

LED Driver, Dual Channel Movie/Flash, 500 mA

Description

The CAT4134 is a high power, dual channel boost converter which provides two matched LED currents. Output current levels are controlled by one of two resistors RSET or RFLASH. When the FLASH input pin is low (movie mode), RSET sets the current. When FLASH is high (flash mode), the resistor RFLASH sets the LED current. Each channel drives two or three white LEDs in series and provides a regulated current to control their brightness. Input supply down to 3 V is supported, making the device ideal for Li Ion battery applications.

High frequency low noise operation allows the device to be used with small external inductors and ceramic capacitors while still maintaining excellent efficiency. When not in use the device can be placed into a “zero” quiescent mode via the shutdown pin.

In addition to soft-start control and current limiting, the CAT4134 include thermal shutdown protection. A dedicated overvoltage pin (OVP)

CAT4134

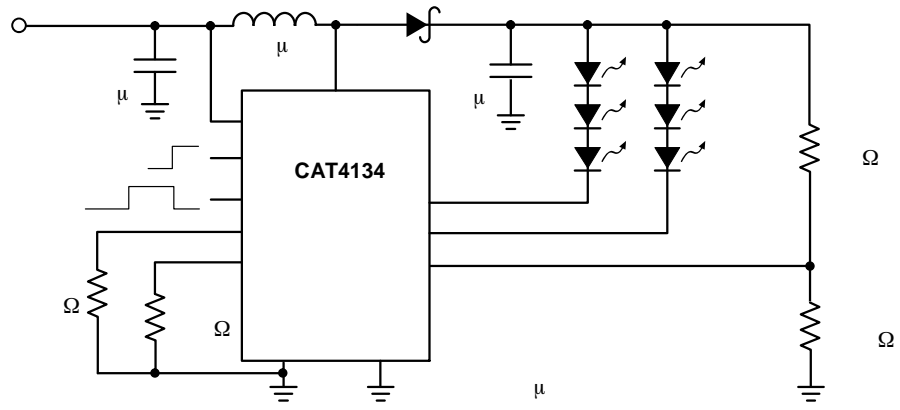


Figure 1. Typical Application Circuit

CAT4134

Table 3. ELECTRICAL OPERATING CHARACTERISTICS

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
						μ
						μ
						Ω
						μ
η						

