

## AMC-ANT-2J6041MGFa

Combi Cellular/LTE MIMO and GNSS magnetic mount antenna

### Features

- **Cables 1 & 2: Cellular/LTE**
  - 698 – 960MHz
  - 1710 – 2170MHz
  - 2500 – 2700MHz
- **Cable 3: GPS/Galileo/GLONASS/QZSS**
  - 1598 – 1606MHz
- Magnetic mount
- Ground plane independent
- Dimensions: 80 x 76 x 13mm
- Customisable cable and connectors



## 1. Antenna and electrical specifications

Cable 1

| Parameters           | Cellular/LTE Antenna                           |                     |             |
|----------------------|--|---------------------|-------------|
| Standards            | 2G,3G and 4G                                   |                     |             |
| Band (MHz)           | 700/850/900                                    | 1700/1800/1900/2100 | 2600        |
| Frequency (MHz)      | 698 - 960                                      | 1710 - 2170         | 2500 - 2700 |
| Return Loss (dB)     | ~-17.0   | ~-10.0              | ~-12.3      |
| VSWR                 | ~1.5:1   | ~2.0:1              | ~1.7:1      |
| Efficiency (%)       | ~34.1  | ~31.3               | ~37.0       |
| Peak Gain (dBi)      | ~1.9   | ~2.9                | ~3.9        |
| Average Gain (dB)    | ~-4.9  | ~-5.3               | ~-4.3       |
| Impedance (Ohms)     | 50   |                     |             |
| Polarisation         | Linear   |                     |             |
| Radiation Pattern    | Omni-Directional                               |                     |             |
| Max. Input Power (W) | 25   |                     |             |
| Connector Type       | SMA male standard (other connectors available) |                     |             |
| Cable Length         | 300cm standard (other lengths available)       |                     |             |
| Cable Type           | LMR100 standard (other cables available)       |                     |             |



**Cable 2**

| Parameters                  | Cellular/LTE Antenna                           |                     |             |
|-----------------------------|--|---------------------|-------------|
| <b>Standards</b>            | 2G/3G/4G                                       |                     |             |
| <b>Band (MHz)</b>           | 700/850/900                                    | 1700/1800/1900/2100 | 2600        |
| <b>Frequency (MHz)</b>      | 698 - 960                                      | 1710 - 2170         | 2500 - 2700 |
| <b>Return Loss (dB)</b>     | ~-9.3  | ~-7.7               | ~-15.4      |
| <b>VSWR</b>                 | ~2.2:1   | ~2.4:1              | ~1.5:1      |
| <b>Efficiency (%)</b>       | ~27  | ~23.1               | ~40.6       |
| <b>Peak Gain (dBi)</b>      | ~0.3   | ~1.9                | ~3.5        |
| <b>Average Gain (dB)</b>    | ~-5.7  | ~-6.4               | ~-3.9       |
| <b>Impedance (Ohms)</b>     | 50   |                     |             |
| <b>Polarisation</b>         | Linear   |                     |             |
| <b>Radiation Pattern</b>    | Omni-Directional                               |                     |             |
| <b>Max. Input Power (W)</b> | 25   |                     |             |
| <b>Connector Type</b>       | SMA male standard (other connectors available) |                     |             |
| <b>Cable Length</b>         | 300cm standard (other lengths available)       |                     |             |
| <b>Cable Type</b>           | LMR100 standard (other cables available)       |                     |             |

**Antenna measurement conditions:**

- Mounted on 30 x 30 x 0.25cm metal plate
- 200cm LMR100 cable
- Measured in certified CTIA 3D anechoic chamber



