

2J7050MGFb

CELLULAR/LTE, 2.4/5.0 GHz ISM MIMO and GNSS
Magnetic Mount

Key Features

Cable 1: CELLULAR / LTE

Cable 2 and 3: 2.4/5.0 GHz ISM

Cable 4: GPS/GLONASS/QZSS/Galileo

Magnetic Mount

Heavy Duty antenna

High Performance

Ground Plane Independent

Customizable Cable and Connector

Dimensions: Ø 96 × 102 mm

Certificates: IP67, IP69, IK09



1. Antenna and electrical specifications

Cable 1

Parameters	CELLULAR / LTE Antenna		
Standards	2G,3G and 4G		
Band (MHz)	700/850/900	1700/1800/1900/2100	2600
Frequency (MHz)	698-960	1710-2170	2500-2700
Return Loss (dB)	~-12.5	~-14.2	~-16.4
VSWR	~1.7:1	~1.7:1	~1.4:1
Efficiency (%)	~50.7	~52.7	~58.4
Peak Gain (dBi)	~-0.9	~4.4	~5.5
Average Gain (dB)	~-3.2	~-2.8	~-2.3
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	LL195 Standard (Other Cables Available)		

Cable 2

Parameters	2.4/5.0 GHz ISM Antenna	
Standards	WiFi, BT, ZigBee, ISM	
Band (MHz)	2.4 GHz	5.0 GHz
Frequency (MHz)	2410-2490	4920-5925
Return Loss (dB)	~-10.3	~-15.5
VSWR	~1.9:1	~1.5:1
Efficiency (%)	~40.1	~45.2
Peak Gain (dBi)	~-3.6	~5.4
Average Gain (dB)	~-4.0	~-3.5
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	LL195 Standard (Other Cables Available)	

Antenna Measurement Conditions:

Mounted on Metal Plate of 30 × 30 cm

200 cm of LL195 Cable

Measured in Certified CTIA 3D Anechoic Chamber

Cable 3

Parameters	2.4/5.0 GHz ISM Antenna	
Standards	WiFi, BT, ZigBee, ISM	
Band (MHz)	2.4 GHz	5.0 GHz
Frequency (MHz)	2410-2490	4920-5925
Return Loss (dB)	~-11.7	~-17.4
VSWR	~1.8:1	~1.4:1
Efficiency (%)	~45.4	~45.7
Peak Gain (dBi)	~4.3	~5.2
Average Gain (dB)	~-3.4	~-3.6
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	LL195 Standard (Other Cables Available)	

Cable 4

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

Antenna Measurement Conditions:

Mounted on Metal Plate of 30 × 30 cm

200 cm of LL195 Cable

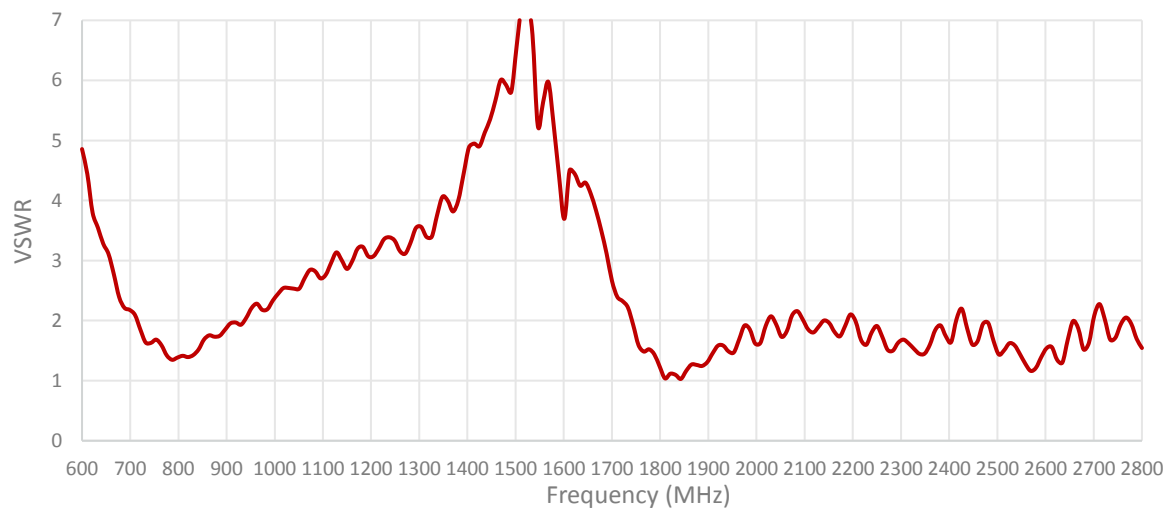
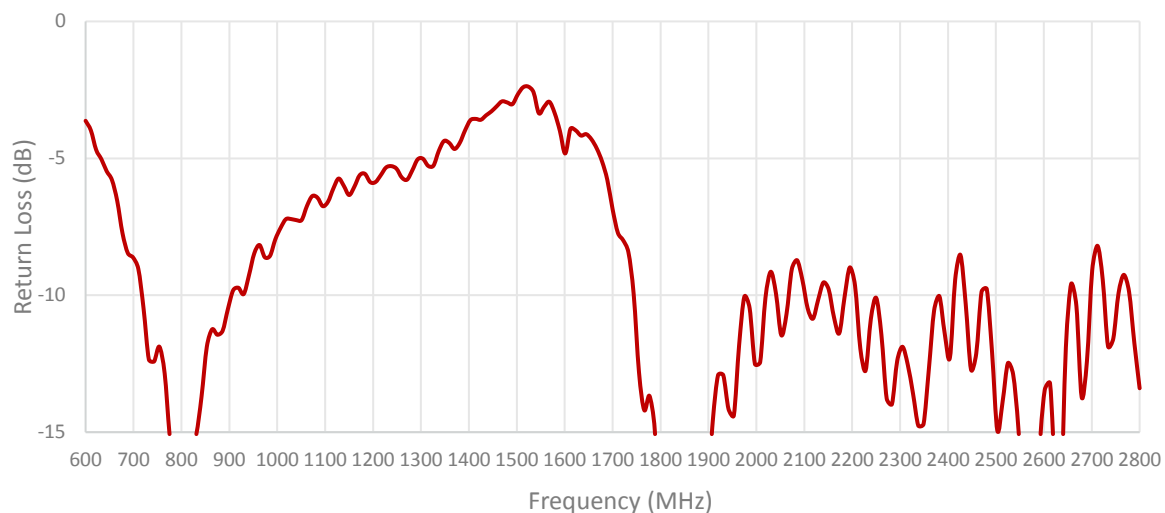
Measured in Certified CTIA 3D Anechoic Chamber

