

Product Datasheet

5GNR / GPS / WiFi Schraubantenne 3in1 SMA

5GNR, 2.4/5.0/6.0 GHz ISM and GNSS Screw Mount

Key Features

Cable 1: 5GNR

- 617-960 MHz
- 1427-2690 MHz
- 3300-5000 MHz
- 5150-5925 MHz

Cable 2: 2.4/5.0/6.0 GHz ISM

- 2410-2490 MHz
- 4920-7125 MHz

Cable 3: GPS/GLONASS/QZSS/Galileo

- 1575-1606 MHz

Screw Mount

Anti-Rotation Mechanism

Ground Plane Dependent

Customizable Cable and Connector

Dimensions \varnothing 146 x 31.5 mm

Certificates: IK09, IP67, IP69K



1. Antenna and electrical specifications

Cable 1

Parameters	5G NR Antenna			
Technologies	5G, 4G, 3G and 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, 12, n20, n28, n71, n81, n82, n83,	n1, n2, n3, n7, n25, n34, n38, n39, 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, B43, 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)	~-7.4	~-9.7	~-11.2	~-14.2
VSWR	~3.3:1	~2.3:1	~2.1:1	~1.7:1
Efficiency (%)	~19.7	~17.5	~13.3	~15.9
Peak Gain (dBi)	~-1.7	~-1.7	~-1.3	~-0.6
Average Gain (dB)	~-8.5	~-8.6	~-9.4	~-8.2
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	LL100 Standard (Other Cables Available)			

Cable 2

Parameters	2.4/5.0/6.0 GHz ISM Antenna		
Standards	WiFi 6E, BT, ZigBee, ISM, SigFox, LoRa		
Band (MHz)	2.4 GHz	5.0 GHz	6.0 GHz
Frequency (MHz)	2410-2490	4920-5925	5925-7125
Return Loss (dB)	~-16.7	~-14.0	~-7.9
VSWR	~1.4:1	~1.6:1	~2.5:1
Efficiency (%)	~30.5	~13.8	~52.1
Peak Gain (dBi)	~1.2	~0.0	~5.2
Average Gain (dB)	~-5.2	~-8.9	~-3.0
Impedance (Ohm)	50		
Polarisation	Linear		
Radiation Pattern	Omni-Directional		
Max. Input Power (W)	10		
Connector Type	SMA-Male-RP 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 30 x 30 cm Metal Plate

100 cm of LL100 Cable

Measured in Certified CTIA 3D Anechoic Chamber

Cable 3

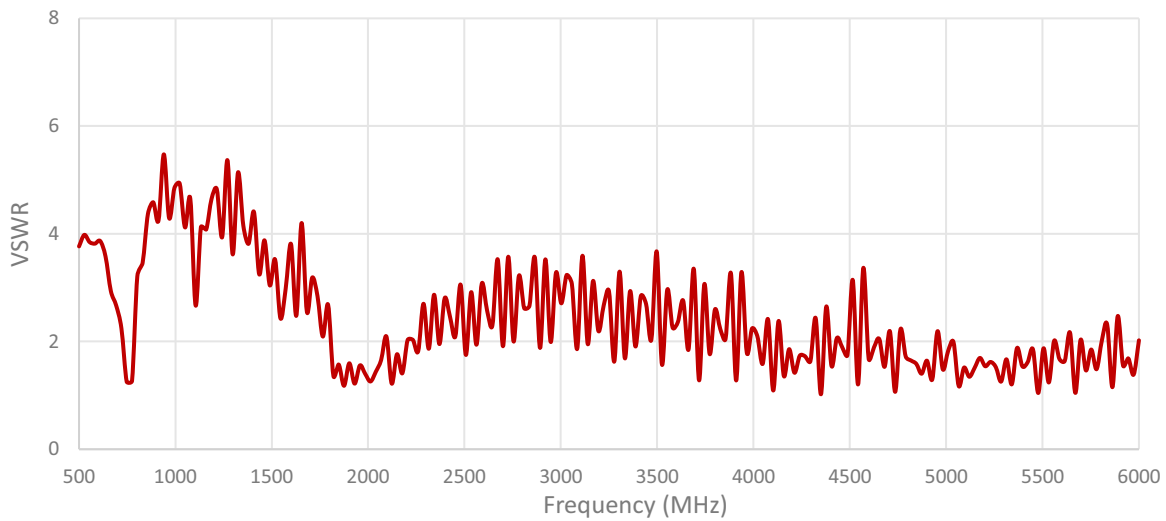
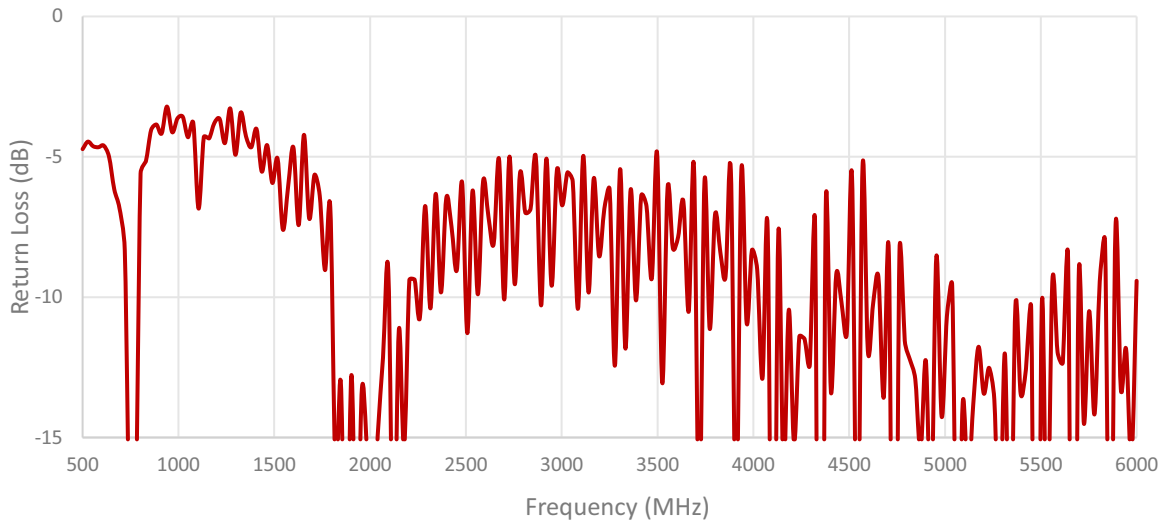
Parameters	GNSS Ceramic Active Antenna	
Standards	GPS/QZSS/Galileo	GLONASS
Band (MHz)	1575	1602
Frequency (Mhz)	1575.42	1598-1606
Patch Size (mm)	25 x 25 x 4	
Passive Gain (dBi)	~3.6	
Impedance (Ohms)	50	
Radiation Pattern	Hemispherical	
Voltage Range (V)	1.5 - 3.6	
Active Gain (dB)	28 @ 2.7 V	
Noise 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	
Connector Type	SMA-Male Standard (Other Connectors Available)	
Cable Length	300 cm Standard (Any Cable Length Available)	
Cable Type	LL100 Standard (Other Cables Available)	

