



## RP40 lite

### 5G, 4G/LTE 4x4 MIMO Fixed Wireless Access Omnidirectional Antenna

The RP40 lite (L000306-XX) antenna family from TE Connectivity (TE) provides high-performance connectivity for current and emerging 4G and 5G frequencies in a flexible and modular package.

The incorporated 4x4 MIMO technology and consistent radiation patterns means that the RP40 lite can provide enhanced data rates and bandwidth with extremely consistent performance.

RP40 lite is suitable for use globally on cellular networks and with any network operator. It fits most common industrial routers/gateways currently on the market. There are 4 or 5-port variants available with the optional fifth port for GNSS coverage. Each model covers 617 - 6000 MHz and supports all major global 5G and 4G/LTE bands.

Designed with a stylish housing and includes all the necessary mounting hardware for desk, wall, offset wall and pole mounting options.

### FEATURES AND BENEFITS

- Global LTE and 5G coverage (617-6000MHz)
- Consistent omnidirectional patterns across all bands, providing stable reception
- Extensive mechanical and environmental testing including UV, flammability, humidity, impact, vibration, shock (see page 3 for full details)
- Integrated 5m (16ft) cables for easier installation
- Supplied with all brackets and mounting hardware

### APPLICATIONS

- Primary connectivity
- Fixed Wireless Access (FWA)
- Failover support
- IoT device connections
- Private networks

### APPLICATIONS

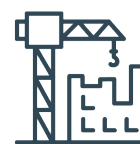
#### Remote Offices



#### Hotel Rooms



#### Construction Sites



#### Remote Schools



#### Rural Communities



#### Temporary Usage



## SPECIFICATIONS

| ELECTRICAL SPECIFICATION     |                                 |         |           |           |           |           |
|------------------------------|---------------------------------|---------|-----------|-----------|-----------|-----------|
| Operating Frequency (MHz)    | 617-698                         | 698-960 | 1427-1496 | 1559-1606 | 1690-4200 | 4200-6000 |
| VSWR - Max                   | <2.20                           |         | <2.20     |           |           |           |
| Isolation - Min (dB)*        | 10                              |         |           |           |           |           |
| Peak Gain - Max (dBi)*       | 5.2                             |         | 6.5       |           |           |           |
| Total Efficiency Average (%) | 77                              |         |           |           |           |           |
| Nominal Impedance (Ohms)     | 50                              |         |           |           |           |           |
| Max Power - Ambient 25°C (W) | 10                              |         |           |           |           |           |
| Polarization                 | Linear Dual Polarized (2V x 2H) |         |           |           |           |           |
| Azimuth Beamwidth            | 360°, Omnidirectional           |         |           |           |           |           |

\*Measured with 1.5ft LMR195 equivalent coaxial cable

| ELECTRICAL SPECIFICATION - GNSS |                   |                 |          |
|---------------------------------|-------------------|-----------------|----------|
| Operating Frequency (MHz)       | 1561.098 ± 2.046  | 1575.42 ± 1.023 | 1602 ± 5 |
| VSWR - Max                      | <2.0              |                 |          |
| LNA Gain, dB                    | 28 ± 3            |                 |          |
| LNA Noise Figure, dB            | 3.17              | 2.87            | 3.06     |
| LNA Input Max. Power, dBm       | -10               |                 |          |
| Out of band Rejection (dBc)     | 698-960MHz        | >80             |          |
|                                 | 1428-1511MHz      | >80             |          |
|                                 | 1710-2700MHz      | >80             |          |
|                                 | 4900-5800MHz      | >70             |          |
| DC Voltage, V                   | 2.5-7.0           |                 |          |
| Current, mA                     | 8.5 ± 3 (at 3.0V) |                 |          |
| Nominal Impedance               | 50                |                 |          |
| Polarization                    | RHCP              |                 |          |

| MECHANICAL SPECIFICATION                        |                                                    |
|-------------------------------------------------|----------------------------------------------------|
| Dimensions - Length x Width x Height - mm (in.) | 380 x 230 x 30 mm (14.96 x 9.05 x 1.18)            |
| Weight kg (lbs.)                                | L000306-01 - 1.3 (2.87)<br>L000306-02 - 1.5 (3.31) |
| Cable                                           | Cellular: LMR 195-equivalent<br>GNSS: RG174        |
| Radome Color / Material                         | White FRPC2100 UV                                  |
| Base Material                                   | PC-ABS FR-V0, UV                                   |
| Mounting                                        | Multiple Options Supplied                          |

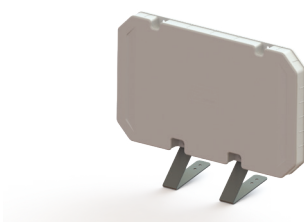
| ENVIRONMENTAL SPECIFICATION          |                                                                                             |
|--------------------------------------|---------------------------------------------------------------------------------------------|
| Operating Temp. (°C)                 | -40 to +85                                                                                  |
| Storage Temperature (°C)             | -40 to +85                                                                                  |
| Temperature Cycling                  | IEC 68-2-14                                                                                 |
| Ingress Protection (IP Rating)       | IP66                                                                                        |
| Humidity                             | MIL-STD-810G, 507.5, Procedure II, Aggravated Humidity                                      |
| Thermal Shock                        | IEC 68-2-14: -25°C to +70°C                                                                 |
| Corrosive Atmosphere (Salt Fog/Mist) | MIL-STD-810G, Method 509.5                                                                  |
| Vibration                            | IEC 60068-2-64                                                                              |
| Mechanical Shock                     | IEC 60068-2-27                                                                              |
| Wind Operational                     | Simulated 100MPH                                                                            |
| Wind Survival                        | Simulated 136MPH                                                                            |
| Pull Test                            | 20lb Pull on Connector/Cables: Duration of 30 Seconds                                       |
| UV Resistance                        | ASTM-G-155                                                                                  |
| Flammability Rating                  | UL94-V0                                                                                     |
| Material Substance Compliance        | RoHS Compliant, CE & UKCA Compliant<br>California Prop 65 Compliant, European RED Compliant |

## PART NUMBER CONFIGURATIONS

| PART NUMBER | PIGTAIL/CABLE                 | CONNECTOR    | NUMBER PORTS | FREQUENCY                                       |
|-------------|-------------------------------|--------------|--------------|-------------------------------------------------|
| L000306-01  | Integrated Cable - 5m (16ft.) | 4 x SMA Male | 4            | Cellular: 617-6000 MHz                          |
| L000306-02  | Integrated Cable - 5m (16ft.) | 5 x SMA Male | 5            | Cellular: 617-6000 MHz<br>GNSS: 1561 - 1602 MHz |

