

DESCRIPTION

The PT5139A is a dual H-bridge motor driver which can drive two brushed DC motors or a single bipolar stepper motor, solenoids or other inductive loads. Each bridge driver includes a PWM current regulation circuitry to limit the winding current. The H-bridge driver consists of all of N-channel MOSFETs.

The device has built-in protection features, including under-voltage lockout (UVLO), over current protection (OCP) and thermal shutdown (TSD). A fault flag output is available to indicate the OCP or TSD conditions when they occur.

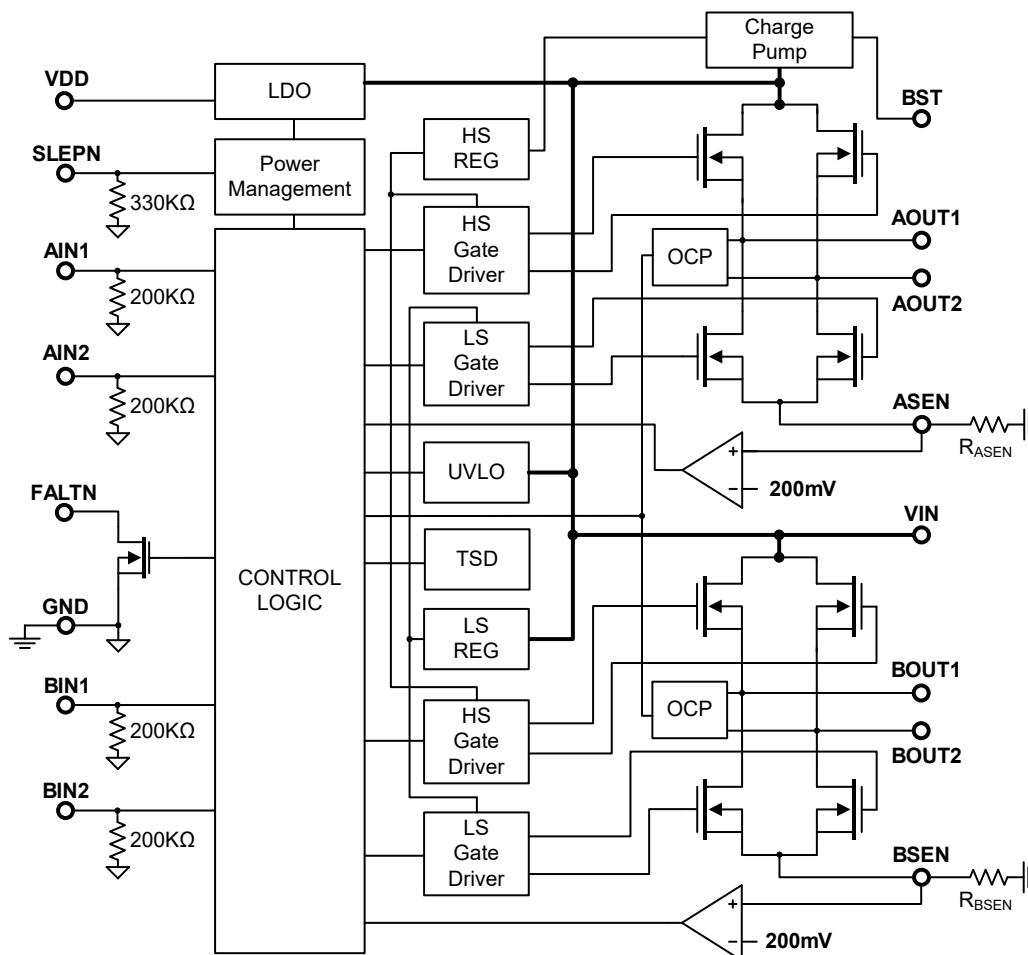
APPLICATIONS

- POS Printers
- Video Security Camera
- Robotics
- Battery Powered Toys

