



Sierra Wireless AirLink® Antenna: 4-in-1 SharkFin

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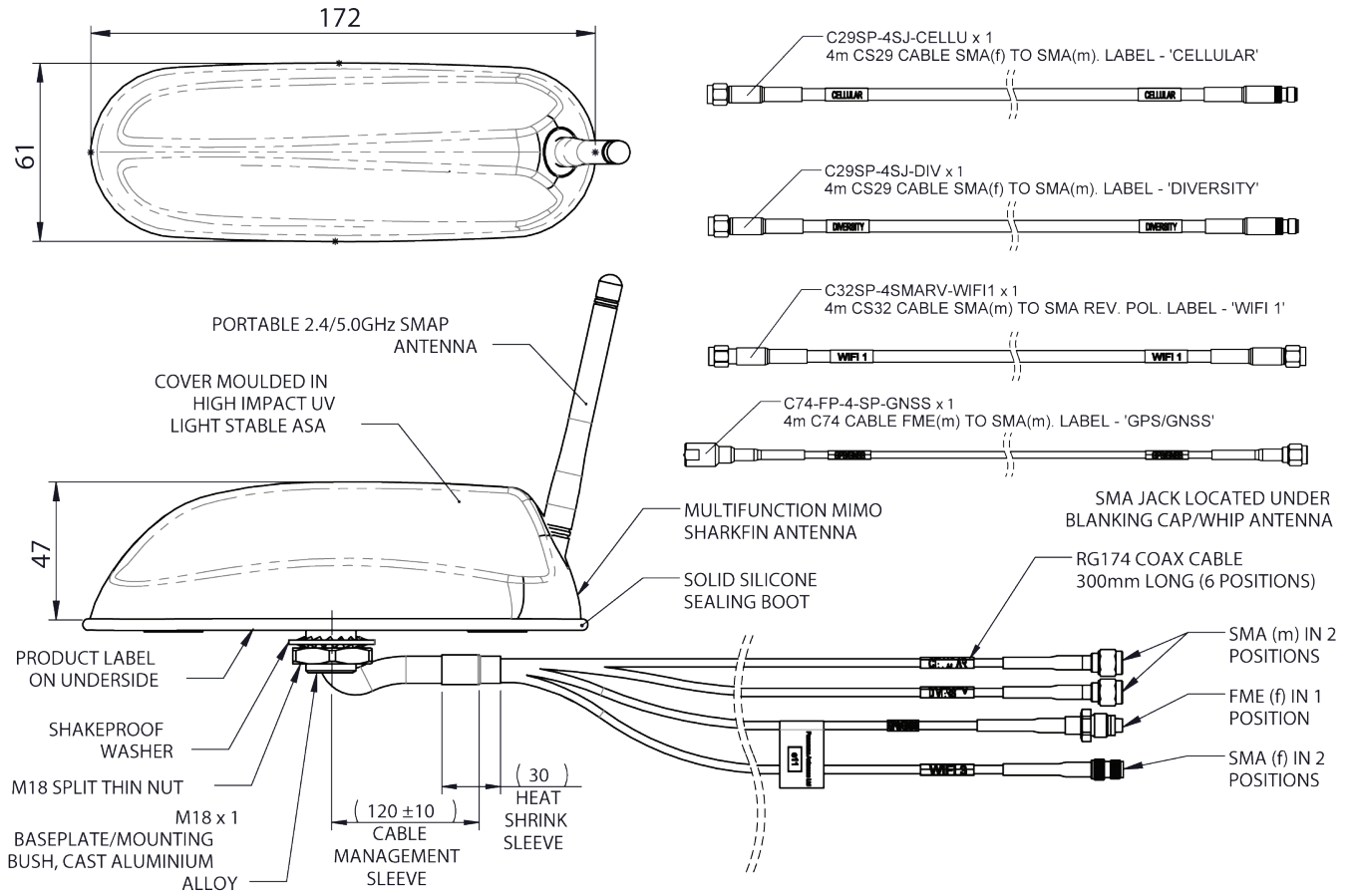
Tested and certified to operate with AirLink routers and gateways, the 4-In-1 SharkFin has a compact OEM style housing that features 2x2 MiMo antenna function for 2G, 3G and 4G LTE frequencies, an active antenna for GPS/GLONASS with 26dB gain LNA, and a single antenna for 2.4/5.8GHz Wi-Fi.

