New Product Introduction

June 2024

600 V CoolMOS™ 8 SJ MOSFET family

CoolSiC™ MOSFET 650 V Generation 2 in Thin-TOLL in 8 x 8 package

CoolSiC™ MOSFET 650 V Generation 2 in TOLT package

62 mm CoolSiC™ MOSFET 1.2 kV M1H – portfolio extension

62 mm CoolSiC™ MOSFET 2 kV M1H – portfolio extension

Easy modules for PV hybrid inverter up to 12 kW

Easy modules for heatpump applications

650 V high speed, half-bridge gate driver 2ED2388S06F

CoolSiC™ MOSFET 1700 V G1 in TO-247-3-HCC package

EconoDUAL™ 3 FF900R17ME7W_B11

BGT24ATR22 24 GHz pulsed doppler radar sensor

Evaluation board EVAL_TDA38812_1VOUT, EVAL_TDA38812_3.3VOUT, EVAL_TDA38812_5VOUT

Evaluation board EVAL_TDA38813_1VOUT

Evaluation board EVAL_TDA38825_1VOUT, EVAL_TDA38825_3.3VOUT, EVAL_TDA38825_5VOUT

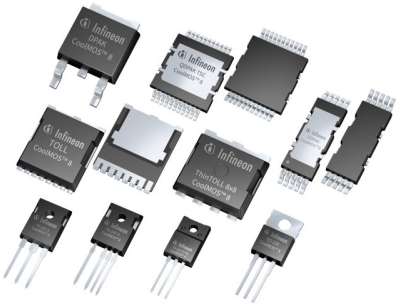
Evaluation board EVAL_TDA38826_1VOUT

Evaluation board for XDP700-002 EVAL_XDP700

40 W auxiliary power supply REF_5QR0680BG_40W1

Inverter and gate driver board REF-DR3KIMBGSIC2MA

600 V CoolMOS™ 8 SJ MOSFET family



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 from 7 mΩ
- Top-side cooling packages

Benefits

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

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
- Charger / adapter

Product overview incl. datasheet link

OPN	SP Number	Package
IPAN60R180CM8XKSA1	SP005591315	PG-TO220-2
IPD60R180CM8XTMA1	SP005578057	PG-TO252-3
IPD60R600CM8XTMA1	SP005578056	PG-TO252-3
IPDD60R037CM8XTMA1	SP005578052	PG-HDSOP-10
IPDD60R180CM8XTMA1	SP005578049	PG-HDSOP-10
IPDQ60R007CM8XTMA1	SP005856994	PG-HDSOP-22
IPDQ60R016CM8XTMA1	SP005578048	PG-HDSOP-22
IPDQ60R037CM8XTMA1	SP005578047	PG-HDSOP-22
IPP60R016CM8XKSA1	SP005982765	PG-TO220-3
IPP60R037CM8XKSA1	SP005982778	PG-TO220-3
IPP60R180CM8XKSA1	SP005578058	PG-TO252-3
IPT60R016CM8XTMA1	SP005578055	PG-HSOF-8
IPT60R037CM8XTMA1	SP005578054	PG-HSOF-8
IPT60R180CM8XTMA1	SP005578053	PG-HSOF-8
IPTA60R180CM8XTMA1	SP005728611	PG-LHSOF-4
IPW60R016CM8XKSA1	SP005591305	PG-TO247-3
IPW60R037CM8XKSA1	SP005591298	PG-TO247-3
IPZA60R016CM8XKSA1	SP005591312	PG-TO247-4
IPZA60R037CM8XKSA1	SP005591309	PG-TO247-4

Product collaterals / Online support

Product family page

CoolSiC™ MOSFET 650 V Generation 2 in Thin-TOLL in 8x8 package

The CoolSiC™ MOSFET discrete 650 V G2 in Thin-TOLL 8x8 is the best 8x8 option to leverage a performing technology, like CoolSiC™ G2. It overcomes the limits in thermal cycles of the standard 8x8 and it boasts the .XT interconnect to reduce the thermal resistance. It is hence possible to fully use the characteristics of SiC but maintaining a small footprint with a product which is the next logical step in power density.

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_{GSoff}=0)
- Pin-to-pin compatible with all 8x8 FETs
- Improved package interconnect with .XT
- 4x improvement in TCoB

Benefits

- Enables BOM savings
- Maximizes the system performance per $
- Highest reliability and longer lifetime
- Enables top efficiency and power density
- Small footprint to more power density
- Most compact daughter card design

Target applications

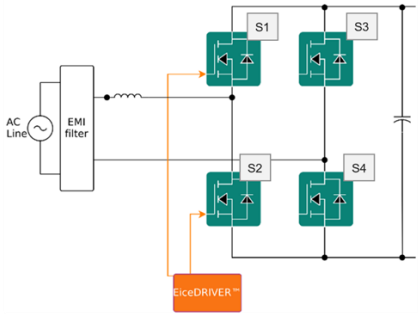
- Switched mode power supplies (SMPS)
- Microinverters
- Home appliances
- Smart TV
- HVAC

Competitive advantage

- CoolSiC™ MOSFETs 650 V G2 in Thin-TOLL 8x8 package are build on the CoolSiC™ Generation 2 technology featuring leading FOMs (figure of merit), reliability and ease of use
- Thin-TOLL 8x8 is compatible with any similar 8x8 package, but it boasts an improved TCoB (thermal cycling on board) capability closer to higher power packages

