Gar VFD69383x2NNN

2-Port Vehicular MIMO Antenna 698960/1690-3800 MHz

The Gar VFD69383x2NNN multiport/multiband antenna provides an excellent solution for Public safety, transportation, and Aftermarket Fleet applications. Configured for two-port MIMO operation over the 3G/4G/5G/ISM/CBRS bands.

FEATURES AND BENEFITS

- One single-hole mount/fixing- reduces vehicle damage and the cost of installation
- Attractive IP67 low profile aerodynamic housing
- Multiband/Multiport MIMO 3G/4G/ISM/CBRS operation
- Operates well on a ground plane and without a ground plane.

APPLICATIONS

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

ELECTRICAL SPECIFICATIONS									
Antenna Model	VFD69383x2NNN								
Number of Ports	2								
Port Configuration	2x – 3G/4G/5G/ISM/CBRS (LTE/CELL)								
Operating Frequency (MHz)	698-806	824-894	880-960	1690-1880	1850-1990	1910-2180	2300-2500	2500-2700	3300-3800
Avg. Peak Gain* (dBi) – Gnd. Plane [No Gnd. Plane]	0.2 [1.0]	1.0 [2.0]	1.5 [2.3]	3.6 [1.6]	3.5 [1.5]	2.9 [1.3]	3.2 [1.2]	4.0 [1.6]	5.1 [2.3]
Max Peak Gain* (dBi) – Gnd. Plane [No Gnd. Plane]	1.8 [2.0]	1.8 [2.4]	2.1 [3.0]	4.9 [2.5]	3.9 [2.3]	3.9 [2.3]	3.9 [2.1]	4.7 [2.6]	7.2 [3.7]
VSWR** – Avg, Gnd. Plane [No Gnd. Plane]	1.7 [2.0]	1.8 [1.7]	1.8 [1.7]	1.4 [1.5]	1.4 [1.4]	1.4 [1.5]	1.6 [1.6]	1.4 [1.6]	1.3 [1.3]
VSWR** – Max, Gnd. Plane [No Gnd. Plane]	2.5 [2.5]	2.2 [2.5]	2.3 [2.5]	2.0 [2.1]	2.0 [2.1]	2.1 [2.1]	2.0 [2.1]	2.0 [2.1]	2.0 [2.1]
Isolation **(dB) LTE1 to LTE2 – Gnd. Plane [No Gnd. Plane]	-10 [-14]	-12 [-15]	-14 [-15]	-18 [-16]	-17 [-16]	-17 [-16]	-21 [-23]	-19 [-23]	-27 [-30]
Azimuth Plane 3 dB Beamwidth	360°, Omnidirectional								
Nominal Impedance (Ohms)	50								
Polarization	Linear Vertical								
Max Power - Ambient 25°C (W)	30 (LTE/CELL)								

Notes: (*) – This parameter is based on a 30cm (1ft) cable length. For the ground plane measurement, a 30cm (1ft) ground plane was used.(**) – This parameter is based on a 518cm (17ft) cable length. For the ground plane measurement, a 30cm (1ft) ground plane was used. 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.)	0.65 kg (1.4 lbs)
Mounting	P-Mount
Cable Type	LMR 100- pigtails, LMR 195- jumper cables, Black
Color	Black or White
Radome Material	PC, UL94-V0
Baseplate Material	Aluminum

ENVIRONMENTAL SPECIFICATIONS	
Operating Environment	Outdoor Vehicle
Operating Temperature – °C (°F)	-40 to +85°C (-40 to +185°F)
Storage Temperature – °C (°F)	-40 to +85°C (-40 to +185°F)
Ingress Protection Rating	IP67
Rail Compliance Standards	EN61373 (Shock & Vibration), EN50155 (Temperature)
Material Substance Compliance	RoHS

