

## 2J6975BGF

5GNR, Iridium and GNSS Screw Mount

### Key Features

#### Cable 1: 5GNR

- 617-960 MHz
- 1427-2690 MHz
- 3300-5000 MHz
- 5150-5925 MHz

#### Cable 2: Iridium

- 1616-1627 MHz

#### Cable 3: GPS/GLONASS/QZSS/Galileo

- 1575-1606 MHz

Screw Mount

#### Iridium Certified

Anti-Rotation Mounting

Ground Plane Independent

Customizable Cable and Connector

Dimensions 80 × 74 × 25.6 mm

Certificates: IP67, IP69



## 1. Antenna and electrical specifications

**Cable 1**

| Parameters           | 5GNR Antenna                                                                                        |                                                                                                                                                                                 |                                 |                      |
|----------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------|
| Technologies         | 5G, 4G, 3G and 2G                                                                                   |                                                                                                                                                                                 |                                 |                      |
| Standards            | 5GNR/4GLTE/FirstNet/CBRS/LPWA/CAT-X/CAT-Mx/CAT-NBx/NB-IoT/3G/2G                                     |                                                                                                                                                                                 |                                 |                      |
| Frequency (MHz)      | 617-960                                                                                             | 1427-2690                                                                                                                                                                       | 3300-5000                       | 5150-5925            |
| Band (MHz)           | 600, 700, 850, 900                                                                                  | 1500, 1600, 1700, 1800,<br>1900, 2000, 2100, 2300,<br>2500, 2600                                                                                                                | 3300, 3500, 3600,<br>3700, 4500 | 5200, 5500, 5800     |
| 5GNR Bands           | n5, n8 ,12, n20, n28, n71,<br>n81, n82, n83,                                                        | n1, n2, n3, n7, n25, n34,<br>n38, n39, n40, n41, n50,<br>n51, n66, n70, n74, n75,<br>n76, n80, n84, n86                                                                         | n77, n78, n79                   |                      |
| 4GLTE Bands          | B5, B6, B8, B12, B13, B14,<br>B17, B18, B19, B20, B26,<br>B27, B28, B29, B44, B67,<br>B68, B71, B85 | B1, B2, B3, B4, B7, B9,<br>B10, B11, B21, B23, B24,<br>B25, B30, B32, B33, B34,<br>B35, B36, B37, B38, B39,<br>B40, B41, B45, B50, B51,<br>B65, B66, B69, B70, B74,<br>B75, B76 | B22, B42, B43, B48,<br>B49, B52 | B46, B47, B252, B255 |
| 3GCELL Bands         | B5, B6, B8, B12, B13, B14,<br>B19, B20, B26                                                         | B1, B2, B3, B4, B7, B9,<br>B10, B11, B21, B25, B32,<br>B33, B34, B35, B36, B37,<br>B38, B39, B40                                                                                | B22                             |                      |
| 2GCELL Bands         | 710, 750, 810T, 850, 900P,<br>900E, 900R                                                            | 1800DCS, 1900PCS                                                                                                                                                                |                                 |                      |
| CDMACELL Bands       | BC0, BC2, BC3, BC7, BC9,<br>BC10, BC12, BC18, BC19                                                  | BC1, BC4, BC6, BC8,<br>BC13, BC14, BC15, BC16,<br>BC20, BC21                                                                                                                    |                                 |                      |
| Return Loss (dB)     | ~-8.9                                                                                               | ~-9.2                                                                                                                                                                           | ~-8.2                           | ~-7.5                |
| VSWR                 | ~2.6:1                                                                                              | ~2.4:1                                                                                                                                                                          | ~2.7:1                          | ~2.5:1               |
| Efficiency (%)       | ~55.0                                                                                               | ~51.2                                                                                                                                                                           | ~25.7                           | ~28.3                |
| Peak Gain (dBi)      | ~2.3                                                                                                | ~5.1                                                                                                                                                                            | ~2.6                            | ~2.7                 |
| Average Gain (dB)    | ~-2.7                                                                                               | ~-3.1                                                                                                                                                                           | ~-6.0                           | ~-5.5                |
| 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           | D302 Standard (Other Cables Available)                                                              |                                                                                                                                                                                 |                                 |                      |

### Antenna Measurement Conditions:

Mounted on 30 x 30 cm Metal Plate

100 cm of D302 Cable

Measured in Certified CTIA 3D Anechoic Chamber

Cable 2

| Parameters        | Iridium Antenna                                |
|-------------------|------------------------------------------------|
| Standards         | Iridium                                        |
| Band (MHz)        | 1621                                           |
| Frequency (MHz)   | 1616-1627                                      |
| Return Loss (dB)  | ~-12.5                                         |
| VSWR              | ~1.6:1                                         |
| Efficiency (%)    | ~68.1                                          |
| Peak Gain (dBic)  | ~5.2                                           |
| Average Gain (dB) | ~-1.8                                          |
| Radiation Pattern | Hemispherical                                  |
| Polarization      | RHCP                                           |
| Connector Type    | SMA-Male Standard (Other Connectors Available) |
| Cable Length      | 300 cm Standard (Any Cable Length Available)   |
| Cable Type        | D302 Standard (Other Cables Available)         |