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

Product collaterals / Online support

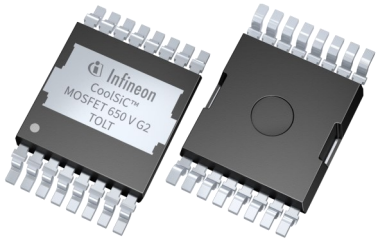
Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
IMTA65R020M2HXTMA1	SP005954481	PG-LHSOF-4
IMTA65R040M2HXTMA1	SP005954482	PG-LHSOF-4
IMTA65R050M2HXTMA1	SP005954483	PG-LHSOF-4
IMTA65R060M2HXTMA1	SP005954484	PG-LHSOF-4

CoolSiC™ MOSFET 650 V Generation 2 in TOLT package

The CoolSiC™ MOSFET discrete 650 V G2 in TOLT leverages the CoolSiC™ Generation 2 best-in-class switching performance, enabling in addition all the benefits of top-side cooling. It is now possible to complement the QDPAK, already available with CoolSiC™ and CoolMOS™, to implement a total discrete top-side cooling solution, obtaining better thermal performance, system cost reduction and simplification, and a cheaper assembly.



Features

- Excellent figures-of-merit (FOMs)
- High robustness and overall quality
- Flexible driving voltage range
- Support for unipolar driving (V_{GSoff}=0)
- Pin to pin compatible with all 8x8 FETs
- Improved package interconnect with .XT
- 4x improvement in TCoB

Benefits

- Enables BOM savings
- Maximizes the system performance per $
- Highest reliability
- Enables top efficiency and power density
- Simplifies assembly and cooling
- Water cooling "ready"
- Allows designs without fan or heatsink
- Lower stray inductances
- Better gate control

Target applications

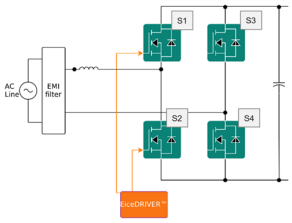
- Switched mode power supplies (SMPS)
- Solid State Circuit Breaker (SSCB)
- EV charging
- PV inverters
- Energy storage systems
- Microinverters

Competitive advantage

- CoolSiC™ MOSFETs 650 V G2 in TOLT package are build on the CoolSiC™ Generation 2 technology featuring leading FOMs (figure of merit), reliability and ease of use
- TOLT is a top-side cooled discrete package, which optimally complements QDPAK, already available with 750 V CoolSiC™ and CoolMOS™, offering improved thermal capability, low parasitics and system cost savings, both by enabling automated assembly and by simplifying the system design (e.g. elimination of the IMS board)

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

Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
IMLT65R015M2HXTMA1	SP005968251	PG-HDSOP-16
IMLT65R020M2HXTMA1	SP005970056	PG-HDSOP-16
IMLT65R040M2HXTMA1	SP005970057	PG-HDSOP-16
IMLT65R050M2HXTMA1	SP005968254	PG-HDSOP-16
IMLT65R060M2HXTMA1	SP005970060	PG-HDSOP-16

62 mm CoolSiC™ MOSFET 1.2 kV M1H – portfolio extension

The 62 mm CoolSiC™ MOSFET halfbridge modules in 1.2 kV equipped with the improved chip performance regarding $V_{GS(th)}$, $R_{DS(on)}$ and gate drive voltage window due to the M1H technology are now available in 2.9 mΩ with and without Thermal Interface Material (TIM).

Features

- Robust integrated body diode, and thus optimal thermal conditions
- Superior gate oxide reliability
- High cosmic ray robustness

Benefits

- Optimized use under demanding conditions
- Lower voltage overshoot
- Minimized conduction losses
- High speed switching with very low losses
- Symmetrical module design and switching behavior of upper and lower switch
- Standard module construction technique secures known reliable
- Production in the 62 mm high volume production line

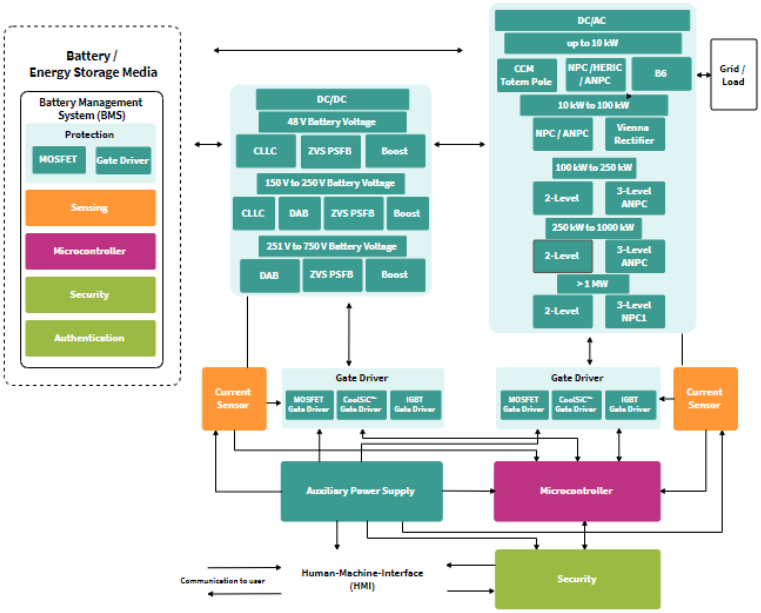
Target applications

- Energy Storage Systems
- EV charging
- Photovoltaic
- UPS

Competitive advantage

- Extension of mature 62 mm housing technology by silicon carbide to address applications with fast switching requirements and low losses at the same time
- Highest current density and robustness against humidity

Block diagram



Product collaterals / Online support

Product page FF3MR12KM1H

Product page FF3MR12KM1HP

Product overview incl. datasheet link

OPN	SP Number	Package
FF3MR12KM1HHPSA1	SP005976718	AG-62MMHB-3111
FF3MR12KM1HPHPSA1	SP005745149	AG-62MMHB-3111

62 mm CoolSiC™ MOSFET 2 kV M1H – portfolio extension

62 mm CoolSiC™ MOSFET half-bridge module 2000 V, 5.2 mΩ in the well-known 62 mm housing design with M1H chip technology. This module is available with and without pre-applied Thermal Interface Material (TIM).

