

# SPECIFICATION

## Patent Pending

- Part Number : **FXP611.07.0092C**
- Product Name : **“The Cloud”** Flexible Polymer GPS/GLONASS/BeiDou Cloud Shape Antenna
- Features : 1559-1610 MHz  
38mm\*37mm\*0.15mm size  
92mm Cable  
IPEX MHFI Connector (U.FL compatible)
- RoHS Compliant**



# 1. INTRODUCTION

This convenient “peel and stick” flexible polymer antenna is designed for applications which require high positioning accuracy using GPS, Glonass, Galileo and even BeiDou functions on modern day GNSS systems. The antenna is designed to be mounted directly to plastic (e.g. ABS enclosure of a wireless device) and has been designed in a way that makes it extremely resistant to detuning affects caused by the device environment.

# 2. SPECIFICATION

ELECTRICAL	
ANTENNA	
STANDARD	GPS-GLONASS-BeiDou
Operation Frequency (MHz)	1559-1610
Polarization	Linear
Impedance (Ohms)	50
Max VSWR	1.2:1
Peak Gain (dBi)	3
Efficiency (%)	80
Average Gain (dB)	-1
Radiation Properties	Omni-directional
Max Input Power (Watts)	5

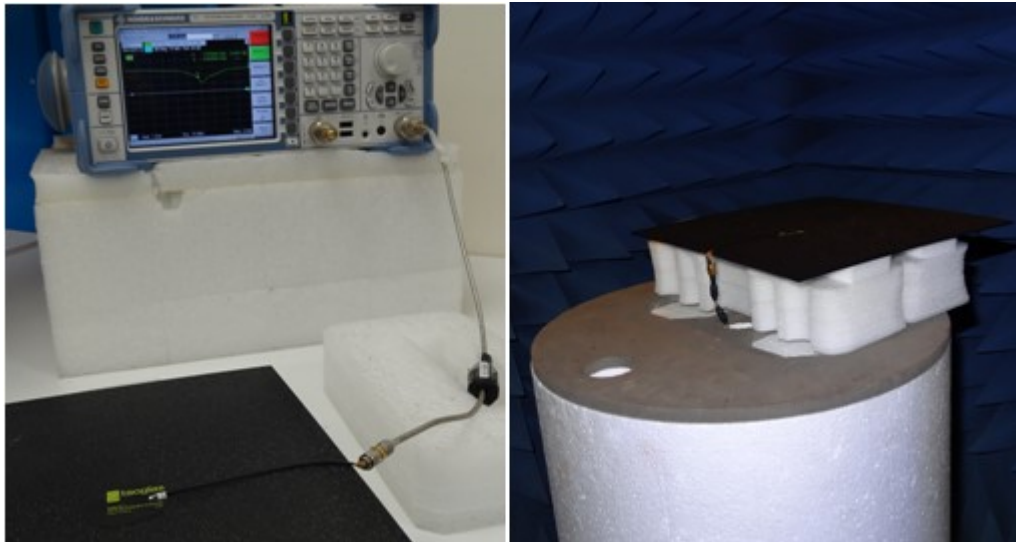
\* The FXP611 antenna performance was measured with 30X30 cm ABS Plastic.

MECHANICAL	
Antenna	
Standard	GPS-GLONASS-BeiDou
Dimensions (mm)	38x37x0.15
Required Space (mm)	40x40x0.2
Material	Flexible Polymer
Connector	MHFI(U.FL Compatible)
Weight(g)	0.9

\*\* The FXP611 antenna requires at least 1cm clearance to metal or to the main device ground plane

ENVIRONMENTAL	
Antenna	
Standard	GPS-GLONASS-BeiDou
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 105°C
Relative Humidity	40% to 95%
RoHS Compliant	Yes

