

## 2J4700BGF-TH19

Cellular and GNSS Screw Mount

### Key Features

**Cable 1: Cellular**

- 824-960 MHz
- 1710-2170 MHz

**Cable 2: GPS/GLONASS/QZSS/Galileo**

- 1575-1610 MHz

Screw Mount

Low Profile

Ground Plane Independent

Customizable Cable and Connector

Dimensions  $\varnothing 52 \times 17.5$  mm

Certificates: IP69K



**Note:** 19mm Thread is Default Option. See Drawing for other Thread Options available.



## 1. Antenna and electrical specifications

Cable 1

Parameters	Cellular Antenna	
<b>Standards</b>	2G and 3G	
<b>Band (MHz)</b>	850/900	1700/1800/1900/2100
<b>Frequency (MHz)</b>	824-960	1710-2170
<b>Return Loss (dB)</b>	~-10.4	~-12.5
<b>VSWR</b>	~1.9:1	~1.7:1
<b>Efficiency (%)</b>	~20.6	~20.5
<b>Peak Gain (dBi)</b>	~-0.3	~-2.0
<b>Average Gain (dB)</b>	~-7.1	~-7.0
<b>Impedance (Ohm)</b>	50	
<b>Polarisation</b>	Linear	
<b>Radiation Pattern</b>	Omni-Directional	
<b>Max. Input Power (W)</b>	100	
<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>	RG174 Standard (Other Cables Available)	

Cable 2

Parameters	GNSS Ceramic Active Antenna	
<b>Standards</b>	GPS/QZSS/Galileo	GLONASS
<b>Band (MHz)</b>	1575	1602
<b>Frequency (Mhz)</b>	1575.42	1598-1606
<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 (Ohms)</b>	50	
<b>Radiation Pattern</b>	Hemispherical	
<b>Polarization</b>	RHCP	
<b>Active Gain (dB)</b>	28dB @ 2.7V	
<b>Noise Figure (dB)</b>	1.8 @ 2.7V	
<b>Voltage Range (V)</b>	1.5 - 3.6	
<b>Current Consumption (mA)</b>	9 @ 2.7V	
<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>	RG174 Standard (Other Cables Available)	