**Cable 3**

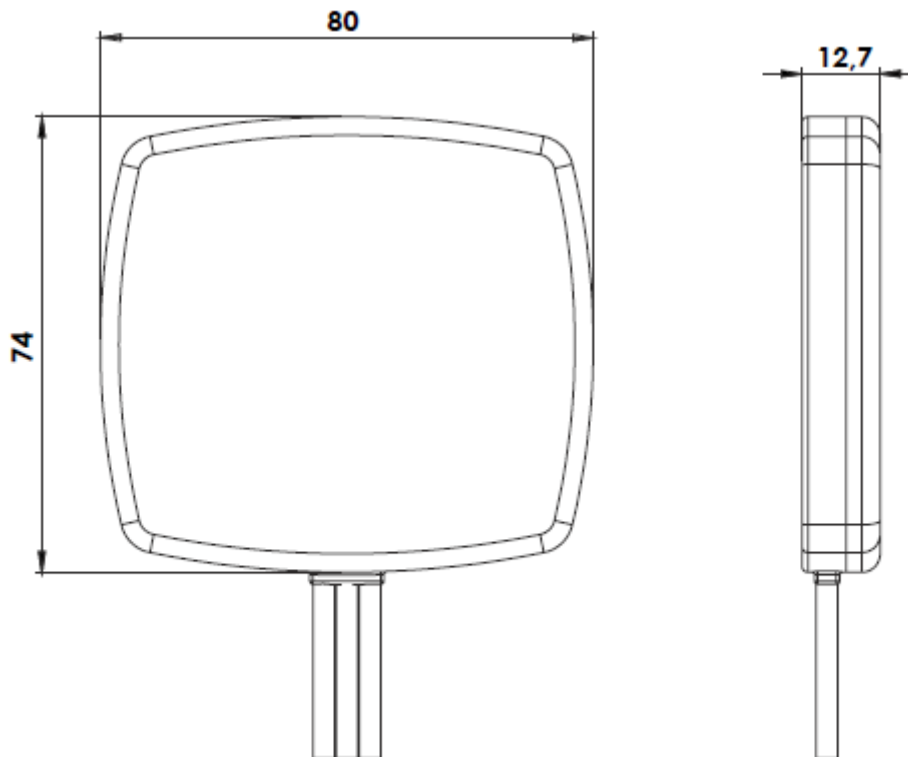
| Parameters                     | GPS/GLONASS Antenna                            |             |
|--------------------------------|--|-------------|
| <b>Standards</b>               | GPS/QZSS/Galileo                               | GLONASS     |
| <b>Band (MHz)</b>              | 1575   | 1602        |
| <b>Frequency (MHz)</b>         | 1575.42  | 1598 - 1606 |
| <b>Patch Size (mm)</b>         | 25 x 25 x 4                                    |             |
| <b>Return Loss (dB)</b>        | <=-15  |             |
| <b>VSWR</b>                    | <=1.4:1  |             |
| <b>Impedance (Ohms)</b>        | 50   |             |
| <b>Polarisation</b>            | RHCP   |             |
| <b>Radiation Pattern</b>       | Hemispherical                                  |             |
| <b>SAW Filter</b>              | Pre-Filter                                     |             |
| <b>Active Gain (dB)</b>        | 28 @ 2.7V                                      |             |
| <b>Noise Figure (dB)</b>       | 1.5 (typ.)                                     |             |
| <b>Voltage (V)</b>             | 1.5 – 3.6                                      |             |
| <b>Current Consumption(mA)</b> | 9 (typ.)                                       |             |
| <b>Power Consumption (mW)</b>  | 24.3 (typ.)                                    |             |
| <b>ESD Protection (kV)</b>     | 2  |             |
| <b>Connector Type</b>          | SMA male standard (other connectors available) |             |
| <b>Cable Length</b>            | 300cm standard (other lengths available)       |             |
| <b>Cable Type</b>              | LMR100 standard (other cables available)       |             |



## 2. Mechanical and environmental specifications

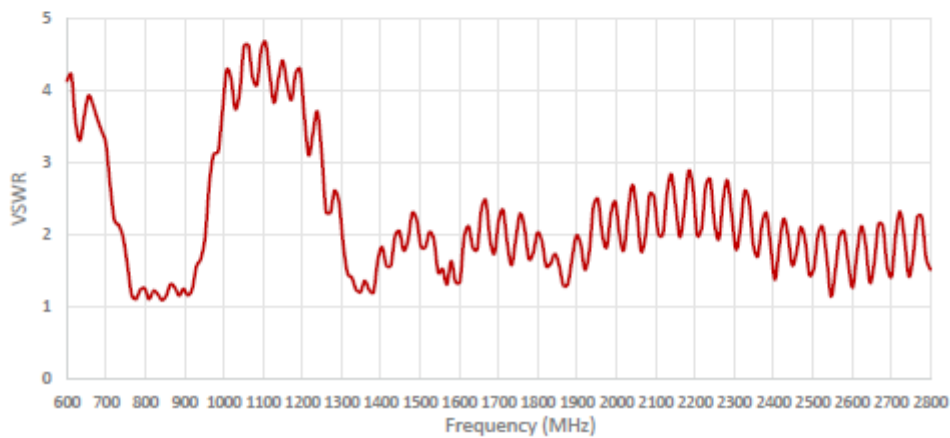
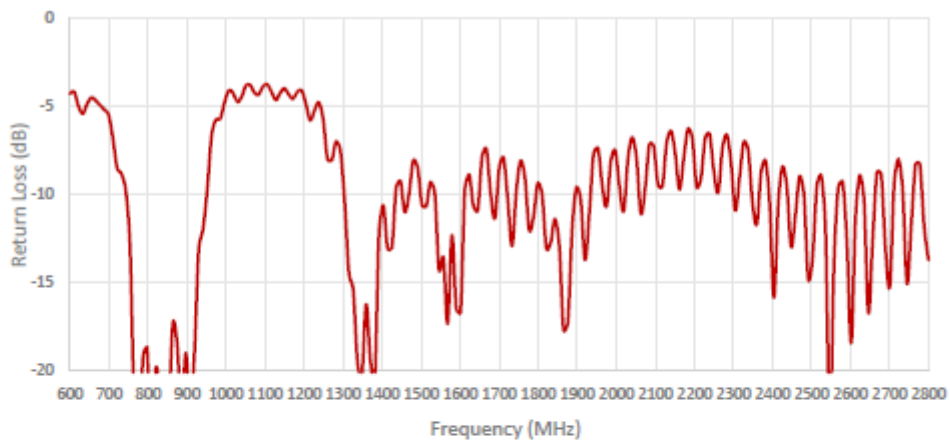
|                                   |                |
|-----------------------------------|----------------|
| <b>Mounting Type</b>              | Magnetic mount |
| <b>Dimensions (mm)</b>            | 80 x 76 x 13   |
| <b>Radome</b>                     | ASA            |
| <b>Radome Colour</b>              | Black or White |
| <b>Operating Temperature (°C)</b> | -40 to +85     |
| <b>Storage Temperature (°C)</b>   | -40 to +85     |
| <b>Substance Compliance</b>       | RoHS           |