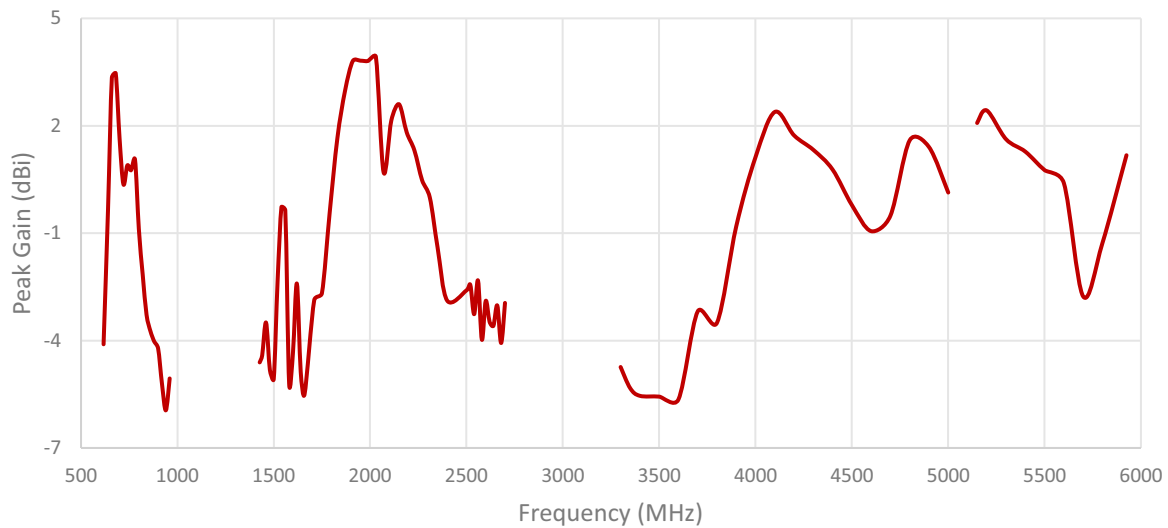
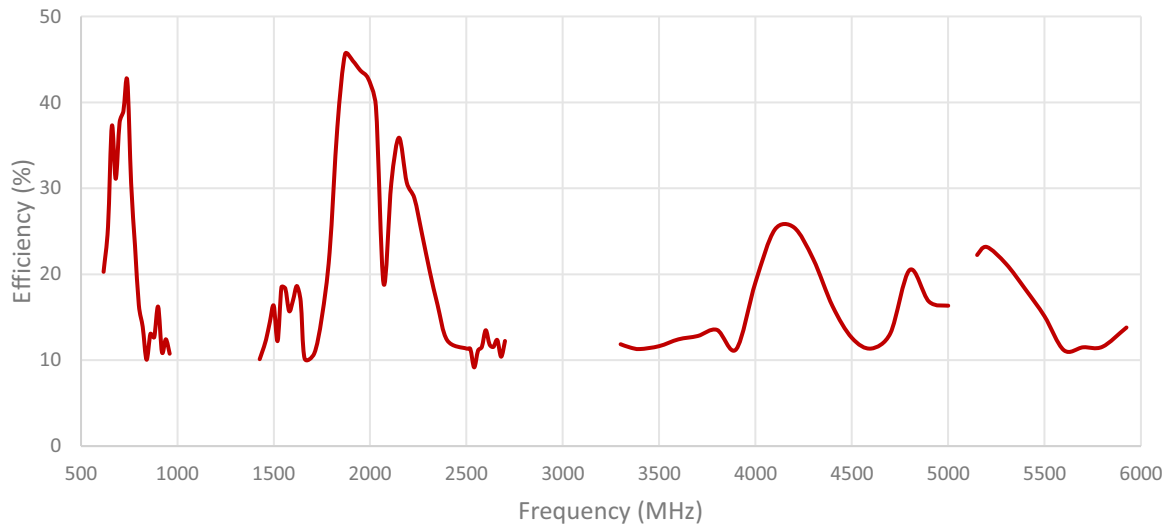
2. Mechanical and environmental specifications

Specifications	
Mounting Type	Screw Mount
Dimensions (mm)	Ø 146 x 31.5
Max. Tighten Torque (Nm)	6 Nm
Radome	ABS
Radome color	Black
Antenna Base	Zamak
Gasket	TPE
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Substance Compliance	RoHS
Certificates	IK09, IP67, IP69K

