



The Gar VFQ69383x21JN multiport/multiband antenna provides an excellent solution for public safety, transportation and aftermarket fleet applications. Configured for two-port operation over the 3G/4G/5G/ISM/CBRS bands and one-port operation over the low//high frequency Wi-Fi bands. An additional fourth 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/multiport operation with GNSS navigation

APPLICATIONS

- FirstNet/Public safety
- Transportation
- Aftermarket fleet
- 5G-ready
- Rugged LTE gateways
- Others

ELECTRICAL SPECIFICATIONS

Antenna Model	VFQ69383x21JN					
Number of Ports	4					
Port Configuration	2x- 3G/4G/5G/ISM/CBRS				1x- Wi-Fi	
Operating Frequency (MHz)	698-806	824-894	880-960	1690-3800	2400-2500	4900-6000
Peak Gain (*) – Avg (dBi)	0.2	0.6	1.1	3.8	2.4	6.4
Peak Gain (*) – Max (dBi)	1.2	1.1	1.8	7.4	3.1	7.0
VSWR (**) – Avg	<1.6:1	<1.6:1	<1.6:1	<1.3:1	<1.4:1	<1.3:1
VSWR (**) – Max	<2.0:1				<2.0:1	
Isolation (**) LTE1 to LTE2, dB	-15	-19	-17	-24	-	-
Isolation (**) LTE1 to WiFi, dB	-41	-43	-41	-20	-20	-45
Isolation (**) LTE2 to WiFi, dB	-50	-49	-49	-34	-34	-49
Isolation (**) WiFi to GNSS, dB	-	-	-	-	-28	-39
Isolation (**) LTE1 to GNSS, dB	-41	-42	-42	-27	-	-
Isolation (**) LTE2 to GNSS, dB	-42	-43	-42	-33	-	-
Azimuth Plane 3 dB Beamwidth	360°, Omnidirectional					
Nominal Impedance (Ohms)	50					
Polarization	Linear Vertical					
Max Power - Ambient 25°C (W)	10					

Notes: (*) – This parameter is based on a one-foot cable length and one-foot ground plane.

(**) – This parameter is based on a 17-foot cable length and one-foot ground plane.

Antenna specifications are subject to change according to the ground plane size.

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.)	0.60 kg (1.3 lbs)
Cable Type	LMR 100, Black
Mounting	P-Mount
Color	Black or White
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

GNSS SPECIFICATIONS

Frequency of Operation (MHz)	1559 - 1606		
Band	BEIDOU	GPS	GLONASS
Frequency Band (MHz)	1561.098 ±2.046	1575.42 ±1.023	1602 ±5
Antenna Gain (dBi)	3.3	4.6	4.8
LNA Gain, Typ. @ room temp. (dBi)		28 ±3	
Noise Figure @ room temp., Max (dB)		≤ 2.5 @ 1575 MHz	
Max VSWR @ room temp.		≤ 2.0	
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)	> 88	> 84	> 86
Input Max Power (dBm)		-33	
Cable Type		RG14	

