Pro Series – 9 in 1 Antenna

MIMO Cellular, MIMO Dual Band Wi-Fi, and GPS Antenna

Product Description

Parsec's Blue Lacy Series PRO9BL 4L 4W G is a rugged nine-in-one 4x4 MIMO cellular, 4x4 MIMO Wi-Fi, and GNSS marine grade external waterproof antenna. This ground independent omni-directional antenna works on all the common North American cellular bands. Also supports CBRS and LAA. The PRO9BL 4L 4W G is optimized for pole mounting while supporting 5G routers that require four cellular elements for 4x4 MIMO.

Detailed product information and options are available under NDA. Patent pending.

Features

- **Cellular frequency range: 617 – 894 MHz**
  1710 – 2700 MHz
  3300 – 4000 MHz
  5150 – 5925 MHz
- **Wi-Fi frequency range: 2400 – 2483.5 MHz**
  4900 – 5900 MHz
- **4x4 MIMO Cellular and 4x4 MIMO Wi-Fi**
- **Omni-directional**
- **Marine grade**

Applications

- **Internet access for boats**
- **Fixed wireless internet access**

Electrical Specifications

ID	Port	Parameters	Units	Typ.
Radiated Efficiency	CELL-1,2,3,4	617 – 663 MHz	%	55
	CELL-1,2,3,4	663 – 798 MHz		65
	CELL-1,2,3,4	798 – 894 MHz		55
	CELL-1,2,3,4	1710 – 2200 MHz		70
	CELL-1,2,3,4	2200 – 2700 MHz		60
	CELL-1,2,3,4	3300 – 4000 MHz		70
	CELL-1,2,3,4	5150 – 5925 MHz		40
	WiFi-1,2,3,4	2400 – 2483.5 MHz		75
	WiFi-1,2,3,4	4900 – 5900 MHz		80
Peak Gain	CELL-1,2,3,4	617 – 698 MHz	dBi	2
	CELL-1,2,3,4	698 – 894 MHz		3
	CELL-1,2,3,4	1710 – 2200 MHz		4
	CELL-1,2,3,4	2200 – 2700 MHz		3
	CELL-1,2,3,4	3300 – 4000 MHz		6
	CELL-1,2,3,4	5150 – 5925 MHz		2
	WiFi-1,2,3,4	2400 – 2483.5 MHz		5
	WiFi-1,2,3,4	4900 – 5900 MHz		9
Return Loss (50 Ω)	CELL-1,2,3,4	617 – 663 MHz	dB	6
	CELL-1,2,3,4	663 – 746 MHz		10
	CELL-1,2,3,4	746 – 894 MHz		5
	CELL-1,2,3,4	1710 – 1780 MHz		11
	CELL-1,2,3,4	1780 – 1995 MHz		6
	CELL-1,2,3,4	1995 – 2360 MHz		9
	CELL-1,2,3,4	2360 – 2700 MHz		6
	CELL-1,2,3,4	3300 – 4000 MHz		7
	CELL-1,2,3,4	5150 – 5925 MHz		3
	WiFi-1,2,3,4	2400 – 2483.5 MHz		10
	WiFi-1,2,3,4	4900 – 5150 MHz		5
	WiFi-1,2,3,4	5150 – 5900 MHz		11

Electrical Specifications (continued)

ID	Port	Parameters	Units	Typ.
Isolation	CELL	617 – 859 MHz	dB	9
	CELL	859 – 894 MHz		12
	CELL	1710 – 1930 MHz		14
	CELL	1930 – 2360 MHz		17
	CELL	2360 – 2700 MHz		12
	CELL	3300 – 4000 MHz		13
	CELL	5150 – 5925 MHz		20
	WiFi	2400 – 2483.5 MHz		16
	WiFi	4900 – 5900 MHz		24
Polarization	CELL, WiFi		dBi	Linear
Max Input Power	CELL, WiFi		Watts	5
RF Connectors	CELL			SMA(M)
	WiFi			RP-SMA
RF Cable Type	CELL, WiFi			LSR200

Notes:

1. **Electrical specifications based on antenna with a 2 ft. x 2 ft. external ground plane.**
2. **Isolation and return loss does not include cable loss.**

GNSS Electrical Specifications

Antenna + Preamp Gain	GPS	1570 – 1581 MHz	dBic	33
Polarization	GPS			RHCP
Filter Rejection	GPS	1625 MHz	dB	12
GNSS Preamp Voltage	GPS		mA	2.2 to 5
GNSS Preamp Current	GPS		mA	5 to 15
RF Connector	GPS			SMA(M)
Cables	GPS			LSR100

5G NR/4G LTE Bands

North America	B2, B4, B5, B7, B12, B14, B17, B25, B26, B29, B30, B41 B46, B48, B66, B71 n2, n5, n12, n25, n26, n41, n48, n66, n71, n77
EMEA	B1, B3, B7, B20, B28, B42, B43, B46 n1, n3, n28, n77, n78