Features

- Superior gate oxide reliability
- Robust integrated body diode, and thus optimal thermal conditions
- High cosmic ray robustness

Benefits

- Optimized use under demanding conditions
- Lower voltage overshoot
- Minimized conduction losses
- High speed switching with very low losses
- Symmetrical module design and switching behavior of upper and lower switch
- Standard module construction technique secures known reliable
- Production in the 62 mm high volume production line

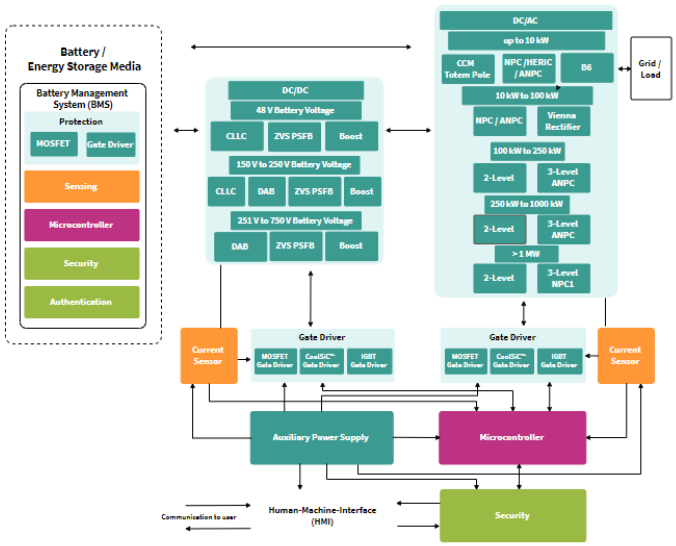
Target applications

- Energy Storage Systems
- EV charging
- Photovoltaic
- Traction
- Uninterruptible power supplies (UPS)

Competitive advantage

- Extension of mature 62 mm housing technology by silicon carbide to address applications with fast switching requirements and low losses at the same time
- Highest current density and robustness against humidity

Block diagram



Product collaterals / Online support

Product page FF5MR20KM1H

Product page FF5MR20KM1HP

Product overview incl. datasheet link

OPN	SP Number	Package
FF5MR20KM1HHPSA1	SP005861795	AG-62MMHB-3111
FF5MR20KM1HPHPSA1	SP005855004	AG-62MMHB-3111

Easy modules for PV hybrid inverter up to 12 kW

Easy modules with CoolSiC™ MOSFET and high-performance AIN ceramic for PV hybrid inverter up to 12 kW.

Features

- FS3L40R07W2H5F_B70
  - CoolSiC™ Schottky Diode Gen 5
  - Increased blocking voltage capability up to 650 V
  - AIN DCB with better thermal conductivity
- FS33MR12W1M1H_B70
  - Enhanced CoolSiC™ MOSFET Gen 1
  - Very low module stray inductance
  - AIN DCB with better thermal conductivity

Benefits

- Enabling higher frequency
- Outstanding module efficiency
- System efficiency improvement
- System cost advantages
- Reduced cooling requirements
- Longer life time and / or higher power density

Target applications

- Solar / PV
- Energy Storage Systems

Competitive advantage

- Complete solution for PV hybrid inverter up to 12 kW

Product collaterals / Online support

Product page FS3L40R07W2H5F_B70

Product page FS33MR12W1M1H_B70

Product overview incl. datasheet link

OPN	SP Number	Package
FS3L40R07W2H5FB70BPSA1	SP005926813	AG-EASY2B-7011
FS33MR12W1M1HB70BPSA1	SP005634675	AG-EASY1B-3111

Easy modules for heatpump applications

EasyPIM™ 2B integrated module with 2-channel interleaved PFC stage and inverter stage for heatpump / HVAC applications

Typical appearance

Features

- Rectifier, PFC and inverter stage in one module
- Very low stray inductance
- High speed H5 technology for PFC stage
- Higher switching frequency up to 50 kHz for PFC stage

Benefits

- Compact design
- Best cost-performance ratio
- Enables high frequency operation
- Reduced cooling requirements

