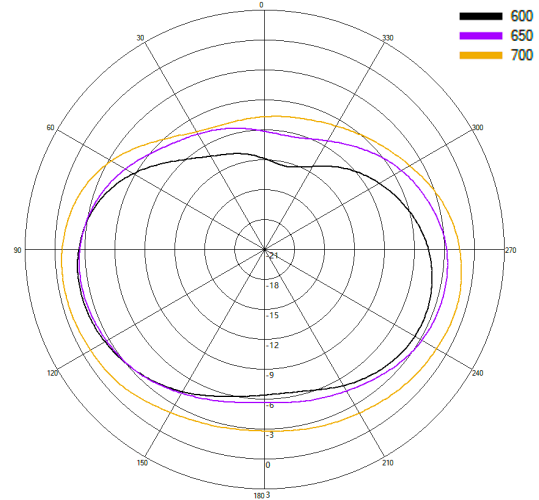
GPSD[X]-6-60[-X]

3D Pattern Data in  
Free Space Cell B

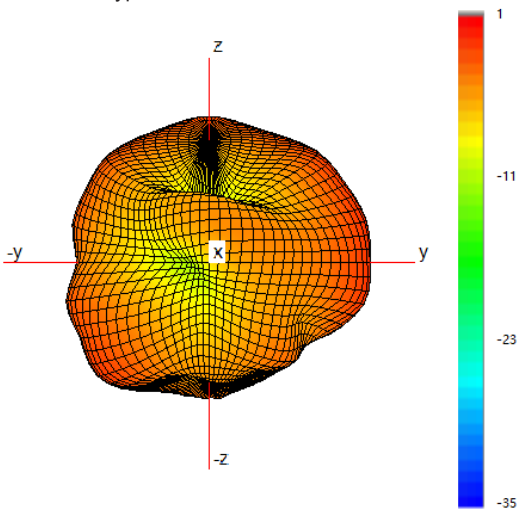
Typical 3D Pattern- Cell B - 650 MHz



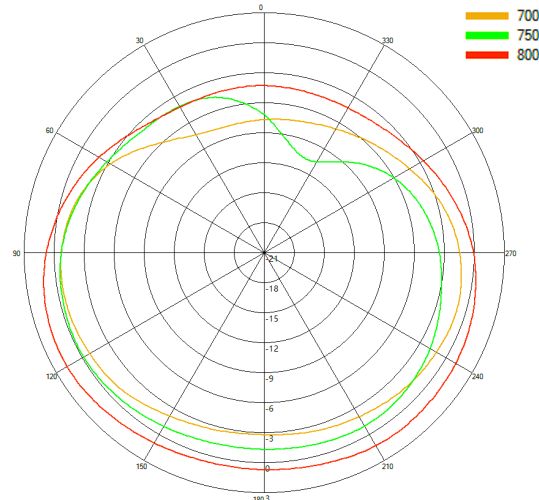
Typical H Plane- Cell B - Patterns- 600-700MHz



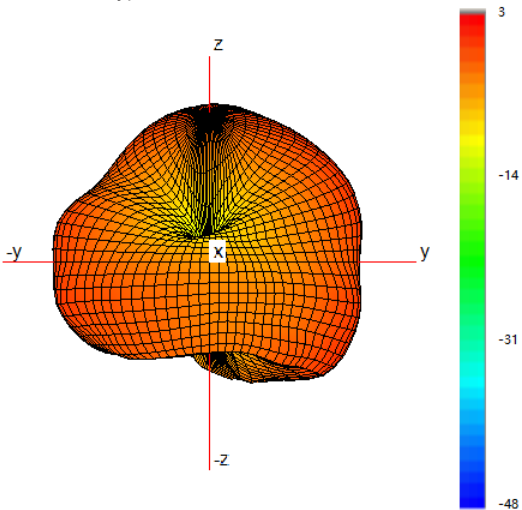
Typical 3D Pattern- Cell B - 750 MHz



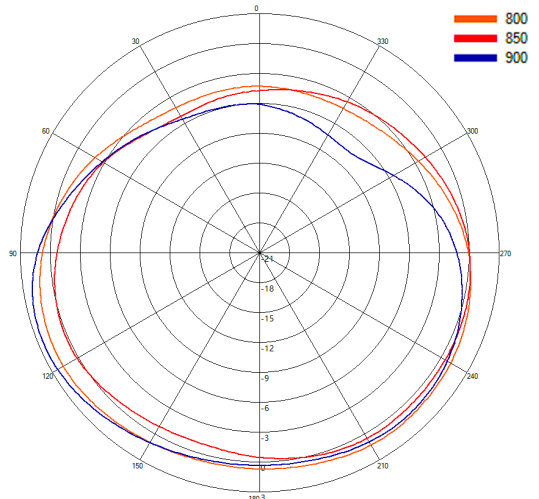
Typical H Plane- Cell B - Patterns- 700-800MHz



