



# MPD8020-0011

## 3- $\phi$ DC Brushless Motor Pre-Driver

### Design Concept

#### Functional Description

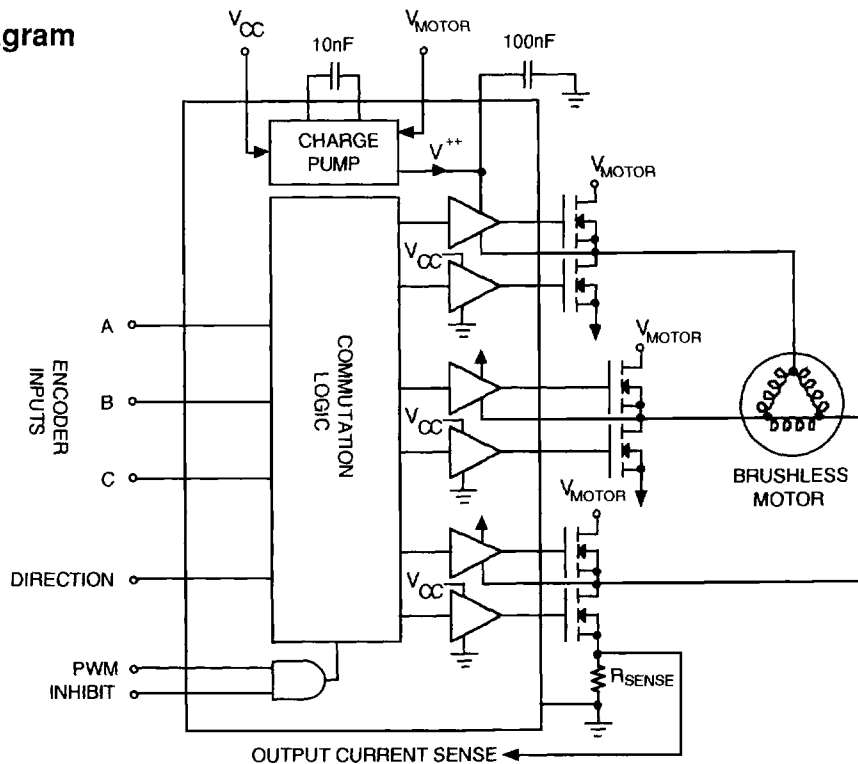
The MPD8020-0011 is a pre-driver for DC brushless motor controllers. Working with Hall-effect or optical feedback, the MPD8020-0011 develops the appropriate drive signals for directional and pulse-width modulation control of a motor. Inputs are included for implementing short circuit protection and for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

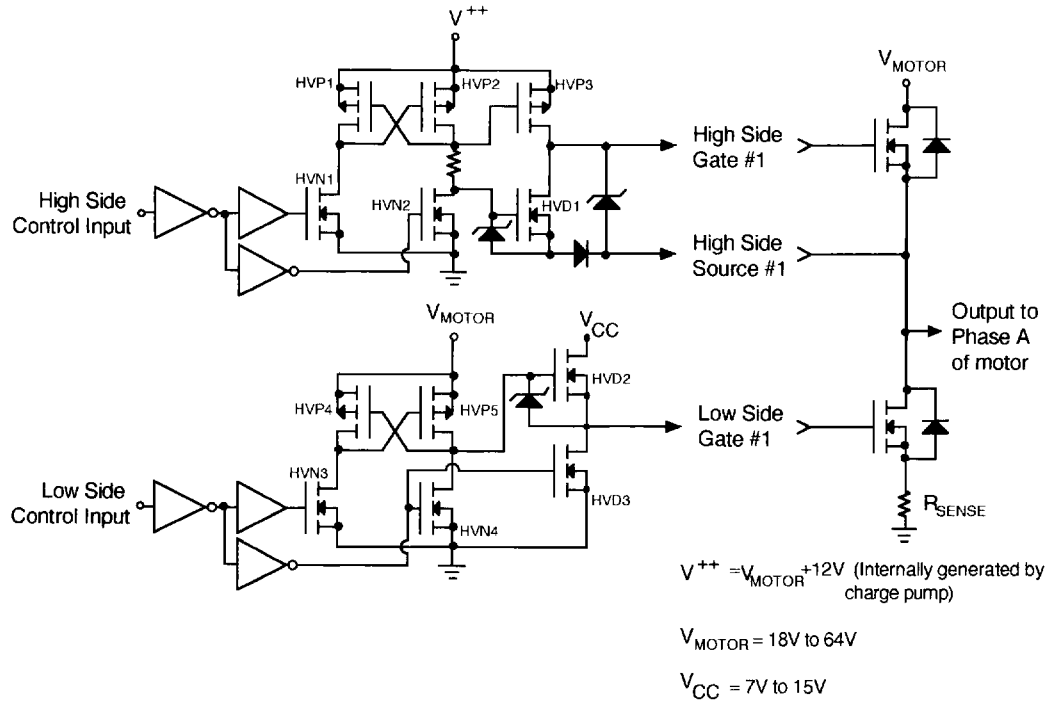
The chip drives external quasi-complementary, N-channel power MOSFET output devices. An on-chip charge pump develops the necessary gate drive potential for the high side source followers, while low side gate drive is derived from the 15V ( $V_{CC}$ ) chip supply.

#### 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





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