



Sierra Wireless AirLink® Antenna: 6-in-1 SharkFin

AirLink® Antenna: 6-in-1 SharkFin

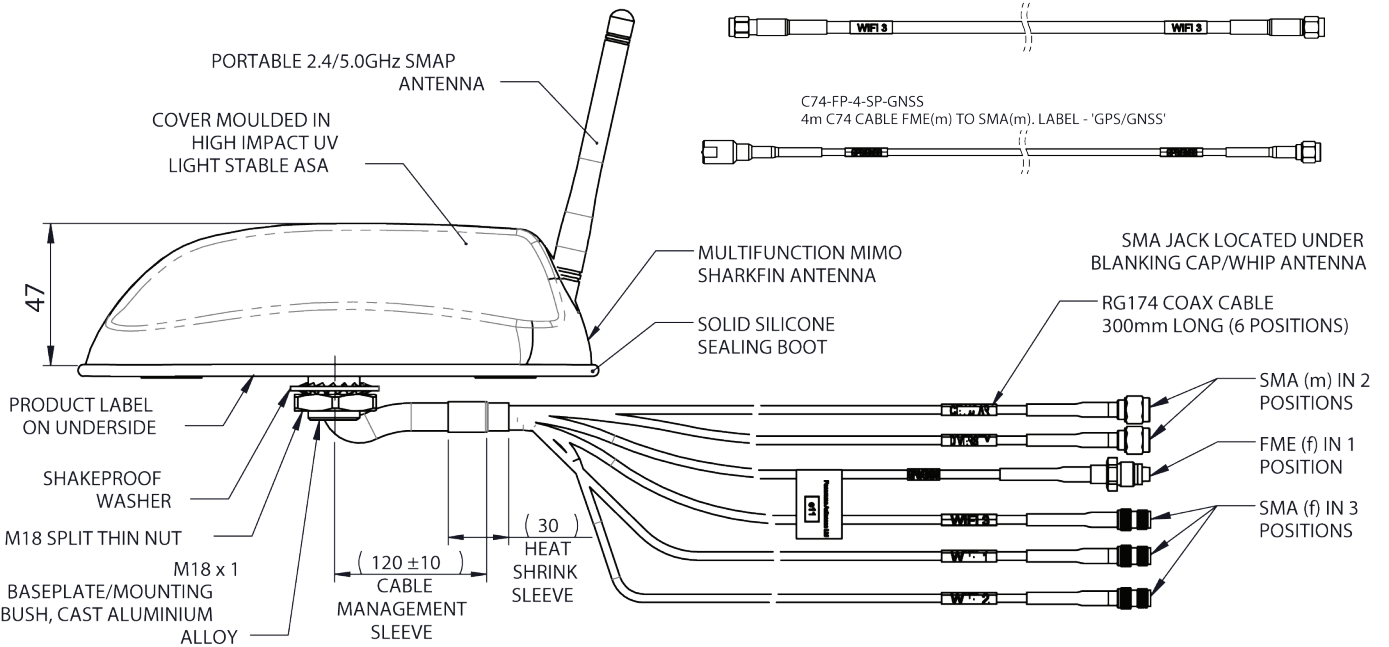
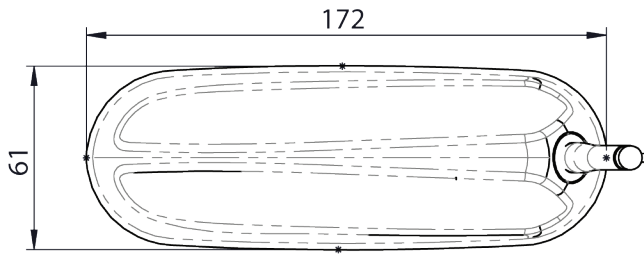
Tested and certified to operate with AirLink routers and gateways, the 6-in-1 SharkFin has a compact OEM style housing that contains 2x2 MiMo antenna function for 2G, 3G, and 4G LTE frequencies, and an active antenna for GNSS with 26dB gain LNA. Mounted via the integral SMA (f) mount, the portable antenna spans 2.4/5.0GHz and, the SharkFin offers dual band 3x3 MiMo Wi-Fi (2.4/5.0GHz) in a compact package.

