



The Barracuda VFH69383B23JW multiport/multiband antenna provides an excellent solution for Public Safety, Transportation and Aftermarket Fleet applications. Configured for 2-port MIMO operation over the 3G/4G/ISM/CBRS bands and 3-port MIMO operation over the low//high frequency Wi-Fi bands. An additional 6th port provides an active antenna for enabling GNSS global navigation services.

FEATURES AND BENEFITS

- One single-hole mount/fixing- reduces vehicle damage and the cost of installation
- Attractive IP67 low profile aerodynamic housing
- Multiband/MIMO operation with GNSS navigation

APPLICATIONS

- FirstNet/Public Safety
- Transportation
- Aftermarket fleet
- 5G ready
- Rugged LTE Gateways
- Others

ELECTRICAL SPECIFICATIONS

Antenna Model	VFH69383B23JW-518J					
Number of Ports	6					
Port Configuration	2x- 3G/4G/ISM/CBRS				3x- Wi-Fi	
Operating Frequency (MHz)	698-806	824-894	880-960	1690-3800	2400-2500	4900-6000
Peak Gain – Avg (dBi)	1.0	-0.1	0.2	3.6	2.7	5.1
Peak Gain* – Max (dBi)	2.5	1.4	1.7	7.4	4.0	6.4
VSWR – Avg	<1.5:1	<1.5:1	<1.5:1	<1.3:1	<1.3:1	<1.2:1
VSWR – Max	<2.0:1				<2.0:1	
Isolation LTE1 to LTE2 (dB)	-17	-17	-17	-22	-30	-42
Isolation LTE1 to WIFI 1 (dB)	-36	-36	-38	-21	-21	-42
Isolation LTE1 to WIFI 2 (dB)	-40	-44	-45	-22	-22	-42
Isolation LTE1 to WIFI 3 (dB)	-19	-21	-24	-30	-36	-47
Isolation LTE2 to WIFI 1 (dB)	-37	-42	-43	-21	-21	-42
Isolation LTE2 to WIFI 2 (dB)	-35	-35	-37	-21	-21	-41
Isolation LTE2 to WIFI 3 (dB)	-16	-18	-19	-26	-36	-47
Isolation WIFI 1 to WIFI 2 (dB)	-58	-59	-58	-37	-38	-46
Isolation WIFI 1 to WIFI 3 (dB)	-41	-44	-47	-38	-38	-46
Isolation WIFI 2 to WIFI 3 (dB)	-40	-42	-42	-35	-36	-45
Isolation GNSS to LTE 1 (dB)	-41	-50	-51	-41	-52	-52
Isolation GNSS to LTE 2 (dB)	-42	-42	-41	-49	-53	-54
Isolation GNSS to WIFI 1 (dB)	-69	-71	-66	-52	-54	-49
Isolation GNSS to WIFI 2 (dB)	-67	-69	-69	-51	-52	-54
Isolation GNSS to WIFI 3 (dB)	-40	-45	-44	-48	-56	-61
Azimuth Plane 3 dB Beamwidth	360°, Omnidirectional					
Nominal Impedance (Ohms)	50					
Polarization	Linear Vertical					
Max Power - Ambient 25°C (W)	10					

MECHANICAL SPECIFICATIONS

Dimensions – L x W x H – mm (inches)	179 x 63 x 48 (7.04 x 2.48 x 1.69)
Weight – kg (lbs.)	0.72 (1.6)
Cable Type	LMR 100, Black
Mounting	P-Mount
Radome Material	PC, UL94-V0
Baseplate Material	Aluminum

ENVIRONMENTAL SPECIFICATIONS

Operating Environment	Outdoor Vehicle
Operating Temperature – °C (°F)	-30 to +70°C (-22 to +158°F)
Storage Temperature – °C (°F)	-40 to +85°C (-40 to +185°F)
Ingress Protection Rating	IP67
Material Substance Compliance	RoHS

