



## Product Overview

### NCV7702B: Motor Driver, Dual H-Bridge, 1.0 A

For complete documentation, see the data sheet

#### Product Description

This dual full-bridge driver IC is intended for 14 V automotive stepper and DC motor applications. Its four half-bridge outputs are configured as two channels and are programmed by six TTL compatible inputs, allowing flexible control of bridge operation. The device operates in standby mode, run mode, or brake mode and typically consumes less than 1 uA while in standby. In run mode, each half-bridge output can deliver load current in either direction. Brake mode activates the low side transistors or high side transistors at the selected outputs. On-chip recirculation diodes are provided, and the IC has multiple fault protection modes. Overcurrent detection protects against shorted loads between outputs and shorts to supply or ground at each output. An overcurrent fault condition activates an internal timer, which modulates faulted outputs at low duty cycle. An overcurrent condition in one channel does not affect operation in the other. Overvoltage and overtemperature detection are also provided, and turn off all bridge outputs during these fault conditions. Recovery from all fault conditions is automatic; the IC will resume normal operation in its previously selected mode upon fault resolution. Diagnostic ability is provided by two open-collector STATUS outputs which report the fault status of each channel independently during overcurrent faults, and together during overvoltage or overtemperature faults.

#### Features

- Single 7 V to 16 V Supply
- Low Standby Current: < 1.0  $\mu$ A Typical
- 3.3 V / 5 V Compatible Inputs
- Independent Channel Enable
- Full-Bridge, Half-Bridge, High Side or Low Side Drive
- On-Chip Recirculation Diodes
- Fault Protection with Automatic Recovery
- Overcurrent Protection
- Overvoltage Protection
- Overtemperature Protection

#### Applications

- DC or Stepper Motors
- Relays or Solenoids
- Unipolar or Bipolar Loads

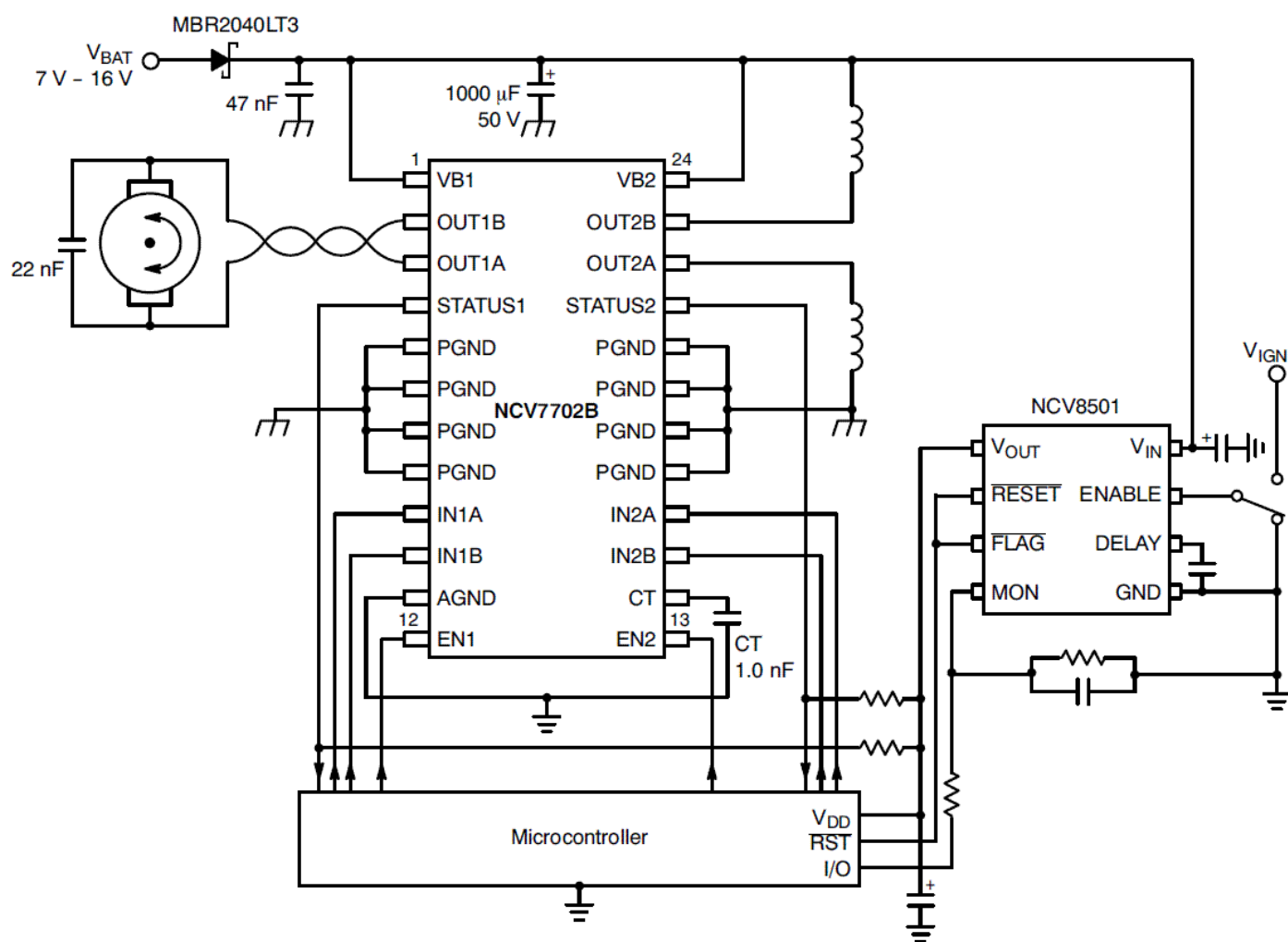
#### End Products

- Automotive

#### Part Electrical Specifications

Product	Compliance	Status	Type	V <sub>M</sub> Min (V)	V <sub>M</sub> Max (V)	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	I <sub>O</sub> Max (A)	I <sub>O</sub> Peak Max (A)	Step Resolution	Control Type	Feedback Method	Current Sense	Regulator Output	Fault Detection	Flyback Protection	R <sub>DS(on)</sub> Typ ( $\Omega$ )	Package Type
NCV7702BDWR2G	AEC Qualified PPAP Capable Pb-free Halide free	Active		7	30	7	16	0.001	1.6		Parallel			No	Over-Current Thermal			SOIC-24

## Application Diagram



For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com)

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