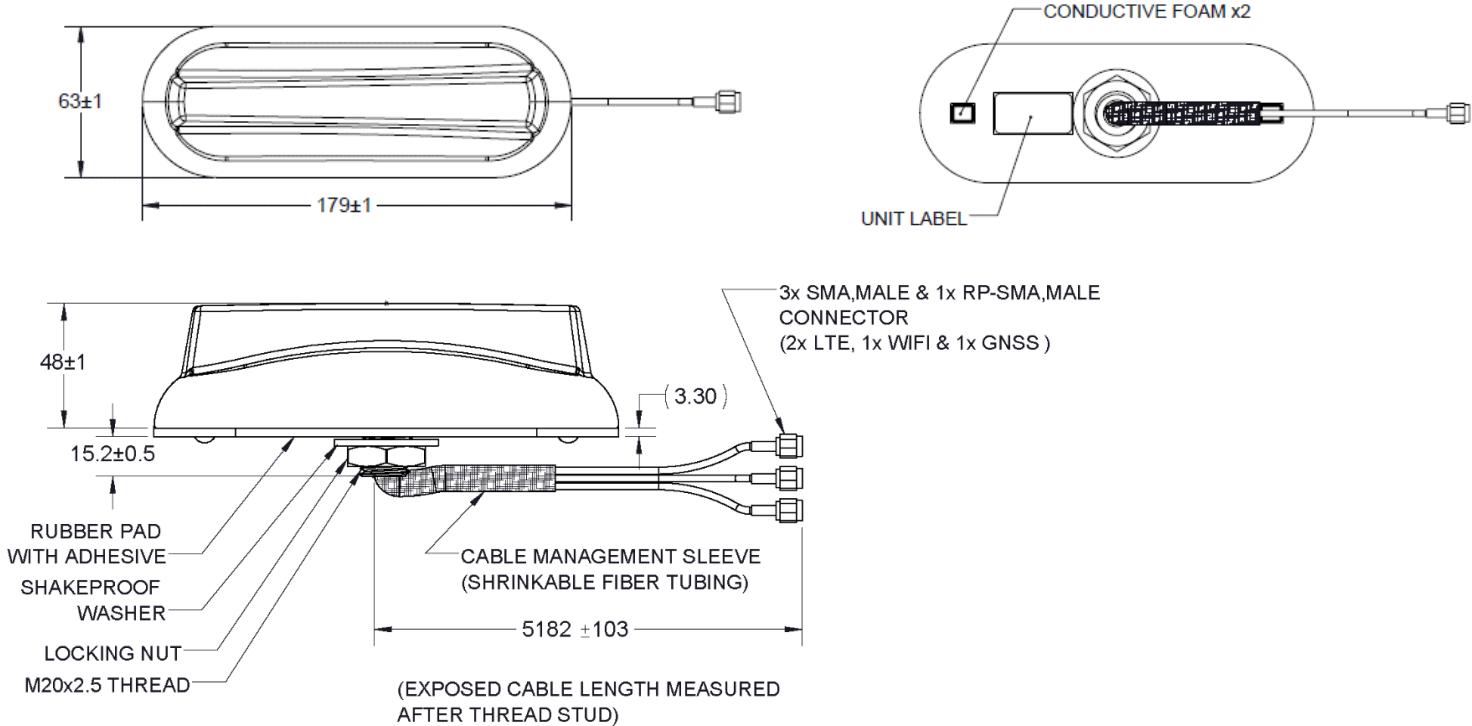
CONFIGURATION

PART NUMBER	CABLE LENGTH	CONNECTOR - LTE PORT	CONNECTOR - WI-FI PORT	CONNECTOR - GNSS PORT	COLOR
VFQ69383B21JN-518L	5.18 m (17.0 ft.)	SMA-male	RPSMA-male	SMA-male	Black
VFQ69383W21JN-518L	5.18 m (17.0 ft.)	SMA-male	RPSMA-male	SMA-male	White