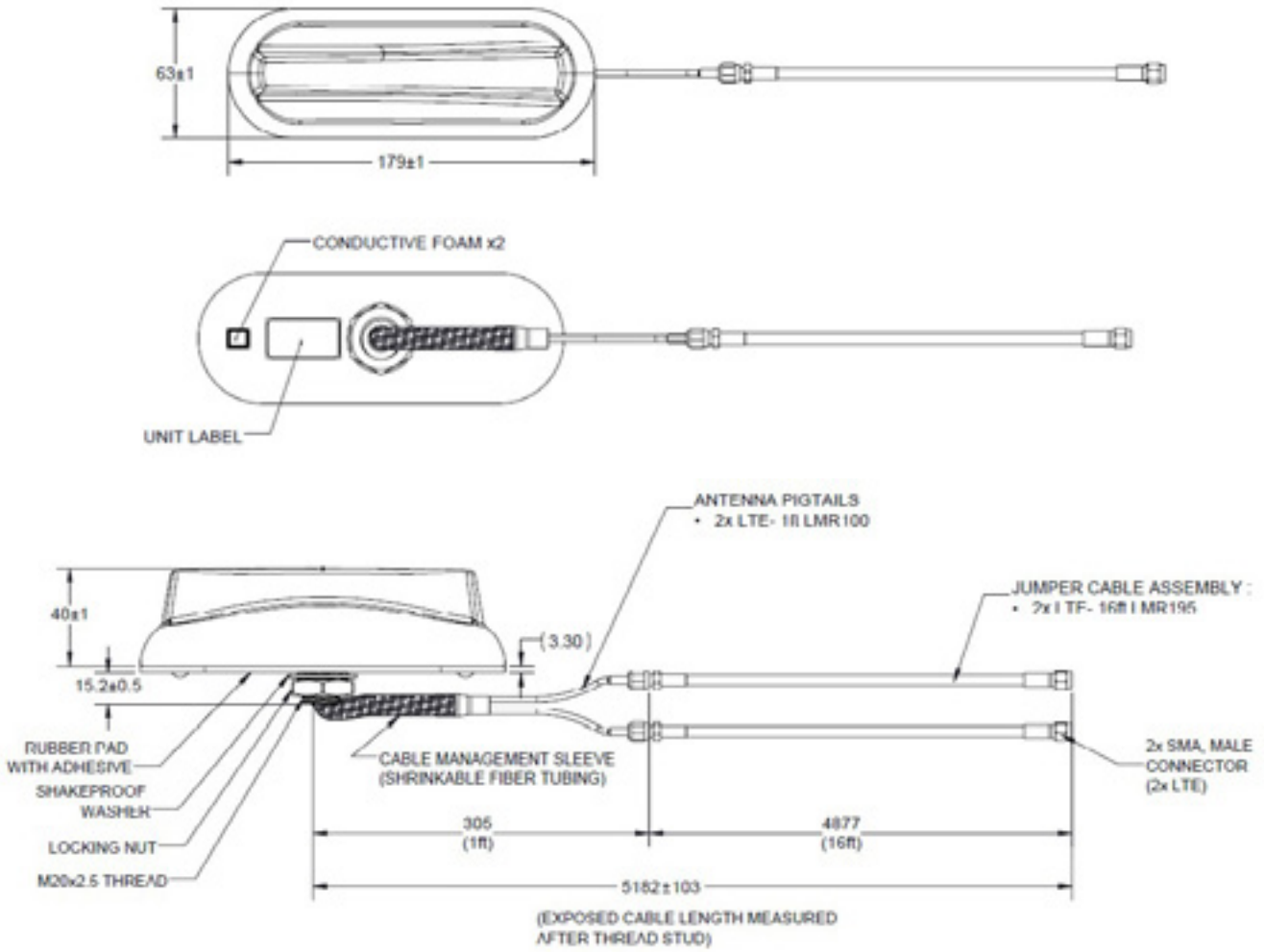
CONFIGURATION

PART NUMBER	PIGTAIL CABLE LENGTH	JUMPER CABLE LENGTH	CONNECTOR – LTE PORTS	COLOR
VFD69383B2NNN-518R	0.3 m (1 ft.)	4.9 m (16 ft)	SMA-male	Black
VFD69383W2NNN-518R	0.3 m (1 ft.)	4.9 m (16 ft)	SMA-male	White

PACKAGING INFORMATION

PACKAGED DIMENSIONS	CARTON	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	1	4	140	196
Height – mm (in.)	130 (5.12)	235 (9.25)	1335 (52.56)	1813 (71.38)
Length – mm (in.)	222 (8.74)	543 (21.38)	1200 (47.24)	1200 (47.24)
Width – mm (in.)	222 (8.74)	232 (9.13)	800 (31.5)	800 (31.5)
Shipping Weight – kg (lb.)	0.88 (1.9)	4.06 (8.95)	155 (342)	212 (467)

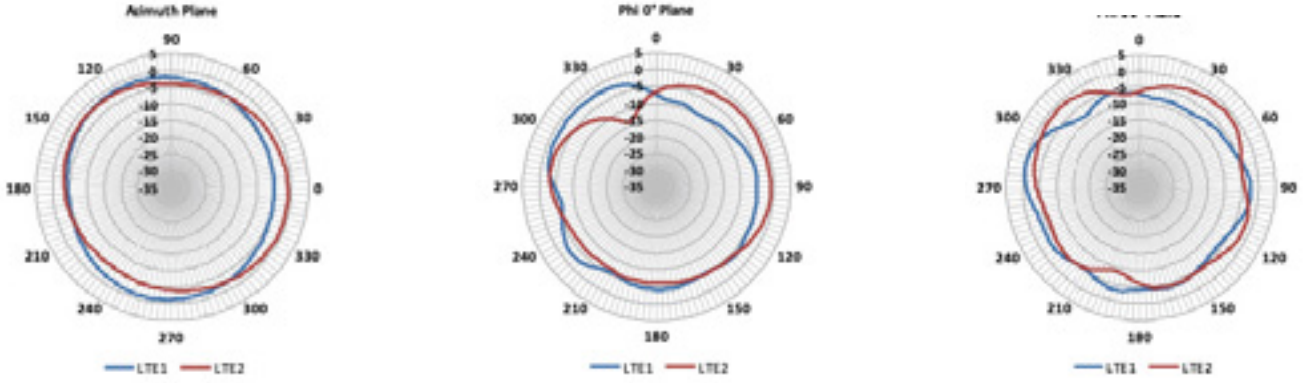
MECHANICAL DRAWINGS



The Gar antenna can create an IP67 water-tight seal when installed on vehicles. Certain vehicles such as a Ford Explorer Interceptor have more narrow roof ridges that are tightly spaced together. For this type, vehicle special adapters are available. See parts **BKIT-VFX69383-001** (between ridges installation) and **BKIT-VFX69383-003** (atop ridge installation) for product details.

