antenna conceptor

Product Datasheet

2J8606BGF

Cellular, 2.4 GHz ISM and GNSS Screw Mount

Key Features

Cable 1: Cellular
- 824-960 MHz
- 1710-2170 MHz

Cable 2: 2.4 GHz ISM
- 2410-2490 MHz

Cable 3: GPS/GLONASS/QZSS/Galileo
- 1575-1610 MHz

Screw Mount
Anti-Rotation Mechanism
Ground Plane Dependent
Customizable Cable and Connector
Dimensions: 98 × 60 × 46 mm
Certificates: IP67, IP69



1. Antenna and electrical specifications

Cable 1

Parameters	Cellular Antenna	
Standards	2G and 3G	
Band (MHz)	850/900	1700/1800/1900/2100
Frequency (MHz)	824-960	1710-2170
Return Loss (dB)	~-7.4	~-10.7
VSWR	~3.0:1	~1.9:1
Efficiency (%)	~11.3	~20.4
Peak Gain (dBi)	~-5.1	~0.1
Average Gain (dB)	~-11.2	~-7.3
Impendance (Ohm)	50	
Polarisation	Linear	
Radiation Pattern	Omni-Directional	
Max. Input Power (W)	100	
Connector Type	SMA-Male Standard (Other Connectors Available)	
Cable Length	300 cm Standard (Any Cable Length Available)	
Cable Type	RG174 Standard (Other Cables Available)	

Cable 2

Parameters	2.4 GHz ISM Antenna
Standards	WiFi, BT, ZigBee, ISM
Band (MHz)	2.4 GHz
Frequency (MHz)	2410-2490
Return Loss (dB)	~-14.2
VSWR	~1.5:1
Efficiency (%)	~27.4
Peak Gain (dBi)	~0.4
Average Gain (dB)	~-5.6
Impendance (Ohm)	50
Polarisation	Linear
Radiation Pattern	Omni-Directional
Max. Input Power (W)	25
Connector Type	RP-SMA-Male Standard (Other Connectors Available)
Cable Length	300 cm Standard (Any Cable Length Available)
Cable Type	RG174 Standard (Other Cables Available)

Antenna Measurement Conditions:

Mounted on 30 x 30 cm Metal Plate

200 cm of RG174100 Cable

Measured in Certified CTIA 3D Anechoic Chamber

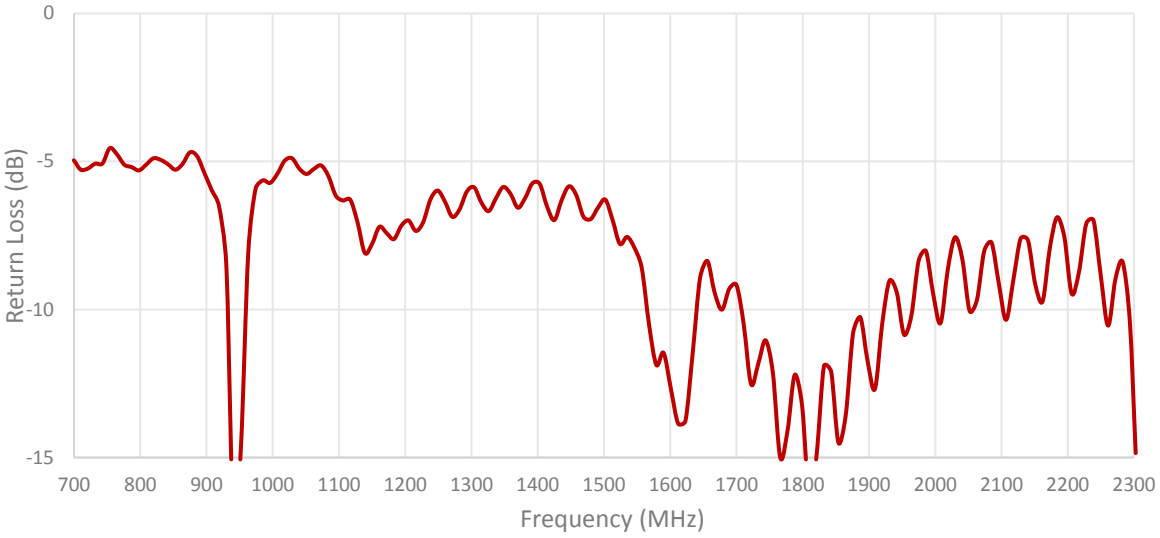
Cable 3		
Parameters	**GPS/GLONASS Antenna**	
Standard	GPS / GLONASS	
Band (MHz)	1575	1602
Frequency(MHz)	1575.42	1598-1610
Return Loss (dB)	<-14	
VSWR	<1.2:1	
Impedance	50	
Radiation Pattern	Hemispherical	
Polarization	RHCP	
Saw Filter	Pre-Filter	
Active Gain (dB)	26 @ 3V / 27dB @ 5V	
Noise Figure (dB)	1.2	
Voltage (V)	2.7 – 5.5	
Current (mA)	15 - 25	
Power Consumption (mW)	40 - 137	
Connector Type	SMA-Male Standard (Other Connectors Available)	
Cable Length	300 cm Standard (Any Cable Length Available)	
Cable Type	RG174 Standard (Other Cables Available)	

