AMC-ANT-2J6975MPGF

5G NR, Iridium and GNSS magnetic/adhesive mount antenna

Features

- **Cable 1: 5G NR**
  - 617 – 960MHz
  - 1427 – 2690MHz
  - 3300 – 5000MHz
  - 5150 – 5925MHz
- **Cable 2: Iridium**
  - 1616 – 1627MHz
- **Cable 3: GPS/GLONASS/QZSS/Galileo**
  - 1575 – 1606MHz
- Magnetic/adhesive mount
- Iridium certified
- Low profile
- High performance
- Pre-filtered GNSS
- Ground plane independent
- Certificates: IP67, IP69
- Dimensions: 89 x 76 x 27/30mm
- Customisable cables and connectors

Alpha Micro Components: Tel: +44 1256 851770 | email: sales@alphamicro.net
www.alphamicro.net

1. Antenna and electrical specifications

Cable 1

Parameters	5G NR Antenna			
Technologies	5G, 4G, 3G, 2G			
Standards	5G NR/4G LTE/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, 1900, 2000, 2100, 2300, 2500, 2600	3300, 3500, 3600, 3700, 4500	5200, 5500, 5800
5G NR Bands	n5, n8, n12, n20, n28, n71, n81, n83	n1, n2, n3, n7,n25, n34, n38, n40, n41, n50, n51, n66, n70, n74, n75, n76, n80, n84, n86	n77,n78, n79	
4G LTE Bands	B5, B6, B8, B12, B13, B14, B17, B18, B19, B20, B26, B27, B28, B29, B44, B67, B68, B71, B85	B1, B2, B3, B4, B7, B9, B10, B11, B21, B23, B24, B25, B30, B32, B33, B34, B35, B36, B37, B38, B39, B40, B41, B45, B50, B51, B65, B66, B69, B70, B74, B75, B76	B22, B42, 43, B48, B49, B52	B46, B47, B252, B255
3G CELL Bands	B5, B6, B8, B12, B13, B14, B19, B20, B26	B1, B2, B3, B4, B7, B9, B10, B11, B21, B25, B32, B33, B34, B35, B36, B37, B38, B39, B40	B22	
2G CELL Bands	710, 750, 810T, 850, 900P, 900E, 900R	1800DCS, 1900PCS		
CDMA CELL Bands	BC0, BC2, BC3, BC7, BC9, BC10, BC12, BC18, BC19	BC1, BC4, BC6, BC8, BC13, BC14, BC15, BC16, 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 (%)	~45.0	~53.2	~25.7	~28.3
Peak Gain (dBi)	~2.3	~5.1	~2.6	~2.7
Average Gain (dBi)	~-3.4	~-2.8	~-6.0	~-5.5
Impedance (Ohms)	50			
Polarisation	Linear			
Radiation Pattern	Omni-directional			
Max I/P Power (W)	25			
Connector Type	SMA male standard (other connectors available)			
Cable Length	3 meters standard (other lengths available)			
Cable Type	DACAR 302 (other cables available)			

Measurement conditions:

- Mounted on 30 x 30cm metal plate
- 1 meter of DACAR 302 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
Polarisation	RHCP
Radiation Pattern	Hemispherical
Connector Type	SMA male standard (other connectors available)
Cable Length	3 metres standard (other lengths available)
Cable Type	DACAR 302 standard (other cables available)

