

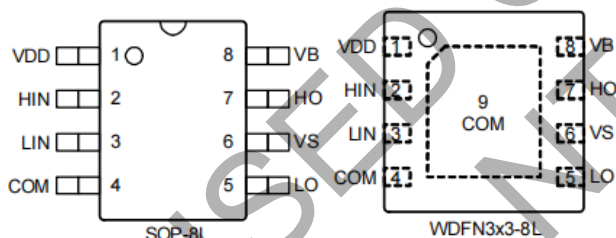
GENERAL DESCRIPTION

The NT2101 are single-chip half-bridge gate drivers for N-channel MOSFET or IGBT. The HVIC and latch immune CMOS technologies enable ruggedized monolithic construction.

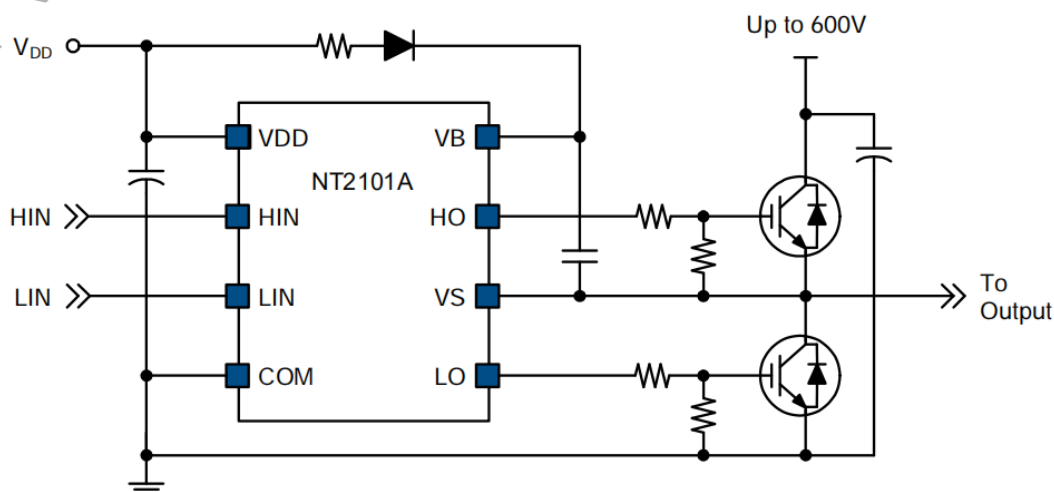
The NT2101 integrate a UVLO circuit to prevent malfunction when V_{DD} or V_{BS} is lower than the specified threshold voltages. The logic inputs are CMOS/TTL compatible down to 3.3V logic for easy interfacing with microcontroller/DSP.

The output drivers feature a high pulse current buffer stage designed for minimum driver cross-conduction. The floating channel can be used to drive an N-channel power MOSFET or IGBT in the high side configuration which operates up to 600 volts. The high current and low output voltage drop features make this device suitable for controlling direct injection actuators and for use in many automotive DC-DC converter and motor control applications.

PIN CONFIGURATION



TYPICAL APPLICATION CIRCUIT



FEATURES

- Floating Channel Designed for Bootstrap Operation
- Fully Operational to +600V
- Tolerant to Negative Transient Voltage
- 50kV/us dV/dt Immune
- Gate Driver Supply Range from 10V to 20V
- 3.3V, 5V CMOS/TTL Inputs with Hysteresis
- Cross-Conduction Prevention Logic
- Matched Propagation Delay for Both Channels
- Outputs in Phase with Inputs
- RoHS Compliant and Halogen-Free SOP-8L Package

APPLICATIONS

- Automotive High Voltage DC-DC Converters
- Starter/Alternator
- Fluorescent Lamp Ballast
- Motor Controls (Fans, Compressors)
- MOSFET - and IGBT High Side Driver Applications

FUNCTIONAL PIN DESCRIPTION

Pin No.	Pin Name	Pin Function
1	VDD	Low side and logic fixed supply
2	HIN	Logic input for high side gate driver output (HO), in phase (NT2101A)
3	LIN	Logic input for low side gate driver output (LO), in phase (NT2101A)
4	COM	Low side return
5	LO	Low side gate drive output
6	VS	High side floating supply return
7	HO	High side gate drive output
8	VB	High side floating supply
9	COM	Low side return and thermal pad

ORDERING INFORMATION

Order Number	Package	Top Marking
NT2101ASA8	SOP-8L	NT2101A
NT2101ADE8	WDFN3x3-8L	NT2101A

Note: Erised products are compatible with the current IPC/JEDEC J-STD-020 requirement. They are halogen-free, RoHS compliant and 100% matte tin (Sn) plating that are suitable for use in SnPb or Pb-free soldering processes. FUNCTIONAL PIN DESCRIPTION

FUNCTIONAL BLOCK DIAGRAM
