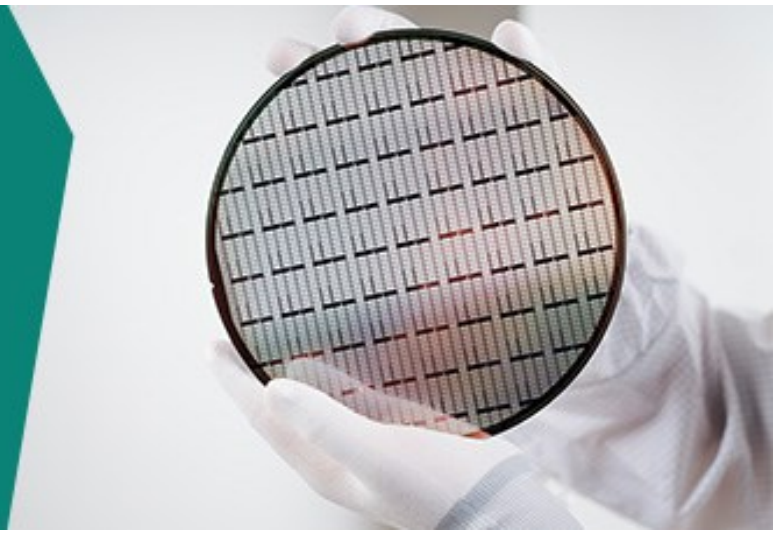
New Product Introduction



New Product Introduction

April 2025

TRAVEO™ T2G graphics software bundle

CoolGaN™ Transistors 60 V – 120 V G3

CoolGaN™ Transistors 650 V G5

CoolSiC™ MOSFET discrete 1200 V G2 in top-side cooled Q-DPAK dual half-bridge package IMSQ120R0xxM2HH

CoolSiC™ MOSFET discrete 1200 V G2 in top-side cooled Q-DPAK package IMCQ120R0xxM2H

600 V CoolMOS™ 8 SJ MOSFET

Automotive EDT2 IGBT in TO-247PLUS reflow

Easy B-series CoolSiC™ M1H 2 kV with high performance ceramic

EconoDUAL™ 3 CoolSiC™ MOSFET 1200 V module

Fast, robust, dual-channel, high side isolated gate driver with accurate and stable timing and high current output EDF5215F/G

EiceDRIVER™ 2EDL5xxx driver for logic level FET 2EDL5013U2D and 2EDL5023U2D

120 V boot 3 A high and low side junction isolated gate drivers 2EDL803XF5B

CoolSiC™ MOSFET 650 V generation 2 in D2PAK 7pin package, 10/26/33/60 mΩ

LITIX Basic+ with power shift for automotive LED lighting

MOTIX™ TLE9563-3QXW and TLE9564QXW motor system ICs (SBC) for BLDC motors

PROFET™ +2 12 V: BTS7008-1EPR

XENSIV™ – TLE4960x magnetic switch family

XENSIV™ – KP40x pressure sensor family: KP400 and KP405

Low-voltage GaN motor drive evaluation board – EVAL_MTR_48V20A_GAN

Low-voltage GaN motor drive reference design – REF_MTR_48V30A_GAN

48 V - 12 V intermediate bus converter featuring CoolGaN™ – REF_IBC_1600W_GAN

500 W half-bridge LLC board – REF_LLC_500W_FULLGAN

XENSIV™ KIT_CSK_BGT60UTR11AIP with 60 GHz radar sensor

XENSIV™ 60 GHz radar BGT60UTR11AIP Wing board

PSOC™ 4700S Plus Inductive Sensing Evaluation Kit CY8CKIT 4700S PLUS

Double pulse testing evaluation board for CoolSiC™ MOSFET FF6MR20W2M1H_B70: EVAL-FFXMR20WXM1H

EVAL_10KW_3LANPC_SIC: virtual evaluation board for ANPC 3-level topology using CoolSiC™ MOSFET 400 V G2

ModusToolbox™ software v3.5 release announcement

TRAVEO™ T2G graphics software bundle

The new software bundling business model for our TRAVEO™ T2G microcontroller family, designed for both graphics. The innovative approach eliminates upfront investments in SW license fees for MCAL and graphics, providing you with greater flexibility and cost savings.

Features

- Graphics package selectable items
- Graphics driver G2M
- JPEG decode driver
- Safety signature driver
- Dynamic warping library
- VUART driver

Benefits

- Easy steps for customer to get the software
- Register as a user on myInfineon
- Request software: Click the request link on Infineon.com: Software request link. Fill out the form with project details and select the desired software
- Delivery: access the software via the Infineon developer center

Target applications

- Instrument cluster
- Cockpit
- Two-wheelers
- Commercial, construction and agricultural vehicles (CAV)

Product collaterals / Online support

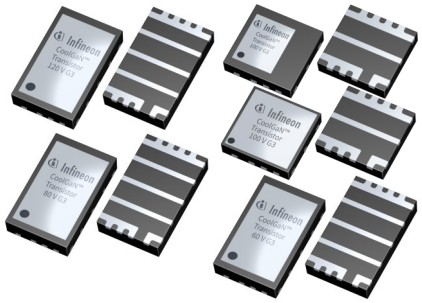
Product family page CYT3DL

Product page CYT4DN

Product overview incl. datasheet link

OPN	SP Number	Package
CYT3DLABSBQ1AESGSXQLA1	SP006066392	PG-TQFP-216
CYT3DLABZBQ1AESGSXQLA1	SP006066403	PG-TQFP-216
CYT4DNJBZCQ1BZSGSXQLA1	SP006066375	PG-LFBGA-327

CoolGaN™ Transistors 60 V – 120 V G3



The new generation of CoolGaN™ transistors 60 V – 120 V G3 are normally-off e-mode devices, enabling high power density designs.

Available in dual-side-cooled PQFN 3x3 or PQFN 3x5 packages, this new family of GaN transistors is designed for reliable performance in demanding high-voltage and high-current applications.

Features

- 60 - 120 V e-mode power transistor
- No reverse recovery charge
- Reverse conduction capability
- Low gate charge, low output charge
- Qualified according to JEDEC

Benefits

- Best-in-class power density
- Highest efficiency
- Improved thermal management
- Enabling smaller and lighter designs
- Excellent reliability
- Lowering BOM cost

Target applications

- Adapters and chargers
- Audio amplifier solutions
- AC-DC power conversion for telecom infrastructure
- DC-DC power conversion for telecom infrastructure
- Low power BDC/BLDC motor drives up to 72 V
- Photovoltaic
- Telecommunication infrastructure

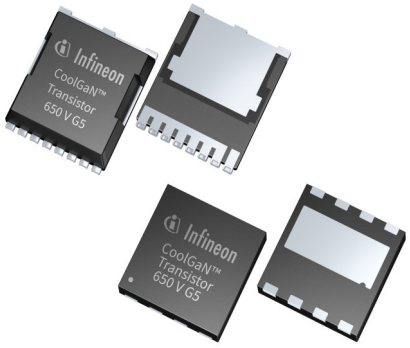
Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
IGB070S10S1XTMA1	SP006039129	PG-TSON-4
IGB110S10S1XTMA1	SP005751575	PG-TSON-4
IGC019S06S1XTMA1	SP006027441	PG-TSON-6
IGC025S08S1XTMA1	SP006027447	PG-TSON-6
IGC037S12S1XTMA1	SP006027453	PG-TSON-6

CoolGaN™ Transistors 650 V G5



The new generation of 650 V GaN power transistors allows for increased efficiency at high-frequency operation and meets the highest quality standards, enabling highly reliable designs with superior efficiency.

Now also available in bottom-side cooled TOLL and DFN package, this new family of GaN transistors is designed for optimal power dissipation in various industrial and consumer applications.