The SharkFin style design provides multiple antenna functions, while remaining discreet, and is suitable for public safety, industrial and transport applications where a cost effective, efficient and robust antenna is essential. Requiring only a single hole mounting, the 4-In-1 SharkFin reduces vehicle damage, installation time & cost and visual impact whilst protecting a vehicle's resale value.

		Specification
PART NO.		6001116
ELECTRICAL DATA		
Frequency Range	Elements 2 & 3	698-960, 1710-2170, 2500-3800MHz
	Element 4	2.4 / 4.9-6.0GHz
Operational Bands	Elements 2 & 3	2G/3G/4G LTE
	Element 4	2.4/5.0GHz Wi-Fi
Peak gain: Isotropic	Elements 2 & 3	2dBi (698-960MHz) 5dBi (1710-3800MHz)
	Element 4	4dBi
Isolation with 5m 16' CS29	Cellular	> 11dB
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

		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	Total Height	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
Weight		923g
Ingress Protection		IP 66
MOUNTING INFO		
Mounting Type		Bolt Mount
Hole Mounting		19mm (3/4")
CABLE DATA		
Cell / LTE Cables	Type	CS29
	Length	4m (13ft)
	Termination	SMA Plug
GPS Cable	Type	CS29
	Length	4 (13ft)
	Termination	SMA Plug
Wi-Fi Cables	Type	CS32
	Length	4 (13ft)
	Termination	RP-SMA