Typical 3D Pattern- Cell B - 850 MHz

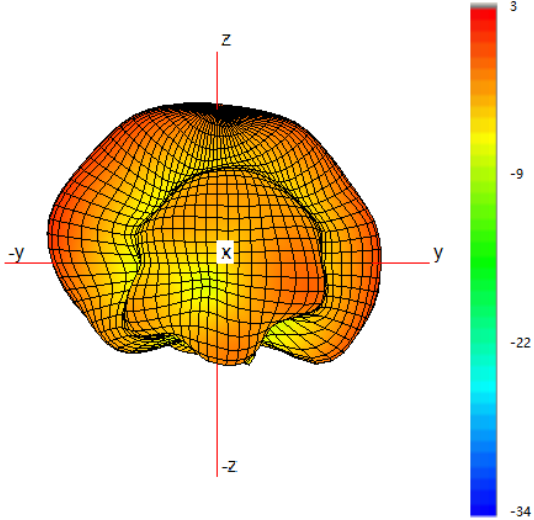


Typical H Plane- Cell B - Patterns- 800-900MHz

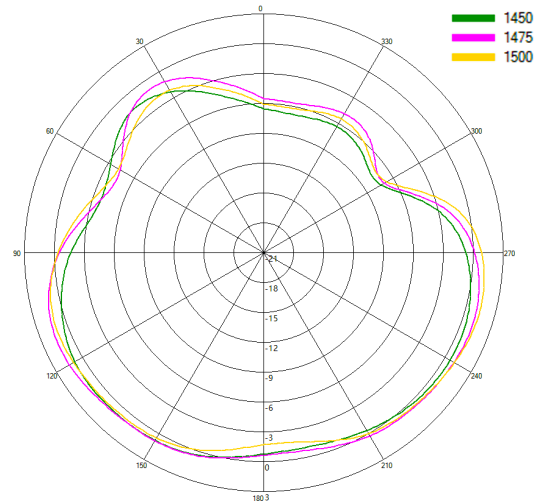


3D Pattern Data in  
Free Space Cell B

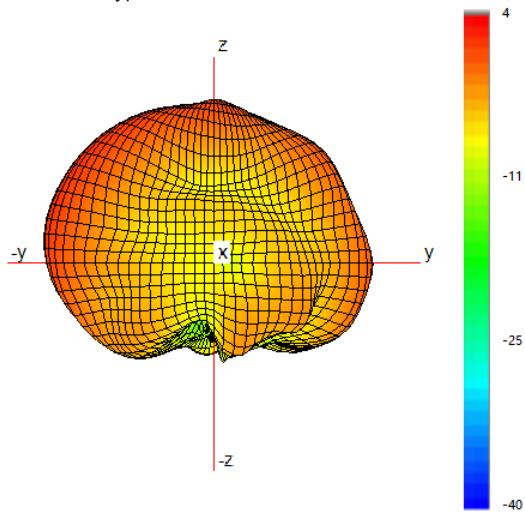
Typical 3D Pattern- Cell B - 1475 MHz



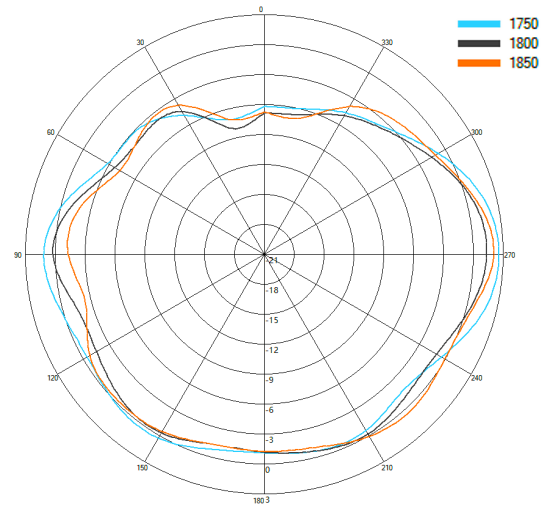
Typical H Plane- Cell B- Patterns- 1450-1500 MHz