Cable 3

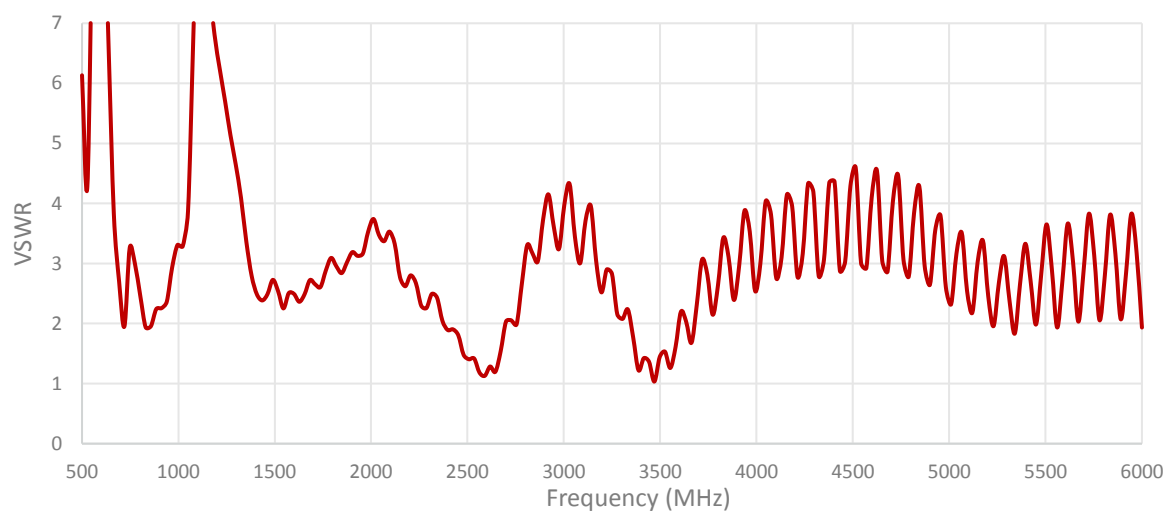
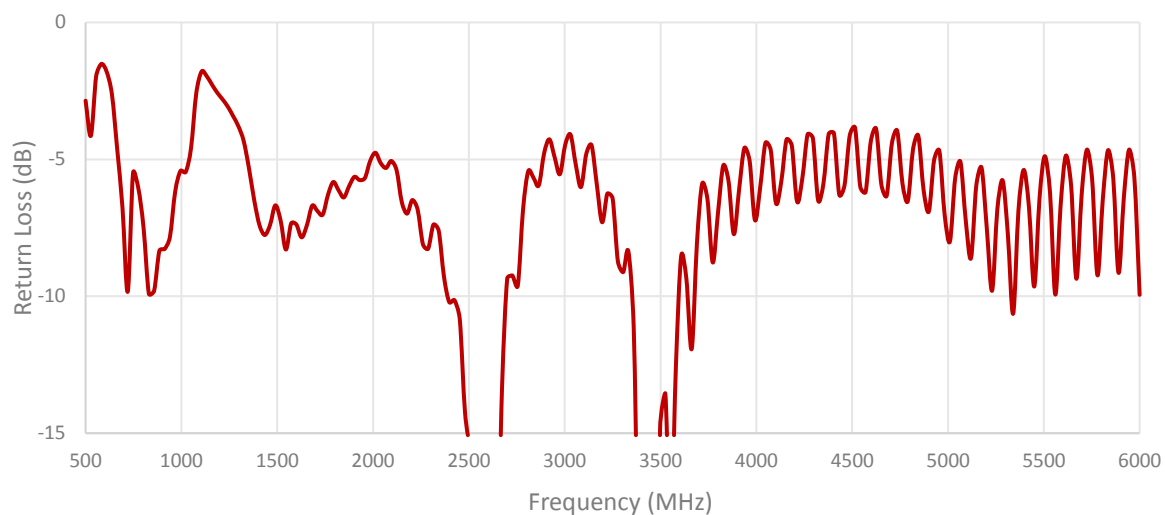
| Parameters               | GNSS Ceramic Active Antenna                    |           |
|--------------------------|------------------------------------------------|-----------|
| Standards                | GPS/QZSS/Galileo                               | GLONASS   |
| Band (MHz)               | 1575                                           | 1602      |
| Frequency (Mhz)          | 1575.42                                        | 1598-1606 |
| Patch Size (mm)          | 25 x 25 x 4                                    |           |
| Return Loss (dB)         | <=-15.0 dB                                     |           |
| VSWR                     | <=1.4:1 dB                                     |           |
| Impedance (Ohms)         | 50                                             |           |
| Radiation Pattern        | Hemispherical                                  |           |
| Polarization             | RHCP                                           |           |
| Saw Filter Type          | Pre-filter                                     |           |
| Active Gain (dB)         | 28 @ 2.7 V                                     |           |
| Noise Figure (dB)        | 1.5 Typ                                        |           |
| Voltage (V)              | 1.5 – 3.6                                      |           |
| Current Consumption (mA) | 9 Typ                                          |           |
| Power Consumption (mW)   | 24.3 Typ                                       |           |
| ESD Protection (kV)      | 2kV                                            |           |
| Connector Type           | SMA-Male Standard (Other Connectors Available) |           |
| Cable Length             | 300 cm Standard (Any Cable Length Available)   |           |
| Cable Type               | D100 Standard (Other Cables Available)         |           |

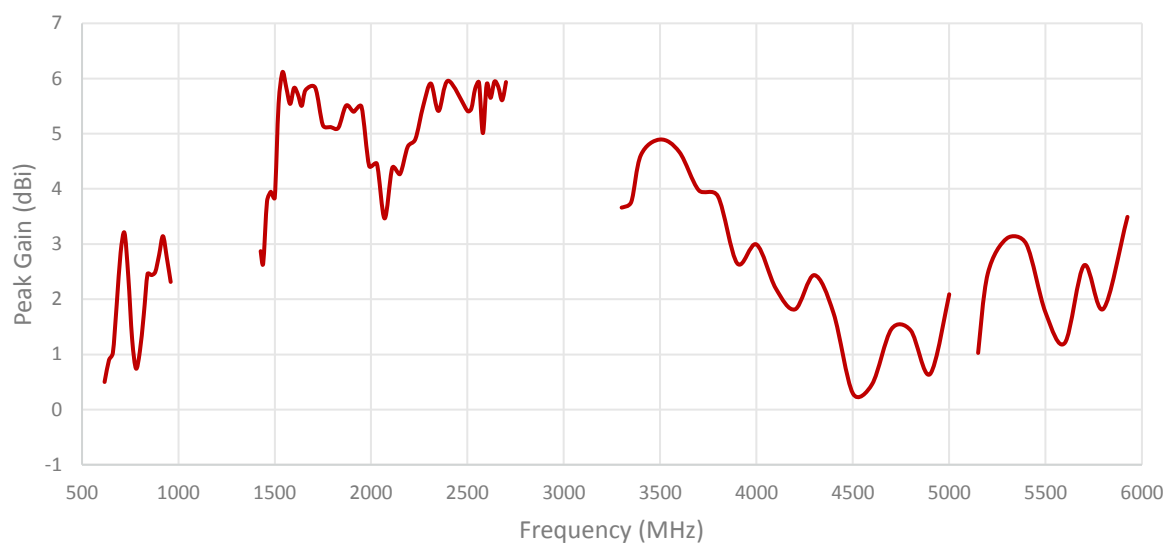
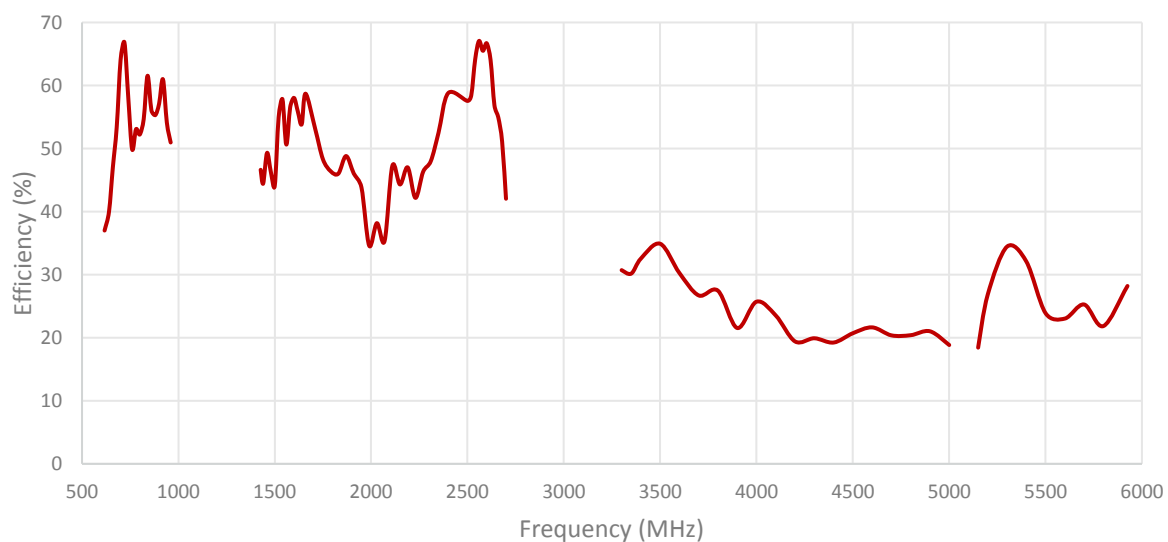
## 2. Mechanical and environmental specifications

