

2J6541BGFa

CELLULAR/LTE MIMO and GNSS Screw Mount

Key Features

Cable 1 and 2: CELLULAR / LTE

- 791-960 MHz
- 1710-2170 MHz
- 2500-2700 MHz

Cable 3: GPS/GLONASS/QZSS/Galileo

- 1575-1610 MHz

Screw Mount

Heavy Duty antenna

High Performance

Ground Plane Dependent

Anti-Rotation Mounting

Customizable Cable and Connector

Dimensions \varnothing 146 x 31.5 mm

Certificates: IP67, IP69K, IK09



Note: This antenna is suitable only for European LTE frequency bands



1. Antenna and electrical specifications

Cable 1

| Parameters | CELLULAR / LTE Antenna | | |
|-----------------------------|--|---------------------|-----------|
| | 4G LTE/FirstNet/LPWA/CAT-X/CAT-Mx/CAT-NBx/NB-IoT/3G/2G | | |
| Standards | | | |
| Band (MHz) | 800/850/900 | 1700/1800/1900/2100 | 2600 |
| Frequency (MHz) | 791-960 | 1710-2170 | 2500-2700 |
| Return Loss (dB) | ~-7.6 | ~-14.3 | ~-10.8 |
| VSWR | ~2.5:1 | ~1.6:1 | ~1.6:1 |
| Efficiency (%) | ~30.7 | ~40.8 | ~26.5 |
| Peak Gain (dBi) | ~-0.5 | ~3.3 | ~-0.9 |
| Average Gain (dB) | ~-5.8 | ~-3.9 | ~-5.9 |
| Impedance (Ohm) | 50 | | |
| Polarisation | Linear | | |
| Radiation Pattern | Omni-Directional | | |
| Max. Input Power (W) | 25 | | |
| Connector Type | SMA-Male Standard (Other Connectors Available) | | |
| Cable Length | 300 cm Standard (Any Cable Length Available) | | |
| Cable Type | RG174 Standard (Other Cables Available) | | |

Cable 2

| Parameters | CELLULAR / LTE Antenna | | |
|-----------------------------|--|---------------------|-----------|
| | 4G LTE/FirstNet/LPWA/CAT-X/CAT-Mx/CAT-NBx/NB-IoT/3G/2G | | |
| Standards | | | |
| Band (MHz) | 800/850/900 | 1700/1800/1900/2100 | 2600 |
| Frequency (MHz) | 791-960 | 1710-2170 | 2500-2700 |
| Return Loss (dB) | ~-7.6 | ~-13.3 | ~-10.9 |
| VSWR | ~2.5:1 | ~1.7:1 | ~1.9:1 |
| Efficiency (%) | ~29.2 | ~39.0 | ~25.7 |
| Peak Gain (dBi) | ~-0.1 | ~2.9 | ~-0.4 |
| Average Gain (dB) | ~-5.9 | ~-4.1 | ~-6.0 |
| Impedance (Ohm) | 50 | | |
| Polarisation | Linear | | |
| Radiation Pattern | Omni-Directional | | |
| Max. Input Power (W) | 25 | | |
| Connector Type | SMA-Male Standard (Other Connectors Available) | | |
| Cable Length | 300 cm Standard (Any Cable Length Available) | | |
| Cable Type | RG174 Standard (Other Cables Available) | | |

Antenna Measurement Conditions:

Mounted on Metal Plate of 30 x 30 cm
 200 cm of RG174 Cable
 Measured in Certified CTIA 3D Anechoic Chamber

Cable 3

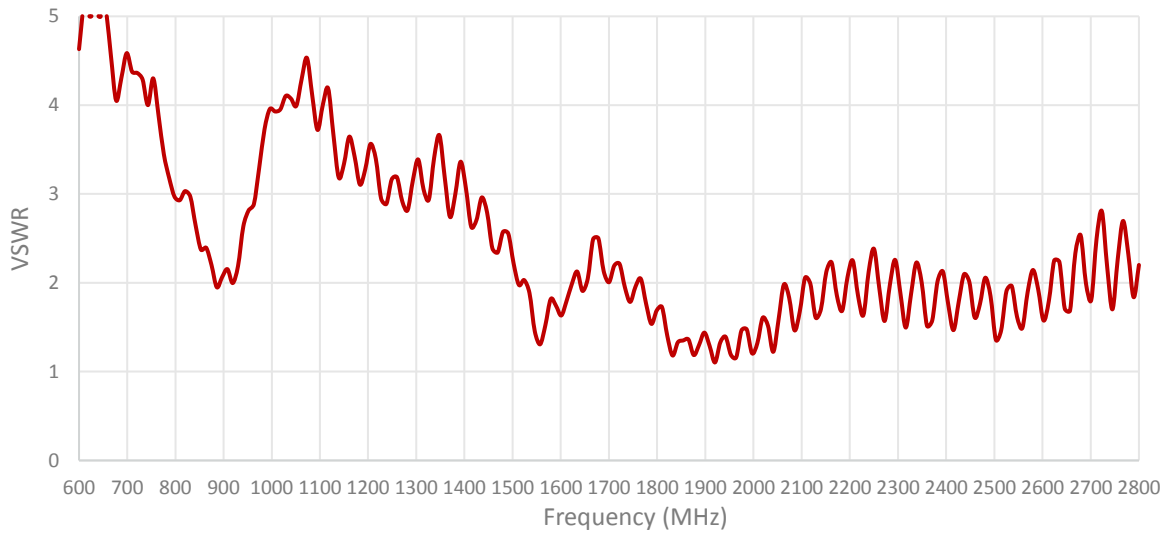
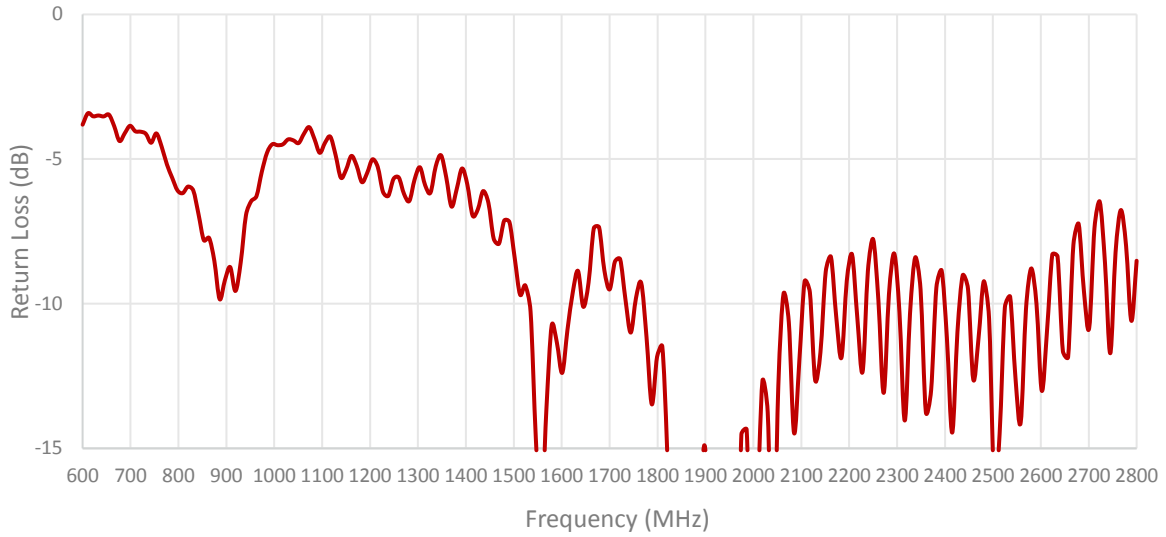
| Parameters | GPS/GLONASS Antenna | |
|---------------------------------|--|-----------|
| | GPS/QZSS/Galileo | GLONASS |
| Standards | GPS/QZSS/Galileo | GLONASS |
| Band (MHz) | 1575 | 1602 |
| Frequency (Mhz) | 1575.42 | 1598-1606 |
| Patch Size (mm) | 25 x 25 x 4 | |
| Passive Gain (dBi) | ~3.6 | |
| Impedance (Ohms) | 50 | |
| Radiation Pattern | Hemispherical | |
| Voltage Range (V) | 2.7 - 5.5 | |
| Active Gain (dB) | 23 @ 3V, 24 @ 5V | |
| Noise Figure (dB) | 1.2 | |
| Current Consumption (mA) | 22 @ 5V | |
| Power Consumption (mW) | max 138mW | |
| Saw Filter Type | Post-Filter | |
| Connector Type | SMA-Male Standard (Other Connectors Available) | |
| Cable Length | 300 cm Standard (Any Cable Length Available) | |
| Cable Type | RG174 Standard (Other Cables Available) | |