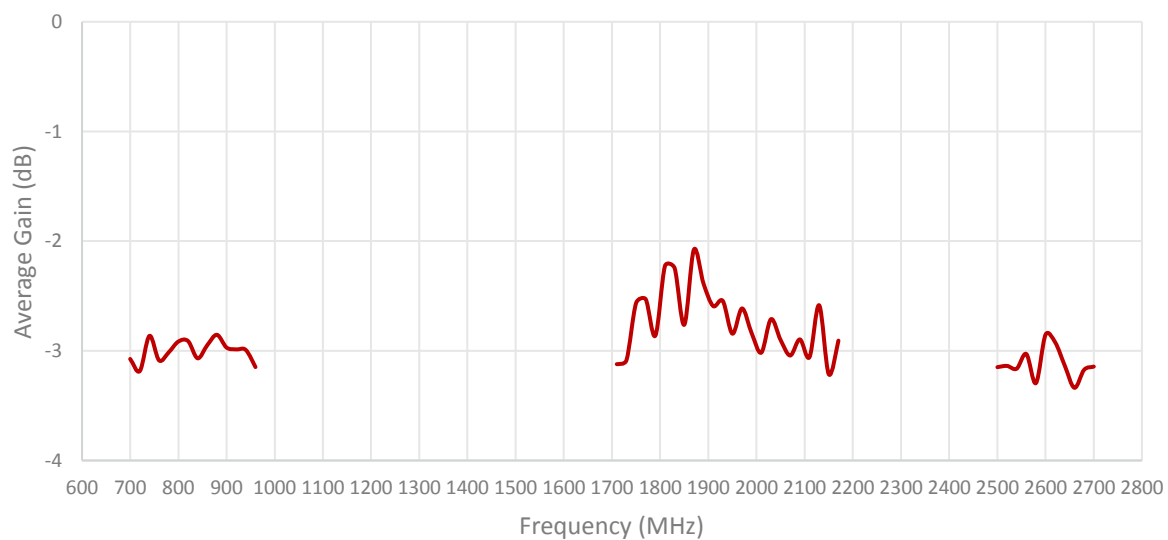
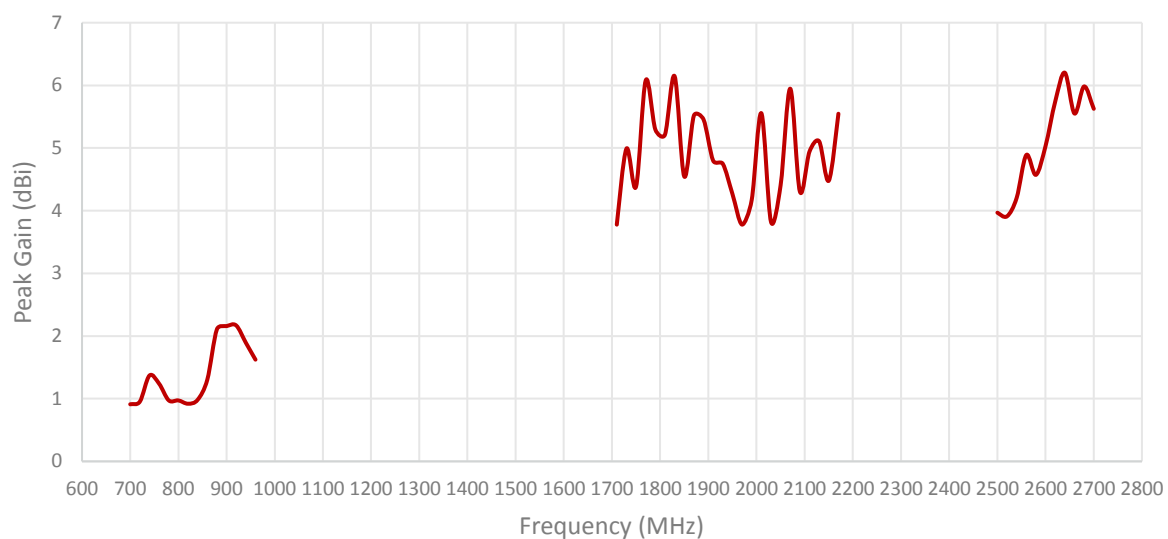
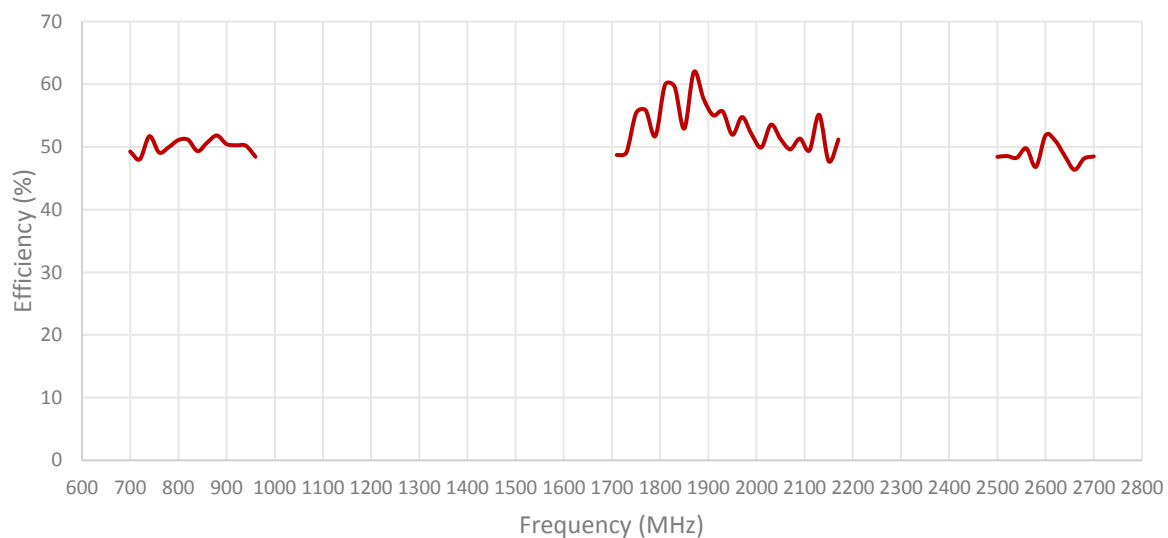
2. Mechanical and environmental specifications

Specifications	2J7050MGFb
Mounting Type	Magnetic Mount
Dimensions (mm)	Ø 96 × 102
Radome	ASA
Radome color	White, Black
Antenna Base	Alluminium alloy
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Substance Compliance	RoHS
Certificates	IP67, IP69, IK09

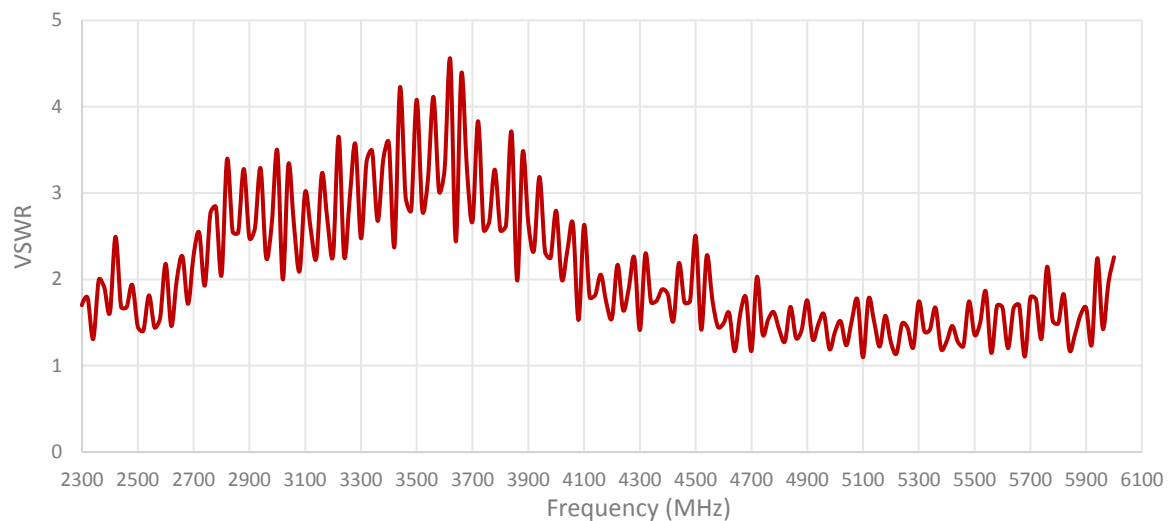
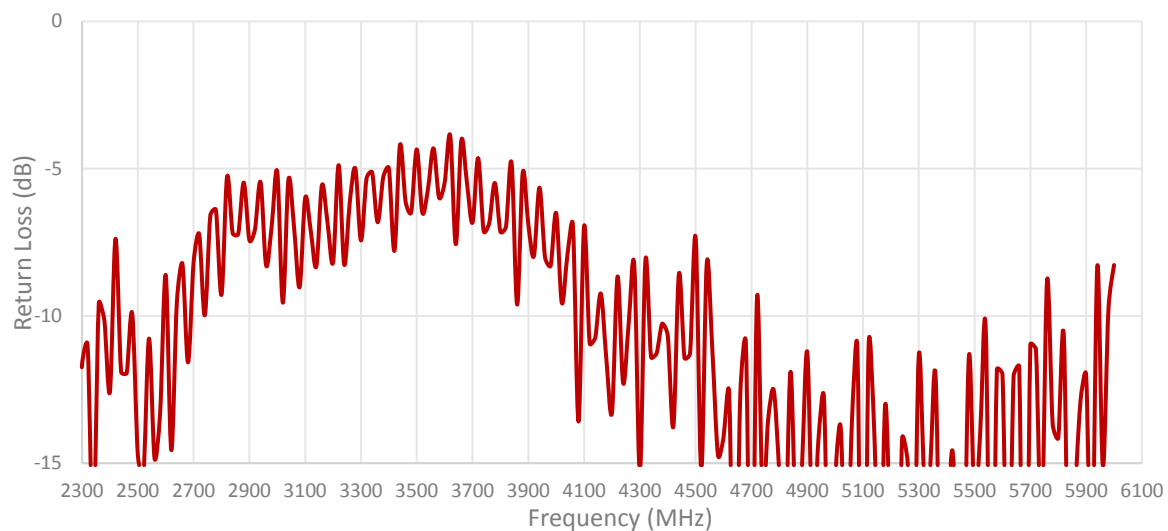
3. Antenna parameters

