



Low-Voltage GPS Antenna

Model: MA-19

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



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MA-19 is an externally mounted GPS antenna that provides continuous L1 band with high gain and low power consumption to a wide selection of GPS receivers in today's market. It is the integration of a high-performance GPS patch antenna and a low noise amplifier into a low profile, extremely compact and fully waterproof enclosure. MA-19 provides excellent signal amplification to any GPS receiver with 2.5~3.3V DC antenna power at the center pin.

Coming with small size and ruggedness, MA-19 is designed mainly to meet the robust demand for a GPS antenna that can maintain GPS signal stability for automatic vehicle locating and navigation even in a harsh environment.

Features:

- Compact Construction/ Low Profile/ Fully Weatherproof
- Low Power Consumption
- New Universal Connectors/Magnet or Screw Mount
- Excellent Temperature Stability
- Low Noise Figure
- Ultra-High Sensitivity

Applications:

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

Specifications:

PHYSICAL CONSTRUCTION	
Construction	Polycarbonate radome at the top, die-cast-shell at the bottom/ rubber gasket for water seal in between
Dimension	58mm(L) x 48mm(W) x 15mm(H)
Weight	65grams (excluding cable & connector)
Standard Mounting	magnet mount and/or screw mount with 2 M3 tapped holes on the plastic flanges
Optional Mounting Plate	customized metal sheet
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	+5 dBi typical
Gain @ 10° Elevation	-1 dBi typical
Axial Ratio	3 dB max.
Output VSWR	1.5 max.
Output Impedance	50 ohm

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LOW NOISE AMPLIFIER	
Center Frequency	1575.42 MHz +/- 1.023 MHz.
LNA Gain	15 dB typically
Bandwidth	2 MHz min.
Noise Figure	2.0 max
Outer Band Attenuation	20dB min. @F0 +/- 50MHz
Supply Voltages	+2.5 ~3.3V DC
Current Consumption	5.5mA +/-1 mA@3.3V
Output Impedance	50 ohm
OVERALL PERFORMANCE (Antenna Element, LNA & Cable)	
Center Frequency	1575.42 MHz.
Gain	14 dB min.
Noise Figure	2.0 max.
Axial Ratio	3 dB max.
Bandwidth	2 MHz min.
VSWR	2.0 max.
Output Impedance	50 ohm
ENVIRONMENTAL CONDITIONS	
Operating Temperature	-30° C~ +85° C
Storage Temperature	-40° C~ +90° C
Relative Humidity	95% non-condensing
Water Resistance	100% waterproof

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