

## PRODUCTVIEW

The SS8841 provides a dual channel integrated motor drive solution for printers and other motor integration applications. The SS8813 has two H-bridge drives, each providing a maximum peak current of 2.5A and a root mean square current of 1.75A(at 24V and Ta = 25°C with appropriate cooling conditions), which can drive two brush DC motors, or a bipolar stepper motor, or a solenoid or other inductive load. Bipolar stepper motors can be operated in full step, 2 subdivision, 4 subdivision, or with software for high subdivision.

The power output module of each H-bridge of the SS8841 consists of N-type power MOSFETs. Each H-bridge contains a rectifier circuit and a current limiting circuit. Simple parallel digital control interface, attenuation mode can be selected for fast attenuation, slow attenuation and hybrid attenuation.

The SS8841 provides a low-power sleep mode to turn off the internal circuitry to achieve very low static current. This sleep mode is achieved by setting the nSLEEP pin. The internal shut-off function contains overcurrent protection, short circuit protection, undervoltage lock protection and overtemperature protection, and provides a fault output pin nFAULT pin

The SS8841 is available in an ETSSOP28 package with a bare pad for improved heat dissipation and is lead-free with 100% wuxi plating on the pin frame.

## APPLICATIONS

- POS printer
- Security camera
- Office automation equipment UYFD/JX game consoles
- Robots

## FEATURES

- Two channel H-bridge current controlled motor driver.
  - Single or two brushed DC motors
  - One stepper motor
- PWM control interface.
- Current control is optional at fixed frequency - 2 bits current control, providing 4 current steps
  - 2 bits
- A low on-impedance metal-oxide-semiconductor field-effect transistor (MOSFET)
  - 24V · Ta = 25°C, to achieve a maximum drive current of 2.5A
  - 24V · Ta= 25°C, RDS(on)350mΩ (typical value HS + LS)
- 8.2~45V operating voltage range
- Sleep mode Low current
- 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	Encapsulation form	Remarks
SS8841T-ET-TP	ETSSOP28	No short-circuit self-recovery function
SS8841H-ET-TP	ETSSOP28	Short-circuit self-recovery function

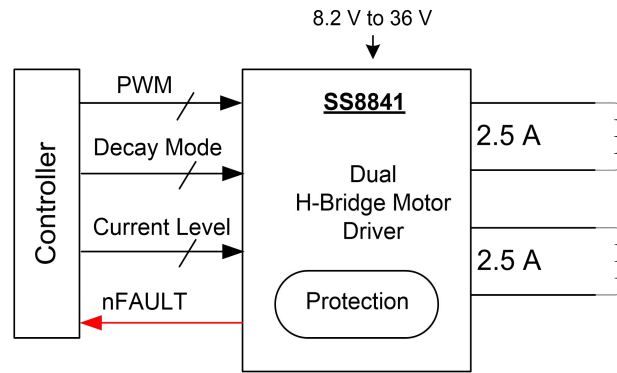
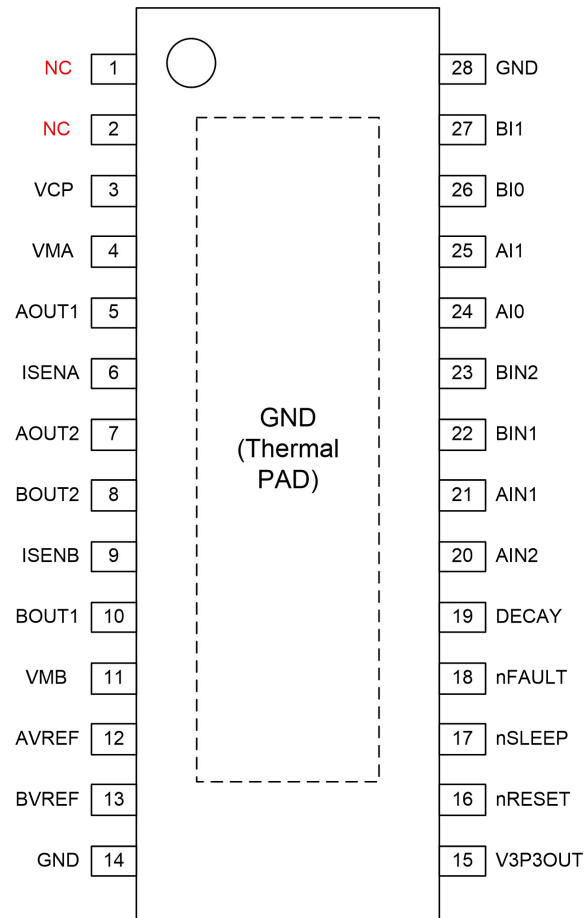