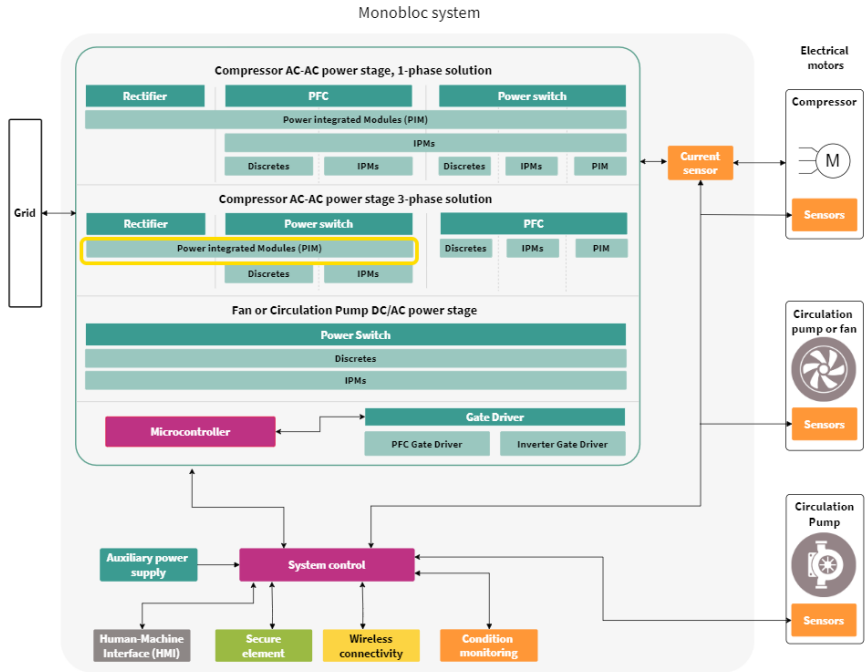
Target applications

- HVAC / heatpump

Competitive advantage

- All- in-one module (Rectifier, PFC and inverter stage)
- Available in press-fit and solder pin versions
- Reduced system costs
- Easy to design products

Block diagram



Product collaterals / Online support

Product page FB50R07W2E3_B23

Product page FB50R07W2E3_C36

Product overview incl. datasheet link

OPN	SP Number	Package
FB50R07W2E3B23BOMA1	SP005341840	AG-EASY2B-311
FB50R07W2E3C36BPSA1	SP005572078	AG-EASY2B-311

650 V high speed, half-bridge gate driver 2ED2388S06F

650 V high speed, half-bridge gate driver with typical 0.29 A source and 0.7 A sink currents in DSO-8 package for driving power MOSFETs and IGBTs

Features

- Operating voltages (VS node) up to + 650 V
- Negative VS transient immunity of 100 V
- Integrated ultra-fast, low resistance bootstrap diode
- 90 ns propagation delay
- Maximum supply voltage of 25 V

Benefits

- Integrated bootstrap diode - space savings, reduced BOM cost, smaller PCB at lower cost with simpler design
- 50% lower level-shift losses
- Excellent ruggedness and noise immunity against negative transient voltages on VS pin

Target applications

- Connected and smart lighting for IoT
- Home appliances
- LED lighting system designs
- Motor control and driver
- Smart buildings

Competitive advantage

- Integrated bootstrap diode - space savings, reduced BOM cost, smaller PCB at lower cost with simpler design
- 50% lower level-shift losses
- Excellent ruggedness and noise immunity against negative transient voltages on VS pin

Product collaterals / Online support

Product page

Product overview incl. datasheet link

OPN	SP Number	Package
2ED2388S06FXUMA1	SP005571188	PG-DSO-8

CoolSiC™ MOSFET 1700 V G1 in TO-247-3-HCC package

The CoolSiC™ MOSFET 1700 V G1, 450 mΩ, 650 mΩ and 1000 mΩ in a TO247-3-HCC package suits single-end fly-back auxiliary power supplies applications like solar inverters, EV chargers, UPS, and general drives for high efficiency level. Key features include direct drivability by a fly-back controller, no need for a gate driver IC, high voltage blockage with less loss, .XT interconnect tech for excellent thermal performance and a high creepage clearance package for increased reliability.

Features

- Optimized for fly-back topologies
- Extremely low switching loss
- 12 V / 0 V gate-source voltage
- Compatible with fly-back controllers
- Gate threshold voltage, $V_{GS(th)}$ = 4.5 V
- .XT interconnection technology

Benefits

- High efficiency for auxiliary power supplies applications
- Better thermal performance and resistance
- TO247 package for easy isolation design
- No gate driver needed
- Higher power density

Target applications

- 1-phase string inverter solutions
- EV charging
- General purpose motor dive - variating frequency and voltage
- Industrial motor drives and controls

Competitive advantage

- TO247-3-HCC package advantages over D2Pak-7L:
  - Better thermal resistance ensures greater output power
  - Lower R_{th} provides better thermal performance
  - TO247 package realize easy isolation design
  - High creepage clearance against environmental pollutions

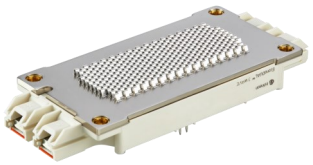
Product collaterals / Online support

Product family page

Product overview incl. data sheet link

OPN	SP Number	Package
IMWH170R1K0M1XKSA1	SP005920420	PG-TO247-3
IMWH170R450M1XKSA1	SP005920422	PG-TO247-3
IMWH170R650M1XKSA1	SP005920424	PG-TO247-3

EconoDUAL™ 3 FF900R17ME7W_B11



The EconoDUAL™ 3 FF900R17ME7W_B11 coming with wave structure on the baseplate, is optimized for applications with open liquid-cooled heatsink to enable higher power density and longer lifetime. The current EconoDUAL™ 3 wave portfolio is now extended by a 900 A module in 1700 V voltage class.

