

# BB-2J7741MGFA-500

CELLULAR/LTE MIMO and GNSS Magnetic Mount

## Key Features

### Cable 1 and 2: CELLULAR / LTE

- 698-960 MHz
- 1710-2170 MHz
- 2500-2700 MHz

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

- 1575-1606 MHz

Magnetic Mount

Ground Plane Dependent

Customizable Cable and Connector

Dimensions: Ø 54 x 68.2 mm

Certificates: IP67, IP69, IK09



## 1. Antenna and electrical specifications

**Cable 1**

Parameters	CELLULAR / LTE Antenna		
	2G,3G and 4G		
<b>Standards</b>	2G,3G and 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>	~-7.2	~-15.4	~-15.7
<b>VSWR</b>	~2.7:1	~1.5:1	~1.4:1
<b>Efficiency (%)</b>	~39	~52	~50
<b>Peak Gain (dBi)</b>	~-0.1	~2.9	~3.5
<b>Average Gain (dB)</b>	~-4.2	~-2.9	~-3.0
<b>Impedance (Ohm)</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		
<b>Cable Length</b>	500 cm Standard		
<b>Cable Type</b>	LL100 Standard		

**Cable 2**

Parameters	CELLULAR / LTE Antenna		
	2G,3G and 4G		
<b>Standards</b>	2G,3G and 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>	~-6.9	~-15.6	~-15.3
<b>VSWR</b>	~2.7:1	~1.5:1	~1.5:1
<b>Efficiency (%)</b>	~38	~52	~53
<b>Peak Gain (dBi)</b>	~-0.1	~3.1	~2.7
<b>Average Gain (dB)</b>	~-4.3	~-2.9	~-2.8
<b>Impedance (Ohm)</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		
<b>Cable Length</b>	500 cm Standard		
<b>Cable Type</b>	LL100 Standard		

**Antenna Measurement Conditions:**

Mounted on 30 x 30 cm Ground Plane

500 cm of Cable LL100

Measured in Certified CTIA 3D Anechoic Chamber

Cable 3

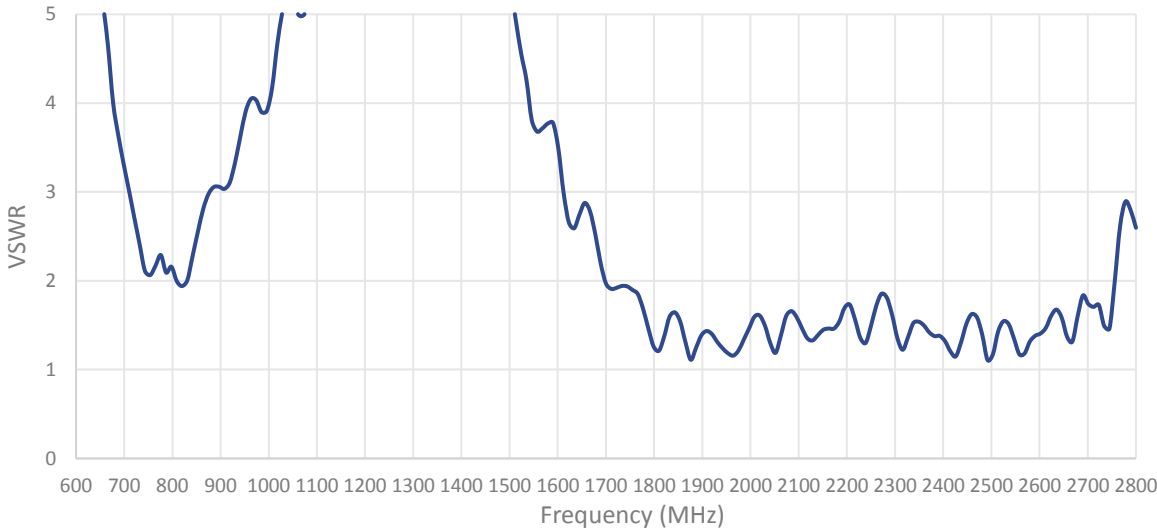
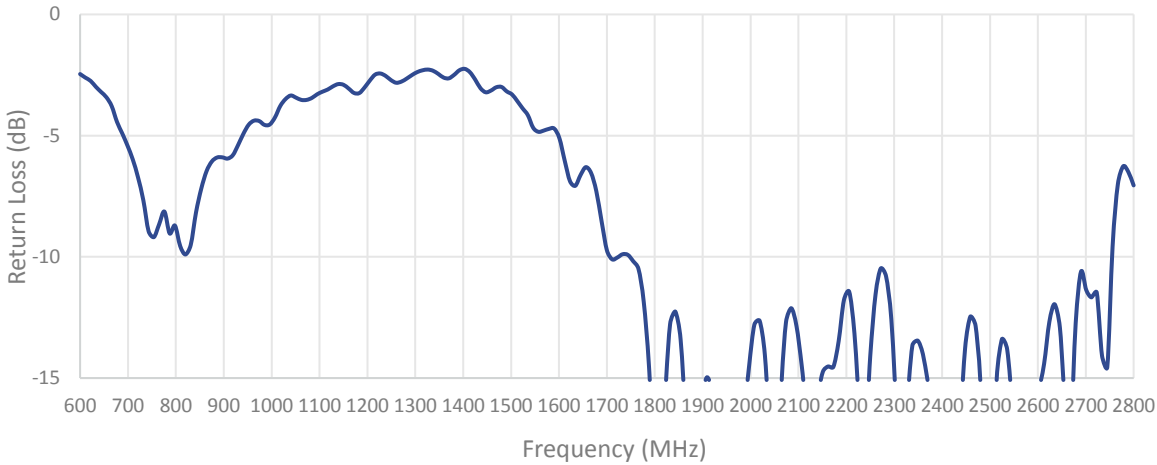
Parameters	GPS/GLONASS Antenna	
	GPS/QZSS/Galileo	GLONASS
Standard	1575	1602
Band (MHz)	1575.42	1598-1606
Frequency(MHz)	25 x 25 x 4	
Patch Size (mm)	<=-15.0 dB	
Return Loss (dB)	<=1.4:1 dB	
VSWR	50	
Impedance	Hemispherical	
Radiation Pattern	RHCP	
Polarization	Pre-filter	
Saw Filter	28 @ 2.7 V	
Active Gain (dB)	1.5 Typ	
Noise Figure (dB)	1.5 – 3.6	
Voltage (V)	9 Typ	
Current (mA)	24.3 Typ	
Power Consumption (mW)	2kV	
ESD Protection (kV)	SMA-Male Standard	
Connector Type	500 cm Standard	
Cable Length	LL100 Standard	
Cable Type		

