



Silicon Germanium Dual-Band LNA/Downconverter RFIC CX74004

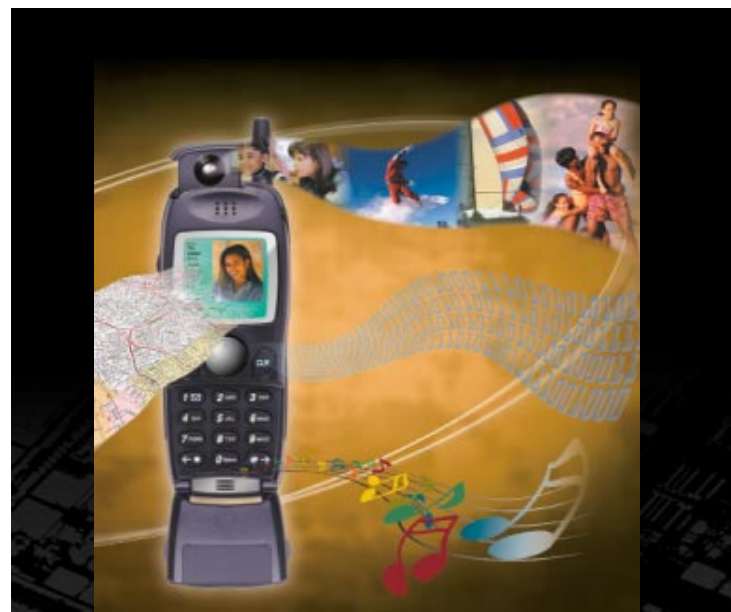
Conexant Delivers RF Chipsets for 2G and 3G CDMA Applications

The CX74004 is a tri-mode, dual-band LNA/downconverter designed in Conexant's advanced SiGe process. The device meets and exceeds cdmaOne, cdma2000, and AMPS requirements for U.S. and Korean cellular, Japan cellular, U.S. PCS and Korean PCS markets. The CX74004 can also be optimized for dual-mode GSM/wideband CDMA (WCDMA) applications in the GSM and IMT-2000 bands.

Employing silicon germanium (SiGe) bipolar complementary metal oxide semiconductor (BiCMOS) process technology, the RFIC is designed for low current consumption at a high performance. By utilizing the advanced process, standby times are up to 15 percent longer than with previous generation of devices.

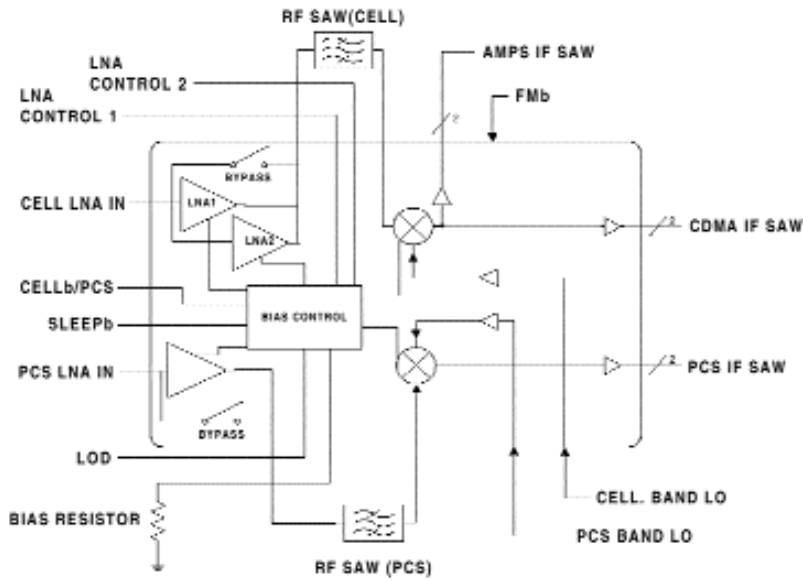
The CX74004 is a super-heterodyne receiver incorporating all the components required for implementing the receiver front end, except for the RF SAW filters. It has two internal low noise amplifiers (LNAs) — one for the cellular band and another for the PCS or IMT-2000 band.

The CX74004, along with Conexant's CX74002 Transmit RFIC, CX74005 VGA + I/Q demodulator, a Conexant power amplifier module, and Conexant's baseband analog processor forms a complete RF subsystem that interfaces with the most common cdma baseband devices.

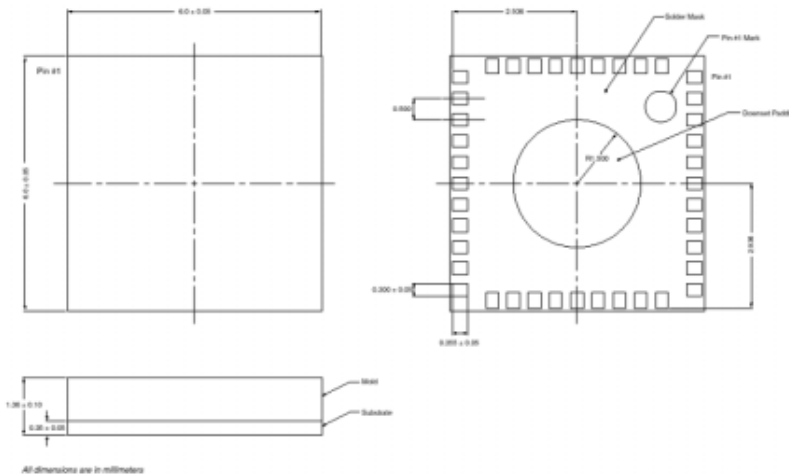


Distinguishing Features

- Tri-mode, dual-band functionality
- Battery-cell operation
($2.7V < VCC < 3.6V$)
- PCS bypass LNA NF=1.9 dB typical
- Three-step cellular LNA NF=1.8 dB typical
- 5mm x 5mm land grid array (LGA)
chip scale package



CX74004 Rx ASIC block diagram



Package dimensions – 32-pin 5mm x 5mm LGA package

Product Features

- Three-step gain LNA designed to meet intermodulation distortion specifications for CDMA applications
- Three independent mixers, one for the PCS band and two for the cellular band, designed to operate with very low LO power of -10dBm

Applications

- Cellular- and PCS-band phones
- cdmaOne, cdma2000 and AMPS modes in the following bands:
 - U.S. cellular
 - Japan cellular
 - U.S. PCS
 - Korea PCS
- GSM/WCDMA dual-mode applications

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