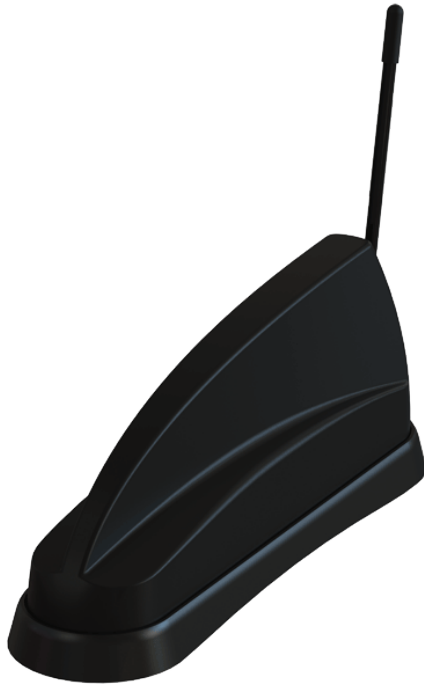


4G/5G Sharkfin MiMo Antenna

GPSD-6-60[-VAR]

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

The GPSD '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.

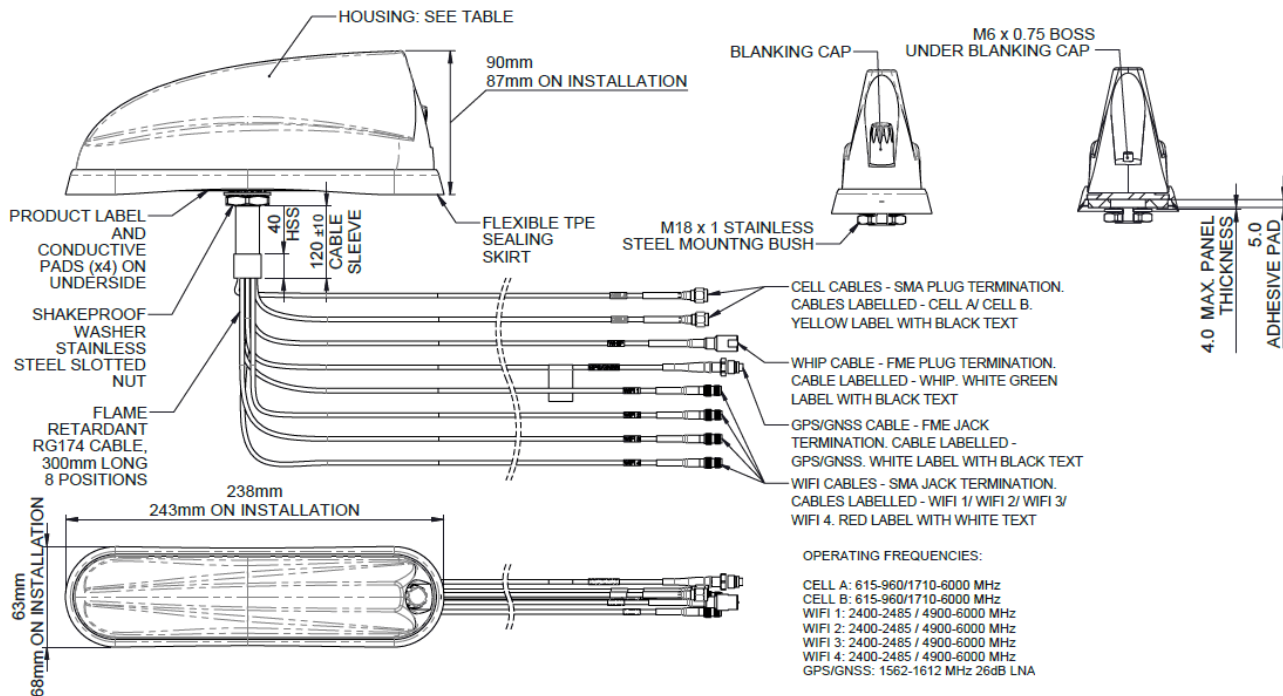
The antenna should be installed on a metal panel when a comms whip is used, but if whip is not required, then it may be fitted on a non-metallic panel and still offer similar performance.