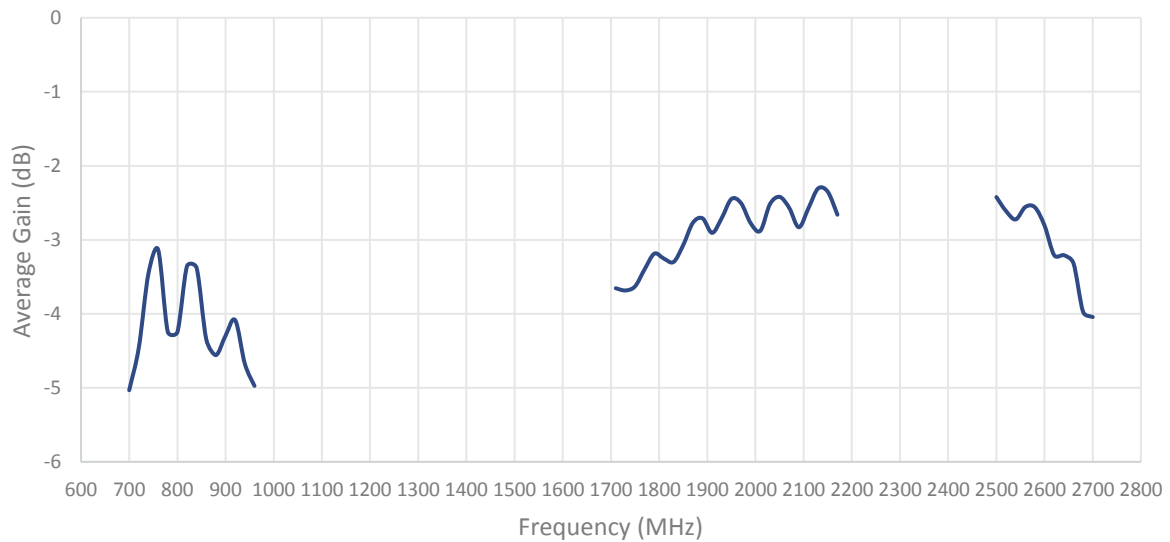
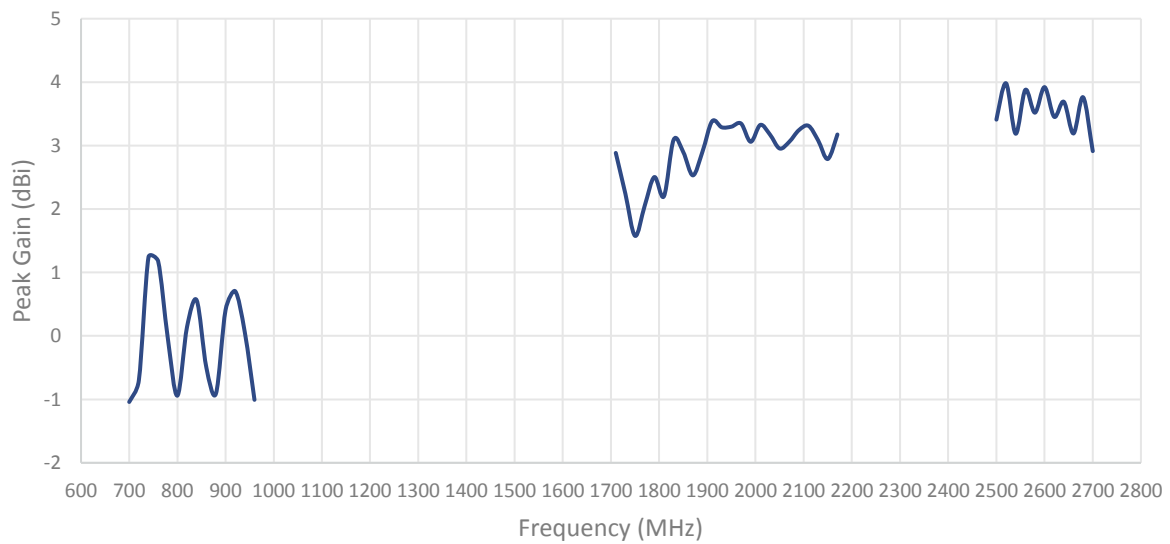
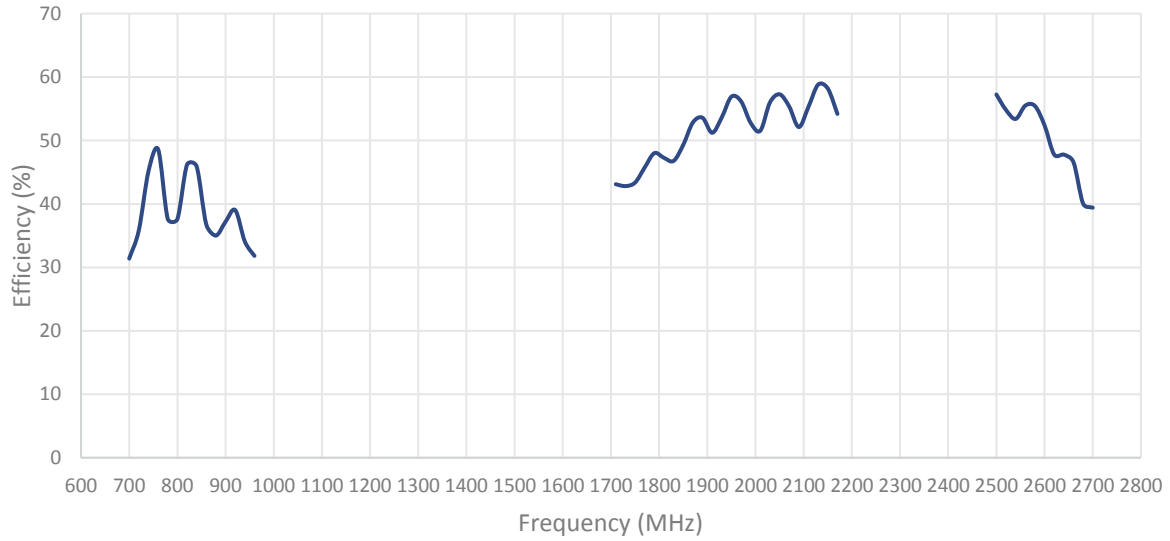
## 2. Mechanical and environmental specifications

Specifications	2J7741MGFa
Mounting Type	Magnetic Mount
Dimensions (mm)	Ø 54 x 68.2
Radome Type	ASA
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, IP69, IK09

