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Ideal Power Adds Global Tier 1 Automotive Supplier to its B-TRAN™ Test and Evaluation Program

AUSTIN, Texas, March 09, 2023 (GLOBE NEWSWIRE) -- Ideal Power Inc. (Nasdaq: IPWR), pioneering the development and commercialization of the highly efficient and broadly patented B-TRAN™ bidirectional semiconductor power switch, has been collaborating with a global Tier 1 automotive supplier. The automotive supplier has now entered into an agreement with Ideal Power to test and evaluate B-TRAN™ devices for its electric vehicle (EV) inverter, bidirectional charging, and circuit protection applications. The Tier 1 supplier is a leader in vehicle electrification, EV systems, and clean mobility, with multi-billion dollar annual revenue.

“We are very excited to announce the first test and evaluation agreement of B-TRAN™ by a Tier 1 automotive supplier for potential adoption in its EV sub-systems. This agreement builds on our custom module development with a Top 10 global automaker,” said Dan Brdar, President and Chief Executive Officer of Ideal Power. “We plan to deliver B-TRAN™ samples for evaluation to the Tier 1 automotive supplier in the second half of 2023. We will work with this automotive supplier to understand their EV applications, gain valuable feedback on their product requirements and to potentially secure a product development or other commercial agreement.”

Brdar continued, “B-TRAN™ has the potential to displace conventional power semiconductor solutions in many applications. We are executing our B-TRAN™ commercialization roadmap in large markets including EV, EV charging, renewable energy and energy storage, uninterruptible power supply (UPS) systems for data centers, and solid-state circuit breakers.”

B-TRAN™ potentially offers distinct advantages over other technologies in EV applications. After batteries, power semiconductors are the second largest cost component of an EV and typically make up 8-10% of the total electric vehicle production cost. While SiC-based devices improve efficiency over traditional silicon-based semiconductors, their very high cost compared to silicon-based devices adds to the cost challenges of EVs. B-TRAN™ offers a lower cost alternative to SiC devices to improve efficiency and vehicle range. In addition to these benefits, B-TRAN™ offers a clear roadmap to incorporate the benefits of silicon carbide as its cost and manufacturability profile improves over time.

Ideal Power’s patented semiconductor power switch, the Bidirectional Bipolar Junction Transistor, or B-TRAN™, reduces power losses by 50% or more over conventional power switches, depending on the application. B-TRAN™’s higher efficiency results in less heat

being generated and therefore significantly lower thermal management requirements, requiring significantly smaller surface area to dissipate heat and giving rise to potentially smaller original equipment manufacturer products. B-TRAN™ offers the industry's only symmetric bidirectional operation, reducing the number of components required for an application by 75% compared to a conventional bidirectional switch utilizing IGBTs and diodes. This highly efficient and unique symmetric operation provides a strong competitive advantage in bidirectional applications, which are growing rapidly as transportation electrifies and power generation shifts to renewable energy coupled with energy storage. For more information on B-TRAN™, visit here.

About Ideal Power Inc.

Ideal Power (NASDAQ: IPWR) is pioneering the development of its broadly patented bidirectional semiconductor power switch, creating highly efficient and ecofriendly energy control solutions for electric vehicle, electric vehicle charging, renewable energy, energy storage, UPS/data center, solid-state circuit breaker and other industrial and military applications. The Company is focused on its patented Bidirectional, Bipolar Junction Transistor (B-TRAN™) semiconductor technology. B-TRAN™ is a unique double-sided bidirectional AC switch able to deliver substantial performance improvements over today's conventional power semiconductors. Ideal Power believes B-TRAN™ will reduce conduction and switching losses, complexity of thermal management and operating cost in medium voltage AC power switching and control circuitry. For more information, visit www.IdealPower.com.

Safe Harbor Statement

All statements in this release that are not based on historical fact are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 and the provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. While Ideal Power's management has based any forward-looking statements included in this release on its current expectations, the information on which such expectations were based may change. Such forward-looking statements include, but are not limited to, statements regarding the potential adoption of B-TRAN™ by customers and the timing of testing of our products. These forward-looking statements rely on a number of assumptions concerning future events and are subject to a number of risks, uncertainties and other factors, many of which are outside of our control that could cause actual results to materially differ from such statements. Such risks, uncertainties, and other factors include, but are not limited to, the success of our B-TRAN™ technology, including whether the patents for our technology provide adequate protection and whether we can be successful in maintaining, enforcing and defending our patents, our inability to predict with precision or certainty the pace and timing of development and commercialization of our B-TRAN™ technology, including the timing of the completion of our wafer fabrication runs with our semiconductor fabrications partners, the rate and degree of market acceptance for our B-TRAN™, the impact of global health pandemics on our business, supply chain disruptions, and the expected performance of future products incorporating our B-TRAN™, and uncertainties set forth in our quarterly, annual and other reports filed with the Securities and Exchange Commission. Furthermore, we operate in a highly competitive and rapidly changing environment where new and unanticipated risks may arise. Accordingly, investors should not place any reliance on forward-looking statements as a prediction of actual results. We disclaim any intention to, and undertake no obligation to, update or revise forward-looking statements, except as required by applicable law.

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