



ANALOG PRODUCTS

MPC17529 FACT SHEET

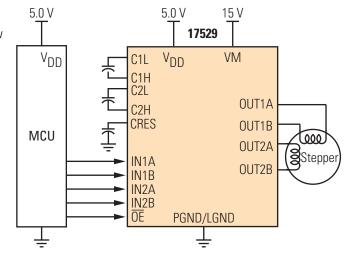
17529 0.7 Ω (TYP) DUAL H-BRIDGE MOTOR DRIVER

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.

Simplified Application Diagram



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

 $\begin{tabular}{lll} \textbf{Performance} & \textbf{Typical Values} \\ \textbf{Outputs} & 2 \text{ ch} \\ \textbf{Output Current} & 0.7 \text{ A (DC), 1.4 A (Peak)} \\ \textbf{Motor Operating Voltage} & 2.0 \text{ V} - 6.8 \text{ V} \\ \textbf{Logic Operating Voltage} & 2.7 \text{ V} - 5.7 \text{ V} \\ \textbf{Input PWM} & 200 \text{ kHz} \\ \textbf{Operating Temp} & -20^{\circ}\text{C} \leq T_{A} \leq 65^{\circ}\text{C} \\ \end{tabular}$

FEATURES

- Motor power supply 6.8 V operation
- Low $R_{DS(ON)} = 0.7 \Omega$ (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	
interior de la	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?



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