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High Voltage Inverting Charge Pumps Offer Low Input & Output Ripple

MILPITAS, CA – May 9, 2012 – Linear Technology Corporation announces the LTC3260 and LTC3261 versatile high voltage charge pumps. The LTC3261 is a high voltage inverting charge pump that can deliver up to 100mA of output current. The LTC3260 has the same charge pump as the LTC3261, but also includes both positive and negative LDO regulators that can source up to 50mA output current each. The negative LDO post regulator is powered from the inverting charge pump output. The positive and negative LDO output voltages can be adjusted down to 1.2V and -1.2V, respectively using external resistor dividers. Both devices operate over a wide 4.5V to 32V input voltage range.

The internal charge pump of the LTC3260 and LTC3261 function in either low quiescent current Burst Mode® operation or low noise constant frequency mode at up to 88% efficiency. In Burst Mode operation the charge pump output regulates to $–0.94 • V_{IN}$. Also, in Burst Mode operation the LTC3261 draws only 60µA of quiescent current, while the LTC3260 draws only 100uA with both LDOs enabled. Constant frequency operation offers low input and output ripple; in this mode the charge pump produces an output equal to $–V_{IN}$ and operates at a fixed 500kHz or to a programmed value between 50kHz to 500kHz using an external resistor. Other IC features include low external parts count with ceramic capacitor stability, soft-start circuitry to prevent excessive current flow during start-up, plus short circuit and thermal protection.

The LTC3260 and LTC3261 are well-suited for a variety of applications such as low noise bipolar/inverting supplies from a high voltage input, industrial/instrumentation low noise bias generators, portable medical equipment and automotive infotainment systems.

The LTC3260 is available in a low-profile (0.75mm) 3mm x 4mm 14-lead DFN package and a 16-lead MSOP package, both with a backside thermal pad. The LTC3261 is available in a 12-lead MSOP package with backside thermal pad. For both devices, the E- and I-grade operating junction temperature is -40°C to +125°C. 1000-piece pricing for the E grade starts at $3.40 each for the LTC3260 and $2.87 each for the LTC3261. Both devices are available from stock.

For more information, visit www.linear.com/product/LTC3260 and www.linear.com/product/LTC3261

Photo Caption: Low Noise High Voltage Inverting Charge Pumps

LTC3260: Dual Supply Inverting Charge Pump

- V_{IN} Range: 4.5V to 32V
- Inverting Charge Pump Generates $–V_{IN}$
- Charge Pump Output Current Up to 100mA
- Low Noise Negative LDO Post Regulator (I_{LDO}^- = 50mA Max)
- Low Noise Independent Positive LDO Regulator (I_{LDO}^+ = 50mA Max)
- 100µA Quiescent Current in Burst Mode® Operation with Both LDO Regulators On
- LDO Dropout = 300mV at 50mA
- 50kHz to 500kHz Programmable Oscillator Frequency
- Stable with Ceramic Capacitors
- Short-Circuit/Thermal Protection
- Low Profile 3mm × 4mm 14-Pin DFN & Thermally Enhanced 16-Pin MSOP Packages

LTC3261: Inverting Charge Pump

- V_{IN} Range: 4.5V to 32V
- Inverting Charge Pump Generates $–V_{IN}$
- Charge Pump Output Current Up to 100mA
- 60µA Quiescent Current in Burst Mode® Operation
- 50kHz to 500kHz Programmable Oscillator Frequency
- Short-Circuit/Thermal Protection
- Low Profile Thermally Enhanced 12-Pin MSOP Package

About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs, µModule® subsystems, and wireless sensor network products. For more information, visit www.linear.com

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