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2.7V to 38V/500mA Low Noise Buck-Boost Charge Pump Saves Space and Reduces EMI

MILPITAS, CA & NORWOOD, MA – June 12, 2017 – Analog Devices, Inc., which recently acquired Linear Technology Corporation, announces the [LTC3246](#), a compact, low noise buck-boost charge pump with integrated watchdog timer capable of up to 500mA of output current. The LTC3246 uses multimode switched capacitor conversion to maintain regulation over a wide 2.7V to 38V input voltage range and produces a regulated 3.3V, 5V, or externally adjustable (2.5V to 5V) output. Internal circuitry automatically selects a conversion ratio of 2:1, 1:1 or 1:2 to optimize efficiency as input voltage and load conditions vary. Low operating current (20µA regulating with no load, 1.5µA in shutdown), low EMI switching and low external device count (three small ceramic capacitors and no inductors) make the LTC3246 ideal for noise-sensitive space constrained automotive applications such as ECU/CAN transceiver supplies, as well as industrial housekeeping supplies and efficient low power 12V to 5V conversion.

The LTC3246's switched capacitor architecture with inherent soft switching provides lower radiated noise and EMI compared with conventional switching regulators. Timing control for the reset timeout and the windowed watchdog timeout can be adjusted using external capacitors on the RT and WT pins, or fixed internally via pin strapping. The accurate threshold of the reset input can be used for additional supply monitoring, or can be configured as a pushbutton reset. Other features include stability with ceramic capacitors, foldback current limiting to prevent excessive current flow during start-up, plus short-circuit and thermal protection.

The LTC3246 is available in a compact, thermally enhanced 16-lead MSOP package. The E and I grades feature a –40°C to 125°C operating junction temperature, the H grade has a –40°C to 150°C operating junction temperature, and the MP grade is specified for –55°C to 150°C operation. 1000-piece pricing starts at \$3.25 each for the E grade and all devices are available from stock. For more information, visit www.linear.com/product/LTC3246.

Photo Caption: Low Noise, High Voltage 500mA Buck-Boost Charge Pump

Summary of Features: LTC3246

- 2.7V–38V Operating Range (42V Abs Max)
- $I_Q = 20\mu\text{A}$ Operating; $1.5\mu\text{A}$ in Shutdown
- Multimode Buck-Boost Charge Pump (2:1, 1:1, 1:2) with Automatic Mode Switching
- 12V to 5V Efficiency = 81%
- I_{OUT} Up to 500mA
- V_{OUT} : Fixed 3.3V, 5V or Adjustable (2.5V to 5V)
- Ultralow EMI
- Engineered for Diagnostic Coverage in ISO 26262 Systems
- Overtemperature & Short-Circuit Protection
- Operating Junction Temperature: 150°C Max
- POR/Watchdog Controller with External Timing Control
- Thermally Enhanced 16-Lead MSOP Package

Pricing shown is for budgetary use only and may differ due to local duties, taxes, fees and exchange rates.

Analog Devices just got more Powerful. On March 10, Analog Devices acquired Linear Technology, creating the premier high-performance analog company. More info at <http://lt.linear.com/07c>

About Analog Devices

Analog Devices (NASDAQ: ADI) is the leading global high-performance analog technology company dedicated to solving the toughest engineering challenges. We enable our customers to interpret the world around us by intelligently bridging the physical and digital with unmatched technologies that sense, measure, power, connect and interpret. Visit <http://www.analog.com>

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