## MOUNTING OPTIONS (MOUNTING KITS INCLUDED)

### Desk Mount



### Direct Wall Mount



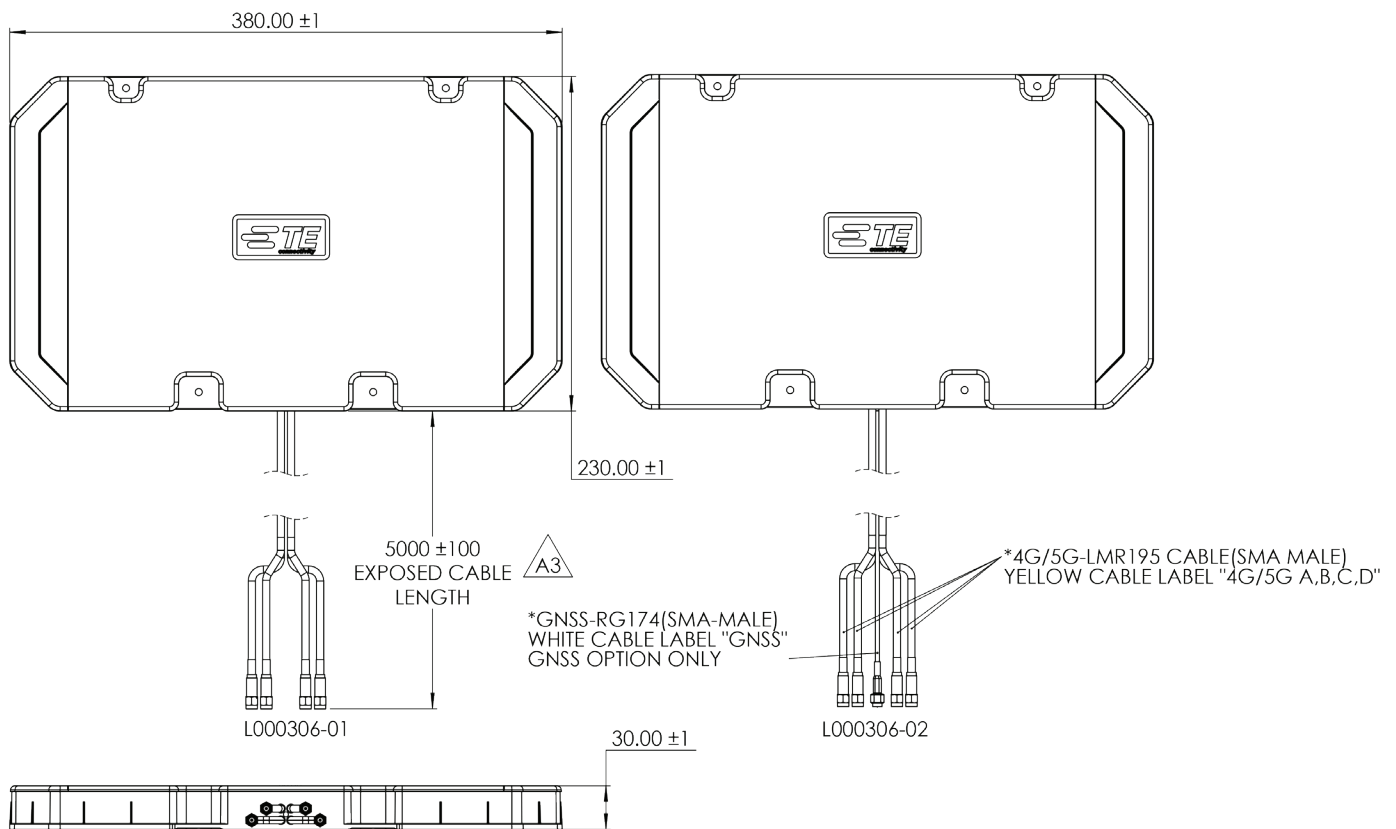
### Pole Mount



### Offset Wall Mount

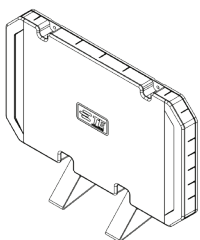


## MECHANICAL DRAWINGS

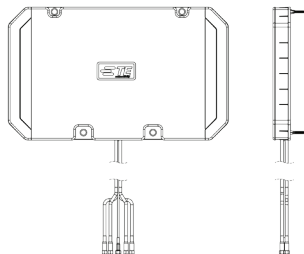


## MOUNTING OPTION DRAWINGS

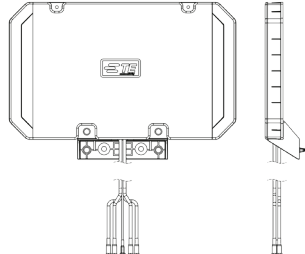
**Desk Mount**



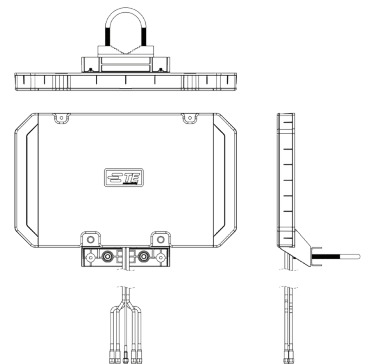
**Direct Wall Mount**



**Offset Wall Mount**



**Pole Mount**



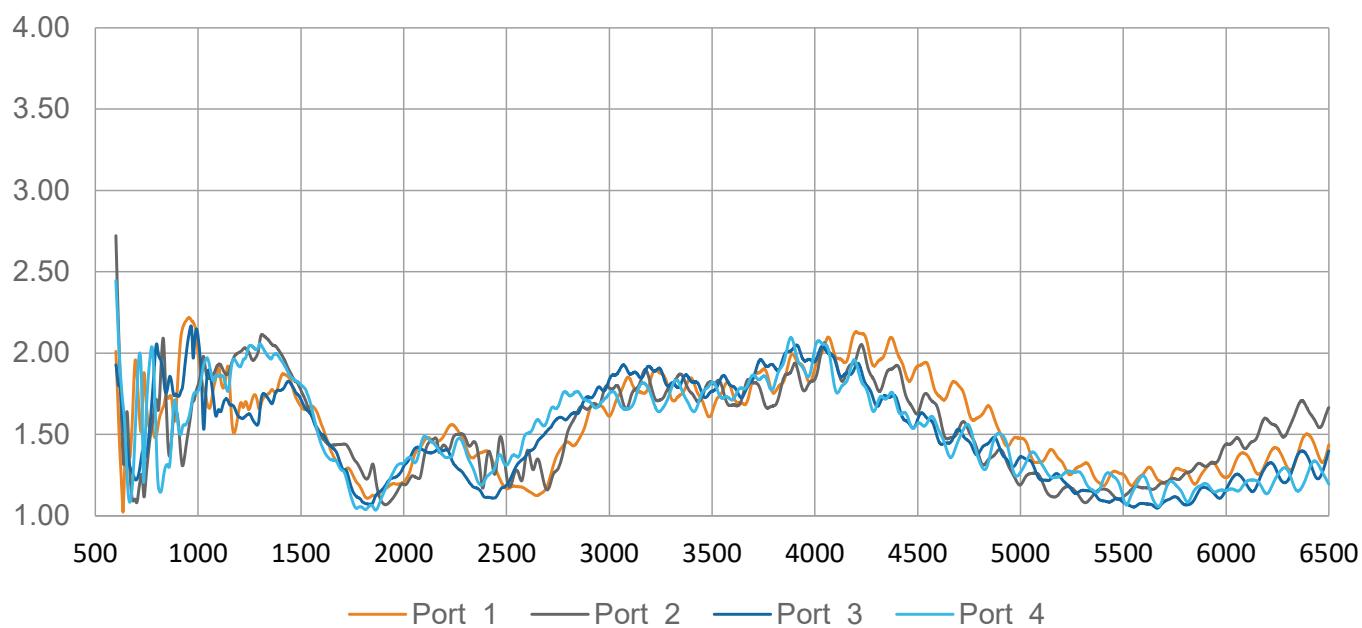
## GLOBAL 4G/5G CELLULAR COVERAGE

The **RP40 lite** antenna provides global sub-6 GHz cellular coverage. The table below shows the frequencies and bands covered and the corresponding performance across those bands is shown in the charts below.