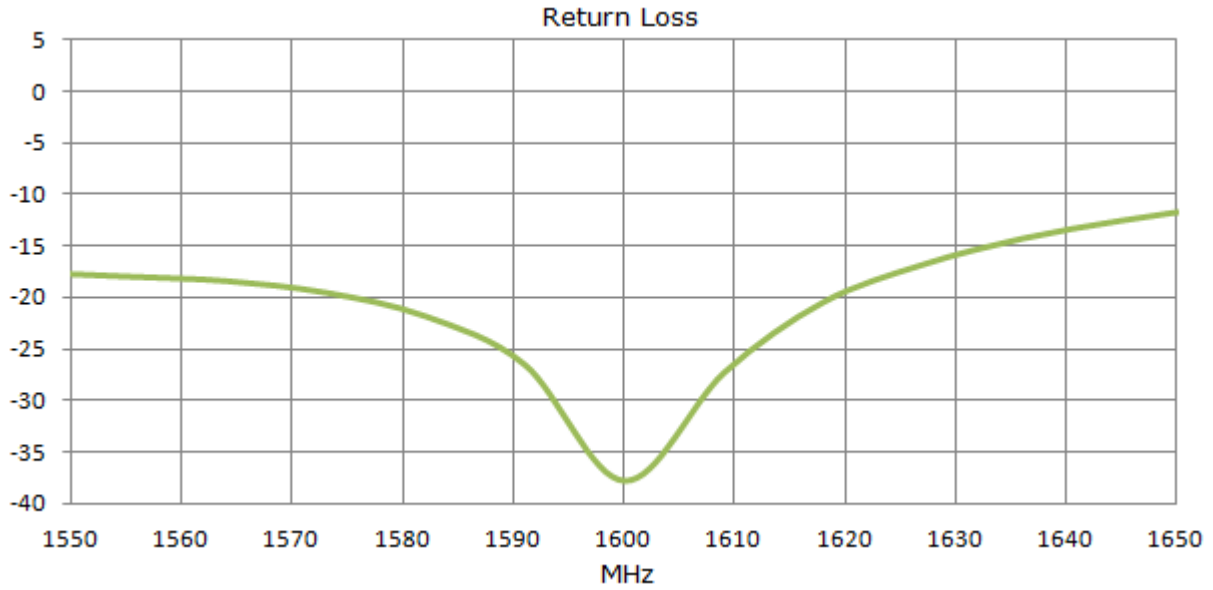
### 3. TEST SET UP



**Figure 1:** Impedance, isolation and correlation coefficient measurements (left hand) and peak gain, average gain, efficiency and radiation pattern measurements (right hand)

