

Dual 1.4MHz, 1A Synchronous Step-Down Regulator

Features

- High Efficiency: Up to 95%
- Internal Soft Start Function
- Output Current
Channel 1: 1A
Channel 2: 1A
- 2.7V to 5.5V Input Voltage Range
- 1.4MHz Switching Frequency
- No Schottky Diode Required
- 100% Duty Cycle in Dropout Operation
- 0.6V Reference Allows Low Output Voltages
- $1\mu\text{A}$ Shutdown Current
- Current Mode Operation for Excellent Line and Load Transient Response
- Over Temperature Protected
- RoHS Compliant

Applications

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

General Description

The G5699 is a dual channel high efficiency monolithic synchronous buck regulator using a constant frequency, current mode architecture. Supply current during operation is only 50µA and drops to <math><1\mu\text{A}</math> in shutdown for each channel. The 2.7V to 5.5V input voltage range makes the G5699 ideally suited for single Li-Ion battery-powered applications. Both regulators have independent input and enable pins. 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. The G5699 is available in TDFN3X3-12 package.

Ordering Information

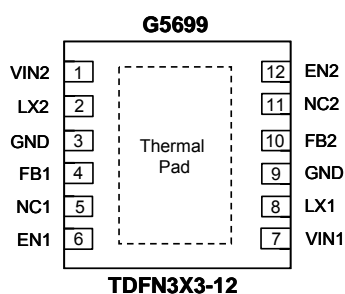
| ORDER NUMBER | MARKING | TEMP. RANGE | PACKAGE (Green) |
|--------------|---------|--------------|-----------------|
| G5699RQ1U | 5699 | -40°C~ +85°C | TDFN3X3-12 |

Note: RQ: TDFN3X3-12

1: Bonding Code

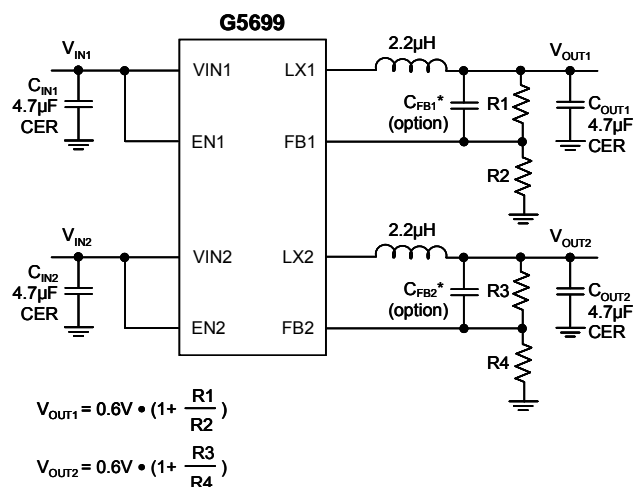
U: Tape & Reel

Pin Configuration



Note: Recommend connecting the Thermal Pad to the Ground for excellent power dissipation.

Typical Application Circuit



* Refer to Table. 1 for Component Selection