

PRODUCT OVERVIEW

The SS8844T offers four independently controlled 1/2 H-bridge starters. It can be used to drive two DC motors, a stepper motor, four solenoids, or other loads. The output driver channel for each channel consists of an N-channel power MOSFETs configured in a 1/2 H-bridge configuration.

The SS8844T delivers up to 2.5A peak current or 1.75A root mean square (RMS) output current (with appropriate printed circuit board (PCB) heat dissipation at 24V and 25° C) on each bridge channel.

The SS8844T internal shut-off feature includes overcurrent protection, short circuit protection, undervoltage lock protection, and overtemperature protection, and provides a fault output pin nFAULT pin.

The SS8844T is available in an ETSSOP28 package with a bare pad for improved heat dissipation. It is lead-free and the pin frame is 100% wuxi plated.

APPLICATIONS

- Textile machines
- Industrial automation
- Office automation equipment
- Game consoles
- Robots

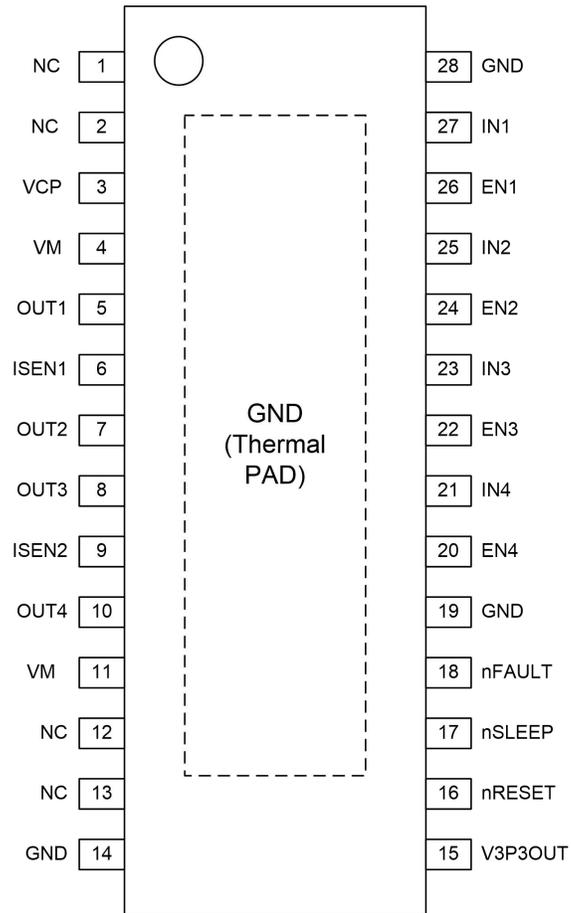
FEATURES

- Dual channel H-bridge current control motor driver
 - Single or two brushed DC motors
 - One stepper motor
 - Fully independent half-bridge control
- Industry standard IN/IN digital control interface
- Metal oxide semiconductor field effect transistor (MOSFET) with low on-impedance
 - 24V, Ta = 25°C to achieve a maximum drive current of 2.5A
 - 24V, Ta= 25°C R_{DS(on)} 350mΩ (typical value HS + LS)
- 8.2~40V operating voltage range
- 3.3V reference voltage built in
- Surface mount package with heat sink
- Protective features
 - Overcurrent Protection (OCP)
 - Thermal shutoff (TSD)
 - Undervoltage Block (UVLO)
 - Fault display Pin (nFAULT)

PRODUCT INFORMATION

Product model number	Package form	Remarks
SS8844T-ET-TP	ETSSOP28	No short circuit protection self-recovery function

PIN CONFIGURATION AND FUNCTION



PIN LIST

Pin names	Pin serial number	Pin description	External component or connection description
Power and ground			
GND	14,19,28	chip-wise	All GND pins and chip bare pads are connected to the power supply.
PPAD	-	Chip on chip	
VM	4,	H-bridge power supply	Motor power supply, all VM pins need to be connected together.
V3P3OUT	15	3.3V rectified output	External 0.47uF capacitor to ground for filtering.
NC	1,2,12,13	Undefined	
VCP	3	High side grid drive	Add 0.1uF capacitor to VM.
Controls			
IN1	27	1 Half bridge logic input	The logic input signal controls the state of OUT1, which has a pull-down resistor inside.
EN1	26	1 Half bridge enable input	Enable the input signal to control the state of OUT1, which has a pull-down resistor inside.
IN2	25	2 Half bridge logic input	The logic input signal controls the state of the OUT2, which has a pull-down resistor inside.
EN2	24	2 Half bridge enable input	Enable the input signal to control the status of OUT2 with an internal pull-down resistor.
IN3	23	3 Half bridge logic input	The logic input signal controls the state of the OUT3, which has a pull-down resistor inside.
EN3	22	3 Half bridge Enable input	Enable the input signal to control the state of OUT3, which has a pull-down resistor inside.
IN4	21	4 Half bridge logic input	The logic input signal controls the state of the OUT4, which has a pull-down resistor inside.
EN4	20	4 Half bridge Enable input	Enable the input signal to control the status of OUT4 with a pull-down resistor inside.
nSLEEP	17	Sleep mode input	For logic high power, the chip works normally; If the logic level is low, the chip enters the low-power sleep mode
nRESET	16	Reset input	High level, the chip is working; Low level, the chip enters the reset state.
Status			
nFAULT	18	Error status Output	Open drain output, if used requires an external pull-up resistor. When overtemperature or overcurrent occurs, the output is low.
Output			
ISEN1	6	1&2 half bridge ground/Isense	1&2 half bridge power ground, directly connected to GND.
ISEN2	9	3&4 Half bridge ground/Isense	3&4 half bridge power ground, directly connected to GND.
OUT1	5	1 Half bridge output	Connect the load
OUT2	7	2 Half bridge output	
OUT3	8	3 Half bridge output	
OUT4	10	4 Half bridge output	