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 6. 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-6-60[-VAR]

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Product Data

Part No.					
		GPSD-6-60-QW	GPSD-6-60-TW	GPSD-6-60-DW	GPSD-6-60
Electrical Data					
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	Dependent on selected whip			
Peak gain: Isotropic*		5dBi (617-960MHz)			
	Elements 2 & 3	8dBi (1710-3800MHz)			
		9dBi (4900-6000MHz)			
	Elements 4, 5, 6 & 7	5dBi (2396-2485MHz)	5dBi (2396-2485MHz)	5dBi (2396-2485MHz)	-
		11dBi (4900-7200MHz)	11dBi (4900-7200MHz)	11dBi (4900-7200MHz)	-
Isolation**	4G/5G	>12dB			
	WiFi	> 15dB	> 15dB	> 15dB	-
Typical Efficiency* W/o Cable Loss	Elements 2 & 3	> 40% (617-698Mz) >60% (698-960/1710-6000MHz)			
Correlation Co-efficient	Elements 2 & 3	<0.2			
Polarisation	Vertical				
Pattern	Omni-directional				
Impedance	50Ω				
Max Input Power (W)	Internal elements 10W / main whip 60W				
GPS/GNSS Data					
Frequency Range (MHz)	1562-1612				
VSWR	<2:1 ± 4MHz				
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	Typical <20mA				
Mechanical Data					
Dimensions (mm) - Installed	Total Height (excl whip)	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				
Weight (g)					
Ingress Protection	IP66				
Mounting Info					
Fixing	Panel Mount				
Hole Size (mm)	19 (3/4")				
Cable Data					
Cable Type - All Feeds	FR RG174 (UN ECE R 118 Compliant)				
Dimensions (mm)	Diameter	2.8 (0.11")			
	Length	300 mm (12")			
Termination	Whip	FME (m)			
	GPS/GNSS	FME (f)			
	4G/5G	2 x SMA plug			
	WiFi	4x SMA (f)	3x SMA (f)	2x SMA (f)	-

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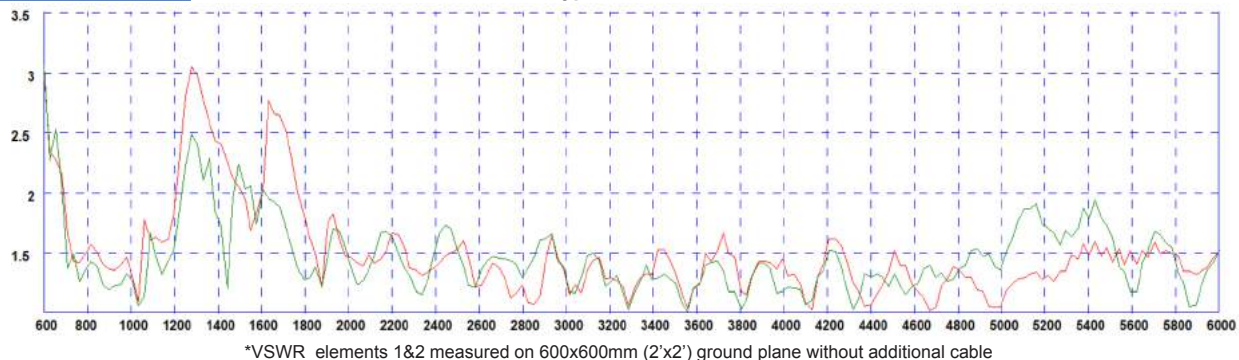
4G/5G Sharkfin MiMo Antenna

GPSD-6-60[-VAR]

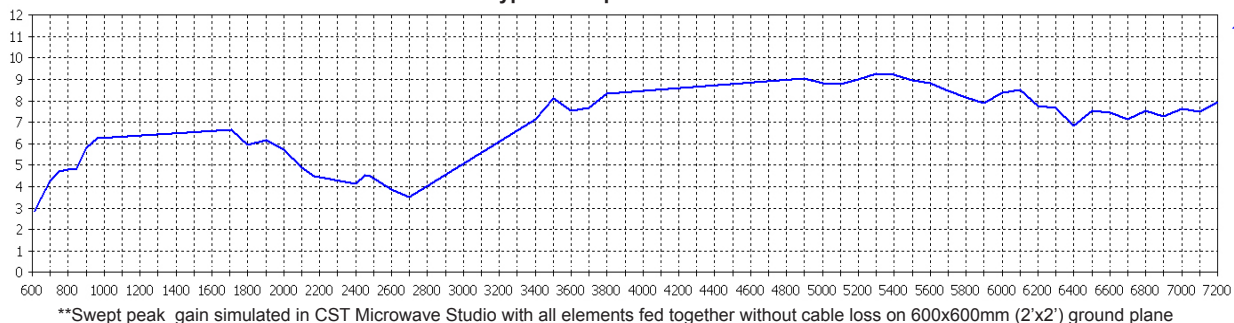
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Electrical Data on
Ground Plane - Cell

