

AMC-ANT-2J6984MPGFa

5G NR MIMO and GNSS magnetic/adhesive mount antenna

Features

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



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)	~-11.2	~-8.3	~-7.1	~-7.4
VSWR	~2.0:1	~2.6:1	~3.2:1	~2.6:1
Efficiency (%)	~46.2	~50.5	~32.5	~30.5
Peak Gain (dBi)	~2.1	~5.4	~3.8	~3.9
Average Gain (dBi)	~-3.5	~-3.1	~-5.1	~-5.2
Impedance (Ohms)	50			
Polarisation	Linear			
Radiation Pattern	Omni-directional			
Max I/P Power (W)	35			
Connector Type	SMA male standard (other connectors available)			
Cable Length	300cm standard (other lengths available)			
Cable Type	DACAR 302 (other cables available)			

Cable 2

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)	~-9.6	~-8.2	~-6.9	~-7.0
VSWR	~2.2:1	~2.6:1	~3.3:1	~2.8:1
Efficiency (%)	~45.1	~52.0	~40.1	~33.5
Peak Gain (dBi)	~3.2	~5.6	~5.1	~4.7
Average Gain (dBi)	~-3.7	~-3.0	~-4.3	~-4.9
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	300cm standard (other lengths available)			
Cable Type	DACAR 302 (other cables available)			

Measurement conditions:

- Mounted on 30 x 30cm metal plate
- 100cm of DACAR 302 cable
- Measured in certified CTIA 3D Anechoic chamber

Cable 3

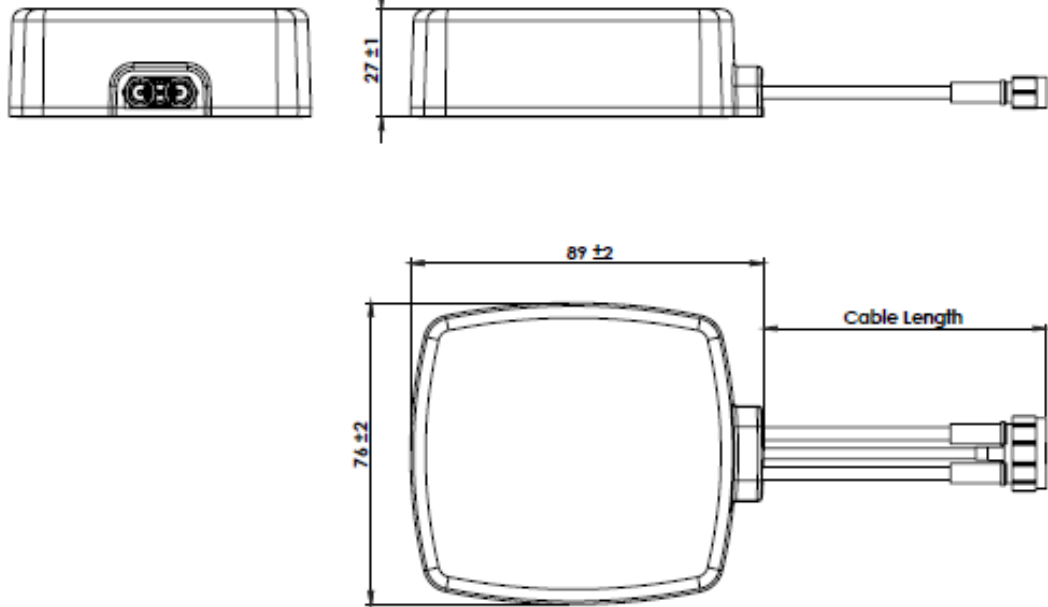
Active Parameters	GNSS ceramic active antenna	
Standards	GPS/QZSS/Galileo	GLONASS
Band (MHz)	1575	1602
Frequency (MHz)	1575.42	1598 - 1606
Patch Size (mm)	18 x 18 x 4	
Return Loss (dB)	≤-15.0	
VSWR	≤1.4:1	
Impedance (Ohms)	50	
Polarisation	RHCP	
SAW Filter	Pre filter	
Radiation Pattern	Hemispherical	
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	300cm standard (other lengths available)	
Cable Type	DACAR 100 standard (other cables available)	

