



Allegro MicroSystems Introduces High-Bandwidth Current Sensor Technologies Enabling High-Performance Power Conversion

02/06/2024

Power-Dense Sensors Designed to Minimize Energy Loss While Improving Efficiency and Reliability for SiC and GaN Technologies

MANCHESTER, N.H., Feb. 06, 2024 (GLOBE NEWSWIRE) -- [Allegro MicroSystems, Inc.](https://www.allegromicro.com) ("Allegro") (Nasdaq: ALGM), a global leader in power and sensing solutions for motion control and energy efficient systems, today announced the launch of its new high-bandwidth current sensors, the [ACS37030 and the ACS37032](#), which enable high-performance power conversion with GaN and SiC technologies in electrified vehicles, clean energy solutions and data center applications.

Current high-power-density GaN and SiC FET charging and power infrastructures demand high-speed, low-loss devices to ensure efficiency and reliability. Existing current-sensing solutions have limited operating ranges, as well as added size and weight that result in designs with additional components and larger bills of materials (BOMs).

To address these challenges, Allegro has introduced two high-bandwidth current sensors – the ACS37030 and ACS37032 – designed to provide efficiency and high-performance with reduced design time and board space. They employ a dual signal paths approach, with one path capturing low-frequency and DC current using Hall-effect elements and the other path capturing high-frequency current data through an inductive coil.

"Our ACS37030/2 is the first market solution capable of responding fast enough for high-speed SiC and GaN protection while also providing low-frequency content for power-conversion control," said Matt Hein, product line manager of current sensors at Allegro. "Designers can now minimize their system footprint when using GaN and SiC architectures."

The compact design, efficiency improvements and cost reductions of Allegro's latest current sensors make them suitable for high-frequency switching in power electronic systems, while offering the following benefits to designers:

- **Efficient and rapid management of high-switching frequencies and thermal conditions for high voltages and currents:** Delivers fast response times that provide critical protection and higher efficiency through minimized energy loss and thermal dissipation.
- **Ability to achieve stable and safe control while reducing electromagnetic interference:** Has a 2% sensitivity error over temperature, while the inductive coil properties increase the signal-to-noise ratio (SNR) as frequency increases, minimizing noise and simplifying electromagnetic compatibility.
- **Reduced design footprint, enabling system reliability and protection:** Offered in a compact and efficient fused-lead SOIC-6 package that can withstand harsh automotive and industrial environments, enabling reliability and protection.
- **Balances cost considerations while minimizing design complexity:** Simplifies designs and facilitates easy-to-design, cost-optimized, high-power, high-frequency switching power conversion for GaN and SiC devices.

To learn more, please visit: www.allegromicro.com/en/acs37030-2

About Allegro MicroSystems

Allegro MicroSystems is a leading global designer, developer, fabless manufacturer and marketer of sensor integrated circuits (ICs) and application-specific analog power ICs enabling emerging technologies in the automotive and industrial markets. Allegro's diverse product portfolio provides efficient and reliable solutions for the electrification of vehicles, automotive automated driver assistance system (ADAS) safety features, industry automation and power-saving technologies for data centers and clean energy applications. For more information visit www.allegromicro.com.

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