



TAOGLAS®



Datasheet

Ultima A.30

Part No:
A.30.A.301111

Description:

A.30 Ultima Series Low Profile GPS-GLONASS-Galileo Permanent Mount Antenna

Features:

Height 20.6mm
Diameter 55.4mm
Heavy duty Permanent(screw) Mount
UV and vandal resistant PC housing and thread
IP67 waterproof rated
Cable: 3m RG-174
Connector: SMA(M)ST
RoHS & Reach Compliant

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1. Introduction



The A.30 Ultima Series GPS/GLONASS/Galileo Antenna is a low profile combination high performance GPS/GLONASS/Galileo antenna solution for professional telematics applications. At only 21 mm height it is one of the lowest profile antennas in the market, with a diameter of 55 mm. Durable UV resistant PC housing, thread and nut withstands vandalism and direct attack.

Typical Applications Include

- Asset Tracking
- Transportation
- Connected Enterprise

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 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. Contact your regional Taoglas Customer Support Team for more information or installation instructions.

2. Specifications

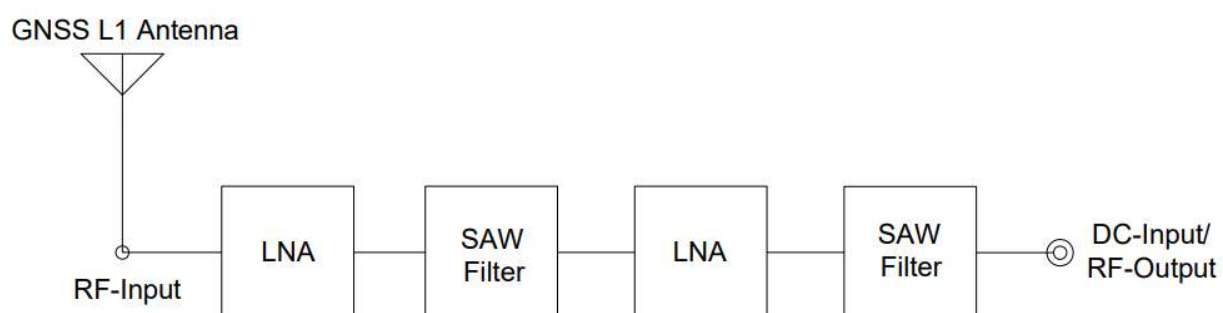
GNSS Frequency Bands Covered							
GPS/QZSS	L1 1575.42MHz	L2 1227.6MHz	L5 1176.45MHz	L6 1278.75MHz			
	■	□	□	□			
GLONASS	L5R 1176.45MHz	L3PT 1201.5MHz	L2PT 1246MHz	L1CR 1575.42MHz	L1PT 1602MHz		
	□	□	□	■	■		
Galileo	E5a 1176.45MHz	E5b 1201.5MHz	E4 1215MHz	E3 1256MHz	E6 1278.75MHz	E2 1561MHz	L1 1575.42MHz
	□	□	□	□	□	□	■
BeiDou	B1 1561MHz	B2 1207.14MHz	B3 1268.52MHz				
	□	□	□				
Compass	E5B(B2)/ E6(B3) 1268.56MHz	E2(B1) 1561MHz					
	□	□					
SBAS	Omnistar 1542.5MHz	WAAS/EGN OS 1575.42MHz					
	□	■					

Electrical		
Frequency (MHz)	1575.42MHz	1602MHz
Average Gain		
dB	-2.07	-2.02
Efficiency		
%	62.07	62.8
Peak Gain		
dBi	3.65	4.08
Impedance	50Ω	
GPS/GALILEO Patch Gain@ Zenith GLONASS Patch Gain@ Zenith	-1.4dBi 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	
Polarization	RHCP	
Radiation Pattern	Omni	

