Description

The SS8833T is a two-bridge motor driver with two H-bridge drivers that can drive two DC brushed motors, a bipolar stepper motor, solenoid valves, or other inductive loads.

The chip work voltage 2.7V-15V, with load currents up to 1.0A per channel. The output driver block for each H-bridge consists of a P+N channel power MOSFET, configured as H-bridges to drive motor winding. Each H bridge includes circuits that regulate or limit the winding current.

Internal safety features include the use of external current limiting resistors for output current limiting, under voltage locking, over current protection (OCP), and overheat protection shutdown. Over temperature output alarm, which can be used to indicate a hot shutdown.

The SS8833T is available in three package forms for customers to choose from flexibly

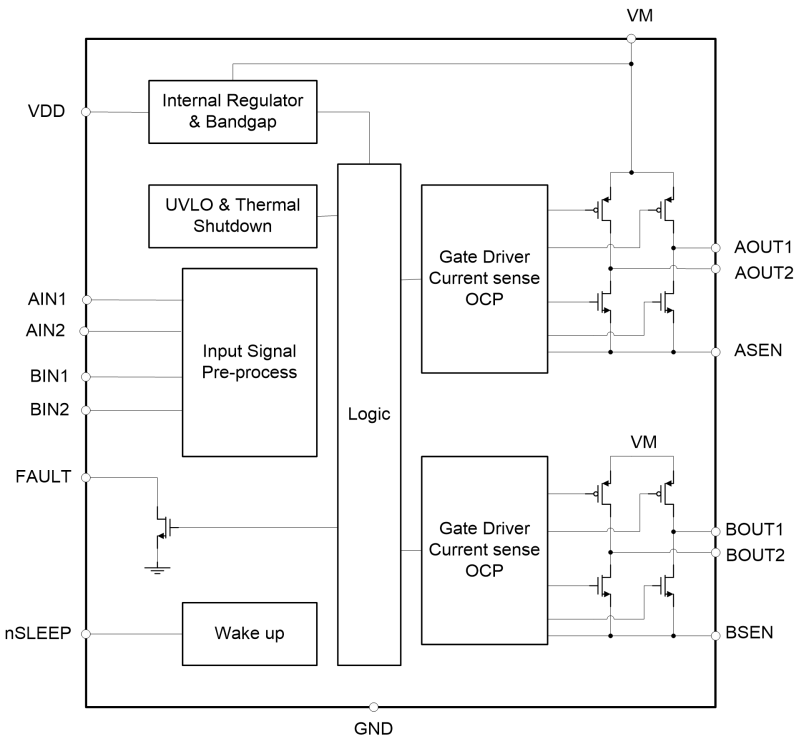
Features

- Wide supply voltage range: 2.7V to 15V
- Two internal full bridge drivers
- Low static current: 1.1mA
- Low sleep current: 1μA
- Hot shutdown and under voltage lock protection
- Over current Protection (OCP)
- Over temperature output alarm
- Over temperature output alarm (HS:650mΩ; LS:350 mΩ)
- Available in a variety of packages:
  ETSSOP16:5.0mm x 6.4mm
  QFN4x4-16L: 4.0mm×4.0mm
  QFN3x3-16L: 3.0mm x 3.0mm

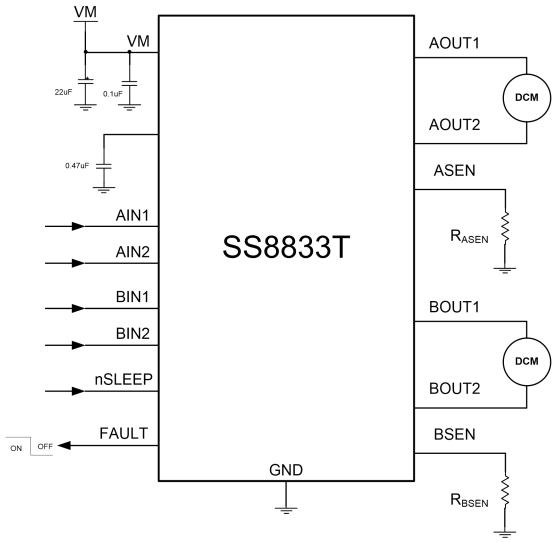
Apply

- POS printer
- Video security camera
- Robotics
- Industrial automation
- Battery-operated toys