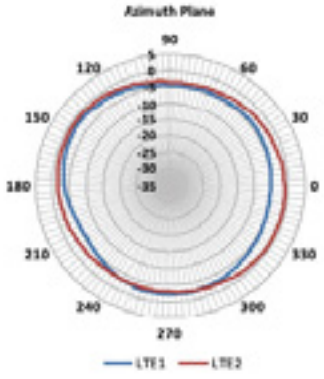
RADIATION PATTERNS *WITH GROUND PLANE* – LTE ANTENNAS

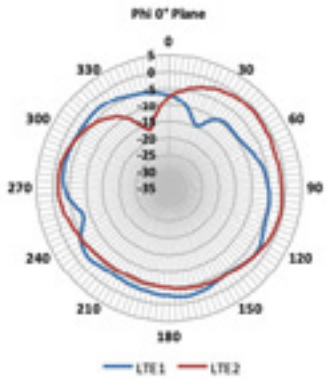
698 MHz

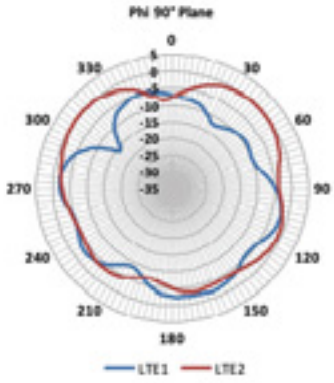


RADIATION PATTERNS *WITH GROUND PLANE* – LTE ANTENNAS

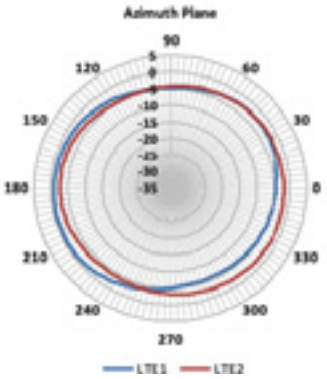
725 MHz

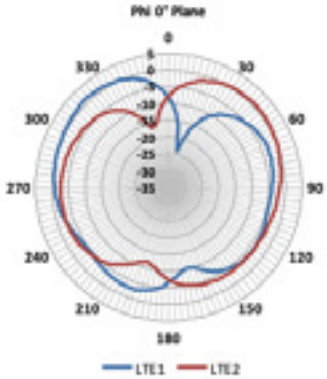


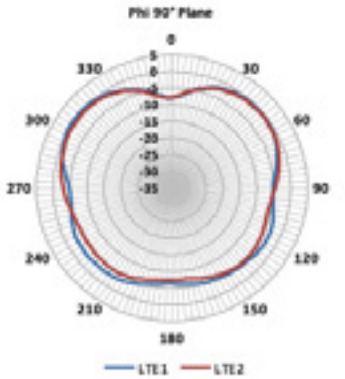




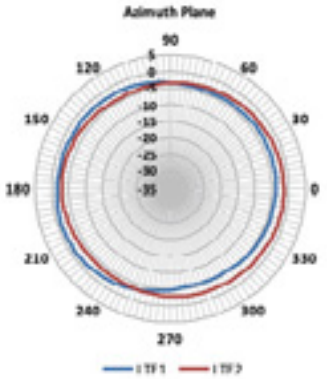
880 MHz

