5A, 2.1MHz, I²C Programmable Synchronous Buck Converter

FEATURES

- Compatible I²C Interface Up to 3.4MHz
- Input Voltage Range :2.5V~5.5V
- Up to 5A Output Current
- Mode Selection Between PFM and PWM at Light Load
- Typical 50μA Quiescent Current in Light Load PFM Mode
- 2.1MHz Switching Frequency
- Integrated Soft-Start
- Input UVLO and OVP
- Build in Thermal Shutdown and OCP
- 0.25μH Inductor Support
- Compact WLCSP-20 Package

APPLICATIONS

- Smart Phones
- DSP or CPUs Processors
- Tablet, MID

GENERAL DESCRIPTION

STI8070A is an I²C Programmable, high efficiency, 2.1MHz, Synchronous Buck converter that operates in wide input voltage range from 2.5V to 5.5V. The output Voltage could be programmed from 0.72V to 1.5V. Very low standby current ensure high efficiency in light load PFM mode. The forced PWM mode could be set to avoid application problems caused by low switching frequency. A COT (Constant On-Time) structure is adaptive to achieve the fixed switching frequency and fast load transient response. STI8070A provides up to 5A output current with Integrated 28mΩ(high side) and 18mΩ(low side) power switch. STI8070A also implement an internal soft-start and cycle-by-cycle over current protection function. In addition, the input UVLO and OVP protection, Thermal shutdown protection.

APPILCATIONS

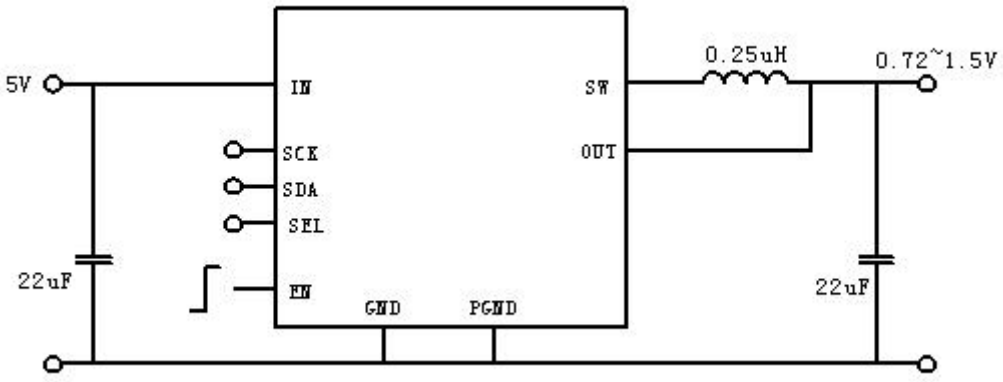

Figure 1. Basic Application Circuit