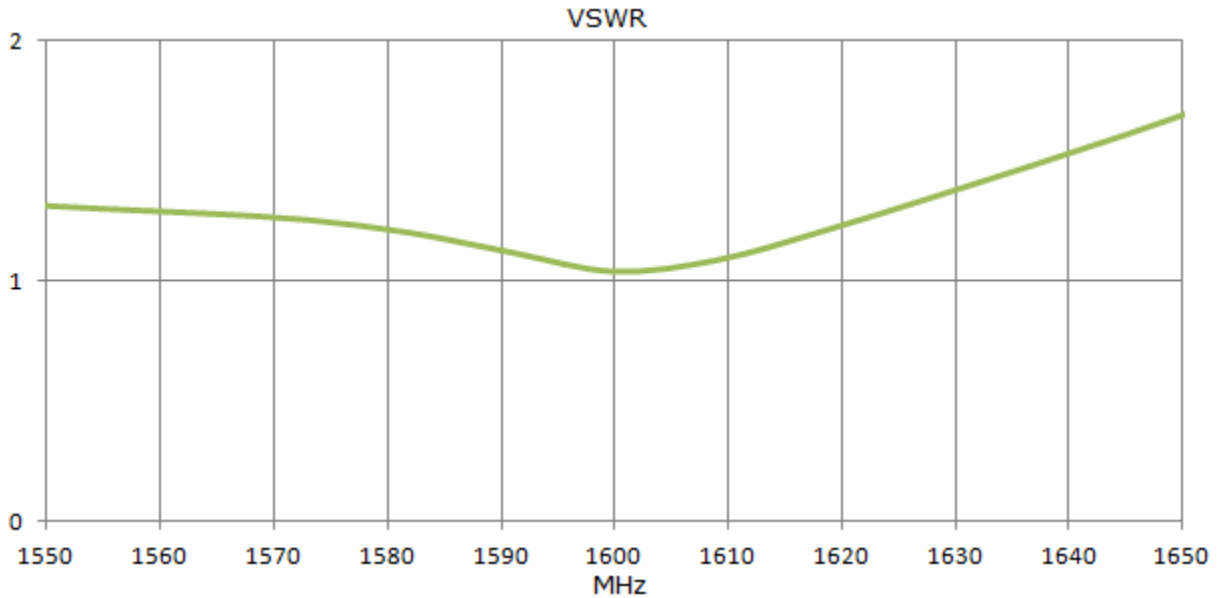
## 4. ANTENNA PARAMETERS

### 4.1. Return Loss



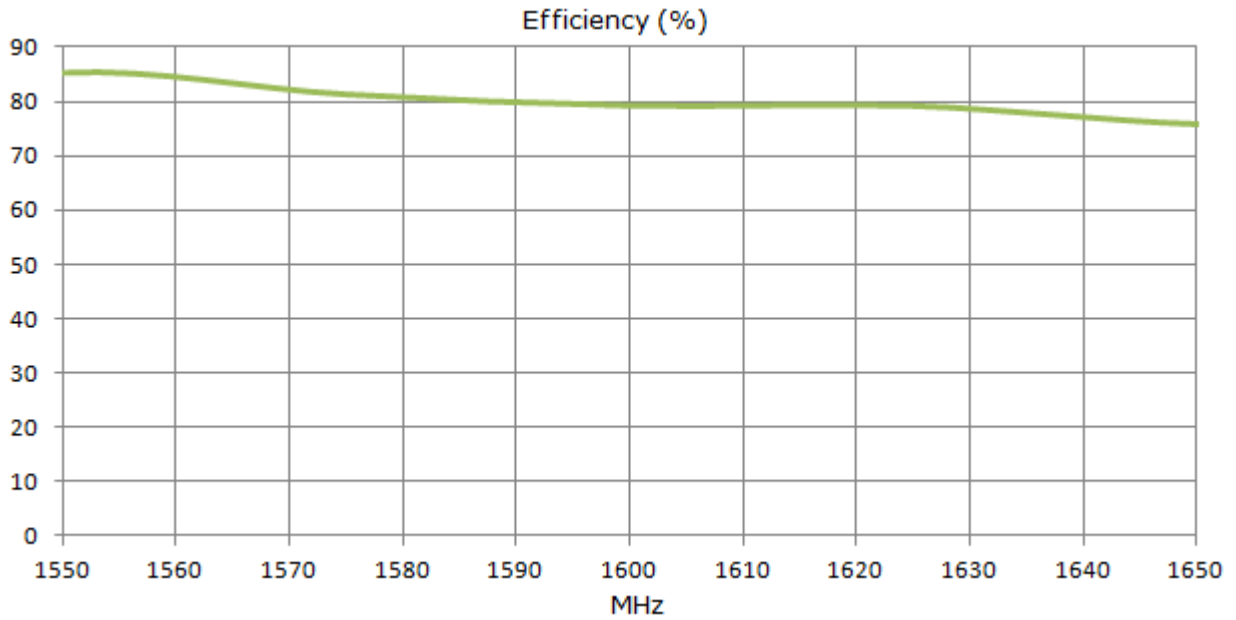
**Figure 2:** Return loss of FXP611 GPS/GLONASS/BeiDou Antenna