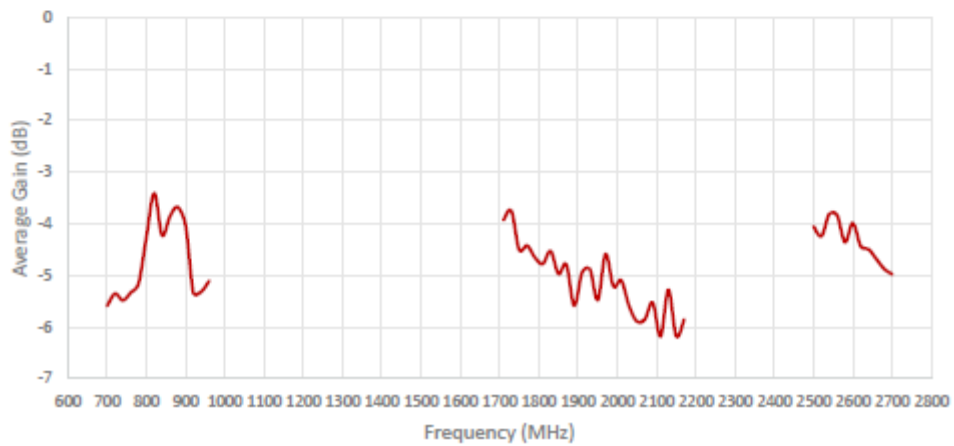
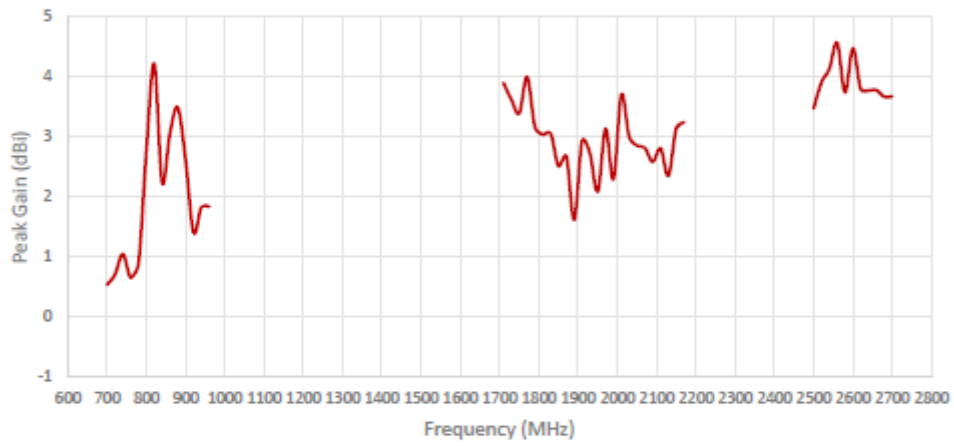
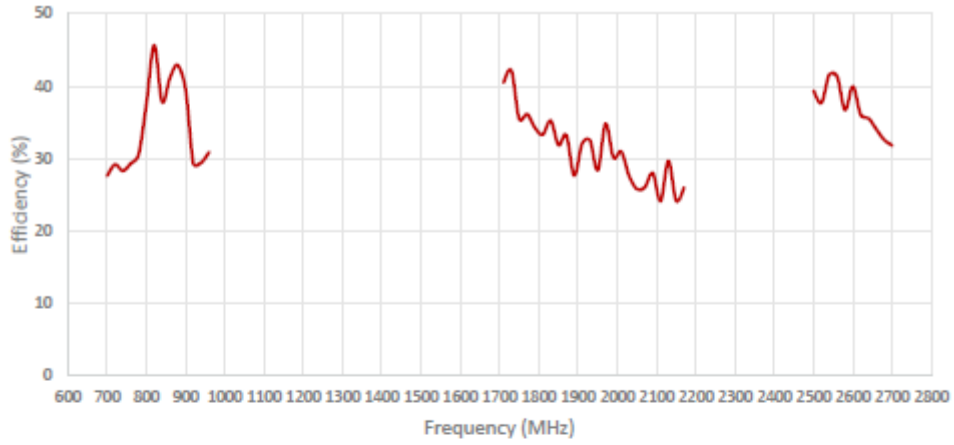
## 3. Antenna drawings



