



Transphorm and Allegro MicroSystems Team Up to Increase GaN Power System Performance for High Power Applications

November 15, 2023

Purpose-Built Isolated Gate Drivers Enable Rapid Adoption of Advanced GaN Semiconductors in Data Centers, Renewables, Electric Vehicles

GOLETA, Calif.--(BUSINESS WIRE)--Nov. 15, 2023-- [Transphorm, Inc.](#) (Nasdaq: TGAN), a global leader in robust GaN power semiconductors, and [Allegro MicroSystems, Inc.](#) ("Allegro") (Nasdaq: ALGM), a global leader in power and sensing semiconductor technology for motion control and energy-efficient systems, today announced a collaboration including Transphorm's [SuperGaN® FETs](#) and Allegro's [AHV85110 Isolated Gate Driver](#) to enable the expansion of GaN power system design for high power applications.

Transphorm's SuperGaN FETs are designed to work in various topologies and are available in several different packages to support a wide power range while also satisfying diverse end application requirements. SuperGaN FETs are used in multiple commercial products, including higher power systems where they are proven to notably increase reliability, power density, and efficiency.

Allegro's self-powered, single-channel isolated gate driver IC is optimized for driving GaN FETs in multiple applications and circuits. The AHV85110 is proven to enhance driver efficiency by as much as 50% compared to competitive gate drivers. This unique solution greatly simplifies the system design, reduces noise by 10x and common mode capacitance by 15 times compared to other solutions in the market.

"Allegro's AHV85110 High Voltage Gate Driver provides a highly compact and efficient power stage implementation that helps to achieve an approximate 30 percent footprint reduction with the least number of external components and bias supply requirements around Transphorm's power devices," said Tushar Dhayagude, Vice President of Worldwide Sales and FAE, Transphorm. "Combined with SuperGaN's highest reliability and superior dynamic switching performance over competing technologies, the end result is a more efficient, more robust solution with increased power density in critical applications such as server, data centers, renewables and electric vehicles."

"We are excited about working with Transphorm on a collaboration that further supports Allegro's focus towards helping customers optimize GaN-based system development and design," said Vijay Mangtani, Vice President and General Manager of High Voltage Power, Allegro MicroSystems. "We are looking forward to the opportunity to combine our high voltage isolated gate driver AHV85110 with Transphorm's SuperGaN FET to enable higher power density, higher efficiency, and higher power output in smaller form factors and provide value to both our and Transphorm's customers."

Those interested in testing the collaborative solution can do so via [Allegro's APEK85110KNH-06-T](#) evaluation board. The board incorporates both the AHV85110 designed to work in various applications along with Transphorm's recently announced TOLL package available in three devices with on-resistances of 35, 50, and 72 milliohms.

About Transphorm

Transphorm, Inc., a global leader in the GaN revolution, designs and manufactures high performance and high reliability GaN semiconductors for high voltage power conversion applications. Having one of the largest Power GaN IP portfolios of more than 1,000 owned or licensed patents, Transphorm produces the industry's first JEDEC and AEC-Q101 qualified high voltage GaN semiconductor devices. The Company's vertically integrated device business model allows for innovation at every development stage: design, fabrication, device, and application support. Transphorm's innovations move power electronics beyond the limitations of silicon to achieve over 99% efficiency, 50% more power density, and 20% lower system cost. Transphorm is headquartered in Goleta, California and has manufacturing operations in Goleta and Aizu, Japan. For more information, please visit www.transphormusa.com. Follow us on Twitter @transphormusa and WeChat @ Transphorm_GaN.

The SuperGaN mark is a registered trademark of Transphorm, Inc. All other trademarks are the property of their respective owners.

View source version on [businesswire.com](https://www.businesswire.com/news/home/20231115504206/en/): <https://www.businesswire.com/news/home/20231115504206/en/>

Press Contact:

Heather Ailara
+1.973.567.6040
heather.ailara@transphormusa.com

Source: Transphorm, Inc.