

100V输入，3.5A开关限流降压变换器

100V Input, 3.5A, Switching Current Limit Step-Down Converter

■ FEATURES

- Wide 5V to 100V Input Range
- 3.5A Typical Peak Switching Current Limit
- Hysteretic Control: No Compensation
- Up to 1MHz Switching Frequency
- PWM Dimming Control Input for LED Application
- Short-Circuit Protection (SCP) with Integrated High-Side MOSFET
- 200 μ A Quiescent Current
- Thermal Shutdown
- Packages: Pb-free Packages, ESOP8
- 宽输入电压: 5V – 100V
- 峰值开关电流限值典型3.5A
- 最高1MHz开关频率
- 支持PWM调光控制输入，应用于LED
- 集成高端MOSFET的短路保护
- 200 μ A静态电流
- 过热关断保护
- ESOP8封装

■ APPLICATIONS

- Scooters, E-Bike Control Power Supplies
- Solar Energy Systems
- Automotive System Power
- Industrial Power Supplies
- High-Power LED Drivers
- 电动车控制电源
- 汽车系统电源
- 大功率LED驱动器
- 太阳能系统
- 工业电源

DESCRIPTION

The HT7886 is a high-voltage, step-down, switching regulator that delivers up to 2A of continuous current to the load. It integrates a high-side, high-voltage, power MOSFET with a current limit of 3.5A, typically. The wide 5V to 100V input range accommodates a variety of step-down applications, making it ideal for automotive, industry, and lighting applications. Hysteretic voltage-mode control is employed for very fast response.

The switching frequency can be up to 1MHz, allowing for small component size. Thermal shutdown and short-circuit protection (SCP) provide reliable and fault-tolerant operations. A 200 μ A quiescent current allows the HT7886 to be used in battery-powered applications.

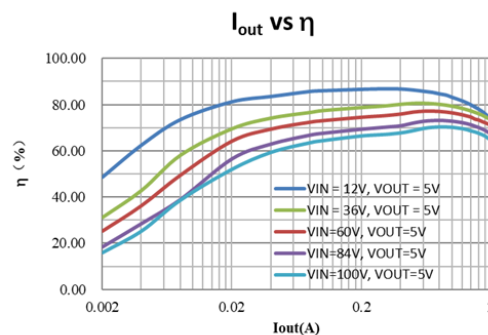
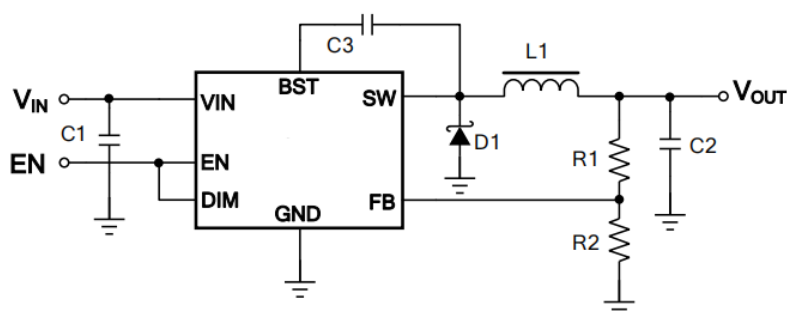
The HT7886 is available in ESOP8 package.

HT7886是一款高压降压开关稳压器,可向负载提供高达2A的连续电流。它集成了高压的高端功率MOSFET,电流限制通常为3.5A。其极宽的5V至100V输入电压范围能适应各种降压应用,使其成为汽车、工业和照明应用的理想选择。迟滞电压模式控制的应用,使其具有良好的瞬态响应能力。

开关频率可高达1MHz,从而允许小尺寸的外围器件。过热保护和短路保护(SCP)使芯片具有较好的可靠性和容错机制。200 μ A的静态电流允许HT7886用于电池供电的应用中。

