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## S3126

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### SiRF Star III GPS Module

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#### GENERAL DESCRIPTION

The S3126 (patch on top) is a high sensitivity, low power consumption; compact size GPS module designed for a broad spectrum of OEM system applications. This product is based on the SiRF Star III low power chipset solution. It tracks up to 20 satellites at a time while providing fast time-to-first-fix and 1Hz navigation updates. Its far-reaching capability meets the sensitivity and accuracy requirements of car navigation as well as other location-based applications, such as AVL system, handheld navigator, PDA, pocket PC, or any battery operated navigation system.

The S3126 design utilizes the latest surface mount technology and high level circuit integration to achieve superior performance while minimizing dimensions and power consumption. This hardware capability combined with software intelligence makes the board easy to be integrated and used in all kinds of navigation applications or products.

#### MAIN FEATURES

- Built-in high performance SiRF Star III chipset
- Superior sensitivity: -159dBm tracking
- Cold/Warm/Hot start time: 42/38/1 sec. (average)
- Low power consumption (40mA typ. @3.3V)
- 20 channels "All-in-View" tracking
- Compact board size: 31.0x26.0x4.0mm (wafer connector not included)
- Support standard NMEA-0183
- Reacquisition time: 0.1 sec.
- Ceramic patch antenna (2mm) on top
- Support patch antenna only

# WONDE PROUD

## S3126

### TECHNICAL SPECIFICATIONS

#### Electrical Characteristics

##### General

Frequency	L1, 1575.42 MHz
C/A code	1.023 MHz chip rate
Channels	20

##### Sensitivity

Tracking	-159dBm typ.
Acquisition	-142dBm typ.

##### Accuracy

Position	5 – 25m CEP without SA
Velocity	0.1 meters/second without SA
Time	1 microsecond synchronized to GPS time

##### Datum

Default	WGS-84
Other	Support different datum by request

##### Acquisition Rate (Open sky, stationary requirements)

Hot start	1 sec, average
Warm start	38 sec, average
Cold start	42 sec, average

##### Dynamic Conditions

Altitude	18,000 meters max.
Horizontal Velocity	515 m/s max.
Vertical Velocity	36 kilometers/hour max.
Acceleration	4g, max.
Jerk	4 meters/second <sup>3</sup> , max.