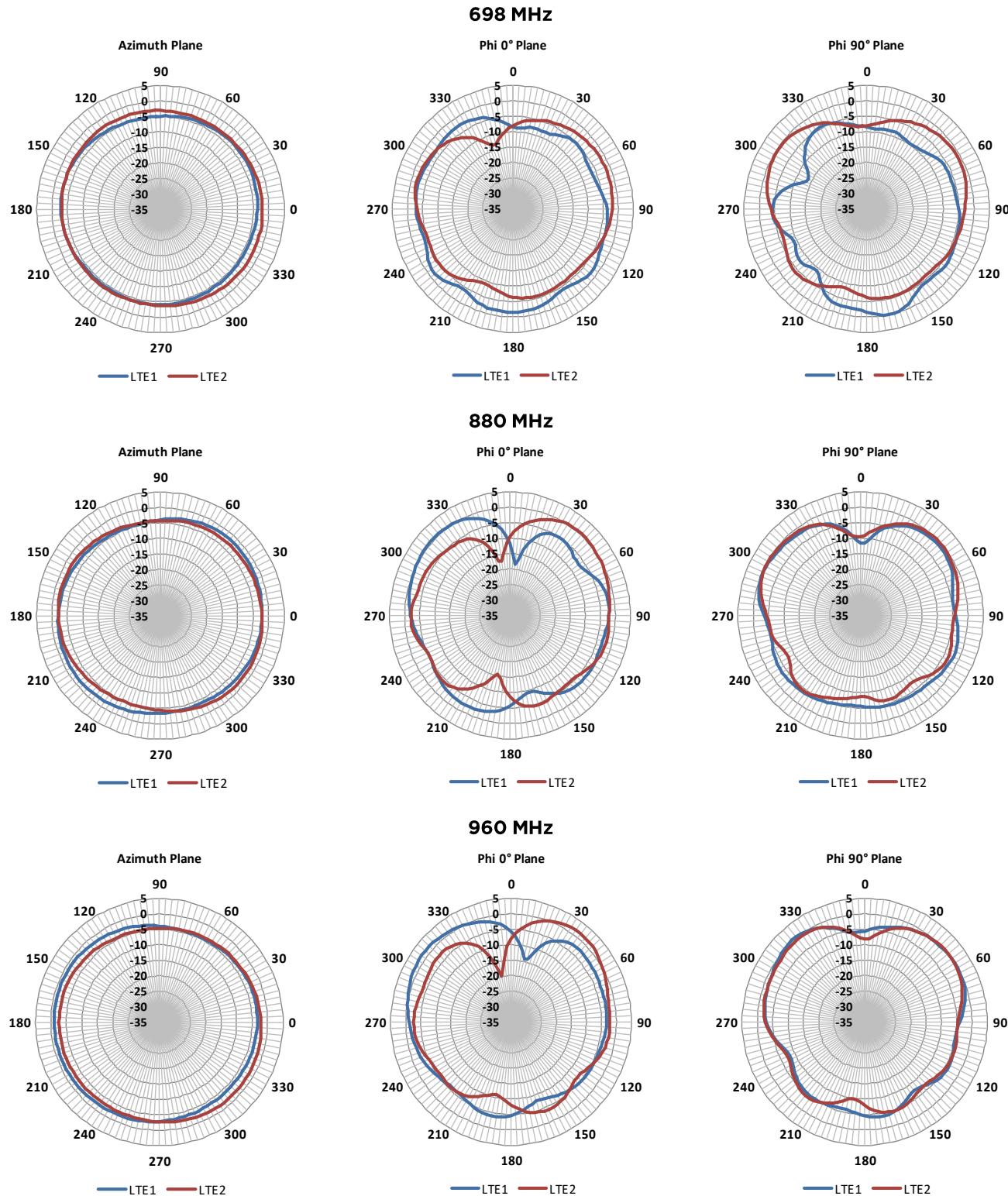
PACKAGING INFORMATION

PACKAGED DIMENSIONS	CARTON	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	1	8	192	240
Height - mm (in.)	135 (5.31)	295 (11.6)	1350 (53.15)	1650 (64.96)
Length - mm (in.)	245 (9.65)	520 (20.5)	1200 (47.24)	1200 (47.24)
Width - mm (in.)	120 (47.2)	260 (10.2)	800 (31.5)	800 (31.5)
Shipping Weight - kg (lb.)	0.73 (1.6)	6.6 (15)	177 (390)	217 (478)