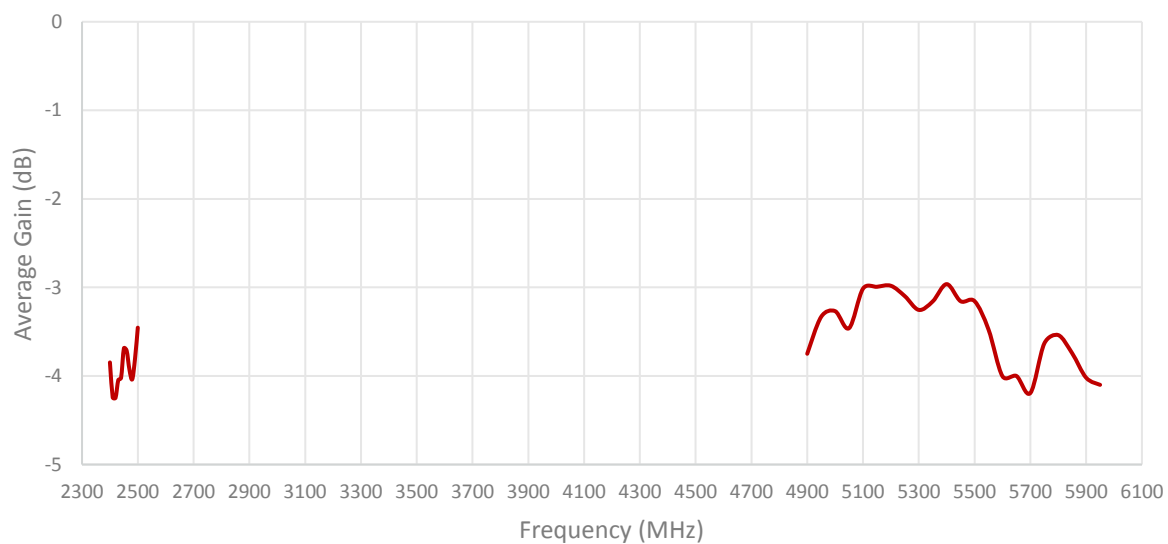
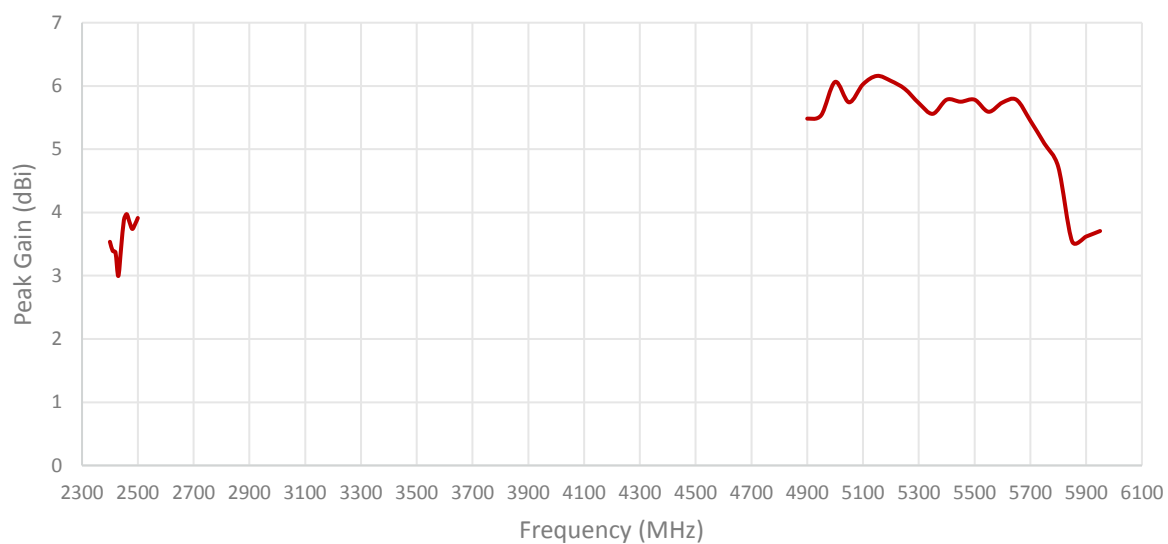
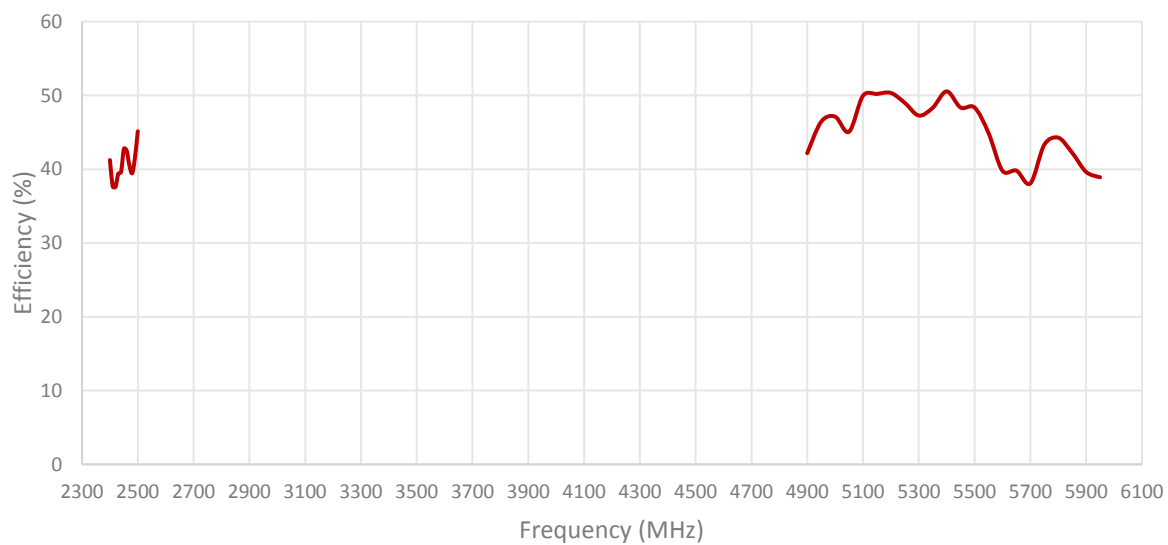
Table 1: CELLULAR/LTE