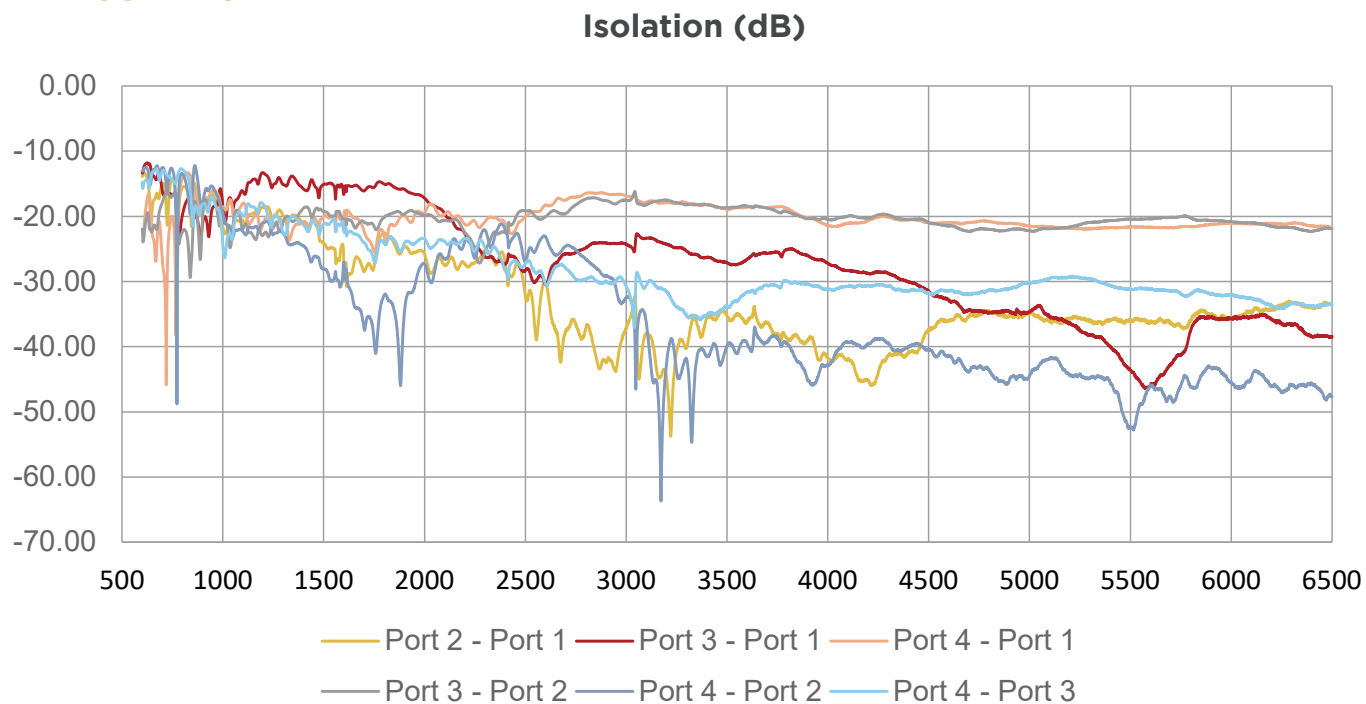
| FREQUENCY     | RF BANDS COVERED                                                                                                                                                           |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 617-960 MHz   | 5, 6, 8, 12, 13, 14, 17, 18, 19, 20, 26, 27, 28, 29, 44, 67, 68, 71, 85<br>N5, N8, N12, N14, N18, N20, N28, N29, N71, N81, N82, N83, N89, N91, N92, N93, N94, N100         |
| 1427-1690 MHz | 11, 21, 24, 32, 45, 74, 75, 76<br>N50, N51, N74, N75, N76                                                                                                                  |
| 1690-2700 MHz | 1, 2, 3, 4, 7, 9, 10, 15, 16, 23, 25, 30, 33, 34, 35, 36, 37, 38, 39, 40, 41, 65, 66, 69, 70<br>N30, N34, N38, N39, N40, N41, N65, N66, N70, N80, N84, N86, N90, N95, N101 |
| 3300-6000 MHz | 22, 42, 43, 46, 47, 48<br>N48, N77, N78, N79                                                                                                                               |