Mechanical

Dimensions	8.56 inch diameter x 8.21 inch height
Mounting	1 ½ NPT thread hole for pipe or ¼-20 inserts for screw mounting
RF Cable Length	Choice of 1 or 15 foot cable

Environmental

Operating Temperature	-40°C to 85°C
Ingress Protection	IP67 waterproof

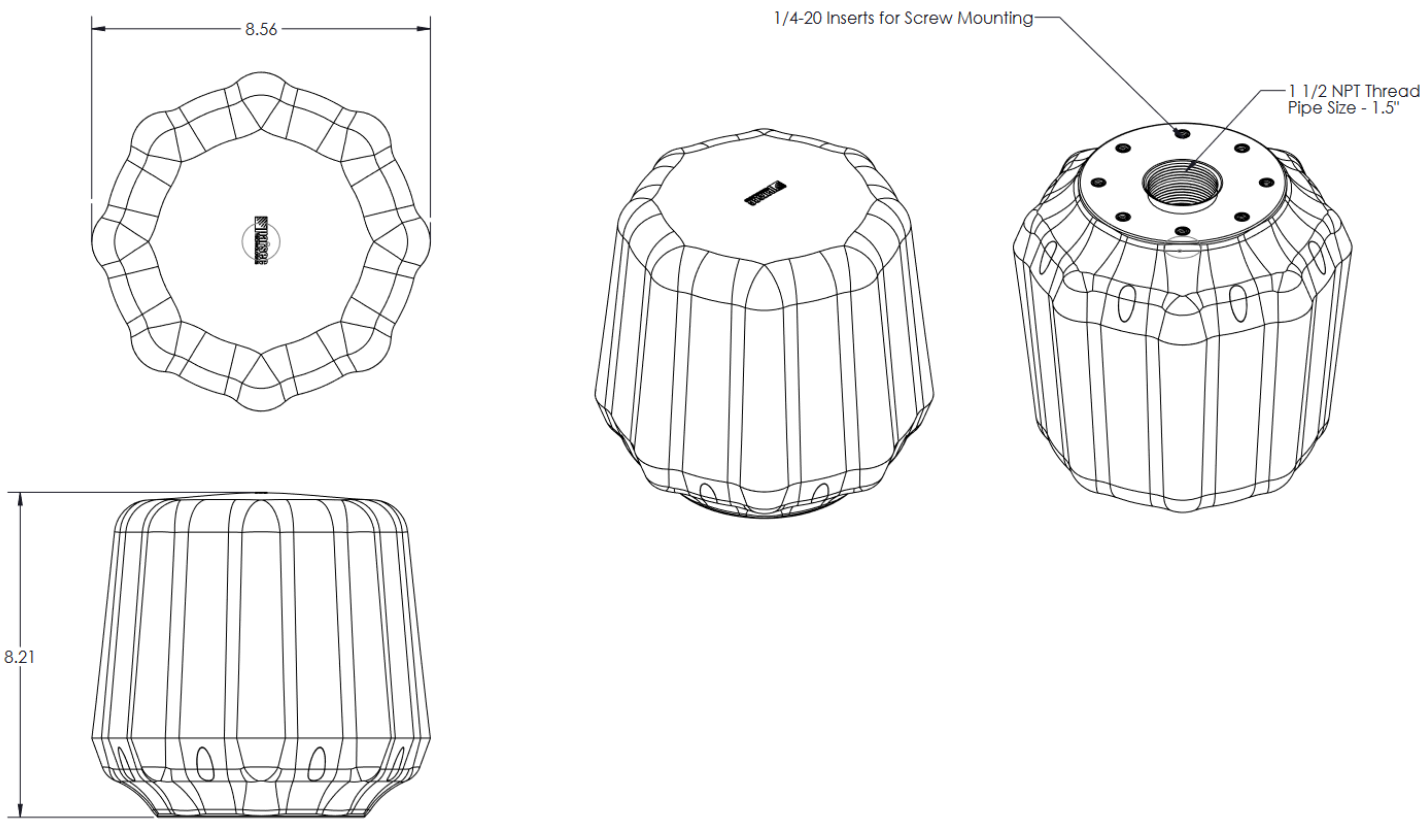


Figure 1. Product Dimensions



Figure 2. Product Picture

Typical Performance