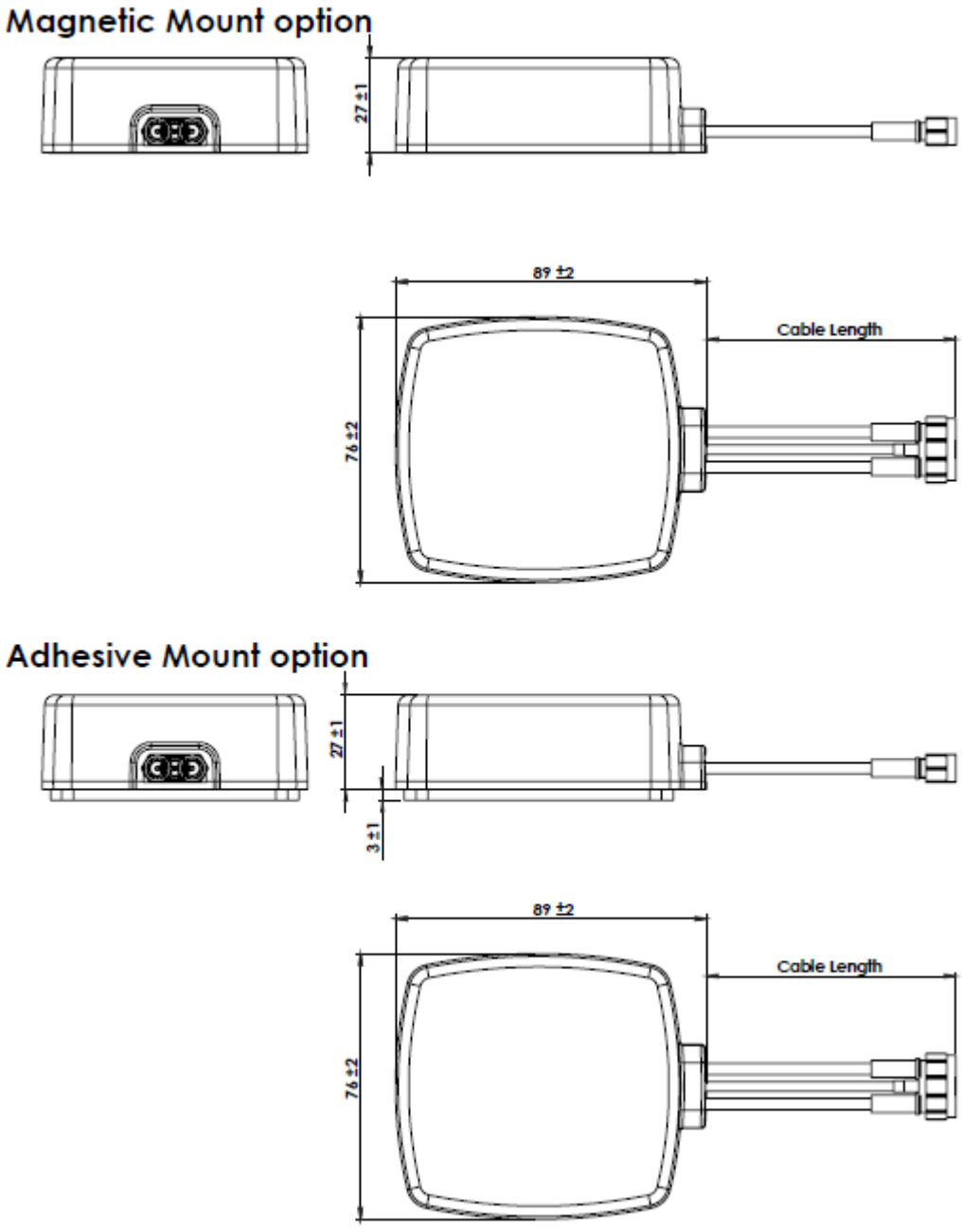
Cable 3

Active 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	
VSWR	≤1.4:1	
Impedance (Ohms)	50	
Polarisation	RHCP	
SAW Filter	Pre filter	
Radiation Pattern	Hemispherical	
Active Gain (dB)	28 @ 2.7V	
Noise Figure (dB)	1.5 typ.	
Voltage (V)	1.5 – 3.6	
Current (mA)	9 typ.	
Power Consumption (mW)	24.3 max	
ESD Protection (kV)	2	
Connector Type	SMA male standard (other connectors available)	
Cable Length	3 meters standard (other lengths available)	
Cable Type	DACAR 100 standard (other cables available)	

2. Mechanical and environmental specifications

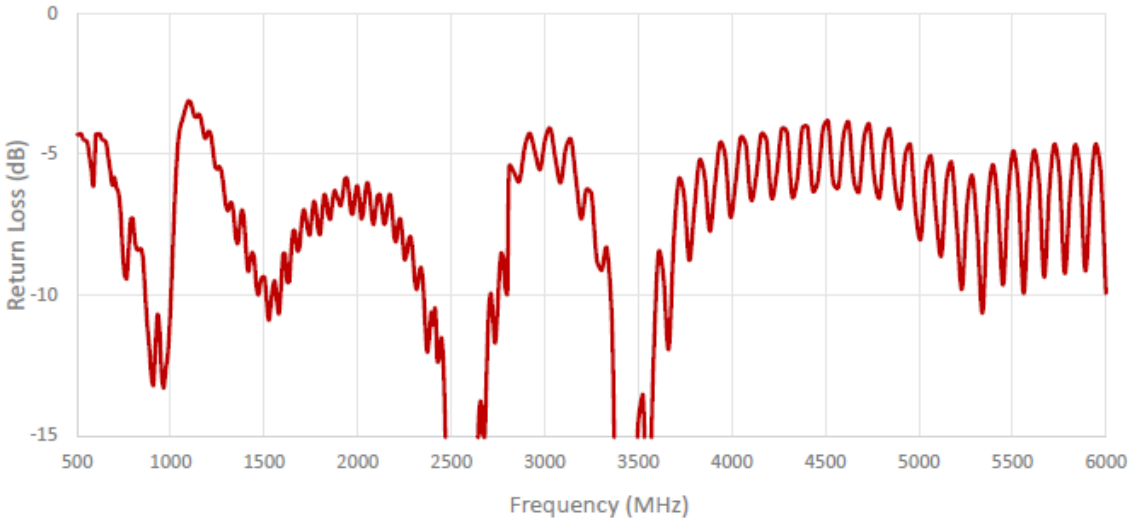
Mounting Type	Magnetic/adhesive mount
Dimensions (mm)	89 x 76 x 27/30
Radome Type	PC + ASA
Radome Colour	Black or white
Operating Temperature (°C)	-40 to +85
Storage Temperature (°C)	-40 to +85
Substance Compliance	RoHS
Certificates	Iridium Certified, IP67, IP69