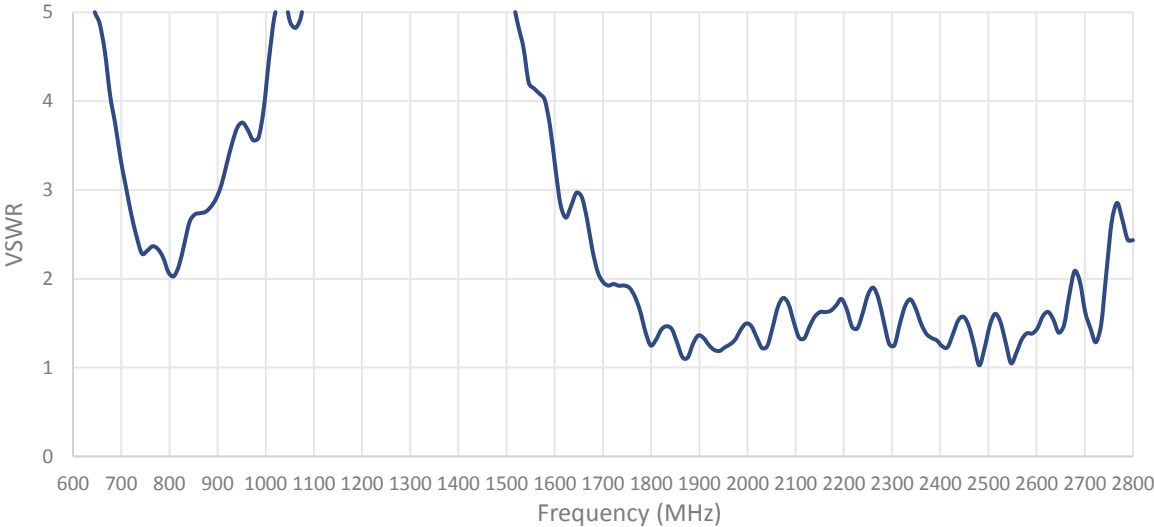
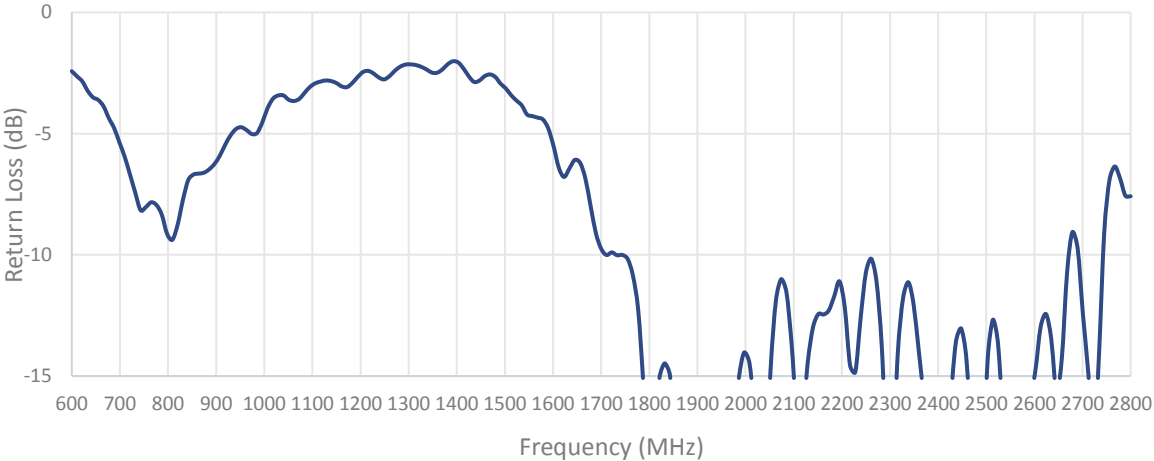
## 3. Antenna parameters

