# Gar VFT69383x2NJN

## 3-Port Vehicular MIMO Antenna
## 698-960/1690-3800 MHz

The Gar VFT69383x2NJN 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 an additional port providing 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 LTE/GNSS navigation

### APPLICATIONS

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

| ELECTRICAL SPECIFICATIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Antenna Model | VFT69383x2NJN | | | | | | | | |
| Number of Ports | 3 | | | | | | | | |
| Port Configuration | 2x – 3G/4G/5G/ISM/CBRS | | | | | | | | |
| Operating Frequency (MHz) | 698-806 | 824-894 | 880-960 | 1690-1880 | 1850-1990 | 1910-2180 | 2300-2500 | 2500-2700 | 3300-3800 |
| Peak Gain* – Avg (dBi) | 0.7 | 0.5 | 0.2 | 3.7 | 3.0 | 2.5 | 3.7 | 4.6 | 5.5 |
| Peak Gain* – Max (dBi) | 2.0 | 1.3 | 2.2 | 4.7 | 3.6 | 3.4 | 5.1 | 5.1 | 7.5 |
| VSWR** – Avg | <1.5:1 | <1.5:1 | <1.5:1 | <1.4:1 | <1.4:1 | <1.4:1 | <1.5:1 | <1.4:1 | <1.3:1 |
| VSWR** – Max | <2.0:1 | | | | | | | | |
| Isolation LTE1 to LTE2 (dB) | -18 | -20 | -18 | -23 | -24 | -24 | -28 | -28 | -34 |
| Isolation LTE1 to GNSS (dB) | -42 | -45 | -44 | -32 | -35 | -37 | -36 | -37 | -38 |
| Isolation LTE2 to GNSS (dB) | -41 | -43 | -41 | -39 | -40 | -40 | -34 | -37 | -36 |
| 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.) | 0.565 kg (1.25 lbs) |
| Cable Type | LMR 100, Black |
| Mounting | P-Mount |
| Color | Black |
| 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 |

# Gar VFT69383x2NJN

## 3-Port Vehicular MIMO Antenna

| GNSS ANTENNA 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) | 3.4 | 4.9 | 5.4 |
| 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 | | |

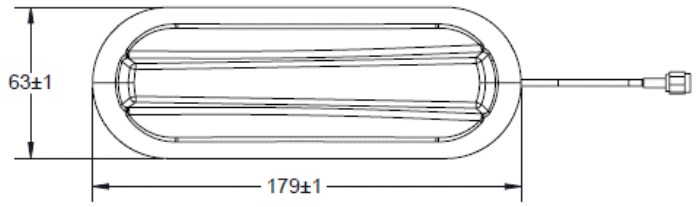
## CONFIGURATION

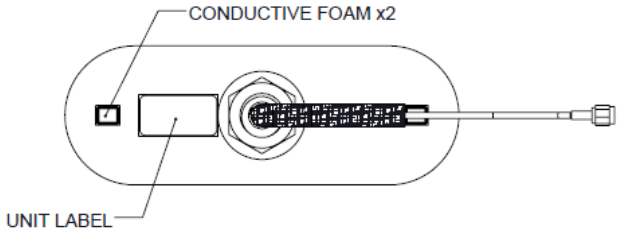
| PART NUMBER | CABLE LENGTH | CONNECTOR – LTE PORTS | CONNECTOR – GNSS PORT | COLOR |
|---|---|---|---|---|
| VFT69383B2NJN-518Q | 5.18 m (17.0 ft.) | SMA-male | SMA-male | Black |
| VFT69383W2NJN-518Q | 5.18 m (17.0 ft.) | SMA-male | SMA-male | White |

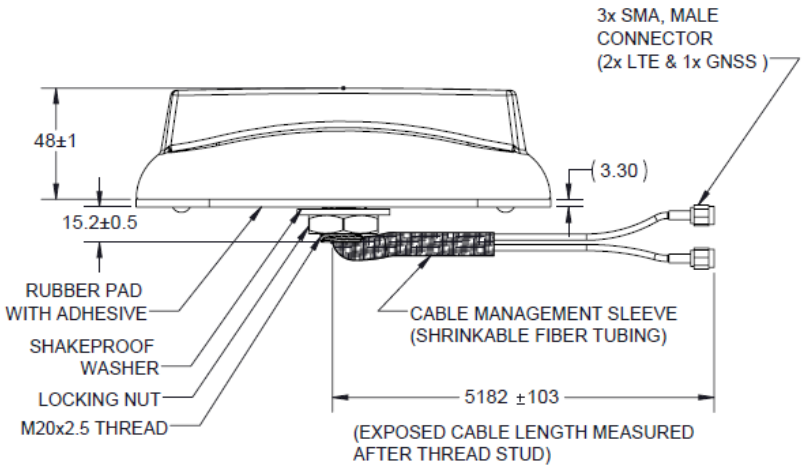
## PACKAGING INFORMATION

| 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.) | 0.69 (1.5) | 6.3 (14) | 170 (375) | 208 (459) |

