

DESCRIPTION

FC3810 is a complete RF to baseband ASK (amplitude shift keying) transceiver IC of FCI's netRF™ family for worldwide ETCS (electronic toll collection system) applications. FC3810 is a true single chip for 5.8GHz band ETC application since it integrates all the required receiver, transmitter, VCO, and PLL enabling tiny low power ETC RF solution.

The receiver part receives 5.8GHz band ASK modulated RF signal from the antenna and gives demodulated baseband ASK DATA to the ASK modem chip. The receiver part is comprised of LNA, down-converter, channel select filter, and ASK demodulator. The transmitter part receives digital data from the ASK modem chip and transmit 5.8GHz band ASK modulated RF signal to the antenna. The transmit part contains data up-converter and drive amplifier. FC3810 integrates the entire required PLL block such as VCO, fractional-N synthesizer, crystal oscillator for LO signal generation for receiving and transmitting. Two wired serial programmable interface protocol enables FC3810 to operate in various modes.

For ASK 5.8GHz band ETC system, external components such as IF SAW filter, and IF ASK demodulator are no longer required because of FC3810 fully integrated ASK transceiver IC. FC3810 is available in a 6mm x 6mm 40-pin MLF package.

APPLICATIONS

- Korea ETC applications

REVISION HISTORY

- **Tentative** version release: Feb, 2007.
- **Preliminary** version datasheet release:
APR, 2008

For latest specifications, technical questions and additional product information, visit website or e-mail

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FEATURES

- Complete RF transceiver for 5.8GHz band ETC applications using ASK modulation
- 5.8GHz fully Integrated LNA and mixer with low noise figure and high linearity.
- Channel selection filter with self calibration and automatic DC-offset calibration
- Fully Integrated ASK demodulator
- Fully integrated low-noise LC VCO
- Fast locking (<20us) fractional-N frequency synthesizer
- Support 2-wired serial programming protocol
- 6mm x 6mm, 40pin, small leadless package

PIN CONFIGURATION

