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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# MPC17559

## Micromotor Driver with Dual 3-Phase and Dual H-Bridge Outputs

Power Actuation

H-Bridge Motor Drivers

### DESCRIPTION

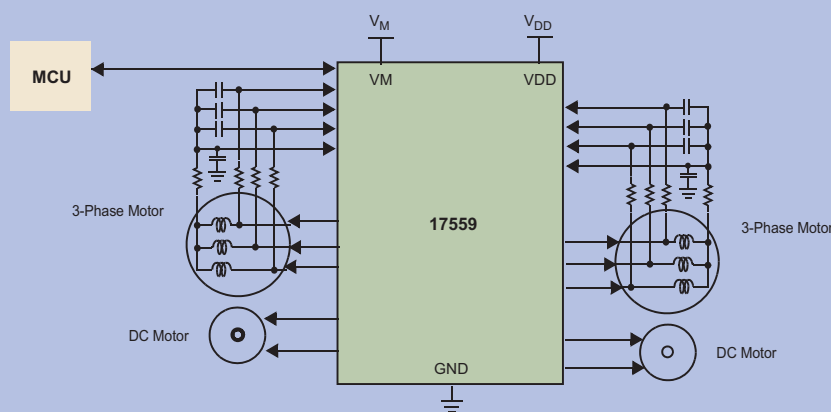
The 17559 is a monolithic quad H-Bridge power IC ideal for portable electronic applications containing multiple brushless and brush DC-motors.

The 17559 is designed to drive motors with supplies operating from 0.9 V to 3.5 V, with independent control of each output bridge via parallel 1.8 V to 3.6 V logic-compatible I/O. Each output bridge has its own gate-drive and logic circuitry with built-in shoot-through current protection.

The 17559 has a low total  $R_{DS(ON)}$  of 1.7  $\Omega$  max @ 25°C for each of the two 3-phase output bridges, and a low total  $R_{DS(ON)}$  of 1.3  $\Omega$  max @ 25°C for each of the two H-Bridge outputs.

The 17559 can efficiently drive many types of micromotors owing to its low output resistance and high output slew rates.

### 17559 SIMPLIFIED APPLICATION DIAGRAM



### APPLICATIONS

- Portable Electronics
- Optical Disc Drive (MO, DVD, and CD)
- DSC, DVC
- Robotics

### PERFORMANCE

### TYPICAL VALUES

Performance	2 ch H-Bridge, 2 ch Stepper
Output Current	0.3 A (DC), 0.6 A (Peak)
Motor Operating Voltage	0.9 V – 3.5 V
Logic Operating Voltage	1.8 V – 3.5 V
Input PWM Max	200 kHz
Operating Temperature	-20°C ≤ T <sub>A</sub> ≤ 65°C

## FEATURES

- Two separate three-phase motor drivers
- Two separate H-bridge motor drivers
- Low-voltage detection and shutdown circuitry
- Pb-free packaging designated by suffix code EP
- Devices available for comparison are in the Analog Product Selector Guide - SG1002, and Automotive Product Selector Guide - SG187.

## QUESTIONS

- Are you working with portable electronic battery-powered applications?
- Do you need to control a stepper or brushless DC-motor in a 3 V or 5 V system?
- Are you designing a brushless DC-motor controller for motors up to 2 A (peak) and 6.8 V DC?

PROTECTION	DETECTION	SHUT DOWN
Undervoltages	●	●

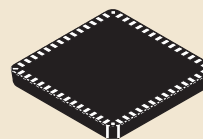
## CUSTOMER BENEFITS

- Easy MCU interfacing and control
- Undervoltage protection to prevent erratic operation
- High PWM rate for enhanced motor control
- Low profile package for portable designs
- Integral charge pump for simpler system
- Low quiescent current
- Two H-Bridges and two three Phase Motor Driver outputs integrated in one package
- Reduced design time

## ORDERING INFORMATION

Device	Temperature Range (T <sub>A</sub> )	Package
MPC17559EP/R2	-20°C to 65°C	56 QFN
Data Sheet Order Number		MPC17559

Contact Sales for Evaluation Kit Availability



**56 QFN**  
0.5 mm Pitch  
8 mm x 8 mm x 1.0 mm Body