New Product Introduction

November 2024

2EP1xxR – 20 V full-bridge transformer drivers for IGBT, GaN and SiC gate driver supply with adjustable frequency and duty cycle

3.3 kV IGBT modules in IHV B housing DD1600S33HE4

OptiMOS™ 7 80 V SSO8 Automotive MOSFETs

OptiMOS™ Linear FET2

6EDL04x065xR and 6EDL04N03PR family

6EDL04x065xT family

CoolSiC™ MOSFET 750 V G1, 8 mΩ in TO-247-4 package, Industrial and Automotive graded

XHP™ 2 CoolSiC™ MOSFET 3.3 kV with .XT

IHV B module with Trench/ Field stop IGBT4 and emitter controlled 4 diode

XENSIV™ – IM63D135A robust digital MEMS microphone for high sound pressure levels

Efficient kit for AC-DC solid state circuit breaker evaluation REF_SSCB_AC_DC_1PH_SIC

REF_SSR_AC_DC_2A - Solid-state relay reference design: 2 A / 250 V AC or 350 V DC featuring over-current and overtemperature protections

Evaluation board EVAL_XDP700_FET_BD

Reference board REF_5AR0680BZS-1_44W1

Reference board REF_5AR3995BZ-1_14W1

Reference board REF_5AR4770BZS-1_15W1

Reference board REF_5AR4780BZS-1_14W1

Reference board REF_5BR2280BZ-1_22W1

Evaluation board EVAL_5BR2280BZ-1_700mA1

New Product Introduction

November 2024

Reference board REF_5BR3995BZ-1_16W1

Evaluation board EVAL_5BR3995BZ-1_BUCK1

Reference board REF_5BR4780BZ-1_15W1

Evaluation board EVAL_5BR4780BZ-1_450mA1

EVAL-2EP130R-xx – family of evaluation boards for 2EP130R

Evaluation board OPTIGA™ Trust M Shield

XENSIV™ Bluetooth® game controller

ModusToolbox™ Software v3.3 Release Announcement

2EP1xxR – 20 V full-bridge transformer drivers for IGBT, GaN and SiC gate driver supply with adjustable frequency and duty cycle

The 2EP1xxR is a family of full-bridge transformer driver ICs in a compact TSSOP8 pin package with power integration and optimizations to generate an asymmetric output voltage to supply isolated gate drivers.

It is optimized for asymmetric gate driver supply due to its unique duty-cycle adjustment ability. 2EP1xxR also offers integrated protections for temperature, short-circuit and UVLO to help protect the system from unwanted faults.

Features

- Isolated gate driver power supply
- Wide input supply voltage up to 20 V
- Frequency adjustment from 50 to 695 kHz and duty cycle adjustment from 10 to 50%
- Adjustable overcurrent threshold, short circuit protection of outputs and over-temperature protection
- Ready output signals operation
- Small space-saving package

Benefits

- Integration of switch output bridge
- Reduction in circuit complexity
- Small footprint for optimized PCB
- Asymmetric output voltage for SiC
- Plug and play isolated power supply

Evaluation board

- EVAL-2EP130R-PR: 2EP130R transformer driver evaluation board with dual output peak rectification and customizable output voltage
- EVAL-2EP130R-PR-SIC: 2EP130R transformer driver evaluation board with dual output peak rectification for SiC MOSFETs
- EVAL-2EP130R-VD: 2EP130R transformer driver evaluation board with dual output voltage doubler configuration

Target applications

- Solar
- EV charging
- ESS
- Welding
- UPS
- Drives

Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
2EP100RXTMA1	SP005435064	PG-TSSOP-8
2EP101RXTMA1	SP005435068	PG-TSSOP-8
2EP110RXTMA1	SP005435072	PG-TSSOP-8
2EP130RXTMA1	SP005435076	PG-TSSOP-8

3.3 kV IGBT modules in IHV B housing DD1600S33HE4

The well-known IHV B 3.3 kV single switch IGBT module has been improved heavily to meet current and future requirements for traction and industry applications such as Medium Voltage Drives or HVDC.

Its first diode portfolio extension is no wonder, the best in class 3.3 kV Diode module called DD1600S33HE4, which is good enough to replace 2x Dual diode 3.3 kV modules.

It features the Emitter Controlled 4 diode at increased power cycling capability in the standardized housing IHV B 130 mm x 140 mm.

Customers can easily switch, while saving cost vs former generations.

Features

- High surge current capability
- $T_{vj\ op\ max}$ = 150°C
- AlSiC base plate with AlN substrate for increased Thermal cycling
- Fire & smoke EN45545 R22, R23 : HL3
- Package with CTI > 600
- Isolated base plate
- 2x power cycling vs state of the art types
- Standardized 130 mm x 140 mm IHV B housing
- Easy set-up of 3-level NPC1 topologies

Benefits

- 2 x PC to enable 200% lifetime or 110% power or 8K more safety buffer at same lifetime
- 30y lifetime under harsh environmental conditions
- best in class by +40% power output
- Clean electrical and mechanical design

Competitive advantage

- Enables extreme power output, by offering esp. at the common bottleneck of low frequencies 40% higher power without lifetime reduction vs legacy types
- DD and FZ1600R33HE4 are the perfect match for a very compact air cooled 1.6+ MW system

Target applications

- Traction
- Industrial drives
- Power transmission and distribution
- CAV

Product collaterals / Online support

Product page

Product overview incl. datasheet link

OPN	SP Number	Package
DD1600S33HE4BPSA1	SP005850884	AG-IHVB130-411

OptiMOS™ 7 80 V SSO8 Automotive MOSFETs

Infineon introduces MOSFETs in our next, leading edge, power technology: OptiMOS™ 7 80 V. These products are offered in our versatile, robust, high current SSO8 5 x 6 mm² SMD package. They are designed specifically for high performance, high quality and the robustness needed for demanding automotive applications.