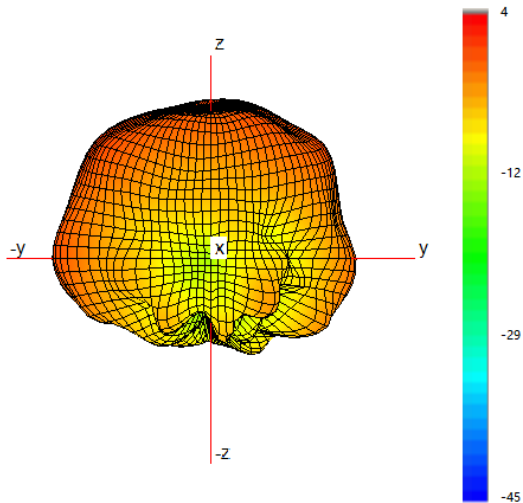
Typical 3D Pattern- Cell B - 1800 MHz



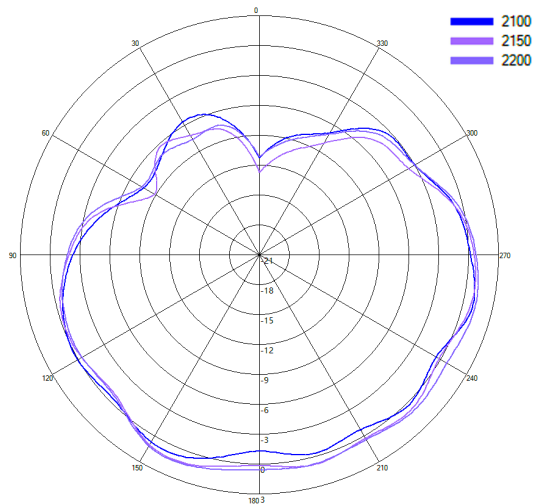
Typical H Plane- Cell B- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell B - 2150 MHz



Typical H Plane- Cell B- Patterns- 2100-2200 MHz

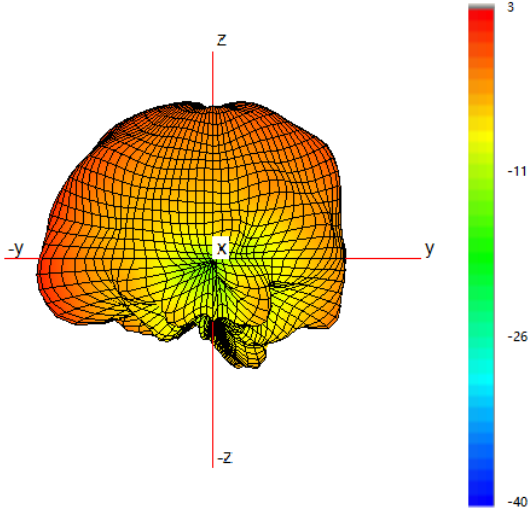


# 4G/5G Sharkfin MiMo Antenna

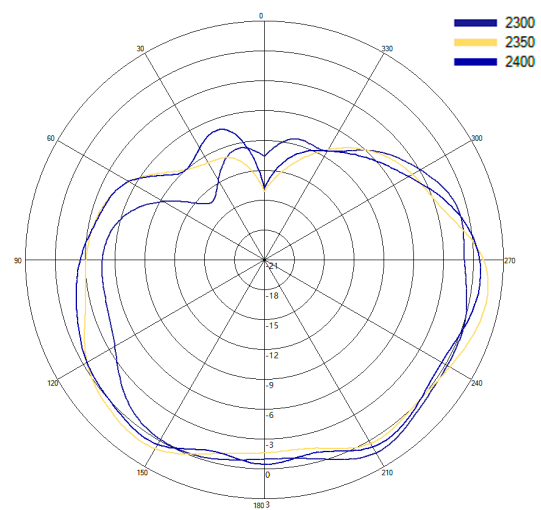
GPSD[X]-6-60[-X]