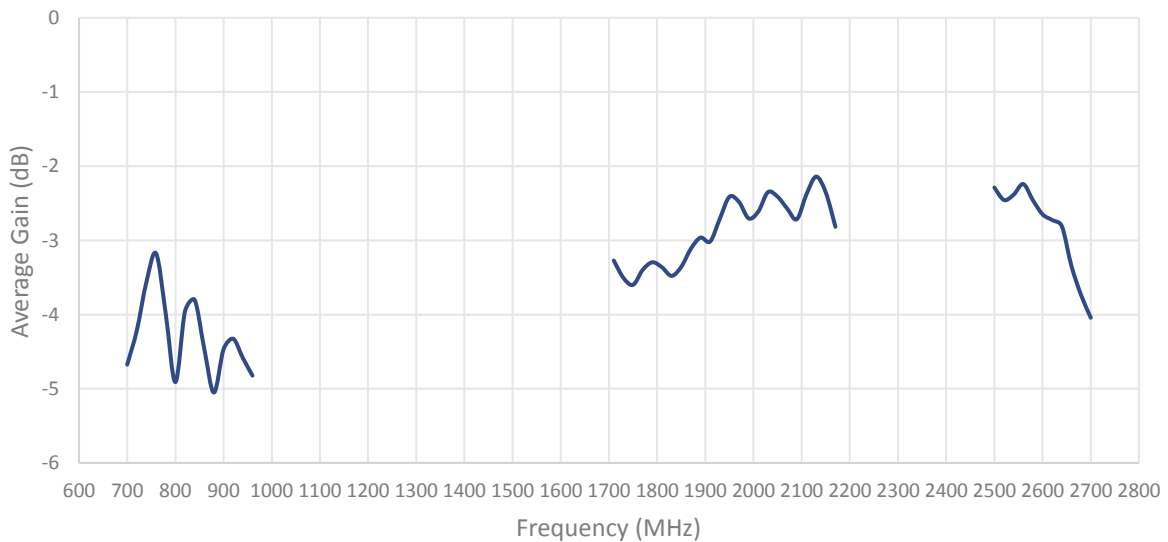
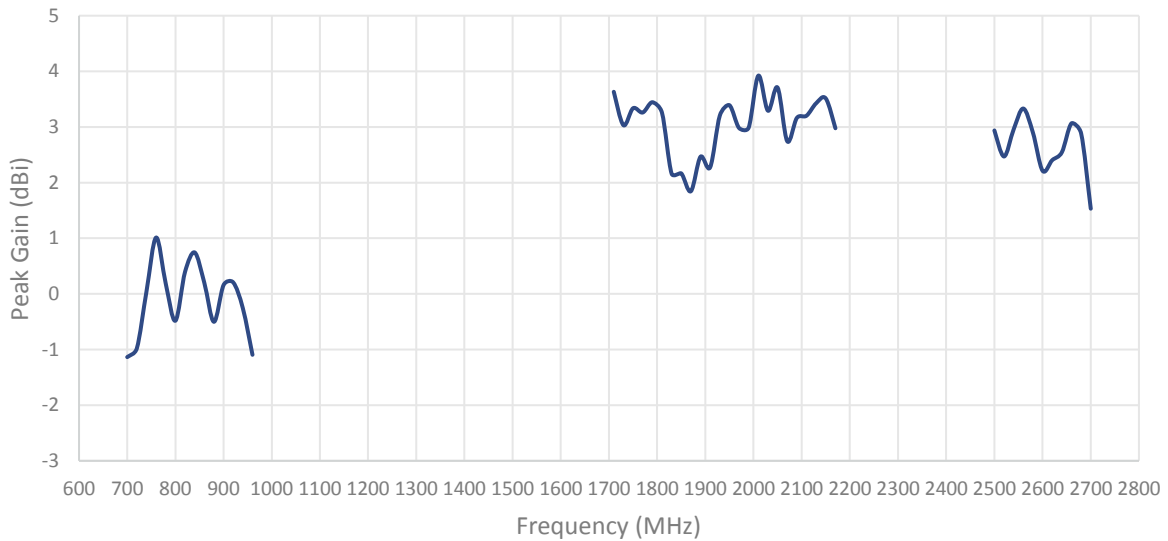
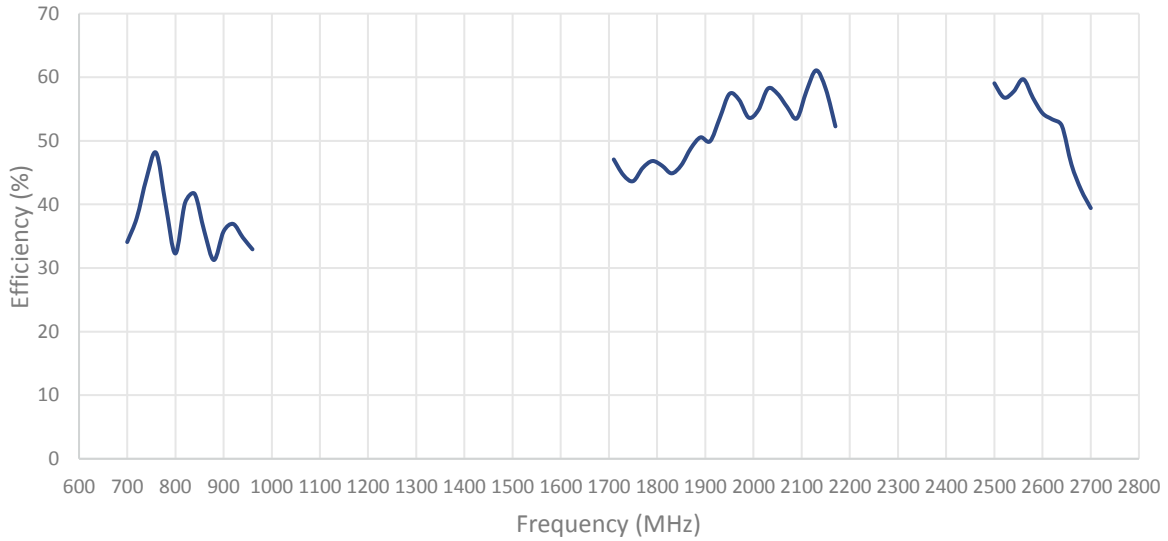
Table 1: CELLULAR/LTE