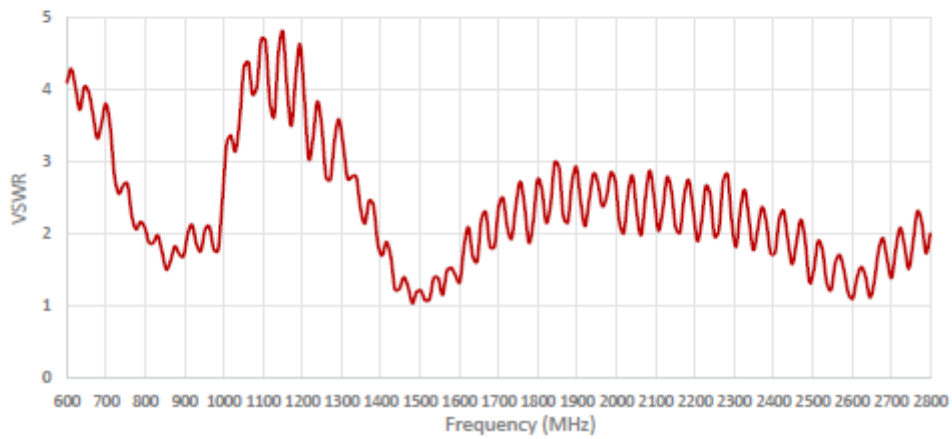
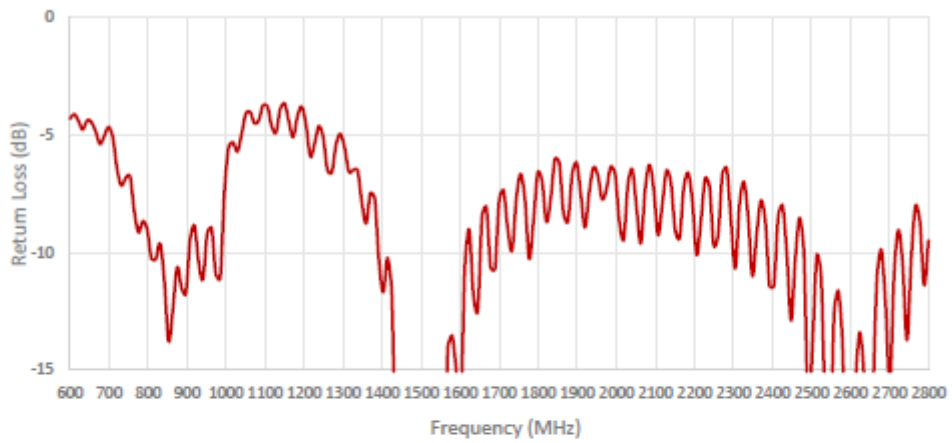
## 4. Antenna parameters

Cable 1: CELLULAR/LTE

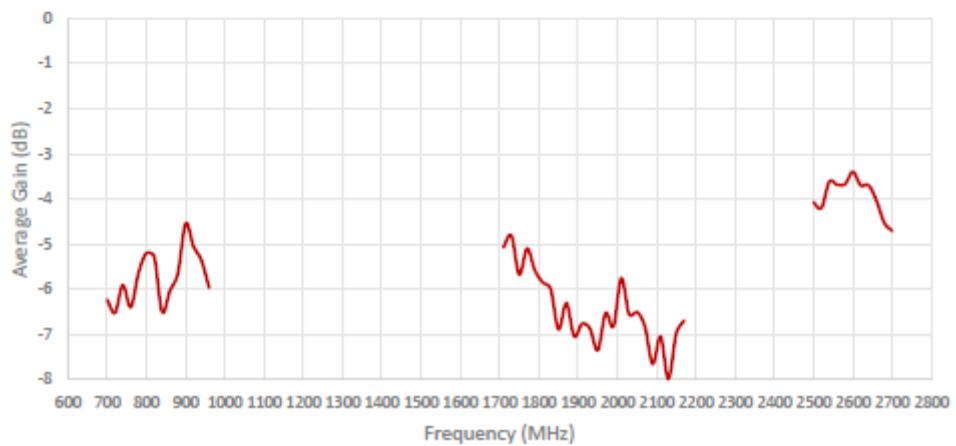
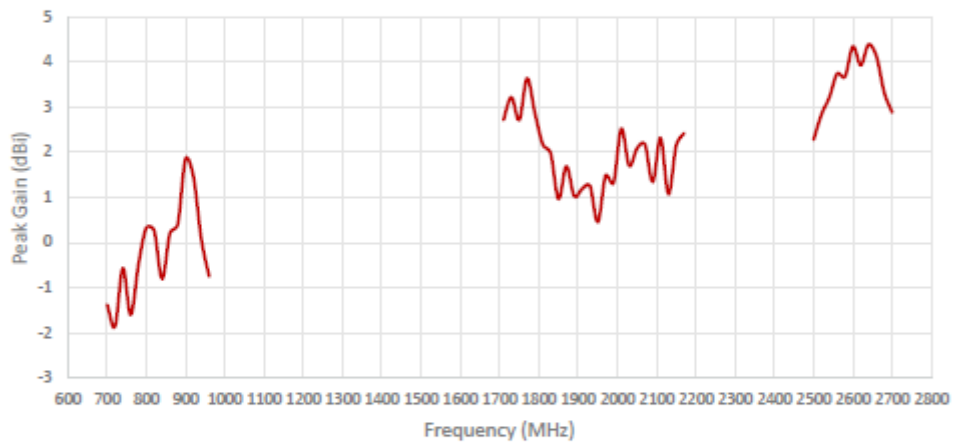
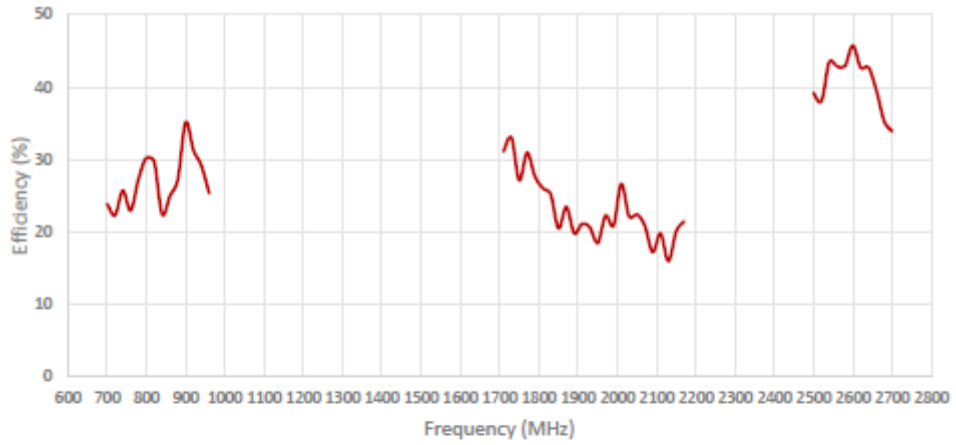