## LTE - VSWR

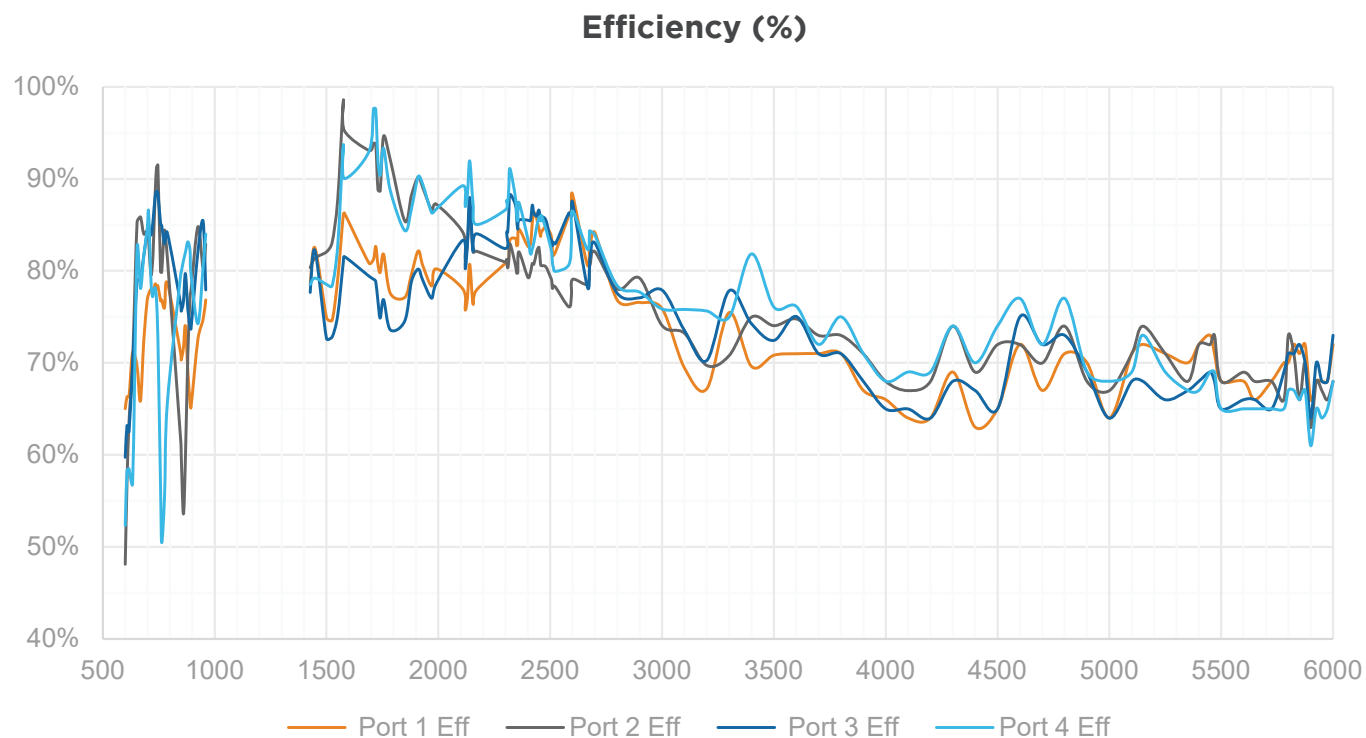
**L000306-01 Without GNSS**



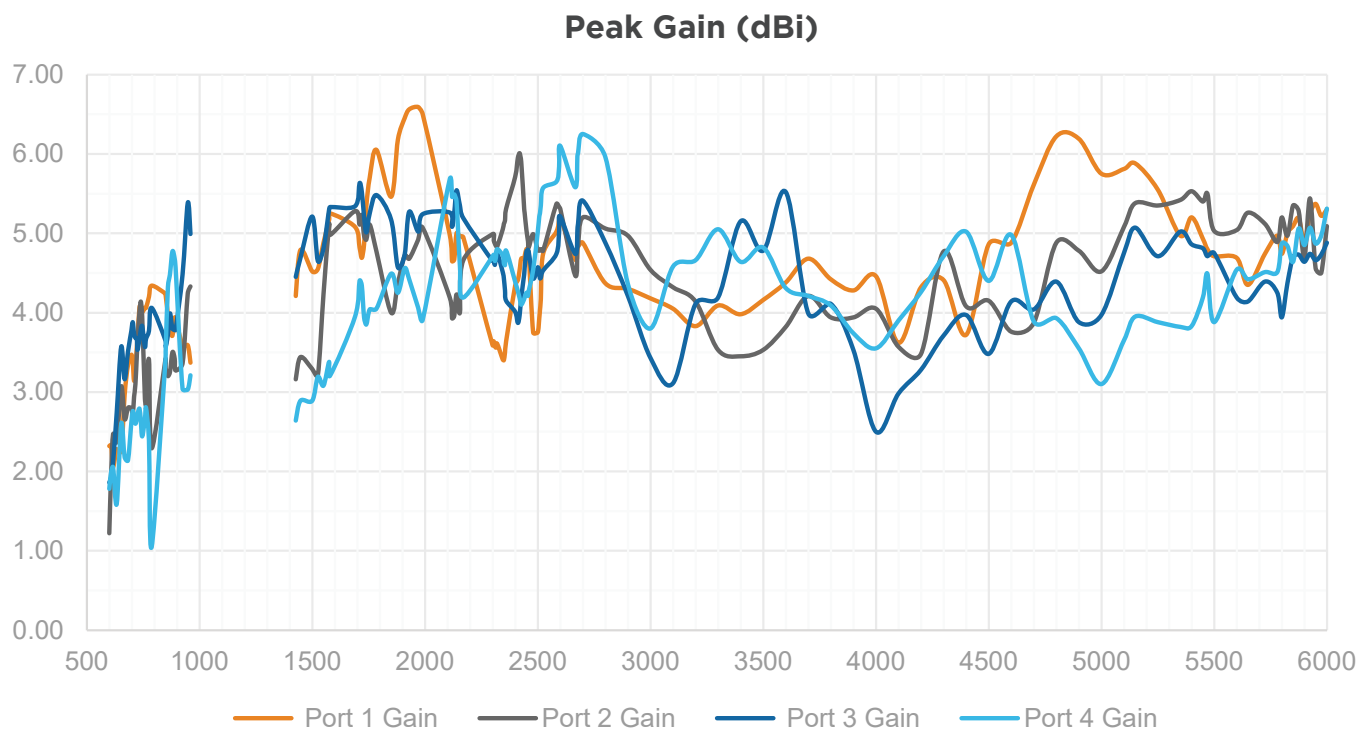
## LTE - ISOLATION



## LTE - EFFICIENCY

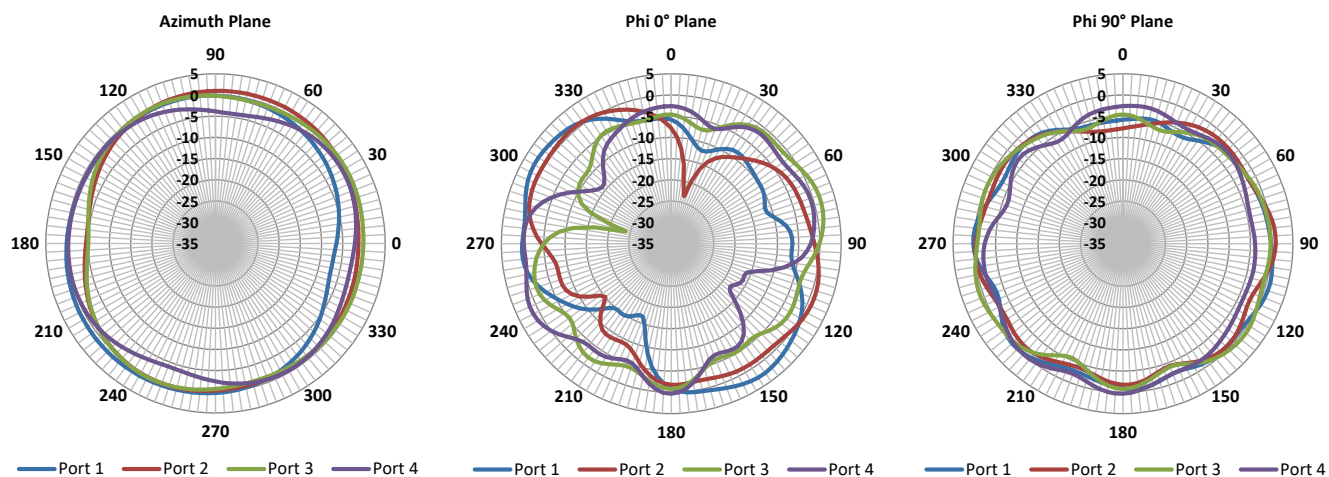


## LTE - PEAK GAIN



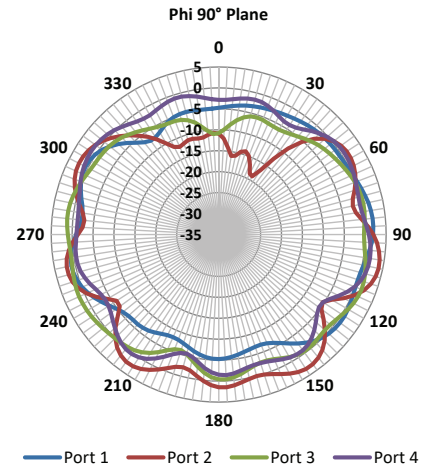
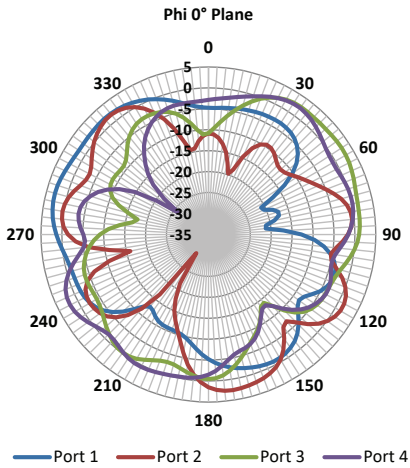
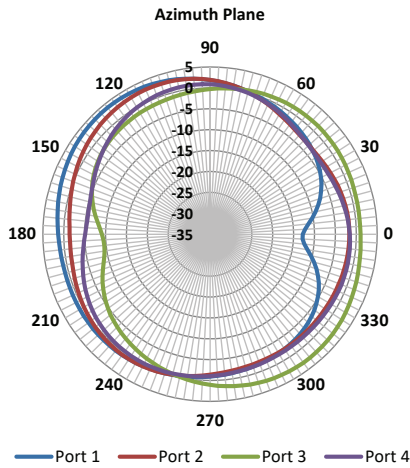
## RADIATION PATTERNS

**633 MHz**

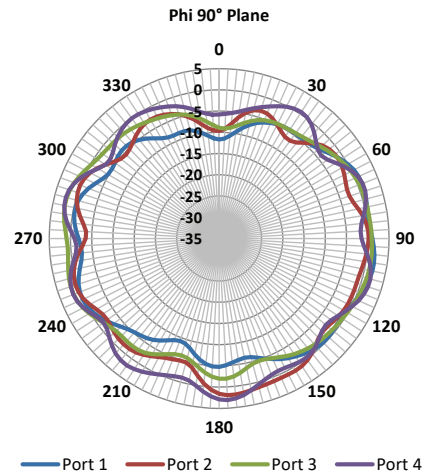
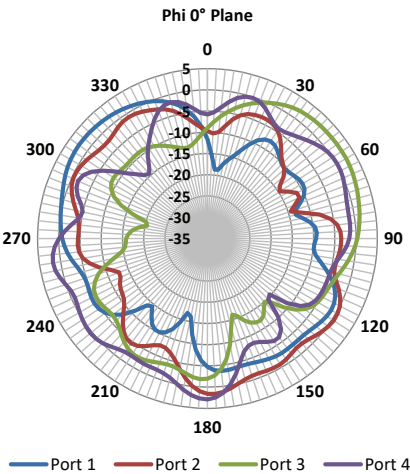
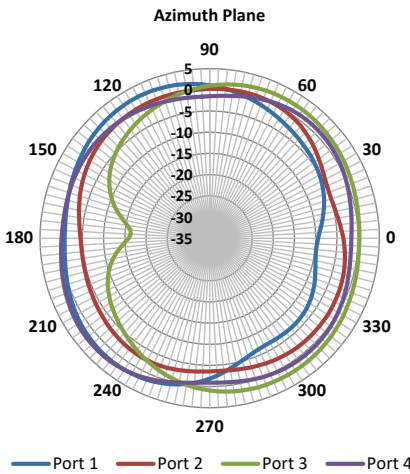




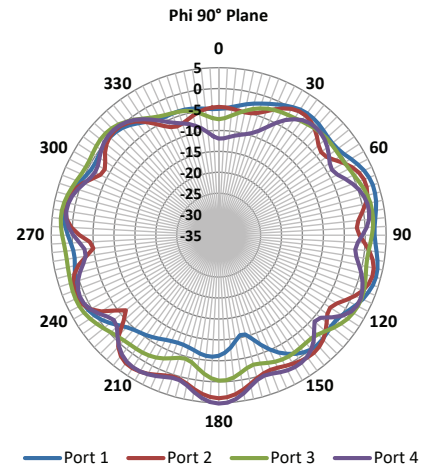
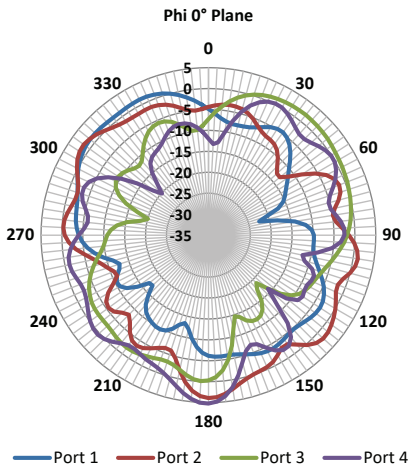
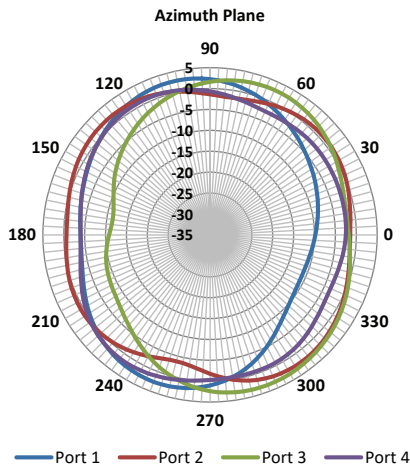
## 725 MHz