3. Antenna parameters

Cable 1: 5GNR





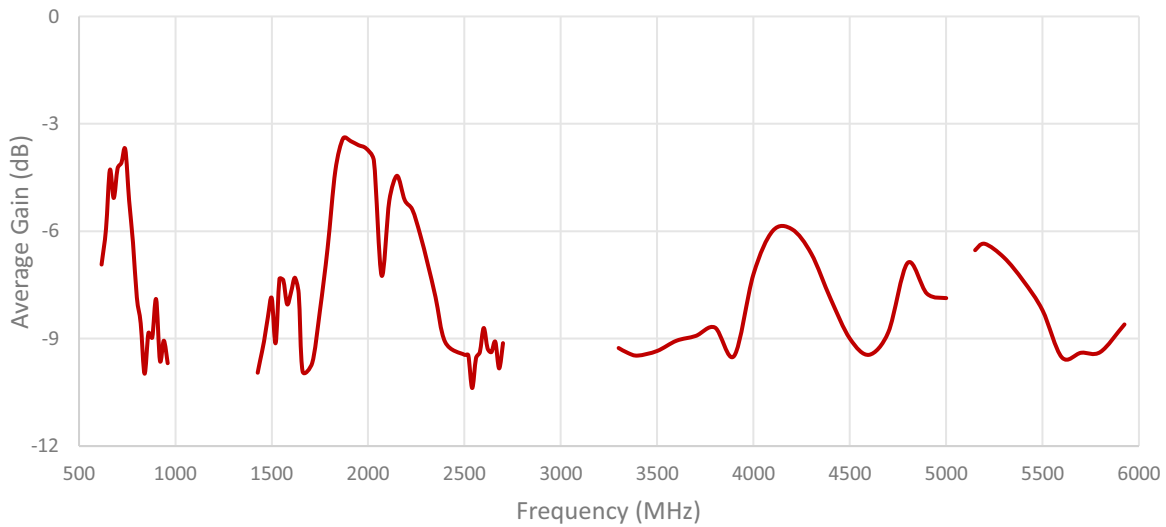
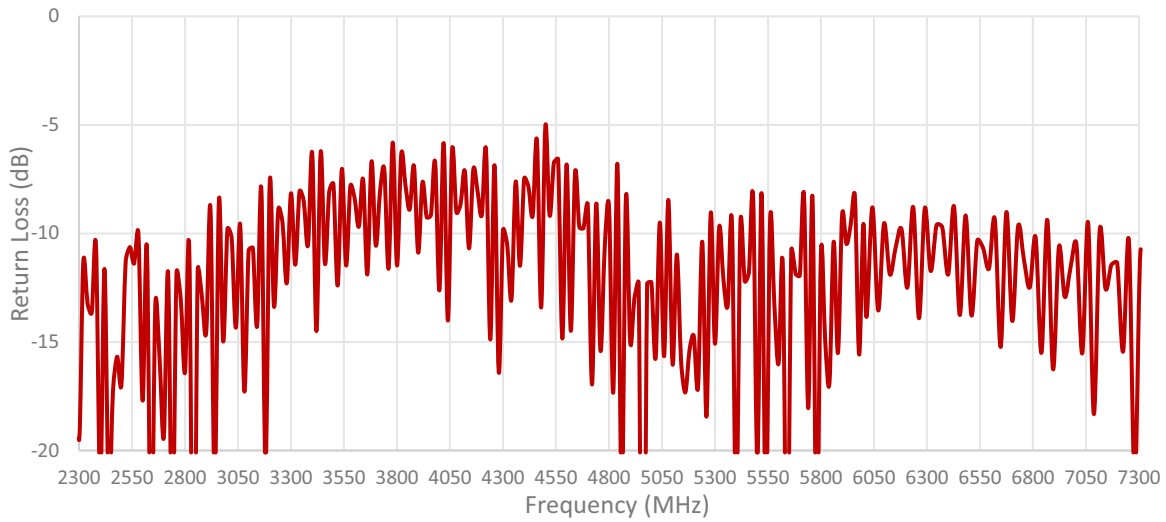
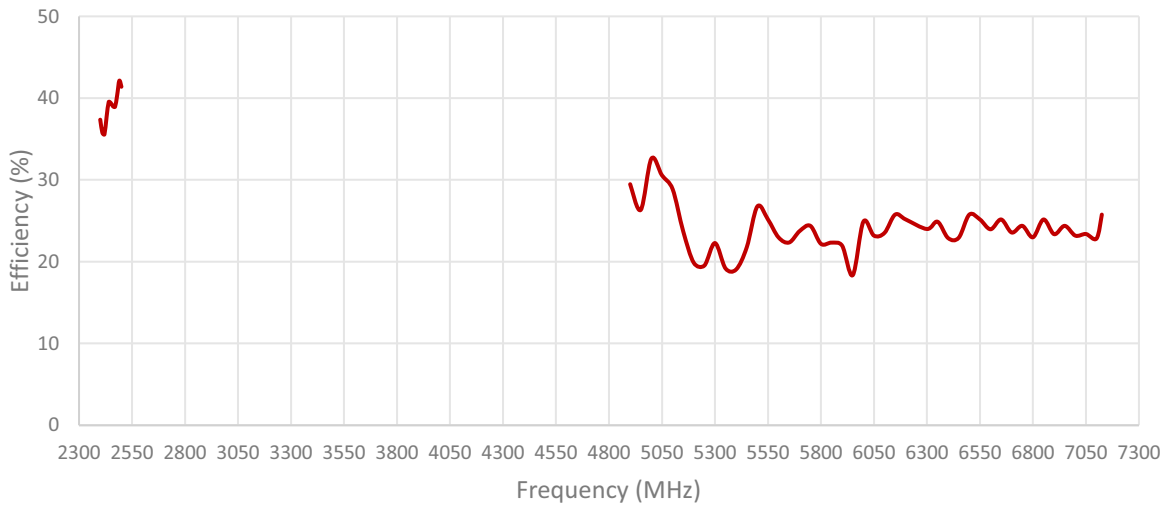
