Silicon Labs Expands Isolated Gate Driver Product Family with Si828x Version 2

– New Si828x features are optimized for electric vehicles and a variety of industrial applications –

AUSTIN, Texas – May 17, 2021 – Silicon Labs (NASDAQ: SLAB), a leading provider of silicon, software and solutions for a smarter, more connected world, today announced the addition of Si828x version 2 to its isolated gate driver product family. This update allows the product family to effectively drive Silicon Carbide (SiC) Field Effect Transistor (FET) gates, addressing the growing market for half- and full-bridge inverters and power supplies that require improved power density, cooler operation and reduced switching losses.

“The Si828x product family offers a variety of benefits that make it ideal for hybrid and electric vehicles (EV), as well as industrial applications,” stated Brian Mirkin, vice president and general manager of power products at Silicon Labs. “Customers using SiC FETs for power switching when designing automotive chargers and traction inverters will greatly benefit from the Si828x’s unique combination of sturdy gate drive, robust desaturation fault response, and an efficiency-boosting Miller clamp.”

Silicon Labs’ gate drivers have been tested with Wolfspeed SiC MOSFETs in cooperation with Wolfspeed, a premier provider of silicon carbide solutions.

“Electric vehicle adoption of silicon carbide is growing rapidly for power conversion and inverter applications because silicon carbide satisfies consumer demand for greater range and faster charging,” explained Jay Cameron, senior vice president and general manager of power products at Wolfspeed. “Gate drivers optimized for silicon carbide MOSFETs maximize the impact silicon carbide has on these applications.”

Wolfspeed SiC FETS used with the Si828x family increase power and conversion efficiency, which translates to fewer battery cells, more power delivered to electric motors and better operating costs. A test report including Silicon Labs’ Si828x and Wolfspeed’s C3M family is available here, as well as documentation for the half bridge reference design used in the testing here.

Si828x version 2 includes the following features:

- 4 Amp peak gate drive current switches SiC FETs and IGBTs efficiently and lowers operating costs for EVs and industrial applications
- Improved common mode transient immunity (CMTI) supports decreased switching transition times and enables increased switching frequency, reducing system power loss
- Additional undervoltage (UVLO) settings improve flexibility for SiC FETs and guard against poorly regulated power supplies
- Integrated dc-dc converter simplifies design and reduces system cost
- FET desaturation protection provided to detect and mitigate fault conditions
- Miller clamp included to eliminate parasitic-induced shoot-through conditions

Si828x version 2 isolated gate drivers are available now. For more information visitwww.silabs.com/si828x-isodriver.

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