

## SPECIFICATION

- Part No. : **A.30.A.301111**
- Product Name : **A.30 Ultima** Series Low Profile GPS-GLONASS  
Screw-Mount Antenna
- Feature : Height 19.6mm (0.77")  
Diameter 55mm (2.17")  
Heavy duty screw mount  
UV and vandal resistant PC housing and thread  
IP67 and IP69k waterproof rated  
GPS/GLONASS - 3M RG174 SMA(M)  
Customizable cable length and connector  
**ROHS Compliant**



## 1. Introduction

The A.30 Ultima Series GPS/GLONASS Antenna is a low profile combination high performance GPS/GLONASS antenna solution for professional telematics applications. At only 22 mm height it is one of the lowest profile antenna in the market, with a diameter of 55 mm. Durable UV resistant PC housing, thread and nut withstands vandalism and direct attack.

The IP67 waterproof robust plastic body makes it extremely light, economical for shipping and with minimum weight impact on vehicles. This also makes it ideal for use in humid environments such as water pits or marine applications as there are no external metal parts to corrode. The additional IP69K rating means it is suitable to undergo industrial high pressure water cleaning. The closed cell foam with double-sided adhesive provides a permanent waterproof seal and can adjust to different curvatures, stopping water from leaking under the antenna into the mounting hole.

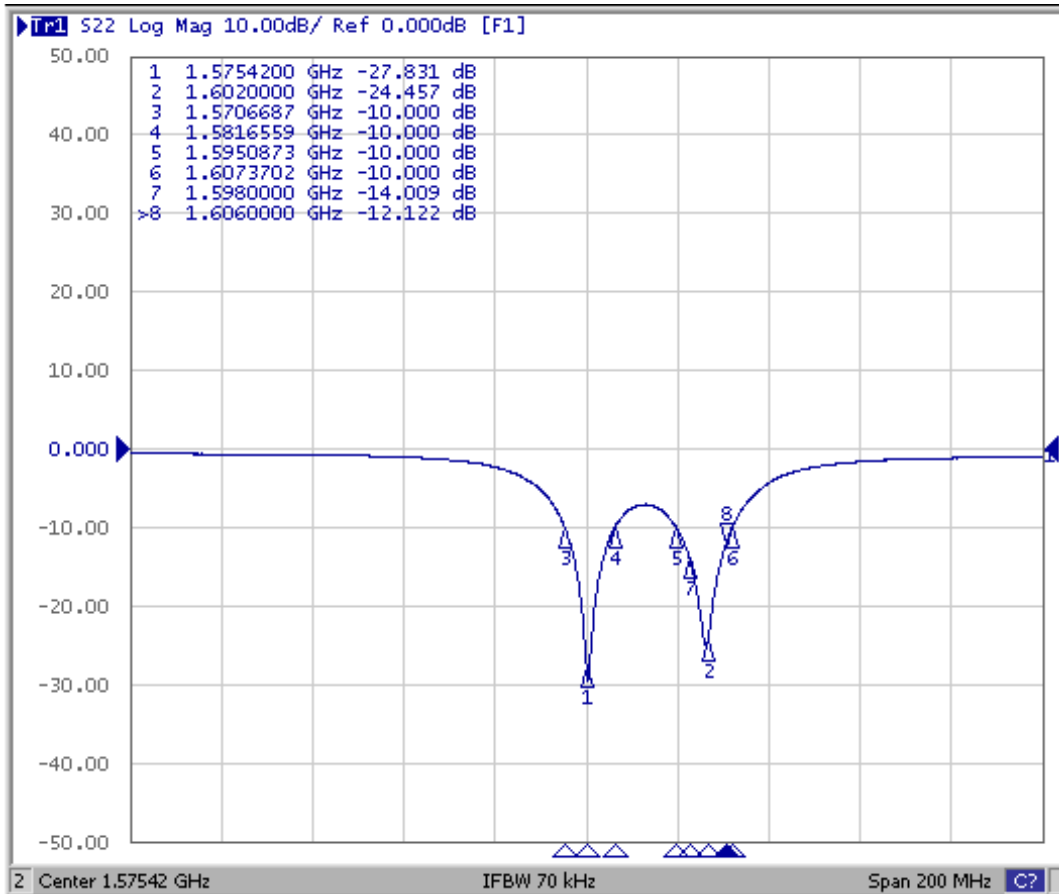
Cable length and connector is customizable.

