SPECIFICATION

Part No.	:	**AA.109.301111**
Product Name	:	Active GPS Antenna [1 Stage LNA]
Features	:	Magnetic Mount Covert stylish design Wide band input voltage 1 Stage LNA IP67
Photos	:	



1.0 Introduction

The AA.109 is provided with a one stage low gain LNA in order to be compatible with modules that have an integrated LNA with no automatic gain control.

Examples are Navman modules Jupiter 3 Jupiter 30xLP, Jupiter 32xLP, Jupiter 31 and Micro Modular Technologies MN1818, MN3310, MN5010HS.

Using a high gain GPS antenna such as the AA.105 can deliver too much gain when using these modules. However please note that there are losses in antenna cables and connectors and it is not advised to use the AA.109 with more than 3m of cable

2.0 Electrical Specifications

Parameter	Specification
Output Connector	Customisable – SMA(M) standard
Mounting	Magnetic or 3M Double-Sided Adhesive
Dimensions	45*45*14.5 mm (circular)
Weight	110±10g (typical)
Color	Black
Operating Temp	-40°C to +85°C
Storage Temp	-40°C to +85°C

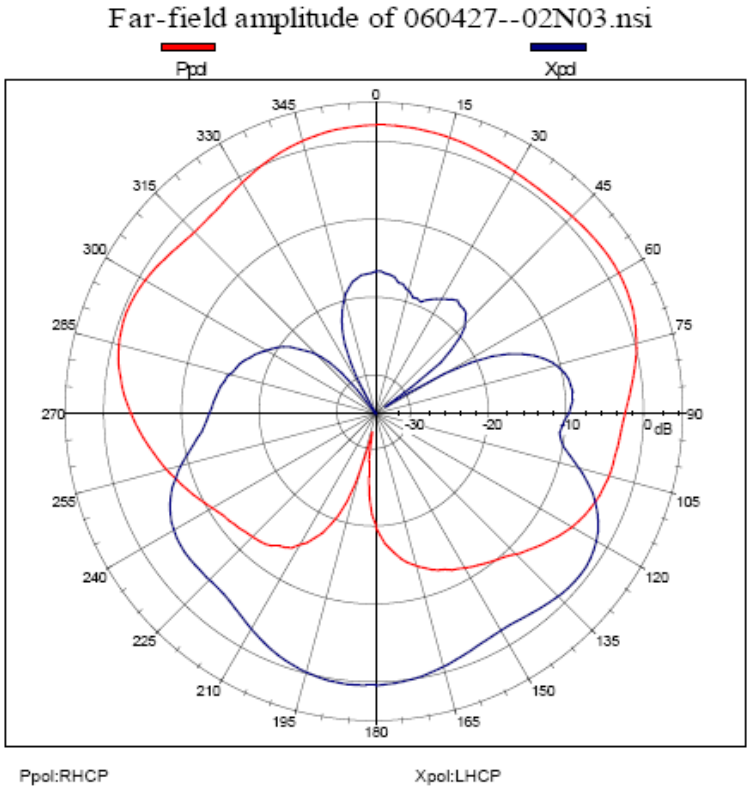
2.1 Patch Antenna

Parameter	Specification
Centre Frequency	1575.42 MHz ± 1.023 MHz
Bandwidth (10dB return loss)	15MHz min
Gain at Zenith	5.0dBic typical
Gain at 10° elevation	- 1.0 dBic min
Axial Ratio	1.0dB typical
Polarization	RHCP

2.2 Filter/LNA

Parameter	Specification
Centre Frequency	1575.42 MHz ± 1.023 MHz
Gain	20dB typical (Vdc=3v)
Noise figure	1.3dB typical (Vdc=3v)
Filter Out of band attenuation	Dielectric Filter
	7dB min fo±20MHz
	20dB min fo±50MHz
	30dB min fo±100MHz
	(fo=1575.42MHz)
Output V.S.W.R.	2.0 max
Voltage	DC = 2.4~5.5V
Current	DC = 5~16mA (ps: 3v / 7mA)

3.0 Radiation Pattern



PS: Total Gain = Radiation Pattern (exclude LNA Gain from G233) + LNA Gain - cable loss (RG-174:1.1dB/m)

4.0 Antenna Dimensions - External

4.1 Antenna Dimensions -Internal

