

## 2J6C86BGF

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

High Performance

Ground Plane Independent

Anti-Rotation Mounting

Customizable Cable and Connector

Dimensions: 193 × 76.3 × 52.4 mm

Certificates: IP67, IP69



## 1. Antenna and electrical specifications

Cable 1

Parameters	5GNR Antenna			
<b>Technologies</b>	5G, 4G, 3G and 2G			
<b>Standards</b>	5GNR/4GLTE/FirstNet/CBRS/LPWA/CAT-X/CAT-Mx/CAT-NBx/NB-IoT/3G/2G			
<b>Frequency (MHz)</b>	617-960	1427-2690	3300-5000	5150-5925
<b>Band (MHz)</b>	600, 700, 850, 900	1500, 1600, 1700, 1800, 1900, 2000, 2100, 2300, 2500, 2600	3300, 3500, 3600, 3700, 4500	5200, 5500, 5800
<b>5GNR Bands</b>	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	
<b>4GLTE Bands</b>	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
<b>3GCELL Bands</b>	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	
<b>2GCELL Bands</b>	710, 750, 810T, 850, 900P, 900E, 900R	1800DCS, 1900PCS		
<b>CDMACELL Bands</b>	BC0, BC2, BC3, BC7, BC9, BC10, BC12, BC18, BC19	BC1, BC4, BC6, BC8, BC13, BC14, BC15, BC16, BC20, BC21		
<b>Return Loss (dB)</b>	~-6.9	~-15.9	~-15.0	~-6.7
<b>VSWR</b>	~2.7:1	~1.5:1	~1.6:1	~2.8:1
<b>Efficiency (%)</b>	~40.2	~47.3	~35.3	~22.1
<b>Peak Gain (dBi)</b>	~2.5	~5.0	~4.8	~3.3
<b>Average Gain (dB)</b>	~-4.0	~-3.3	~-4.8	~-6.7
<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 Standard (Other Connectors Available)			
<b>Cable Length</b>	300 cm Standard (Any Cable Length Available)			
<b>Cable Type</b>	D302 Standard (Other Cables Available)			

**Antenna Measurement Conditions:**

Mounted on Metal Plate of 30 x 30 cm

100 cm of Cable D302

Measured in Certified CTIA 3D Anechoic Chamber

**Cable 2**

Parameters	2.4/5.0/6.0 GHz ISM Antenna		
<b>Standards</b>	WiFi, BT, ZigBee, ISM, Sigfox, LoRa		
<b>Band (MHz)</b>	2.4GHz	5.0 GHz	6.0GHz
<b>Frequency (MHz)</b>	2410-2490	4920-5925	5925-7125
<b>Return Loss (dB)</b>	~-16.7	~-18.6	~-12.3
<b>VSWR</b>	~1.5:1	~1.3:1	~1.8:1
<b>Efficiency (%)</b>	~49.2	~48.2	~32.1
<b>Peak Gain (dBi)</b>	~4.2	~6.4	~5.3
<b>Average Gain (dB)</b>	~-3.1	~-3.2	~-3.8
<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-RP Standard (Other Connectors Available)		
<b>Cable Length</b>	300 cm Standard (Any Cable Length Available)		
<b>Cable Type</b>	D302 Standard (Other Cables Available)		

**Antenna Measurement Conditions:**

Mounted on Metal Plate of 30 x 30 cm  
 100 cm of Cable D302  
 Measured in Certified CTIA 3D Anechoic Chamber

