

1.2MHz, 30.0V Output, Boost(Step-Up) WLED Driver

General Description

The FH2122 is a step-up converter designed for driving up to 8 Series white LED's from a single cell Lithium Ion battery. Its low 250mV feedback voltage reduces power loss and improves efficiency.

Optimized operation frequency can meet the requirement of small LC filters value and low operation current with high efficiency. Internal soft start function can reduce the inrush current. Tiny package type provides the best solution for PCB space saving and total BOM cost.

Features

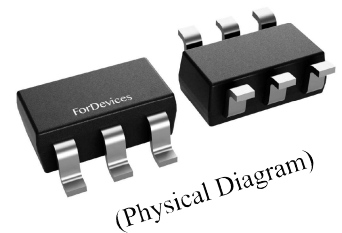
- 2.5V to 5.5V Input Voltage
- Drivers up to 8 Series WLEDs
- Low 250mV Feedback Voltage
- 1.2MHz Fixed Switching Frequency
- Internal 1.6A Switch Current Limit
- Internal Compensation
- Thermal Shutdown
- Over Voltage Protection
- Dimming with wide Frequency Range
- Available in a 6-pin SOT-23 package

Applications

- Camera Flash White LED
- Digital still cameras
- PDA LED back light
- Probable Instruments

Package

- 6-pin SOT23-6



Typical Application Circuit

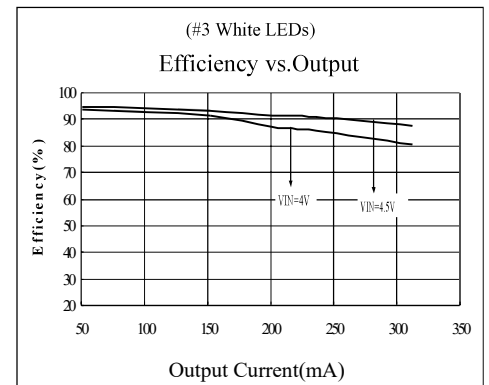
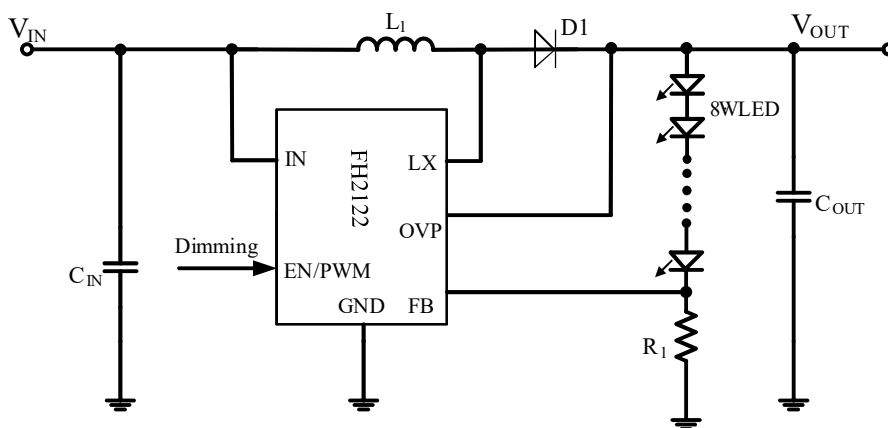
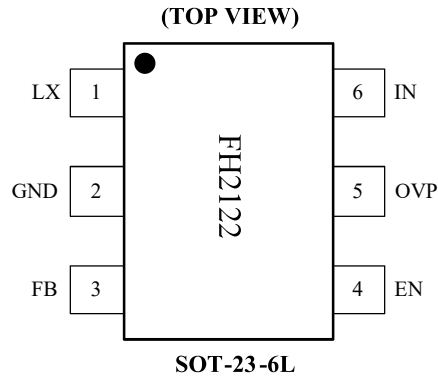


Figure 1. Basic Application Circuit

Pin Configuration



Pin Assignment

Pin	Name	Function
1	LX	Power Switch Output. LX is the drain of the internal MOSFET switch. Connect the power inductor and output rectifier to LX. LX can swing between GND and 30.0V.
2	GND	Ground Pin
3	FB	Feedback Input. The FB voltage is 0.25V. Connect a resistor divider to FB.
4	EN	Regulator On/Off Control Input. A high input at EN turns on the converter, and a low input turns it off. When not used, connect EN to the input supply for automatic startup.
5	OVP	Over Voltage Input. OV measures the output voltage for open circuit protection. Connect OV to the output at the top of the LED string.
6	IN	Input Supply Pin. Must be locally bypassed.

Function Block Diagram

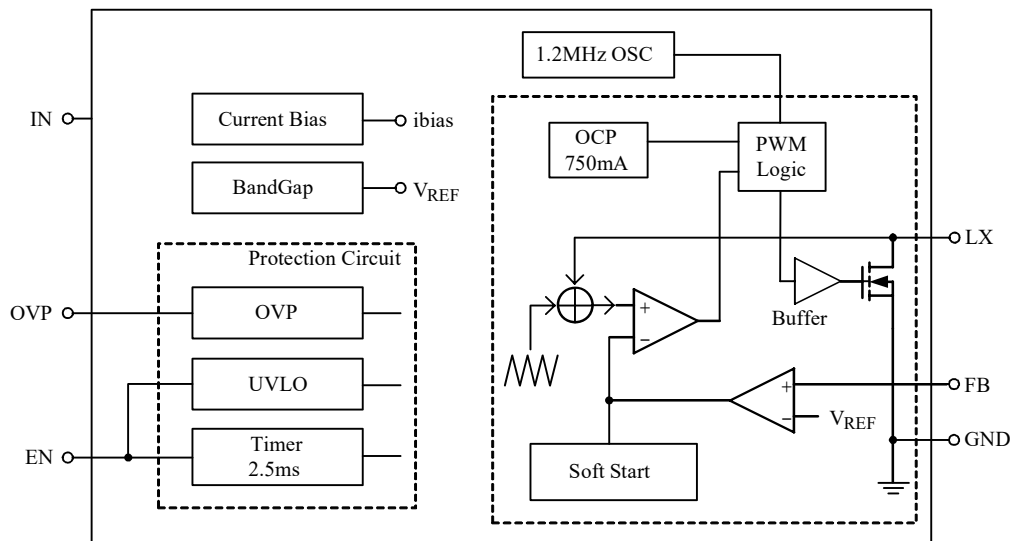


Figure 2. Block Diagram

Order Information

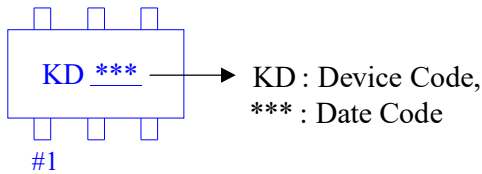
Part Number	Description	Temperature Range	Package Type	Top Mark	SPQ
FH2122M6	DC-DC Boost Vin: 2.5~5.5V, Up to: 30.0V #8 WLED Driver, 1.20MHz VFB: 2.5V	-40 ~ +85°C	SOT-23-6L	KD ***	3000PCS/Reel

Note:

- FH2122 devices are Pb-free and RoHs compliant.
- The surface prints of our semiconductor devices are subject to change during the production process and do not involve changes in electrical parameters, and we will not separately state the notice.
- If you have any other custom purchase needs, please contact our sales department.



Device Name: SOT-23-6L



ESD SENSITIVITY CAUTION

ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.



Note:

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▲ Update by Oct.2020