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## **36V<sub>IN</sub>, 600mA $\mu$ Module Step-Down Regulator in 6.25mm x 11.25mm BGA Consumes only 5 $\mu$ A Quiescent Current**

MILPITAS, CA – May 8, 2012 – Linear Technology Corporation introduces the [LTM8029](#), a 5 $\mu$ A quiescent current DC/DC step-down  $\mu$ Module<sup>®</sup> regulator with very low dropout voltage and a wide input and output voltage range of operation. Capable of delivering up to 600mA, the LTM8029 prolongs battery run time due to two key features: (1) 5 $\mu$ A quiescent current consumption during standby mode and only 0.9 $\mu$ A in shutdown discharges very little current from the battery, (2) very low 0.6V dropout (at 600mA) conversion permits longer operating time as the battery's operating voltage drops to a value close to the output voltage. Moreover, wide range of operating voltage of 4.5V to 36V (40Vmax) input and 1.2V to 18V output, enable the LTM8029's use in such applications as avionics, heavy industrial equipment, battery stack energy storage and factory automation and robotics.

The LTM8029 includes the inductor, power switches, DC/DC controller and additional circuitry in a small 6.25mm x 11.25mm x 3.42mm BGA package. Efficiency of operation for 3.3V<sub>OUT</sub>, at 600mA from 5V<sub>IN</sub>, 12V<sub>IN</sub>, and 24V<sub>IN</sub> is 84%, 79% and 75%, respectively. Rise in junction temperature is minimal at only 17°C, when converting from 36V<sub>IN</sub> to 3.3V<sub>OUT</sub> at full current of 600mA. The LTM8029 has adjustable switching frequency from 200kHz to 2.2MHz, useful for applications that must maintain switching noise within a certain range. In addition to positive-to-positive, the LTM8029 can be used to regulate a negative output voltage. Pricing starts at \$6.60 each for 1,000-piece quantities. For more information, visit

[www.linear.com/product/LTM8029](http://www.linear.com/product/LTM8029)


**Photo Caption:** 36Vin, 600mA,  $\mu$ Module<sup>®</sup> Step-Down Regulator Consumes only 5 $\mu$ A Quiescent Current

## Summary of Features: LTM8029

- Wide Input Range: 4.5V<sub>IN</sub> to 36V<sub>IN</sub> (40Vmax)
- Wide Output Range: 1.2V to 18V
- 5 $\mu$ A Quiescent Current at 12V<sub>IN</sub> to 3.3V<sub>OUT</sub>
- 600mA Output Current
- Excellent Dropout Voltage: 0.6V at 600mA
- Adjustable Switching Frequency: 200kHz to 2.2MHz

## 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,  $\mu$ Module<sup>®</sup> subsystems, and wireless sensor network products. For more information, visit [www.linear.com](http://www.linear.com)

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