### 4.2. VSWR



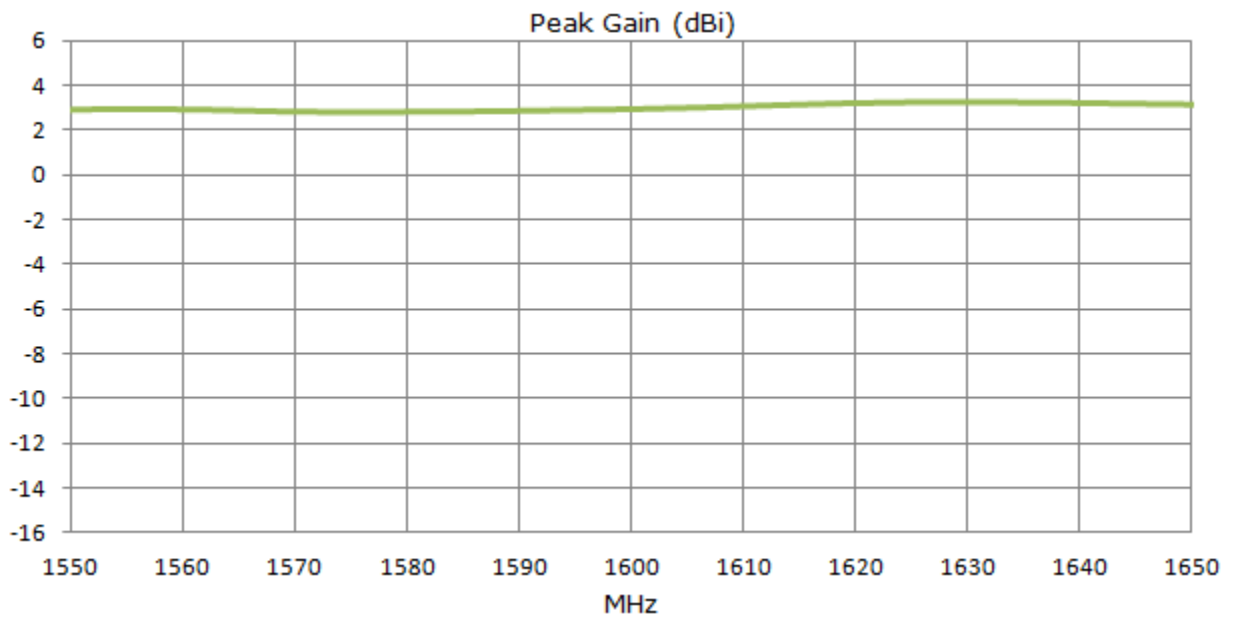
**Figure 3:** VSWR of FXP611 GPS/GLONASS/BeiDou Antenna