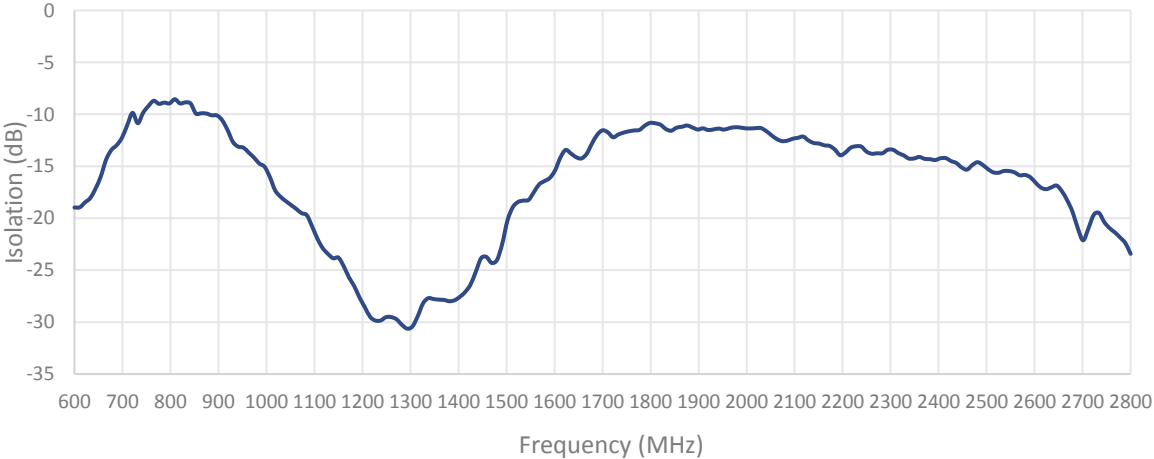


**Table 2: CELLULAR/LTE**

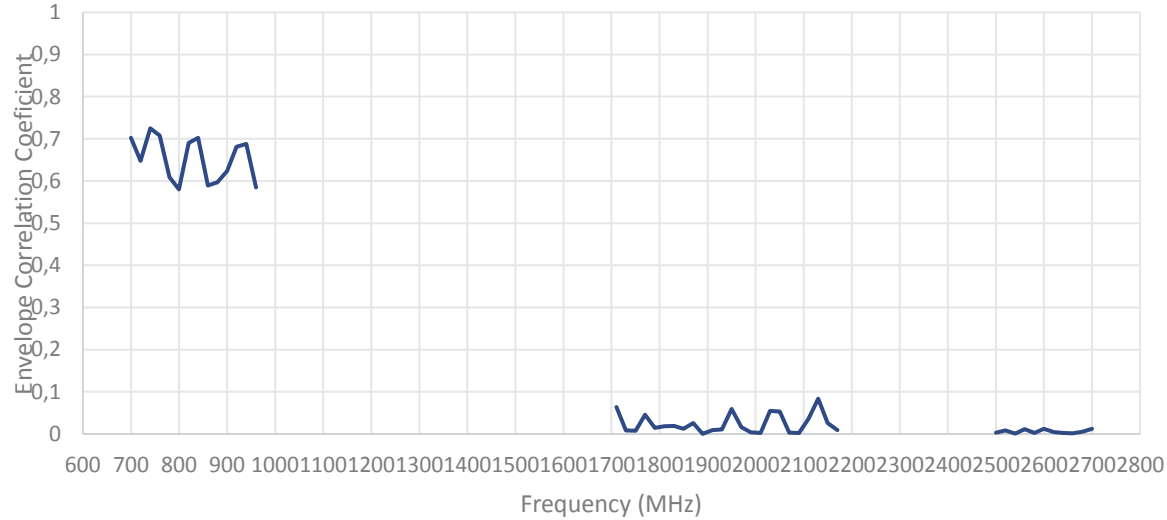




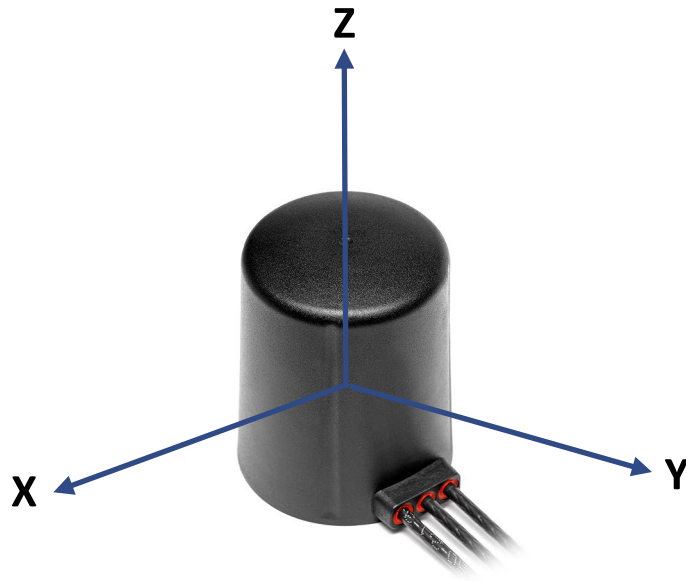
### ISOLATION FOR CABLES 1 AND 2



### ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 