Features

- > $R_{DS(on)}$ better than prior best
- > Leading edge FOM ($R_{DS(on)}$x Q_g)
- > Fast switching times (turn on/off)
- > Low package resistance and inductance
- > High avalanche current capability and SOA ruggedness
- > Extended qualification beyond AEC-Q101

Benefits

- > Very low conduction losses
- > Superior switching performance
- > Highest power density in 5 x 6 mm² package
- > High power efficiency
- > Small footprint and efficient cooling

Competitive advantage

- > The newest technology has the industry's lowest $R_{DS(on)}$ which means the lowest conduction losses in your application
- > Excellent power density in the SSO8 package can replace MOSFETs in TOLL (10 x 12 mm²) packages in some cases while using 75% less PCB area

Target applications

- > HV to 48 V DC-DC converter in electric vehicles
- > 48 V to 12 V DC-DC converter (or 48 V to 24 V)
- > 48 V power distribution
- > 48 V battery management system (BMS) and disconnect switch
- > 48 V motor control (EPS, braking, suspension, HVAC)

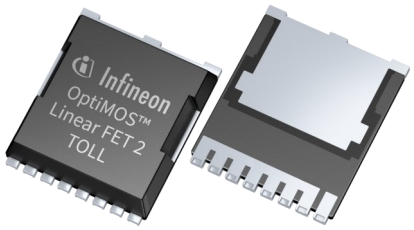
Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
IAUCN08S7N013ATMA1	SP005402887	PG-TDSON-8
IAUCN08S7N019ATMA1	SP005923840	PG-TDSON-8
IAUCN08S7N024ATMA1	SP005923836	PG-TDSON-8
IAUCN08S7N034ATMA1	SP005923832	PG-TDSON-8

OptiMOS™ Linear FET2



The new OptiMOS™ Linear FET2 is Infineon's new best-in-class 100 V power MOSFETs in a TO-Leadless (TOLL) package, offering the industry's lowest $R_{DS(on)}$ and wide SOA at 25°C. OptiMOS™ 5 linear FET2 technology enables the best-in-class trade-off between $R_{DS(on)}$ and linear mode capability. Combined with the TOLL package, the device is targeted for inrush current protection, such as hot-swap, e-fuse, and battery protection in battery management systems (BMS).

Features

- Wide safe operating area (SOA)
- Low $R_{DS(on)}$
- Lower leakage current compared to Linear FET
- Optimized transfer characteristic

Benefits

- Rugged linear mode operation
- Low conduction losses
- Improved gate driver compatibility
- Better current sharing when paralleling

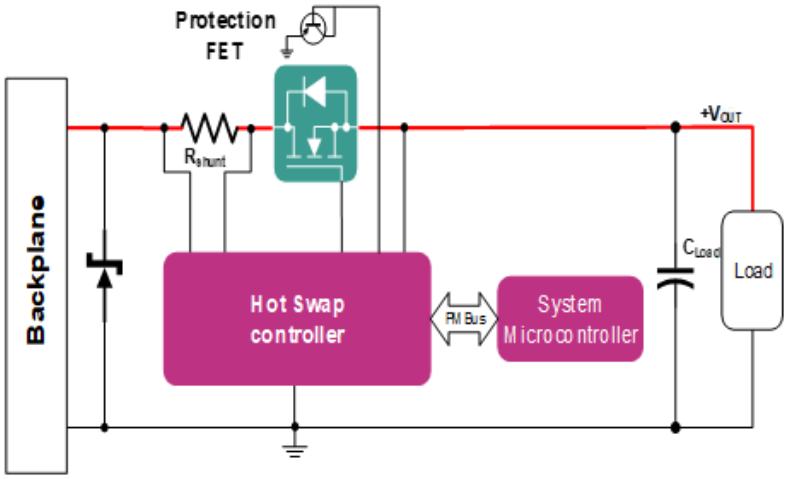
Competitive advantage

- Robustness against harsh application conditions
- High efficiency and power density
- More MOSFETs per gate driver
- High reliability and power density

Target applications

- Hotswap in telecom and server
- BMS in a wide variate of applications

Block diagram:



Product collaterals / Online support

Product page IPT017N10NM5LF2

Product page IPT023N10NM5LF2

Product overview incl. datasheet link

OPN	SP Number	Package
IPT017N10NM5LF2ATMA1	SP006046454	PG-HSOF-8
IPT023N10NM5LF2ATMA1	SP006046479	PG-HSOF-8

6EDL04x065xR and 6EDL04N03PR family

650 V and 300 V three-phase gate driver with Over Current Protection (OCP), Enable (EN), Fault and Integrated Bootstrap Diode (BSD)

Features

- Infineon thin-film-SOI-technology
- Maximum blocking voltage +650 V
- Output source/sink current +0.165 A/-0.375 A
- Integrated ultra-fast, low $R_{DS(on)}$ Bootstrap Diode
- Insensitivity of the bridge output to negative transient voltages up to -50 V given by SOI-technology
- Separate control circuits for all six drivers
- Detection of over current and under voltage supply
- Externally programmable delay for fault clear after over current detection
- 'Shut down' of all switches during error conditions CMOS and LSTTL compatible input (negative logic)
- Signal interlocking of every phase to prevent cross-conduction

Benefits

- Smaller footprint
- Higher efficiency
- Increased reliability
- Easy of design

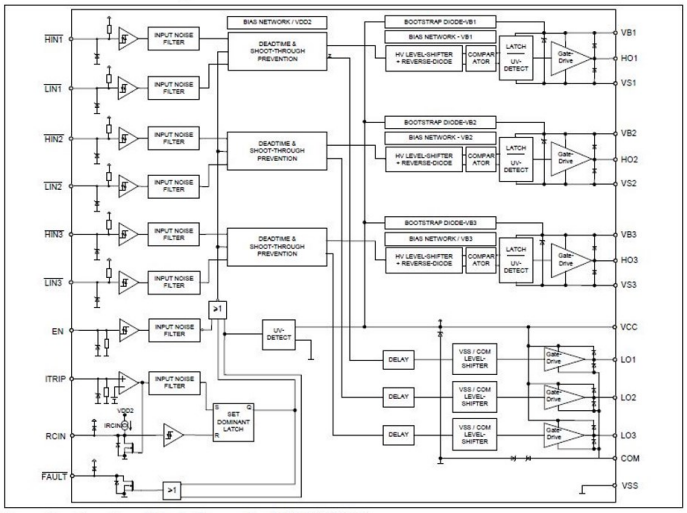
Competitive advantage

- Integrated bootstrap diode
- Space savings
- Reduced BOM cost
- Excellent ruggedness and noise immunity against negative transient voltages on VS pin

