

HERO SWITCHER™ (High-Frequency Efficient Rapid Output) 6A Step-Down Regulator

Features

- σ Input Voltage Range from 2.2V to 5.5V
- σ I²C Controlled Output Voltage Range from 0.5V to 2.4 V (3.3V offered by SX0106A output voltage adjustable version)
- σ Up to 6A Output Current
- σ Up to 95% Efficiency
- σ Power Save Mode 30μA Quiescent Current at Light Load
- σ **HERO SWITCHER™** Rapid Output Load Transient Responses
- σ **HERO SWITCHER™** Programmable 2-4.5MHz Switching Frequency at PWM
- σ Internal Compensated
- σ Startup output voltage selection
- σ I²C slave address selection
- σ Dynamic Voltage Scaling
- σ Fault Interrupt Output
- σ 2mm x 2.5mm DFN Package

Applications

- σ Telecom
- σ Optical modules
- σ Power supply for FPGAs, CPUs, and ASICs

Description

The SX0106 is a high efficiency step down regulator with up to 4.5MHz switching frequency. SX0106 operates with input voltage range from 2.2V to 5.5V and it is able to deliver 6A output current.

With the I²C interface, SX0106 provides programmable output voltages between 0.5V to 2.4V. Programmable frequency from 2MHz to 4.5MHz. Programmable 25KHz switching limit for low acoustic noise application. And, programmable force PWM mode.

The SX0106 RID_IRQn pin is a triple functions pin. It configures the initial output voltage as well as the slave address. After start up the pin becomes the interrupt output.

Typical Application Circuits