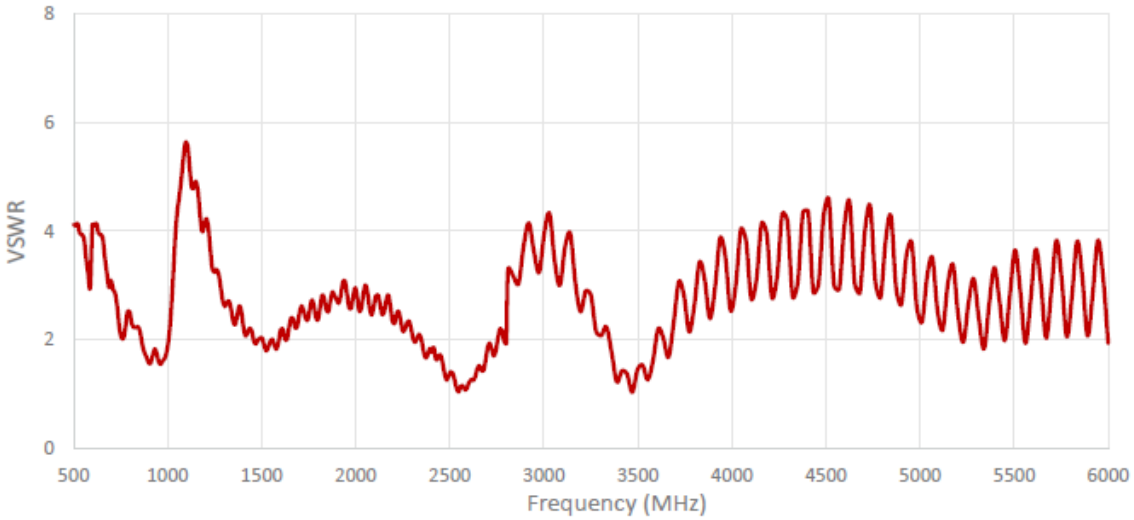
3. Antenna drawings

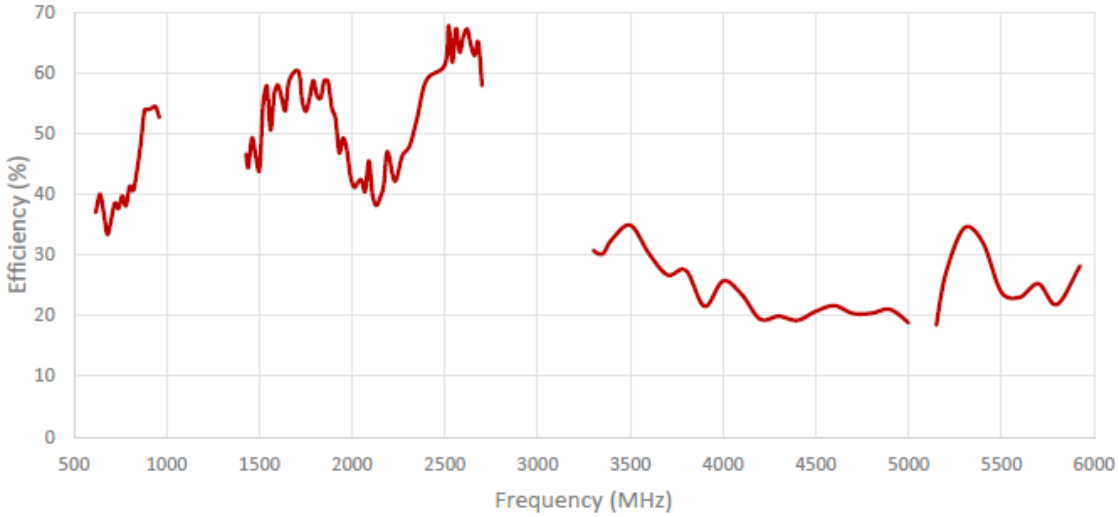


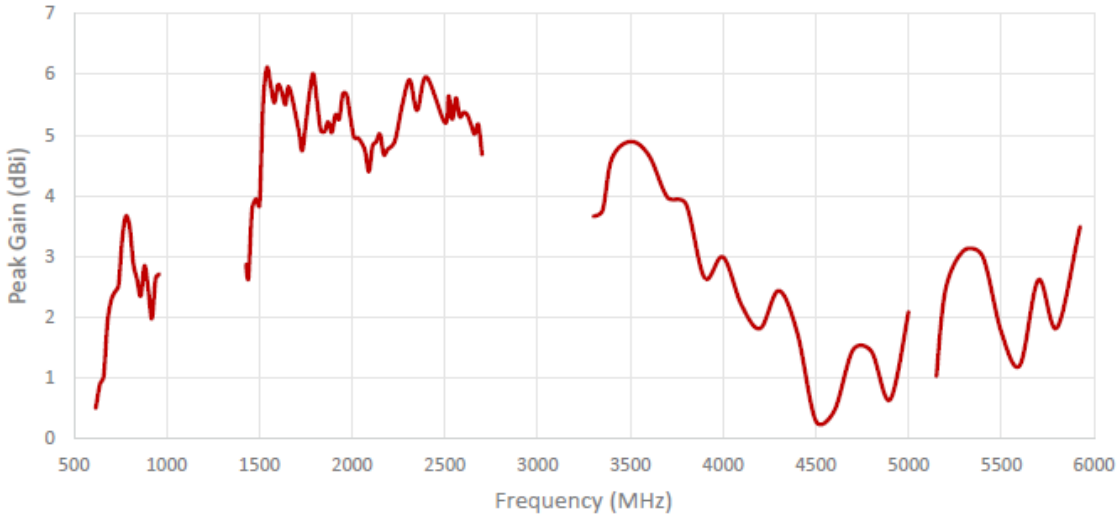
4. Antenna parameters

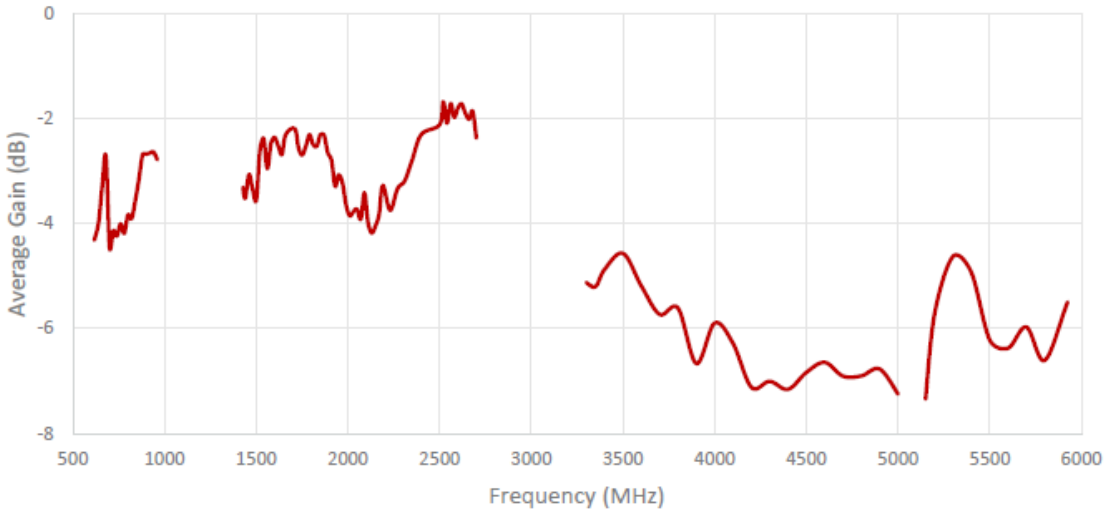
Cable 1: 5GNR



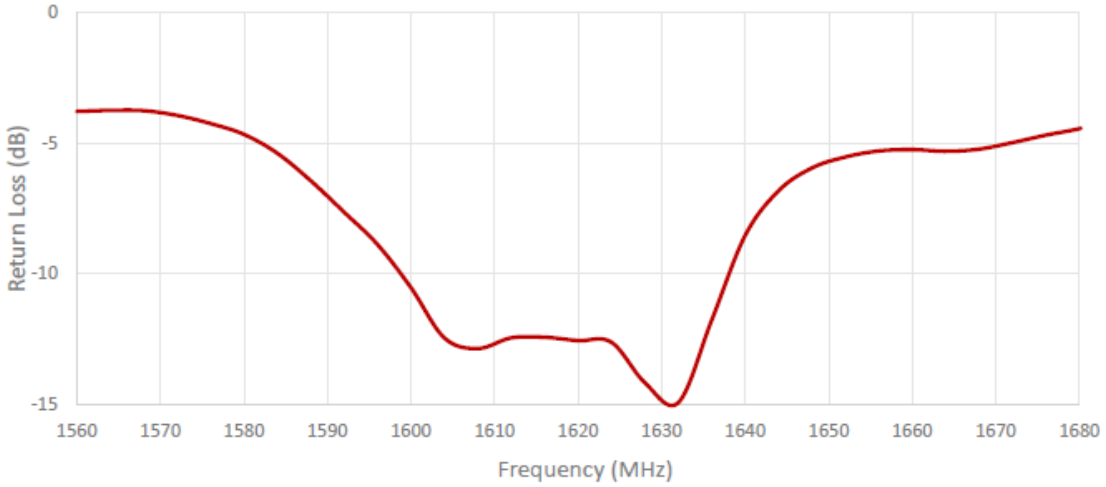


