

1.4MHz 1A Synchronous Step-Down Regulator

Features

- High Efficiency: Up to 93%
- Low Quiescent Current: Only 50μA During Operation
- Internal Soft Start Function
- 1A Output Current
- 2.5V to 6V Input Voltage Range
- 1.4MHz Switching Frequency
- No Schottky Diode Required
- 100% Duty Cycle in Dropout Operation
- 0.6V Reference Allows Low Output Voltages
- <1μA Shutdown Current
- Current Mode Operation for Excellent Line and Load Transient Response
- Over Temperature Protected
- RoHS Compliant

General Description

The G5728B is a high efficiency monolithic synchronous buck regulator using a constant frequency, current mode architecture. Supply current during operation is only 50μA and drops to <1μA in shutdown. The 2.5V to 6V input voltage range makes the G5728B ideally suited for single Li-Ion battery-powered applications. 100% duty cycle provides low dropout operation, extending battery run time in portable systems. Switching frequency is internally set at 1.4MHz, allowing the use of small surface mount inductors and capacitors. The internal synchronous switch increase efficiency and eliminates the need for an external Schottky diode. Built-in soft start function eliminates in-rush current that could damage the system.

Applications

- Cellular Telephones
- Personal Information Appliances
- Microprocessors and DSP Core Supplies
- Wireless and DSL Modems
- Digital Still and Video Cameras
- MP3 Players
- Portable Instruments

Ordering Information

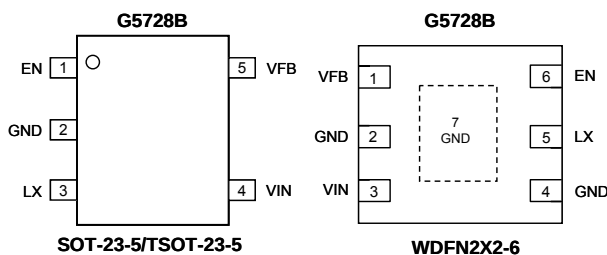
ORDER NUMBER	MARKING	OUTPUT VOLTAGE (V)	TEMP. RANGE	PACKAGE (Green)
G5728BT11U	578Bx	Adjustable	-40°C~+85°C	SOT-23-5
G5728BTO1U	578Bx	Adjustable	-40°C~+85°C	TSOT-23-5
G5728B-12TO1U	578Dx	1.2	-40°C~+85°C	TSOT-23-5
G5728BU51D	578B	Adjustable	-40°C~+85°C	WDFN2X2-6

Note: T1: SOT-23-5 TO:TSOT-23-5 U5:WDFN2X2-6

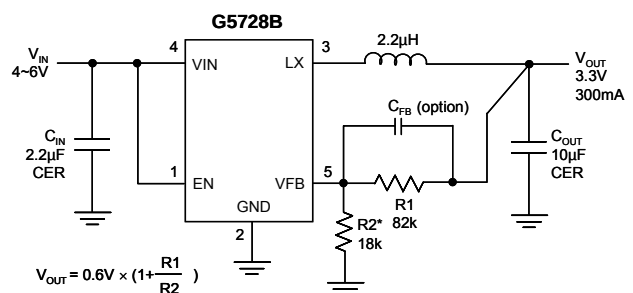
1: Bonding Code

U&D: Tape & Reel

Pin Configuration



Typical Application Circuit



* $R_2 \leq 20k\Omega$ for stability consideration.

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General Description

The G5728C is a high efficiency monolithic synchronous buck regulator using a constant frequency, current mode architecture. The 2.5V to 6V input voltage range makes the G5728C ideally suited for single Li-Ion battery-powered applications. 100% duty cycle provides low dropout operation, extending battery run time in portable systems. Switching frequency is internally set at 1.4MHz, allowing the use of small surface mount inductors and capacitors. The internal synchronous switch increase efficiency and eliminates the need for an external Schottky diode. Built-in soft start function eliminates in-rush current that could damage the system.

Applications

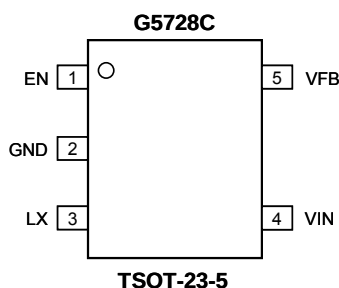
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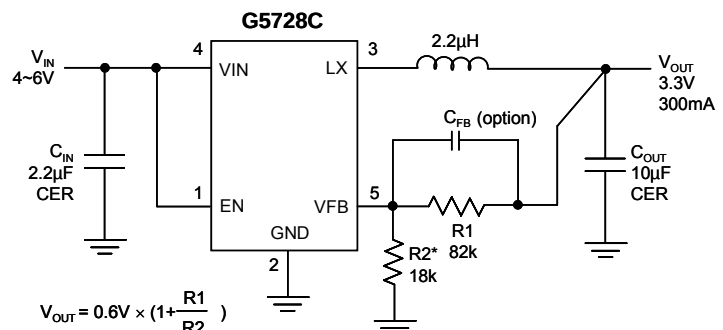
ORDER NUMBER	MARKING	OUTPUT VOLTAGE	TEMP. RANGE	PACKAGE (Green)
G5728CTO1U	578Cx	Adjustable	-40°C~ +85°C	TSOT-23-5

Note: TO:TSOT-23-5
 1: Bonding Code
 U: Tape & Reel

Pin Configuration



Typical Application Circuit



* R2 ≤ 20kΩ for stability consideration.