

5.0A Peak Current DC-DC Synchronous Boost with Output Disconnect 1.8V Minimum Input and 5.5V Maximum Output

General Description

FH47065 is a high efficiency synchronous boost regulator that converts down to 1.8V input and up to 5.5V output voltage. It adopts NMOS for the main switch and PMOS for the synchronous switch. It can disconnect the output from input during the shutdown mode.

Applications

- All Single Cell Li or Dual Cell Battery
- Operated Products as MP-3 Player, PDAs, and Other Portable Equipment

Features

- 1.8V Minimum input voltage
- Adjustable output voltage from 2.5V to 5.5V
- 5A peak current limit
- Input under voltage lockout
- Load disconnect during shutdown
- Output over voltage protection
- Input battery voltage monitor
- Low $R_{DS(ON)}$ (main switch/synchronous switch) at 5.0V output: 20/40m Ω
- Compact package: QFN2*2-10L

Typical Applications

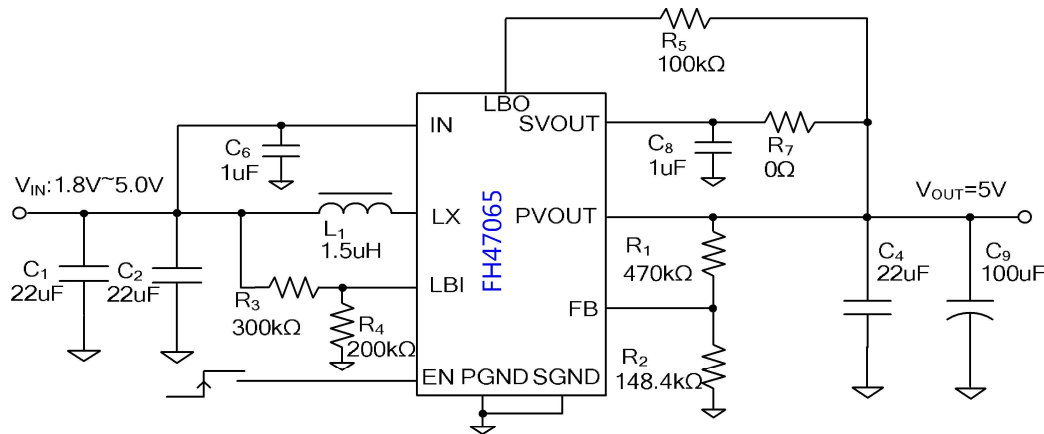


Figure 1. Schematic Diagram

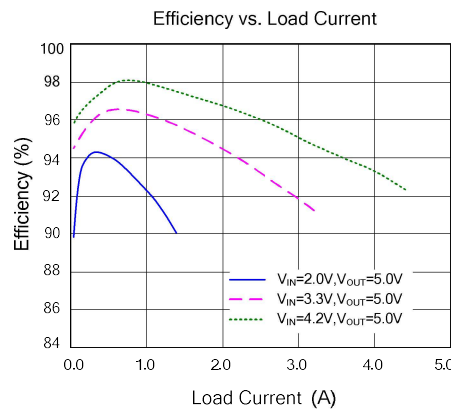
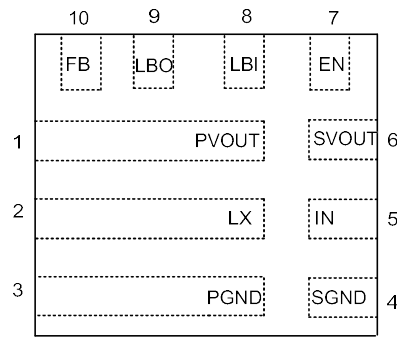


Figure 2. Efficiency Figure

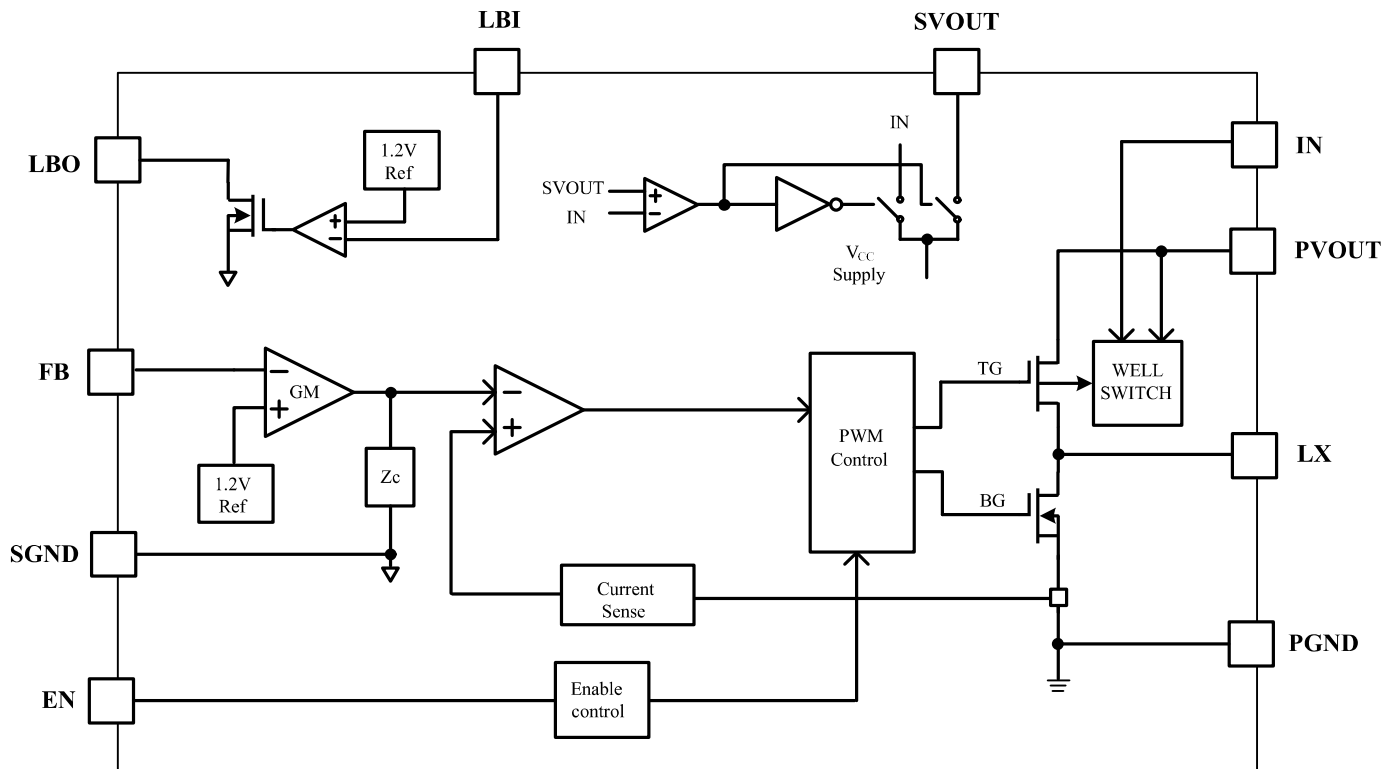
Pinout (top view)



