



40V-Rated Automotive-Compliant Synchronous Buck Converter from Diodes Incorporated Supports High Efficiency Operation and Reduces EMI

Plano, Texas – August 10, 2022 – Diodes Incorporated (Diodes) (Nasdaq: DIOD) has announced a further addition to its family of automotive-compliant DC-DC converters. The DIODES™AP64060Q is a 600mA synchronous buck converter device with an input voltage range that covers 4.5V to 40V. It incorporates a 600mΩ high-side power MOSFET plus a 300mΩ low-side power MOSFET so that high-efficiency step-down conversion (reaching 90%) can be delivered, and with minimal PCB board space. The AP64060Q is targeted for use in automotive powertrains, infotainment systems, and instrumentation clusters, as well as vehicles' exterior lighting.

The AP64060Q has a very low quiescent current (IQ), typically only 90µA, which translates into enhanced light load efficiency. Thanks to the fast switching frequencies this device supports (2MHz), smaller accompanying inductors and capacitors can be selected. Its synchronous rectification eliminates the need for an external Schottky diode, while use of a peak current mode control and built-in loop compensation network further reduces the overall component count.

The proprietary gate driver scheme employed in the AP64060Q alleviates switching node ringing without impacting on MOSFET turn-on and turn-off times. This mitigates high frequency radiated electromagnetic interference (EMI) noise caused by MOSFET switching.

The AP64060Q has an operating ambient temperature range of -40°C to +125°C. Protection features include overvoltage protection (OVP), undervoltage lockout (UVLO), and thermal shutdown. This device is supplied in a compact TSOT26 package.

The AP64060Q is available at \$0.23 in 1000 piece quantities. It is AEC-Q100 Grade 1 qualified, supports PPAP documentation, and is manufactured in IATF 16949 certified facilities.

About Diodes Incorporated

Diodes Incorporated (Nasdaq: DIOD), a Standard and Poor's SmallCap 600 and Russell 3000 Index company, delivers high-quality semiconductor products to the world's leading companies in the consumer electronics, computing, communications, industrial, and automotive markets. We leverage our expanded product portfolio of discrete, analog, and mixed-signal products and leading-edge packaging technology to meet customers' needs. Our broad range of application-specific solutions and solutions-focused sales, coupled with worldwide operations of 32 sites, including engineering, testing, manufacturing, and customer service, enables us to

be a premier provider for high-volume, high-growth markets. For more information visit www.diodes.com

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