Voltage Level Translator from Diodes Incorporated Provides Direction-Free Flexibility for Networks and Servers

Plano, TX – June 5, 2019 – Diodes Incorporated (Nasdaq: DIOD) today announced a new addition to its family of low voltage level translators, offering simple and autonomous bidirectional operation. The PI4GTL2002 is a 2-bit level shifter designed to translate signals conditioned for one voltage level to signals at a higher or lower voltage, such as gunner transceiver logic (GTL) or GTL+ to LVTTL/TTL. As leading processor manufacturers continue to include GTL+ interfaces in their products, the need for high performance level translators is increasing in applications such as server/data centers and networking. The PI4GTL2002 meets that demand with the added benefit of not imposing the need for directional control.

The open-drain design of the PI4GTL2002 means the device can translate voltage levels in either direction without incurring the design complexity or performance penalty of a dedicated direction control signal. The device operates in either direction, shifting between 0.8V and 5V (CMOS), with less than 1.5ns propagation delay between inputs and outputs. As such, the PI4GTL2002 can support a number of use cases, including standard and fast mode I²C.

The NMOS-based pass transistors in the design use a common gate to enable bidirectional operation, with reference voltages for each of the two signals. This enables the design team to apply a different voltage to either side of the device, allowing voltage translation between signals ranging from 0.8V to 5V.

The pin-out of the PI4GTL2002 follows a convenient flow-through design, making PCB layout simpler. A low input and output capacitance keeps the propagation delay low, while the device also features an on-resistance of just 3.5Ω to minimize signal distortion.


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 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; 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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