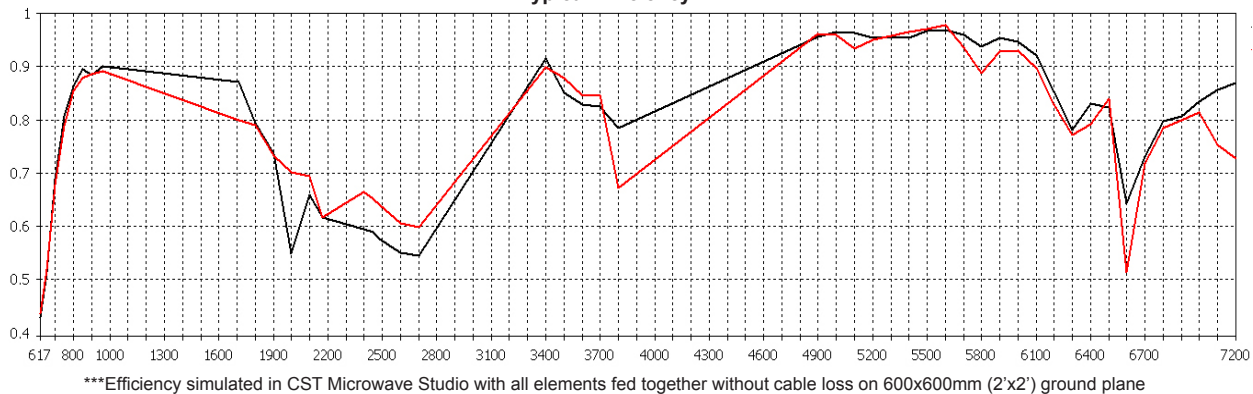
Typical VSWR*



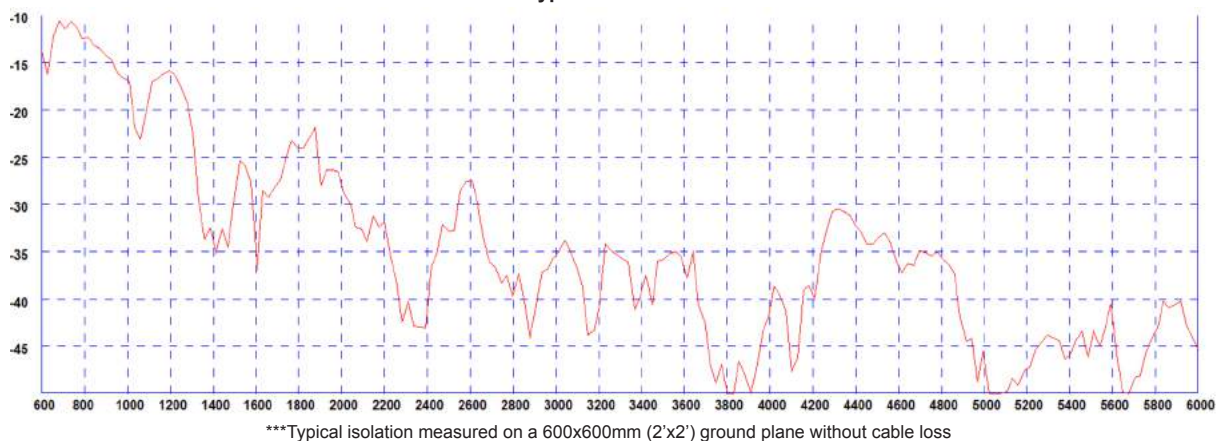
Typical Swept Peak Gain **



Typical Efficiency ***



Typical Isolation ***



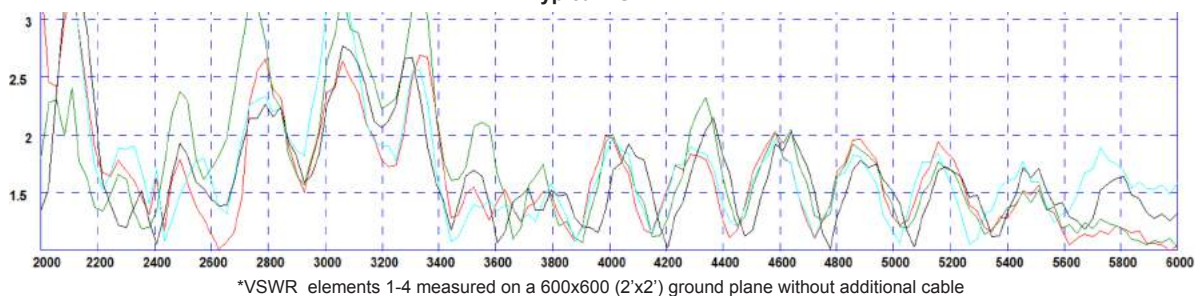
4G/5G Sharkfin MiMo Antenna

GPSD-6-60[-VAR]

