



High Voltage Dual Output Step-Down Charge Pump Offers Lower Power Dissipation with No Inductors

MILPITAS, CA – August 11, 2016 – Linear Technology Corporation announces the [LTC3256](#), a highly integrated, high voltage low noise dual output power supply, which takes a single positive input and generates 5V and 3.3V step-down supplies with high efficiency and no inductors. The device features a wide 5.5V to 38V input voltage range and includes independently enabled dual outputs: a 5V 100mA supply, and a 250mA 3.3V low-dropout (LDO) regulator, for a total of 350mA available output current. This combination of regulators offers much lower power dissipation than a dual-LDO solution. For example at 12V V_{IN} and maximum load on both outputs, power dissipation is decreased by over 2W with the LTC3256, thus reducing significant heat and input current. The LTC3256 is engineered for diagnostic coverage in ISO26262 systems and incorporates numerous safety and system monitoring features. The device is well-suited for a variety of applications requiring low noise, low power rails from a high voltage input such as automotive ECU/CAN transceiver supplies, industrial/telecom housekeeping supplies, and general-purpose low-power 12V to 5V and 3.3V conversion.

The LTC3256 maximizes efficiency by running the charge pump in 2:1 mode, over as wide an operating range as possible, and automatically switches to 1:1 mode as needed, consistent with V_{IN} and load conditions. Controlled input current and soft switching minimize conducted and radiated EMI. The device offers low quiescent current of only 20 μ A with both outputs regulating (no load) and 1 μ A in shutdown. The integrated watchdog timer, independent power good outputs and reset input ensure reliable system operation and enable fault monitoring. A buffered 1.1V reference output enables system self-testing diagnostics for safety critical applications. The LTC3256 also has additional safety features including overcurrent fault protection, overtemperature protection and tolerance of 38V input transients.

The LTC3256 is available in a thermally enhanced 16-lead MSOP package, with a backside thermal pad. The E- and I-grade operating junction temperature range is -40°C to 125°C , the H grade operates from -40°C to 150°C , and the MP grade operates from -55°C to 150°C .

Devices are in stock, priced starting at \$2.95 each for the E-grade. For more information, visit www.linear.com/product/LTC3256.

Photo Caption: Wide V_{IN} Range, Dual Output 350mA Step-Down Charge Pump with Watchdog Timer and Reference Output

Summary of Features: LTC3256

- Input Voltage Range: 5.5V to 38V
- Independently Enabled 5V & 3.3V Fixed Outputs
- 5V Output: 100mA Max
- 3.3V LDO Output: 250mA Max
- Multi-Mode Step Down Charge Pump (2:1, 1:1) with Automatic Mode Switching
- Low Quiescent Current
 - 20 μ A with Both Outputs Regulating (No Load)
 - <1 μ A in Shutdown
- Engineered for Diagnostic Coverage in ISO26262 Systems
- 1.1V Reference Output for System Diagnostics
- Power-On Reset & Watchdog Controller with Adjustable Timing
- Overcurrent Fault Protection on Each Output
- Overtemperature Protection
- 150°C Max Operating Junction Temperature
- 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.

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 over 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, μ Module[®] subsystems, and wireless sensor network products. For more information, visit www.linear.com

 , LT, LTC, LTM, Linear Technology, the Linear logo and μ Module are registered trademarks of Linear Technology Corp. All other trademarks are the property of their respective owners.

Press Contacts:

North America / Worldwide

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

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

UK & Nordic

Alan Timmins
a.timmins@ntlworld.com
Tel: +44-1-252-629937