2. Mechanical and environmental specifications

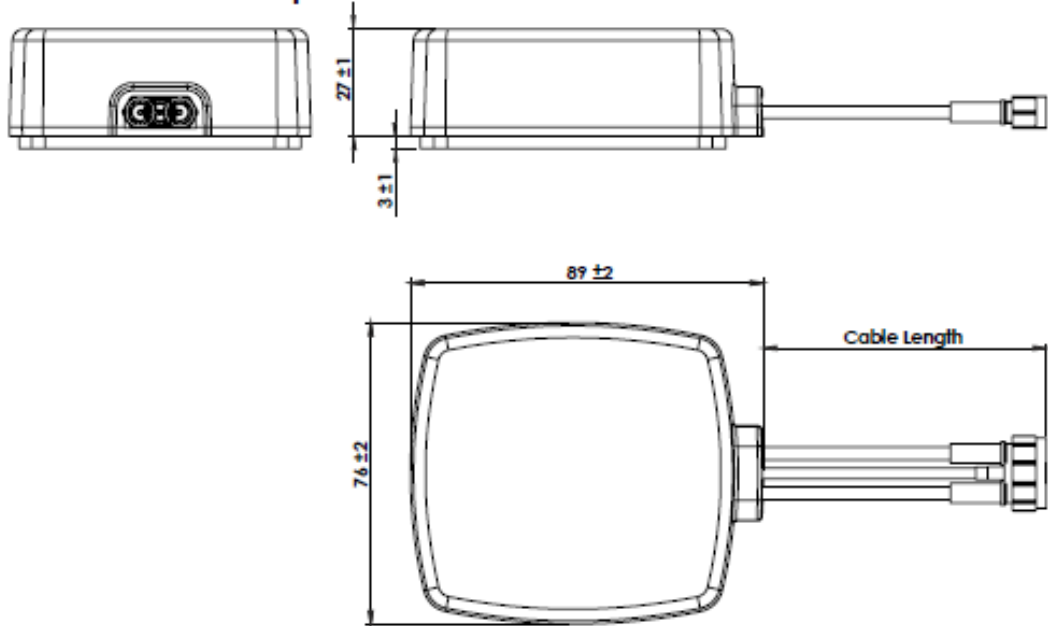
Mounting Type	Magnetic/adhesive mount
Dimensions (mm)	89 x 76 x 27/30
Radome Type	ASA
Radome Colour	Black or white
Operating Temperature (°C)	-40 to +85
Storage Temperature (°C)	-40 to +85
Substance Compliance	RoHS
Certificates	IP67, IP69