## MECHANICAL DRAWINGS

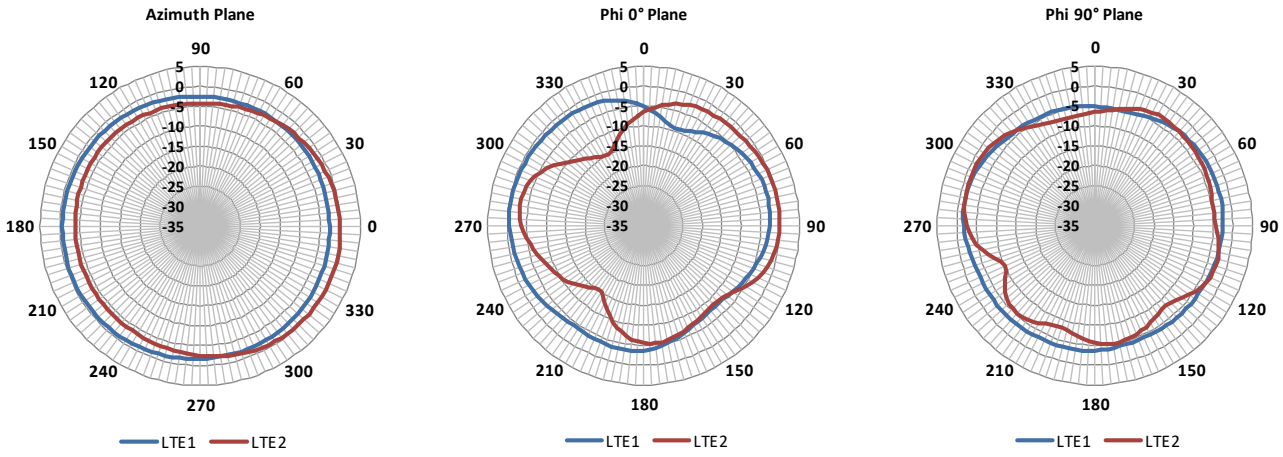


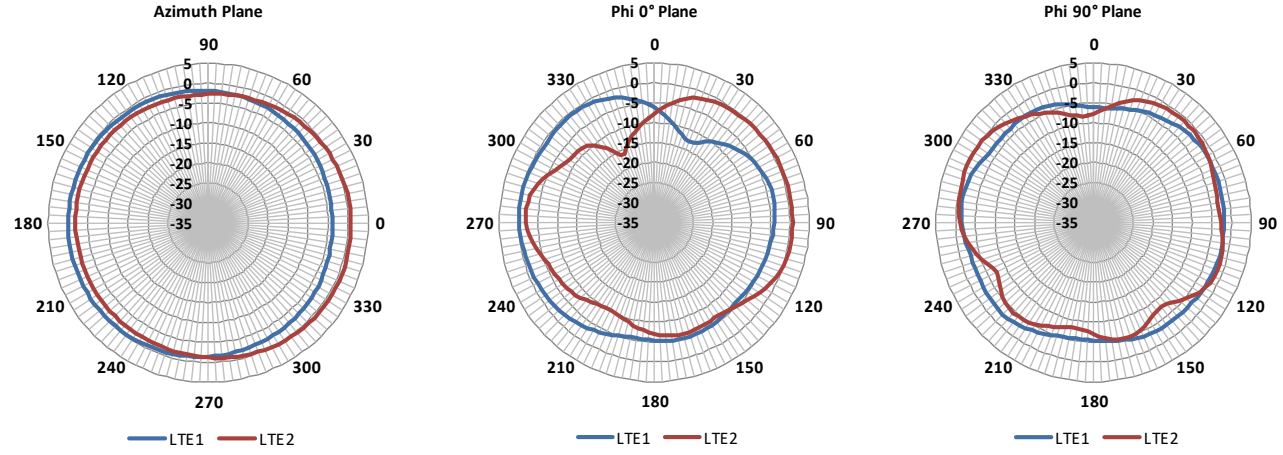



## RADIATION PATTERNS – LTE ANTENNAS

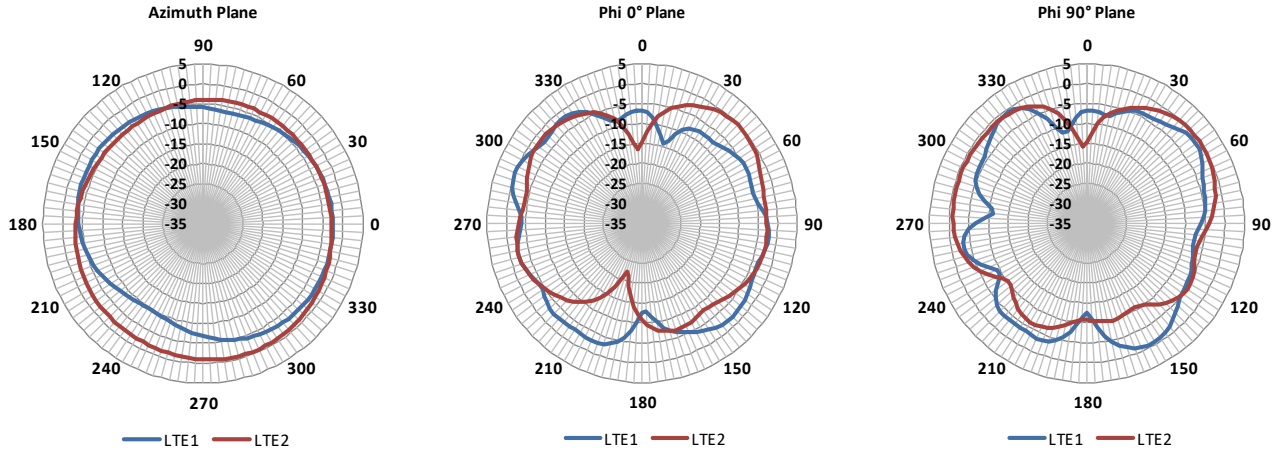
### 698 MHz




### 725 MHz