Features

- Wave structure on the baseplate
- Highest power density
- Best-in-class V_{CEsat}
- $T_{vj\ op}$ = 175°C overload
- Integrated NTC temperature sensor

Benefits

- Optimized for direct liquid-cooled heatsinks
- Higher inverter output current for the same frame size
- Avoidance of paralleling of IGBT modules
- Reduced system costs by simplification of the inverter systems

Target applications

- CAV
- Wind
- Drives

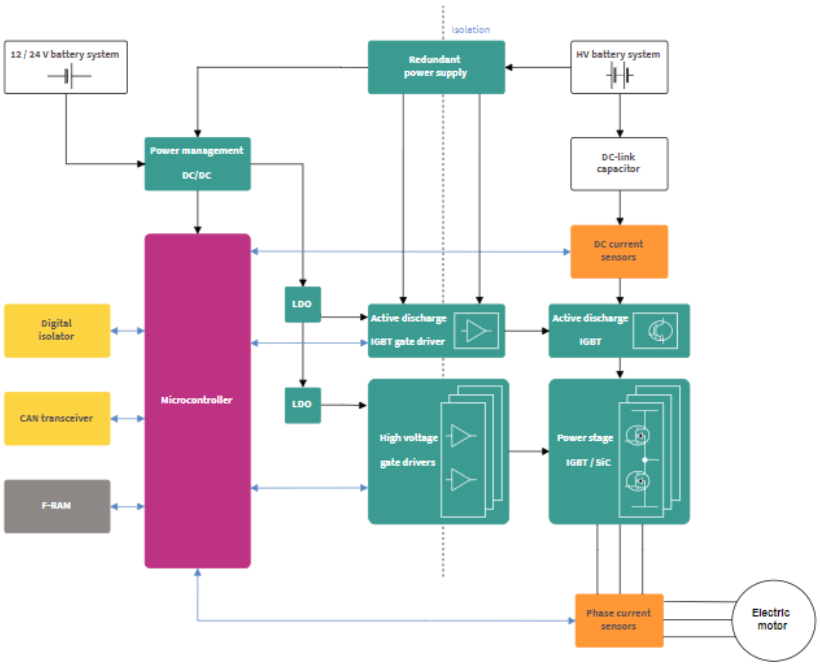
Competitive advantage

- The EconoDUAL™ 3 wave, optimized for liquid cooled heatsinks, enables:
  - Up to 6x higher lifetime due to better cooling
  - Or up to 30% more output current at same lifetime

Product collaterals / Online support

Product page

Block diagram



Product overview incl. datasheet link

OPN	SP Number	Package
FF900R17ME7WB11BPSA1	SP005982831	AG-ECONOD-711

BGT24ATR22 24 GHz pulsed doppler radar sensor

The BGT24ATR22 is a Monolithic Microwave Integrated Circuit (MMIC) for 24 GHz radar applications. It provides building blocks for analog signal generation and reception, operating in the frequency range from 24 GHz up to 24.25 GHz. The device features 2 transmit channels, 2 receive channels, a fundamental Voltage-Controlled Oscillator (VCO), an integrated Analog Base Band (ABB) and a 12-bit Analog-to-Digital Converter (ADC). The radar transceiver has an integrated Digital Radar Data Processing (DRDP) unit with Fast Fourier Transform (FFT).

Features

- 24 GHz radar transceiver
- 2 Tx channels
- 2 Rx channels
- Low-phase-noise VCO with automatic frequency control
- Analog base band with automatic DC-offset compensation
- State machine with ultra-low power modes
- 12-bit ADC for dynamic range and detection performance
- Digital radar data processing unit with integrated FFT

Benefits

- Compact PCB design due to high level of integration
- Ultra-low power consumption modes for 24 / 7 use cases
- Low system costs due entry-level only microcontrollers
- Autonomous motion sensing
- Globally approved 24 GHz radar with excellent characteristics for robust and reliable performance in harsh environmental conditions

Target applications

- Automotive short-range radar
- Hands-free trunk and door opening
- Motion detection
- Touchless switches

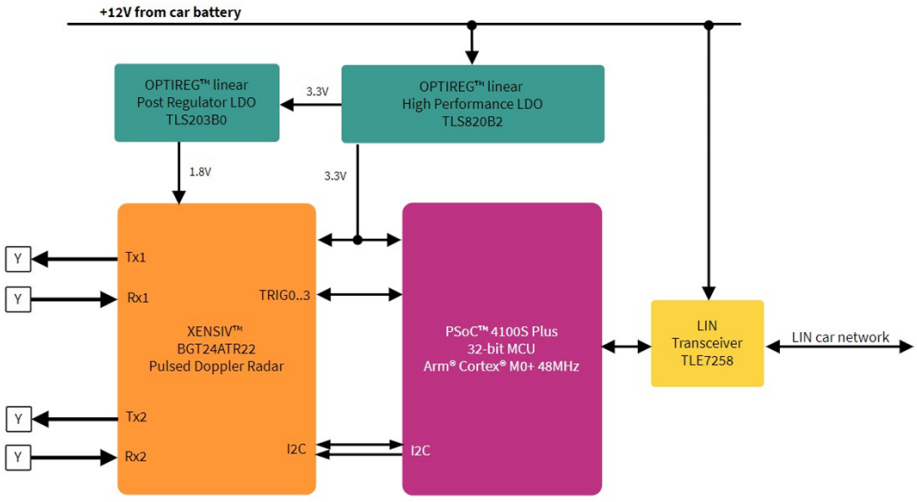
Competitive advantage

- The BGT24ATR22 pulsed doppler radar transceiver excels in automotive power closure applications due to its high level of integration and ultra-low power consumption, while enabling use of entry-level microcontrollers for low cost, compact system design