3. Antenna drawings

Magnetic Mount option

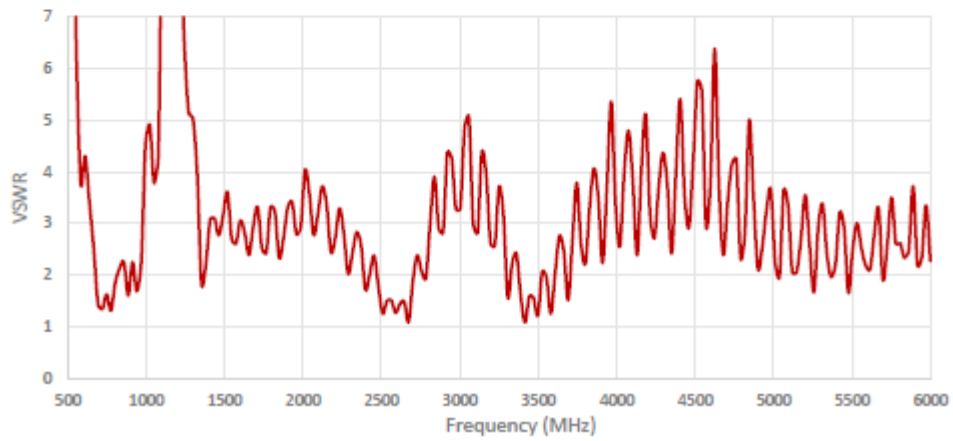
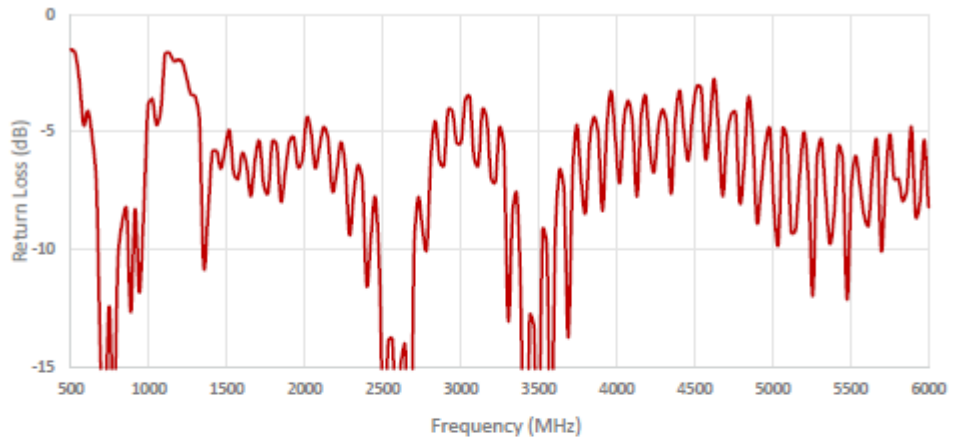