## 850 MHz

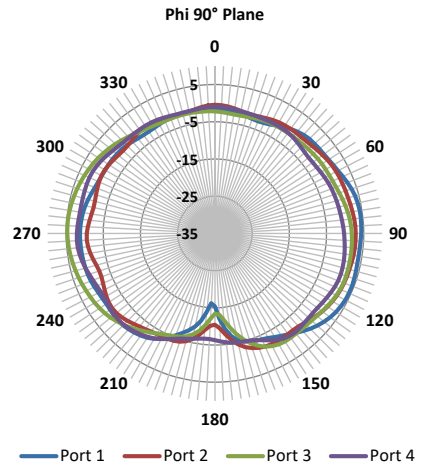
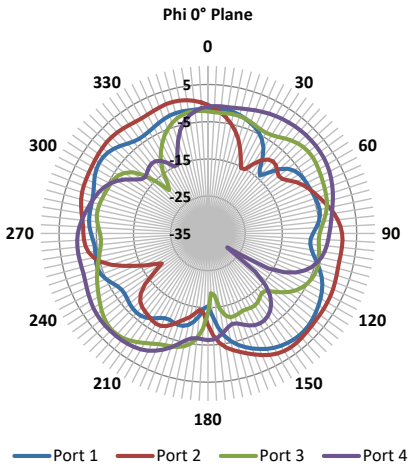
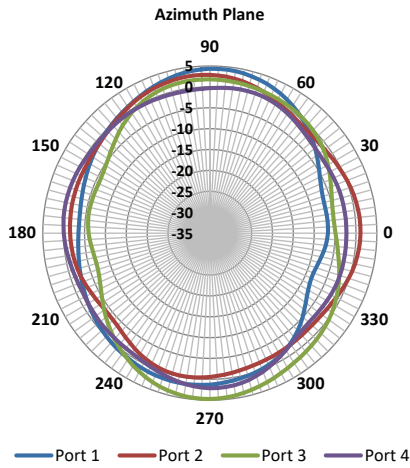


## 925 MHz

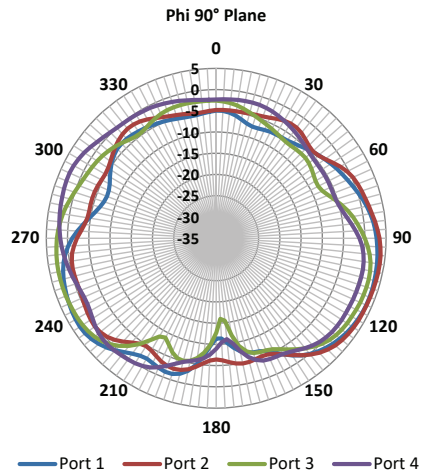
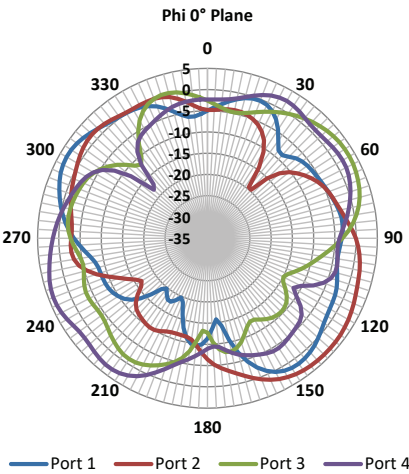
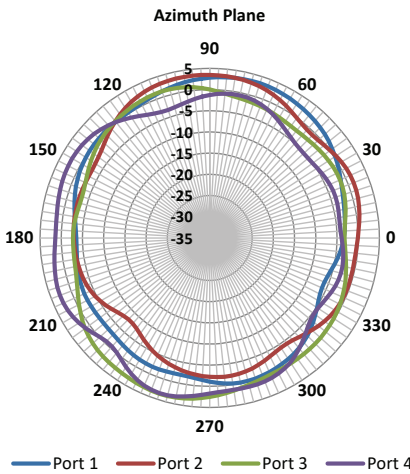




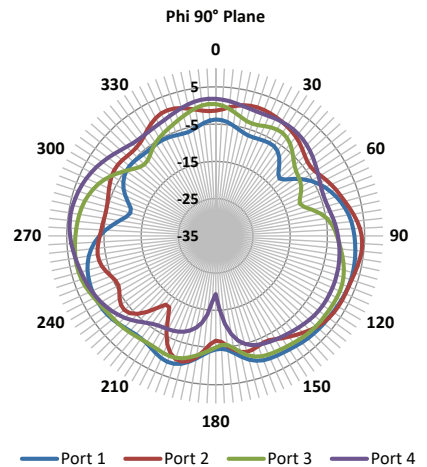
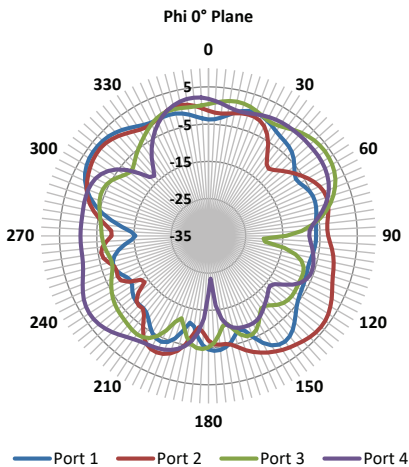
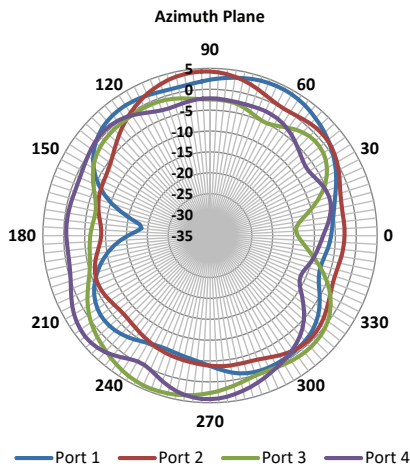
## 1448 MHz



