

SPECIFICATION

- Part No. : **A.40.A.301111**
- Product Name : GPS-GLONASS-GALILEO Hercules Heavy Duty
Screw Mount
- Feature : Height 28.5mm Diameter 47.8mm
Heavy duty screw mount
IP67 & IP69K Waterproof Rating
GPS/GLONASS/GALILEO - 3M RG174 SMA(M)
Customizable
ROHS Compliant



1. Introduction

The A.40 Hercules is a high performance thread mount GPS-GLONASS-GALILEO antenna designed for external use on vehicles and outdoor assets. Designed for heavy duty work with one piece C&C machined nickel plated steel base and threads, there are also convenient side slots for running cables laterally. Durable UV resistant PC housing is resistant to vandalism and direct attack. At only 29mm high it complies with the latest EU directives for height restrictions, whilst also enabling covert operation with a diameter of only 49mm. The antenna is completely waterproof with an IP67 rating, plus an additional IP69K rating for waterproof resistance against high pressure water jets used in cleaning.

Cable lengths, types and connectors are fully customizable.

2. Specification

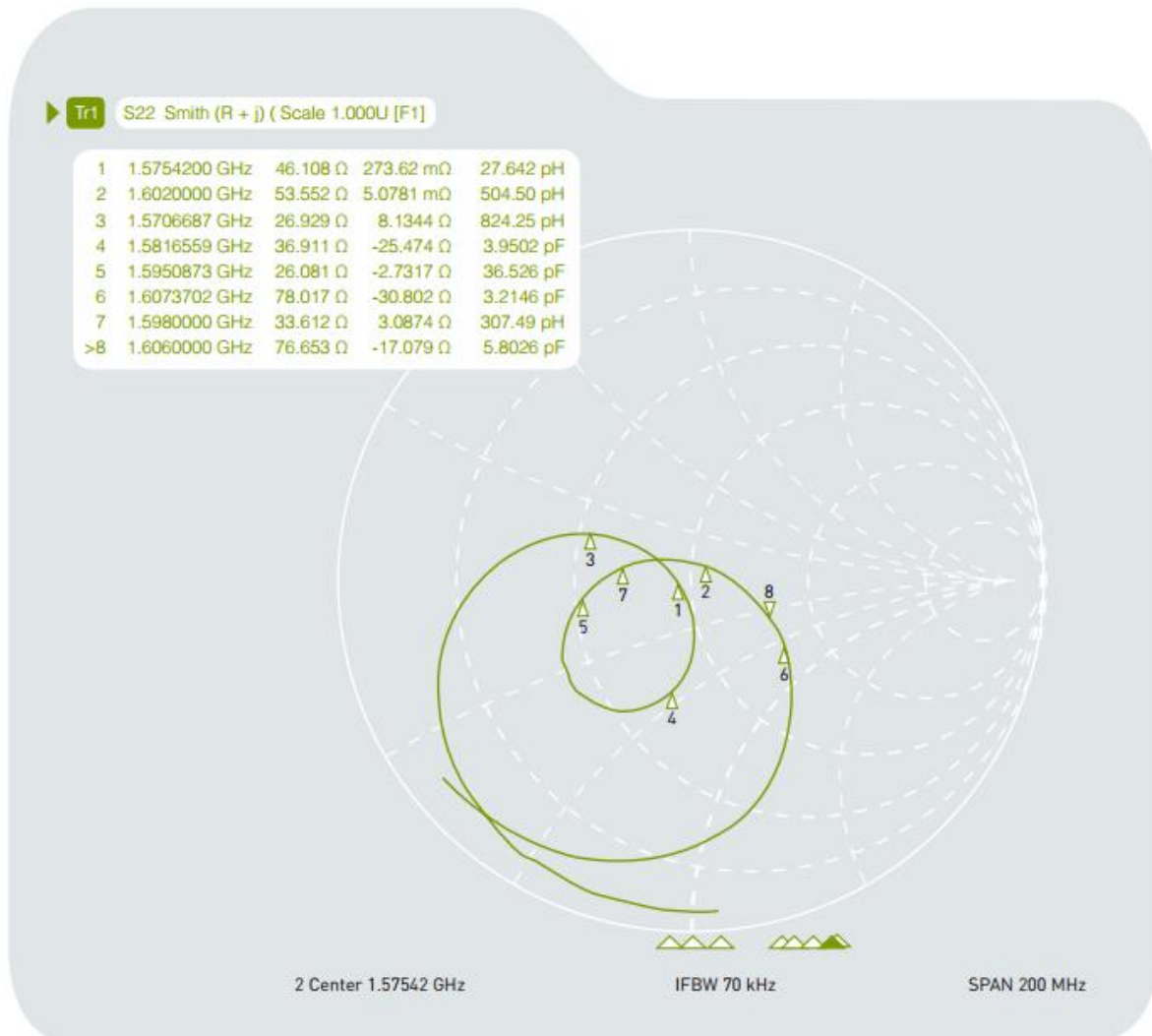
ELECTRICAL	
Frequency(MHz)	1574~1606MHz
Impedance(Ohm)	50Ω
GPS/GALILEO Patch Gain@ Zenith GLONASS Patch Gain@ Zenith	-1.4dB Passive Gain @ Zenith -1.3dBi Gain @ Zenith
VSWR	2.0 max
Axial ratio	3.0dB max
Polarization	RHCP
Out Band Rejection	fo = 1575.42MHz fo ± 30 MHz 5dB Min. fo ± 50 MHz 20dB Min. fo ± 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 28.5mm
Cable type	RG174
Cable length	3000±30mm
Casing	UV Resistant PC
Connector	SMA Male
Recommended Mounting Torque	24.5N·m
Maximum Mounting Torque	29.4N·m
ENVIRONMENTAL	
Temperature Range	-40°C to 85°C
Waterproof	IP67 and IP69K
Thermal Shock	100 cycles -40°C to +85°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