ENVIRONMENTAL SPECIFICATIONS
GNSS ANTENNA SPECIFICATIONS

Frequency of Operation (MHz)	1559 - 1606		
Band	BEIDOU	GPS	GLONASS
Frequency Band (MHz)	1559.052 - 1563.144	1574.42 - 1576.42	1598.0625 - 1605.89
Absolute Gain (dBi)	2	2	2
LNA Gain, Typ. @ room temp. (dBi)	26	27	26
Noise Figure @ room temp., Max (dB)	3.0	2.5	2.8
Max VSWR @ room temp.	2:1	2:1	2:1
Polarization	RHCP		
Nominal Impedance (Ohms)	50		
DC Voltage (Vdc)	3.3		
Operating Supply Voltage (Vdc)	2.5 - 7.0		
Current Consumption, Max @ room temp mA)	20		
Out-of-band Signal Rejection Min @ room temp (dBc)	60 (@1-1525 MHz)	60 (@1675-2000 MHz)	50 (@2000-3000 MHz)
Input Max Power (dBm)	-30		
Cable Type	RG14		

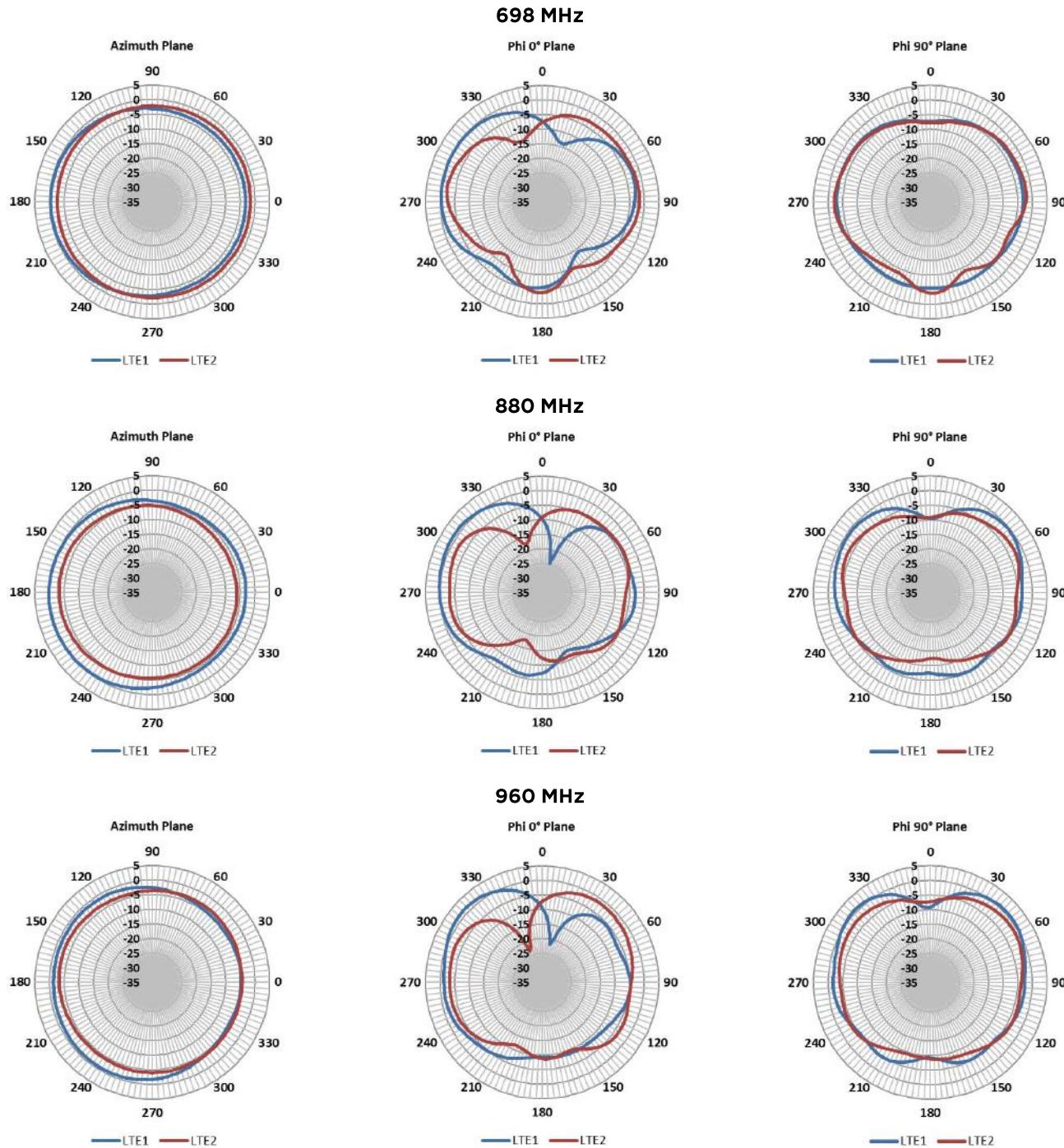
CONFIGURATION

PART NUMBER	CABLE LENGTH	CONNECTOR - LTE PORTS	CONNECTOR - WI-FI PORTS	CONNECTOR - GNSS PORT
VFH69383B23JW-518J	5.18 m (17.0 ft.)	SMA- male	SMA- male	SMA- male