2. Mechanical and environmental specifications

| Specifications | 2J6541BGFa |
|----------------------------------|-------------------|
| Mounting Type | Screw Mount |
| Dimensions (mm) | Ø 146 x 31.5 |
| Max. Tighten Torque (Nm) | 6 Nm |
| Radome | ABS |
| Radome color | Black |
| Antenna Base | Zamak |
| Gasket | TPE |
| Operating Temperature (C) | -40 to +85 |
| Storage Temperature (C) | -40 to +85 |
| Substance Compliance | RoHS |
| Certificates | IP67, IP69K, IK09 |

3. Antenna parameters

Cable 1: CELLULAR/LTE



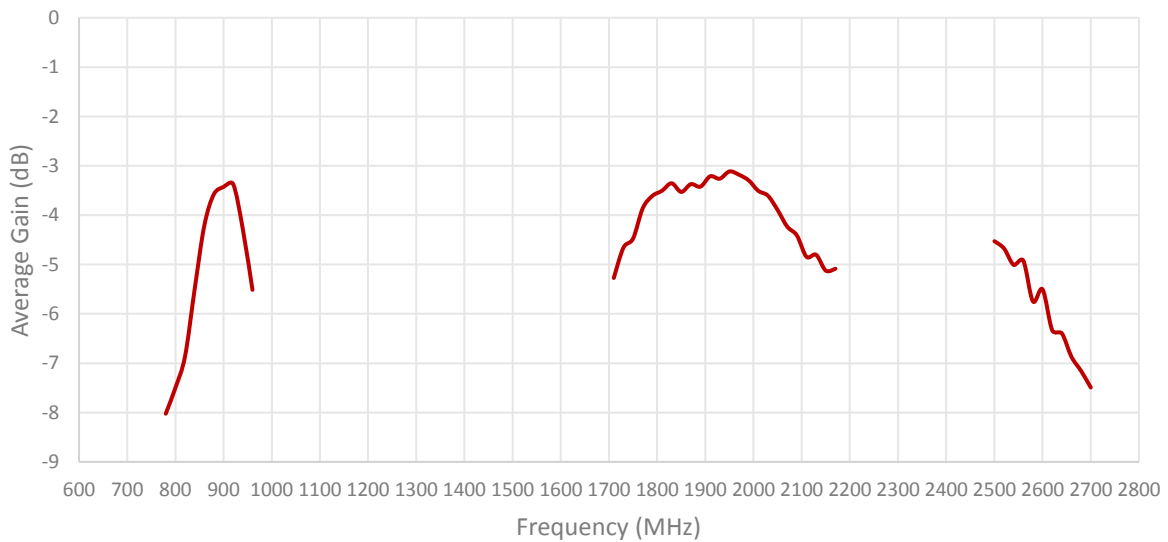
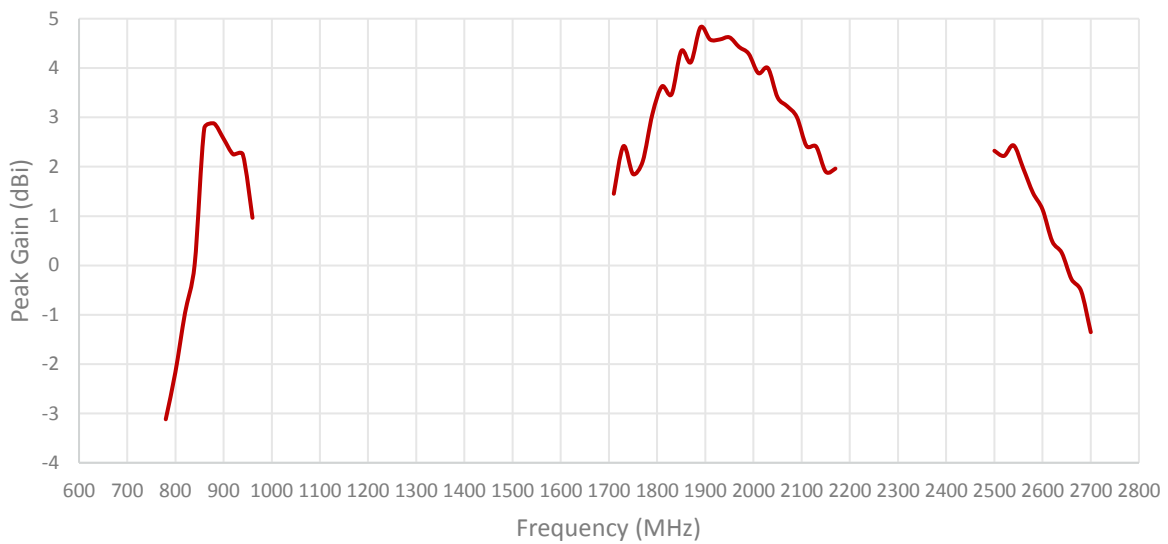
