

SPECIFICATION

Patent Pending

Part Number	:	FXP611.07.0092C
Product Name	:	"The Cloud" Flexible Polymer GPS/GLONASS/GALILEO/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	GPS-GLONASS-GALILEO-BeiDou
STANDARD	
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	GPS-GLONASS-GALILEO-BeiDou
Standard	
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	GPS-GLONASS-GALILEO-BeiDou
Standard	
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 105°C
Relative Humidity	40% to 95%
RoHS Compliant	Yes

3. Test Setup

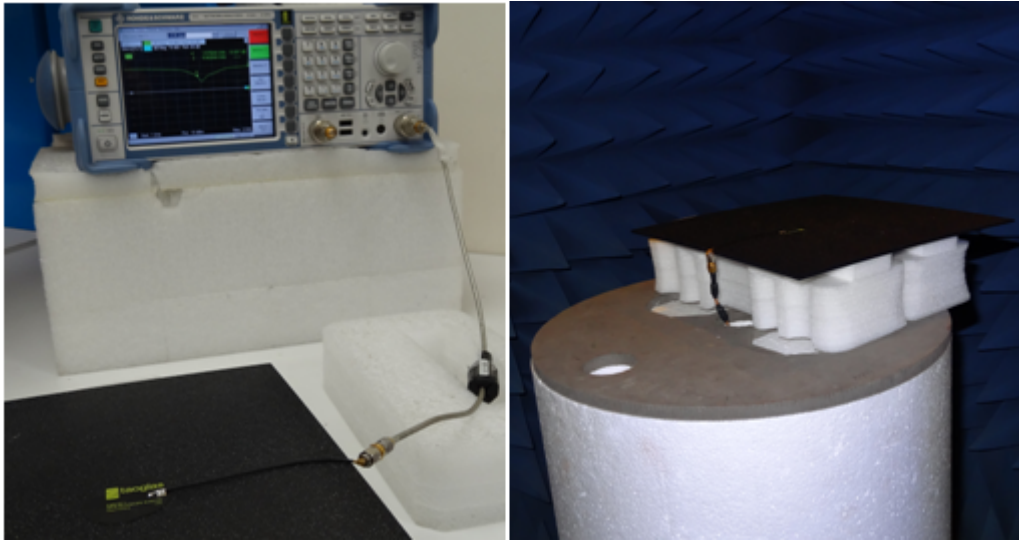


Figure 1: Impedance, isolation and correlation coefficient measurements (left hand) and peak gain, average gain, efficiency and radiation pattern measurements (right hand)