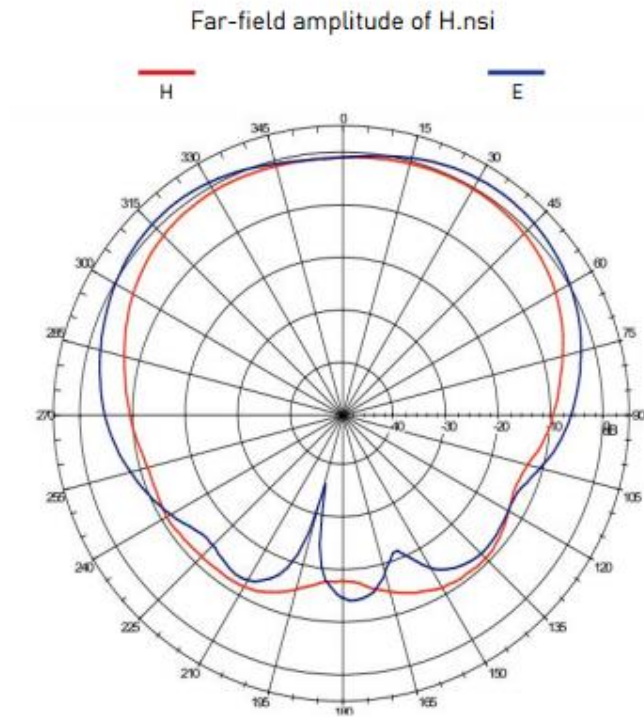
H-Plane



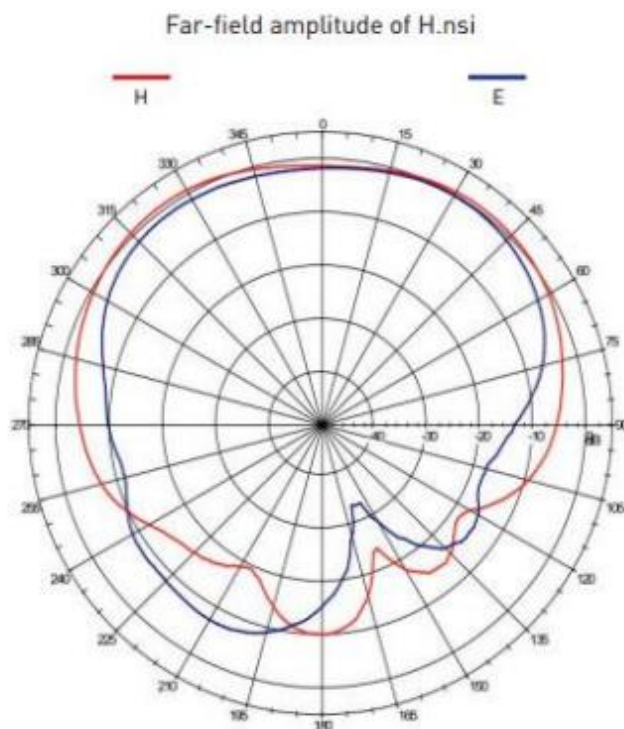
E-Plane



4.1. 1575.42MHz



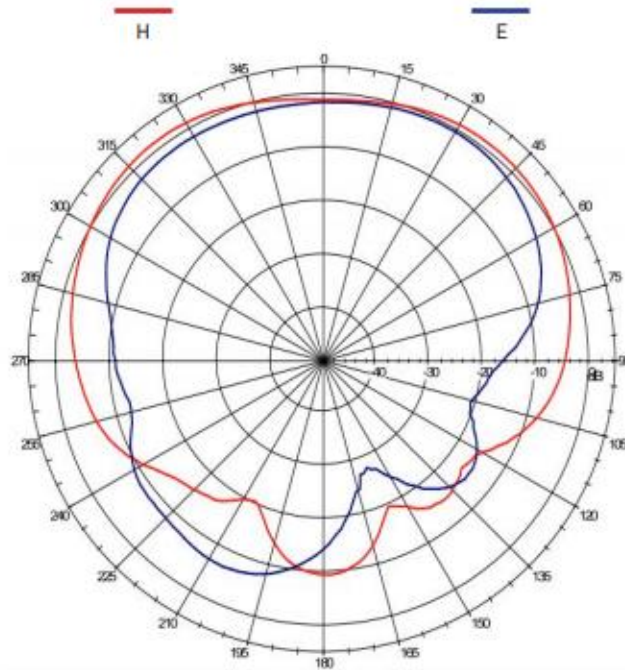
