5 to 60V Three-Phase Brushless DC Motor Pre-Driver

FEATURES

- Wide Operating Voltage: 5V to 60V
- Charge Pump Gate Drive Supply
- 100% Duty Operation with Trickle Charge Circuit
- 1A Maximum Peak Source Current
- 2A Maximum Peak Sink Current
- 3.3V and 5V Logic Compatible
- Low-Power Sleep Mode
- Adjustable Dead-Time
- Fault Indication Output
- Full Protection Features
  - Over Current Protection
  - Short Circuit Protection
  - Input Undervoltage Lockout
  - Gate Driver Undervoltage Lockout
  - Bootstrap Undervoltage Protection
  - Thermal Shutdown Protection
- Available in QFN-28L(4mm×4mm) Package.

DESCRIPTION

The SCT55610 is a highly integrated gate driver IC for three-phase Brushless DC(BLDC) motor control. It is capable of driving 3 high-side and 3 low-side N-channel MOSFETs with a wide input supply range from 5V to 60V.

The SCT55610 supports 100% duty operation with an internal trickle charge circuit to maintain high-side gate driver voltage. Low-power sleep mode is supported to achieve low stand-by current.

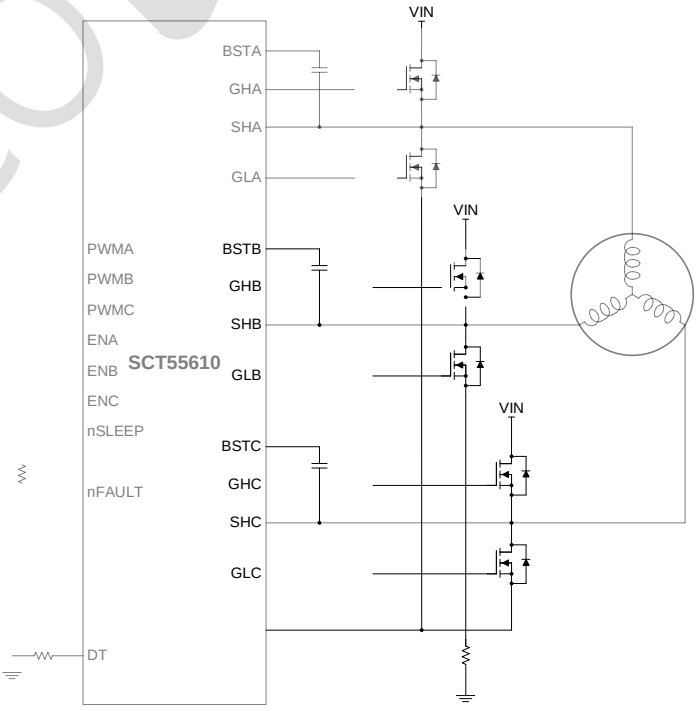
The SCT55610 provides full protection features, including over current protection, short circuit protection, input undervoltage lockout, gate driver undervoltage lockout, bootstrap undervoltage protection and thermal shutdown protection. Fault conditions are indicated through an open-drain output pin(nFAULT).

The device is available in 4mm×4mm QFN-28L package.

APPLICATIONS

- Three-Phase Brushless DC Motor
- Fans and Pumps
- Drone
- Robot Vacuum

TYPICAL APPLICATION



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