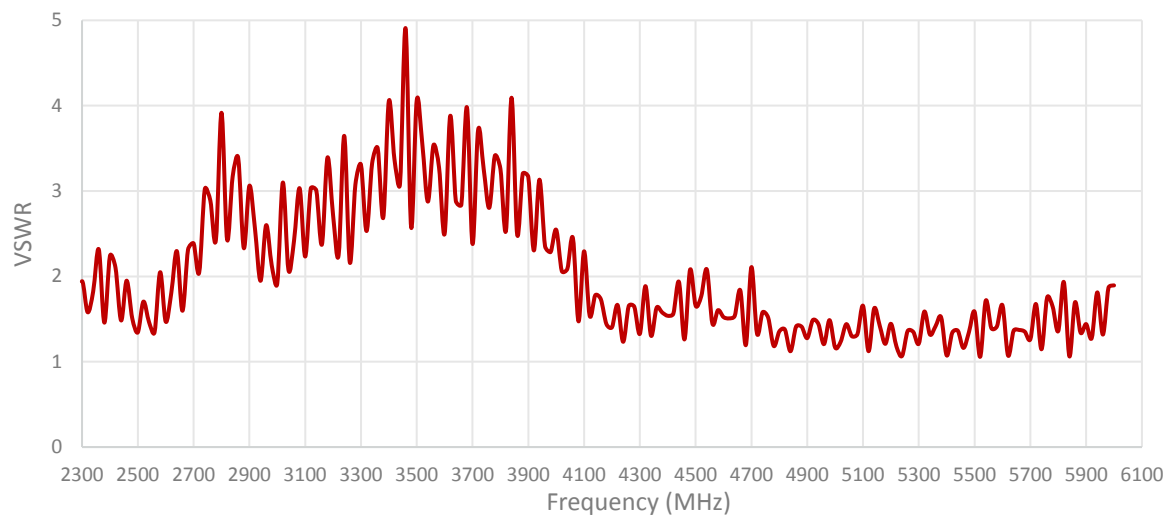
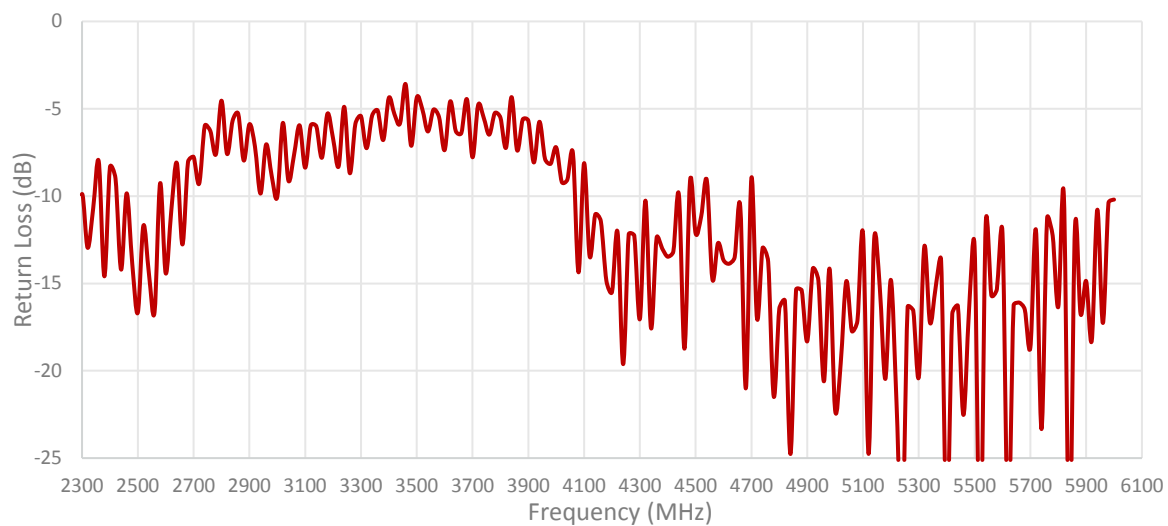


