

500kHz 5A High Efficiency Synchronous PWM Boost Converter



General Description

The FP6276B is a current mode boost DC-DC converter with PWM/PSM control. Its PWM circuitry with built-in 50mΩ high side switch and 50mΩ low side switch make this regulator highly power efficient. The internal compensation network also minimizes external component counts to only 6. An internal 0.6V voltage is connected to error amplifier the non-inverting input as precision reference voltage. Built-in soft-start function can reduce the inrush current.

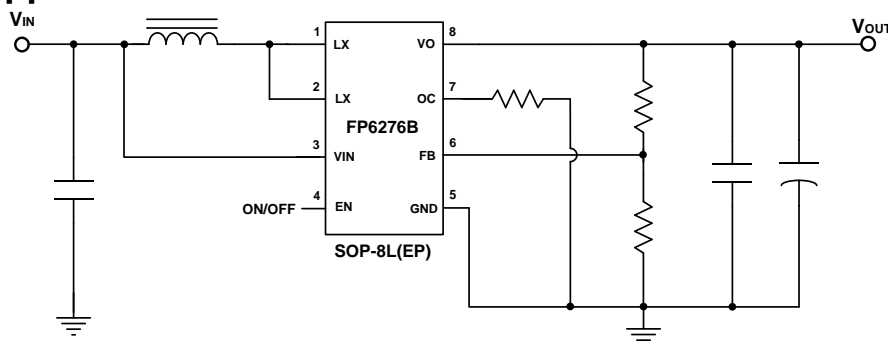
Features

- Current mode with PWM/PSM control
- Input voltage range: 2.4V~4.5V
- Shutdown current: <1uA
- Oscillator frequency: 500KHz
- Reference voltage: 0.6V +/-2%
- Disconnect load during shutdown
- Cycle-by-cycle current limit
- Low $R_{DS(on)}$: 50mΩ for both high and low side
- Protection: OTP, Output OVP, OCP, SCP
- Internal compensation
- Internal soft-start: 7ms
- Package: SOP-8L(EP)

Applications

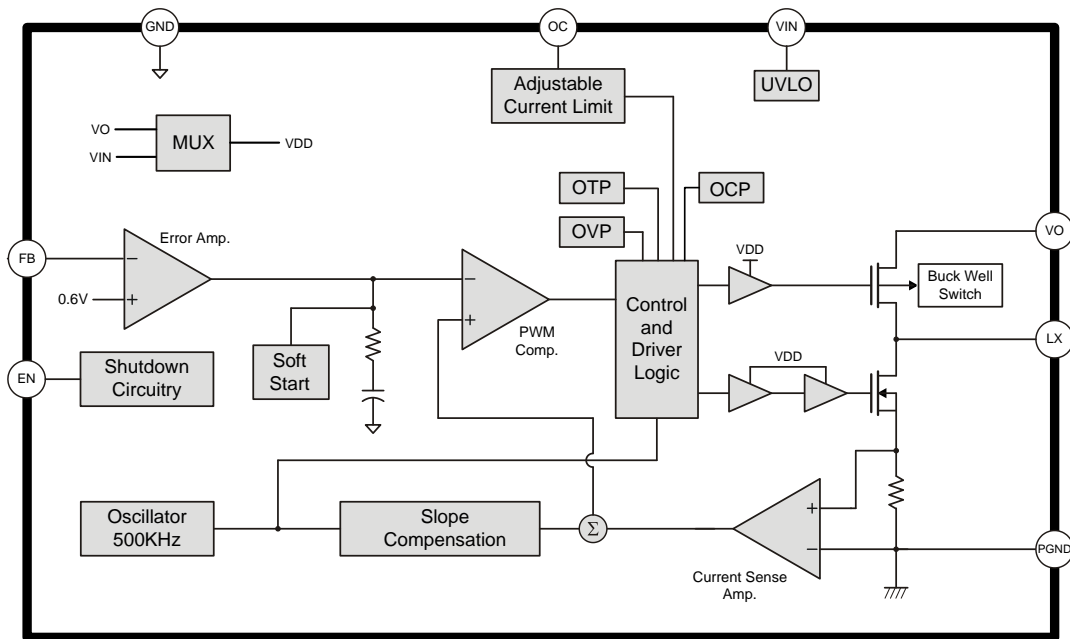
- Chargers
- Handheld Devices
- Portable Products
- Power Bank

Typical Application Circuit



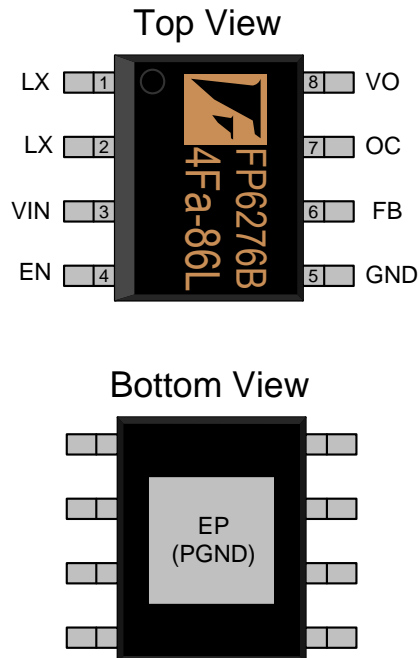
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Function Block Diagram



Pin Descriptions

SOP-8L (EP)



Name	No.	I / O	Description
LX	1	I	Power Switch Output
LX	2	I	Power Switch Output
VIN	3	P	IC Power Supply
EN	4	I	Enable Control (Active High)
GND	5	P	IC Ground
FB	6	I	Error Amplifier Inverting Input
OC	7	I	Output Current Limit Detect
VO	8	O	Output Voltage Pin
PGND	EP	P	IC Power Ground(Must connect to GND)