

Wide Range Synchronous Buck Controller

Description

The KF8437 is a synchronous step down regulator from a high voltage input supply. Operating with an input voltage range from 8V to 30V, the KF8437 achieves 2A continuous output current with excellent load and line regulation. The switching frequency is programmable from 100kHz to 500 kHz and the synchronous architecture provides for highly efficient designs. Current mode operation provides fast transient response and eases loop stabilization.

The KF8437 requires a minimum number of readily available standard external components. Other features include cable compensation, programmable current limit and thermal shutdown.

The KF8437 converters are available in the industry standard SOP8-PP packages.

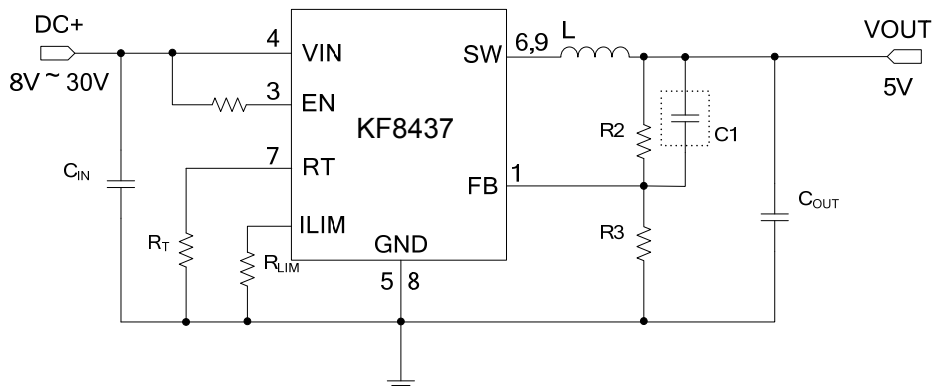
Features

- Wide Input Voltage Range: 8V ~ 30V
- Up to 93% Efficiency
- Programmable Switching Frequency up to up to 500kHz
- No Loop Compensation Required
- Programmable Current Limit
- Cable Compensation from 0Ω to 0.3Ω
- Thermal Shutdown
- Available in SOP8-PP Package

Applications

- Car Charger / Adaptor
- Pre-Regulator for Linear Regulators
- Distributed Power Systems
- Battery Charger

Typical Application Circuit



* The output voltage is set by R2 and R3: $V_{OUT} = 1.21V \cdot [1 + (R2/ R3)]$.

Pin Assignment and Description

TOP VIEW		PIN	NAME	DESCRIPTION
<p>SOP8-PP(Exposed Pad) *The exposed pad must be soldered to a large PCB.</p>		1	FB	Feedback
		2	ILIM	Current Limit
		3	EN	ON/OFF (High Enable)
		4	VIN	Input Supply Voltage
		5,8	GND	Ground
		6,9	SW	Switch Node
		7	RT	Frequency Setting