Target applications

- Dishwasher
- Fridge
- Washing machine
- Pumps
- Fans
- Heat pump
- Sewing machine

Block diagram:



Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
6EDL04I065NRXUMA1	SP005916525	PG-TSSOP-25
6EDL04I065PRXUMA1	SP005916528	PG-TSSOP-25
6EDL04N065PRXUMA1	SP005902416	PG-TSSOP-25
6EDL04N03PRXUMA1	SP005916544	PG-TSSOP-25

6EDL04x065xT family

650 V three-phase gate driver with Over Current Protection (OCP), Enable (EN), Fault and Integrated Bootstrap Diode (BSD)

Features

- Infineon thin-film-SOI-technology
- Maximum blocking voltage +650 V
- Output source/sink current +0.165 A/-0.375 A
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Target applications

- Dishwasher
- Fridge
- Washing machine
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- Fans
- Heat pump
- Sewing machine

Block diagram:

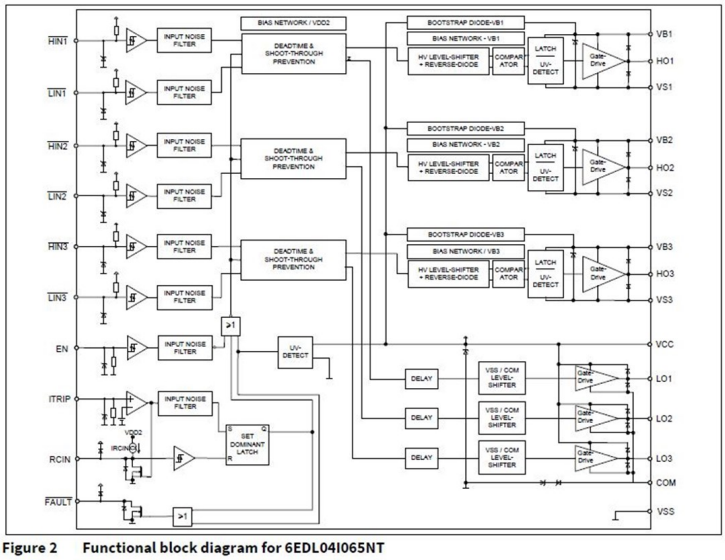


Figure 2 Functional block diagram for 6EDL04I065NT

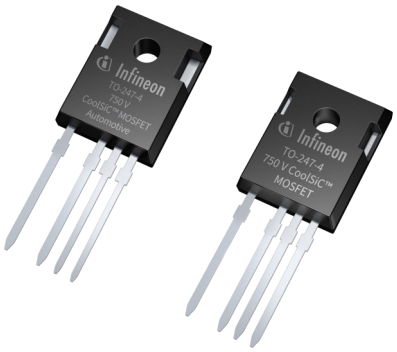
Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
6EDL04I065NTXUMA1	SP005916546	PG-DSO-28
6EDL04I065PTXUMA1	SP005916548	PG-DSO-28
6EDL04N065PTXUMA1	SP005916550	PG-DSO-28

CoolSiC™ MOSFET 750 V G1, 8 mΩ in TO-247-4 package, Industrial and Automotive graded



The new CoolSiC™ MOSFET 750 V G1 in TO-247-4 package is a highly robust SiC MOSFET for the best system performance and reliability. The CoolSiC™ MOSFET 750 V leverages more than 20 years of SiC experience in Infineon. It offers an edge in performance, reliability, and robustness, with gate driving flexibility, enabling the simplified and cost-effective system design for top efficiency and power density. The innovative top-side-cooling package further enhance the CoolSiC™ 750 V strengths, offering more density, optimized power loop design and less system and assembly cost.

Features

- Highly robust 750 V technology
- Best-in-class $R_{DS(on)}$ x Q_{fr}
- Excellent R_{on} x Q_{oss} and R_{on} x Q_G
- Low C_{rss}/C_{iss} together and high V_{GSth}
- 100% avalanche tested
- .XT interconnection technology for best-in-class thermal performance

Benefits

- Superior efficiency in hard switching
- Enables higher switching frequency
- Higher reliability
- Withstand bus voltages beyond 500 V
- Robustness against parasitic turn
- Unipolar driving

Competitive advantage

- Enhanced robustness to withstand bus voltages beyond 500 V
- Best-in-class figures of merit
- Unique diffusion soldering technique
- Ultra-low R_{on}

Target applications

- Industrial
- 1-phase string inverter solutions
- AC-DC power conversion for telecom infrastructure
- Energy storage systems
- EV charging
- Server power supplies
- Automotive
- Onboard battery charger for electric vehicles
- High-voltage DC-DC converter for electric vehicles

Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
AIMZA75R008M1HXKSA1	SP005596205	PG-TO247-4
IMZA75R008M1HXKSA1	SP005970686	PG-TO247-4

XHP™ 2 CoolSiC™ MOSFET 3.3 kV with .XT

Decarbonize transportation thanks to XHP™ 2 CoolSiC™ MOSFET 3.3 kV with .XT. Its unparalleled performance is enabled by the unique combination of CoolSiC™ MOSFET 3.3 kV with integrated body diode, XHP™ 2 housing and .XT interconnection technology.

