

## 2J7182BGF

CELLULAR/LTE, 2.4/5.0 GHz ISM, TETRA and GNSS

### Key Features

**Cable 1: CELLULAR / LTE**

**Cable 2: 2.4/5.0 GHz ISM**

**Cable 3: TETRA**

**Cable 4: GPS/GLONASS/QZSS/Galileo**

Screw Mount

Heavy Duty antenna

High Performance

28 dB Gain

Pre-Filter

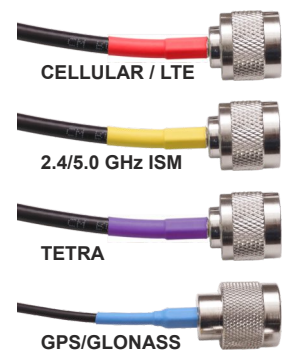
Ground Plane Dependent

Anti-Rotation Mounting

Customizable Cable and Connector

Dimensions: Ø 96 x H 130 mm

Certificates: IP67, IP69, IK09



## 1. Antenna and electrical specifications

**Cable 1**

Parameters	CELLULAR / LTE Antenna		
<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>	~-6.1	~-10.3	~-10.6
<b>VSWR</b>	~3.0:1	~2.0:1	~1.9:1
<b>Efficiency (%)</b>	~41.3	~42.4	~43.0
<b>Peak Gain (dBi)</b>	~-1.9	~-3.0	~-2.9
<b>Average Gain (dB)</b>	~-3.9	~-3.8	~-3.7
<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 (Other connectors available)		
<b>Cable Length</b>	300 cm (Customizable length available)		
<b>Cable Type</b>	LL195 (Other cable type available)		

**Cable 2**

Parameters	2.4/5.0 GHz ISM Antenna	
<b>Standards</b>	WiFi, BT, ZigBee, ISM	
<b>Band (MHz)</b>	2.4 GHz	5.0 GHz
<b>Frequency (MHz)</b>	2410-2490	4920-5925
<b>Return Loss (dB)</b>	~-10.4	~-13.6
<b>VSWR</b>	~1.9:1	~1.6:1
<b>Efficiency (%)</b>	~58	~64
<b>Peak Gain (dBi)</b>	~-5.6	~-5.5
<b>Average Gain (dB)</b>	~-2.3	~-1.9
<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-RP Standard (Other Connectors Available)	
<b>Cable Length</b>	300 cm Standard (Any Cable Length Available)	
<b>Cable Type</b>	LL195 Standard (Other Cables Available)	

**Antenna Measurement Conditions:**

Mounted on 60 x 60 cm Ground Plane  
 LL195 200 cm Cable Length  
 Measured in Certified CTIA 3D Anechoic Chamber

Cable 3

Parameters	TETRA Antenna
<b>Standards</b>	TETRA
<b>Band (MHz)</b>	390, 420, 460
<b>Frequency (MHz)</b>	380-470
<b>Return Loss (dB)</b>	~-16.6
<b>VSWR</b>	~1.5:1
<b>Efficiency (%)</b>	~64.4
<b>Peak Gain (dBi)</b>	~2.1
<b>Average Gain (dB)</b>	~-1.9
<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>	Most RF Connectors (SMA-Male Standard)
<b>Cable Length</b>	Any Cable Length (300 cm Standard)
<b>Cable Type</b>	Other Cables Available (LL195 Standard)

Cable 4

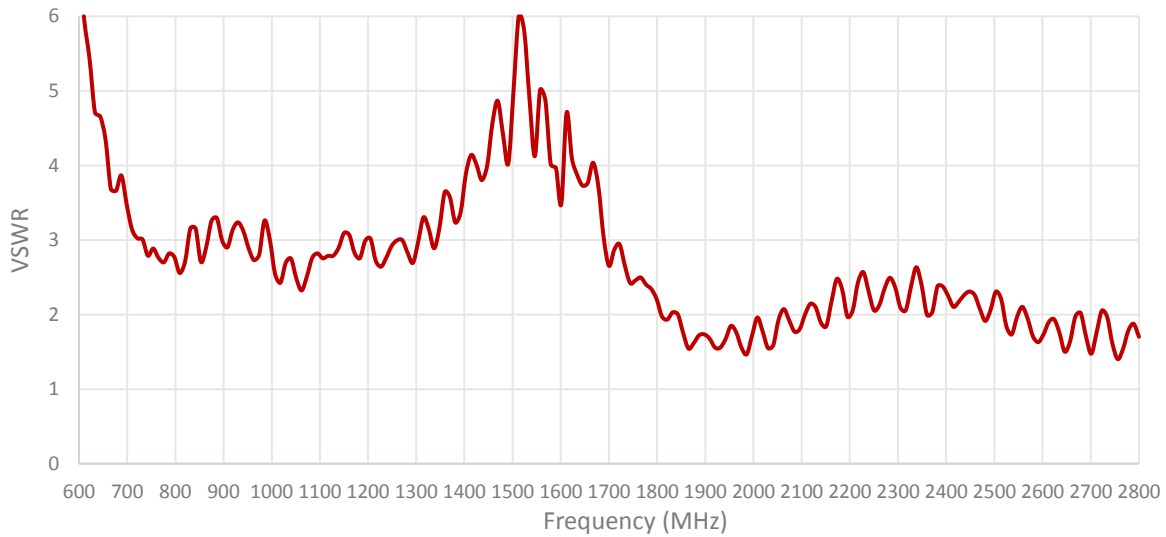
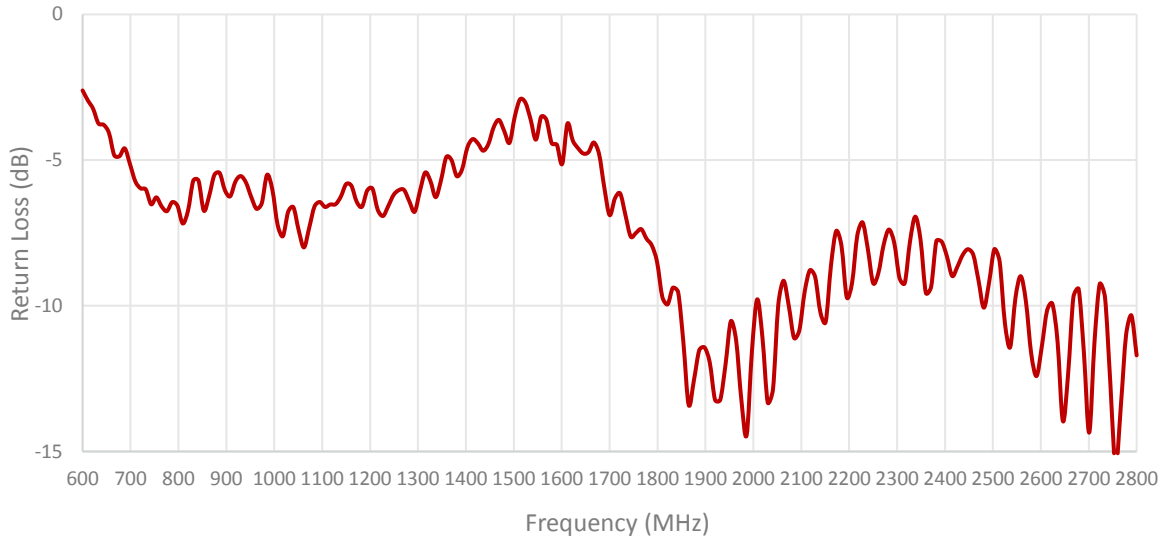
Parameters	GPS/GLONASS Antenna	
<b>Standards</b>	GPS/QZSS/Galileo	GLONASS
<b>Bands (MHz)</b>	1575	1602
<b>Frequency (MHz)</b>	1575.42	1598-1606
<b>Passive Gain (dBi)</b>	~-3.6	
<b>Impedance (Ohms)</b>	50	
<b>Radiation Pattern</b>	Hemispherical	
<b>Voltage Range (V)</b>	1.5 - 3.6	
<b>Active Gain (dB)</b>	28 @ 2.7 V	
<b>Noise Figure (dB)</b>	1.8 @ 2.7 V	
<b>Current Consumption (mA)</b>	9 @ 2.7 V	
<b>Power Consumption (mW)</b>	24.3 @ 2.7 V	
<b>Saw Filter Type</b>	Pre-Filter	
<b>Out of Band Rejection (dB)</b>	~43	
<b>ESD Protection (kV)</b>	6	
<b>Connector Type</b>	SMA-Male Standard (Other Connectors Available)	
<b>Cable Length</b>	300 cm Standard (Any Cable Length Available)	
<b>Cable Type</b>	LL100 Standard (Other Cables Available)	

