

Applications

- High sensitivity / low power GPS and A-GPS applications
- Portable navigation devices, mobile phones and GPS peripheral devices
- Telematics equipment

Features

- Single-conversion L1-band GPS radio with integrated IF filter
- Integrated LNA; 1.6 dB typ. noise figure
- Low RF system noise figure; 2.25 dB typ.
- Low 10 mA operating current with 2.7-3.3 V supply; 8 mA with internal LNA disabled
- Standby current <10 μ A
- Fully Integrated PLL, compatible with 13, 16.368, 19.5 and 26MHz reference frequencies
- 2-bit SIGN & MAG Digital IF output
- Integrated VCO and resonator
- I/O supply range extends down to 1.7 V
- 2.2 x 2.2 x 0.3 mm, 46 pad, 250 μ m pitch, SnAg solder bump, RoHS-compliant package

Product Description

The SE4110S is a highly integrated GPS receiver offering high performance and low power operation in a wide range of low-cost applications. It is particularly well suited to cellphone and high sensitivity L1-band GPS / A-GPS systems.

The SE4110S includes an on-chip LNA, a low IF receiver with a linear AGC and 2-bit analogue-to-digital converter (ADC). The receiver incorporates a fully integrated image reject mixer so no SAW filter is required in many applications. There is also an on-chip IF filter.

The SE4110S supports a wide range of reference frequencies addressing both traditional GPS systems and emerging mobile phone applications. The synthesizer is highly integrated requiring only two passive components to implement an off-chip loop filter.

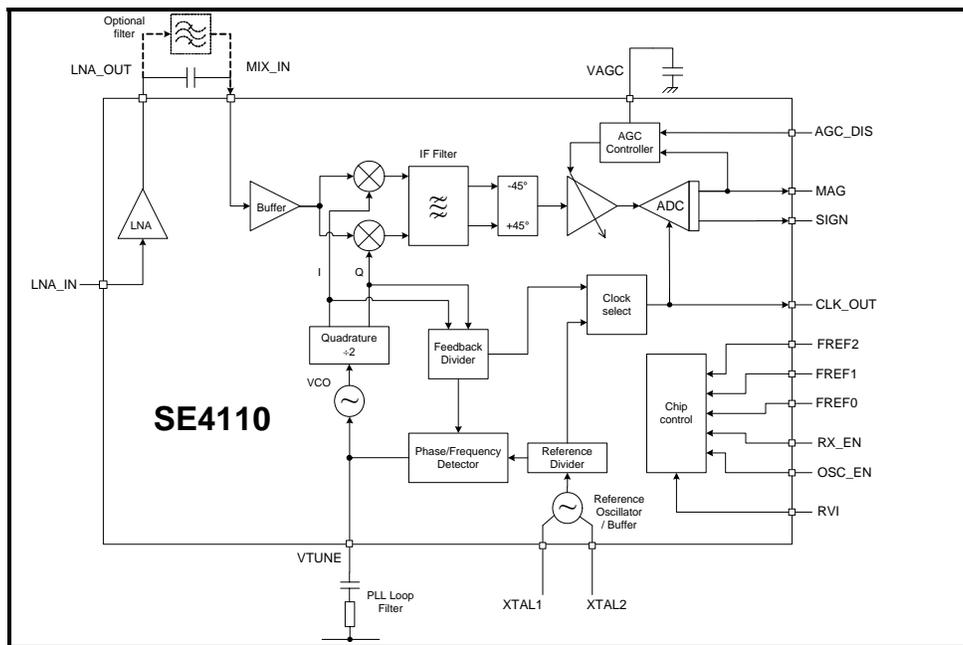
The SE4110S is optimized for the lowest possible power consumption consistent with the very low external component count.

The SE4110S incorporates current controlled low-spurious output buffers which may optionally be run from a separate external supply to interface to low voltage systems. The buffers supply sufficient current to drive most baseband devices directly.

Ordering Information

Part No.	Package	Remark
SE4110S-R	46-Pad Chip-Scale Package	Shipped in Tape & Reel

Functional Block Diagram



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Product Preview

The datasheet contains information from the product concept specification. SiGe Semiconductor, Inc. reserves the right to change information at any time without notification.

Preliminary Information

The datasheet contains information from the design target specification. SiGe Semiconductor, Inc. reserves the right to change information at any time without notification.

Production testing may not include testing of all parameters.

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