



For immediate release

Optimized Complementary MOSFETs from Diodes Incorporated Enhance Buck Converter Power Density

Plano, Texas – June 03, 2014 – Diodes Incorporated (Nasdaq: DIOD), a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic and analog semiconductor markets, today introduced the DMC1028UFDB. Aimed at increasing the power density of DC-DC converters, this complementary MOSFET pair integrates an N-channel MOSFET and a P-channel MOSFET in a single DFN2020 package. The design is customized for point-of-load (POL) converters that step down from 3.3V to 1V for core voltage supply to ASICs. Target applications are Ethernet network controllers and processors used in such equipment as routers, network interface controllers (NICs), switches, digital subscriber line (DSL) adaptors, servers, and set-top boxes (STBs).

Buck converters implemented using a separate PWM controller and external MOSFETs enhance design flexibility and provide for distributed heat dissipation from the switching elements. The performance parameters of the DMC1028UFDB MOSFETs have been optimized to maximize efficiency in 3.3V to 1V buck converters while driving loads up to 3A. These include: a low 19mOhm $R_{ds(on)}$ at $V_{gs}=3.3V$ for the low-side N-channel MOSFET, which is mostly on for two-thirds of the switching cycle; and a low gate charge (Q_g) of 5nC at $V_{gs} = 3.3V$ for the P-channel MOSFET, to minimize switching losses.

The DMC1028UFDB uses a P-channel MOSFET to implement the high-side switching element, which simplifies the design and reduces the component count compared to an N-channel MOSFET that would require a charge pump. Overall power density is doubled by combining the P-channel and N-channel devices, as a complementary MOSFET pair, in a single DFN2020 package relative to

individual MOSFETs in the same footprint package. For further information, visit the Company's website 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 two additional facilities located in Shanghai, China. Diodes has assembly and test facilities located in Shanghai and in Chengdu, China, as well as in Neuhaus and in 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. For further information, including SEC filings, visit Diodes' website at www.diodes.com.

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