### 4.3. Efficiency



**Figure 4:** Efficiency of FXP611 GPS/GLONASS/BeiDou Antenna

### 4.4. Peak Gain



**Figure 5:** Peak Gain of FXP611 GPS/GLONASS/BeiDou Antenna

## 4.5. Average Gain

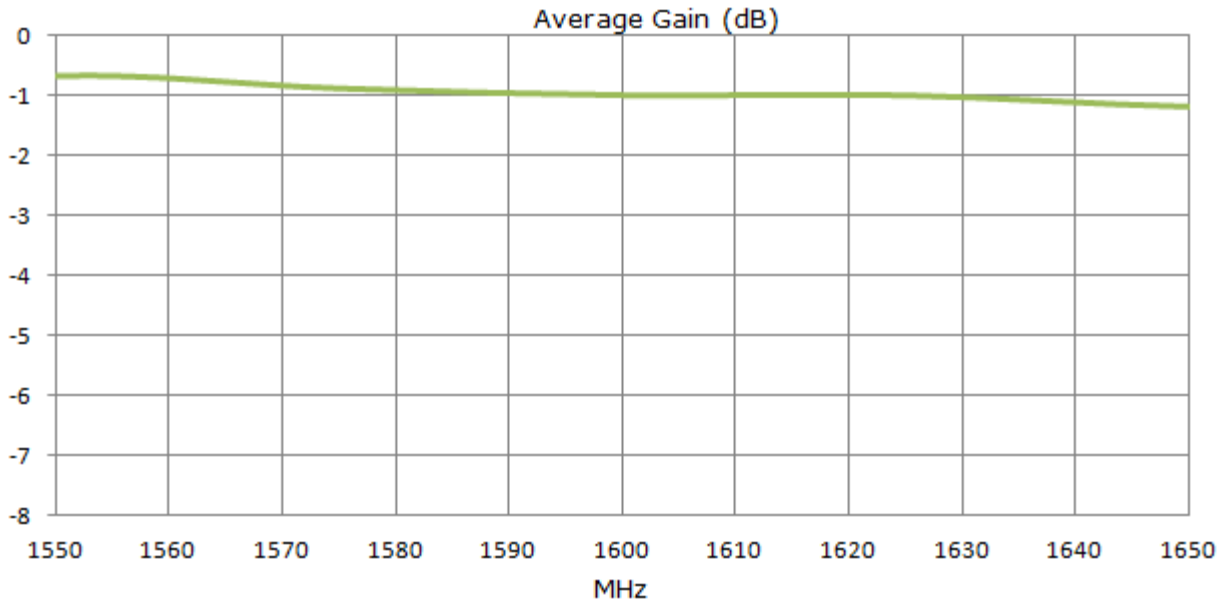