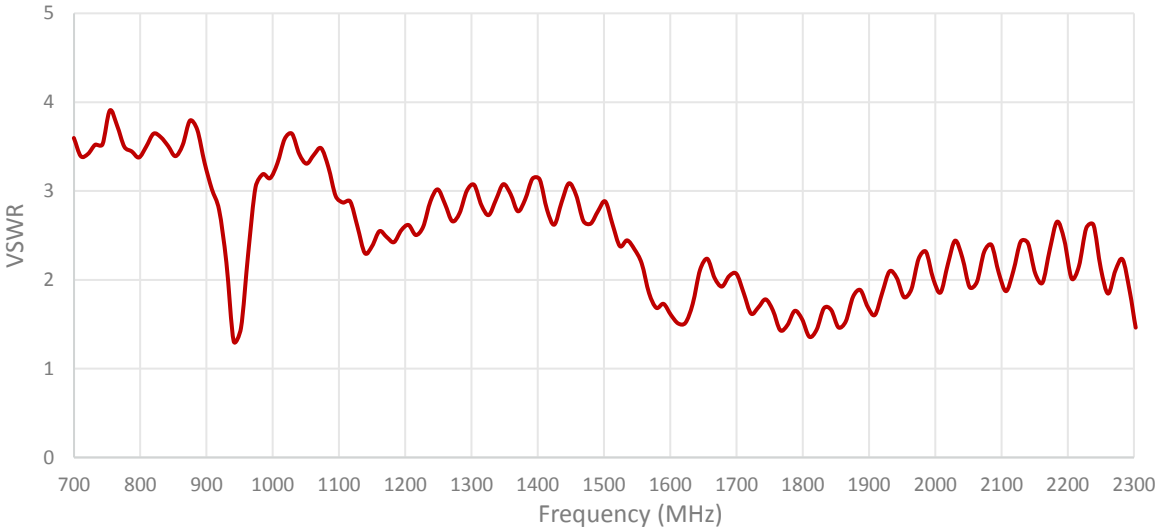
2. Mechanical and environmental specifications

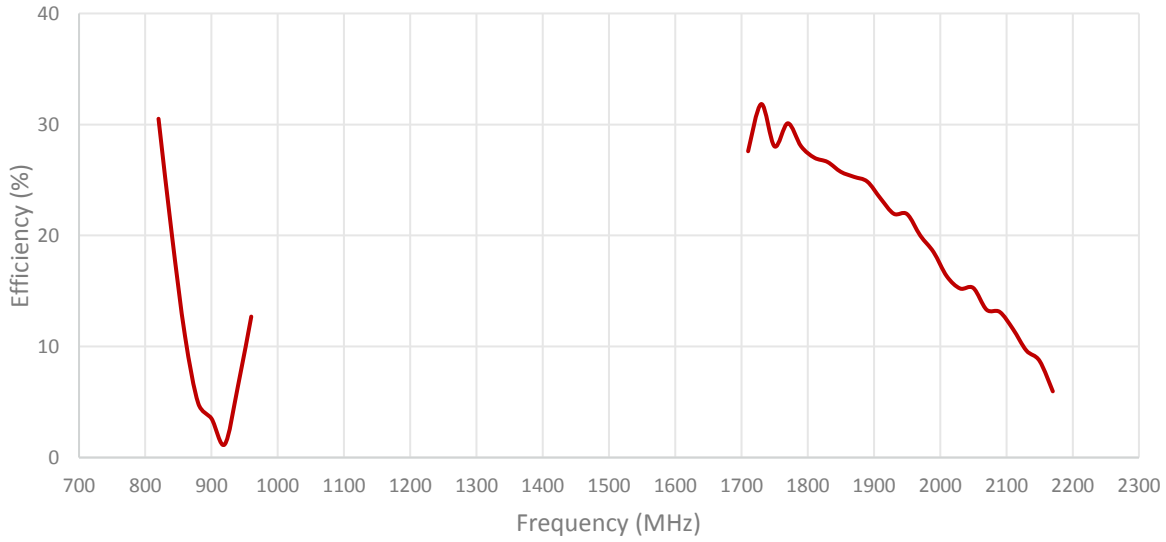
Specifications	**2J8606BGF**
Mounting Type	Screw Mount
Dimensions (mm)	98 × 60 × 46
Max. Tighten Torque (Nm)	6 Nm
Radome	ASA
Radome color	Black
Antenna Base	Zamak
Gasket	TPE
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Substance Compliance	RoHS
Certificates	IP67, IP69