## 2. Specification

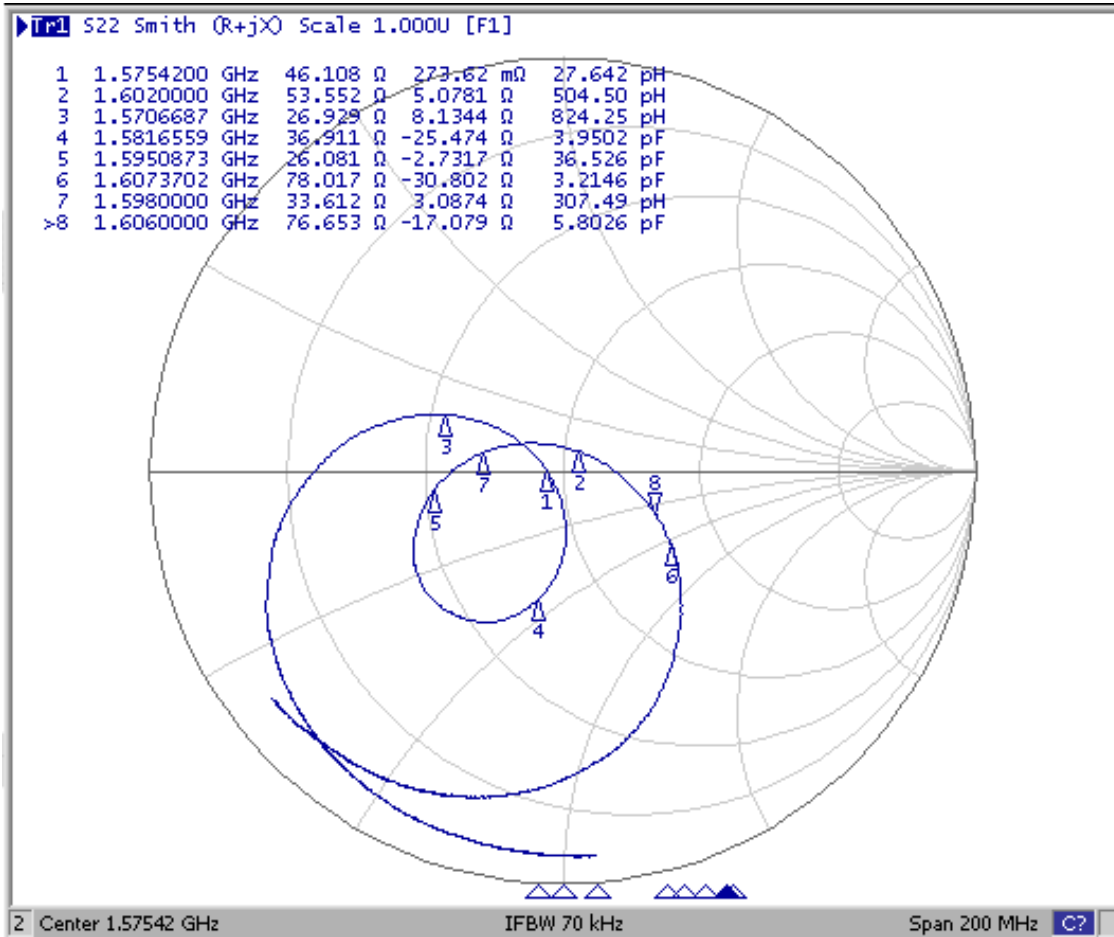
ELECTRICAL GPS/GLONASS	
Frequency(MHz)	1574~1606MHz
Impedance(Ohm)	50Ω
GPS Patch Gain@ Zenith GLONASS Patch Gain@ Zenith	-1.4dB Passive Gain @ Zenith -1.3dBi Gain @ Zenith
VSWR	2.0 max
Out Band Rejection	fo = 1575.42MHz fo ± 30 MHz 5dB Min. fo ± 50 MHz 20dB Min. fo ± 100 MHz 25dB Min.
Input Voltage(V)	Typ. 2.5~5.5V
Total Gain @ Zenith	27dB typical at 3.0V
Current consumption(mA)	10mA typical at 3.0V
Noise figure	1.3dB typical
MECHANICAL	
Dimensions	Φ49mm , Height 29mm
Cable type	RG174
Cable length	3000±30mm
Casing	PC
Connector	SMA Male
Weight(1 pc)	89g
Recommended Torque for Mounting	3.92N·m
Max Torque for Mounting	4.9N·m
ENVIRONMENTAL	
Temperature Range	-40°C to 85°C
Waterproof	IP67 and IP69k
Thermal Shock	100 cycles -40°C to +80°C
Shock (drop test)	1m drop on concrete 6 axes
Humidity	Non-condensing 65°C 95% RH