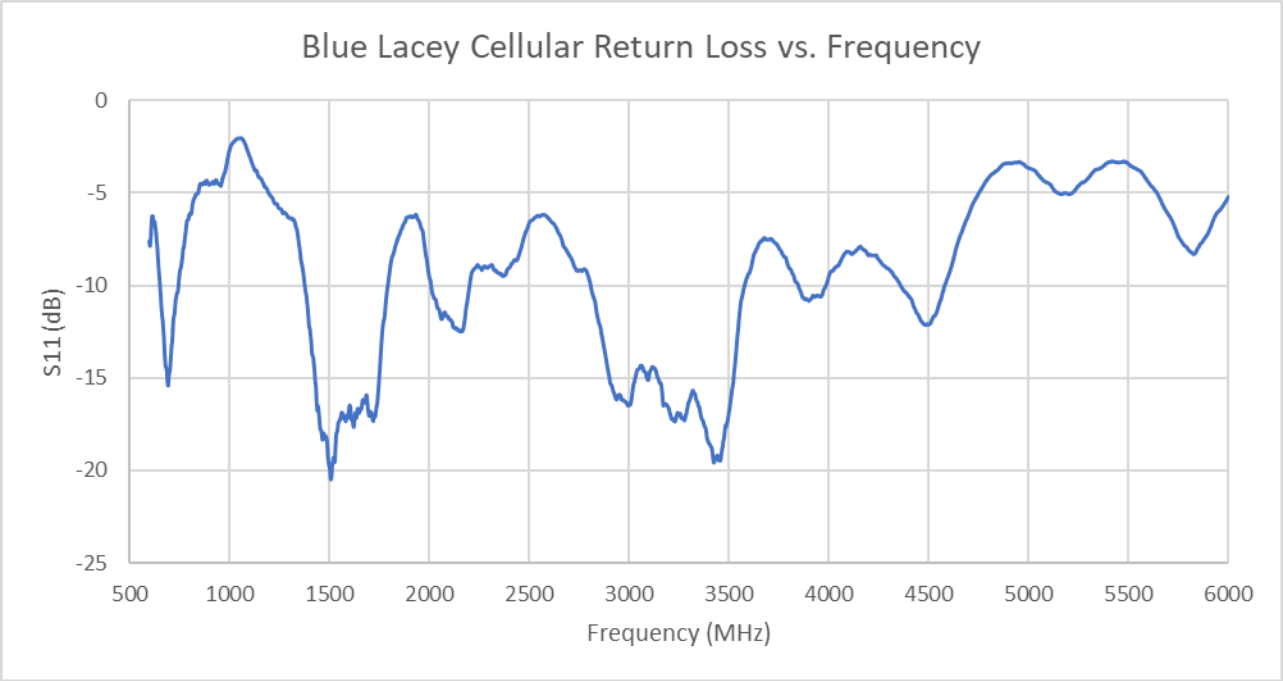


Figure 3. Cellular Return Loss

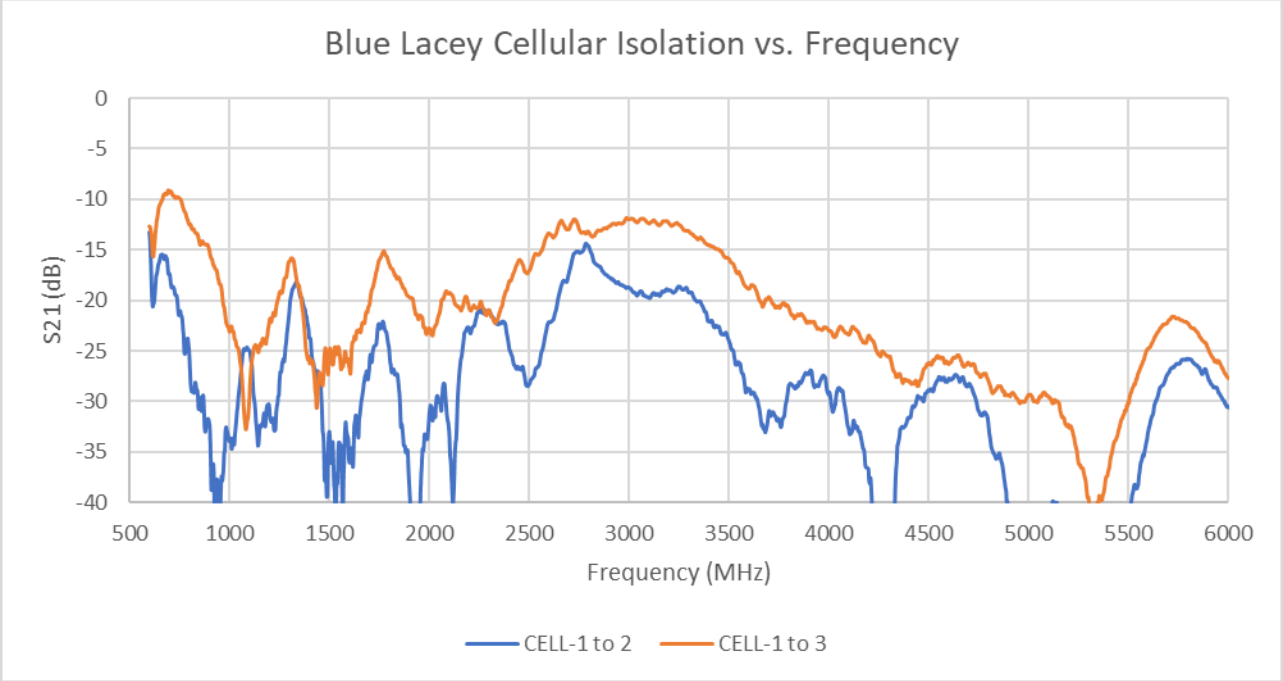


Figure 4. Cellular Isolation

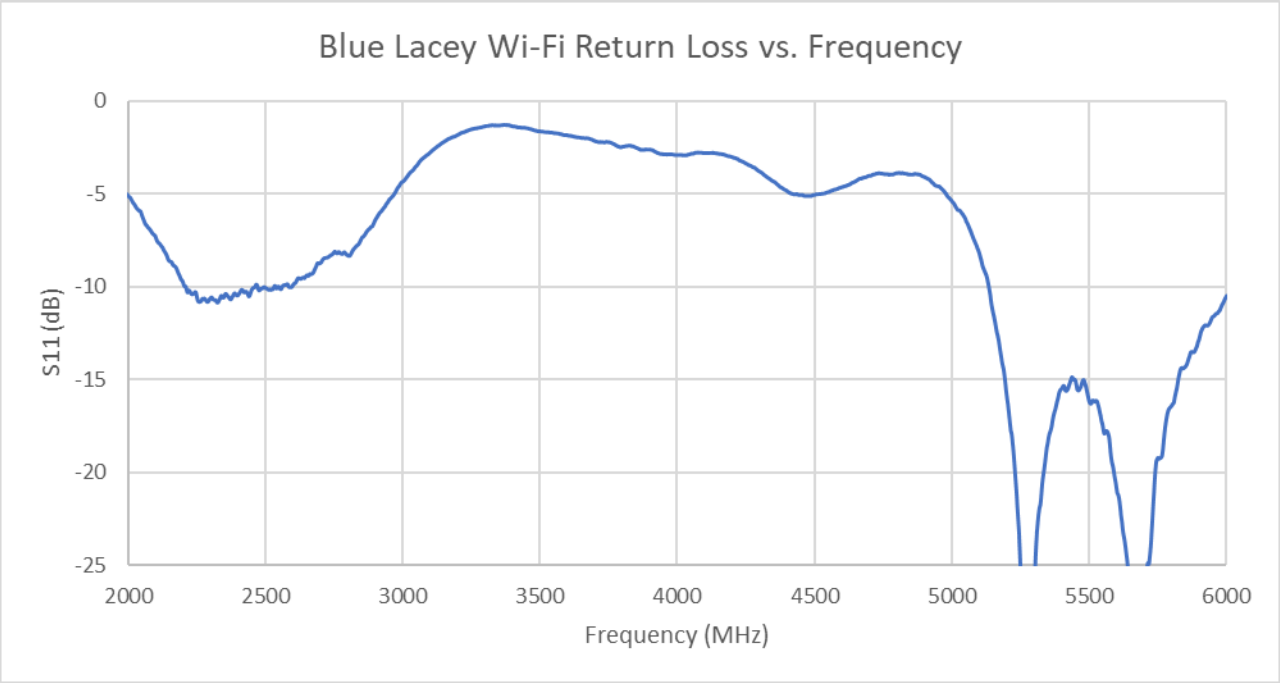


Figure 5. Wi-Fi Return Loss

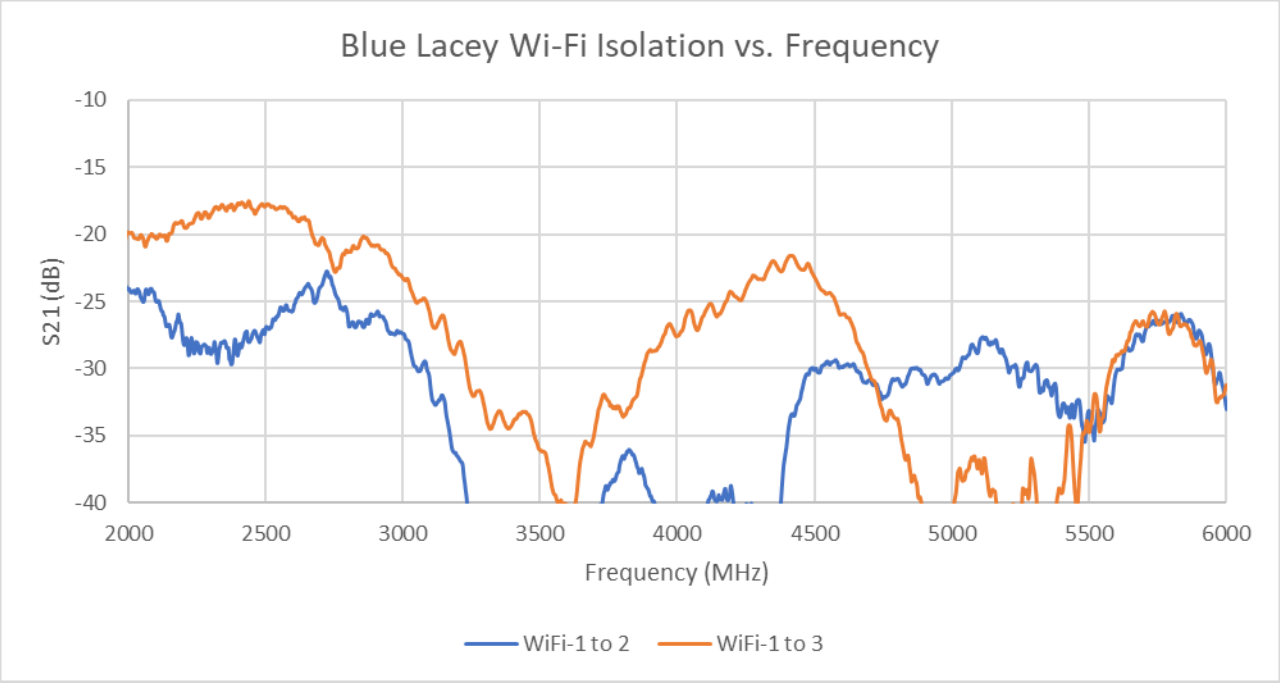


Figure 6. Wi-Fi Isolation

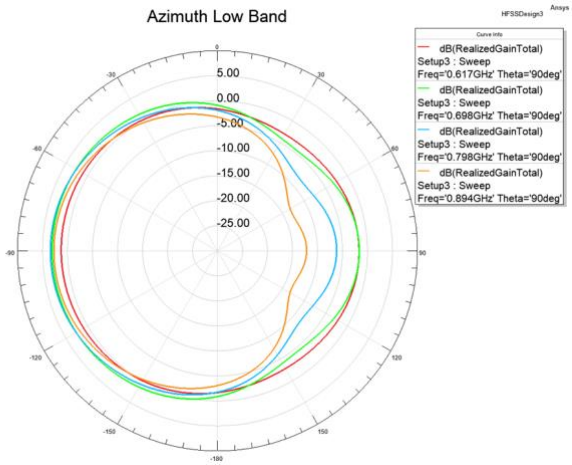


Figure 7. CELL, Azimuth, Low Band, Phi/Deg, Theta = 90

