

160 V SOI Gate Drivers for Battery Powered Applications

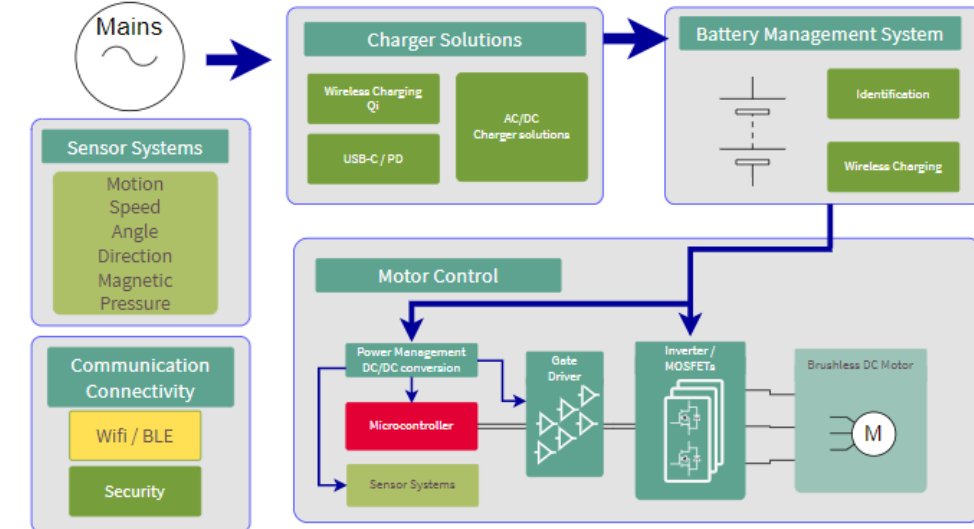
Key features

- > **2ED2742/32S01G** I_{O+} / I_{O-} 1A/2A HB and HS-LS (3x3 mm DFN10)
- > **2ED2744/34S01G** I_{O+} / I_{O-} 2A/4A HB and HS-LS (3x3 mm DFN10)
- > **2ED2748/38S01G** I_{O+} / I_{O-} 4A/8A HB and HS-LS (3x3 mm DFN10)
- > **6ED2742S01Q** I_{O+} / I_{O-} 1A/2A 3-Ph (5x5mm QFN32)
- > Integrated ultra-fast, **low R_{DS(on)} bootstrap diode**
- > Independent, per channel under voltage lockouts (UVLO)
- > Schmitt trigger inputs with hysteresis
- > Integrated short pulse / noise rejection input filter
- > 2 kV HBM ESD compliance
- > Integrated **shoot-through protection** with dead time for HB & 3-Ph
- > Thermal pad for more efficient heat transfer with 2ED versions
- > 3-Ph driver comes with Integrated Power Management Unit (**PMU**), trickle charge pumps , ITRIP and current sense amplifier

Value proposition

- > Lower system level BOM cost with integrated, monolithic bootstrap diodes
- > Superior latch-up immunity and high reliability with Tower SOI
- > Small, simple, low-cost solution for multiple applications
- > High power density enables smaller footprints for space savings
- > High current drive for higher frequency or MOSFET paralleling
- > Simple solution for **multiple BPA applications** such as Drones, Lawn mover, Cordless power tools, Service robots, Outdoor power equipment, Cordless vacuum cleaners and LEVs,

Application schematic



Applications



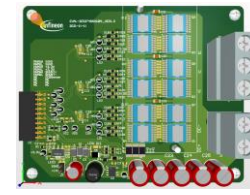
6ED2742S01Q Demo Board

I/p range: 12 V, 24 V, 36 V
 O/p Power: Up to 250 W
 I_{rms} : 15 A
 Switch: BSC074N15NS5 (150 V, 7.4 mΩ)
 Target Applications: Power Tools
 Available for internal evaluation: **NOW**. On ISAR: Q4'22



2ED2742S01G Demo Board

I/p range: 24 V, 36 V, 48 V
 O/p Power: Up to 1200 W
 I_{rms} : 25 A
 Switch: IPTC015N10NM5 (100 V, 1.5 mΩ)
 Target Applications: Outdoor Power Equipment like lawn mowers
 Available for internal evaluation: **NOW**. On ISAR: Q1'23



2ED2748S01G Demo Board

I/p range: 48 V, 72 V, 96 V
 O/p Power: Up to 3000 W
 I_{rms} : 30 A
 Switch: 2 x IPTC015N10NM5 (100 V, 1.5 mΩ)
 Target Applications: Forklifts, LSEVs
 Available for internal evaluation: **NOW**. On ISAR: Q1'23