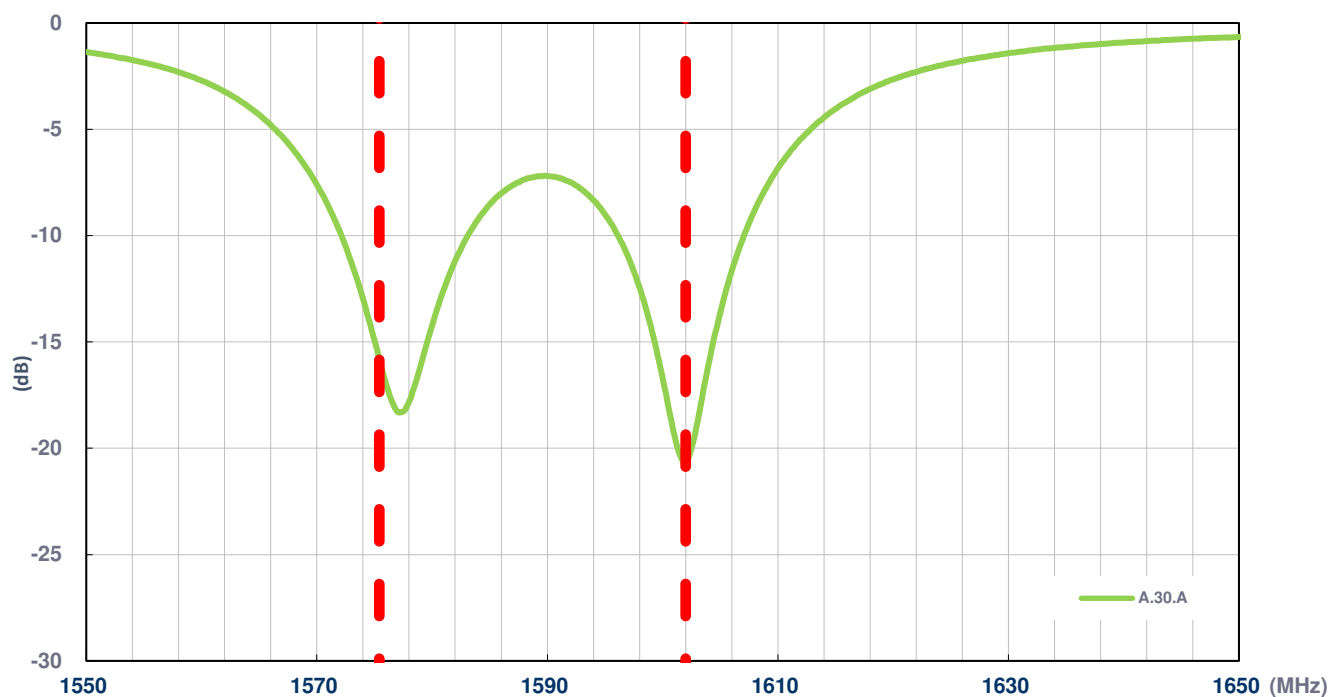
Mechanical	
Diameter	55.4mm
Height	20.6mm
Cable type	RG-174
Cable length	3000±30mm
Casing	PC
Connector	SMA Male
Weight (1 pc)	89g
Shock (drop test)	1m drop on concrete 6 axes
Environmental	
Humidity	Non-condensing 65°C 95% RH
Temperature Range	-40°C to 85°C
Waterproof	IP67
Thermal Shock	100 cycles -40°C to +80°C

