

Product Brief

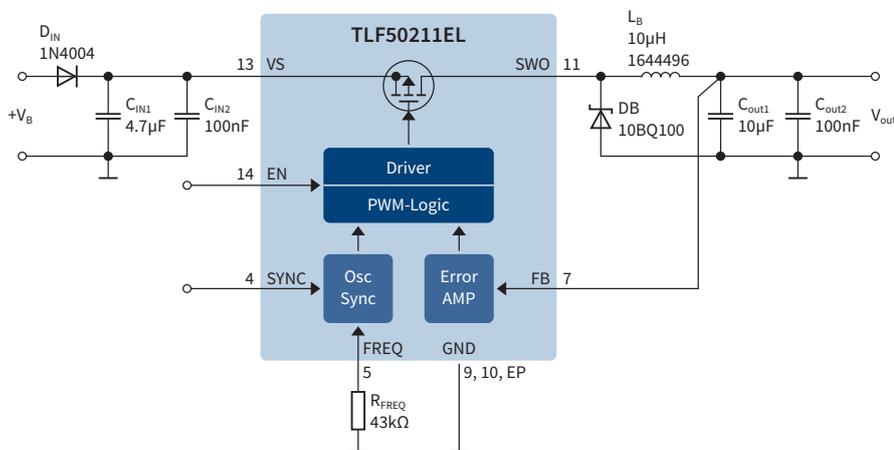
TLF50211EL

2.2MHz Buck Converter 5V, 500mA, with Enable and Low Quiescent Current

The TLF50211EL is part of the TLF502x1-family of DC/DC buck converters offering various features sets like Enable, Reset and Watchdog. It is coming with integrated power transistor and is providing:

- 500mA output current at 5V ($\pm 2\%$)
- 100% duty-cycle
- Wide input voltage range from 4.75V up to 45V
- Ultra-low current consumption of less than 45 μ A
- PWM- to PFM-mode
- Adjustable switching frequency of up to 2MHz
- Integrated compensation and soft-start function
- Enable function
- Cycle-by-cycle current limitation
- Over-temperature shutdown

Application Diagram



Key Features

- Ultra low current consumption
- High switching frequency
- Integrated soft-start
- Integrated compensation
- TLF50211EL: Enable
- Protection functions
- Family pin-out
- PG-SSOP-14 EP
- AEC-qualified

Key Benefits

- Less external components
- Smaller filter elements
- Reduced design efforts and flexibility

Applications

- Automotive general purpose
- Automotive Body

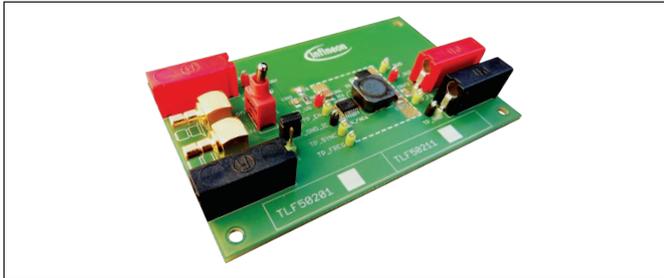
Type	Description	Ordering Code
TLF50211EL	2.2MHz Step-Down Buck Converter 5V; 500mA, low quiescent current; Enable	SP000952282



TLF50211EL

2.2MHz Buck Converter 5V, 500mA, with Enable and Low Quiescent Current

Application Board



Detail: Buck-Core



The buck-core is designed with the aim to be reproduced in customer applications (see dashed area in the right picture).

Correlated Material

Application Board Documentation: [TLF50211EL](#)
 Gerber-Data: On request
 PCB-Board Ordering number: SP000949234

In order to reduce the design-in efforts to a minimum, a small PCB with the buck-core is provided. It enables an easy replacement test and fast prototyping too.

Core Layout



Core Test-Application Example



The buck-core is available as stand-alone 3-wire PCB. It can be easily applied in any application as replacement. Core characterization report and layout data (gerber-file) are available.

Correlated Material

Core Board Documentation: [TLF50211EL](#)
 Gerber-Data: On request
 Ordering number: SP001254796

Type	Description	Ordering Code
TLF50211EL	2.2MHz Step-Down Buck Converter 5V; 500mA, low quiescent current; Enable	SP000952282

Published by
 Infineon Technologies AG
 85579 Neubiberg, Germany

© 2014 Infineon Technologies AG.
 All Rights Reserved.

Visit us:
www.infineon.com

Order Number: B124-H9922-X-X-7600
 Date: 07 / 2014

Attention please!

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenheitsgarantie"). With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office (www.infineon.com).

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office. Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.