		Specification
PART NO.		6001117
ELECTRICAL DATA		
Frequency Range	Elements 2 & 3	698-960, 1710-2170, 2500-3800MHz
	Elements 4 & 5	2.4 / 4.9-6.0GHz
	Element 6 (Whip)	2.4 / 4.9-6.0GHz
Operational Bands	Elements 2 & 3	2G/3G/4G LTE
	Elements 4, 5 & 6	2.4/5GHz Wi-Fi
Peak gain: Isotropic*	Elements 2 & 3	2dBi (698-960MHz), 5dBi (1710-3800MHz)
	Elements 4, 5 & 6	4dBi (2.4GHz), 6dBi (5.8GHz)
Isolation with 4m/13' CS29	Cellular	> 11dB
	Wi-Fi	> 19dB
Typical Efficiency w/o Cable Loss	Elements 2 & 3	> 50%
Correlation Co-efficient	Elements 2 & 3	< 0.2
Polarisation		Vertical
Pattern		Omni-directional
Impedance		50Ω
Max Input Power		25W

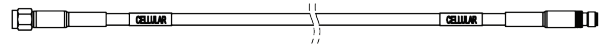
* Excluding cable loss

		Specification
GPS/GNSS DATA		
Frequency Range	Element 1	1562-1612MHz
VSWR		<2:1 ± 4MHz
Gain: LNA		26dB
Polarisation		Right Hand Circular
Operating Voltage		3-5V DC
Approval		E11
Current		<20mA
MECHANICAL DATA		
Dimensions	Height (including whip)	118mm (4.6")
	Height (excluding whip)	50mm (2.2")
	Length	170mm (6.77")
	Width	60mm (2.4")
Operating Temp		-40° / +80°C (-40° / 176°F)
Material		ASA, EPDM, Aluminium Alloy
Colour		Black
Ingress Protection		IP66
Weight		1282g
MOUNTING DATA		
Mounting Type		Bolt Mount
Mounting Hole		19mm (3/4")
CABLE DATA		
Cell / LTE Cables	Type	CS29
	Length	4m (13ft)
	Termination	SMA Plug
GPS Cable	Type	CS29
	Length	4m (13ft)
	Termination	SMA Plug
Wi-Fi Cables	Type	CS32
	Length	4m (13ft)
	Termination	RP-SMA Plug

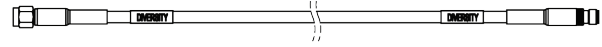
TECHNICAL DRAWING



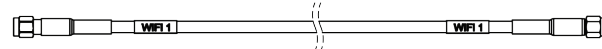
C29SP-4SJ-CELLU
 4m CS29 CABLE SMA(f) TO SMA(m). LABEL - 'CELLULAR'



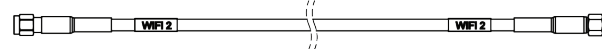
C29SP-4SJ-DIV
 4m CS29 CABLE SMA(f) TO SMA(m). LABEL - 'DIVERSITY'



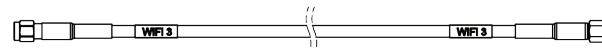
C32SP-4SMARV-WIFI1
 4m CS32 CABLE SMA(m) TO SMA REV. POL. LABEL - 'WIFI 1'



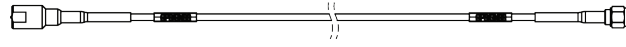
C32SP-4SMARV-WIFI2
 4m CS32 CABLE SMA(m) TO SMA REV. POL. LABEL - 'WIFI 2'



C32SP-4SMARV-WIFI3
 4m CS32 CABLE SMA(m) TO SMA REV. POL. LABEL - 'WIFI 3'



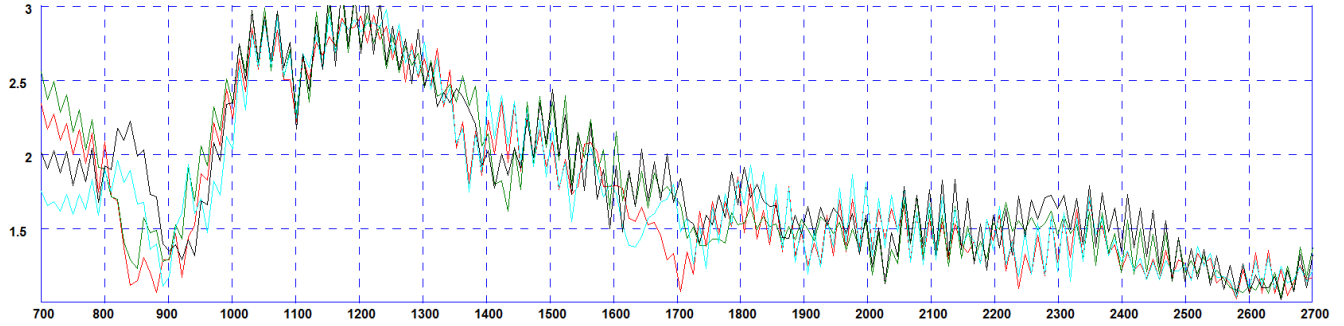
C74-FP-4-SP-GNSS
 4m C74 CABLE FME(m) TO SMA(m). LABEL - 'GPS/GNSS'



