

DESCRIPTION

The PT4302 is an ultra-low power OOK/ASK super heterodyne receiver for the 315/433.92 MHz frequency bands. It offers a high level of integration and requires only few external components. The PT4302 consists of a low-noise amplifier (LNA), a down-conversion mixer, an on-chip phase-locked loop (PLL) with integrated voltage-controlled oscillator (VCO) and loop filter, an OOK/ASK demodulator, a data filter, a data slicing comparator and an on-chip regulator. The PT4302 also implements a discrete one-step automatic gain control (AGC) that reduces the LNA gain when the RF input signal is greater than -68 dBm. The AGC circuitry can extend the dynamic range of received RF signal.

The PT4302 is available in a 16-pin SSOP package and is specified over the extended temperature range (-40 to $+85^{\circ}\text{C}$).

FEATURES

- Ultra-low power consumption: 2.7 mA for full operation (315 MHz)
- Few external components
- Excellent sensitivity of the order of -111 dBm (peak ASK signal level)
- 2.4 V to 5.5 V supply voltage range
- 250 MHz to 500 MHz frequency range
- Data rate up to 10 Kb/s

APPLICATIONS

- Automotive remote keyless entry (RKE)
- Remote control
- Garage door and gate openers
- Suitable for applications that meet either the European ETSI-300-220 or the North American FCC (Part 15) regulatory standards

BLOCK DIAGRAM