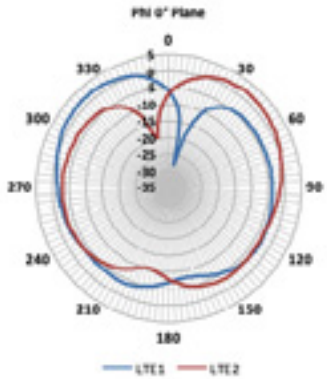


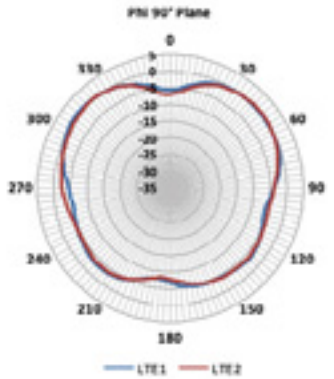




960 MHz

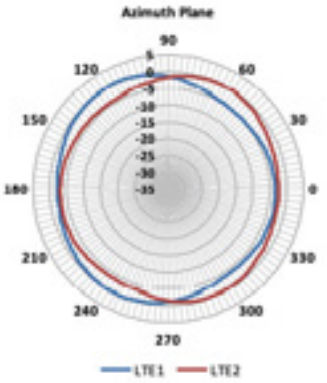


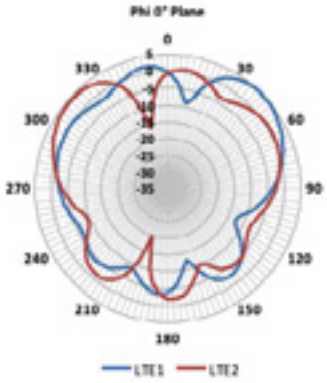


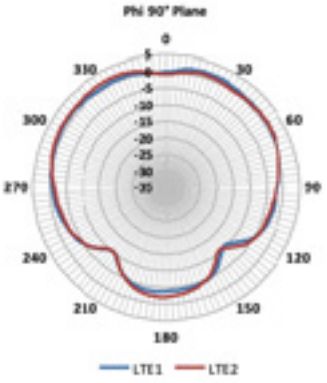


RADIATION PATTERNS *WITH GROUND PLANE* – LTE ANTENNAS

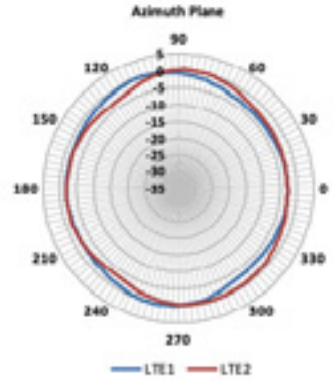
1690 MHz

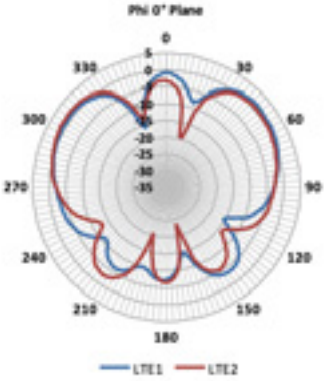


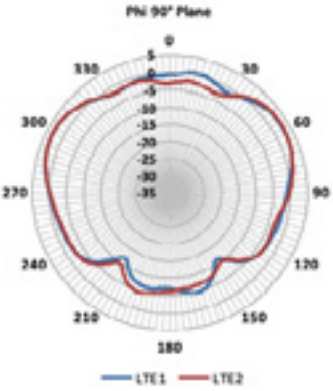




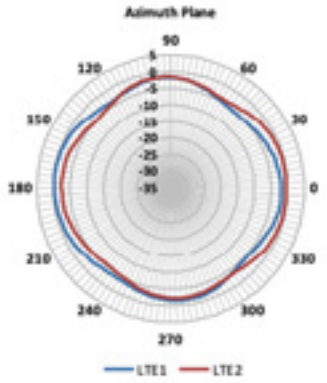
