High-current boost converter intended for LED photo flash applications

The AAT1274 is a high efficiency, 1.5A high-current boost converter for LED photo flash applications. It maintains output current regulation by switching the internal high-side and low-side switch transistors, pulse-width modulated at a fixed frequency of 2 megahertz. The high switching frequency allows the use of a small external inductor and output capacitor, making it ideally suited in all single cell, Li-ion-powered applications.

Skyworks Solutions' patented AS2Cwire (Advanced Simple Serial Control) digital interface is used to enable, disable, configure and program the operation of the device. Using the AS2Cwire interface, the movie-mode current level for the LED, and the flash-to-movie-mode current ratio can be programmed to one of 16 levels. The AAT1274 includes a separate flash enable input to initiate the flash operation and a flash-inhibit pin which reduces the flash current to movie-mode levels during high-battery demand.

The maximum flash and movie-mode current is set by one external resistor where the ratio of flash to movie-mode current is set at approximately 7:3:1. The AAT1274 can drive one high current LED. In addition, the device contains a thermal management system to protect it from an output short-circuit condition. Built-in circuitry prevents excessive in-rush current during start-up, and the part is available in a Pb-free, thermally-enhanced TDFN33-14 package.

For more information, please visit Skyworks' Web site at: www.skyworksinc.com [1]

Source URL (retrieved on *05/24/2013 - 1:49pm*):
http://www.ecnmag.com/product-releases/2012/08/high-current-boost-converter-

intended-led-photo-flash-applications

Links:
[1] http://www.skyworksinc.com