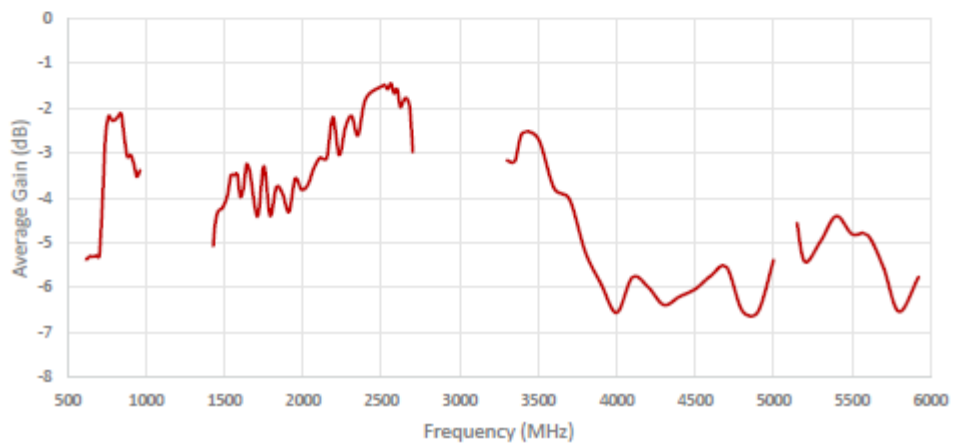
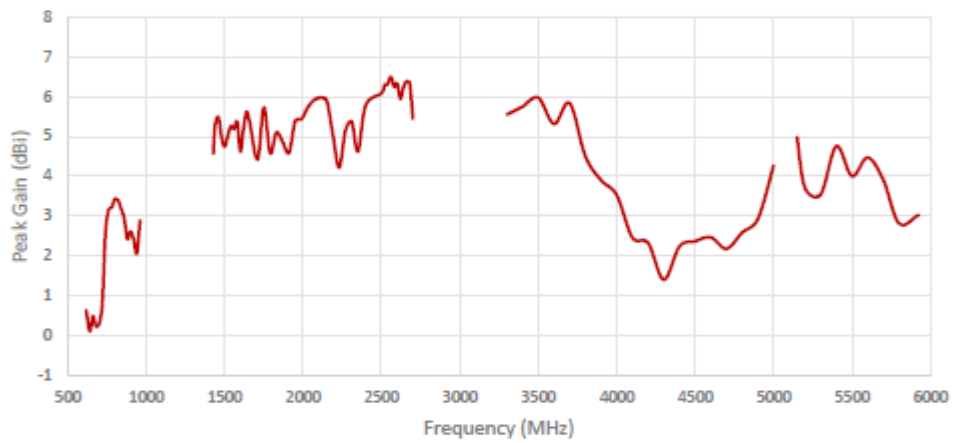
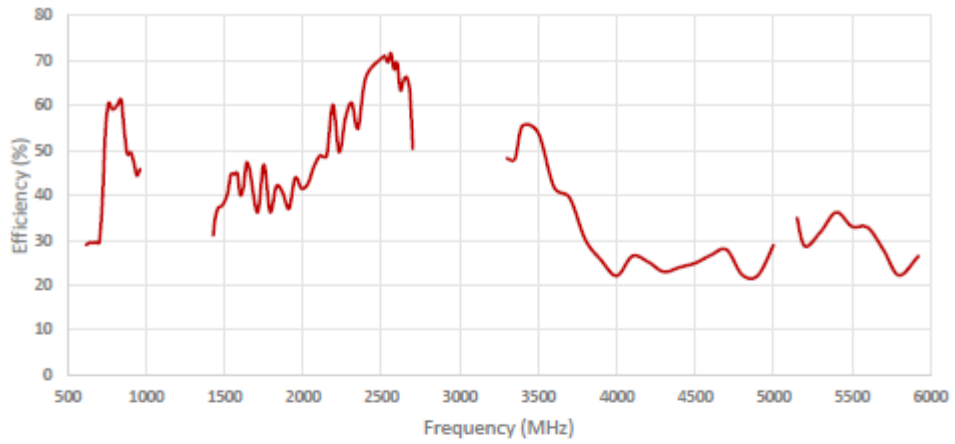
Adhesive Mount option