VSWR

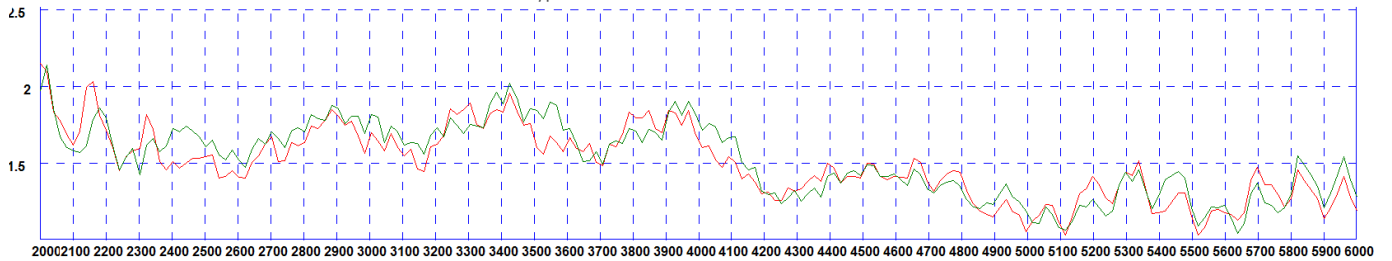
VSWR

Typical VSWR - 2G/3G/4G Elements 2&3*



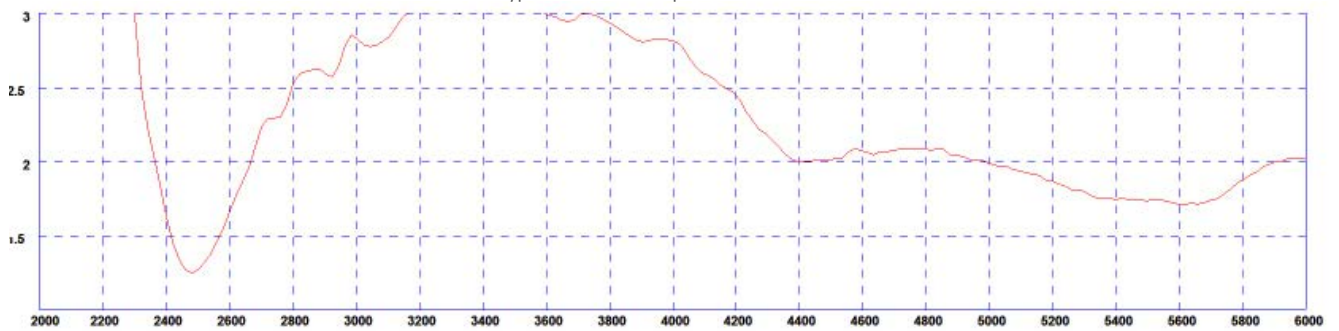
*VSWR measured with no whip and 5m (16') of CS29 cable Black & Blue = no ground plane Green and Red = 600x600mm (2'x2') ground plane