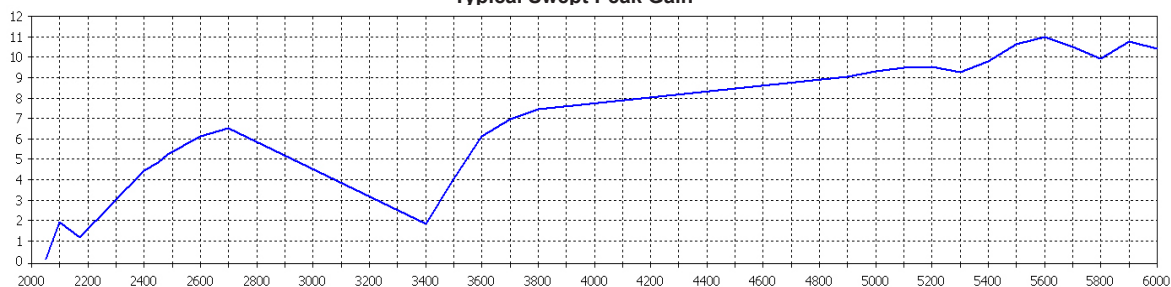
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Electrical Data -on
groundplane - WiFi

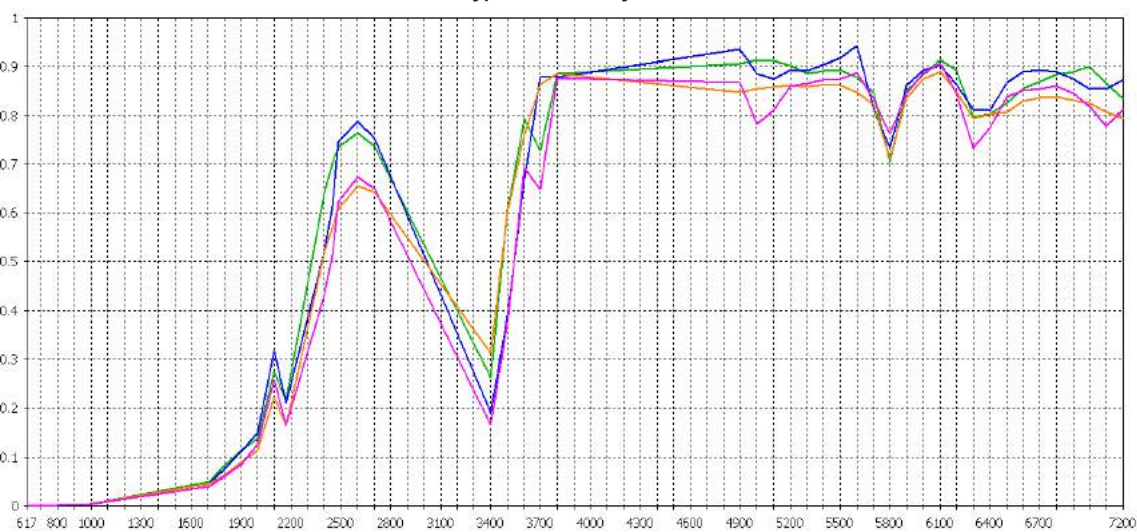
Typical VSWR*



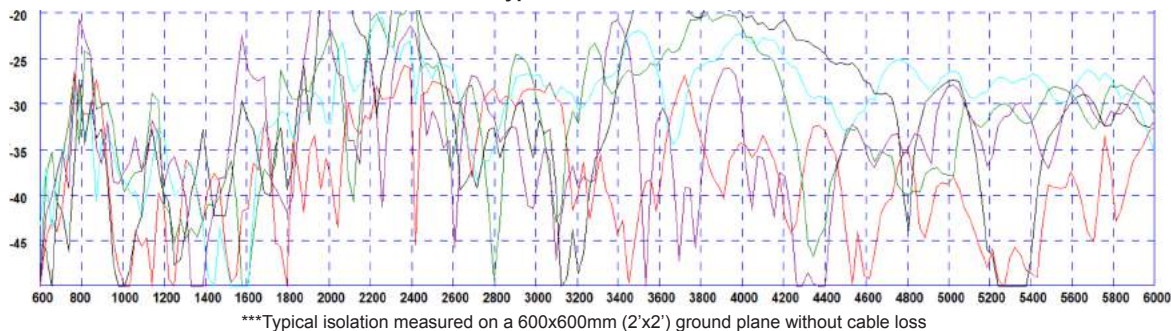
Typical Swept Peak Gain **



Typical Efficiency ***



Typical Isolation ***



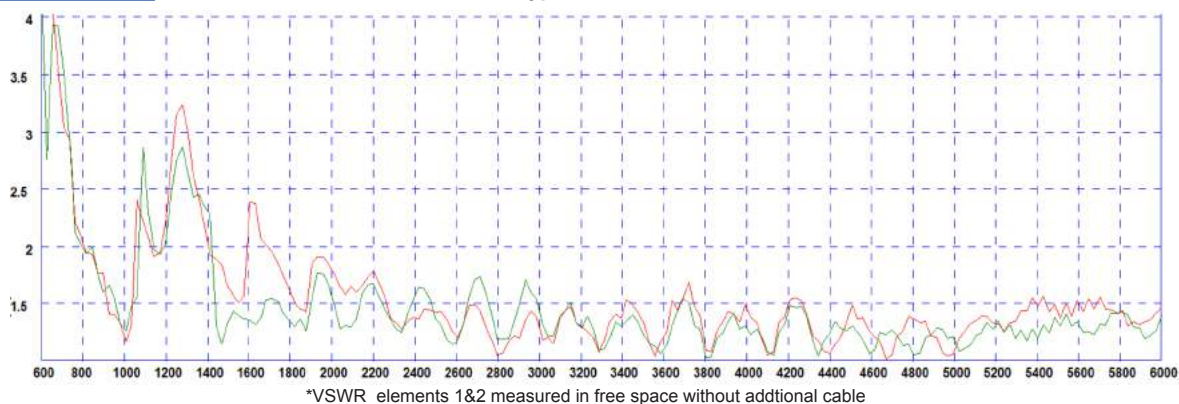
4G/5G Sharkfin MiMo Antenna

GPSD-6-60[-VAR]

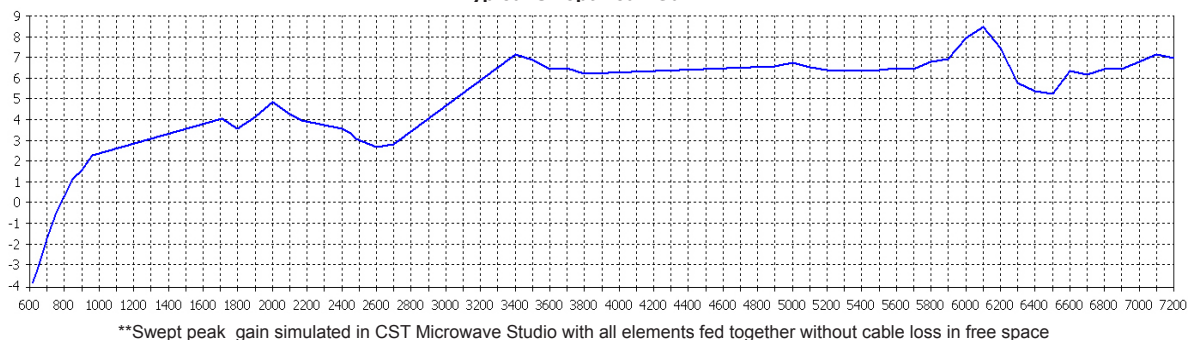
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Electrical Data in
Free Space - Cell