4. Antenna Parameters

4.1. Return Loss

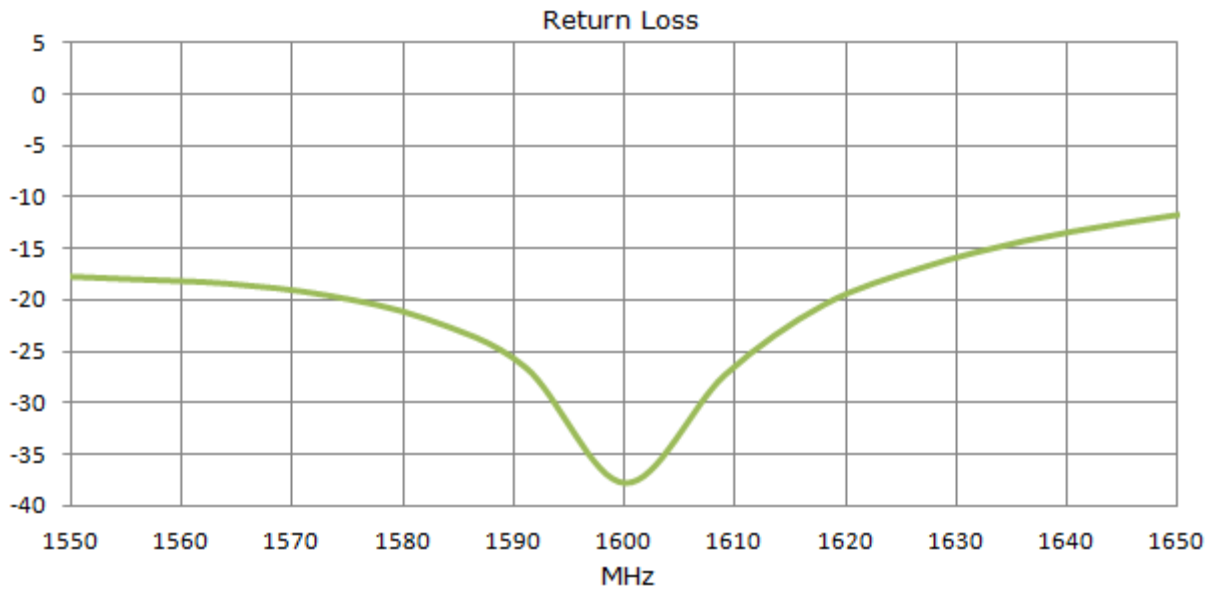


Figure 2: Return loss of FXP611 GPS/GLONASS/GALILEO/BeiDou Antenna

4.2. VSWR

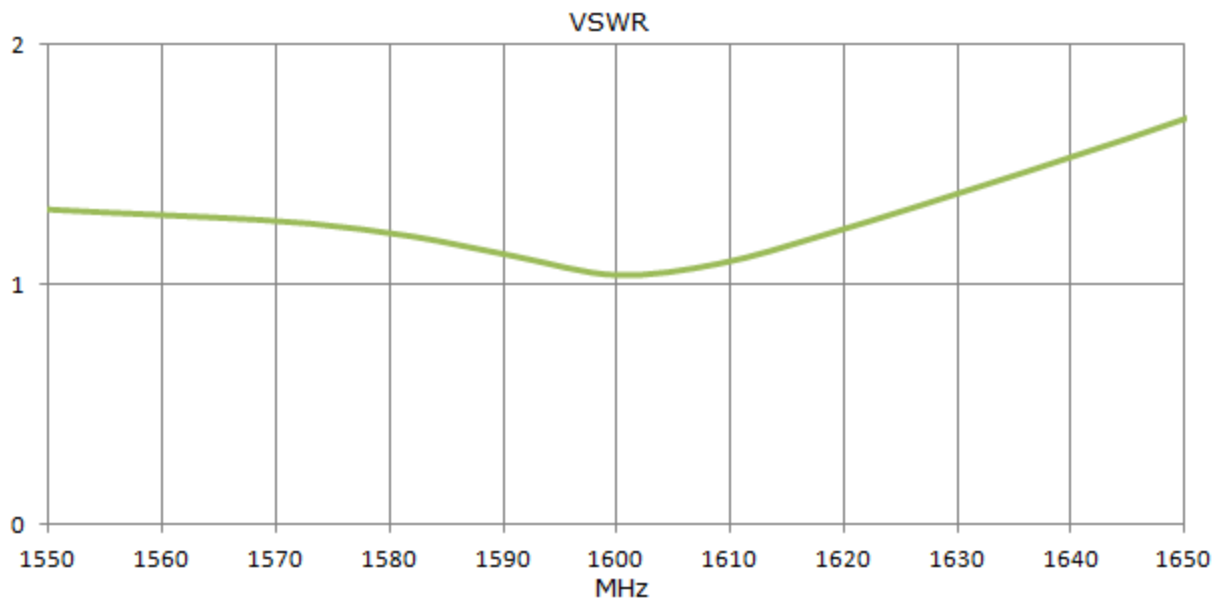