3D Pattern Data in  
Free Space Cell B

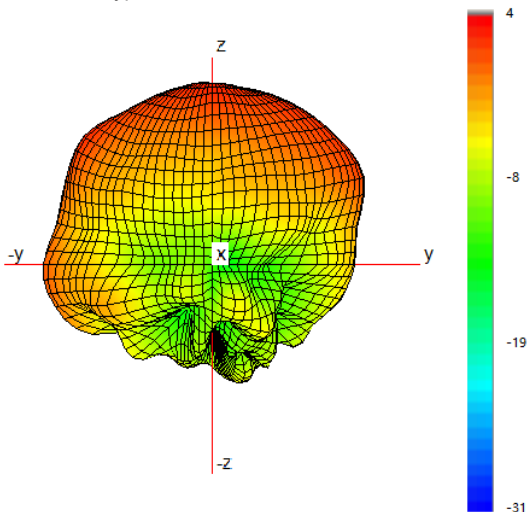
Typical 3D Pattern- Cell B - 2350 MHz



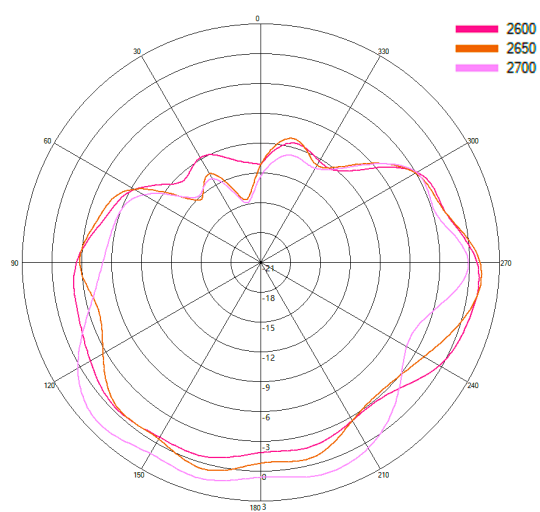
Typical H Plane- Cell B - Patterns- 2300-2400 MHz



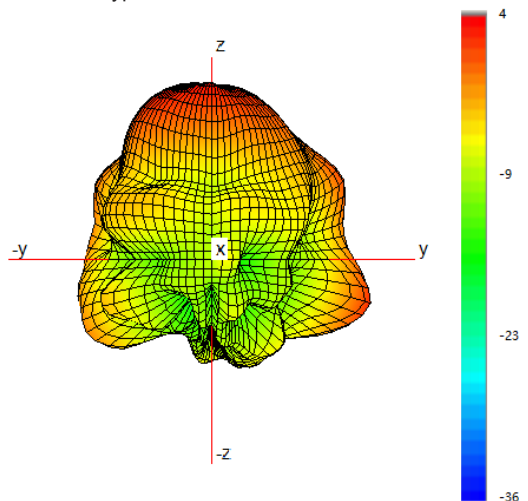
Typical 3D Pattern- Cell B - 2650 MHz



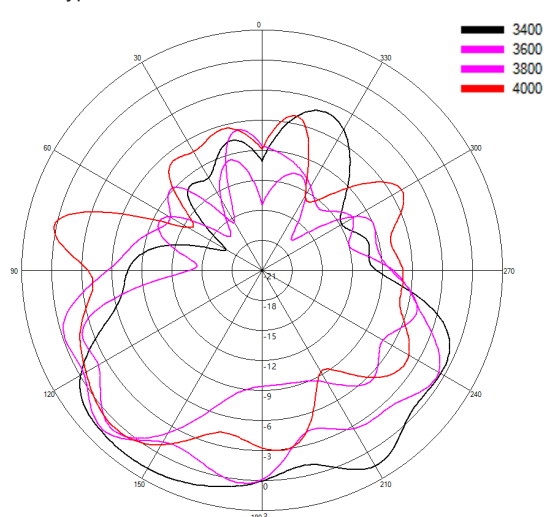
Typical H Plane- Cell B - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell B - 3600 MHz