Typical VSWR - WiFi Elements 4&5*



*VSWR measured with no whip and 5m (16') of CS32 cable

Typical VSWR - Whip - WiFi Element 6

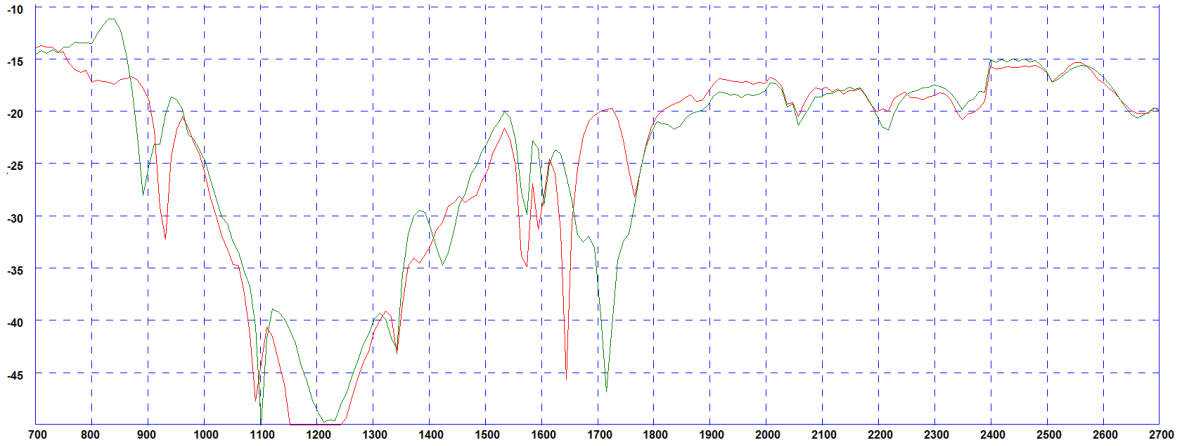


* VSWR measured in free space

VSWR

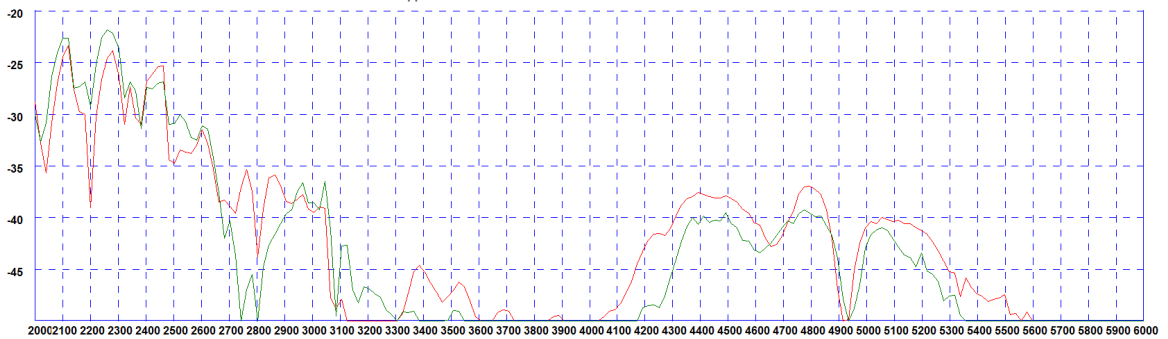
Isolation

Typical Isolation - Cellular Elements 2&3*



*Isolation measured with no whip and 5m (16') of CS29 cable Green Plot = 600x600mm (2' X2') ground plane Red Plot = no ground plane

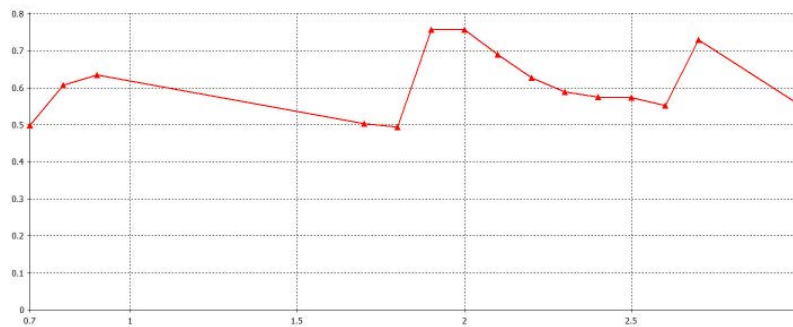
Typical Isolation - WiFi Elements 4&5*



*Isolation measured with no whip and 5m (16') of CS29 cable Red Plot = 600x600mm (2' X2') ground plane Green Plot = no ground plane

Typical Total Efficiency

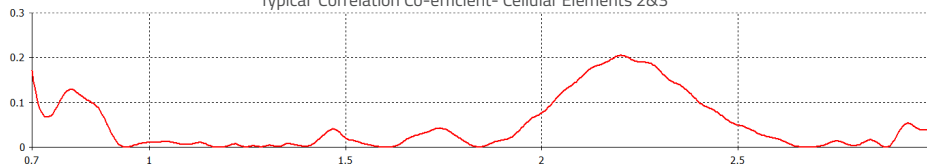
Typical Total Efficiency - Cellular Elements 2&3*



