



ECOMAL[®]
Electronic Components and Logistics

ECOMAL Europe GmbH

Driver ICs by



IXYS
A Littelfuse Technology

Source: <https://www.littelfuse.com>

LOW-SIDE GATE DRIVERS

IXYS Integrated Circuits offers powerful families of ultra-fast Low-Side Gate Drivers for MOSFETs and IGBTs, with a large mix of logic configurations, packaging, and drive current capabilities. Five of these devices are AEC-Q100 qualified.

Single-output and dual-output low-side driver ICs include selectable options for logic combinations. The range of current ratings offered is the broadest available, extending to 30A peak, which is the **LARGEST PEAK DRIVE CURRENT** capability for an integrated driver on the market.

In all series devices, internal circuitry eliminates cross conduction and current "shoot-through," and the driver is virtually immune to latch up.

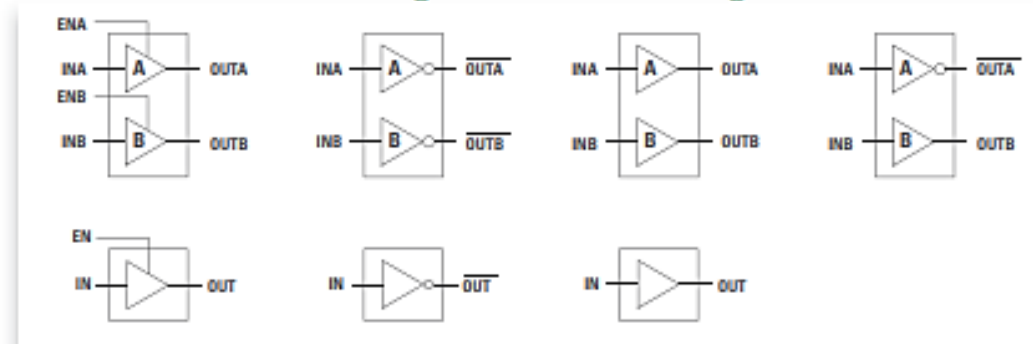
Features & Benefits

- 1.5A to 30A peak source/sink drive current
- Wide operating voltage range up to 35V
- -40°C to +125°C extended operating temperature range
- Logic input withstands negative swing of up to -5V
- Dual drivers have matched rise and fall times
- Low propagation delay time
- Low output impedance

Applications

- Efficient power MOSFET and IGBT switching
- Switch mode power supplies
- Motor controls
- DC to DC converters
- Class-D switching amplifiers
- Pulse transformer driver

Available Single and Dual Driver Logic Versions



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HIGH-SIDE AND LOW-SIDE GATE DRIVER ICs

High-side and low-side drivers control two N-Channel MOSFETs or IGBTs in fast switching applications. The gate driver converts PWM input signals into gate-signals compatible to MOSFETs or IGBTs, providing a robust and efficient power semiconductor control. An integrated bootstrap circuit is generating a floating voltage with enables the high-side driver to operate up to $600V_{DC}$.

The drivers accept wide V_{DD} supply voltage as well as wide logic input voltage ranges. Various built-in protection features ensure safe operation of the driver and the driven power semiconductors.

Features & Benefits

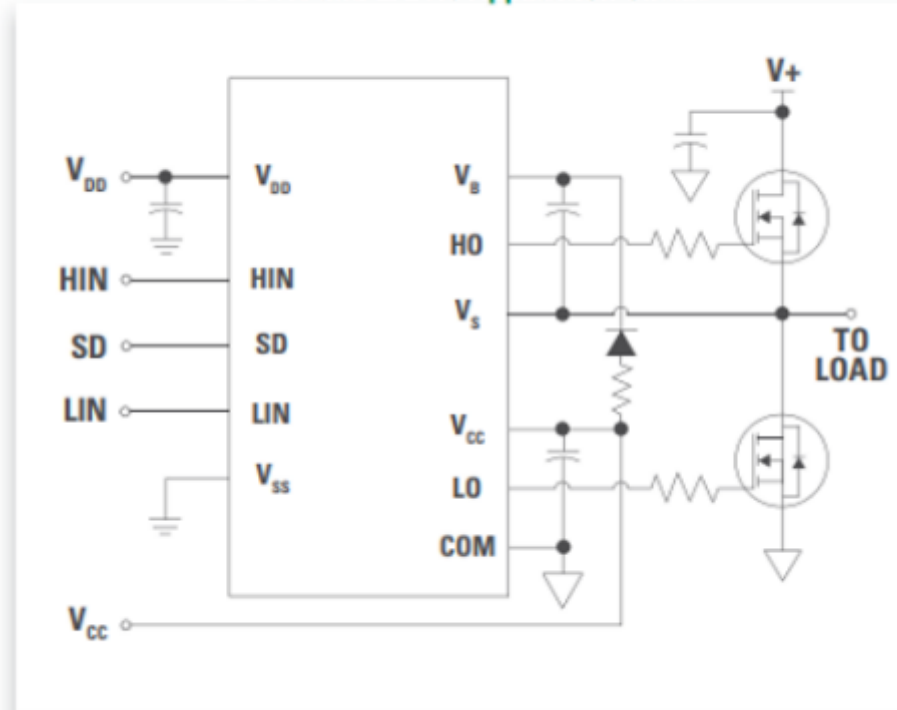
- High-side operation up to $600V_{DC}$
- Outputs tolerant to negative transients
- Supply voltage range: 10V to 20V
- Logic input voltage range: 3.3V to 20V
- Cycle-by-cycle edge-triggered shutdown circuitry
- Under Voltage Lockout (UVLO)
- Operating temperature range: $-40^{\circ}C$ to $+125^{\circ}C$

