

# TF2110M/2113M

## High-Side and Low-Side Gate Drivers

#### **Features**

- Drives two N-channel MOSFETs or IGBTs in high-side / low side configuration
- The floating high-side operates to 600V
- 2.5A sink / 2.5A source typical output currents
- Outputs tolerant to negative transients
- Wide gate driver supply voltage range: 10V to 20V
- Wide logic input supply voltage range: 3.3V to 20V
- Wide logic supply offset voltage range: -5V to 5V
- 15 ns(typ) rise / 13 ns (typ) fall times with 1000 pF load
- 105 ns (typ) turn-on / 94 ns (typ) turn-off delay times
- Cycle-by-cycle edge-triggered shutdown circuitry
- Extended temperature range: -40 °C to +125 °C

### Description

The TF2110M and TF2113M are high voltage, high-speed MOSFET and IGBT drivers with independent high-side and low-side outputs. The high-side driver features floating supply for operation at up to 500V / 600V. The 10 ns (max) / 20 ns (max) propagation delay matching between the high and the low side drivers allows high frequency operation.

The TF2110M and TF2113M logic inputs are compatible with standard CMOS levels (as low as 3.3V) while driver outputs feature high pulse current buffers designed for minimum driver cross-conduction.

The TF2110M and TF2113M are offered in 16-pin SOIC wide and 14-pin PDIP packages. They operate over an extended -40 °C to +125 °C temperature range.

# **Applications**

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

# **Typical Application**





SOIC-16W

#### **Ordering Information**

/ 60	0V	Year Year Weel			
	_	PART NUMBER	PACKAGE	PACK / Qty	MARK
-	Ŀ	TF2110M-3BS	PDIP-14	Tube / 25	A YYWW
	I	TF2110M-TEU	SOIC-16W	Tube / 45	<sup>₩</sup> TF2110M
)	$\sim$	TF2110M-TEH	SOIC-16W	T & R / 1500	Lot ID
/		TF2113M-3BS	PDIP-14	Tube / 25	∧ YYWW
		TF2113M-TEU	SOIC-16W	Tube / 45	TF2113M
		TF2113M-TEH	SOIC-16W	T & R / 1500	Lot ID



Up to 500V

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### **Pin Descriptions**

PIN NAME	PIN DESCRIPTION
V <sub>DD</sub>	Logic power supply pin
HIN	Logic input pin for the high-side gate driver output. HIN and HO are in phase
SD	Logic input shutdown pin
LIN	Logic input pin for the low side gate driver output. LIN and LO are in phase
V <sub>ss</sub>	Logic ground pin
V <sub>B</sub>	High-side gate driver floating power supply pin
НО	High-side gate driver output pin
V <sub>s</sub>	High-side gate driver floating power supply return pin
V <sub>cc</sub>	Low-side gate driver power supply pin
LO	Low-side gate driver output pin
СОМ	Low-side gate driver power supply return pin
NC	"No connect" pin



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# **Revision History**

Rev.	Change	Owner	Date
1.0	First release	D. Walton	12/7/2022

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