Features

- 650 V e-mode power transistor
- Ultrafast switching
- No reverse-recovery charge
- Capable of reverse conduction
- Low gate charge, low output charge
- Superior commutation ruggedness
- Low dynamic $R_{DS(on)}$
- High ESD robustness: 2 kV HBM - 1 kV CDM
- Bottom-side cooled package
- JEDEC qualified (JESD47, JESD22)

Benefits

- Supports high operating frequency
- Enables highest system efficiency
- Enables ultra-high power density designs
- Supports BOM cost savings

Target applications

- AC-DC power conversion for telecom infrastructure
- Datacenter and computing solutions
- EV charging
- Industrial power supplies
- Photovoltaic
- Power conversion
- USB-C adapters and chargers

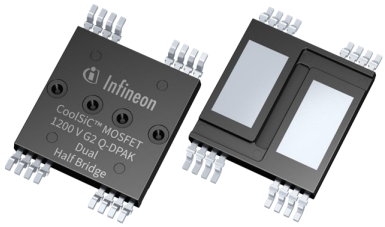
Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
IGT65R025D2ATMA1	SP006026239	PG-HSOF-8
IGT65R035D2ATMA1	SP005965872	PG-HSOF-8
IGT65R045D2ATMA1	SP005965880	PG-HSOF-8
IGT65R055D2ATMA1	SP005965883	PG-HSOF-8
IGT65R140D2ATMA1	SP005965886	PG-HSOF-8
IGLD65R055D2AUMA1	SP005825087	PG-LSON-8
IGLD65R080D2AUMA1	SP005918713	PG-LSON-8
IGLD65R110D2AUMA1	SP005918714	PG-LSON-8
IGLD65R140D2AUMA1	SP005825083	PG-LSON-8

CoolSiC™ MOSFET discrete 1200 V G2 in top-side cooled Q-DPAK dual half-bridge package IMSQ120R0xxM2HH



The CoolSiC™ MOSFET discrete 1200 V in a top-side cooled Q-DPAK dual half-bridge package has been specifically designed for a wide use in industrial application, including industrial drives, EV charging, solar and uninterruptible power supply.

The Q-DPAK provides customers with a reduced system cost by enabling easier assembly with outstanding thermal performance. Compared to bottom-side cooled solutions, top-side cooled devices enable a more optimized PCB layout, which in turn reduces the effects of parasitic components and stray inductances, while also providing enhanced thermal management capabilities.

Features

- SMD top-side-cooled package
- Low stray inductance
- CoolSiC™ MOSFET 1200 V G2 technology with enhanced switching performance and FOM factor
- .XT interconnection technology
- Lowest $R_{Ds(on)}$
- Mold compound (CTI > 600) and mold groove (CD > 4.8 mm)
- Humidity robustness
- Avalanche robust, short-circuit and PTO

Benefits

- Higher power density
- Enabling automated assembly
- Less complex designs needed
- Outstanding thermal performance compared to BSC packages
- Improve system power losses
- Enable a V_{RMS} of 950 V with pollution degree 2
- High reliability
- Lower TCO cost or BOM cost

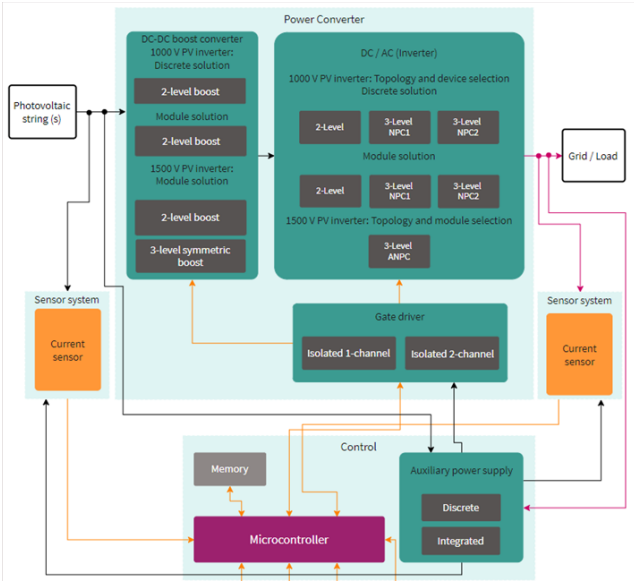
Competitive advantage

- Increased power density
- Improved the thermal performance compared to BSC devices
- Enables easier electrical design

Target applications

- Drives
- EV charging
- Solar
- UPS

Block diagram



Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
IMSQ120R012M2HHXTMA1	SP005873528	PG-HDSOP-16
IMSQ120R026M2HHXTMA1	SP005873530	PG-HDSOP-16
IMSQ120R040M2HHXTMA1	SP005873534	PG-HDSOP-16
IMSQ120R053M2HHXTMA1	SP005873538	PG-HDSOP-16

CoolSiC™ MOSFET discrete 1200 V G2 in top-side cooled Q-DPAK package IMCQ120R0xxM2H

The CoolSiC™ MOSFET discrete 1200 V in a top-side cooled Q-DPAK single switch package has been specifically designed for a wide use in industrial application, including EV charging, solar, UPS, SSCB, industrial drives, AI and CAV.

The Q-DPAK provides customers with a reduced system cost by enabling easier assembly with outstanding thermal performance. Compared to bottom-side cooled solutions, top-side cooled devices enable a more optimized PCB layout, which in turn reduces the effects of parasitic components and stray inductances, while also providing enhanced thermal management capabilities.

Features

- SMD top-side-cooled package
- Low stray inductance
- CoolSiC™ MOSFET 1200 V G2 technology with enhanced switching performance and FOM factor
- .XT interconnection technology
- Lowest $R_{Ds(on)}$
- Mold compound (CTI > 600) and mold groove (CD > 4.8 mm)
- Humidity robustness
- Avalanche robust, short-circuit and PTO

Benefits

- Higher power density
- Enabling automated assembly
- Less complex designs needed
- Outstanding thermal performance compared to BSC packages
- Improve system power losses
- Enable a V_{RMS} of 950 V with pollution degree 2
- High reliability
- Lower TCO cost or BOM cost

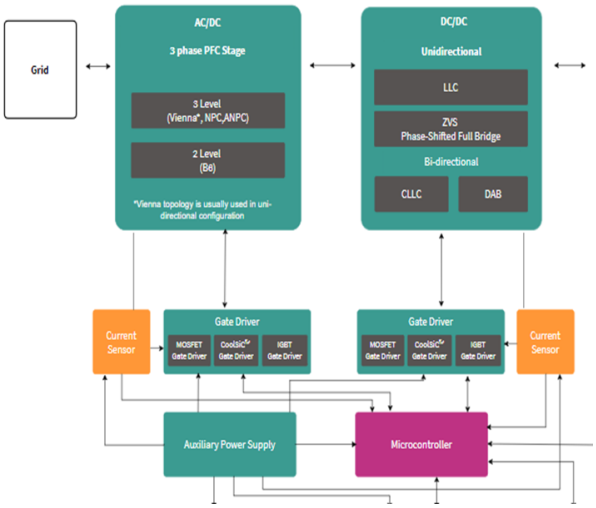
Competitive advantage

- Increased power density
- Improved the thermal performance compared to BSC devices
- Enables easier electrical design

Target applications

- EV charging
- Solar
- UPS
- SSCB
- Industrial drives
- AI
- CAV

Block diagram



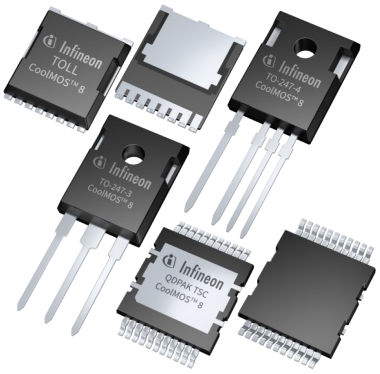
Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
IMCQ120R026M2HXTMA1	SP005927117	PG-HDSOP-22
IMCQ120R034M2HXTMA1	SP006017347	PG-HDSOP-22
IMCQ120R040M2HXTMA1	SP005927124	PG-HDSOP-22
IMCQ120R053M2HXTMA1	SP005974969	PG-HDSOP-22
IMCQ120R078M2HXTMA1	SP005974971	PG-HDSOP-22

600 V CoolMOS™ 8 SJ MOSFET



Infineon's newest CoolMOS™ 8 at 600 V is leading the way in high voltage super-junction MOSFET technology worldwide, setting the standard for both technology and price performance on a global scale. The series is equipped with an integrated fast body diode, making it suitable for a wide range of applications. It is enhancing Infineon's WBG offering and the successor of the 600 V CoolMOS™ 7 MOSFET family including P7, S7, CFD7, C7, G7 and PFD7.