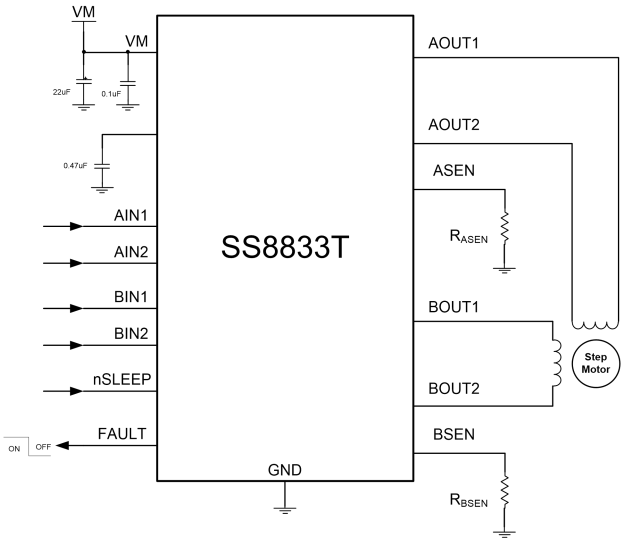
Block diagram



Application circuit



双直流电动机的应用

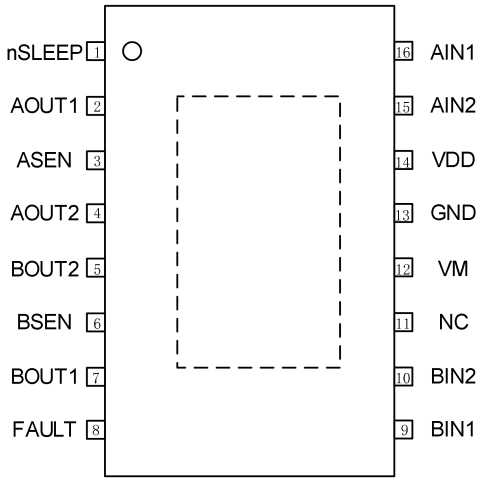


步进电机的应用

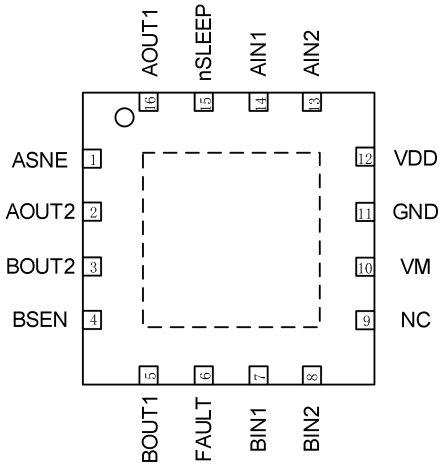
Order information

Valid Part Number	Package Type	Top Code
SS8833T-ET-TP	ETSSOP16	SS8833T-ET
SS8833T-QN-TP	QFN4x4-16L	SS8833T-QN
SS8833T-QF-TP	QFN3x3-16L	SS8833T-QF

Pin configuration



ETSSOP16



QFN4x4-16/QFN3x3-16

Note: the bottom pad of the package needs to be connected to GND

Pin description

Pin name	I/O	Description	Pin serial number	
			ETSSOP16	QFN
ASEN	I/O	Channel A current detection, connected to channel A's current detection resistor	3	1
AOUT2	O	Connect to motor winding A.	4	2
BOUT2	O	Connect to motor winding B.	5	3
BSEN	I/O	Channel B current detection, connecting the current detection resistor of channel B.	6	4
BOUT1	O	Connect to motor winding B.	7	5
FAULT	OD	Fault output. In over temperature fault condition, logic low.	8	6
BIN1	I	Input 1 on channel B of the H-bridge controls BOUT1. (220K internal pull-down resistor grounded.)	9	7
BIN2	I	Input 1 on channel B of the H-bridge controls BOUT2. (220K internal pull-down resistor grounded.)	10	8
NC	-	Connectionless	11	9
VM	Power	Chip power. Voltage ranges from 2.7V to 15V. It is recommended that 22μF ceramic bypass capacitors be grounded.	12	10
GND	GND	Ground the chip. (GND pins and the device power board must both be grounded.)	13	11
VDD	Power	Internal control and logical power supply voltage. Connect the 0.47μF capacitor from VDD to GND. VDD is for internal use only. Do not attach any external loads to the VDD pins.	14	12
AIN2	I	Input 2 for Channel A of the H bridge controls AOUT2. (220K internal pull-down resistor ground.)	15	13
AIN1	I	Input 2 for Channel A of the H bridge controls AOUT1. (220K internal pull-down resistor ground.)	16	14
nSLEEP	I	Sleep mode input. Logic input high enables the device, logic input low enters low-power sleep mode and resets all internal logic. (220K internal pull-down resistor ground.)	1	15
AOUT1	O	Connect to motor winding A.	2	16