

## Product Overview

### FAN7888: 225V, 3.3/5V input logic compatible, 0.65/0.35A sink/source current, 3-Phase Half-Bridge Gate-Drive IC

For complete documentation, see the data sheet.

The FAN7888 is a monolithic three half-bridge gate-drive IC designed for high-voltage, high-speed driving MOSFETs and IGBTs operating up to +200 V.

Fairchild's high-voltage process and common-mode noise canceling technique provide stable operation of high-side drivers under high-dv/dt noise circumstances.

An advanced level-shift circuit allows high-side gate driver operation up to  $V_S = -9.8$  V (typical) for  $V_{BS} = 15$  V.

The UVLO circuits prevent malfunction when  $V_{DD}$  and  $V_{BS}$  are lower than the specified threshold voltage.

Output drivers typically source / sink 350mA / 650mA, respectively, which is suitable for three-phase half-bridge applications in motor drive systems.

## Features

- Floating Channel for Bootstrap Operation to +200 V
- Typically 350 mA / 650 mA Sourcing/Sinking Current Driving Capability for All Channels
- 3 Half-Bridge Gate Driver
- Extended Allowable Negative  $V_S$  Swing to -9.8 V for Signal Propagation at  $V_{BS}=15$  V
- Matched Propagation Delay Time Maximum: 50 ns
- 3.3 V and 5 V Input Logic Compatible
- Built-in Shoot-Through Prevention Circuit for All Channels with 270 ns Typical Dead Time
- Built-in Common Mode dv/dt Noise Canceling Circuit
- Built-in UVLO Functions for All Channels

## Applications

- Motion-Industrial motor

## Part Electrical Specifications

Product	Compliance	Status	Type	Number of Drivers	$V_{in}$ Max (V)	$V_{CC}$ Max (V)	Drive Source/Sink Typ (mA)	Rise Time (ns)	Fall Time (ns)	$t_p$ Max (ns)	Package Type
FAN7888MX	Pb-free Halide free	Active	MOSFET or IGBT	3	225	25	350 / 650	50	30	240	SOIC-20W

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

Created on: 4/18/2018