**Cable 3**

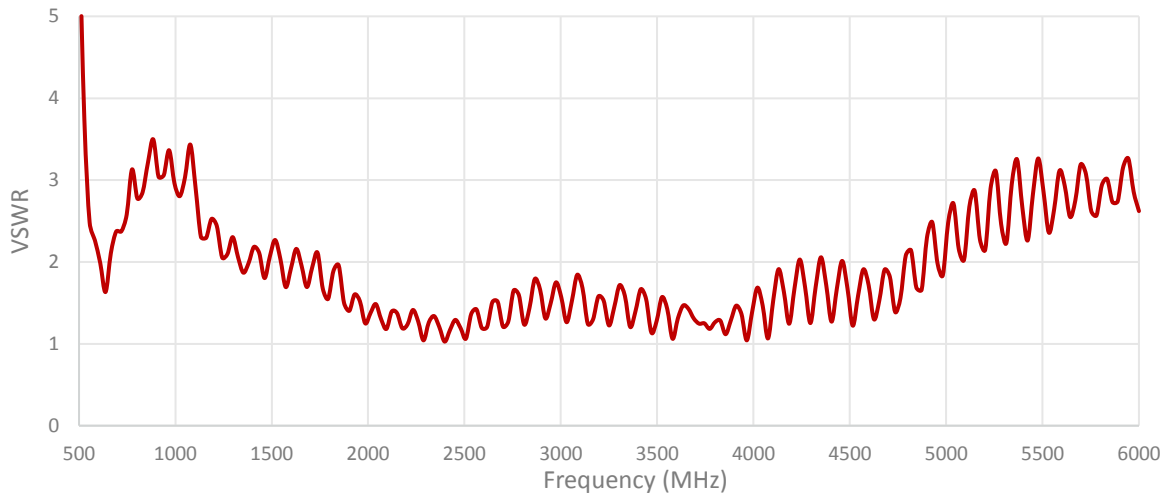
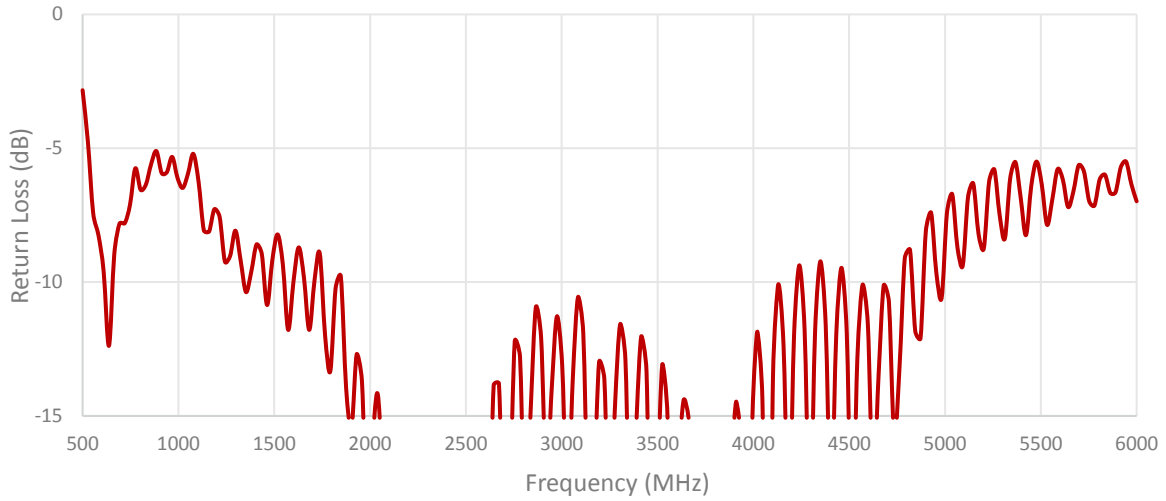
Parameters	GPS/GLONASS Antenna	
<b>Standards</b>	GPS/QZSS/Galileo	GLONASS
<b>Band (MHz)</b>	1575	1602
<b>Frequency(MHz)</b>	1575.42	1598-1610
<b>Patch Size (mm)</b>	25 x 25 x 4	
<b>Return Loss (dB)</b>	<=-15.0 dB	
<b>VSWR</b>	<=1.4:1 dB	
<b>Impedance</b>	50	
<b>Radiation Pattern</b>	Hemispherical	
<b>Polarization</b>	RHCP	
<b>Saw Filter</b>	Pre-filter	
<b>Active Gain (dB)</b>	28 @ 2.7 V	
<b>Noise Figure (dB)</b>	1.5 Typ	
<b>Voltage (V)</b>	1.5 – 3.6	
<b>Current Consumption (mA)</b>	9 Typ	
<b>Power Consumption (mW)</b>	24.3 Typ	
<b>ESD Protection (kV)</b>	2kV	
<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)	

