



Product brief

IFX9202ED

Dual general purpose 6 A H-bridge with SPI diagnosis

The IFX9202ED is a dual general purpose 6 A H-bridge for industrial applications, home appliance and building automation, power tools battery management and medical applications, designed for the control of small DC motors and inductive loads is available from Infineon.

The outputs can be pulse width modulated at frequencies up to 20 kHz – that enables operation above the human sonic range – by means of PWM/DIR control. While the signal at the direction input defines the direction of the DC motor, the PWM signal controls the duty cycle. For load currents above the current limitation threshold (8 A typ.) the H-bridge switches into chopper current limitation mode.

The IFX9202ED is protected against short circuits and overtemperature and provides diagnosis via SPI or basic error feedback via status flag. Open load can be detected when the bridge is disabled or during PWM operation of inductive loads.

The robust DSO-36 (Dual gauge) package provides excellent thermal performance.

Applications

- > DC motor control for industrial applications
- > Stepper motors in industrial applications
- > Home and building automation
- > Power tools battery management
- > Industrial robotic
- > Medical applications



Performance IFX9202ED

The IFX9202ED is based on IFX9201SG with two independent general purpose 6 A H-bridges in a robust and small package for PCB area optimization.

Key features

- > $R_{DS(on)}$ (typ.) < 100 mΩ per switch
- > Operation voltage: 5.0 to 36 V
- > Fully 3.3/5.0 V compatible logic inputs
- > Low standby current
- > Short circuit and overtemperature protection
- > V_S undervoltage protection
- > Open load detection in ON and OFF state
- > Detailed SPI diagnosis or simple error flag
- > Green product (RoHS compliant)

Key benefits

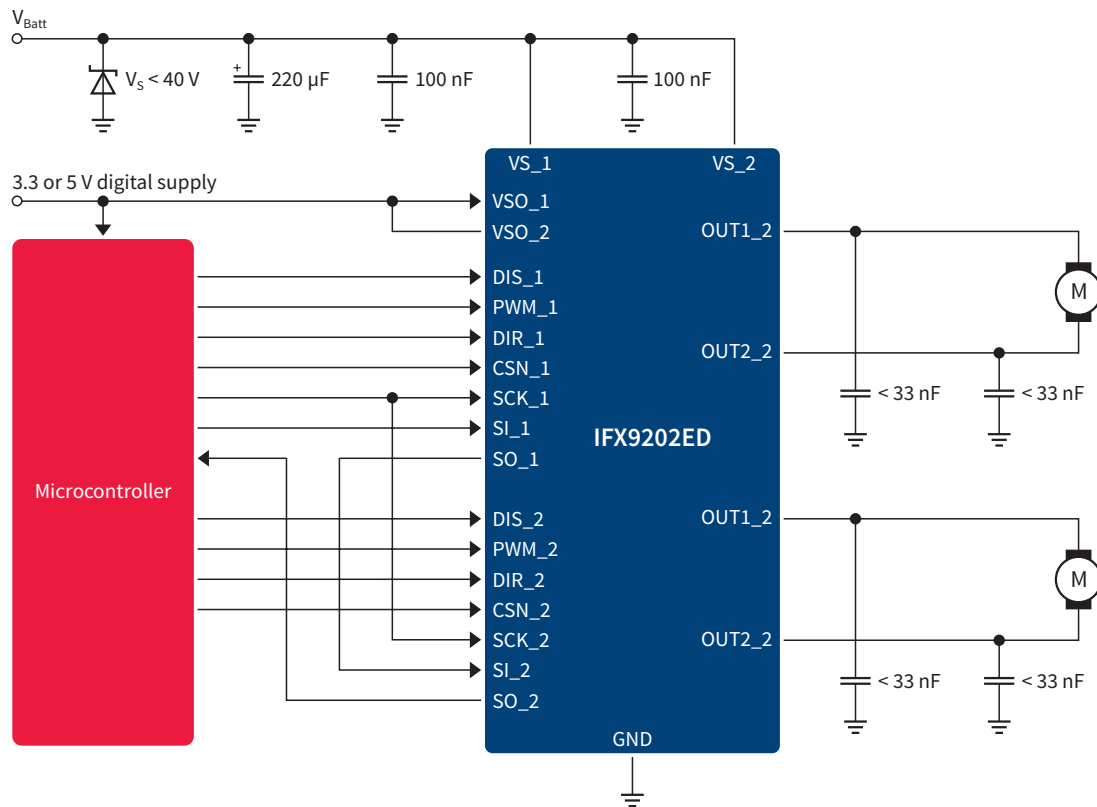
- > Small package saves board space
- > Simple control with PWM/DIR control pins
- > Simple design with few external components
- > Optional SPI enables for easy diagnosis



IFX9202ED

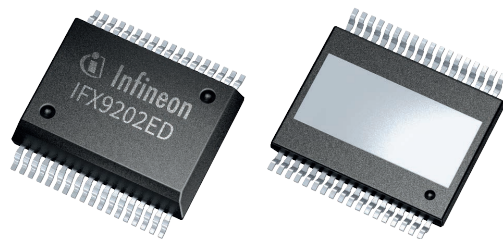
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Block diagram



The DSO-36 (Dual gauge) package

- > Small footprint (106 mm²)
- > 0.5 mm pitch
- > Unparalleled thermal performance $R_{thJC} < 1 \text{ K/W}$



Published by
Infineon Technologies AG
81726 Munich, Germany

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