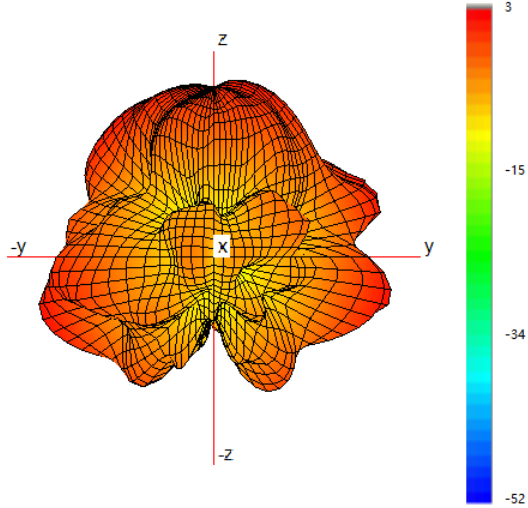


Typical H Plane- Cell B - Patterns- 3400-4000 MHz

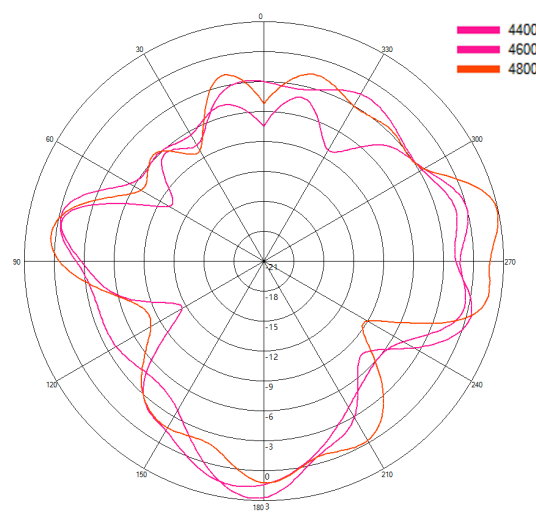


3D Pattern Data in  
Free Space Cell B

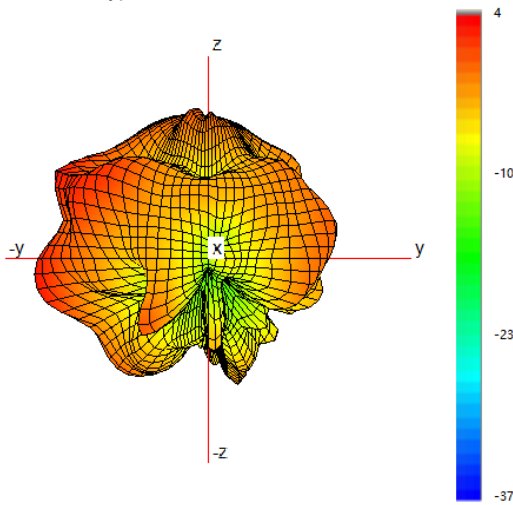
Typical 3D Pattern- Cell B - 4700 MHz



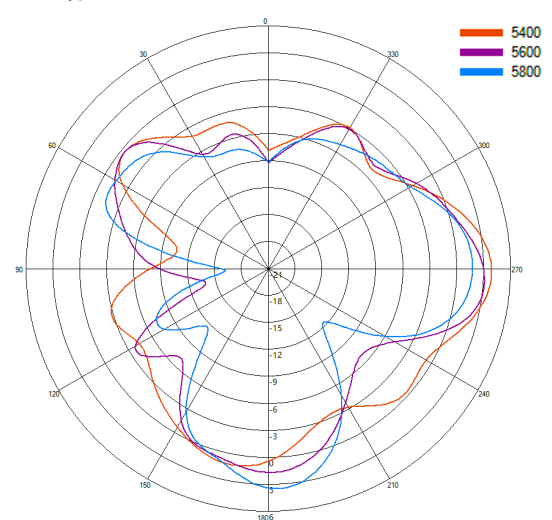
Typical H Plane- Cell B- Patterns- 4400-4800 MHz



Typical 3D Pattern- Cell B - 5600 MHz



Typical H Plane- Cell B - Patterns- 5400-5800 MHz



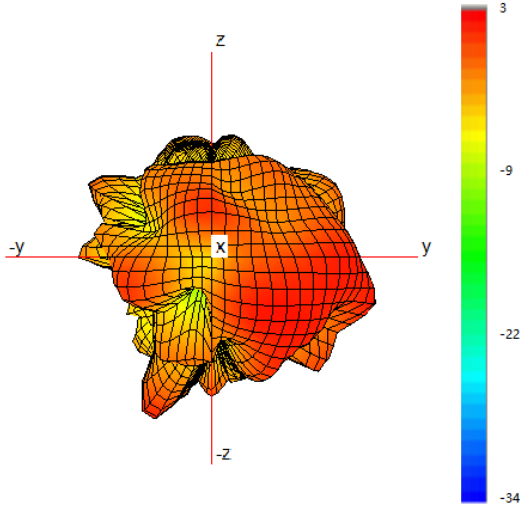


# 4G/5G Sharkfin MiMo Antenna

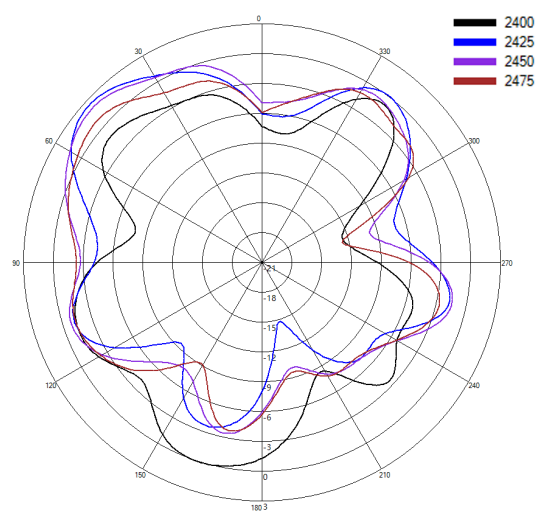
GPSD[X]-6-60[-X]