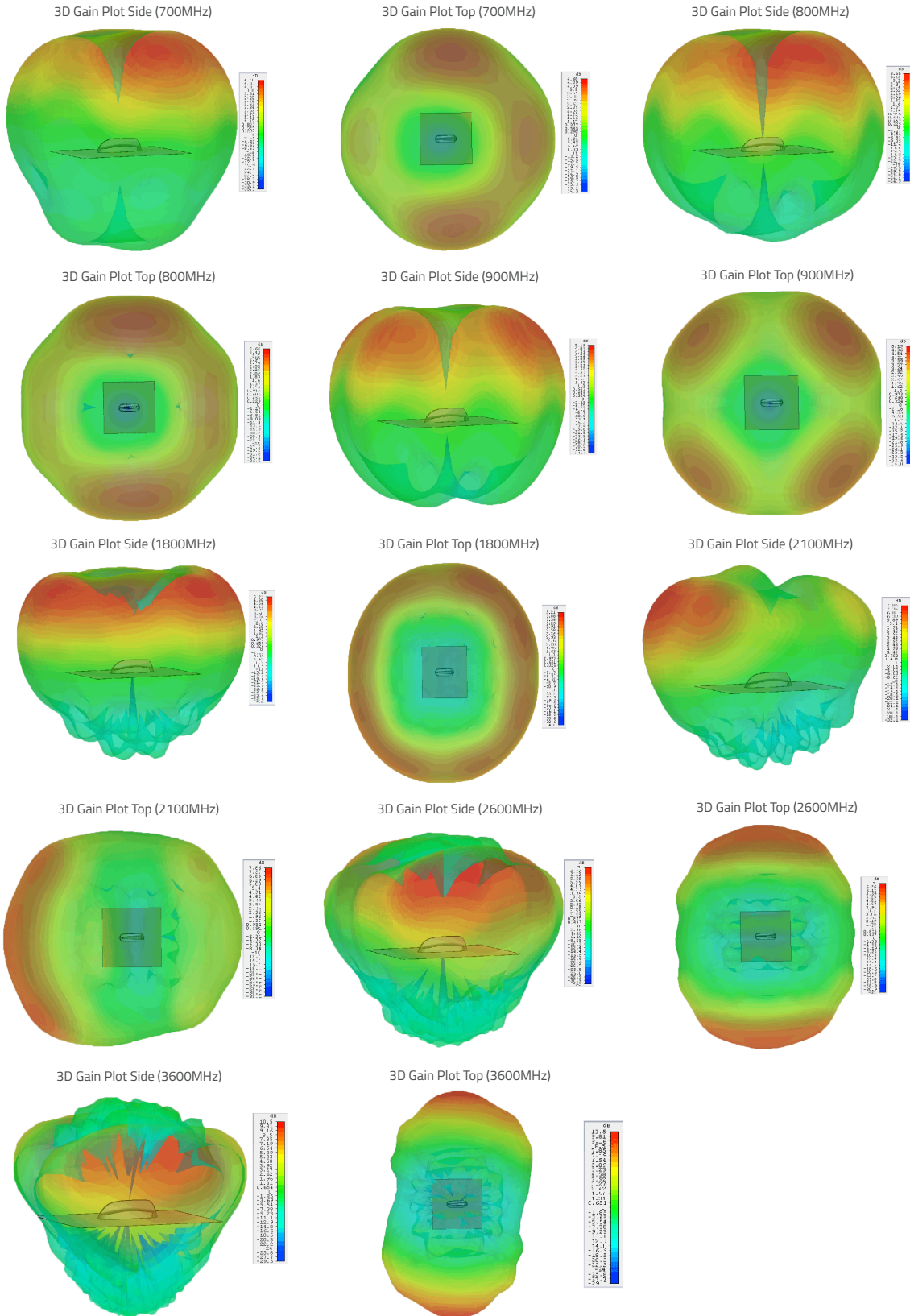
* Efficient simulated in free space with no whip and no ground plane and no cable.

