



For immediate release

50V MOSFET Gate-Driver ICs from Diodes Incorporated Address Demand for Driving Battery-Powered BLDC Motors

Plano, Texas – May 2, 2017 – 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 DGD0506 and DGD0507. These high-frequency gate-driver ICs are designed for driving two external N-channel MOSFETs in a half-bridge configuration. A 50V rating suits a wide range of motor driving requirements, especially brushless DC (BLDC) motors, which are increasingly being used in battery-powered applications such as drones, fans, e-cigarettes, and cordless power tools including drills, handheld vacuum cleaners and blenders.

Logic level inputs (from 2.5V) allow the DGD0506 and DGD0507 drivers to be directly controlled from 3.3V MCUs, while the output steps up to the VCC supply (8V to 14V) to ensure the MOSFET is fully enhanced to reduce conduction losses. With 1.8A source and 2.5A sink current capability, these drivers minimize switching time of very low RDS(ON) MOSFETS, including Diodes' own DMT4002LPS, increasing overall system efficiencies.

The DGD0506 and DGD0507 gate drivers integrate a bootstrap diode to reduce component count and, along with the small form-factor 3mm x 3mm DFN3030 package, benefits space- and weight-constrained applications. Requiring only a single input, the DGD0506 half-bridge minimizes MCU GPIO pin count along with the design flexibility to program deadtime from 70ns to 420ns. For shorter deadtimes, the DGD0507 has separate high- and low-side inputs enabling higher switching frequencies with a 35ns max propagation delay that is matched within 5ns. This, along with cross-conduction prevention logic, protects the MOSFETs by ensuring that the high and low outputs are not both on at the same time. Undervoltage lockout (UVLO) circuitry also protects the MOSFETs against a loss of supply.

In the DFN3030 package, the DGD0506 and DGD0507 offer a pin-for-pin alternative to popular industry types. Further information is also be 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' 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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