

Product Overview

CAT3661: LED Driver, Low Power, 1-Channel

For complete documentation, see the data sheet.



The CAT3661 is a high efficiency low power fractional charge pump that drives one LED with up to 5 mA of current. Soft-start current limiting and short-circuit protection are optimized for use with coin cell batteries. Low noise input ripple and constant switching frequency allows the use of small external ceramic capacitors. This makes the CAT3661 ideal for EMI sensitive applications. The charge pump supports a wide range of input voltages from 2.0 V to 5.5 V. The CAT3661 has a built-in circuitry to provide feedback to a microcontroller of Open/Short LED and Low battery events. The Low battery indicator trip point is internally fixed at 2.4 V. External resistors can be added to raise or lower the trip voltage, if needed. The device is packaged in the tiny 16-lead TQFN 3 mm x 3 mm package with a max height of 0.8 mm. The inclusion of a 1.33x fractional charge pump mode increases device efficiency by up to 10% over traditional 1.5x tri-mode charge pumps with no added external capacitors.

Features

- Quad Mode Charge Pump: 1x, 1.33x, 1.5x, 2x
- Low Quiescent Current 150 A Typical
- Drives One LED up to 5 mA
- Optimized for Coin Cell Battery Operation
- Open/Short LED Fault Detection
- Adjustable Low Battery Detection
- Power Efficiency up to 92%
- Low Noise Input Ripple in All Modes
- Zero Current Shutdown Mode
- Soft Start and Short Circuit Current Limiting

For more features, see the data sheet

Benefits

- Higher efficiency charge pump than competition, very compact solution, no inductor.
- High efficiency LED driver even at low LED current below 5mA.

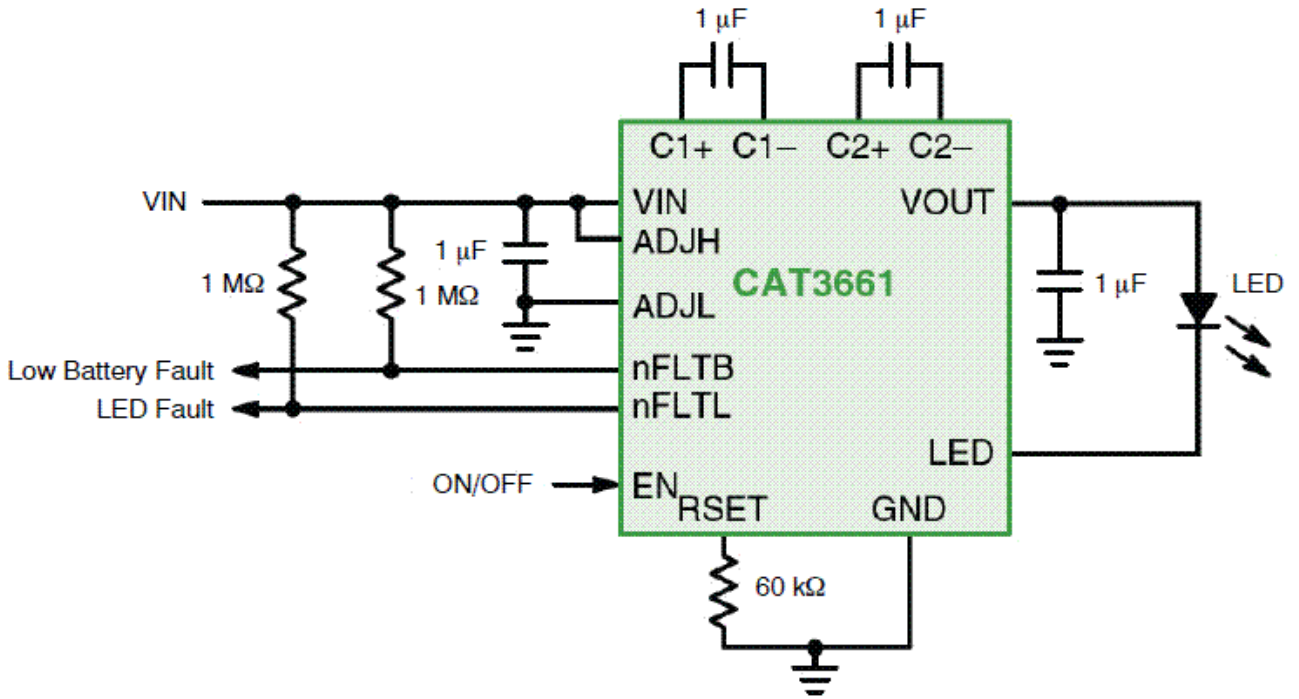
Applications

- Low Power LCD Display Backlight
- Low Power Handheld Device Backlight

Part Electrical Specifications

Product	Compliance	Status	Topology	V _{IN} Min (V)	V _{IN} Max (V)	V _O Max (V)	I _O Max (mA)	f _{sw} Typ (kHz)	Package Type
CAT3661HV3-GT2	Pb-free	Active	Charge Pump	2	5.5	6	6	100	TQFN-16
	Halide free								

Application Diagram



For more information please contact your local sales support at www.onsemi.com.

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