

SparkFun BabyBuck Regulator Breakout

The SparkFun 5V BabyBuck Regulator Breakout includes the AP63357 from Diodes Inc., a 3.5A synchronous buck converter with a wide input voltage range of 3.8V to 32V. The fully integrated 74mΩ high-side power MOSFET/40mΩ

Product number COM-21256

Weight 0.01kg



Product description

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The BabyBuck regulator is a minimalist version of our buck regulator boards. This board is configured to provide a regulated 5V output (*from an input voltage range of 6 to 32V*) and has a high voltage **EN** (*enable*) control pin rated up to 32V. There is a small copper pad on the back of the board to dissipate excess heat with a heat sink. With only four PTH pins for input and output power connections, everything fits on a board layout measuring just 0.63 inches x 0.52 inches.

Check out the SparkFun Buck Regulator Breakout - 5V (AP63357) to see the larger, fully functional version of this board.

Note: The AP63357 is rated for up to 3.5A output, but for thermal reasons you should expect a maximum of 3A from our boards. The boards can output 3.5A, but require sufficient active cooling.

[Get Started Guide for the SparkFun AP63357 Buck Regulator](#)

Features:

BabyBuck Board:

- 0.63" x 0.52" PCB layout
- Four PTH pins spaced 0.1" apart
 - **VIN** - Power In (6V to 32V)
 - **GND** - common ground
 - **VOU**T - Current output (regulated 5V)
 - **EN** - Enable (pull up to activate the current output)
- 0.5" x 0.6" Plated copper pad (*for heat sink*)

AP63357:

- VIN 3.8V to 32V
- 3.5A continuous output current
- 0.8V \pm 1% Reference voltage
- 22 μ A Low quiescent current (pulse frequency modulation)
- 450kHz switching frequency
- Supports pulse frequency modulation (PFM)
 - Up to 86% efficiency at 5mA light load
- Proprietary gate driver design for best EMI reduction
- Frequency spread spectrum (FSS) for EMI reduction
- Low dropout (LDO) mode
- Power Good Indicator with 5M Ω internal pull-up
- Precision enable threshold for setting the UVLO
- Protective circuits
 - Undervoltage lockout (UVLO)
 - Output undervoltage protection (UVP)
 - Cyclical peak current limitation
 - Thermal shutdown

Documents:

- [Circuit diagram](#)
- [Eagle files](#)
- [Board dimensions](#)
- [Hookup Guide](#)
- [Datasheet](#) (AP63357)
- [Product page of the manufacturer](#) (AP63357)
 - [Technical documentation](#)
 - [Technical support page of diodes](#)
- [GitHub Hardware Repo](#)

Product properties

Zolltarifnummer	85044095
Gross Weight (kg)	0.010
Country of Origin	USA
Brand	SparkFun
Product ID	COM-21256
Manufacturer ID	COM-21256
EAN	4060137083396

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