Figure 3: VSWR of FXP611 GPS/GLONASS/GALILEO/BeiDou Antenna

4.3. Efficiency

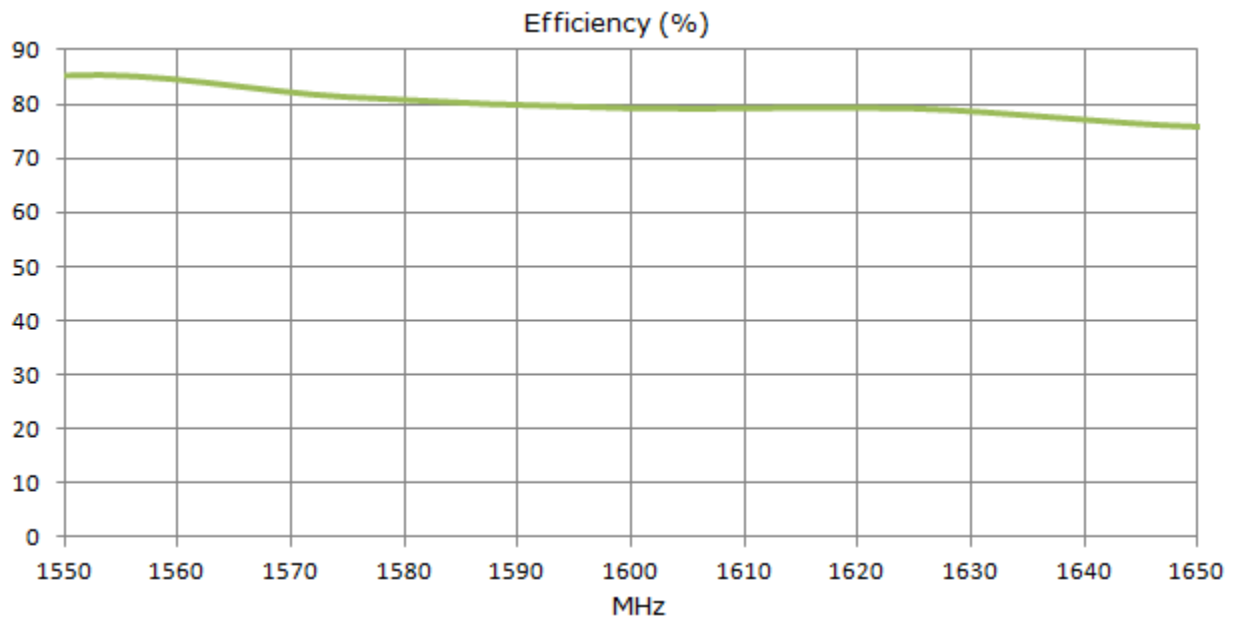


Figure 4: Efficiency of FXP611 GPS/GLONASS/GALILEO/BeiDou Antenna

