



MPD8020-0011

3- ϕ DC Brushless Motor Pre-Driver

Design Concept

Functional Description

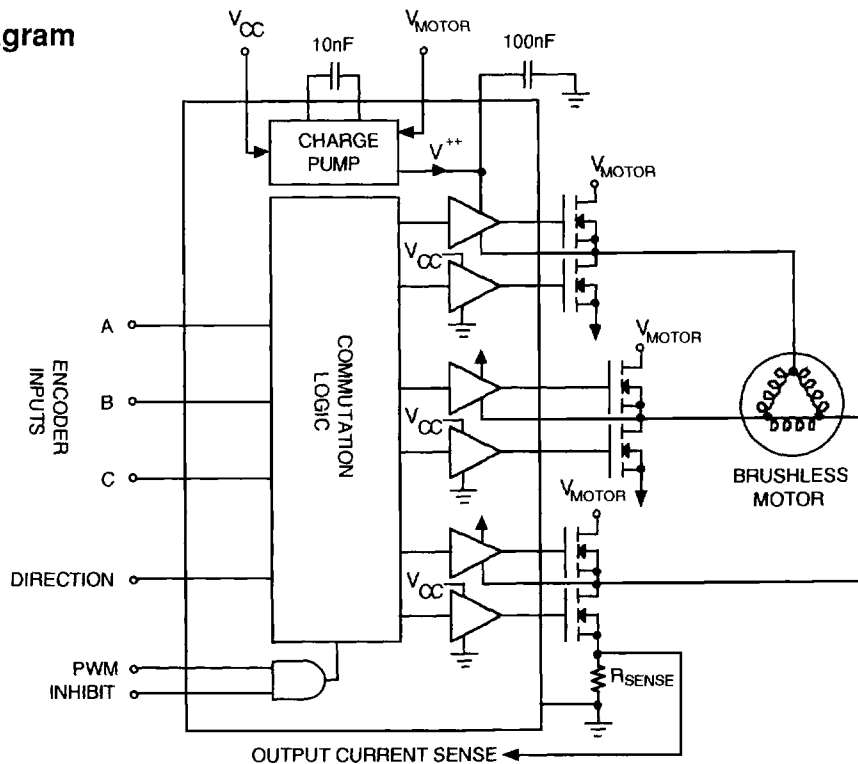
The MPD8020-0011 is a pre-driver for DC brushless motor controllers. Working with Hall-effect or optical feedback, the MPD8020-0011 develops the appropriate drive signals for directional and pulse-width modulation control of a motor. Inputs are included for implementing short circuit protection and for allowing the motor to free-wheel.

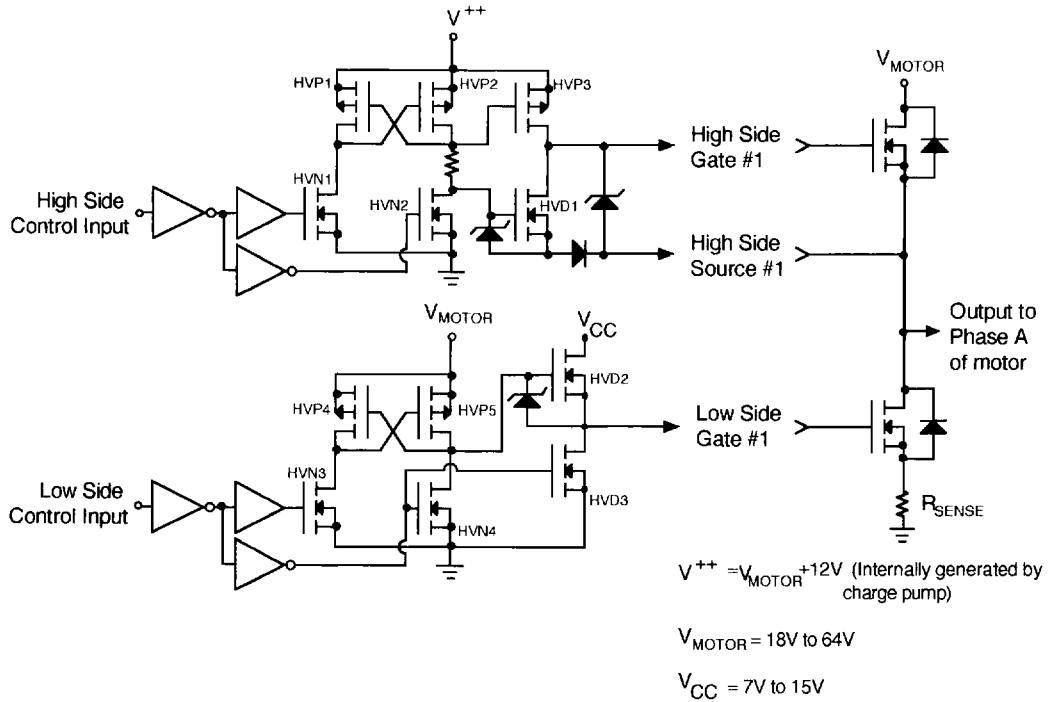
The chip drives external quasi-complementary, N-channel power MOSFET output devices. An on-chip charge pump develops the necessary gate drive potential for the high side source followers, while low side gate drive is derived from the 15V (V_{CC}) chip supply.

Features

- Drives quasi-complementary, N-channel MOSFETs
- Full commutation logic with independent PWM and inhibit inputs
- On-chip charge pump for high side drivers eliminates the need for an external gate supply.
- 64V motor supply capability
- Mil spec part available
- Compatible with 60° sensor spacing

Block Diagram





5

Figure 1. MPD8020-0011 Output Stage (one of three)