Figure 1 . Schematic diagram of typical application

## PIN CONFIGURATION AND FUNCTION



## PIN LIST

Pin names	Pin serial number	Pin description	External component or connection description
<b>Power and ground</b>			
GND	14,28	Chip-ground	All GND pins and chip bare pads are connected to the power source
PPAD	-	Chip-ground	
VMA	4	Channel A H-bridge power supply	Motor power supply, all VMx pins need to be connected together
VMB	11	Channel B H-bridge power supply	
V3P3OUT	15	3.3V rectified output	The external 0.47uF capacitor is connected to the ground for filtering, which can supply power to the reference voltage xVREF.
NC	1, 2	undefined	
VCP	3	High side grid drive	Add 0.1uF capacitor to VM
<b>Control</b>			
AIN1	21	Channel A H-bridge input 1	The logic input signal controls the state of AOUT1 with a pull-down resistor inside
AIN2	20	Channel A H-bridge input 2	The logic input signal controls the state of AOUT2 with a pull-down resistor inside
AI0	24	Channel A H-bridge setting input 0	AI1,AI0=0,0→100%, AI1,AI0=0,1→71%, AI1,AI0=1,0→38%, AI1,AI0=1,1→0%
AI1	25	Channel A H-bridge setting input 1	
BIN1	22	Channel B H-bridge input 1	The logic input signal controls the state of BOUT1 with a pull-down resistor inside
BIN2	23	Channel B H-bridge input 2	The logic input signal controls the state of BOUT2 with a pull-down resistor inside
BI0	26	Channel B H-bridge setting input 0	BI1,BI0=0,0→100%, BI1,BI0=0,1→71%, BI1,BI0=1,0→38%, BI1,BI0=1,1→0%
BI1	27	Channel B H-bridge setting input 1	
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
DECAY	19	Attenuation mode select input	Low=Slow attenuation ; hanging =mixed attenuation ; High =fast attenuation
nRESET	16	Reset input	High level, the chip is working; Low level, the chip enters the reset state.
AVREF	12	Channel A H-bridge reference voltage input	Reference voltage input, to set the drive current. An external programmable DAC can be connected for high subdivision or to a fixed reference voltage (e.g. V3P3OUT)
BVREF	13	B channel H-bridge reference voltage input	
<b>Status</b>			
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.。
<b>Output</b>			
ISENA	6	Channel A H-bridge ground/Isense	Channel A H-bridge detects the current end, connect the detection current resistor to the ground, if no current

			limiting is required, ground directly.
IENB	9	Channel B H-bridge ground / Isense	Channel B H-bridge detects the current end, connect the detection current resistor to the ground, if there is no need to limit the current, ground directly.
AOUT1	5	Channel A H-bridge output 1	Channel A H-bridge output, define the forward current as AOUT1 → AOUT2
AOUT2	7	Channel A H-bridge output 2	
BOUT1	10	Channel B H-bridge output 1	Channel B H-bridge output, define the forward current as BOUT1 → BOUT2
BOUT2	8	Channel B H-bridge output 2	