

Description

The VP2128 is an efficiency and low-cost buck converter with integrated low $R_{DS(ON)}$ high-side 150m Ω and low-side 130m Ω MOSFET switches. It is capable of delivering 2A output current over a wide range of supplying voltage from 4.5V to 18V. With a simple voltage divider, the output voltage is easily adjustable from 0.922V to 16V.

Other features such as programmable soft-start, integrated Boot-Diode, total fault-free protection and 93% conversion efficiency at 5V/1A output make VP2128 ideally to be used in portable consumer electronics.

The VP2128 is available in popular SO-8P green package with exposed pad.

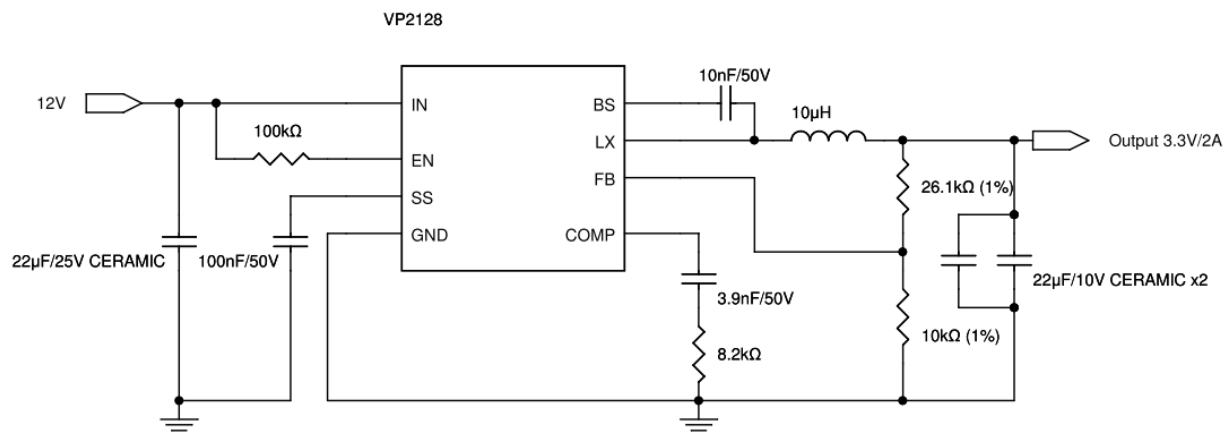
Features

- 4.5V to 18V Input Voltage Range
- Adjustable Output from 0.922V to 16V
- 2A Output Current
- Integrated 150m Ω /130m Ω MOSFET Switches
- 0.922V Voltage Reference with $\pm 2\%$ Accuracy
- 93% Conversion Efficiency at 5V/1A Output
- Adapted Current Mode PWM Operation
- Fixed 340kHz Switching Frequency
- Integrated Boot-Diode
- Programmable Soft-Start Function
- Under Voltage Lock-Out Protection
- Over Temperature and Over Current Limitation
- RoHS 2.0 compliant SO-8P Green Package with Exposed Pad

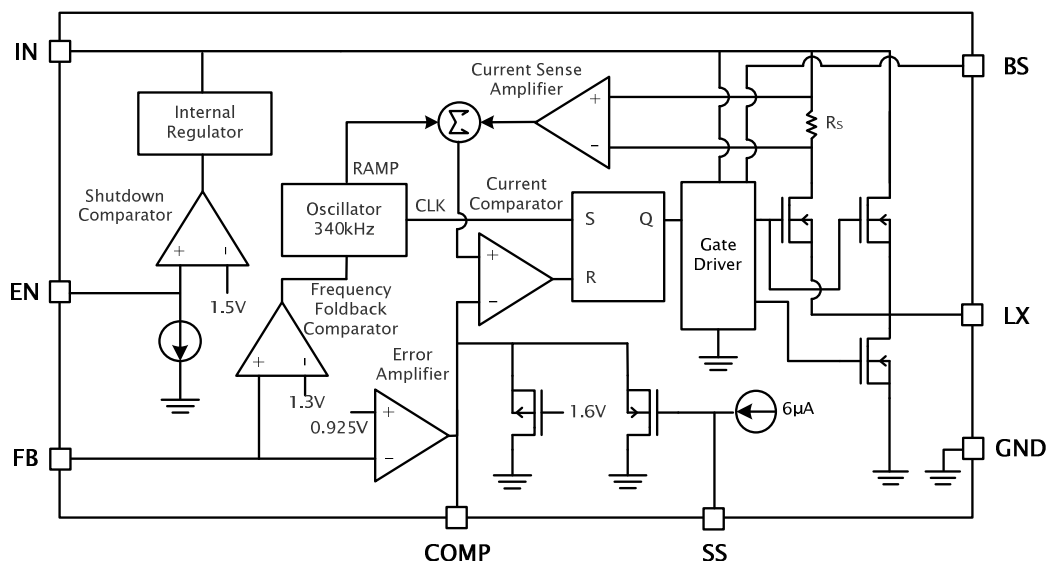
Applications

- Set-Up Box
- Networking Device
- MID/Netbook/Pad-Device
- LCD Monitor/ LCD TV

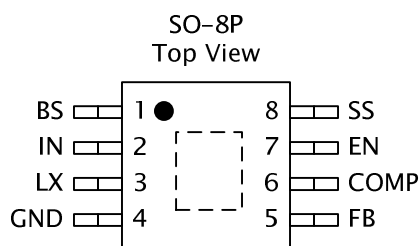
Typical Application



Functional Block Diagram



Pin Assignments And Descriptions



Pin No.	Pin	I/O/P	Function Description
1	BS	–	High-Side N Channel MOSFET Gate drive boost input. Connect at least 10nF capacitor from LX to BS to control the High-Side switch. Place the capacitor close to this pin if possible.
2	IN	P	Power Input. Drive IN with a 4.5V to 18V power source to activate the converter.
3	LX	O	Power Switching Output. LX is the switching node that supplies power to the output.
4	GND	P	Power ground.
5	FB	I	Feedback Input. FB monitors the output voltage to regulate that voltage. Use a voltage divider feedback from the output to drive FB pin.
6	COMP	–	Compensation Node. COMP is used to compensate the regulation control loop. Connect a series RC network from COMP to GND to compensate the regulation control loop. In some cases, an additional capacitor from COMP to GND is also permitted.