ForDevices

DC-DC Buck(Step-Down) Synchronous Regulator

28.0V 2.0A 500KHz ECOT PSM Control

General Description

The FH4720 is a high frequency, synchronous, rectified, step-down, switch-mode converter with internal power MOSFETs. It offers a very compact solution to provide a 2.0A continuous output current over a wide input supply range, with excellent load and line regulation.

ECOT PSM control operation provides very fast transient response and easy loop design as well as very tight output regulation.

The FH4720 requires a minimal number of readily available, external components and is available in a space saving SOT-23-6L package.

Applications

- Automotive Systems
- Network Terminal Equipment
- Security Monitoring Camera
- Printer Systems
- Industrial Power Systems
- Distributed Power Systems

Brierf

Features

- Wide 4.5V to 28.0V Operating Input Range
- Continuous Output Current: 2.0A
- Switching Frequency: 500KHz
- ECOT PSM Mode Control with Fast Transient Response
- Built-in Over Current Limit
- Built-in Over Voltage Protection
- PFM Mode for High Efficiency in Light Load
- Internal Soft-Start
- 100mΩ/50mΩ Low $R_{DS(ON)}$ Internal Power MOSFETs
- Output Adjustable from 0.600/0.800/0.765V
- No Schottky Diode Required
- Short Protection with Hiccup-Mode
- Integrated internal compensation
- Thermal Shutdown
- Available in SOT-23-6L Package
- -40°C to +85°C Temperature Range

Typical Application Circuit

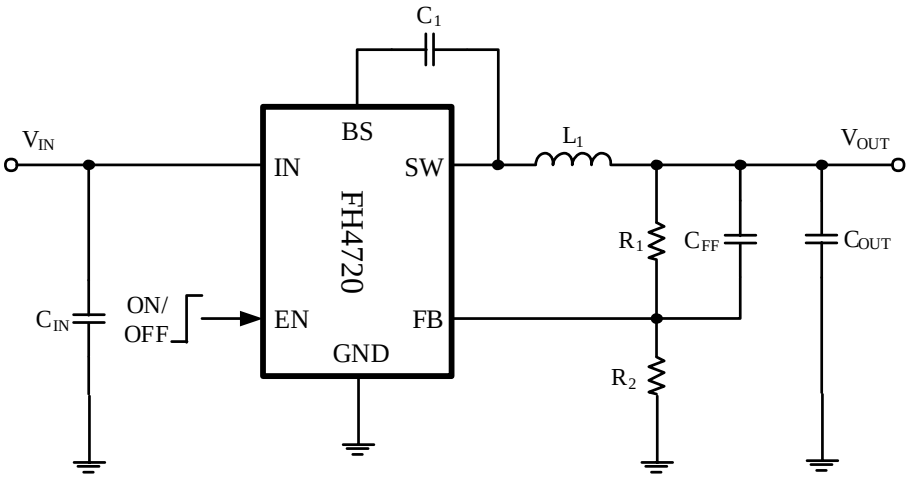


Figure 1. Basic Application Circuit

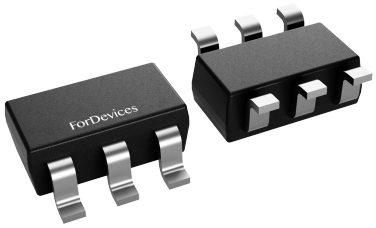
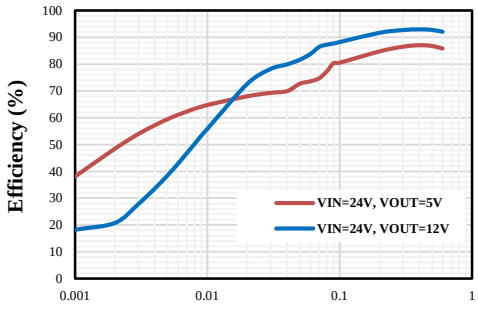
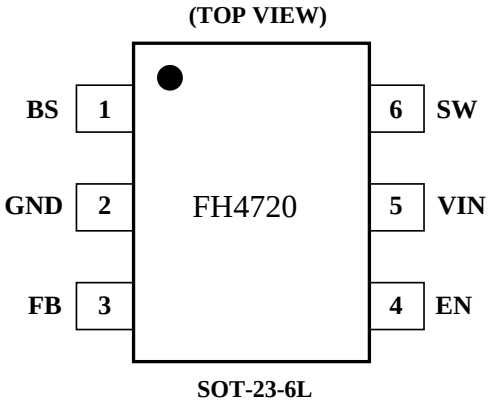


