



For immediate release

Three-Phase Half-Bridge Gate Driver from Diodes Incorporated Simplifies BLDC and PMSM Motor Drive

Plano, Texas – November 09, 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 announced the DGD2136. This fully integrated 3-phase gate driver IC is intended for driving N-channel MOSFETs or IGBTs in a half-bridge configuration. With its floating high-side drivers, bootstrap operation allows the DGD2136 to switch up to 600V, while standard logic level inputs down to 2.4V enable an easy control interface. This gate driver is designed for BLDC and PMSM motor drive applications such as those commonly found in household appliances, power and garden tools, air conditioners, sewing machines, and industrial motors.

The increased use of BLDC and PMSM motors reflects industry directives to improve the efficiency of electrical motors and achieve the goal of zero maintenance in order to minimize the total cost of ownership. To meet this requirement, the DGD2136 is optimized for 3-phase applications, driving three half-bridges formed from N-channel MOSFETs or IGBTs. A high voltage process enables the floating high-side drivers to operate up to 600V while the driver outputs feature high-pulse current buffers to minimize driver cross conduction.

The device incorporates multiple protections: overcurrent is sensed via an external resistor to turn off all outputs; matched propagation delays with an internal deadtime and shoot-through logic prevent both outputs from being high when both inputs are high (a fault state); a V_{CC} undervoltage lockout shuts down the respective high side output; and built-in immunity to high dv/dt transients at the V_S pin minimizes the risk of false triggering. The DGD2136 also has a fault signal output that enables monitoring of the driver stage and can be used with the RC input pin to provide an adjustable reset time.

The DGD2136 gate driver is offered in an industry-standard SO-28 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 and analog semiconductor markets. Diodes serves the consumer electronics, computing, communications, industrial, and automotive markets. Diodes' products include diodes, rectifiers, transistors, MOSFETs, protection devices, functional 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. Design, marketing, and engineering centers are located in Plano; San Jose, California; Taipei, Taiwan; Manchester, England; and Neuhaus, Germany. Diodes' wafer fabrication facilities are located in Kansas City, Missouri and Manchester, with four manufacturing facilities located in Shanghai, China, and two joint venture facilities located in Chengdu, China, as well as manufacturing facilities located in Neuhaus and Taipei. Additional engineering, sales, warehouse, and logistics offices are located in Fort Worth, Texas; Taipei; Hong Kong; Manchester; Shanghai; Shenzhen, China; Seongnam-si, South Korea; Suwon, South Korea; Tokyo, Japan; and Munich, Germany, with support offices throughout the world. For further information, including SEC filings, visit Diodes' website at <http://www.diodes.com>.

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