Figure 6: Average Gain of FXP611 GPS/GLONASS/BeiDou Antenna

## 4.6. Radiation Pattern

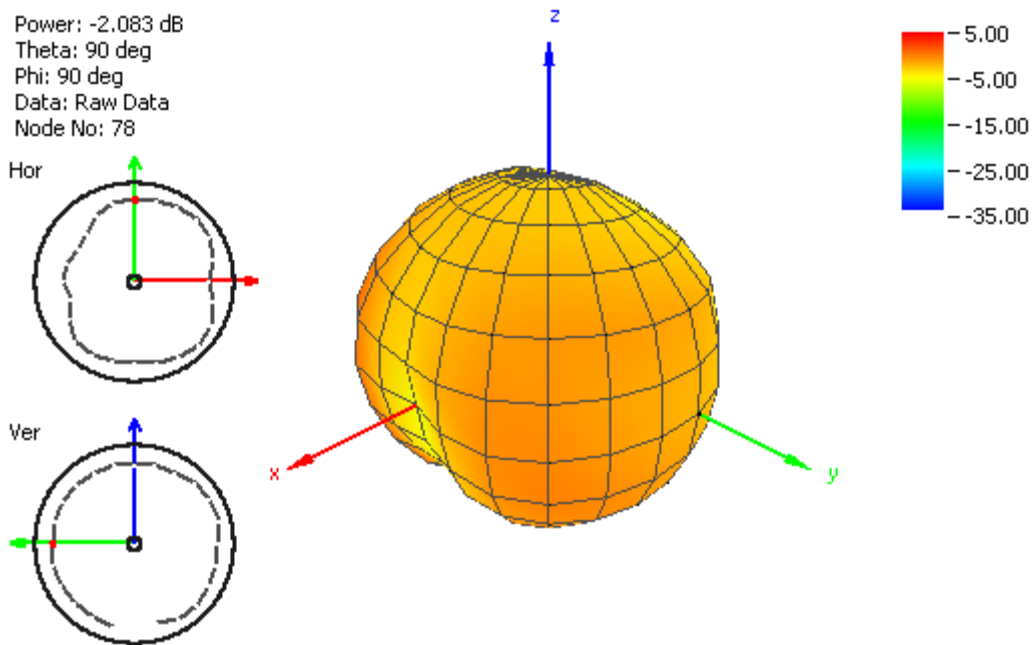
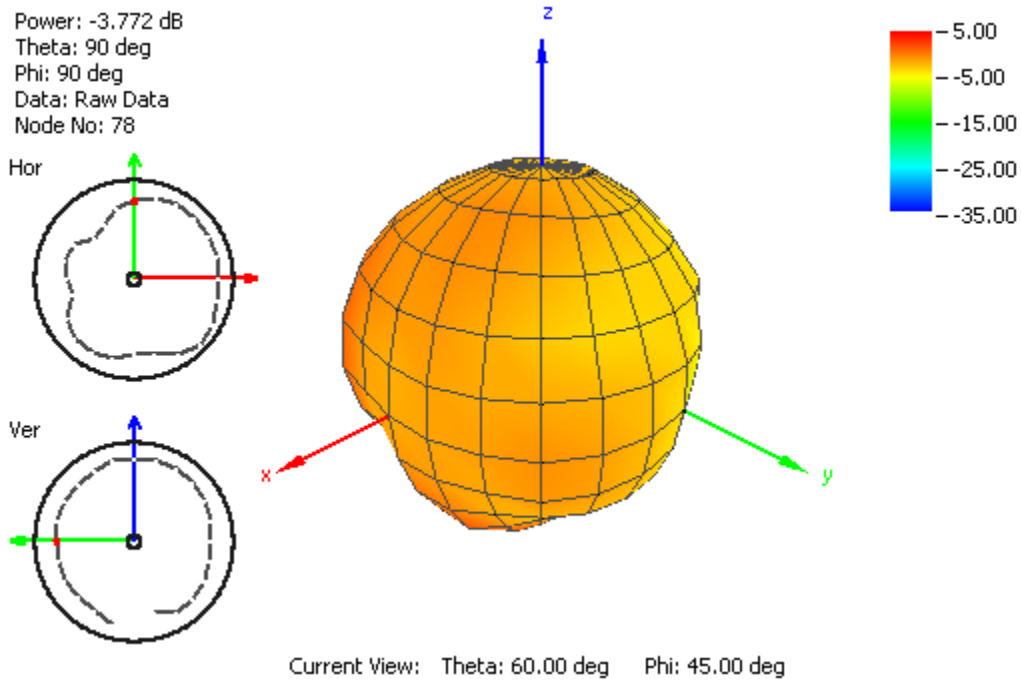
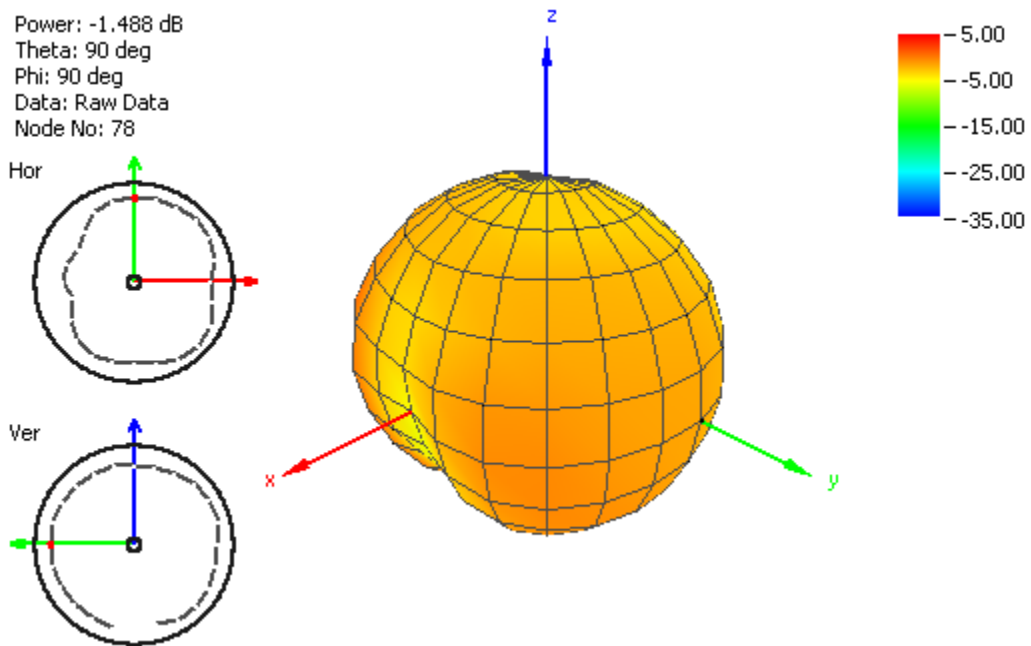