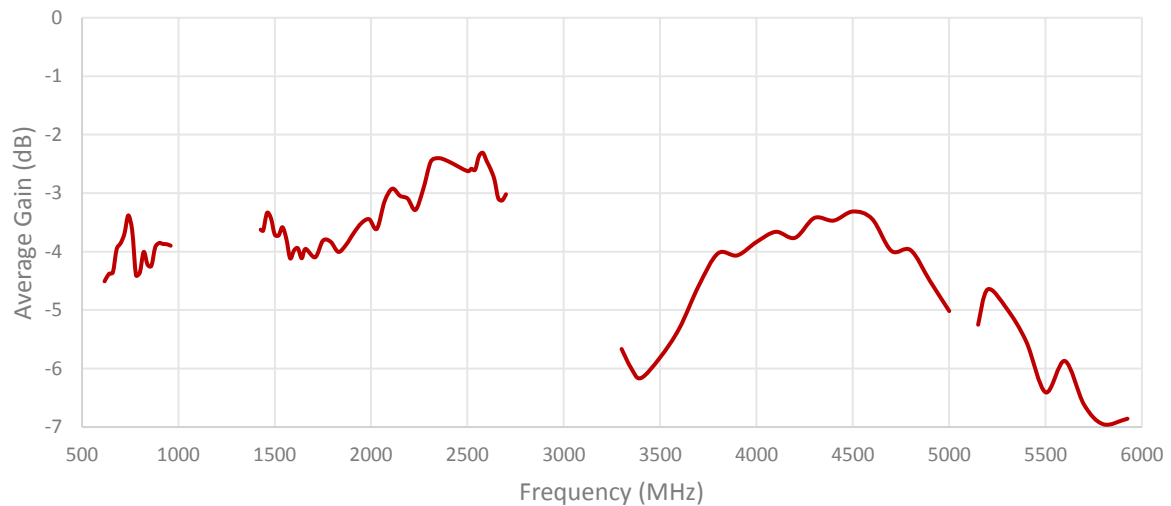
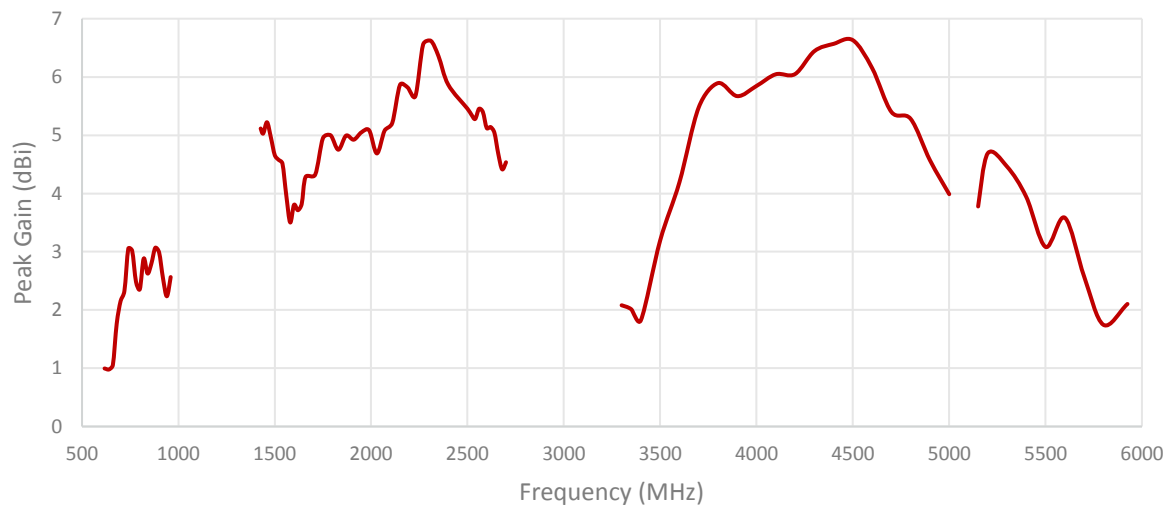
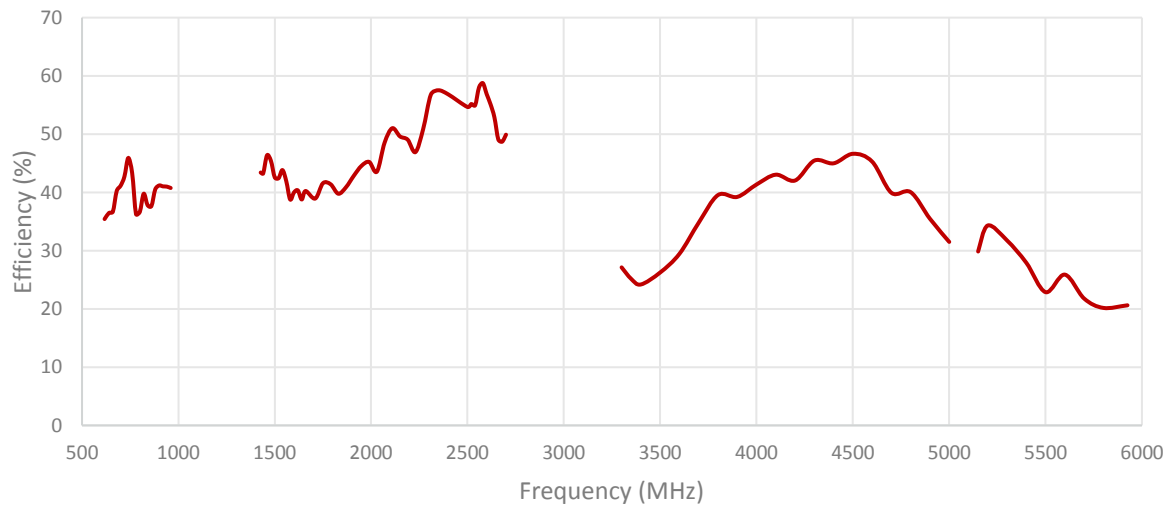
## 2. Mechanical and environmental specifications

Specifications	2J6C86BGF
<b>Mounting Type</b>	Screw Mount
<b>Dimensions (mm)</b>	193 × 76.3 × 52.4
<b>Recommended Torque (Nm)</b>	6 Nm
<b>Radome Type</b>	ASA
<b>Radome color</b>	Black, White
<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