该产品提供ESOP8封装。

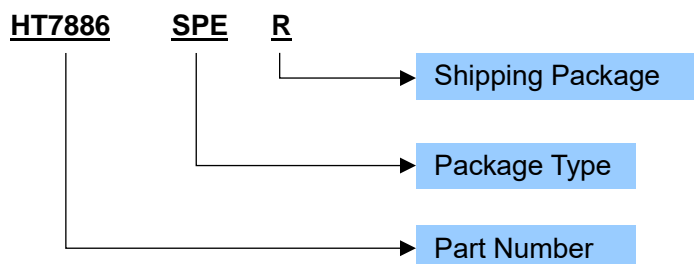
TYPICAL APPLICATION



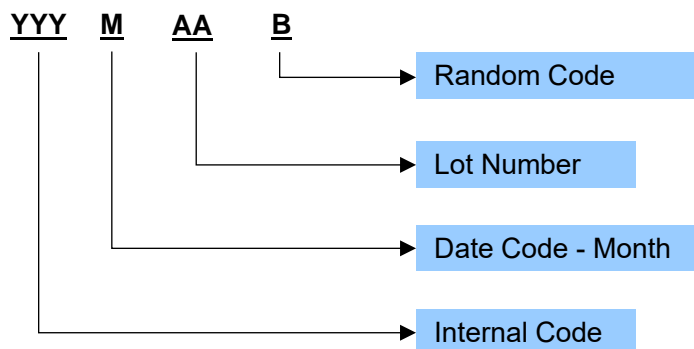
ORDERING INFORMATION

Ordering Number	Package Type	Marking	Operating Temperature Range	Shipping Package / MOQ
HT7886SPER	ESOP8 (SPE)	HT7886SP YYYMAAB ¹	-40°C ~ 125°C	Tape and Reel / 2500pcs
HT7886SPET	ESOP8 (SPE)	HT7886SPE YYYMAAB	-40°C ~ 125°C	Tube / 100pcs

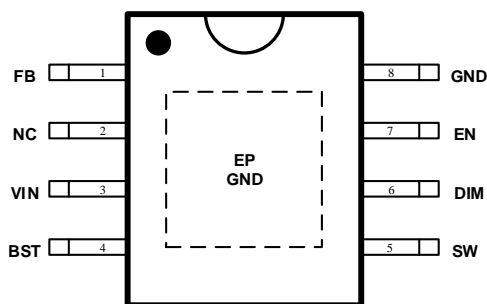
Ordering Number



Production Tracking Code



¹ YYYMAAB is production tracking code

■ TERMINAL CONFIGURATION

Top View
■ TERMINAL FUNCTION

Terminal No.	Name	Description
1	FB	Feedback. FB is the input to the voltage hysteretic comparators. The average FB voltage is maintained at 200mV by loop regulation. 反馈。FB是电压迟滞比较器的输入。通过环路调节，FB电压保持在平均200mV
2	NC	No connection. 无连接
3	VIN	Input supply. VIN supplies power to all of the internal control circuitries, both BST regulators, and the high-side switch. A decoupling capacitor to ground must be placed close to VIN to minimize switching spikes. 输入电源。VIN为所有内部控制电路、BST调节器和高端管供电。接地滤波电容必须放置在VIN附近，以减少开关尖峰
4	BST	Bootstrap. BST is the positive power supply for the internal, floating, high-side MOSFET driver. Connect a bypass capacitor between BST and SW. BST是内部高端MOSFET驱动器的正电源。在BST和SW之间连接一个旁路电容器。
5	SW	Switch node. SW is the output from the high-side switch. A low forward voltage Schottky rectifier to ground is required. The rectifier must be placed close to SW to reduce switching spikes. SW是高短管的输出。需要接低正向电压的肖特基二极管到地。二极管必须靠近SW，以减少开关尖峰
6	DIM	PWM dimming input. DIM is useful in LED driver applications. Pull DIM below the specified threshold for dimming off. Pull DIM above the specified threshold for dimming on. If the dimming function is not needed, such as in common buck applications, then connect DIM and EN together. PWM调光输入。DIM在LED驱动器中使用。DIM低于阈值，灯灭；DIM高于阈值，灯亮。如果不需要调光功能，例如在普通降压应用中，则将DIM和EN连接在一起。
7	EN	Enable input. Pull EN below the specified threshold to shut down the HT7886. Pull EN above the specified threshold or leave EN floating to enable the HT7886. 使能脚。将EN拉到阈值以下以关闭HT7886。将EN拉至阈值以上或悬空，以启用HT7886。
8	GND	Ground. GND should be placed as close to the output capacitor as possible to avoid the high-current switch paths. Connect the exposed pad to GND plane for optimal thermal performance. 地。GND应尽可能靠近输出电容，以避免高电流开关路径。将暴露的焊盘连接到GND平面，以获得最佳热性能
EP	GND	Provides both electrical and thermal connection from the device to the board. A matching ground pad must be provided on the PCB and the device connected to it via solder. For proper electrical operation, this ground pad must be connected to the system ground. 既是地，又是散热PAD

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