



Product news

Low Voltage Automotive Buck Converter from Diodes Incorporated with Programmable PFM/PWM for Enhanced Efficiency

Plano, Texas – June 30, 2020 - Diodes Incorporated (NASDAQ: DIOD) today announced the [AP61100Q](#), a 5.5V, 1A continuous output current, automotive-compliant, synchronous buck converter for point of load (POL) applications. With a fully integrated 110mΩ high-side power MOSFET and 80mΩ low-side power MOSFET, it provides high-efficiency step-down DC-DC conversion from 5V and 3.3V input rails. The converter has been developed for use in automotive applications including infotainment systems, instrumentation clusters, telematics, and advanced driver assistance systems (ADAS).

The AP61100Q offers design flexibility with a multi-functional programmable EN pin that enables the device to operate in forced pulse width modulation (PWM), where the frequency is constant across all loads, or in pulse frequency modulation (PFM). When in PFM, the AP61100Q delivers up to 89% efficiency at 5mA light load and a low quiescent current of only 15µA.

The buck converter has a wide output voltage range of 0.6V to 3.6V and operates at 2.2MHz to avoid AM radio band frequencies. By using constant on-time control, the buck converter can achieve fast transient response, easy loop stabilization, and low output voltage ripple.

The [AP61100Q](#) is qualified to AEC-Q100 Grade 1, supports PPAP documentation, and is manufactured in IATF 16949 certified facilities. The device is available in the SOT563 (1.6mm x 1.6mm) package priced at \$0.185 in 3000 piece quantities.

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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 28 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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