

500kHz 5A High Efficiency Synchronous PWM Boost Converter



General Description

The FP6276 is a current mode synchronous boost DC-DC converter with PWM/PSM control. Its PWM circuitry with built-in 55mΩ high side switch and 55mΩ low side switch make this regulator highly power efficient. The internal compensation network also minimizes as much as 6 external component counts. The non-inverting input of error amplifier connects to a 0.6V precision reference voltage and internal soft-start function can reduce the inrush current.

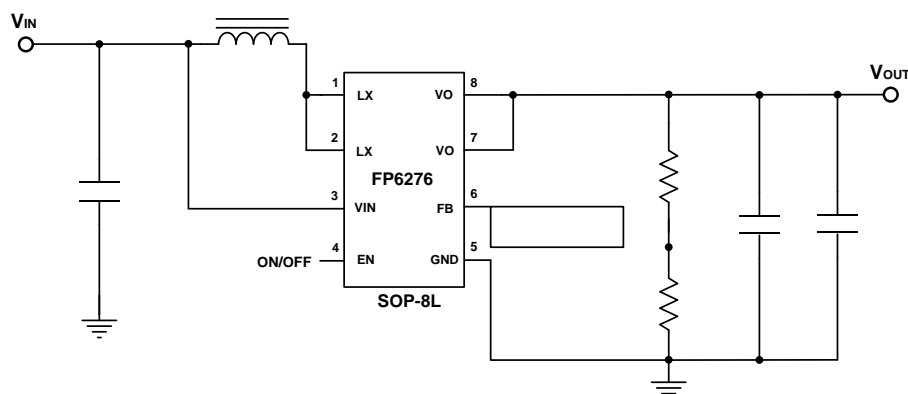
Features

- Current mode with PWM/PSM control
- Input Voltage range: 2.4V~4.5V
- Shutdown current: <1uA
- Oscillator frequency: 500KHz
- Reference voltage: 0.6V +/-2%
- Load disconnect during shutdown
- Cycle-by-cycle current limit
- Low $R_{DS(on)}$: Low side 55mΩ, High side 55mΩ.
- Protection: OTP, Output OVP, SCP
- Internal Compensation
- Internal Soft-start: 7ms
- Package: SOP8(EP)

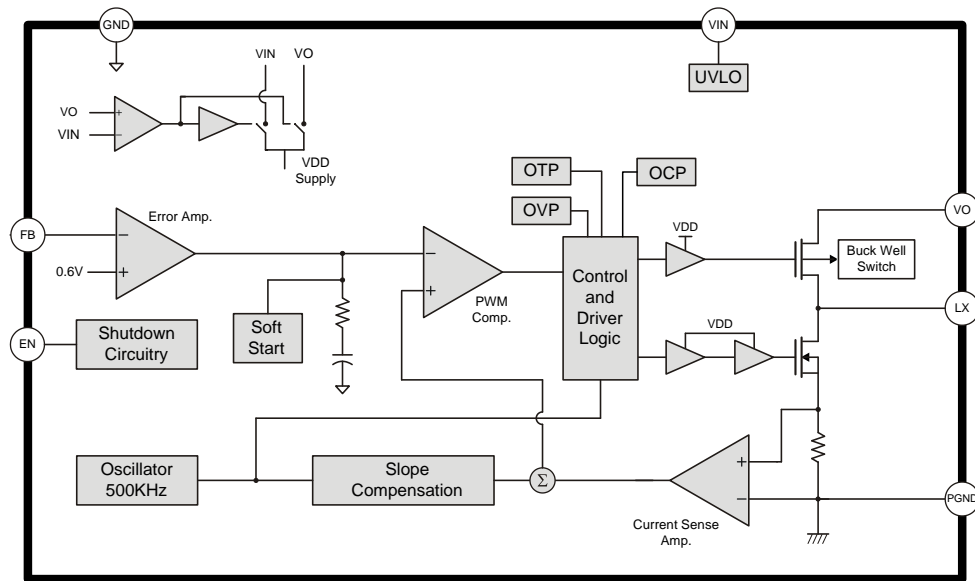
Applications

- Chargers
- Handheld Devices
- Portable Products
- Power Bank

Typical Application Circuit



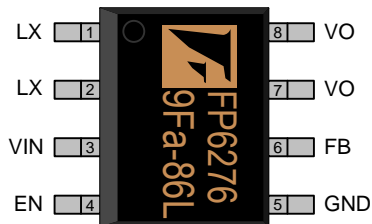
Function Block Diagram



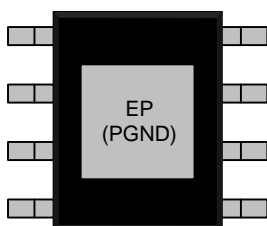
Pin Descriptions

SOP-8L (EP)

Top View



Bottom View



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
VO	7	O	Output Voltage Pin
VO	8	O	Output Voltage Pin
EP	9	P	IC Power Ground