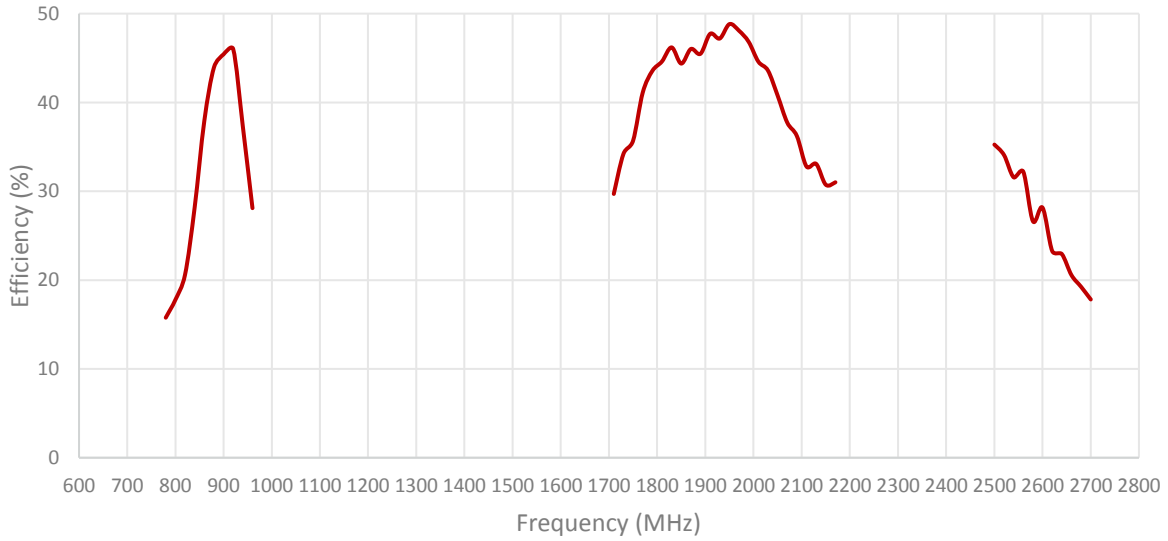
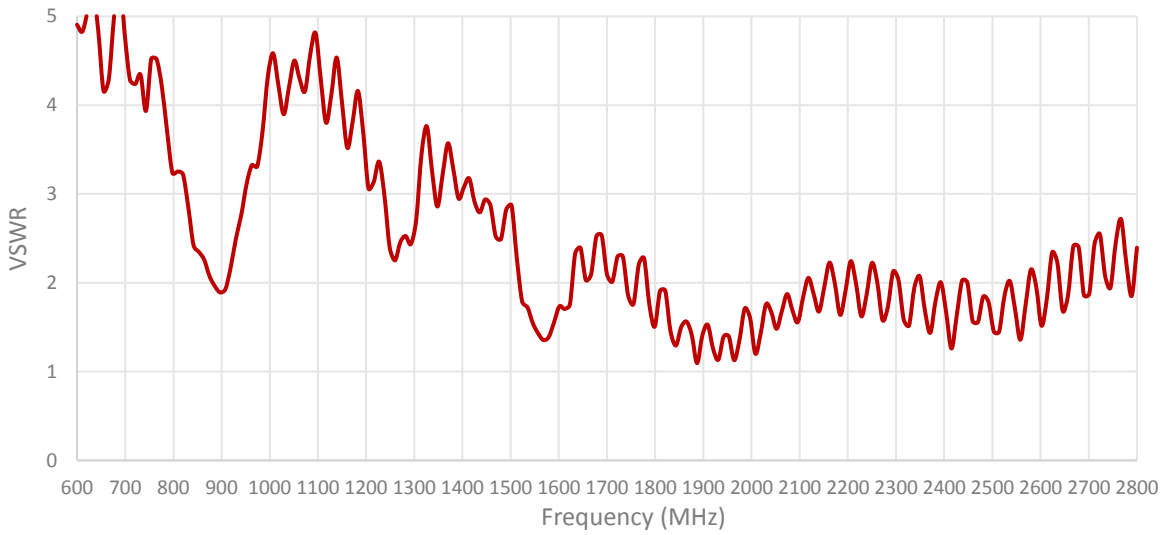
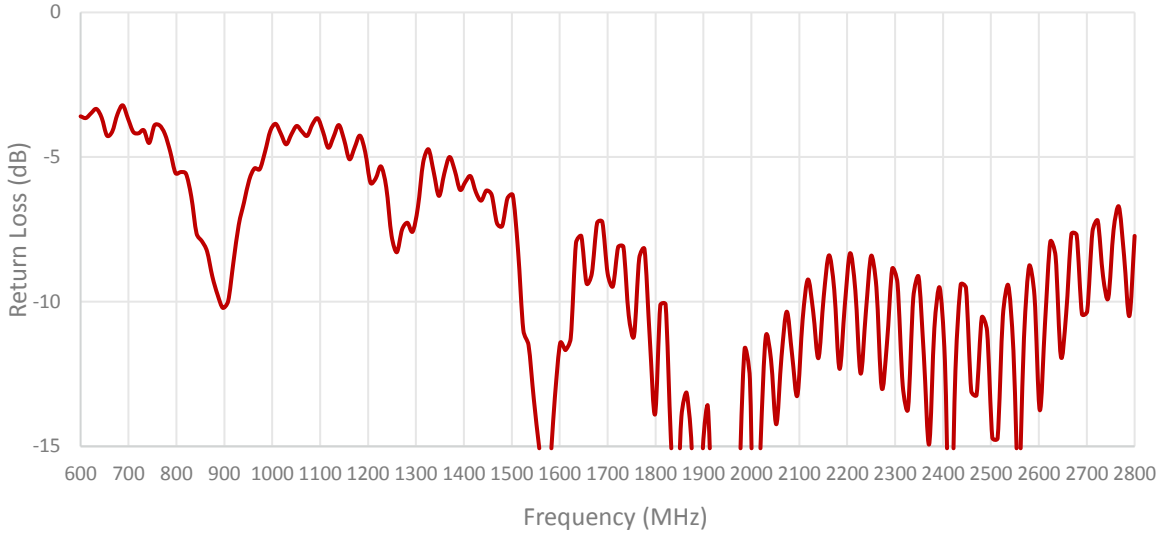
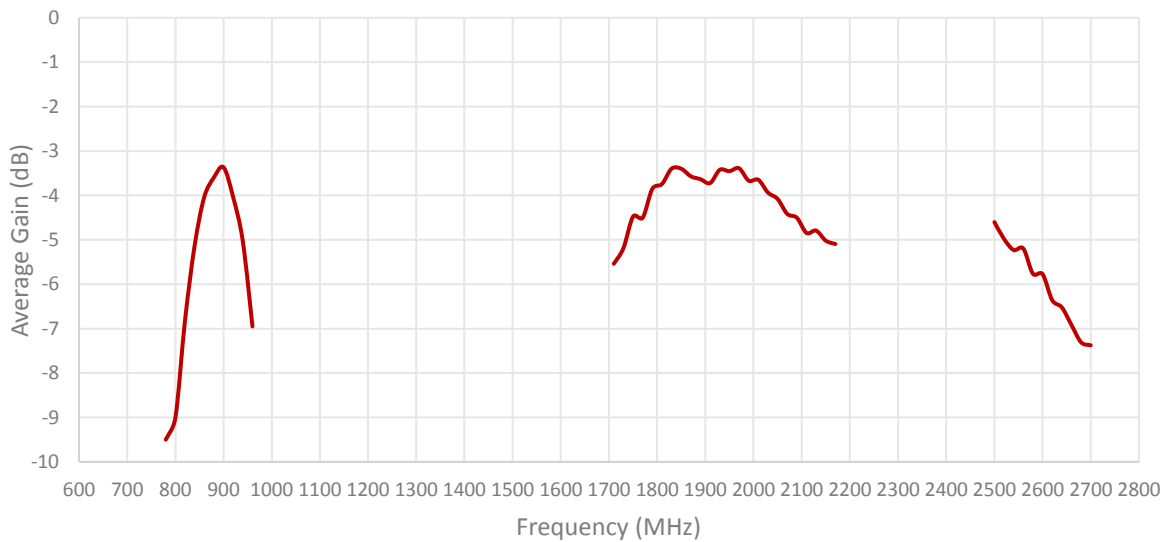
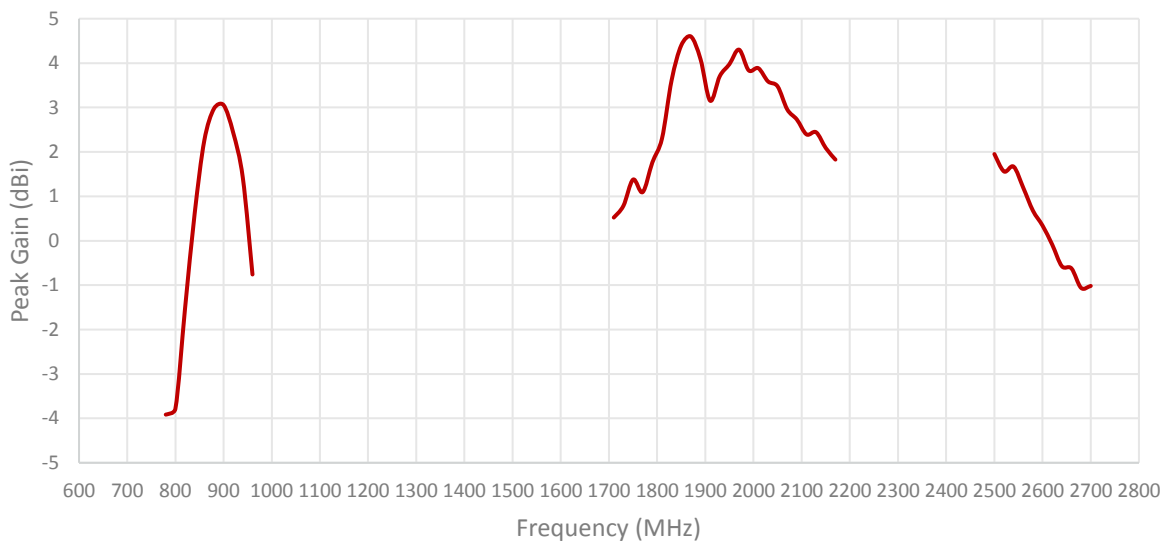
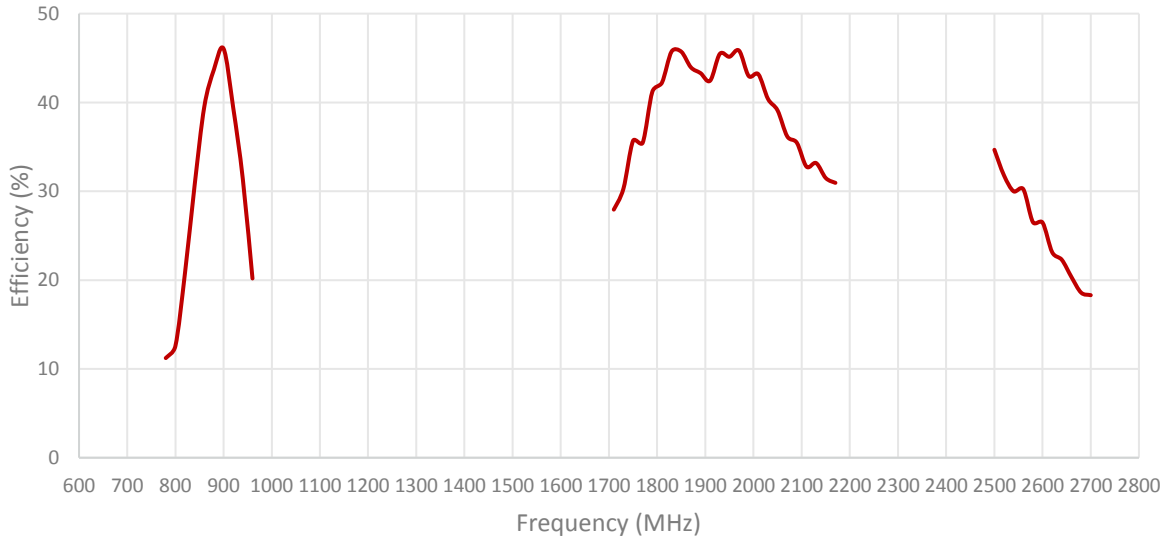
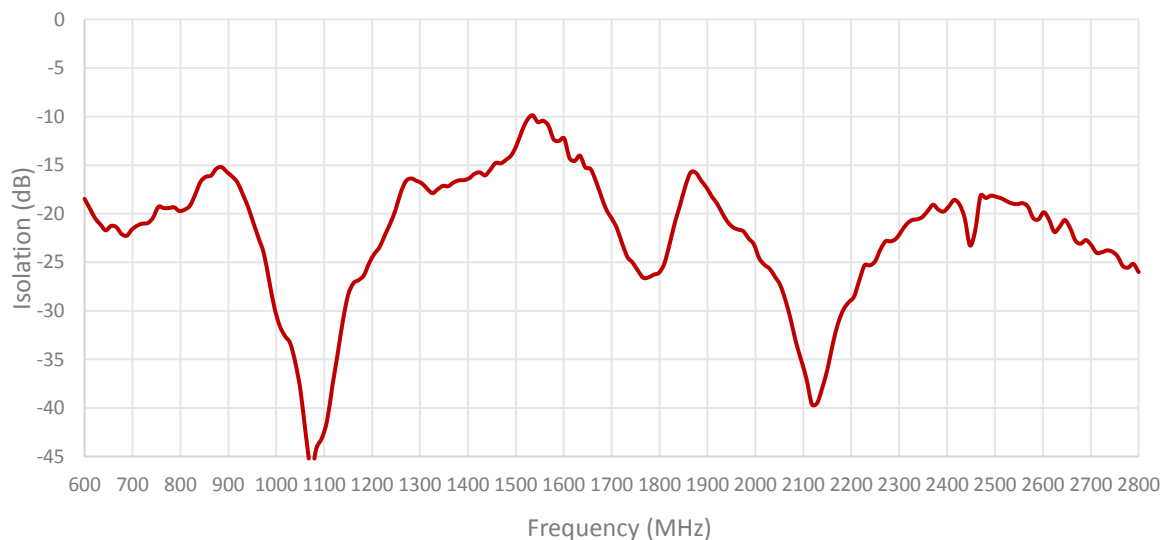