Features

- High F_{sw}
- Compact size
- Low losses
- Highest I_{nom}
- .XT joining technology
- I2t surge current robustness

Benefits

- Energy efficiency
- High power density
- Enhanced lifetime

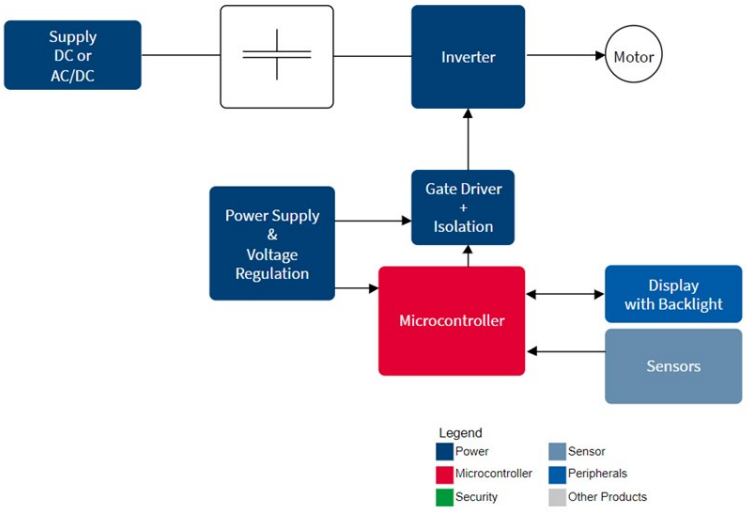
Competitive advantage

- Unique combination of highest power density, energy efficiency and ruggedness

Target applications

- Rail Transportation: traction converters
- Renewables: PV, ESS, H2 electrolysis

Block diagram:



Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
FF2000UXTR33T2M1BPSA1	SP005400736	AG-XHP2K33-3031
FF2600UXTR33T2M1BPSA1	SP005404848	AG-XHP2K33-3031
FF4000UXTR33T2M1BPSA1	SP005965418	AG-XHP2K33-3031

IHV B module with Trench/ Field stop IGBT4 and emitter controlled 4 diode

The well-known IHV B 3.3 kV single switch IGBT module has been improved heavily to meet current and future requirements for traction and industry applications such as Medium Voltage Drives or HVDC.

Its latest portfolio roll-out type is the IGBT:Diode ratio optimized FZ1200R33HE4D_B9 which is good enough to replace Infineon and competition 1500 A 3.3 kV single switches.

It features the TRENCHSTOP™ IGBT4 and emitter controlled 4 diode at increased power cycling capability in the standardized housing IHV B 190 x 140 mm².

Customers can easily switch while saving cost vs former generations.

Features

- High short-circuit capability
- Low switching losses
- Low V_{CEsat}
- $T_{vj\ op\ max}$ = 150°C
- Unbeatable dynamic robustness
- Fire and smoke EN45545 R22, R23 : HL3
- Package with CTI > 600
- 2 x power cycling vs state of the art types
- Enlarged diode for regeneration
- Rectangular RBSOA

Benefits

- 2 x PC to enable 200% lifetime or 110% power- or 8K more safety buffer at same lifetime
- Fault current RBSOA up to 3000 A
- Performance like any 1500 A 3.3 kV
- 1:1 mechanical swap to 190 x 140 mm²
- 30y lifetime under harsh environmental conditions

Competitive advantage

- 200% power cycling vs IGBT 3 and 3.3 kV competition types enable 200% lifetime in most applications or 110% power at same lifetime or 8K more safety buffer at same lifetime
- Good enough to replace any 1500 A 3.3 kV type
- 10% cheaper than IGBT 3

Target applications

- Traction
- Industrial drives
- Power transmission and distribution
- CAV

Product collaterals / Online support

Product page

Product overview incl. datasheet link

OPN	SP Number	Package
FZ1200R33HE4DB9BPSA1	SP006006538	AG-IHVB190-411

XENSIV™ – IM63D135A robust digital MEMS microphone for high sound pressure levels

As part of our comprehensive XENSIV™ sensor family, we offer digital MEMS microphones, qualified according to the state-of-the-art automotive quality standard AEC-Q103-003, which are robust for very high sound pressure levels. They are suited to all applications outside and inside the car where the best audio performance in harsh automotive environments and a digital PDM interface is required. It also perfectly supports acoustic noise cancellation applications with its flat and stable frequency and phase response and a very low LFRO (low frequency roll off) at 7 Hz.
Other highlights include close sensitivity and phase matching, making automotive XENSIV™ MEMS microphones ideal for beamforming arrays.

Features

- Qualification according to AEC-Q103-003
- High AOP 135 dB SPL
- Environmental robust up to IP57
- Increased operating temperature range: TA = -40 °C …105 °C
- Close sensitivity matching
- Flat frequency response down to 7 Hz
- Digital PDM output

Benefits

- Automotive qualified microphone with extended availability to match long automotive design cycles for whole typical vehicle´s life cycles, allows savings in design-in efforts and risks
- Very high AOP for optimal use on the exterior of the car
- Enlarged operating temperature range allows flexible use in different application environments
- Flat frequency response with low frequency roll of for best ANC performance
- Close sensitivity and phase matching for optimum beam forming (arrays)

Competitive advantage

- Qualification according to AEC-Q103-003
- Very high AOP 135 dB SPL
- IP57 robustness
- Increased T-range: TA = -40 °C ... +105 °C
- Long term availability
- High performance
- Very low LFRO =7 Hz

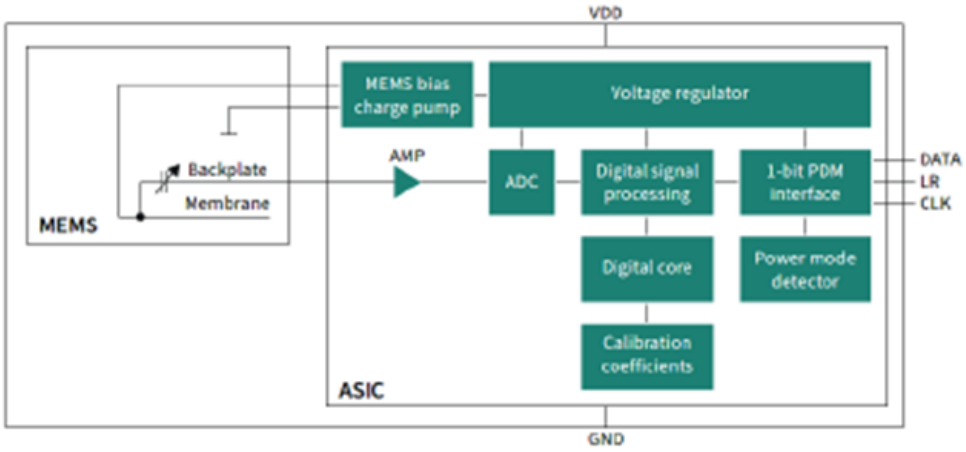
Target applications

- External sound sensing – siren detection
- Active noise cancellation/Road noise cancellation (ANC/RNC)
- Hands free calling/ Voice control from interior or exterior
- Road condition detection

