NCP1421LEDEVB:NCP1421 High Current LED Driver Evaluation Board

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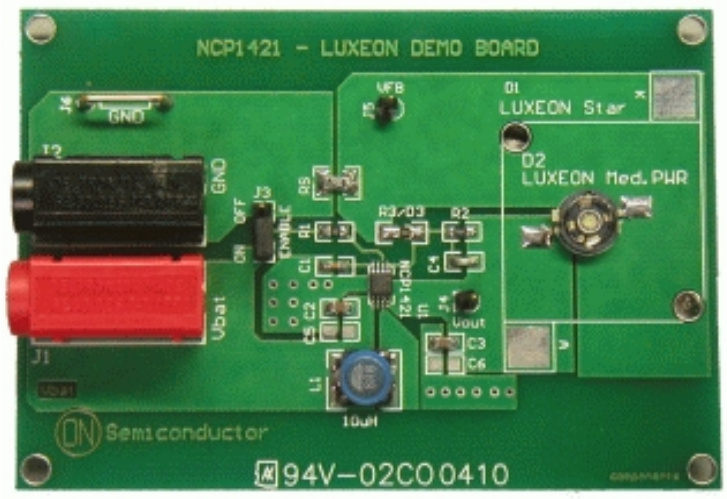
Evaluation Board Description



The NCP1421 is a monolithic, micro-power, high-frequency, step-up switching converter IC designed for battery operated hand-held electronic products with up to 600 mA loading. It integrates a synchronous rectifier (Sync-Rect) to improve efficiency and to eliminate the external Schottky Diode. The NCP1421's high switching frequency (up to 1.2 MHz) allows for a low profile, small sized inductor and output capacitor to be used. When the device is disabled, the internal conduction path from the battery to the load is fully blocked, which isolates the load from the battery. This True-Cutoff function reduces the shutdown current to typically only 50 nA. A Ring-Killer is also integrated to eliminate high-frequency ringing in discontinuous conduction mode. Finally, a Low-Battery Detector, Logic-Controlled Shutdown, Cycle-by Cycle Current Limiting and Thermal Shutdown provide value-added features for various battery operated applications. With all these functions on, the quiescent supply current is typically only 8.5 µA. This device is available in the compact and low profile Micro8 package.

The NCP1421LED evaluation board uses the NCP1421 to drive a high power, white LED. The circuit is configured to minimize power dissipation in the current sense resistor and the effects of lot-to-lot LED forward voltage (VF) variation on LED current.

Features and Applications

Features

- Capable of driving White LEDs up to 600 mA
- High Switching Frequency, up to 1.2 MHz
- True-Cutoff Function Reduces Device Shutdown Current to typically 50 nA

Evaluation Board Information

Evaluation Board	Short Description	Status	Parts Used	Action
NCP1421LEDEVB	NCP1421 High Current LED Driver Evaluation Board	Active	NCP1421DMR2	Contact Local Sales Office

Technical Documents

Type	Document Title	Document ID/Size	Rev
Eval Board: Gerber	NCP1421LEDEVB BILL OF MATERIALS	NCP1421LEDEVB_BOM.PDF - 55.0 KB	2
Eval Board: Schematic	NCP1421LEDEVB SCHEMATIC	NCP1421LEDEVB_SCHEMATIC.PDF - 866.0 KB	2
Eval Board: Gerber	NCP1421LEDEVB GERBER LAYOUT FILES (ZIP FORMAT)	NCP1421LEDEVB_GERBER.ZIP - 25.0 KB	1
Eval Board: Gerber	NCP1421LEDEVB TEST PROCEDURE	NCP1421LEDEVB_TEST_PROCEDURE.PDF - 57.0 KB	1

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