

1.2MHz Current Mode Boost(Step-Up) Converter 2.5A, High Efficiency

GENERAL DESCRIPTION

The FH4204C is a constant frequency, 6-pin SOT23 current mode step-up converter intended for small, low power applications. The FH4204C switches at 1.2MHz and allows the use of tiny, low cost capacitors and inductors 2mm or less in height. Internal soft-start results in small inrush current and extends battery life.

The FH4204C features automatic shifting to pulse frequency modulation mode at light loads. The FH4204C includes under-voltage lockout, current limiting, and thermal overload protection to prevent damage in the event of an output overload. The FH4204C is available in a small 6-pin SOT-23 package.

APPLICATIONS

- Set-Top Boxed
- LCD Bias Supply
- Battery-Powered Equipment

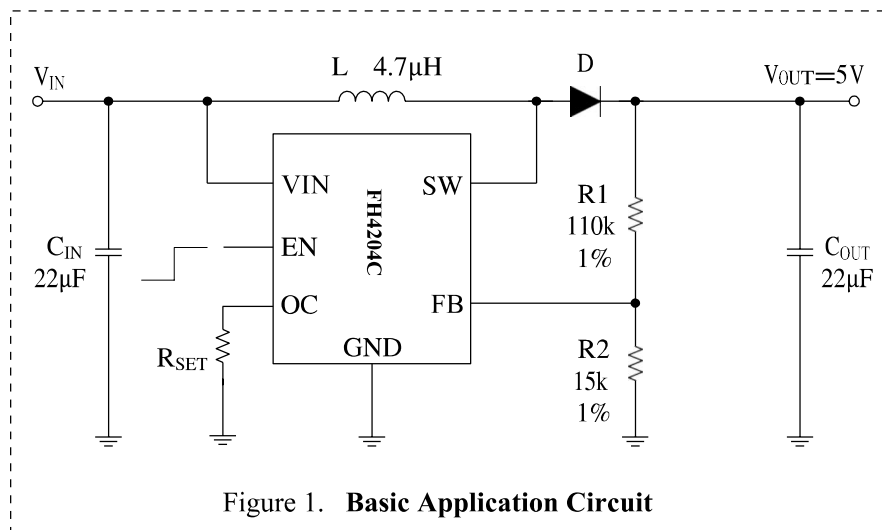


(Physical Drawings)

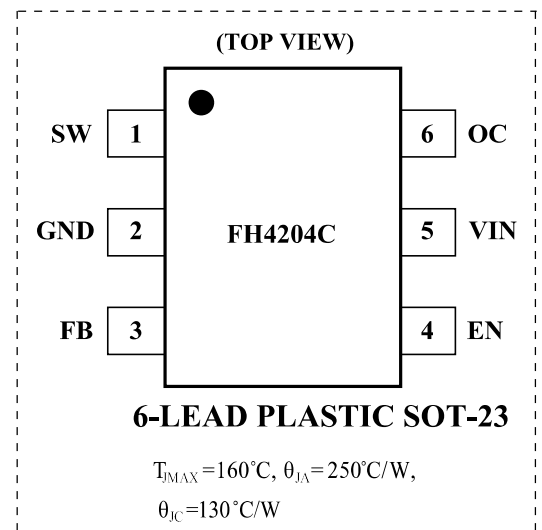
FEATURES

- Integrated 80mΩ Power MOSFET
- 2.2V to 16V Input Voltage
- 1.2MHz Fixed Switching Frequency
- Adjustable Over Current Protection:0.5A~2.5A
- Internal 2.5A Switch Current Limit (OC pin floating)
- Adjustable Output Voltage
- Internal Compensation
- Over Voltage Protection
- Up to 20.0V Output Voltage
- Automatic Pulse Frequency Modulation Mode at Light Loads
- Up to 93% Efficiency
- Available in a 6-Pin SOT-23-6L Package
- DSL and Cable Modems and Routers
- Networking cards powered from PCI or PCI express slots