**Antenna Measurement Conditions:**

Mounted on Ground Plane of 30x30 cm

200 cm of RG174 Cable

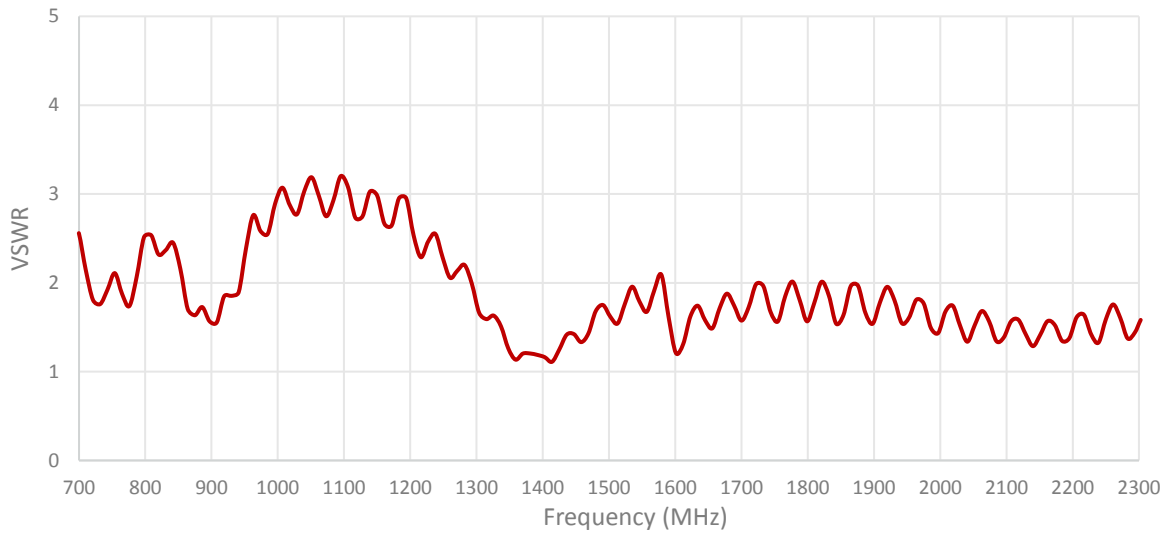
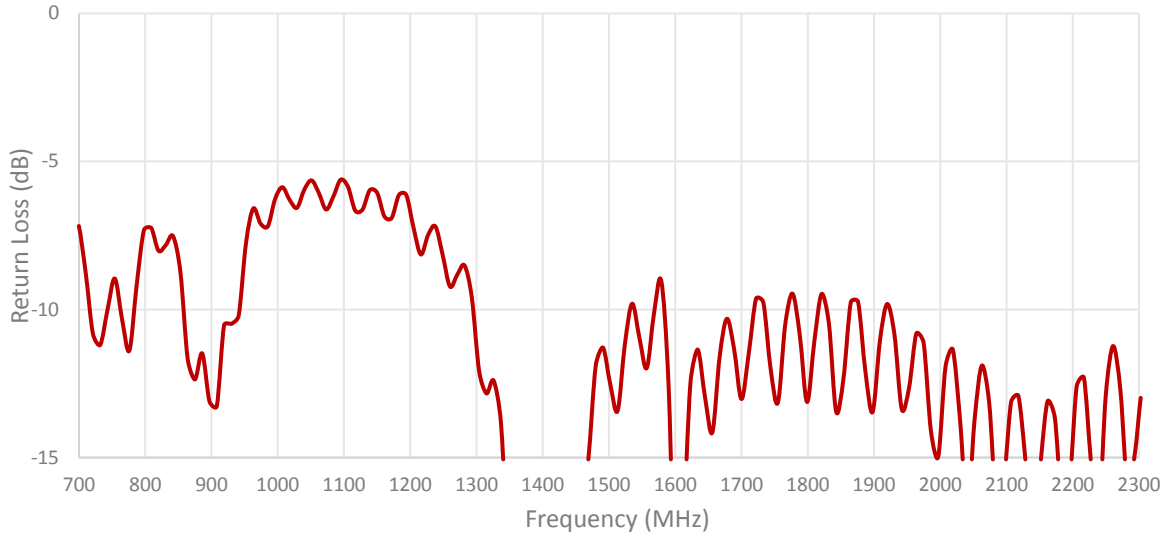
Measured in Certified CTIA 3D Anechoic Chamber

