



For immediate release

Highly Configurable DC-DC Converter with Integrated H-Bridge from Diodes Incorporated

Plano, TX – August 09, 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 introduced the AP72200. This device is a high-current synchronous buck/boost DC-DC converter with integrated high-side and low-side H-Bridge MOSFETs. The AP72200 delivers up to 97% efficiency with 1% voltage regulation accuracy, low quiescent current, and very low output ripple.

The AP72200 employs Diodes Incorporated's proprietary buck/boost current-mode control technology to achieve excellent voltage regulation and a continuous output current of up to 2A. The design allows for seamless transition between buck and boost operation while the wide 2.3V to 5.5V input voltage range provides flexibility of supply and produces between 2.6V to 5.14V output voltage.

The high level of integration, along with low quiescent current and wide input voltage range, make the AP72200 well-suited for a wide range of portable applications including smart phones, tablets, and other battery-operated consumer devices.

Many of the features of the AP72200 are user-configurable through an industry-standard I²C interface, which can operate in standard mode, fast mode, fast-mode plus, and high-speed mode. This includes programmable-output voltage ramp-up and ramp-down slew-rates, output-active discharge, over-voltage protection threshold, and over-current threshold. The AP72200 can also be configured to operate in PWM or PFM mode, as well as in ultrasonic mode, which reduces the switching frequency to avoid the generation of sub-harmonic frequencies in the region of 20kHz that can cause interference in the audible frequency range. The buck/boost output can also be disabled using the I²C interface, allowing a master device to control the operation of the regulator across a standard I²C bus. The output voltage can be set to between 2.60V and 5.14V in 0.02V increments by programming the device over I²C.

The integrated H-Bridge MOSFETs feature extremely low $R_{DS(ON)}$ of 25mΩ and a shutdown current of less than 1μA. Quiescent current is as low as 20μA when operating in non-switching mode and a typical of 29μA in PFM mode. The switching frequency in continuous switching mode is typically 2.5MHz, dropping to 27kHz in ultrasonic mode.

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, 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.

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