



## **High-Efficiency Class-D Stereo Audio Amplifier from Diodes Incorporated Saves Battery Power While Delivering Superior Sound Quality**

**Plano, Texas – October 13, 2021** – Diodes Incorporated (Nasdaq: DIOD) introduces the [PAM8965](#) Class-D stereo audio power amplifier with an integrated synchronous boost converter. This high-efficiency device is targeted for use in AI-enabled speaker systems and portable musical instruments - where elevated output power, extended battery life, and compact construction are all key requirements.

Running off a 2.8V to 8.5V supply, the PAM8965 has the capability to drive 12W into 4Ω speakers via each of its two channels, with 92% efficiency. By incorporating a synchronous boost converter, with pulse frequency modulation (PFM) operation at light loads, this device is not only able to deliver augmented performance and efficiency levels, but it also reduces board space usage and lowers the overall bill-of-materials (BOM) costs.

The product's spread spectrum modulation (SSM) results in more effective electromagnetic interference (EMI) suppression across a broad range of frequencies. This allows the use of inexpensive ferrite bead filters, rather than more costly and bulky LC filters. The boost converter's ultrasonic PFM operation minimizes the impact of audible noise emanating from other components situated on the PCB. In addition, Class-D and boost SSM switching is synchronized to avoid beats.

The PAM8965's non-clipping power limit ensures that speakers continue to provide superior audio fidelity without risk of damage. The thermal foldback function reduces output power if the amplifier device starts to overheat. Undervoltage, overvoltage, and short-circuit protection, as well as thermal shutdown, are also included. A low quiescent current of just 10mA helps to further conserve battery charge.

The [PAM8965](#) is available in a 40-pin W-QFN package format. It is priced at \$0.99 each in 3000 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 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 31 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](http://www.Diodes.com).

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