Product collaterals / Online support

Product page

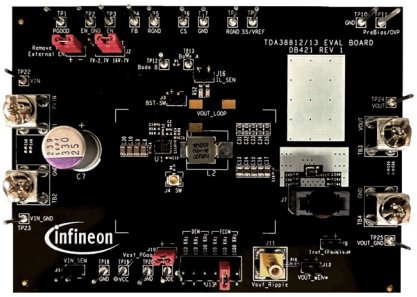
Block diagram



Product overview incl. datasheet link

OPN	SP Number	Package
BGT24ATR22E6433XUMA1	SP005573958	PG-VQFN-32

Evaluation board EVAL_TDA38812_1VOUT, EVAL_TDA38812_3.3VOUT, EVAL_TDA38812_5VOUT



The TDA38812 evaluation boards, showcase the compact, versatile, high-performance TDA38812 point-of-load regulator. Tailored for demanding applications in server, AI, datacom, telecom, and storage markets, these boards feature V_{IN} = +12 V, Fsw = 600 KHz - 1000 KHz, and an output current (I_{out}) range of 0 to 20 A. Each board demonstrates a specific output voltage (V_{OUT}): 1 V, 3.3 V and 5 V respectively.

Features

- Wide input voltage range
- No external compensation
- Supports both FCCM and DEM mode
- Programmable Fsw
- Soft start
- OCP limit
- Enhanced protection features

Benefits

- Support diverse end applications
- Compact design
- No external components
- Efficiency at light / full load
- Robust design and reliability

Target applications

- Datacenter and computing solutions
- Server power supplies
- Telecommunication infrastructure

Product collaterals / Online support

Board page TDA38812_1VOUT

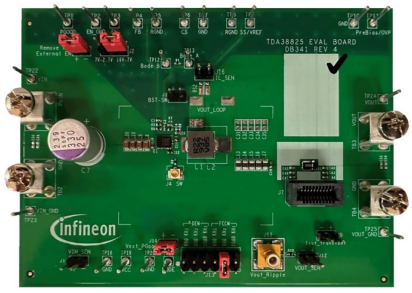
Board page TDA38812_3.3VOUT

Board page TDA38812_5VOUT

Product overview incl. user manual link

OPN	SP Number
EVALTDA388121VOUTTOBO1	SP005957442
EVALTDA3881233VOUTTOBO1	SP006011990
EVALTDA388125VOUTTOBO1	SP006011991

Evaluation board EVAL_TDA38813_1VOUT



The evaluation board EVAL_TDA38813_1VOUT demonstrates the capability of the compact, versatile, high performance, and easy to use TDA38813 point of load regulator that use a proprietary COT that delivers fast transient response required for demanding applications in Server, AI, datacom, telecom and storage markets. The board features V_{IN} = +12 V, V_{OUT} = 1 V, Fsw = 600 KHz - 1000 KHz at I_{out} 0 to 20 A.

Features

- Wide input voltage range
- No external compensation
- Supports both FCCM and DEM mode
- Programmable Fsw
- Soft start
- OCP limit
- Enhanced protection features

Benefits

- Support diverse end applications
- Compact design
- No external components
- Efficiency at light / full load
- Robust design and reliability

Target applications

- Datacenter and computing solutions
- Server power supplies
- Telecommunication infrastructure

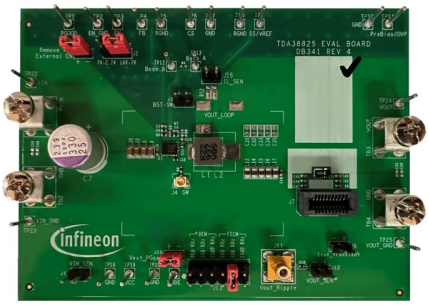
Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
EVALTDA388131VOUTTOBO1	SP005962844

Evaluation board EVAL_TDA38825_1VOUT, EVAL_TDA38825_3.3VOUT, EVAL_TDA38825_5VOUT



The EVAL_TDA38825 series features compact and versatile point-of-load regulators designed for demanding applications in server, AI, datacom, telecom, and storage markets. Each board showcases the high-performance TDA38825 with V_{IN} = +12 V, Fsw = 600 KHz - 1000 KHz, and an output current (I_{out}) range of 0 to 20 A. Each board demonstrates a specific output voltage (V_{OUT}): 1 V, 3.3 V and 5 V respectively.

Features

- Wide input voltage range
- No external compensation
- Supports both FCCM and DEM mode
- Programmable Fsw
- Soft start
- OCP limit
- Enhanced protection features

Benefits

- Support diverse end applications
- Compact design
- No external components
- Efficiency at light / full load
- Robust design and reliability

Target applications

- Datacenter and computing solutions
- Server power supplies
- Telecommunication infrastructure

Product collaterals / Online support

Board page TDA38825_1VOUT

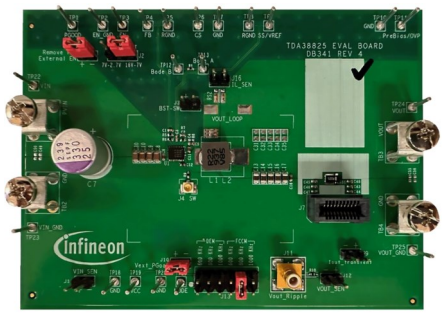
Board page TDA38825_3.3VOUT

Board page TDA38825_5VOUT

Product overview incl. user manual link

OPN	SP Number
EVALTDA388251VOUTTOBO1	SP005957441
EVALTDA3882533VOUTTOBO1	SP006011992
EVALTDA388255VOUTTOBO1	SP006011993

Evaluation board EVAL_TDA38826_1VOUT



The evaluation board EVAL_TDA38826_1VOUT demonstrates the capability of the compact, versatile, high performance, and easy to use TDA38826 point of load regulator that use a proprietary COT that delivers fast transient response required for demanding applications in Server, AI, datacom, telecom and storage markets. The board features VIN = +12 V, V_{OUT} = 1 V, Fsw = 600 KHz - 1000 KHz at Iout 0 to 20 A.

