



Buck Controller from Diodes Incorporated Optimizes Performance in Notebooks and All-in-One PCs

Plano, Texas – June 18, 2014 – Diodes Incorporated (Nasdaq: DIOD), a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic and analog semiconductor markets, today introduced the AP3591. This single-phase, synchronous step-down controller is designed to provide enhanced transient response and output accuracy for low-voltage regulation in notebooks and all-in-one PCs.

Operating at a resistor-programmed fixed frequency between 100kHz to 700kHz, the device's adaptive constant-on-time control algorithm is capable of handling very wide input/output voltage ratios and helps reduce external component counts. The AP3591's input and output voltage ranges are 4.5V to 26V and 0.75V to 5.5V, respectively. Output current is up to 25A.

The controller enables the selection of two operating modes: a diode emulation mode that automatically reduces frequency and increases efficiency under light load conditions, and a constant-frequency, continuous-conduction mode that avoids light load output ripple.

The AP3591 is packaged in the 14-pin QFN3535 and includes the following circuit protection features: resistor-programmable current limit, over-temperature shutdown, and over-voltage and under-voltage protection. The device also integrates both soft-start and soft-stop functions. For further information, visit the Company's website at www.diodes.com.

About Diodes Incorporated

Diodes Incorporated (Nasdaq: DIOD), a Standard and Poor's SmallCap 600 and Russell 3000 Index company, is a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete,

logic and analog semiconductor markets. Diodes serves the consumer electronics, computing, communications, industrial, and automotive markets. Diodes' products include diodes, rectifiers, transistors, MOSFETs, protection devices, functional specific arrays, single gate logic, amplifiers and comparators, Hall-effect and temperature sensors; power management devices, including LED drivers, AC-DC converters and controllers, DC-DC switching and linear voltage regulators, and voltage references along with special function devices, such as USB power switches, load switches, voltage supervisors, and motor controllers. Diodes' corporate headquarters and Americas' sales office are located in Plano, Texas. Design, marketing, and engineering centers are located in Plano; San Jose, California; Taipei, Taiwan; Manchester, England; and Neuhaus, Germany. Diodes' wafer fabrication facilities are located in Kansas City, Missouri and Manchester, with two additional facilities located in Shanghai, China. Diodes has an assembly and test facility located in Shanghai, in Chengdu, China, as well as in Neuhaus and in Taipei. Additional engineering, sales, warehouse, and logistics offices are located in Fort Worth, Texas; Taipei; Hong Kong; Manchester; Shanghai; Shenzhen, China; Seongnam-si, South Korea; Suwon, South Korea; Tokyo, Japan; and Munich, Germany, with support offices throughout the world. For further information, including SEC filings, visit Diodes' website at <http://www.diodes.com>.

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