

1.0A 100KHz 90.0 V Buck DC to DC Converter

Description

The FH4830 is a 100KHz fixed frequency PWM buck (step-down) DC-DC converter, capable of driving a 1.0A load with high efficiency, low ripple and excellent line and load regulation. Requiring a minimum number of external components, the regulator is simple to use and include internal frequency compensation and a fixed-frequency oscillator.

The PWM control circuit is able to adjust the duty ratio linearly from 0 to 85%.

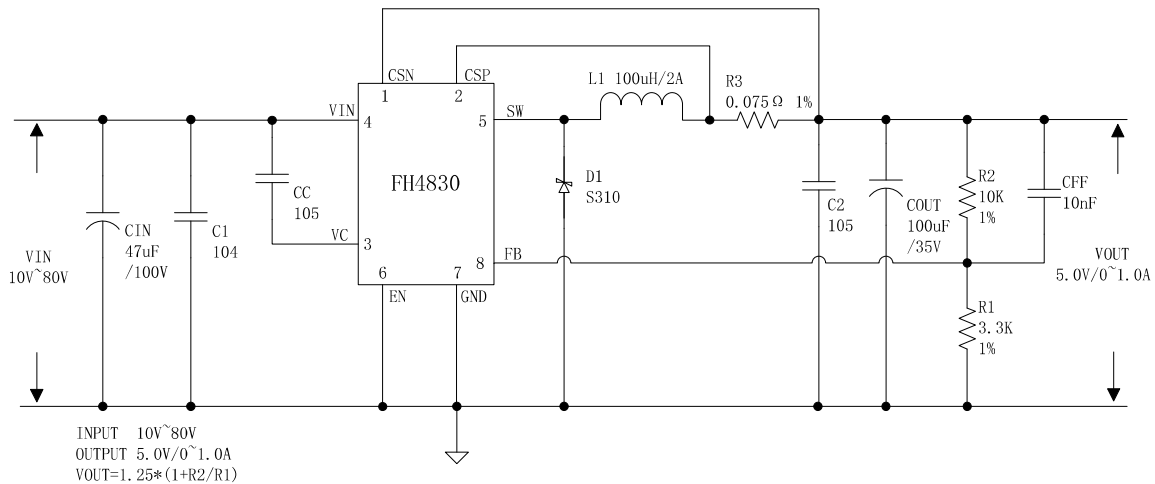
Applications

- Ebike Controller Power Supply
- Telecom / Networking Equipment

Features

- Operation Voltage from 8V to 80V
- Maximum Duty Cycle up to 85%
- Minimum Drop Out 2.0V
- Adjust VOUT from 1.25V to 20V
- Max. IOU=1.0A at VOUT=5V
- Max. IOU=0.5A at VOUT=15V
- Fixed 100KHz Switching Frequency
- Max. Output power less than 8W
- EN PIN TTL shutdown capability
- Internal Optimize HV Power MOSFET
- High efficiency up to 91%
- Excellent line and load regulation
- Built in current limit function
- Built in output short Protection Function
- SOP8-EP (Exposed PAD) package

Typical Application Circuit



R3 for limit maximum output current, R3 choose 0.075ohm in $V_{OUT} \leq 5V$ application;
R3 choose 0.082ohm in $V_{OUT} > 5V$ application.

