High voltage gate driver IC improves noise immunity

Paul Rako - September 13, 2010

Fairchild Semiconductor has introduced high voltage gate drive ICs, including the FAN7392, a 2-input, 2-output / high and low side gate driver with shutdown function, the FAN7393, a 1-input, 2-output / half bridge with shutdown and controllable dead time, the FAN73932, a 1-input, 2-output / half bridge with shutdown and fixed dead time control and the FAN73933, a 2-input, 2-output / half bridge with controllable dead time. The parts are suited for use in industrial applications such as motor drive inverters, distributed power supplies and telecom system power supplies.

These devices provide improved noise immunity over competitive solutions, and feature an innovative common-mode dv/dt noise canceling circuit that enables stable operation of the high voltage gate driver under high dv/dt noise circumstances. The devices also feature an advanced level shift circuit that offers high-side gate driver operation with negative VS swings of up to -9.8V (at VBS = 15V), where Vs is the high voltage floating supply return and VBS is the high side floating supply voltage. Additionally, the FAN739x series provide stable operation over a wide temperature range of -40° to 125°C. The series also features floating channels for bootstrap operation to +600V, built-in under-voltage lockout for VBS, and matched propagation delay for both channels. These devices also eliminate a buffer transistor when compared to other low current HVICs on the market.

Price (each, 1000 pcs.) are $1.52 for the FAN7392, FAN7393, FAN73932 and FAN73933.