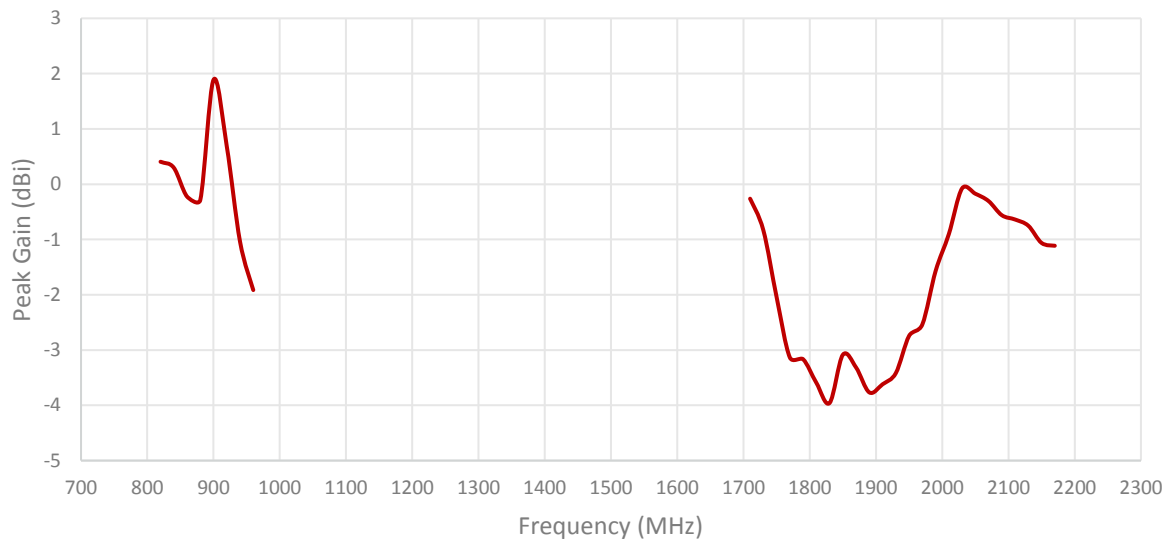
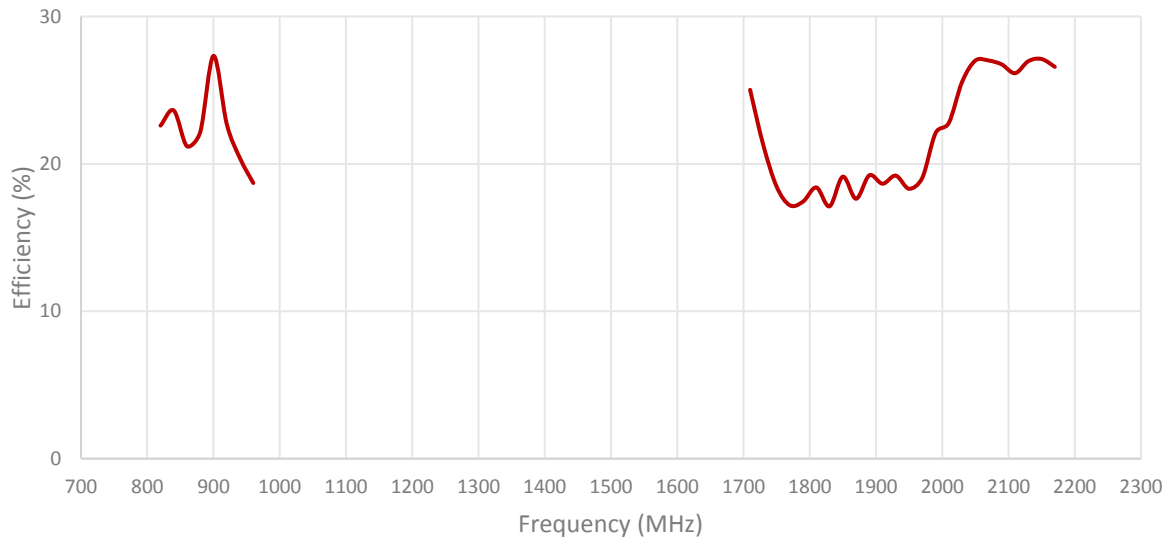
## 2. Mechanical and environmental specifications