1920 MHz

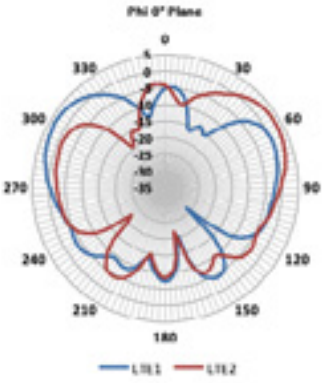


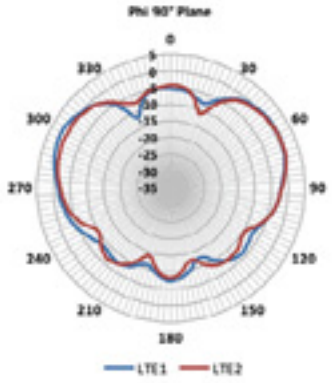




2110 MHz

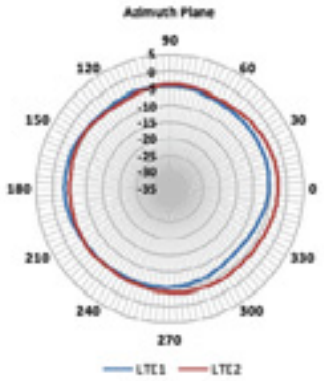


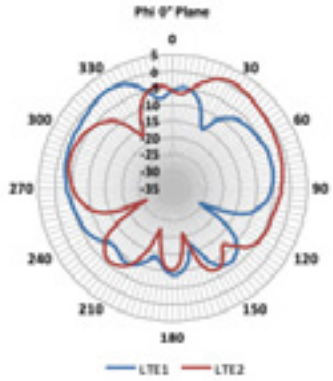


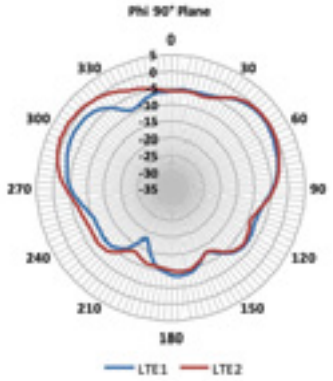


RADIATION PATTERNS *WITH GROUND PLANE* – LTE ANTENNAS

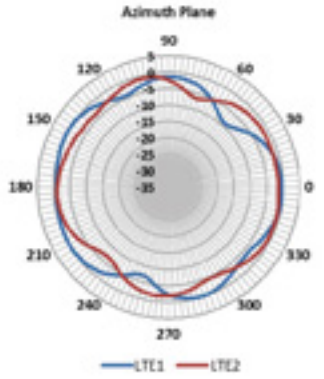
2400 MHz

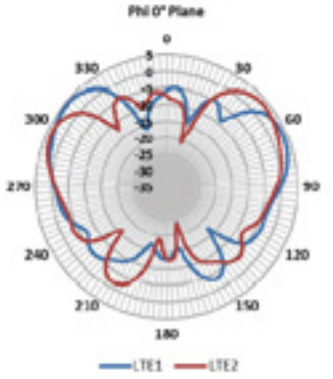


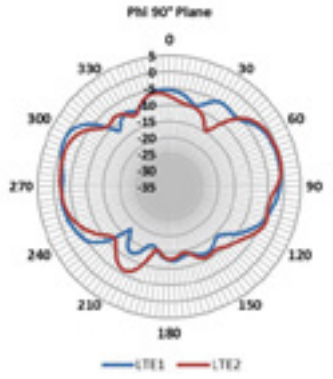