Features

- World class $R_{DS(on)}$ * A
- Integrated fast body diode
- Excellent commutation ruggedness
- Advanced interconnect technology
- Gradual portfolio including BiC 7 mΩ
- Top-side cooling packages

Benefits

- Ease of use and fast design-in
- Low ringing tendency
- 14-42% lower R_{th}
- Simplified portfolio
- System level innovation
- 0.1% Efficiency improvement over C7, and 0.17% over P7

Competitive advantage

- Top-side cooled packages like QDPAK
- Enhancing CoolSiC™ offering
- 7 mΩ offering in QDPAK for SSCB

Target applications

- Server, telecom, super solid-state solutions (relays, circuit breakers), EV charging, solar and energy storage systems, UPS, industrial SMPS, lighting, residential aircon PFC, fridge compressor and charger / adapter

Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
IPDQ60R024CM8XTMA1	SP006023019	PG-HDSOP-22
IPT60R024CM8XTMA1	SP006023064	PG-HSOF-8
IPT60R099CM8XTMA1	SP006023022	PG-HSOF-8
IPW60R024CM8XKSA1	SP006023085	PG-TO247-3
IPW60R055CM8XKSA1	SP006023084	PG-TO247-3
IPW60R099CM8XKSA1	SP006023066	PG-TO247-3
IPZA60R024CM8XKSA1	SP006023089	PG-TO247-4
IPZA60R055CM8XKSA1	SP006023088	PG-TO247-4
IPZA60R099CM8XKSA1	SP006023086	PG-TO247-4

Automotive EDT2 IGBT in TO-247PLUS reflow

You need the best cost-performance solution for discrete inverter in small and medium power segment? Our new automotive 750 V EDT2 IGBT in TO-247PLUS product portfolio combines first in market reflow solderable devices with best-in-class power density. Different power class inverters can now be addressed with the same product family & same platform design to reach high scalability.

Features

- EDT2 technology with highest power density specifically designed for inverter application
- Qualified Reflow device 260°C
- Up to 40% less system R_{th} due to reflow capability
- Extremely tight parameter distribution
- Various power classes in same package enables platform scalability

Benefits

- The 750 V EDT technology significantly improves energy efficiency and cooling efforts for high voltage automotive application
- Excellent parallel operation of devices without binning requirements
- Reduced system cost and improved system efficiency (up to 1%)
- Compact design & streamlined manufacturing of customized cooling concepts possible

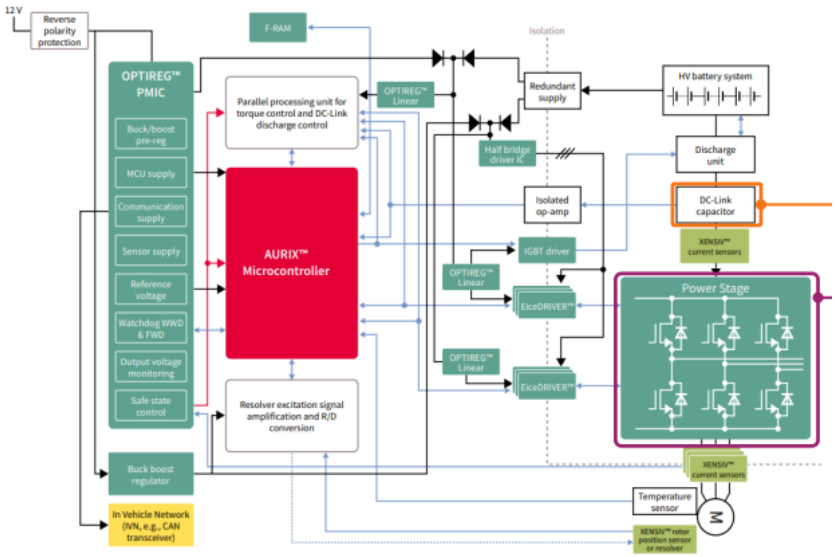
Competitive advantage

- Highest power output in a TO247 package in the market with the 200 A device
- First 260°C reflow solderable devices in the market
- 30% less turn on energy loss compared to 3-pin devices due to Kelvin emitter
- EDT2 - best performing IGBT technology supporting global top vehicle platforms

Target applications

- xEV traction inverter
- DC-link discharge switch
- Automotive auxiliary drives

Block diagram



Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
AIKQB120N75CP2ALSA1	SP006090610	PG-TO247-3
AIKQB160N75CP2ALSA1	SP006090612	PG-TO247-3
AIKQB200N75CP2ALSA1	SP006090614	PG-TO247-3
AIKYX120N75CP2ALSA1	SP005613170	PG-TO247-4
AIKYX160N75CP2ALSA1	SP005613172	PG-TO247-4
AIKYX200N75CP2ALSA1	SP005573941	PG-TO247-4

Easy B-series CoolSiC™ M1H 2 kV with high performance ceramic

EasyDUAL™ and EasyPACK™ 2B 2 kV, 6 mΩ halfbridge and 3-level module with CoolSiC™ MOSFET enhanced generation 1, integrated NTC temperature sensor, PressFIT contact technology and aluminium nitride ceramic.

Features

- Best in class packages with 12 mm height
- Leading edge WBG material
- Very low module stray inductance
- Wide gate source voltage range
- Low switching and conduction losses
- Overload operation up to 175°C

Benefits

- System efficiency improvement
- Reduced cooling requirements
- Enabling higher frequency
- Increase of power density
- Compact design
- Perfect fit for 1500 V DC-link

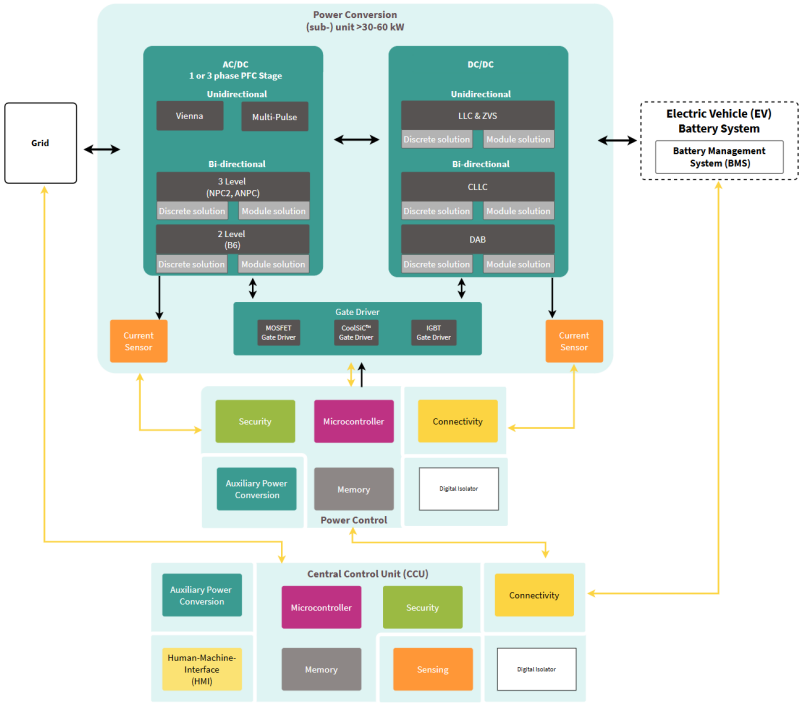
Competitive advantage

- Expansion of 2 kV portfolio to offer our customers a scalable solution for applications with higher application requirements
- New modules are equipped with latest high performance ceramics (AlN) which will help to expand the system lifetime and / or support higher power ratings

Target applications

- DC-DC converter
- EV charging
- Photovoltaic
- Energy storage systems

Block diagram



Product collaterals / Online support

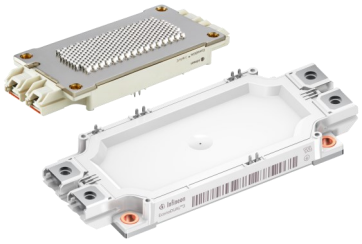
Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
FF6MR20W2M1HB70BPSA1	SP005731276	AG-EASY2B-3111
F3L6MR20W2M1HB70BPSA1	SP006029252	AG-EASY2B-3111

EconoDUAL™ 3 CoolSiC™ MOSFET 1200 V module

EconoDUAL™ 3 1200 V / 1.4 mΩ halfbridge module with CoolSiC™ MOSFET with enhanced generation 1, integrated NTC temperature sensor and PressFIT contact technology. Also available with pre-applied Thermal Interface Material (FF1MR12MM1HP_B11) or with wave structure on the back side of the base plate for direct liquid cooling (FF1MR12MM1HW_B11).