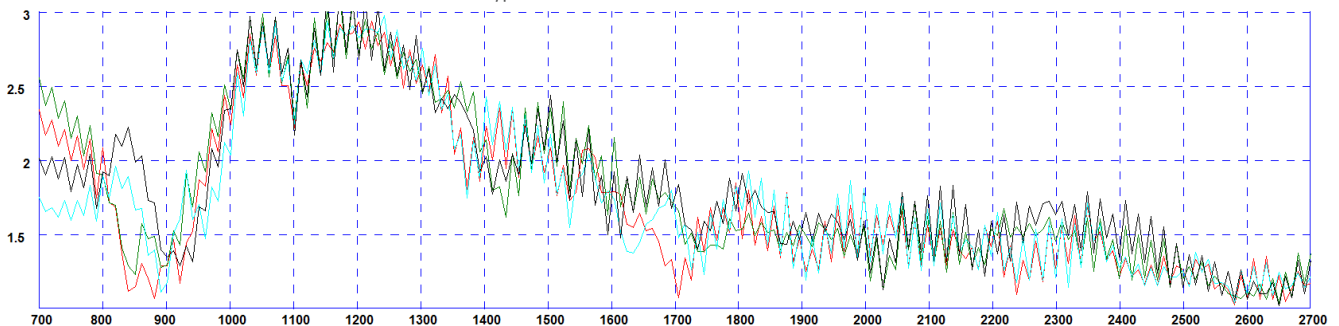
TECHNICAL DRAWING



VSWR

VSWR

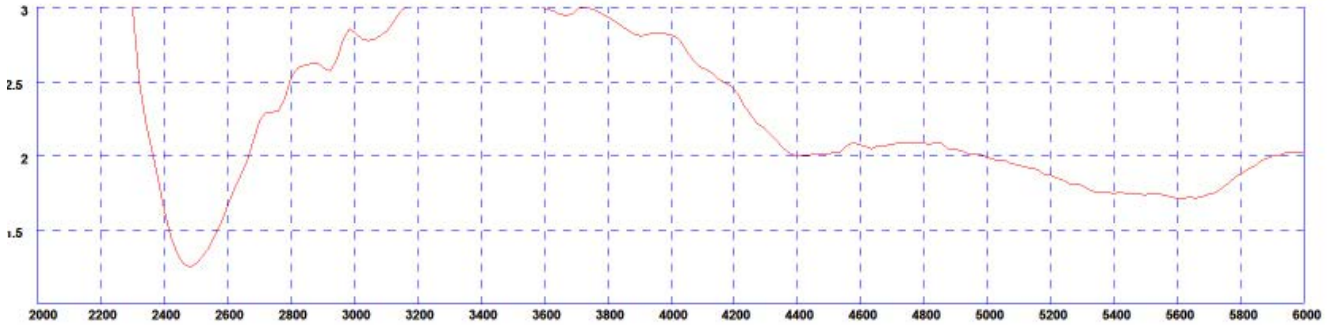
Typical VSWR - 2G/3G/4G Elements 2&3*



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

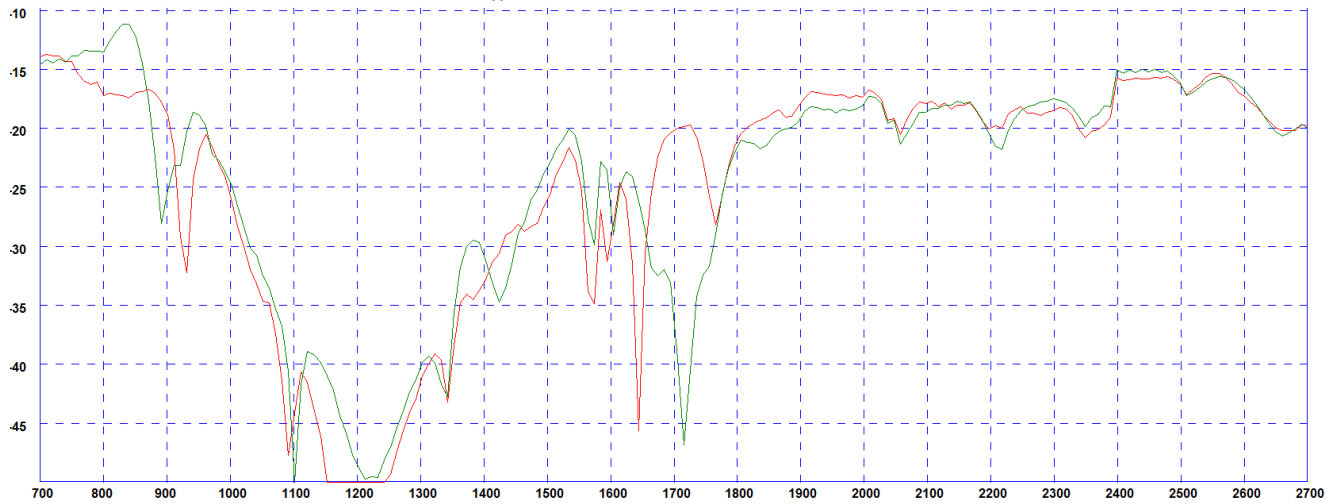
VSWR

Typical VSWR*



Isolation

Typical Isolation - Cellular Elements 2&3*

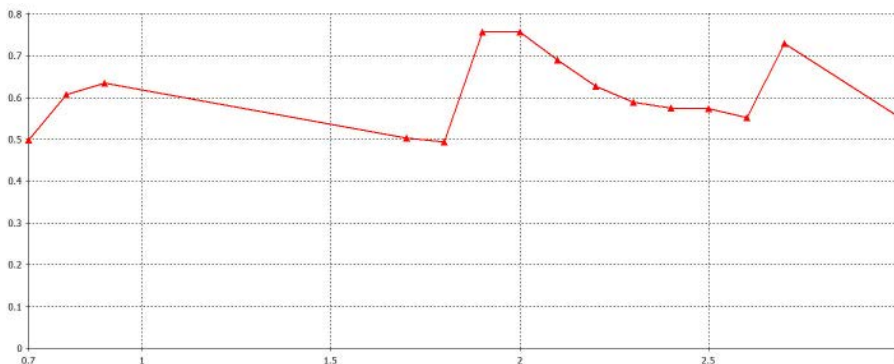


*Isolation measured with no whip and 5m (16') of CS29 cable Green Plot = 600x600mm (2' X2') ground plane Red Plot = no ground plane