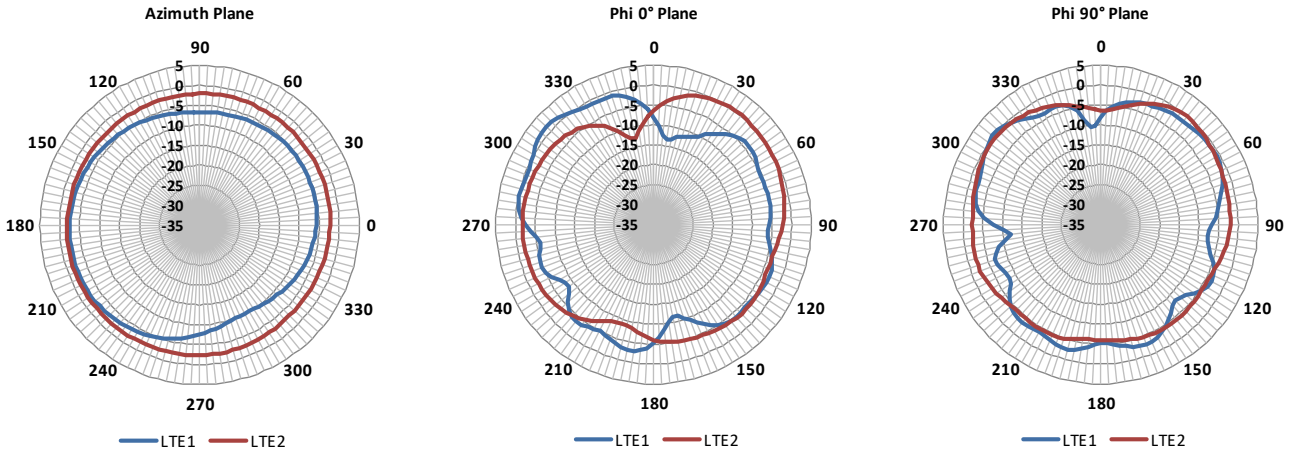



### 880 MHz

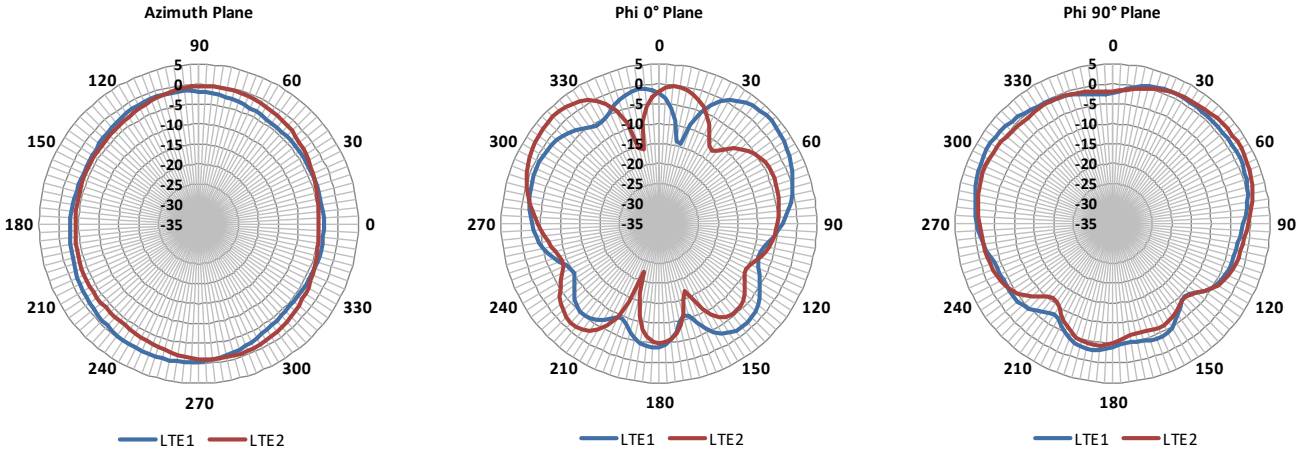


## RADIATION PATTERNS – LTE ANTENNAS

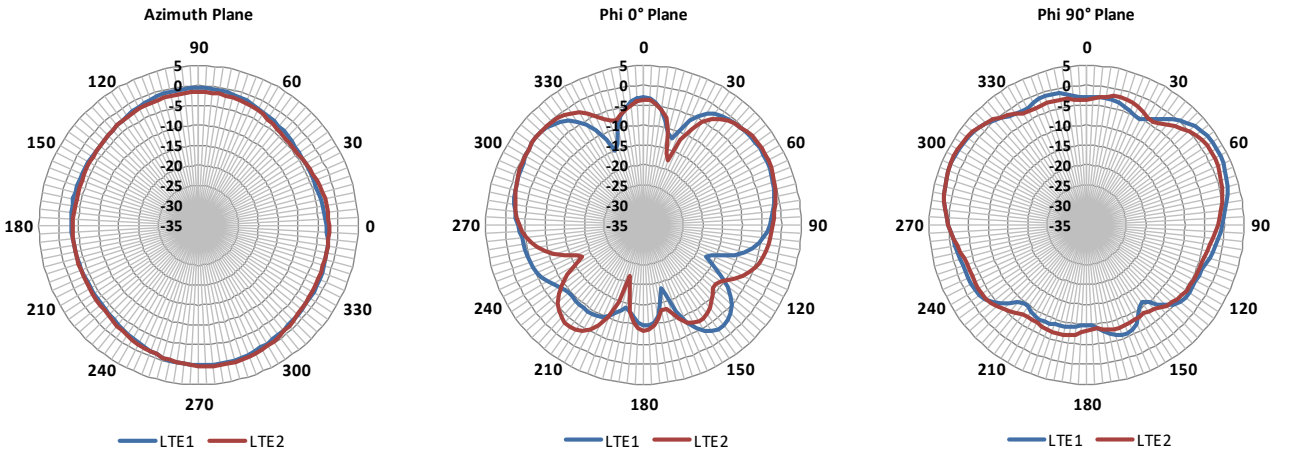
### 960 MHz




### 1690 MHz

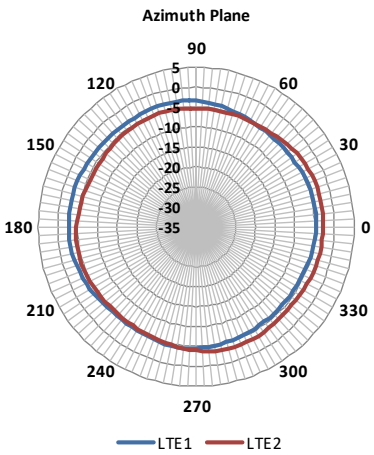


