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Ideal Power Begins Third-Party Automotive Qualification and Reliability Testing

AUSTIN, Texas, Oct. 16, 2024 /PRNewswire/ -- [Ideal Power Inc.](#) (Nasdaq: IPWR) ("Ideal Power," the "Company," "we," "us" or "our"), pioneering the development and commercialization of the highly efficient and broadly patented B-TRAN™ bidirectional semiconductor power switch, today announces the start of third-party automotive qualification and reliability testing of B-TRAN™ devices.

"This is a significant milestone in our commercialization roadmap as third-party automotive qualification and reliability testing of B-TRAN™ is now underway. Demonstration of compliance with automotive standards, the most stringent reliability standards for power semiconductor devices, is expected to accelerate the adoption of B-TRAN™ with large industrial customers as well as automotive OEMs and Tier 1 automotive suppliers," said Dan Brdar, President and Chief Executive Officer of Ideal Power.

Ideal Power successfully performed a critical subset of reliability testing of packaged B-TRAN™ devices in its lab and at a third-party testing site to confirm our readiness for third-party automotive qualification and reliability testing. This testing focused on the reliability of packaged B-TRAN™ devices in extreme environmental conditions and under high electrical and thermal stress as well as blocking voltage and shock testing. All of the tested devices packaged by our commercial packaging partner passed these tests indicating a robust B-TRAN™ packaging design. As a result, the Company engaged a third-party to commence full automotive qualification and reliability testing.

The automotive qualification and reliability testing includes a broader array of testing as required by automotive codes and standards utilizing specified parameters and a wide range of test conditions. The testing to achieve automotive qualification requires over a thousand packaged B-TRAN™ devices from multiple wafer runs. The process includes tens of thousands of power cycles at various current levels, thermal cycling at extreme temperature and humidity levels, blocking voltage and shock and vibration testing, and visual inspection. These tests are designed to expose B-TRAN™ to conditions that are intended to accelerate failure mechanisms and demonstrate the long-term reliability of the devices. Successful completion of B-TRAN™ automotive qualification and reliability testing is expected in the first half of 2025.

About Ideal Power Inc.

Ideal Power (NASDAQ: IPWR) is pioneering the development and commercialization 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 that delivers substantial performance improvements over today's conventional power semiconductors. Ideal Power's B-TRAN™ can reduce conduction and switching losses, complexity of thermal management and operating cost in AC power switching and control circuitry. For more information, visit the Company's website at www.IdealPower.com, on [LinkedIn](#), on [Twitter](#), and on [Facebook](#).

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 expected completion of B-TRAN™ automotive qualification in the first half of 2025. 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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