

Product Brief

1EDI EiceDRIVER™ Compact 300 mil

1200V galvanically isolated single-channel wide body gate driver IC family

ED-C
Compact

Complementing our successful 1EDI EiceDRIVER™ Compact family, we now offer our compact drivers in a wide body package for increased creepage distance, improved thermal behavior, and optimized pin out. These galvanically isolated drivers are based on our coreless transformer technology, enabling a world class common mode transient immunity of 100 kV/μs. With current drive strengths of up to 6 A on separate output pins for sourcing and sinking, they are ideal for IGBT based applications such as photovoltaic string inverters, charge stations for electric vehicles, industrial drives, welding equipment, induction heating appliances, and power supplies for servers and telecommunication systems.

The 1EDI Compact 300 mil comes in nine variants:

- > The 1EDI05I12AH, 1EDI20I12AH, 1EDI40I12AH, and 1EDI60I12AH provide 0.5, 2, 4, and 6 A drive strength on separate sink/source output pins and a typical propagation delay of 300 ns.
- > The 1EDI20H12AH and 1EDI60H12AH are ideal for high-speed IGBT applications with a reduced propagation delay of just 120 ns.
- > With an integrated Miller clamp, the 1EDI10I12MH, 1EDI20I12MH, and 1EDI30I12MH deliver 1, 2, and 3 A output current.

The optimized pin out simplifies the PCB design for low impedance power supply.

All drivers are offered in a halogen-free and RoHS compliant wide-body package with a creepage distance of 8 mm.

Key features

- > Single channel isolated high-voltage gate driver IC
- > 12V input-to-output isolation voltage
- > DSO-8 300 mil wide body package with 8 mm creepage distance
- > Drives high voltage power MOSFETs and IGBTs
- > Up to 6 A minimum peak rail-to-rail output
- > Separate source and sink outputs or active Miller clamp

Applications

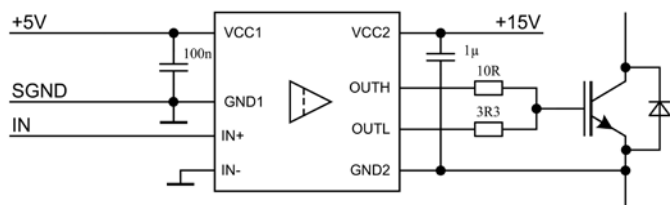
- > General purpose inverters
- > Industrial drives
- > Photovoltaic inverters
- > Charge stations for electric vehicles
- > Welding equipment
- > Commercial and agricultural vehicles



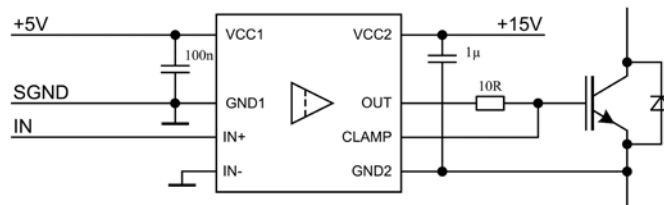
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1200 V galvanically isolated single-channel wide body driver IC family

Circuit diagram using a driver with separate source/sink output



Circuit design using a driver with active Miller clamp



Product features

Sales Code	1EDI60I12AH	1EDI40I12AH	1EDI20I12AH	1EDI05I12AH	1EDI60H12AH	1EDI20H12AH	1EDI30I12MH	1EDI20I12MH	1EDI10I12MH
Package	DSO-8 300 mil				DSO-8 300 mil		DSO-8 300 mil		
Applications	General purpose inverters, industrial drives, welding, UPS				SMPS, PFC, telecom, server, photovoltaic, buck/boost		General purpose inverters, industrial drives, welding, UPS		
Voltage class	1200 V				1200 V		1200 V		
Output current	6 A/-6 A	4 A/-4 A	2 A/-2 A	1 A/-1 A	6 A/-6 A	2 A/-2 A	3 A/-3 A	2 A/-2 A	1 A/-1 A
Separate sink/source outputs	✓	✓	✓	✓	✓	✓	—	—	—
Active Miller clamp	—	—	—	—	—	—	✓	✓	✓
Propagation delay	300 ns	300 ns	300 ns	300 ns	120 ns	120 ns	300 ns	300 ns	300 ns
Maximum switching frequency	1 MHz*	1 MHz*	1 MHz*	1 MHz*	4 MHz*	4 MHz*	1 MHz*	1 MHz*	1 MHz*
Recommendation	All 650 V and 1200 V IGBT modules				All 650 V and 1200 V IGBT modules		All 650 V and 1200 V IGBT modules		

* do not exceed maximum power dissipation requirements

Highlights:

- › DSO-8 300 mil wide body package with 8 mm creepage distance
- › 100 kV/μs CMTI
- › Optimized pin out for low inductance power supply
- › No need to adapt signal voltage levels between μController and driver

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