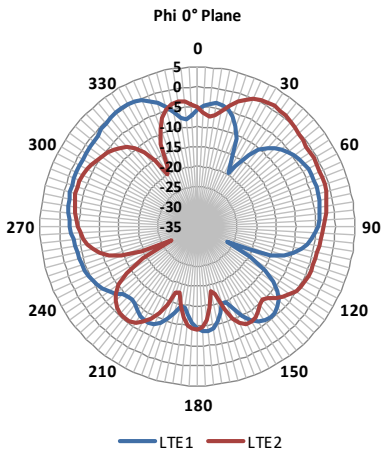

### 1920 MHz

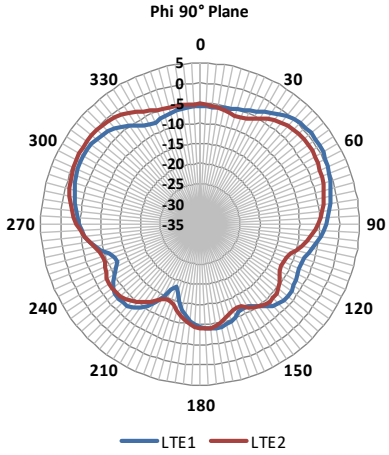


## RADIATION PATTERNS – LTE ANTENNAS

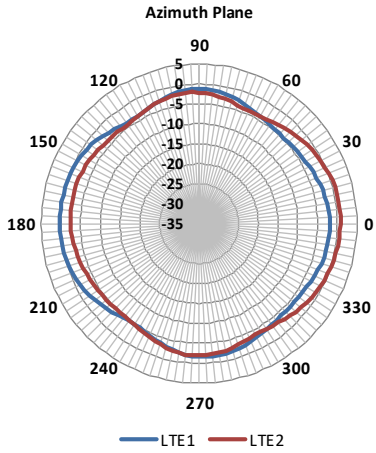
