

1.5A flash LED driver for smart phone application

General Description

The OCP1201 is a constant current driver for high current white LED. Two simple logic control inputs (ENM and ENF) enable and disable flash and movie mode operation of the OCP1201.Movie-mode and Flash-mode, current levels are dependent on the duty of PWM signal. The maximum current of Flash mode and movie mode are 1.5A and 0.3A. For Flash mode, a default timer can be used either to terminate a flash event or as a safety flash timer. It is an ideal power solution for WLED photo flash applications within small PCB layout dimension and used in Lithium-ion/polymer battery operated products.

The OCP1201 contain over-temperature shutdown, under voltage lock-out (UVLO) and LED short to ground protection functions; Built-in circuitry prevents excessive inrush current during start-up. The shutdown feature reduces quiescent current to less than 1.0µA.

The device is available in 6-pin 2mmX2mm DFN package or in 6-pin TSOT package and is rated over the -40°C to 85°C.

Features

- Input Voltage Range: 2.7V to 5.5V
- Drives up to 1.5A LED Flash Current
- Drives up to 0.3A LED Movie Current
- Dimming frequency :20kHz ~ 200kHz
- Independent flash mode and movie mode enable pins
- Integrated Soft-Start Eliminates Inrush Current
- Under Voltage Lock-Out
- Over-Temperature Protection
- LED Short Circuit Protection
- Small Solution Size
- Less than 1uA Shutdown Current
- RoHS and Green Compliant Pb-free Package: TSOT23-6, DFN2X2-6

Applications

- Camera Flashes and Movies
- Cell Phones or Smart Phones
- PDAs and Digital Camera
- White LED Biasing
- Mobile Handsets
- Tablet PCs and Laptops/E-books
- Camcorder Video Light (Movie Light)



■ Pin Configuration

TSOT23-6 (Top View):

VCC 1 6 ENF GND 2 5 VCCP LED 3 4 ENM

DFN2X2-6 (Top View):

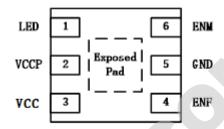


Figure 1, Pin Assignments of OCP1201

Pin	Pin No.	Pin No.	Pin Function			
Name	TSOT	DFN	- Fili Fullction			
VCC	1	3	Power supply input pin. Decouple this pin to GND pin with 2.2uF or greater ceramic capacitor. It receives the input from 2.7V to 5.5V.			
GND	2	5	Power Ground			
LED	3	1	Boost output. Connect a 2.2uF or greater ceramic capacitor from LED to GND.			
ENM	4	6	Movie mode enable pin.			
VCCP	5	2	Connect VCCP pin to VCC pin			
ENF	6	4	Flash mode enable pin.			
Exposed PAD			Connected to GND pin for electrical and thermal usage.			

■ Typical Application Circuit

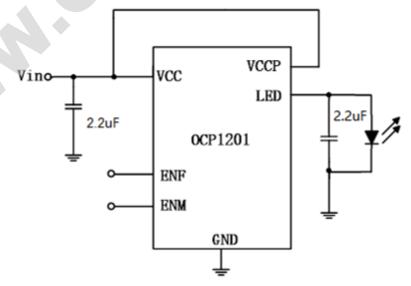


Figure 2, Typical Application Circuit of OCP1201



Ordering Information

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Part Number	Package Type	Package Qty	Temperature	Eco Plan	Lead/Ball Finish				
OCP1201VAD	DFN2X2-6L	7-in reel 3000pcs/reel	-40∼85℃	Green	NIPDAU				
OCP1201TWAD	TSOT23-6L	7-in reel 3000pcs/reel	-40∼85℃	Green	NIPDAU				

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