2

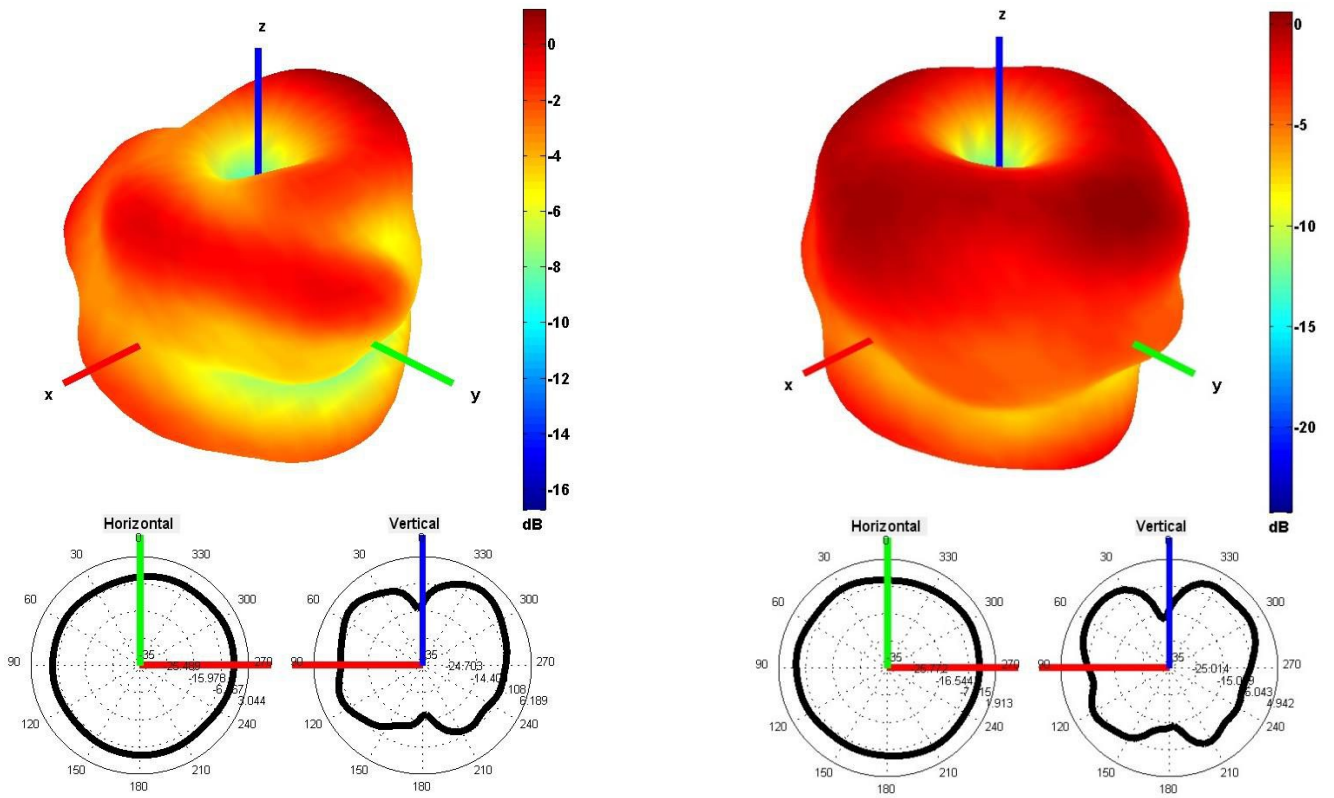




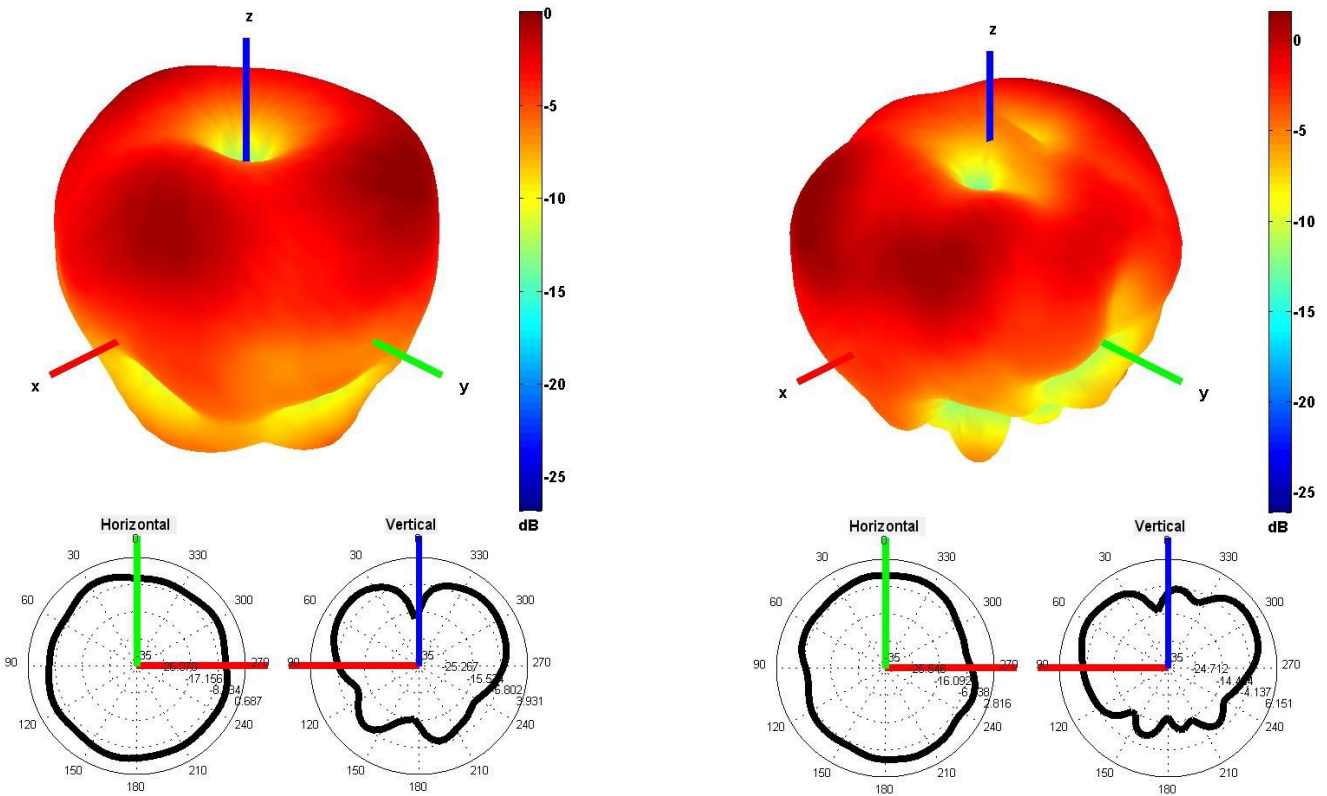


Radiation pattern reference

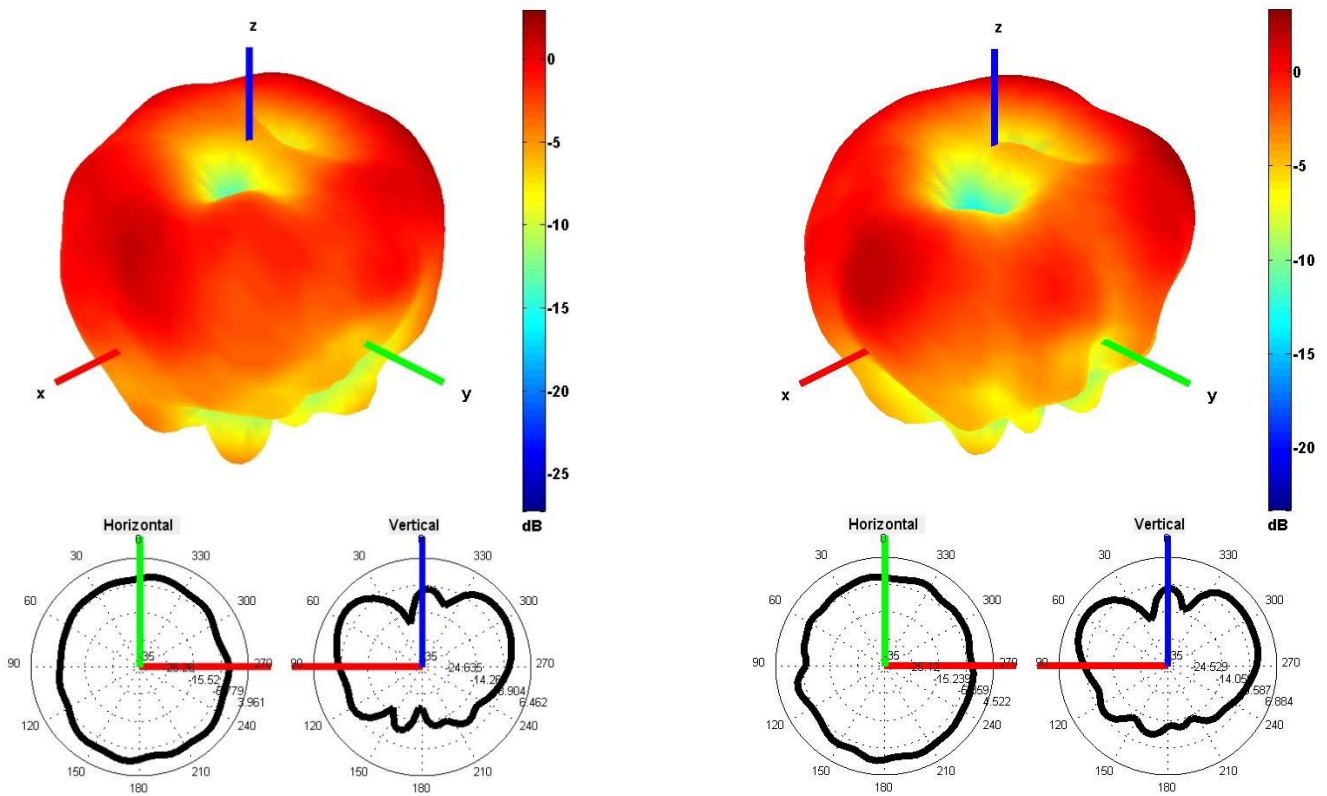
Table 1: CELLULAR/LTE