3D Pattern Data in  
Free Space WiFi - 1

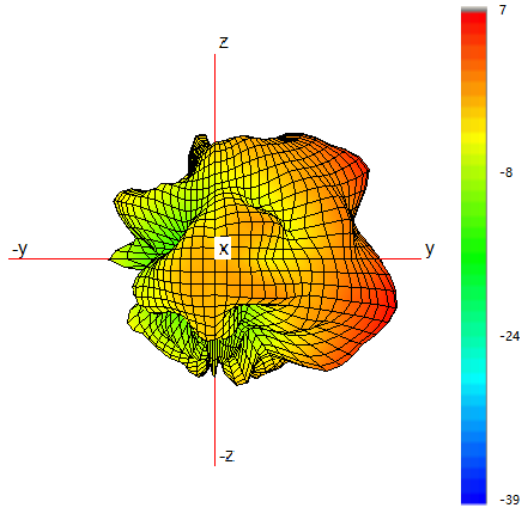
Typical 3D Pattern- WiFi - 1 - 2450 MHz



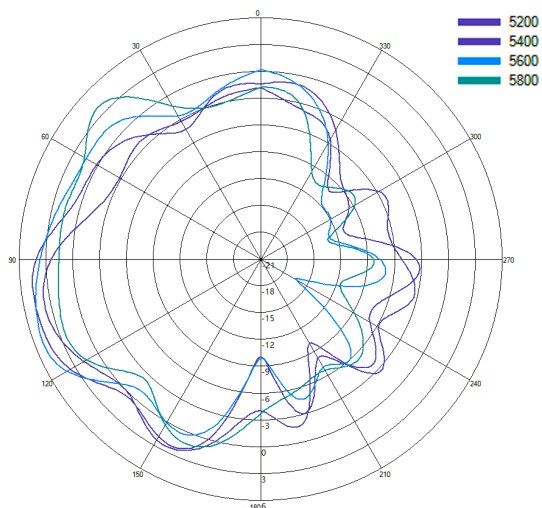
Typical H Plane- WiFi - 1 - Patterns- 2400-2475MHz



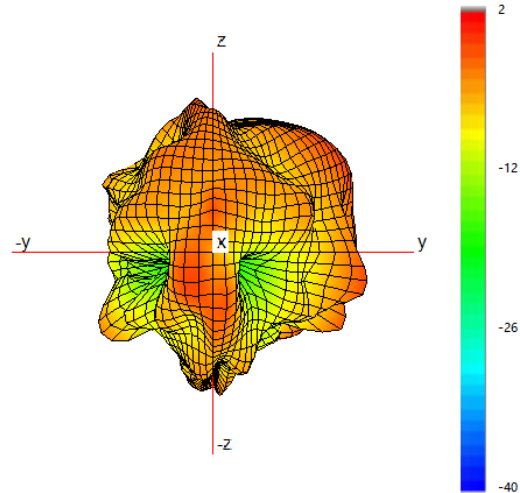
Typical 3D Pattern- WiFi - 1 - 5500 MHz



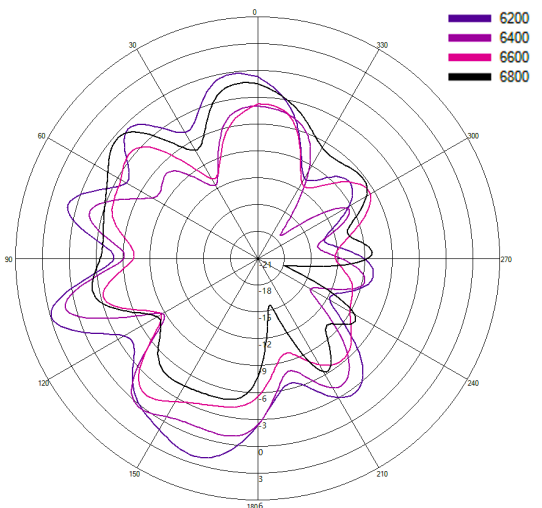
Typical H Plane- WiFi - 1 - Patterns- 5200-5800MHz



