



Allegro MicroSystems Simplifies SiC Power Design for AI Data Centers and EVs with Expanded Power-Thru(TM) Gate Driver Portfolio

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New AHV85003/AHV85043 chipset joins the flagship AHV85311 integrated solution with industry's first complete family of noise-eliminating, self-powered SiC gate drivers

MANCHESTER, N.H., Jan. 05, 2026 (GLOBE NEWSWIRE) -- [Allegro MicroSystems, Inc.](#) ("Allegro") (Nasdaq: ALGM), a global leader in power and sensing solutions for motion control and energy-efficient systems, today announced the strategic expansion of its Power-Thru™ isolated gate driver portfolio with the launch of the [AHV85003/AHV85043](#) chipset. Joining the flagship AHV85311 integrated solution, this expanded family creates a complete ecosystem for high-voltage silicon carbide (SiC) designs in AI data centers, electric vehicles (EVs), and clean energy systems. The solution simplifies the design challenge in power conversion by eliminating the need for external isolated bias supplies for gate drivers. This innovation delivers the industry's smallest solution footprint while reducing the bill of materials (BOM) to address the critical challenge of achieving maximum power density, especially in demanding 800V systems.

Allegro's Power-Thru™ isolated gate drivers integrate signal and power across a single isolation barrier. This breakthrough approach reduces common-mode capacitance in the system by up to 15x¹, addressing a major source of noise that impacts efficiency. They deliver up to a 20dB improvement in electromagnetic interference (EMI) performance², which boosts overall system efficiency and eliminates countless hours spent by designers resolving noise issues.

In addition to addressing the physics of noise, the expanded Power-Thru portfolio is engineered to resolve critical business challenges. To ensure supply chain resilience, both the new AHV85003/AHV85043 chipset and the existing AHV85311 integrated solution support a multi-source SiC strategy. With selectable gate-to-source voltages (V_{gs}) of 15V, 18V, and 20V, and adjustable regulated negative voltage, designers can easily swap between SiC FETs from different vendors without redesigning their boards.

Furthermore, the portfolio now offers two distinct implementation paths. The flagship AHV85311 integrated solution, which includes the isolation transformer, provides an all-in-one route for accelerating time-to-market. The versatile new AHV85003/AHV85043 chipset empowers designers to optimize for cost and layout by selecting their own external transformer tailored for their specific isolation needs.

"We are redefining what engineers should expect from a gate driver," said Vijay Mangtani, Vice President and GM of High Voltage Power Products at Allegro MicroSystems. "With Power-Thru, we solved the fundamental physics problem of noise in high-voltage systems. Now, by offering both a chipset and an integrated solution, we are giving our customers a complete toolkit. Whether they need the plug-and-play speed of an integrated solution or the granular control of a chipset, they get the same game-changing efficiency and the freedom to use the SiC FETs of their choice."

Looking to simplify your SiC power design? Datasheets, samples, and recommended transformer options for the AHV85003/AHV85043 chipset are available at www.allegromicro.com/ahv85003-43

About Allegro MicroSystems

Allegro MicroSystems, Inc. is leveraging more than three decades of expertise in magnetic sensing and power ICs to propel automotive, clean energy and industrial automation forward with solutions that enhance efficiency, performance and sustainability. Allegro's commitment to quality drives transformation across industries, reinforcing our status as a pioneer in "automotive-grade" technology and a partner in our customers' success. For additional information, visit <https://www.allegromicro.com/en/>.

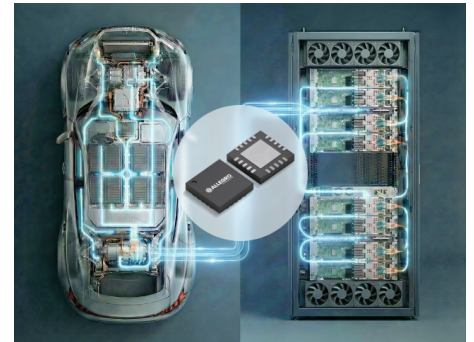
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AHV85003/AHV85043



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¹ As compared to conventional isolated gate drivers using external bias DC/DC converters with up to 30pF of common-mode capacitance.

² EMI performance improvement measured against a leading competitor solution under like conditions.

A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/85a53f07-9c09-4feb-ae4-e68de38604d6>