4.4. Peak Gain

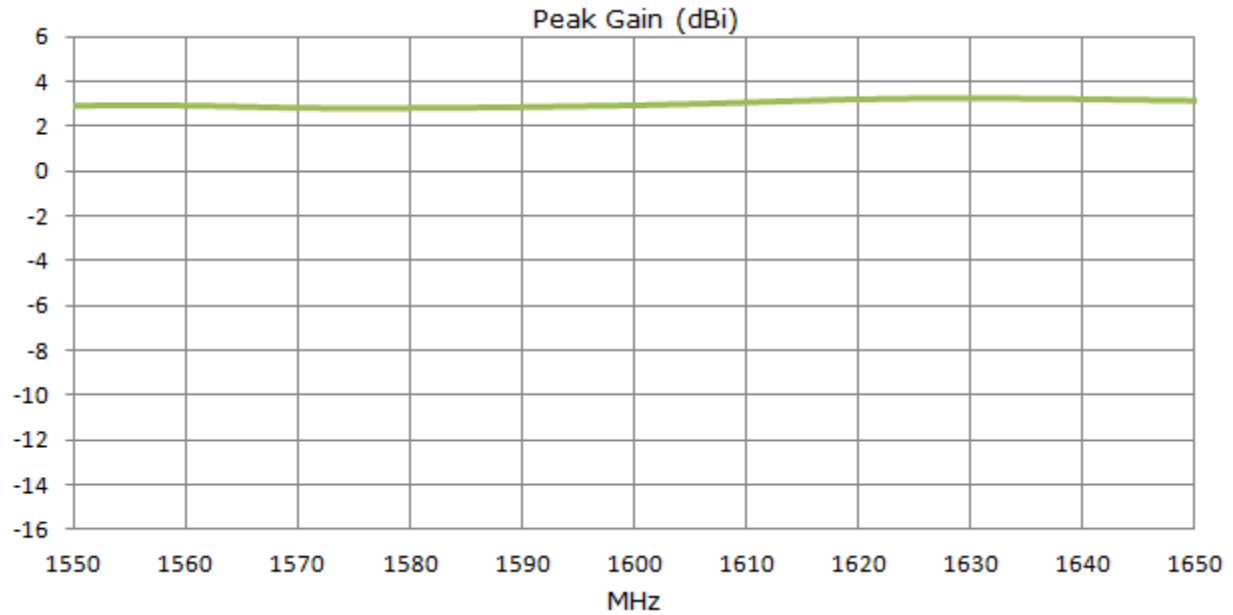


Figure 5: Peak Gain of FXP611 GPS/GLONASS/GALILEO/BeiDou Antenna

4.5. Average Gain

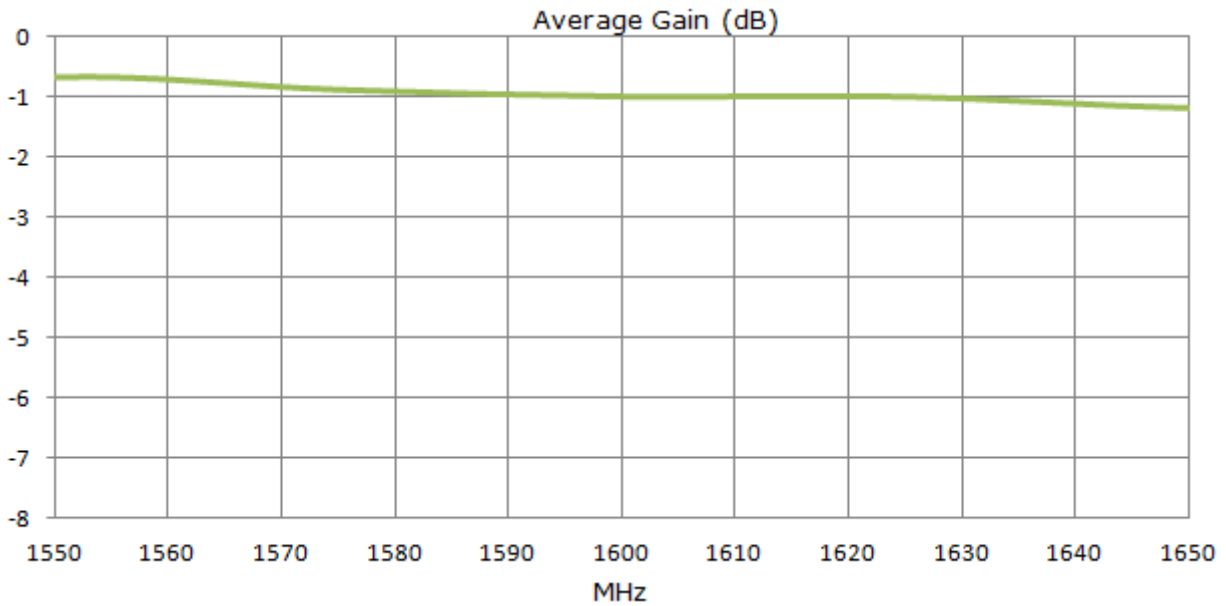