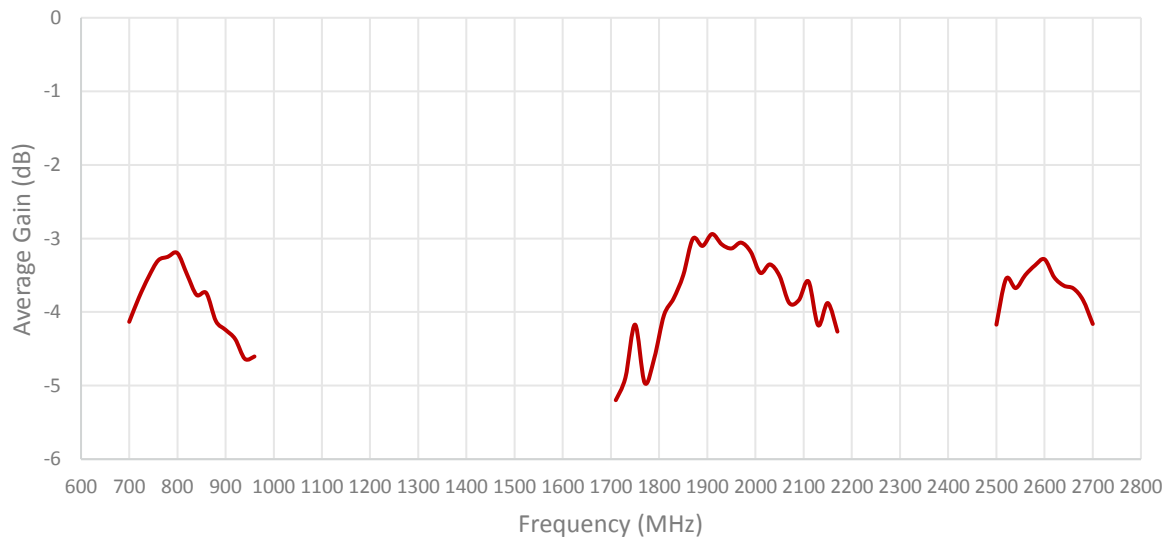
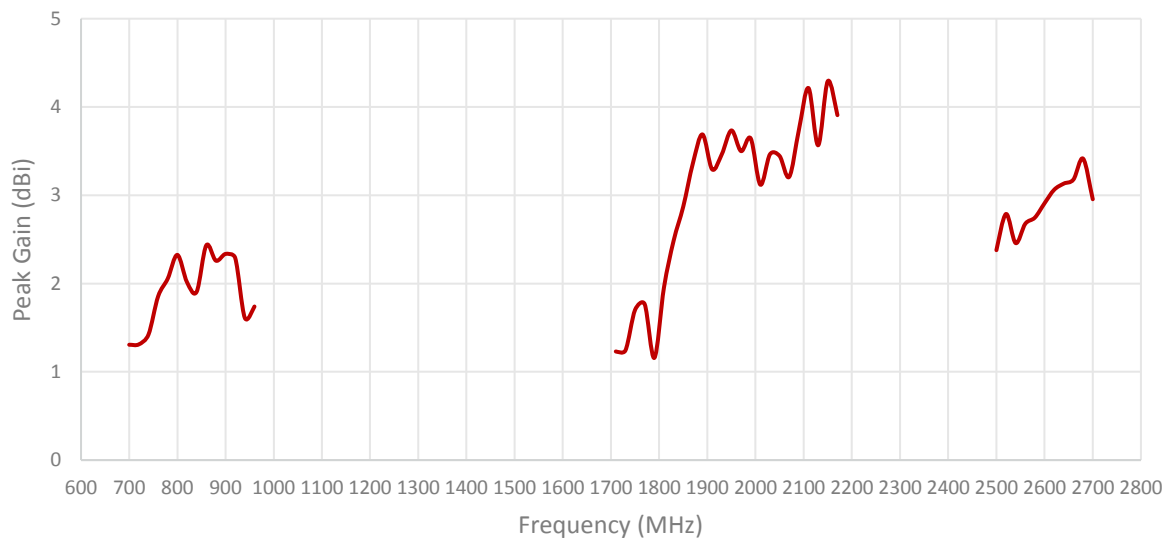
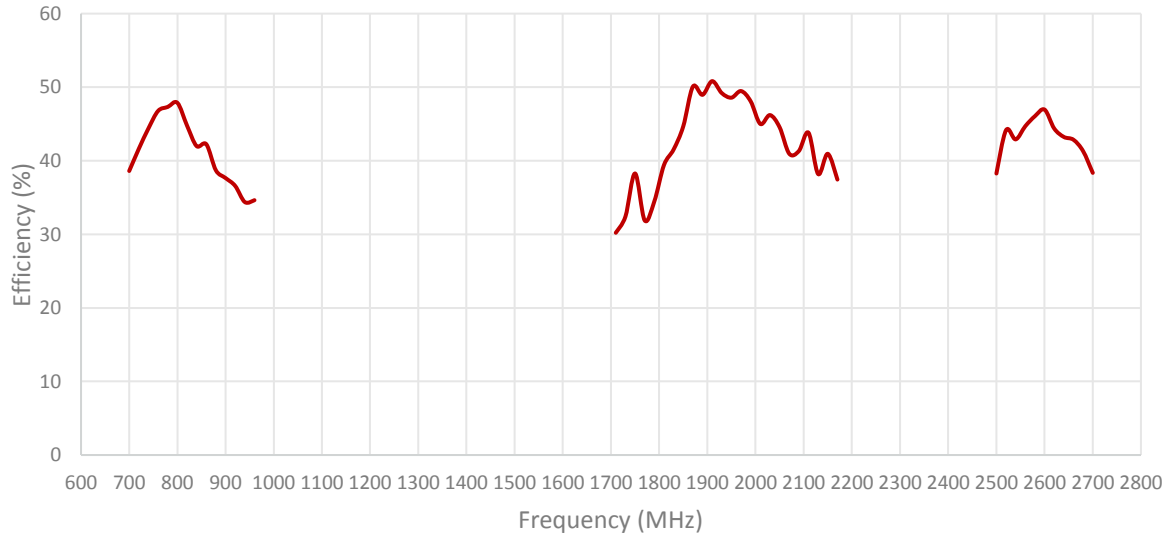
## 2. Mechanical and environmental specifications