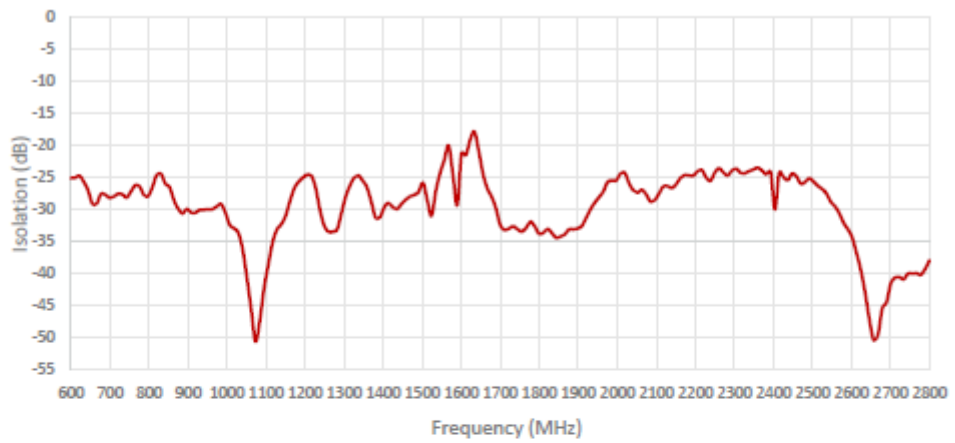
Cable 2: CELLULAR/LTE



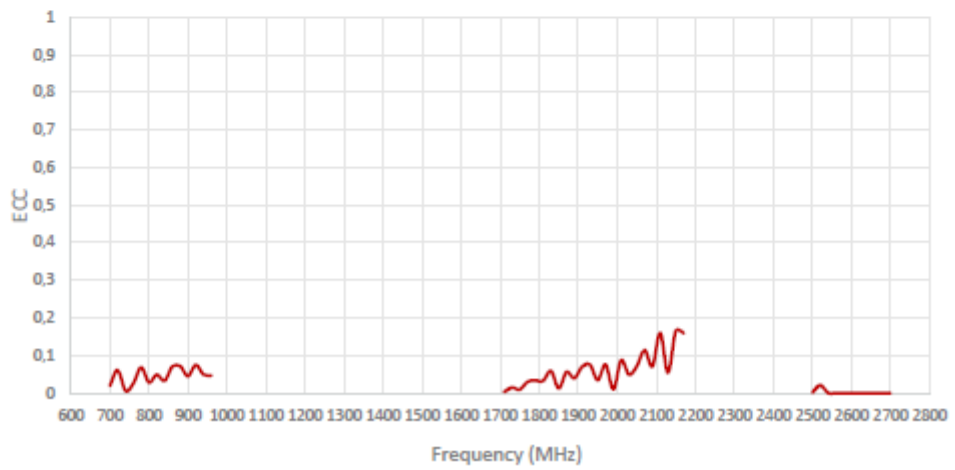


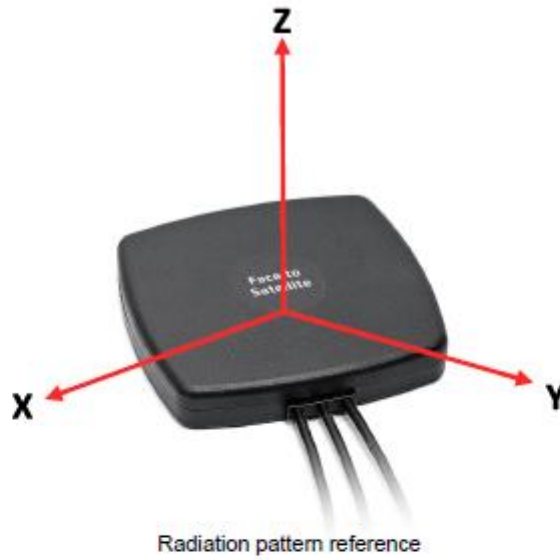