## 3. Antenna Characteristics

### 3.1 Return Loss



### 3.2 Smith Chart – Impedance



## 4 Antenna Radiation Pattern – GPS-GLONASS

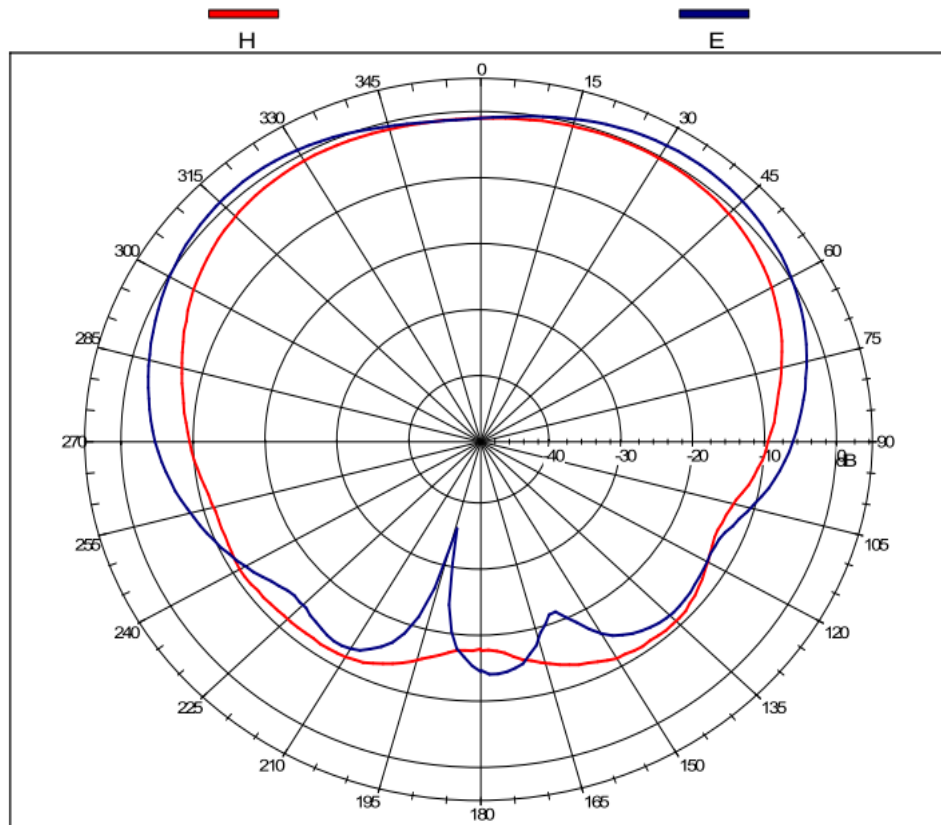
H-Plane

E-Plane

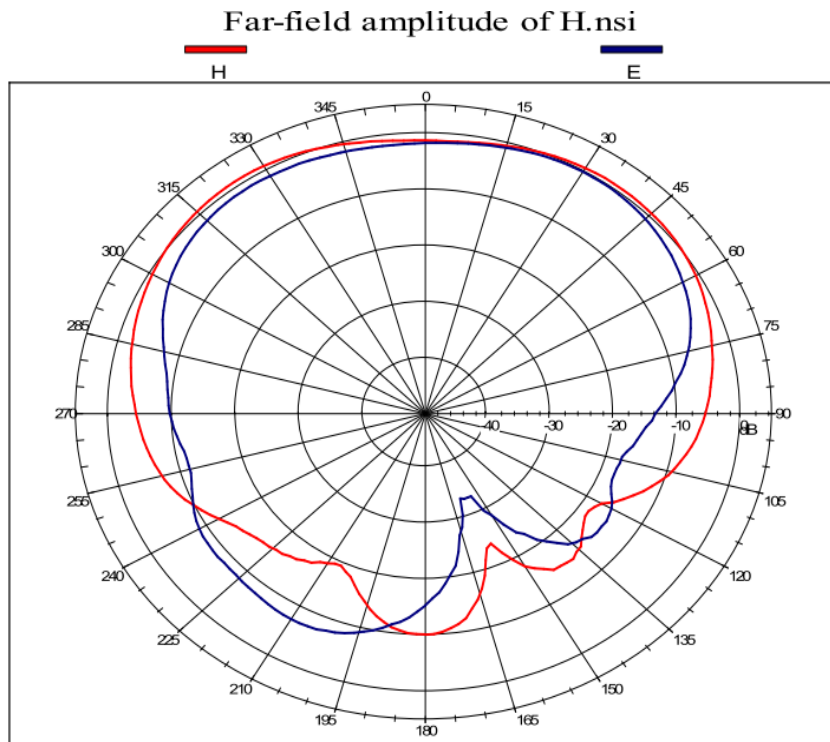