4.2. 1598MHz





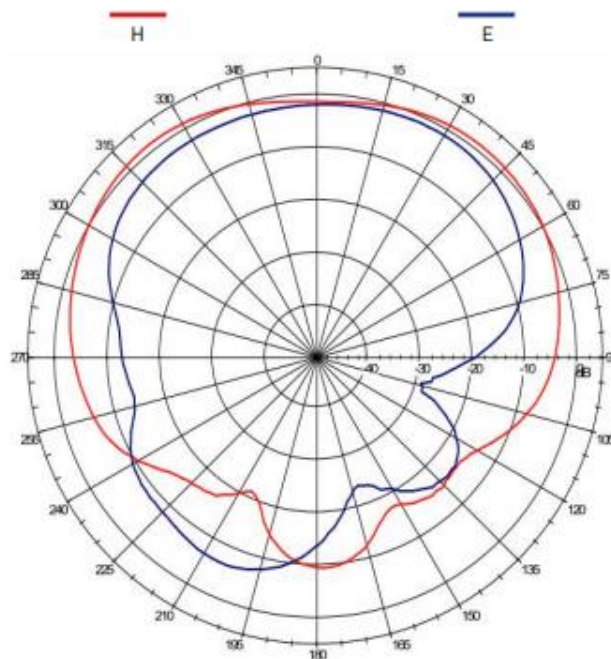
4.3. 1602MHz

Far-field amplitude of H.nsi

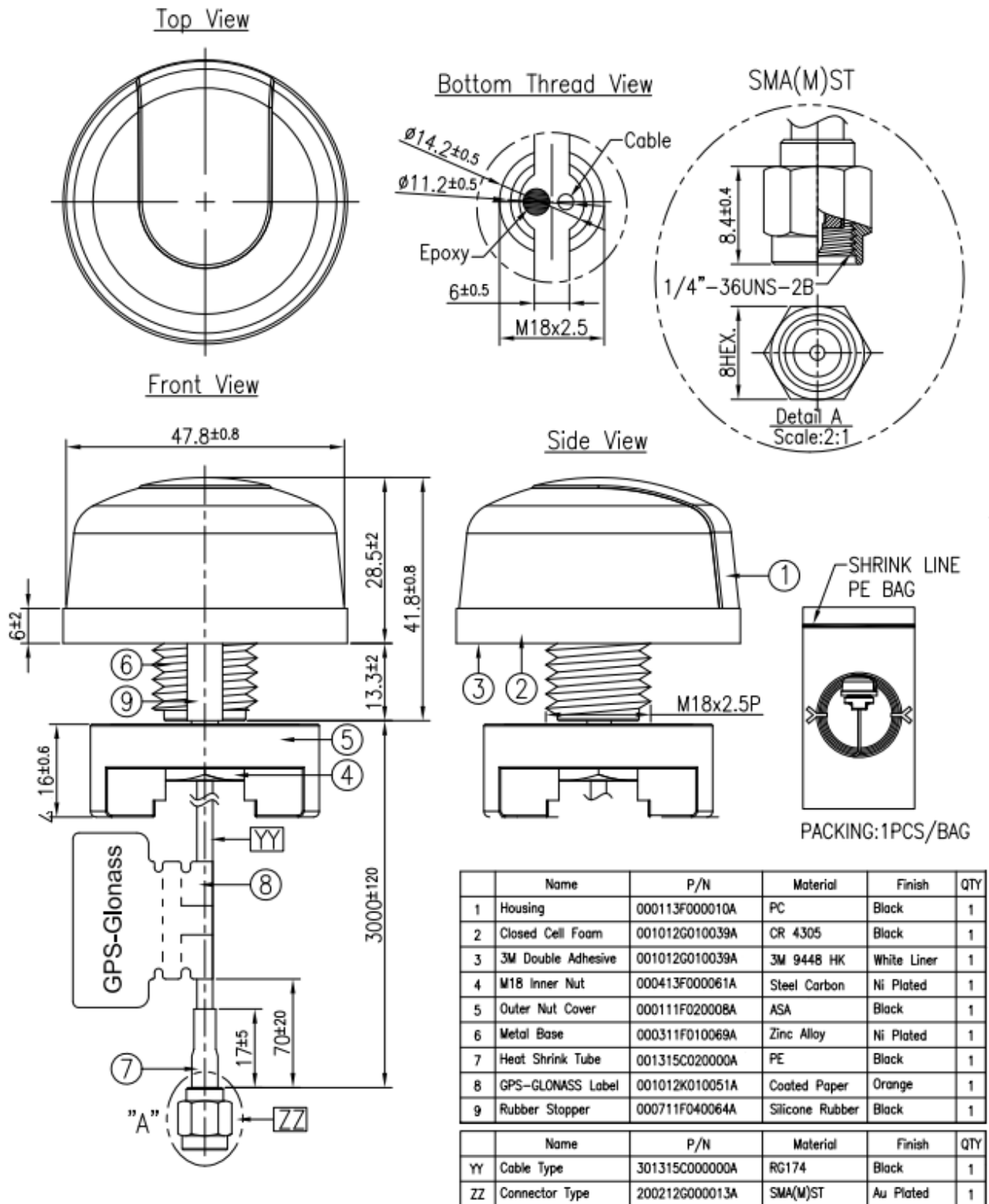