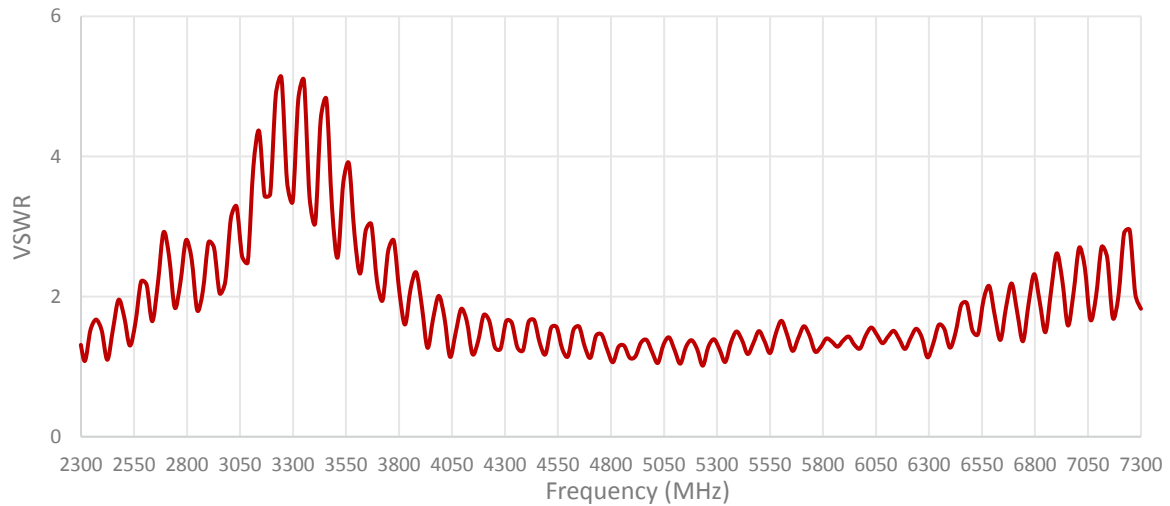
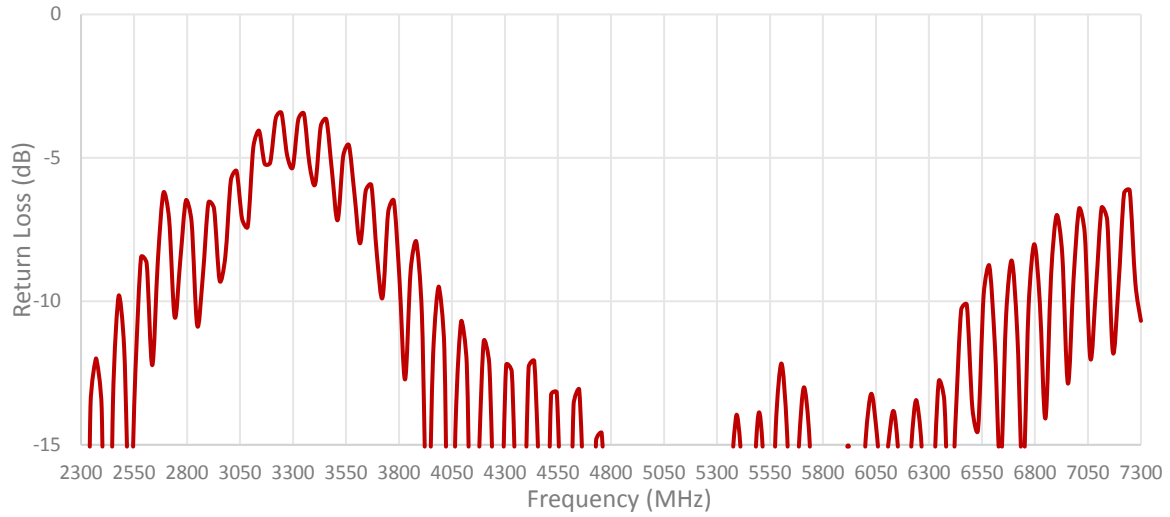
### 3. Antenna parameters

