

Application Drives

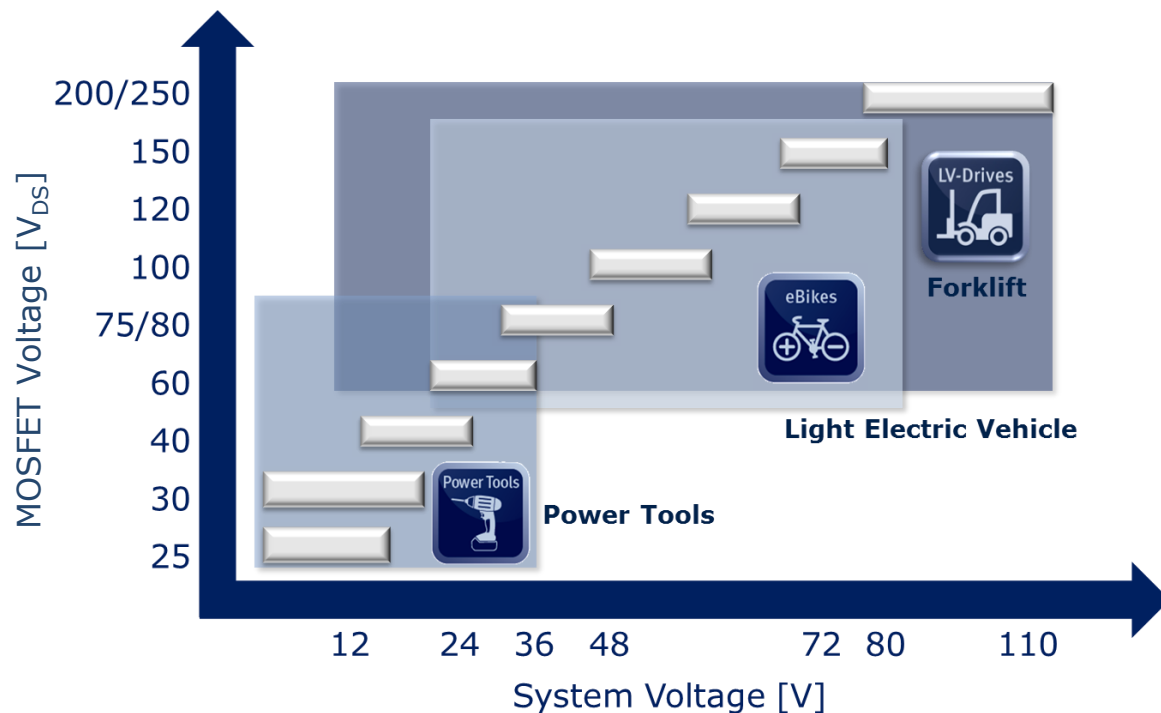
PCIM 2014, Nuremberg



OptiMOS™ for highest Reliability and Performance in your Drives Application



For each System the right MOSFET



Features

- High current capability
- Lowest on-state resistance $R_{DS(on)}$
- Easy-to use
- Outstanding product performance & quality

Benefits

- Enables system cost reduction & overall system miniaturization
- Enables optimized thermal management
- Extending of battery lifetime
- Reliable operation in harsh environments

Demoboard for Power Tools Applications

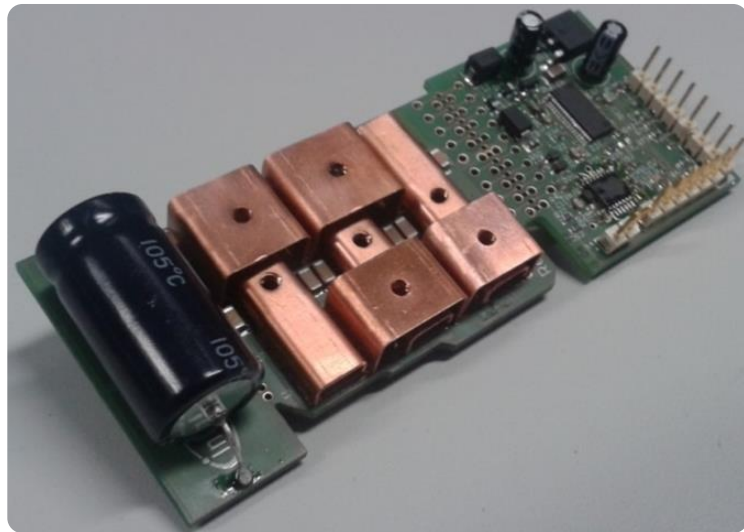
■ Drives a 3phase Brushless DC Motor for Power Tools

