

1.0MHz High Output current High Efficiency Synchronous Step-Up Converter

DESCRIPTION

FH4303 is an ForDevices high efficiency, high frequency synchronous Step-Up converter, capable of delivering output current up to 3A at a 5V output from a 3.6V input. With a low $R_{ds(on)}$ Power MOS and a built-in synchronous rectifier, its efficiency can be as high as 93% at a 5.0V/2.1A load. This greatly minimizes power dissipation and reduces heat on the IC, making it ideal for applications that require small board space and have stringent temperature constraints, such as power banks and mobile devices. FH4303 also incorporates technology that protects against overload and short-circuit conditions. All of these features are integrated in a tiny QFN3*3-16L package. With 1.0MHz switching frequency, small external input and output capacitors and inductor can be used.

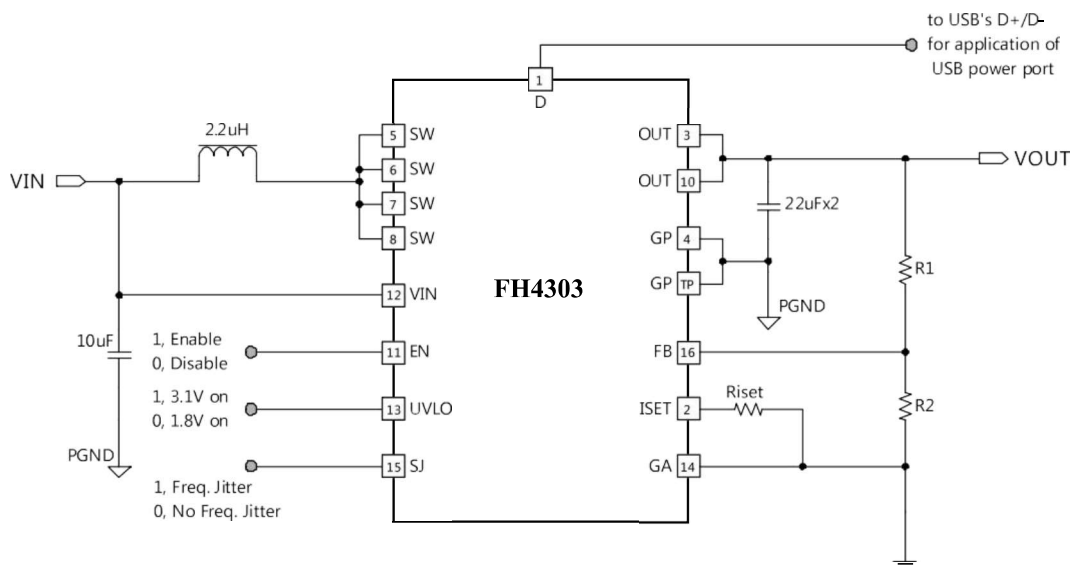
FEATURES

- ◆ Up to 97% Energy Converting Efficiency
- ◆ Up to 3.0A output current at 5V output, 3.6V input
- ◆ Externally adjustable output voltage
- ◆ True Shut off during shutdown and output short- circuit protection
- ◆ Thermal Shutdown
- ◆ QFN3*3-16L

APPLICATIONS

- ◆ 3G/4G PCI-e module
- ◆ Power Bank
- ◆ Mobile 3G/4G Mi-Fi

TYPICAL APPLICATION



➤ Typical Application Circuit

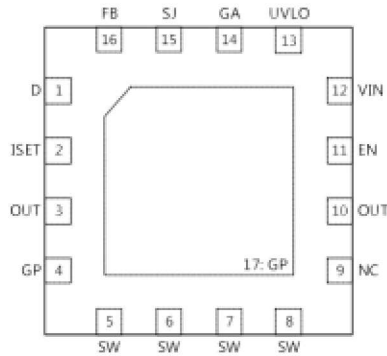
ORDERING INFORMATION

PART NUMBER	Voltage Output	PACKAGE	TOP MARK	SPQ
FH4303QN16	ADJ	QFN3*3-16L	FH4303 YWW2L	3000PCS/Reel

Note:

- Our device surface prints are subject to change during the production process and we do not separately declare notice if changes to electrical parameters are not involved.

■ PIN CONFIGURATION



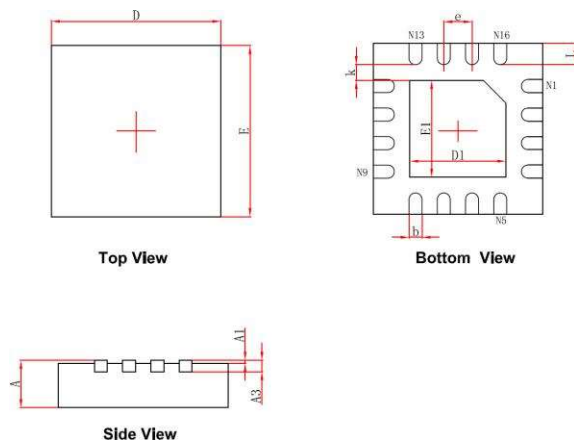
QFN3*3-16L

■ PIN DESCRIPTION

PIN #	NAME	DESCRIPTION
1	D	Connected to the D+ and D- line of USB connect, provide the correct voltage with attached portable equipment for USB Dedicated Charging Port (DCP) Emulator, and Apple / Samsung adaptors.
2	ISET	Programmable peak-current-limit control. Connect an external resistor (Riset) between ISET and AGND to set the peak NMOS current-limit threshold. The current- limit threshold may be adjusted from 0.6A to 5.0A, And if follows following equation: $I_{peak}=(180/Riset)*1000 (A)$
3, 10	OUT	Output pin. Bypass with a 22μF or larger ceramic capacitor closely between this pin and ground.
4, 17	GP	Power ground pin. Please be noted that Pin #17 is the thermal pad of the IC.
5,6,7,8	SW	Switching node of the Switching Regulator. Connect a 1.0uH to 2.2μH inductor between IN and SW pin.
9	NC	No Connect. Connecting this pin to GP for routing out the power ground of Pin#17.
11	EN	Enable pin for the IC. Drive this pin high to enable the IC, low or floating to disable.
12	IN	Input pin. Bypass IN to GND with a 10uF or greater ceramic capacitor.
13	UVLO	Select IN UVLO.
14	GA	Analog ground pin. GA is internally connected to the analog ground of the control circuitry.
15	SJ	Select Jitter or not. When SJ floating, the IC works at Jitter mode. SJ=0, the IC works at no Jitter.
16	FB	Feedback Input. Connect an external resistor divider from the output to FB and GND to set V_{OUT} , with the equation: $V_{out} = 0.6 \times (R1+R2)/R2$

■ PACKAGE OUTLINE

- Type: QFN3*3-16L



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700/0.800	0.800/0.900	0.028/0.031	0.031/0.035
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	2.924	3.076	0.115	0.121
E	2.924	3.076	0.115	0.121
D1	1.600	1.800	0.063	0.071
E1	1.600	1.800	0.063	0.071
k	0.200MIN.		0.008MIN.	
b	0.180	0.280	0.007	0.011
e	0.500TYP.		0.020TYP.	
L	0.324	0.476	0.013	0.019