Features

- Low switching losses
- Superior gate oxide reliability
- Higher gate threshold voltage
- Higher power output
- Robust integrated body diode
- High cosmic ray robustness
- High speed switching module
- $T_{vj(op)}$ = 175°C overload
- PressFIT pins
- Screw power terminals
- Integrated NTC temperature sensor
- Isolated baseplate

Benefits

- High switching frequency
- Reduced volume and size
- Reduction of system costs
- High thermal efficiency

Competitive advantage

- High switching frequency (>7 kHz)
- Optimized for high speed motors

Target applications

- Commercial, construction and agricultural vehicles (CAV)
- Energy storage systems
- General purpose motor drive - variating frequency and voltage
- HVAC control module
- Motor control
- Uninterruptible power supplies (UPS)
- EV charging

Product collaterals / Online support

Product page FF1MR12MM1H_B11

Product page FF1MR12MM1HW_B11

Product page FF1MR12MM1HP_B11

Product overview incl. datasheet link

OPN	SP Number	Package
FF1MR12MM1HB11BPSA1	SP006049681	AG-ECONOD-3111
FF1MR12MM1HWB11BPSA1	SP006017040	AG-ECONOD-3111
FF1MR12MM1HPB11BPSA1	SP006017348	AG-ECONOD-3111

Fast, robust, dual-channel, high side isolated gate driver with accurate and stable timing and high current output EDF5215F/G

Designed to drive low-side and high-side MOSFETs, a strong output stage, together with a low part-to-part skew and fast signal propagation makes these products ideal for use in fast-switching power systems. The outputs are matched with a maximum 4 ns propagation delay enabling the use of lower dead-time in half-bridge and perfect synchronization in diagonal driving.

Features

- 250 V high and low-side gate driver
- -250 V negative HS transient immunity
- 100 V/ns dV/dt robustness
- 5 A / 9 A source / sink capability
- +9 ns / -5 ns delay accuracy
- 4 ns max delay matching
- 1.2 V output clamping threshold in UVLO
- <2 µs fast start-up time

Benefits

- High side channel isolation
- Flexible: independent channels
- Robustness against ground noise
- Great signal synchronization
- Reliable for high switching frequencies
- Safe operation during system start-up
- Optimal operation in bootstrap supply

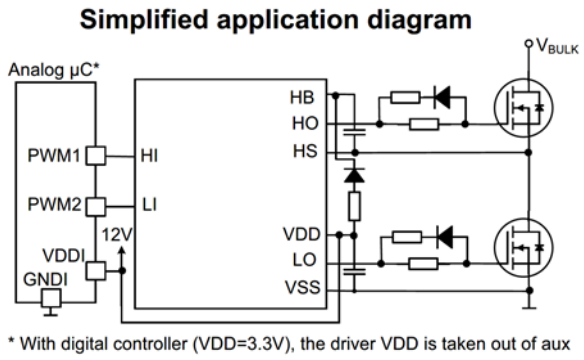
Competitive advantage

- Robust
- Fast (<2 µs fast start-up time)
- Accurate and stable timing and high current output

Target applications

- Server and telecom DC-DC converter
- Synchronous rectification for SMPS
- Motor drives and power tools
- Low-speed electric vehicles (LSEV)
- Solar optimizers and micro-inverters

Block diagram



Product collaterals / Online support

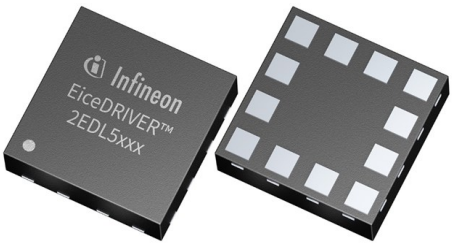
Product page 2EDF5215F

Product page 2EDF5215G

Product overview incl. datasheet link

OPN	SP Number	Package
2EDF5215FXUMA1	SP005635213	PG-DSO-8
2EDF5215GXTMA1	SP005965073	PG-VDSON-8

EiceDRIVER™ 2EDL5xxx driver for logic level FET 2EDL5013U2D and 2EDL5023U2D



This half-bridge driver family is designed to control both high-side and low-side logic level MOSFETs. It features a 120 V bootstrap voltage, complete with an integrated bootstrap diode and active clamp to prevent capacitor overcharge during deadtime. The driver also includes TTL-compatible inputs and split outputs, allowing for independent adjustment of turn-on and turn-off strength. Additionally, an active Miller clamp is included to prevent unwanted turn-on.

Features

- Integrated 120 V bootstrap switch
- low propagation delay and delay matching
- Strong 7 A active miller clamp
- Strong current capability
- Small 2x2 mm^2 TSNP package
- Active bootstrap clamp

Benefits

- No need for external bootstrap diode
- Fast switching transition
- Higher efficiency
- Higher power density
- Induced turn-on immunity

Competitive advantage

- Small package: TSNP-12 2x2 in lead frame package. Most competition are in chip scale package which many customer do not prefer because of reliability concerns. MPS has lead frame package but in bigger 3x3 mm^2 package size
- Active miller clamp function: Improves system reliability. No other competition has this feature
- Low 20 ns propagation delay: Adaptability for higher switching frequencies designs

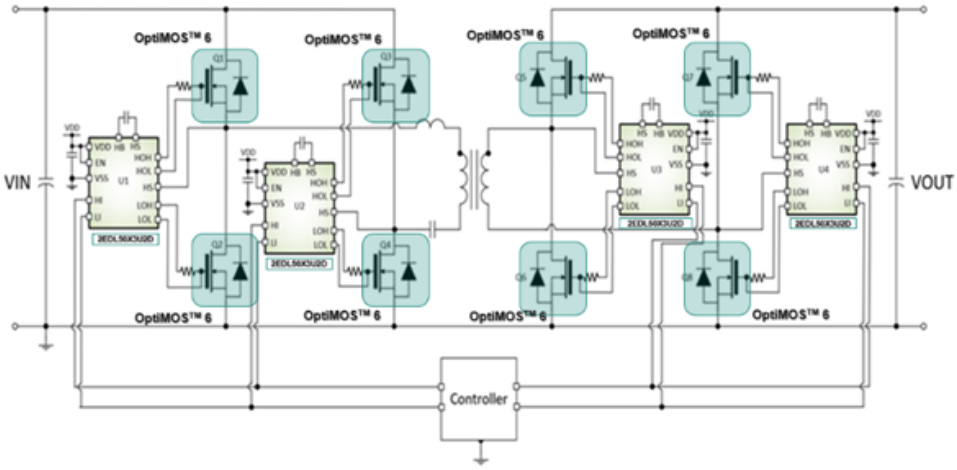
Target applications

- Telecom
- Server
- DC-DC converter

Product collaterals / Online support

Product family page

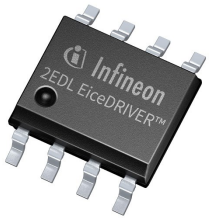
Block diagram



Product overview incl. datasheet link

OPN	SP Number	Package
2EDL5013U2DXTMA1	SP005724978	PG-TSNP-12
2EDL5023U2DXTMA1	SP005915227	PG-TSNP-12

120 V boot 3 A high and low side junction isolated gate drivers 2EDL803XF5B



The 2EDL803XF5B family is designed to drive both high and low-side MOSFETs in a half-bridge configuration. The floating high-side driver is capable of driving a high-side MOSFET operating up to 120 V bootstrap voltage and provides 3 A current capability. The high-side bias voltage is generated using an integrated bootstrap diode. The inputs of the driver are TTL logic compatible and can withstand input common mode swing from -10 V up to 20 V.

Features

- 3 A / 4 A source and 6 A sink output current
- 120 V absolute maximum boot voltage
- Integrated bootstrap diode
- -10 V to 20 V input pin capability
- -5 A output pin reverse current cap.
- -12 V abs maximum negative voltage on HS
- 8-17 V supply voltage operating range
- UVLO for both high-side and low-side
- Fast propagation delay (< 35 ns)
- 2 ns typical delay matching
- Offered in DSO-8
- -40ºC to 125ºC operating junction T°

Benefits

- Best-in-class driving capability
- Strong 3 A / 4 A source and 6 A sink capability
- Strong 6 A pull down (no induced turn on)
- Tight propagation delay matching
- DSO-8 package, industry standard pin-out
- Integrated bootstrap diode

Competitive advantage

- Low impedance TTL output / stronger sink reducing self-turn on, improving noise margin
- -10 V to 20 V robustness of control inputs giving crucial safety margin to drive gate pulse-transformer
- Strong sourcing and sinking current capability allowing faster switching of power MOSFET's thus lower switching losses

Target applications

- Solar - micro-inverters and power optimizers
- Telecom / datacom half- and full-bridge power converters

Product collaterals / Online support

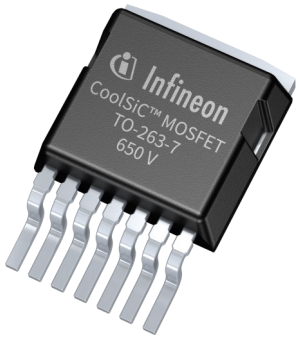
Product page 2EDL8033F5B

Product page 2EDL8034F5B

Product overview incl. datasheet link

OPN	SP Number	Package
2EDL8033F5BXUMA1	SP005752558	PG-DSO-8
2EDL8034F5BXUMA1	SP005752560	PG-DSO-8

CoolSiC™ MOSFET 650 V generation 2 in D2PAK 7pin package, 10/26/33/60 mΩ



The portfolio of the CoolSiC™ MOSFET discrete 650 V G2 in the D2PAK 7-pin package has been expanded to include options with 10, 26, 33, and 60 mΩ. This enhancement provides a more granular $R_{DS(on)}$ range, now spanning from 7 mΩ to 60 mΩ.