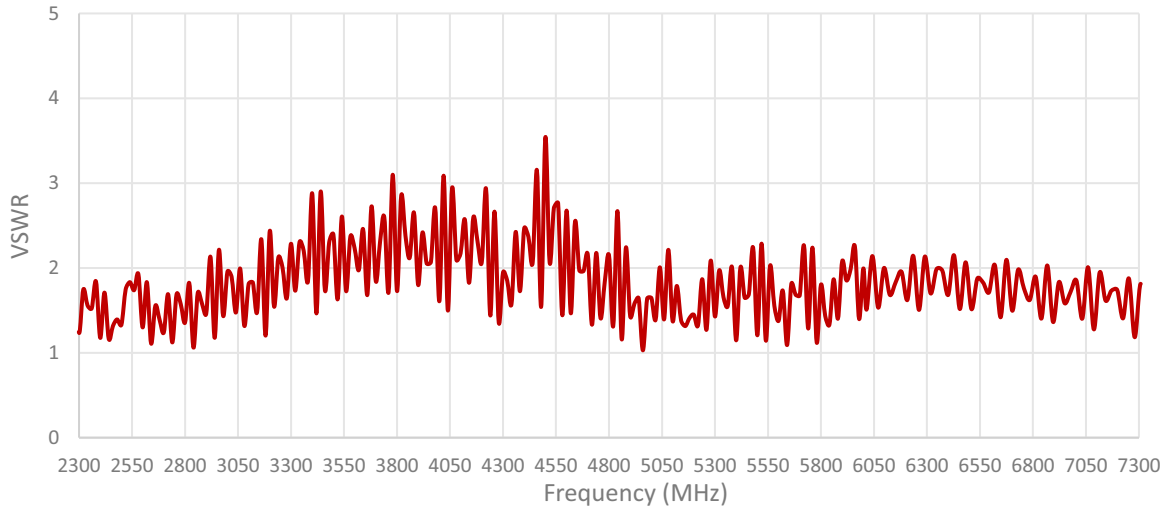
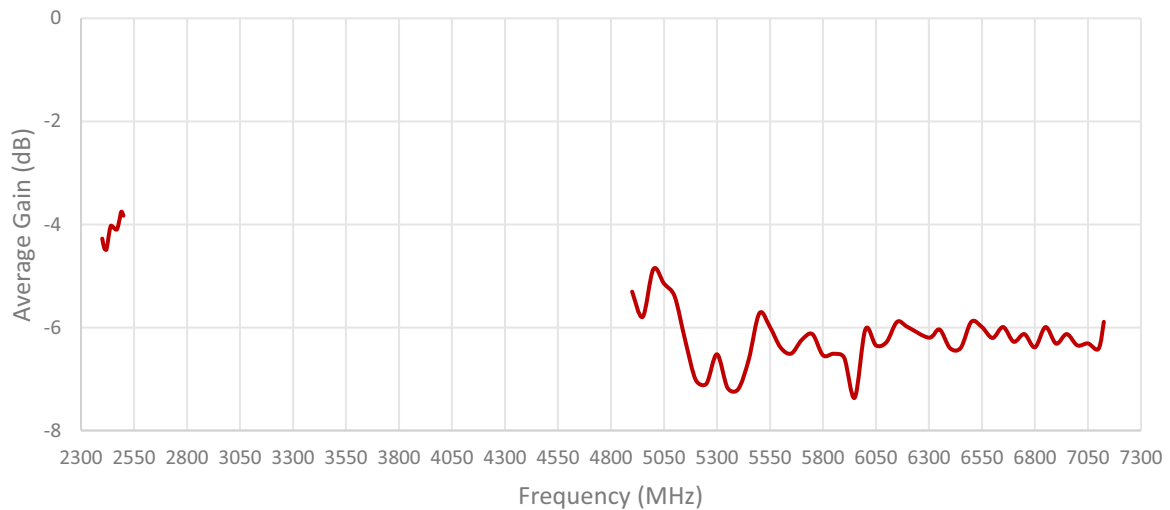
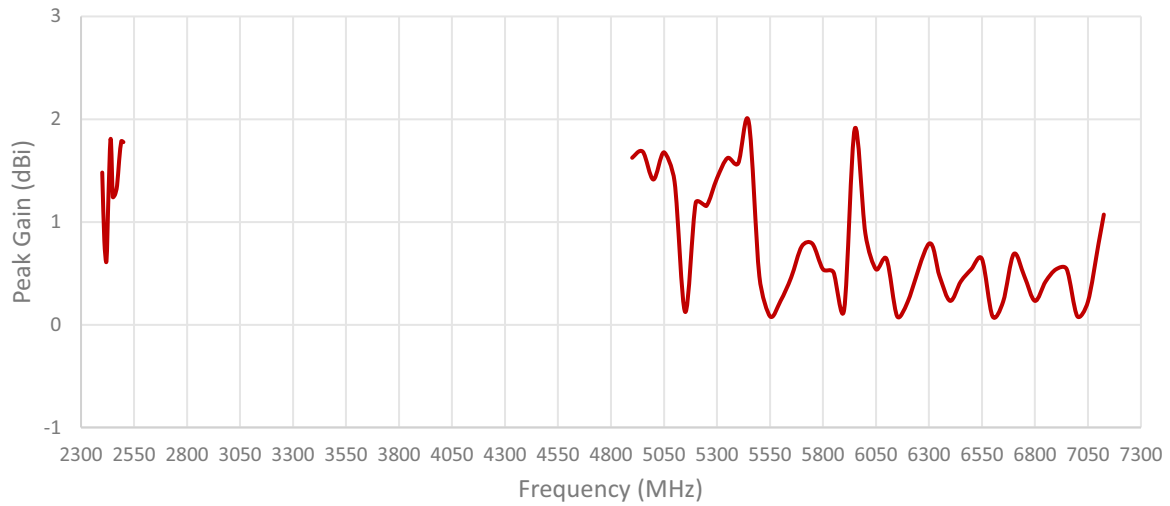
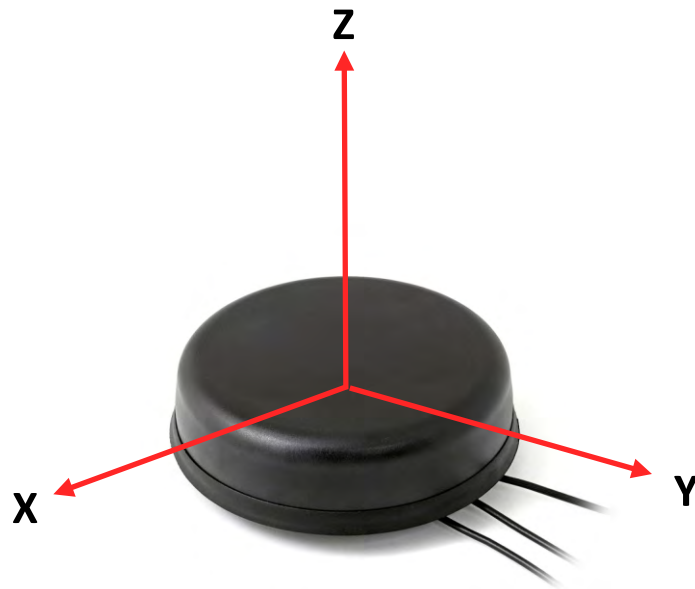