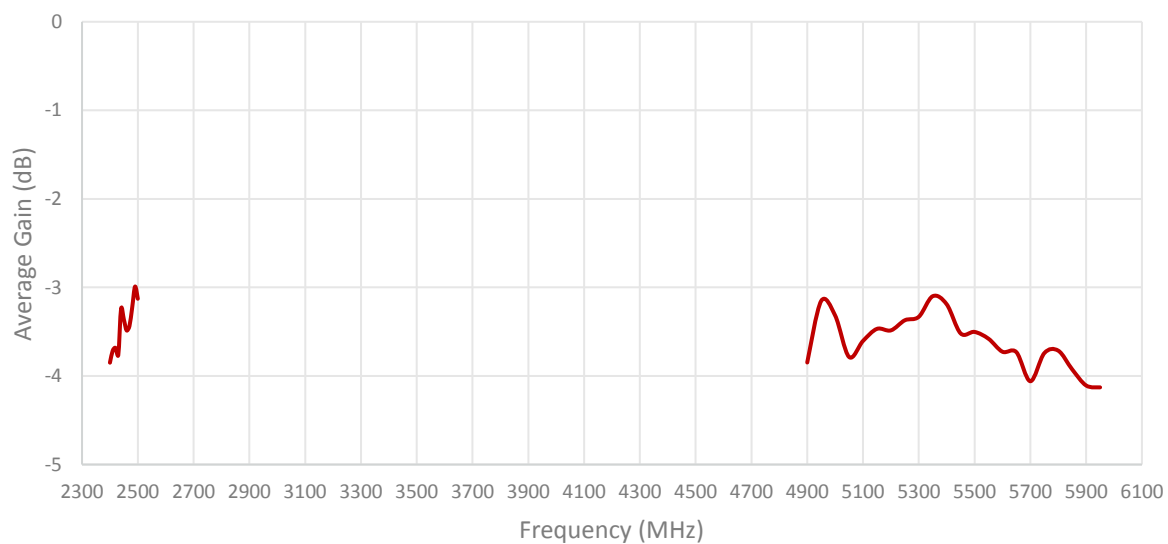
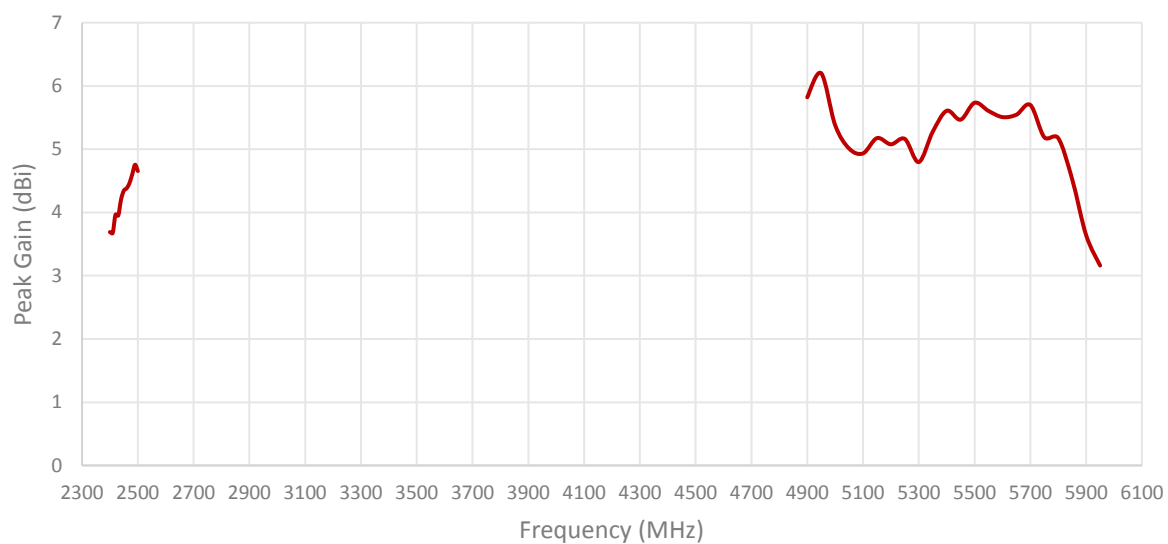
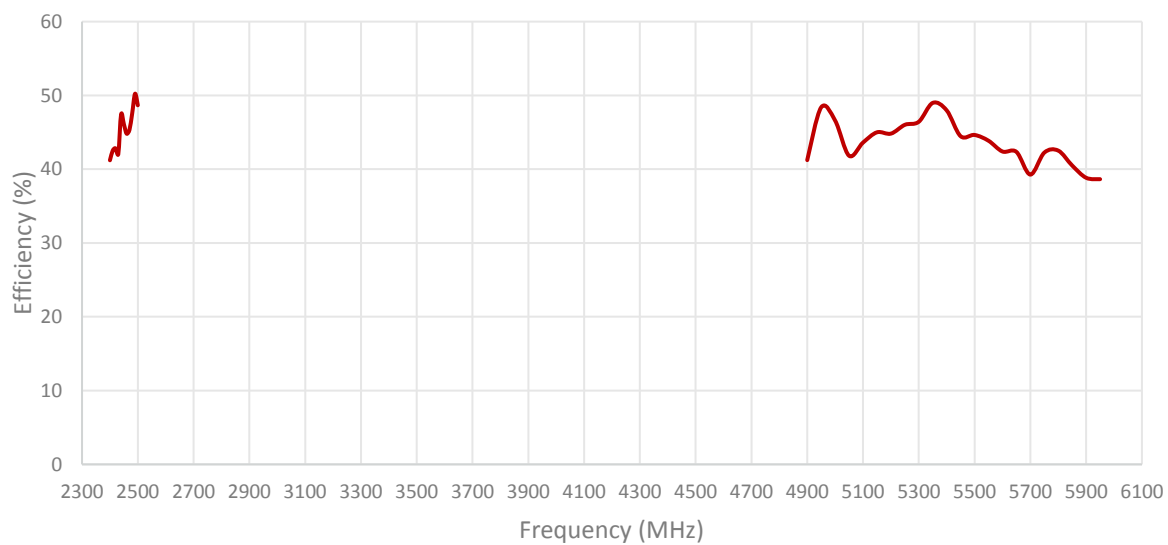
Cable 2: 2.4/5.0 GHz ISM