Figure 6: Average Gain of FXP611 GPS/GLONASS/GALILEO/BeiDou Antenna

4.6. Radiation Pattern

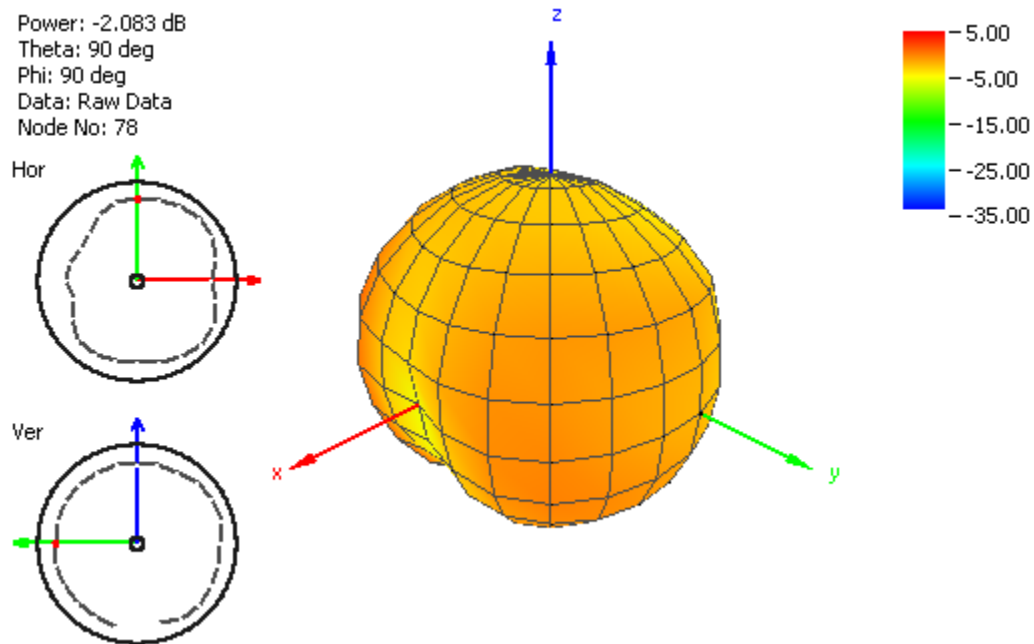
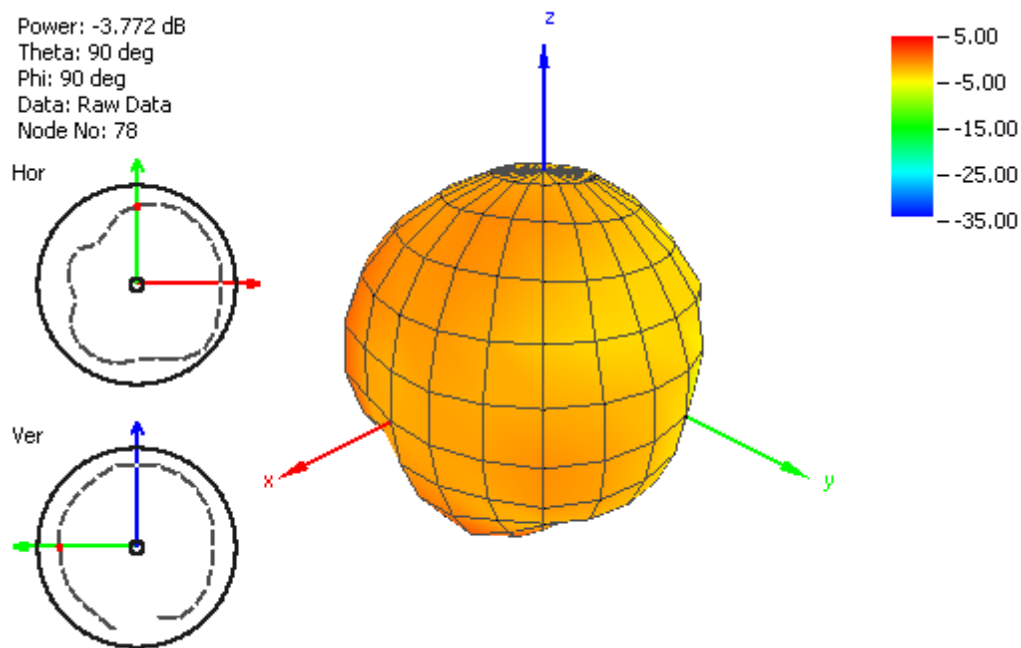