Table 2: CELLULAR/LTE

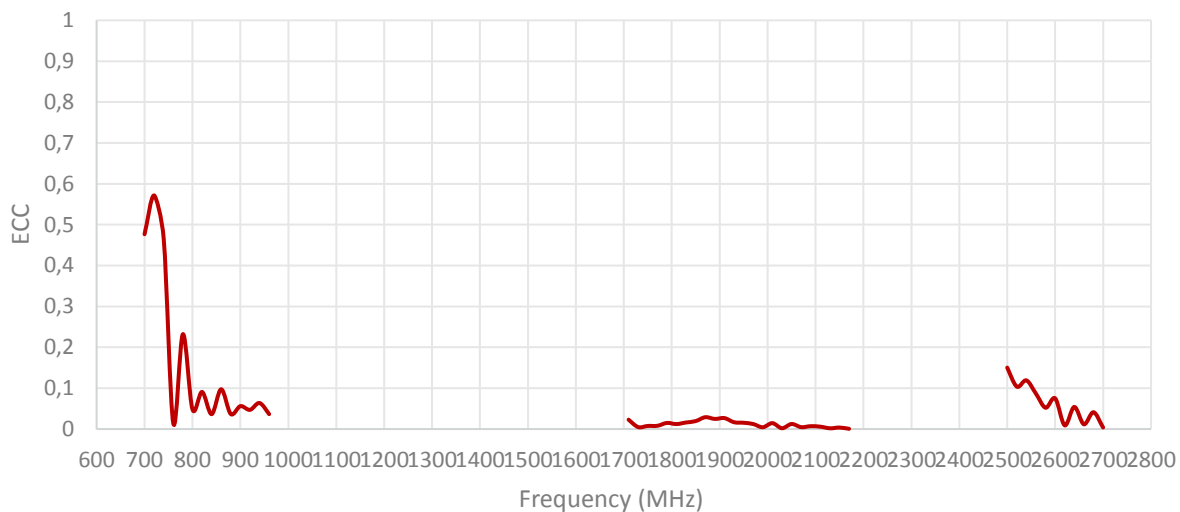


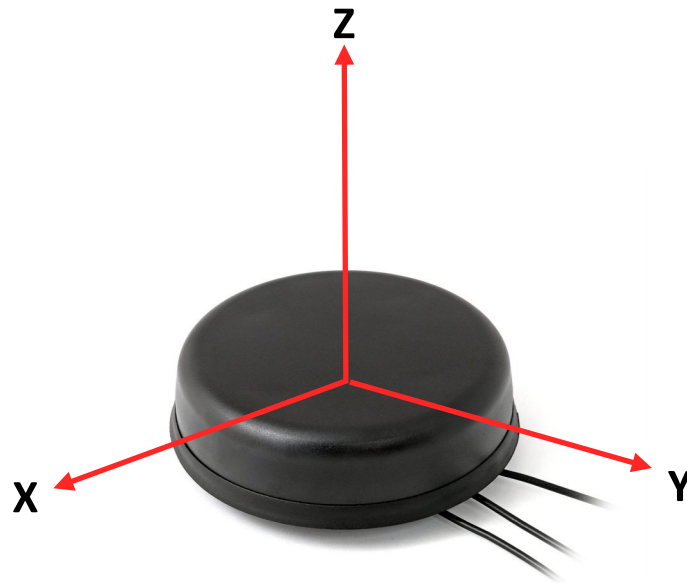


ISOLATION FOR CABLES 1 AND 2



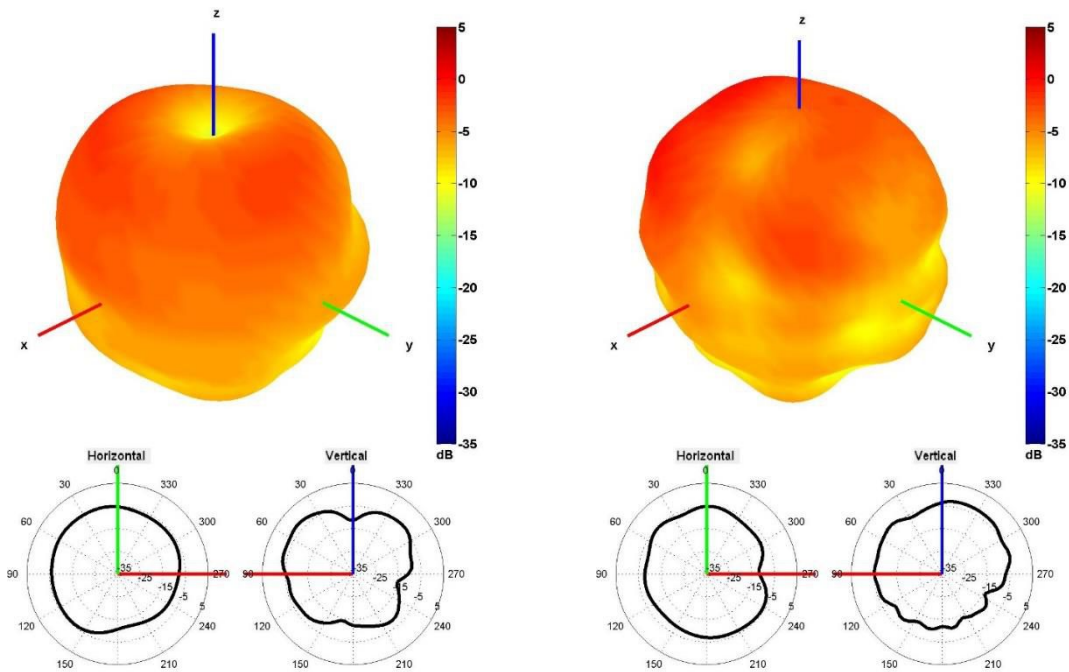
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 2