Applications

- DC-DC Converters
- AC-DC Inverters
- Motor Controls
 - Servo Motor Control
 - Pumps and Fans
- Class D Power Amplifiers
- Uninterruptable Power Supplies (UPS)
- Welding
- Induction Cooking

Source: <https://www.littelfuse.com>

LF2110 and LF2113 Application Circuit



8-Pin SOIC



14-Pin SOIC



16-Pin SOIC

HALF-BRIDGE GATE DRIVER ICs

Half-bridge gate drivers control two N-Channel MOSFETs or IGBTs in fast switching applications. The gate driver converts PWM input signals into gate-signals compatible to MOSFETs or IGBTs, providing a robust and efficient power semiconductor control. An integrated bootstrap circuit is generating a floating voltage with enables the high-side driver to operate up to $600V_{DC}$.

The drivers accept wide V_{DD} supply voltage as well as wide logic input voltage ranges. Various built-in protection features ensure safe operation of the driver and the driven power semiconductors.

Features & Benefits

- High-side operation up to $600V_{DC}$
- Outputs tolerant to negative transients
- Supply voltage range: 10V to 20V
- Logic input voltage range: 3.3V to 20V
- Fixed or programmable deadtime
- Cycle-by-cycle edge-triggered shutdown circuitry
- Under Voltage Lockout (UVLO)
- Operating temperature range: $-40^{\circ}C$ to $+125^{\circ}C$

Applications

- Motor Controls / Drives
- Stepper Motor Drives
- DC/DC-Converters
- AC/DC-Inverters
- Robotics
- Cordless Power Tools
- Drones