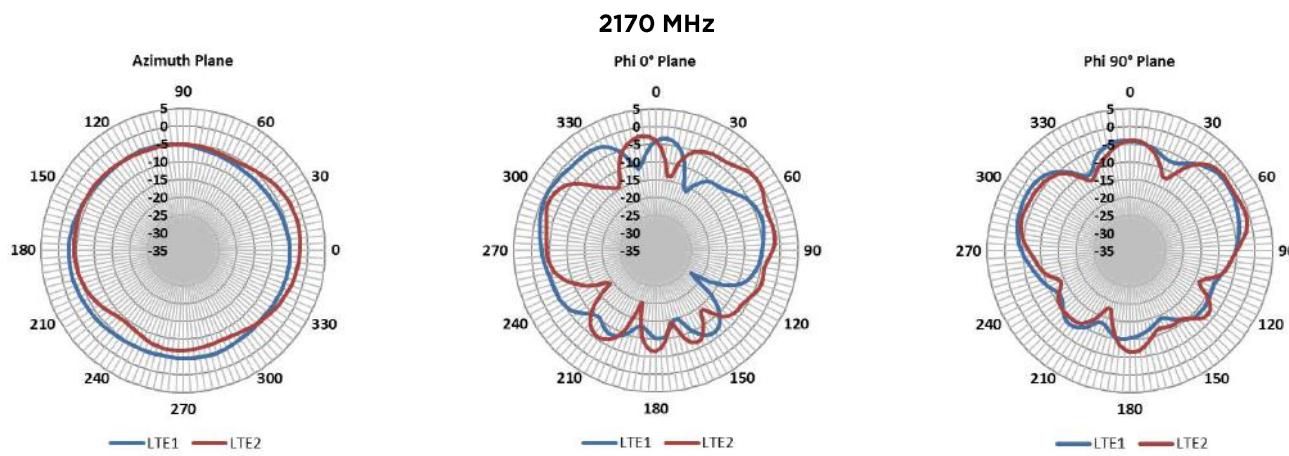
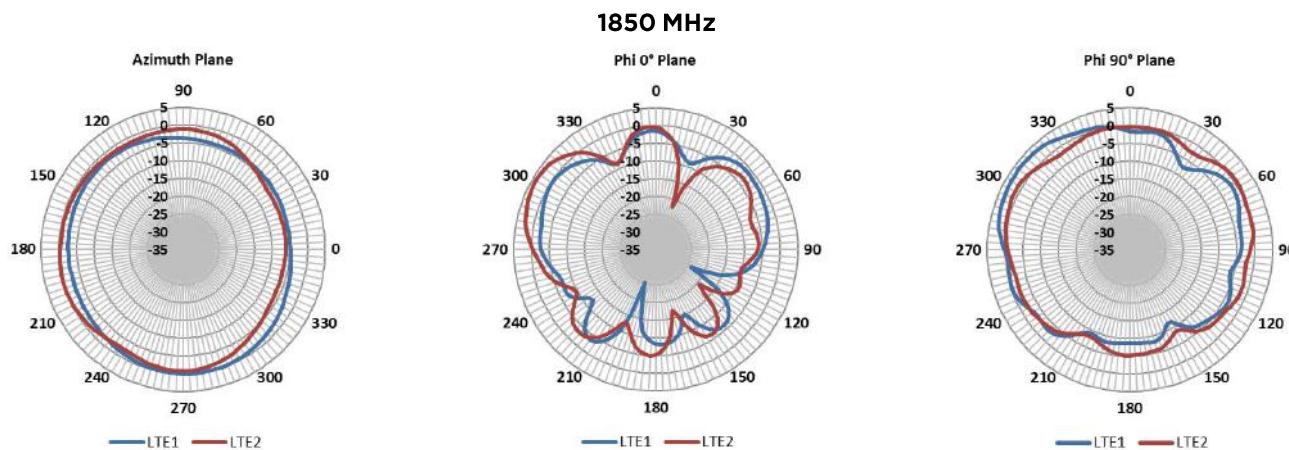
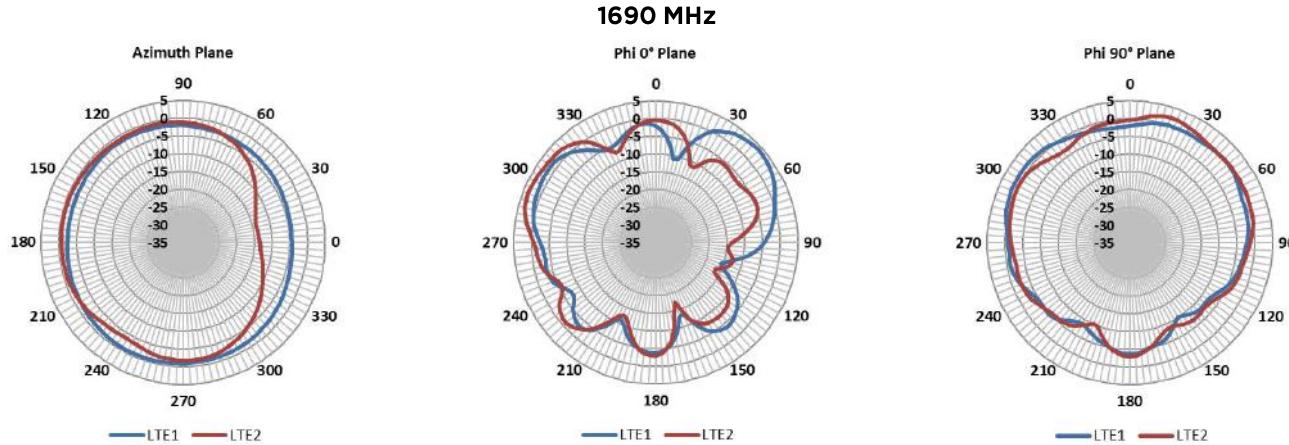
PACKAGING INFORMATION

PACKAGED DIMENSIONS	CARTON	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	1	8	192	240
Height - cm (in.)	135 (5.31)	295 (11.6)	1350 (53.15)	1650 (64.96)
Length - cm (in.)	245 (9.65)	520 (20.5)	1200 (47.24)	1200 (47.24)
Width - cm (in.)	120 (47.2)	260 (10.2)	800 (31.5)	800 (31.5)
Shipping Weight - kg (lb.)	0.85 (1.9)	7.5 (16)	198 (436)	245 (540)