Features

- Wide input voltage range
- No external compensation
- Supports both FCCM and DEM mode
- Programmable Fsw
- Soft start
- OCP limit
- Enhanced protection features

Benefits

- Support diverse end applications
- Compact design
- No external components
- Efficiency at light / full load
- Robust design and reliability

Target applications

- Datacenter and computing solutions
- Server power supplies
- Telecommunication infrastructure

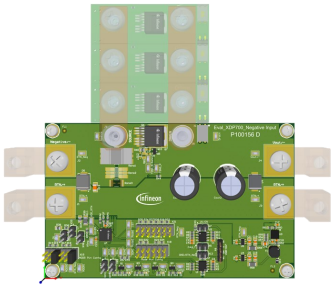
Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
EVALTDA388261VOUTTOBO1	SP005962845

Evaluation board for XDP700-002 EVAL_XDP700



This board features the XDP700-002, a wide input voltage range (-6.5 V to -80 V) hot-swap controller to provide controlled turn-on of the FETs to reduce the inrush current on capacitive load. It allows for testing of controlled turn-on of N-Channel MOSFETs in various footprints with option to add multiple FETs in parallel for higher power levels.

Features

- Easy input and output connections
- Provides PMBus™ interface
- Per pin diagnostics
- Wide input voltage range
- On board capacitive load
- Fault, warning, power good LEDs

Benefits

- Various MOSFET package selection
- Easy paralleling of MOSFET
- Port for XDP designer dongle
- Easy device address selection
- 3.3 V bias
- On board I²C pullups

Target applications

- Telecom
- Power distribution systems
- SMPS Switch Mode Power Supply

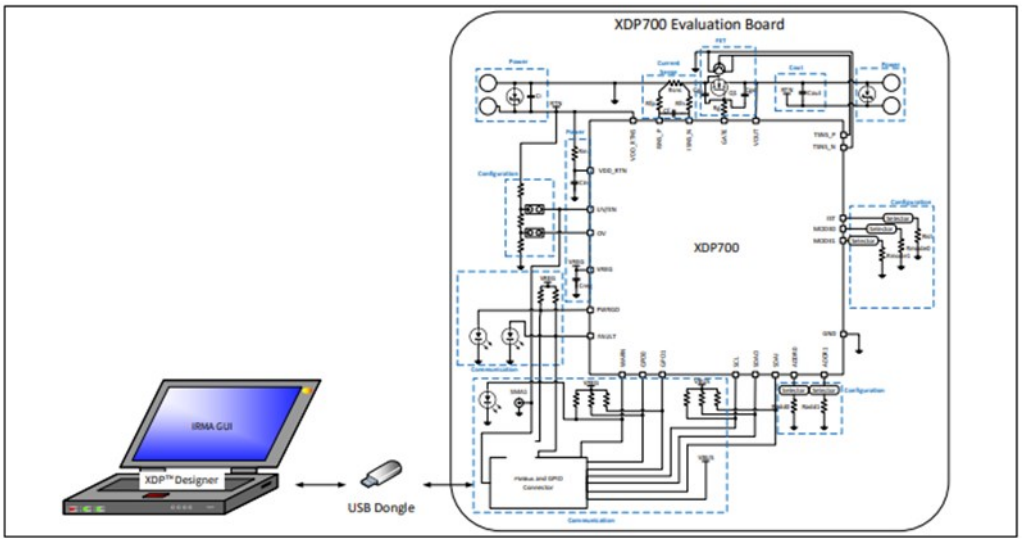
Competitive advantage

- Fully digital interface to allow for flexibility in configuration via PMBus
- Suitable for both high and low power evaluation with flexibility to adjust number of MOSFETs in parallel
- On board digital isolation for communication and digital signals
- Heatsinking via copper bars to allow for high power testing

Product collaterals / Online support

Board page

Block diagram



Product overview incl. user manual link

OPN	SP Number
EVALXDP700TOBO1	SP006009892

40 W auxiliary power supply REF_5QR0680BG_40W1

40 W auxiliary SMPS for refrigerator with the fifth-generation Infineon Quasi-Resonant (QR) CoolSET™ ICE5QR0680BG designed with a universal input and three outputs (isolated 12 V/3.1 A, 5 V/0.2 A and non-isolated 15 V/0.15 A) as typically employed in most home appliances.