Specifications	2J7182BGF
<b>Mounting Type</b>	Screw Mount
<b>Dimensions (mm)</b>	Ø 96 x H 130
<b>Max. Tighten Torque (Nm)</b>	15 Nm
<b>Radome</b>	ASA
<b>Radome color</b>	White, Black
<b>Antenna Base</b>	Alluminium alloy
<b>Operating Temperature (C)</b>	-40 to +85
<b>Storage Temperature (C)</b>	-40 to +85
<b>Substance Compliance</b>	RoHS
<b>Certificates</b>	IP67, IP69, IK09

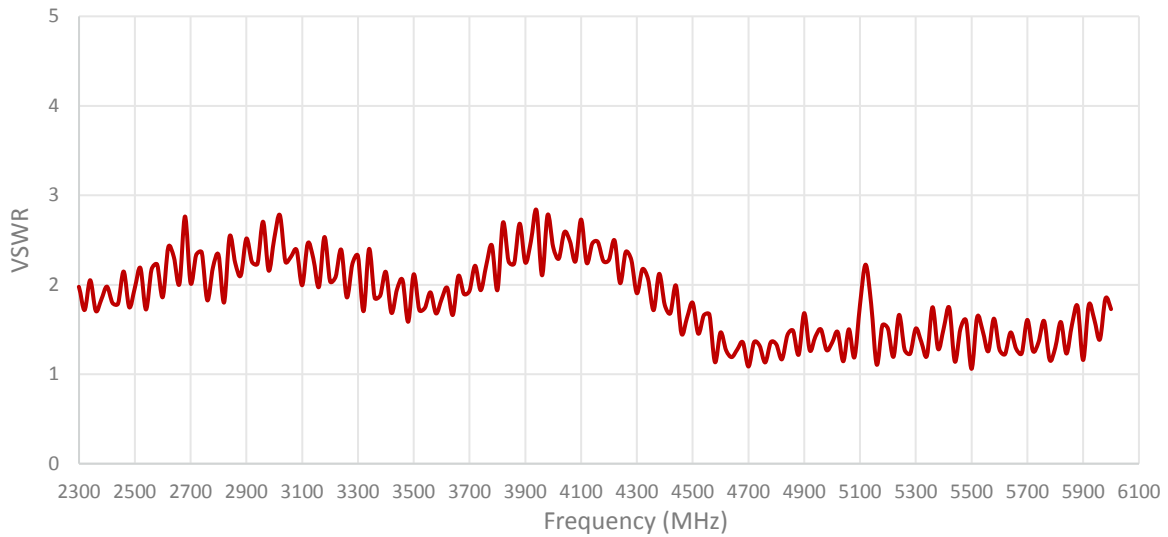
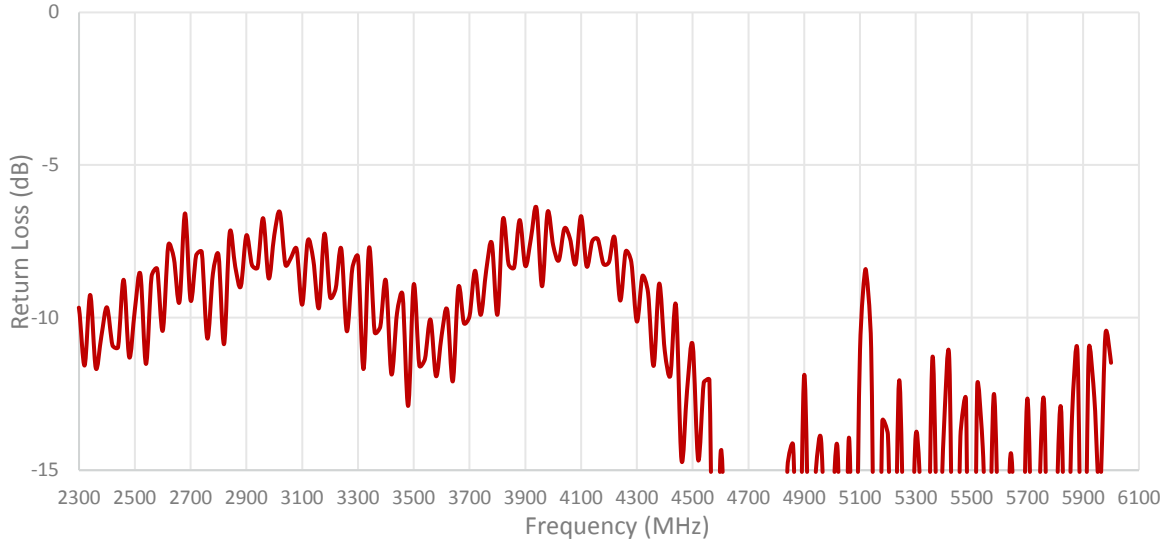
### 3. Antenna parameters