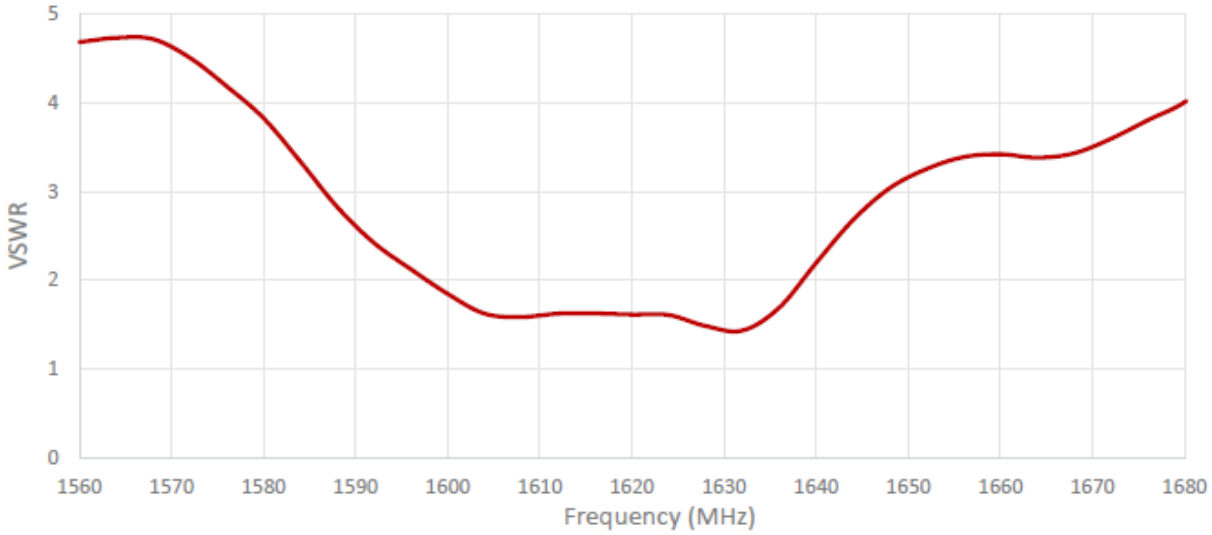

Efficiency (%)
70
60
50
40
30
20
10
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

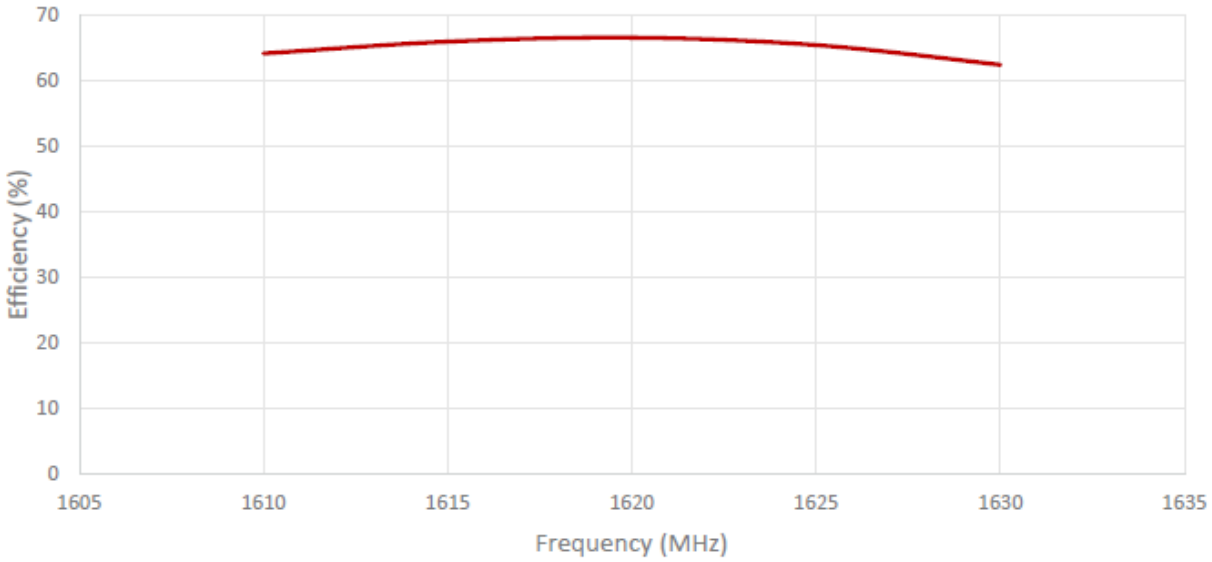

Peak Gain (dBi)
7
6
5
4
3
2
1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

