

High-PSRR LDO from Diodes Incorporated Enables Lower Noise and Ripple in Noise-Sensitive Applications

Plano, Texas – August 7, 2025 – Diodes Incorporated (Nasdaq: DIOD) today announces the <u>AP7372</u> low-noise low-dropout (LDO) regulator for powering precision components such as data converters (ADCs, DACs), voltage-controlled oscillators (VCOs), and phase-locked loops (PLLs).

With up to 90dB power supply ripple rejection (PSRR) across a wide frequency range, and extremely low output noise at only $8\mu Vrms$, the AP7372 helps designers mitigate the effects of input source noise and meet stringent output ripple and noise targets. This is most critical within test and measurement, communication, industrial automation, and medical equipment.

The LDO delivers up to 200mA output current, with a dropout voltage (VDO) of 120mV. There are five variants providing fixed output voltages of 1.8V, 2.5V, 3.3V, and 5.0V voltages, and an adjustable voltage down to 1.2V. A dedicated pin for a resistor-divider allows fine adjustments of the fixed outputs. With an input voltage range from 2.7V to 20V, the AP7372 can be powered from common bus standards such as 12V and 5V or battery voltage (VBAT) down to a single Li-Ion cell.

The regulator also provides adjustable soft-start time, easily set using an external capacitor, that lets designers optimize the power-rail ramp up to mitigate inrush currents and produce a consistent and stable supply. A current limiter protects against short-circuit and overcurrent, and thermal protection is built in. A small 2.2µF ceramic output capacitor ensures stability and the circuit is complete with just the input capacitor and soft-start capacitor. The low bill of materials and the AP7372's 1.2mm x 1.0mm U-WLB1012-6 (Type A1) ball-grid array package enable a compact circuit footprint for high power density.

In addition, the LDO provides an enable pin that can be used for system-level control such as power-up sequencing and to save energy by shutting down the regulator when unused. The shutdown current is approximately $3\mu A$ with a quiescent current of $66\mu A$, ensuring the AP7372 has minimal impact on the overall system power budget.

The AP7372 is available at \$0.30 in 1,000-piece quantities.

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 automotive, industrial, computing, consumer electronics, and communications markets. We leverage our expanded product portfolio of analog and discrete power solutions combined with leading-edge packaging technology to meet customers' needs. Our broad range of application-specific products and solutions-focused sales, coupled with global operations including engineering, testing, manufacturing, and customer service, enable us to be a premier provider for high-volume, high-growth markets. For more information, visit www.diodes.com.

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Company Contact:

Gurmeet Dhaliwal
Director, Investor Relations & Corporate Marketing
Diodes Incorporated
+1 408-232-9003
Contact Us