power integrations

NEWS RELEASE

Power Integrations Launches 98.5%-Efficient High Voltage BLDC Motor Driver IC Family

11/13/2018

Appliance half-bridge motor driver eliminates heatsinks, slashes software certification time and expense

SAN JOSE, Calif.--(BUSINESS WIRE)-- Power Integrations (Nasdaq: **POWI**), the leader in high-voltage integrated circuits for energy-efficient power conversion, today announced the release of its **BridgeSwitch™** integrated half-bridge (IHB) motor driver IC family. BridgeSwitch ICs feature high- and low-side advanced FREDFETs (Fast Recovery Diode Field Effect Transistors) with integrated lossless current sensing, resulting in inverter conversion efficiency of up to 98.5% in brushless DC (BLDC) motor drive applications to 300 W. Superior efficiency along with the distributed thermal footprint provided by the IHB driver eliminates the need for a heatsink, reducing both system cost and weight. Integrated lossless current sensing, bus voltage sensing and system-level thermal sensing makes this device family ideal for BLDC motors in home-appliance applications. BridgeSwitch devices target refrigerator compressors, HVAC system fans and other residential and light commercial pumps, fans and blowers.

This press release features multimedia. View the full release here:
https://www.businesswire.com/news/home/20181113005799/en/

Appliance half-bridge motor driver eliminates heatsinks, slashes software certification time and expense (Photo: Business Wire)

The 600 V FREDFETs used in **BridgeSwitch** ICs incorporate fast, ultra-soft-recovery body-diodes. This drastically reduces losses during switching and reduces noise generation, which simplifies system level EMC. The new high-voltage, self-powered, half-bridge motor driver ICs also feature built-in device protection and system monitoring and a robust single-wire status update interface which enables communication between the motor-microcontroller and up to three BridgeSwitch devices. Each BridgeSwitch device may be configured with different high- and low-side current limits, eliminating the need for the microcontroller and external circuitry to

protect the system from open or shorted motor windings. Integrated loss-less current monitoring provides hardware-based motor fault protection, which simplifies the task of providing protection under motor-fault conditions to satisfy IEC60335-1 and IEC60730-1 requirements.

Comments senior product marketing manager Cristian Ionescu-Catrina: “We have taken a fresh look at the challenges posed by the burgeoning BLDC market and ever-tightening energy-use regulations worldwide, and produced an innovative solution that saves energy and space while reducing the BOM. This eases compliance with safety standards, simplifies circuitry and reduces development time.”

Other features include up to 20 kHz PWM frequency, and a small signal output that provides accurate, real-time reporting of FREDFET drain current which mirrors the positive motor winding current. Safety features include two-level device over-temperature detection, low-side and high-side cycle-by-cycle current limit, as well as DC bus overvoltage and undervoltage protection and reporting. Devices are compatible with all common control algorithms – field oriented control (FOC), sinusoidal, and trapezoidal modes with sensor and sensorless detection, which are described in reference designs DER-654, DER-653 and DER-749. BridgeSwitch is available in InSOP-24C – a small surface-mount package offering creepage distances greater than 3.2 mm and enabling PCB heatsinking via two exposed pads.

Samples of BridgeSwitch ICs are available now and are priced at $1.69 in 10,000-piece quantities. Visit PI’s new motor drivers sub-site for technical support at: **https://motor-driver.power.com/bridgeswitch**.

About Power Integrations

Power Integrations, Inc. is a leading innovator in semiconductor technologies for high-voltage power conversion. The company’s products are key building blocks in the clean-power ecosystem, enabling the generation of renewable energy as well as the efficient transmission and consumption of power in applications ranging from milliwatts to megawatts. For more information please visit **www.power.com**.

View source version on **businesswire.com**: **https://www.businesswire.com/news/home/20181113005799/en/**

Media Contact

Power Integrations, Inc.
Peter Rogerson, 408-414-8573
peter.rogerson@power.com

or

Press Agency Contact

BWW Communications

Nick Foot, +44-1491-636 393

nick.foot@bwwcomms.com

Source: Power Integrations, Inc.