



# Mobile GPS Antenna with LNA

## MODEL: MA-25

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

**MA-25** 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, it can provide 3V or 5V input Voltage.

### FEATURES:

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

### APPLICATIONS:

- AVL
- Fleet Management Systems
- Car Navigation
- Bluetooth Receiver
- Weather Balloon
- Security Surveillance
- External Antenna for Handheld GPS

### SPECIFICATIONS:

Physical Condition	
Construction	Polycarbonate- radome at top, die-cast shell at bottom/ rubber gasket for water seal in between
Dimension	46mm (L) x 38mm (W) x 12.5mm (H)
Weight	50 grams (excluding cable & connector)
Standard Mounting	Magnet mount with two magnets & screw mount
Optional Mounting Plate	customized metal sheet



<b>Environmental Conditions</b>	
Operation temperature	-40°C to +85°C
Storage temperature	-40°C to +100°C
Relative Humidity	95% non-condensing
<b>Cable &amp; Connector</b>	
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)
<b>Antenna Element</b>	
Center Frequency	1575.42 MHz +/-1.023MHz
Polarization	R.H.C.P. (Right Handed Circular Polarization)
Absolute Gain @ Zenith	+5 dBi typical
Gain	90° : 2.0dBi Min 20° : -5.0dBi Min Mounted on the 60mm x60mm square ground plane
Axial Ratio	90° : 3.0dB Max Mounted on the 60mm x60mm square ground plane
<b>Low Noise Amplifier</b>	
Center Frequency	1575.42 MHz +/- 1.023 MHz
Gain	28+/-4.5dB
Noise Figure	1.5dB Max
Supply Voltages	2.5 ~5.5V DC
Current Consumption	13~16 mA@3.0V 20~22mA @5.0V
Out Band Rejection	fo = 1575.42 MHz fo +/- 20 MHz 7dB MIN fo +/- 30 MHz 12dB MIN fo +/- 50 MHz 20dB MIN fo +/- 100 MHz 30dB MIN
Output Impedance	50 ohm
Output VSWR	2.0 Max
<b>Overall Performance ( Antenna Element, LNA &amp; Cable )</b>	
Frequency range	1575.42 +/- 1.023 MHz
Gain	At 90°C 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)