Product collaterals / Online support

Product page

Block diagram:



Product overview incl. datasheet link

OPN	SP Number	Package
IM63D135AXTMA1	SP006031385	PG-TLGA-5

Efficient kit for AC-DC solid state circuit breaker evaluation REF_SSCB_AC_DC_1PH_SIC

Efficient kit for AC-DC solid state circuit breaker evaluation: Interactive GUI, versatile topologies, and passive cooling.

This solid-state circuit breaker (SSCB) kit allows to easily evaluate AC and DC type circuit breakers with help of an interactive GUI. This kit supports 110 V_{AC} or 230 V_{AC} or 350 V_{DC} operation and 16 A nominal current. It can support different SSCB topologies like 1P - N, 3P - N (stacked, cascaded), L+ - L-. It is having non-isolated integrated coolers mounted over top-side cooling (TSC) SiC MOSFET packages to support passive cooling.

Features

- Bidirectional MOSFET switch
- Actuation: ZVS, ZCS for AC version
- Mechanical series switch providing physical air gap
- User programmable protection schemes for overload and overcurrent
- Measurements:
  - DC version: I, U, P
  - AC version: I, U, P, Q, S, THDi, PF
- CoolMOS™ S7T SJ MOSFET with integrated temperature sensor/NTC interface
- Shunt based overcurrent detection
- Communication interfaces
  - CAN (isolated, frontside)
  - UART (isolated, backplane)
  - Inhibit IO

Target applications

- Industrial automation
- Solid-state circuit breaker

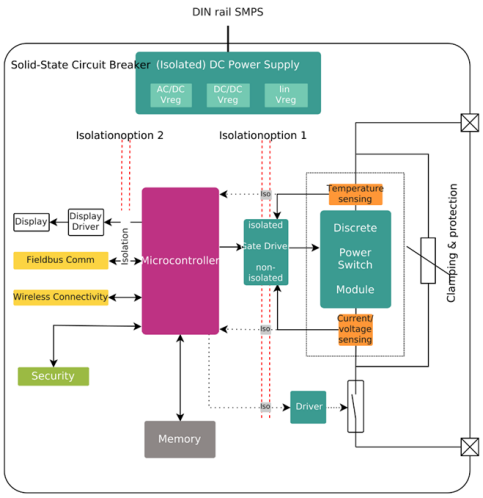
Benefits

- Evaluate AC and DC type circuit breaker
- Interactive GUI
- Supports 110 / 230 V_{AC} or 350VDC, 16A I_{nom}
- Support different SSCB topologies like
  - 1P - N
  - 3P - N (stacked, cascaded)
  - L+ - L-
- Non-isolated integrated coolers
- Top-side cooling CoolSiC™ MOSFET

Competitive advantage

- Rapid evaluation and prototyping with interactive GUI and versatile topologies
- Comprehensive measurement capabilities for AC and DC parameters
- Built-in protection mechanisms, including overload and over-current detection
- Efficient cooling solution with non-isolated integrated coolers and top-side cooling
- Cost-effective development with reduced time-to-market and design risk

Block diagram:



Product overview incl. application note link

OPN	SP Number
REFSSCBACDC1PHSICTOBO1	SP006046723

Product collaterals / Online support

Board page

REF_SSR_AC_DC_2A - Solid-state relay reference design: 2 A / 250 V AC or 350 V DC featuring overcurrent and over-temperature protections

The REF_SSR_AC_DC_2A kit allows you to evaluate AC and DC-type solid-state relays in a compact form factor. It supports 250 V_{AC} or 350 V_{DC} operation and 2 A nominal current.

Thanks to the innovative solid-state isolator (iSSI30R12H) using Infineon's coreless transformer (CT) technology and the CoolMOS™ S7T SJ MOSFET with integrated temperature sensor, the board features integrated overcurrent and overtemperature protection mechanisms.

Features

- Bidirectional MOSFET switch
- AC and DC operation
- External TVS clamping diode
- SJ MOSFET with embedded temperature sensor
- Overtemperature protection
- Shunt based overcurrent protection
- Isolated gate drive

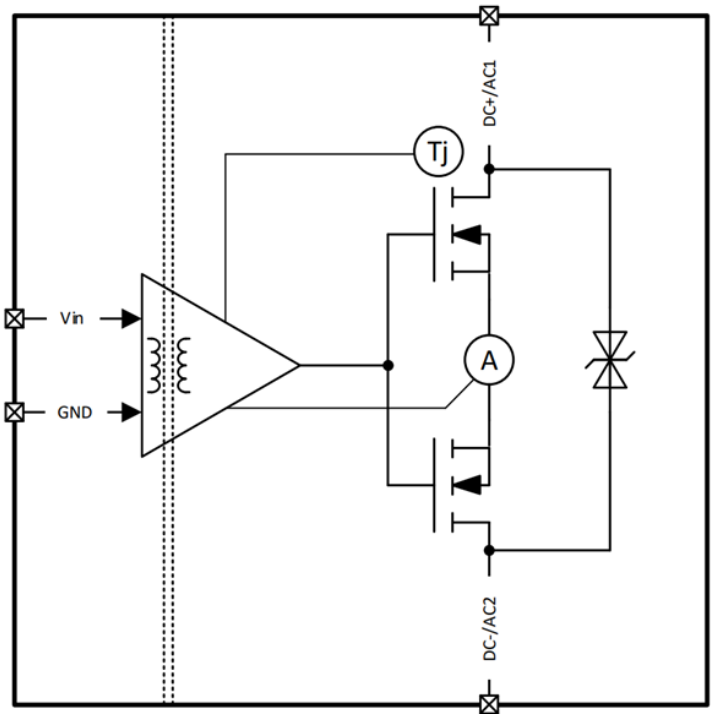
Benefits

- Small form factor
- Enhanced reliability and safety
- Galvanic isolation up to 5.7 kV rms
- Fast switch off (<10us)
- Arc-free switching
- No separate output bias supply needed

