

High Efficiency 1X/1.5X Fractional Charge Pump for White LED

OVERVIEW

The CP2130 is optimized for white LED supplies in backlit color display applications. The device provides a constant current, set by an external resistor, for each LED. The supply voltage ranges from 2.7 V to 5.5 V and is ideally suited for all applications powered by a single LI-Ion battery cell or three to four NiCd, NiMH, or Alkaline battery cells. The CP2130 provides up to 30 mA per LED, for a total of 150 mA, for input voltages ranging from 3 V to 5.5 V. High efficiency is achieved by utilizing a 1x/1.5x adaptive fractional conversion technique in combination with very low dropout current sources. Only two external 1 μ F and two 0.47 μ F capacitors are required to build a complete small and low cost power supply solution. The CP2130 switches at 1 MHz operating frequency and is available in a small 16-pin QFN package to keep board space to a minimum.

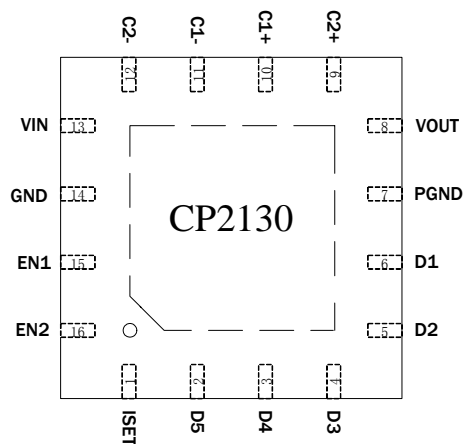


3mm*3mm QFN 16L
-40°C ~ 85°C

FEATURES

- ◆ Drives up to 5 LEDs at 30 mA Each
- ◆ Regulated Output Current With 0.5% Matching Over Temperature
- ◆ LED Brightness Control Through PWM Control Signal (0Hz~50KHz)
- ◆ Low Input Ripple and Low EMI
- ◆ Over-current and Over-temperature Protected
- ◆ Less than 0.1 μ A Quiescent Current In Shutdown Mode
- ◆ RoHS Compliant and 100% Lead (Pb)-Free

Pin Diagram (Top View)

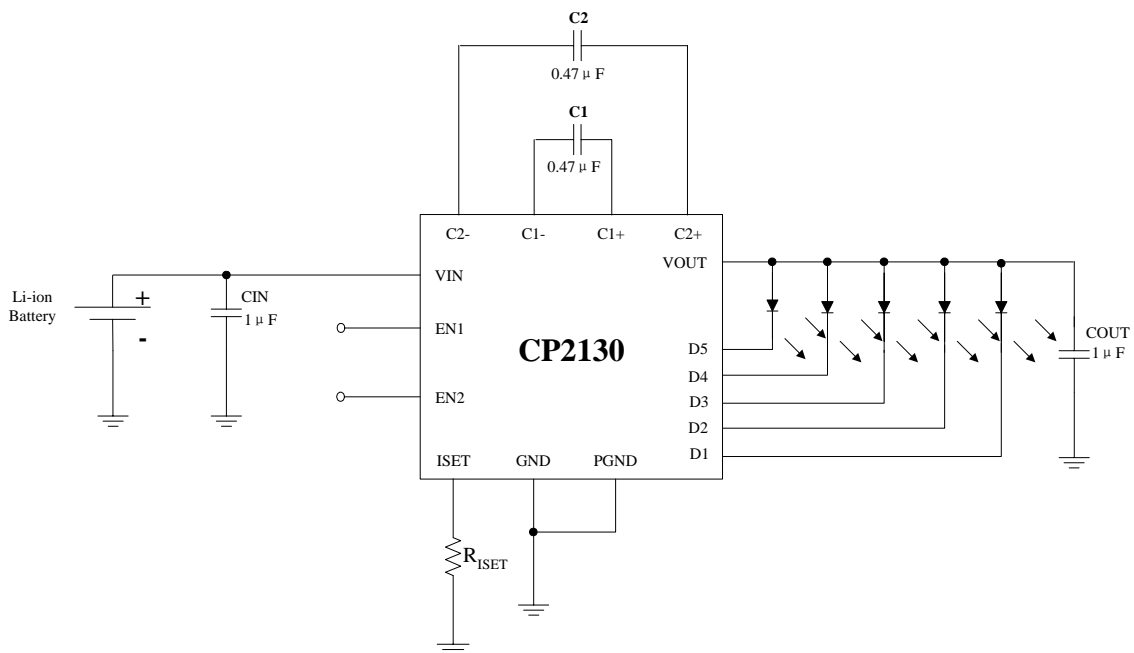


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APPLICATIONS

- ◆ Cell phone
- ◆ Digital Camera
- ◆ MP3,PMP,PDA

TYPICAL APPLICATION



RELATED PRODUCTS

CP2133: High Efficiency 1X/1.5X Fractional Charge Pump for White LED

CP2131: High Efficiency 1X/1.5X Fractional Charge Pump for White LED



Chiphomer Technology Limited
 Add: 4F, Building D, 1618 Yishan Road, Shanghai, P.R.C.
 Tel: +86-(0)21-64058488, 64014543
 Fax: +86-(0)21-64050030
 Email: sales@chiphomer.com
 Web: www.chiphomer.com

Shenzhen Office:
 10D, Building 2, Dushi Yangguang Garden CheGongMiao, Futian District, Shenzhen, 518048, P.R.C.
 Tel: (86)755-82046706, 82047789
 Fax: (86)755-82046709