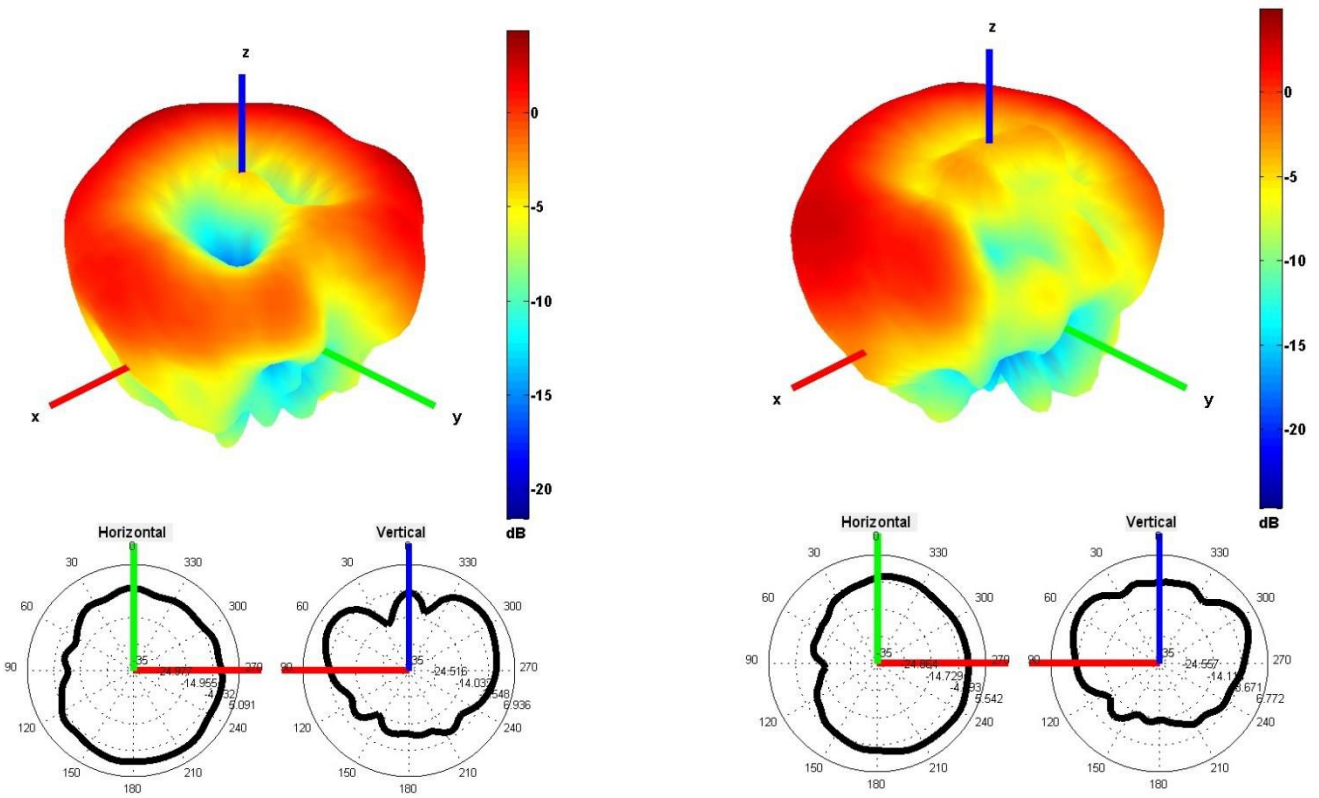
750 and 850 MHz Radiation pattern



940 and 1750 MHz Radiation pattern

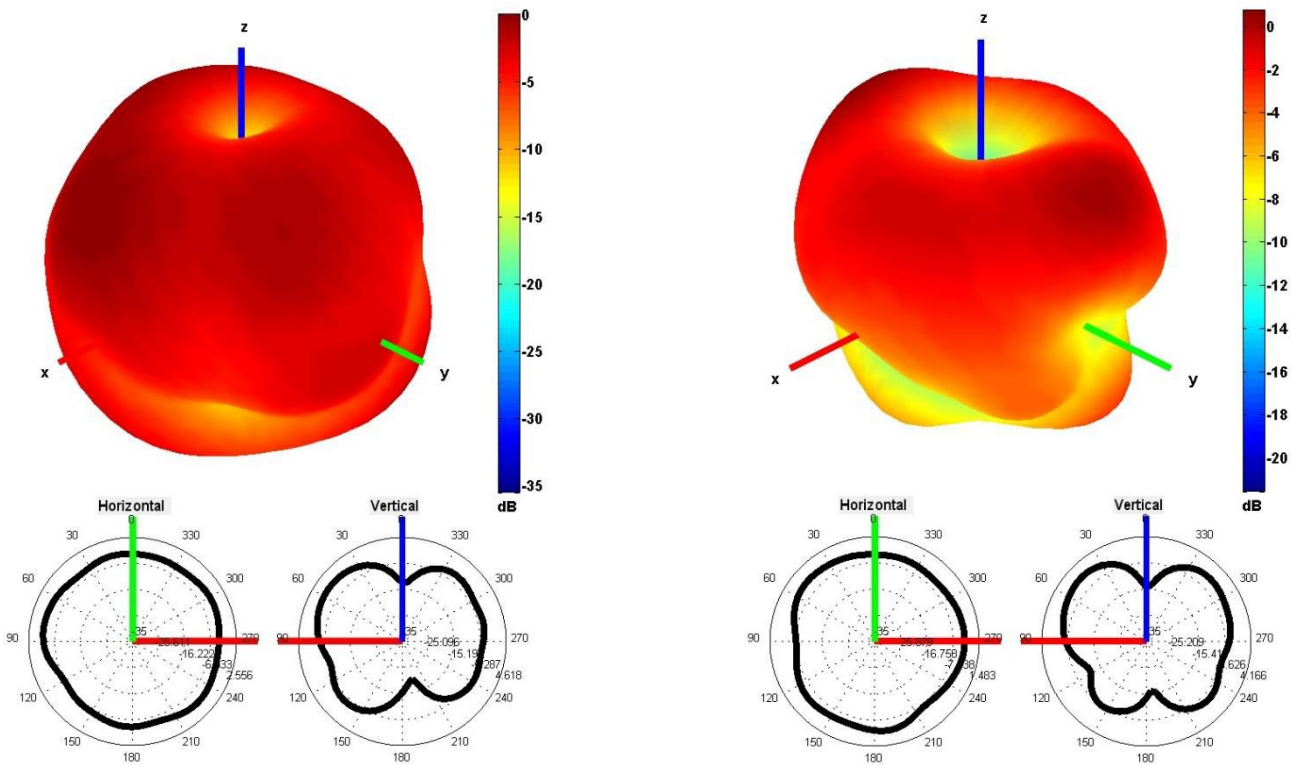


1850 and 1950 MHz Radiation pattern



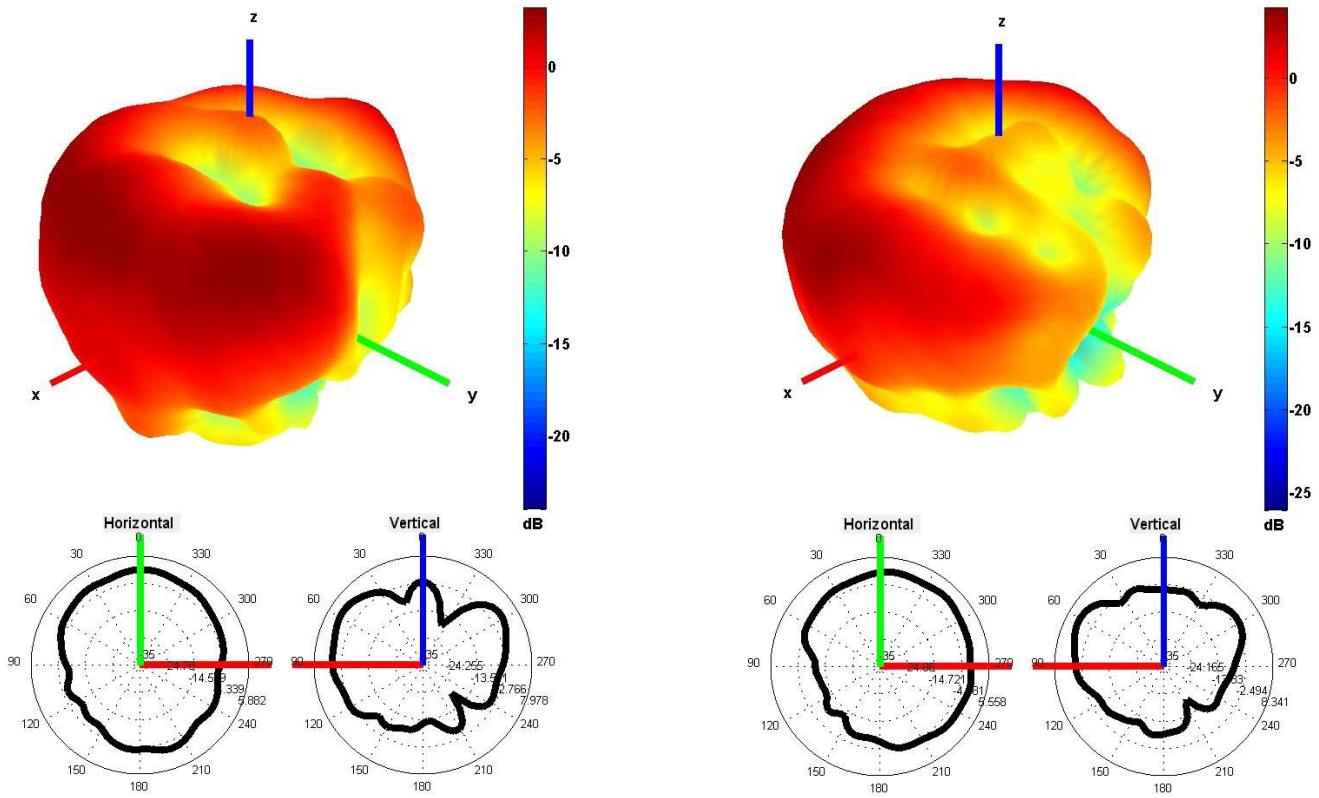