Table 2: 2.4/5.0/6.0 GHz ISM



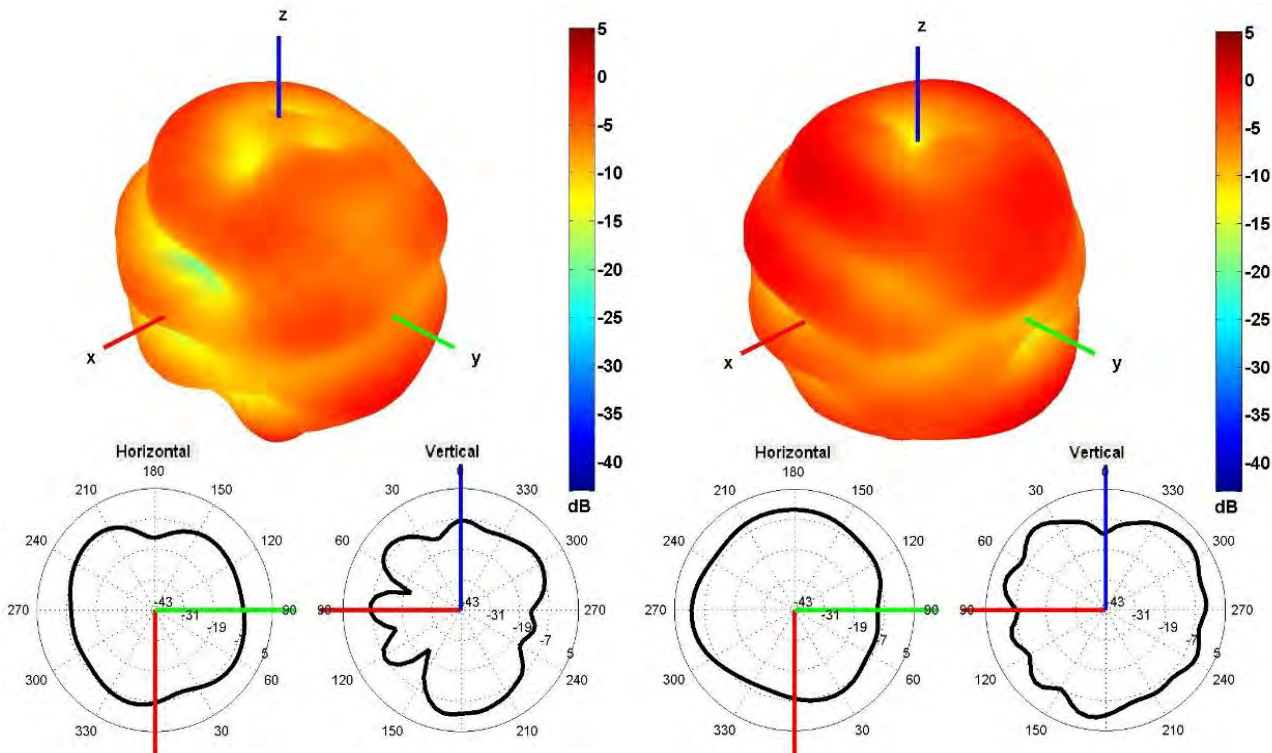




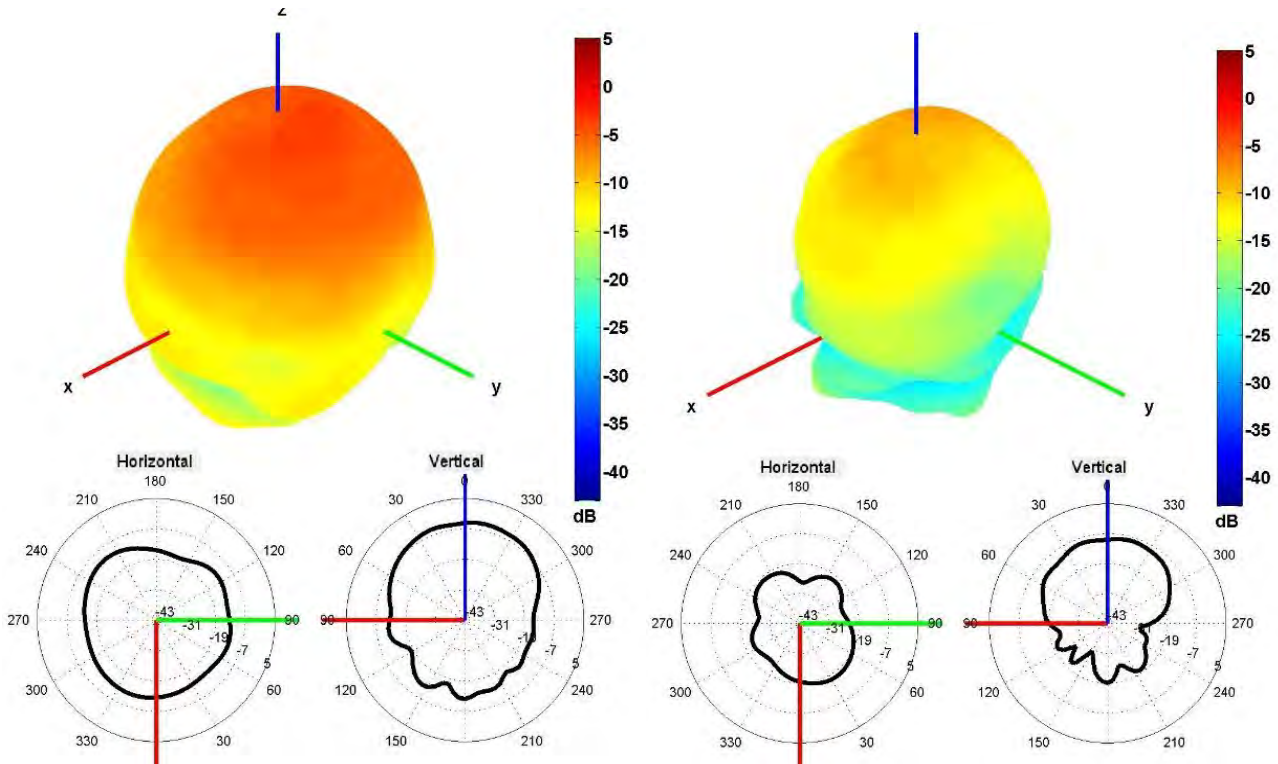


Radiation pattern reference

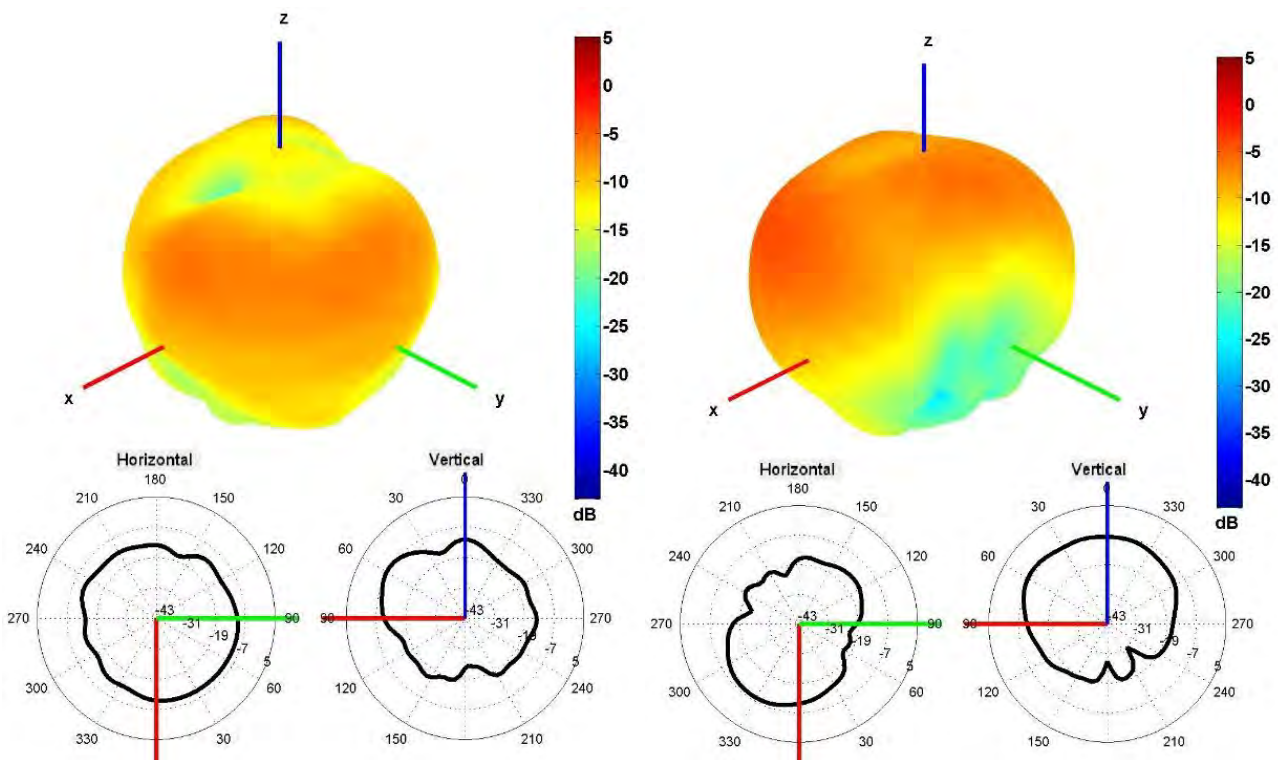
Cable 1: 5GNR



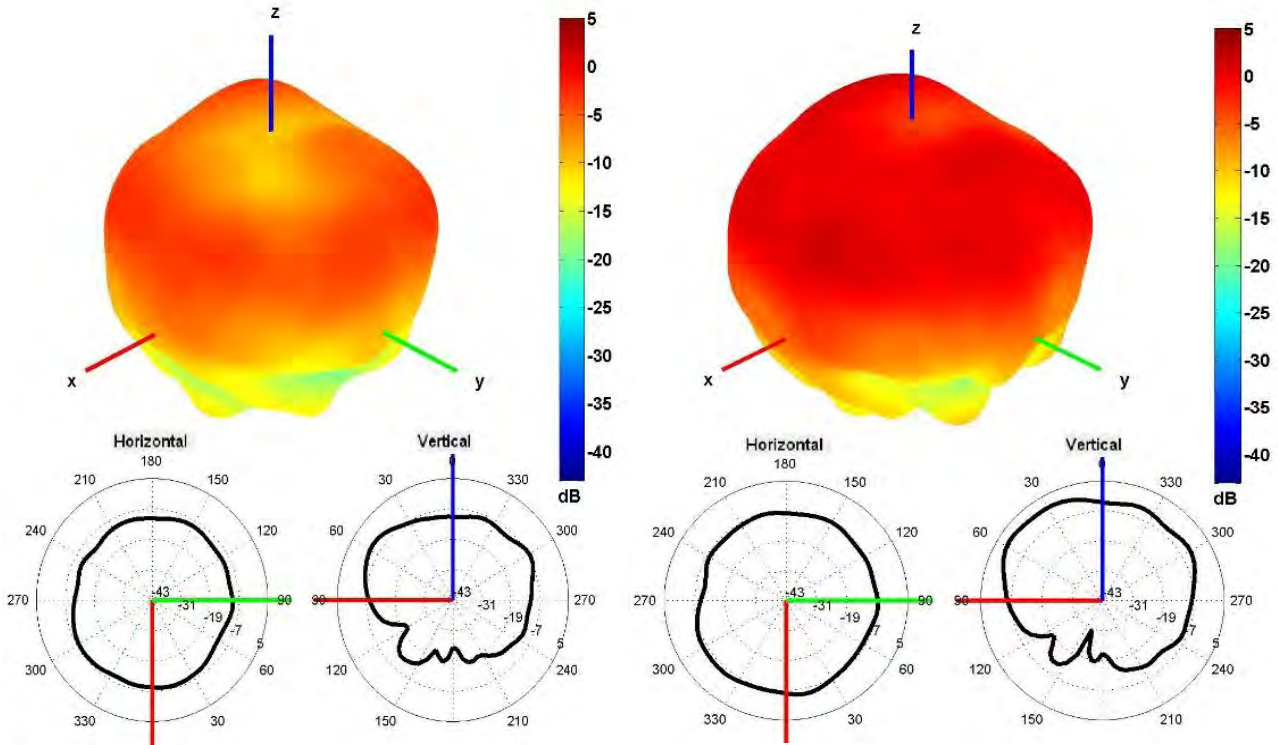
650 and 750 MHz Radiation pattern