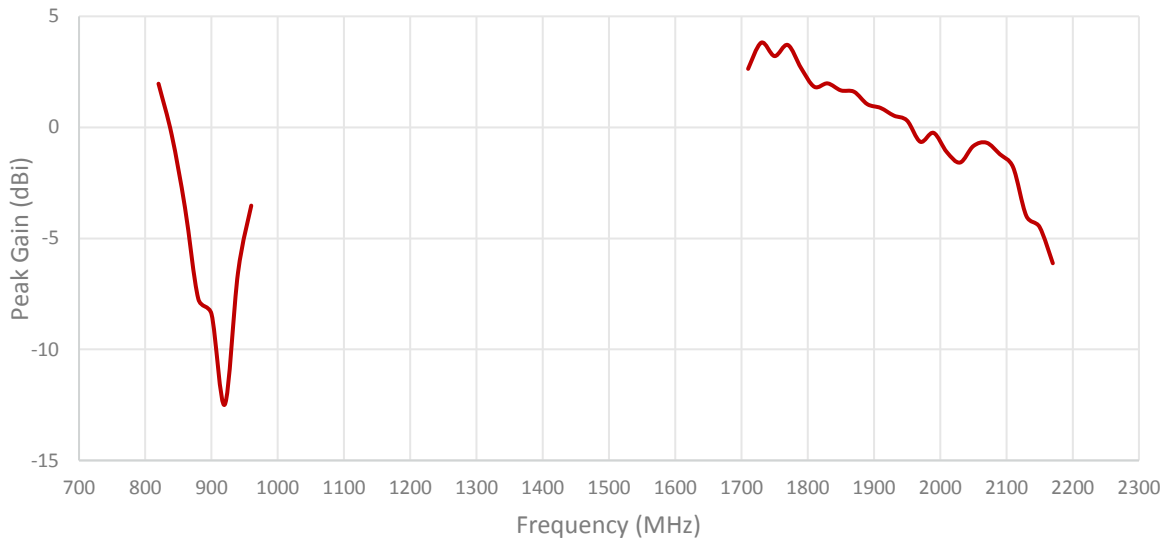
3. Antenna parameters

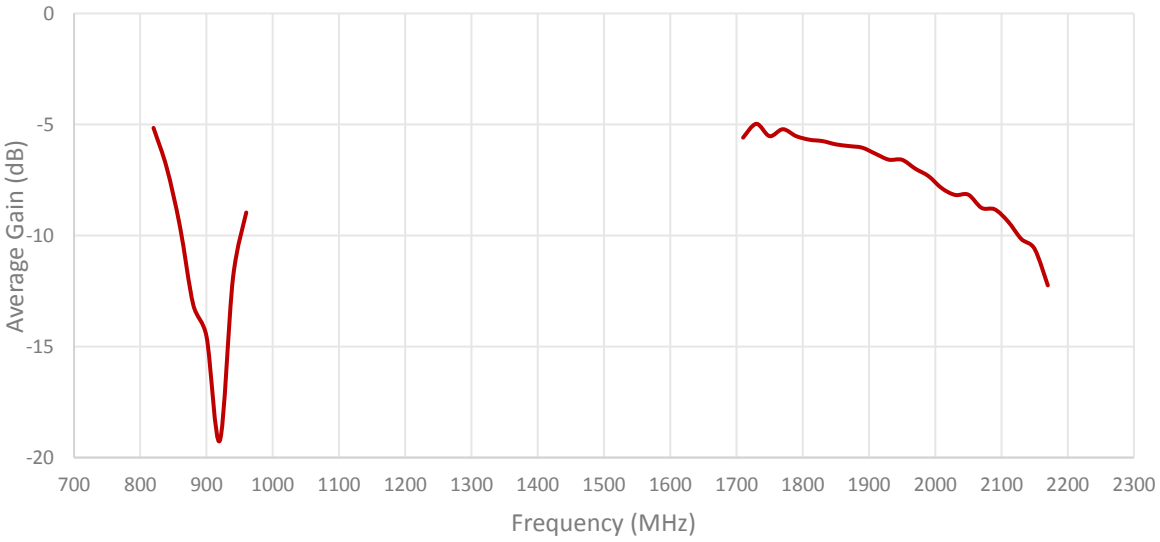
Cable 1: Cellular



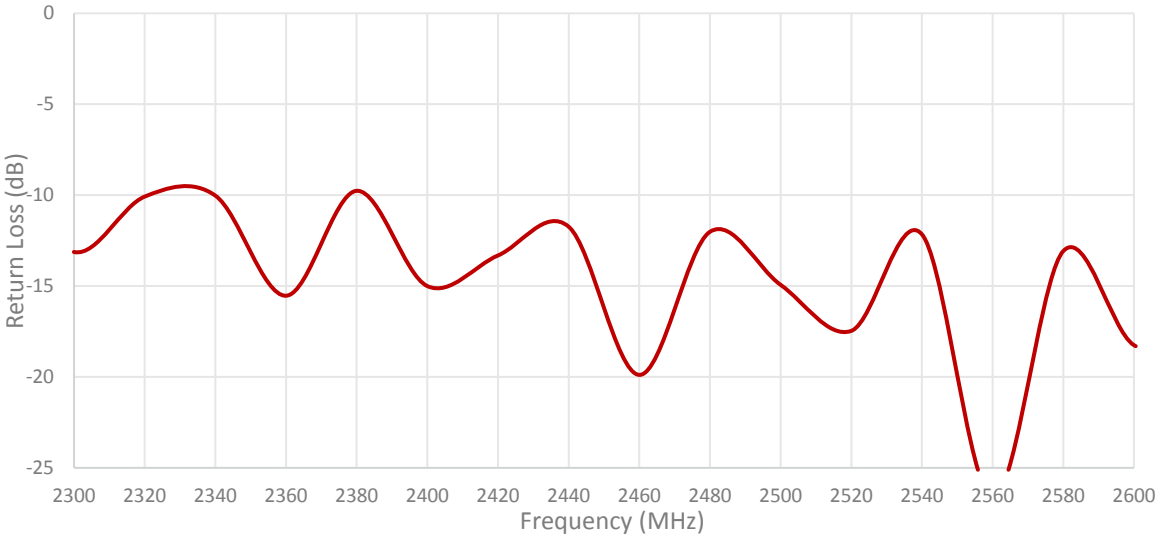


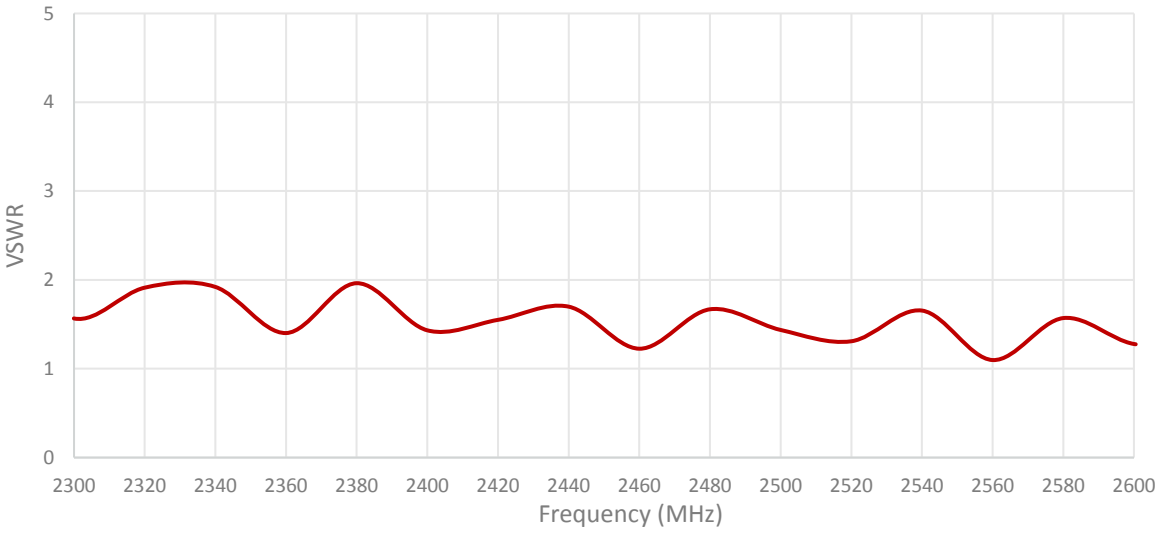

40
30
20
10
0