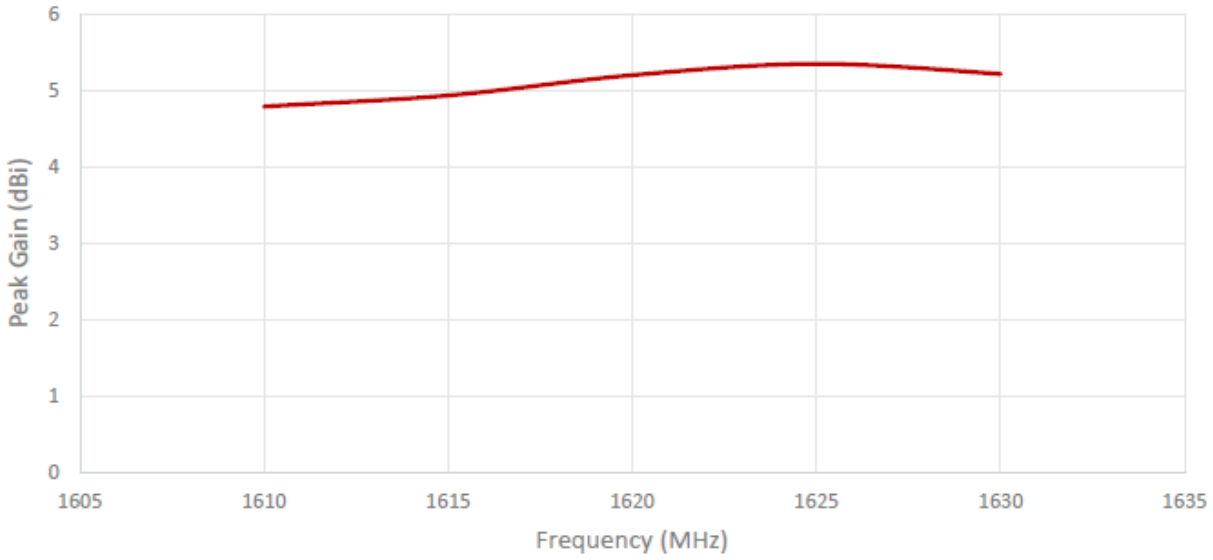


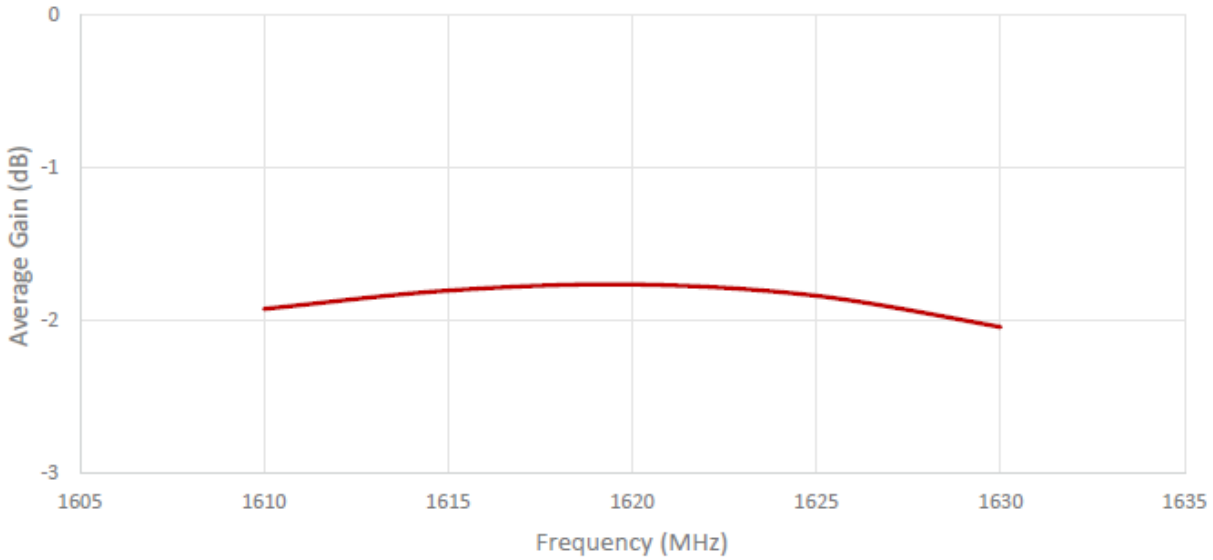
Cable 2: IRIDIUM

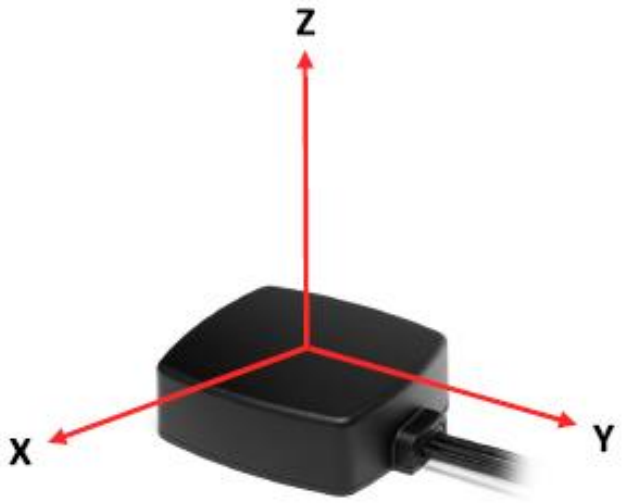



VSWR
5
4
3
2
1
0
1560
1570
1580
1590
1600
1610
1620
1630
1640
1650
1660
1670
1680
Frequency (MHz)


Efficiency (%)
70
60
50
40
30
20
10
0
1605
1610
1615
1620
1625
1630
1635
Frequency (MHz)

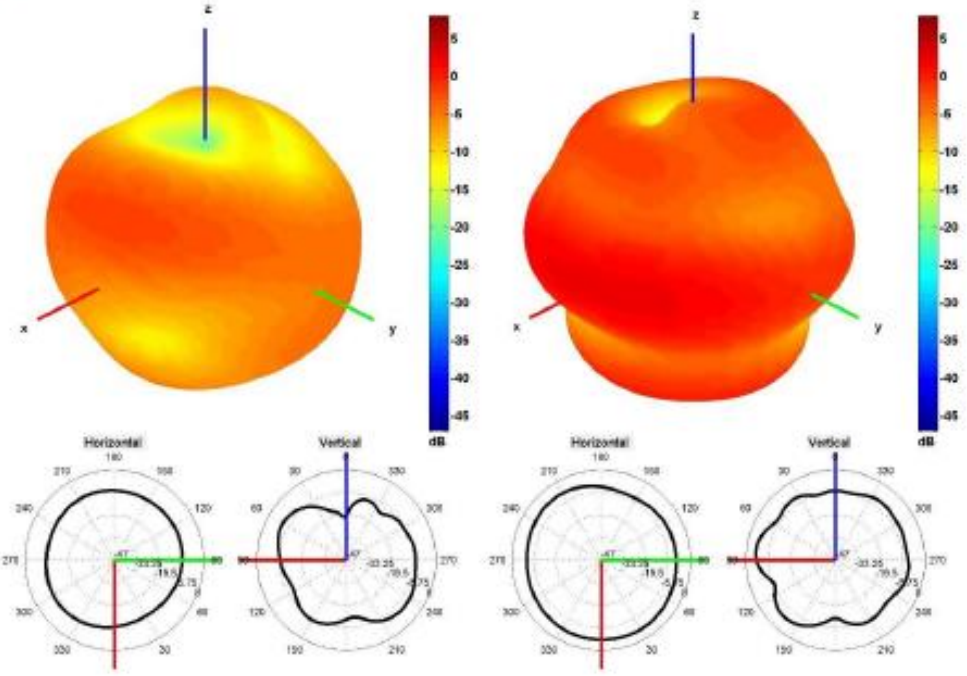

6
5
4
3
2
1
0
Peak Gain (dBi)
1605
1610
1615
1620
1625
1630
1635
Frequency (MHz)


