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## **Rail-to-Rail SiGe Op Amps Offer Unmatched Speed-Power Efficiency**

MILPITAS, CA – August 24, 2010 – Linear Technology introduces the [LTC6252/3/4](#) and [LTC6255/6/7](#) single/dual/quad rail-to-rail operational amplifiers, providing unmatched speed-power efficiency in tiny packages. The LTC6252/3/4 achieves 720MHz GBW product and 280V/us slew rate while consuming 3.3mA supply current. The LTC6255/6/7 provides 6.5MHz GBW product and 1.8V/us slew rate, consuming just 65uA supply current. These parts join the previously released 180MHz gain-bandwidth Product 1mA supply current LTC6246/7/8 to provide a family of high efficiency op amps suitable for a wide array of applications.

The 720MHz 3.3mA LTC6252/3/4 features low input-referred broadband noise of 2.75nV/rtHz and slew rate of 280V/us. This high speed performance is combined with DC precision: input offset voltage is 350uV max at room temperature, and 1mV max from -40C to 125C. It operates on voltage supplies of 2.5V to 5.25V and has rail-to-rail inputs and outputs with fast output overdrive recovery.

The 6.5MHz 65uA LTC6255/6/7 also features rail-to-rail inputs and outputs. It is unity gain stable and can drive capacitive loads of up to 100nF. Operation is guaranteed with supply voltages ranging from 1.8V to 5.25. Maximum input offset voltage is 350uV at 25C and 700uV from -40C to 125C. Applications include portable instrumentation, battery and solar powered systems, and automotive electronics.

The dual LTC6253 and LTC6256 are available in 2mm x 2mm DFN and 8-lead SOT-23 packages. MSOP options are also available, including 8-lead and 10-lead versions with shutdown. The single-channel LTC6252 and LTC6255 also feature shutdown capability and are available in a SOT-23 package. Quad channel LTC6254 and LTC6257 are available in a 16-lead MSOP package. These amplifiers are fully specified over the commercial (0C to 70C), industrial (-40C to 85C) and high temperature industrial (H-grade) (-40C to 125C) temperature ranges, and priced starting at \$1.24 each for the LTC6255CS6#TRPBF in 2500-piece quantities.

For more information, visit [www.linear.com/6255](http://www.linear.com/6255) and [www.linear.com/6252](http://www.linear.com/6252).

## **Photo Caption: Power Efficient Rail-to-Rail Op Amps**

### **Summary of Features: LTC6252/3/4**


- Gain Bandwidth Product: 720MHz
- $-3\text{dB}$  Frequency ( $A_V = 1$ ): 400MHz
- Low Quiescent Current: 3.3mA
- High Slew Rate: 280V/us
- Input Common Mode Range Includes Both Rails
- Output Swings Rail-to-Rail
- Low Broadband Voltage Noise: 2.75nV/ $\sqrt{\text{Hz}}$
- Power-Down Mode: 42uA
- Fast Output Recovery
- Supply Voltage Range: 2.5V to 5.25V
- Input Offset Voltage: 350uV Max
- Large Output Current: 90mA
- CMRR: 105dB
- Open Loop Gain: 60V/mV
- Operating Temperature Range:  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$
- Single in 6-Pin TSOT-23
- Dual in MS8, 2mm  $\times$  2mm Thin DFN, TSOT-23, MS10
- Quad in MS16

### **Summary of Features: LTC6255/6/7**

- Gain Bandwidth Product: 6.5MHz
- $-3\text{dB}$  Frequency ( $A_V = 1$ ): 4.5MHz
- Low Quiescent Current: 65uA
- Stable for Capacitive Load up to 100nF
- Input Offset Voltage: 350uV Max
- Input Common Mode Range Includes Both Rails
- Output Swings Rail-to-Rail
- CMRR/PSRR: 100dB/100dB
- Supply Voltage Range: 1.8V to 5.25V
- Shutdown Current: 7uA Max
- Operating Temperature Range:  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$
- Single in 6-Pin TSOT-23
- Dual in MS8, 2mm  $\times$  2mm Thin DFN, TSOT-23, MS10
- Quad in MS16

## 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, uModule<sup>®</sup> products, 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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