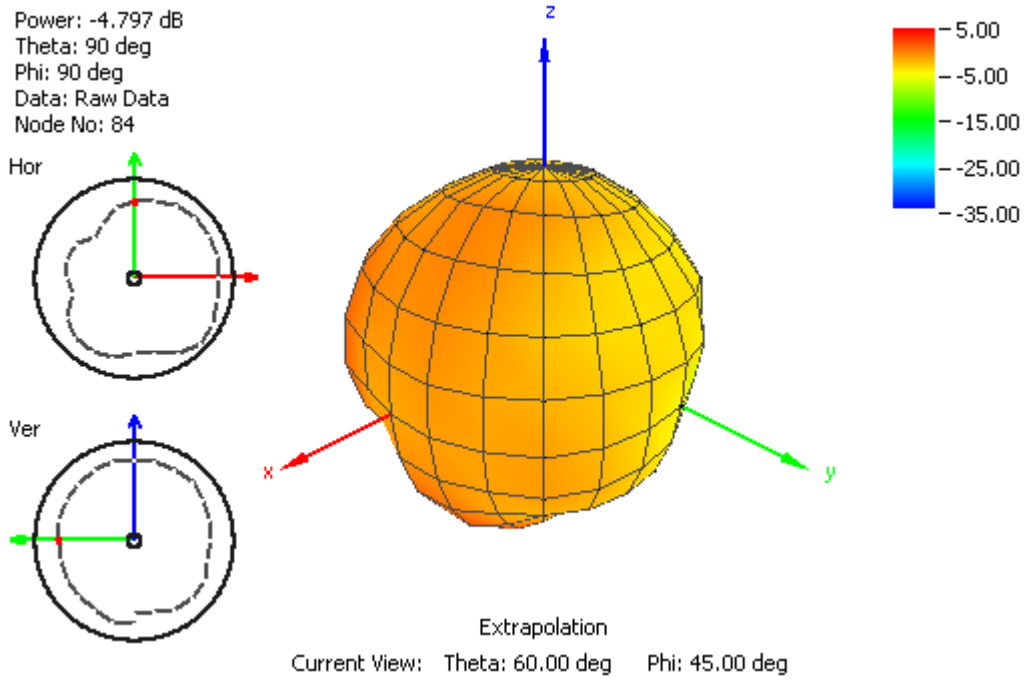
Figure 7: Radiation Pattern of FXP611 GPS/GLONASS/BeiDou Antenna at 1561MHz