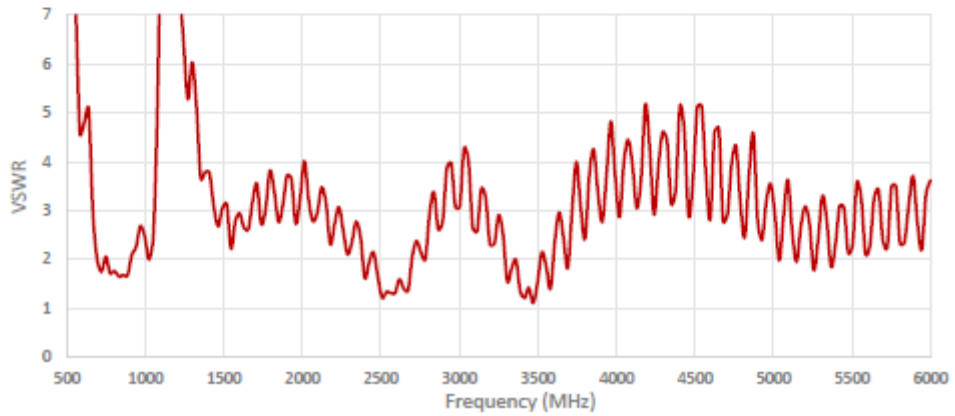
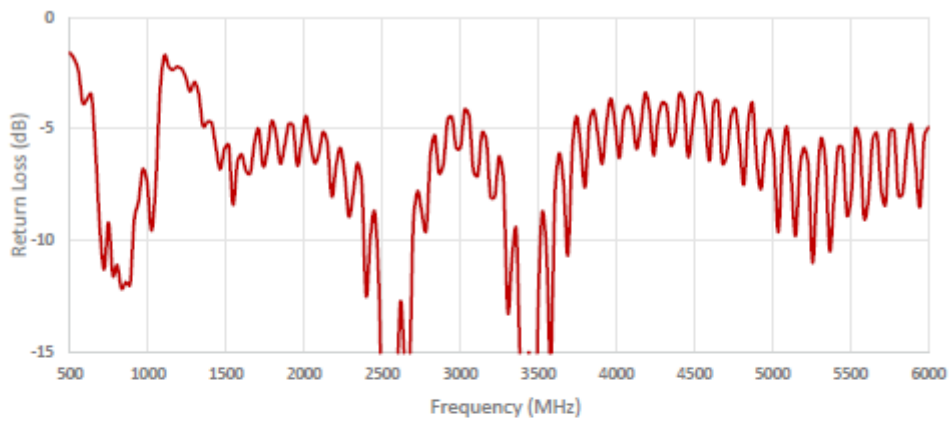
4. Antenna parameters

