

650 V CoolMOS™ CFD7A - high-voltage superjunction MOSFETs for automotive applications

Infineon's silicon-based 650 V CoolMOS™ high-voltage SJ power MOSFETs CFD7A are specifically optimized to meet the requirements for electric-vehicle applications such as on-board chargers, HV-LV DC-DC converters, and auxiliary power supplies. With more than 10 years of automotive experience, CoolMOS™ CFD7A combines highest quality going well beyond the AEC-Q101 standards with unrivalled technology expertise.

The CoolMOS™ CFD7A family is manufactured on the highly automated 300 mm production line, which contributes to reach the zero-defect target in mass production while fulfilling the growing market demand.



Features

- > Battery voltages up to 475 V without compromising on reliability standards
- > Efficiency improvements in hard- and soft-switching topologies up to 98.4%
- > Kelvin-source concept for further efficiency improvement
- > Intrinsic fast body diode with -30% lower Q_{rr} compared to CoolMOS™ CFDA

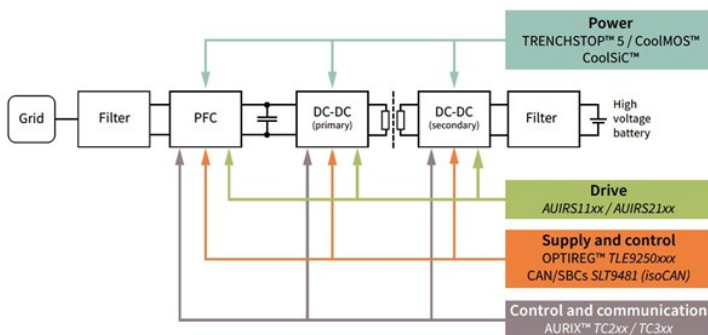
Benefits

- > Highest reliability in the field meeting automotive lifetime requirements
- > Enabling higher power density designs
- > Scalable as designed for use in PFC and DC-DC stage
- > Granular portfolio available

Target applications

- > On-board charger
 - Hard-switching topologies (with SiC diode)
 - PFC boost stages
 - DC-DC stage of OBC
- > HV-LV DC-DC converter
 - LLC or full-bridge phase shift (ZVS)
- > Auxiliary power supplies

Application diagram: On-board charger



Product collaterals / Online support

[Product Family Page](#)

[Product Brief](#)

[Application Note](#)

Product overview incl. data sheet link

OPN	SP Number	Package
IPBE65R115CFD7AATMA1	SP002561838	PG-TO263-7
IPB65R115CFD7AATMA1	SP002561832	PG-TO263-3
IPB65R050CFD7AATMA1	SP003793200	PG-TO263-3
IPB65R230CFD7AATMA1	SP003783094	PG-TO263-3