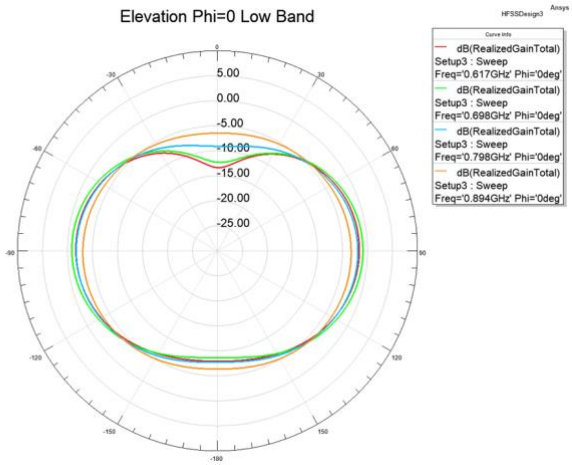


Figure 8. CELL, Elevation, Low Band, Theta/Deg, Phi = 0

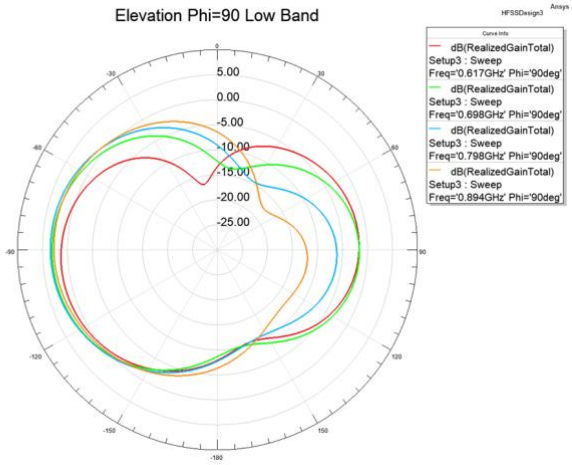


Figure 9. CELL, Elevation, Low Band, Theta/Deg, Phi = 90

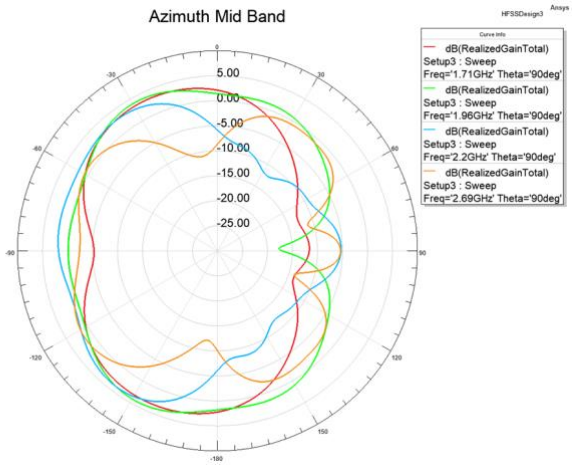


Figure 10. CELL, Azimuth, Mid Band, Phi/Deg, Theta = 90

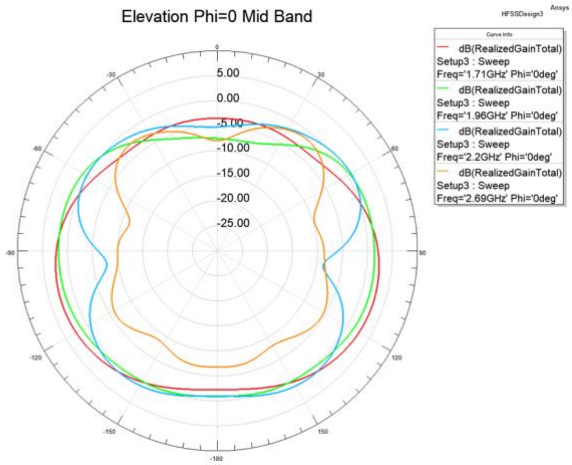


Figure 11. CELL, Elevation, Mid Band, Theta/Deg, Phi = 0