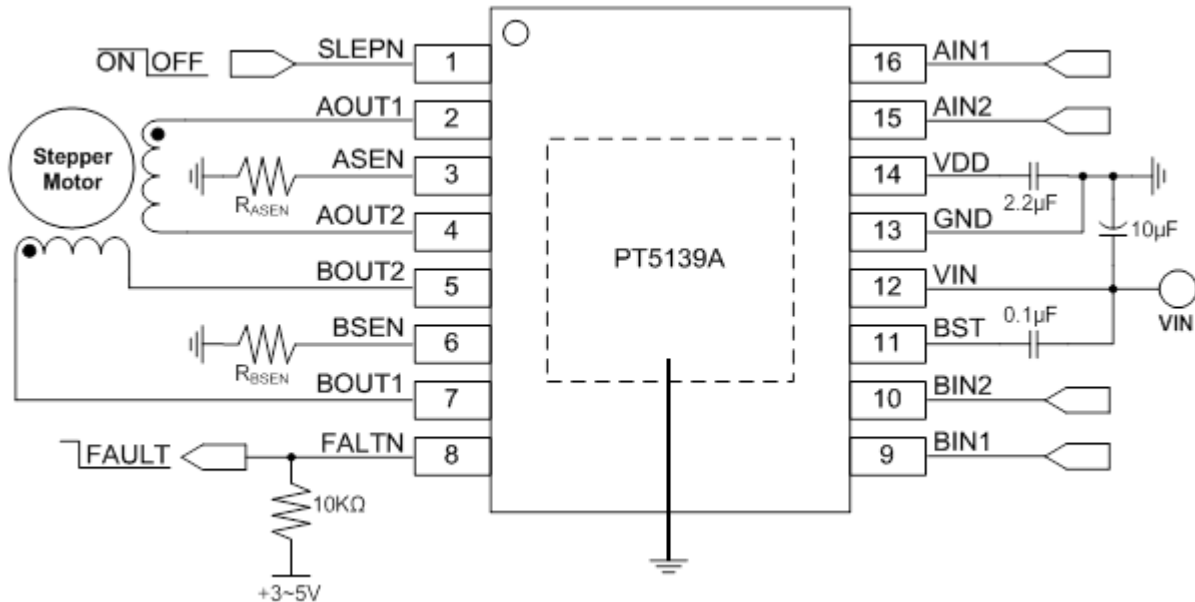
FEATURES

- Wide Supply Voltage Range: 2.7V to 15V
- Dual H-bridge Drivers, drive two brushed DC motor or single bipolar stepping motor
- MOSFET RDS(on) Resistance HS + LS = 1060mΩ
- Output Current : 700mA (HTSSOP package)
- Internal PWM Current Regulation Function
- Low Quiescent Current : 1.5mA
- Low Sleep Current: <1μA
- Built-in Protection Circuits; Thermal Shutdown (TSD), Under Voltage Lock-Out (UVLO) and Over Current Protection (OCP) functions.
- Fault Indicates Output (FALTN)
- Multiple Packages Available:
 - 16 pins QFN, 3.0mm × 3.0mm with thermal pad.
 - 16 pins HTSSOP, 5.0mm × 6.4mm with thermal pad.
 - 16 pins TSSOP, 5.0mm × 6.4mm