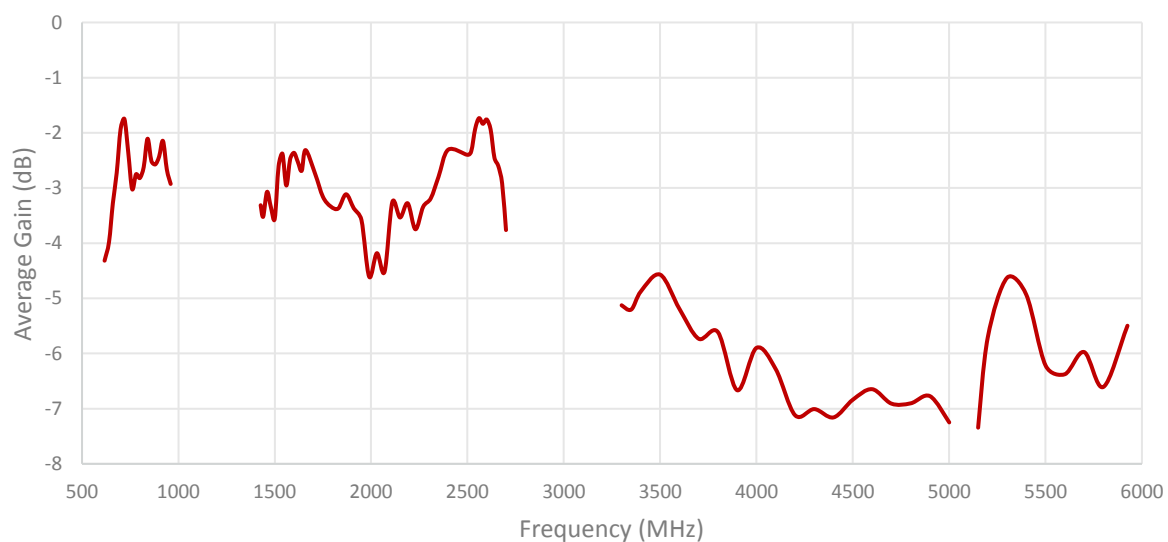
| Specifications            | 2J6975BGF                     |
|---------------------------|-------------------------------|
| Mounting Type             | Screw Mount                   |
| Dimensions (mm)           | 80 x 74 x 25.6                |
| Max. Tighten Torque (Nm)  | 5 Nm                          |
| Radome Type               | PC+ASA                        |
| Radome Color              | Black, White                  |
| Operating Temperature (C) | -40 to +85                    |
| Storage Temperature (C)   | -40 to +85                    |
| Substance Compliance      | RoHS                          |
| Certificates              | Iridium Certified, IP67, IP69 |

### 3. Antenna parameters

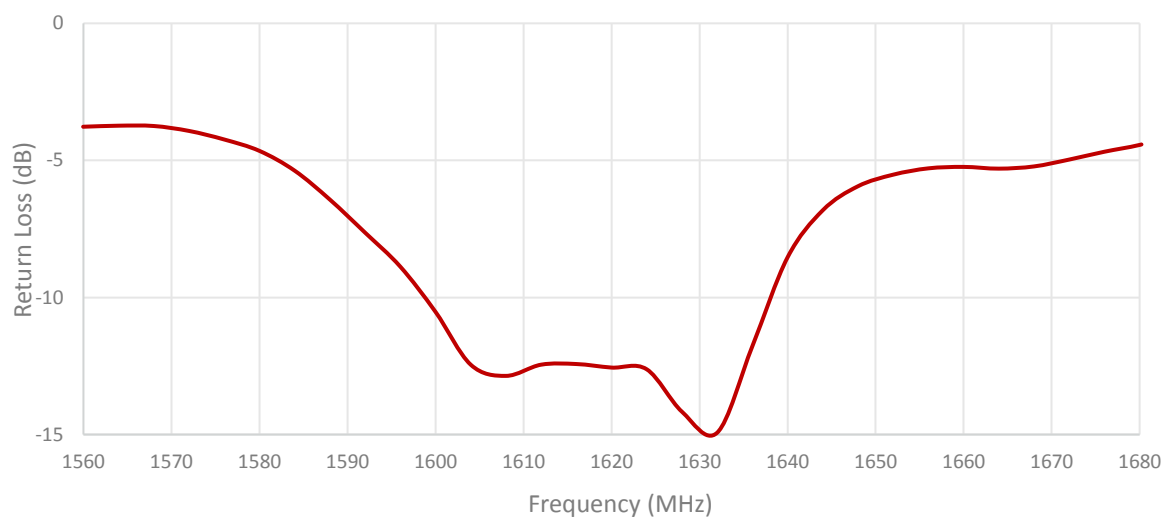
**Cable 1: 5GNR**

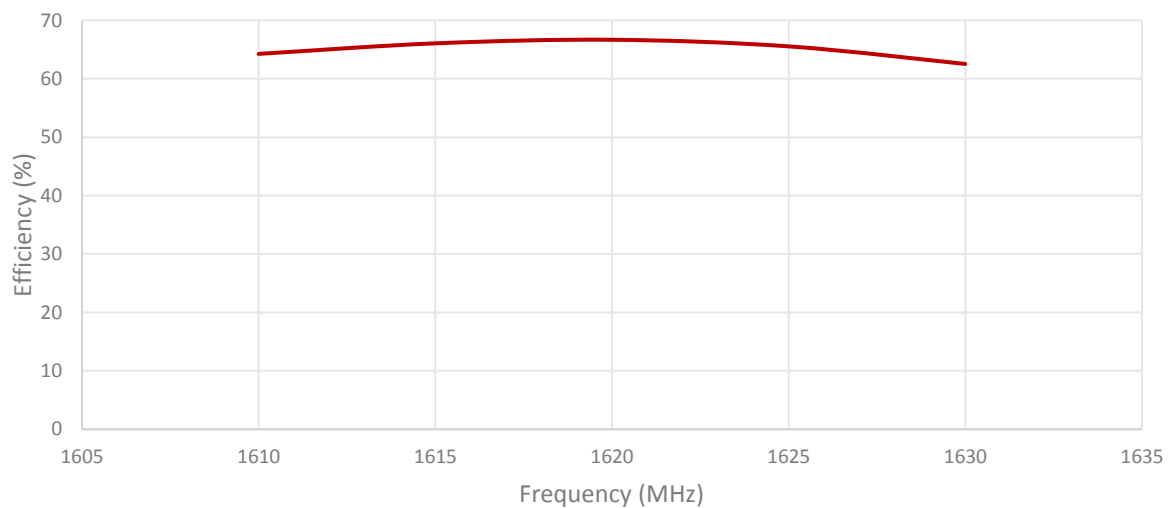
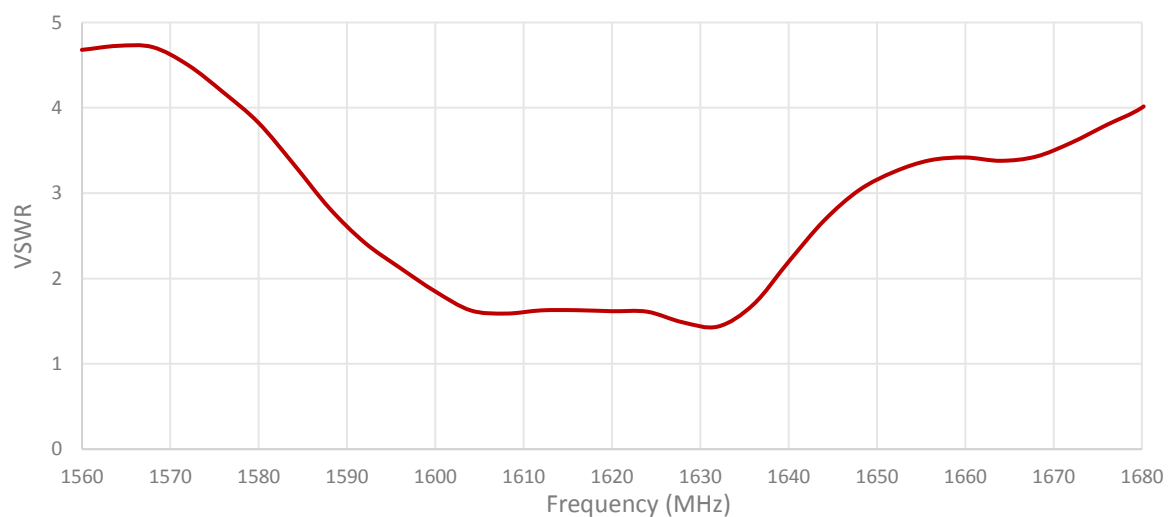