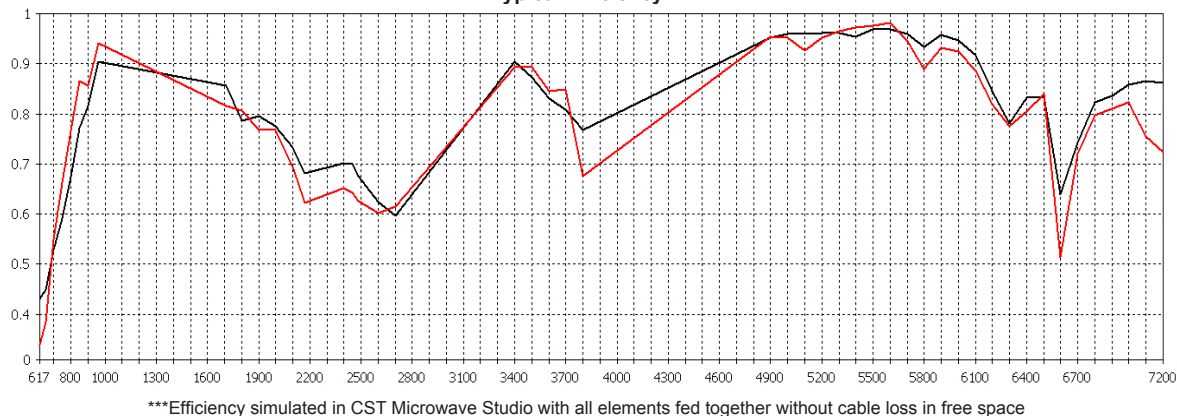
Typical VSWR*



Typical Swept Peak Gain **



Typical Efficiency ***



Typical Isolation ***



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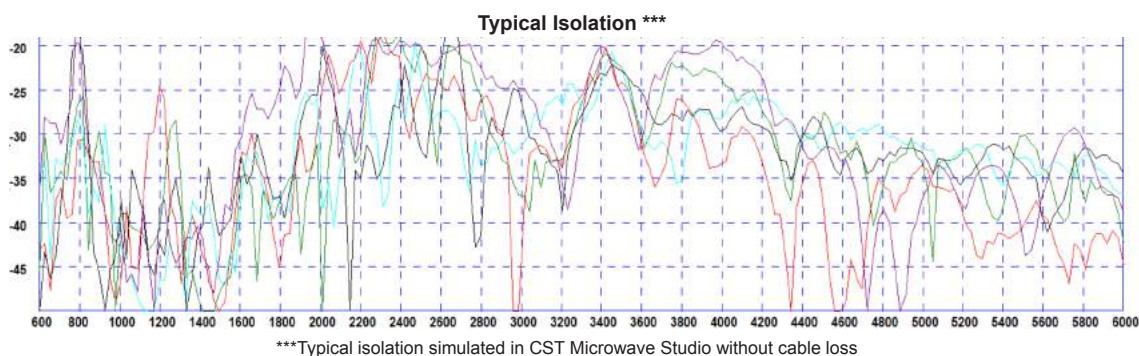