3. Antenna Characteristics

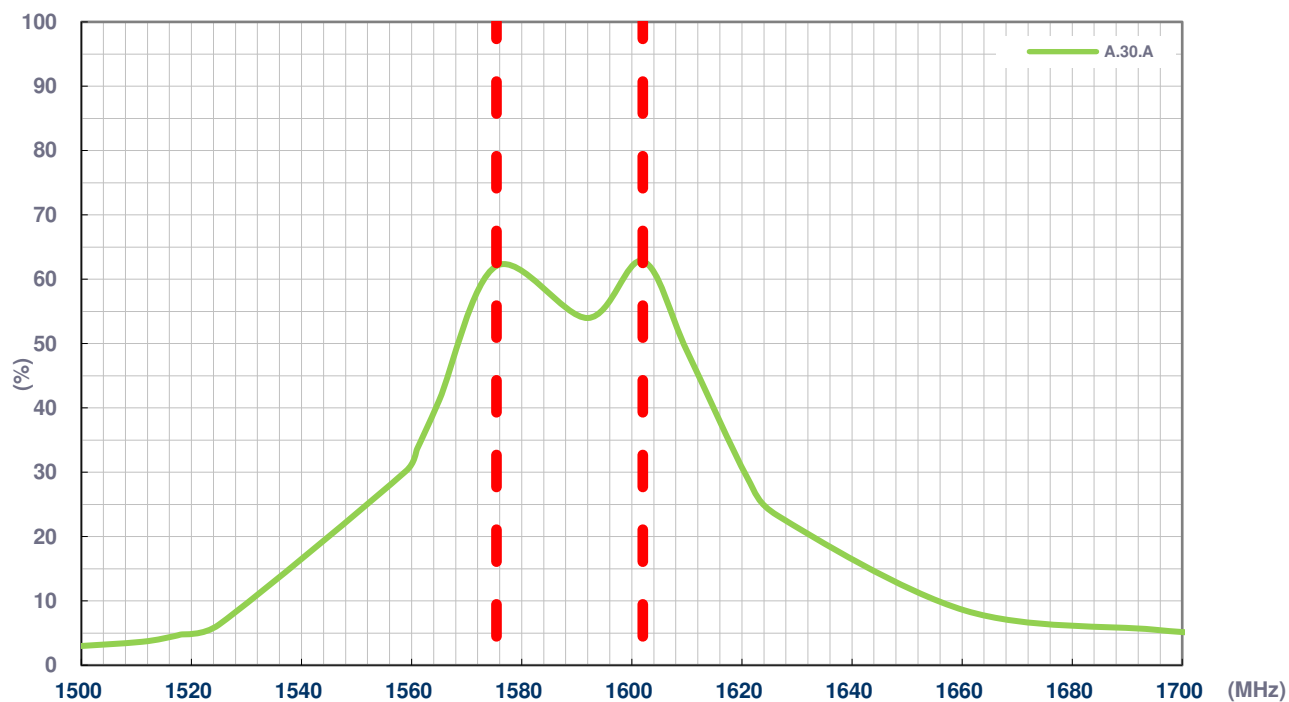
3.1 LNA Block Diagram



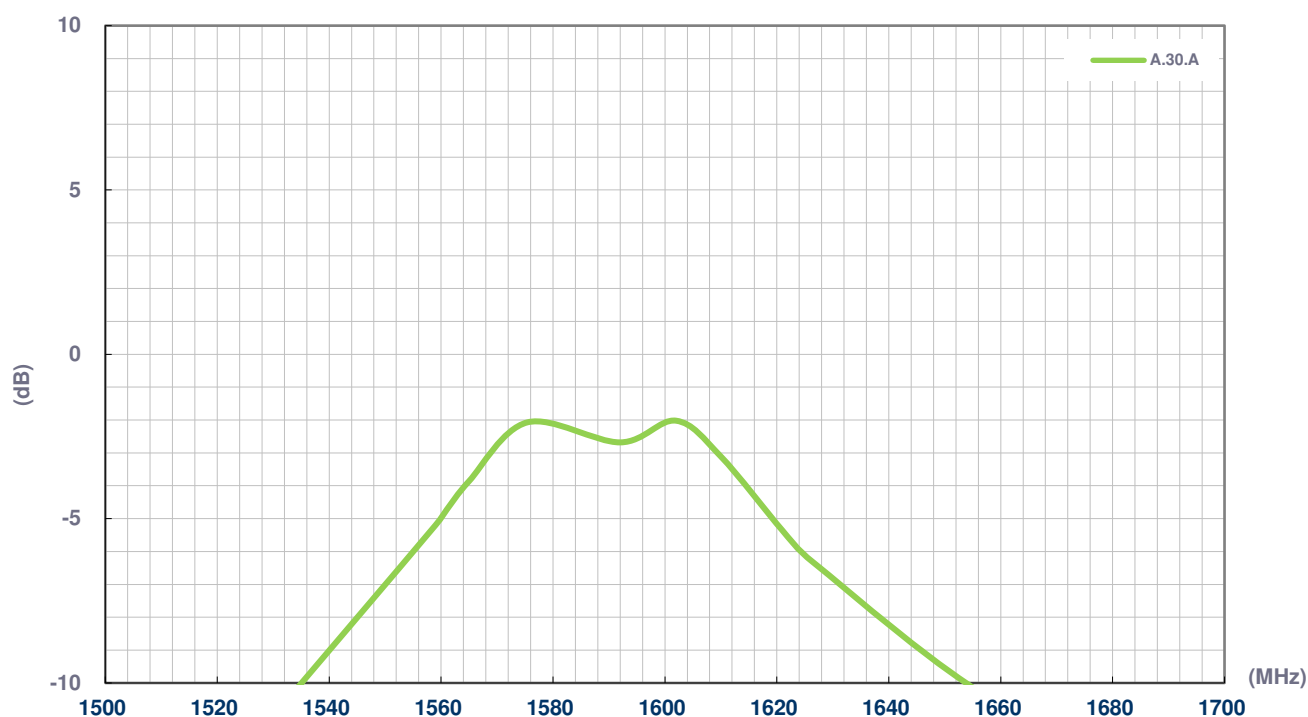
3.2 Return Loss



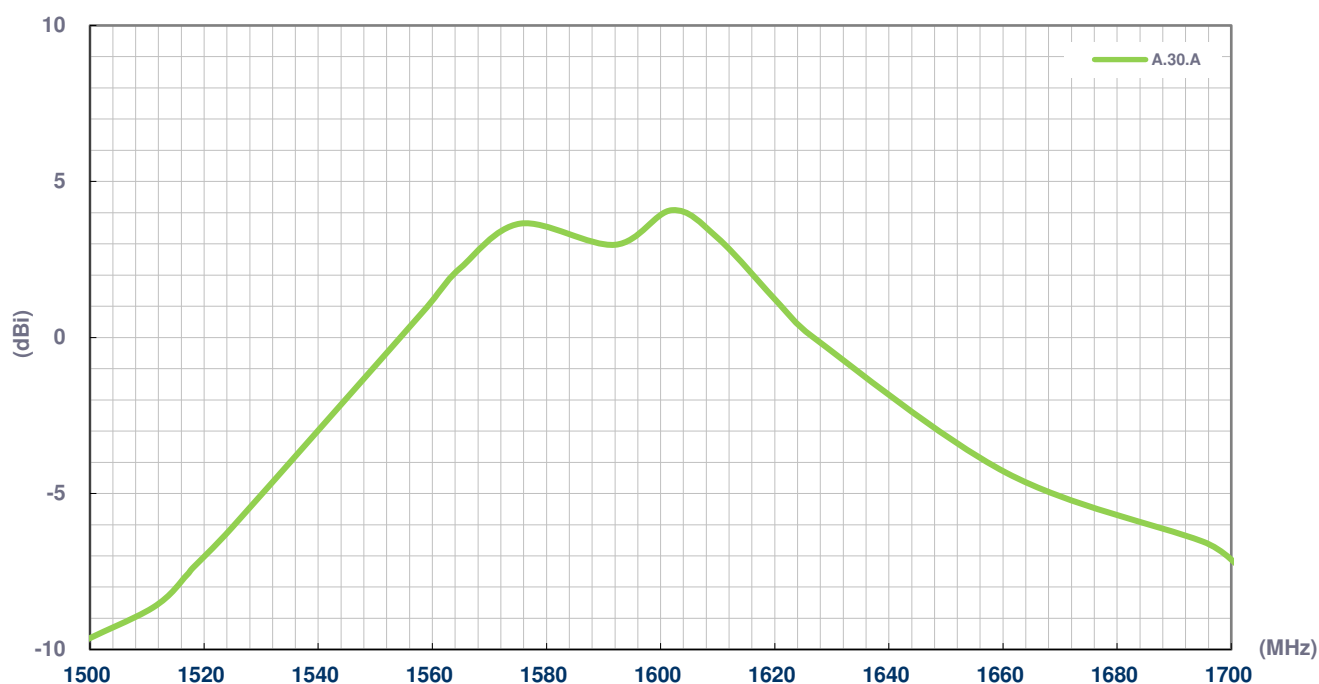
3.3 Efficiency



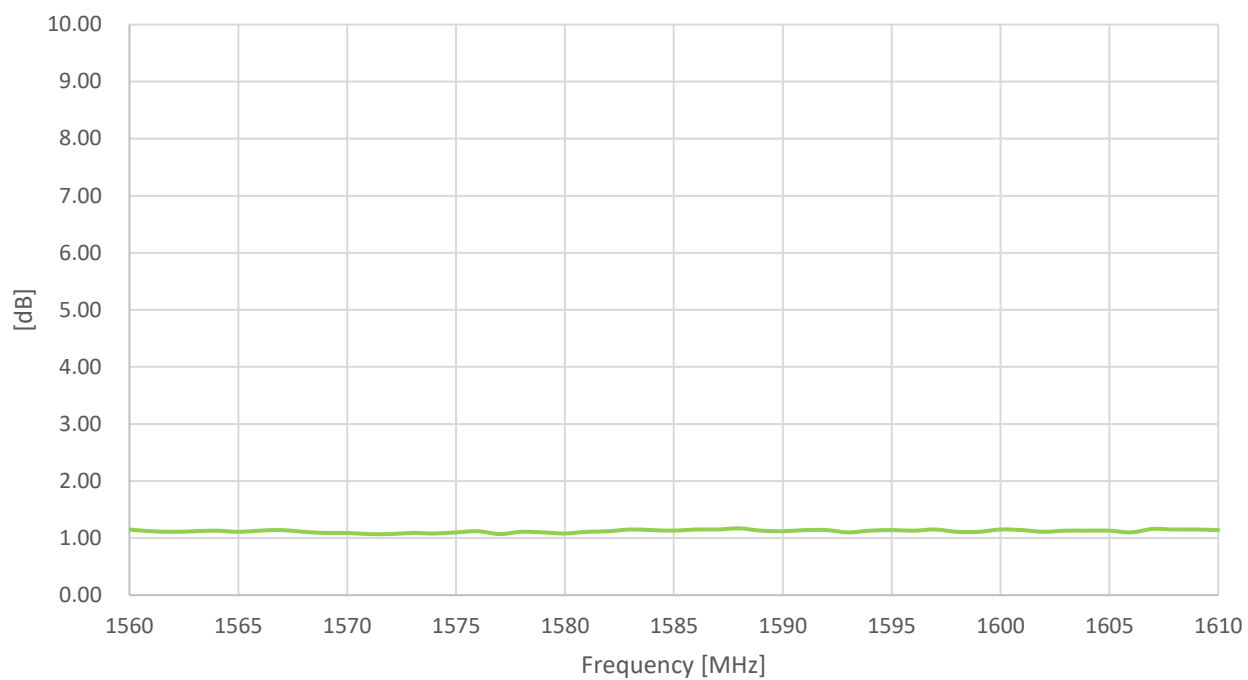
3.4 Average Gain



3.5 Peak Gain

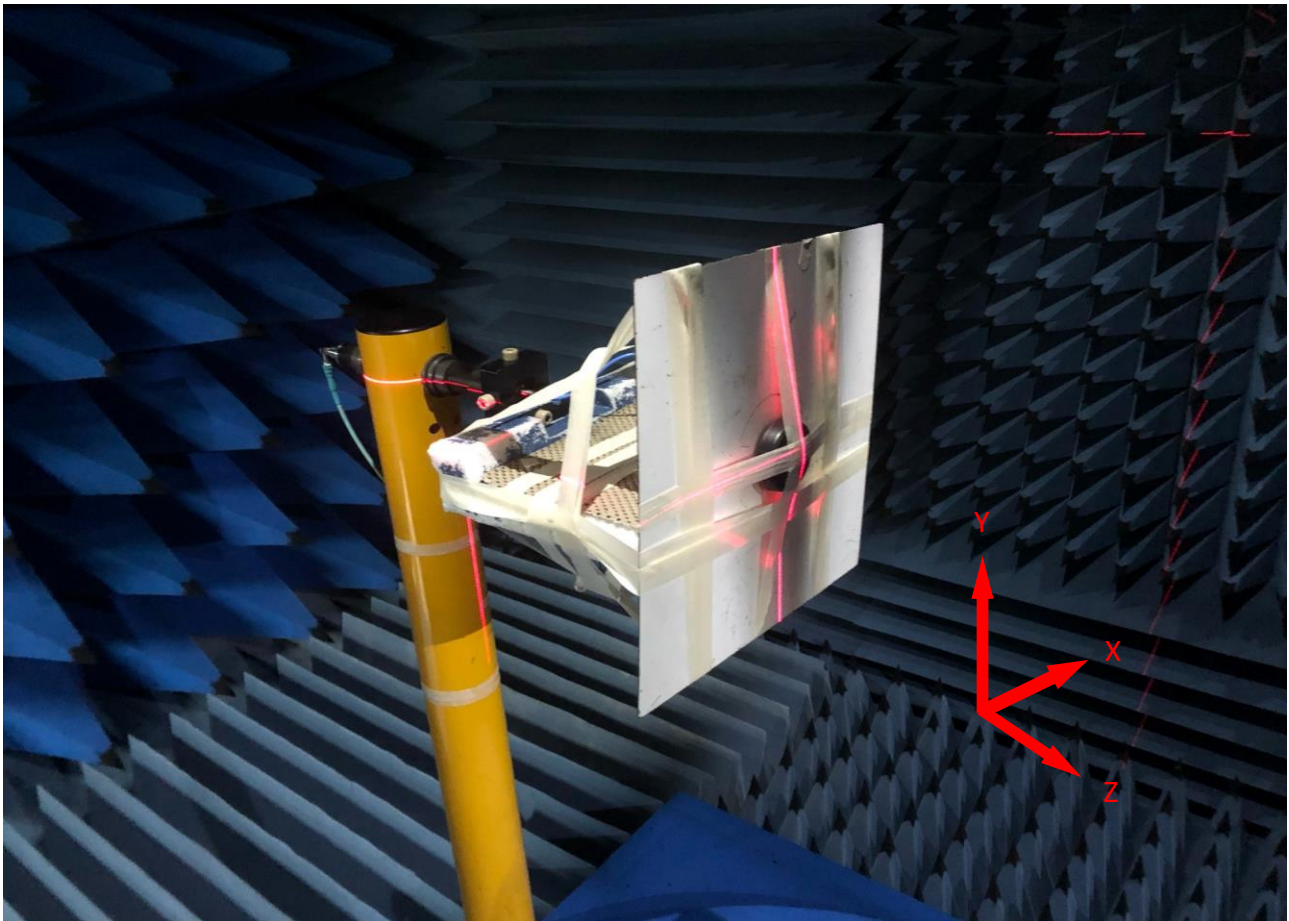


3.6 LNA Noise Figure