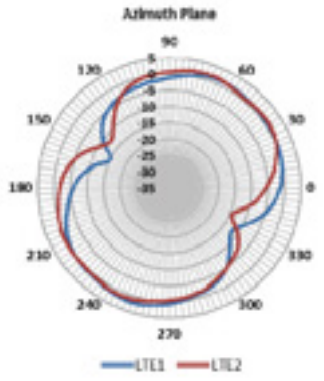
2700 MHz

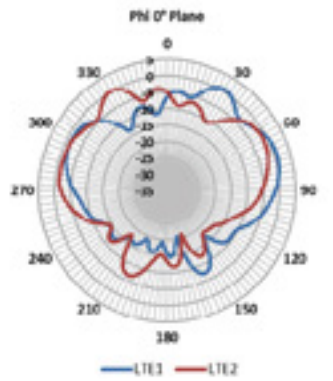


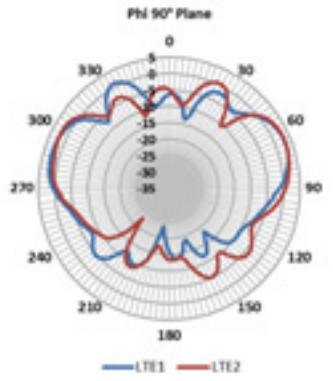




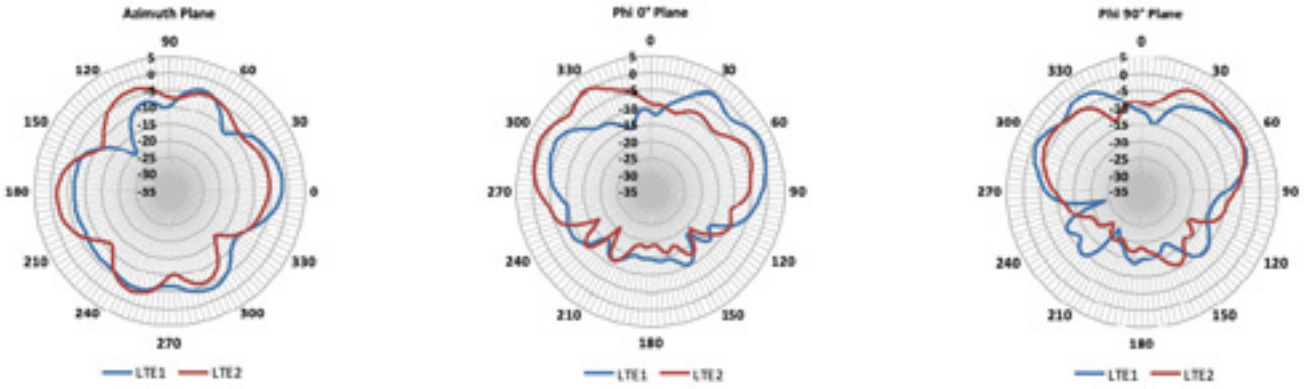
3400 MHz





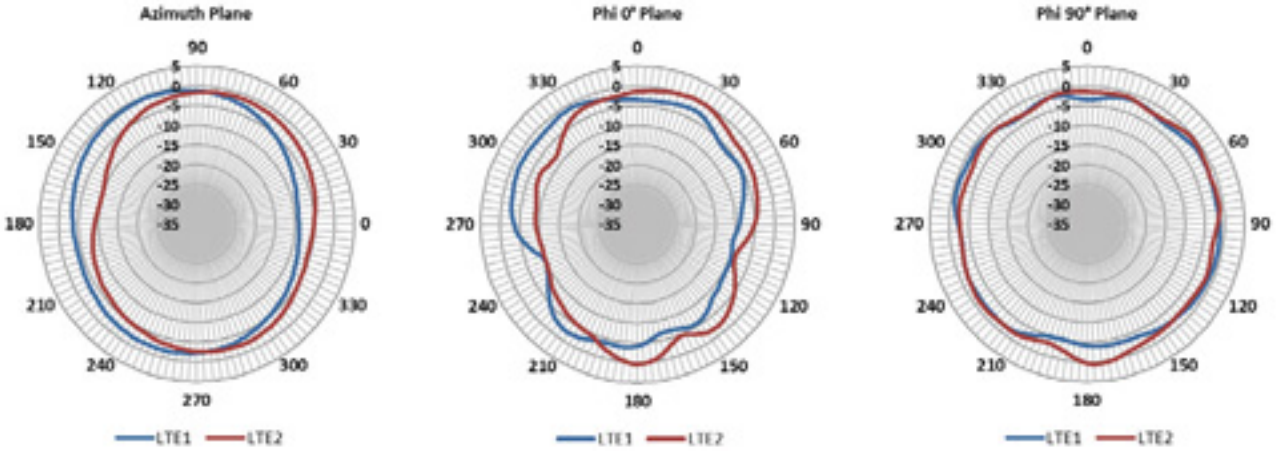


3800 MHz

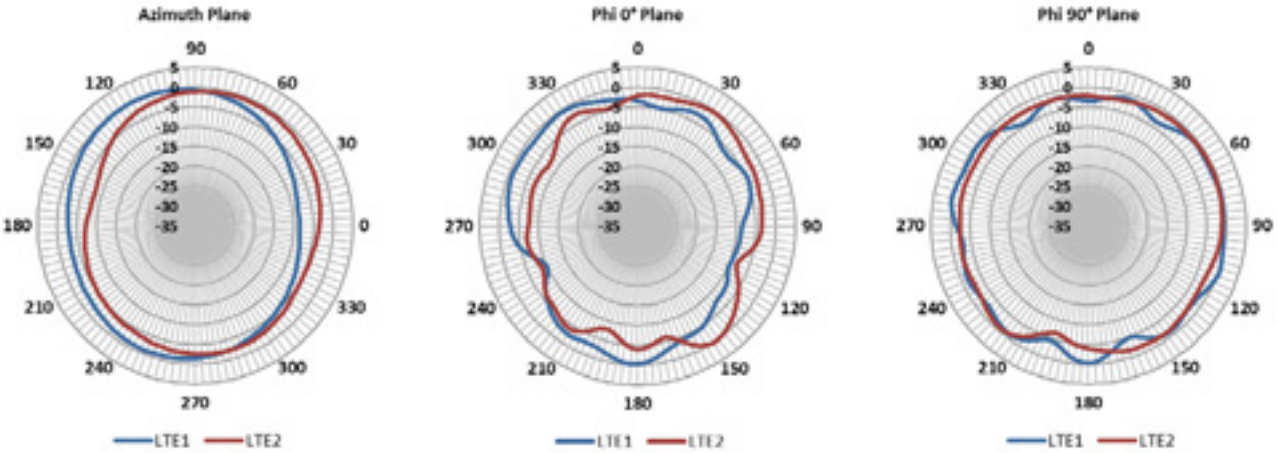


RADIATION PATTERNS *without Ground Plane* – LTE ANTENNAS

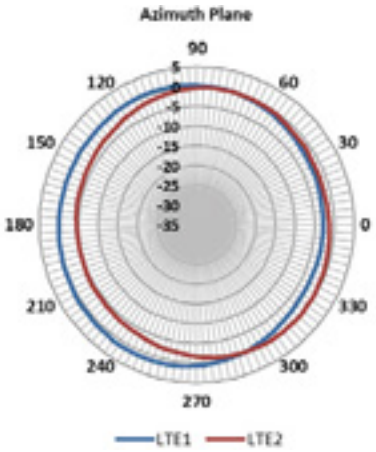
698 MHz

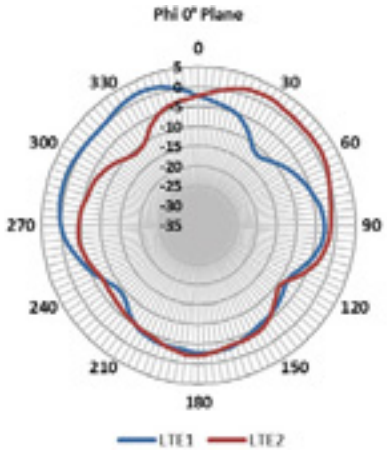


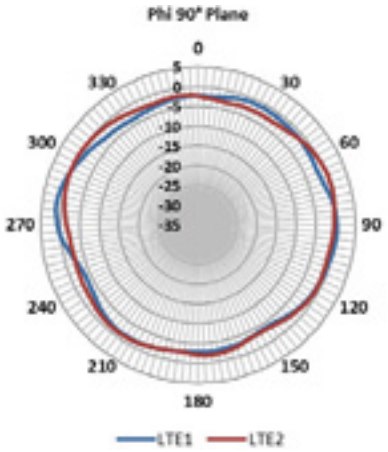