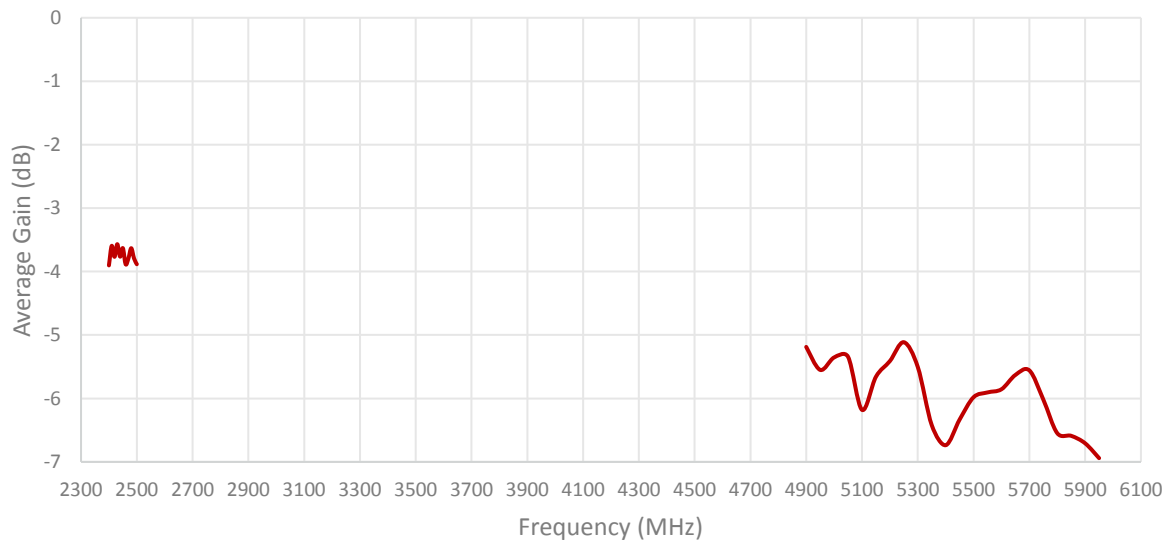
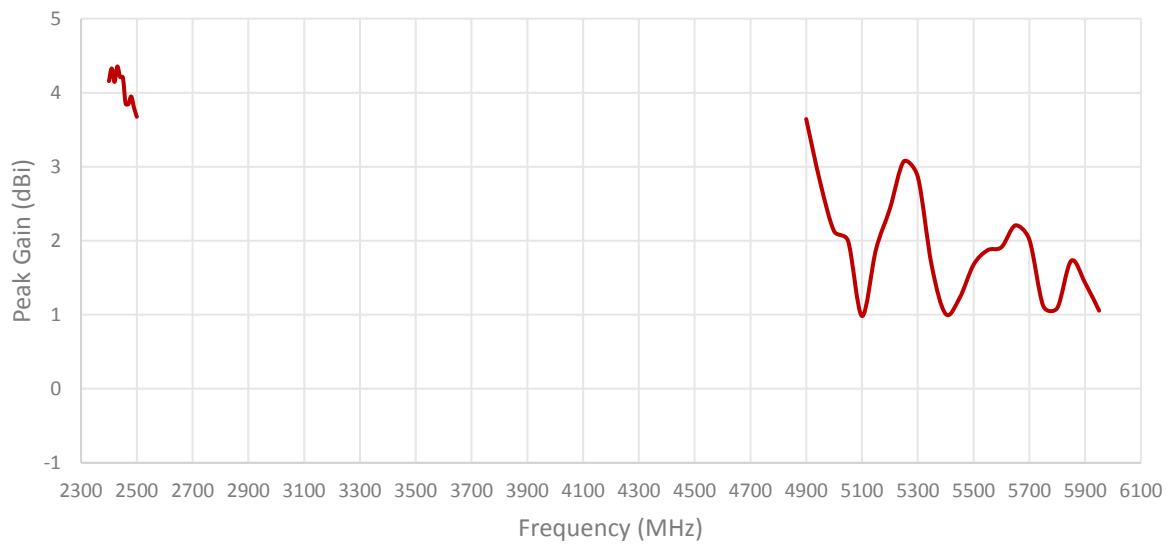
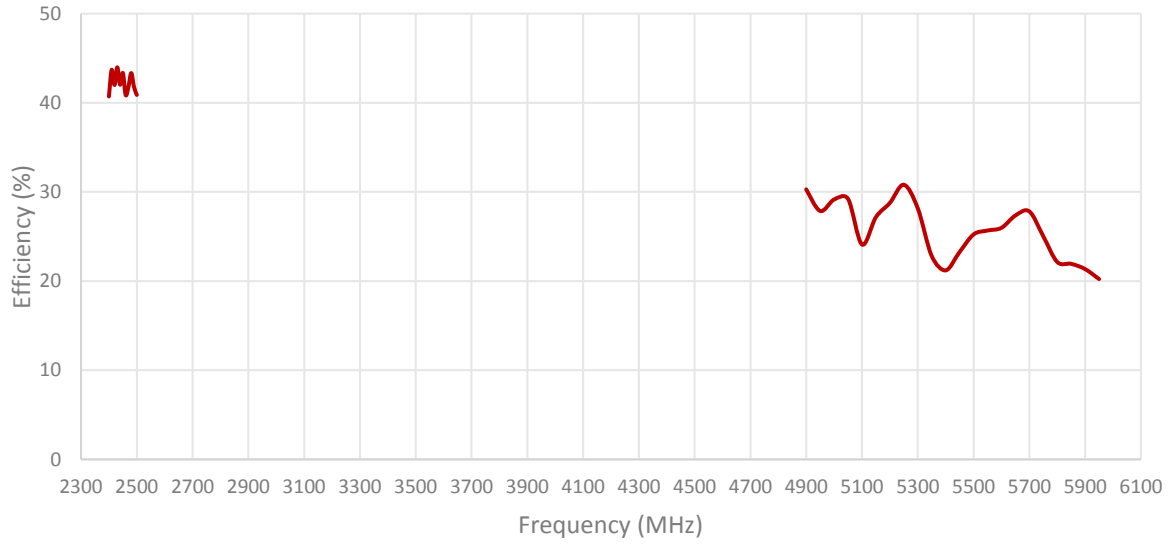
**Table 1: CELLULAR/LTE**





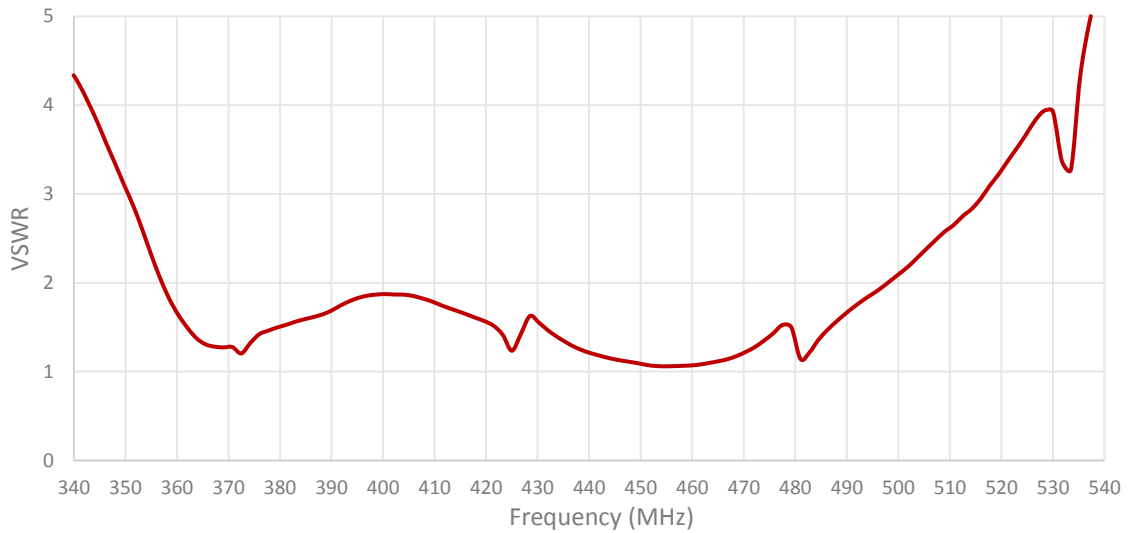
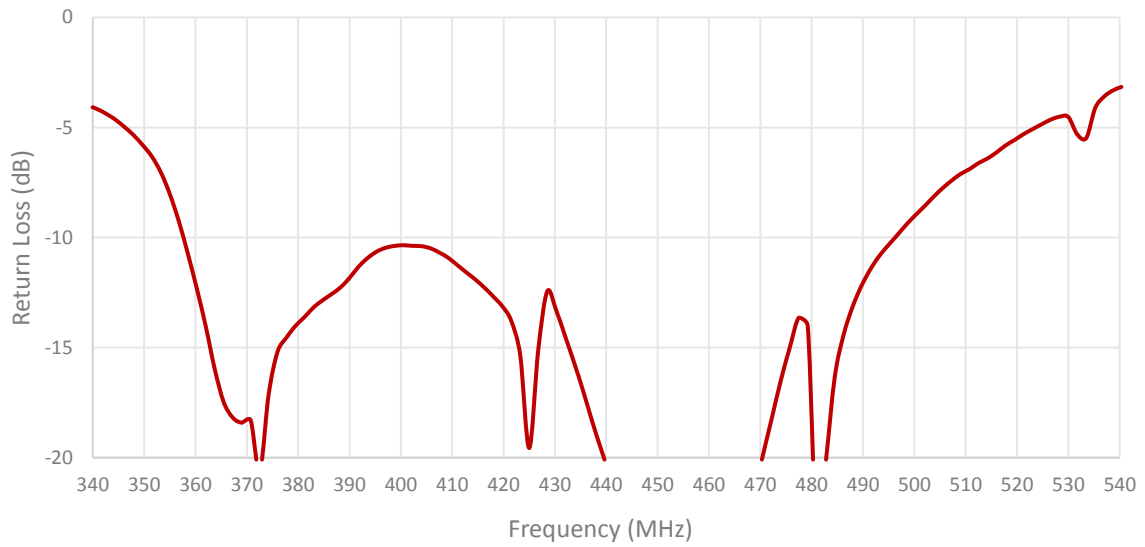
**Cable 2: 2.4/5.0 GHz ISM**