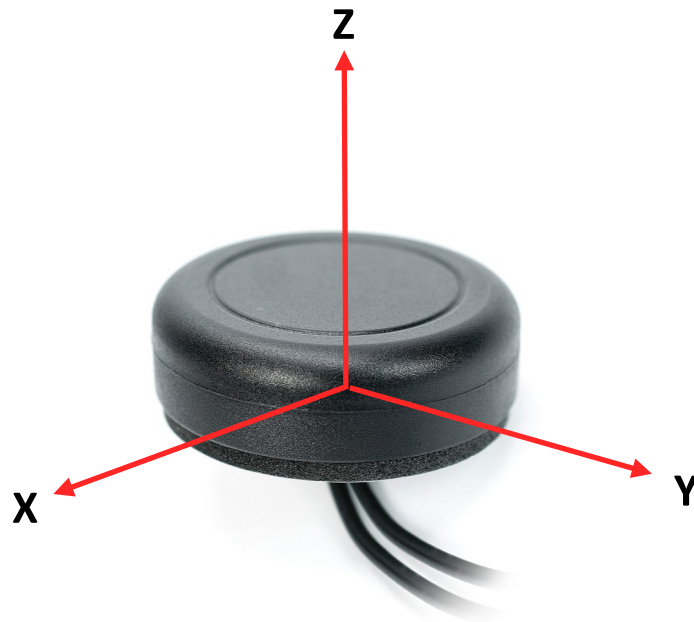
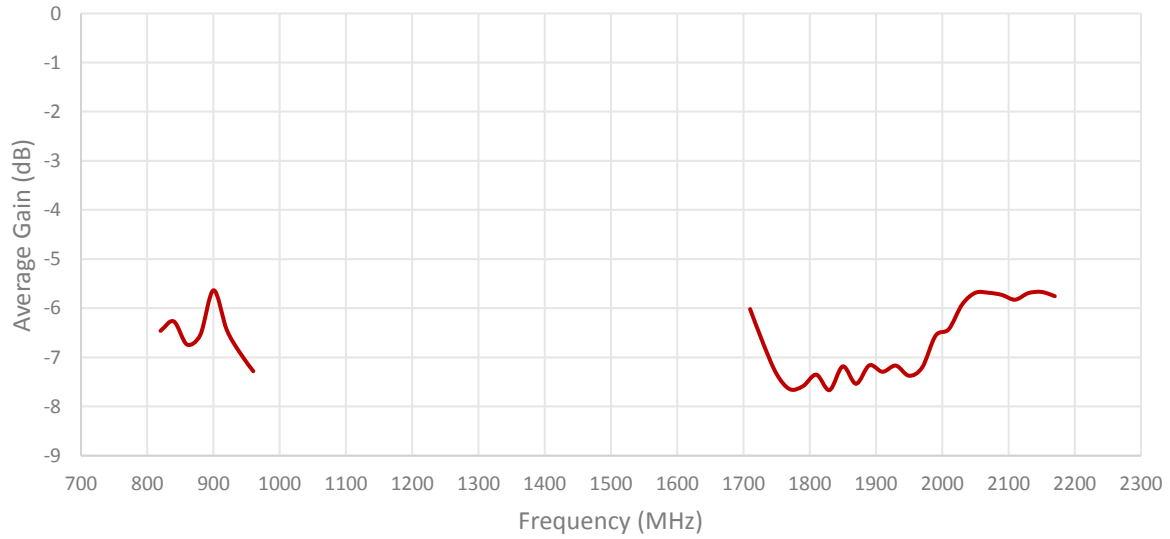
Specifications	2J4700BGF-TH19
<b>Mounting Type</b>	Screw Mount
<b>Dimensions (mm)</b>	Ø 52 × 17.5
<b>Max. Tighten Torque (Nm)</b>	4 Nm
<b>Radome Type</b>	ABS
<b>Radome Color</b>	Black
<b>Antenna Base</b>	ABS
<b>Operating Temperature (C)</b>	-40 to +85
<b>Storage Temperature (C)</b>	-40 to +85
<b>Certificates</b>	IP69K
<b>Substance Compliance</b>	RoHS

