



Features:

- Drives two N-channel MOSFETs or IGBTs in a half bridge configuration
- Floating high-side driver in bootstrap operation to 600V
- 290mA source/600mA sink output current capability
- Outputs tolerant to negative transients
- Internal logic and deadtime (100ns) to protect MOSFETs
- Logic input (HIN and LIN) 3.3V capability
- Schmitt triggered logic inputs with internal pull down
- Undervoltage lockout for high and low side drivers
- Extended temperature range: -40°C to +125°C

Description

The TF2304M is a high voltage, high speed gate driver capable of driving N-channel MOSFETs and IGBTs in a half-bridge configuration. TF Semi's high voltage process enables the TF2304M's high side to switch to 600V in a bootstrap operation.

The TF2304M logic inputs are compatible with standard TTL and CMOS levels (down to 3.3V) to interface easily with controlling devices. The driver outputs feature high pulse current buffers designed for minimum driver cross conduction. An internal deadtime of 100ns protects high-voltage MOSFETs from shoot-through.

The TF2304M is offered in 8-pin PDIP and SOIC narrow package and operates over an extended -40°C to +125°C temperature range.



Applications

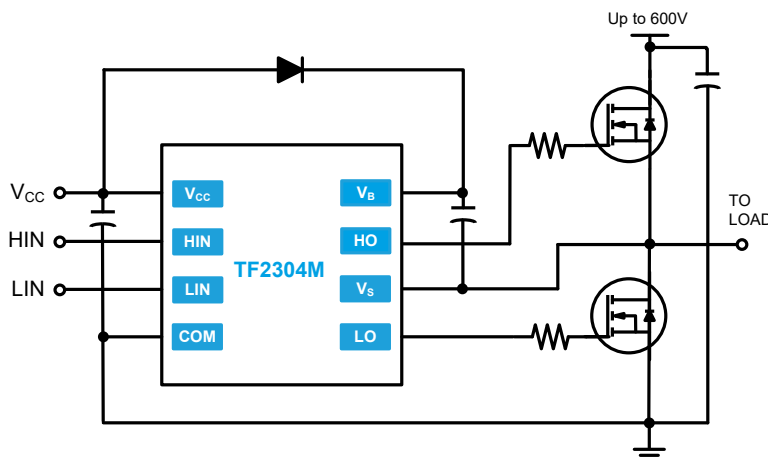
- Motor Controls
- AC-DC Inverters
- DC-DC Converters
- Class D Power Amplifiers

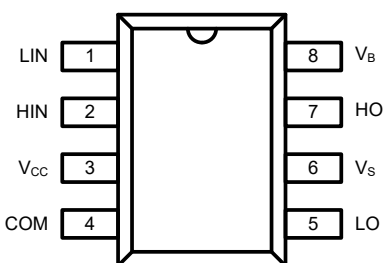
Ordering Information

Year Year Week Week

PART NUMBER	PACKAGE	PACKING / Qty	MARK
TF2304M-3AS	PDIP-8	Tube / 50	YYWW TF2304M Lot ID
TF2304M-TAU	SOIC-8(N)	Tube / 100	YYWW TF2304M Lot ID
TF2304M-TAH	SOIC-8(N)	Tape & Reel / 2500	YYWW TF2304M Lot ID

Typical Application





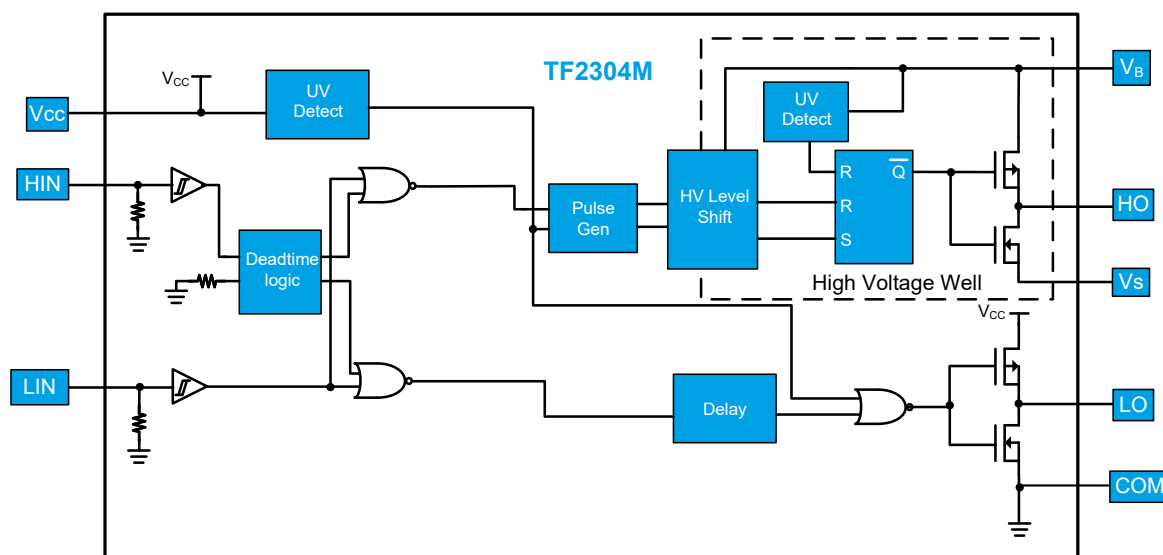
Top View: SOIC-8, PDIP-8

TF2304M

Pin Descriptions

PIN NAME	PIN DESCRIPTION
HIN	Logic input for high-side gate driver output, in phase with HO
LIN	Logic input for low side gate driver output, in phase with LO
COM	Low-side and logic return
LO	Low-side gate drive output
V _{cc}	Low-side and logic fixed supply
V _s	High-side floating supply return
HO	High-side gate drive output
V _b	High-side floating supply

Functional Block Diagram



Revision History

Rev.	Change	Owner	Date
1.0	First release, AI datasheet	D. Walton	1/25/2024

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