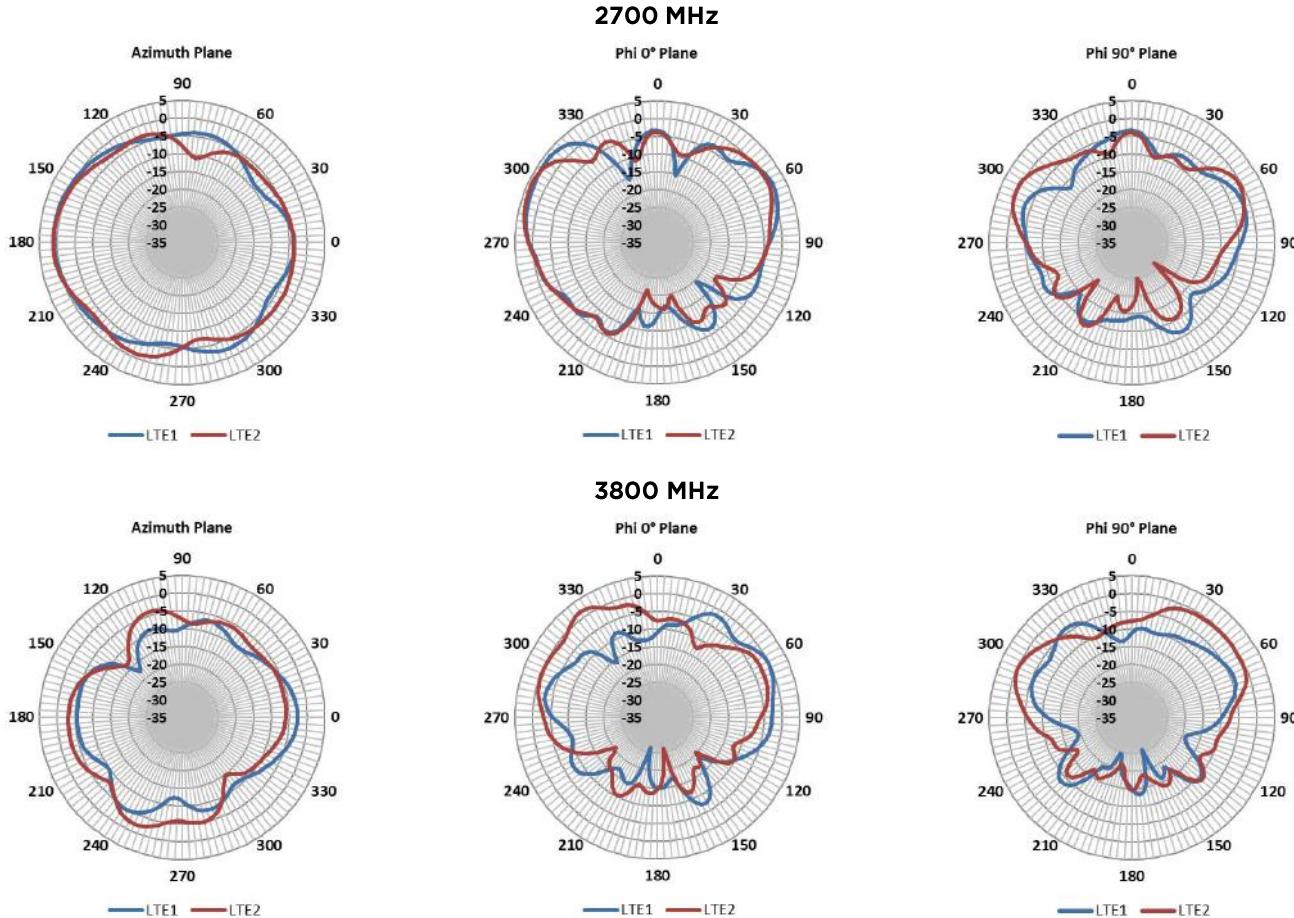
RADIATION PATTERNS – LTE ANTENNAS



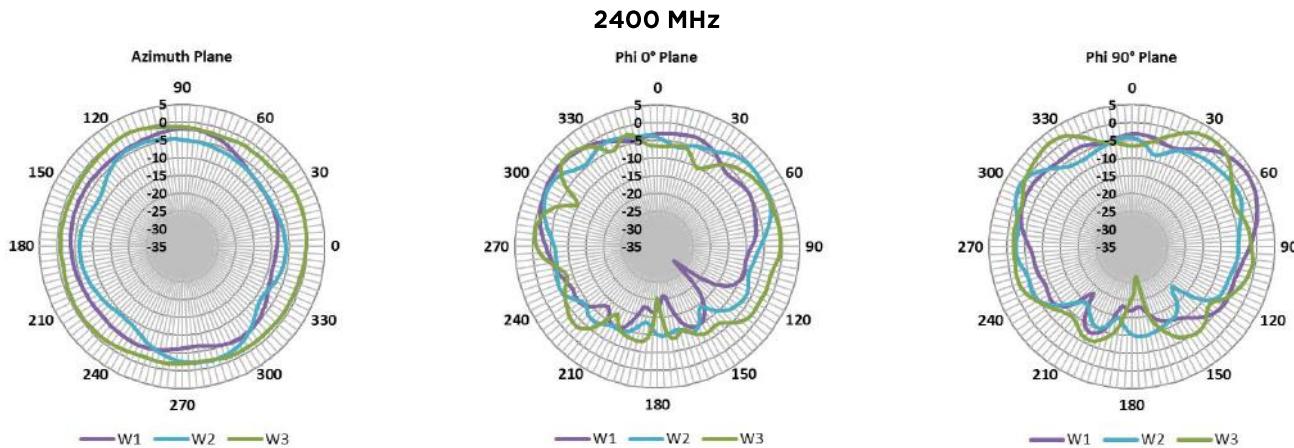
RADIATION PATTERNS – LTE ANTENNAS