Efficiency (%)
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
Frequency (MHz)

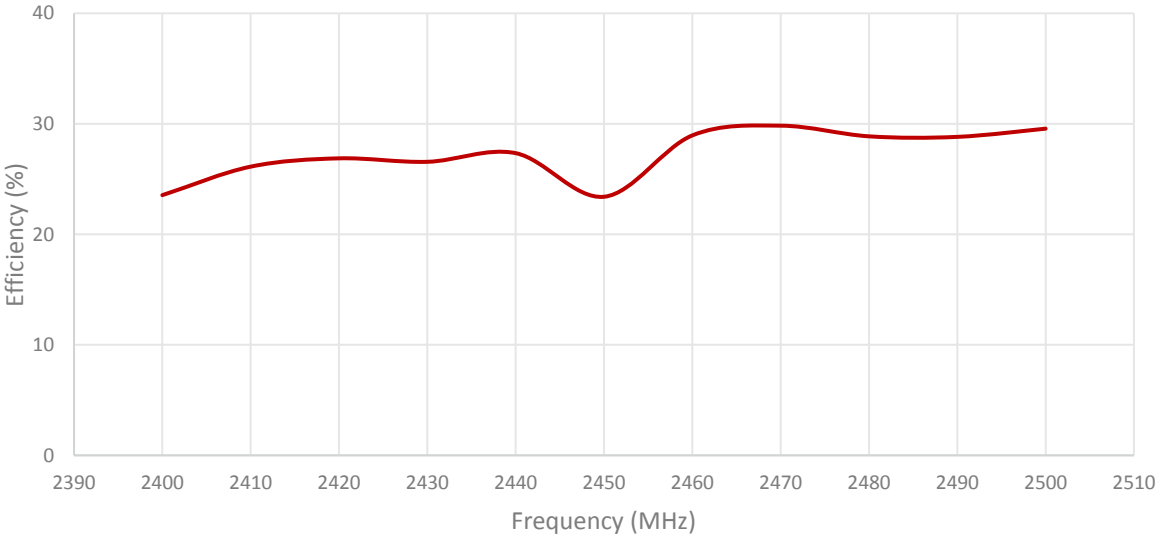

5
0
-5
-10
-15
Peak Gain (dBi)
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
Frequency (MHz)

