

## 1.50A, Low Voltage H-Bridge Motor Drive

### ■ GENERAL DESCRIPTION

FH8837 / FH8837A are low voltage DC motor driver IC. Internal integration 650mΩ (HS+LS typical) H bridge NMOS switch, which can support the 1.80V~12.0V input voltage range. The maximum current capacity is up to 1.5A, support for ultra-low power sleep mode; built-in UVLO, Thermal Shutdown, OCP protection circuit. FH8837/FH8837A can be used in camera, toys and consumer products.

### ■ APPLICATIONS

- Cameras
- Toys
- Consumer Products

### ■ TYPICAL APPLICATON

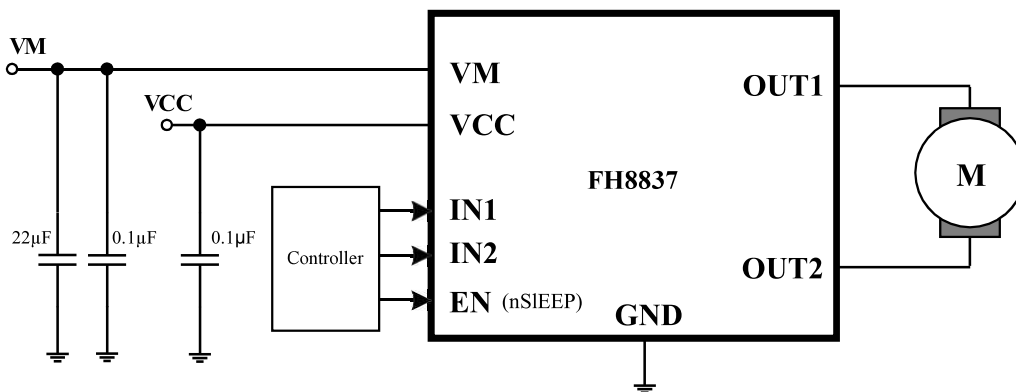


Figure 1. Basic Application Circuit

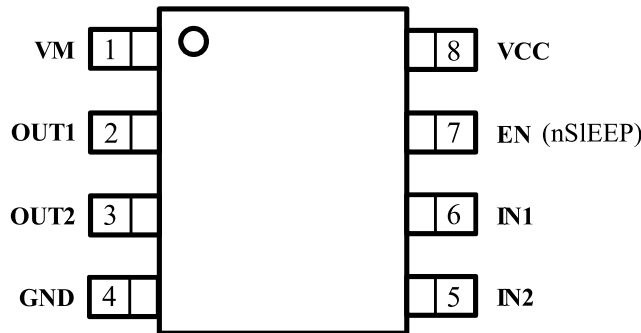
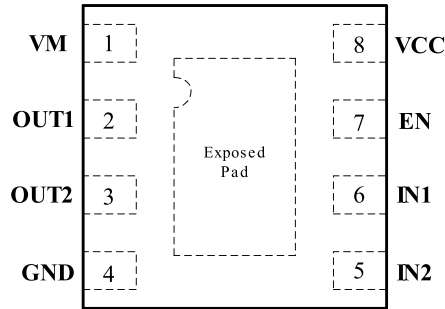
### ■ FEATURES

- Support the input voltage range:
  - Motor power: 1.8V~12.0V
  - Control power supply: 1.8V~7.0V
- LDMOS  $R_{DS(ON)}$  (HS+LS) 650mΩ (typical)
- Ultra-low power sleep mode
- VM sleep mode current: 45nA (typical)
- VCC sleep mode current: 17nA (typical)
- Maximum 1.5A current output capacity
- Built-in UVLO Protection
- Built-in Over Temperature Protection
- Built-in Short Circuit Protection
- Built-in Over Current Protection
- Built-in Charge Pump
- FH8837: DFN2\*2-8L package
- FH8837A: SOP-8L package

### ■ ABSOLUTE MAXIMUM RATINGS

Parameter	Value	Unit
VM Voltage Range	-0.3~12.0	V
VCC, IN1, IN2, EN Voltages Range	-0.3~7.0	V
OUT1, OUT2 Voltage Range	-0.3~Vin+0.3	V
Storage Temperature Range	-50~150	°C
Junction Temperature	-40~150	°C
Package Thermal Resistance $\theta_{JA}$ of DFN2*2-8L	70	°C/W
Package Thermal Resistance $\theta_{JA}$ of SOP-8L	90	°C/W

## ■ PACKAGE



## ■ PIN FUNCTIONS

Pin	Name	Function
1	VM	Power Supply for Driver. Connect a 0.1 $\mu$ F bypass ceramic capacitor to GND. A bulk capacitor with at least 22 $\mu$ F capacitance on VM to GND is needed and helpful to stabilize VM voltage during motor operation.
2	OUT1	Motor Driver output 1
3	OUT2	Motor Driver output 2
4	GND	Ground pin
5	IN2	PWM input2
6	IN1	PWM input1
7	EN	Chip Enable Input Pin. When this pin is in logic low, the device enters low-power sleep mode. The device operates normally when this pin is logic high. The pin has an internal pull-down resistor to GND.
8	VCC	Power Supply for Logic Input. Connect a 0.1 $\mu$ F bypass ceramic capacitor to GND

## ■ ORDER INFORMATION

Part Number	Current Output	Package	Top Mark	Quantity / Reel
FH8837N08	1.50A	DFN2*2-8L	T*** **	3000PCS
FH8837AS08	1.50A	SOP-8L	T8837* ** ***	3000PCS

- FH8837 / FH8837A devices are Pb-free and RoHS compliant.
- The surface prints of our semiconductor devices are subject to change during the production process and do not involve changes in electrical parameters, and we will not separately state the notice.



### ESD SENSITIVITY CAUTION

ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.



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