

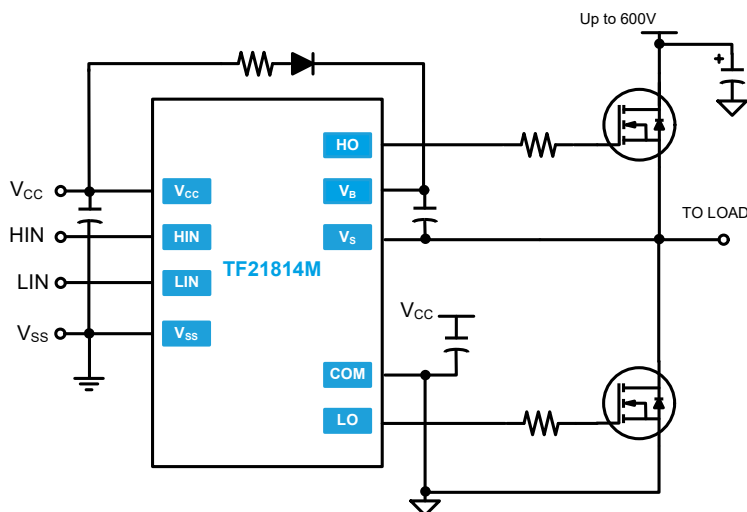
Features

- Floating high-side driver in bootstrap operation to 600V
- Drives two N-channel MOSFETs or IGBTs in a half bridge configuration
- 1.9A source / 2.3A sink output current capability
- Outputs tolerant to negative transients
- Wide low side gate driver supply voltage: 10V to 20V
- 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

Applications

- Motor Drivers
- Motor Controls
- DC-DC Converters
- Class D Power Amplifiers

Typical Application

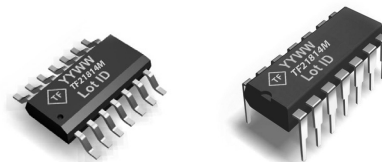


Description

The TF21814M is a high voltage, high speed gate driver capable of driving N-channel MOSFETs and IGBTs in a half bridge configuration. TF Semiconductor's high voltage process enables the TF21814M's high side to switch to 600V in a bootstrap operation.

The TF21814M 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.

The TF21814M is offered in PDIP-14 and SOIC-14(N) packages and operate over an extended -40 °C to +125 °C temperature range.



SOIC-14(N)

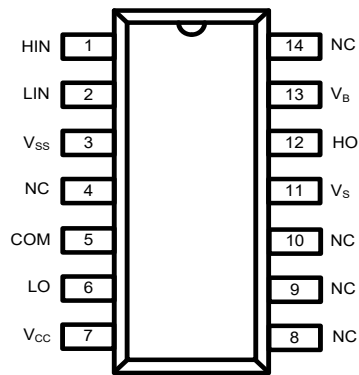
PDIP-14

Ordering Information

Year Year Week Week

PART NUMBER	PACKAGE	PACK / Qty	MARK
TF21814M-3BS	PDIP-14	Tube / 25	YYWW TF21814M Lot ID
TF21814M-TUU	SOIC-14(N)	Tube / 50	YYWW TF21814M Lot ID
TF21814M4-TUH	SOIC-14(N)	T&R / 2500	YYWW TF21814M Lot ID

Pin Diagrams

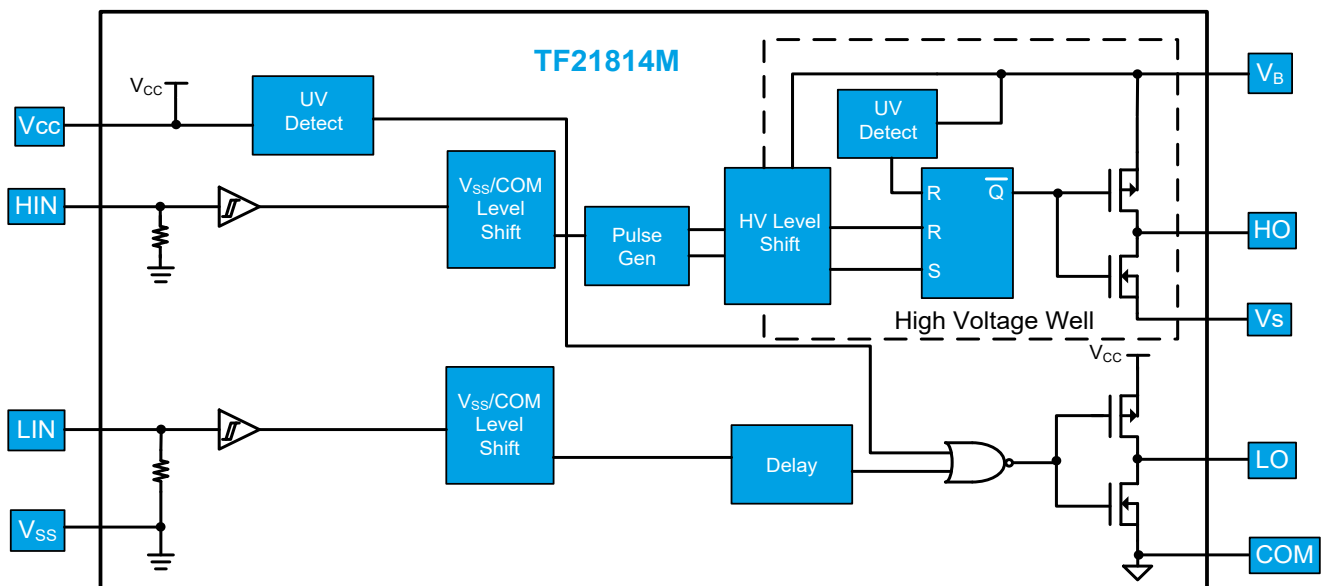


Top View: PDIP-14, SOIC-14

Pin Descriptions

PIN NAME	PIN NUMBER	PIN DESCRIPTION
HIN	1	Logic input for high-side gate driver output, in phase with HO.
LIN	2	Logic input for low-side gate driver output, in phase with LO.
V _{SS}	3	Logic return
NC	4, 8, 9, 10, 14	No Connect
COM	5	Low-side return
LO	6	Low-side gate drive output
V _{CC}	7	Low-side and logic fixed supply
V _S	11	High-side floating supply return
HO	12	High-side gate drive output
V _B	13	High-side floating supply

Functional Block Diagram



Revision History

Rev.	Change	Owner	Date
1.0	First release	D. Walton	12/8/2022

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