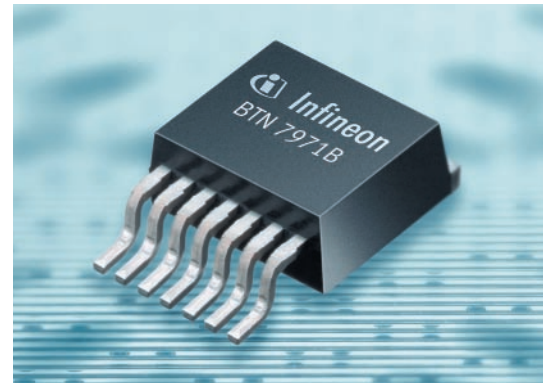


## BTN 7971B

High Current PN Half Bridge  
Infineon® NovalithIC®



THE BTN 7971B is a fully integrated high current half bridge for motor drive applications. It is part of the Infineon® NovalithIC® family containing one p-channel highside MOSFET and one n-channel lowside MOSFET with an integrated driver IC in one package. The power switches utilize vertical MOS technologies to ensure optimum on state resistance. Due to the p-channel highside switch the need for a charge pump is eliminated thus minimizing EMI. Interfacing to a microcontroller is made easy by the integrated driver IC which features logic level inputs, diagnosis with current sense, slew rate adjustment, dead time generation and protection against overtemperature, overvoltage, undervoltage, overcurrent and short circuit.

The BTN 7971B provides a cost optimized solution for protected high current PWM motor drives with very low board space consumption.

### Applications

High current DC- or brushless DC (BLDC) motor drives for use in applications like

- Power Windows
- Sun Roof
- Central Door Lock
- Seat Positioning
- Wiper
- 4 Wheel Transfer Case
- Electronically Controlled Manual Transmission (ECMT)
- Cooling Fan
- Seat Belt Pretensioner
- Electronic Parking Brake
- Pump Control

### Features

- High peak current capability of min. 50 A
- Path resistance of typ. 16 mΩ @ 25°C
- Low quiescent current of typ. 7 μA @ 25°C
- PWM capability of up to 25 kHz with active freewheeling
- Switched mode current limitation for reduced power dissipation in overcurrent
- Status flag diagnosis with current sense capability
- Overtemperature shut down with latch behaviour
- Overvoltage and undervoltage shut down
- Driver circuit with logic level inputs
- Adjustable slew rates for optimized EMI
- Operation down to 4.5V
- Fast switching speed to minimize switching losses in high power applications

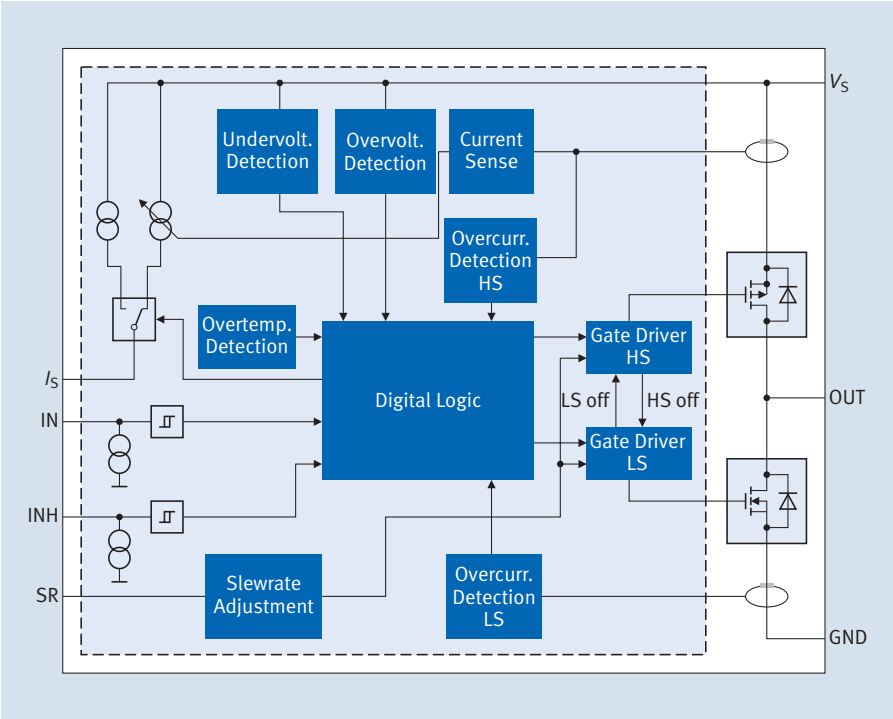
[www.infineon.com/NovalithIC](http://www.infineon.com/NovalithIC)

## Automotive Power



Never stop thinking

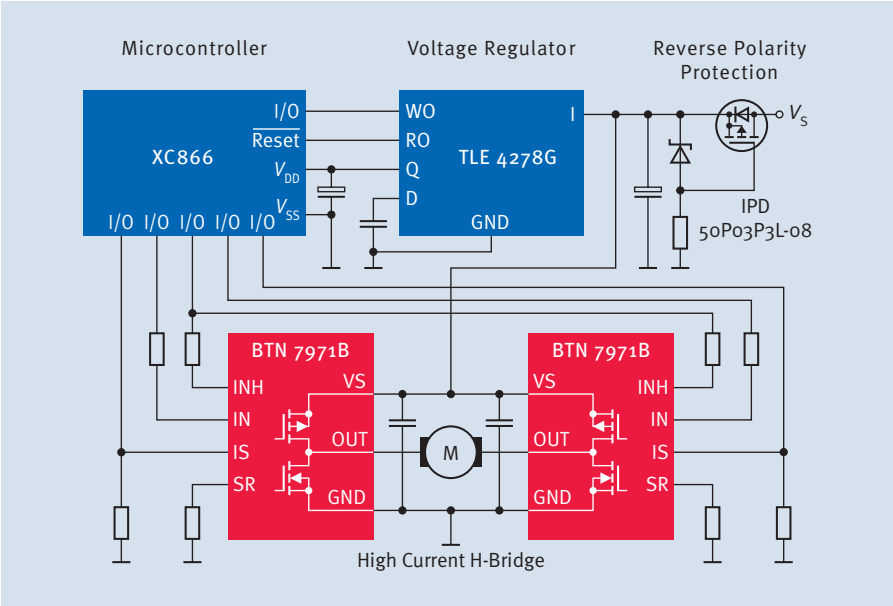
Block Diagram



Product Summary

Type	Description	Package
BTN 7971B	High Current PN Half Bridge	PG-T0263-7-6

Application Example



How to reach us:  
<http://www.infineon.com>

Published by  
Infineon Technologies AG  
81726 Munich, Germany

© 2007 Infineon Technologies AG  
All Rights Reserved.

Legal Disclaimer

The information given in this Product Brief shall in no event be regarded as a guarantee of conditions or characteristics. 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 the nearest Infineon Technologies Office ([www.infineon.com](http://www.infineon.com)).

Warnings

Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office. Infineon Technologies components may be used in life-support devices or systems only 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.