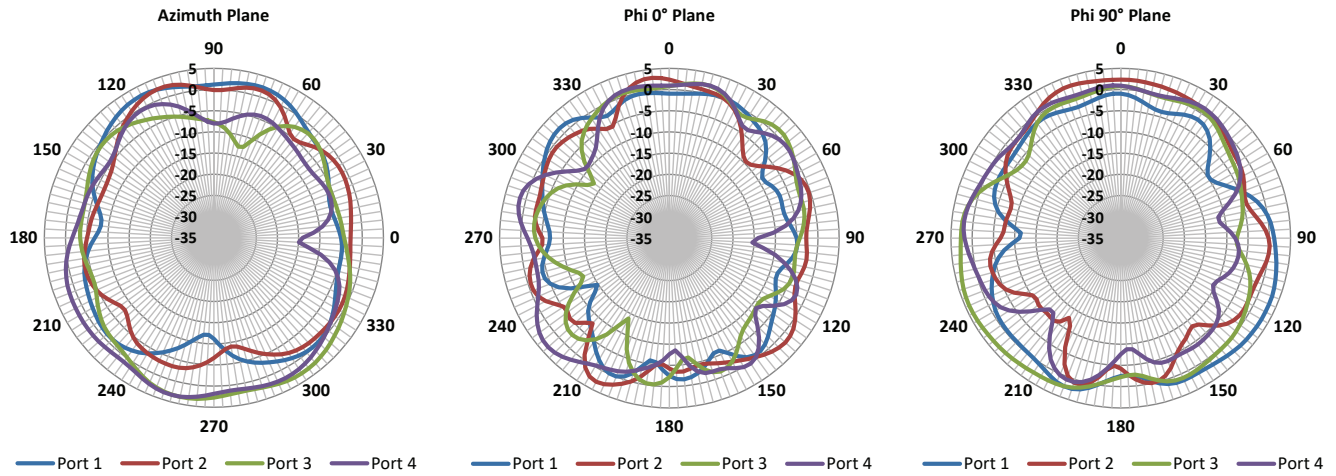
## 1730 MHz



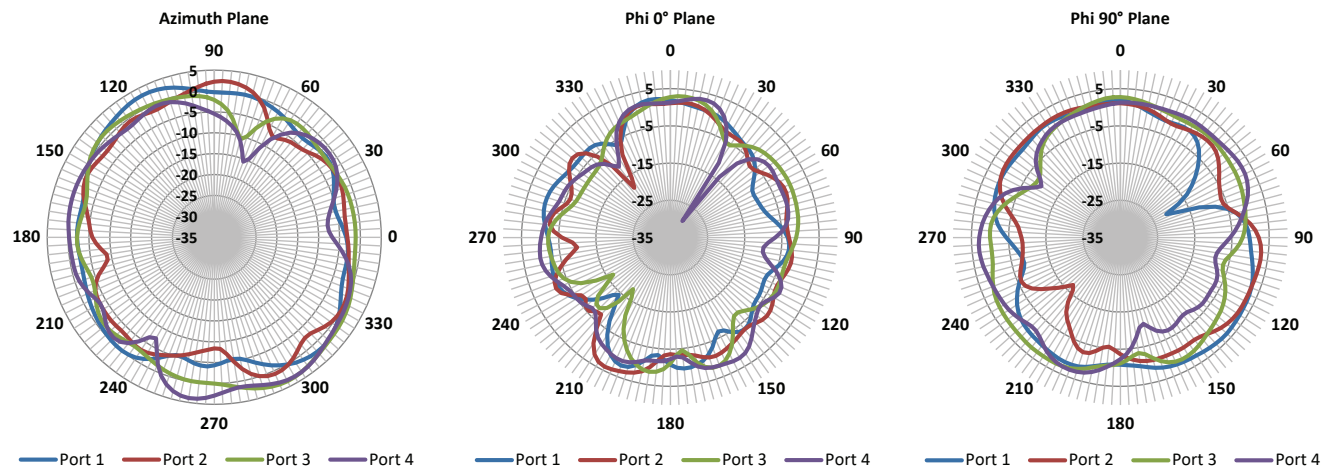
## 1930 MHz



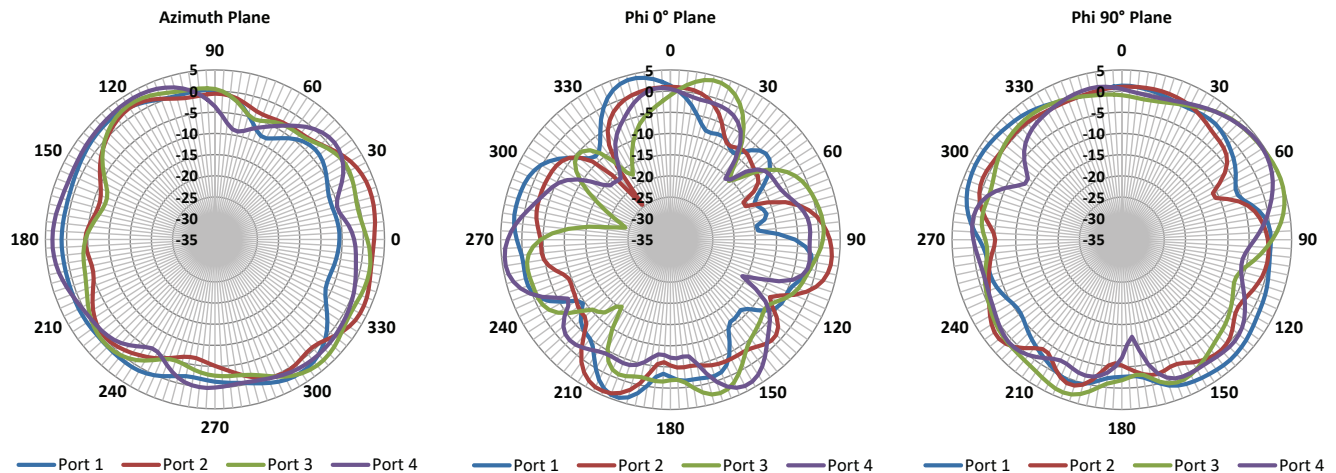
## 2130 MHz



## 2310 MHz

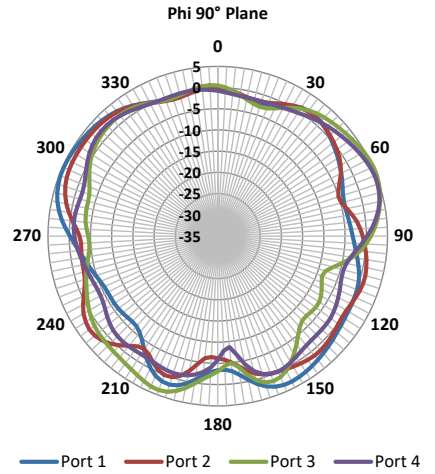
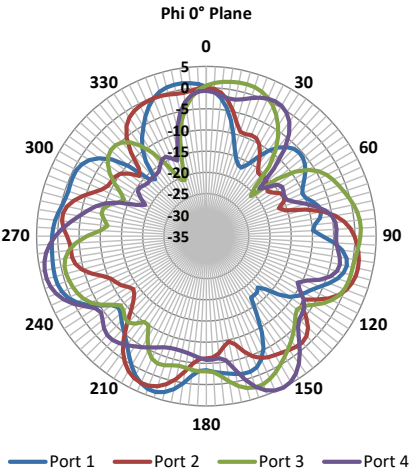
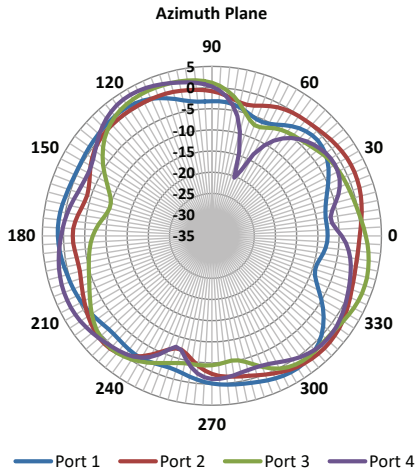


## 2600 MHz

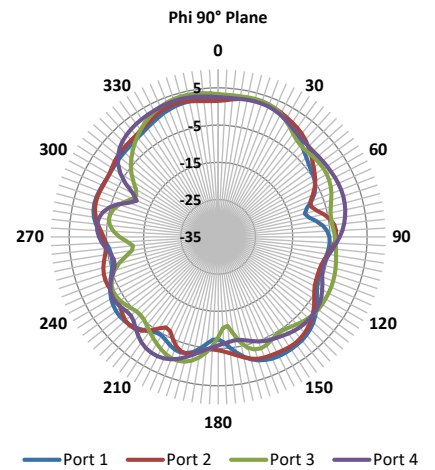
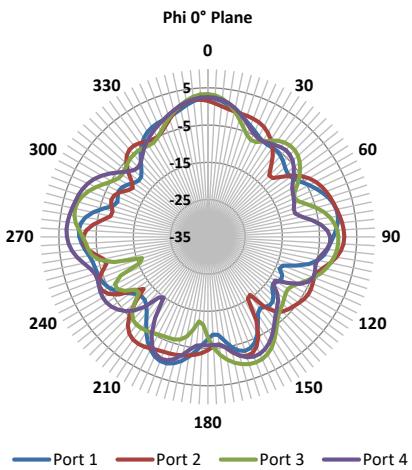
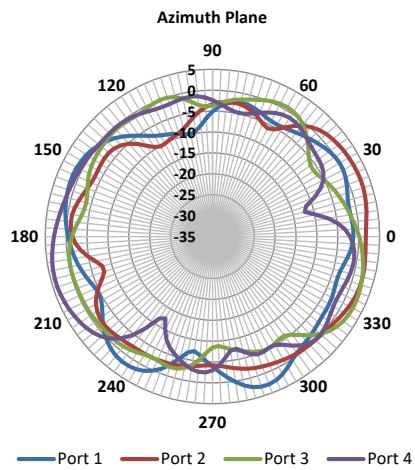