(QFN2*2-10L)

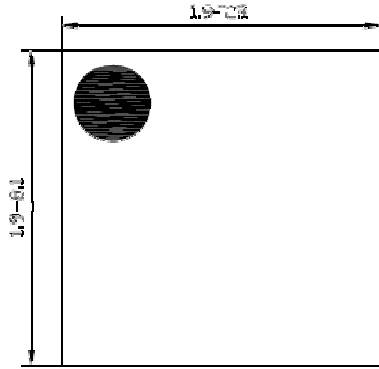
Name	QFN2X2-10	Description
PVOOUT	1	Power output pin. Decouple this pin to GND pin with at least 22uF ceramic cap.
SVOUT	6	Signal output pin. Decouple this pin to GND pin with at least 1.0uF ceramic cap for noise immunity consideration.
LX	2	Inductor node. Connect an inductor between IN pin and LX pin.
PGND	3	Power ground pin.
SGND	4	Signal ground pin.
IN	5	Signal input pin.
EN	7	Enable pin. Internal integrated with 1Mohm pull down resistor.
LBI	8	Low battery comparator input.
FB	10	Feedback pin. Connect a resistor R1 between OUT and FB, and a resistor R2 between FB and GND to program the output voltage. $V_{OUT}=1.2V*(R_1/R_2+1)$.
LBO	9	Low battery comparator output.(open drain) .

Block Diagram

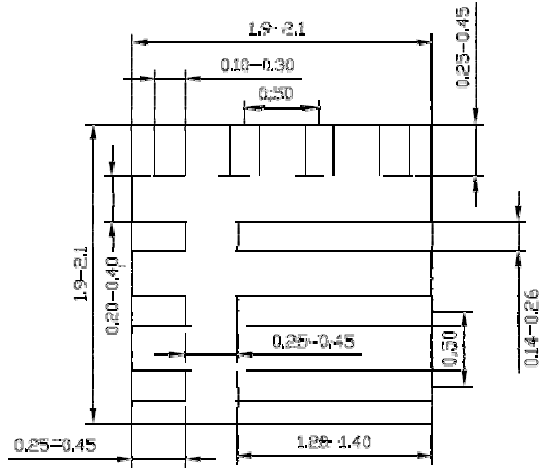


Package Outline

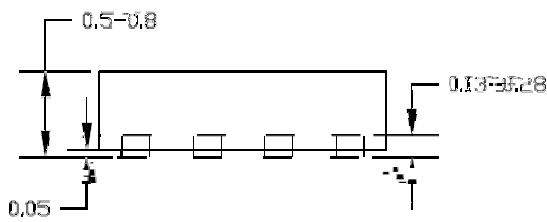
QFN2x2-10L



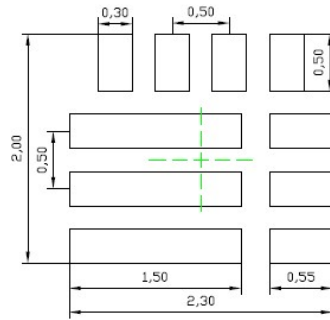
Top View



Bottom View



Side View



Recommended PCB Layout
(Reference only)

Notes: All dimension in MM and exclude mold flash & metal burr.

Ordering Information

Part Number	Temperature Range	Output Voltage	Package type	Top Mark	SPQ
FH47065D10	-40°C to 85°C	2.5V to 5.5V (Adjustable)	QFN2*2-10L	** xyz (**Device code x y z Date code)	3000PCS/Reel

- FH47065 devices are Pb-free and RoHS compliant.
- The surface prints of our semiconductor devices are subject to change during the production process and do not involve changes in electrical parameters, and we will not separately state the notice.



ESD SENSITIVITY CAUTION

ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.

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