



## **Primary-Side Switcher from Diodes Incorporated Cuts Power Supply Size and Cost While Improving Efficiency and Performance**

**Plano, Texas – September 4, 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 AP3988 off-line, side-switching controller designed to cut costs and improve power supply performance in chargers, ADSL adapters and home appliance supplies. By providing primary-side control, the device eliminates the requirement for opto-couplers and secondary-side control circuitry, reducing component count, board space requirements and cost. Primary-side regulation results in higher efficiency with less heat generated in the power supply, which increases reliability. Additional benefits include improved output voltage and current accuracy, enhanced over-voltage and short-circuit protection, and better EMC performance, achieved by frequency dithering.

The AP3988 switcher regulates output voltage using piece-wise pulse frequency modulation, in which analog levels are represented as fixed-duration pulses of varying repetition rate. Transistors with  $700V_{CBO}$  are built into the device and start-up current is typically just  $0.2\mu A$ .

This switcher has integral cable voltage drop compensation of 5% of nominal voltage and adjustable line voltage compensation.

The AP3988 controller is designed for use in 5.5W adapters and is offered in the SO-7 package. For further information, visit the Company's website at [www.diodes.com](http://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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### Company Contact:

Diodes Incorporated  
Julie Holland  
VP, Worldwide Analog Products  
P: 972-987-3900  
E: [pressinquiries@diodes.com](mailto:pressinquiries@diodes.com)

### Investor Relations Contact:

Shelton Group  
Leanne K. Sievers  
EVP, Investor Relations  
P: 949-224-3874  
E: [lsievers@sheltongroup.com](mailto:lsievers@sheltongroup.com)