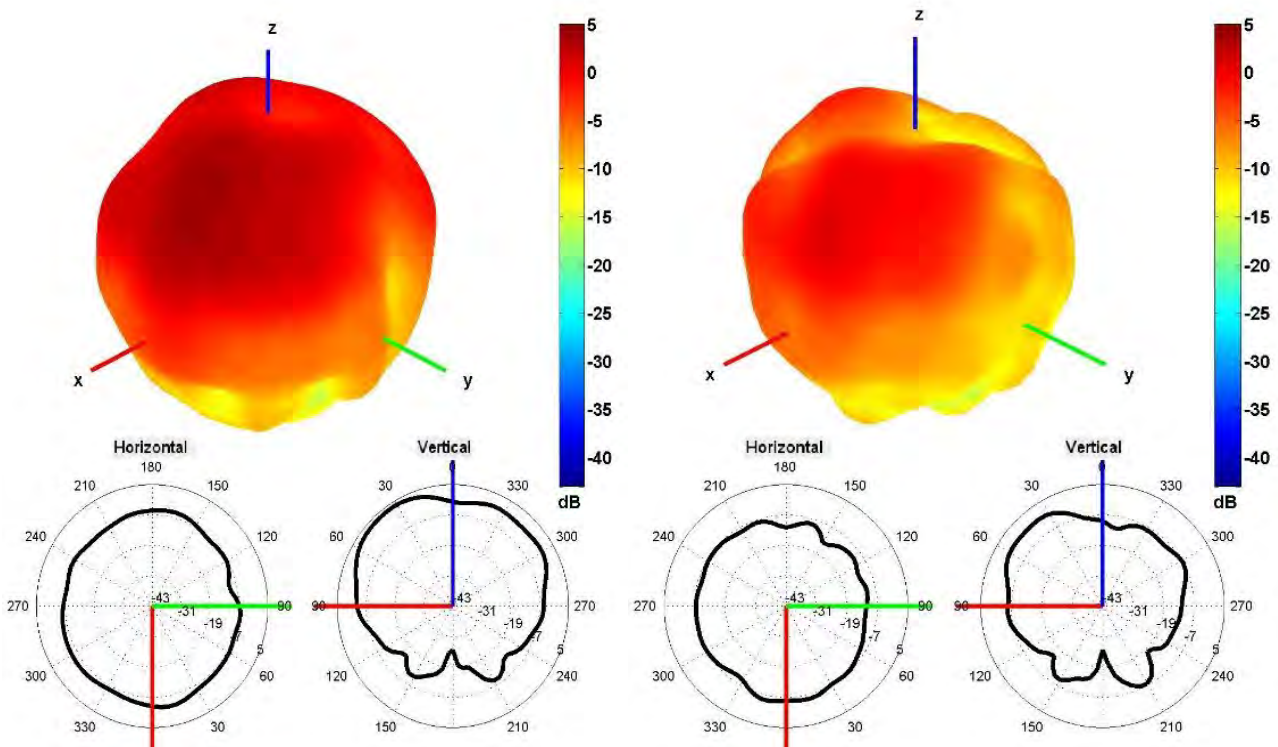
850 and 950 MHz Radiation pattern



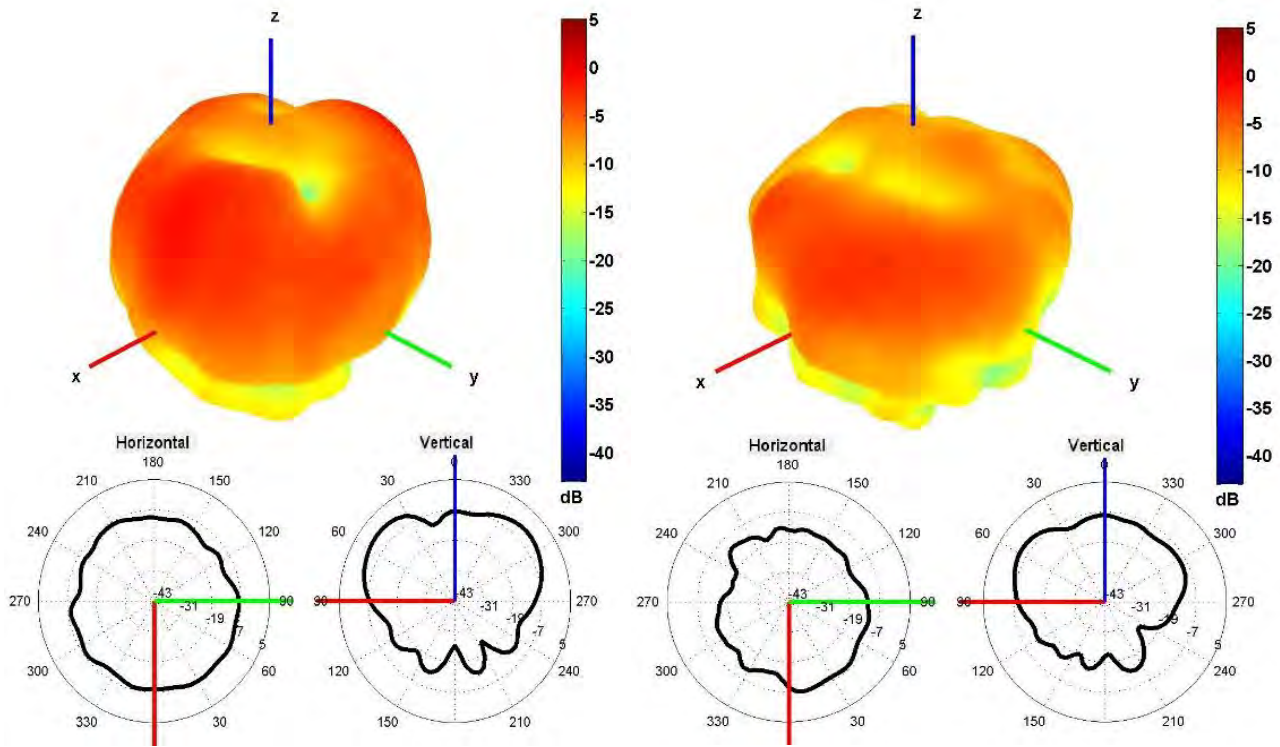
1500 and 1600 MHz Radiation pattern



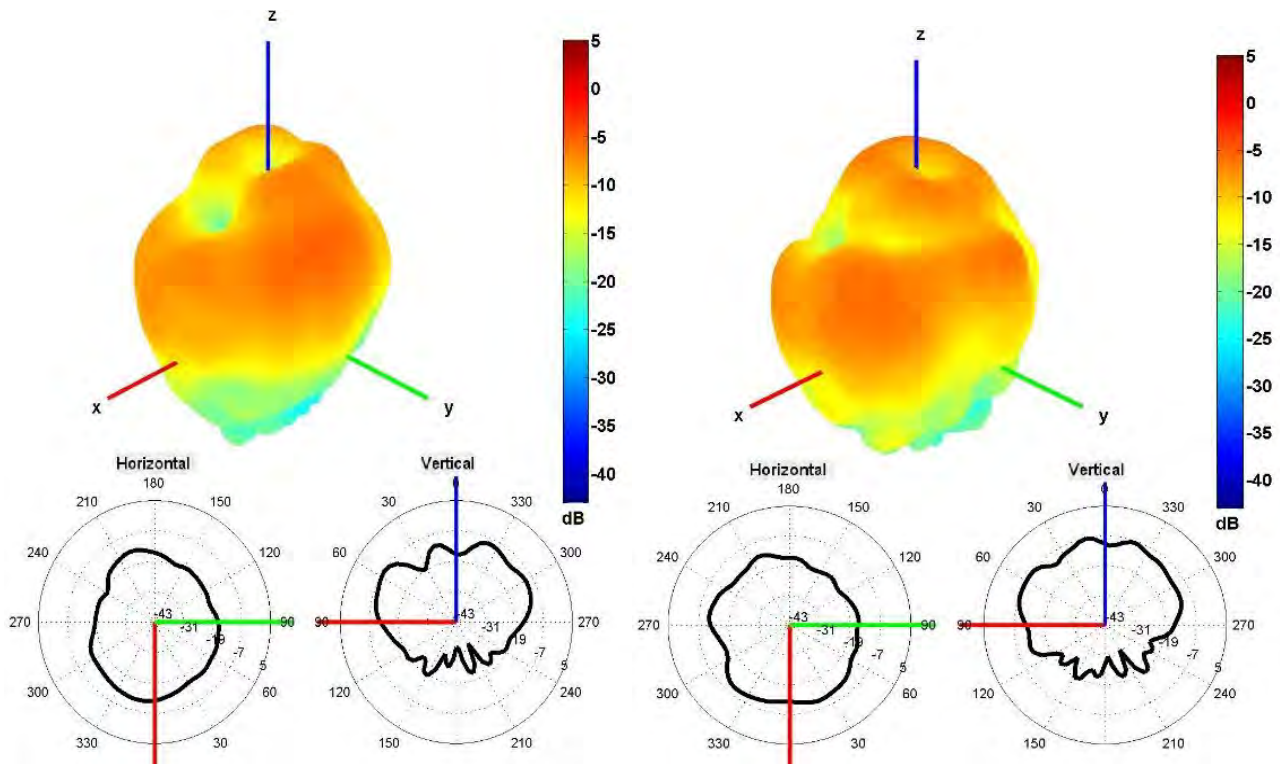
1750 and 1850 MHz Radiation pattern



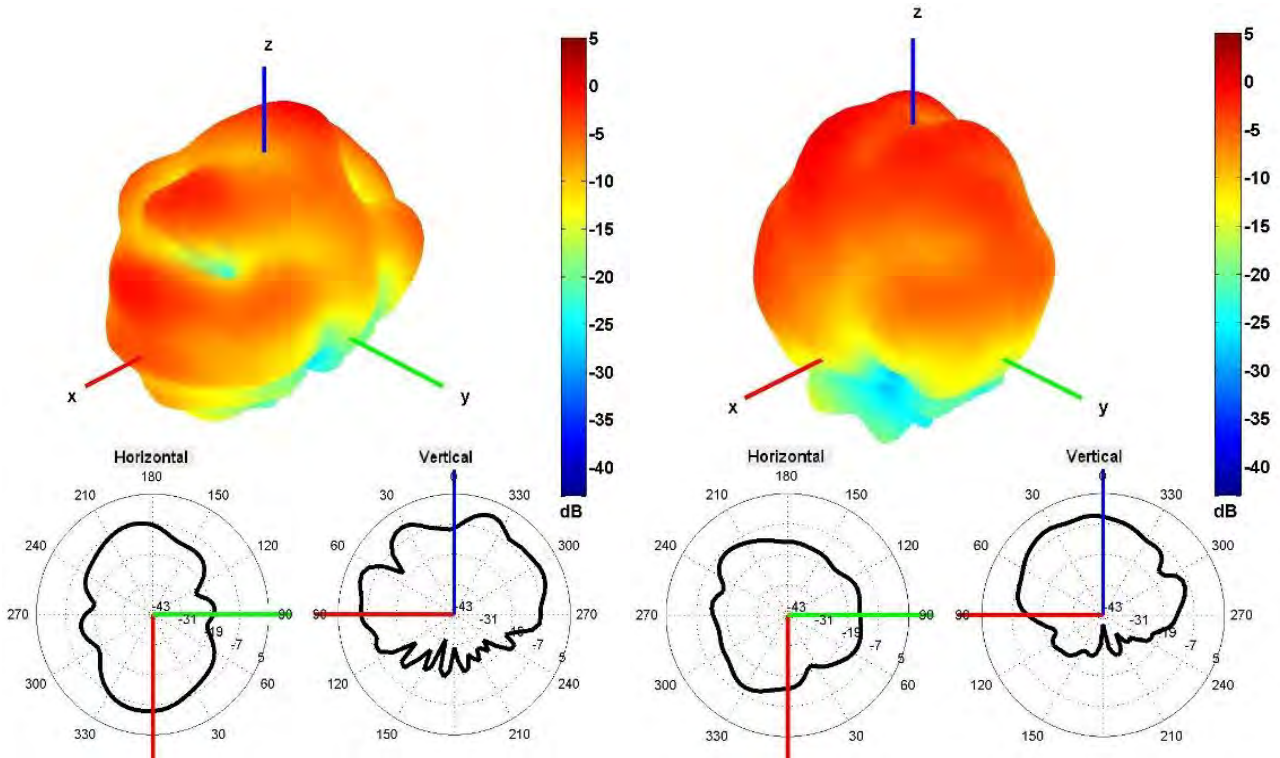
1950 and 2100 MHz Radiation pattern