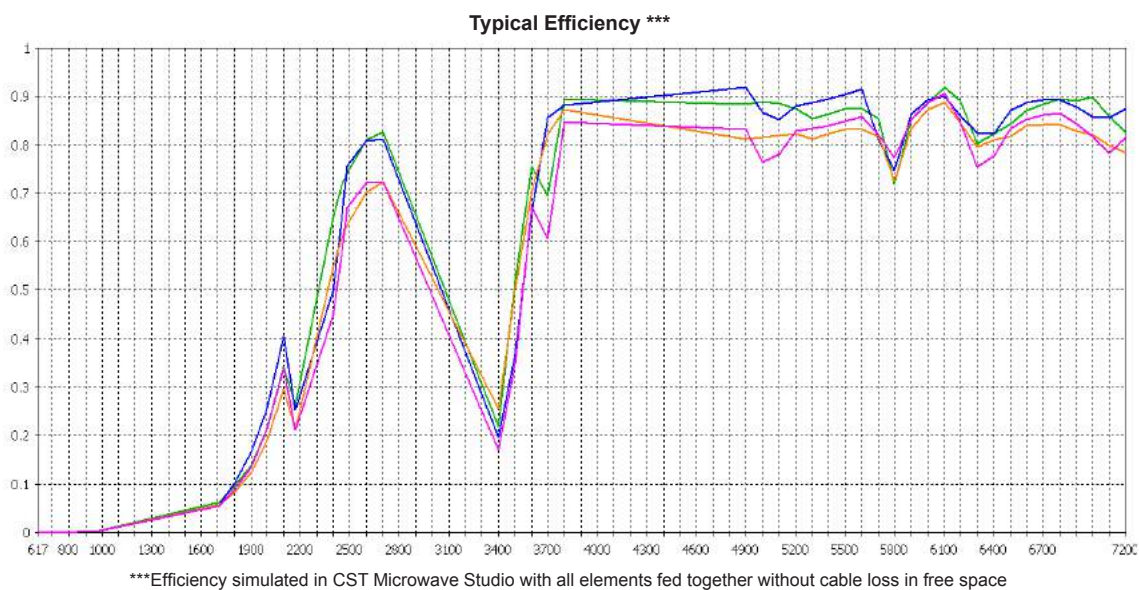
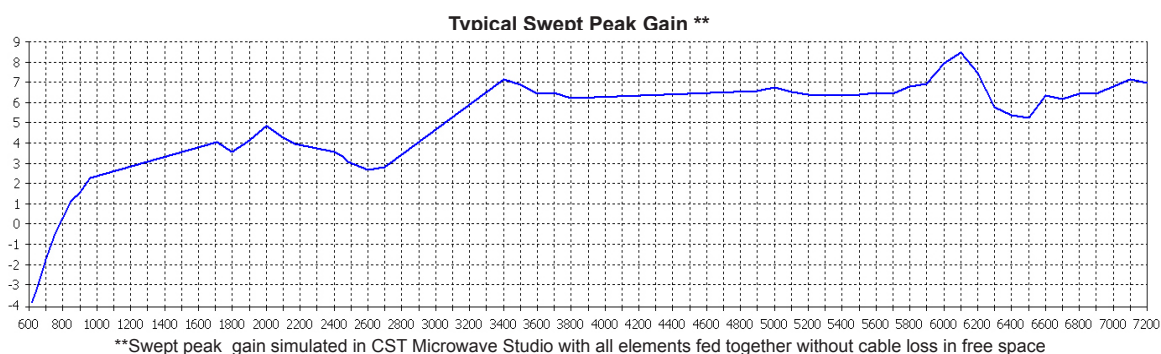
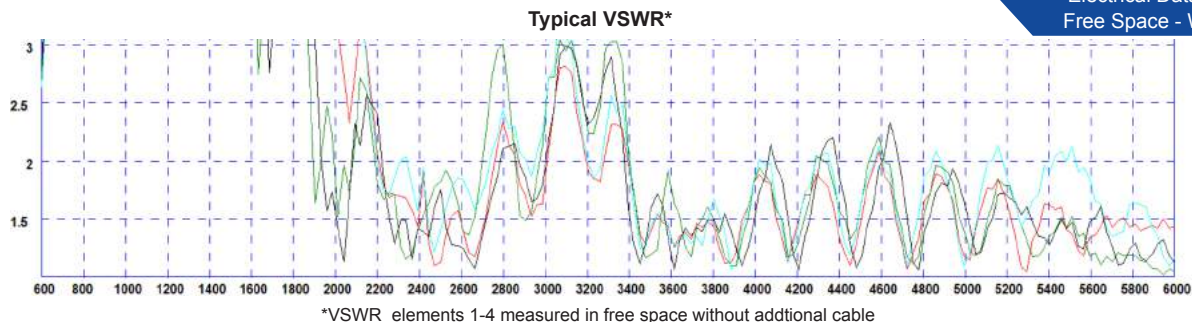
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4G/5G Sharkfin MiMo Antenna