725 MHz



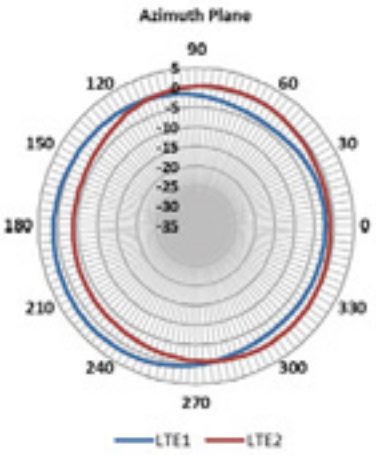
880 MHz

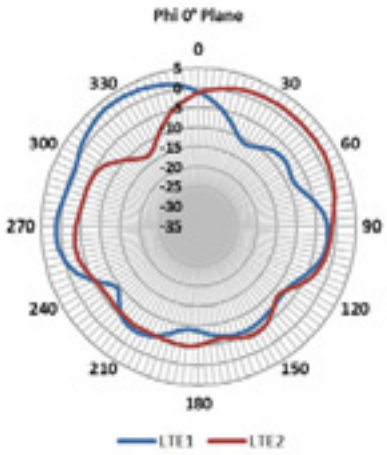


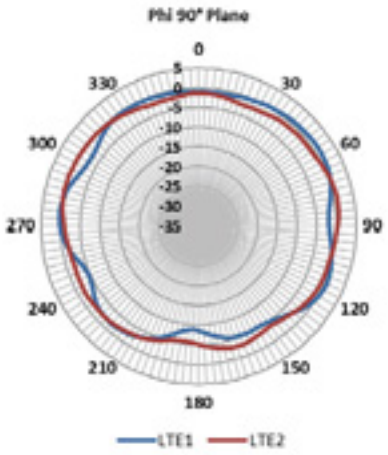




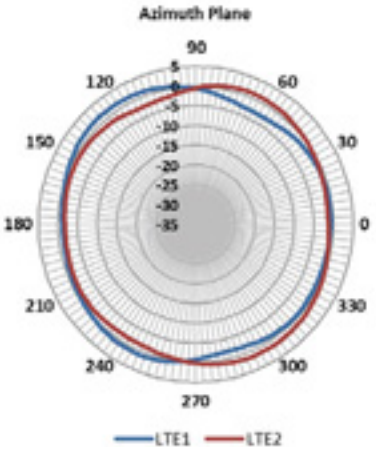
960 MHz

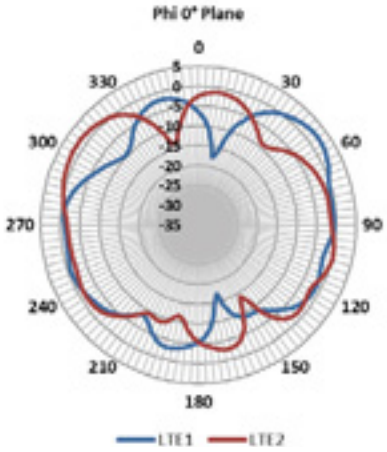


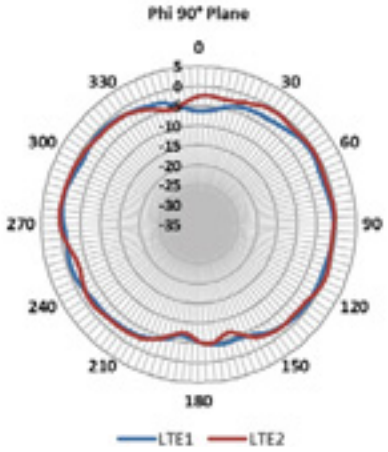




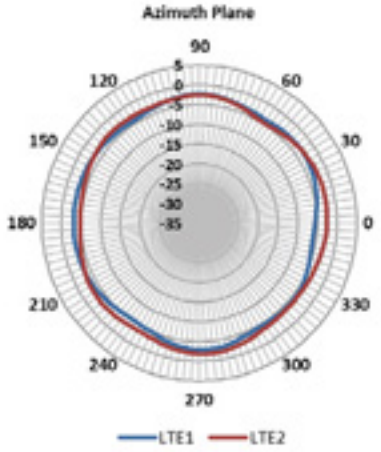
1690 MHz

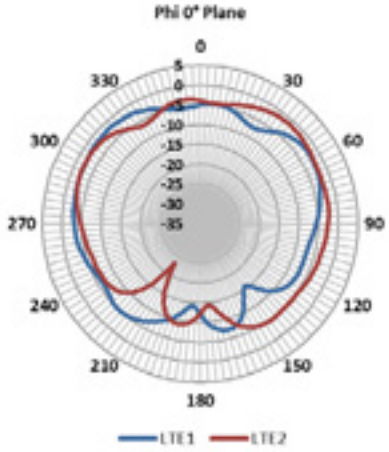


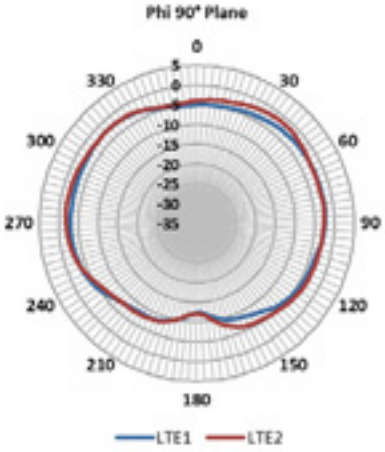