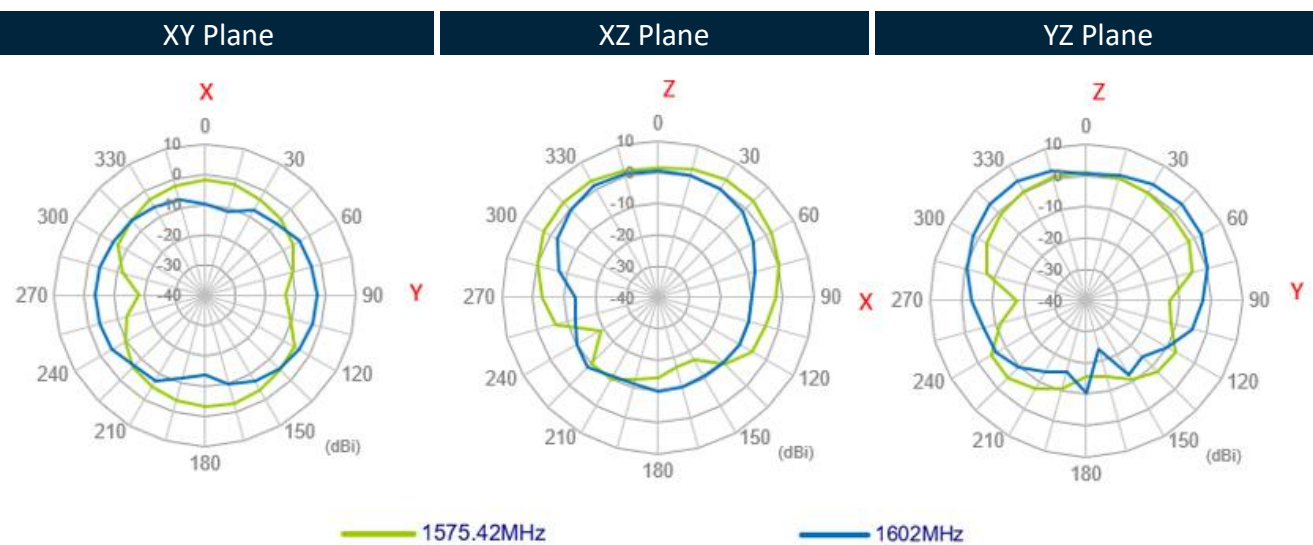


4. 2D Radiation Patterns

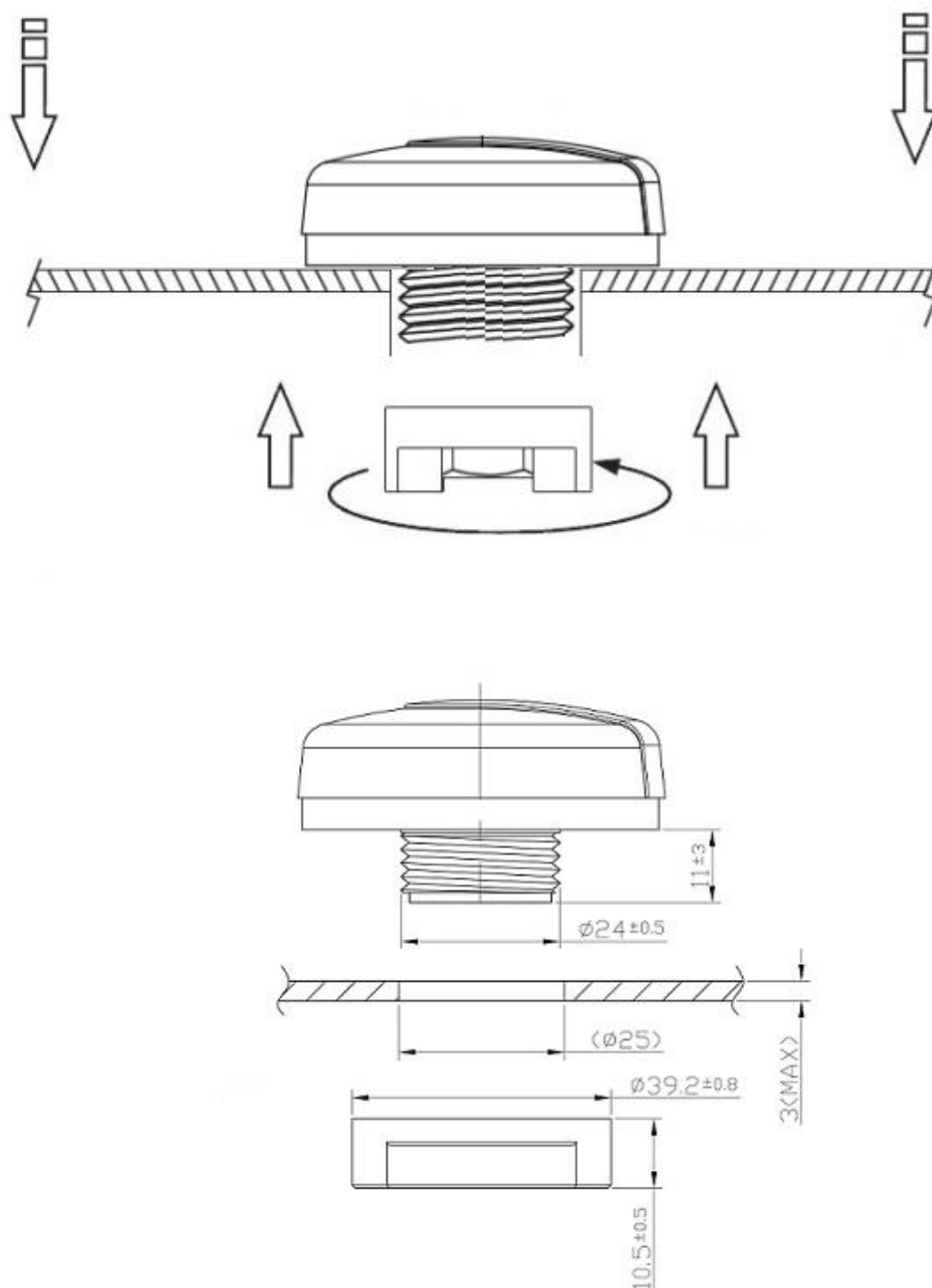
4.1 Test Setup



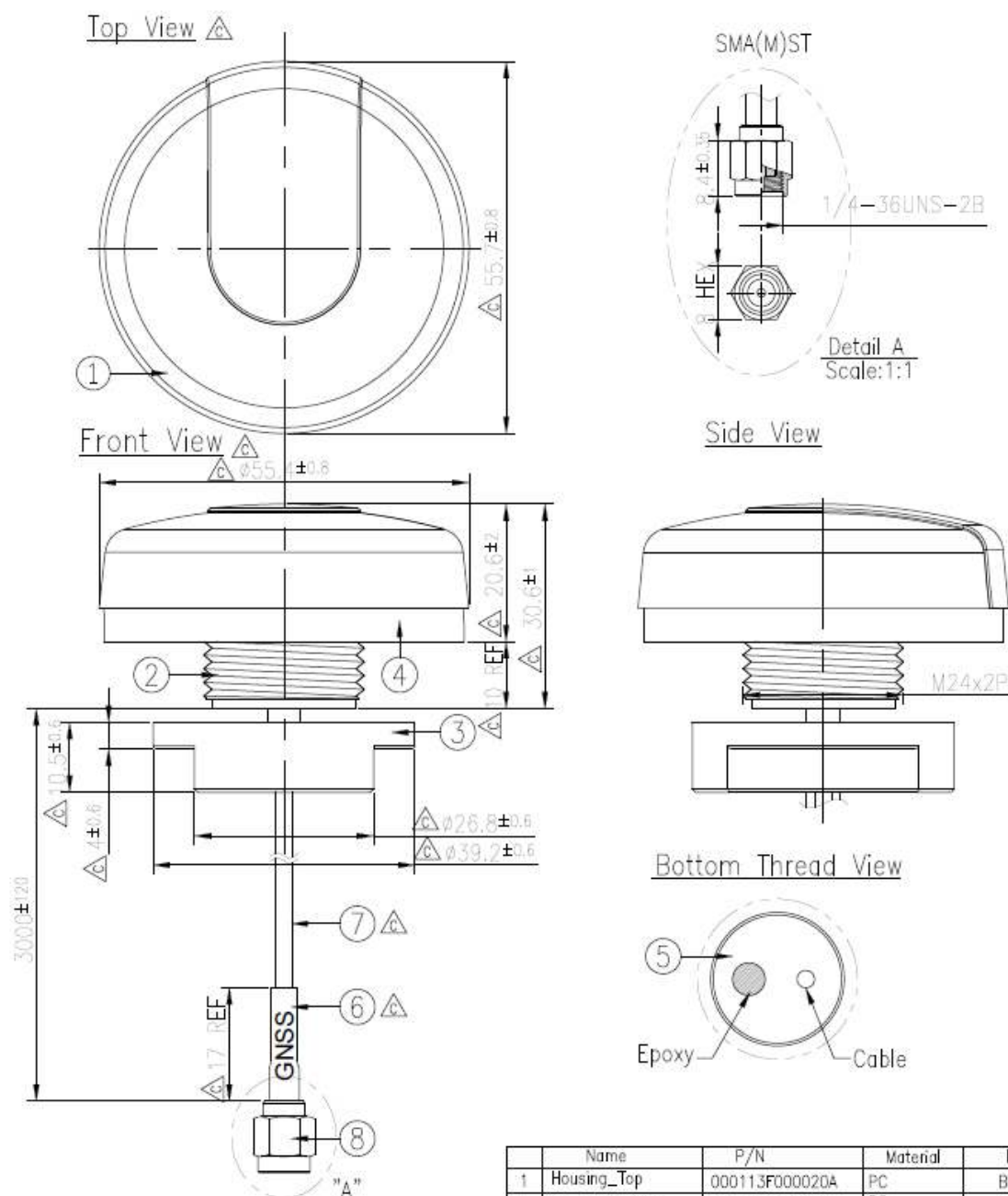
4.2 2D Radiation Patterns



5. Installation



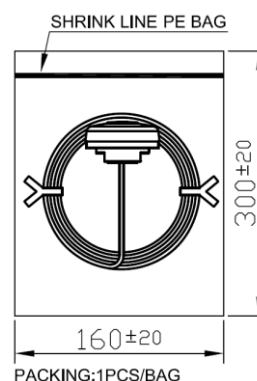
6. Mechanical Drawing (Units: mm)



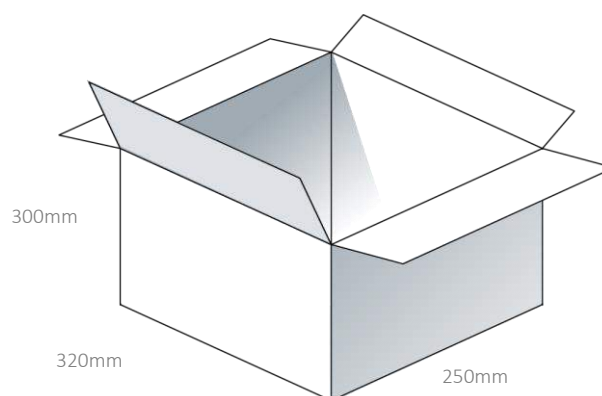
Name	P/N	Material	Finish	QTY