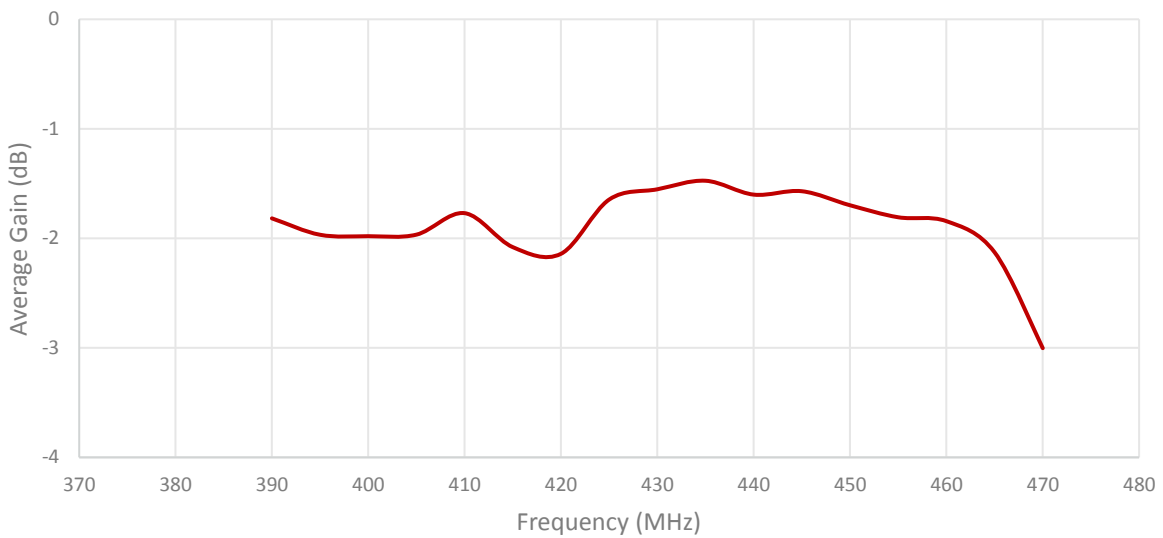
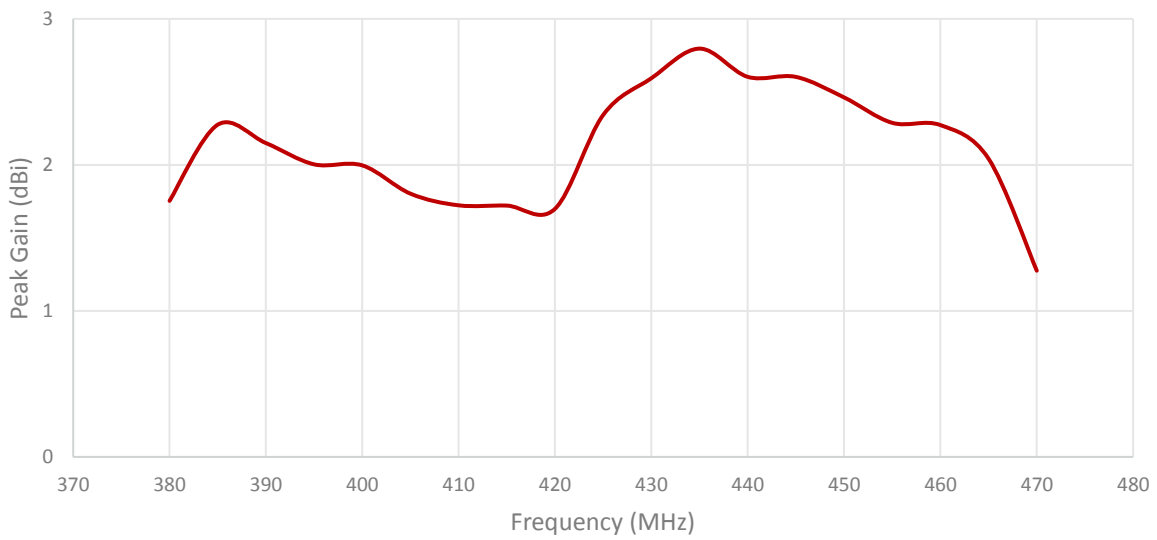
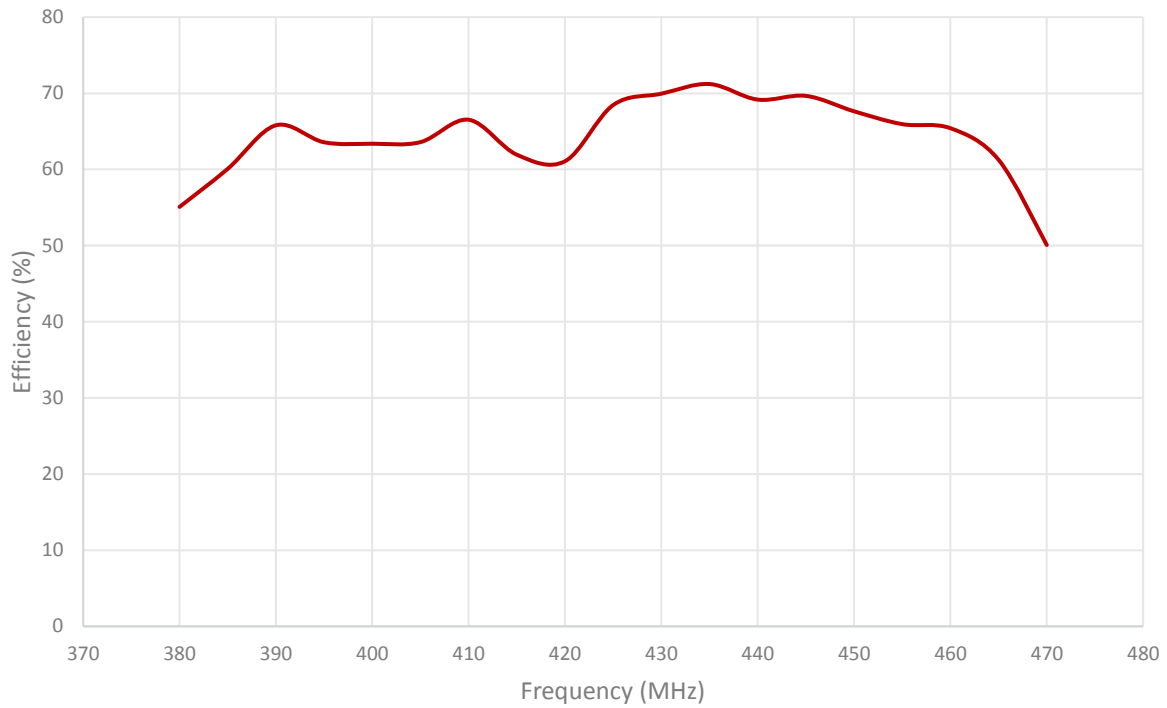