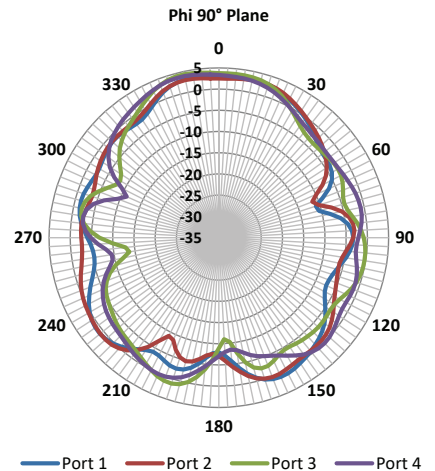
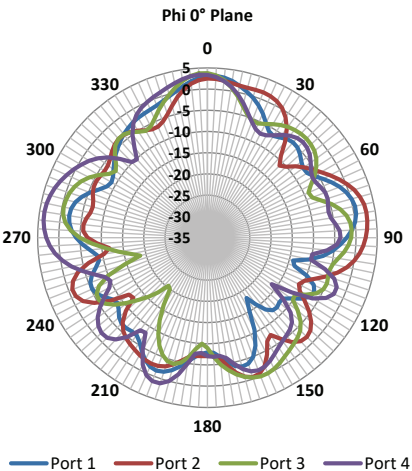
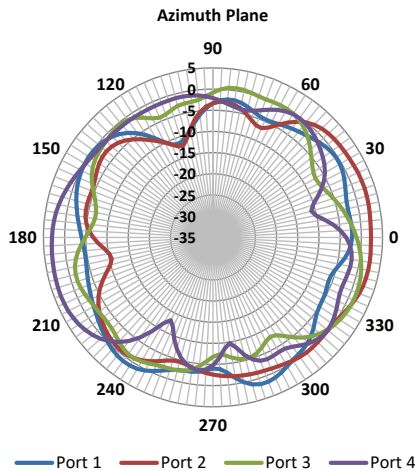
## 2700 MHz



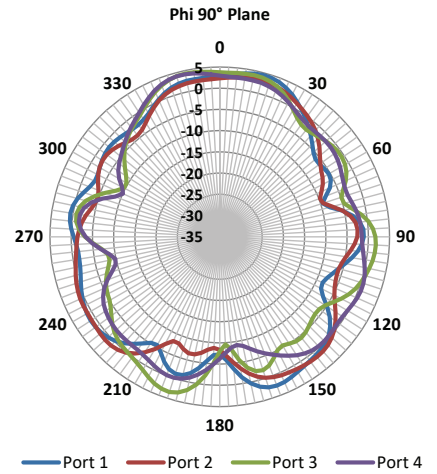
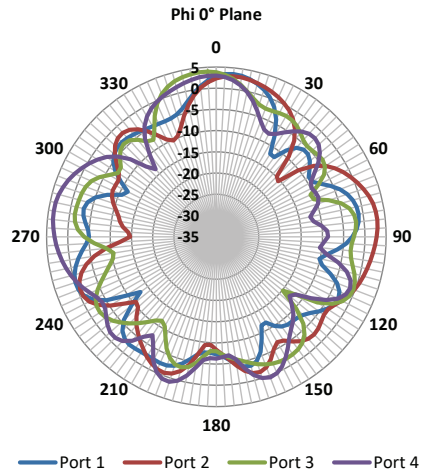
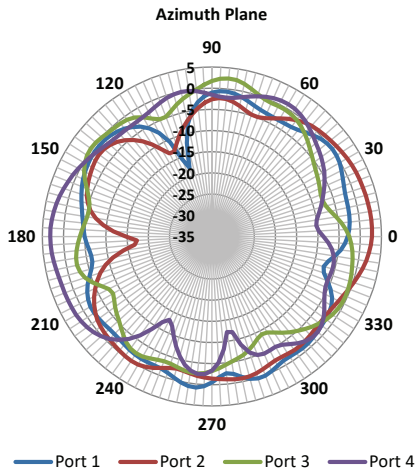
## 3300 MHz



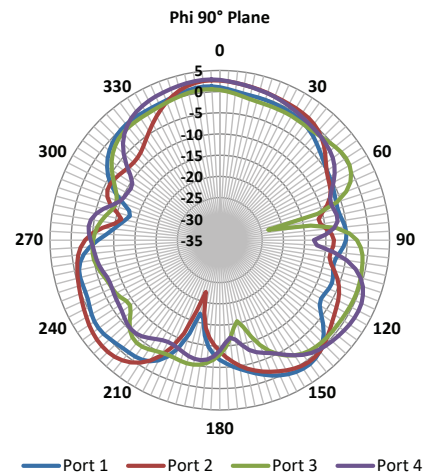
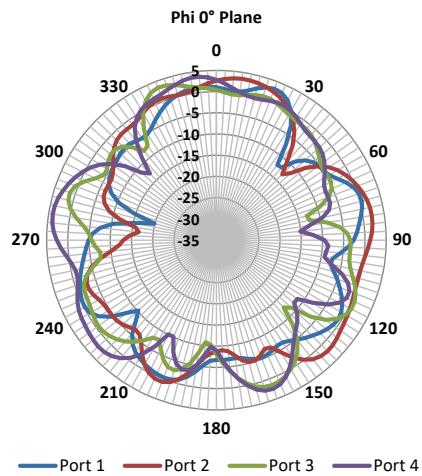
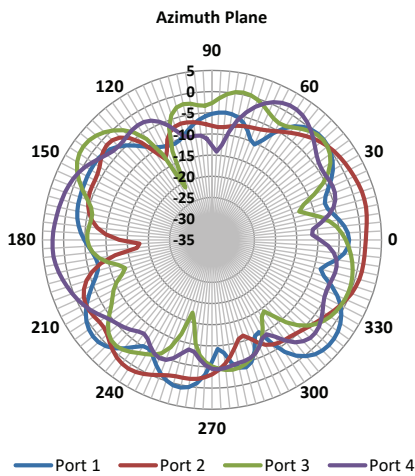
## 3500 MHz



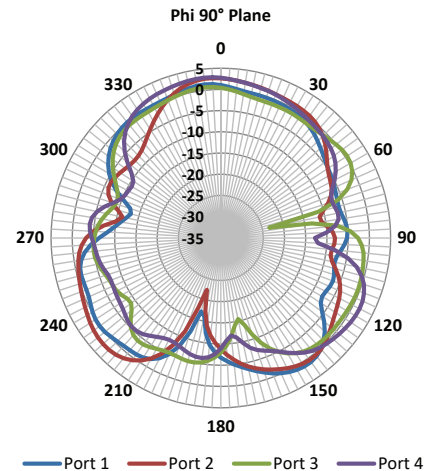
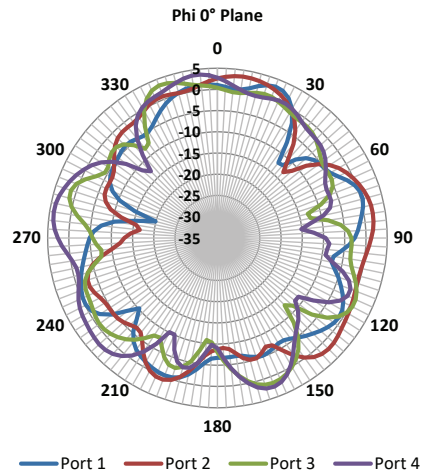
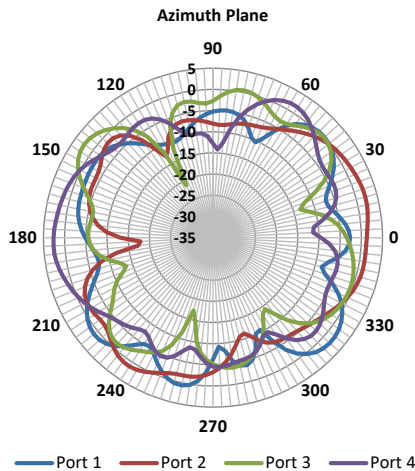
## 3700 MHz



## 4200 MHz

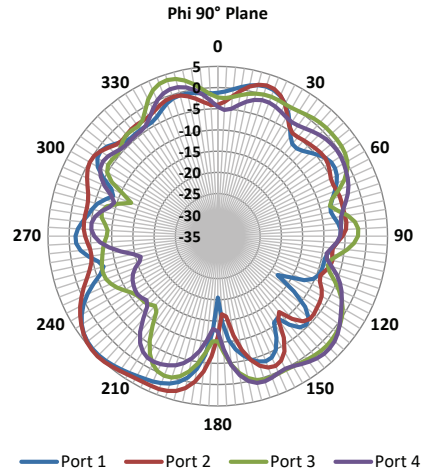
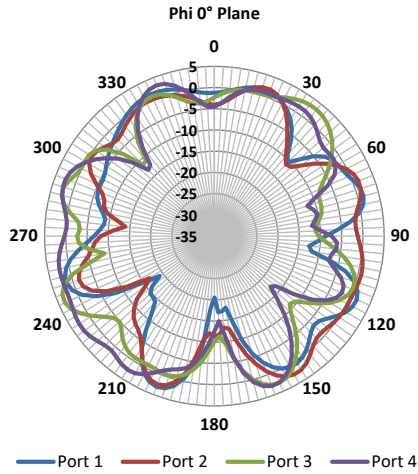
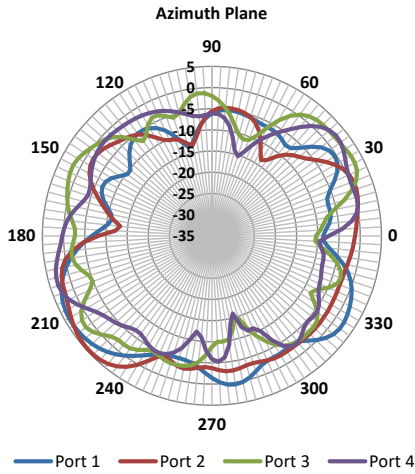