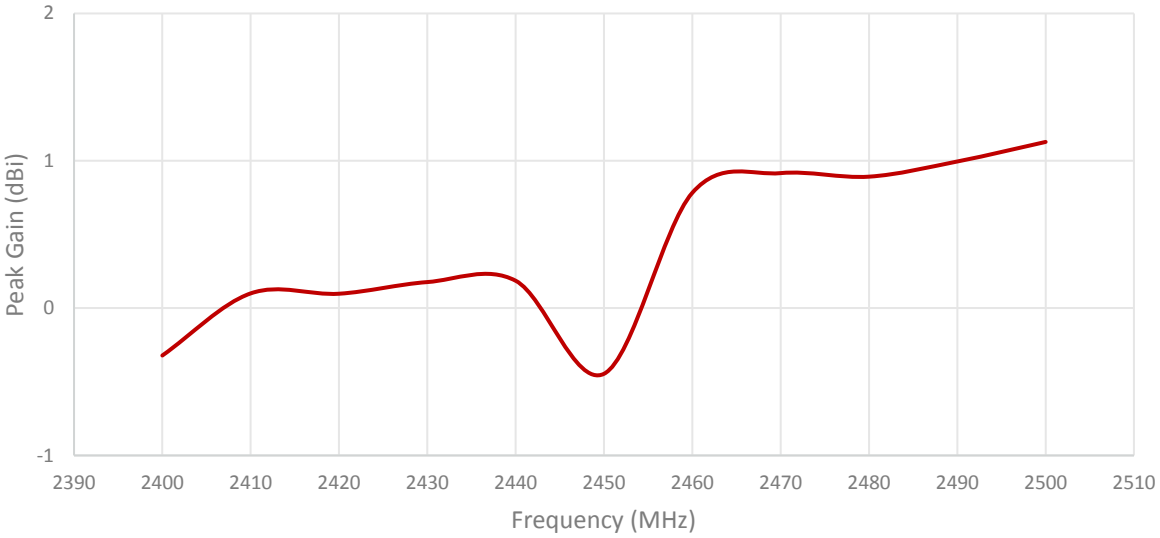


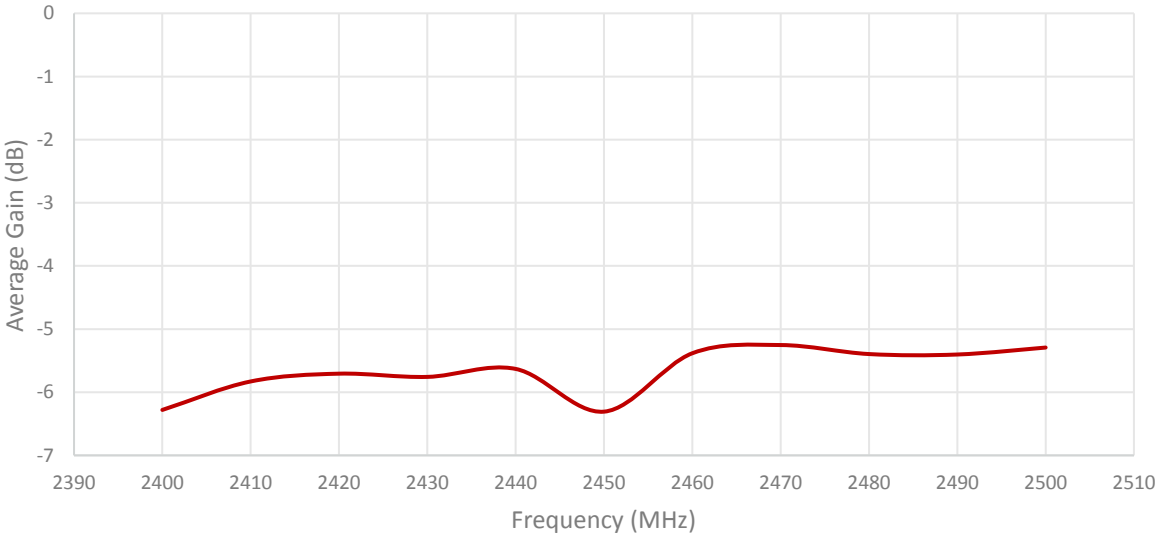
Cable 2: 2.4 GHz ISM

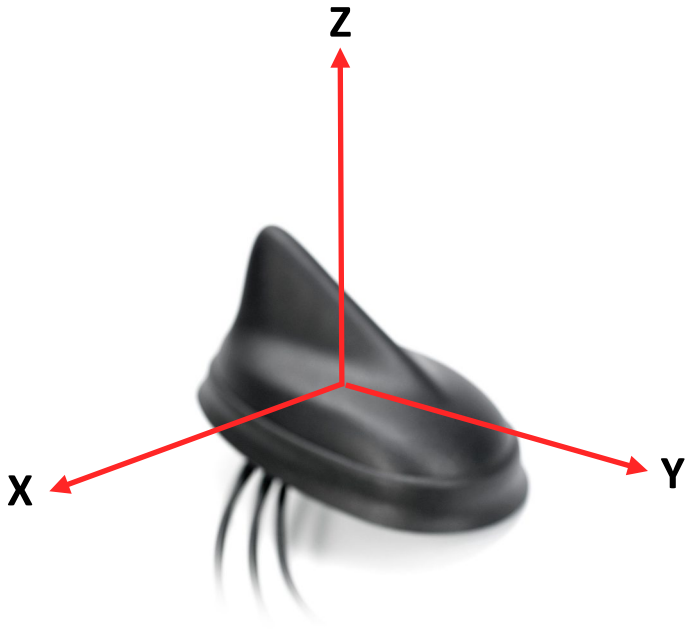



VSWR
5
4
3
2
1
0
2300
2320
2340
2360
2380
2400
2420
2440
2460
2480
2500
2520
2540
2560
2580
2600
Frequency (MHz)