ELECTRICAL DATA

Typical Total Efficiency

Typical Total Efficiency - Cellular Elements 2&3*

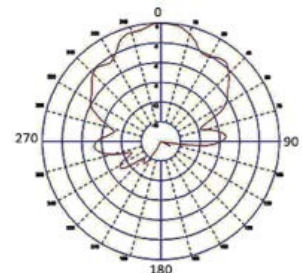


* Efficient simulated in free space with no whip and no ground plane and no cable.

Typical Radiation Patterns

GPS/GNSS Element 1

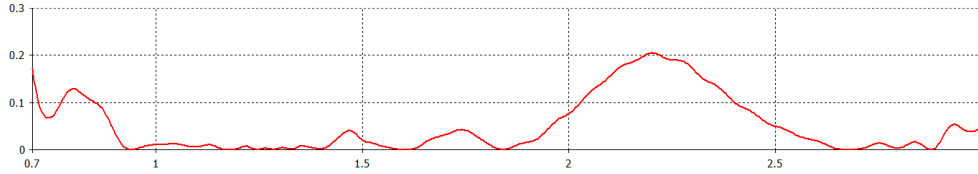
Element 1: Typical E Plane Pattern



ELECTRICAL DATA

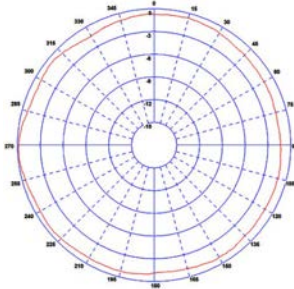
Typical Correlation Co-efficient

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

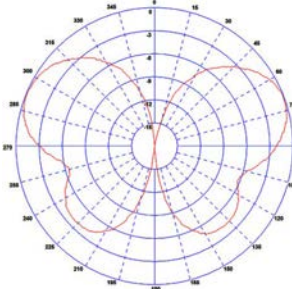


Typical Radiation Patterns - Element 4

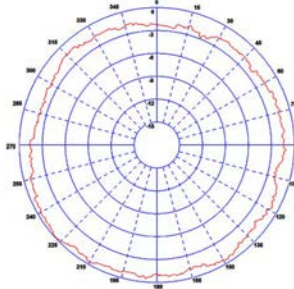
Typical H Plane Plot (2450MHz)



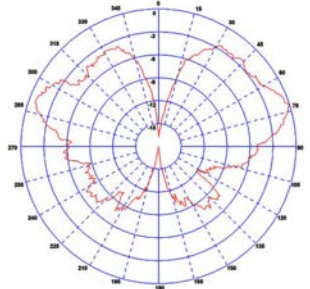
Typical E Plane Plot (2450MHz)



Typical H Plane Plot (5400MHz)



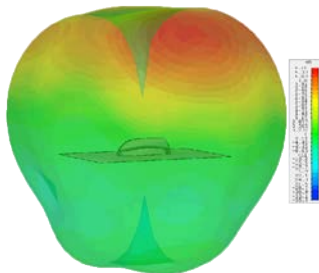
Typical E Plane Plot (5400MHz)



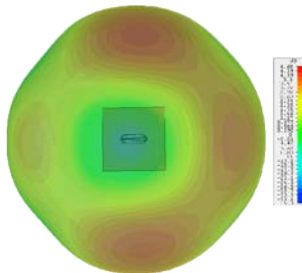
ELECTRICAL DATA

3D Radiation Patterns - Cell / LTE Elements 2&3

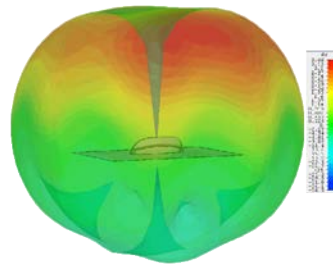
3D Gain Plot Side (700MHz)