2350 and 2600 MHz Radiation pattern

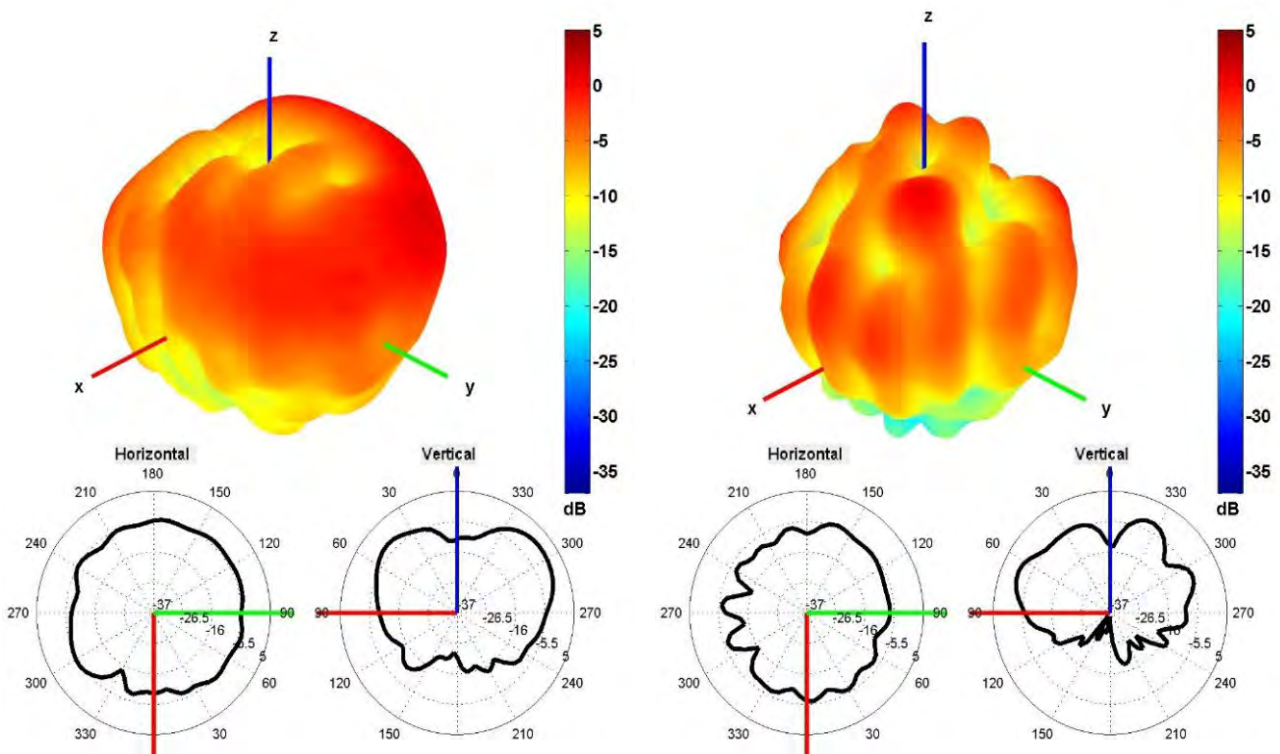


3350 and 3600 MHz Radiation pattern

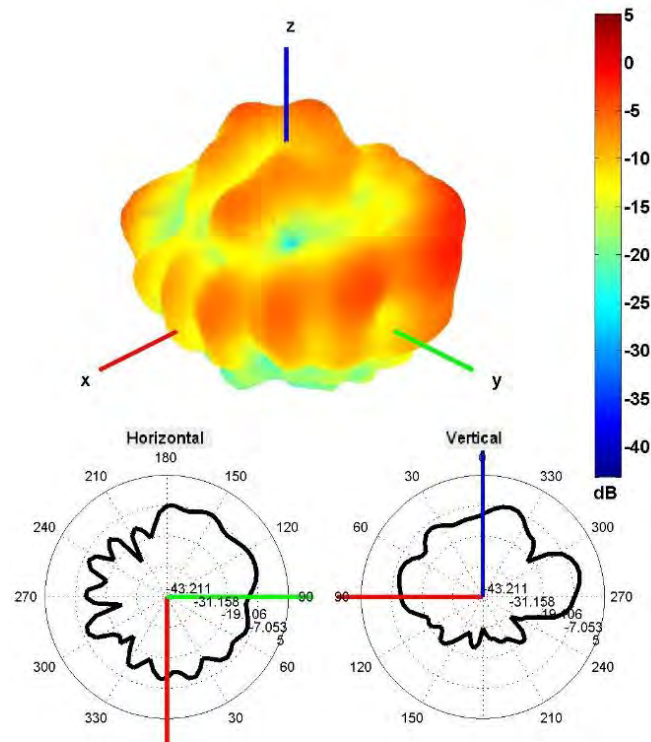


4500 and 5500 MHz Radiation pattern

Table 2: 2.4/5.0/6.0 GHz ISM

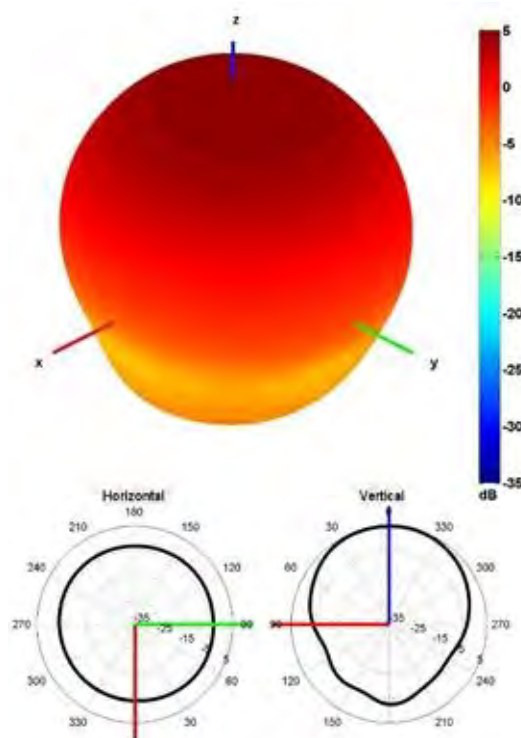


2450 and 5500 MHz Radiation pattern



