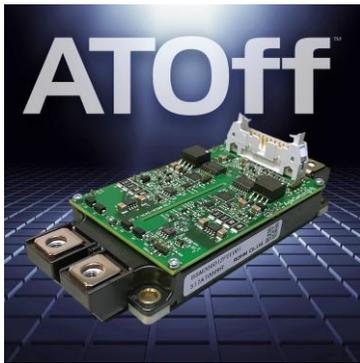


AgileSwitch to be Awarded Patent for Innovative SiC Module Switching Technique

Patent-pending Augmented Turn-Off™ switching technique addresses enhanced control in high-power SiC applications; [whitepaper](#) provides details of performance improvements



The innovative Augmented Turn-Off (ATOff™) switching technique addresses two significant impediments to the successful implementation of Silicon Carbide modules in high-power applications. By reducing both turn-off spikes and ringing both under normal operation as well as short-circuit conditions (DSAT), SiC MOSFET modules can be operated in the higher frequencies that enable dramatic increases in power conversion density. A [whitepaper](#) describing the performance improvements attained using ATOff is available for download.

The ATOff technology has been incorporated into AgileSwitch's first SiC gate drive assembly. The software configurable [EconoDual Electrical Master 3](#)

(EDEM3) is optimized for driving SiC MOSFETs up to 1200V currently offered by ROHM. The EDEM3 provides up to 15 Amps of peak current at an operating frequency up to 100 kHz. The driver includes isolated HI and LO Side DC/DC converters and monitors seven fault conditions that are reported as a combination of the 3 fault lines via the 20 pin control header. Applications for the EDEM3 include: solar/PV inverters, wind turbines, energy storage, battery charging, induction heating/welding, electric vehicles (HEV/EV), trains and other traction vehicles.

AgileSwitch intends to incorporate ATOff technology into new gate drivers for 62mm SiC MOSFETs from Wolfspeed, Semikron, Microsemi and others.

"SiC MOSFETs are bringing the promise of improved efficiency and size in power conversion systems, but complexity of designing drivers makes it very challenging for OEMs to take full advantage of these improvements," said Rob Weber, AgileSwitch CEO. "Our drivers using Augmented Turn-Off are providing OEMs with a fully-integrated solution."

About AgileSwitch

[AgileSwitch, LLC](#) produces plug-and-play, programmable Silicon IGBT and Silicon Carbide MOSFET gate drive assemblies designed from the ground up to address the demands for higher performance and functionality at ever higher voltages and currents. AgileSwitch drivers can be fully customized to meet the needs and demands of virtually any customer application. With an ongoing product development commitment, AgileSwitch is continuously expanding its product line of gate drivers. AgileSwitch is a member of PowerAmerica, a public-private partnership between industry, the U.S. Department of Energy, and academia that is working to accelerate the adoption of advanced semiconductor components made with silicon carbide (SiC) and gallium nitride (GaN) into a wide range of products and systems.