CAT4134

TYPICAL CHARACTERISTICS

μ μ μ °

**Figure 2. LED Current Regulation
(100 mA Load)**

**Figure 3. LED Current Regulation
(200 mA Load, Flash)**

Ω
Figure 4. Current Gain vs. RFLASH

**Figure 5. LED Current Regulation
(100 mA Load, Flash)**

**Figure 6. Efficiency vs. Output Current
(Flash Mode)**

**Figure 7. Efficiency vs. Input Voltage
(Flash Mode)**

TYPICAL CHARACTERISTICS

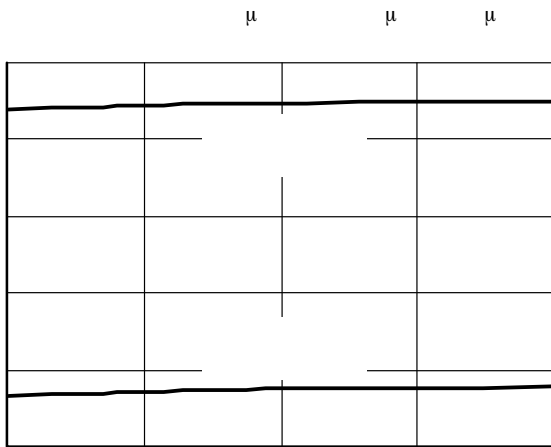


Figure 13. Switching Frequency vs. Supply Voltage

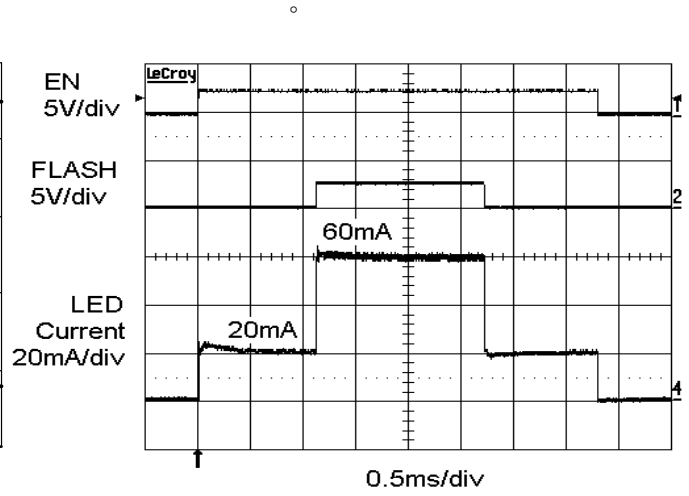


Figure 14. Enable Flash Waveform

CAT4134

Table 4. PIN DESCRIPTION

Pin #	Name	Function

CAT4134

CAT4134

CAT4134

Typical Applications

The CAT4134 can drive one or two strings of 2 to 3 LEDs in series resulting in combinations of 2, 3, 4, 6 LEDs.

The resistor ratio $R1/R2$ sets the maximum V_{OUT} during an open-LED fault condition and provides the overvoltage protection.

For applications with 2 LEDs in series and $V_{OUT_{MAX}}$ at

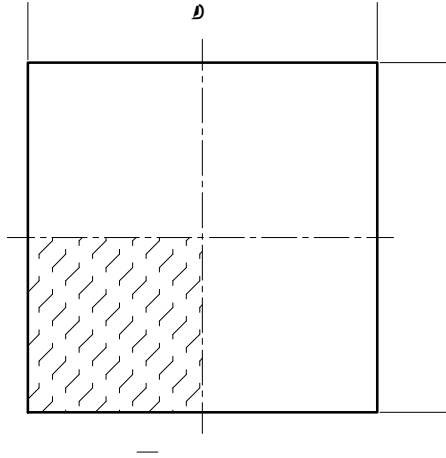
Example of Ordering Information

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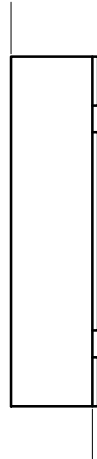


TDFN12, 3x3
CASE 511AN-01
ISSUE A

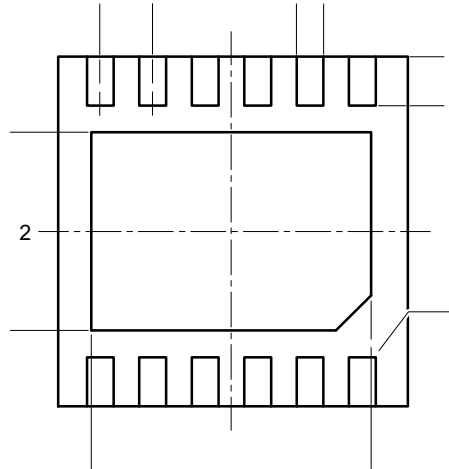
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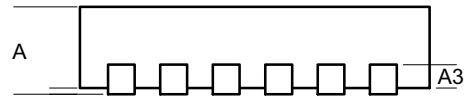
TOP VIEW



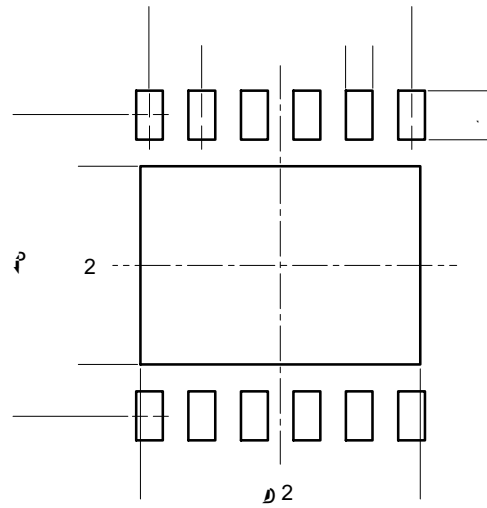
SIDE VIEW



BOTTOM VIEW



A1



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