0
-1
-2
-3
Average Gain (dB)
1605
1610
1615
1620
1625
1630
1635
Frequency (MHz)

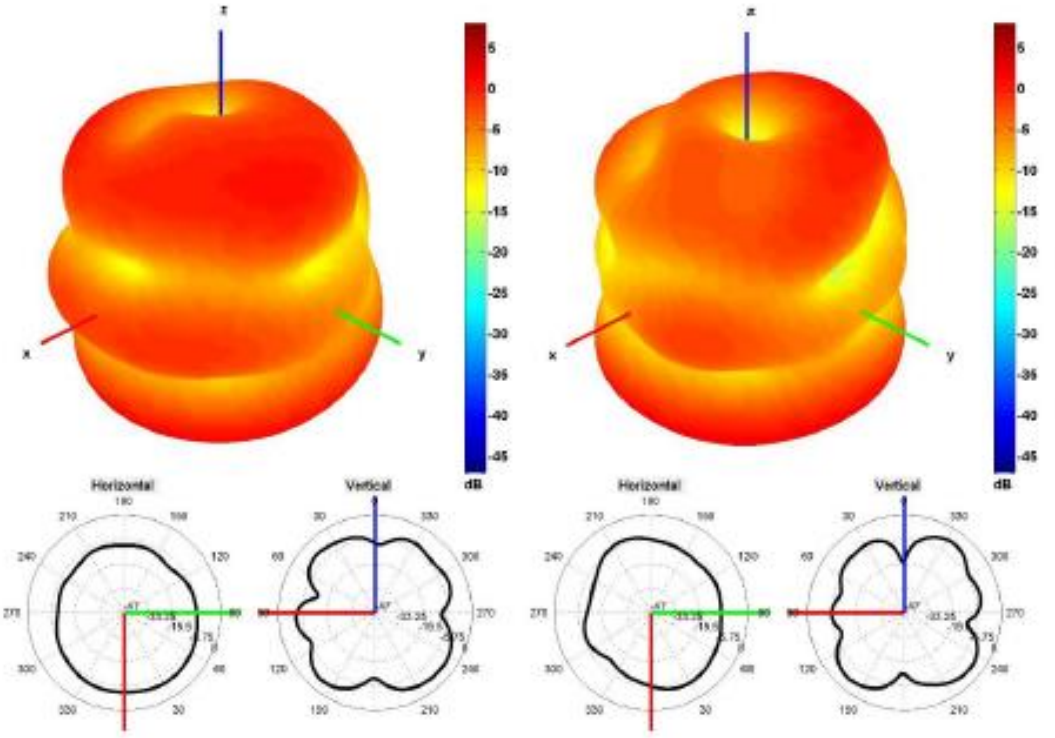


Radiation pattern reference

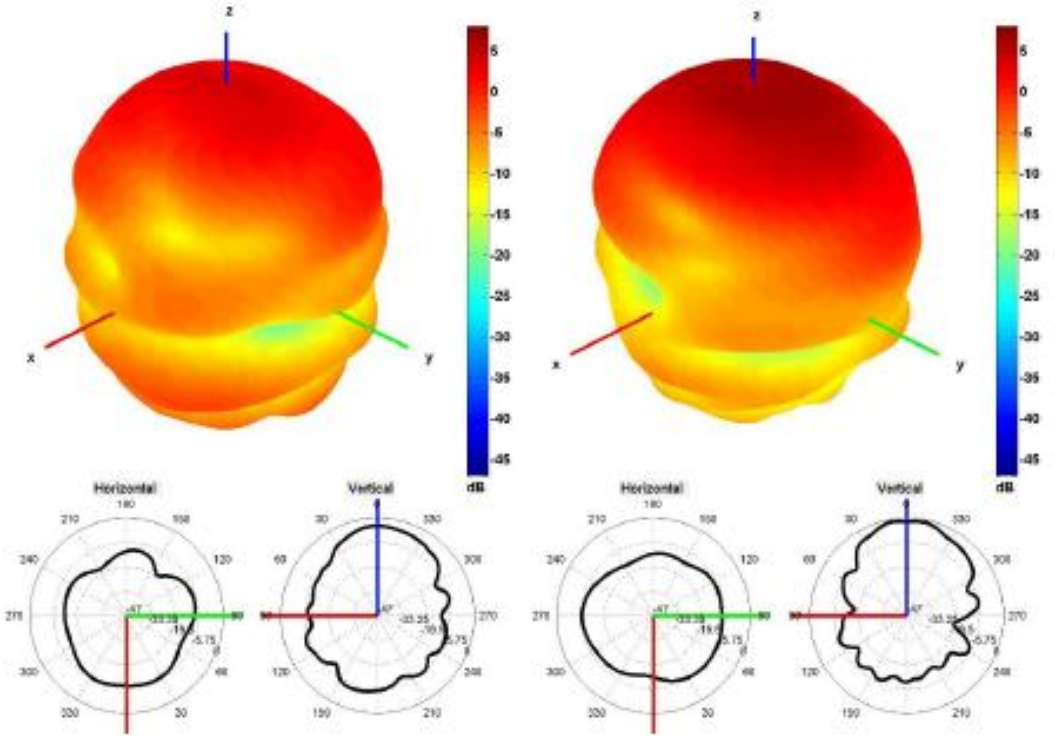
Cable 1: 5GNR



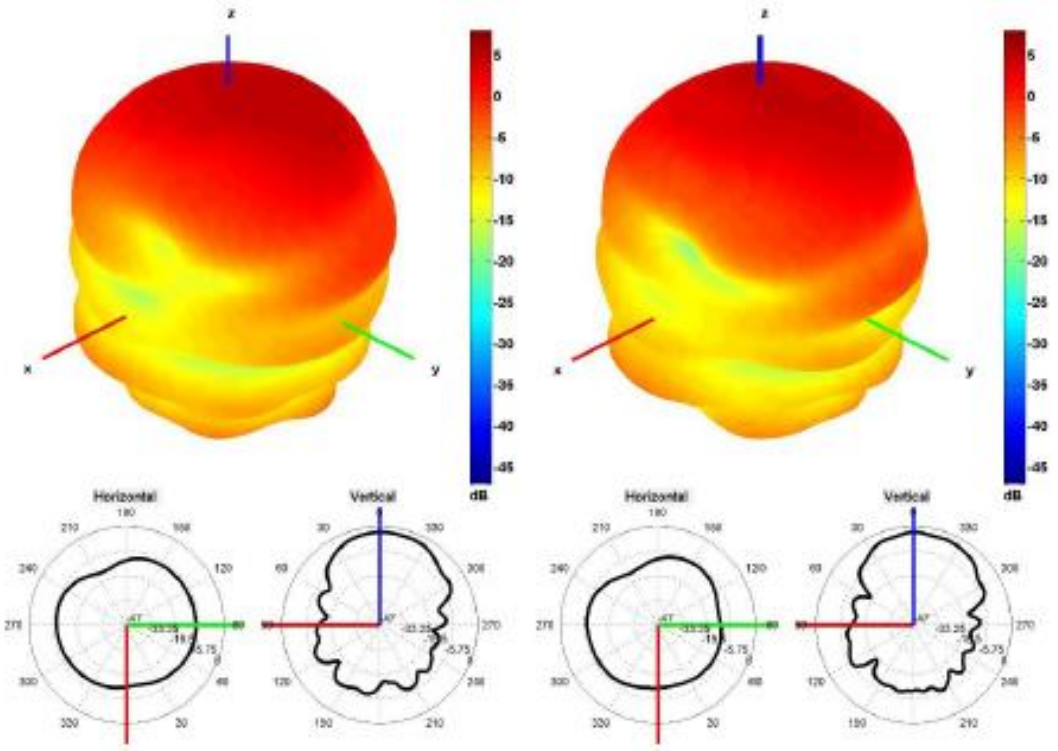