## 5150 MHz

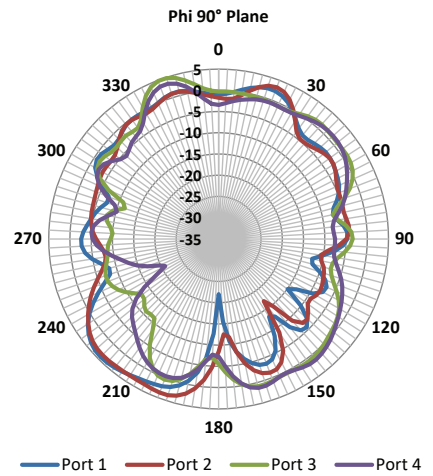
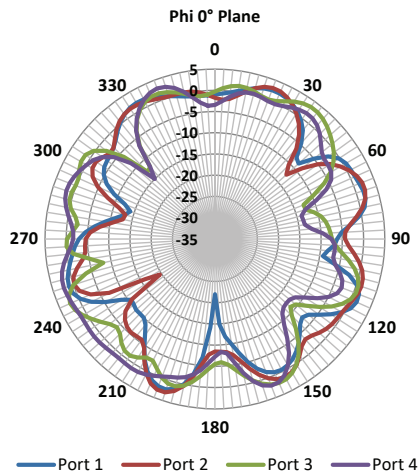
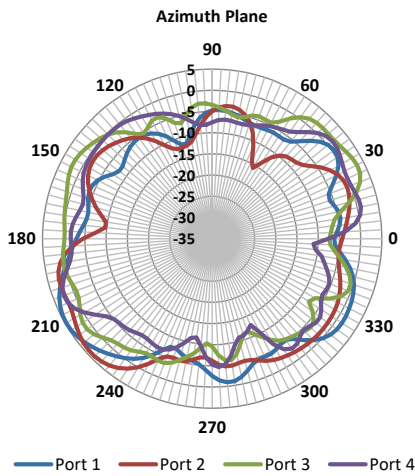




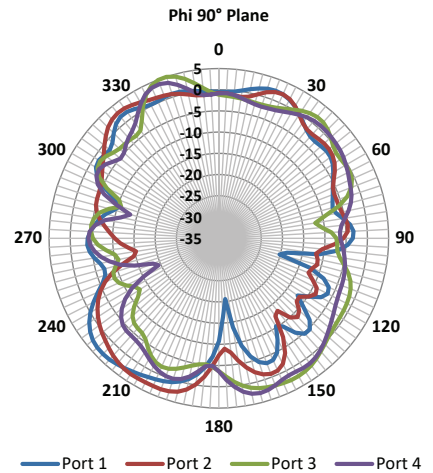
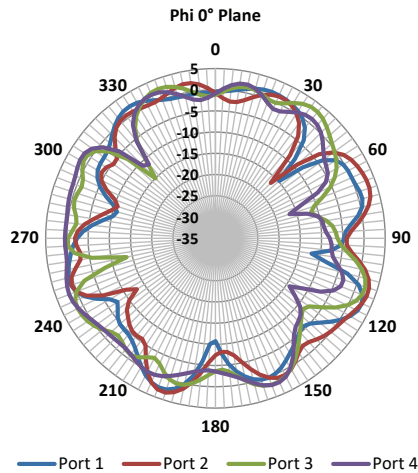
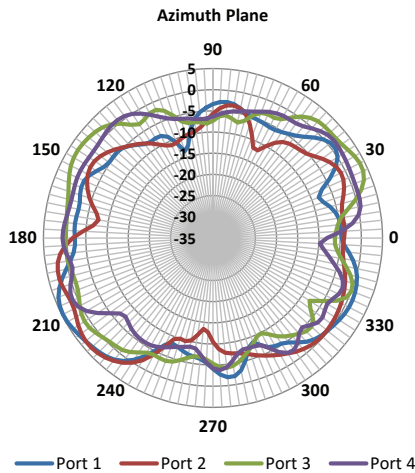
## 5500 MHz



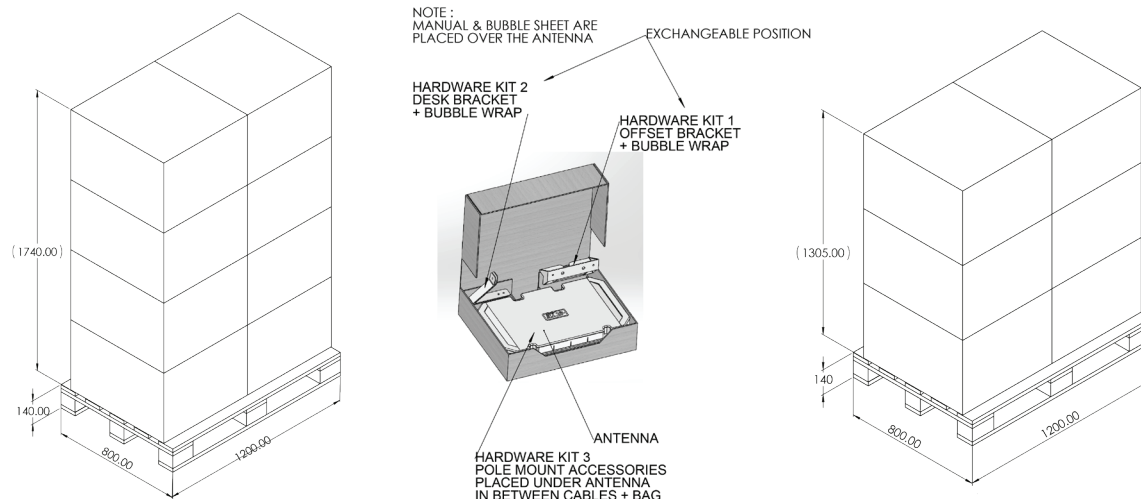
## 5800 MHz



## 6000 MHz



## PACKAGING



### Ocean Shipping Standard Configuration Information

- Pallet 120cm x 80cm x 14cm, Weight 12 kg
- Single unit carton: Weight 2.6 kg
- Master carton @ 12 unit: Weight 33.0 kg
- Pallet @ 8 master cartons per pallet: Weight 276 kg (120 x 80 x 174cm) 96 total units per pallet

### Air Shipping Standard Configuration Information

- Pallet 120cm x 80cm x 14cm, Weight 12kg
- Single unit carton: Weight 2.6 kg
- Master carton @ 12 unit: Weight 33.0 kg
- Pallet @ 6 master cartons per pallet: Weight 163.2kg (120 x 80 x 130.5cm) 72 total units per pallet

| PACKAGED DIMENSIONS             | UNIT CARTON  | MASTER CARTON | AIR PALLET    | OCEAN PALLET  |
|---------------------------------|--------------|---------------|---------------|---------------|
| Number of Antennas              | 1            | 12            | 72            | 96            |
| Height cm (in)                  | 9.0 (3.54)   | 43.5 (17.13)  | 144.5 (56.89) | 188.4 (74.17) |
| Length cm (in)                  | 38.3 (15.08) | 60.0 (23.6)   | 120 (47.24)   | 120 (47.24)   |
| Width cm (in)                   | 31.5 (12.4)  | 66.5 (26.18)  | 80.0 (31.5)   | 80 (31.5)     |
| Est. Shipping Weight* kg (lbs.) | 2.6 (5.8)    | 33.0 (72.7)   | 210 (463.0)   | 276 (608.5)   |
| *Including Mounting Kits        |              |               |               |               |

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|-------------------|-----------------------|
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