Target applications

- Industrial automation
- Solid-state relay

Block diagram:



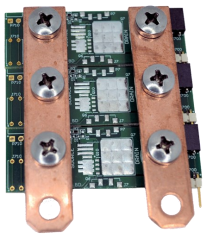
Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
REFSSRACDC2ATOBO1	SP006062662

Evaluation board EVAL_XDP700_FET_BD



This FET board connects with EVAL_XDP700 to allow evaluation of FETs available in various footprints with Infineon's XDP™ XDP700-002.

Features

- Supports PG-TSON-8-3, D²PAK7 packages
- Supports D²PAK, TOLL, SSO8, packages
- Easy interface with EVAL_XDP700

Benefits

- Easy to parallel for high power
- Built-in heatsink via copper busbar

Target applications

- Telecom
- DC-DC

Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
EVALXDP700FETBDTOBO1	SP006079179

Reference board REF_5AR0680BZS-1_44W1

This 44 W demonstration board operates under a wide range input developed with offline SMPS application in mind. It features the new CoolSET™ 5th Generation Fixed Frequency Plus ICE5AR0680BZS-1 with 800 V integrated MOSFET in DIP-7 package.

Features

- Universal input: 85 ~300 V_{AC}, 50 / 60 Hz
- Output: 12 V (isolated)
- Output current: 3.66 A

Benefits

- Robust operation
- Frequency reduction at light loads
- Programmable burst mode
- Integrated error amplifier
- Integrated 800 V MOSFET
- Either primary / secondary side regulation

Target applications

- Home appliances
- AC-DC power supplies for servers

Product collaterals / Online support

Board page

Product overview incl. application note link

OPN	SP Number
REF5AR0680BZS144W1TOBO1	SP006091203

Reference board REF_5AR3995BZ-1_14W1

This 14 W auxiliary SMPS reference design configured in a flyback topology and is based on the ICE5AR3995BZ-1, a member of Infineon's latest Cool-SET™ 5th Generation Fixed Frequency Plus family.

Thanks to the integrated 950 V MOSFET in DIP-7 package, such a design enables the deployment to unstable grid environments and increases system robustness.

Features

- Universal input: 85 ~300 V_{AC}, 50 / 60 Hz
- Output 1: 15 V (non-isolated)
- Output current 1: 0.83 A (for 15 V)
- Output 2: 5 V (non-isolated)
- Output current 2: 400 mA (for 5 V)

Benefits

- Robust operation
- Frequency reduction at light loads
- Programmable burst mode
- Integrated error amplifier
- Integrated 800 V MOSFET
- Either primary/secondary side regulation

Target applications

- Home appliances
- AC-DC power supplies for servers

Product collaterals / Online support

Board page

Product overview incl. application note link

OPN	SP Number
REF5AR3995BZ114W1TOBO1	SP006091216

Reference board REF_5AR4770BZS-1_15W1

This 15 W auxiliary SMPS reference design operates under a wide range input developed with indoor residential airconditioning application in mind. It features the new CoolSET™ 5th Generation Fixed Frequency Plus ICE5AR4770BZS-1 with 700 V integrated MOSFET in DIP-7 package.

Features

- Universal input: 90 ~264 V_{AC}, 50 / 60 Hz
- Output: 12 V (isolated)
- Output current : 1.25 A

Benefits

- Robust operation
- Frequency reduction at light loads
- Programmable burst mode
- Integrated error amplifier
- Integrated 700 V MOSFET
- Either primary / secondary side regulation

Target applications

- Home appliances
- AC-DC power supplies for servers

Product collaterals / Online support

Board page

Product overview incl. application note link

OPN	SP Number
REF5AR4770BZS115W1TOBO1	SP006005381

Reference board REF_5AR4780BZS-1_14W1

This 14 W auxiliary SMPS reference design operates under a wide range input developed with indoor residential aircon application in mind. It features the new CoolSET™ 5th Generation Fixed Frequency Plus ICE5AR4780BZS-1 with 700 V integrated MOSFET in DIP-7 package.

Features

- Universal input: 85 ~300 V_{AC}, 50 / 60 Hz
- Output 1: 15 V (non-isolated)
- Output current 1: 830 mA (for 15 V)
- Output 2: 5 V (non-isolated)
- Output current 2: 400 mA (for 5 V)

Benefits

- Robust operation
- Frequency reduction at light loads
- Programmable burst mode
- Integrated error amplifier
- Integrated 800 V MOSFET
- Either primary / secondary side regulation

Target applications

- Home appliances
- AC-DC power supplies for servers

Product collaterals / Online support

Board page

Product overview incl. application note link

OPN	SP Number
REF5AR4780BZS114W1TOBO1	SP006091236

Reference board REF_5BR2280BZ-1_22W1

This 22 W auxiliary SMPS reference design configured in a flyback topology and is based on the ICE5BR2280BZ-1, a member of Infineon's latest CoolSET™ 5th Generation Fixed Frequency Plus family.

Thanks to the integrated 800 V MOSFET in DIP-7 package, such a design enables the deployment to unstable grid environments and increases system robustness.

Features

- Universal input: 85 ~300 V_{AC}, 50 / 60 Hz
- Output 1: 12 V (isolated)
- Output current 1: 1.4 A (for 12 V)
- Output 2: 5V (isolated)
- Output current 2: 300 mA (for 5 V)
- Output 3: 15 V (non-isolated)
- Output current 3: 150 mA (for 15 V)

Benefits

- Robust operation
- Frequency reduction at light loads
- Programmable burst mode
- Integrated error amplifier
- Integrated 800 V MOSFET
- Either primary / secondary side regulation

Target applications

- Home appliances
- AC-DC power supplies for servers

Product collaterals / Online support

Board page

Product overview incl. application note link

OPN	SP Number
REF5BR2280BZ122W1TOBO1	SP006007356

Evaluation board EVAL_5BR2280BZ-1_700mA1

This 10.5 W evaluation board configured in a non-isolated high-voltage buck topology and comes along with the ICE5BR2280BZ-1, a product of Infineon's latest CoolSET™ 5th Generation Fixed Frequency Plus family.