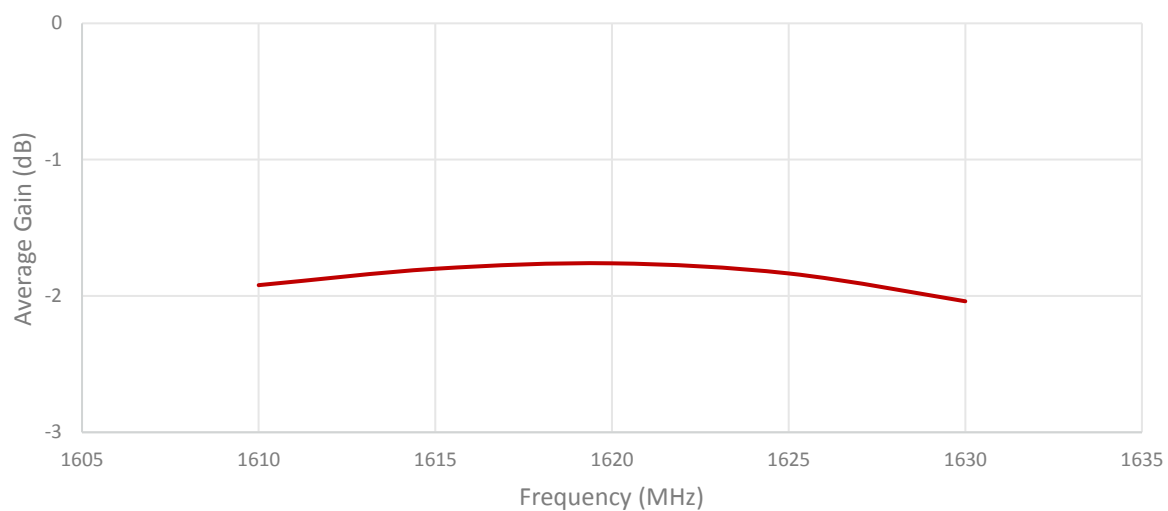
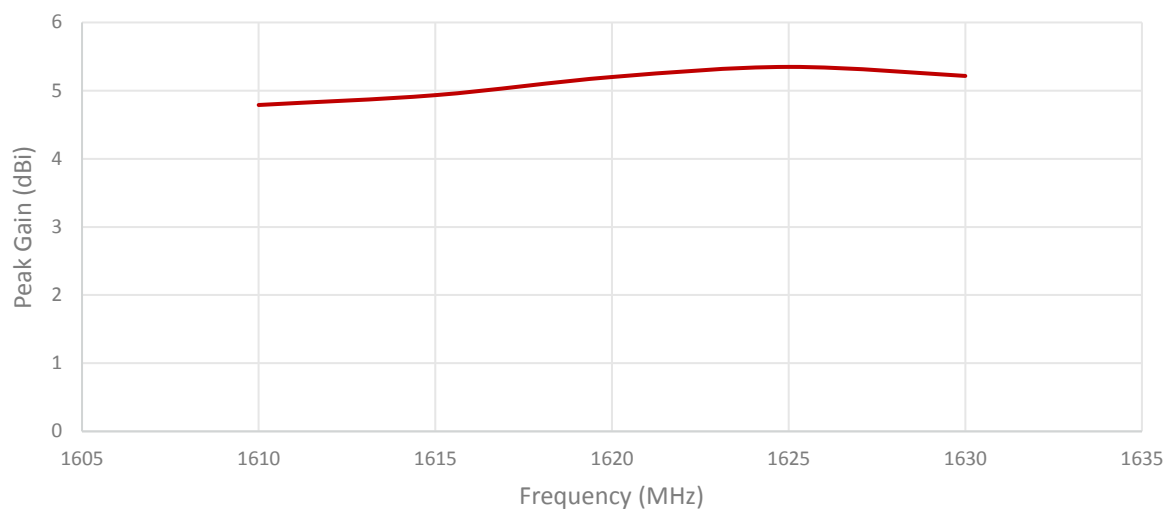