The CoolSiC™ MOSFET 650 V G2 in the D2PAK-7 (TO-263-7) package builds upon the robust foundation of generation 1 technology. This new generation facilitates accelerated system design, offering more cost-effective, efficient, compact, and reliable solutions. generation 2 introduces significant improvements in key performance metrics suitable for both hard-switching operations and soft-switching topologies. These advancements make it ideal for various common configurations of AC-DC, DC-DC, and DC-AC stages.

Features

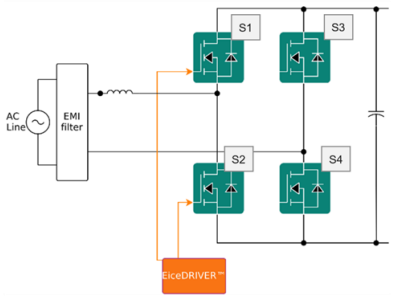
- Excellent figures of merit (FOMs)
- Best-in-class $R_{DS(on)}$
- High robustness and overall quality
- Flexible driving voltage range
- Support for unipolar driving ($V_{GS(off)}$=0)
- Best immunity against turn-on effects
- Improved package interconnect with .XT

Benefits

- Enables BOM savings
- Maximizes the system performance per $
- Highest reliability
- Enables top efficiency and power density
- Ease-of-use
- Full compatibility with existing vendors
- Allows designs without fan or heatsink

Block diagram

Topology example 1: CCM Totem Pole PFC



S1, S2	– CoolSiC™ MOSFET 650 V – CoolGaN™ HEMT 600 V / 650 V – Low Q_{rr} CoolMOS™ solution
S3, S4	– CoolMOS™ 8 – CoolMOS™ S7
Gate Driver ICs	– EiceDRIVER™ 2EDB9259Y – EiceDRIVER™ 2EDF9275F

Target applications

- 1-phase string inverter solutions
- Energy storage systems
- EV charging
- Power conversion
- Solid-state circuit breaker

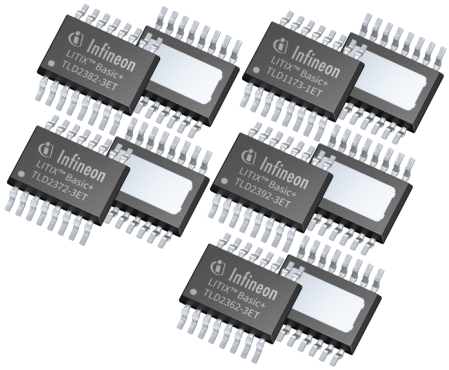
Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
IMBG65R010M2HXTMA1	SP005961932	PG-TO263-7
IMBG65R026M2HXTMA1	SP006051144	PG-TO263-7
IMBG65R033M2HXTMA1	SP006051145	PG-TO263-7
IMBG65R060M2HXTMA1	SP006051147	PG-TO263-7

LITIX™ Basic+ with power shift for automotive LED lighting



The new LITIX™ Basic+ current sinks are now available as one and three-channel versions and enable higher current rear light applications using the power shift feature. The devices come in the new small TFDSO-16 package. We hereby complete our LITIX™ Basic+ portfolio offering dedicated devices with single LED short diagnosis, PWM engine or power shift feature.

Features

- Offload power via external resistor
- Flexible and intelligent fault management
- 150 mA / channel or 400 mA for the 1 channel device
- Analog current control input
- Common error network sharing
- Thermal derating via NTC resistor

Benefits

- Drive high currents
- Improve thermal performance
- Reduce PCB space

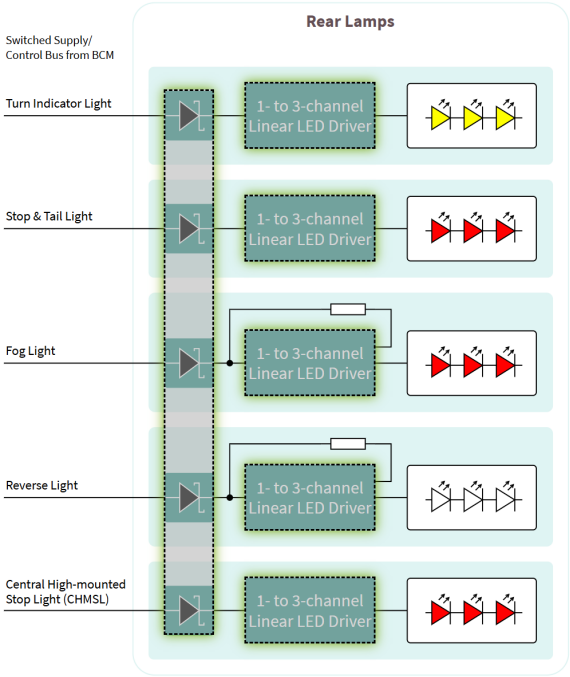
Competitive advantage

- Improved EMC performance during digital dimming due to internal slope control
- Very small package saves PCB space

Target applications

- Position, fog, rear lights and side markers
- Daytime running light
- Interior lighting functions like ambient lighting (including RGB color control), illumination and dash board lighting
- LED indicators for industrial applications and instrumentation

Block diagram



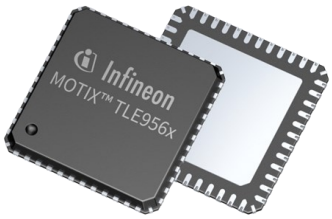
Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
TLD11731ETXUMA1	SP005747585	PG-TFDSO-16
TLD23623ETXUMA1	SP005747588	PG-TFDSO-16
TLD23723ETXUMA1	SP005747602	PG-TFDSO-16
TLD23823ETXUMA1	SP005747595	PG-TFDSO-16
TLD23923ETXUMA1	SP005747606	PG-TFDSO-16

MOTIX™ TLE9563-3QXW and TLE9564QXW motor system ICs (SBC) for BLDC motors



Expansion of the MOTIX™ TLE956x family with two products: new TLE9563-3QXW and TLE9564QXW product variants offer extended temperature range of -40°C to +175°C (AEC Q100, grade 0-qualified). MOTIX™ TLE956x motor system ICs (SBC) integrate a 5 V low-dropout voltage regulator, LIN or CAN transceivers, three half-bridges for BLDC motor control, one current sense amplifier and one 32-bit serial peripheral interface (SPI). They include also a broad range of diagnostic and supervision features as well as ISO 26262 support documentation (ISO-ready).

Features

- Drives 6 MOSFETs up to Q_{Gtot} = 90 nC at 20 kHz
- Integrated low-drop voltage regulator 5 V
- Integrated CAN FD transceiver up to 5 Mbps (TLE9563) and LIN2.2B / J2602 (TLE9564)
- One current sense amplifier
- 6 PWM inputs up to 25 kHz
- 32-bit serial peripheral interface
- Adaptive MOSFET control (AMC)
- Broad range of monitoring and diagnostic features
- Grade 0 variants with extended temperature range 40°C to +175°C

Benefits

- Compatible for LIN and CAN FD to reduce design-in effort and optimize system costs
- Adaptive MOSFET control (AMC) feature can help improve EME performance, achieve target switching time and reduce power losses
- High reliability to meet the most challenging automotive mission profiles
- Free of charge ISO 26262 support documentation allows use in safety relevant applications (ISO-ready)

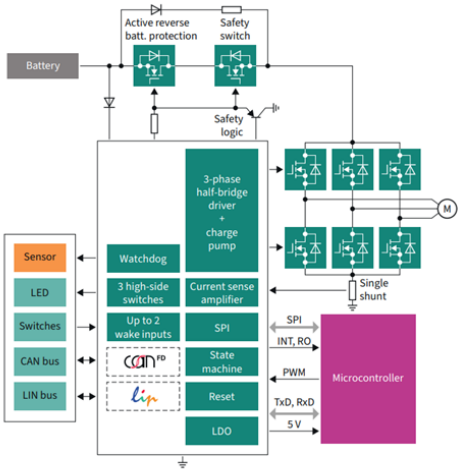
Competitive advantage

- High integration and improved performance that reduces system cost by reducing PCB space needed while also reducing pick and place manufacturing costs
- Peerless scalability and flexibility offered across TLE9185 family & motor system ICs
- Remove two resistor and diode per gate due to current controlled gate control → save estimated 0,03 EUR per gate
- No end-of line MOSFET calibration needed → reduced testing time of ~2 seconds
- Reduce engineering efforts by estimated 2-3 months by reusing product knowhow across use in different applications

