400MHz to 3.8GHz High Linearity Downconverting Mixer Improves Performance for 3G & WiMAX Basestations

MILPITAS, CA – February 5, 2007 – The LT5557, a new high linearity, 3.3V, downconverting active RF mixer from Linear Technology elevates receiver dynamic range performance while extending bandwidth capability to cover 3G and WiMAX basestation frequencies to 3.8 GHz. The LT5557 offers 24.7 dBm IIP3, noise figure of 11.7 dB, and 2.9 dB of gain at 1.95 GHz. Its performance remains robust at WiMAX frequencies with 23.5 dBm IIP3, and 1.7 dB of gain at 3.6GHz. This performance is achieved with a low -3dBm LO input drive level, enabling best-in-class LO isolation performance. Typical LO-to-RF isolation is better than 42 dBc at 1.95 GHz. The LT5557's power consumption is low for this class of high linearity mixers, typically 270mW from a 3.3V supply. The device incorporates on-chip RF transformers to enable convenient single-ended, 50Ohm matching at the RF and LO inputs. The combination yields an overall cost-effective, compact, easy-to-use and high performance receiver solution for wireless basestations of all types.

The LT5557 incorporates a double-balanced active mixer core topology with on-chip LO buffer. Differential drive is employed internally throughout the mixer to maximize linearity and RF isolation. Conversion from single ended to differential is accomplished through on-chip RF balun transformers at the RF and LO inputs. The device's wide operating bandwidth covers the 850-965MHz GSM and US cellular bands, as well as 1.7GHz to 2.1GHz 3G wireless services. The LT5557 also supports WiMAX operating in the US at 2.6GHz and worldwide at up to 3.8 GHz.

The LT5557 operates from a single 3.3V supply, drawing a quiescent supply current of 81.6 mA. A shutdown feature is provided. When the chip is disabled, it draws a maximum sleep current of 100uA. The device comes in a 16-lead 4mm x 4mm QFN surface mount package.

It is pin compatible with other high performance Linear Technology downconverting mixers. Pricing starts at $5.95 each in 1,000-piece quantities. The product is available immediately from stock.

Photo Caption: High Linearity Downconverting Mixer for WiMAX

Summary of Features: LT5557

• Frequency Range	400 MHz to 3.8 GHz
• IIP3 @ 900 MHz	+25.6 dBm
@ 1950 MHz	+24.7 dBm
@ 2600 MHz	+23.7 dBm
@ 3600 MHz	+23.5 dBm
• Conversion Gain (900-1950 MHz)	3 dB
• LO Drive	- 3 dBm
• Noise Figure (900-950 MHz)	< 11.7 dB
• LO-RF Isolation	> 42 dB

About Linear Technology

Linear Technology Corporation, a manufacturer of high performance linear integrated circuits, was founded in 1981, became a public company in 1986 and joined the S&P 500 index of major public companies in 2000. 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. For more information, visit www.linear.com

Press Contacts:

John Hamburger, Director Marketing Communications
jhamburger@linear.com
Tel 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager
ddickinson@linear.com
408-432-1900 ext 2233