

Press Release

onsemi Launches Simulation Tools to Bring Complex Power Electronics Applications to Market Faster

Industry-first PLECS Models and system-level simulation valid for hard and soft switching applications, corner modeling and custom parasitic environment, enabling virtual prototyping

ORLANDO – March 21, 2023 – onsemi (Nasdaq: [ON](#)), a leader in intelligent power and sensing technologies, today announced a breakthrough in simulation tools for onsemi's EliteSiC Silicon Carbide (SiC) product family and its applications. The company launched the online [Elite Power Simulator](#) and [Self-Service PLECS Model Generator](#), which provide meaningful insights for complex power electronic applications through system-level simulations at an early stage of the development cycle. The tools save power electronic engineers time by providing state-of-the-art accurate simulation data enabling EliteSiC product selection tailored to customer applications, instead of costly and time-consuming hardware fabrication and testing.

Users have ultimate power and flexibility to create high-fidelity system-level PLECS models when the Elite Power Simulator is deployed in conjunction with the Self-Service PLECS Model Generator. Whether uploaded to onsemi's Elite Power Simulator or downloaded for direct use, the self-service PLECS models deliver the optimization and accuracy required for demanding power electronic simulations. The models are generated based on typical or worst-case conditions to let the customer design within the technology boundaries. The capability to define application-specific parasitics ensures that the generated PLECS models provide highly accurate results for the customer's system-level simulations.

"Our PLECS simulator has proven very popular with power designers due to speed and ease of use," said Jost Allmelling, managing director and co-founder, Plexim. "It is particularly exciting to see the truly novel aspects here, including the ability to simulate soft switching accurately, the customized models via the onsemi Self-Service PLECS Model Generator and the ready-made models for corner cases."

To date, system-level simulators and their associated PLECS models have only been valid for hard switching topologies, with simulation results for soft switching applications such as LLC (inductor-inductor-capacitor) or CLLC (capacitor-inductor-inductor-capacitor) being highly inaccurate. onsemi's industry-first PLECS models break this trend and solve this problem for customers.

"This is a significant step for the industry, increasing its ability to get both hard and soft switching designs to market quickly," said Asif Jakwani, senior vice president and general manager of the Advanced Power Division, which is part of the Power Solutions Group at onsemi. "Our tools enable our customers to understand how our devices perform in their application environment and fully optimize the performance within the boundaries of the technology."

See onsemi's Elite Power Simulator and Self-Service PLECS Model Generator at booth 1032 at APEC 2023, the leading conference for practicing power electronics professionals, in Orlando.

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About onsemi

onsemi (Nasdaq: ON) is driving disruptive innovations to help build a better future. With a focus on automotive and industrial end-markets, the company is accelerating change in megatrends such as vehicle electrification and safety, sustainable energy grids, industrial automation, and 5G and cloud infrastructure. **onsemi** offers a highly differentiated and innovative product portfolio, delivering intelligent power and sensing technologies that solve the world's most complex challenges and leads the way to creating a safer, cleaner, and smarter world. **onsemi** is recognized as a Fortune 500® company and included in the S&P 500® index. Learn more about **onsemi** at www.onsemi.com.

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