Target applications

- Auxiliary pumps (fuel, water, etc.)
- HVAC control module
- Engine cooling fan
- Sunroof module
- Transfer case

Block diagram:



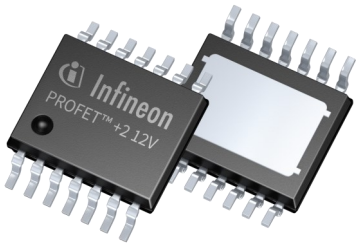
Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
TLE95633QXWXUMA1	SP005582746	PG-VQFN-48
TLE9564QXWXUMA1	SP005582750	PG-VQFN-48

PROFET™ +2 12 V: BTS7008-1EPR



PROFET™ +2 12 V family has one additional member, BTS7008-1EPR, providing protection functions and diagnosis. The product has a slow slew rate control implemted especially for seat heating application. This product uses current trip as protection feature. Furthermore, ISO 26262-ready documentation supports the use in safety-related applications.

Features

- Slow slew rate typ. 0.027 V/µs to meet ICNIRP1989 requirements
- No undervoltage recovery delay for power distribution application
- Best-in-class current sense accuracy

Benefits

- Current capability up to 11 A
- Capacitive, resistive and inductive load switching
- Pin to pin compatibility between family members with the TSDSO14 exposed pad packages

Competitive advantage

- Slow slew rate

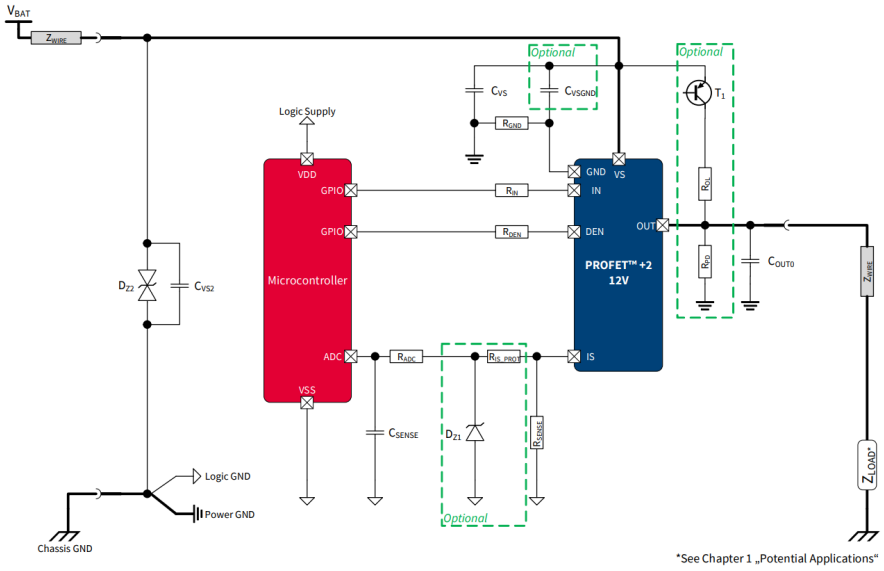
Target applications

- Seat heating application
- Power distribution
- Body control module
- ADAS

Product collaterals / Online support

Product page

Block diagram



Product overview incl. datasheet link

OPN	SP Number	Package
BTS70081EPRXUMA1	SP006004854	PG-TSDSO-14

XENSIV™ – TLE4960x magnetic switch family

Infineon combines its proven expertise in functional safety and magnetic position sensors with the launch of XENSIV™ TLE4960x magnetic switch family. The sensor can measure the magnetic field orthogonal to the PCB direction in Z direction. It has an open drain output providing speed information. TLE4960x is developed according to ISO 26262 and provides built-in diagnosis functions to support functional safety applications with requirements up to ASIL B. The device is AEC-100 compliant and grade 0 qualified.

Features

- ASIL B compliant
- Built-in diagnostic with fault indication
- SOT23-3 package
- Lowest power on and delay time
- Highly accurate sensitivity over temperature and life time

Target applications

- Easy fulfilment of functional safety requirements
- Sensor self-monitoring including fault indication to system level
- Increased design flexibility ensuring system cost savings
- Fast detection and reaction in case of a fault
- Stable long-term performance and high end-customer satisfaction
- Easy change from previous generations. Increased performance with low design-in effort.

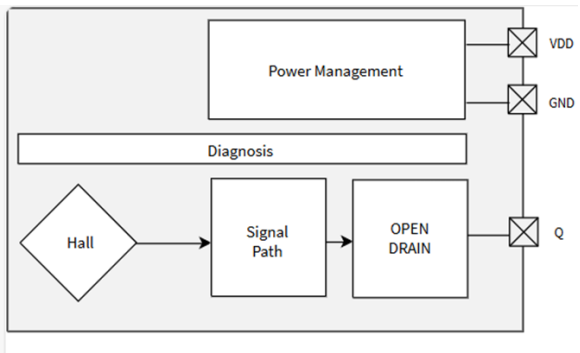
Competitive advantage

- The sensor can measure the magnetic field orthogonal to the PCB direction in Z direction
- It has an open drain output providing speed information
- TLE4960x is developed according to ISO 26262 and provides built-in diagnosis functions to support functional safety applications with requirements up to ASIL B

Benefits

- Automotive comfort and convenience electronics

Block diagram



Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
TLE496011MS2XTSA1	SP005924303	PG-SOT23-3
TLE496013MS2XTSA1	SP005924485	PG-SOT23-3
TLE496015MS2XTSA1	SP005924491	PG-SOT23-3
TLE496041MS2XTSA1	SP005924627	PG-SOT23-3
TLE496042MS2XTSA1	SP005924552	PG-SOT23-3
TLE496044MS2XTSA1	SP005924634	PG-SOT23-3
TLE496046MS2XTSA1	SP005924642	PG-SOT23-3
TLE496047MS2XTSA1	SP005924558	PG-SOT23-3
TLE496048MS2XTSA1	SP005924532	PG-SOT23-3
TLE496081MS2XTSA1	SP005924532	PG-SOT23-3

XENSIV™ – KP40x pressure sensor family: KP400 and KP405

The KP40x is a monolithically integrated pressure sensor with a programmable PSI5 interface, designed for passive safety vehicle systems. It provides fast reaction times and helps fulfill existing and future safety tests. Used in side airbag and pedestrian protection applications, the KP40x offers a signal pulse proportional to pressure change, with an amplitude independent of ambient pressure. It's ISO 26262-compliant and offers best-in-class cost performance.

Features

- Fully compliant to PSI5 and AK-LV29/38 and extended pressure range addendum
- ISO 26262-compliant development to be used in ASIL B(D) systems
- Patented built-in diagnosis for pressure cells and circuitry
- SMD package: DFN-8-1

Benefits

- Small holes for intrusion protection
- Safe operation even with two blocked holes
- Easy customization with end of line programming via PSI5 interface in the final customer module
- Low design-in effort due to drop-in compatibility to previous safety pressure sensor family
- Best-in-class cost performance

Competitive advantage

- Smaller package
- 5-hole lid with 0.4 mm diameter
- Infineon zero-defect quality level
- High level of support provided by Infineon

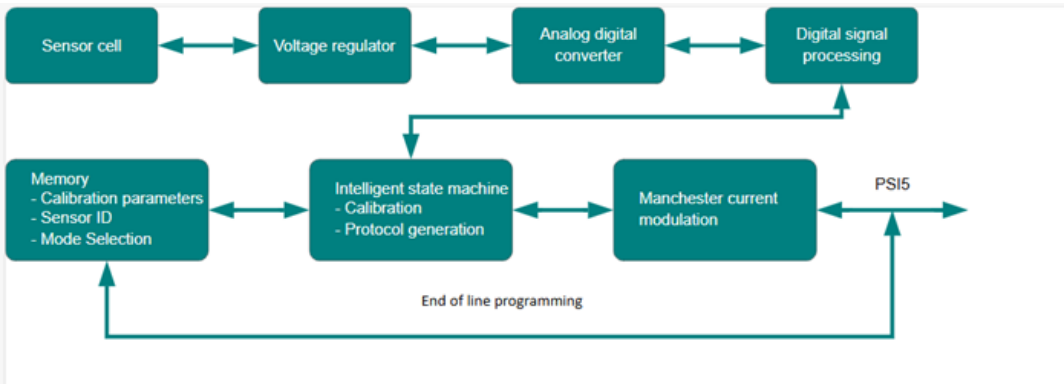
Target applications

- KP400
  - Side crash detection
- KP405
  - Pedestrian impact detection
  - Front crash detection
  - Side crash detection

Product collaterals / Online support

Product page

Block diagram



Product overview incl. datasheet link

OPN	SP Number	Package
KP400XTMA1	SP005414523	PG-DFN-8
KP405XTMA1	SP005414529	PG-DFN-8

Low-voltage GaN motor drive evaluation board – EVAL_MTR_48V20A_GAN

EVAL_MTR_48V20A_GaN is a complete evaluation board for FOC motor drive applications, including six CoolGaN™ transistors 100 V G3 in half-bridge configuration, each using the TDI EiceDRIVER™ (1EDN7126G). Three in-phase current sensors using the XENSIV™ TLI4971 magnetic current sensor, providing accurate phase current measurements at any switching frequency.

