



***For immediate release***

## **Small-Outline Synchronous Rectification MOSFET Driver for Off-Line Power Adapters from Diodes Incorporated**

**Plano, TX – July 17, 2018** – Diodes Incorporated (Nasdaq: DIOD), a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic, analog, and mixed-signal semiconductor markets, today announced the APR346 secondary-side synchronous rectification MOSFET driver, providing increased efficiency for off-line power adapters delivering 5V to 20V DC from an AC supply.

Designed to operate in continuous-conduction mode (CCM), discontinuous-conduction mode (DCM), and quasi-resonant mode (QR), the APR346 is used to drive an external MOSFET to deliver the benefits of synchronous rectification (SR), which provides significantly higher performance and efficiency than diode-based secondary side rectification. SR is now preferred by power adapter manufacturers and is expected to form the basis of power adapters for notebooks, mobile phones and a range of other portable devices, many of which will be adopting the USB Type-C™ connector with PD (power delivery) capabilities.

The APR346 requires very few additional components and because it is designed to operate with an external MOSFET it offers maximum design flexibility. With fast turn-on and turn-off times of 70ns and 100ns (typ), respectively, it achieves high performance through directly sensing the drain-source voltage of the external MOSFET and rapidly turning the MOSFET on or off according to demand from the load. A built-in minimum on-time of 1.6µs (typ) effectively blanks out any potential drain voltage ringing to maintain efficient operation as the load current begins to flow through the channel.

Further information is available at [www.diodes.com](http://www.diodes.com).

*USB Type-C™ is a trademark of USB Implementers Forum.*

### **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, analog and mixed-signal semiconductor markets. Diodes serves the consumer electronics, computing, communications, industrial, and automotive markets. Diodes' products include diodes, rectifiers, transistors, MOSFETs, protection devices, function-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 also has timing, connectivity, switching, and signal integrity solutions for high-speed signals. Diodes' corporate headquarters and Americas' sales office are located in Plano, Texas and Milpitas, California. Design, marketing, and engineering centers are located in Plano; Milpitas;

Taipei, Taiwan; Taoyuan City, Taiwan; Zhubei City, Taiwan; Manchester, England; and Neuhaus, Germany. Diodes' wafer fabrication facility is located in Manchester, with an additional facility located in Shanghai, China. Diodes has assembly and test facilities located in Shanghai, Jinan, Chengdu, and Yangzhou, China, as well as in Hong Kong, Neuhaus and Taipei. Additional engineering, sales, warehouse, and logistics offices are located in Taipei; Hong Kong; Manchester; Shanghai; Shenzhen, China; Seongnam-si, South Korea; and Munich, Germany, with support offices throughout the world.

Recent news releases, annual reports and SEC filings are available at the Company's website: <http://www.diodes.com>. Written requests may be sent directly to the Company, or they may be e-mailed to: [diodes-fin@diodes.com](mailto:diodes-fin@diodes.com).

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