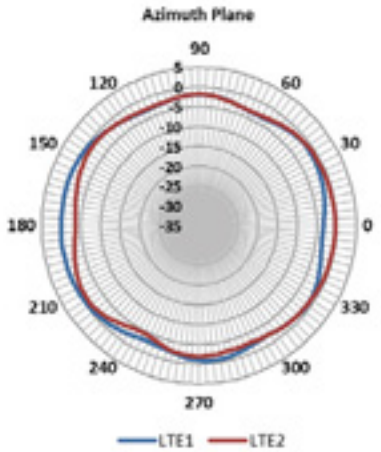
2110 MHz

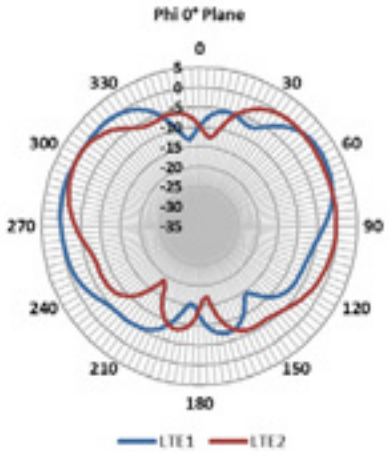


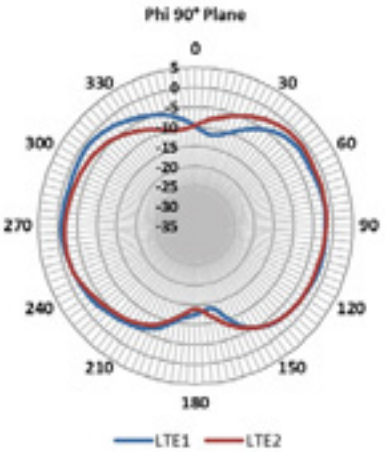




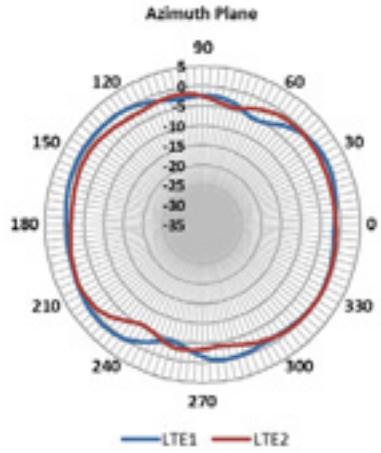
2400 MHz

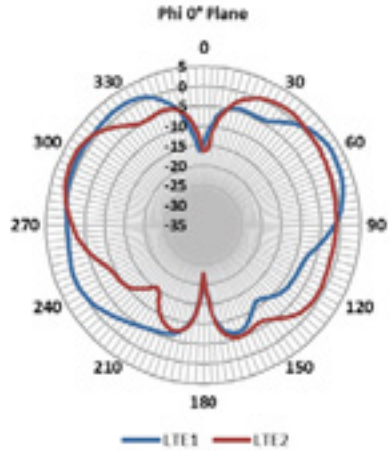


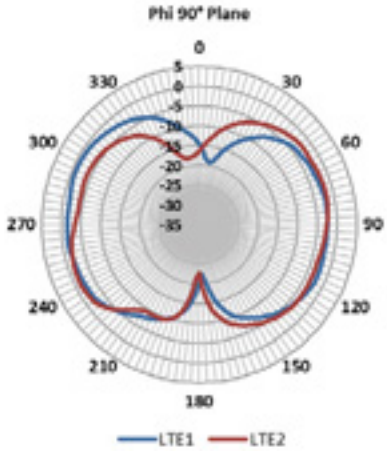




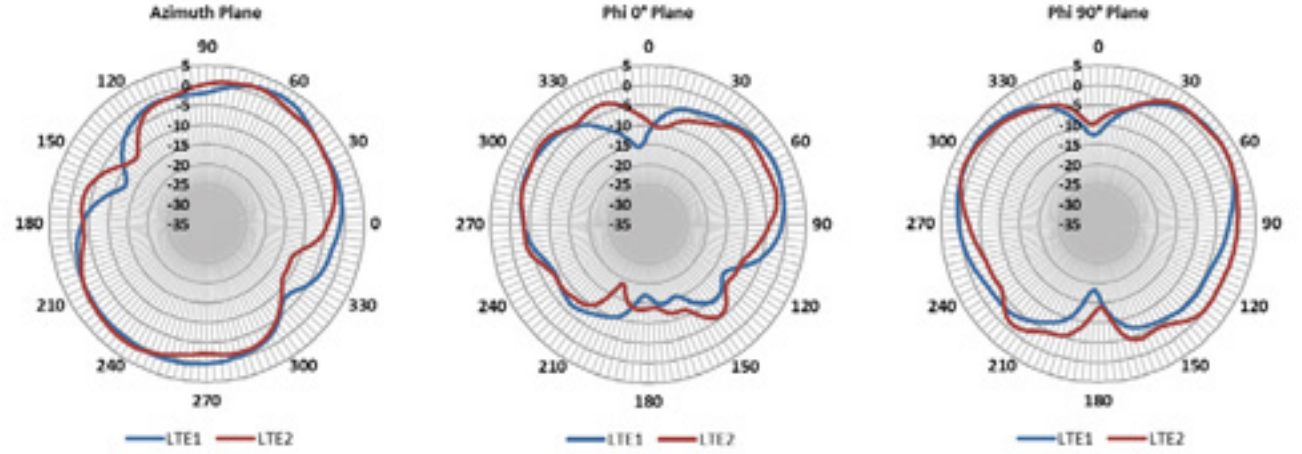
2700 MHz



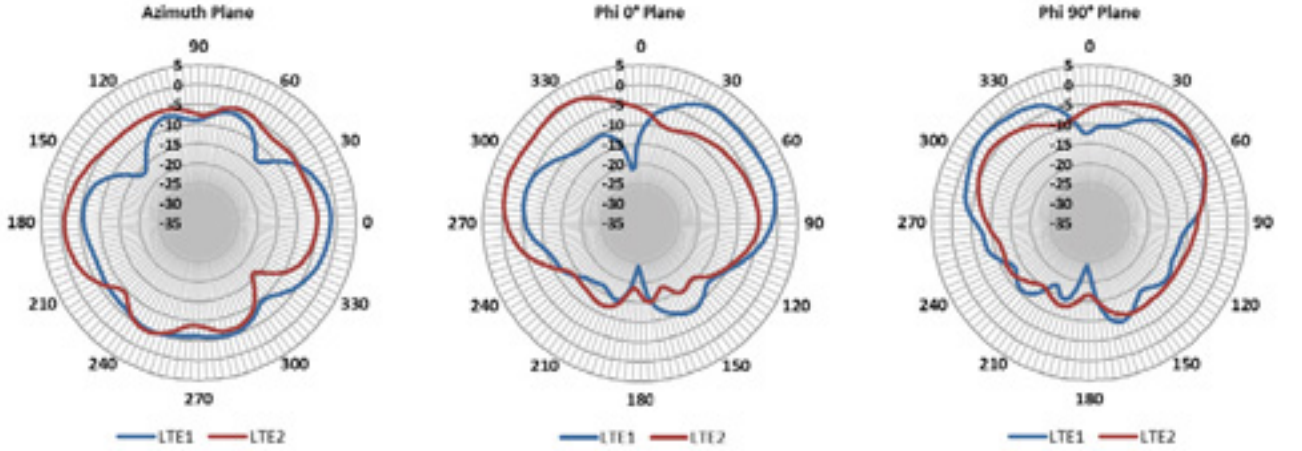




3400 MHz



3800 MHz



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