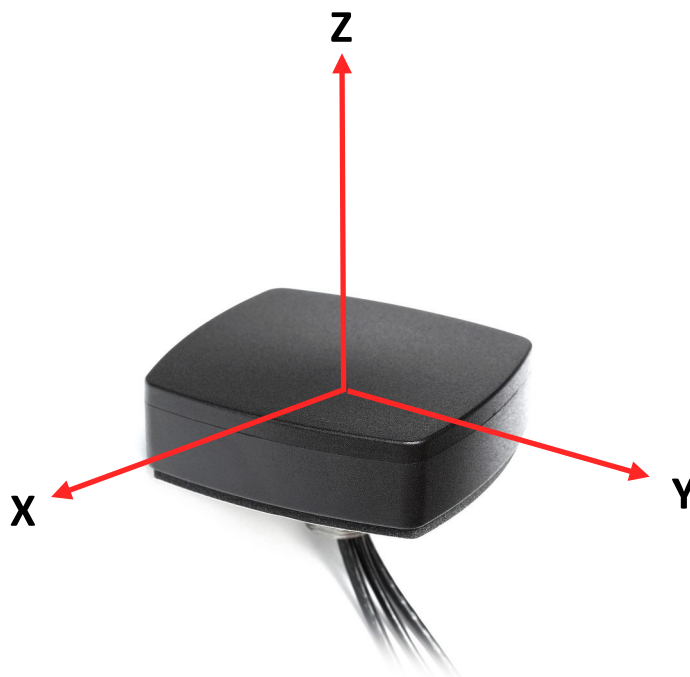
**Cable 2: IRIDIUM**





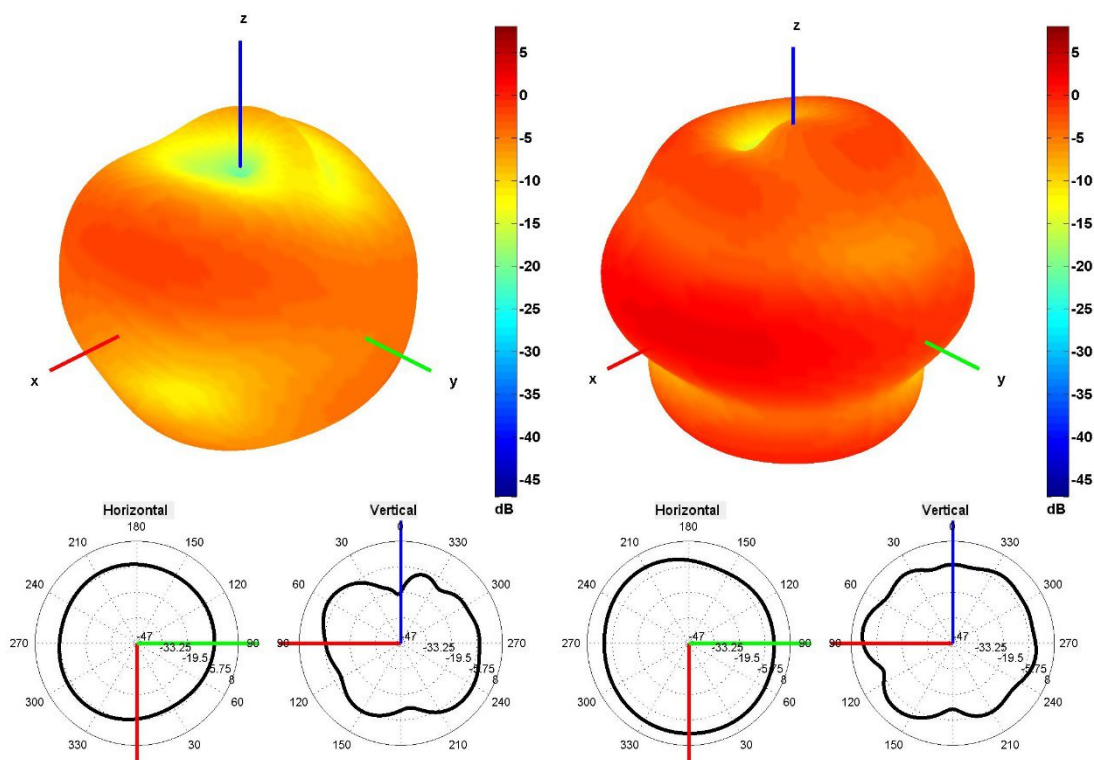




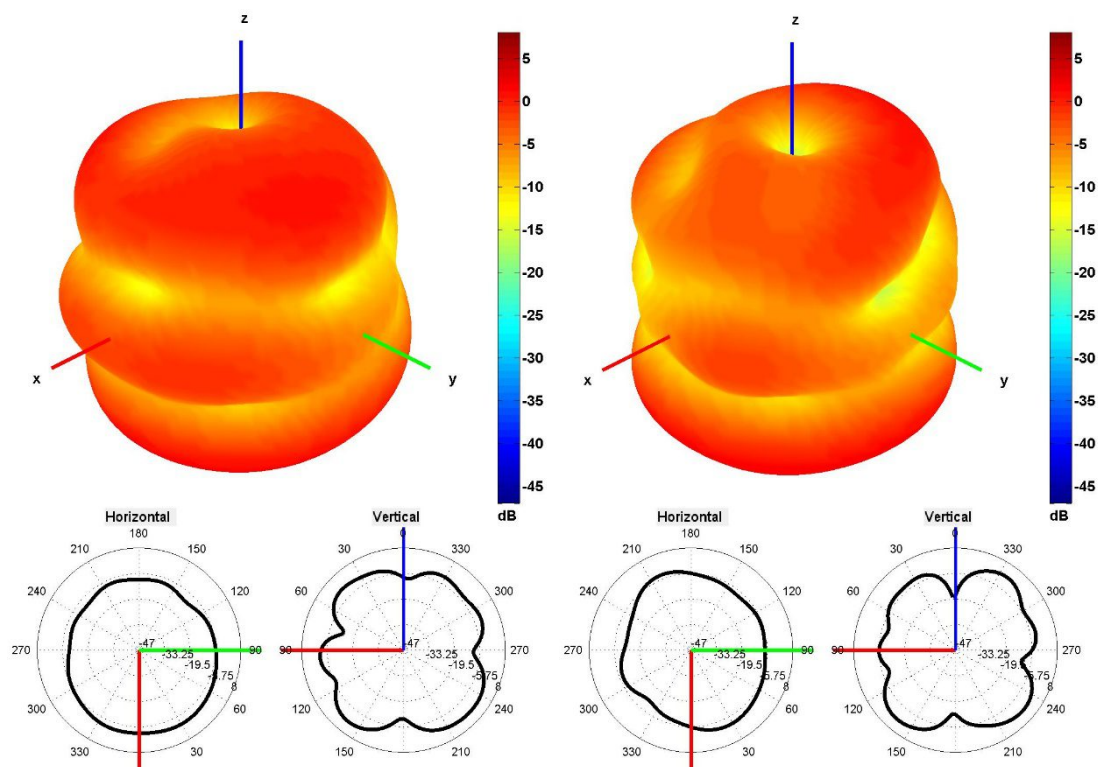


Radiation pattern reference

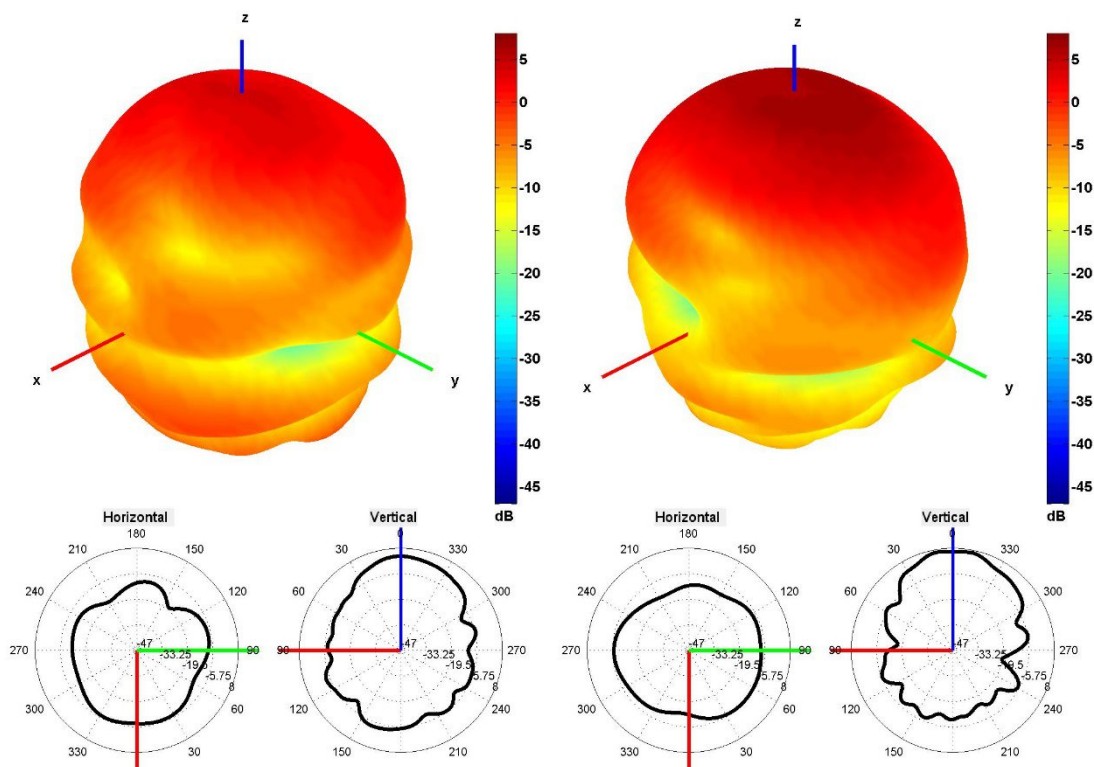
Cable 1: 5GNR



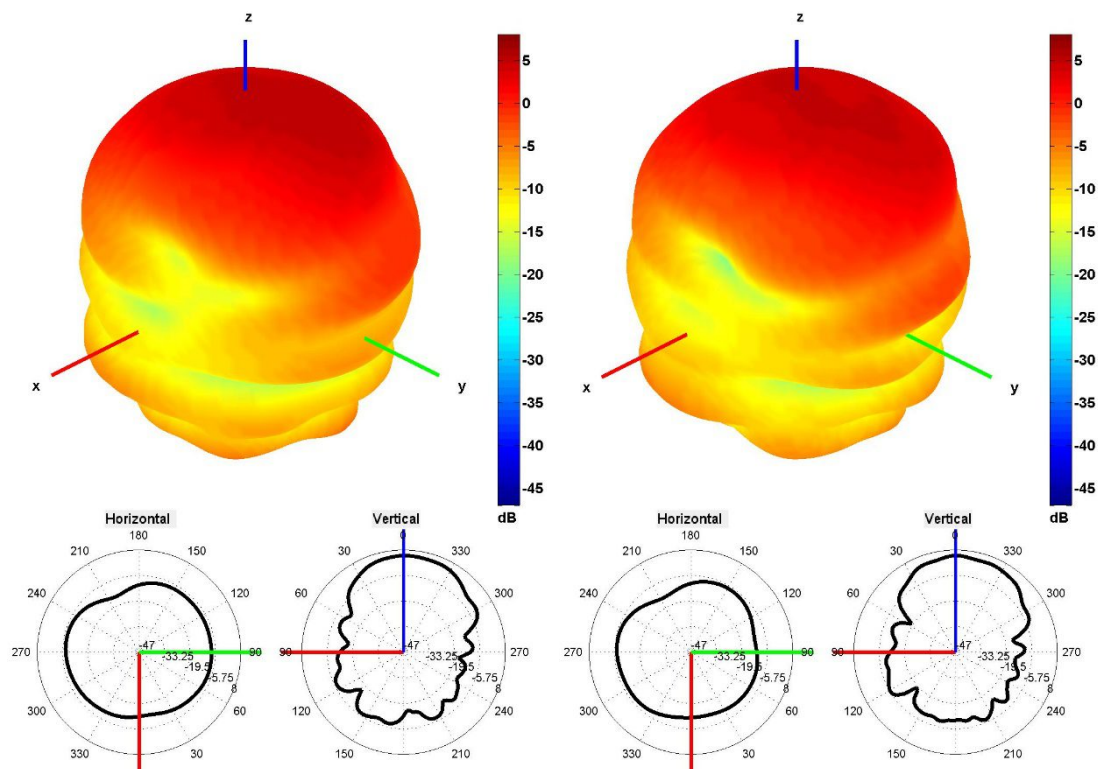
650 and 750 MHz Radiation pattern



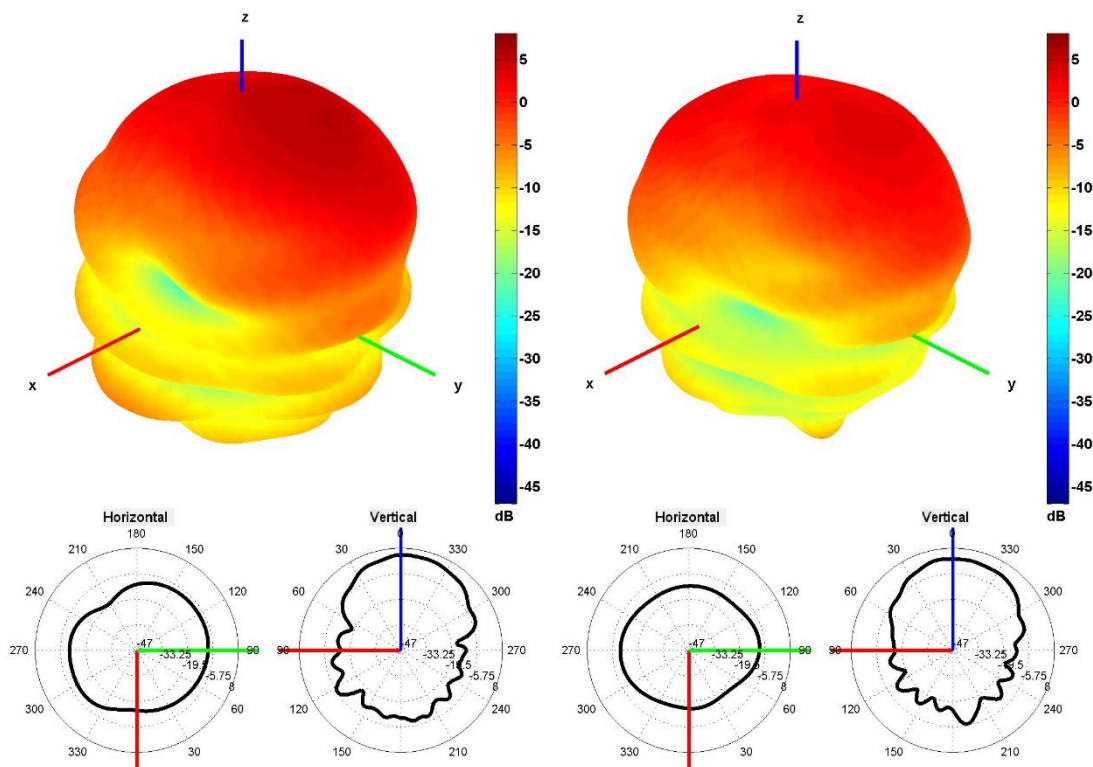
850 and 940 MHz Radiation pattern



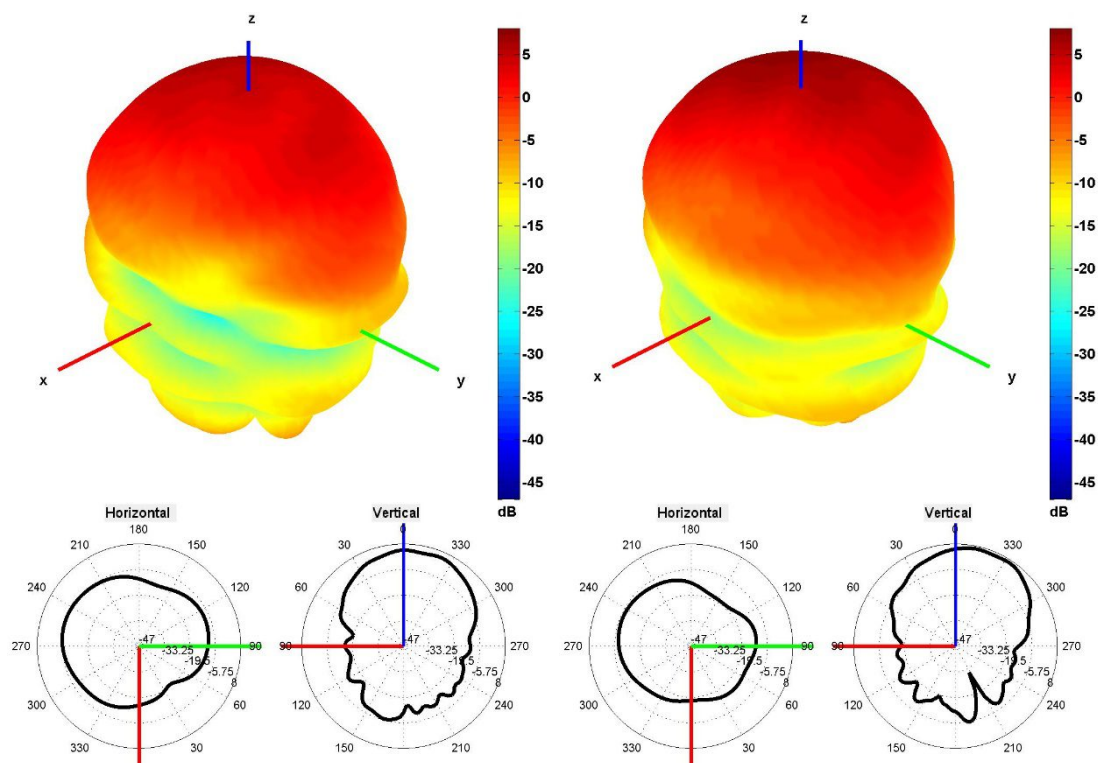
1500 and 1600 MHz Radiation pattern



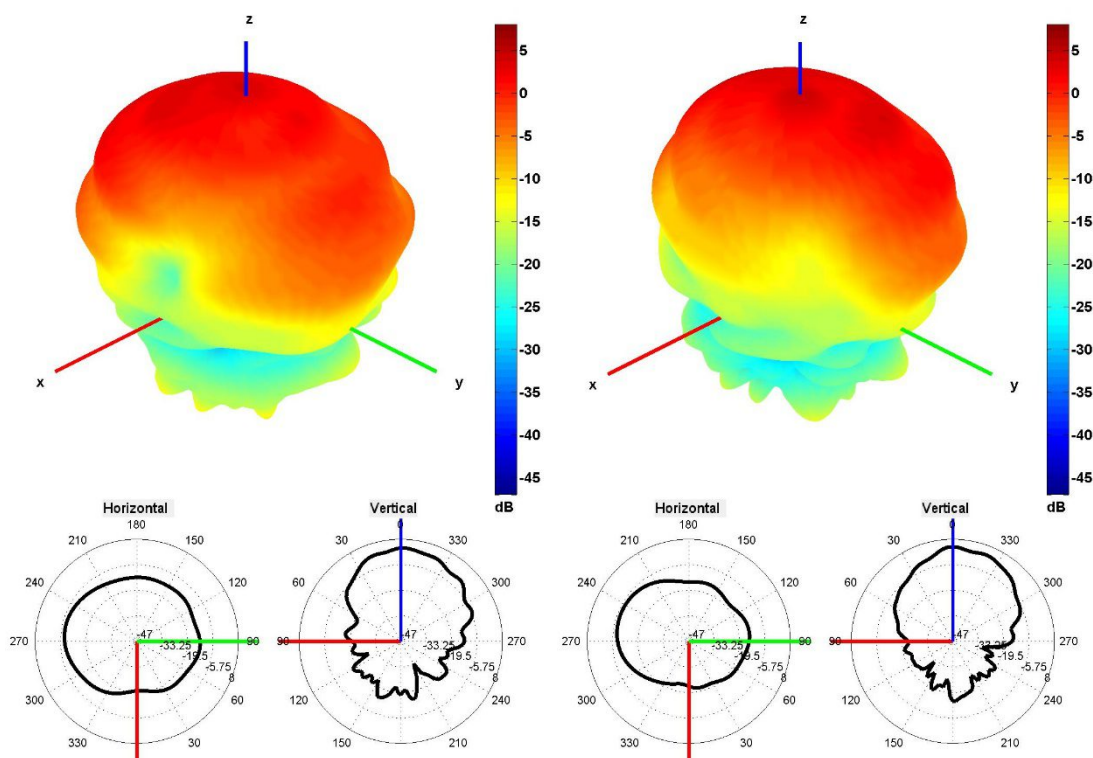