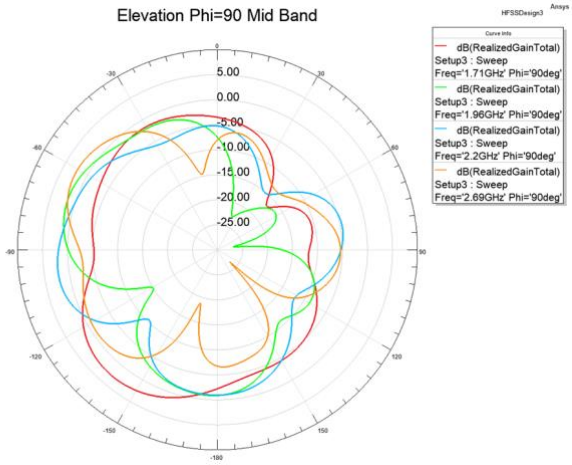


Figure 12. CELL, Elevation, Mid Band, Theta/Deg, Phi = 90

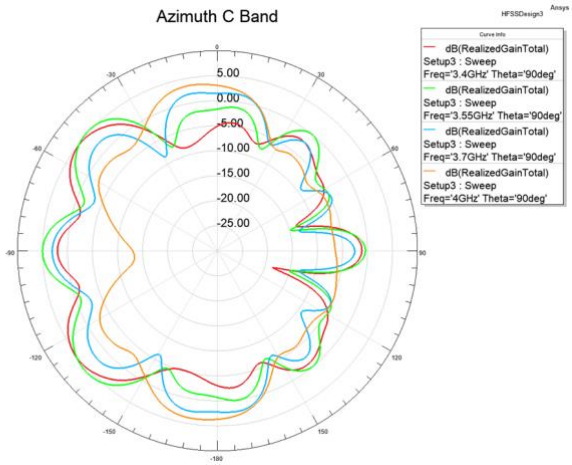


Figure 13. CELL, Azimuth, C Band/CBRS, Phi/Deg, Theta = 90

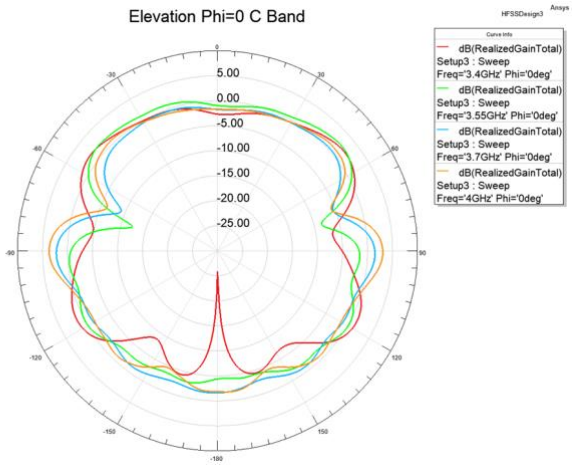


Figure 14. CELL, Elevation, C Band/CBRS, Theta/Deg, Phi = 0

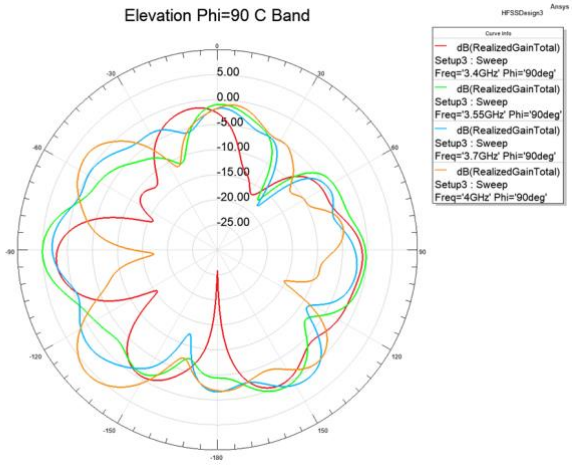