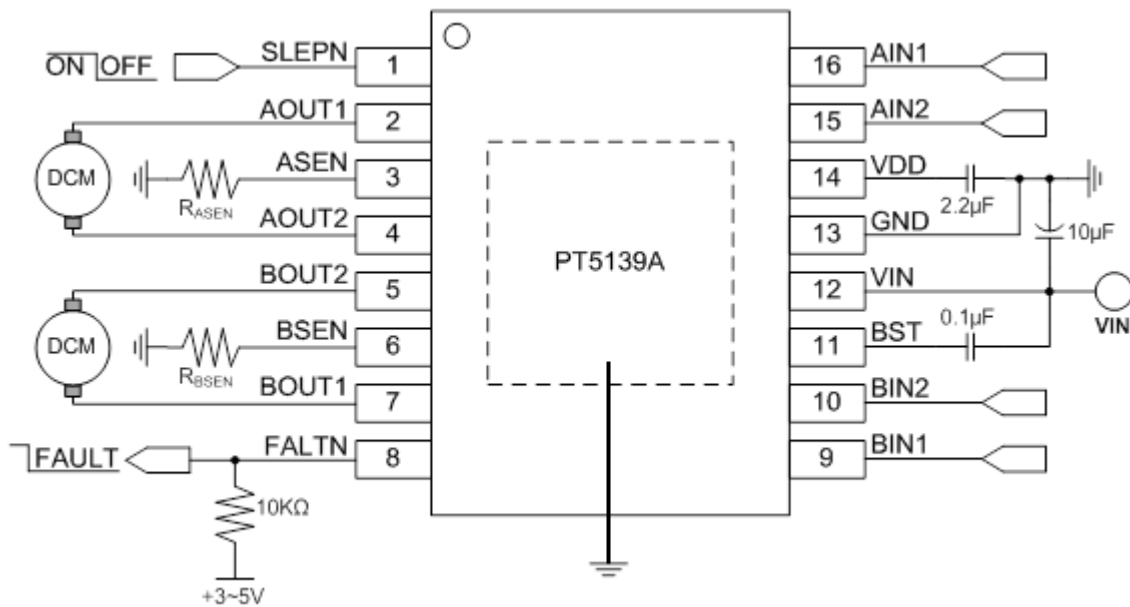
BLOCK DIAGRAM



APPLICATION CIRCUIT



Drives a bipolar stepping motor



Drives two brushed DC motors

ORDER INFORMATION

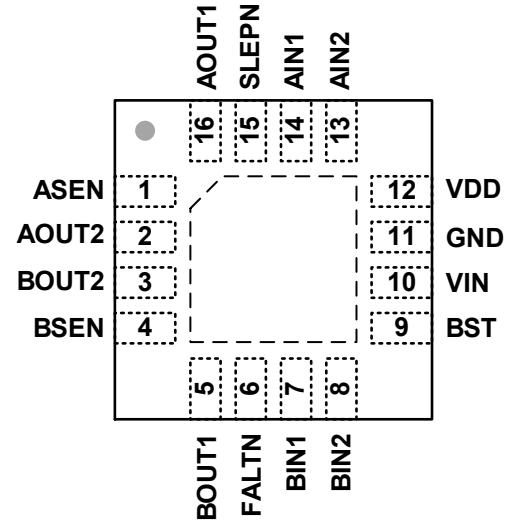
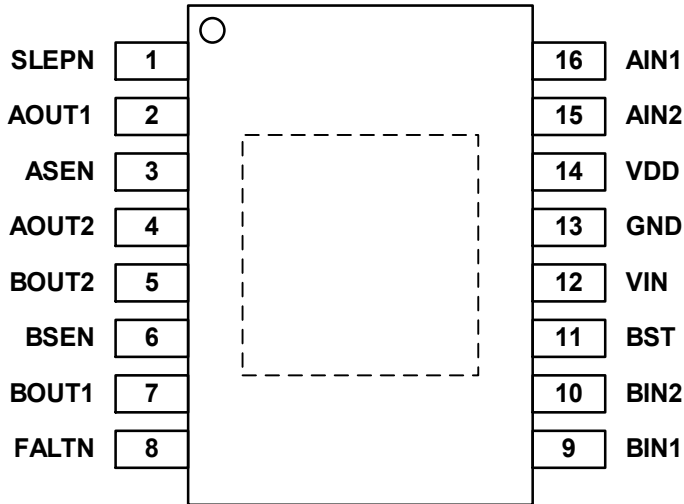
Part Number	Package Type	Top Code
PT5139A-HT	16-Pin, HTSSOP, 5.0mm x 6.4mm	PT5139A-HT
PT5139A-TX	16-Pin, TSSOP, 5.0mm x 6.4mm	PT5139A-TX
PT5139A	16-Pin, QFN, 3.0mm x 3.0mm	PT5139A

PIN CONFIGURATION

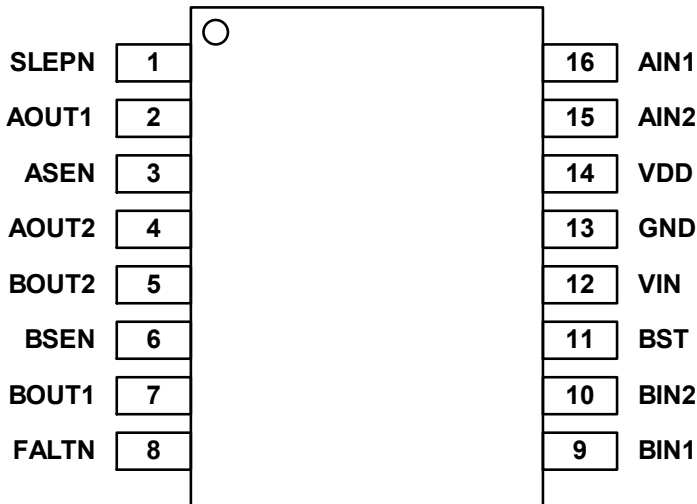
Top View

PT5139A, HTSSOP

PT5139A, QFN, 3mm x 3mm



PT5139A, TSSOP



The exposed thermal pad should be connected to GND.

IMPORTANT NOTICE

Princeton Technology Corporation (PTC) reserves the right to make corrections, modifications, enhancements, improvements, and other changes to its products and to discontinue any product without notice at any time.

PTC cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a PTC product. No circuit patent licenses are implied.

Princeton Technology Corp.
2F, 233-1, Baociao Road,
Sindian Dist., New Taipei City 23145, Taiwan
Tel: 886-2-66296288
Fax: 886-2-29174598
<http://www.princeton.com.tw>