

10A Peak Current Mode Non-Synchronous PWM Boost(Step-Up) DC-DC Converter

PRELIMINARY DATASHEET

General Description

The FH47196 is a current mode boost DC-DC converter. It is PWM circuitry with built-in 15mΩ power MOSFET make this regulator highly power efficient.

The non-inverting input of error amplifier connects to a 1.20V precision reference voltage. Current mode control and external compensation network make is easy and flexible to stabilize the system.

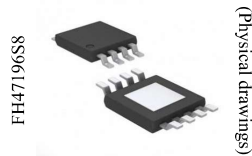
The FH47196 is available in the ESOP-8L package to fit in space-saving PCB for the application fields.

Features

- Supply Voltage Operating Range: 2.7V to 12.0V
- Adjustable Output up to 13.0V
- Internal Fixed PWM frequency: 400KHz
- Precision Feedback Reference Voltage: 1.2V (±2%)
- Internal 15 mΩ, 10A, 14V Power MOSFET
- Shutdown Current: 1.0μA (Max.)
- Over Temperature Protection
- Internal Soft Start Function
- Adjustable Over Current Protection: 2.0A ~ 10A
- Package Type: ESOP-8L

Package Type

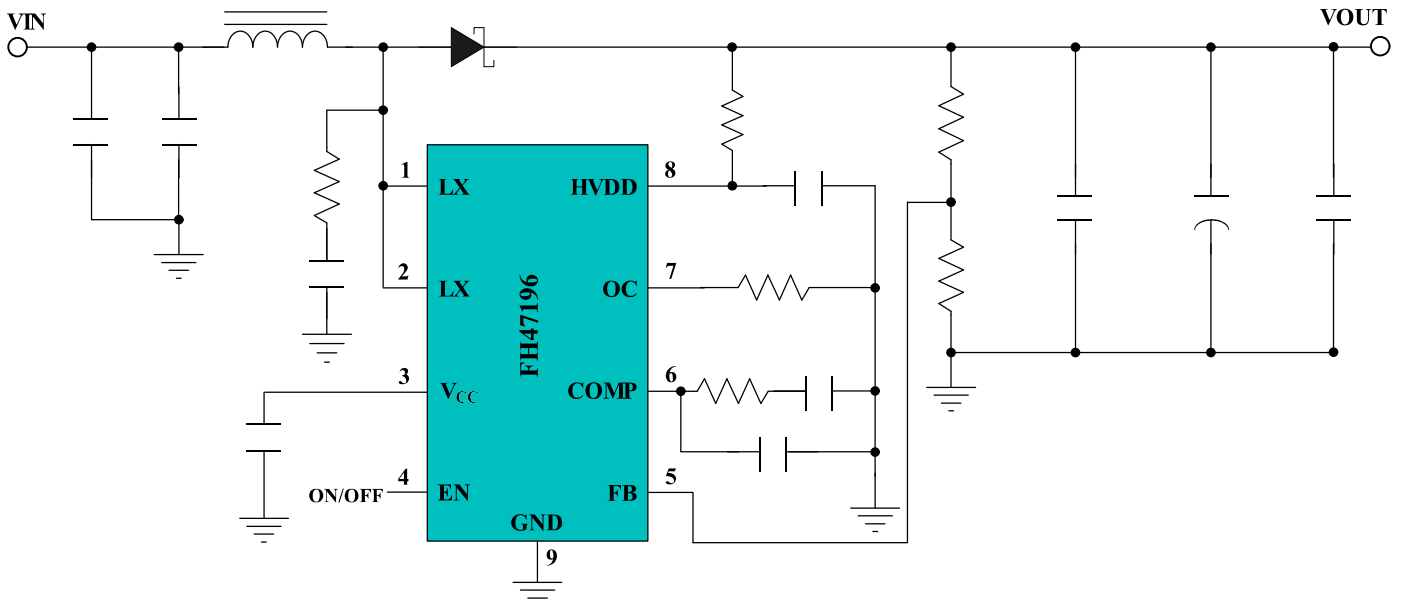
- 8-PIN ESOP



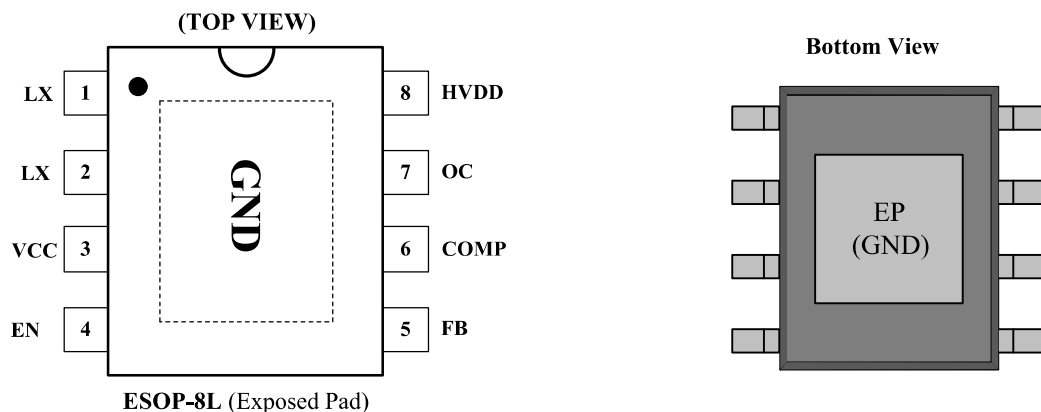
Applications

- Chargers
- LCD Displays
- Digital Cameras
- Handheld Devices
- Portable Products
- Power Bank