### 4.1 1575.42MHz

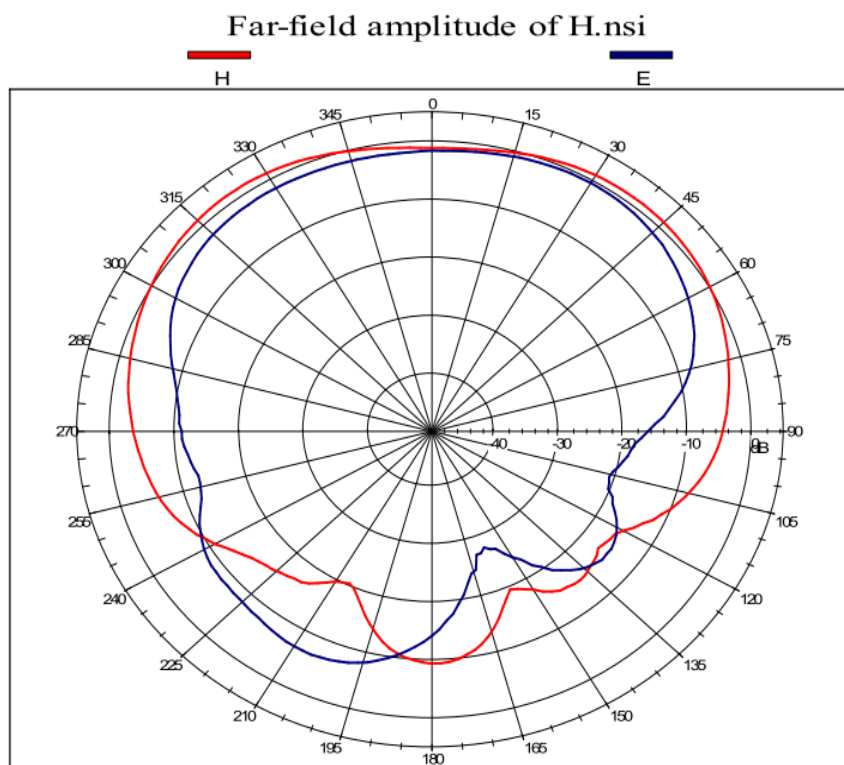
Far-field amplitude of H.nsi



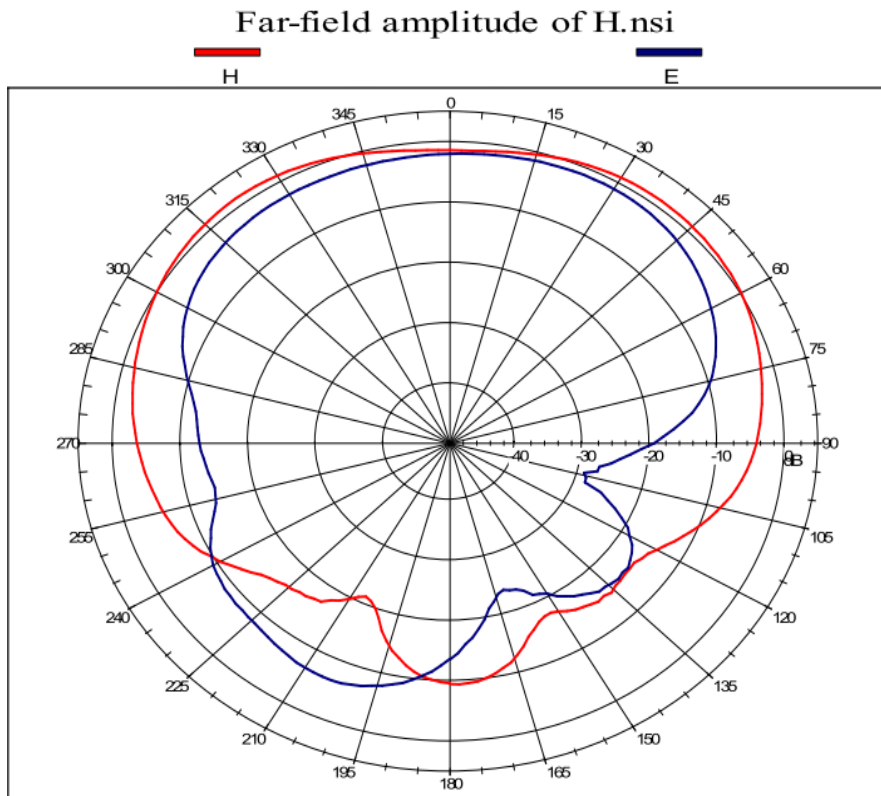
## 4.2 1598MHz



## 4.3 1602MHz

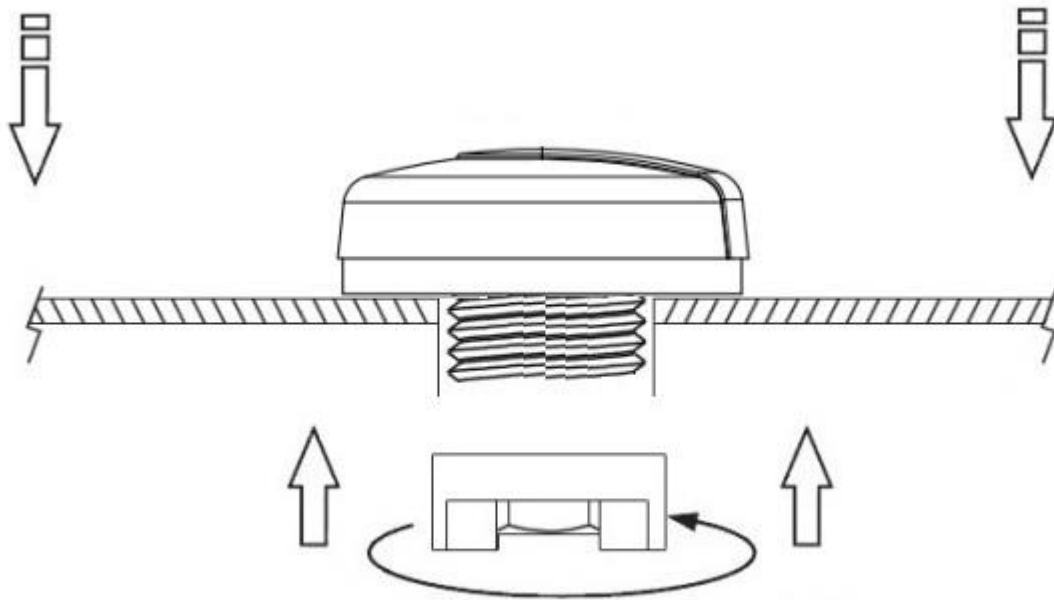