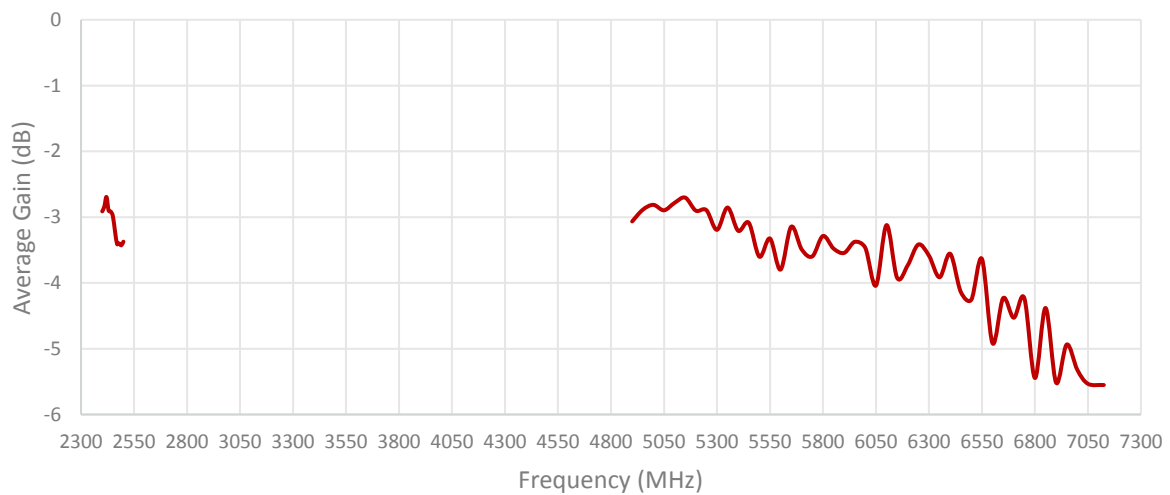
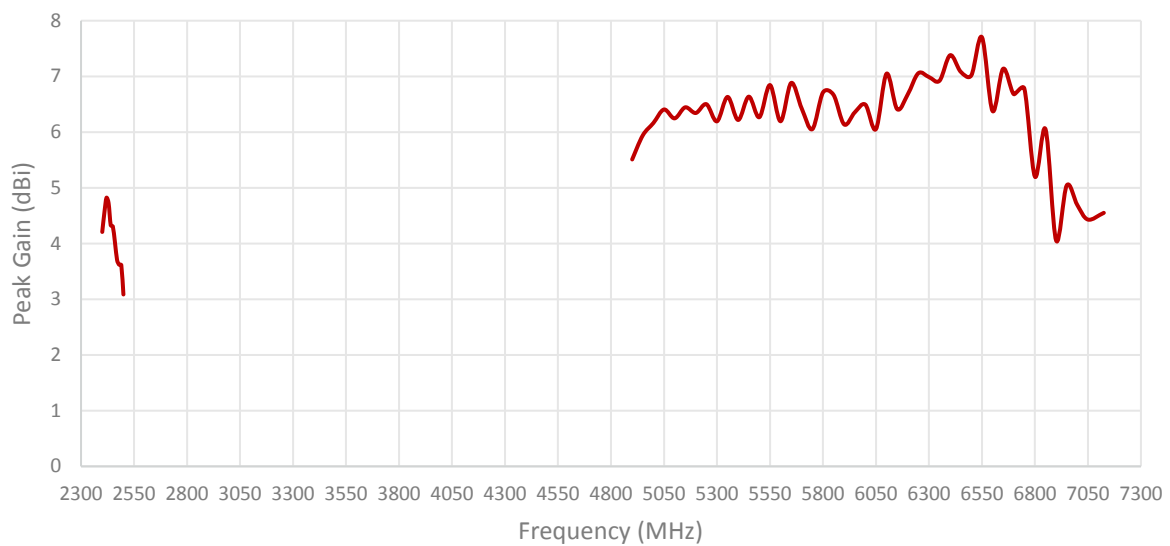
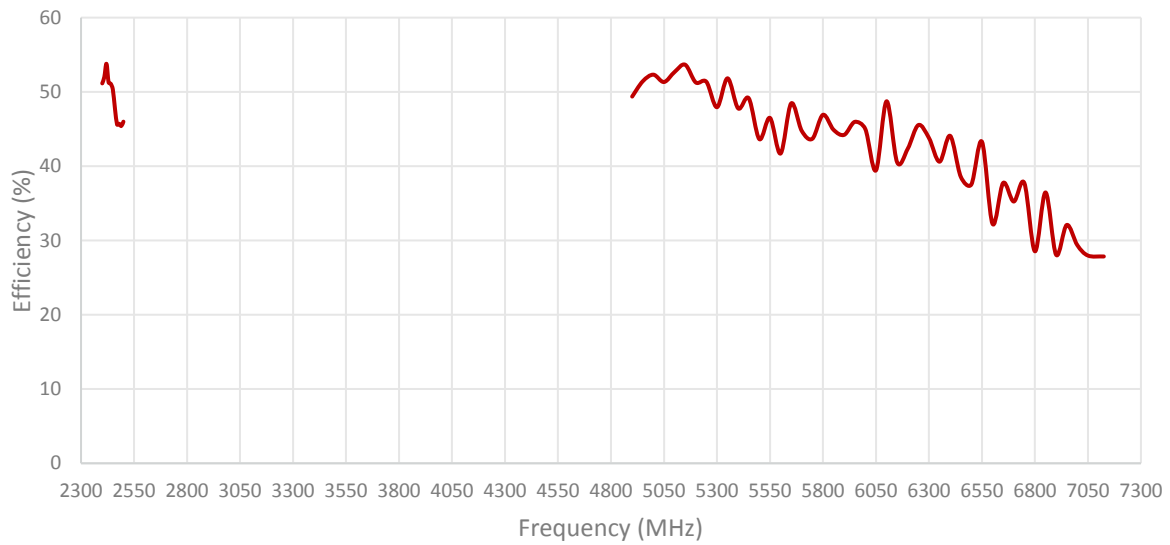
Cable 1: 5GNR