Typical Correlation Co-efficient

Typical Correlation Co-efficient- Cellular Elements 2&3*



ELECTRICAL DATA

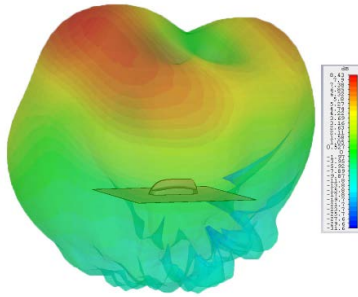


*3D radiation patterns simulated in CST Microwave Studio on a 600x600mm (2' X2') ground plane with both elements fed together.

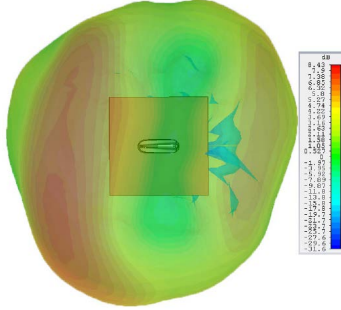
ELECTRICAL DATA

Typical 3D Radiation Patterns - Wifi Elements 4&5

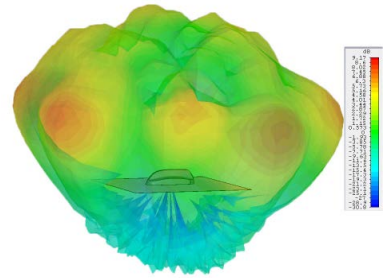
3D Gain Plot Side (2.4GHz)



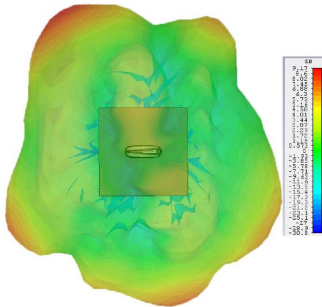
3D Gain Plot Top (2.4GHz)



3D Gain Plot Side (5.4GHz)

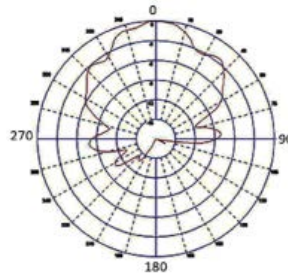


3D Gain Plot Top (5.4GHz)



Typical Radiation Patterns - GPS/GNSS Element 1

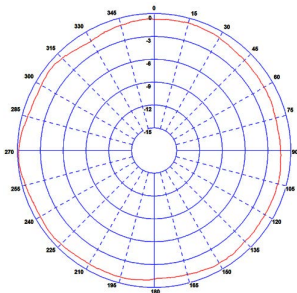
Element 1: Typical E Plane Pattern



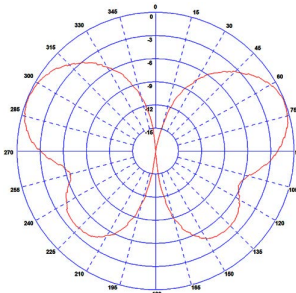
*3D radiation patterns simulated in CST Microwave Studio on a 600x600mm (2' X2') ground plane with both elements fed together.

Typical Radiation Patterns - Whip

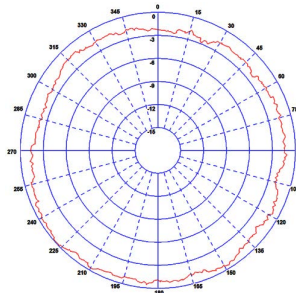
Typical H Plane Plot (2450MHz)



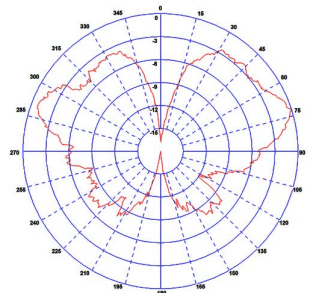
Typical E Plane Plot (2450MHz)



Typical H Plane Plot (5400MHz)



Typical E Plane Plot (5400MHz)



About Sierra Wireless

Sierra Wireless is building the Internet of Things with intelligent wireless solutions that empower organizations to innovate in the connected world. We offer the industry's most comprehensive portfolio of 2G, 3G, and 4G embedded modules and gateways, seamlessly integrated with our secure cloud and connectivity services. OEMs and enterprises worldwide trust our innovative solutions to get their connected products and services to market faster.

For more information, visit www.sierrawireless.com.