Efficiency (%)
40
30
20
10
0
2390
2400
2410
2420
2430
2440
2450
2460
2470
2480
2490
2500
2510
Frequency (MHz)

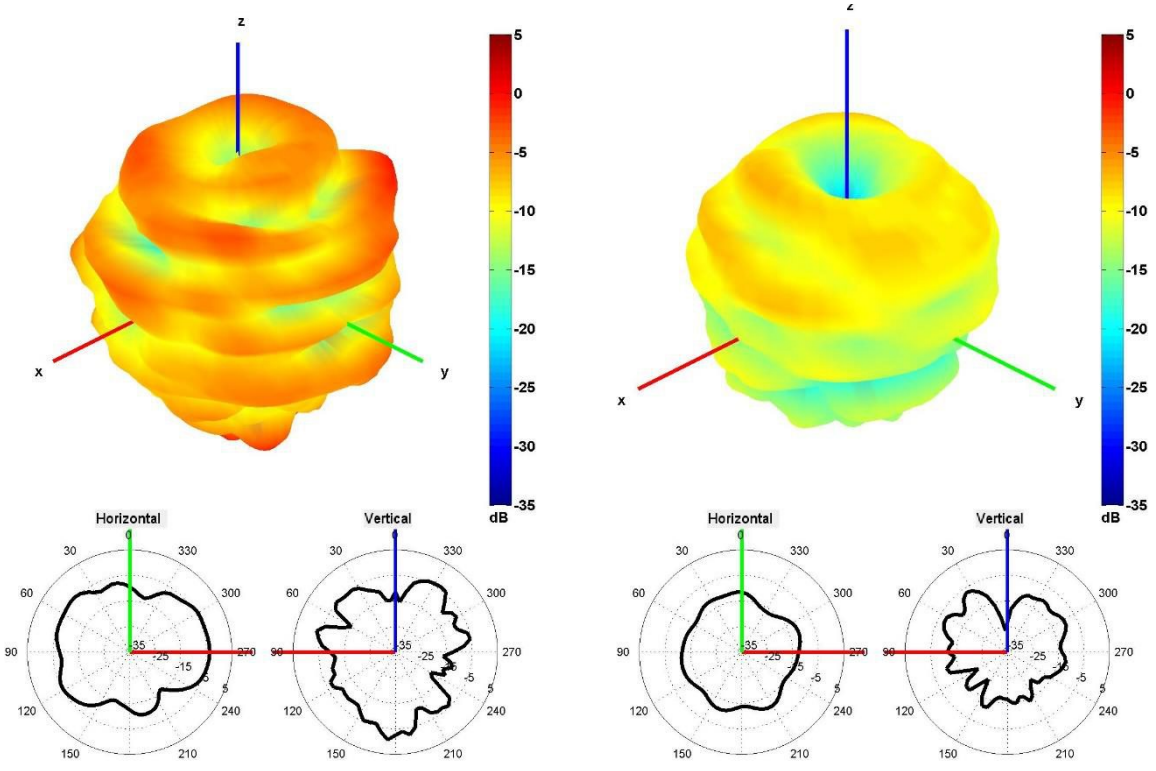

2
1
0
-1
Peak Gain (dBi)
2390
2400
2410
2420
2430
2440
2450
2460
2470
2480
2490
2500
2510
Frequency (MHz)


0
-1
-2
-3
-4
-5
-6
-7
Average Gain (dB)
2390
2400
2410
2420
2430
2440
2450
2460
2470
2480
2490
2500
2510
Frequency (MHz)

