

Synchronous Step-Up Converter with Ultra Low Quiescent Current

思远半导体

General Description

The SY5951 is a synchronous step-up converter with 600nA ultra-low quiescent current. It is designed for products are powered by alkaline battery, NiMH rechargeable battery, Li-on battery or rechargeable Li-on battery, under light load, it has high efficiency which can achieve longer battery life.

The SY5951 also offers (supports) both down mode and pass-through operation (pass mode) for different applications. In down mode, the output voltage can be regulated lower than input. In pass-through mode, the output voltage follows input voltage. The SY5200 exits down mode and enters into pass-through mode when $V_{IN} > V_{OUT} + 0.5V$.

The SY5951 supports true shutdown function when it is disabled, which disconnects the load from the input supply to reduce the current consumption.

The SY5951 offers both adjustable output voltage version and fixed output voltage versions. It is available in Green WLCSP-1.22×0.83-6B and TDFN-2×2-6AL packages.

Applications

- ◆ Memory LCD Bias
- ◆ Optical Heart Rate Monitor LED Bias
- ◆ Wearable Applications
- ◆ Low Power Wireless Applications
- ◆ Portable Products
- ◆ Battery Powered System

Features

- ◆ Operating Input Voltage Range: 0.7V to 5.5V
- ◆ Ultra Low Quiescent Current
400nA Ultra Low IQ into VIN Pin
- ◆ Adjustable Output Voltage from 2.5V to 5.5V
- ◆ Fixed Output Voltage Versions Available
- ◆ Power-Save Mode for Improved Efficiency at Low Output Power
- ◆ True Disconnection During Shutdown
- ◆ Up to 75% Efficiency at 10μA Load with Fixed
- ◆ Output Voltage Version
- ◆ Up to 93% Efficiency from 10mA to 300mA Load
- ◆ Available in Green WLCSP6 and TDFN-2×2-6AL Packages

Typical Application Circuit