Figure 1. FH4830 Typical Application Circuit

Pin Configurations

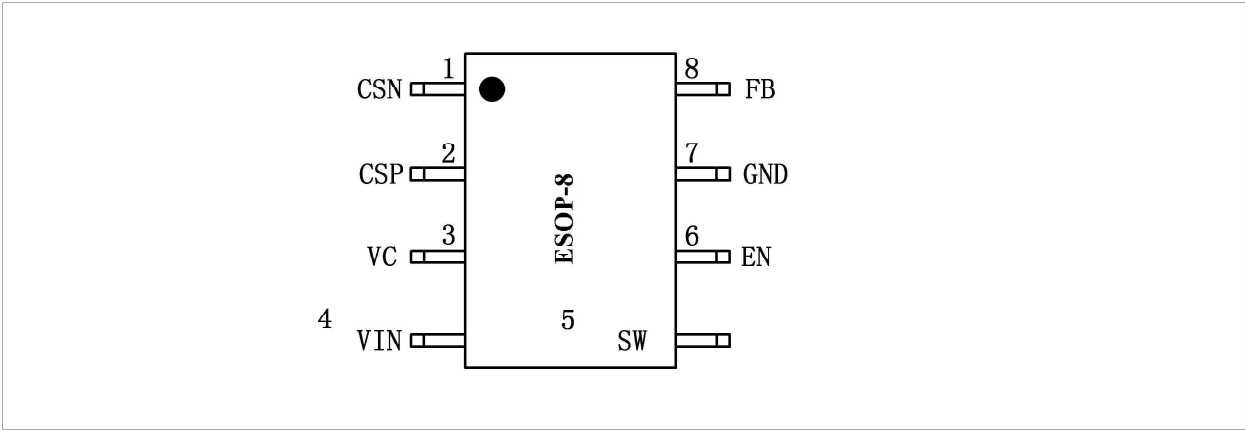


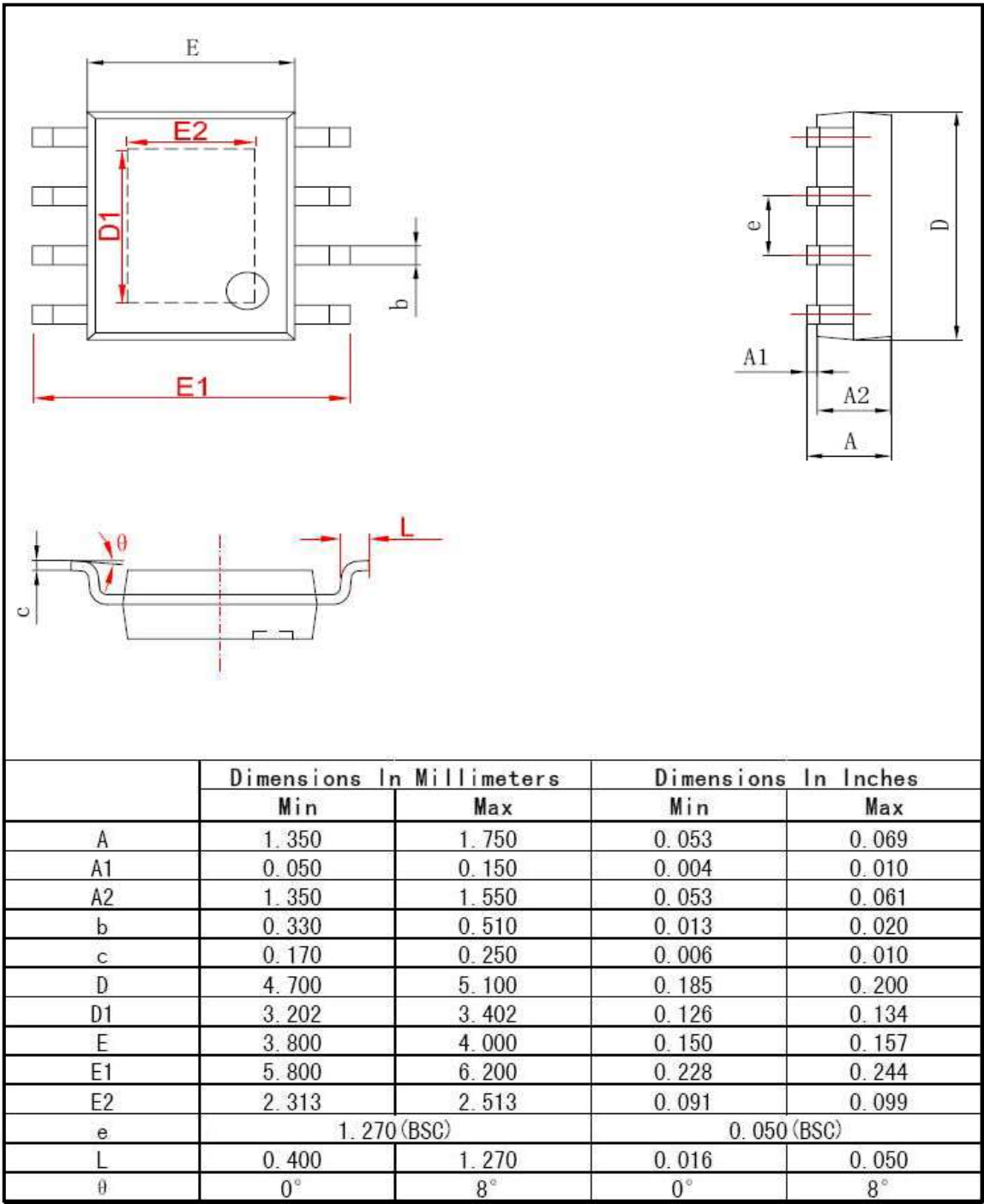
Figure2. Pin Configuration of FH4830 (Top View)

Table 1 Pin Description

Pin Number	Pin Name	Description
1	CSN	Current Sense Negative Terminal.
2	CSP	Current Sense Positive Terminal.
3	VC	Internal Voltage Regulator Bypass Capacity. In typical system application, The VC pin connect a 1uF capacitor to VIN.
4	VIN	Supply Voltage Input Pin. FH4830 operates from 8V to 80V DC voltage. Bypass Vin to GND with a suitably large capacitor to eliminate noise on the input.
5	SW	Power Switch Output Pin (SW). Output is the switch node that supplies power to the output. The exposed PAD is SW.
6	EN	Enable Pin. Drive EN pin high to turn off the device, drive it low to turn it on. Floating is default low. Connect to GND to enable the voltage regulator.
7	GND	Ground Pin. Care must be taken in layout. This pin should be placed outside of the Schottky Diode to output capacitor ground path to prevent switching current spikes from inducing voltage noise into FH4830.
8	FB	Feedback Pin (FB). Through an external resistor divider network, Feedback senses the output voltage and regulates it. The feedback threshold voltage is 1.25V.

Package Information

ESOP-8



Ordering Information

Order Information	Marking ID	Package Type	Packing Type Supplied As
FH4830ES08	FH4830	ESOP-8L	2500 Units on Tape & Reel