GPSD-6-60[-VAR]

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Electrical Data -in
Free Space - WiFi



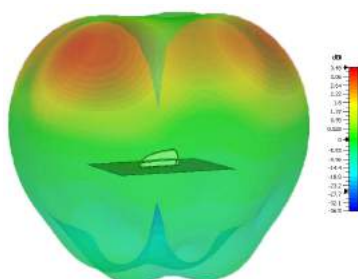
4G/5G Sharkfin MiMo Antenna

GPSD-6-60[-VAR]

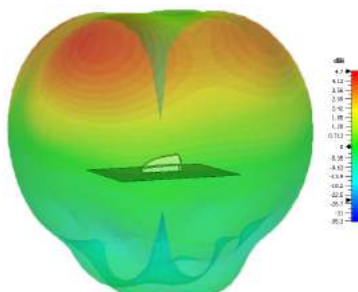
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3D Patterns on Ground Plane -Cell

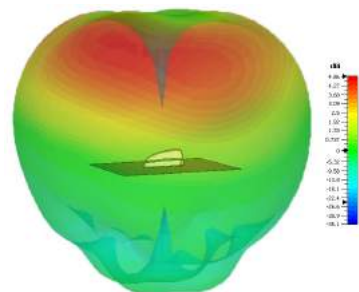
3D Pattern All Elements (650MHz)



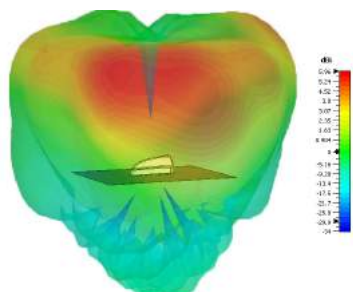
3D Pattern All Elements (750MHz)



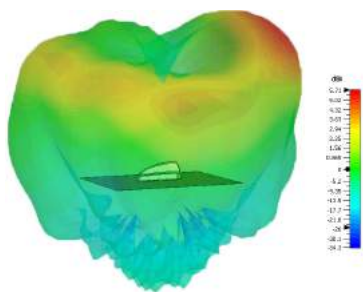
3D Pattern All Elements (850MHz)



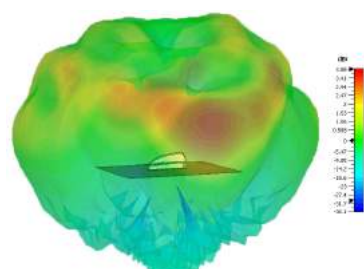
3D Pattern All Elements (1800MHz)



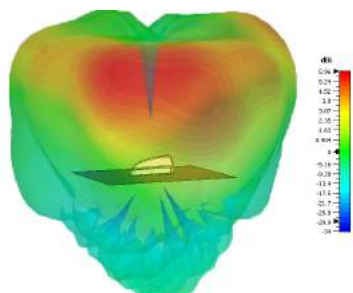
3D Pattern All Elements (2000MHz)



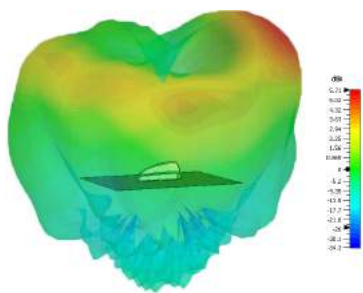
3D Pattern All Elements (2600MHz)



3D Pattern All Elements (3600MHz)

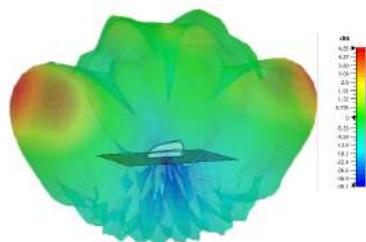


3D Pattern All Elements (5400MHz)