Features

- Optimized half-bridge layout
- Waveform connection
- DC voltage connection
- On-board temperature sensing
- Multiple PWM input options

Benefits

- High efficiency
- High power density
- Easily scalable design

Target applications

- Low power BDC / BLDC motor drives up to 72 V

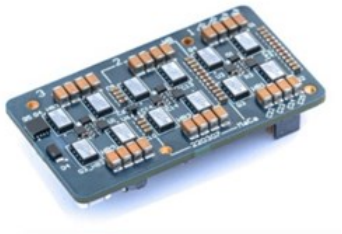
Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
EVALMTR48V20AGANTOBO1	SP006088287

Low-voltage GaN motor drive reference design REF_MTR_48V30A_GAN



This compact inverter reference design for low-voltage battery applications includes twelve CoolGaN™ transistors 100 V G3 (IGC033S10S1) in a half-bridge configuration with two devices in parallel for all phases.
The transistors are driven by the EiceDRIVER™ 1EDN7136U and the output phase current is sensed by the XENSIV™ TLI4971 magnetic current sensor. In addition, the XMC™ XMC4200 microcontroller is able to run a field-oriented control (FOC).

Features

- Small reference design
- Optimized layout
- Top-side cooling
- High switching frequency

Benefits

- High efficiency
- High power density
- Inspiring next-generation of drives

Target applications

- Low power BDC / BLDC motor drives up to 72 V
- Multicopters and drones

Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
REFMTR48V30AGANTOBO1	SP006088284

48 V - 12 V intermediate bus converter featuring CoolGaN™ REF_IBC_1600W_GAN

REF_IBC_1600W_GAN operates from 36 to 60 V_{in_DC} with nominal output voltage of 12 V and maximum power of 1600 W. It is in a compact form factor with a low profile of 10 mm and maximum top side component height of 7 mm. Under forced airflow of 1000 LFM, the peak efficiency is 96.7% at 48 V_{in}.

Features

- Digital voltage mode control
- Current balancing and current sharing
- Fast line and load transient response
- High power density and low profile
- PMBus communication
- Scalable in power

Benefits

- High efficiency
- Configurable V_{out} through PMBus
- Allows FW based customization
- Accurate telemetry for protection

Target applications

- 48 V intermediate bus converter (IBC)
- Data center and AI data center solutions
- DC-DC power conversion for telecom infrastructure
- Server power supply units (PSU)

Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
REFIBC1600WGANTOBO1	SP006104519

500 W half-bridge LLC board – REF_LLC_500W_FULLGAN

The REF_LLC_500W_FULLGAN is a half-bridge LLC resonant DC-DC converter board, delivering 500 W at 22 V. With its low profile, high switching frequency, and efficiency, it is ideal for super thin OLED TVs. The design showcases a full GaN solution, with the CoolGaN™ Transistor 650 V G5 (IGLD65R110D2) used on the primary side, and the CoolGaN™ Transistor 100 V G3 (IGC033S101), controlled by the XDPP1148-100B, on the secondary side.

Features

- 500 W at full output voltage range
- High peak efficiency (max. 96 %)
- Low profile (height 6 mm)
- Synchronous rectification
- 650 V and 100 V GaN transistors

Benefits

- Attractive business model for customers
- Easy installation inside TV (small size)
- Elimination of dummy load

Target applications

- Complete system solutions for smart TVs

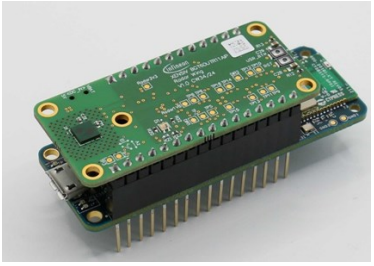
Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
REFLLC500WFULLGANTOBO1	SP006120076

XENSIV™ KIT_CSK_BGT60UTR11AIP with 60 GHz radar sensor



The XENSIV™ KIT_CSK_BGT60UTR11AIP is the go-to IoT sensors platform for IoT device development. It helps you create new prototype ideas based on BGT60UTR11AIP 60 GHz FMCW radar sensor.

Features

- Adafruit feather-compatible form factor
- Wi-Fi and Bluetooth® combo radio module
- Interchangeable sensor wings
- Seamless integration into ModusToolbox™
- Real-time sensor data evaluation
- Dual core, low-power PSOC™ 6 MCU
- Dedicated cloud demo platform

Benefits

- Ideal for IoT, battery-powered devices
- Suited for customer field trials
- Rapid prototyping with code examples
- Secure cloud connection with OPTIGA™
- Secure device provisioning
- Flexible FMCW configuration

Competitive advantage

- Small size for integration into space-constrained environments
- Low power consumption for battery-driven applications

Target applications

- Smart building
- Smart home
- Smart appliances
- Healthcare
- Service robots

Product collaterals / Online support

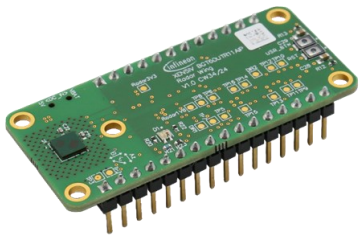
Board page

Product overview incl. user manual link

OPN	SP Number
KITCSKBGT60UTR11AIPTOBO1	SP006089336

XENSIV™ 60 GHz radar BGT60UTR11AIP Wing board

The EVAL_60UTR11_WING is the go-to IoT sensors platform for IoT device development. It helps you create new prototype ideas based on BGT60UTR11AIP 60 GHz FMCW radar sensor.



Features

- 50.8 x 22.9 mm² size on standard FR4 laminate
- 1 RGB LED and 2 configurable user buttons on the Wing
- Form factor compatibility with Adafruit

Benefits

- Ideal for IoT, battery-powered devices
- Suited for customer field trials
- Rapid prototyping with code examples
- Secure cloud connection with OPTIGA™
- Secure device provisioning
- Flexible FMCW configuration

Competitive advantage

- Small size for integration into space-constrained environments
- Low power consumption for battery-driven applications

Target applications

- Smart building
- Smart home
- Smart appliances
- Healthcare
- Service robots

Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
EVAL60UTR11WINGTOBO1	SP006140647

PSOC™ 4700S Plus Inductive Sensing Evaluation Kit
CY8CKIT 4700S PLUS

The PSOC™ 4700S Plus Inductive Sensing Evaluation Kit, also known as the CY8CKIT-4700S-PLUS, is a cost-effective hardware platform that enables designers to create and debug the automotive PSOC™ 4700S Plus MCU. This kit showcases Infineon's innovative inductive-sensing technology, allowing users to experience the functionality of both buttons and proximity sensors.

Features

- Inductive sense buttons using metal over touch technology
- Inductive sense proximity sensor that supports metal target detection
- Arduino-compatible connectors for easy integration with other hardware platforms
- Shield2Go connector for added flexibility and expandability
- ModusToolbox™ support, a comprehensive suite of development tools and resources
- Code examples that demonstrate sequential scanning and parallel scanning techniques for greater efficiency in design

Benefits

- Insensitivity to dirt, oil, and moisture, ensuring reliable operation under a variety of conditions
- Compatibility with both grounded and ungrounded (floating) metal, providing greater flexibility in design
- Intrinsically safe operation, which requires no electrical connection to the metal and eliminates the risk of electric shock
- Large detection range for proximity sensing of metallic objects, enabling accurate and efficient operation

Target applications

- Touch buttons with metal overlay, ideal for use on door handles or trunk openers
- Touch buttons with a dual-sensing requirement, combining soft-touch and force-touch capabilities
- Rotary encoders for use in trackpad systems, volume dials, and other applications
- Force-sensing using inductive sensing, making it ideal for use in touchscreens and touch button systems
- Gear shift detection using inductive sensors, providing reliable and accurate data for automotive applications
- Contactless throttle pedal applications, enabling safe and efficient operation of vehicles

Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
CY8CKIT4700SPLUSTOBO1	SP006006467

Double pulse testing evaluation board for CoolSiC™ MOSFET FF6MR20W2M1H_B70: EVAL-FFXMR20WXM1H

The purpose of this board is to enable the evaluation of the FF6MR20W2M1H_B70 CoolSiC™ MOSFET module in combination with 1ED3890MC12M gate driver. The evaluation board allows users to evaluate the device performance via double-pulse measurements. It's a double pulse testing evaluation board for 2 kV CoolSiC™ EasyDUAL™ 2B MOSFET in a half-bridge configuration. It shows a reliable and fast controllability of such devices using 1ED3890MC12M EiceDRIVER™.

