

***LTC News for Immediate Release***

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**High Linearity Active RF Mixer Simplifies 3G Wireless  
Basestation Receiver Design**

MILPITAS, CA – April 18, 2005 – A new high linearity active downconverting RF mixer from Linear Technology significantly reduces the cost and simplifies design of 3G cellular basestations. The LT5527 RF mixer features an operating frequency range extending to 3.7GHz. At 1.9GHz, the LT5527 offers IIP3 (Input 3<sup>rd</sup> order Intercept Point) linearity of 23.5dBm, conversion gain of 2.3dB, and a Noise Figure of 12.5dB, meeting the dynamic range requirements of 3G cellular basestations and other high performance wireless infrastructure receivers. The LT5527's Local Oscillator (LO) and RF inputs operate single-ended and have built-in 50-Ohm impedance, requiring few external matching components, reducing basestation cost and design time. Moreover, the LT5527 incorporates a low noise LO buffer, allowing operation at a -3dBm LO drive level, resolving the challenges of RF isolation and reducing the need for external filtering.

The LT5527 operates over a wide frequency range from 400MHz to 3.7GHz, covering the 850MHz cellular band, the 1.9GHz and 2.1GHz W-CDMA and UMTS bands, as well other high performance wireless applications that operate in bands at 450MHz, 2.4GHz and 3.5GHz.

The LT5527 features on-chip RF transformers at both the RF and LO inputs. The transformers facilitate 50-Ohm impedance matching and allow these inputs to operate single-ended, simplifying product development and speeding time to market.

The LT5527 operates from a single 5V supply voltage. Typical operating current is 78mA. The device can be shutdown by an ENABLE pin. When disabled, the chip draws 100uA maximum quiescent current to conserve power. The LT5527 is offered in a 16-pin 4mm x 4mm surface mount QFN package. It is priced at \$5.80 each in 1,000-piece quantities, and is available from stock.

(more...)

## Summary of Features: LT5527

- Frequency Range 400MHz to 3.7GHz
- Input IIP3 @ 1.9GHz +23.5 dBm
- Noise Figure @ 1.9GHz 12.5 dB
- Conversion Gain @1.9GHz 2.3 dB
- LO Drive Power -3 dBm
- LO-to-RF Leakage -44dBm

COMPANY BACKGROUND: Linear Technology Corporation was founded in 1981 as a manufacturer of high performance linear integrated circuits. Linear Technology products include high performance amplifiers, comparators, voltage references, monolithic filters, linear regulators, DC-DC converters, battery chargers, data converters, communications interface circuits, RF signal conditioning circuits, and many other analog functions. Applications for Linear Technology's high performance circuits include telecommunications, cellular telephones, networking products such as optical switches, notebook and desktop computers, computer peripherals, video/multimedia, industrial instrumentation, security monitoring devices, high-end consumer products such as digital cameras and MP3 players, complex medical devices, automotive electronics, factory automation, process control, and military and space systems.

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