**Cable 3: TETRA**

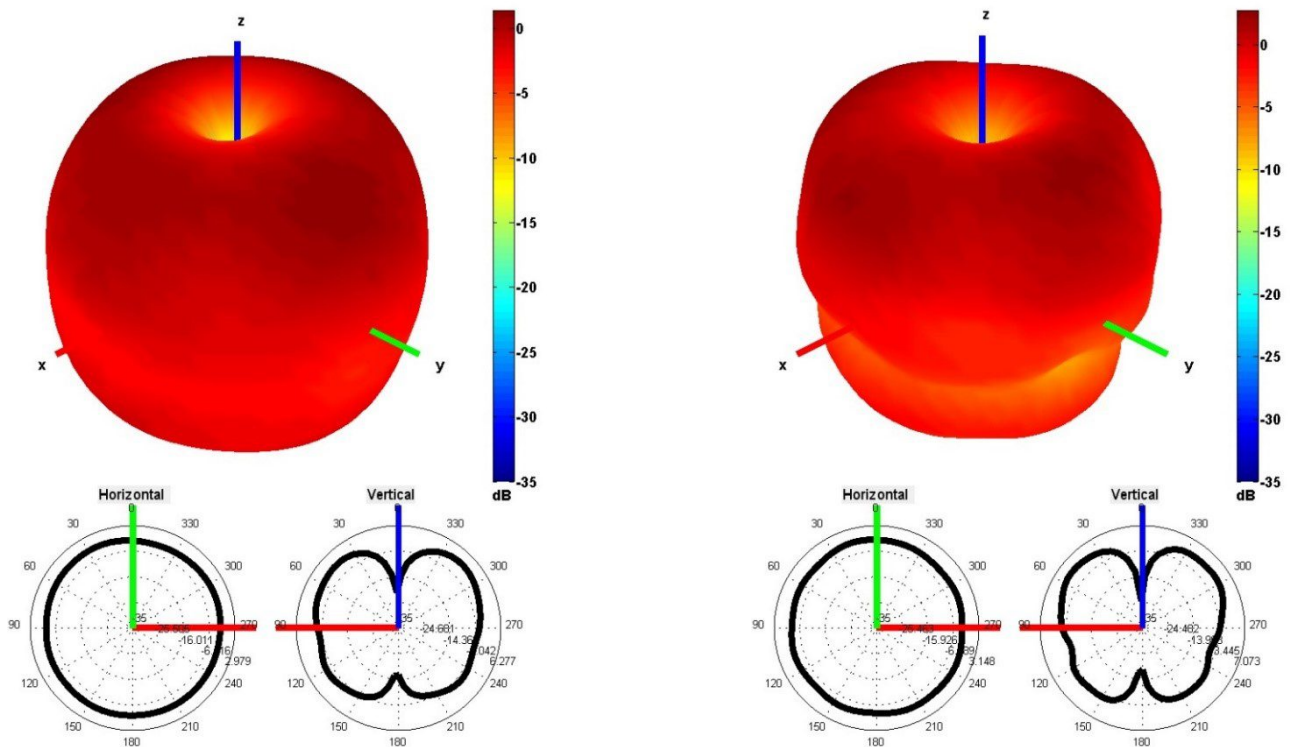




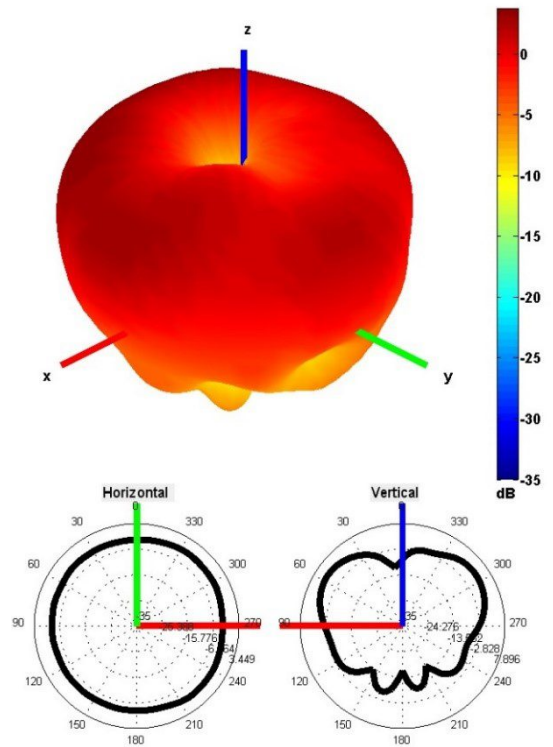
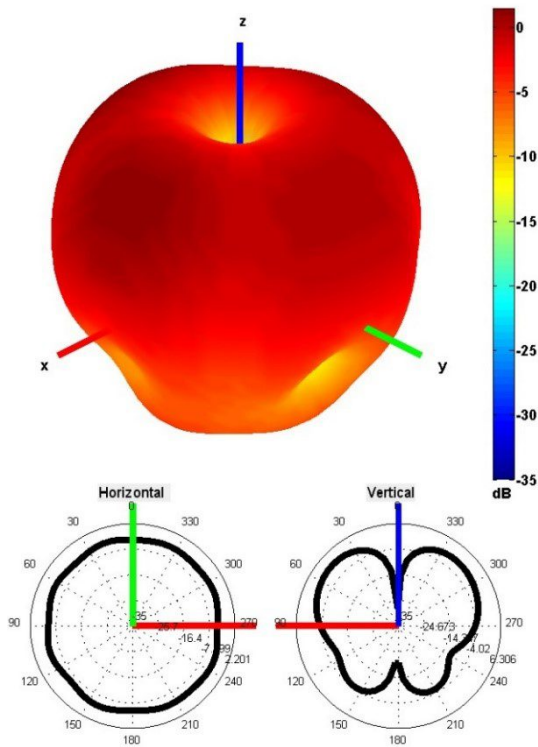


Radiation pattern reference

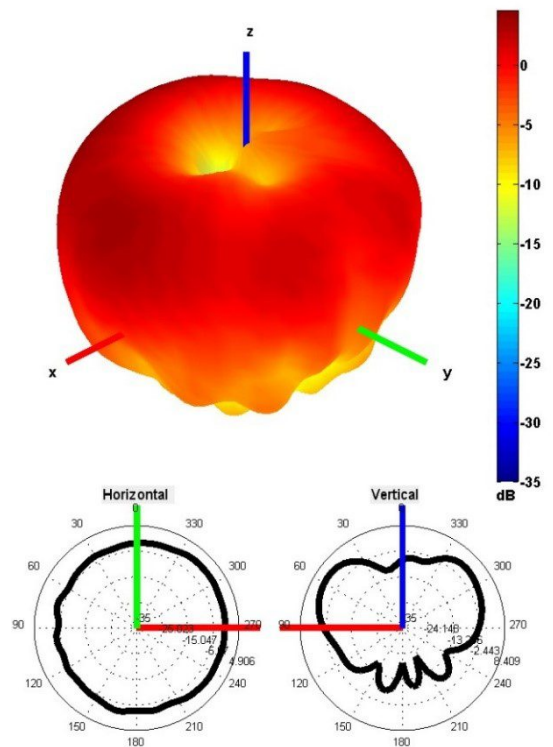
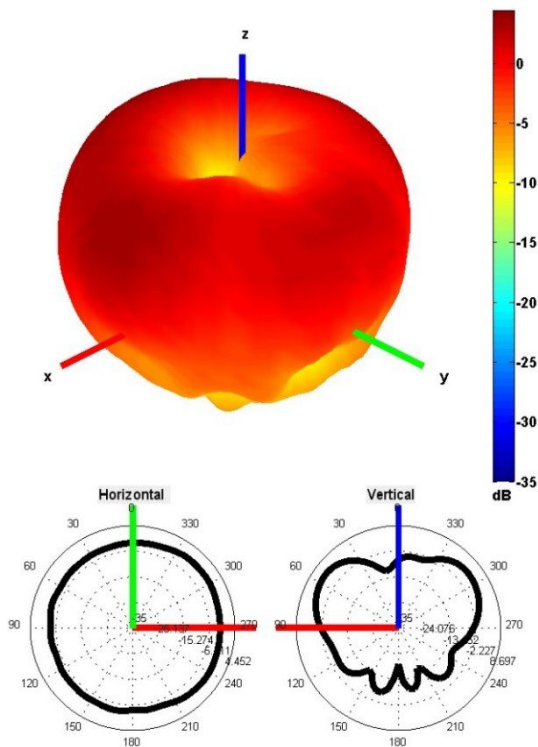
Cable 1: CELLULAR/LTE