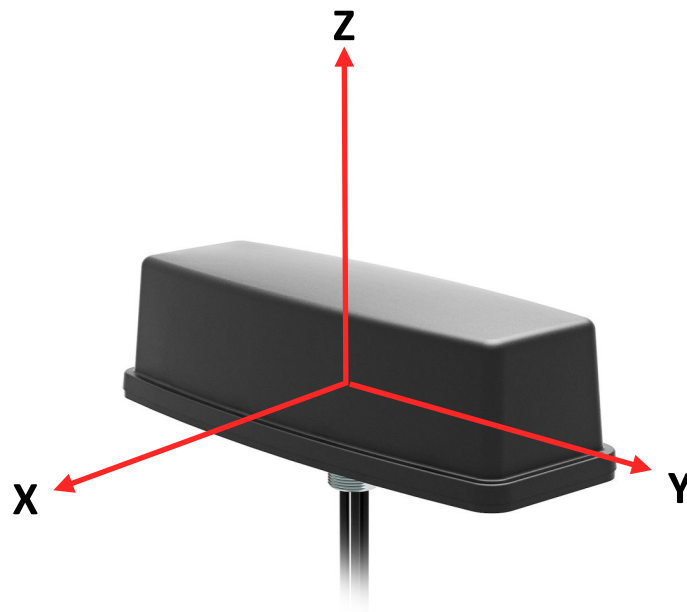


**Table 2: 2.4/5.0/6.0 GHz ISM**



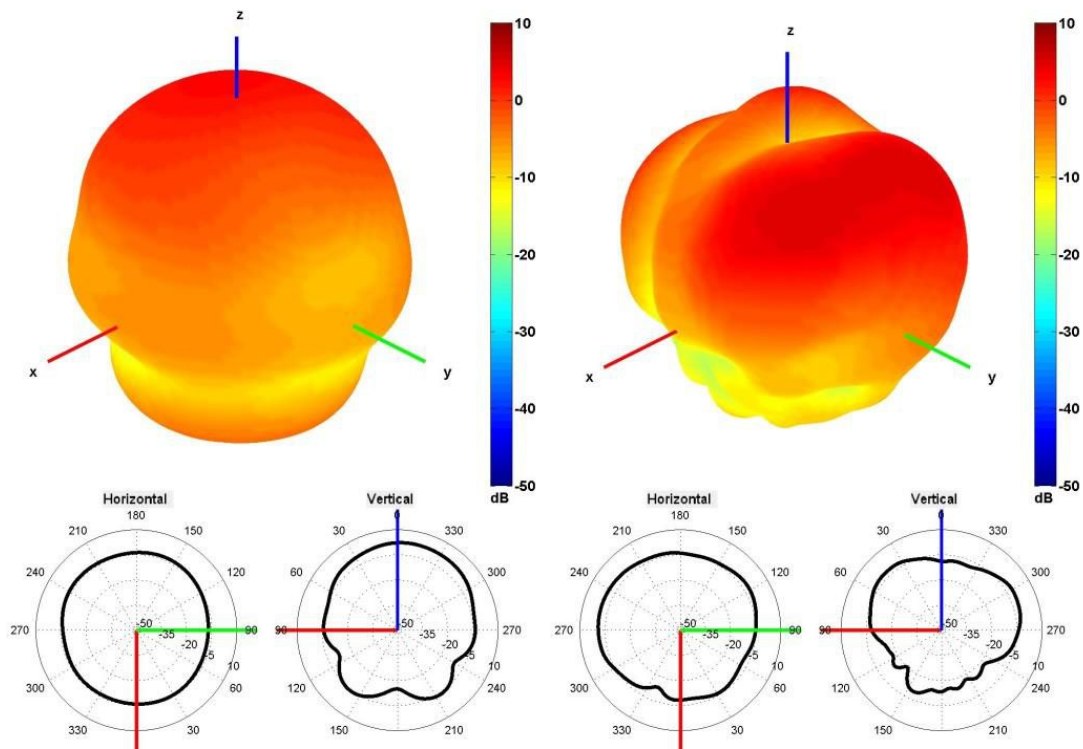




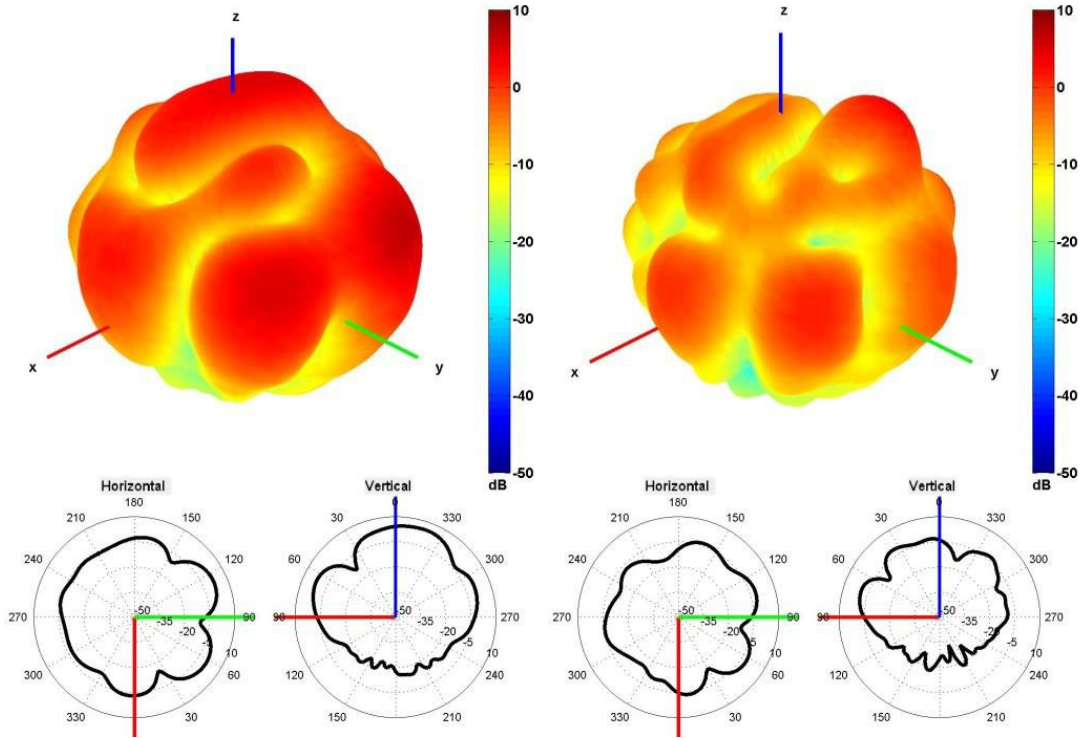


Radiation pattern reference

Cable 1: 5GNR

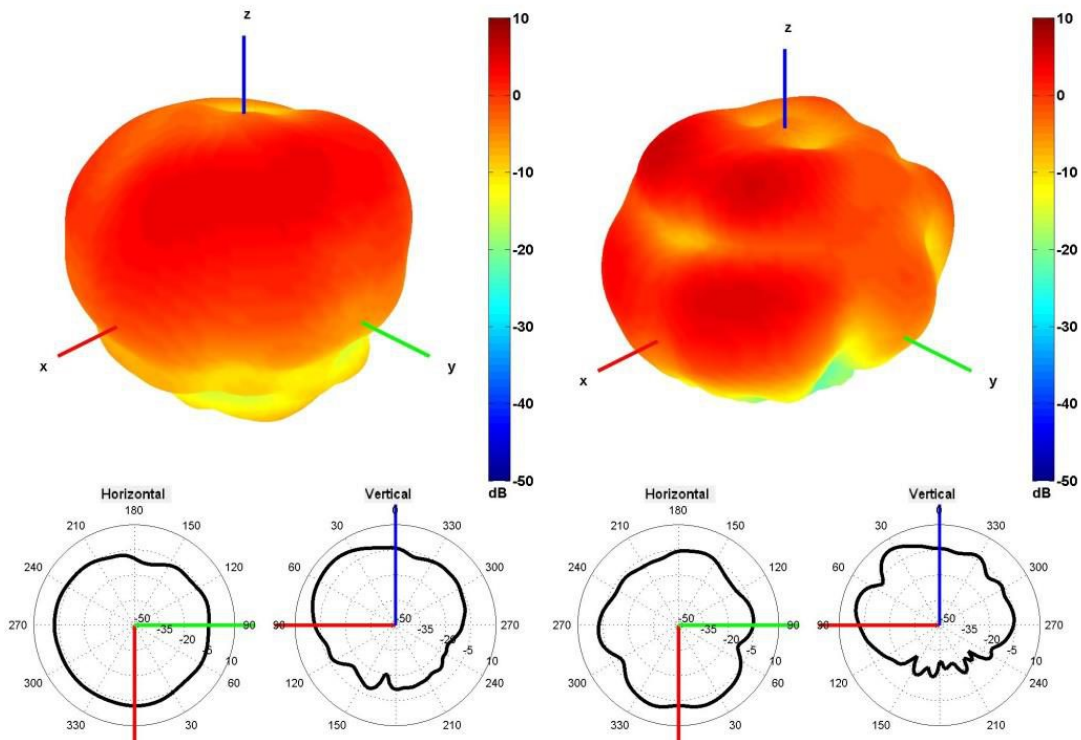


740 and 2500 MHz Radiation pattern

