

Dual High Side Switch Controller 002

One of the most frequent uses of n-channel MOSFET's is as a voltage controlled switch. To ensure that the MOSFET delivers the full supply voltage to the load it is necessary for the gate voltage to be a few volts above the supply voltage level. This can be a problem if no other suitable higher voltage sources are available for use elsewhere in the circuit.

The LTC 1982 dual high-side switch controller from Linear Technology (www.linear-tech.com) solves this problem by incorporating a voltage tripler circuit in the gate driver stage. The gate voltage is limited to +7.5 V which is 2.0 V above the IC's maximum operating voltage. It can directly drive the gate of logic-level MOSFET with a $V_{GS(th)}$ from 1.0 V to 2.0 V. A suitable n-channel logic level MOSFET would be the BSP 295. This device can switch up to 1.5 A and is available in an SOT 233 SMD package.