Figure 7: Radiation Pattern of FXP611 GPS/GLONASS/GALILEO/BeiDou Antenna at 1561MHz



Current View: Theta: 60.00 deg Phi: 45.00 deg

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

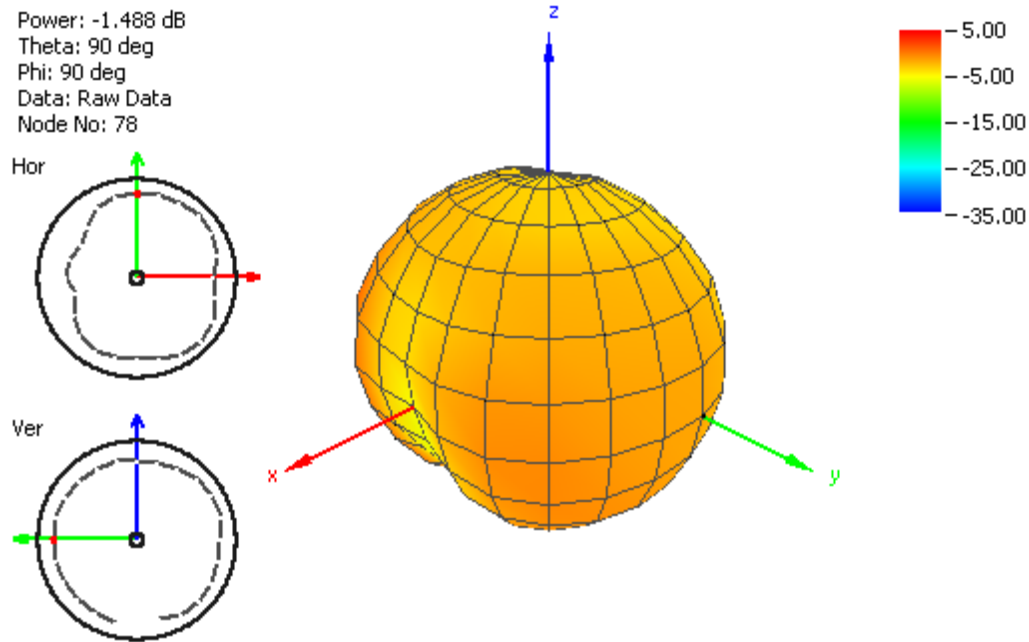


Figure 9: Radiation Pattern of FXP611 GPS/GLONASS/GALILEO/BeiDou Antenna at 1589MHz