### 3. Antenna parameters

**Table 1: Cellular**

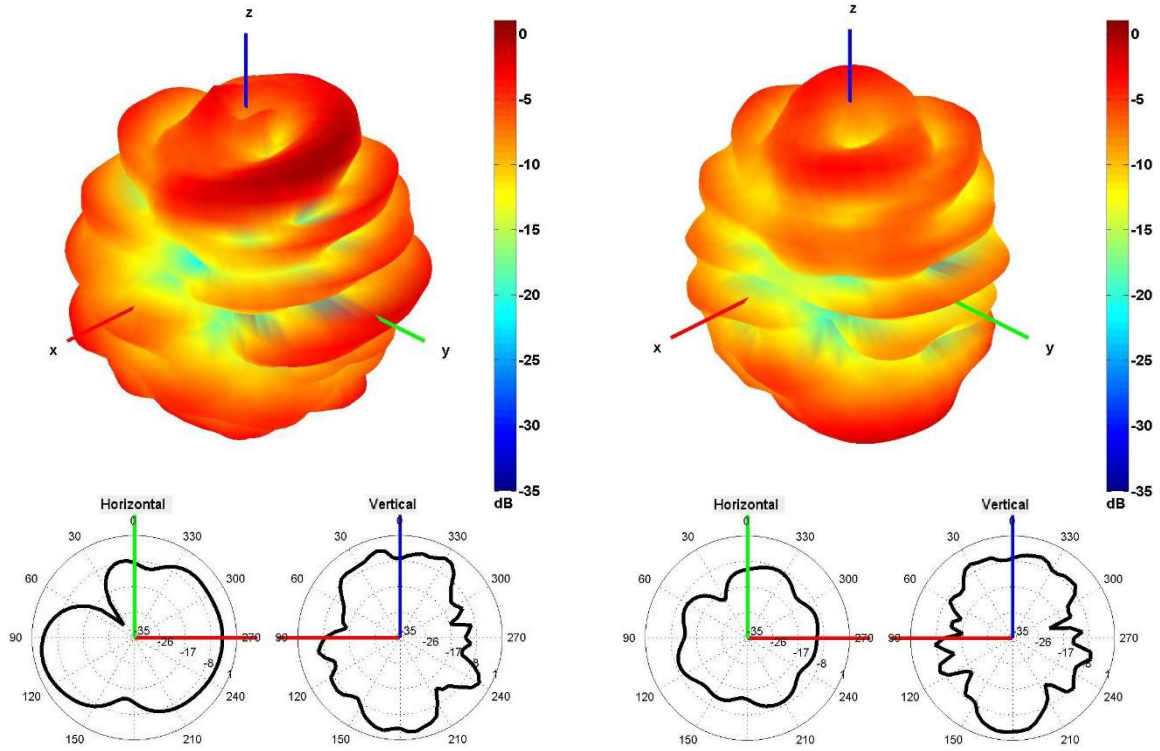




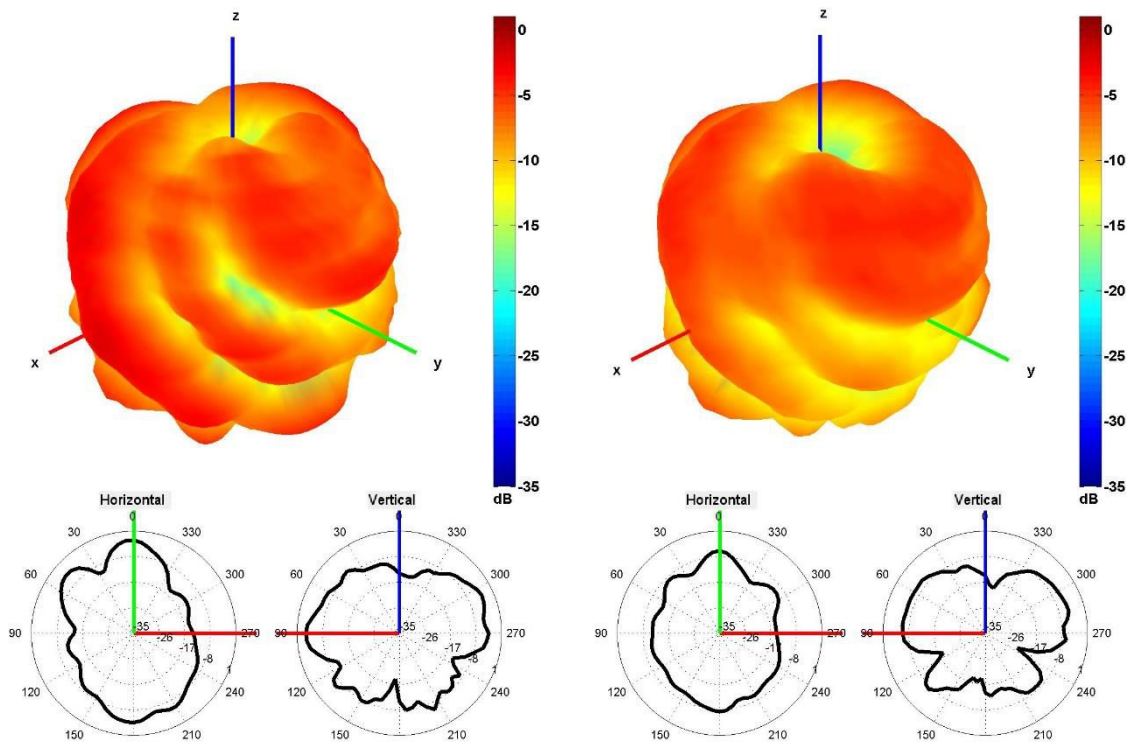


Radiation pattern reference

Cable 1: Cellular

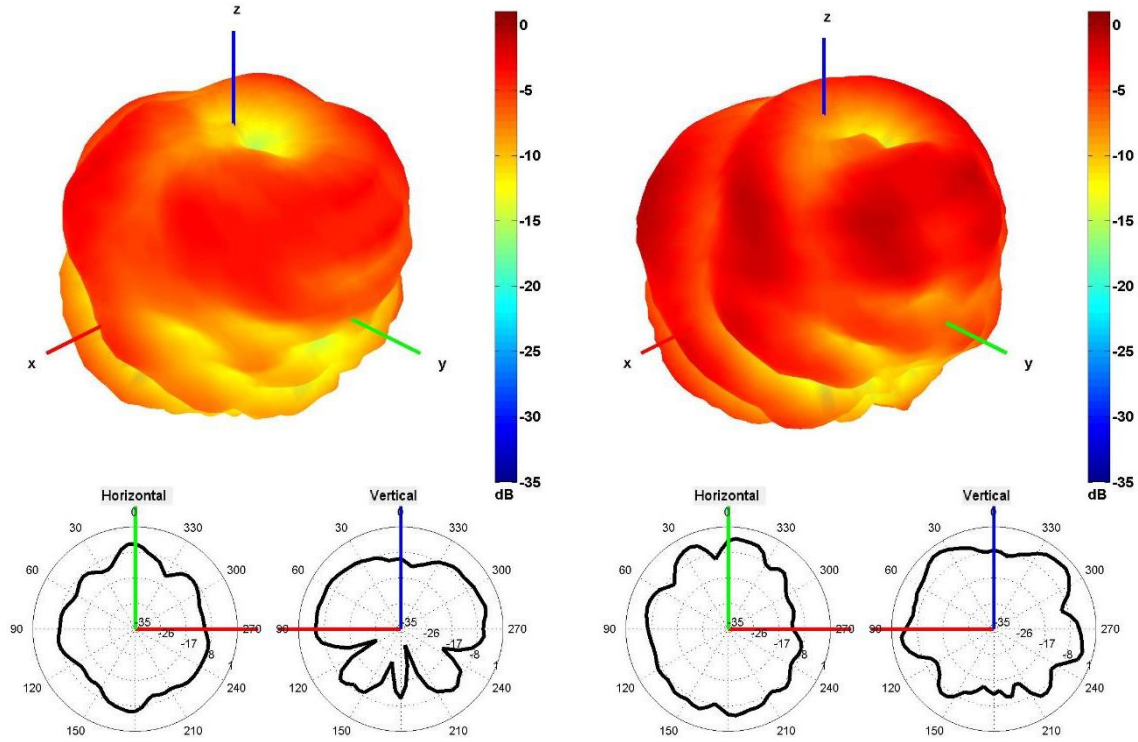


850 and 940 MHz Radiation pattern