650 and 750 MHz Radiation pattern



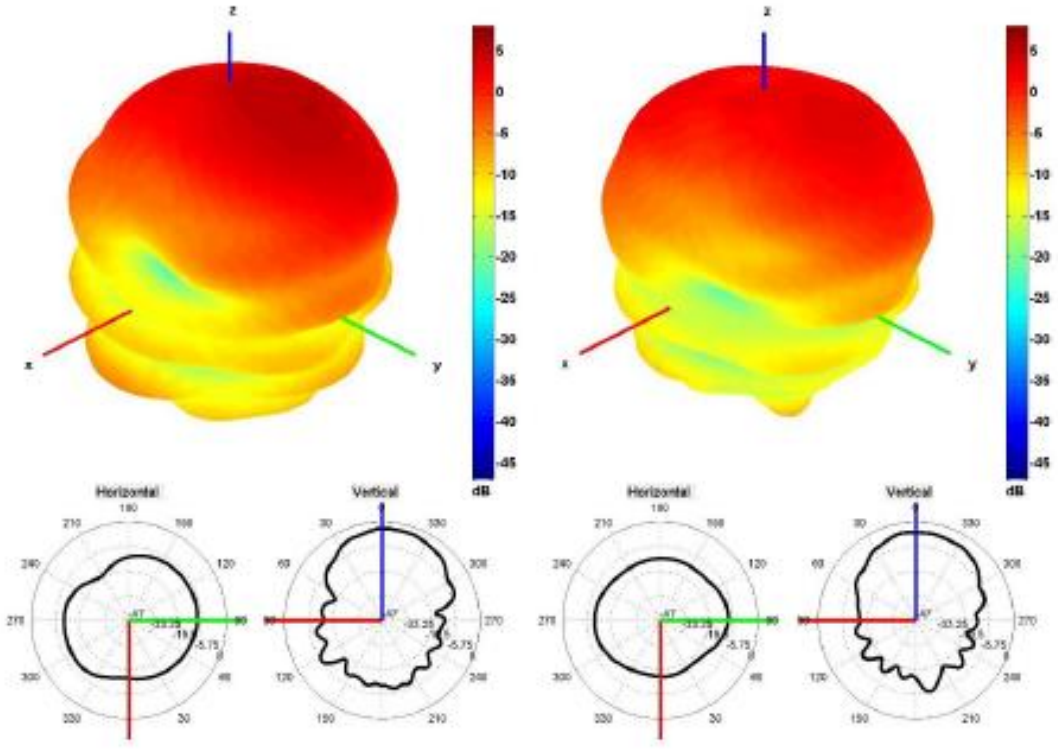
850 and 940 MHz Radiation pattern



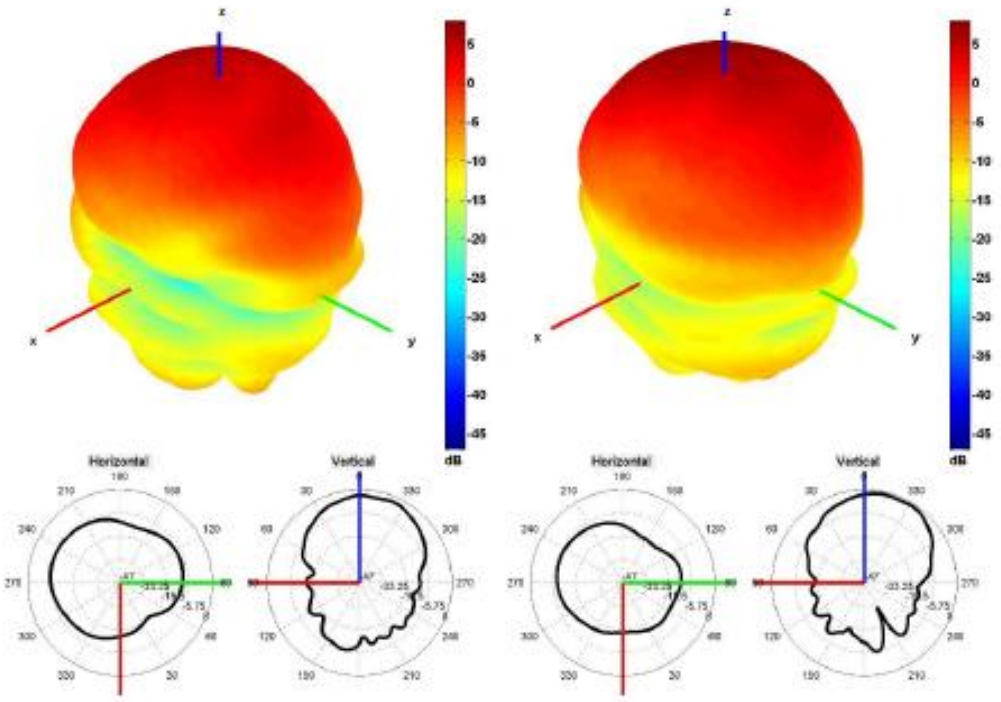
1500 and 1600 MHz Radiation pattern



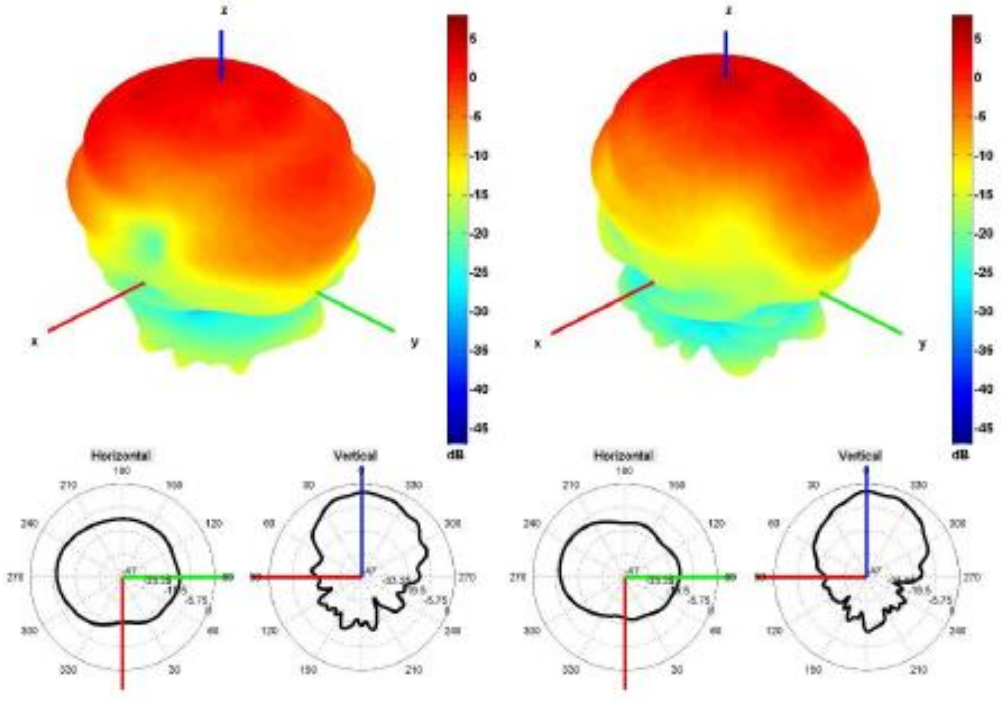
1750 and 1850 MHz Radiation pattern