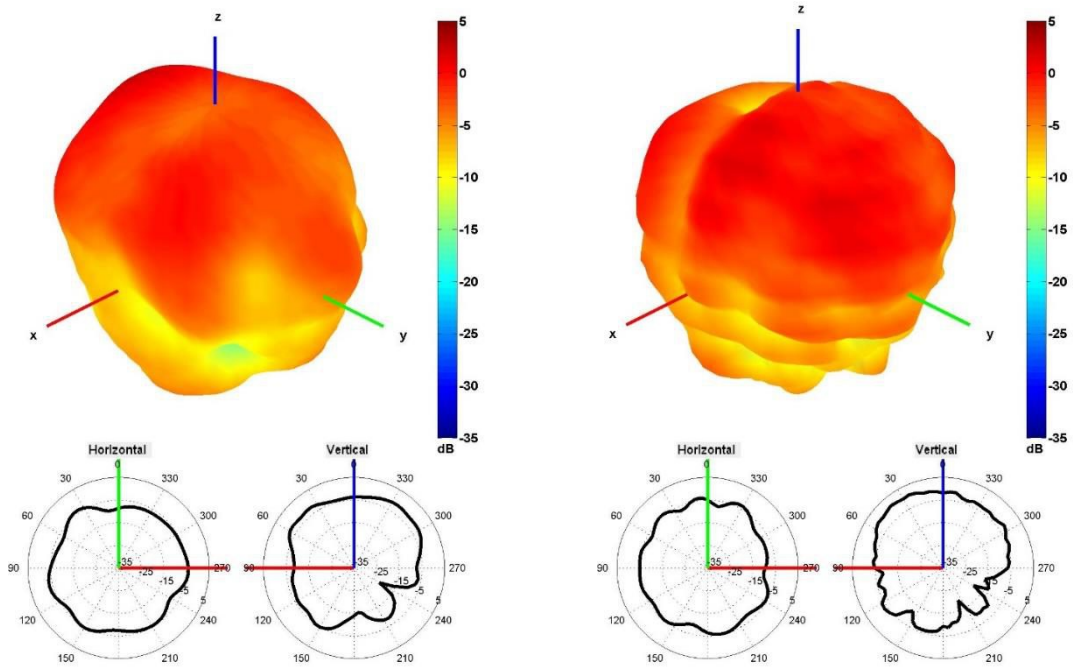


Radiation pattern reference

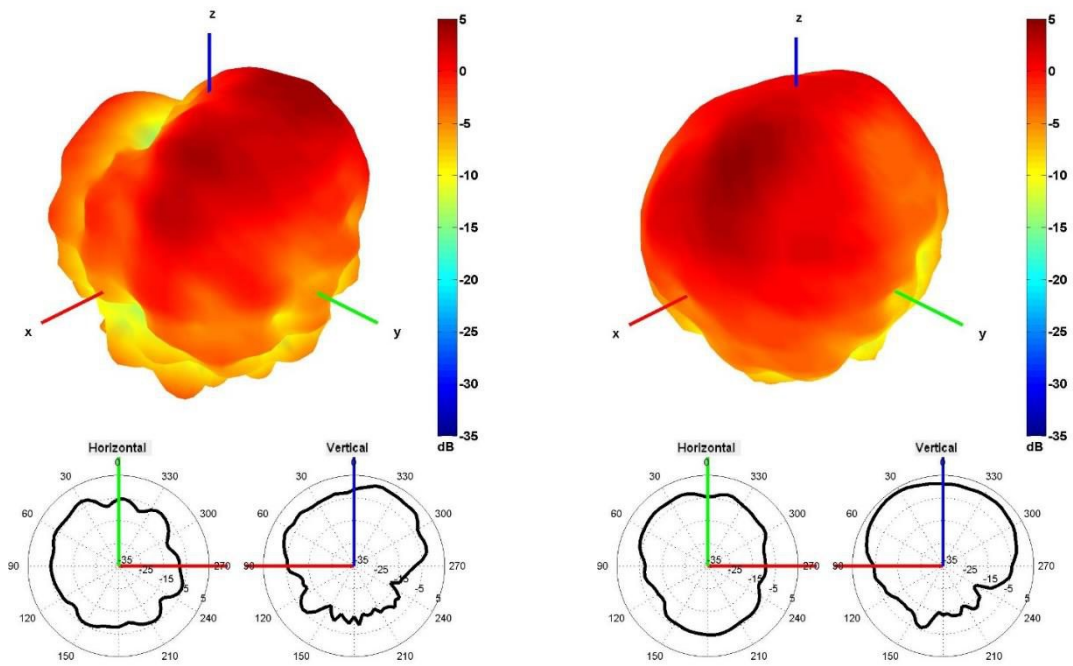
Cable 1: CELLULAR/LTE



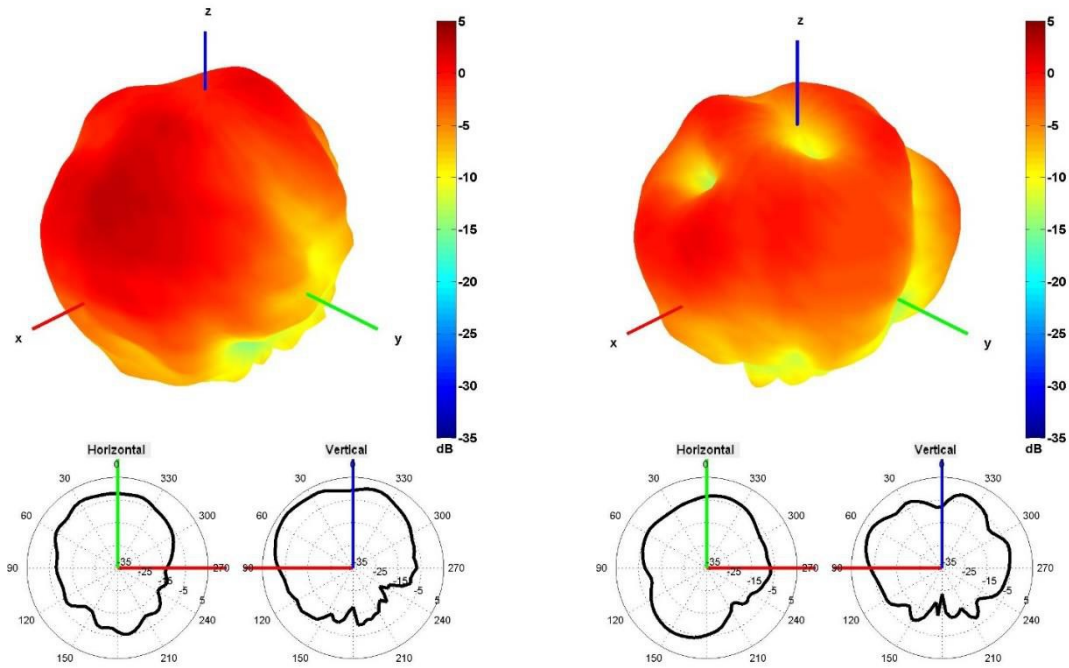
750 and 850 MHz Radiation pattern



940 and 1750 MHz Radiation pattern

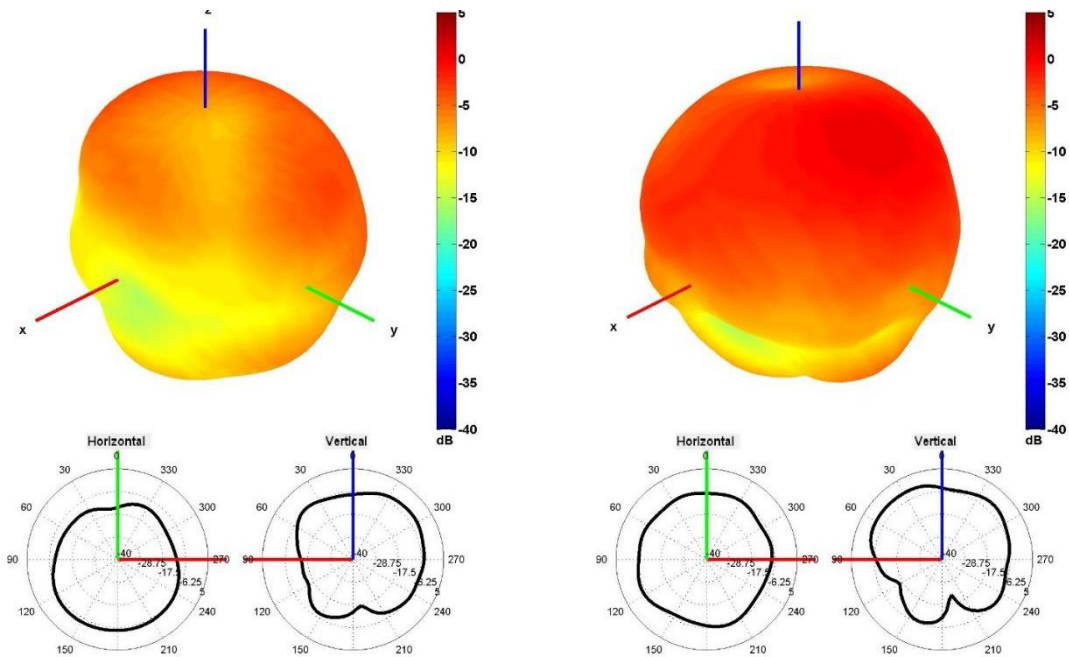