RADIATION PATTERNS – LTE ANTENNAS

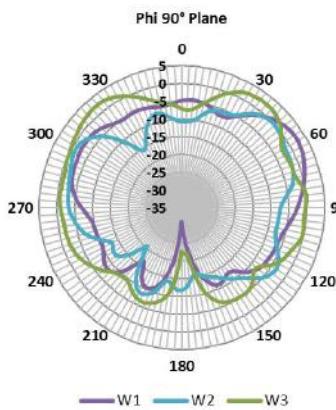
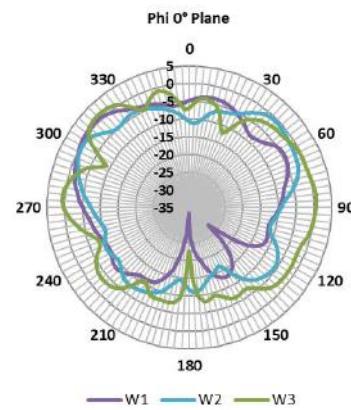
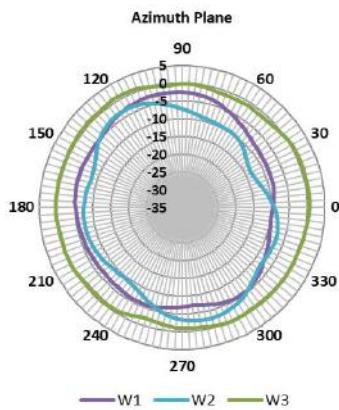


