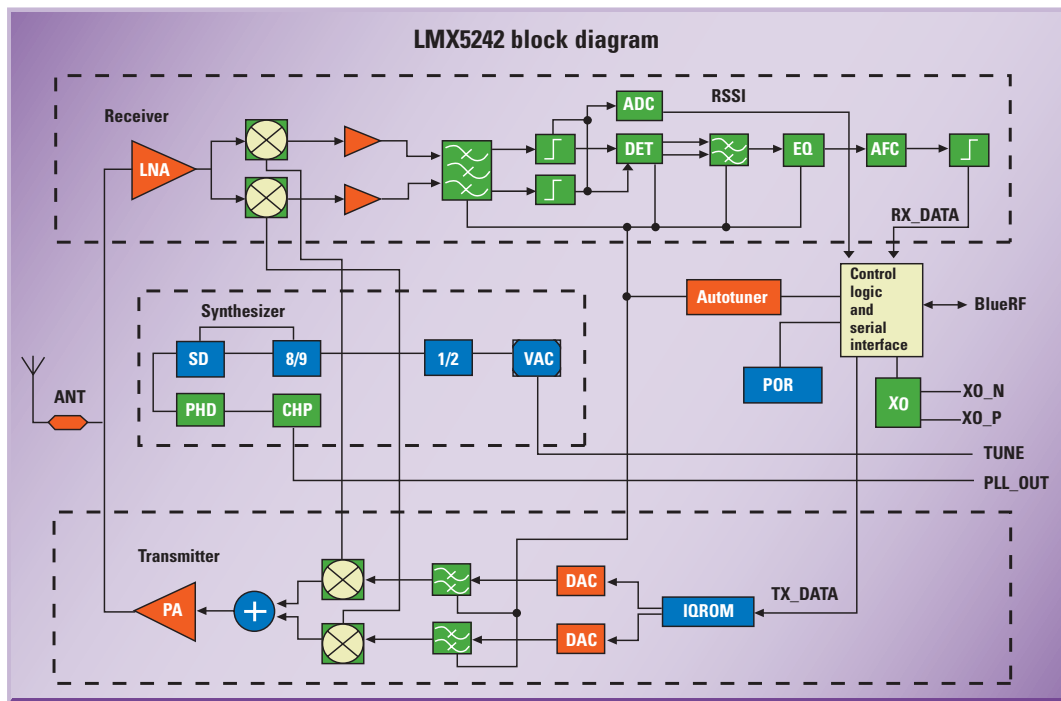


LMX5252: Bluetooth® radio

National Semiconductor. Powering the wireless world.



Bluetooth

Bluetooth wireless solutions

Everyone wants to be connected. At home. At work. At play. And National Semiconductor is pioneering wireless solutions across the board.

From high-performance, optimized ICs to complete reference designs—National's Bluetooth technology is enabling wireless communications anytime, anywhere.

Bringing you a world of fast and secure wireless connectivity between consumer electronics, cellular phones, PCs, and peripherals—National is at the forefront of Bluetooth innovation, making tomorrow's technology a reality today.

www.national.com/bluetooth

Introducing the next generation in Bluetooth® solutions

National's LMX5252 Bluetooth radio provides the features and functionality designed to get you to market faster, offering a more cost effective solution than ever before. This highly integrated solution offers a 0.18 μm 2.4 GHz radio. Available in a single tiny LLP-60 package (6 mm x 6 mm x 0.8 mm), the LMX5252 provides one of the smallest solutions available in the industry.

Radio

Featuring an integrated antenna filter and switch, National's radio minimizes the total number of external components. The radio additionally integrates the receiver and transmitter baluns, the antenna switch, and filter together with the VCO onto a tiny single die. The fractional-N delta-sigma synthesizer and the crystal offer support for a wide range of external reference frequency clocks and crystals.

Outstanding features

- Implemented in 0.18 μm CMOS technology
- RF includes baluns, switch and filters on chip

- Secondary 32.768 kHz oscillator for low-power modes
- Typically -84 dBm receiver sensitivity
- Class 2 operation
- Fractional-N sigma-delta modulator
- Operating voltage range 2.5V to 3.0V
- I/O voltage range 1.6V to 3.6V
- Several power management functions
- Accepts external clock 10 MHz to 40 MHz or crystal input 10 MHz to 20 MHz
- Current consumption typically below 41 mA
- Available in a LLP-36 (6 mm x 6 mm x 0.8 mm) package

Interfaces

- Blue RF interface
- Single Rx/Tx-pin radio interface applications
- Mobile handsets
- Personal digital assistants
- Personal computers

Applications

- Mobile handsets
- Personal digital assistants
- Personal computers

 **National Semiconductor**
The Sight & Sound of Information