

## Wide Range Synchronous Buck Controller

### Description

The KF8434 is a synchronous step down regulator from a high voltage input supply.

KF8434 achieves 2.1A continuous output current with excellent load and line regulation. The switching frequency is programmable from 130 kHz to 500 kHz and the synchronous architecture provides for highly efficient designs. Current mode operation provides fast transient response and eases loop stabilization.

The KF8434 requires a minimum number of readily available standard external components. Other features include cable compensation, programmable current limit and thermal shutdown.

The KF8434 converters are available in the industry standard SOP-8L packages.

### Feature

- Wide Input Operation Voltage Range: 8V to 35V
- Absolute Maximum Input Supply Voltage: 40V
- Input Protection Mode Trigger Voltage: 32V
- Up to 95% Efficiency
- Programmable Switching Frequency up to up to 500kHz
- Programmable current limit
- Output Cable Compensation up to 0.7V
- Thermal Shutdown
- Available in SOP-8L Package

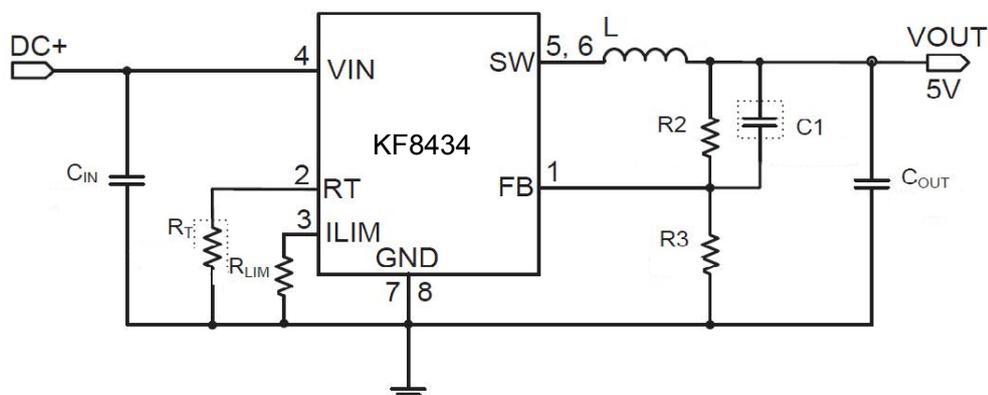
### Application

- Car Charger / Adaptor
- Wall-Adapter/ Power Plugs, Outlets
- Mobile/ Tablet Power Bank
- USB Power Output Ports

### Pin Assignment and Description

TOP VIEW		PIN	NAME	DESCRIPTION
8	7	1	FB	Feedback
6	5	2	RT	Frequency Setting
		3	ILIM	Current Limit
		4	VIN	Input Supply Voltage
1	2	5, 6	SW	Switch Node
3	4	7, 8	GND	Ground

### Typical Application Circuit



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

\* RT: RT is optional. The resistor range is from 130KΩ to 1.5 MΩ. KF8434 can work when keeping RT pin floating. The default frequency is 130KHZ.

\* ILIM: KF8434 can work when keeping ILIM pin floating, with 2.1A limit current in this situation.