RADIATION PATTERNS – WI-FI ANTENNAS

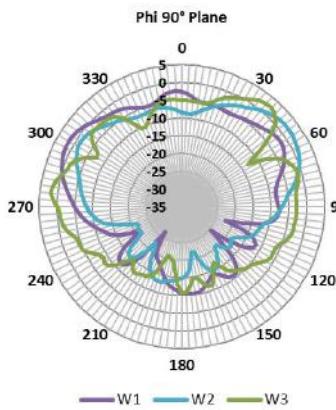
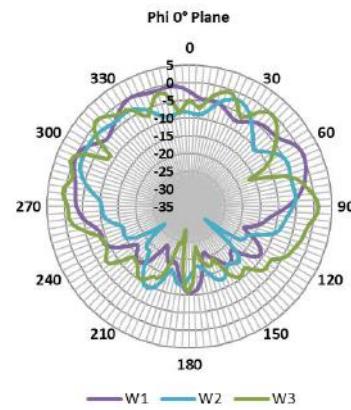
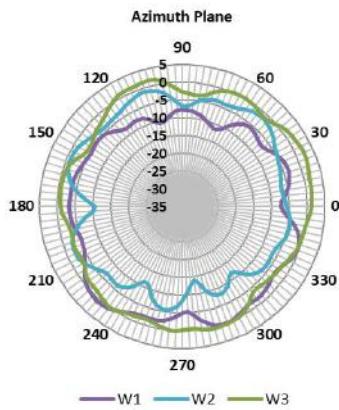


RADIATION PATTERNS – WI-FI ANTENNAS

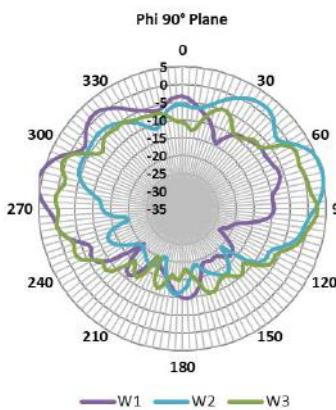
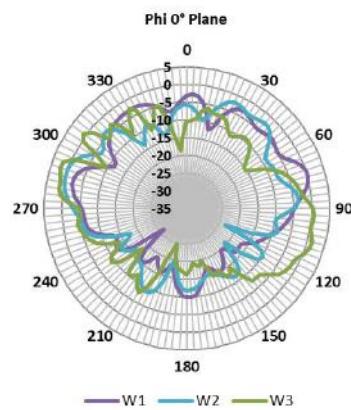
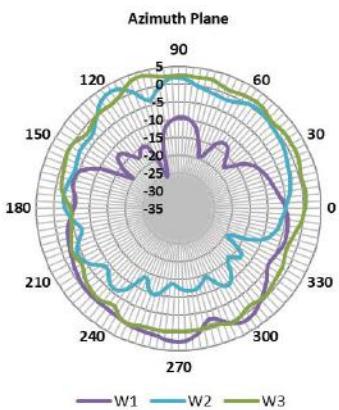
2500 MHz



4900 MHz



5900 MHz



✓RoHS

Laird warrants to the original end user customer of its products that its products are free from defects in material and workmanship. Subject to conditions and limitations Laird will, at its option, either repair or replace any part of its products that prove defective because of improper workmanship or materials. This limited warranty is in force for the useful lifetime of the original end product into which the Laird product is installed. Useful lifetime of the original end product may vary but is not to exceed five (5) years from the original date of the end product purchase.

sales@lairdconnect.com
support@lairdconnect.com
www.lairdconnect.com

Any information furnished by Laird Inc. and its agents is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird materials rests with the end user, since Laird and its agents cannot be aware of all potential uses. Laird makes no warranties as to the fitness, merchantability or suitability of any Laird materials or products for any specific or general uses. Laird shall not be liable for incidental or consequential damages of any kind. All Laird products are sold pursuant to the Laird Terms and Conditions of sale in effect from time to time, a copy of which will be furnished upon request.

© Copyright 2019 Laird Inc. All Rights Reserved. Laird, Laird Technologies, the Laird Logo, and other marks are trademarks or registered trademarks of Laird Inc. or an affiliate company thereof. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird or any third party intellectual property rights.