1 Housing_Top	000113F000020A	PC	Black	1
2 Housing_bottom	000113F010020A	PC	Black	1
3 M24 Nut	000112A020020A	ABS	Black	1
4 Double-sided Adhesive with Foam (black form)	001013A000020A	CR4305+3M9448	Black	1
5 Silicon Rubber	000712A000020A	Silicon Rubber	Black	1
6 Heat Shrink Tube (GNSS)	001316C000000A	PE	Blue Tube/White Text	1
7 RG174 Cable Type	301315C000000A	PVC	Black	1
8 SMA(M)ST	200212G000013A	Brass	Au Plated	

7. Packaging

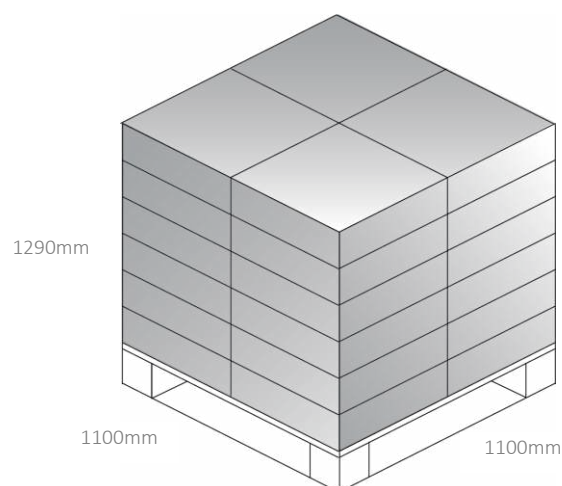
1pcs A.30.A.301111 per PE Bag
Dimensions - 300*160mm
Weight - 89g



60pcs A.30.A.301111 per carton
Dimensions - 320*300*250mm
Weight - 6.8Kg



Pallet Dimensions:
1100*1100*1290mm
60 Cartons Per Pallet



Changelog for the datasheet

SPE-14-8-088 – A.30.A.301111

Revision: E (Current Version)

Date:	2022-10-13
Changes:	Added LNA block diagram
Changes Made by:	Cesar Sousa

Previous Revisions

Revision: D

Date:	2022-05-26
Changes:	Added LNA noise figure graph
Changes Made by:	Gary West

Revision: C

Date:	2021-11-12
Changes:	Updated to reflect new data
Changes Made by:	Jack Conroy

Revision: C

Date:	2019-07-11
Changes:	Updated to reflect new data
Changes Made by:	Jack Conroy

Revision: B

Date:	2018-12-11
Changes:	Amended Drawing to show Heatshrink
Changes Made by:	Jack Conroy

Revision: A (Original First Release)

Date:	2014-05-09
Notes:	
Author:	Jack Conroy



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