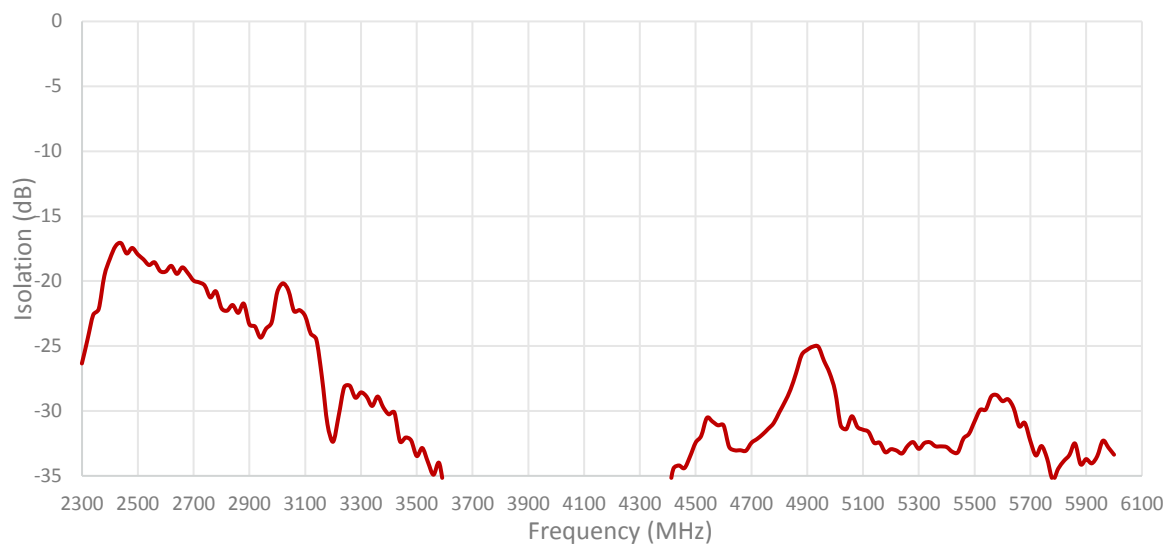


Cable 3: 2.4/5.0 GHz ISM

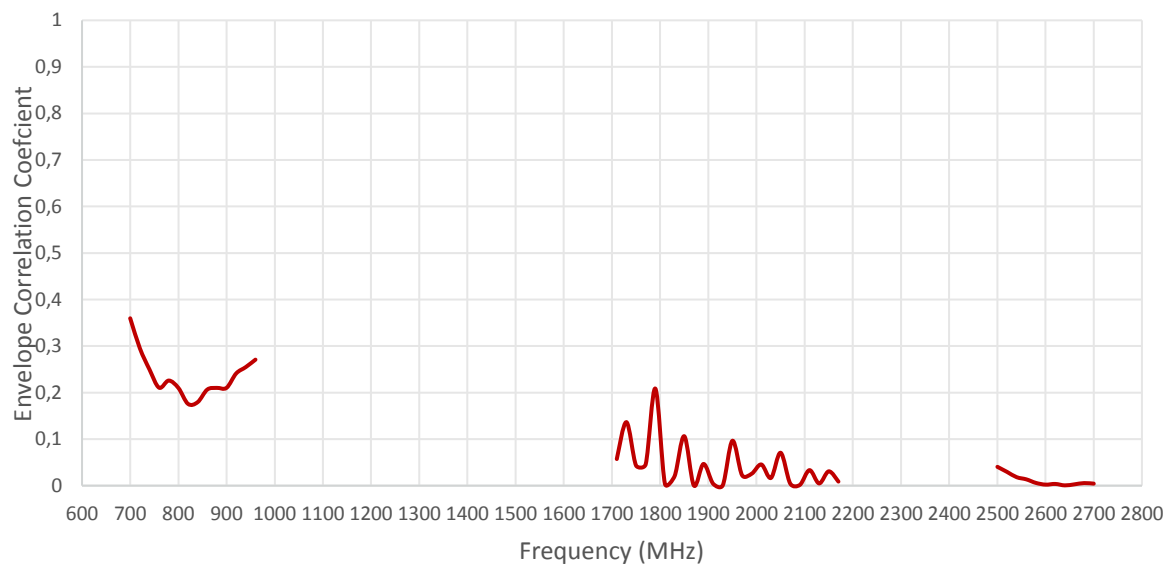


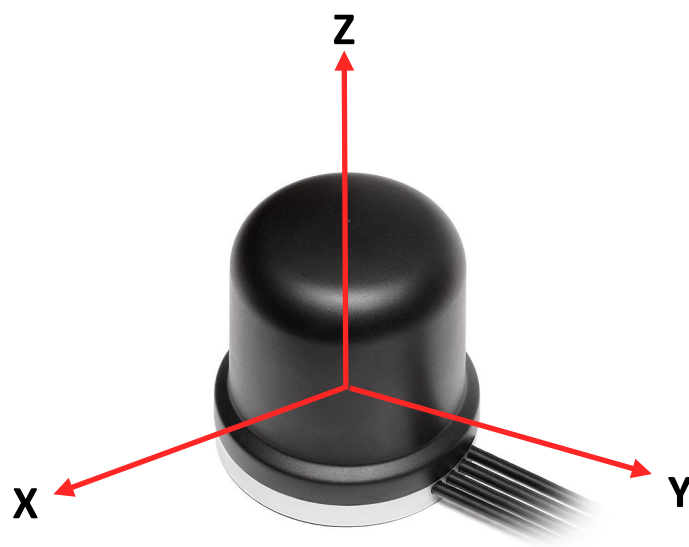


ISOLATION FOR CABLES 2 AND 3



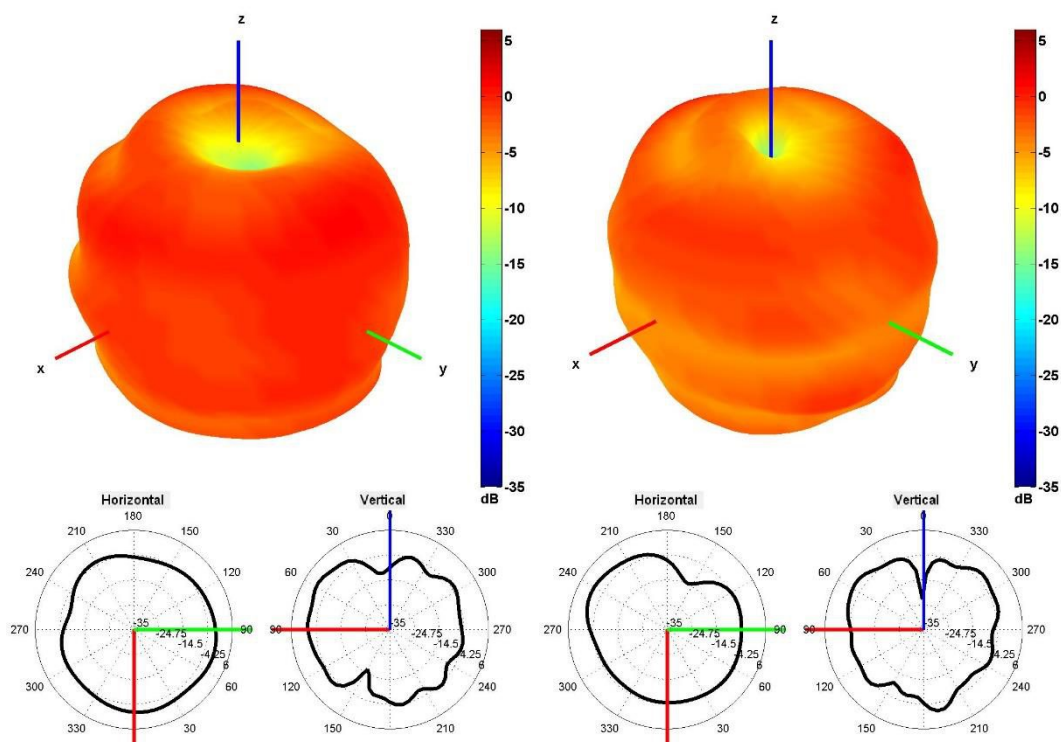
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 2 AND 3



