LTC News for Immediate Release
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125 Msps 14-bit Wideband ADC has Low Power Consumption

Low Power ADC Improves Base Station Power Efficiency and Battery Life for Portable Electronics

MILPITAS, CA – June 15, 2005 – Linear Technology Corporation announces the LTC2255, a 125Msps, 14-bit Analog to Digital Converter (ADC) that features excellent AC performance and extremely low power. Outperforming its nearest 14-bit competitor, the LTC2255 consumes 49% less power at just 395mW, significantly lowering the power budget and thermal considerations required for multiple channel devices. This provides a significant advantage in applications where efficiency and cooling is critical, such as satellite receivers, wireless base stations and portable electronics. As part of an extensive pin-compatible family, the LTC2255 comes in a conveniently small 5mm x 5mm QFN package with integrated bypass capacitors, requiring only a small number of tiny external components. The LTC2255 eliminates the need for large and costly decoupling capacitors, affording the smallest solution size available, which eases PCB space constraints and allows for more compact, cost effective designs. With its small dimensions, low power and reduced external component requirement, designers can easily fit four LTC2255 ADCs where just one competing solution would fit.

The LTC2255 is well placed to meet the needs of 3G and emerging 4G technologies,WiMAX and other wideband wireless applications where high performance ADCs play a key role in handling the demands of increasing network traffic. For wireless base station system designers, reduced power consumption is an important design consideration in helping to lower overall system operation costs. In addition, the combination of high sampling rate, low current and 14-bit resolution make it ideally suited to battery powered, high performance test and instrumentation equipment.

The LTC2255 offers exceptional low-level input signal performance due to its high linearity, and it is designed with good margin relative to the sample rate for reliable performance over a wide temperature range. At 125Msps sampling rate, it achieves excellent AC performance with 72.1dB SNR and 85dB SFDR at 70MHz.

The LTC2255 releases alongside 5 new family members, expanding the existing pin compatible family of low power, high speed ADCs to higher sampling rates of 105Msps and 125Msps in resolutions of 10, 12 and 14 bits. Each device is available both commercial and industrial temperature grades

(more...)

The entire LTC2255 product family is provided in the following table.

Part Number	Resolution	Speed	Power	Availability	Price (1k)
LTC2255	14-bit	125Msps	395mW	Now	$49.00
LTC2254	14-bit	105Msps	320mW	Now	$41.00
LTC2249	14-bit	80Msps	222mW	Now	$25.00
LTC2248	14-bit	65Msps	205mW	Now	$23.35
LTC2247	14-bit	40Msps	120mW	Now	$15.85
LTC2246	14-bit	25Msps	75mW	Now	$12.50
LTC2245	14-bit	10Msps	60mW	Now	$10.00
LTC2253	12-bit	125Msps	395mW	Now	$27.50
LTC2252	12-bit	105Msps	320mW	Now	$23.00
LTC2229	12-bit	80Msps	211mW	Now	$16.70
LTC2228	12-bit	65Msps	205mW	Now	$12.08
LTC2227	12-bit	40Msps	120mW	Now	$7.92
LTC2226	12-bit	25Msps	75mW	Now	$7.50
LTC2225	12-bit	10Msps	60mW	Now	$4.57
LTC2251	10-bit	125Msps	395mW	Now	$12.00
LTC2250	10-bit	105Msps	320mW	Now	$7.50
LTC2239	10-bit	80Msps	211mW	Now	$6.70
LTC2238	10-bit	65Msps	205mW	Now	$5.00
LTC2237	10-bit	40Msps	120mW	Now	$4.80
LTC2236	10-bit	25Msps	75mW	Now	$3.50

Summary of Features: LTC2255 Family

- Sample Rate: 125Msps/105Msps
- 10-bit, 12-bit, 14-Bit resolution
- 72.1dB SNR at 70MHz Input
- 85dB SFDR at 70MHz Input
- 640MHz Full Power BW S/H
- Tiny Board Footprint
- Single 3V Supply (2.85V to 3.4V)
- Low Power Dissipation: 395mW/320mW
- Flexible Input: 1Vp-p to 2Vp-p Range
- No Missing Codes
- INL ±1LSB
- Optional Clock Duty Cycle Stabilizer
- Shutdown and Nap modes
- 32-Pin, 5mm x 5mm QFN Package
- Pin Compatible Family

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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