IR Introduces 600V ICs for Energy Efficient Inverterized Motor Drive Applications

International Rectifier has introduced the compact IRS2334SPbF and IRS2334MPbF three-phase 600V ICs for inverterized motor drives used in energy efficient appliance and industrial applications.

The IRS2334SPbF is offered in an SOIC20WB package while the IRS2334MPbF is available in a QFN5X5 package featuring a footprint of just 25mm^2 and designed with the appropriate creepage and clearance requirements to enable rugged and reliable designs at voltages up to 600V.

“Inverterized motor drives offer efficiency greater than 80 percent compared to standard on/off drives that deliver less than 50 percent efficiency,” said Alberto Guerra, Vice President, Strategic Market Development, IR’s Energy Saving Products Business Unit. “The IRS2334SPbF and IRS2334MPbF offer a compact solution and simpler implementation that enable designers of applications such as power tools, refrigerator compressors and electrically controlled fans to utilize energy efficient inverters with the smallest form factor,” he added.

The IRS2334x family provides comprehensive protection including proprietary negative voltage spike (Vs) immunity for safe operation under extreme switching conditions and short circuit events. The output drivers feature a high pulse current buffer stage designed for minimum driver cross-conduction. Propagation delays are matched to simplify use at high frequencies. The floating channel can be used to drive N-channel power MOSFET or IGBTs in the high-side configuration.

The new ICs utilize IR’s advanced high-voltage IC (HVIC) process which incorporates next-generation high-voltage level-shifting and termination technology to deliver superior electrical over-stress protection and higher field reliability. The IRS2334x feature under-voltage lock-out protection, integrated deadtime protection and shoot-through protection. Other features of the new devices include advanced input filter,

lower di/dt gate driver for better noise immunity, output in phase with inputs and 3.3V input logic compatibility.

For more information, please visit www.irf.com [1].

Posted by Ron M. Seidel, Editorial Intern

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