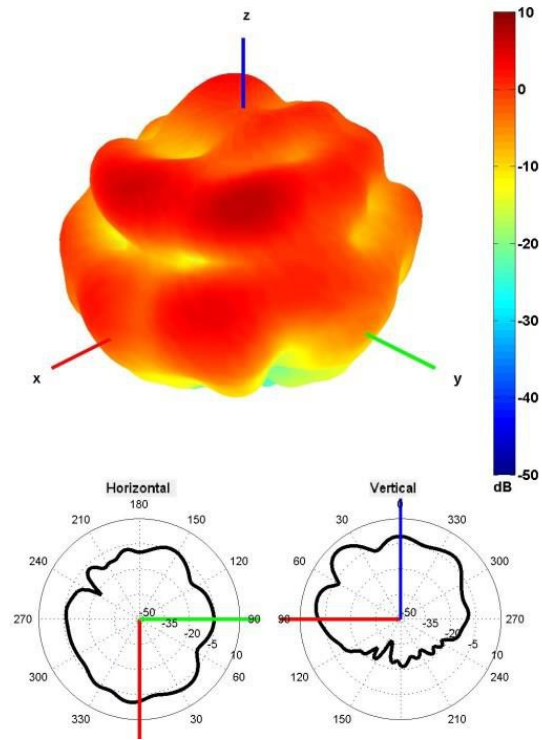


4500 and 5500 MHz Radiation pattern

Cable 2: 2.4/5.0/6.0 GHz ISM

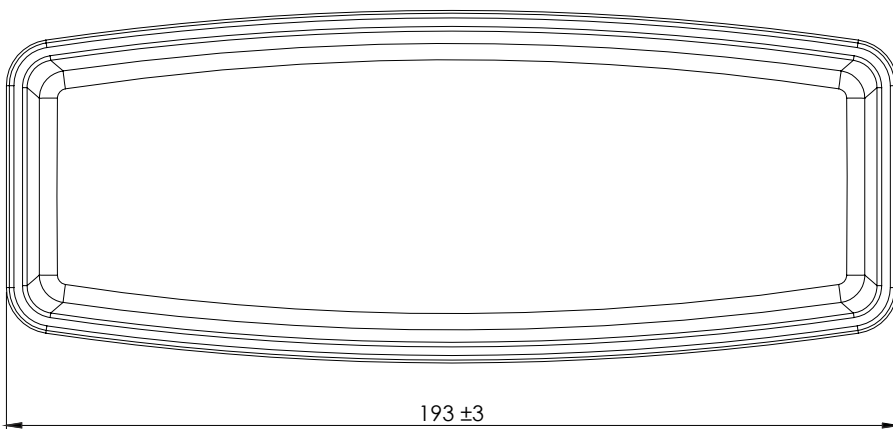
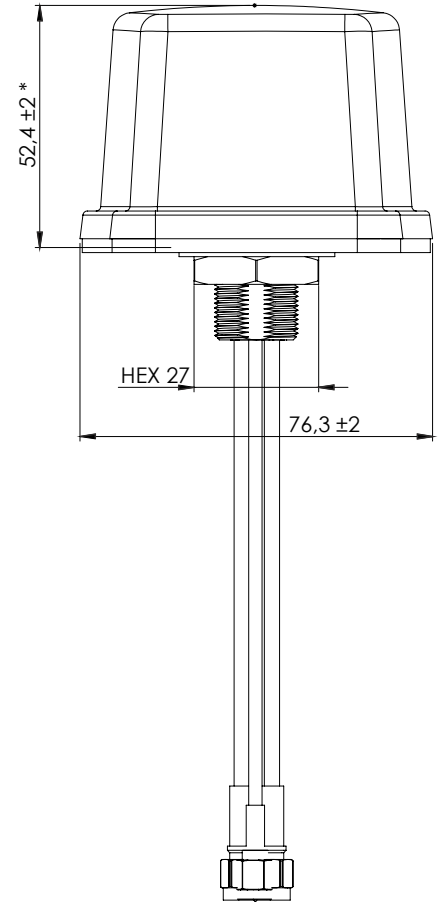
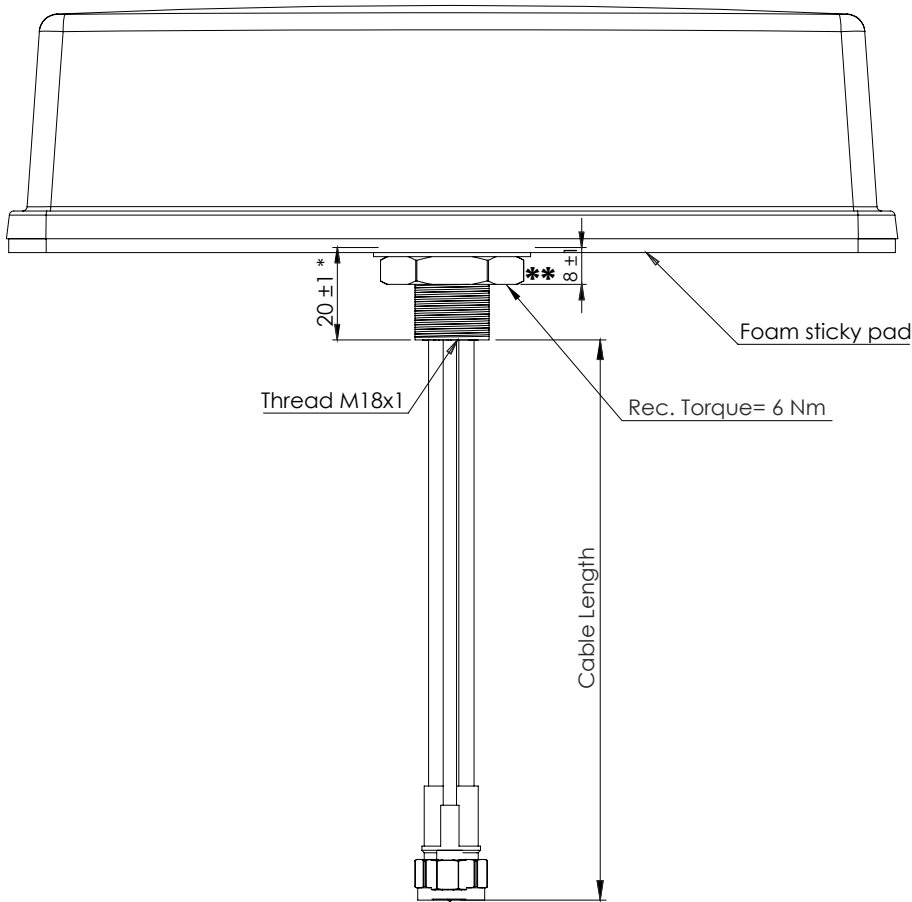


2450 and 5500 MHz Radiation pattern

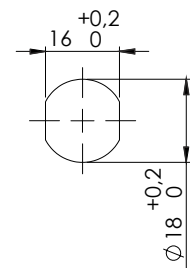


6500 MHz Radiation pattern

## 4. Antenna drawings



### Mounting hole



Max. mounting thickness 12mm  
 Note: Dimensions are in millimeters  
 \*Dimensions are after mounting  
 \*\*Recommended Torque= 6 Nm

## 5. Antenna Images