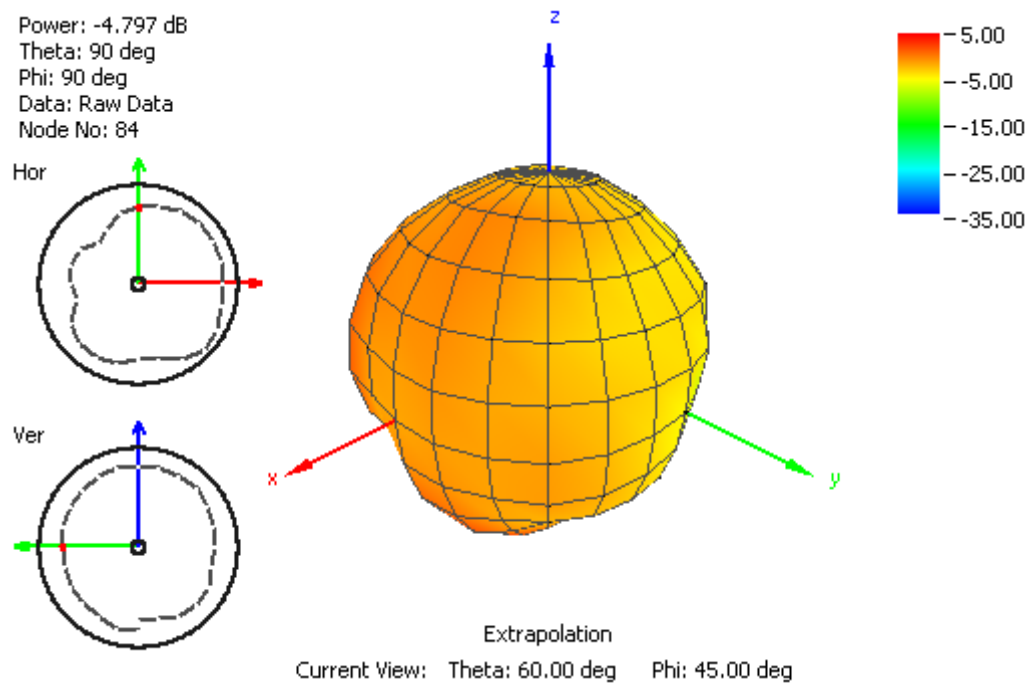
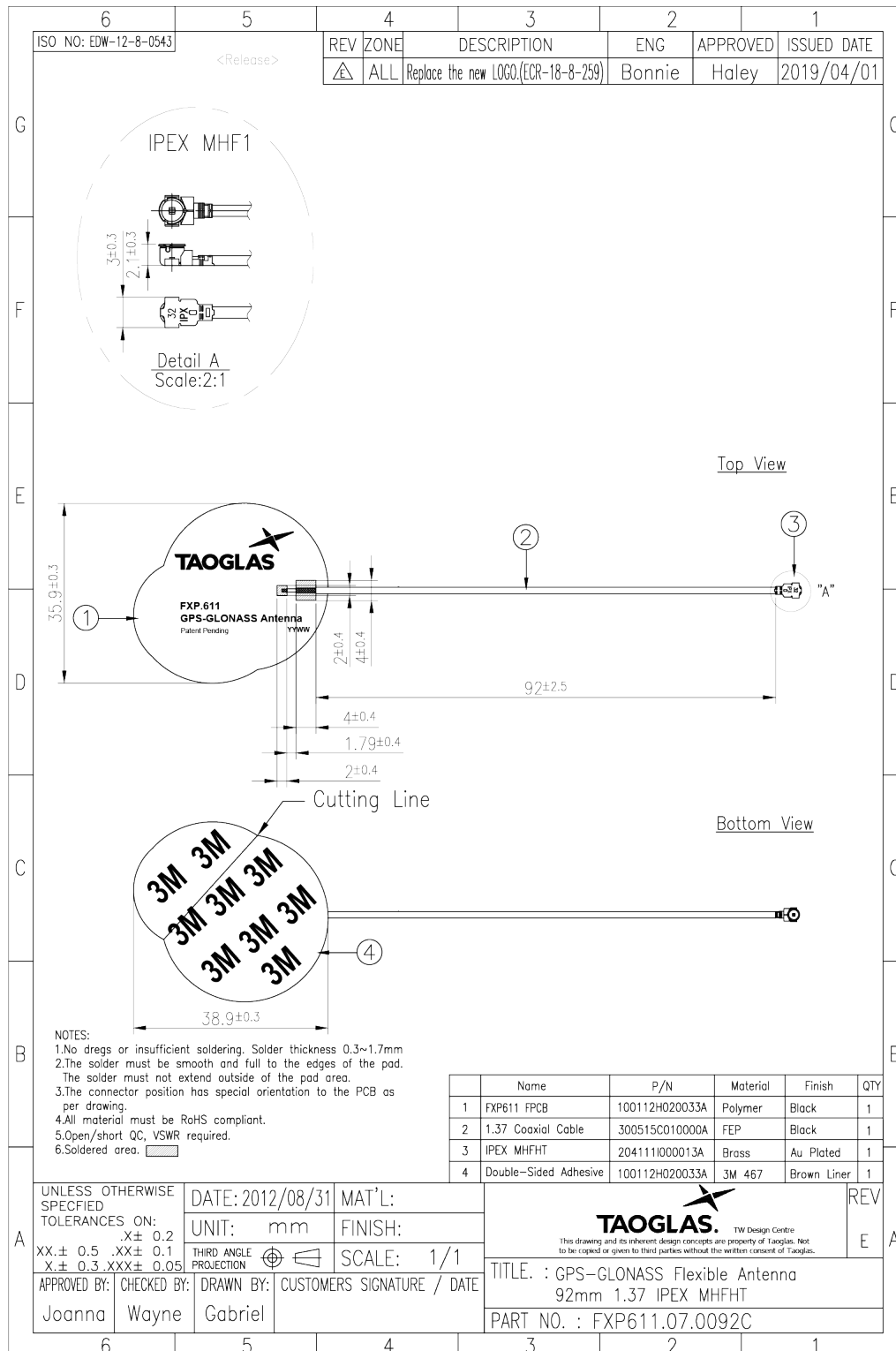


