

ADVANCE INFORMATION

All information in this data sheet is preliminary and subject to change.

8/97



900MHz Image-Reject Receiver with Transmit Mixer

MAX2426

General Description

The MAX2426 is a highly integrated front-end IC that provides the lowest-cost solution for cordless and ISM-band radios operating in the 900MHz band. It incorporates a receive image-reject mixer (to reduce filter cost) and a versatile transmit mixer. The device operates from a +2.7V to +4.8V single supply, allowing direct connection to a 3-cell battery stack.

The receive path incorporates an adjustable-gain LNA and an image-reject downconverter with 35dB image suppression. These features yield excellent combined downconverter noise figure (4dB) and high linearity with an input third-order intercept point (IIP3) of up to 2dBm.

The transmitter consists of a balanced mixer and a power amplifier (PA) predriver that outputs 2dBm. It can be used in a variety of configurations, including BPSK modulation, direct VCO modulation, and transmitter upconversion. For devices featuring transmit as well as receive image rejection, refer to the MAX2420/MAX2421/MAX2422/MAX2460 data sheet.

The MAX2426 includes an on-chip local oscillator (LO), requiring only an external varactor-tuned LC tank for operation. The MAX2426 is optimized for a receive IF frequency of 70MHz and uses high-side LO injection ($f_{LO} > f_{RF}$). The integrated divide-by-64/65 dual-modulus prescaler can also be set to a direct mode in which it acts as an LO buffer amplifier.

Four separate power-down inputs can be used for advanced system power management, including a 0.5µA shutdown mode.

This device is compatible with commonly used modulation schemes such as FSK, BPSK, and QPSK, as well as frequency-hopping and direct-sequence spread-spectrum systems. The MAX2426 comes in a 28-pin SSOP package.

Applications

Cordless Phones
Wireless Telemetry
Wireless Networks
Spread Spectrum Communications
Two-Way Paging

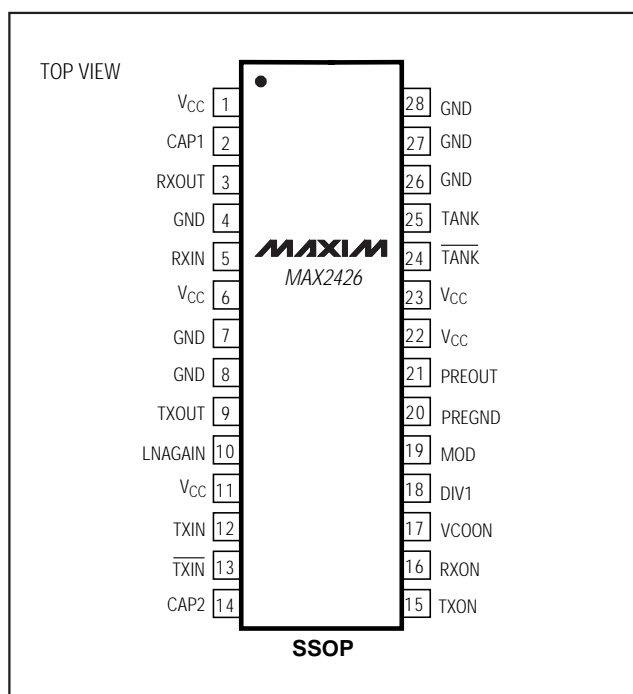
Features

- ◆ 35dB Receive Image Rejection
- ◆ Adjustable-Gain LNA
- ◆ Up to 2dBm Combined Receiver Input IP3
- ◆ 4dB Combined Receive Noise Figure
- ◆ PA Predriver Provides up to 2dBm
- ◆ Low Current Consumption: 23mA Receive
15mA Transmit
9.5mA Oscillator
- ◆ 0.5µA Shutdown Mode
- ◆ Operates from Single +2.7V to +4.8V Supply

Ordering Information

PART	TEMP. RANGE	PIN-PACKAGE
MAX2426EAI	-40°C to +85°C	28 SSOP

Pin Configuration



Maxim Integrated Products 1

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For small orders, phone 408-737-7600 ext. 3468.

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Functional Diagram