■ Provides all Connections for Power Tool Functions

- ❑ Hall sensors
- ❑ Speed control potentiometer
- ❑ Motor direction switch
- ❑ UART communication port

■ Key Features

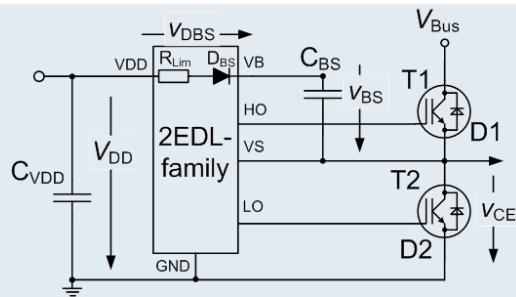
- ❑ Low parasitics
- ❑ Low voltage overshoots
- ❑ Good thermal dissipation
- ❑ Low cost 2Ly/2oz (70um) Copper PCB
- ❑ Maximized efficiency and power density $\sim 75\text{W}/\text{cm}^3$



EiceDRIVER™ 2EDL Compact for all Consumer and low-End industrial Equipment



- I_{out} : **0.5A, 2.3A**
- UVLO for IGBT and MOSFET



Features

- 600V level-shift Halfbridge Driver IC
- Integrated low-resistive ultrafast Bootstrap Diode
- Specific undervoltage lockout levels for IGBT and CoolMOS™
- Overcurrent prot., enable, fault-out

Applications



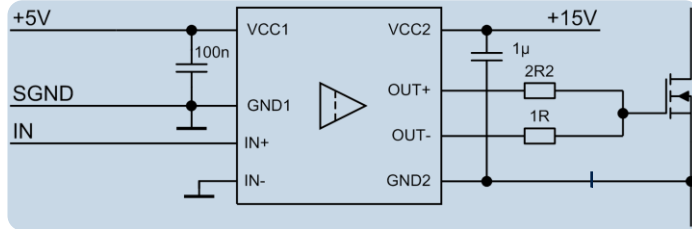
Customer Benefits

- Immunity against neg. trans. voltage, no latch up
- System BOM Advantage through integrated BS Diode
- Optimal controllability of application
- Simple PCB Layout, speed up design

1EDI Compact is ideal for all IGBT Power Modules up to 1200V or CoolMOS™ 650V



- I_{out}: **0.5A, 2A, 4A, 6A** @ 15V
- UVLO for IGBT and MOSFET (6A)



Features

- 1200V coreless Transformer IC with galvanic isolation
- MOSFET: prop. delay <105ns with 40ns Input Filter Time
- High CMTI Robustness >100kV/µs
- Separate Source/Sink Output
- Small package DSO-8 150mil



Applications



Customer Benefits

- Tailored for all 600V, 650V and 1200V IGBTs, modules and 650V CoolMOS™
- High switching frequency applications as SMPS, up to 4MHz
- Ideal f. CoolMOS™ C7 3-/4-pin, P6
- Tune turn-off vs. turn-on
- High reliability @ small footprint