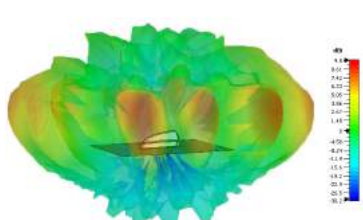


3D Patterns on Ground Plane -WIFI

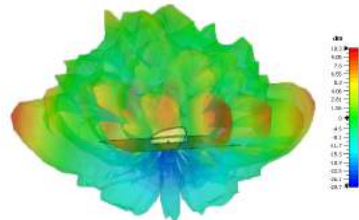
3D Pattern All WiFi Elements (2450MHz)



3D Pattern All WiFi Elements (5400MHz)



3D Pattern All WiFi Elements (7100MHz)



3D patterns all simulated in CST Microwave Studio with all elements of same type fed together excluding cable loss

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4G/5G Sharkfin MiMo Antenna

GPSD-6-60[-VAR]

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Electrical Data -in
Free Space - Cell

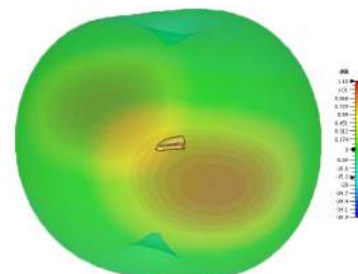
3D Pattern All Elements (650MHz)



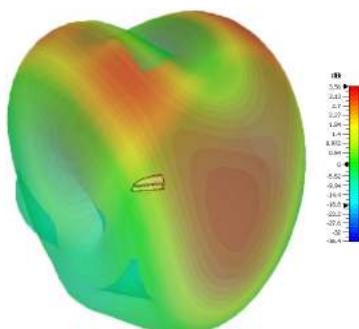
3D Pattern All Elements (750MHz)



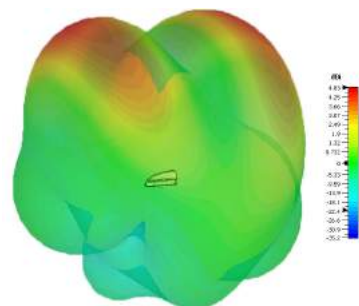
3D Pattern All Elements (850MHz)



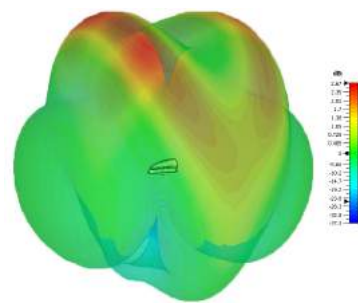
3D Pattern All Elements (1800MHz)



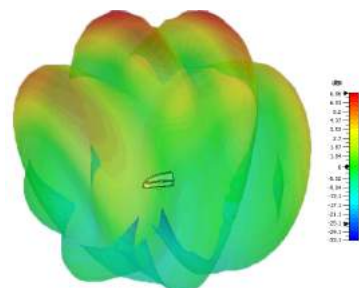
3D Pattern All Elements (2000MHz)



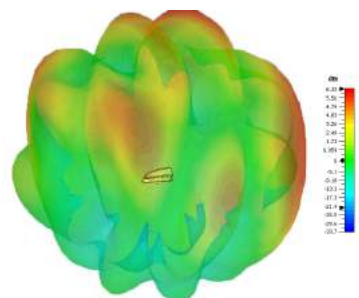
3D Pattern All Elements (2600MHz)



3D Pattern All Elements (3600MHz)

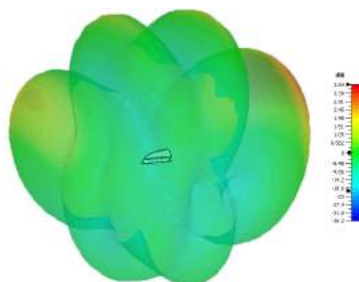


3D Pattern All Elements (5400MHz)

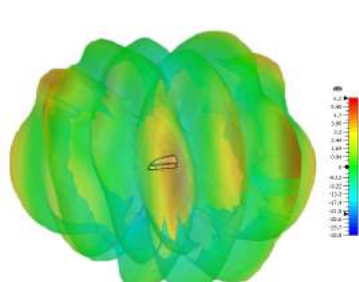


Electrical Data -in
Free Space - WiFi

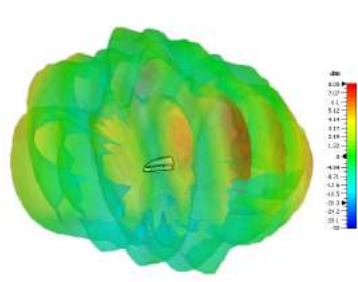
3D Pattern All WiFi Elements (2450MHz)



3D Pattern All WiFi Elements (5400MHz)



3D Pattern All WiFi Elements (7100MHz)



3D patterns all simulated in CST Microwave Studio with all elements of same type fed together excluding cable loss

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