Features

- Universal input 85~265 V_{AC}
- Isolated 12 V/3.1 A, 5 V /0.2 A
- >88% full load efficiency at 230 V_{AC}

Benefits

- Low standby
- High efficiency
- Multi-output support
- Robust operation with 800 V MOSFET

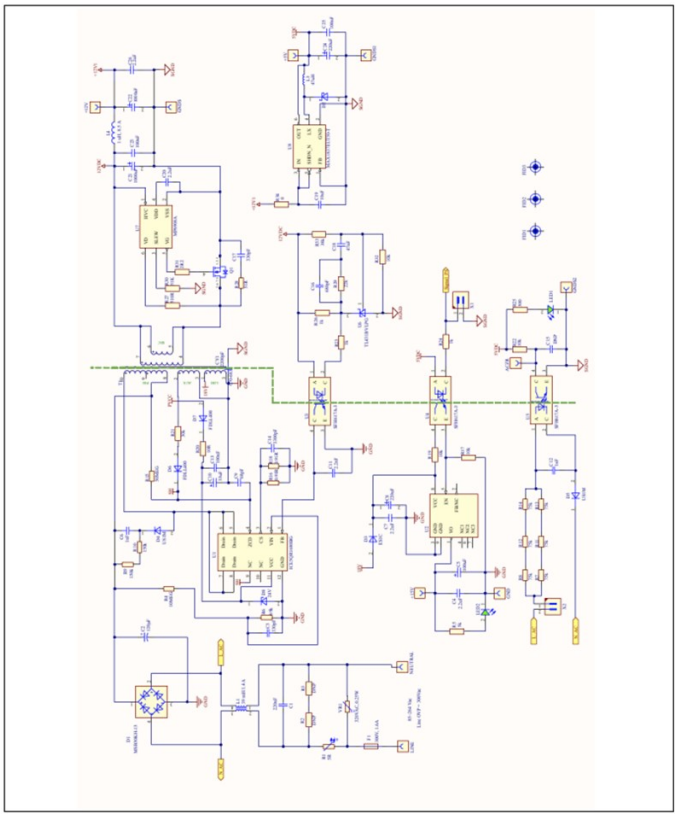
Target applications

- Major home appliances

Competitive advantage

- Multi-output support for IPM gate driver, relay, MCU, and miscellaneous biasing needs
- High efficiency design with synchronous rectification and DC-DC at secondary side
- Ease of interface and/or control AC motor with AC zero crossing detection circuitry
- Low standby with the ability to turn off LDO at primary side
- Robust operation thanks to an integrated 800 V MOSFET

Block diagram



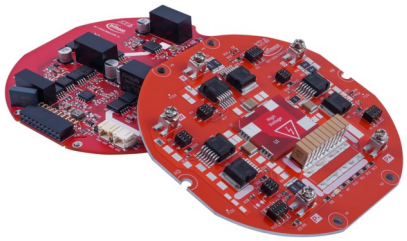
Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
REF5QR0680BG40W1TOBO1	SP006041487

Inverter and gate driver board REF-DR3KIMBGSIC2MA



REF-DR3KIMBGSIC2MA is the upgraded inverter and gate driver board developed for servo motor and drive applications. Designed to evaluate the CoolSiC™ MOSFET 1200 V Generation 2 in TO-263-7 package, features IMBG120R040M2H as the main component for the 3-phase inverter board. The driver circuit incorporates the EiceDRIVER™ compact single-channel isolated gate driver, 1ED3122MC12H, with a Miller clamp function.

Features

- 3-phase servo motor with integrated drive
- CoolSiC™ MOSFET 1200 V, 40 mΩ G2
- EiceDRIVER™ Compact, 10 A, 5.7 kV (rms)
- PCB diameter 110 mm
- Insulated metallic substrate (IMS) PCBs
- Input voltage 350 V_{DC} ~ 800 V_{DC}
- Output voltage 220 V_{AC}~ 480 V_{AC}
- Output power 4.2 kW

Benefits

- State-of-the-art Infineon technology
- Compacter design
- PCBs with high thermal conductivity
- Passive cooling without cooling fans
- Overcurrent detection circuit
- Current sampling with isolated amplifier

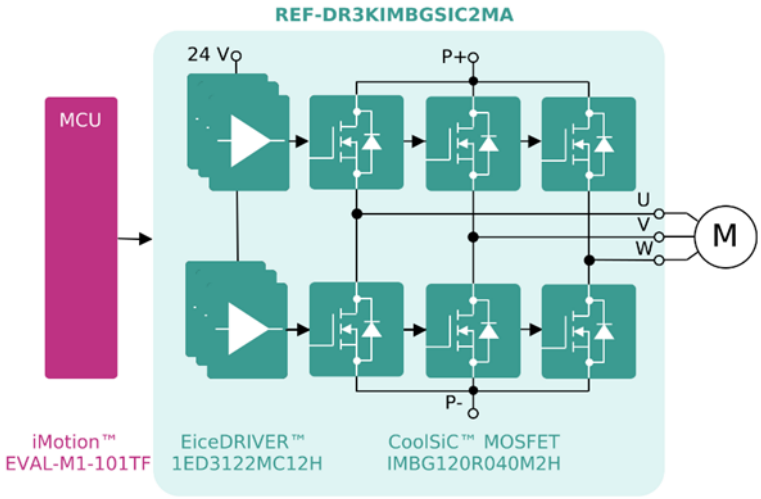
Target applications

- Motor control and driver
- Servo motor drive and control

Competitive advantage

- REF-DR3KIMBGSIC2MA is the upgraded inverter and gate driver board developed for servo motor and drive applications. Customers can use it as reference to build their own servo motor and drives integration. It is incorporating state-of-the-art Infineon components such as the CoolSiC™ MOSFET 1200 V Generation 2 and EiceDRIVER™ Compact single-channel isolated gate driver

Block diagram



Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
REFDR3KIMBGSIC2MATOBO1	SP005990399