Typical Application Circuit



TERMINAL CONFIGURATION

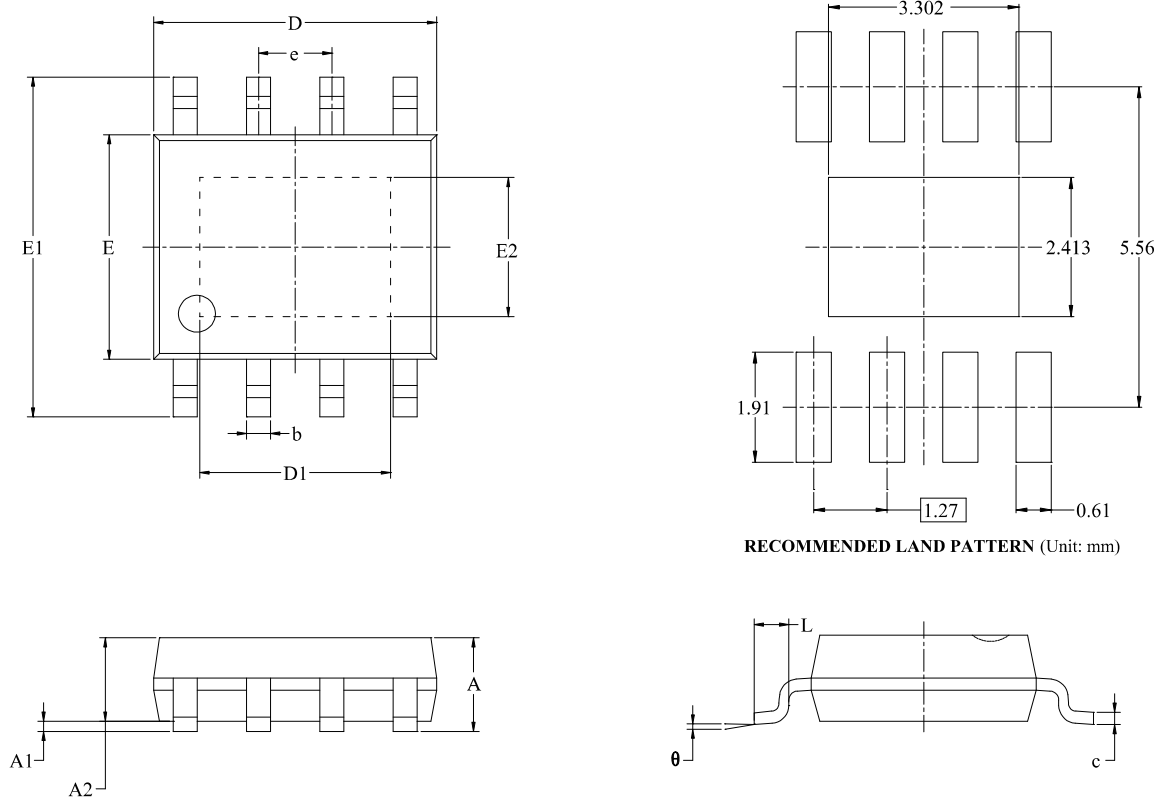


TERMINAL FUNCTION

Name	No.	I / O	Description
LX	1	I	Power Switch Output
LX	2	I	Power Switch Output
Vcc	3	P	Power Supply for Internal Control Circuits and Gate Drivers
EN	4	I	Enable Control (Active High)
FB	5	I	Error Amplifier Inverting Input
COMP	6	O	Compensation
OC	7	I	Adjustable Current Limit (Floating Invalid)
HVDD	8	P	IC Power Supply
GND	EP	P	IC Ground (Exposed PAD) – Must Connect to Ground

PACKAGE OUTLINE DIMENSIONS

ESOP-8L (Exposed Pad)



RECOMMENDED LAND PATTERN (Unit: mm)

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A		1.700		0.067
A1	0.000	0.100	0.000	0.004
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.007	0.010
D	4.700	5.100	0.185	0.201
D1	3.202	3.402	0.126	0.134
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
E2	2.313	2.513	0.091	0.099
e	1.27 BSC		0.050 BSC	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

Note:

1. Package dimensions are in compliance with JEDEC outline: MS-012AA.
2. Dimension "D" does not include molding flash, protrusions or gate burrs.
3. Dimension "E" does not include inter-lead flash or protrusions.

Exposed PAD Dimensions:

Symbols	Min. (mm)	Max. (mm)
D1	2.60	3.45
E1	1.90	2.56

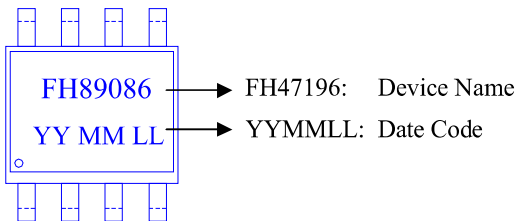
ORDERING INFORMATION

Part Number	Voltage Range	Features	Operating Temperature	Package Type	Top Mark	SPQ
FH47196S8	2.7V ~ 12.0V	<ul style="list-style-type: none"> • DC-DC PWM boost converter • Current Mode Non-Synchronous • Output up to 13.0V • Frequency: 400kHz • VFB: 1.2V (±2%) • Peak Current: 10.0A(max.) 	-25°C to 85°C	ESOP-8L	FH47196 <u>YY MM LL</u>	2500PCS/Reel

Note:

- **FH47196** 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.
- If you have any other custom purchase needs, please contact our sales department.
- ForDevices reserves the right to amend and legally interpret the electrical parameters of this chip device. (<http://www.fordevices.com>)

Device Name: ESOP-8L



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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▲ Update by May.2020