1750 and 1850 MHz Radiation pattern



1950 and 2100 MHz Radiation pattern

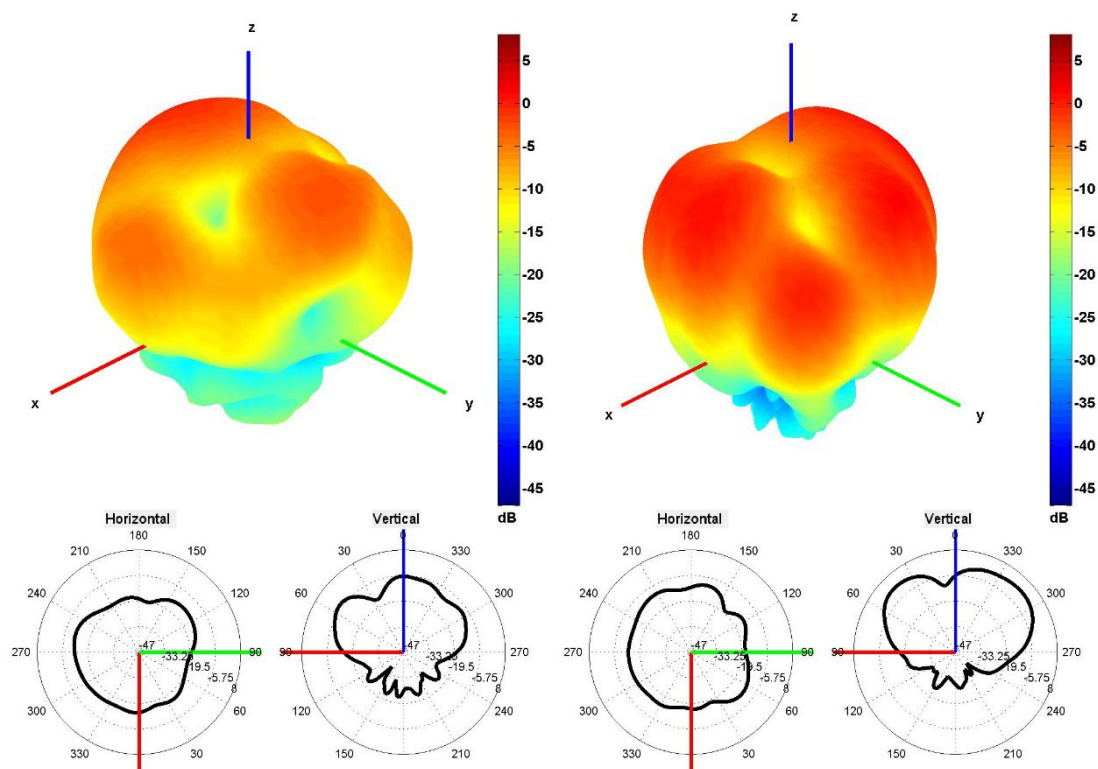


2350 and 2600 MHz Radiation pattern



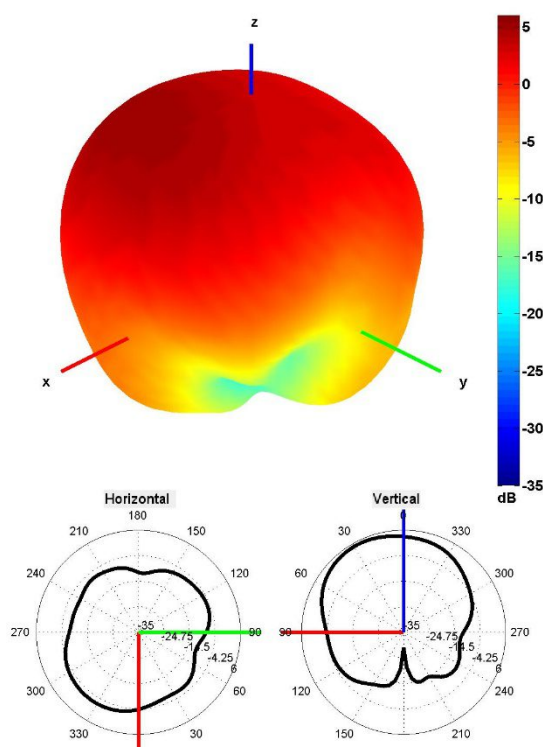
3350 and 3600 MHz Radiation pattern





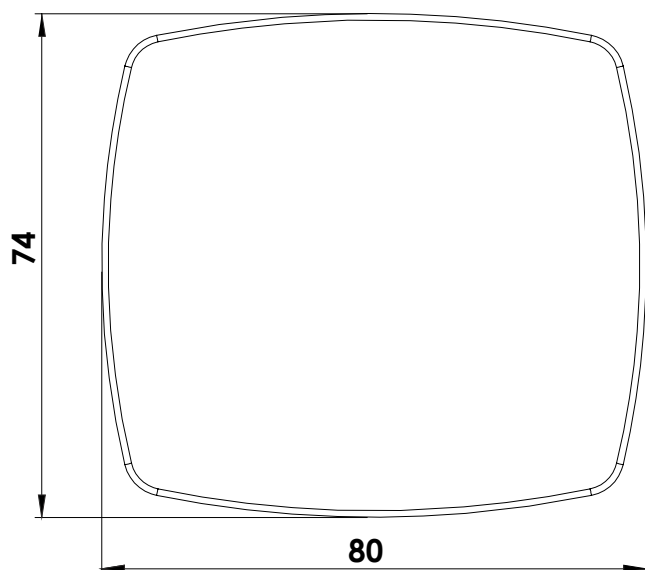
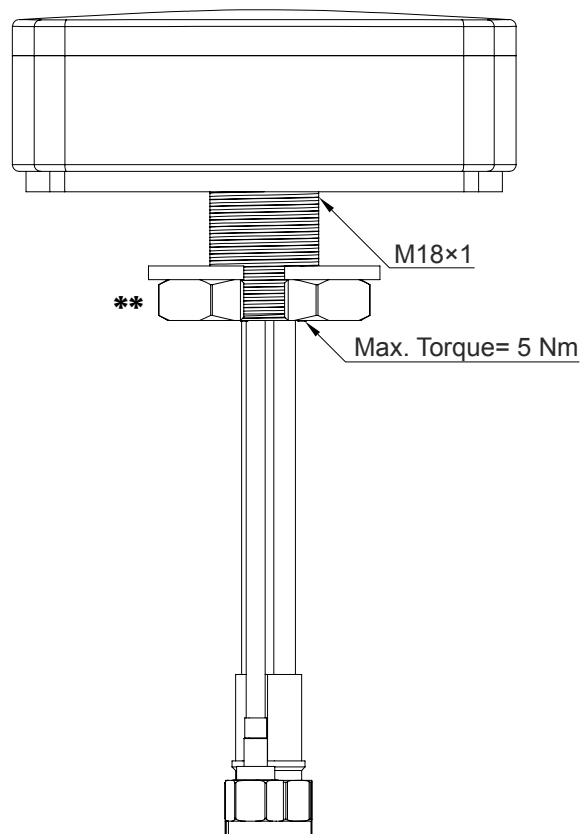
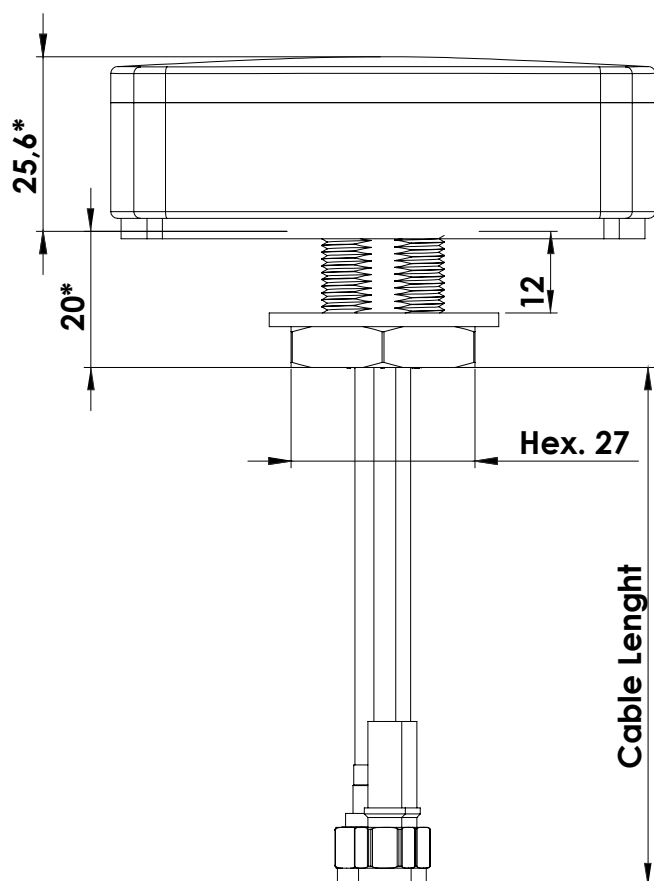
4500 and 5500 MHz Radiation pattern

Cable 2: IRIDIUM

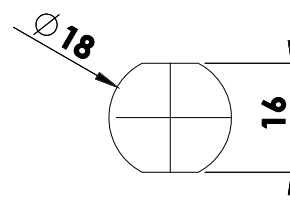


1621 MHz Radiation pattern

## 4. Antenna drawings



### Mounting hole



Max. mounting thickness 12mm  
Note: Dimensions are in millimeters  
\*Dimensions are after mounting  
\*\*Max. Torque= 5 Nm

## 5. Antenna Images



 **iridium**  
Certified







## Макро Групп – это:

- дистрибьютор электронных компонентов с 1994 года
- контрактный производитель электроники с 2007 года с собственным производством в Санкт-Петербурге (компания Макро ЕМС, входит в ГК Макро Групп)
- поставщик полупроводниковых материалов
- комплексный поставщик электронных компонентов
- моделирование и производство полупроводниковых эпитаксиальных гетероструктур для задач оптоэлектроники

Головной офис расположен в Санкт-Петербурге. Собственные представительства в крупных промышленных городах России и стран СНГ.

## Преимущества для наших заказчиков:

- работа по тендерам с 2012 года
- оформление банковских гарантий
- отсрочки платежей
- поставка электронных компонентов по проектным ценам
- инженерная поддержка проектов заказчиков
- сертификат системы менеджмента качества ISO 9001-2015
- необходимые сертификаты и лицензии

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