**Figure 8:** Radiation Pattern of FXP611 GPS/GLONASS/BeiDou Antenna at 1575MHz



**Figure 9:** Radiation Pattern of FXP611 GPS/GLONASS/BeiDou Antenna at 1589MHz

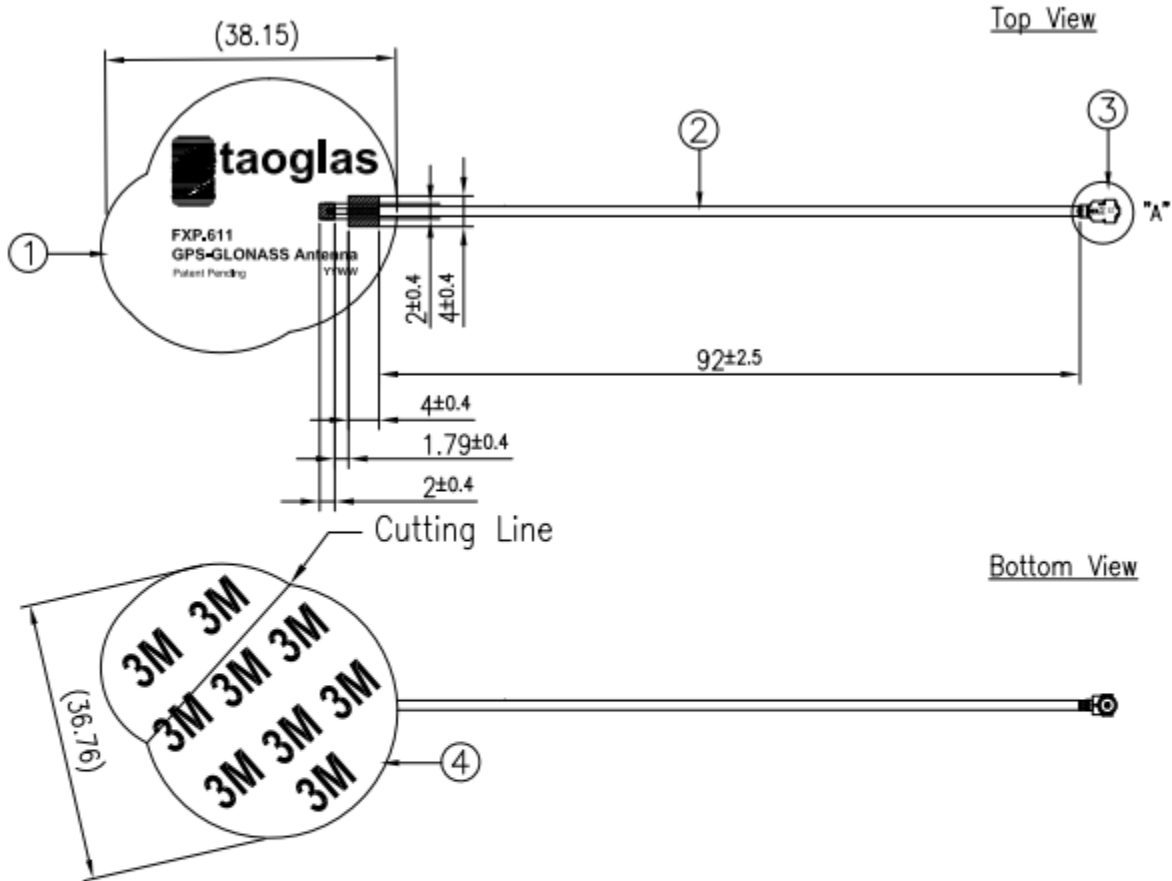


**Figure 10:** Radiation Pattern of FXP611 GPS/GLONASS/BeiDou Antenna at 1610MHz



# 5. MECHANICAL DRAWING

## 5.1 Antenna

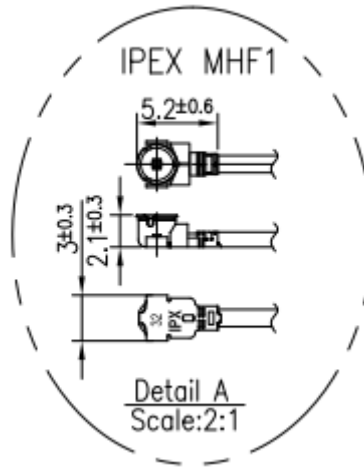


**NOTES:**

- 1.No dregs or insufficient soldering. Solder thickness 0.3~1.7mm
- 2.The solder must be smooth and full to the edges of the pad. The solder must not extend outside of the pad area.
- 3.The connector position has special orientation to the PCB as per drawing.
- 4.All material must be RoHS compliant.
- 5.Open/short QC, VSWR required.
- 6.Soldered area. ████

	Name	P/N	Material	Finish	QTY
1	FXP611 FPCB	100112H020033A	Polymer	Black	1
2	1.37 Coaxial Cable	300515C010000A	FEP	Black	1
3	IPEX MHF1	204111I000013A	Brass	Au Plated	1
4	Double-Sided Adhesive	100112H020033A	3M 467	Brown Liner	1

## 5.2 Connector



## 6. Packaging