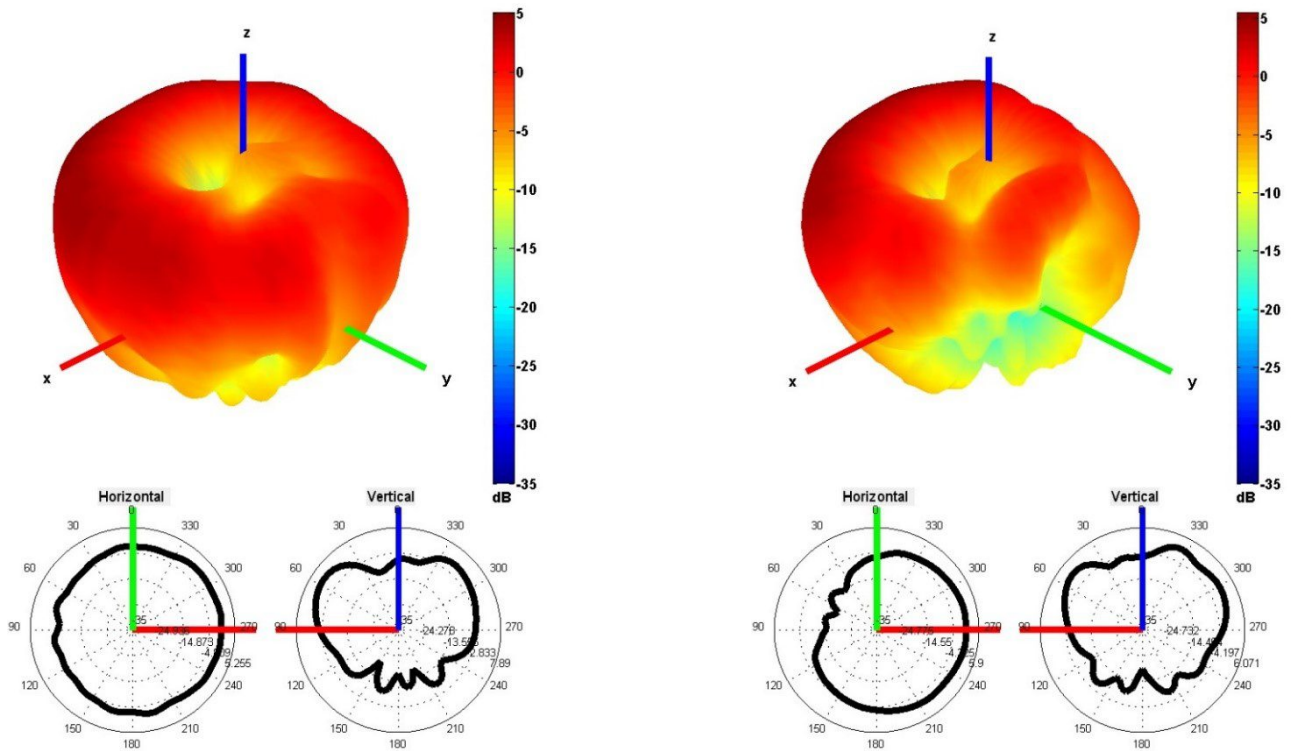
750 and 850 MHz Radiation pattern



940 and 1750 MHz Radiation pattern

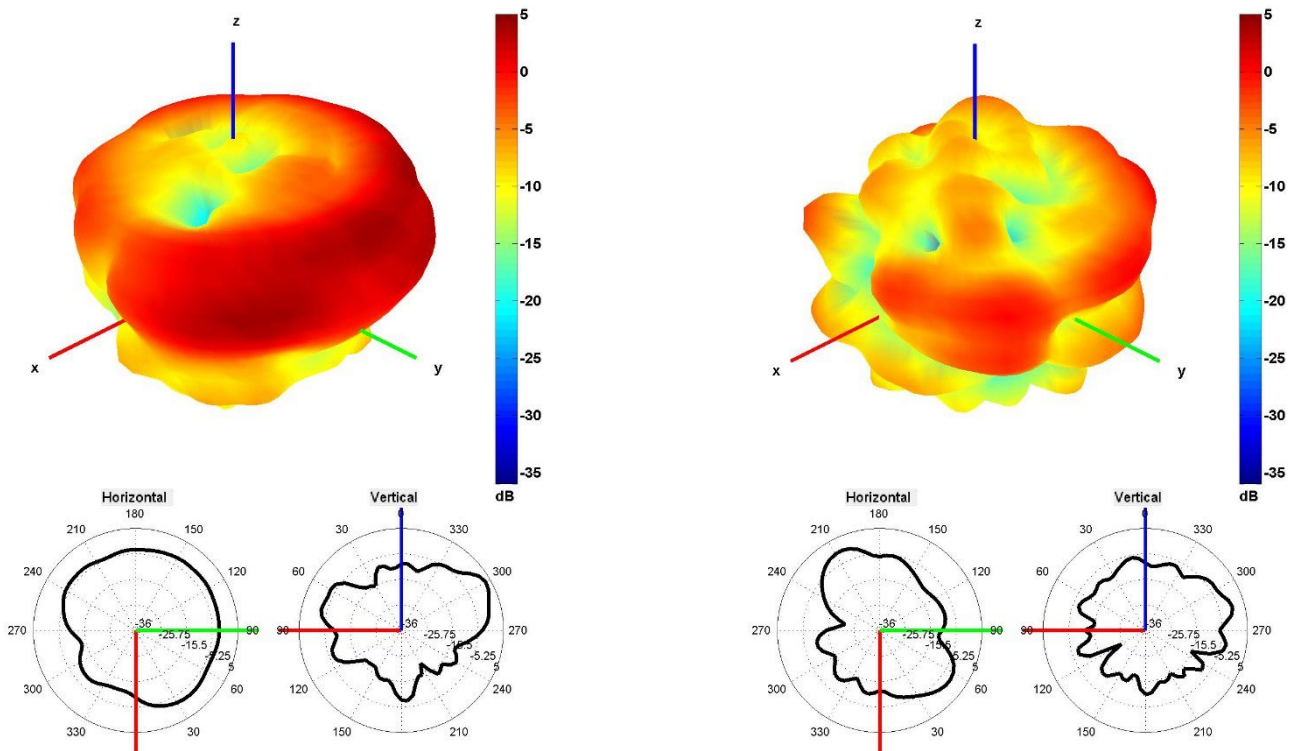


1850 and 1950 MHz Radiation pattern



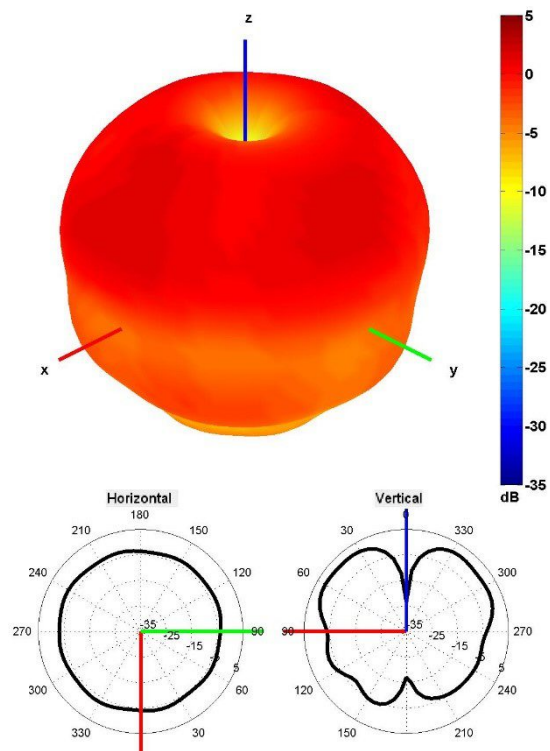
2100 and 2600 MHz Radiation pattern

Table 2: 2.4/5.0 GHz ISM



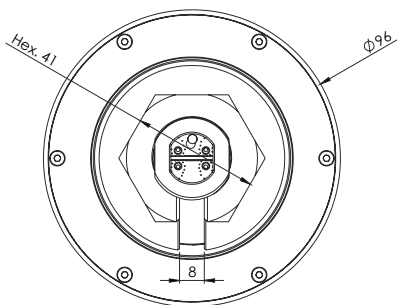
