18V, 6A Synchronous Buck Converter from Diodes Incorporated for POL Applications

Plano, Texas – February 25, 2020 Diodes Incorporated (Nasdaq: DIOD) today introduced the AP62600 synchronous DC-DC buck converter for point-of-load (POL) conversion in applications such as TVs, monitors, white goods, home appliances, consumer electronics, and large-scale integrated circuits.

The AP62600 delivers up to 6A of output from a supply voltage of 4.5V to 18V. The device incorporates integrated high-side and low-side MOSFETs with 36mΩ and 14mΩ on-resistances, respectively.

The AP62600 expands on Diodes’ recent AP64xxx (40V) and AP63xxx (32V) DC-DC converters’ best-in-class EMI performance. AP62600’s proprietary gate driver scheme, coupled with fast transient response, reduces high-frequency radiated EMI as well as minimizes switching node ringing.

Even with its high level of feature integration, the AP62600 is supplied in a package measuring just 2mm x 3mm, allowing it to be used in the smallest of products. Selectable switching frequencies of 400kHz, 800kHz, and 1.2MHz provide engineering teams with more flexibility, allowing them to optimize component choices for efficiency or a smaller form factor.

There is a power-good indicator, which alerts users to any fault conditions that may arise. A programmable soft-startup mode controls inrush current at power-up, enabling designers to implement power sequencing when using multiple AP62600s to supply large integrated devices, such as FPGAs, ASICs, DSPs, and microprocessors.

High efficiency can be realized across all loads with pulsed frequency modulation (PFM) operation. Other modes offered include pulse width modulation (PWM) to get the best ripple performance and an ultrasonic mode (USM), which avoids audible noise at light loads.

The AP62600SJ-7 is available in the V-QFN2030-12 package.

Further information is available 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, 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, UK; and Neuhaus, Germany. Diodes’ wafer fabrication facilities are located in Manchester and Greenock, UK, and 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; Munich, Germany; and Tokyo, Japan, 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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**Company Contact:**
Diodes Incorporated
Emily Yang
VP, Worldwide Sales and Marketing
P: 972-987-3900
E: pressinquiries@diodes.com

**Investor Relations Contact:**
Shelton Group
Leanne K. Sievers
EVP, Investor Relations
P: 949-224-3874
E: lsievers@sheltongroup.com