



Integrated Device Technology

IDT P9122: Two Channel Synchronous Step-Down Switcher with Integrated FET

CLOCKS AND TIMING | INTERFACE AND CONNECTIVITY | MEMORY AND LOGIC | POWER MANAGEMENT | RF PRODUCTS

FEATURES

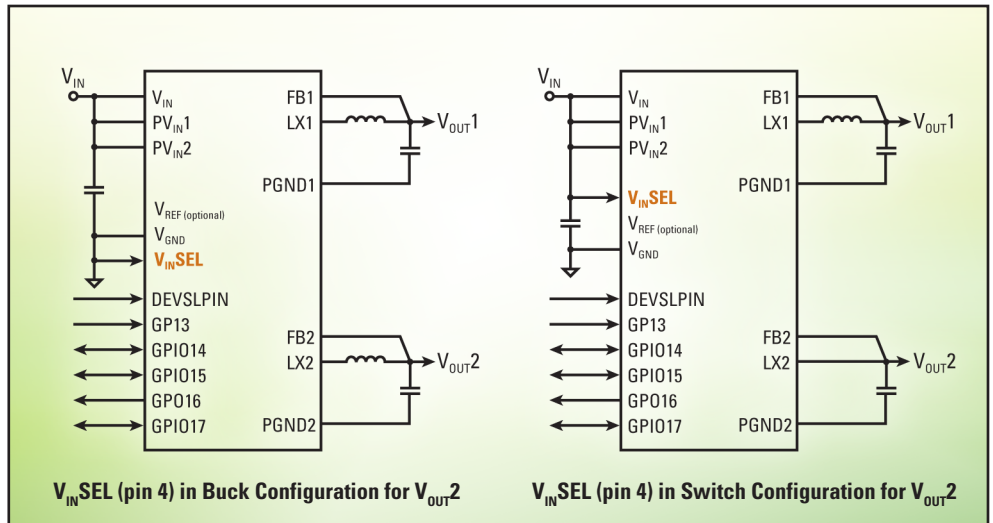
- Input voltage range: 2.7 V to 5.5 V
- 2 step-down converters with integrated FETs
 - Buck 1: 2 A
 - Buck 2: 3 A
- Switching frequency 2 MHz
- Buck 2 with optional 'analog switch mode'
- Low quiescent current: 25 μ A (No load, PFM mode)
- Device sleep mode with less than 1 μ A I_q
- Factory programmable output voltage: 0.8 - 3.4 V
- Automatic PFM/PWM or forced PWM mode
- Power Good and/or Power On Reset output
- Optional programmable sequence mode
- QFN 24-lead 4 x 4 mm x 0.8 mm
- Optional reference voltage output (VREF)
- No external filter/compensation
- Benchmarking efficiency

BENEFITS

- Configurable PMIC solution
- Minimal external component count
- Optional in-circuit programming

TARGET APPLICATIONS

- Point-of-load regulation in a variety of low power applications:
 - Solid State Disk Drive (SSD) Power Management
 - Low power USB powered applications
 - Set Top Box / TV power supply
 - Portable gaming



The IDT P9122 supports several modes to control the two buck regulators and to generate status information like PG (power good) or POR (power on reset).

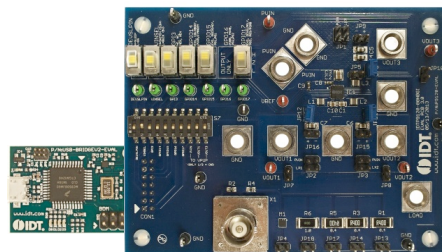
The IDT P9122 is a fully integrated power management IC designed to provide two programmable, high efficiency voltage regulator outputs with ultra-low quiescent currents during sleep mode or no-load conditions. To support low power operation, the IDT P9122 supports both sleep and standby modes.

The device can operate the second regulator in either buck or pass through switch configuration to support 5 V or 3.3 V supplied systems with a single solution.

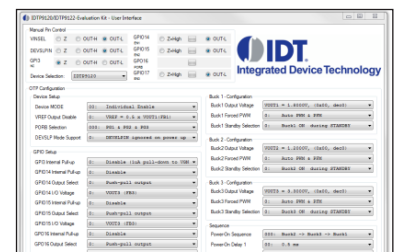
Flexible production programming options allow for selectable direct buck enable inputs or programmable sequencing with power good and power on reset generation as well as programmable output voltages without the need for external adjustment components.

The P9122 is available in a 4 mm x 4 mm, 24-lead, QFN package and is guaranteed to operate over the industrial ambient temperature range of -40°C to +85°C.

USB-BRIDGEV2-EVAL and IDTP9120-EVAL



Graphical User Interface



Various device features can be configured during production using one time programmable fuse memory (OTP). During evaluation, the options can be evaluated using the compatible IDT P9120 Evaluation Kit (IDTP9120-EVAL) and USB-Bridge (USB-BRIDGEV2-EVAL).

For More Information

Visit www.idt.com/go/pmic

DISCLAIMER Integrated Device Technology, Inc. (IDT) and its subsidiaries reserve the right to modify the products and/or specifications described herein at any time and at IDT's sole discretion. All information in this document, including descriptions of product features and performance, is subject to change without notice. Performance specifications and the operating parameters of the described products are determined in the independent state and are not guaranteed to perform the same way when installed in customer products. The information contained herein is provided without representation or warranty of any kind, whether express or implied, including, but not limited to, the suitability of IDT's products for any particular purpose, an implied warranty of merchantability, or non-infringement of the intellectual property rights of others. This document is presented only as a guide and does not convey any license under intellectual property rights of IDT or any third parties. IDT's products are not intended for use in life support systems or similar devices where the failure or malfunction of an IDT product can be reasonably expected to significantly affect the health or safety of users. Anyone using an IDT product in such a manner does so at their own risk, absent an express, written agreement by IDT.

Integrated Device Technology, IDT and the IDT logo are registered trademarks of IDT. Other trademarks and service marks used herein, including protected names, logos and designs, are the property of IDT or their respective third party owners. © Copyright 2014. All rights reserved.

PB_IDTP9122_0814