

Product Brief

2EDL EiceDRIVER™ Compact

600 V half-bridge Driver ICs
for consumer electronics and home appliances

ED-C
Compact

The new 2EDL EiceDRIVER™ Compact high-voltage gate driver family meets the ever growing need for higher application efficiency and smaller form factors in consumer electronics and home appliances. It is optimized for the switching behavior and power losses of today's power supplies using IGBT and MOSFETs with dramatically reduced gate charges such as the latest generation of Infineon's CoolMOS™. With a monolithically integrated ultrafast low-ohmic bootstrap diode, the 2EDL Compact sets the benchmark for driver ICs needed in applications with more than 2 A output currents.

The 2EDL Compact family comprises seven 600V drivers with output currents of 0.5A and 2.3A in DSO-8 and DSO-14 150 mil packages for applications based on IGBT or MOSFET switches:

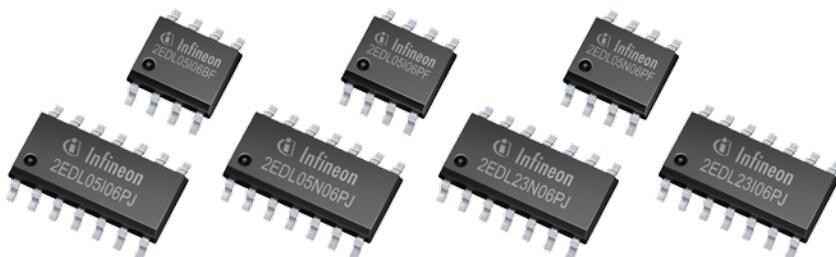
- › The 2EDL05I06BF in DSO-8, optimized for IGBTs, comes without interlock or dead time. It is ideal for switched reluctance motor drives and two-transistor forward switched-mode power supply topologies.
- › The 2EDL05I06PF in DSO-8 and the 2EDL05I06PJ in DSO-14 are optimized for IGBTs and include interlock and dead time. They are recommended for applications such as fans, pumps, major home appliances, power tools, and general purpose inverters. The DSO-14 version is recommended for industrial applications with higher creepage distance requirements.
- › The 2EDL05N06PF in DSO-8 and the 2EDL05N06PJ in DSO-14 boast the same features as the IGBT driver versions and an undervoltage lockout adapted for MOSFETs. They are recommended for servers and telecommunications equipment, low-voltage drives, e-bikes, battery chargers, and half-bridge based switched-mode power supply applications.
- › The 2EDL23I06PJ and 2EDL23N06PJ are 2.3 A half-bridge driver ICs in DSO-14 with interlock, dead time, fault enable, and overcurrent protection. The 2EDL23I06PJ for IGBTs is ideal for applications such as multi-oven IH cookers, fans, pumps, and drives. The 2EDL23N06PJ for MOSFETs is best suited for TV, switched-mode power supplies, servers and telecommunications equipment, e-scooters, forklifts, and battery chargers.

Key features

- › High creepage distance in DSO-14
- › Integrated ultrafast low-ohmic bootstrap diode
- › Asymmetric undervoltage lockout for IGBT types
- › Specific undervoltage lockout levels for IGBT and MOSFET
- › Rail-to-rail output
- › Overcurrent protection in DSO14

Applications

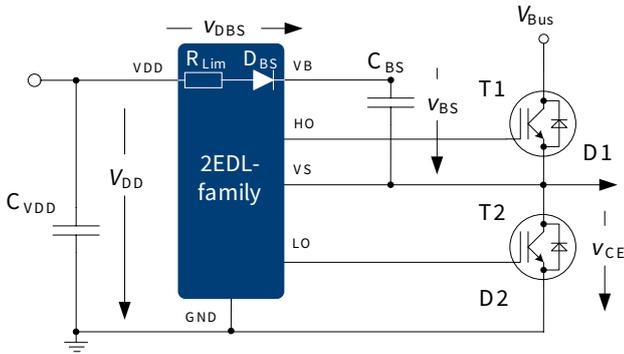
- › Home appliances
- › Consumer electronics
- › Fans, pumps
- › E-bikes, E-scooters, orklift trucks
- › Power tools



600V Half-Bridge EiceDRIVER™ Compact

2EDL family

Bootstrap circuit of 2EDL half-bridge driver ICs with high-performance, ultrafast bootstrap diode (example with IGBTs):



Products:

- > 2EDL05106BF
- > 2EDL05106PF
- > 2EDL05106PJ
- > 2EDL05N06PF
- > 2EDL05N06PJ
- > 2EDL23106PJ
- > 2EDL23N06PJ

Detailed product features

Sales Code	2EDL05106BF (DSO-8)	2EDL05106PF (DSO-8) 2EDL05106PJ (DSO-14)	2EDL05N06PF (DSO-8) 2EDL05N06PJ (DSO-14)	2EDL23106PJ (DSO-14)	2EDL23N06PJ (DSO-14)
Applications	Switched reluct. motor drive, TTF, PFC	Fans, pumps, MHA, GP drives (GPI) DSO-14: Industrial	TVs, LV drives, PCs, e-bikes, adapters (SMPS), batteries DSO-14: server/telecom	Multi-oven IH cookers, fans, pumps, drives	TVs, adapters (SMPS), server/telecom, PCs, e-scooters, forklift trucks, batteries
Blocking voltage	600V	600V	600V	600V	600V
Output current (peak)	0.36A / -0.7A	0.36A / -0.7A	0.36A / -0.7A	2.3A / -2.8A	2.3A / -2.8A
Integr. bootstrap function	Ultrafast BS diode and BS resistor	Ultrafast BS diode and BS resistor	Ultrafast BS diode and BS resistor	Ultrafast BS diode and BS resistor	Ultrafast BS diode and BS resistor
UVLO (lowest turn-off)	IGBT (10.9V)	IGBT (10.9V)	MOSFET (7.5V)	IGBT (10.9V)	MOSFET (7.5V)
Features	No deadtime No interlock	Deadtime, interlock	Deadtime, interlock	Deadtime, interlock enable, fault, overcurrent protection	Deadtime, interlock enable, fault, overcurrent protection
Package	PG-DSO-8 150mil	PG-DSO-8 150mil PG-DSO-14 150mil	PG-DSO-8 150mil PG-DSO-14 150mil	PG-DSO-14 150mil	PG-DSO-14 150mil

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