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Features

- 3.6V ~ 40V Supply Voltage Range
- Voltage Reference Accuracy: $\pm 1.5\%$
- Output Current Limit Accuracy: $\pm 3\%$
- 120kHz Fixed Switching Frequency
- Cycle by Cycle Peak Current Limit
- Adjustable Output Current Limit
- Adjustable Line-Compensation
- Input Over Voltage Protection
- Hiccup Short Circuit Protection
- Output Over Voltage Protection
- Output Over Current Protection
- Over Temperature Protection
- Max Duty Cycle :100%
- Internal Soft Start Circuitry
- CC/CV Mode Control
- SOP-8L Package

Applications

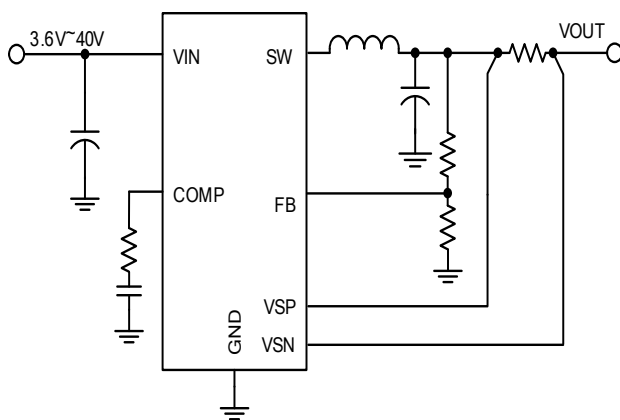
- Car Chargers
- Portable Charger Devices
- DC/DC Converters with Current Limit

General Description

The SP1286FAC is a high efficiency synchronous DC-DC buck converter with a wide input voltage range from 3.6V to 40V, which can delivering up to 3.1A output current. The SP1286FAC regulates the output voltage at a fixed 5V or customized voltage by setting the divider resistor. The converter operates in either the CC(Constant output Current) mode or CV(Constant output Voltage) mode. When the output load current is lower than the CC limit set by the R_{CS} resistor, the converter operates in CV mode. When Output current increase until it reaches the CC limit set by the R_{CS} resistor. At this point, the SP1286FAC will transition from regulating output voltage to regulating output current, and the output voltage will drop with increasing load.

The SP1286FAC is available in SOP-8L package and require very few external devices for operation.

Simplified Application Circuit



Efficiency

$V_{out}=5V$

