

Product brief

EiceDRIVER™ 2EDi product family

Fast, robust, dual-channel galvanic isolated gate driver ICs

Galvanic isolated EiceDRIVER™ family overview

The 2EDi is a family of dual-channel isolated gate driver ICs designed to drive Si MOSFETs, SiC MOSFETs and GaN power switches.

Isolation is achieved by means of Infineon coreless transformer (CT) technology which guarantees robust operation and industry benchmark common-mode rejection (CMTI).

The high propagation delay accuracy and low channel-to-channel mismatch makes the product ideal for use in fast-switching power system. In addition, high CMTI, high reverse current capability and fast clamping of the output below UVLO guarantees reliable operation in the application.

EiceDRIVER™ 2EDi generation II: what is new?

- DSO-14 packages with increased channel-to-channel creepage to ease the layout or enable the use with higher working voltages or worst pollution layout
- > New LGA 4 mm x 4 mm enabling 70 percent space saving
- > Fulfills the latest component standard for magnetic couplers (IEC 60747-17)
- > Programmable dead-time and shoot-through functionality

Applications

- Server
- > Telecom
- DC-DC converters
- > Power tools
- > Industrial SMPS
- > Low-speed electrical vehicles
- Solar micro inverter
- LED Lighting

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Product key features

Fast power switching with accurate timing

- > 5 A/9 A source/sink currents
- Propagation delay typ. 38 ns with 6 ns channel-tochannel precision

Optimized for area and system BOM

- > < 1 Ω source and sink output resistance
- > Output stages with 5 A reverse current capability

Robust

- > CMTI >150 V/ns
- Under voltage lockout function for switch protection
- > Dead time control and shoot through protection

Output-to-output channel isolation

> Functional level galvanic isolation

Input-to-output channel isolation

> Functional, basic and reinforced galvanic isolation

Product benefit

Efficiency gain and lower losses

- Strong driving enables reduced switching losses
- Accurate timing enables dead-time optimization or synchronized driving in case of parallel MOSFETs

Improved thermal behavior at smaller form factor

- Most of the driving power is dissipated externally with reduced thermal stress on the driver
- Eliminates two costly protection diodes on the gate driver outputs

Protection and safe operation

- Reliable driver operation against fast switching transients
- MOSFET is protected from thermal stress in abnormal conditions
- > Protection against noise and spurious pulses

Flexible configurations

High-side + low-side, high-side + high-side, lowside + low-side

Regulatory safety

- Functional for level-shifting and ground bounce immunity
- Reinforced for control of primary-side MOSFETs from secondary-side controller

System benefits

Enabling higher system efficiency and higher power density designs

Improving long term competitive cost position, integration and mass manufacturability

Extending end-product lifetime by improving safe operation of power switches in normal and abnormal field (grid) conditions

Lower EMI by ground isolation Robust Level shifting

Simplified safety approval

through component standards (UL1577, IEC60747-17) and system standards (IEC62368) certificates











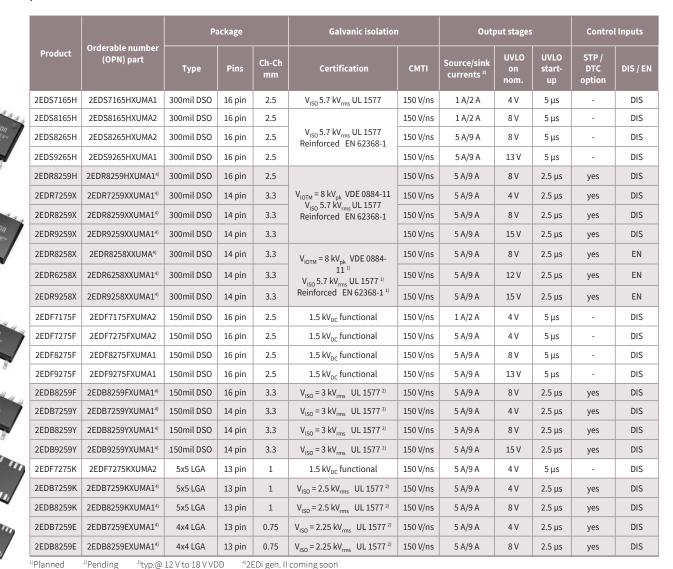




2EDi EiceDRIVER™ family

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Product portfolio



www.infineon.com/2EDi

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