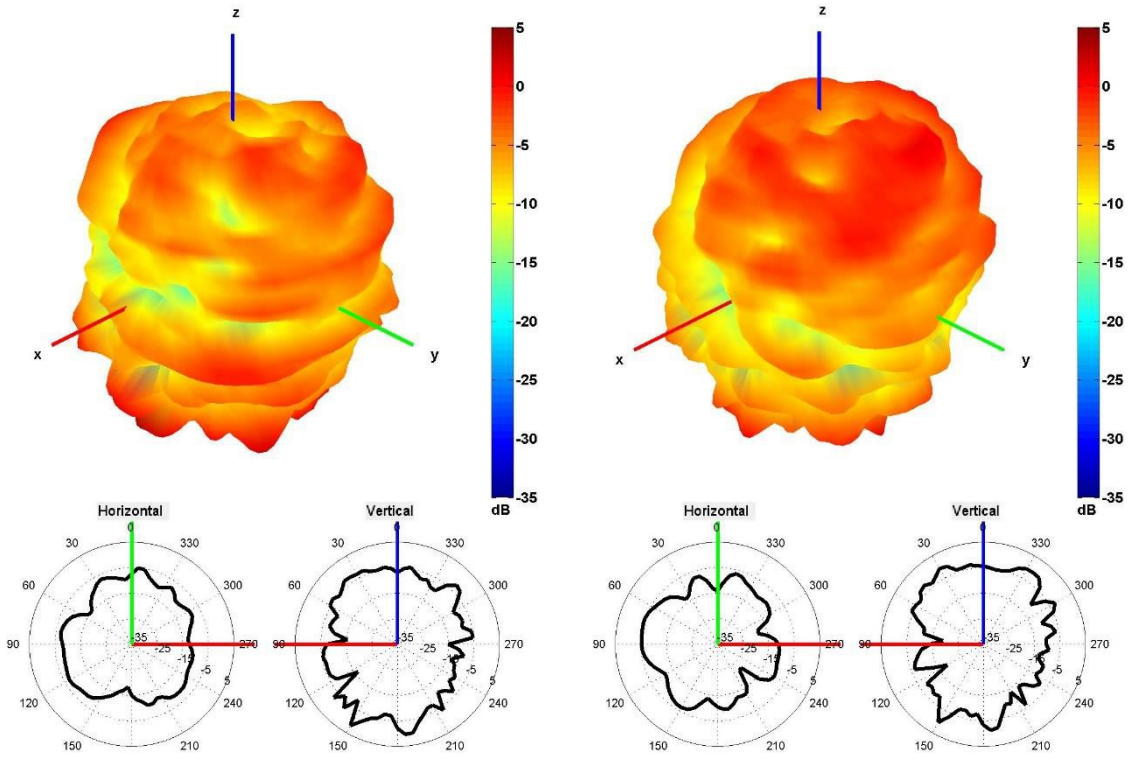


Radiation pattern reference

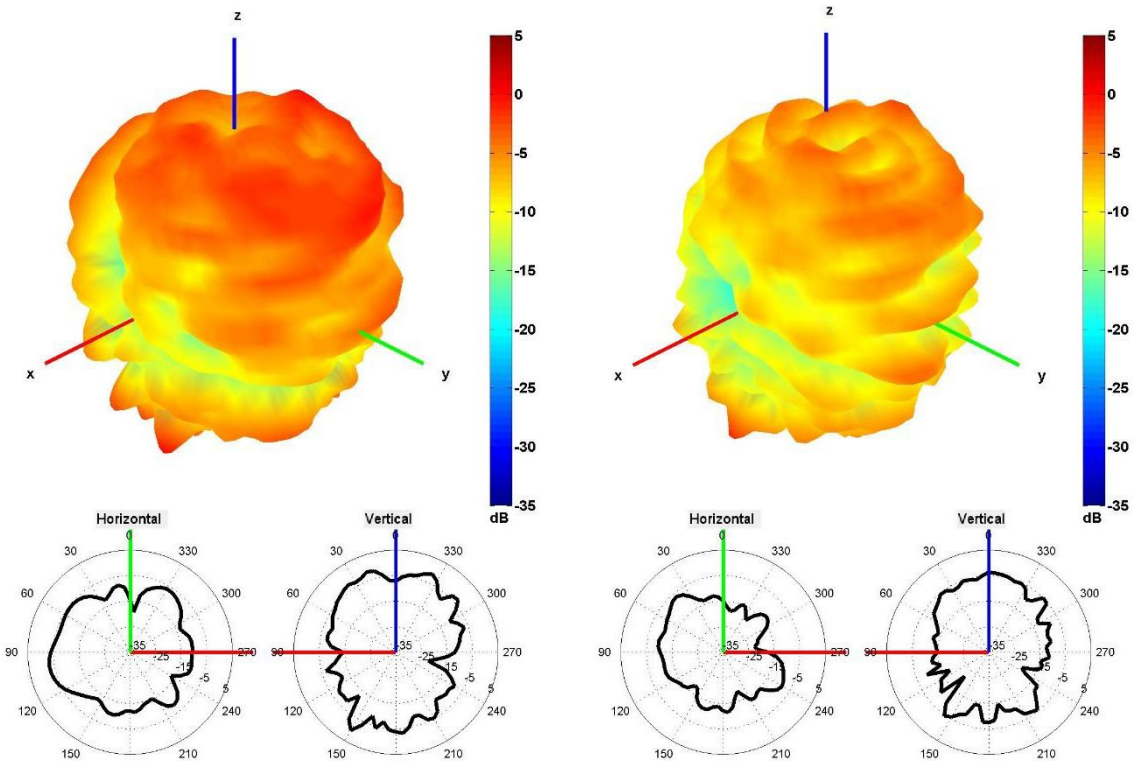
Cable 1: CELLULAR



850 and 940 MHz Radiation pattern

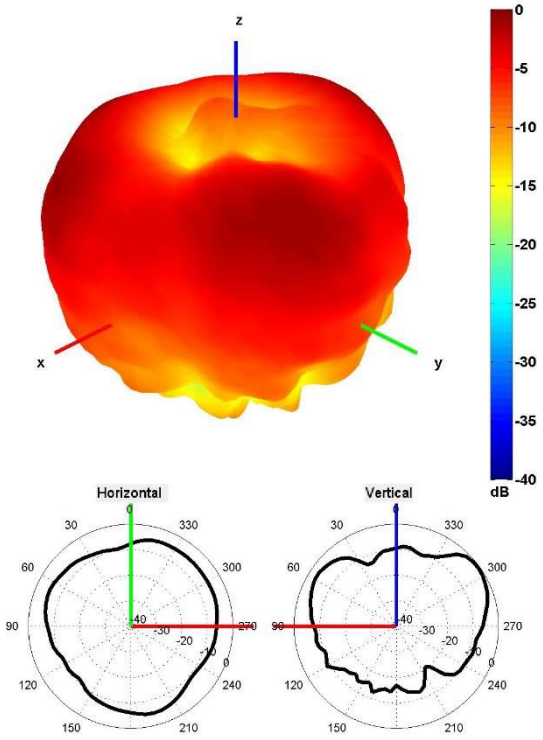


1750 and 1850 MHz Radiation pattern



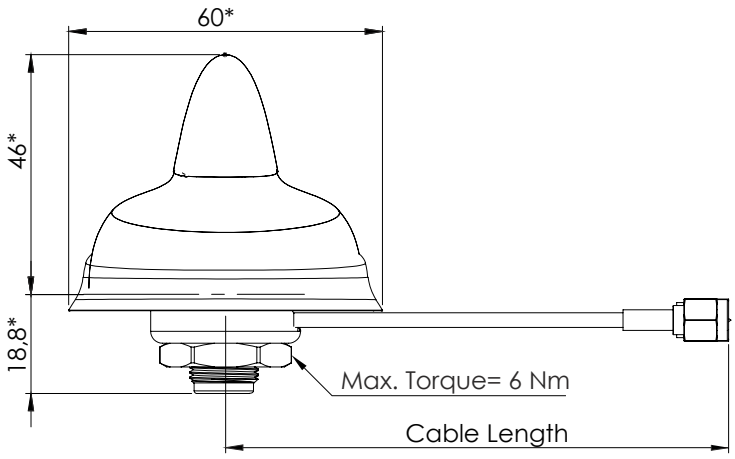
1950 and 2100 MHz Radiation pattern

