

9V, 7A高效异步升压转换器

9V,7A Non-Synchronous Boost Converter

FEATURES

- Input voltage range V_{IN} : 2.5V to 8.5V
- Output voltage range V_{OUT} : V_{IN} to 9V
- Internal Fixed PWM Frequency: 600kHz
- Internal 60m Ω , 7A power MOSFET
- High Efficiency
- 88% ($V_{IN} = 3.7V$, $V_{OUT} = 7.5V$, $I_{OUT} = 1A$)
- Adjustable Current Limitation
- Output overvoltage protection (at 10V), thermal shutdown protection
- Pb-free Packages, SOP8L-PP

- 输入电压范围 V_{IN} : 2.5V-8.5V
- 输出电压范围 V_{OUT} : V_{IN} -9V
- 内置固定开关频率: 600kHz
- 内置60m Ω , 7A功率开关管
- 高转换效率:
- 88% ($V_{IN} = 3.7V$, $V_{OUT} = 7.5V$, $I_{OUT} = 1A$)
- 限流保护功能, 外部可调节
- 输出过压 (10V)、热关断等保护
- SOP8L-PP, 无铅封装

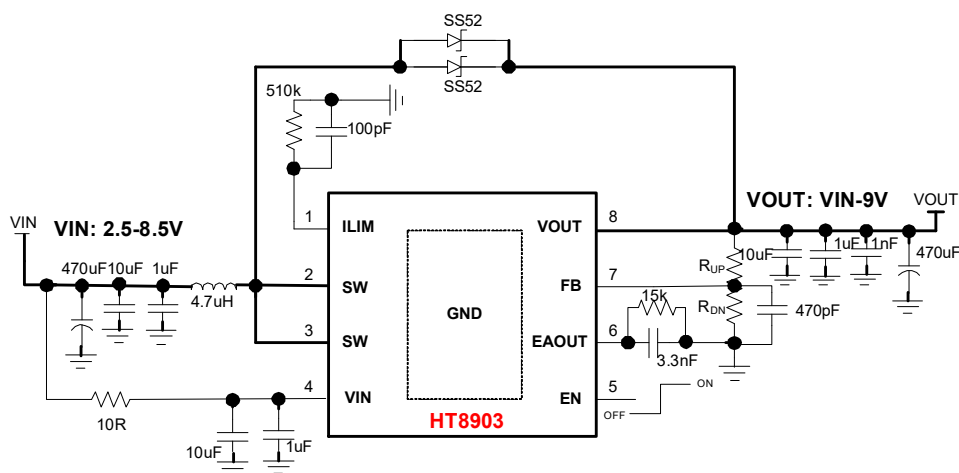
APPLICATIONS

- Smart Speakers
- Wireless Speakers
- 智能音响
- 无线音响
- 便携式音箱
- Portable Speakers
- E-Cigarette
- 电子烟
- 移动电源
- 拉杆音箱
- Power bank
- Outdoor Speakers

ORDERING INFORMATION

Part Number	Package Type	Marking	Operating Temperature Range	MOQ/Shipping Package
HT8903SPER	SOP8L-PP	HT8903SP UVWXYZ ¹	-40 $^{\circ}$ C ~ 85 $^{\circ}$ C	Tape and Reel 3000PCS
HT8903SPET	SOP8L-PP	HT8903SP UVWXYZ	-40 $^{\circ}$ C ~ 85 $^{\circ}$ C	Tube 100PCS

TYPICAL APPLICATION



¹ UVWXYZ is production tracking code

■ DESCRIPTION

The HT8903 is a non-synchronous boost converter integrated with a 60mΩ power switch to provide a high efficiency and small size solution in portable systems.

The HT8903 has an input voltage range from 2.5 V to 9V to support applications with single cell and two cell Lithium batteries. The device has 7A switch current capability and can provide an output voltage up to 9V.

A function of adjustable Current limitation is available to protect HT8903 from over current during operation, and to prevent the battery from being over-pulled caused by an overload.

The HT8903 is available in SOP8L-PP, with very limited external components, so that it provides space-saving PCB for various applications.

The HT8903 provides 10V output overvoltage protection, and thermal shutdown protection.

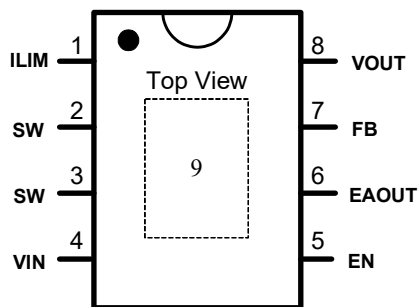
HT8903是一款采用CMOS工艺的升压转换器，内部集成了60mΩ,7A功率开关管。

HT8903具有2.5V至8.5V的输入电压范围，可为采用单节或两节锂电池的应用提供支持。该器件具备7A开关电流能力，并且能够提供最高9V的输出电压。

HT8903具有可外部调节的限流保护功能，不仅可保护芯片过流，亦可有效防止电池被拉死。

HT8903外围精简，采用SOP8L-PP封装，使用和测试简单，为便携式系统提供了高效的小尺寸解决方案。

HT8903内置了10V的过压保护和过热关断保护功能。

■ TERMINAL CONFIGURATION

■ TERMINAL FUNCTION

Terminal No.	Name	I/O ¹	Description
1	ILIM	O	Adjustable switch peak current limit. An external resistor paralleled with a 100pF capacitor should be connected between this pin and the GND pin. 最大限流值设置端，外接电阻并联100pF到地。
2,3	SW	P	The switching node pin of the converter. 升压整流管输入端。
4	VIN	I	IC power supply input. 芯片电源输入端
5	EN	I	Enable logic input. Logic high level enables the device. Logic low level disables the device. 芯片使能端，高电平使能，低电平关断。
6	EAOUT	O	Error amplifier output. Connect a 3.3nF capacity paralleled with 15k resistor to GND. 误差放大器输出端，接3.3nF电容并联15k电阻到地。
7	FB	I	Regulator Feedback Input. 升压调节反馈输入端。
8	VOUT	I	Boost Converter voltage detect pin. 升压输出检测端。
9	GND	G	Power ground. Also provides thermal connection from the device to the board. A matching ground pad should be provided on the PCB and the device connected to it via solder. 芯片地，同时提供器件向板级散热的路径。PCB板上需要留有足够的铺地露铜与之良好焊接。

¹ I: Input; O: Output; G: Ground; P: Power

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