**ISOLATION FOR CABLES 1 AND 2**

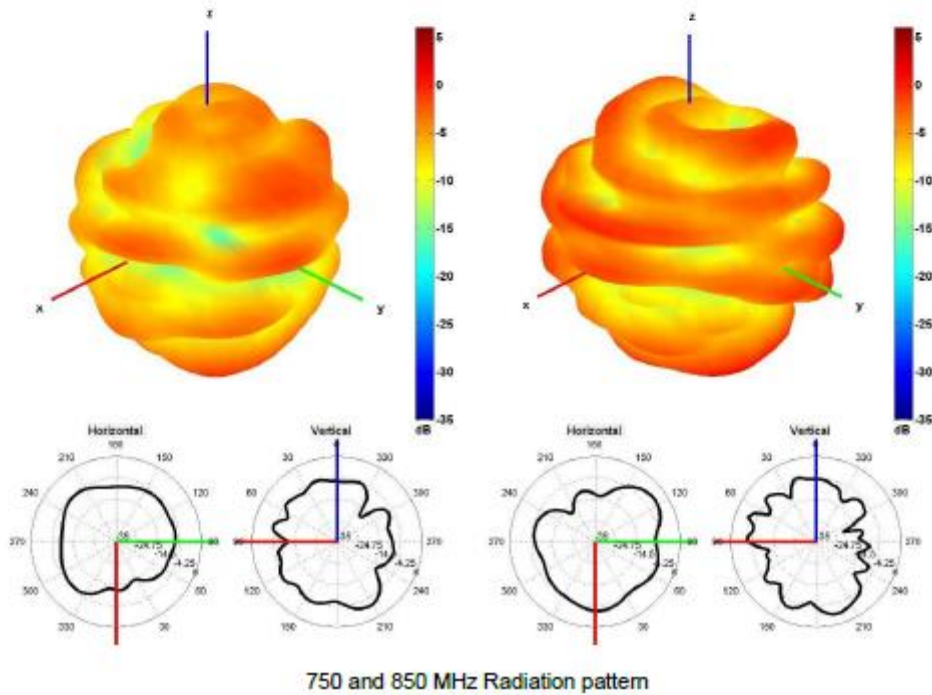


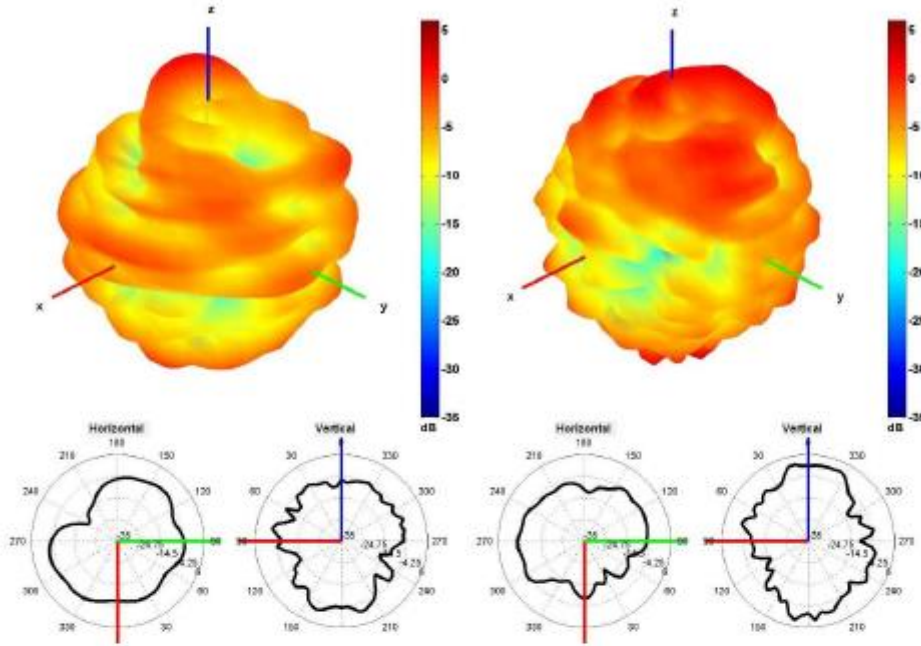
**ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 2**