Figure 15. CELL, Elevation, C Band/CBRS, Theta/Deg, Phi = 90

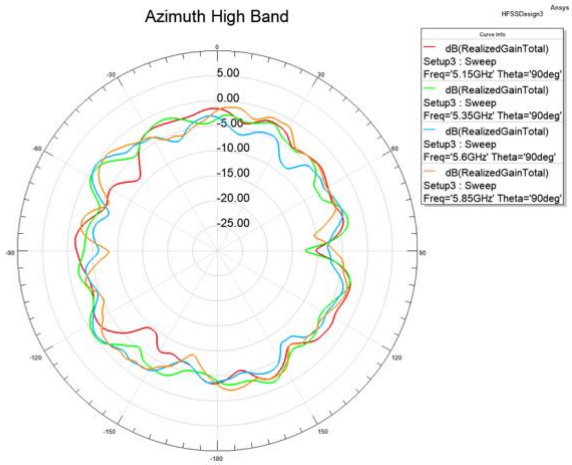


Figure 16. CELL, Azimuth, 5 GHz LAA, Phi/Deg, Theta = 90

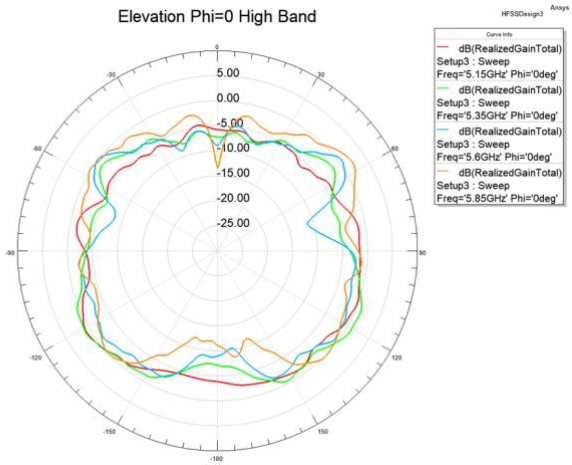


Figure 17. CELL, Elevation, 5 GHz LAA, Theta/Deg, Phi = 0

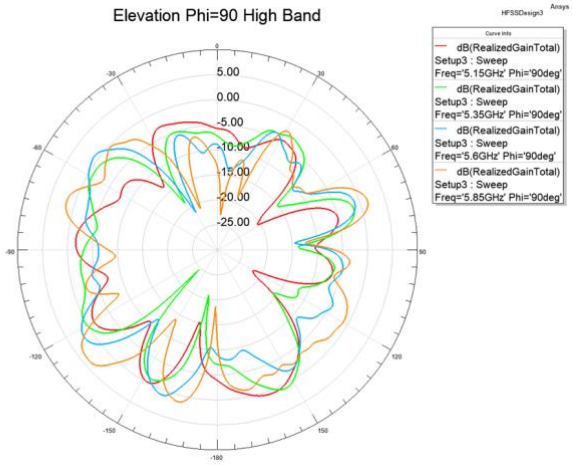


Figure 18. CELL, Elevation, 5 GHz LAA, Theta/Deg, Phi = 90

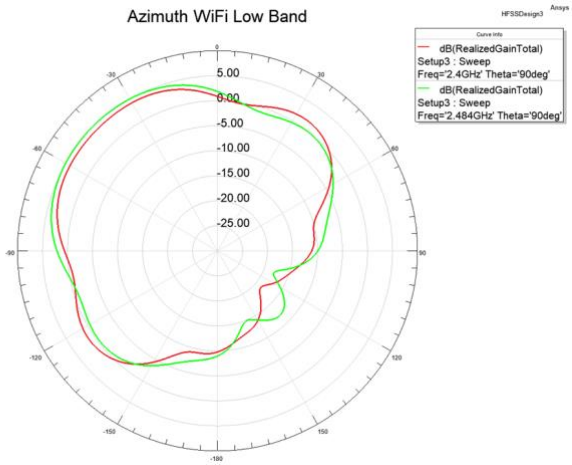


