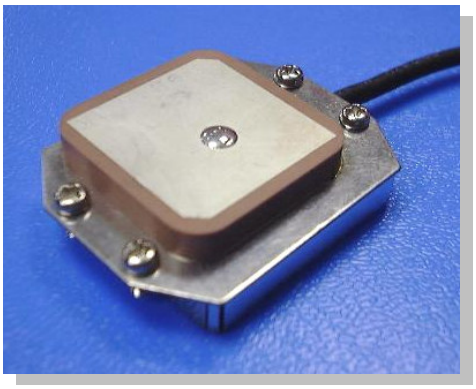
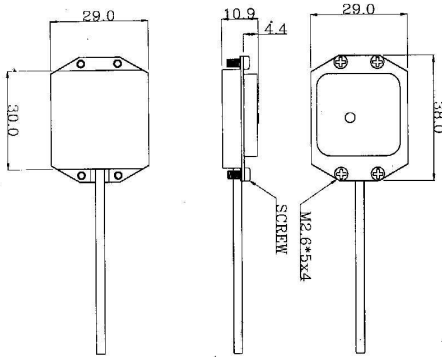
# GPS Antenna Module

## Model: SA-60C

### High-performance antenna module for embedded applications






### Introduction:

The SA-60C is the integration of a high performance GPS patch antenna and a state-of-the-art low noise amplifier over a 38mm x 29mm metal frame with 4 screws at its corners. With its compact construction & high-end LNA, the SA-60C is ideal for various kinds of embedded applications and provides excellent signal amplification when connected to a GPS receiver with 5V DC antenna power at the center pin.

### Features:

- High Performance
- Low Noise Figure
- Very Low Current Consumption
- Variety of Connectors

### Applications:

- Embedded GPS Antenna for AVL, Fleet Management Systems, Car Navigation, Marine Navigation, Hand-held GPS

### Specification:

| Physical Condition | |
|---|---|
| Dimension | 38mm(L) x 29mm(W) x 10.5mm(D) |
| Weight | 20grams (w/o cable & connector) |





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| | |
|---|---|
| Shielding | LNA circuits are shielded with metal frame to avoid interference |
| **Cable & Connector** | |
| RF Cable: | 5 meter RG174/U (standard) cable & length (optional) |
| Pulling Strength: | 6 Kg @ 5sec. molded plastic 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 type. |
| Optional Adapters: | FME to MCX/BNC/SMA/SMB/TNC |
| **Antenna Element** | |
| Center Frequency: | 1575.42 MHz +/- 1.023 MHz |
| 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 |
| **Low Noise Amplifier** | |
| Center Frequency: | 1575.42 MHz +/- 1.023 MHz. |
| Power Gain | 30 dB typical. |
| Bandwidth | 2 MHz min. |
| Noise Figure | 2.5 max. |
| Supply Voltages | +4.5~5.5V DC. |
| Current Consumption | 28mA +/-3mA @ 5VDC. |
| VSWR | 2.0 max. |
| Output Impedance | 50 ohm |
| **Overall Performance (antenna element, LNA & cable)** | |
| Center Frequency: | 1575.42 MHz. |
| Gain: | 27dB min. |
| Noise Figure: | 2.5 max. |
| Band width: | 2 MHz min. |
| Axial Ratio: | 3 dB max. |
| VSWR | 2.0 max. |
| Output Impedance | 50 ohm |
| **Environmental conditions** | |
| Operating Temperature: | -40°C~+85°C |
| Storage Temperature: | -50°C~+90°C |
| Relative Humidity: | 95% non-condensing |

(*PS: The specification is subject to change without prior notice)