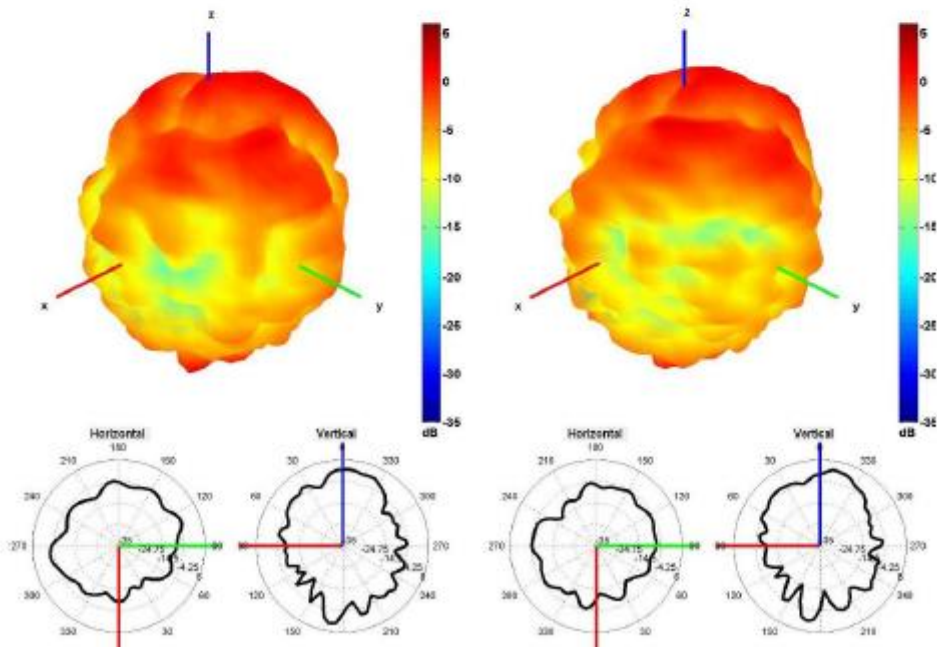


Cable 1: CELLULAR/LTE



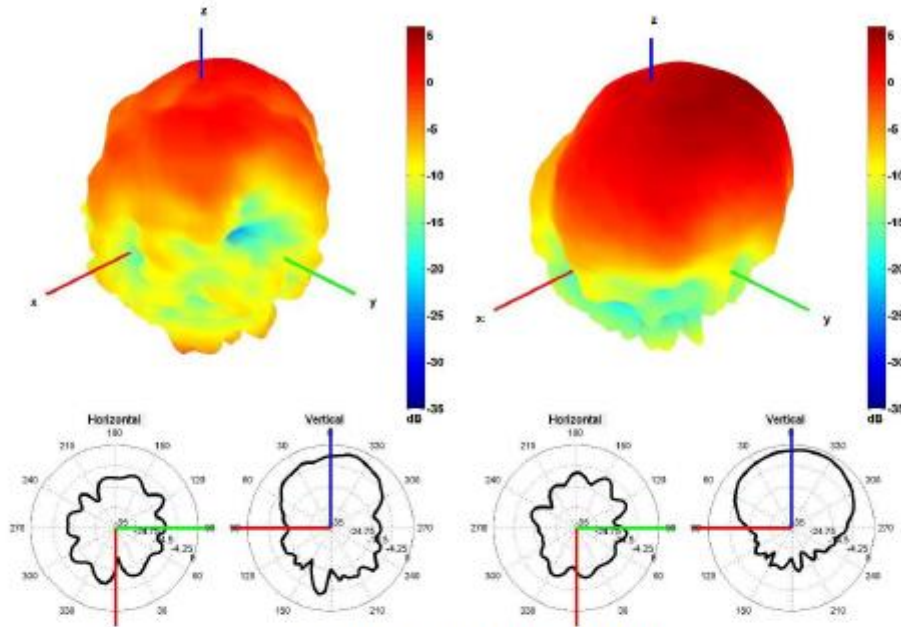


940 and 1750 MHz Radiation pattern



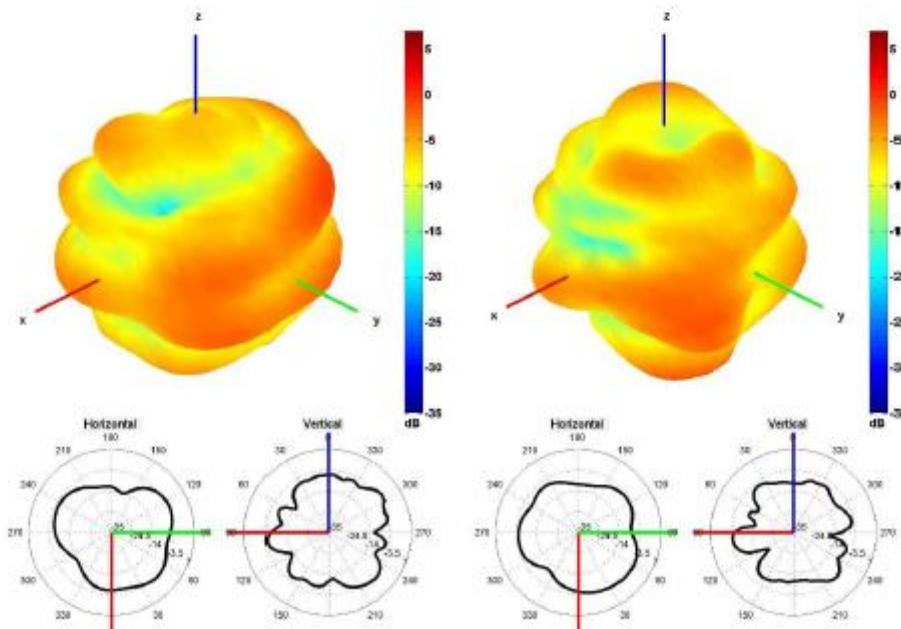
1850 and 1950 MHz Radiation pattern





2100 and 2600 MHz Radiation pattern