1850 and 1950 MHz Radiation pattern

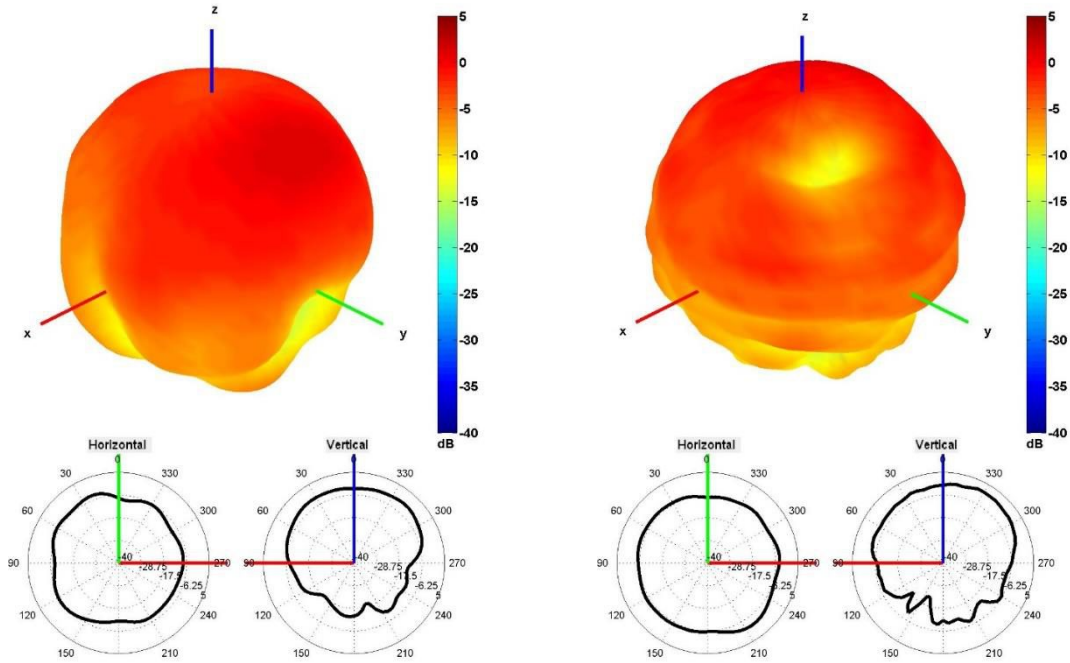


2100 and 2600 MHz Radiation pattern

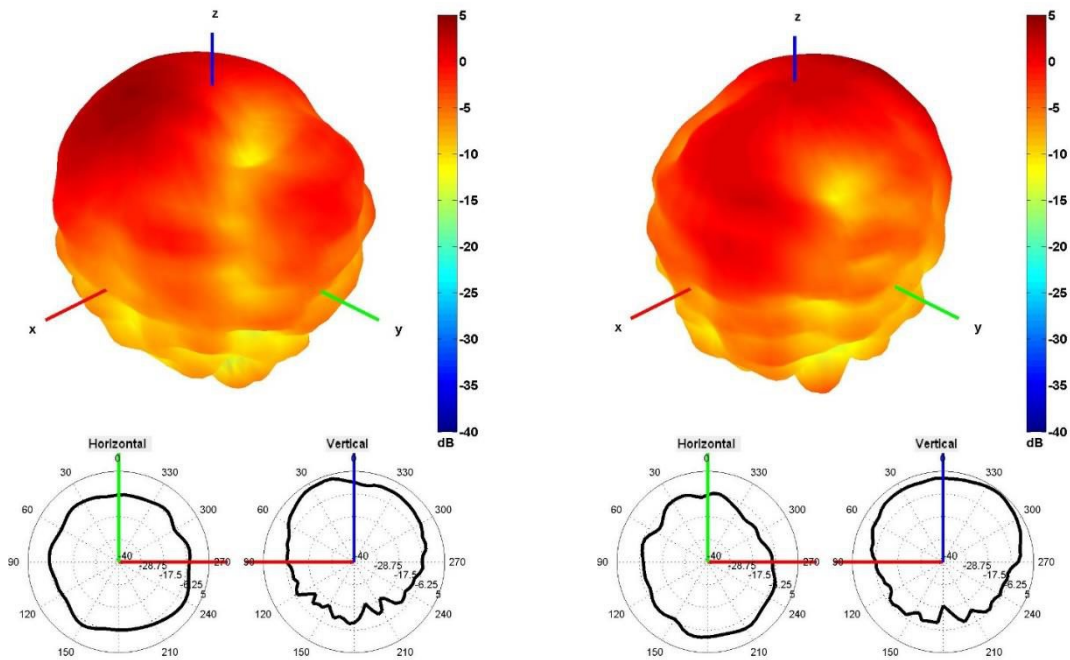
Cable 2: CELLULAR/LTE



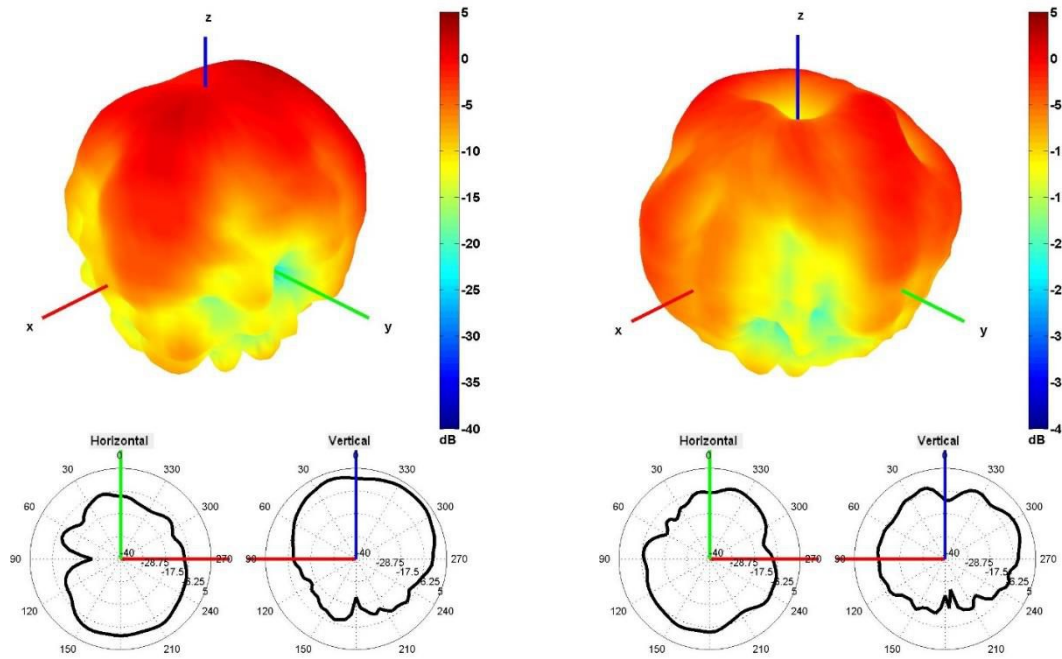
750 and 850 MHz Radiation pattern



