



Product brief

EiceDRIVER™ 2EDL8 product family

Dual-channel junction-isolated gate driver ICs

The EiceDRIVER™ 2EDL8 family of dual-channel junction-isolated gate driver ICs is designed for medium voltage power MOSFETs in half-bridge applications such as telecom and datacom DC-DC converters. The 2EDL8 family comprises four variants:

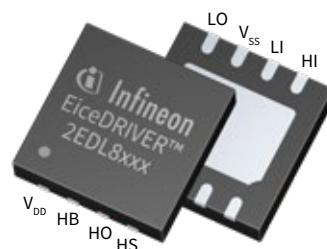
a) Designers can choose between two different pull-up currents: The 3 A version can be the right choice for retrofit designs. The industry-leading 4 A version is recommended to reduce MOSFET switching losses.

b) The 2EDL8 family is available with two different input configurations: The 2EDL802x permits operation of both channels independently. For this reason, it is the perfect choice for diagonally driven full-bridges on the primary side as well as for the synchronous rectification stage on the secondary side because it permits reduction of the losses during the free-wheeling phase. The differential input structure of the 2EDL812x effectively renders it to be a half-bridge gate driver with built-in shoot-through protection, making it a good choice for the primary-side half-bridge stages with non-diagonal driving scheme.

Common to all four variants is their industry-standard leadless package and pin-out. Also, all of them have an integrated 120 V boot-strap diode as well as a precise channel-to-channel propagation delay matching of +/- 2 ns.

Key applications

- > Telecom DC-DC converter
- > Datacom DC-DC converter
- > Two-switch forward converter
- > Active clamp forward converter
- > Class D audio amplifier



Key features

- > 120 V boot-strap diode integrated
- > Low resistance rail-to-rail outputs:
 - Low-side: 4 A pull-up, 6 A pull-down
 - High-side: 4 A pull-up, 5 A pull-down
- > 4 ns delay matching
- > Differential inputs, optional

Product benefits

- > No need for external boot strap diode
- > Fast MOSFET switching
- > Strong pull-down current reduces risk of return-on from switching noise
- > Low dead-time losses
- > Inherent shoot-through protection
- > -8 V/+15 V common mode rejection

System benefits

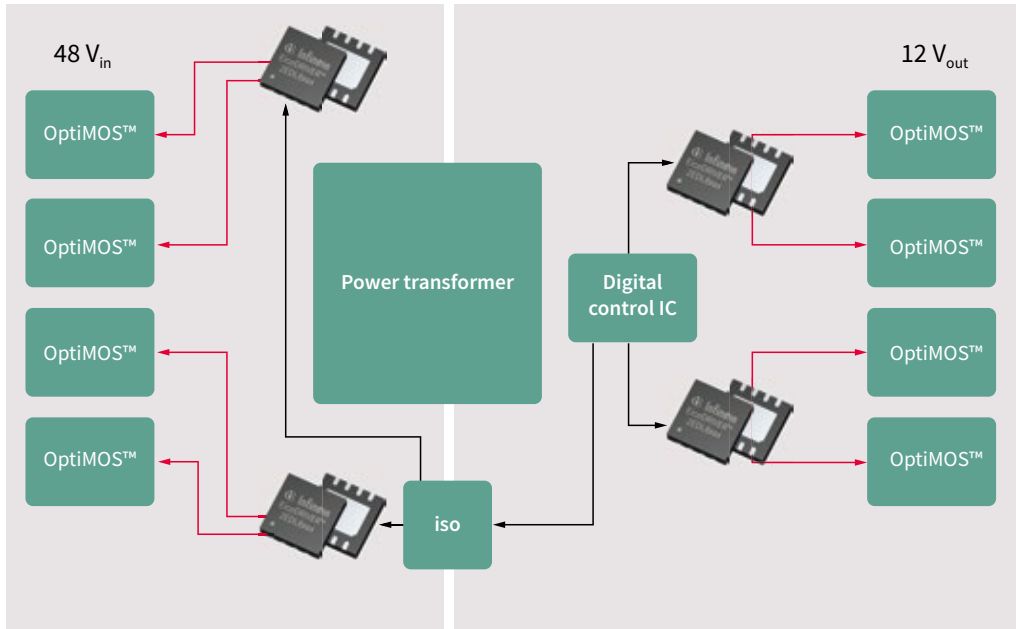
- > High power density
- > High efficiency
- > Strong MOSFET Reliability
- > High efficiency
- > Strong MOSFET reliability
- > Robust operation



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Typical application schematic



Design and support tools

Part number	Inputs		Controls timing		Integrated boot-strap diode		Outputs				
	Configuration	On threshold min	Off threshold max	Minimum input pulse width	Delay matching	Abs. max HB voltage	Turn-off time	Low-side pull-up	Low-side pull-down	High-side pull-up	High-side pull-down
2EDL8023G	Independent inputs	2.9V	1.0V	40 ns _{max}	2 ns _{typ}	120 V _{max}	10 ns _{typ}	3 A _{peak}	6 A _{peak}	3 A _{peak}	5 A _{peak}
2EDL8024G								4 A _{peak}		4 A _{peak}	
2EDL8123G	Differential inputs							3 A _{peak}		3 A _{peak}	
2EDL8124G								4 A _{peak}		4 A _{peak}	

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