

## Step-Up DC/DC Converter Series White LED Backlight Driver

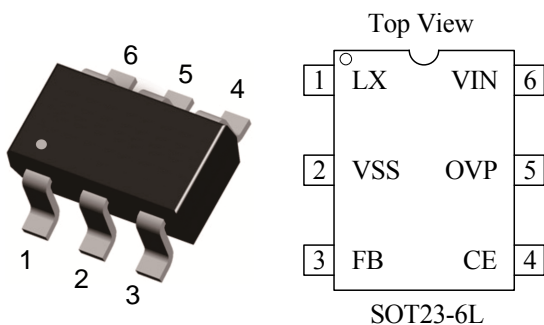
### General Description

The KF9908 Series is a fixed frequency, constant current step-up DC/DC converter ideal for driving LEDs used in backlighting applications on cellular phones, PDAs and digital cameras etc. Output voltage of up to 23V can be derived, and from a 3.2V input six white LED's can be driven in series or alternatively, using a 2.5V input, a network of two parallel legs with three in each may be driven.

Luminance of the LED's is controlled by changing the duty cycle of a PWM signal applied to the CE pin.

In addition, an internal MOSFET with an  $R_{ds(on)}$  of  $0.8\Omega$  is used. Allow profile and small board area solution can be achieved using a chip coil and an ultra small ceramic output capacitor (CL) of 0.22 $\mu$ F.

### Package



### Features

- Input voltage range : 2.5V-6V.
- Output voltage range : up to 23V externally set-up reference voltage 0.25V
- Oscillation frequency : 1.0MHz.
- On resistance :  $0.8\Omega$
- Control : PWM control.
- Efficiency : 88%(When driving 3 white LEDs in series  $V_{in}=3.6V$   $I_{LED}=20mA$ ).
- Stand-by Current :  $I_{STB}=1.0\mu A$ .
- Load capacitor : 0.22 $\mu$ F,ceramic.
- Lx limit Current :1.0A

### Applications

- PDAs, GPSs.
- For White LED Drivers.
- Mobil phones, PHS.
- Digital still cameras.

### Pin Description

Pin No.	Pin Name	Pin Function
1	LX	Switch
2	VSS	Ground
3	FB	Voltage Feedback
4	CE	Chip Enable
5	OVP	Over voltage protect
6	VIN	Power Input

### Typical Application Circuit

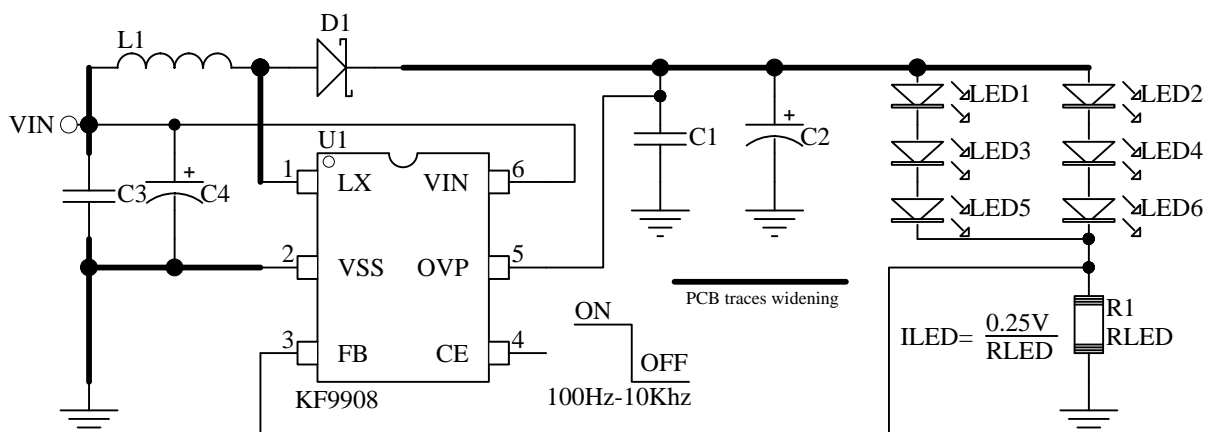


Figure 1(1). Basic Application Circuit with KF9908