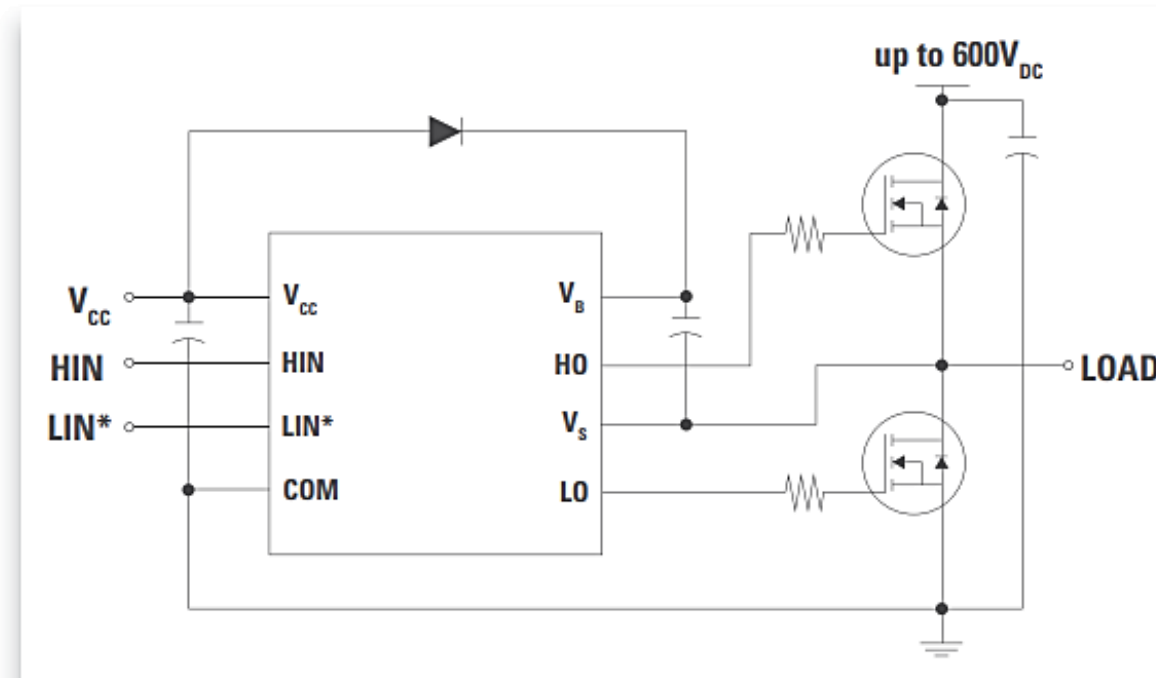


8-Pin SOIC



14-Pin SOIC

LF2103 Application Circuit



3-PHASE HALF-BRIDGE GATE DRIVER ICs

Switching three pairs of N-Channel MOSFETs or IGBTs in 6-pack configurations is a challenge in fast switching applications. 3-phase gate drivers convert PWM input signals into gate-signals compatible to MOSFETs or IGBTs, providing a robust and efficient power semiconductor control.

Integrated bootstrap circuits are generating floating voltages with enables the three high-side drivers to operate up to $600V_{DC}$.

The drivers accept wide V_{DD} supply voltage as well as wide logic input voltage ranges. Various built-in protection features ensure safe operation of the driver and the driven power semiconductors.

Features & Benefits

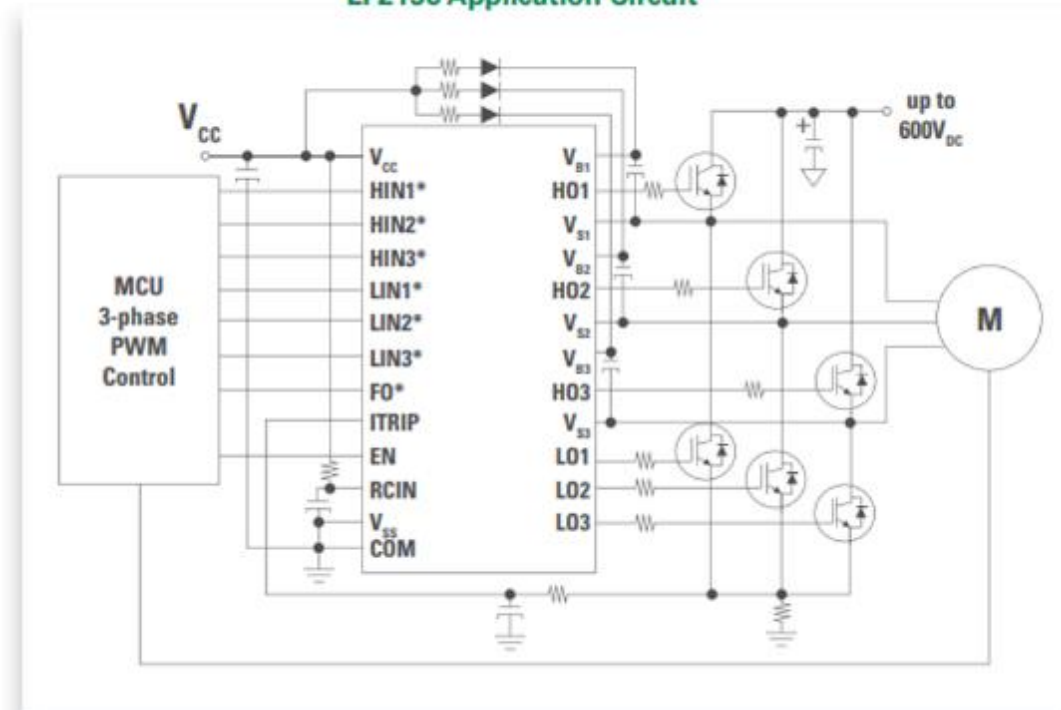
- High-side operation up to $600V_{DC}$
- Outputs tolerant to negative transients
- Supply voltage range: 10V to 20V
- Logic input voltage range: 3.3V to 20V
- Cycle-by-cycle edge-triggered shutdown circuitry
- Under Voltage Lockout (UVLO)
- Matched propagation delay times
- Cross conduction prevention logic
- Shoot-through protection logic
- Internal deadtime
- Operating temperature range: $-40^{\circ}C$ to $+125^{\circ}C$

Applications

- 3-Phase Motor Drives
 - Pump Motors
 - Compressor Motors
 - Fan Motors
- Air Conditioners
- Cordless Power Tools
- Robotics



LF2136 Application Circuit



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*The major component
in your success!*