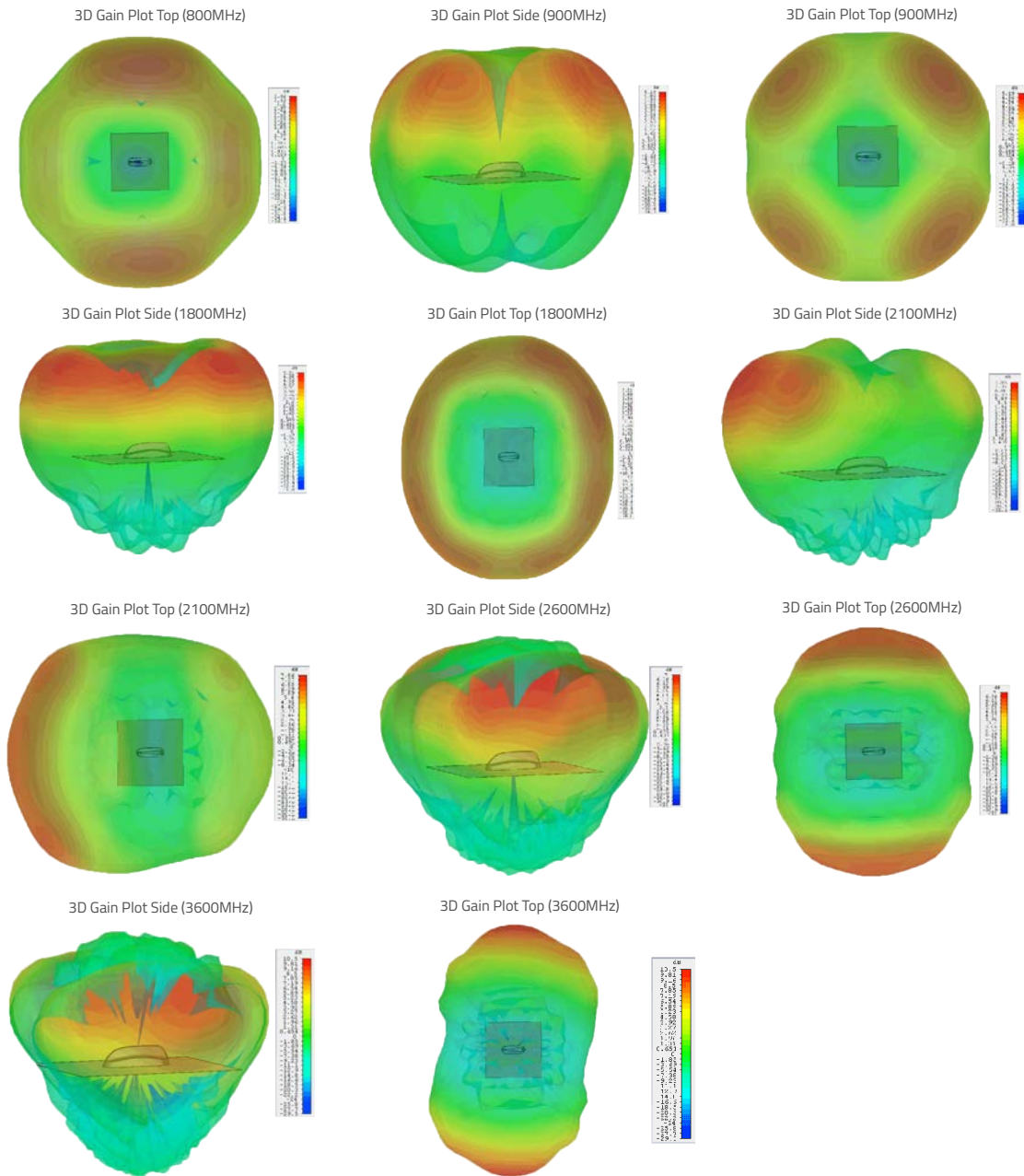
3D Gain Plot Top (700MHz)



3D Gain Plot Side (800MHz)



ELECTRICAL DATA



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

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.