1MHz 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**
- **1MHz 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**

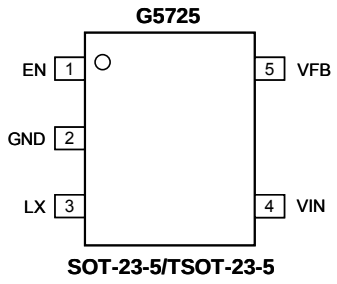
General Description

The G5725 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 G5725 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 1MHz, 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

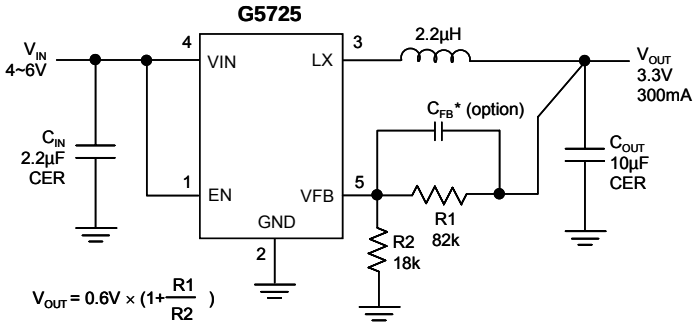
- **Cellular Telephones**
- **Personal Information Appliances**
- **Microprocessors and DSP Core Supplies**
- **Wireless and DSL Modems**
- **Digital Still and Video Cameras**
- **MP3 Players**
- **Portable Instruments**

Pin Configuration



SOT-23-5/TSOT-23-5

Typical Application Circuit



1MHz 1.5A Synchronous Step-Down Regulator

Features

- **High Efficiency: Up to 93%**
- **Low Quiescent Current: Only 50μA During Operation**
- **Internal Soft Start Function**
- **1.5A Output Current**
- **2.5V to 6V Input Voltage Range**
- **1MHz 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 G5725A 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 G5725A 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 1MHz, 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**
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- **MP3 Players**
- **Portable Instruments**

Ordering Information

ORDER NUMBER	MARKING	OUTPUT VOLTAGE	TEMP. RANGE	PACKAGE (Green)
G5725AT11U	57AAx	Adjustable	-40°C~ +85°C	SOT-23-5
G5725ATO1U	57AAx	Adjustable	-40°C~ +85°C	TSOT-23-5

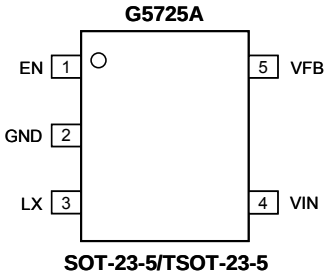
For other output voltage, please contact us at sales@gmt.com.tw

Note:T1: SOT-23-5 TO:TSOT-23-5

1: Bonding Code

U: Tape & Reel

Pin Configuration



SOT-23-5/TSOT-23-5

Typical Application Circuit