Figure 10: Radiation Pattern of FXP611 GPS/GLONASS/GALILEO/BeiDou Antenna at 1610MHz

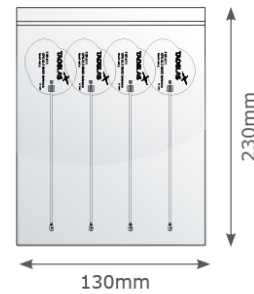
5. Mechanical Drawing



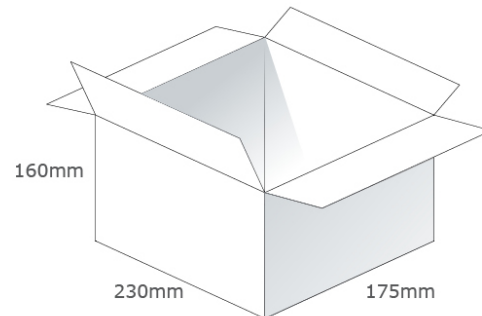
6. Packaging



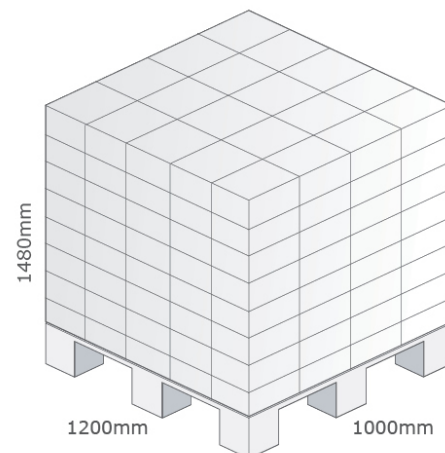
100pcs FXP611.07.0092C per PE Bag
Bag Dimensions - 130 x 230mm
Weight - 132g



2,000 pcs FXP611.07.0092C per carton
Carton - 230 x 175 x 160mm
Weight - 2.8Kg



Pallet Dimensions 1200 x 1000 x 1480mm
200 Cartons per Pallet
25 Cartons per layer
8 Layers



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Declaration of Conformity

Taoglas hereby declares under its sole responsibility, that the following products are compliant with the essential requirements and other relevant provisions of the the Restriction of the use of certain Hazardous Substances Directive (RoHS) 2015/863/EU.

Part Number: FXP611.07.0092C

Description: Cloud GPS/GLONASS/Galileo/BeiDou Flexible PCB Antenna

Requirements:

ROHS Directive 2015/863/EU
Prevention (Article 4.1)

Standards
EN 50581:2012

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Date 1st March, 2021

Signed: