Super Barrier Rectifier from Diodes Incorporated
Optimized for Solid-State Retrofit MR16 LED Lamps

Plano, Texas – June 28, 2016 – 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 introduced the SBRT3M40P1. This Trench Super Barrier Rectifier (SBR®) has been optimized to deliver a low forward-voltage drop in a small form factor while maintaining low reverse-current leakage. This capability addresses requirements for input bridge rectifiers in solid-state lighting (SSL) applications focused on 12V AC LED retrofit lamps, which provide a more efficient and longer life alternative to popular MR16 halogen bulbs.

Operating at +125°C, this 40V rated Trench SBR, has a low reverse-current leakage of only 1.2mA at 12V blocking, which provides immunity to thermal runaway under the high ambient temperature environment of an MR16 retrofit. Furthermore, it maximizes the 1A bridge rectifier efficiency and power density with only a 0.29V forward-voltage drop in a compact PowerDI®123 footprint of 6.75mm².

To minimize forward loss, the SBRT3U40P1 is an alternative device that provides a lower forward-voltage drop of 0.25V at the expense of an increase in the reverse-current leakage to 4mA. Options for different forward loss and reverse leakage enable the rectification circuit to be optimized depending on the waveform’s duty cycle requirements and operating temperature.

A 40V blocking capability normally provides sufficient headroom for a 12V AC input supply. However, if the line regulation is poor then the SBRT3M60P1 and SBRT3U60P1, with their 60V blocking capability, give extra headroom at the
expense of their slightly higher forward-voltage drop of 0.34V and 0.28V, respectively.

While a conventional SMA package option is available, the PowerDI123 package offers a smaller footprint (6.75mm² compared to 16mm²) and lower height profile (<1mm compared to 2mm) for space-critical applications like the target MR16 retrofit bulb market. For further information, visit the Company’s website at www.diodes.com.

SBR and PowerDI are registered trademarks of Diodes Incorporated.

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’ 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 facilities are located in Kansas City, Missouri and 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.

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