

AP63203 Buck/BabyBuck Regulator Breakouts

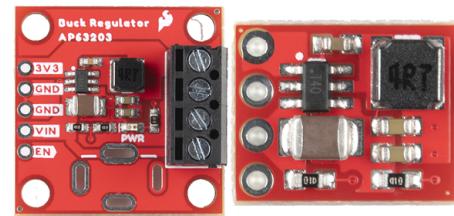
Product Overview

10/26/2022

For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

SparkFun AP63203 Buck/BabyBuck Regulator Breakouts are 2A synchronous buck converter boards that operate at 3.8V to 32V wide input voltage range. These breakouts integrate a 125mΩ high-side and a 68mΩ low-side power MOSFET, providing high-efficiency step-down DC/DC conversion. The Electromagnetic Interference (EMI) is reduced to the minimum in these breakout regulators because of its proprietary gate driver design and Frequency Spread Spectrum (FSS). These regulator breakouts offer a 1.1MHz switching frequency, up to 2A continuous output current, 22µA ultralow quiescent current, and 3.3V output voltage. Typical applications include network systems, set-top boxes, gaming consoles, home audio, and consumer electronics.



Features

- Proprietary gate driver design for best EMI reduction
- Frequency Spread Spectrum (FSS) to reduce EMI
- Precision-enabled threshold to adjust UVLO
- Totally lead-free and fully RoHS compliant
- Halogen and antimony free
- Supports Pulse Frequency Modulation (PFM):
 - Up to 80% efficiency at 1mA light load
 - Up to 88% efficiency at 5mA light load
- Protection circuitry:
 - Overvoltage protection
 - Cycle-by-Cycle peak current limit
 - Thermal shutdown

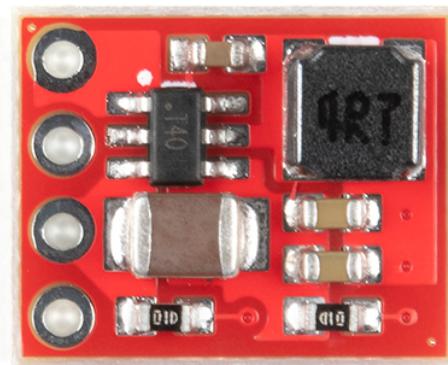
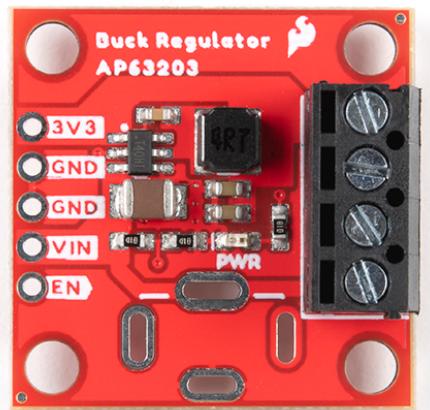
Specifications

• 3.8V to 32V input voltage range	• 22µA ultralow quiescent current
• Up to 2A continuous output current	• 3.3V fixed output voltage
• 0.8V ±1% reference voltage	• 1.1MHz switching frequency

Applications

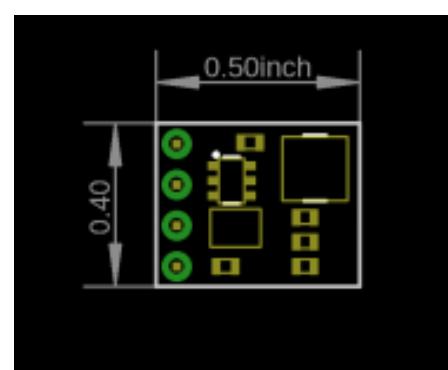
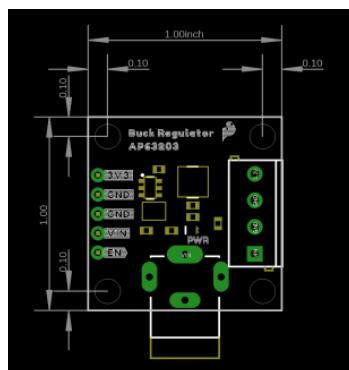
- Flat-screen TV sets and monitors
- Power tools and laser printers
- White goods and small home appliances
- FPGA, DSP, and ASIC supplies
- Home audio
- Network systems
- Set-top boxes
- Gaming consoles
- Consumer electronics

Board Overview



- Buck Regulator Breakout - 3.3V (AP63203)
- BabyBuck Regulator Breakout - 3.3V (AP63203)

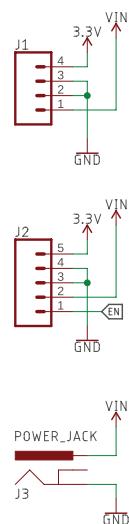
Board Dimensions



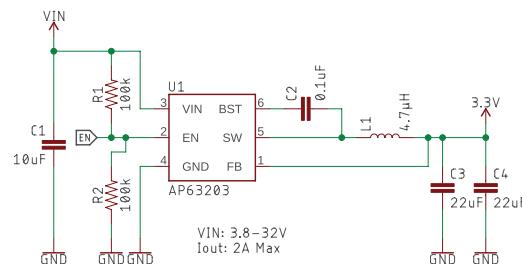
- Buck Regulator Breakout - 3.3V (AP63203)
- BabyBuck Regulator Breakout - 3.3V (AP63203)

Schematic - Buck Regulator Breakout - 3.3V (AP63203)

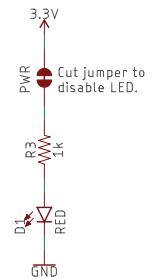
Connectors



Buck Regulator

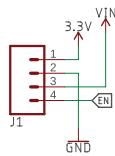


Power LED

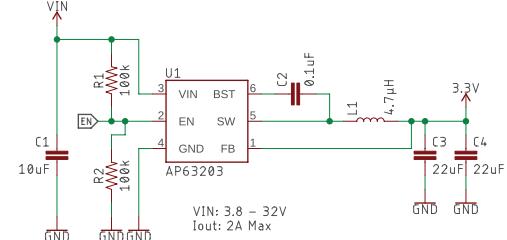


Schematic - BabyBuck Regulator Breakout - 3.3V (AP63203)

Connector



Buck Regulator



Mouser Part Numbers

[View All Parts](#)

To learn more, visit <https://www.mouser.com/new/sparkfun/sparkfun-ap63203-regulator-breakouts/>