TYPICAL APPLICATION



PIN CONFIGURATIONS



PIN DESCRIPTION

Pin Name	Pin Number	Description
SW	1	Power Switch Output. SW is the drain of the internal MOSFET switch. Connect the power inductor and output rectifier to SW. SW can swing between GND and 22V.
GND	2	Ground Pin
FB	3	Feedback Input. The FB voltage is 0.6V. Connect a resistor divider to FB.
EN	4	Regulator On/Off Control Input. A high input at EN turns on the converter, and a low input turns it off. When not used, connect EN to the input supply for automatic startup.
VIN	5	Input Supply Pin. Must be locally bypassed.
OC	6	Adjustable Current Limit (Floating Available).

FUNCTIONAL BLOCK DIAGRAM

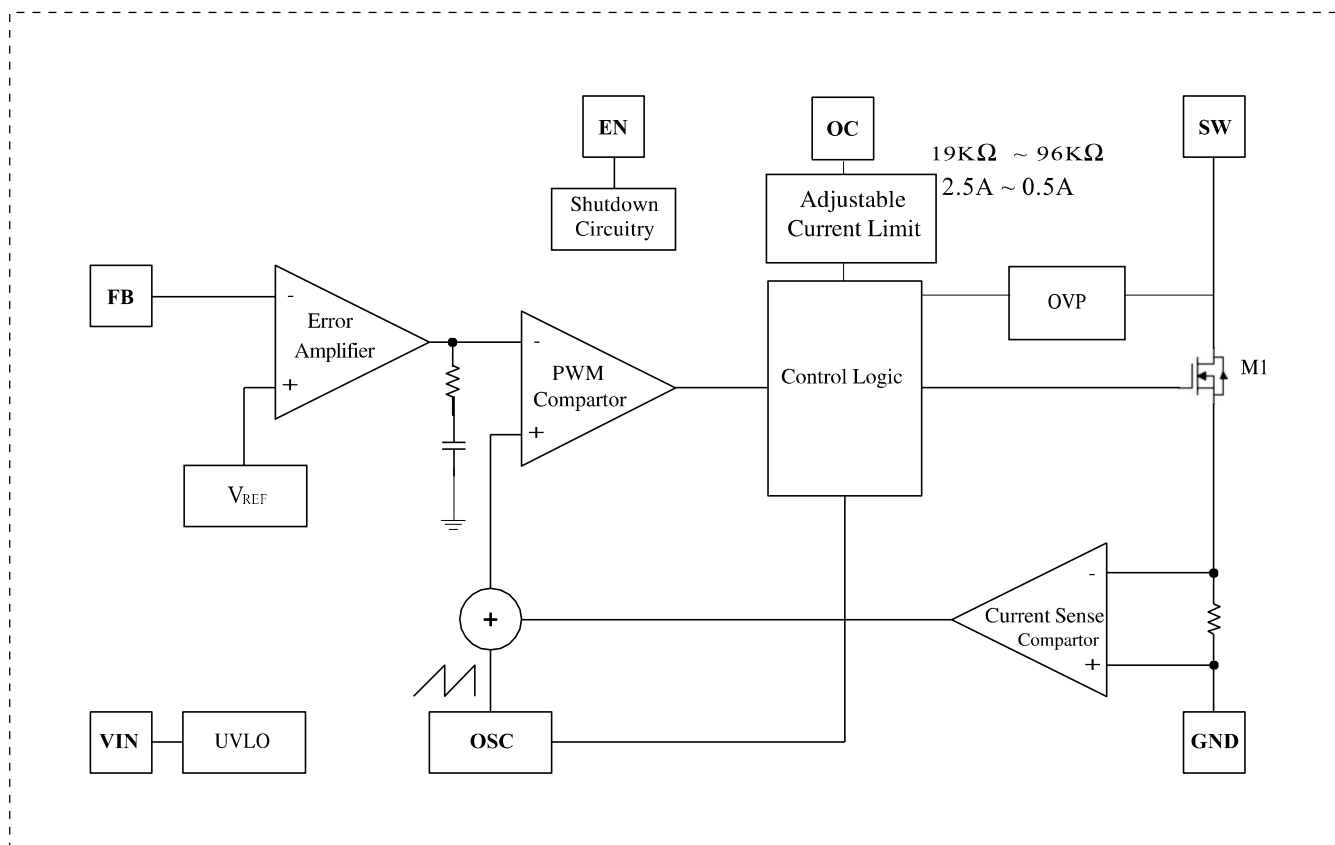
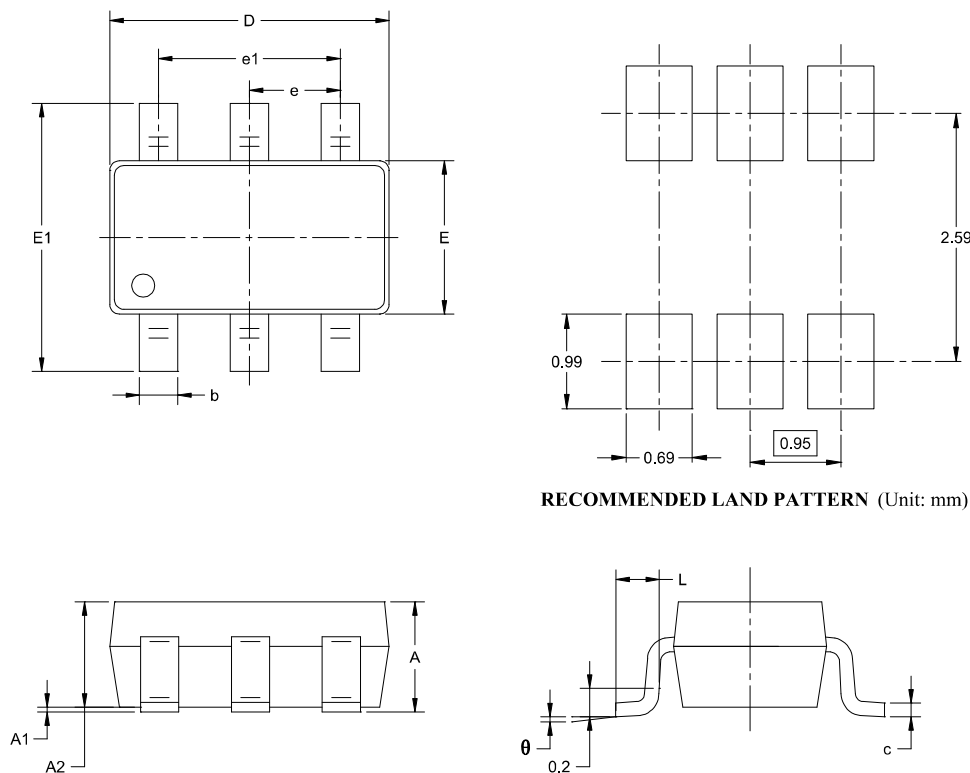


Figure 2. FH4204C Block Diagram

PACKAGE DESCRIPTION

- Type: SOT-23-6L



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950 BSC		0.037 BSC	
e1	1.900 BSC		0.075 BSC	
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

ORDER INFORMATION

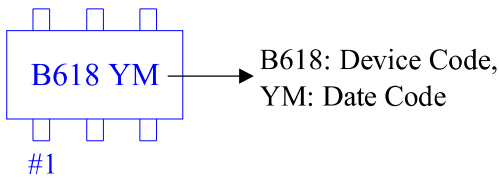
Part Number	Voltage Range	Features	Operating Temperature	Package Type	Top Mark	SPQ
FH4204CM6	2.2V~16.0V	<ul style="list-style-type: none"> • 1.2MHz Frequency • Efficiency: 93% • 2.5A Peak Current • Up to 20.0V 	-40°C to 85°C	SOT-23-6L	B618 YM	3000PCS/Reel

Note:

- FH4204C 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.



Device Name: **SOT-23-6L**



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.



Note:

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