

2A, 3.3V-18V Input, 600KHz Synchronous Step-Down Converter

Features

- Wide 3.3V to 18V Operating Input Range
- 2A Continuous Output Current
- No Schottky Diode Required
- 600KHz Frequency Operation
- Built-in Over Current Limit
- Built-in Over Voltage Protection
- Internal Soft start
- Output Adjustable from 0.6V
- Integrated internal compensation
- Short Protection with Hiccup-Mode
- Thermal Shutdown
- Available in SOT23-6 Package
- -40°C to +85°C Temperature Range

Applications

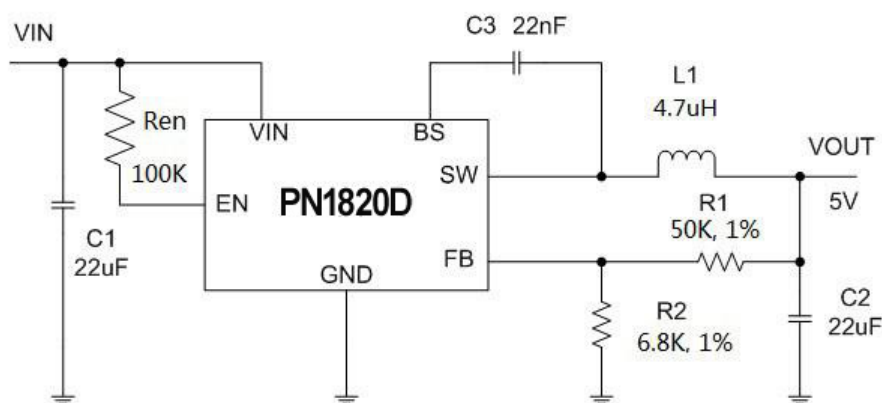
- Digital Set-top Box (STB)
- Tablet Personal Computer (Pad)
- Flat-Panel Television and Monitor
- Digital Video Recorder (DVR)
- Portable Media Player (PMP)
- General Purposes

General Description

The PN1820D is a high frequency, synchronous, rectified, step-down, switch-mode converter with internal power MOSFETs. It offers a very compact solution to achieve a 2A continuous output current over a wide input supply range, with excellent load and line regulation.

The PN1820D requires a minimal number of readily available, external components and is available in a space saving SOT23-6 package.

Typical Application Circuit



VOUT	R1	R2
5.0V	50K	6.8K
3.3V	50K	11K
1.8V	50K	25K
1.5V	50K	33.3K
1.2V	50K	50K
1.0V	50K	75K

Figure 1. Basic Application Circuit For VOUT=5V

Absolute Maximum Ratings

Vin, EN, Voltage	-0.3V to 18V	SW Voltage	-0.3V to (VIN+0.5V)
Operating Temperature Range	-40°C to +85°C	Storage Temperature Range	-65°C to 150°C
FB Voltages	-0.3 to 6V	BS Voltage	(Vsw-0.3) to (Vsw+5V)
Lead Temperature (Soldering, 10s)	+300°C		