Figure 19. Wi-Fi, 2.4 GHz Azimuth, Phi/Deg, Theta = 90

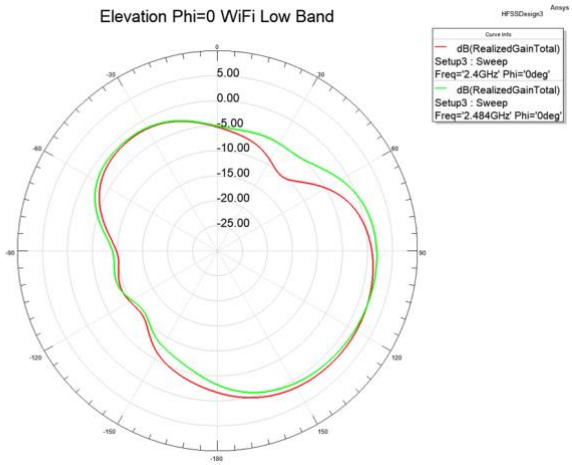


Figure 20. Wi-Fi, 2.4 GHz Elevation, Theta/Deg, Phi = 0

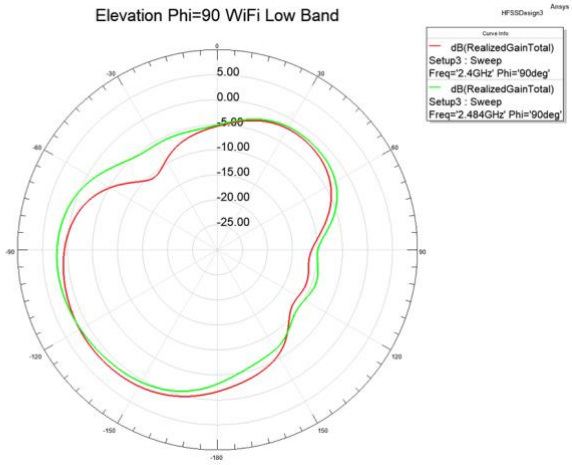


Figure 21. Wi-Fi, 2.4 GHz Elevation, Theta/Deg, Phi = 90

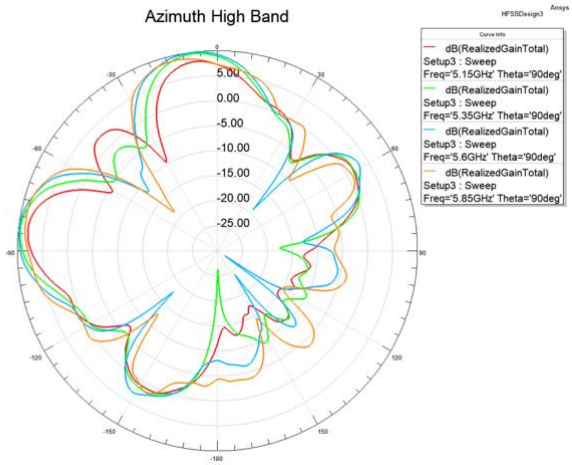


Figure 22. Wi-Fi, 5 GHz Azimuth, Phi/Deg, Theta = 90