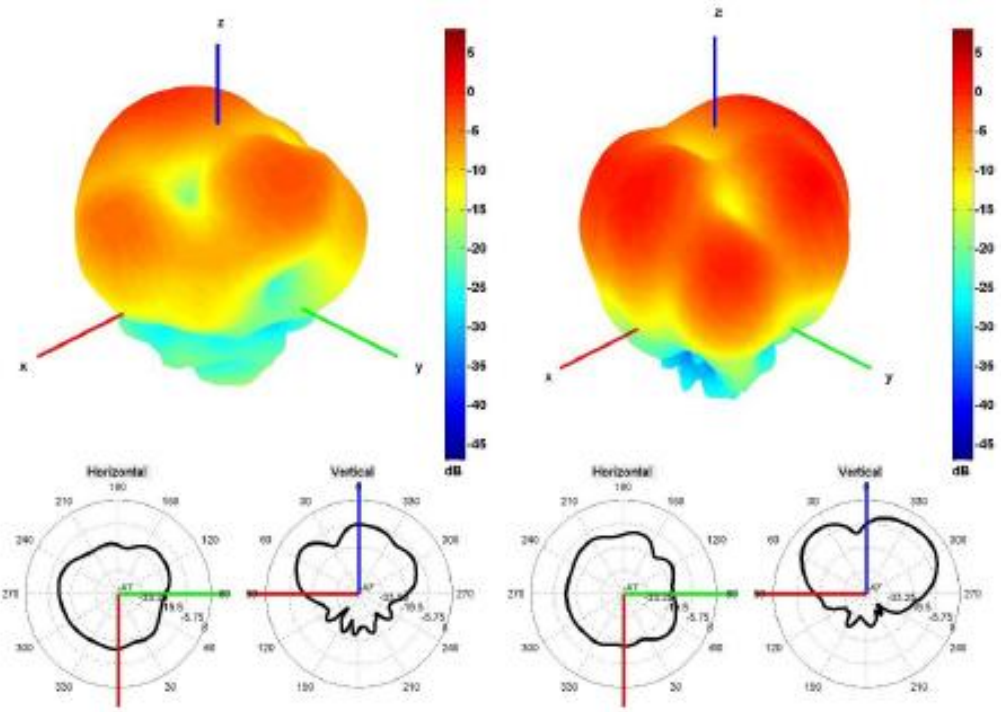
1950 and 2100 MHz Radiation pattern



2350 and 2600 MHz Radiation pattern

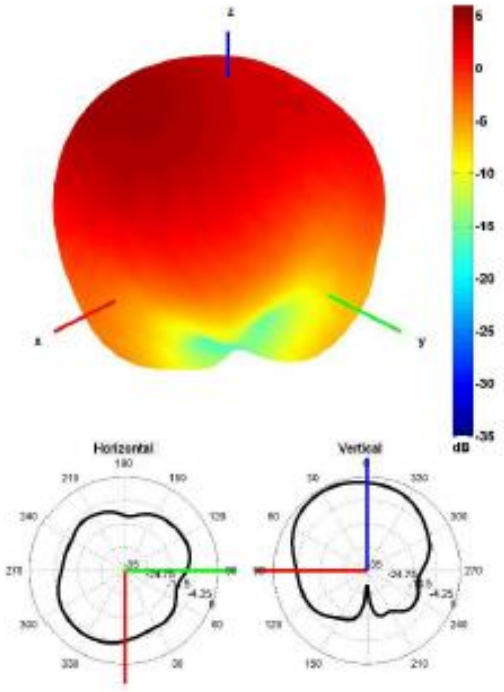


3350 and 3600 MHz Radiation pattern



4500 and 5500 MHz Radiation pattern

Cable 2: IRIDIUM



1621 MHz Radiation pattern