1EDS-SRC brings innovative Features into industrial Drive Applications

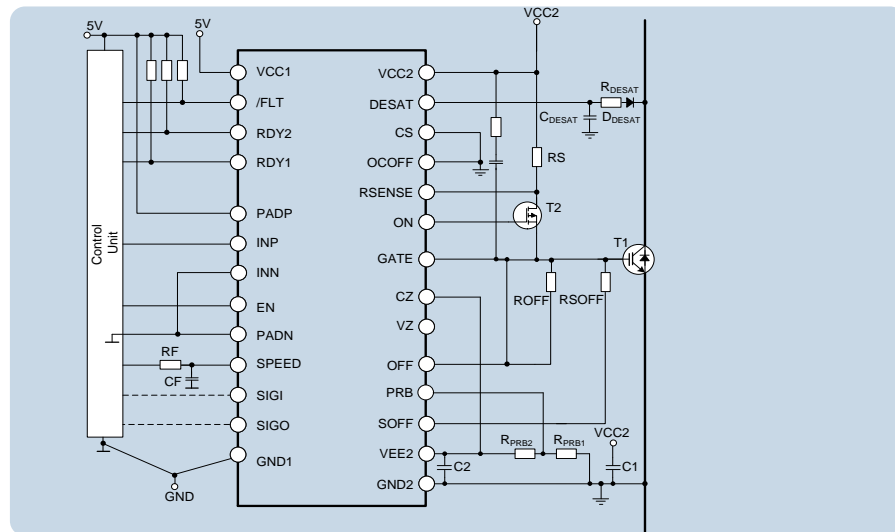
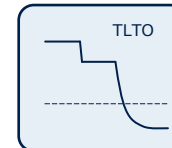
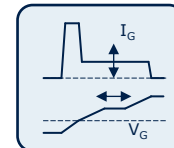


Highlights

- Reinforced isolation acc. to VDE 0884-10
- Turn On Slew Rate Control via Current Source (11 steps)

Features

- Output supply range unipolar 0..+15V up to bipolar -8V..+15V with UVLO
- Selective short Circuit Protection for 3-level Inverter Support
- DESAT and OC Protection, fault signaling
- Soft turn-off
- RDY1, RDY2 to indicate working driver
- Very low Propagation Delay Mismatch



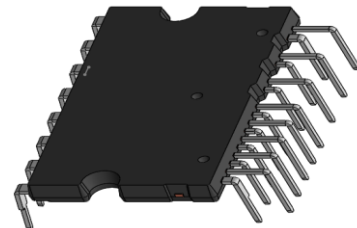
What is CIPOS™...?

Control Integrated POver System = CIPOS™

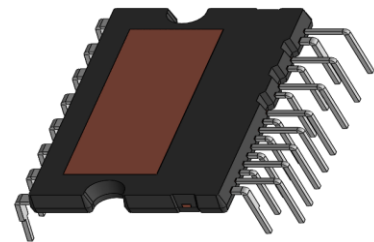
LS Power Semitech
A joint venture with infineon

- Transfer-molding package based Power Module
- Targeting for various applications
 - For 3-phase Inverter Drives (+ optional Bridge Diodes)
 - For 3-phase Inverter Drives with MOSFET
 - For Power Factor Correction (PFC) application
 - For Switched Reluctance Motor (SRM) application
- New CIPOS™ Mini DCB with improved thermal performance. Best choice for industrial drives

CIPOS™-MINI



CIPOS™-MINI-DCB

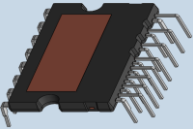


CIPOS™ Mini DCB Line-up

Coming soon!



