

General Description

SY8601 is single-lithium battery linear-charging IC with integrated high voltage input. The charging is disabled when input voltage is higher than the protection threshold of 6.5V-input maxim voltage up to 28V; it can work well without over-voltage protect circuit. The integrated reverse block protection circuit without external isolating diodes. NTC interface is provided for temperature detection of lithium battery.

The trickle charge voltage is preset to be 4.2V/4.35V, and the charging current and charging cut-off current can be set via an external resistor for more applications. For battery voltage below 2.6V, the battery is pre-charged at 20% of the constant current. The \overline{PG} and \overline{CH} pin are open-drain which can drive LED. When the device is powered on and the working conditions are met, PPR is turned on. CHG is an end-of-charge indication, which is turned off when the charging current is lower than the preset charging cut-off current.

SY8601 is available in a DFN-2x3-8L package, and recommended to work within the temperature range of -40°C~+85°C.

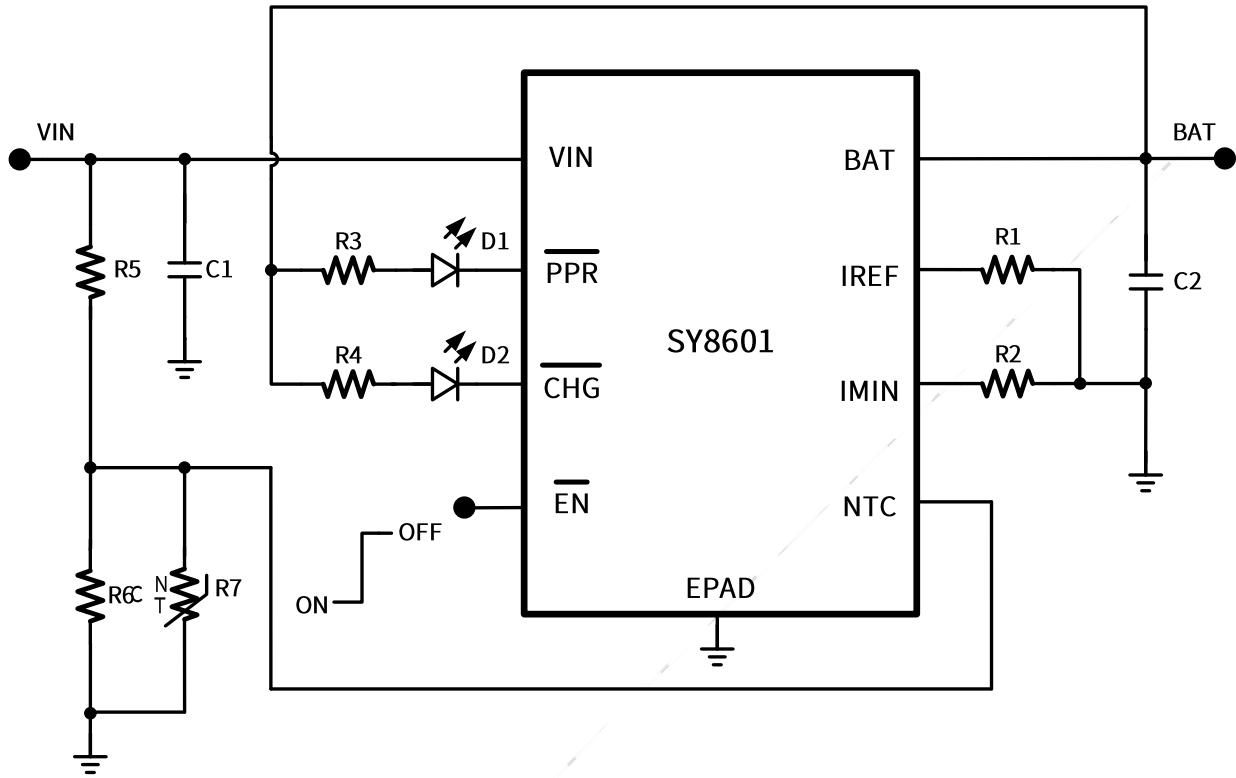
Applications

- ◆ Wearable devices
- ◆ Wireless Bluetooth earbuds
- ◆ IOT equipment
- ◆ Intelligent control equipment

Features

- ◆ Floating voltage is 4.2V/4.35V with $\pm 1\%$ accuracy
- ◆ Charging current the range of 10mA~500mA, with $\pm 10\%$ accuracy
- ◆ Charge cut-off current, with $\pm 15\%$ accuracy
- ◆ Low cut-off current applications such as Bluetooth earbuds
- ◆ Battery temperature detection protection
- ◆ 6.5V input over-voltage protection
- ◆ 28V input voltage, no need for input over-voltage protection circuit
- ◆ Indication of power source and charging state
- ◆ Automatic recharge
- ◆ IEC62368
- ◆ DFN-2x3-8L package

Typical Application Circuit



Typical Application Circuit of SY8601