Figure 2. Physical diagram



Efficiency VIN=24V

Pin Configuration



Pin Description

Pin	Name	Function
1	BS	Bootstrap. A capacitor connected between SW and BST pins is required to form a floating supply across the high-side switch driver.
2	GND	Ground Pin
3	FB	Adjustable Version Feedback input. Connect FB to the center point of the external resistor divider
4	EN	Drive this pin to a logic-high to enable the IC. Drive to a logic-low to disable the IC and enter micro-power shutdown mode.
5	IN	Power Supply Pin
6	SW	Switching Pin

Functional Block Diagram

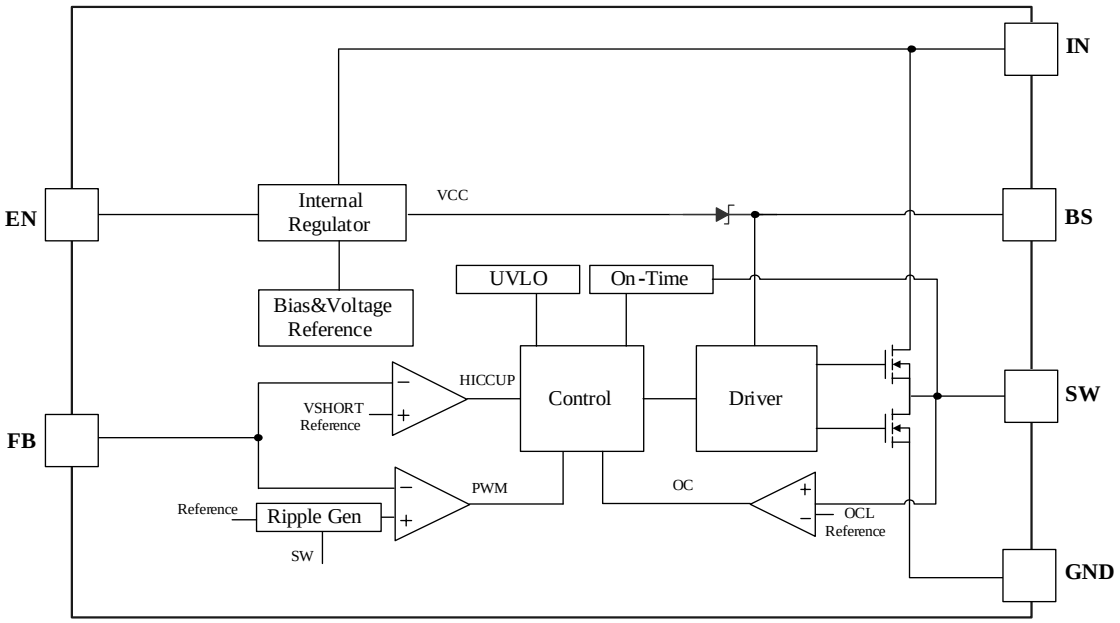


Figure 3. Block Diagram

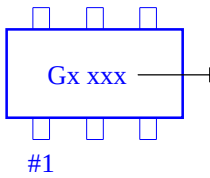
Order Information

Part Number	Description	Temperature Range	Package Type	Top Mark	SPQ
FH4720AM6	DC-DC Buck ECOT PSM Control Vin: 4.5~28.0V Iout:2.0A, 500KHz VFB: 0.6V	-40 ~ +85℃	SOT-23-6L	Ga***	3000PCS/Reel
FH4720BM6	DC-DC Buck ECOT PSM Control Vin: 4.5~28.0V Iout:2.0A, 500KHz VFB: 0.8V	-40 ~ +85℃	SOT-23-6L	Gq***	3000PCS/Reel
FH4720CM6	DC-DC Buck ECOT PSM Control Vin: 4.5~28.0V Iout:2.0A, 500KHz VFB: 0.765V	-40 ~ +85℃	SOT-23-6L	Gs***	3000PCS/Reel

Note:

- FH4720A/B/C 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



Gx: Device Code,
xxx: Date Code

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 Dec.2020