Vicor Adopts Silvaco's Victory TCAD™ 3D Simulation Solution for Accurate Power Device Modeling and Simulation

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SANTA CLARA, Calif., Oct. 28, 2025 (GLOBE NEWSWIRE) -- Silvaco Group, Inc. ("Silvaco") (NASDAQ: SVCO), a provider of TCAD, EDA software, and SIP solutions that enable semiconductor design and digital twin modeling through AI software and innovation, announced today that Vicor Corporation, a high-performance power module company, has adopted Silvaco's Victory™ TCAD 3D simulation solution for process and device simulation to enable accurate modeling and simulation of power devices to meet stringent customer requirements.

Vicor is a provider of high-density power modules, offering innovative power solutions designed to create efficient, compact and easy-to-deploy power delivery networks. Vicor had been using Silvaco's Victory TCAD 2D simulation solution to design and optimize power semiconductor devices tailored to its proprietary architectures. To more accurately capture key physical effects not possible in 2D models, Vicor has adopted Silvaco's Victory TCAD 3D simulation solution. This adoption enables comprehensive modeling of complex device structures and layout-level interactions.

As power devices become more advanced, traditional 2D simulations can no longer provide sufficient accuracy to predict real-world performance. By moving to 3D simulations, Vicor's engineers can more closely mirror actual device geometries, capture complex effects that impact reliability and efficiency, and reduce costly design iterations. This shift enables faster development cycles, better-informed design decisions, and stronger confidence that products will meet performance and market demands. These capabilities are critical as the industry continues its trend toward miniaturization and system-level integration.

"As a leading supplier of modular power solutions based on our patented architectures, we often have unique requirements for power semiconductors," said Dean Jennings, Sr. Principal Engineer at Vicor. "Silvaco's Victory TCAD 3D simulation solution is invaluable in enabling the design of custom power semiconductor devices, as well as the process technology required to fabricate them. The Victory TCAD 3D simulation solution is fast, easy to use, and accurate. Calibration of the process flow was efficient and straightforward as the out-of-the-box model parameters produced excellent results. Using Silvaco's Victory TCAD has enabled the development of custom power devices from concept through to production."

"Working with Vicor's engineering team to meet their simulation requirements has been highly productive," said Eric Guichard, Ph.D., Senior Vice President and General Manager of Silvaco's TCAD Division. "Vicor's use of Victory TCAD 3D's suite of tools demonstrates the practical benefits of 3D simulation in accelerating process and device development and solving complex power devices design challenges, capabilities that are increasingly vital as power devices become more compact, integrated, and sensitive to spatial effects."

For more information about Silvaco's TCAD tools, visit www.silvaco.com.

About Silvaco
Silvaco is a provider of TCAD, EDA software, and SIP solutions that enable semiconductor design and digital twin modeling through AI software and innovation. Silvaco's solutions are used for semiconductor and photonics processes, devices, and systems development across display, power devices, automotive, memory, high performance compute, foundries, photonics, internet of things, and 5G/6G mobile markets for complex SoC design. Silvaco is headquartered in Santa Clara, California, and has a global presence with offices located in North America, Europe, Egypt, Brazil, China, Japan, Korea, Singapore, Vietnam, and Taiwan. Learn more at silvaco.com**.**

About Vicor
Vicor Corporation designs, develops, manufactures and markets modular power components and complete power systems based upon a portfolio of patented technologies. Headquartered in Andover, Massachusetts, Vicor sells its products to the power systems market, including enterprise and high-performance computing, industrial equipment and automation, telecommunications and network infrastructure, vehicles and transportation, aerospace and defense. www.vicorpower.com

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