Typical 3D Pattern- WiFi - 1 - 6500 MHz

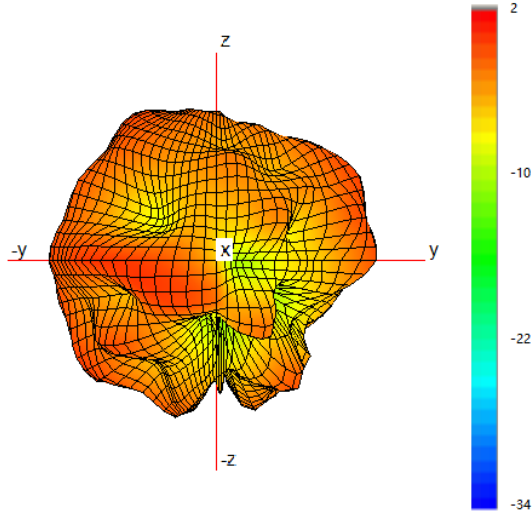


Typical H Plane- WiFi - 1 - Patterns- 6200-6800MHz

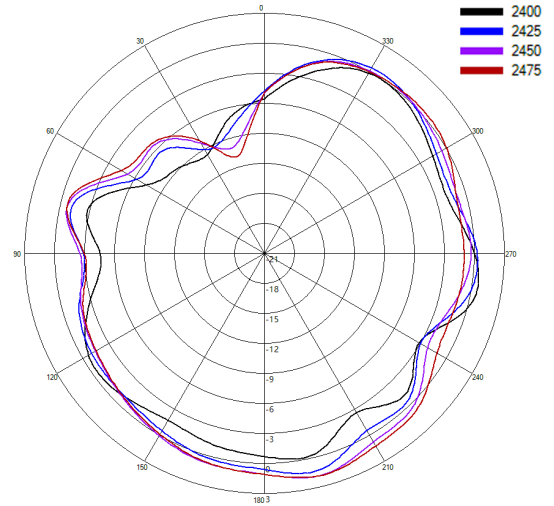


3D Pattern Data in  
Free Space WIFI - 2

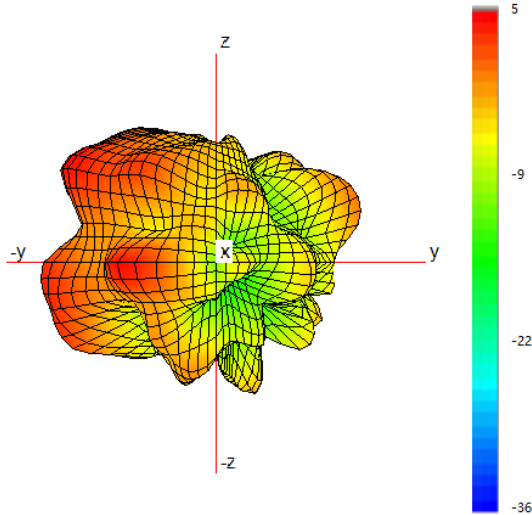
Typical 3D Pattern- WiFi - 2 - 2450 MHz



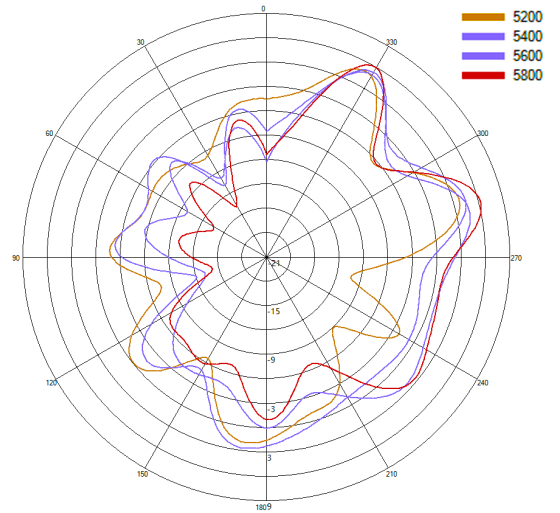
Typical H Plane- WiFi - 2 - Patterns- 2400-2475MHz



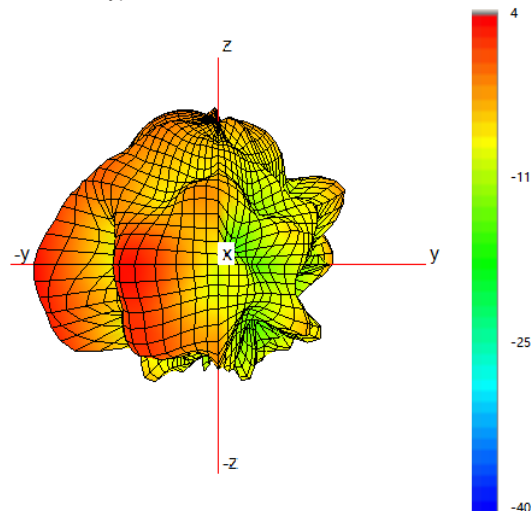
Typical 3D Pattern- WiFi - 2 - 5500 MHz



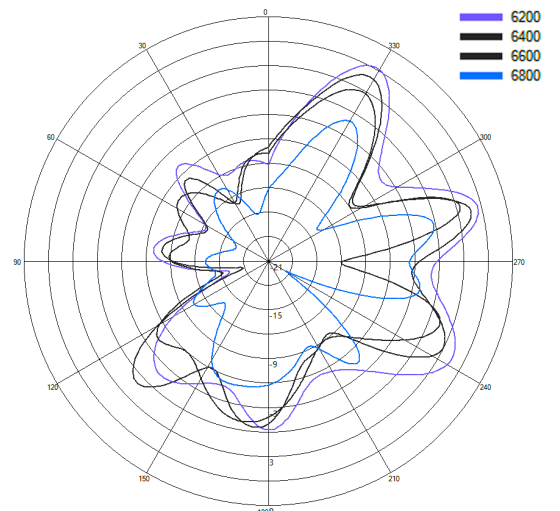
Typical H Plane- WiFi - 2 - Patterns- 5200-5800MHz