940 and 1750 MHz Radiation pattern

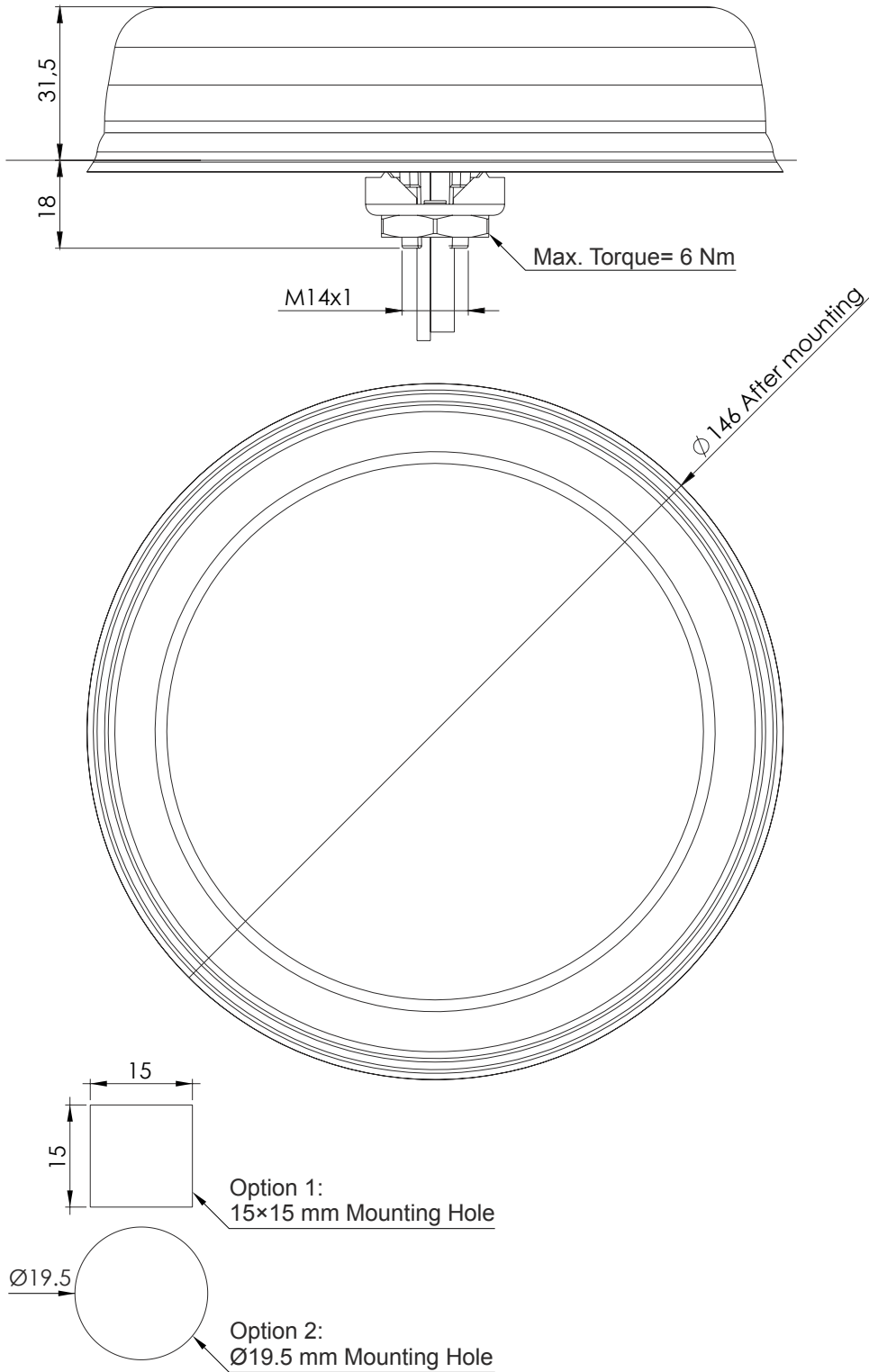


1850 and 1950 MHz Radiation pattern



2100 and 2600 MHz Radiation pattern

4. Antenna drawings



Note: Dimensions are in millimeters
***Dimensions are after mounting**
****Max. Torque= 6 Nm**

5. Antenna Images