2100 and 2600 MHz Radiation pattern

Table 2: CELLULAR/LTE



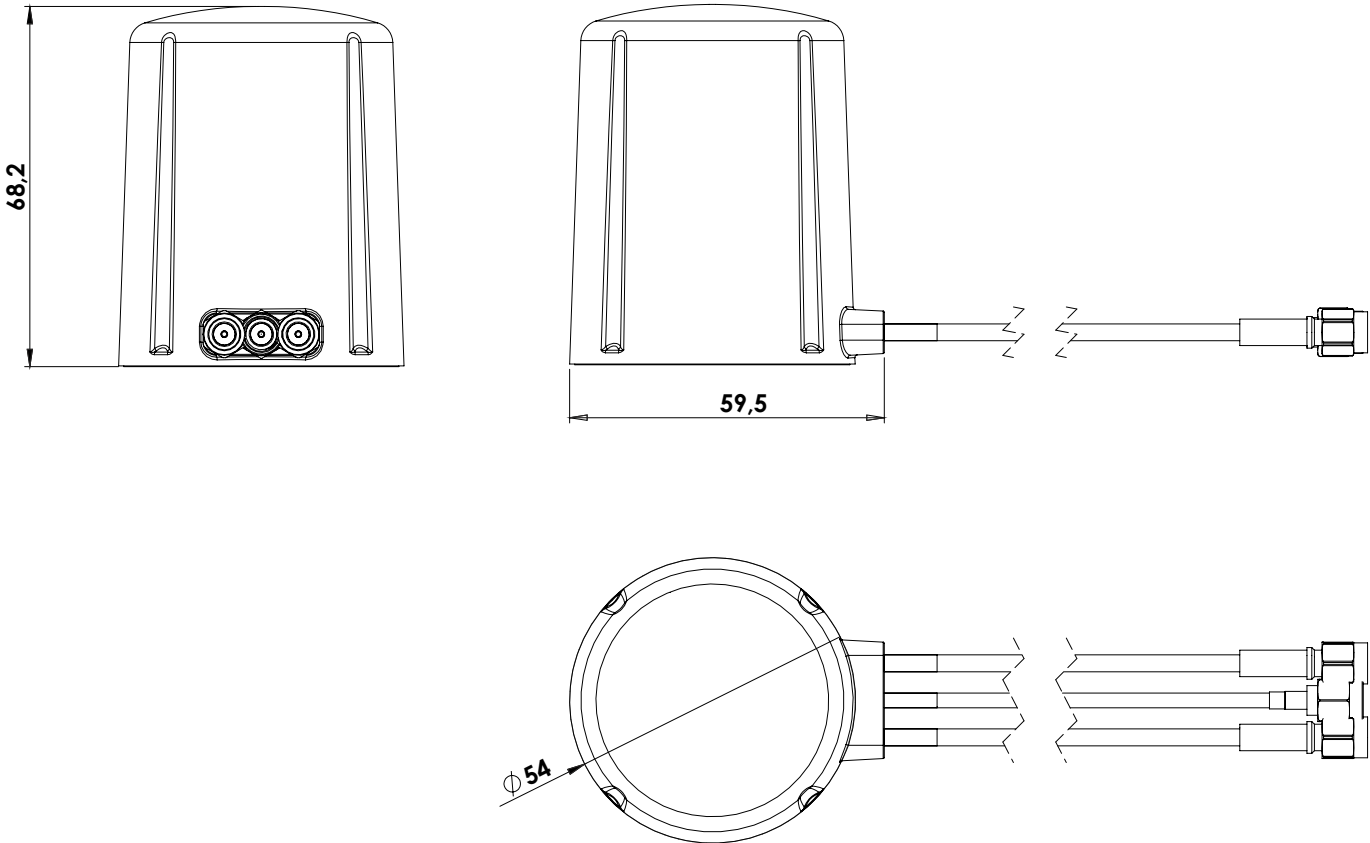
750 and 850 MHz Radiation pattern





2100 and 2600 MHz Radiation pattern

## 4. Antenna drawings



5. Antenna Images