### 2110 MHz

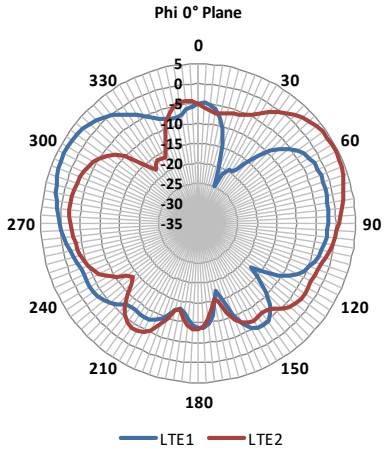


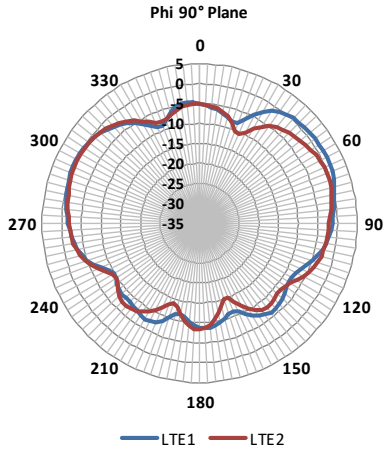



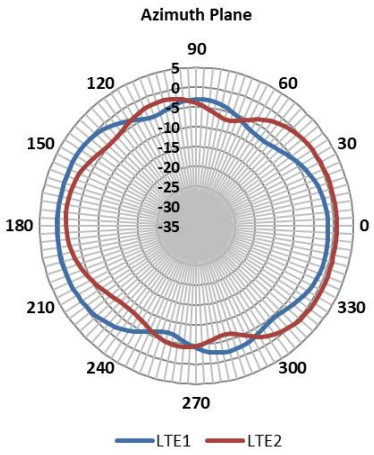

### 2400 MHz

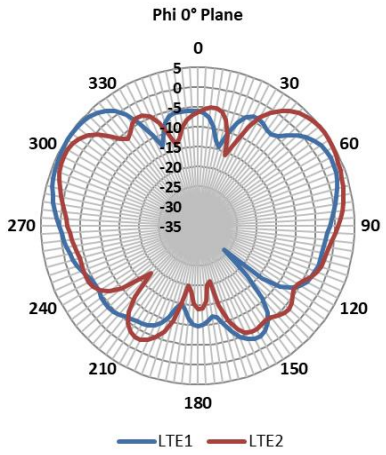


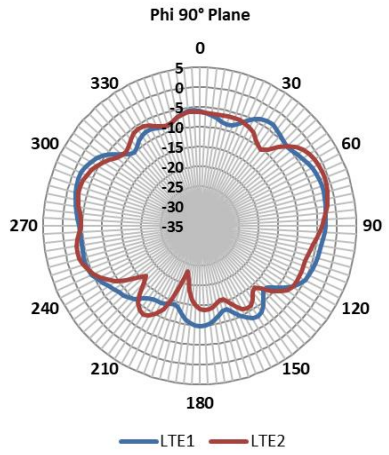