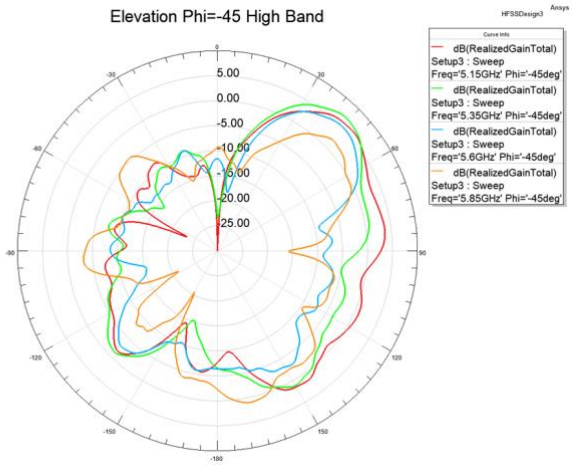


Figure 23. Wi-Fi, 5 GHz Elevation, Theta/Deg, Phi = 0

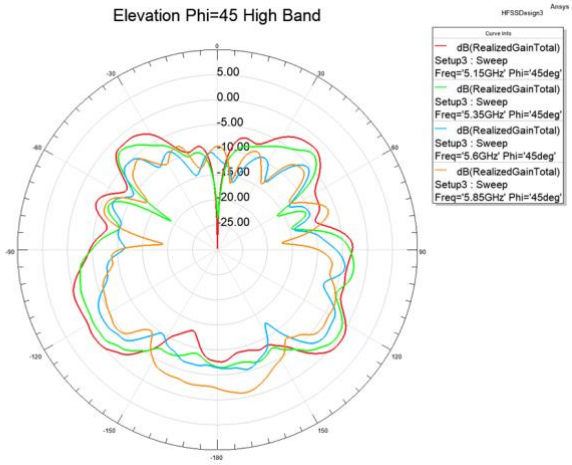


Figure 24. Wi-Fi, 5 GHz Elevation, Theta/Deg, Phi = 90

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Ordering Information

Part Number	PRO9BL4L4WG01	1 foot long cables
	PRO9BL4L4WG15	15 foot long cables
Packing for Shipment	Protective box, qty. 1 per box.	