1.0A, 1.5MHz DC-DC Buck(Step-Down) Converter in DFN2*2-6L Package

Datasheet Brierf

■ DESCRIPTION

The FH4502 is a high-efficiency, DC-DC step-down(Buck) switching regulator, capable of delivering up to 1A of output current. The devices operate from an input voltage range of 2.6V to 5.5V and provide output voltages from 0.6V to VIN, making the FH4502 ideal for low voltage power conversions. Running at a fixed frequency of 1.5MHz allows the use of small inductance value and low DCR inductors, thereby achieving higher efficiencies. Other external components, such as ceramic input and output caps, can also be small due to higher switching frequency, while maintaining exceptional low noise output voltages. Built-in EMI reduction circuitry makes this converter ideal power supply for RF applications. Internal soft-start control circuitry reduces inrush current. Short-circuit and thermal-overload protection improves design reliability.

FH4502 is housed in a tiny DFN2*2-6L package.

■ FEATURES

- Up to 96% Efficiency
- Up to 1.0A Max Output Current
- 1.5MHz Frequency
- Light Load operation
- Internal Compensation
- Tiny DFN2*2-6L Package

■ APPLICATIONS

- MIDs, Tablet PC
- Set Top Boxes
- USB ports/Hubs
- Hot Swaps
- Cellphones

■ TYPICAL APPLICATION

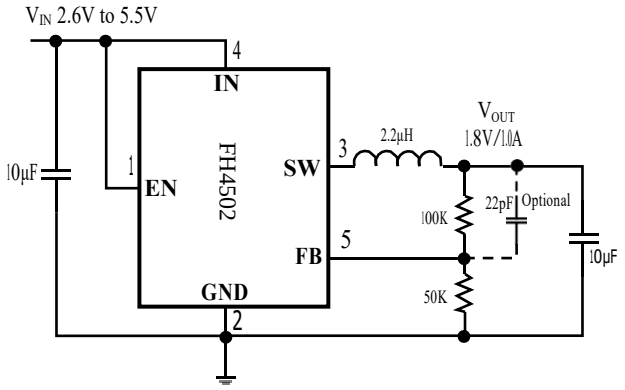
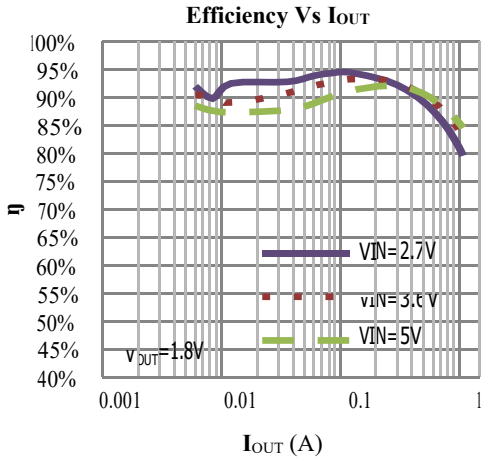
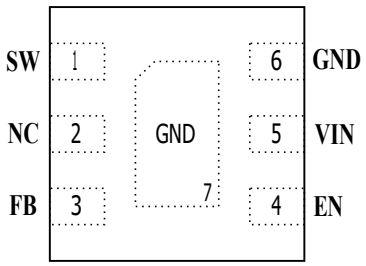


Figure 1. **1.8V/1.0A 1.5MHz Step-Down Converter**



■ PIN CONFIGURATION

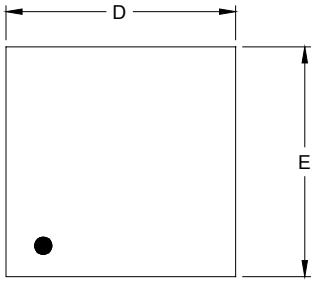


■ PIN DESCRIPTION

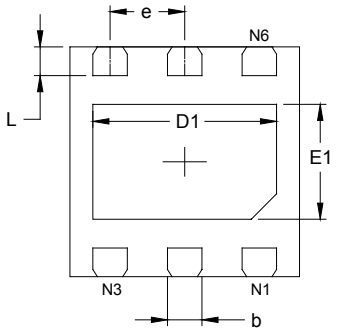
PIN #	NAME	DESCRIPTION
1	**SW**	Inductor Connection. Connect an inductor Between SW and the regulator output.
2	**NC**	Not connected, No internal connecting wire to any pad of the chip
3	**FB**	Feedback Input. Connect an external resistor divider from the output to FB and GND to set the output to a voltage between 0.6V and VIN
4	**EN**	Enable pin for the IC. Drive this pin high to enable the part, low to disable.
5	**IN**	Supply Voltage. Bypass with a 10μF ceramic capacitor to GND
6, 7	**GND**	Ground, The thermal pad (Pin No,7) is Ground too.

■ PACKAGE OUTLINE

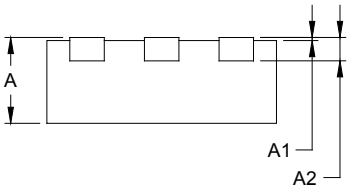
- DFN2*2-6L PACKAGE OUTLINE AND DIMENSIONS



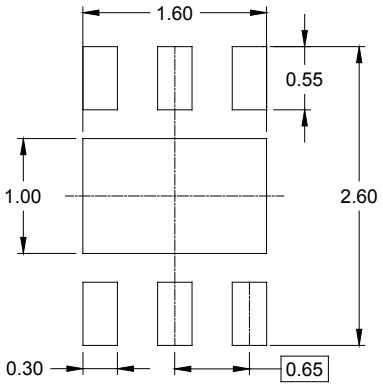
TOP VIEW



BOTTOM VIEW



SIDE VIEW



RECOMMENDED LAND PATTERN(Unit: mm)

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	0.700	0.800	0.028	0.031
A1	0.000	0.050	0.000	0.002
A2	0.203 REF		0.008 REF	
D	1.900	2.100	0.075	0.083
D1	1.500	1.700	0.059	0.067
E	1.900	2.100	0.075	0.083
E1	0.900	1.100	0.035	0.043
b	0.250	0.350	0.010	0.014
e	0.650 BSC		0.026 BSC	
L	0.174	0.326	0.007	0.013

■ ORDERING INFORMATION

PART NUMBER	Operating Temperature Range	Voltage Output	PACKAGE	TOP MARK	SPQ
FH4502N6	-40°C to 85°C	ADJ	DFN2*2-6L	* * * *	3000PCS/Reel

- FH4502 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.

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