### 2700 MHz

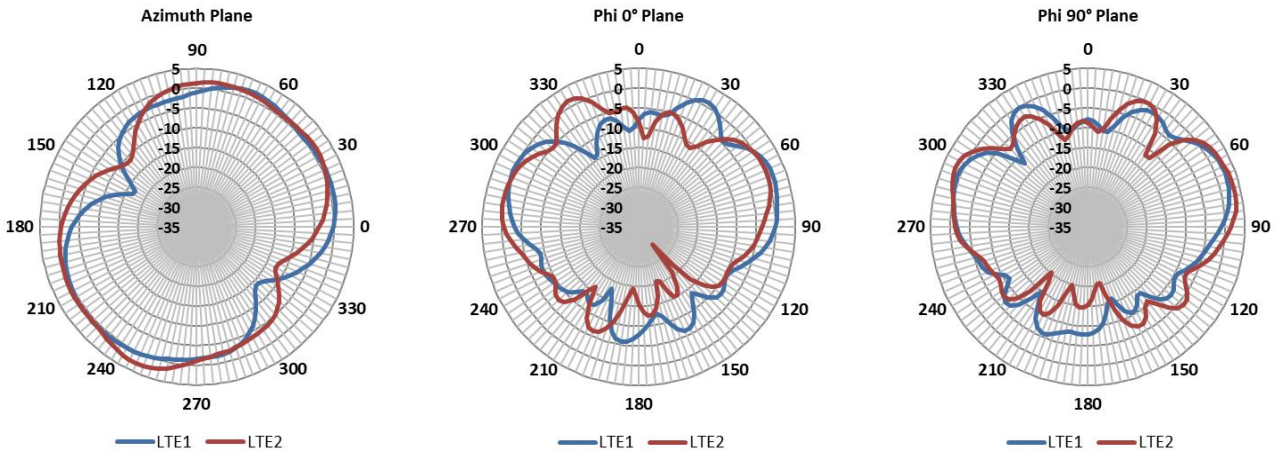


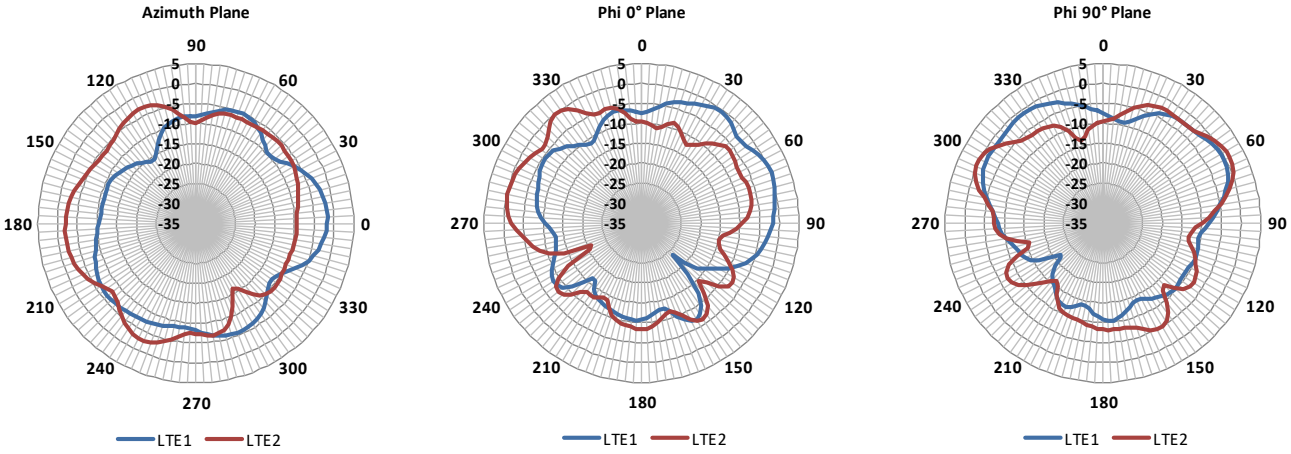



## RADIATION PATTERNS – LTE ANTENNAS

### 3400 MHz




### 3800 MHz




RoHS

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