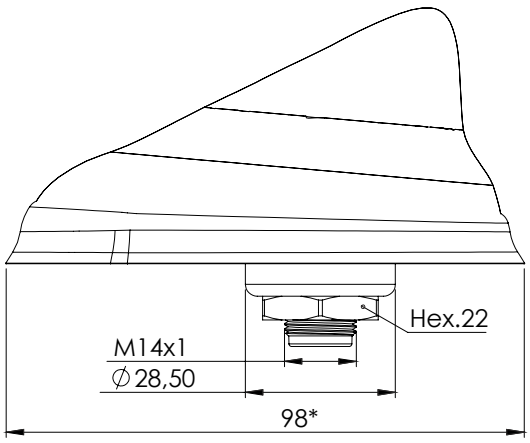
Cable 2: 2.4 GHz ISM

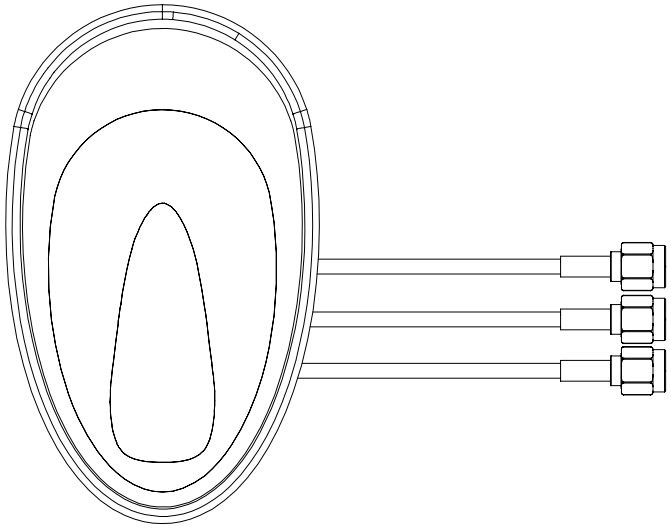


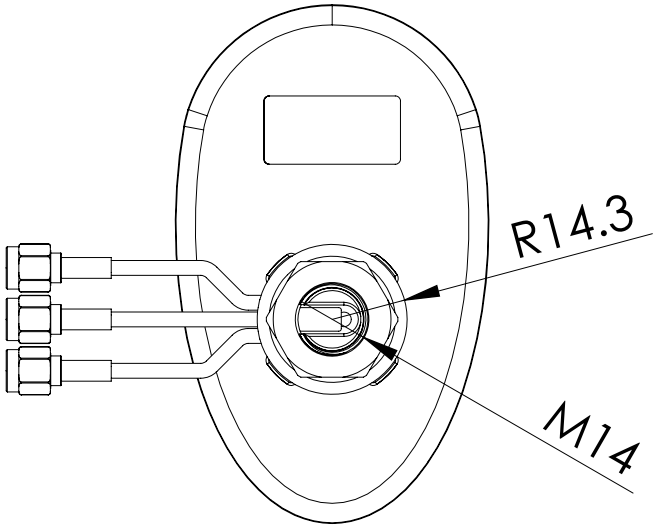
2450 MHz Radiation pattern

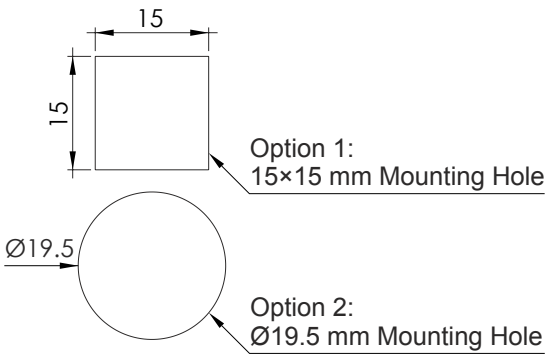
4. Antenna drawings











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

5. Antenna Images





