

# Mobile GPS Antenna with LNA

## MODEL: GA-38

Compact & Sensitive GPS antenna with Excellent Signal Amplification for Mobile Applications



- High performance
- Out-band filtering & rejection
- Fully waterproof
- Voltage: 2.5 V ~5.5 V DC
- Provides excellent signal amplification

**GA-38** is the integration of a high performance GPS patch antenna and a state-of-the-art low noise amplifier into a very low profile/ extremely compact/ fully waterproof enclosure which, when connected to a GPS receiver with 2.5~5.5V DC antenna power, provides excellent signal amplification and out-band filtering & rejection, provide 3V or 5V input Voltage is available.

### FEATURES:

- Compact Construction/ Low Profile/ Fully Waterproof
- Magnet and Screw Mount Base
- Excellent Temperature Stability
- Low Noise Figure
- High Sensitivity

### APPLICATIONS:

- Automobile GPS
- Bluetooth Receiver
- Car Tracking Navigation System
- AVL / Fleet Management Systems
- External Antenna for Handheld GPS
- External Antenna for PDA Navigator

### SPECIFICATIONS:

Physical Condition	
Construction	Polycarbonate- radome at top, die-cast shell at bottom/ rubber gasket for water seal in between
Dimension	40.5mm (L) x 38mm (W) x 12.3mm (H)
Weight	50 grams (excluding cable & connector)
Standard Mounting	Magnet mount with two magnets & screw mount
Optional Mounting Plate	customized metal sheet
Environmental Conditions	
Operation temperature	-40°C to +85°C
Storage temperature	-40°C to +100°C
Relative Humidity	95% non-condensing
Cable & Connector	

Cable	5 meter RG174/U (standard) cable, other length available
Pulling Strength	6 Kg @ 5sec with molded plastics on connector end for strain relief
Connector Available	BNC,TNC,FME (to be adapted), GT5, MCX (OSX), SMA, SMB or SMC in straight or right angle
Optional Adapters	Universal Connector Adapter (FME to TNC/BNC/SMA/SMB/MCX)

### Antenna Element

Center Frequency	1575.42 MHz +/-1.023MHz
Polarization	R.H.C.P. (Right Handed Circular Polarization)
Absolute Gain @ Zenith	3 dBic Typ.
Gain	90° : 2.0dBi min. 20° : -5.0dBi min. Mounted on the 60mm x 60mm square ground plane
Axial Ratio	90° : 3 .0dB max. Mounted on the 60mm x 60mm square ground plane

### Low Noise Amplifier

Center Frequency	1575.42 MHz +/- 1.023 MHz
Gain	28+/-4.5dB
Bandwidth	10 MHz min. @S11≤-10 dB
Noise Figure	1.5dB Typ.
Filter	25dB @ fo± 50MHz 35dB @ fo± 100MHz * fo=1575.42MHz
Supply Voltages	2.5 ~5.5V DC
Current Consumption	2.5V : 6.6mA Typ. 3V: 8.6mA Typ. 4V: 12.6mA Typ. 5V: 16.6mA Typ.
Output Impedance	50 ohm
Output VSWR	2.0 max.

### Overall Performance (Antenna Element, LNA & Cable)

Frequency range	1575.42 +/- 1.023 MHz
Gain	At 90° 30 ± 4.5dBi-(cable loss) Note:1 Mounted on the 60mm x 60mm square ground plane
Output Impedance	50 ohm
VSWR	2.0 max.

(This specification is subject to change without prior notice)

Note:1:Cable Loss=(-1.2dB/m)