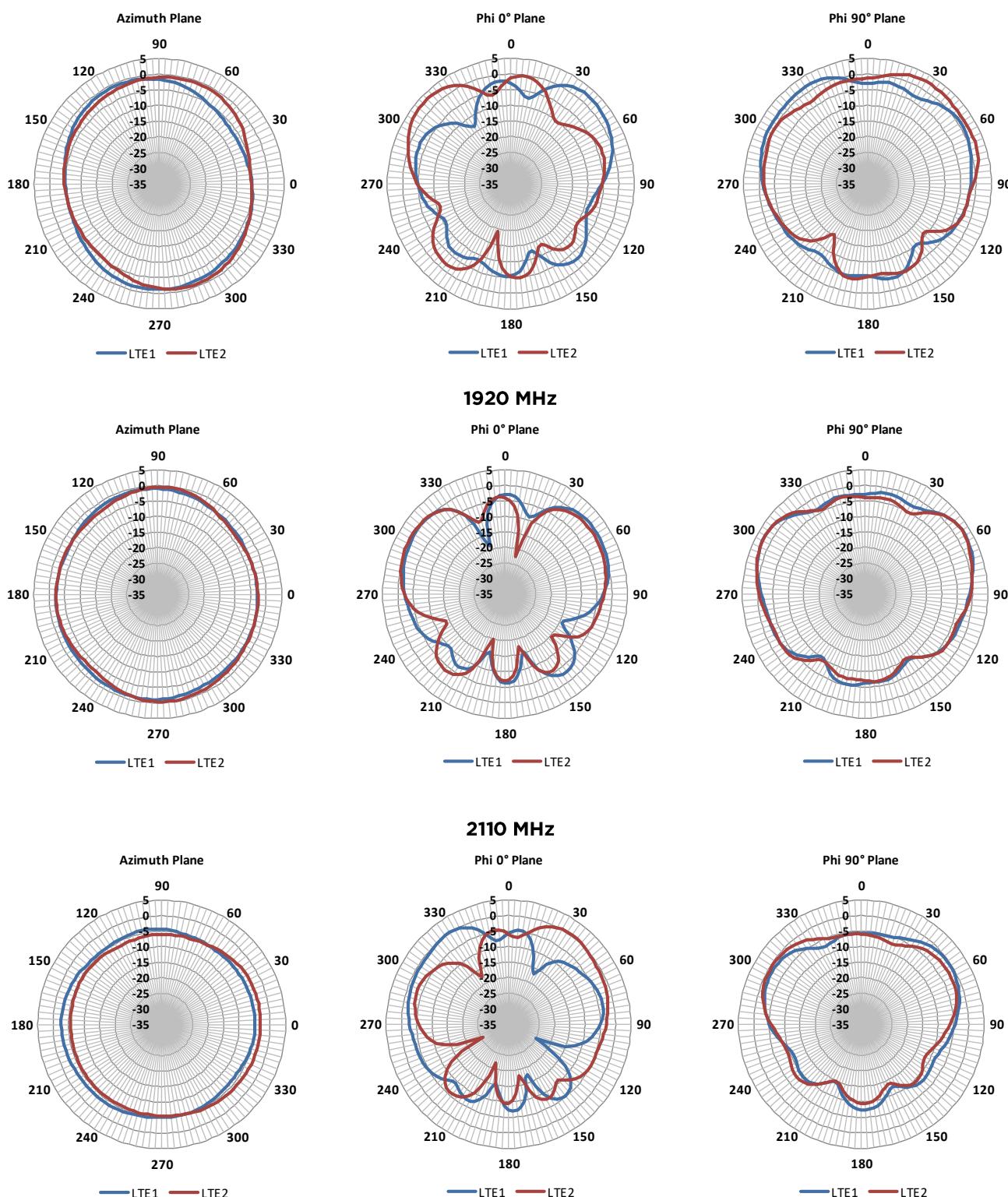
MECHANICAL DRAWINGS



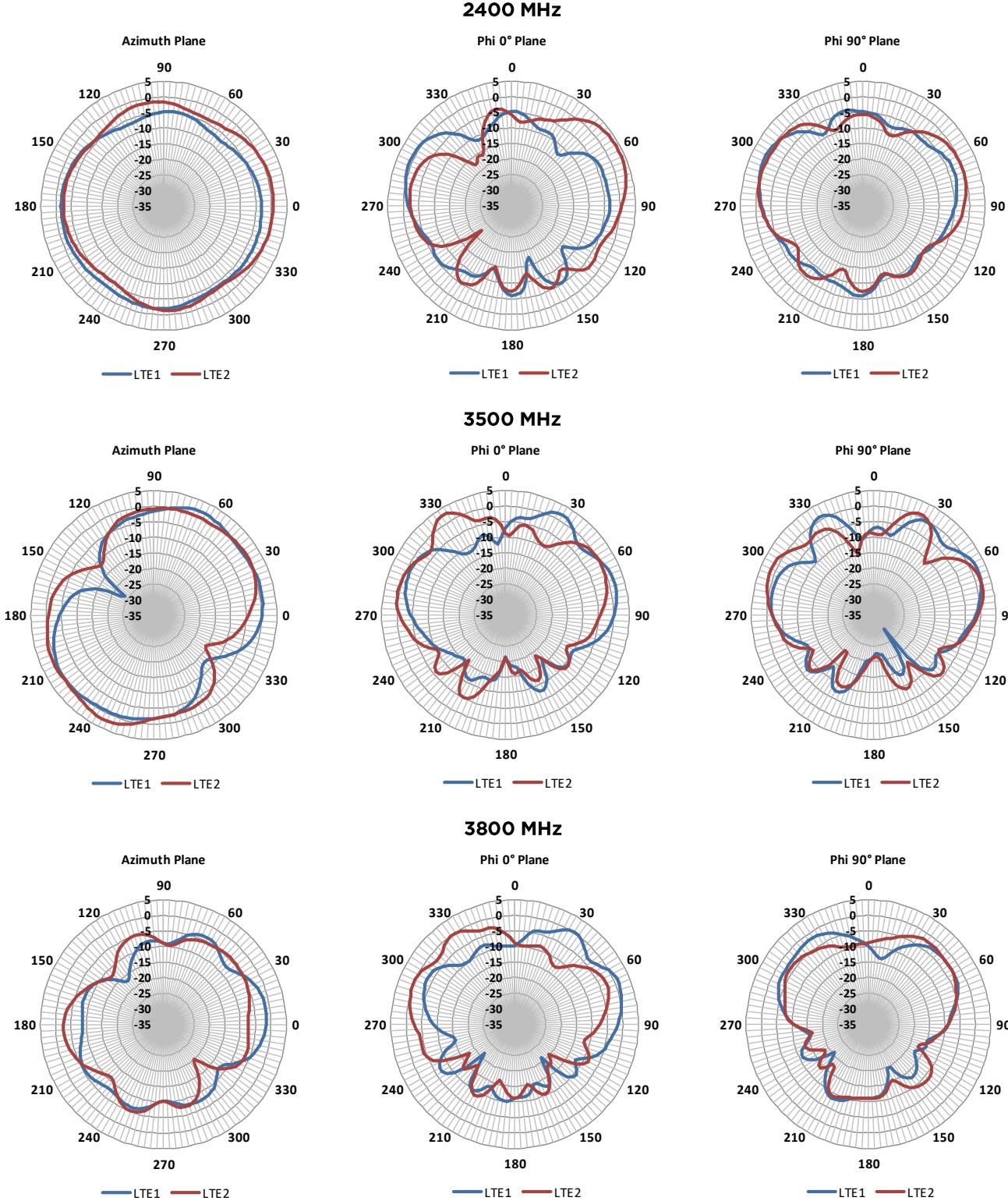
RADIATION PATTERNS – LTE ANTENNAS



