SE2438T: 2.4 GHz Smart Energy/ZigBee® Front-End Module

Applications

- Smart Meters
- In-home appliances
- Smart thermostats

Features

- Integrated:
  - PA with up to 15 dBm output power
  - Low Noise Amplifier (LNA) with programmable bypass
  - Transmit (Tx) and Receive (Rx) switching function
- Front-End Module (FEM) noise figure of 3.5 dB typical
- Differential Rx/Tx interface with integrated Baluns
- Fast switch ON/OFF time <800 ns
- 2.0 V–3.6 V supply operation
- Sleep mode current 0.05 µA typical
- 3.0 mm x 3.0 mm x 0.55 mm 20-pin QFN
- Pb-free, RoHS compliant, and Halogen free

Skyworks Green™ products are compliant with all applicable legislation and are halogen-free. For additional information, refer to *Skyworks Definition of Green™*, document number SQ04-0074.

Description

The SE2438T is a high performance, fully integrated Radio Frequency (RF) FEM that is designed for ZigBee®/Smart Energy applications.
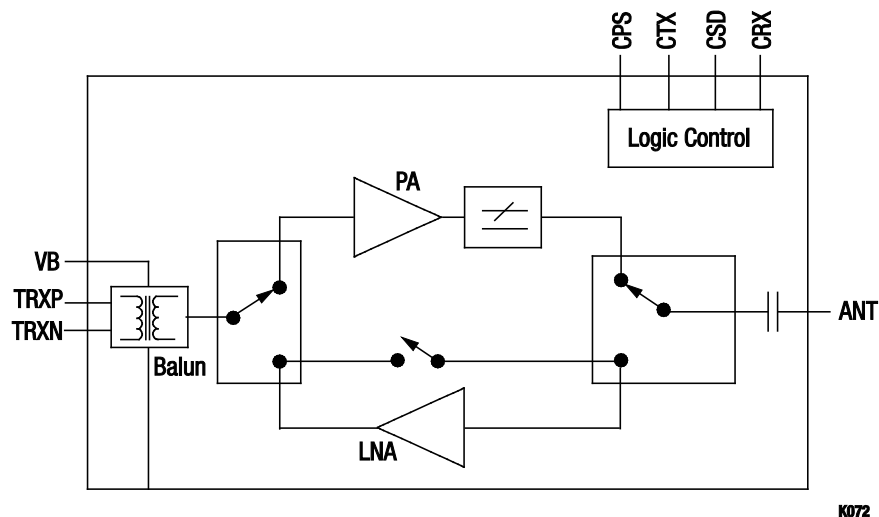
The SE2438T is designed for ease of use and maximum flexibility, with integrated fully matched input baluns, an integrated inter-stage matching and harmonic filter, and digital controls that are compatible with 1.6 V– 3.6 V Complementary Metal Oxide Semiconductor (CMOS) levels.

The RF blocks operate over a wide supply voltage range from 2.0 V to 3.6 V, which allows the SE2438T to be used in battery powered applications over a wide spectrum of the battery discharge curve.

A functional block diagram of the SE2438T is shown in Figure 1.

Figure 1. SE2438T Block Diagram

Ordering Information

Model Name	Manufacturing Part Number	Evaluation Board Part Number
SE2438T: 2.4 GHz Smart Energy/ZigBee Front-End Module	SE2438T	SE2438T-EK1