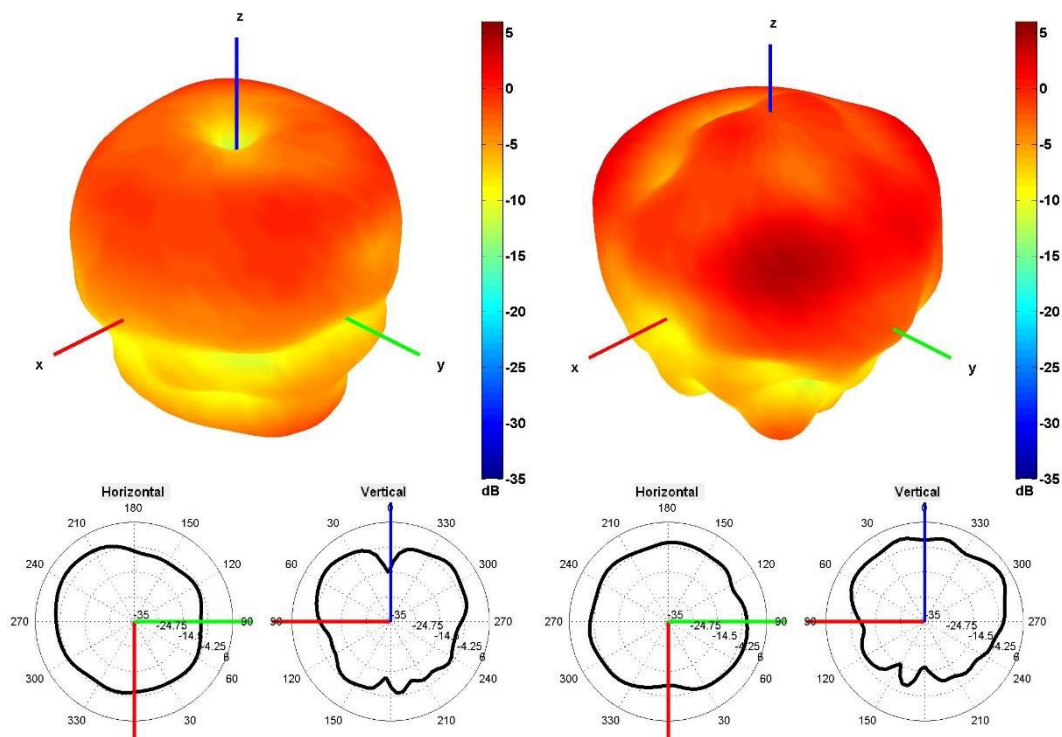


Radiation pattern reference

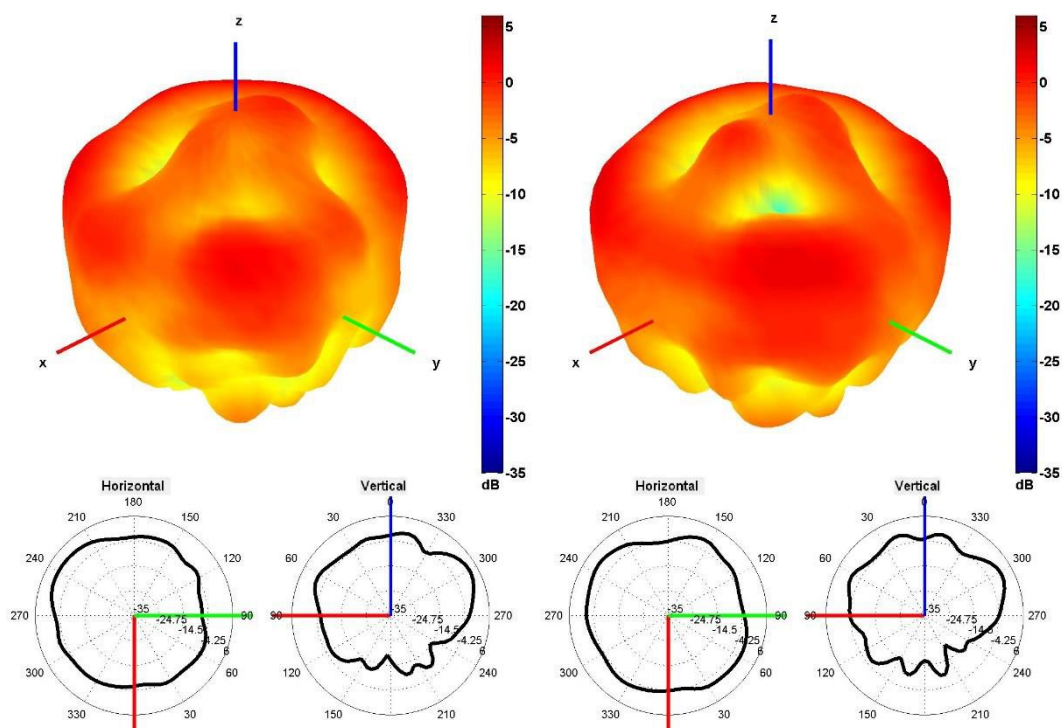
Cable 1: CELLULAR/LTE



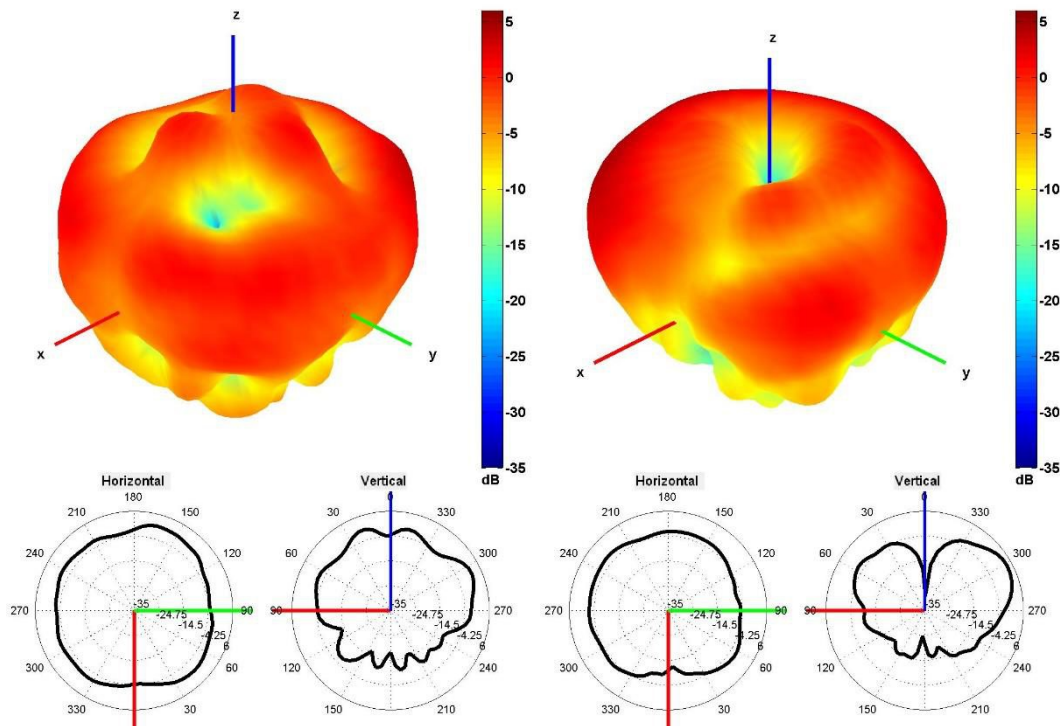
750 and 850 MHz Radiation pattern



940 and 1750 MHz Radiation pattern

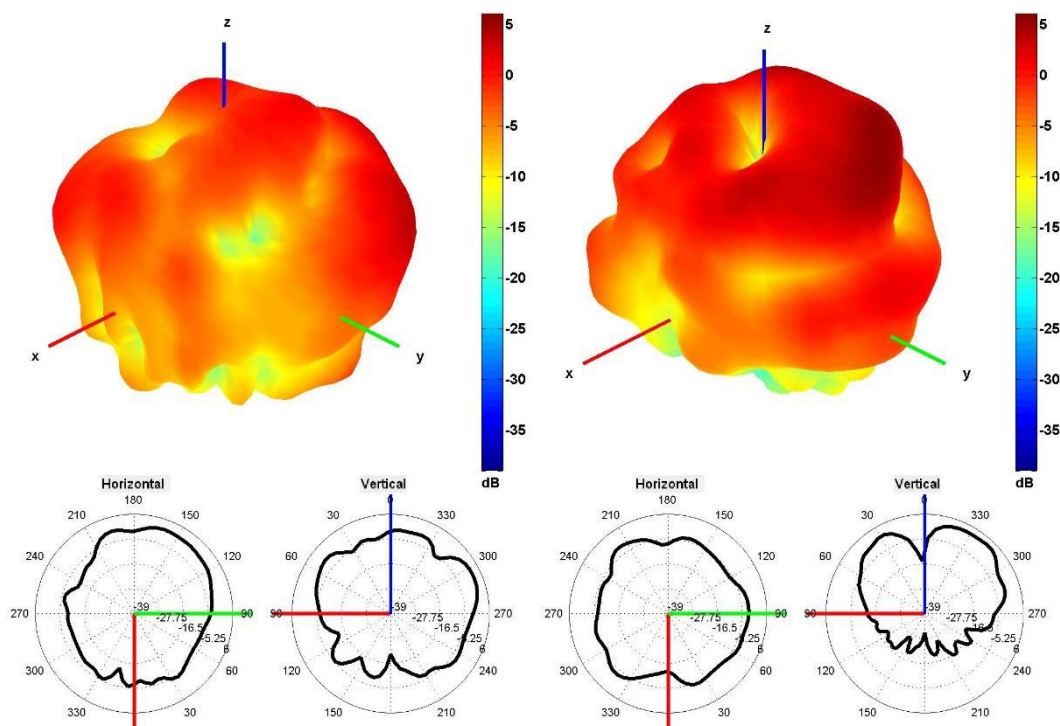


1850 and 1950 MHz Radiation pattern



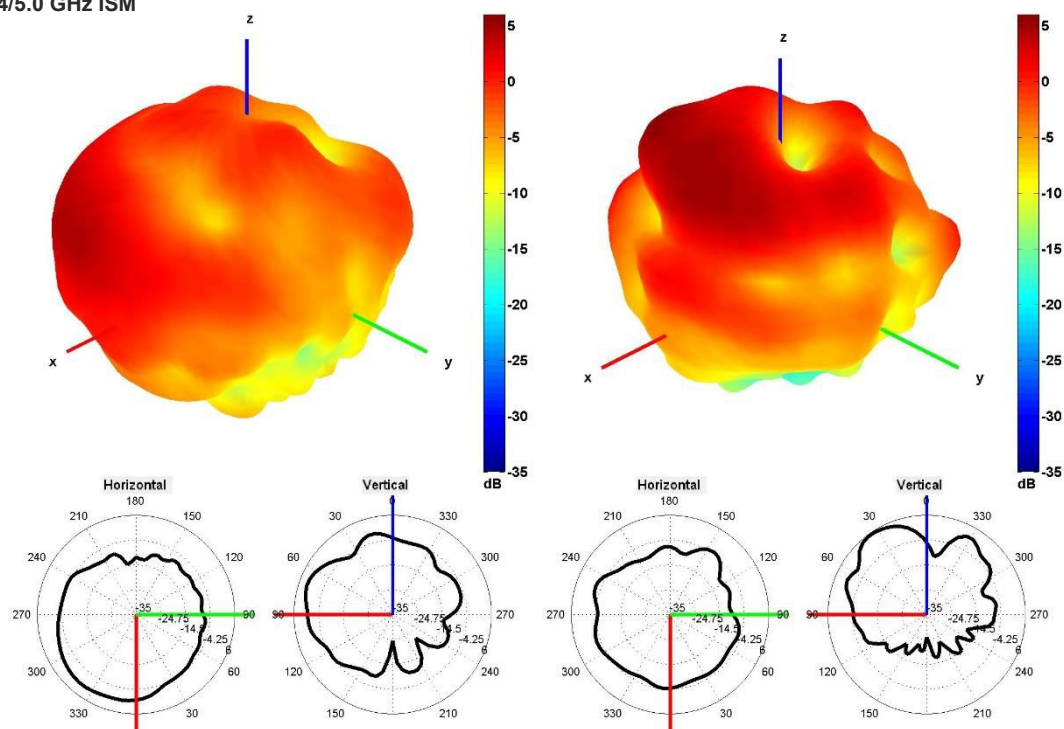
2100 and 2600 MHz Radiation pattern

Cable 2: 2.4/5.0 GHz ISM



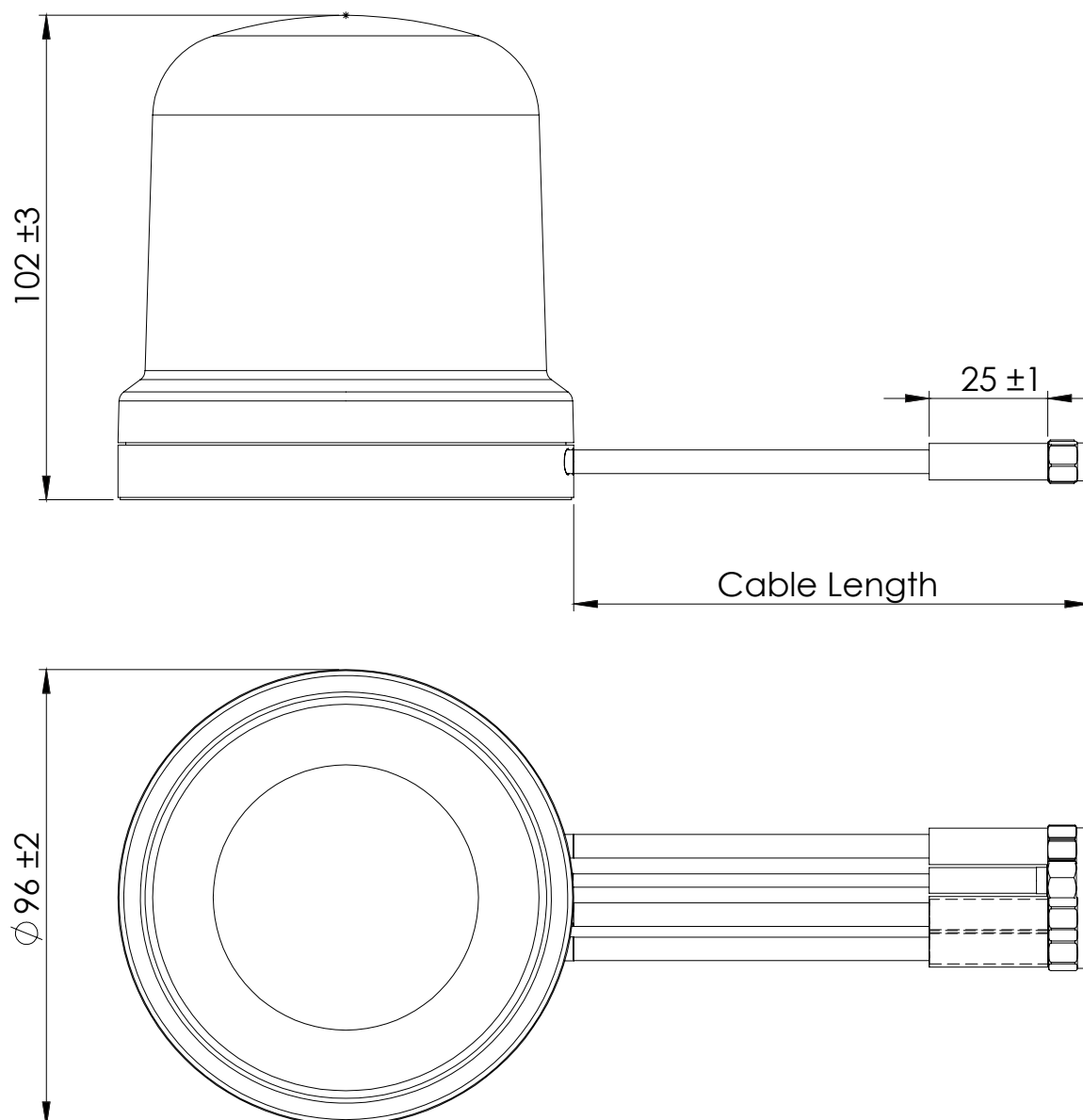
2450 and 5500 MHz Radiation pattern

Cable 3: 2.4/5.0 GHz ISM