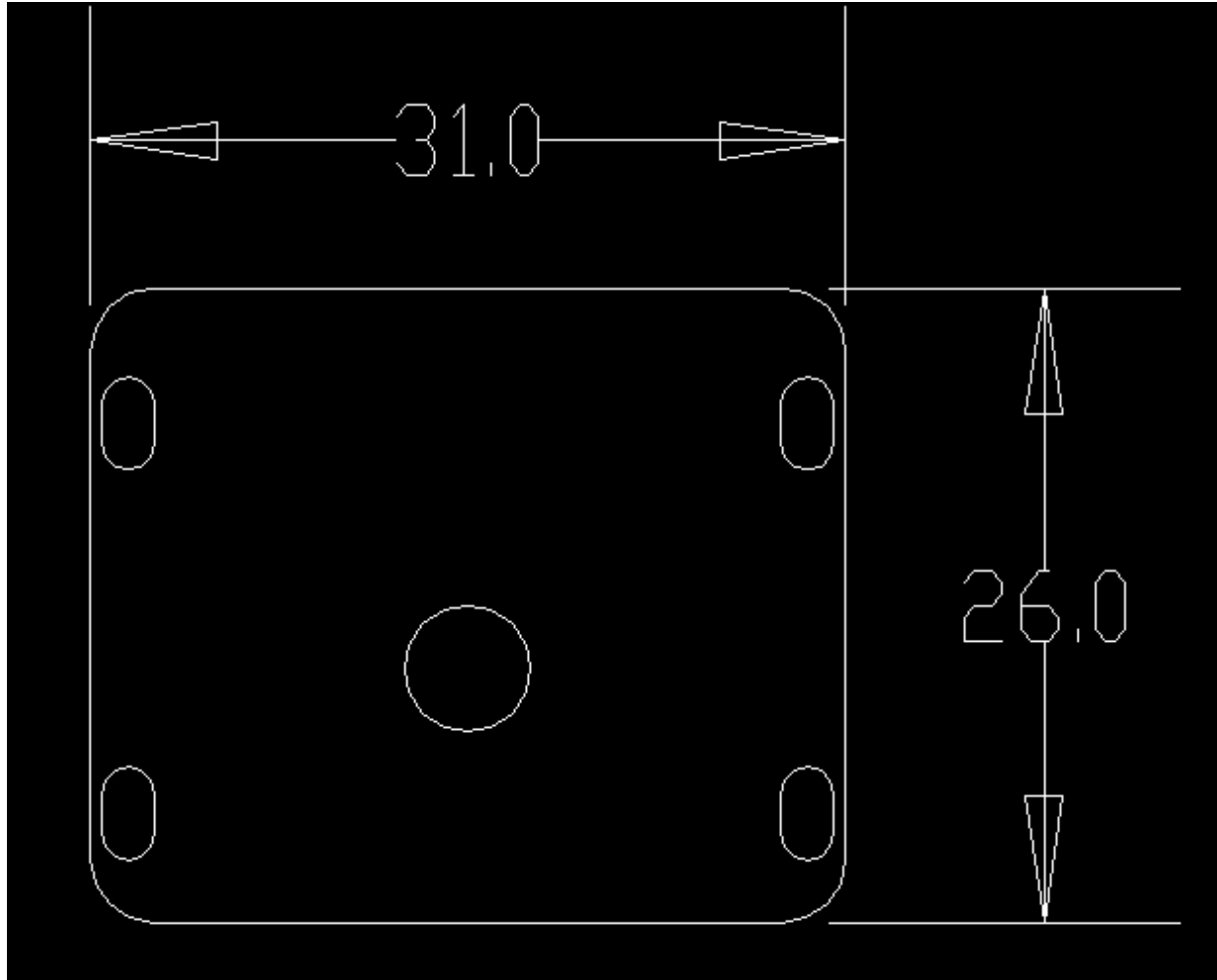
##### Power

Main power input	3.3±5% VDC input
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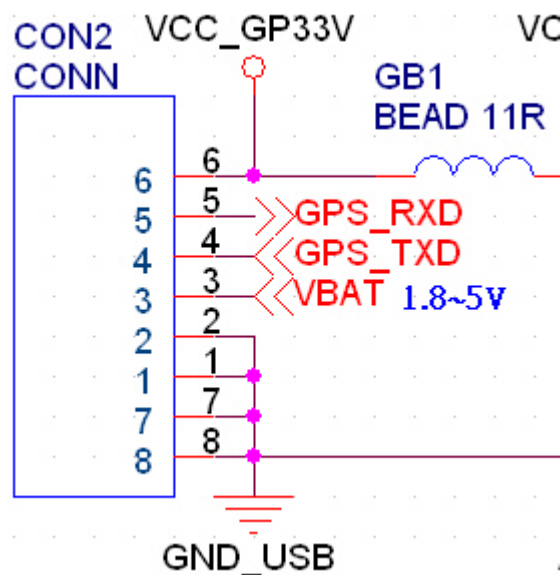
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S3126

## DIMENSIONS



## CONNECTOR



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*Product Brief*

**S3126**

## **APPLICATIONS**

The S3126 is a high performance, low power consumption GPS module. The applications are as below:

- Car navigation
- GPS wrist watch
- Solar operated device
- Marine navigation
- Fleet management
- AVL and Location-Based Services
- Radar detector with GPS function
- Hand-held device for personal positioning and navigation
- Ideal for PDA, Pocket PC and other computing devices for GPS application

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