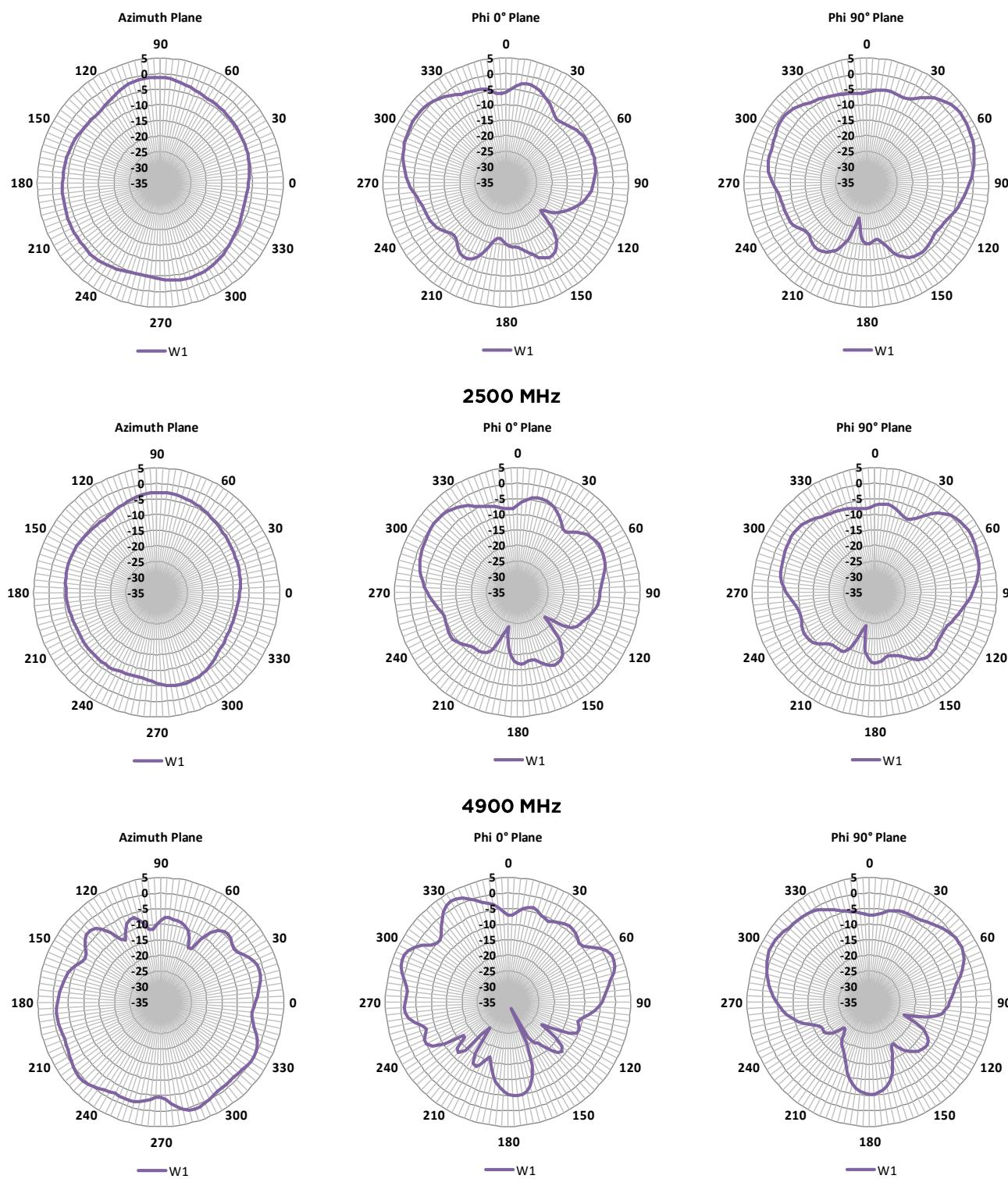
RADIATION PATTERNS – LTE ANTENNAS



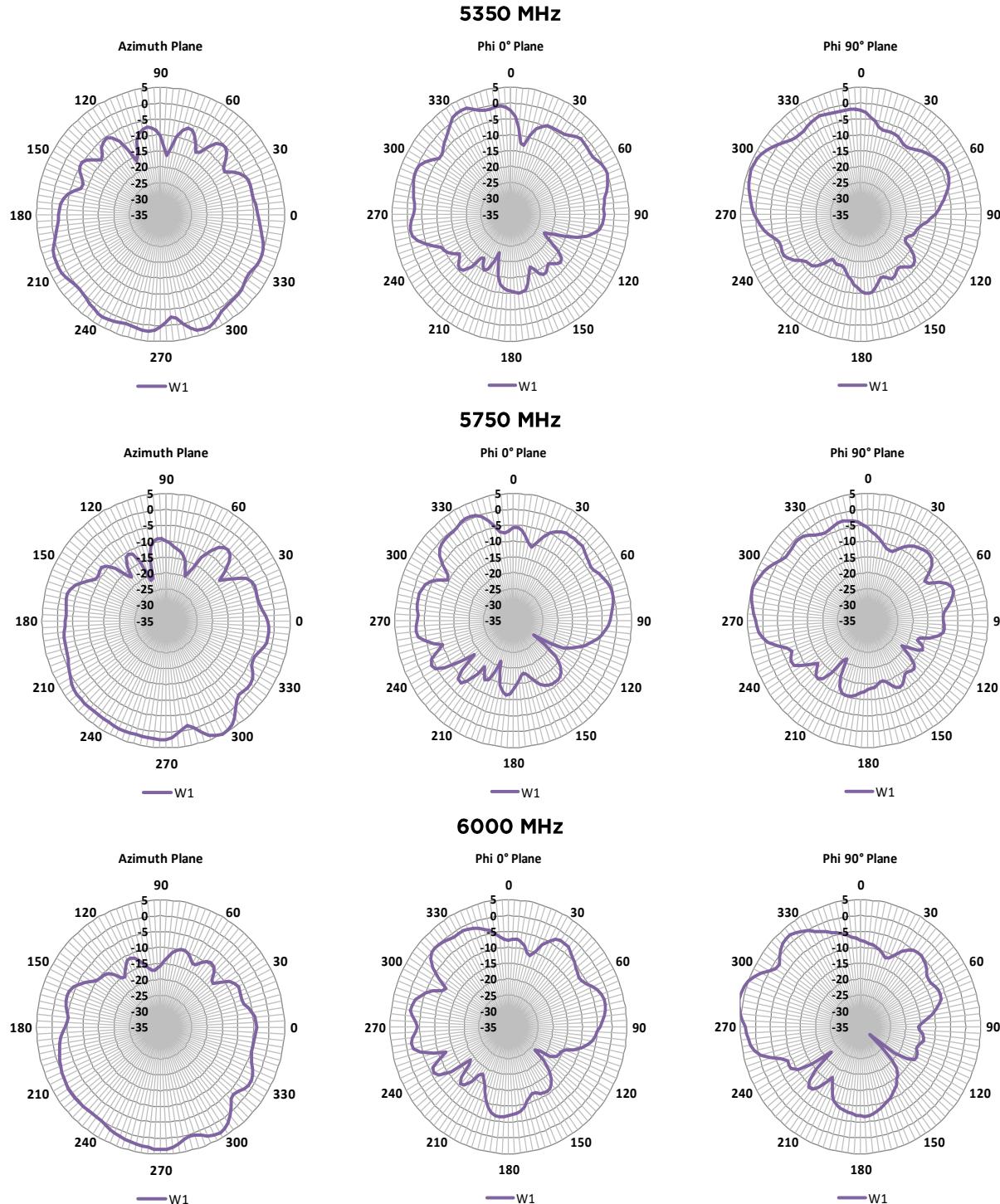
RADIATION PATTERNS – LTE ANTENNAS



RADIATION PATTERNS – WI-FI ANTENNAS



RADIATION PATTERNS – WI-FI ANTENNAS



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.

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.

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