Thanks to the integrated 800 V MOSFET in DIP-7 package, such a design enables the deployment to unstable grid environments and increases system robustness.

Features

- Universal input: 85 ~264 V_{AC}, 50 / 60 Hz
- Output: 15 V (non-isolated)
- Output current: 700 mA (for 15 V)

Benefits

- Robust operation
- Frequency reduction at light loads
- Programmable burst mode
- Integrated error amplifier
- Integrated 800 V MOSFET
- Either primary/secondary side regulation

Target applications

- Home appliances
- AC-DC power supplies for servers

Product collaterals / Online support

Board page

Product overview incl. application note link

OPN	SP Number
EVAL5BR2280BZ1700MATOBO1	SP006007386

Reference board REF_5BR3995BZ-1_16W1

This 16 W auxiliary SMPS reference design configured in a flyback topology and is based on the ICE5BR3995BZ-1, a member of Infineon's latest CoolSET™ 5th Generation Fixed Frequency Plus family.

Thanks to the integrated 950 V MOSFET in DIP-7 package, such a design enables the deployment to unstable grid environments and increases system robustness.

Features

- Universal input: 85 ~264 V_{AC}, 50 / 60 Hz
- Output 1: 12 V (non-isolated)
- Output current 1: 0.9 A (for 12 V)
- Output 2: 5 V (non-isolated)
- Output current 2: 0.3 A (for 5 V)
- Output 3: 15 V (non-isolated)
- Output current 3: 150 mA (for 15 V)

Benefits

- Robust operation
- Frequency reduction at light loads
- Programmable burst mode
- Integrated error amplifier
- Integrated 950 V MOSFET
- Either primary / secondary side regulation

Target applications

- Home appliances
- AC-DC power supplies for servers

Product collaterals / Online support

Board page

Product overview incl. application note link

OPN	SP Number
REF5BR3995BZ116W1TOBO1	SP006007329

Evaluation board EVAL_5BR3995BZ-1_BUCK1

This 5.4 W evaluation board configured in a non-isolated high-voltage buck topology and comes along with the ICE5BR3995BZ-1, a product of Infineon's latest CoolSET™ 5th Generation Fixed Frequency Plus family.

Thanks to the integrated 950 V MOSFET in DIP-7 package, such a design enables the deployment to unstable grid environments and increases system robustness.

Features

- Universal input: 85 ~460 V_{AC}, 50 / 60 Hz
- Output: 18 V (non-isolated)
- Output current: 300 mA (for 18 V)

Benefits

- Robust operation
- Frequency reduction at light loads
- Programmable burst mode
- Integrated error amplifier
- Integrated 950 V MOSFET
- Either primary / secondary side regulation

Target applications

- Home appliances
- AC-DC power supplies for servers

Product collaterals / Online support

Board page

Product overview incl. application note link

OPN	SP Number
EVAL5BR3995BZ1BUCK1TOBO1	SP006007333

Reference board REF_5BR4780BZ-1_15W1

This 15 W auxiliary power supply reference design configured in a non-isolated flyback topology and is based on the ICE5BR4780BZ-1, a product of Infineon's latest CoolSET™ 5th Generation Fixed Frequency Plus family.

Thanks to the integrated 800 V MOSFET in DIP-7 package, such a design enables the deployment to unstable grid environments and increases system robustness.

Features

- Universal input: 85 ~264 V_{AC}, 50 / 60 Hz
- Output 1: 12 V (non-isolated)
- Output current 1: 0.8 vA (for 12 V)
- Output 2: 5 V (non-isolated)
- Output current 2: 300 mA (for 5 V)
- Output 3: 15 V (non-isolated)
- Output current 3: 150 mA (for 15 V)

Benefits

- Robust operation
- Frequency reduction at light loads
- Programmable burst mode
- Integrated error amplifier
- Integrated 800 V MOSFET
- Either primary / secondary side regulation

Target applications

- Home appliances
- AC-DC power supplies for servers

Product collaterals / Online support

Board page

Product overview incl. application note link

OPN	SP Number
REF5BR4780BZ115W1TOBO1	SP006007372

Evaluation board EVAL_5BR4780BZ-1_450mA1

This 6.7 W evaluation board configured in a non-isolated high-voltage buck topology and comes along with the ICE5BR4780BZ-1, a product of Infineon's latest CoolSET™ 5th Generation Fixed Frequency Plus family.

Thanks to the integrated 800 V MOSFET in DIP-7 package, such a design enables the deployment to unstable grid environments and increases system robustness.

Features

- Universal input: 85 ~264 V_{AC}, 50 / 60 Hz
- Output: 15 V (non-isolated)
- Output current: 450 mA (for 15 V)

Benefits

- Robust operation
- Frequency reduction at light loads
- Programmable burst mode
- Integrated error amplifier
- Integrated 800 V MOSFET
- Either primary / secondary side regulation

Target applications

- Home appliances
- AC-DC power supplies for servers

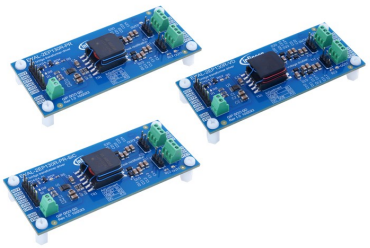
Product collaterals / Online support

Board page

Product overview incl. application note link

OPN	SP Number
EVAL5BR4780BZ1450MATOBO1	SP006007382

EVAL-2EP130R-xx – family of evaluation boards for 2EP130R



This family of evaluation boards can be used by design engineers to evaluate the family of full-bridge transformer driver ICs – 2EP1xxR.

