

NCD(V)5700x – 5 kV Isolated Single Channel Gate Driver

Value Proposition

NCD57001 is a high-current single channel IGBT driver with internal galvanic isolation, designed for high system efficiency and reliability in high power applications. Its features include complementary inputs, open drain FAULT and Ready outputs, active Miller clamp, accurate UVLOs, DESAT protection, and soft turn-off at DESAT. NCD57001 accommodates both 5 V and 3.3 V signals on the input side and wide bias voltage range on the driver side including negative voltage capability.

Unique Features

- High Current Output (+4/-6 A) at IGBT Miller Plateau Voltages
- Low Output Impedance for Enhanced IGBT Driving
- Short Propagation Delays with Accurate Matching
- Active Miller Clamp to Prevent Spurious Gate Turn-on
- DESAT Protection with Programmable Delay
- Negative Voltage (Down to -9 V) Capability for DESAT
- Soft Turn Off During IGBT Short Circuit
- IGBT Gate Clamping During Short Circuit • IGBT Gate Active Pull Down

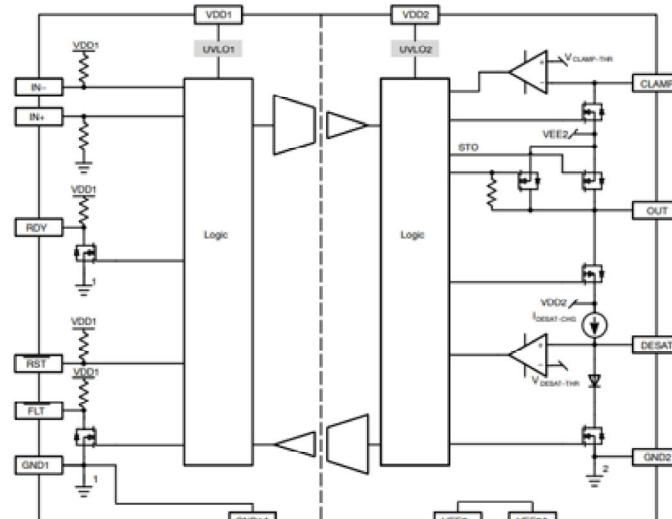
Other Features

- Tight UVLO Thresholds for Bias Flexibility
- Wide Bias Voltage Range including Negative VEE2
- 3.3 V to 5 V Input Supply Voltage
- Designed for AEC-Q100 Certification
- 5000 V Galvanic Isolation (to meet UL1577 Requirements)
- 1200 V Working Voltage (per VDE0884-10 Requirements)
- High Transient Immunity
- High Electromagnetic Immunity
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

Market & Applications

- Motor Control
- Uninterruptible Power Supplies (UPS)
- Industrial Power Supplies
- Automotive Applications
- Welding
- Solar Inverter

Typical Application Circuit



Ordering & Package information

- SOIC-16WB

onsemi