

AS3685A/AS3685B

Ultra Small High Efficiency 700mA Charge Pump for White LED Flash

1 General Description

The AS3685 is low noise high efficiency capacitive charge pump with 1:1, 1:1.5 and 1:2 operating modes in a small 3x3mm DFN10 or a tiny 2x1.5mm WL-CSP (Wafer Level Chip Scale Package) package. It can drive one flash led at up to 700mA current. It supports flash/torch and indicator mode for the flash led.

Additionally the AS3685 limits the flash time automatically to protect the flash LED.

2 Key Features

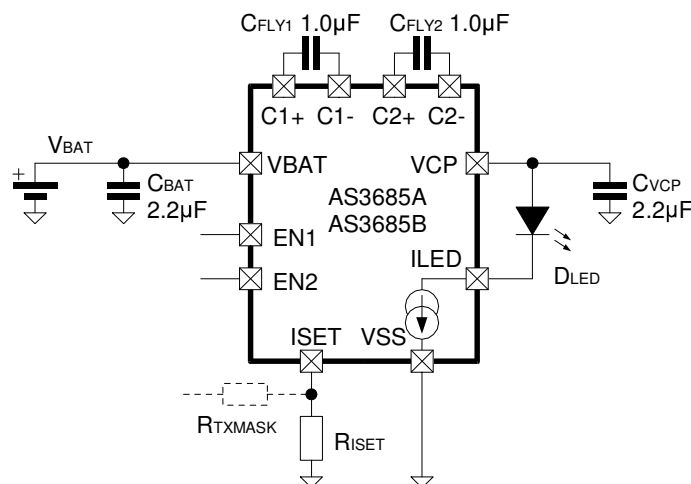
- High Efficiency capacitive charge pump with 1:1, 1:1.5 and 1:2 modes
 - 1:2 Mode can be disabled (factory programmable)
- Up to 700mA Led Current
- Automatic Charge Pump Mode switching (Up)
- LED cathode disconnect in Shutdown
- Overtemperature Protection
- Automatic 800ms Flash Timeout to protect the flash LED (time factory programmable)
- Two Device Variants:
 - AS3685A: Direct control to select three currents
 - AS3685B: Single Pin Interface or Two Pin Interface with Strobe Input; 17 different currents can be selected
- Package
 - DFN10 3x3mm (10 pins + exposed pad)
 - WL-CSP (Wafer Level Chip Scale Package) 3x4 balls 0.5mm pitch (2x1.5mm)

3 Application

- Flash / Torch for Mobile Phones, Digital Cameras and PDA

4 Application Diagram

Figure 1 – Application Diagram of AS3685A/AS3685B



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