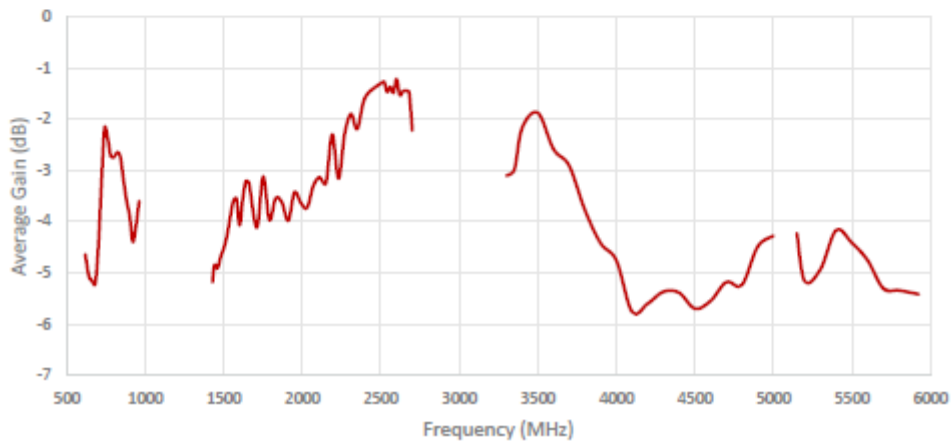
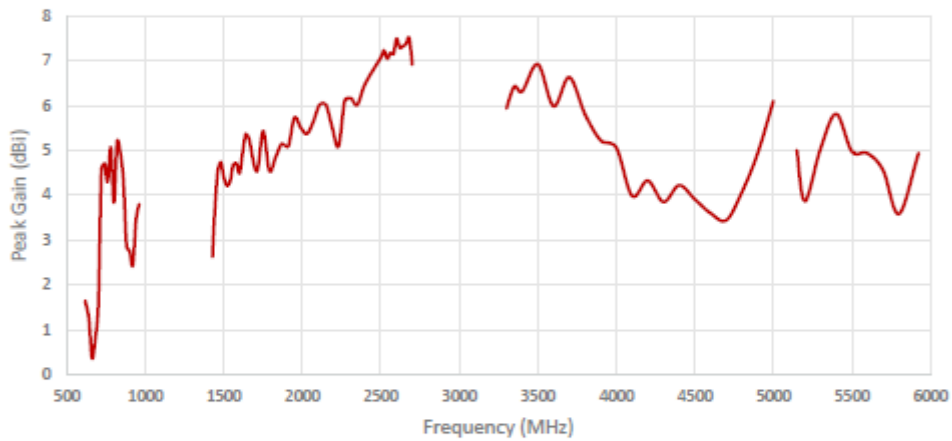
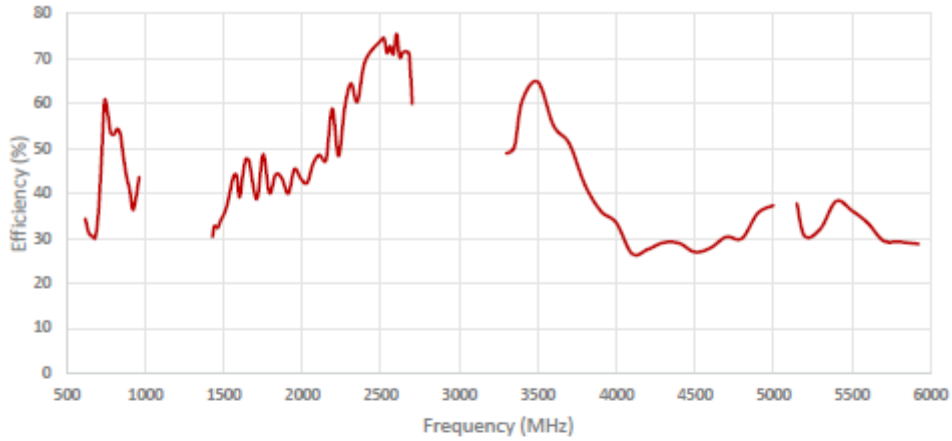
Cable 1: 5G NR