### 4.4 1606MHz

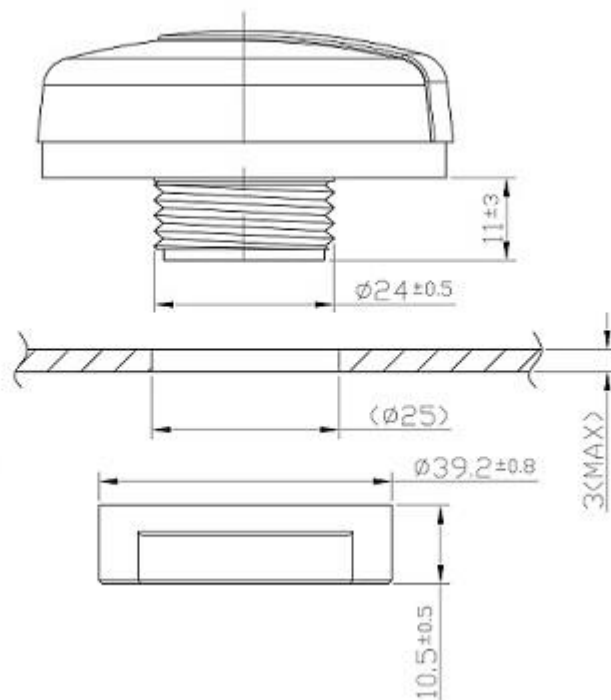




## 5 Installation

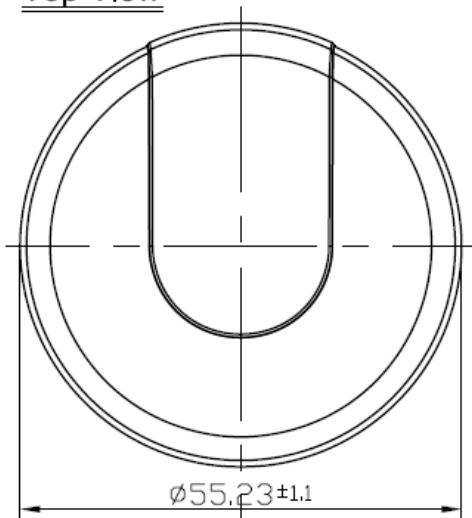


Recommended torque for Mounting is 3.92N·m  
 Maximum torque for Mounting is 4.9N·m