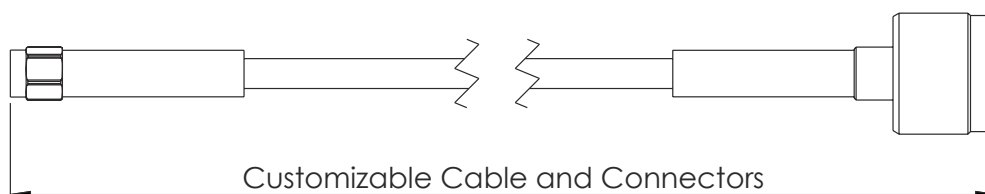
2450 and 5500 MHz Radiation pattern

4. Antenna drawings



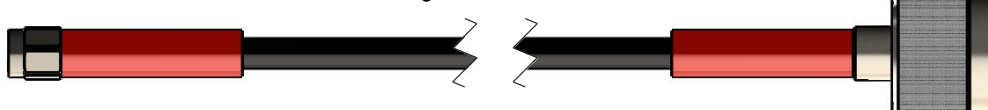
Note: Dimensions are in millimeters

5. Jumper cables drawings - Optional



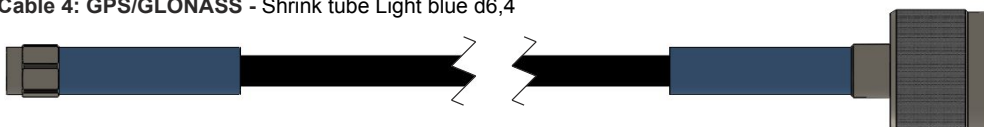
C318N-LMR195-C91N OST - 1×

Cable 1: CELLULAR/LTE - Shrink tube Orange d6,4



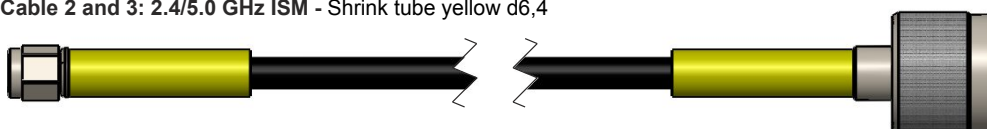
C318N-LMR195-C91N BST

Cable 4: GPS/GLONASS - Shrink tube Light blue d6,4



C318N-LMR195-C151N GST - 2×

Cable 2 and 3: 2.4/5.0 GHz ISM - Shrink tube yellow d6,4



6. Antenna Images