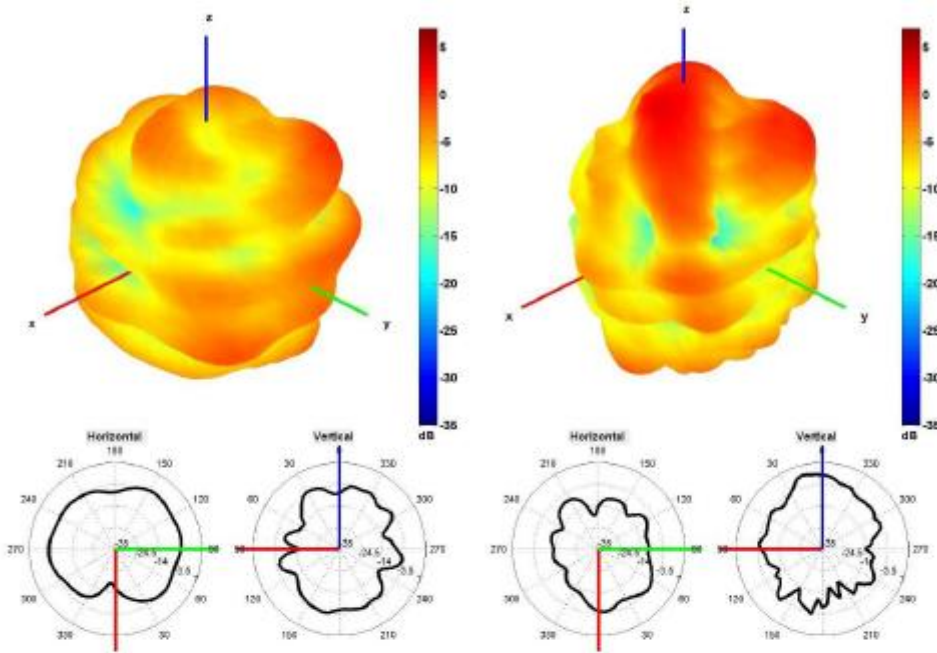
Table 2: CELLULAR/LTE



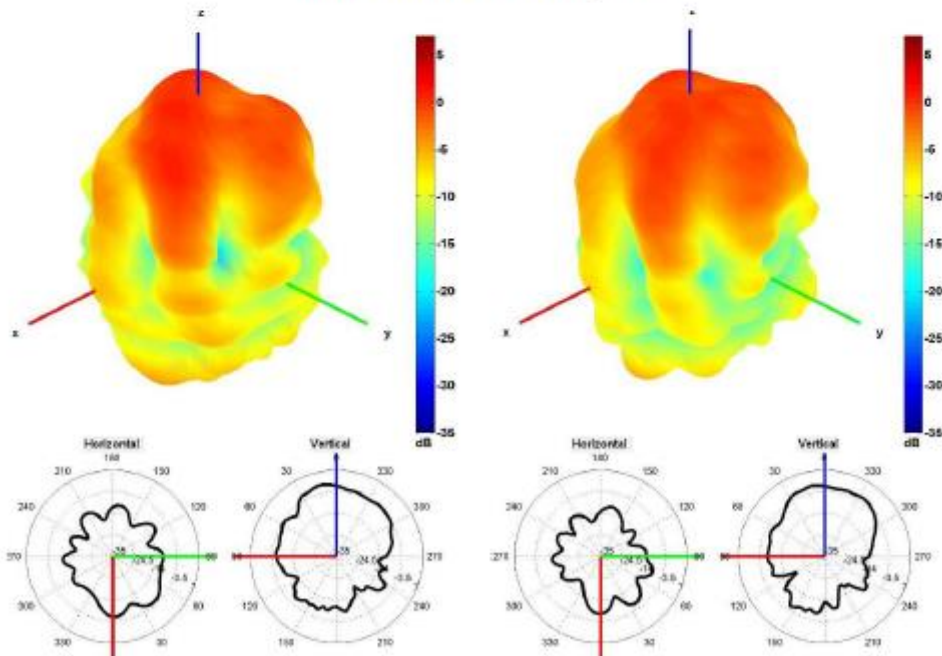
750 and 850 MHz Radiation pattern





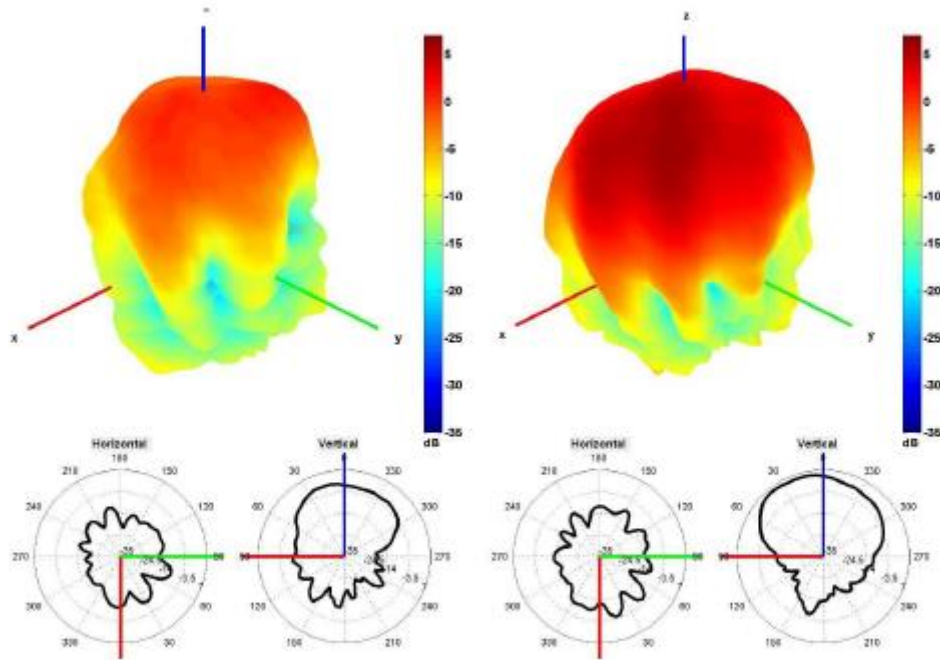


940 and 1750 MHz Radiation pattern



1850 and 1950 MHz Radiation pattern





2100 and 2600 MHz Radiation pattern