There are three eval board variants available:
EVAL-2EP130R-PR: 2EP130R transformer driver evaluation board with dual output peak rectification and customizable output voltage for MOSFETS and IGBTs

EVAL-2EP130R-PR-SIC: 2EP130R transformer driver evaluation board with dual output peak rectification for SiC MOSFETs

EVAL-2EP130R-VD: 2EP130R transformer driver evaluation board with dual output voltage doubler configuration

Features

- Three different board options depending upon desired topology and switches
- Includes three different transformer options depending upon desired performance. (EVAL-2EP130R-PR only)
- Wide input supply range from 5 V to 20 V
- Wide frequency operating range from 50 kHz to 695 kHz using the internal oscillator or an external pulse width modulation (PWM)

Benefits

- Easy evaluation of 2EP130R full-bridge transformer driver IC
- Isolated supply for 2 gate driver ICs

Target applications

- Solar
- EV charging
- ESS
- Welding
- UPS
- Drives

Product collaterals / Online support

Board page EVAL-2EP130R-PR

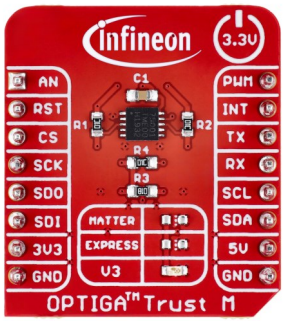
Board page EVAL-2EP130R-PR-SIC

Board page EVAL-2EP130R-VD

Product overview incl. user manual link

OPN	SP Number
EVAL2EP130RPRTOBO1	SP006018698
EVAL2EP130RPRSICTOBO1	SP006018688
EVAL2EP130RVDTOBO1	SP006018695

Evaluation board OPTIGA™ Trust M Shield



OPTIGA™ Trust M Shield is the best way to evaluate the OPTIGA™ Trust M family of Discrete Secure Elements. It comes in a popular mikroBus layout which makes it easy to prototype with any MCU or MPU platform. It can also be used with SBCs and the proper adapters. The OPTIGA™ Trust M Shield can be evaluated with the PSoC™ 62S2 Wi-Fi BT Pioneer Kit and OPTIGA™ Trust Adapter.

Features

- Pre-provisioned TLS certificates
- Based on CC EAL 6+ (high) certified HW
- MikroBUS™ compatible
- I2C interface (shielded connection)
- Cryptographic toolbox
- ECC, RSA, AES, HMAC, HKDF, TLS PRF

Benefits

- Easy to evaluate
- Works with any MCU / MPU platform
- Easy plug in and plug out
- Platform-independent evaluation
- Broad ecosystem with many adapters

Target applications

- Smart home
- Building automation
- Industrial robotics
- Drones
- PLC´s

Product collaterals / Online support

Board page

Product overview incl. datasheet link

OPN	SP Number
TRUSTMV3SHIELDTOBO1	SP006068634

XENSIV™ Bluetooth® game controller

The XENSIV™ Bluetooth® game controller integrates advanced Infineon products in an innovative design. Leveraging XENSIV™ magnetic position sensors, the joysticks deliver exceptional precision without succumbing to sensor drift. XENSIV™ switch triggers, CAPSENSE™ buttons, CAPSENSE™ presence detection, and a SPIDER+ rumble driver are all seamlessly integrated with the PSoC™6 BLE microcontroller to implement a low power, plug & play game controller.

Features

- XENSIV™ 3D magnetic joysticks/triggers
- XENSIV™ magnetic switches
- CAPSENSE™ capacitive touch buttons
- SPIDER+ rumble driver
- PSOC™6 Bluetooth® LE microcontroller

Benefits

- Automatic HID configuration: plug and play
- Easy connect to smartphone/PC
- Bluetooth® low energy: long battery life
- Magnetic joysticks: no drift
- PSOC™6 kit: onboard debugger
- Customizable shield design

Support/Tools/Software

- Gerber files for the printed circuit board
- Bill of materials
- CAD files for 3D printing
- Game controller embedded C software
- Software tool: Modus Toolbox™ software

Target applications

- Game controller for consumer electronics
- Control of industrial robots
- Control of mobile robots

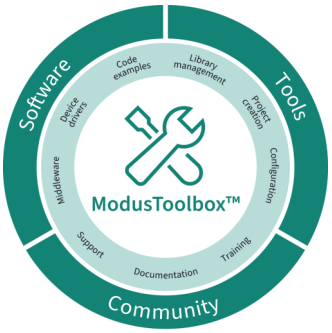
Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
GAMECONTROLLERTOBO1	SP006056290

ModusToolbox™ Software v3.3 Release Announcement



Infineon has released the latest update to the ModusToolbox™ Software ecosystem with newly supported products and updated use cases. 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. Available in the ModusToolbox™ Software repository overview.
Development Tools supporting Windows, Linux, and macOS are available as a tools installation package from the Infineon Developer Center.
The ModusToolbox™ ecosystem includes additional installations available within the ModusToolbox™ setup program, include ModusToolbox™ Programming Tools, ModusToolbox™ Edge Protect Security Suite and coming soon the ModusToolbox™ Motor Suite.
Community forums, knowledge-based articles, and technical blog articles are easily accessible from the Infineon Developer Community. Additional resources to enhance the ModusToolbox™ development experience include comprehensive documentation for both development tools and run-time software, detailed training, and tutorial videos.

Features

- Updated build structure, targeting multi-core development flows
- New memory configuration support for early access PSOC™ Edge and PSOC™ Control devices
- Low power configuration personalities for PSOC™ 6
- ModusToolbox™ Edge Protect Security Suite – dedicated installation for enabling security functions on PSOC™ 6 along with early access support for PSOC™ Edge and PSOC™ Control devices

Benefits

- Faster and more targeted compile times for multi-core devices and multi-project applications
- Specific tools and configuration capabilities targeting the next generation of PSOC™ Edge and PSOC™ Control devices (early access only)

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 drivers and functional APIs including a HAL for maximizing portability, and a Peripheral Driver Library for maximizing code efficiency and device capabilities
- 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

Product collaterals / Online support

Tool page