Typical 3D Pattern- WiFi - 2 - 6500 MHz

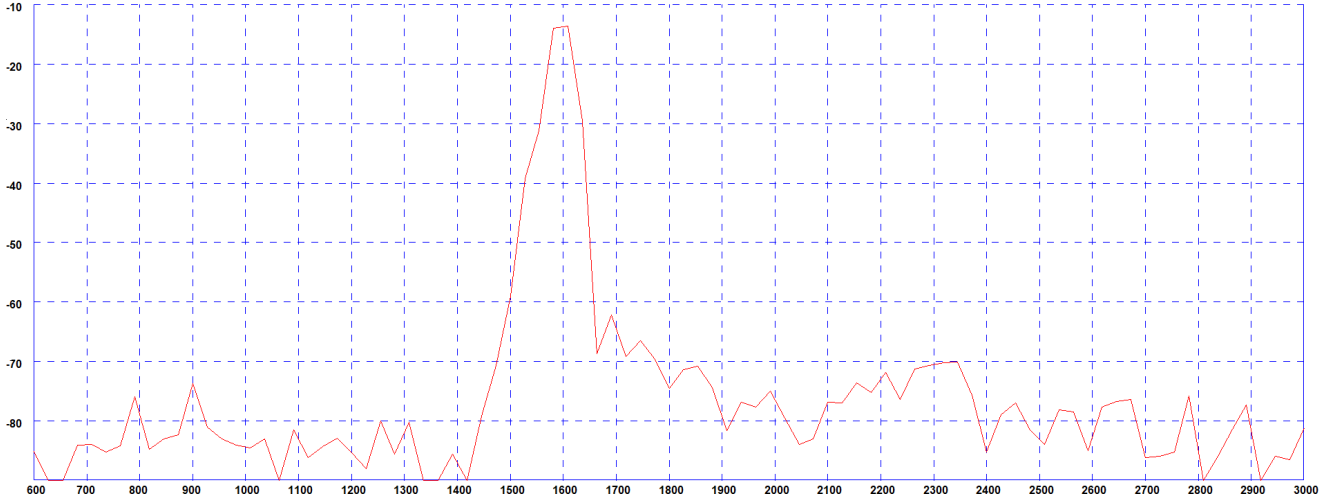


Typical H Plane- WiFi - 2 - Patterns- 6200-6800MHz

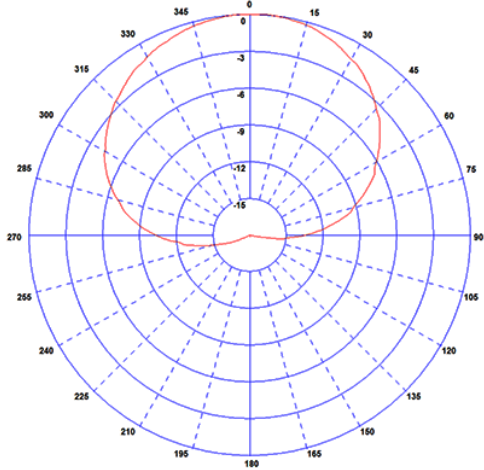


Electrical Data- L1  
GPS/GNSS

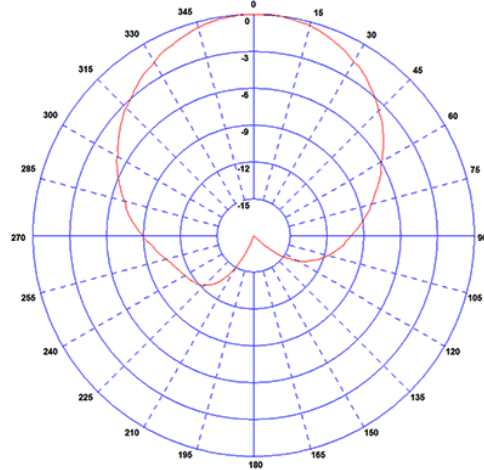
Swept Peak Gain GPS/GNSS



Typical E Plane Pattern - GPS/GNSS 1575 MHz



Typical E Plane Pattern - GPS/GNSS 1602 MHz



GPS/GNSS Measurements taken on 190x190mm (7.4" x 7.4") ground plane excluding cable loss