4.4. 1606MHz

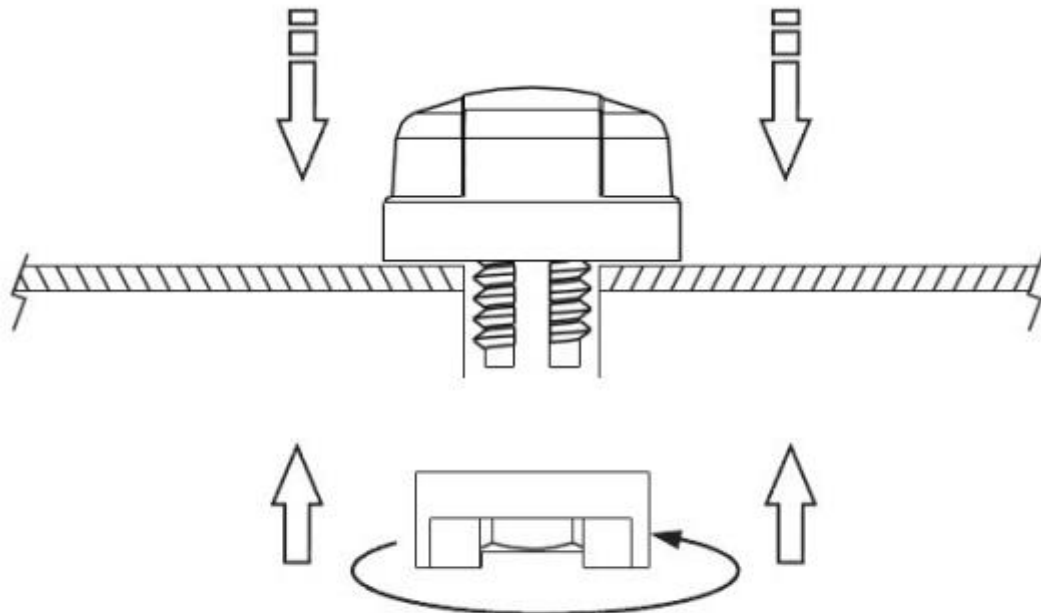
Far-field amplitude of H.nsi



5. Drawing



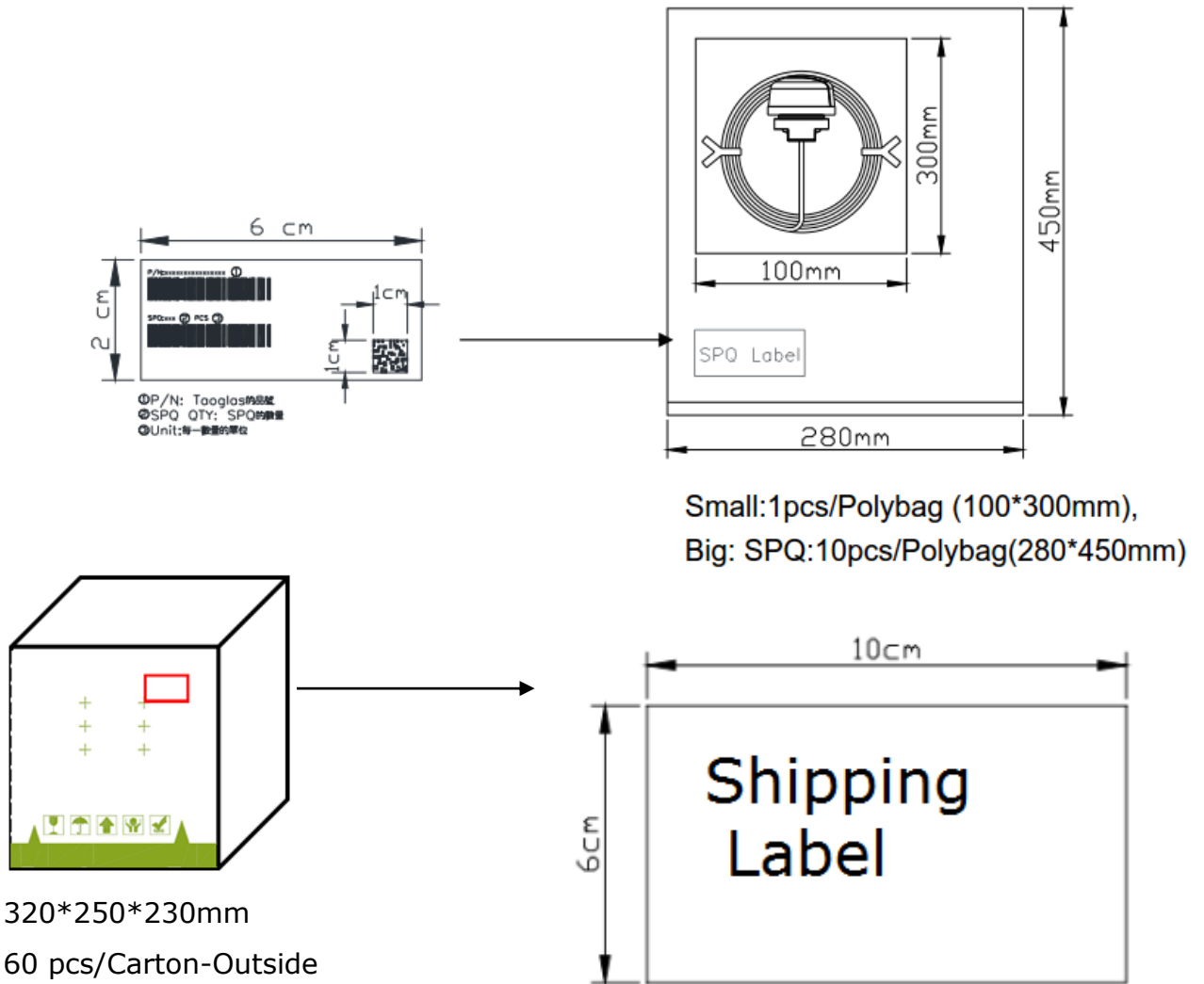
6. Installation



Recommended torque for Mounting is 24.5N·m
Maximum torque for mounting is 29.4N·m



7. Packaging



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