LS Power Semitech
A joint venture with infineon

Package	Project	Application	Line-up
MINI DCB 	High thermal performance*	Drives (RAC, Indus)	20/30A
	Vacuum Cleaner*	Vacuum Cleaner with SRM	15/20/30A
	2f interleaving PFC for ~4kW*	RAC	20/30A

* = Development will be completed by CY2014

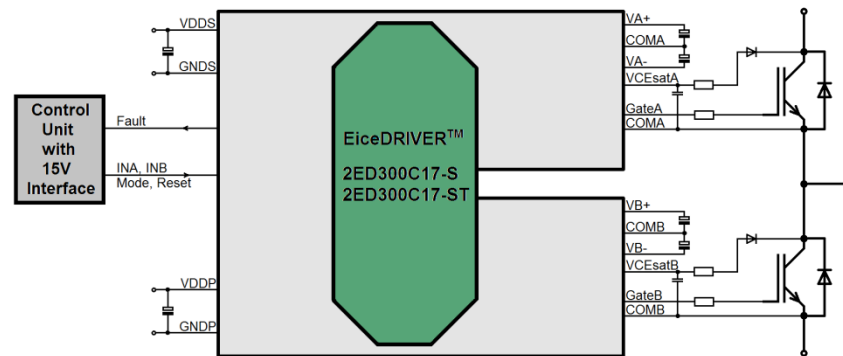
EiceDRIVER™ 2ED300C17-S

Dual Channel Gate Driver Board

- For all Infineon IGBT Modules up to 1700V
- High peak Output Current of 30A
- Integrated DC-DC SMPS

Key Features

- Reinforced isolation according to EN 50178 / IEC 61800-5-1
- Large partial Discharge Test Voltage of 1920V_{rms}
- Patented paralleling of IGBT Modules
- Safe operation, even in noise-intense industrial Environments
- Outstanding protection features



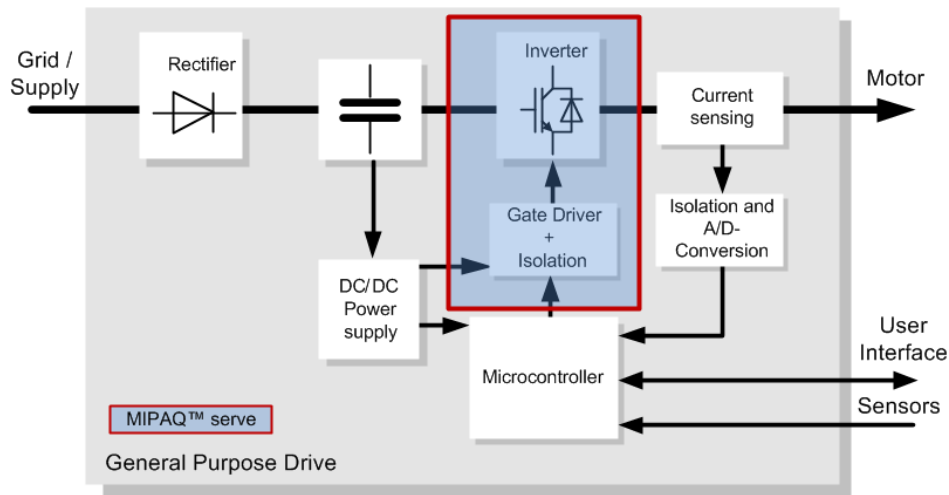
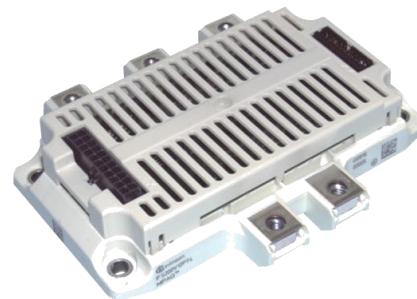
MIPAQ™ serve

IGBT Module with integrated Driver

- IGBT Module in sixpack Configuration
- V_{CES} 1200V, 100A, 150 and 200A nominal current
- Integrated Driver Electronic and digital Temperature Measurement with galvanic isolation

Key Benefits

- **Increased Power Density:** Up to 60cm² Board Space Savings in the application
- **Accelerated Time-to-Market:** The MIPAQ™ serve is a fully assembled and tested system
- **Galvanic Isolation:** Infineon's coreless transformer technology provides galvanic isolation





ENERGY EFFICIENCY MOBILITY SECURITY

Innovative semiconductor solutions for energy efficiency, mobility and security.

