

ANALOG PRODUCTS

MPC17529 FACT SHEET



POWER ICs
H-BRIDGE

17529 0.7 Ω (TYP) DUAL H-BRIDGE MOTOR DRIVER

The 17529 is a monolithic dual H-Bridge that is ideal for use in portable electronic applications to control bipolar stepper motors and brush DC-motors found in Camera Lens Shutters, Optical Disc drives, and other head positioners.

The 17529 is a 6.8 V dual H-bridge motor driver with enable and tri-state bridge control via a parallel MCU interface (3.0 V and 5.0 V compatible logic). The device features an on-board charge pump, and built-in shoot through current protection and undervoltage detector.

This IC has four output control modes: Forward, Reverse, Brake, Tri-state (Open) and low "ON" resistance of 1.2 Ω (max). The 17529 can drive various types of micro motors with low loss via parallel drive. Each bridge can be used for PWM control at frequency up to 200kHz.

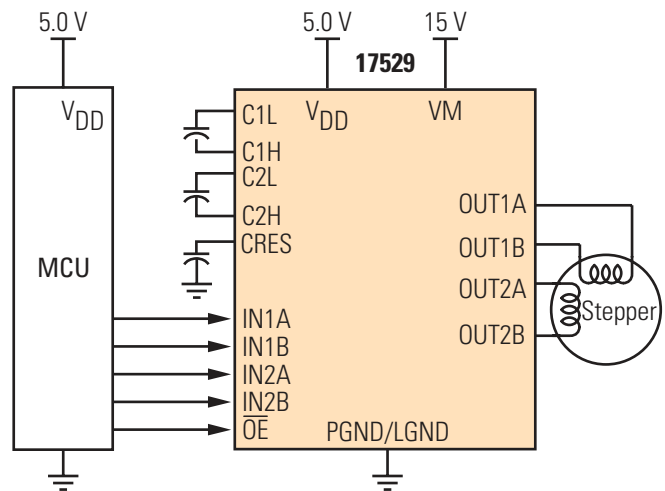
APPLICATIONS

- Portable Electronics
- SLR Lens Shutter Control
- Optical Disc Drive (MO, DVD, and CD)
- DSC, DVC

CUSTOMER BENEFITS

- Easy MCU interfacing to dual H-Bridges
- Dual H-Bridges can be used singly or in parallel
- Undervoltage detection to prevent erratic operation
- Low $R_{DS(ON)}$ bridge maximizes current to a load
- Output protection H-Bridge operation to 6.8 V @ 1.4 A peak PWM to 200 kHz
- Integral charge pump for a simpler system
- Low quiescent current
- Low profile package for portable designs
- Reduced design time

Simplified Application Diagram

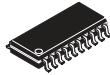



Performance	Typical Values
Outputs	2 ch
Output Current	0.7 A (DC), 1.4 A (Peak)
Motor Operating Voltage	2.0 V – 6.8 V
Logic Operating Voltage	2.7 V – 5.7 V
Input PWM	200 kHz
Operating Temp	-20°C ≤ T _A ≤ 65°C

FEATURES

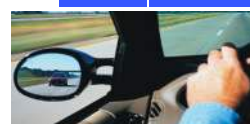
- Motor power supply 6.8 V operation
- Low $R_{DS(ON)}$ 0.7 Ω (typ)
- Output current 700 mA (DC), 1.4 A (peak)
- Shoot through current protection circuit
- PWM control input frequency 200 kHz
- Charge pump circuit
- Additional devices available for comparison in Analog Selector Guide SG1002/D

Protection	Detect	Limiting	Shut Down
	Undervoltage	•	
Overcurrent/Short Circuit		•	

Ordering Information	Package	Ship Method	Motorola Part Number
	20 VMFP	Rail T/R	**17529EV **17529EVEL
	24 QFN	Rail T/R	**17529EP **17529EPR2
Data Sheet Order Number			MPC17529/D
Contact Sales for Evaluation Kit Availability			
**Prefix Index: PPC = Eng Samples; XPC = In Qual; MPC = Production			

QUESTIONS

- Are you working with portable electronic battery powered applications?
- Do you need to control a bipolar stepper or brush DC-motor in a 3.0 V or 5.0 V logic system?
- Are you designing a motion control system using motors up to 1.4 A (peak) and 6.8 V DC?



How to reach us:

USA/EUROPE/Locations Not Listed: Motorola Literature Distribution;
P.O. Box 5405, Denver, Colorado 80217
1-800-521-6274 or 480-768-2130

JAPAN: Motorola Japan Ltd.; SPS, Technical Information Center,
3-20-1, Minami-Azabu, Minato-ku, Tokyo 106-8573 Japan
81-3-3440-3569

ASIA/PACIFIC: Motorola Semiconductors H.K. Ltd.; Silicon Harbour Centre,
2 Dai King Street, Tai Po Industrial Estate, Tai Po, N.T., Hong Kong
852-26668334

HOME PAGE: <http://motorola.com/semiconductors>



MOTOROLA and the Stylized M Logo are registered in the U.S. Patent and Trademark Office. All other product or service names are the property of their respective owners. Motorola, Inc. is an Equal Opportunity/Affirmative Action Employer.
© Motorola, Inc. 2003

MPC17529FS/D
Rev. 1