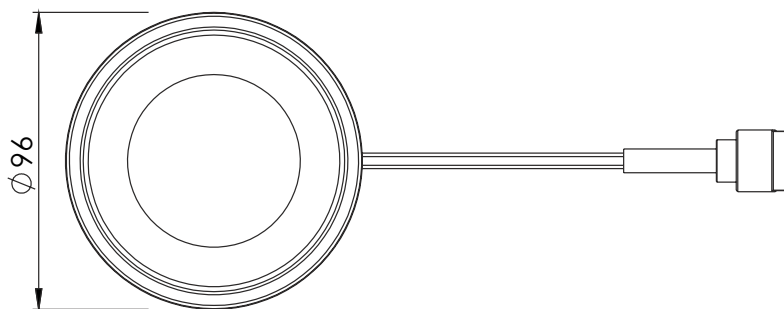
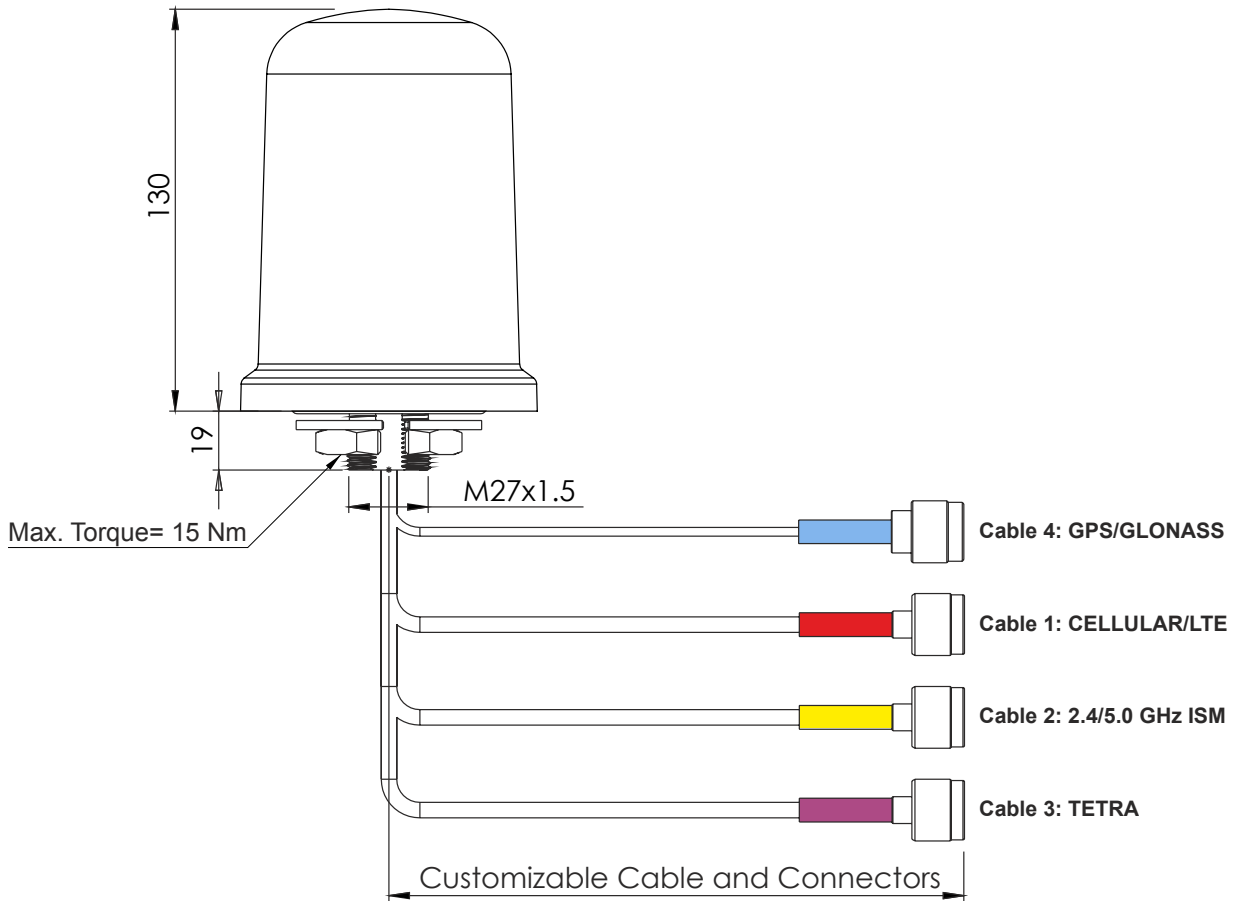
2450 and 5500 MHz Radiation pattern

Cable 3: TETRA

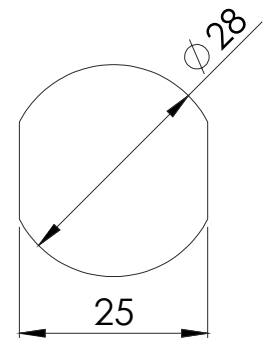


425 MHz Radiation pattern

## 4. Antenna drawings



Mounting hole



Note: Dimensions are in millimeters  
 \*Dimensions are after mounting  
 \*\*Max. Torque= 15 Nm

## 5. Antenna Images