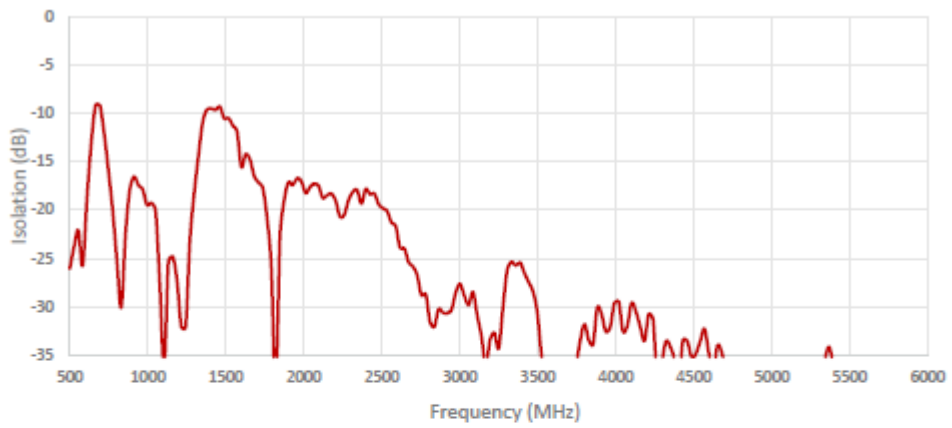


Cable 2: 5GNR

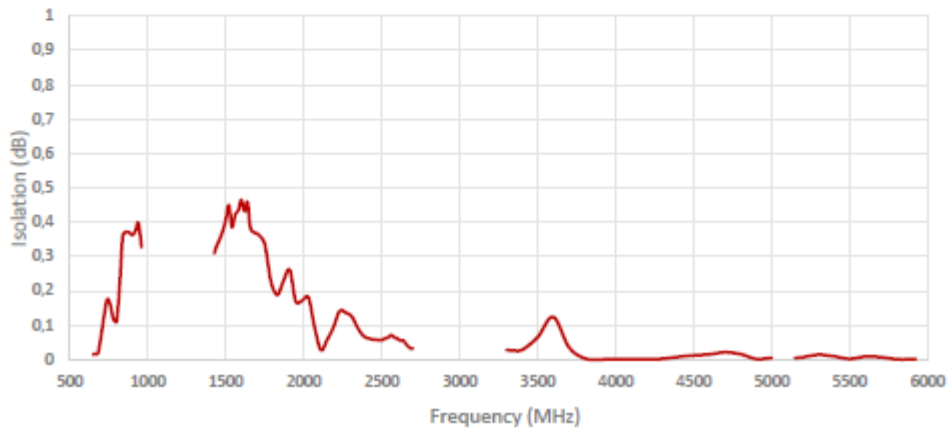


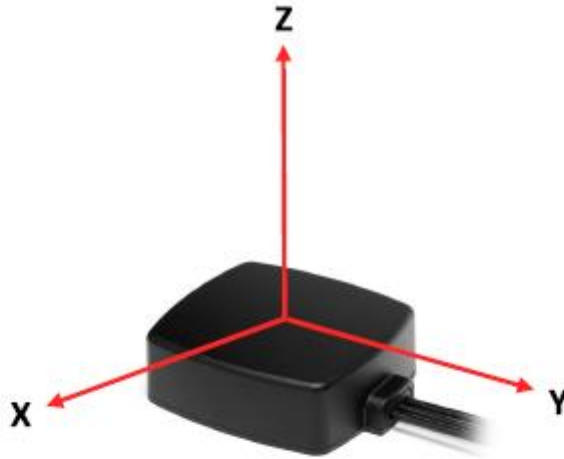


ISOLATION FOR CABLES 1 AND 2



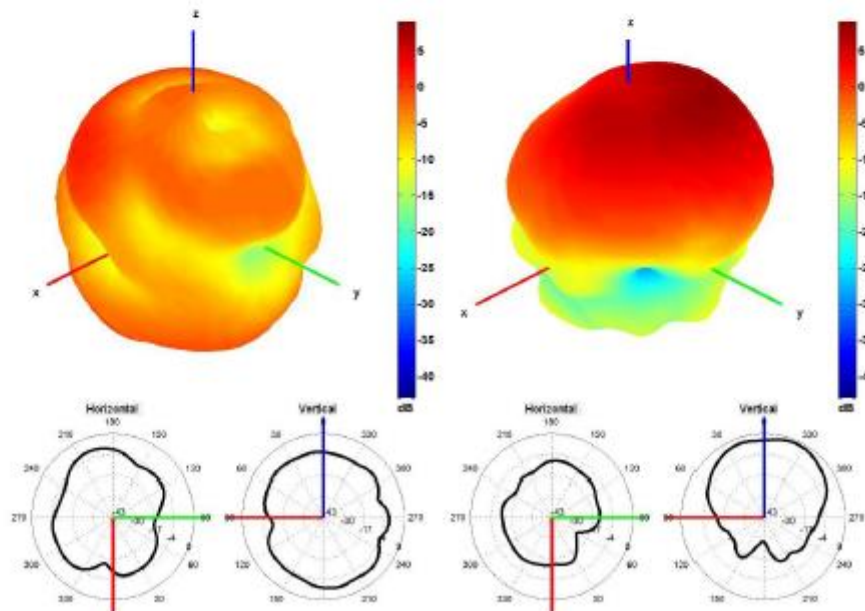
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 2