1750 and 1850 MHz Radiation pattern

Cable 1: Cellular

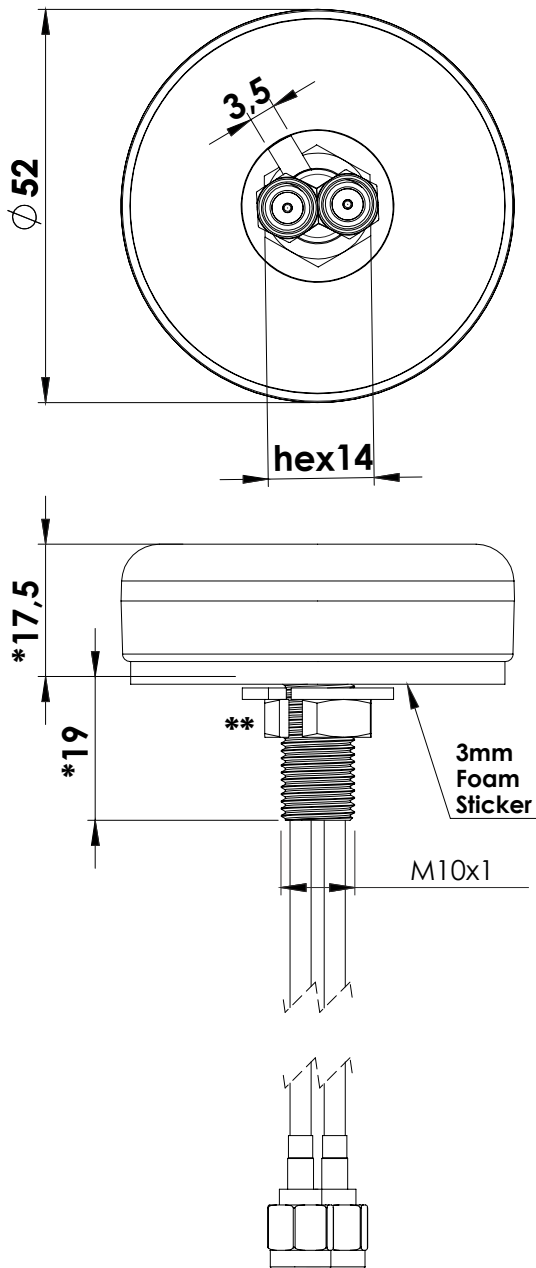


1950 and 2100 MHz Radiation pattern



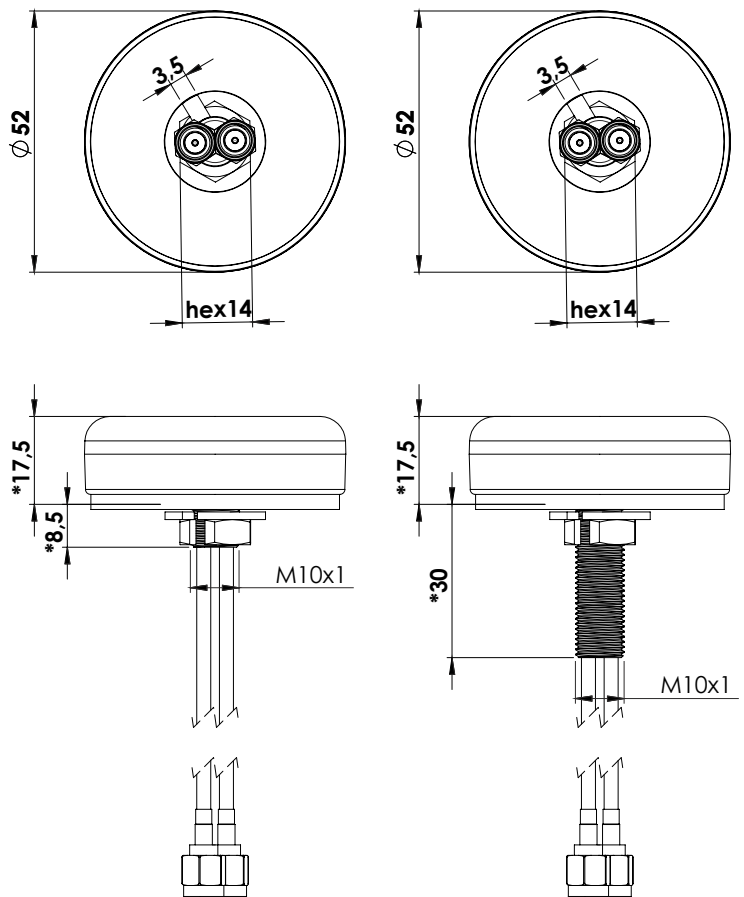
## 4. Antenna drawings

### Default Thread Option



**2J4700BGF-TH19**  
19 mm Thread  
Default Option

### Other Thread Options available



**2J4700BGF-TH8,5**  
8,5 mm Thread

**2J4700BGF-TH30**  
30 mm Thread

**\*Dimensions after mounting**  
**\*\*Max. Torque= 4 Nm**

## 5. Antenna Images

