

MPC17533

0.7 A 6.8 V Dual H-Bridge Motor Driver

H-Bridge Motor Drivers

DESCRIPTION

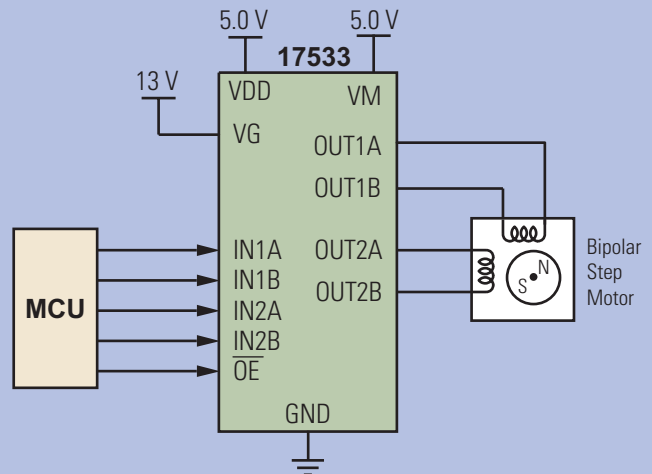
The 17533 is a monolithic dual H-Bridge power IC ideal for portable electronic applications containing bipolar stepper motors and/or brush DC-motors (e.g., cameras and disk drive head positioners).

The 17533 operates from 2.0 V to 6.8 V, with independent control of each H-Bridge via parallel MCU interface (3.0 V- and 5.0 V-compatible logic). The device features built-in shoot-through current protection and an undervoltage shutdown function.

The 17533 has four operating modes: Forward, Reverse, Brake, and Tri-Stated (High Impedance). The 17533 has a low total $R_{DS(ON)}$ of 1.2 Ω (max @ 25°C).

The 17533's low output resistance and high slew rates provide efficient drive for many types of micromotors.

17533 SIMPLIFIED APPLICATION DIAGRAM



APPLICATIONS

- Portable Electronics
- Lens Shutter Camera
- Optical Disc Drive
- (MO, DVD, CD, etc.)

PERFORMANCE

TYPICAL VALUES

Outputs	2 ch
Output Current	0.7 A (DC), 1.4 A (PEAK)
Motor Output Voltage	2.0 - 6.8 V
Logic Operating Voltage	2.7 - 5.7 V
Input PWM	200 kHz
Operating Temp	-20°C ≤ T _A ≤ 65°C

FEATURES

- Low Total $R_{DS(ON)}$ 0.8 Ω (Typ), 1.2 Ω (Max) @ 25°C
- Output Current 0.7 A (DC), 1.4 A (Peak)
- Shoot-Through Current Protection Circuit
- 3.0 V/5.0 V CMOS-Compatible Inputs
- PWM Control Input Frequency up to 200 kHz
- Built-In 2-Channel H-Bridge Driver
- Low Power Consumption
- Undervoltage Detection and Shutdown Circuit
- Devices available for comparison are in the Analog Product Selector Guide - SG1002 and Automotive Product Selector Guide - SG187

PROTECTION	DETECT	SHUT DOWN
Undervoltage	●	●

CUSTOMER BENEFITS

- Easy MCU interfacing to two H-Bridges
- Undervoltage detection to prevent erratic operation
- High PWM rate for enhanced motor control
- Output protected H-Bridge operation to 6.8 V @ 700mA cont.
- PWM to 200 kHz
- Low profile package for portable designs
- Low quiescent current
- Reduced design time

QUESTIONS

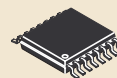
- Are you working with portable electronic battery powered applications?
- Do you need to control a stepper or Brush DC-motor in a 3 or 5 V logic system?
- Are you designing a Brush DC-motor controller for motors up to 1.4 A (peak) and 6.8 V DC?

ORDERING INFORMATION

Device	Temperature Range (T_A)	Package
***17533EV/EL	-20°C to 65°C	16 VMFP
Data Sheet Order Number		MPC17533

***Prefix Index:
PPC = Engineering Samples; MPC = Production

Contact Sales for Evaluation Kit Availability



16 VMFP
0.65 mm Pitch
5.3 mm x 5.45 mm Body