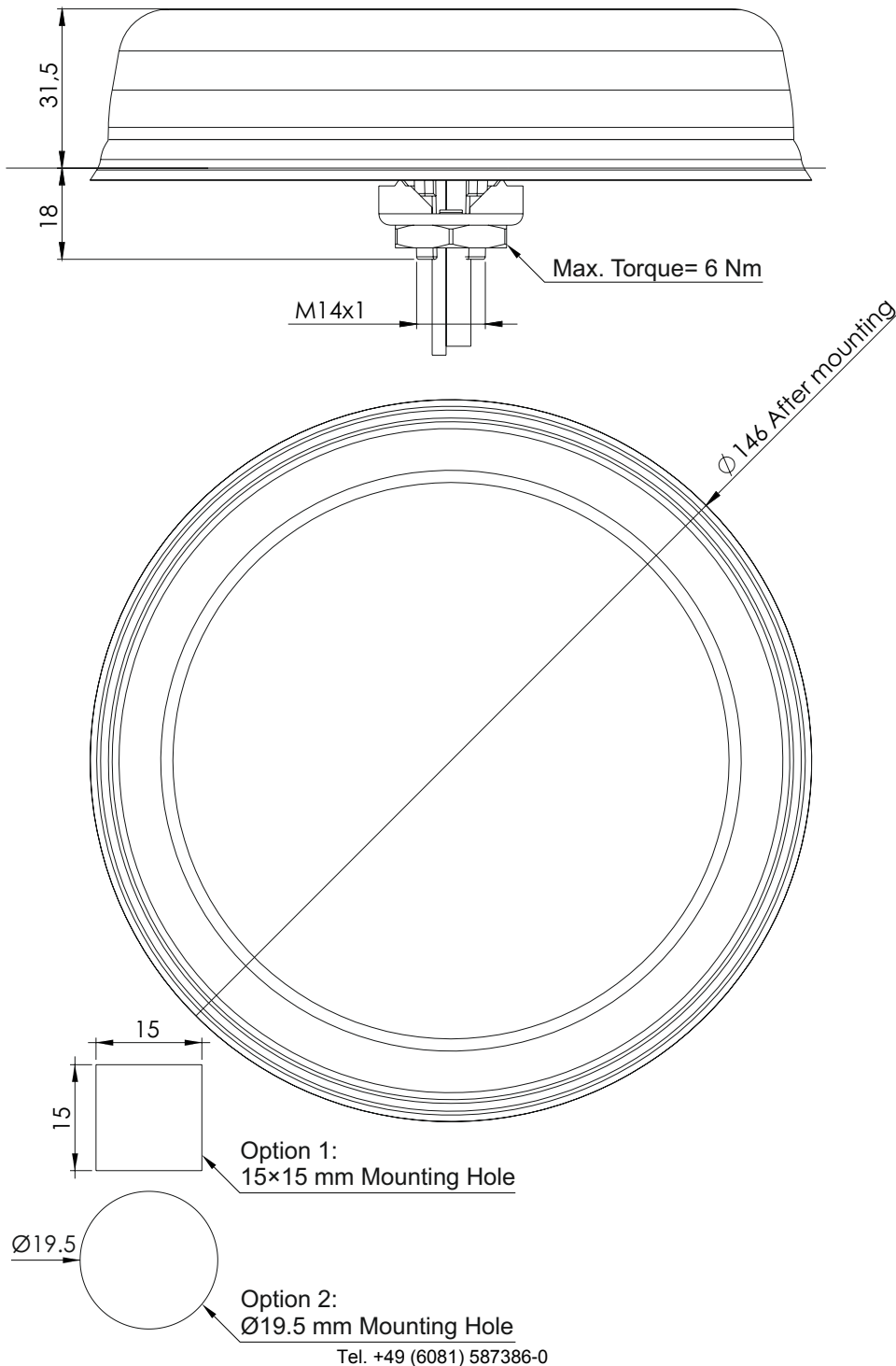
6500 MHz Radiation pattern

Cable 3: IRIDIUM



1621 MHz Radiation pattern

4. Antenna drawings



Tel. +49 (6081) 587386-0

Note: Dimensions are in millimeters
***Dimensions are after mounting**
****Max. Torque= 6 Nm**

5. Antenna Images