Radiation pattern reference

Cable 1: 5GNR



750 and 2500 MHz Radiation pattern

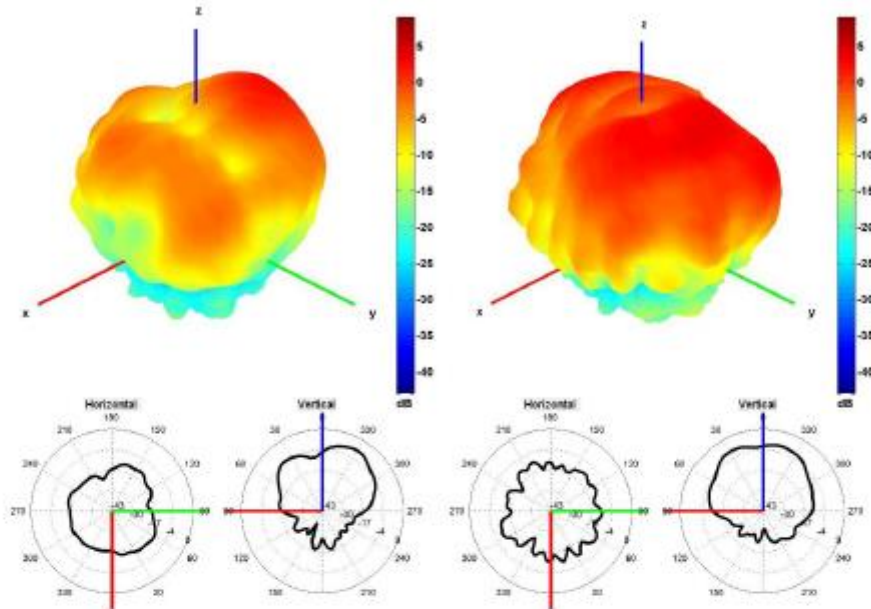
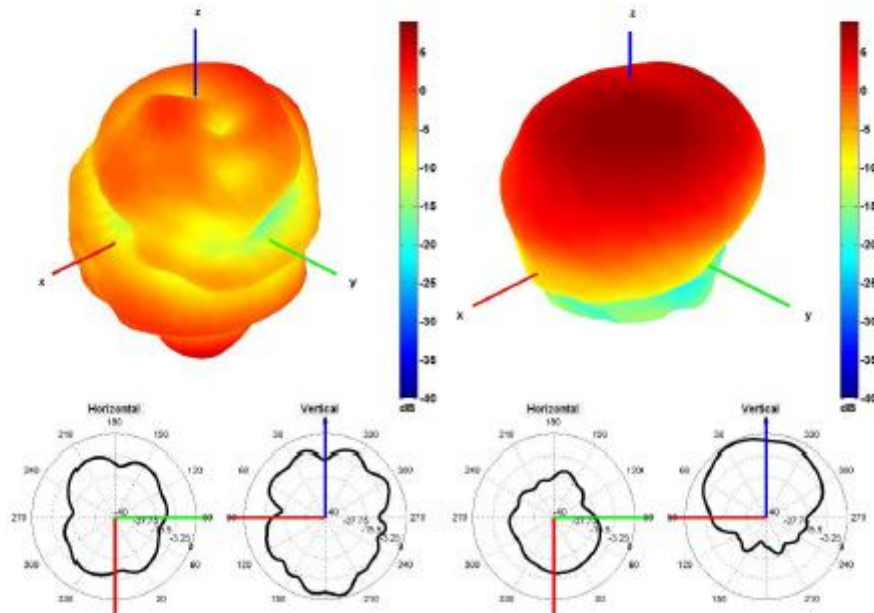
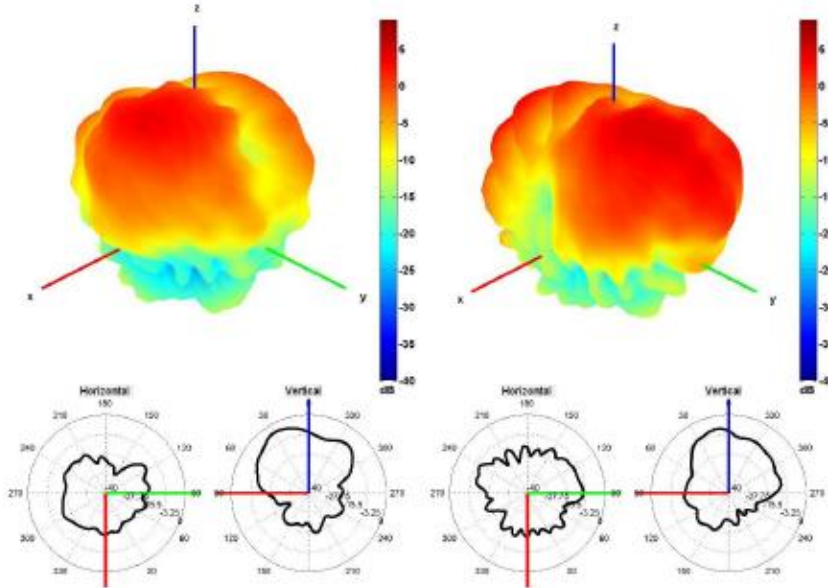


Table 2: 5GNR

4500 and 5500 MHz Radiation pattern



750 and 2500 MHz Radiation pattern



4500 and 5500 MHz Radiation pattern