

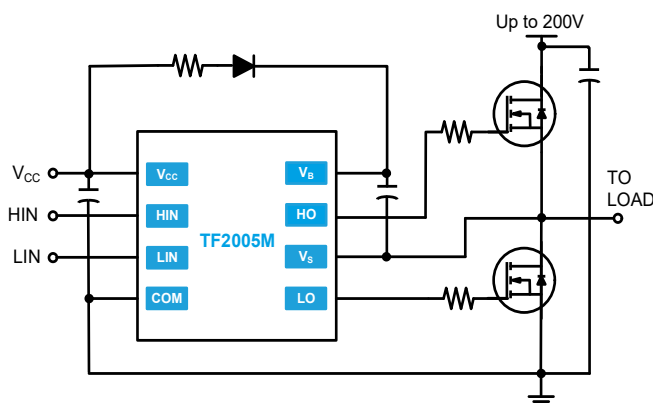
Features

- Floating high-side driver in bootstrap operation to 200V
- Drives two N-channel MOSFETs or IGBTs in high-side/low-side configuration
- Outputs tolerant to negative transients
- Wide low-side gate driver and logic supply: 10V to 20V
- Logic inputs CMOS and TTL compatible (down to 3.3V)
- Schmitt triggered logic inputs with internal pull down
- Delay matching of 30ns maximum
- Source/sink pulsed current of 290mA/600mA typical
- Undervoltage lockout for high-side and low-side drivers
- Space-saving SOIC-8 package available
- Extended temperature range:-40°C to +125°C

Applications

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

Typical Application

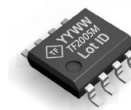


Description

The TF2005M is a mid voltage, high speed gate driver capable of driving N-channel MOSFETs and IGBTs in a high-side/low-side configuration. TF Semiconductor's high voltage process enables the TF2005M's high-side to switch to 200V in a bootstrap operation. The 30ns (max) propagation delay matching between the high and the low side drivers allows high frequency switching.

The TF2005M logic inputs are compatible with standard TTL and CMOS levels (down to 3.3V) for easy interfacing with controlling devices. The driver outputs feature high pulse current buffers designed for minimum driver cross conduction. The low-side gate driver and logic share a common ground

The TF2005M is available in a space-saving 8-pin SOIC package and the operating temperature extends from -40°C to +125°C.

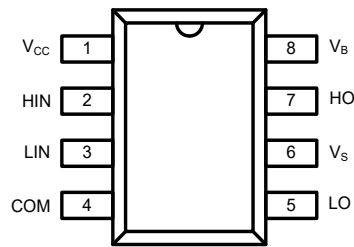


SOIC-8(N)

Ordering Information

Year Year Week Week

PART NUMBER	PACKAGE	PACK / Qty	MARK
TF2005M-TAU	SOIC-8(N)	Tube / 100	YYWW TF TF2005M Lot ID
TF2005M-TAH	SOIC-8(N)	T & R / 2500	YYWW TF TF2005M Lot ID

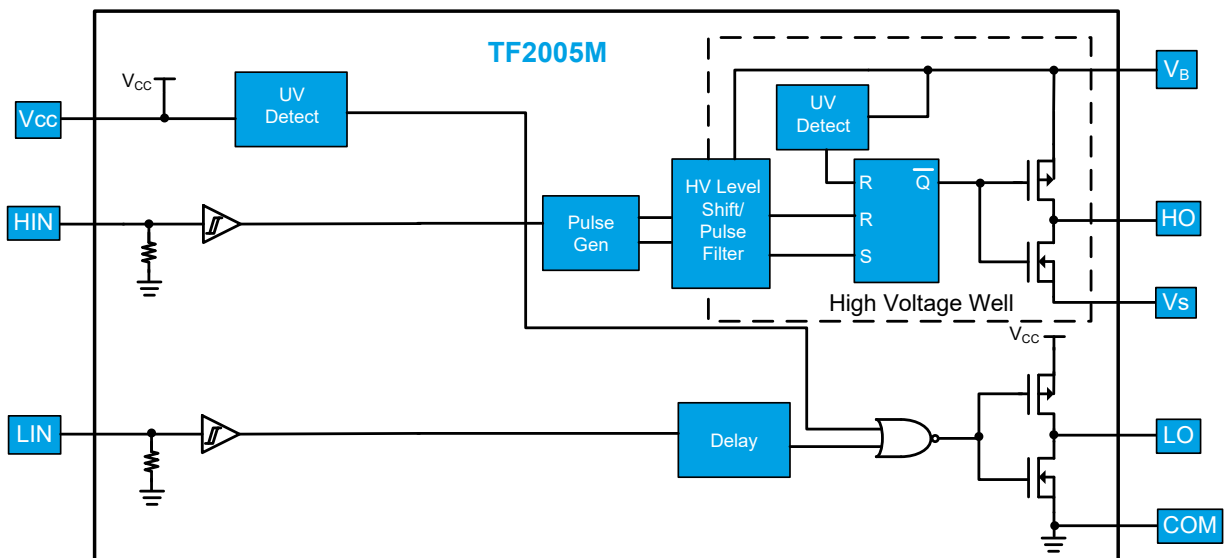


Top View: SOIC-8
TF2005M

Pin Descriptions

PIN NAME	PIN DESCRIPTION
HIN	Logic input for high-side gate driver output (HO), in phase
LIN	Logic input for low-side gate driver output (LO), in phase
V _B	High-side floating supply
HO	High-side gate drive output
V _S	High-side floating supply return
V _{CC}	Low-side and logic fixed supply
LO	Low-side gate drive output
COM	Low-side return
NC	"No connect" pin

Functional Block Diagram



Revision History

Rev.	Change	Owner	Date
1.0	First release, AI datasheet	D. Walton	12/01/2022

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