

### Applications

- Mobile phone & PDA accessories
- Portable navigation and personal security
- Security systems
- Asset tracking
- Telematics equipment

### Features

- 35mW typical power consumption
- Single conversion radio with integrated IF filters
- On-chip, gain switchable LNA
- Low LNA noise figure, 1.9 dB typ.
- On chip crystal oscillator can be powered up independently
- Fully integrated VCO, resonator and PLL
- Remote antenna current detection
- 4x4 mm 24 pin QFN - Pb Free and RoHS compliant package

### Ordering Information

Type	Package	Remark
SE4100L-R	24 Pin QFN	Shipped in Tape & Reel

### Product Description

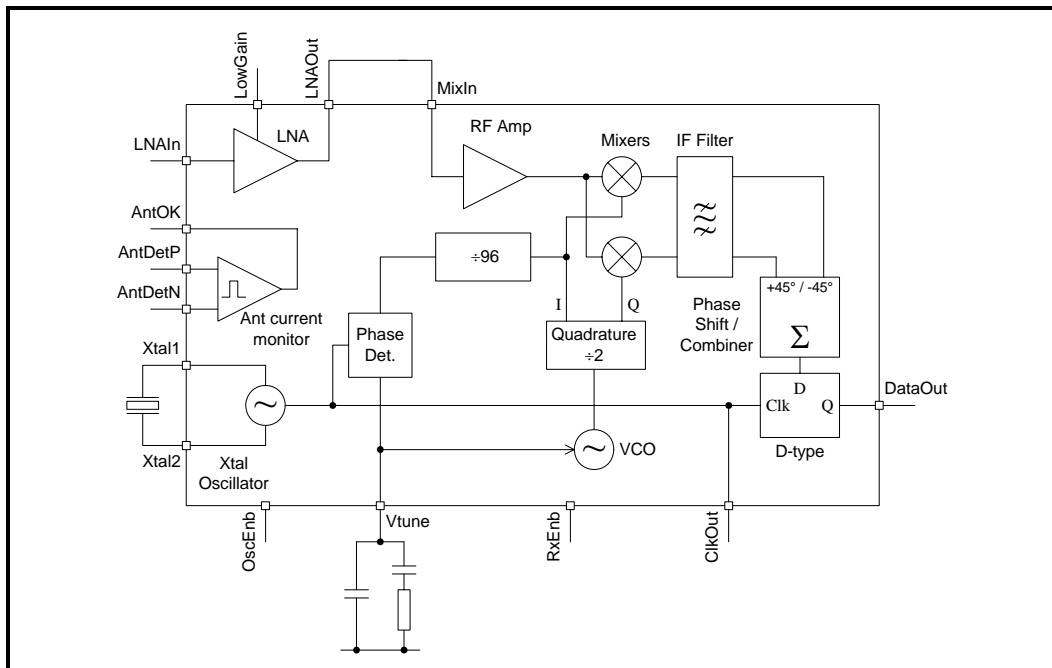
The SE4100L is an integrated GPS receiver designed to receive the L1 signal at 1575.420 MHz. The receiver has a low IF architecture and integrates all of the amplifier, oscillator, mixer and IF sampling functions.

The high level of integration reduces the external component count to just 14 passives in addition to power supply de-coupling and a 16.368 MHz crystal. Furthermore, elimination of the need for an external VCO resonator and RF filter reduces the critical off-chip RF circuitry to just three matching components to achieve optimum noise match at the LNA input. Combined with the 4x4 mm LPCC package, this results in a very small circuit footprint with no need for electrical screening in many applications.

The SE4100L's small size and BOM requirement is complemented by just 35 mW typical operating power consumption. Digitally controlled shutdown modes enable the 16.368 MHz clock signal to the baseband processor to be maintained separately from operation of the rest of the receiver.

A switchable gain LNA enables the SE4100L to be used with either a local passive antenna or with a remote active antenna without changing the circuit configuration. An image reject mixer downconverts the RF signal to a 4.092 MHz IF. The integrated IF filter feeds a combiner, limiter and output latch. The output signal is a 1-bit quantized 4.092 MHz digital IF.

### 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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