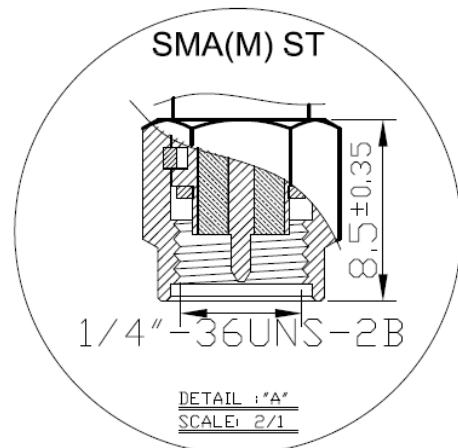


## 6 Drawing

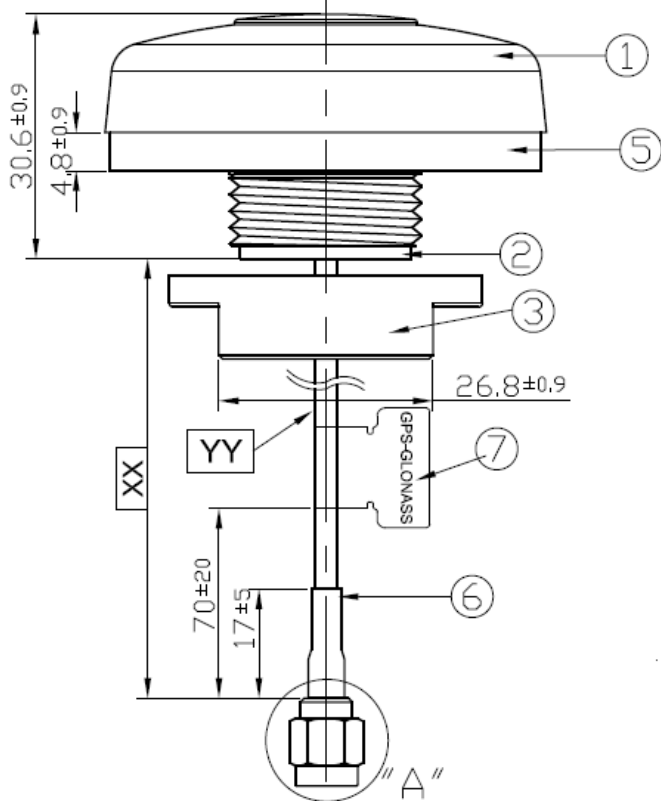
Top View



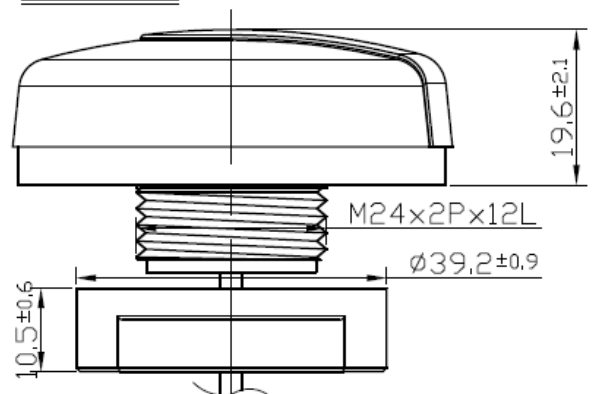
SMA(M) ST



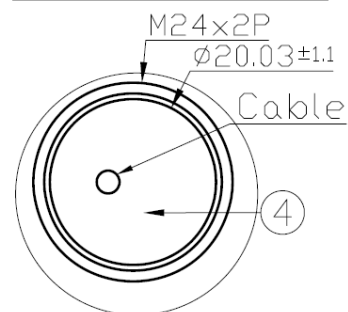
Front View



Side View



Bottom Thread View



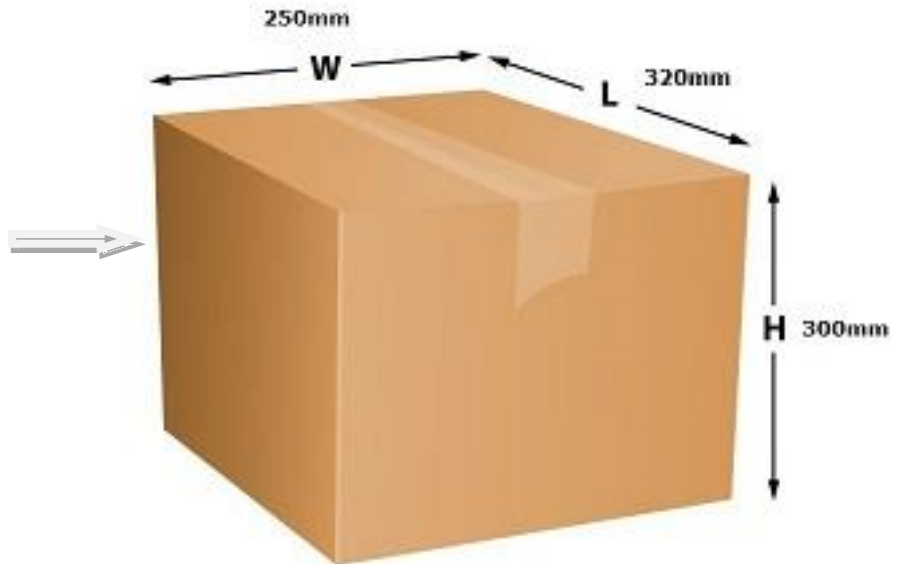
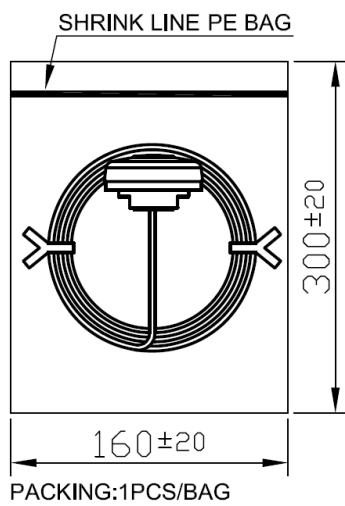
	Name	Material	Finish	QTY
1	Housing Top	<b>PC</b>	Black	1
2	Housing bottom	<b>PC</b>	Black	1
3	M20 Nut	ABS	Black	1
4	Silicon Rubber	Silicon Rubber	Black	1
5	Foam Adhesive	CR4305+3M9448	Black	1
6	Heat Shrink Tube	PE (RG-174)	Black	1
7	GPS-GLONASS Label	Coated Paper	Orange	1

	Name	Spec	Finish	QTY
XX	Cable Length	3000±90 mm		1
YY	Cable Type	RG-174	Black	1
ZZ	Connector Type	SMA(M) ST	Gold	1

## 7 Packaging

1pcs antenna per big PE bag (Weight: 89g)

60 big PE bags per carton (Weight 6kg)



60 cartons per Pallet

Pallet Dims: 1100\*1100mm

3600 pcs per pallet

