



TLE 8444SL – Quad Half-Bridge Driver IC for Bipolar Stepper and DC Motors

TLE 8444SL IS A PROTECTED QUAD half-bridge IC developed for automotive and industrial motion control applications. It is a monolithic die based on Infineon's smart mixed technology.

This product can be used to drive DC motors in forward (cw), reverse (ccw), brake and high-impedance modes. It also allows stepper motors to be driven in no-current, negative/positive output current modes. These modes can be easily achieved by connecting the device to a microcontroller via a standard parallel interface.

The PG-SSOP-24-7 package saves PCB board space and costs. Integrated short circuit and over temperature protection as well as built-in diagnosis features such as over- and under voltage lockout and open load detection improve system reliability and performance.

Applications

- DC motor drives
- Bipolar stepper motors drives

Key Features

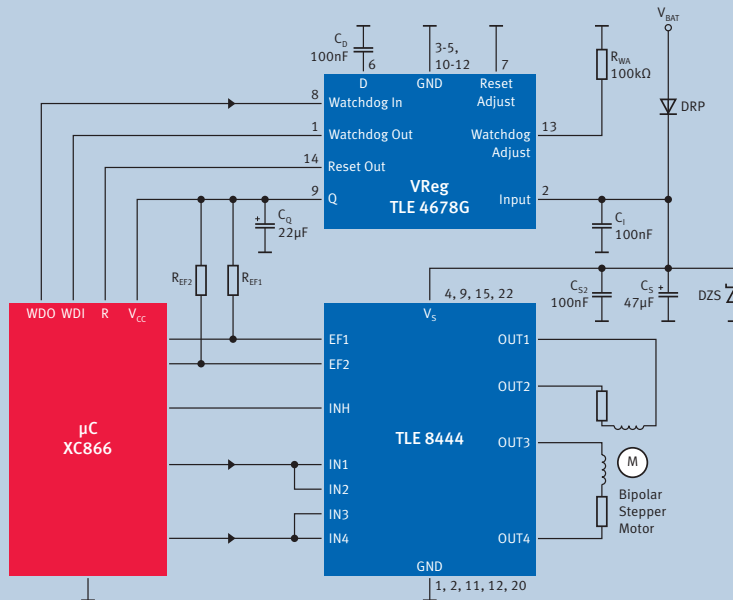
- PWM capability up to 10kHz
- Simple parallel interface control
- Error Flag Diagnosis
- Low current consumption in sleep mode (max 5 μ A)
- Over temperature protection
- Open load detection
- Minimum Overcurrent Shutdown at 0.9A
- AEC qualified

Key Benefits

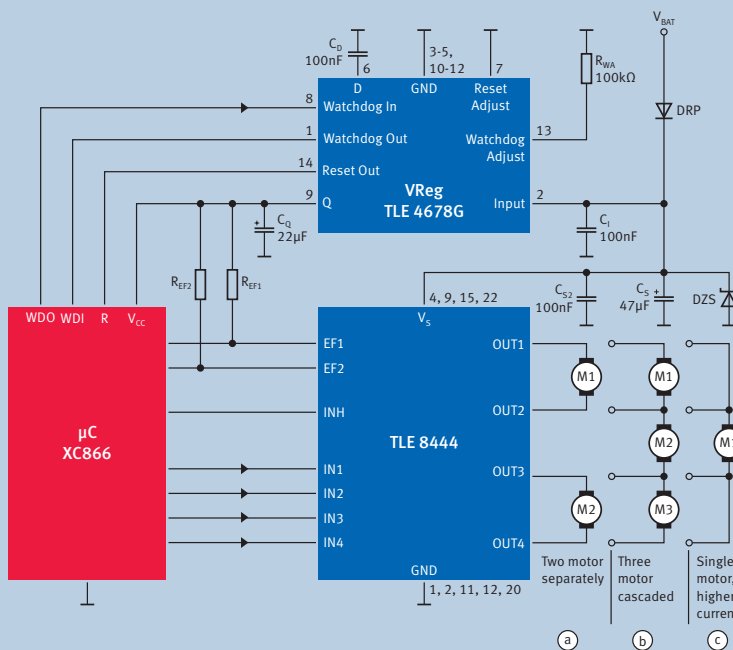
- Can be used for fast switching applications
- Easy failure detection
- Low impact on battery lifetime
- Implementation of thermal shutdown extends IC lifetime
- Allows Motor Peak currents up to 0.9A
- Broken wire connections easily detected
- For automotive and industrial applications

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Application Diagram – Stepper Motor



Application Diagram – DC Motor



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