Features

- Half-bridge driver for Easy 2B FF6MR20W2M1H_70, 2kV module with CoolSiC™ Trench MOSFET technology
- Driver IC 1ED3890MC12M with I2C bus for parameter adjustment
- Bulk DC-link capacitors for double pulse testing
- Two variants are available with the choice of using a Rogowski coil or a coaxial shunt for current measurement

Benefits

- 132 µF on-board bulk film capacitance
- Pressed-inFF6MR20W2M1H module
- Negative gate-drive voltage adjustment

Target applications

- EV charging
- ESS PFC
- DC-DC stages
- Solar applications

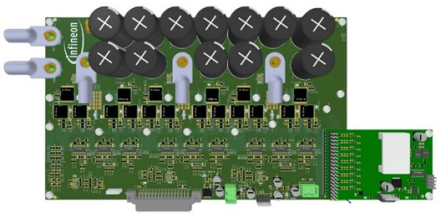
Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
EVALFFXMR20W2M1HXTOBO1	SP006111020
EVALFFXMR20W2M1HXTOBO2	SP006111023

EVAL_10KW_3LANPC_SIC: virtual evaluation board for ANPC 3-level topology using CoolSiC™ MOSFET 400 V G2



This virtual design for 3L-ANPC topologies features a 3-phase, 3-level inverter board and an isolated power supply board. The optimized layout minimizes commutation loop inductance, reducing switching losses and voltage overshoot. This design is ideal for engineers and researchers to experiment, validate, and optimize 3L-ANPC systems for industrial motor drives and photovoltaic string inverters.

Features

- Test platform for 3L-ANPC topology
- 3-phase, 3-level ANPC power board
- Isolated power supply: AUX power supply
- XMC4400 drive card interface
- High precision coreless current sensor
- CoolSiC™ 400 V - heat-sink free design

Benefits

- High efficiency > 99.5% and power density
- Low EMI
- Reduced voltage stress, improved longevity
- Flexible motor control algorithm
- Allows for 2-L modification to compare
- Extended power range via heatsink (optional)

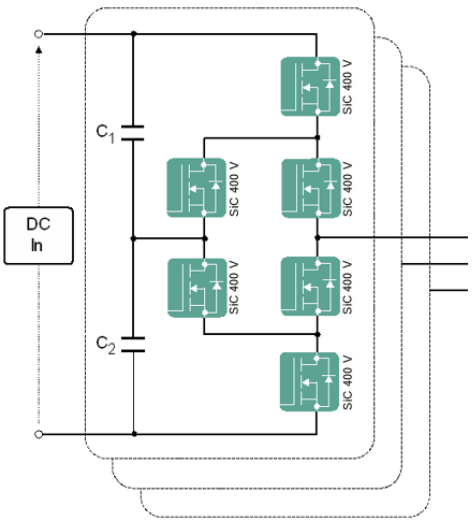
Competitive advantage

- CoolSiC™ MOSFET 400 V G2 value proposition in 3L-ANPC
- 400 V SiC enables 3L topologies (ANPC) with blocking voltage capability of 800 V_{DC}
- Higher V_{BUS} improves efficiency and power density, reduces PCB copper, and eliminates paralleling
- Inductor size reduction due to inherent lower current ripple of multilevel topology
- Better EMI performance due to inherent lower dv/dt of the topology
- Better thermal management due to heat spreading over 18 MOSFETs

Target applications

- 1-phase string inverter solutions
- Industrial motor drives and controls
- Photovoltaic
- Uninterruptible power supplies (UPS)

Block diagram



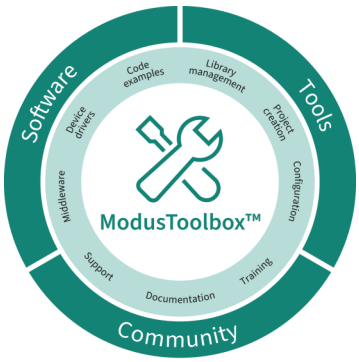
Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number	Note
EVAL10KW3LANPCSICTOBO1	SP006122444	This is a virtual evaluation board with design files available for download here

ModusToolbox™ Software v3.5 release announcement



Infineon has released the latest tools update for the ModusToolbox™ ecosystem with newly supported products and ease-of-use features.

ModusToolbox™ software is a modern, extensible development environment supporting a wide range of Infineon microcontrollers, connectivity products and 3rd party partner Wi-Fi modules.

Provided as a collection of development tools, libraries, and embedded run-time assets ModusToolbox™ is architected to provide a flexible and comprehensive development experience.

Run-time software, comprised of middleware, device drivers, and code examples, is provided via an extensive collection of GitHub-hosted repositories usable directly within the ModusToolbox™ desktop applications. Additional details are available from the ModusToolbox™ software repository overview.

Development tools supporting Windows, Linux, and macOS are available via the ModusToolbox™ setup program.

The ModusToolbox™ setup program, supports the installation of the base ModusToolbox™ installation, Eclipse IDE for ModusToolbox™, ModusToolbox™ programming tools, ModusToolbox™ edge protect security suite, and ModusToolbox™ Motor Suite.

Features

- Support for the latest PSOC™ control C3 family of devices, including the ModusToolbox™ Motor Suite
- New application sharing feature, enabling efficient exporting capabilities
- New settings UI for managing environment variables, including the ability to easily enable/disable early access packs
- New version of Eclipse IDE with improved intelligence

Benefits

- Faster more intuitive code development with updated intelligence available within the Eclipse IDE
- Easier installation and enabling of content and OS configuration settings
- Ability to easily export and share development projects and workspaces

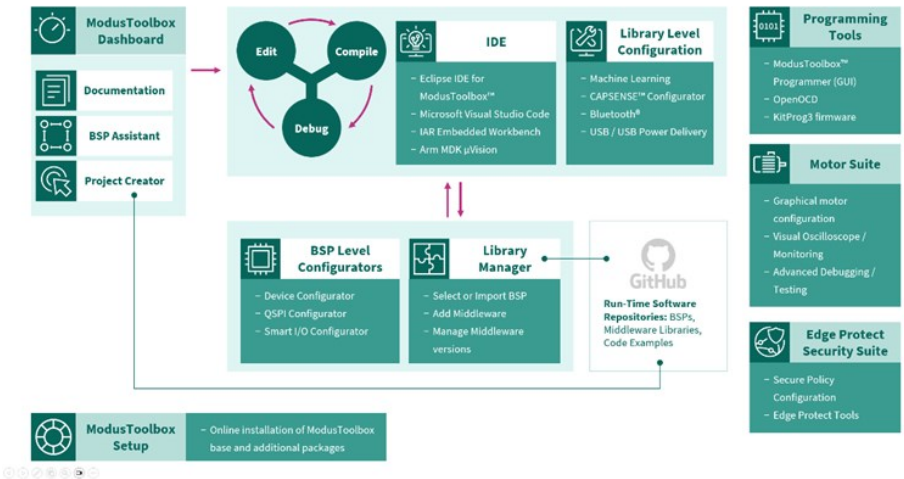
Competitive advantage

- Development workflow flexibility - ModusToolbox™ provides an adaptable work environment with options for various IDEs, command-line tools with GUI options, and a make-based build system
- Middleware management - libraries within ModusToolbox™ library manager can be imported directly into your project structure and seamlessly incorporated into the build environment
- ModusToolbox™ includes Peripheral driver library for maximizing code efficiency and device capabilities, along with middleware abstraction APIs for maximizing portability
- Application portability is facilitated through the availability of code generation, board support packages, and BSP assistant

Target applications

- Any IoT or industrial embedded applications using microcontroller-class devices from Infineon.

Block diagram



Product collaterals / Online support

Tool page

Link to ReadMe ModusToolbox™ software