New Product Introduction

October 2019

iMOTION™ MADK Starter Kit for IMM101T Smart IPMs

TLE9180D-21QK / TLE9180D-31QK 3-phase gate driver ICs

OptiMOS™ 5 – 40 V MOSFETs in sTOLL Power MOS Package

HybridPack™ Drive Family

NLM0011 and NLM0010 - NFC-PWM configuration ICs

IGT40R070D1 E8220 - CoolGaN™ 400V e-mode HEMT

IGLD60R190D1 - CoolGaN™ 600V e-mode HEMT

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TLE985x - H-Bridge Driver IC with integrated Arm® Cortex®-M0

OptiMOS™6 - 40 V in SS08

Low Capacitance ESD Devices

BGSA402ML10 - Low Resistance Antenna Tuning Switch

BGS12P2L6 - High Power SPDT RF Switch

eTZ950N22P70 / eTZ1100N16P70 - 70 mm Single Thyristor

CoolSiC™ MOSFET evaluation board for 7.5 kW motor drive

iMOTION™ MADK Starter Kit for IMM101T Smart IPMs

The EVAL-IMM101T Starter Kit is designed to give an easy-to-use motor drive solution based on the iMOTION™ IMM101T Smart IPM. It provides a fully-integrated motor drive solution designed for PMSM/BLDC motor drive applications such as fans, pumps and compressors.
The starter kit EVAL-IMM101T was developed to support customers during their first steps designing applications with IMM101T Smart IPM and comprises other necessary circuitry required for “out-of-the-box” evaluation of IMM101T Smart IPMs, such as rectifier and EMI filter stage, as well as isolated debugger section with USB connection to the PC.

Features

> Nominal input voltage 110 V_{AC} – 230 V_{AC}
> PCB size is 88.9mm x 89.5mm
> On-board EMI filter
> On-board debugger with 1 kV isolation for isolated communication to PC via USB
> Single shunt current sensing configuration by default
> NTC to reduce inrush current
> Measurement test-points compatible with standard oscilloscope probes
> RoHS compliant

Benefits

> Evaluate iMOTION™ IMM101T Smart IPMs for your application
> Easy to start evaluation – shorter cycle time to final product
> Get your motor running within one hour

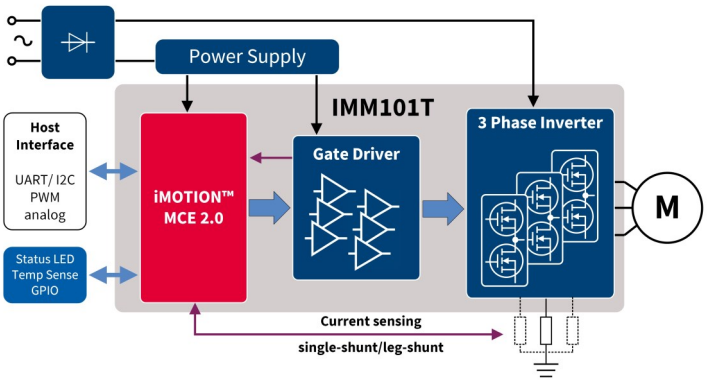
Target applications

> Low power BLDC motor drives, for consumer and industrial applications
> Fans for air conditioner and kitchen hood
> Pumps for washing machines
> Low power fridge compressors

Competitive advantage

The combination of the MCE2.0 iMOTION™ motor control engine integrated into IMM101T devices, together with the gate driver and six MOSFETS offers a complete motor drive system in a compact 12 x 12mm² surface mount package, minimizing external components count and PCB area.

Block diagram



Product collaterals / Online support

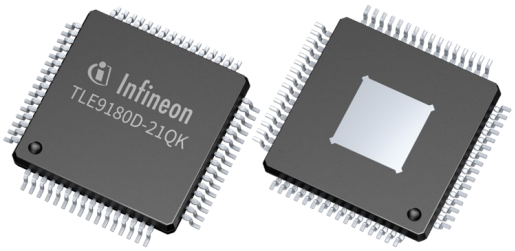
Product page EVAL-IMM101T-015
Product page EVAL-IMM101T-046
iMOTION™ IMM100 Product Brief
Webinar-on demand

Product overview incl. data sheet link

OPN	SP Number	Package
EVAL-IMM101T-015TOBO1	SP004177748	board
EVAL-IMM101T-046TOBO1	SP004177752	board

TLE9180D-21QK / TLE9180D-31QK 3-phase gate driver ICs

The TLE9180D-21QK and TLE9180D-31QK are advanced gate driver ICs dedicated to control 6 external N-channel MOSFETs forming an inverter for high current 3 phase motor drives application in the automotive sector. A sophisticated high voltage technology allows ICs to support applications for single and mixed battery systems with battery voltages of 12 V, 24 V and 48 V. Bridge, motor and supply related pins can withstand voltages of up to 90 V. Motor related pins can even withstand negative voltage transients down to - 15 V without damage. All low- and high-side output stages are based on a floating concept and its driver strength allows to drive lowest $R_{DS(ON)}$ MOSFETs common on the market. In 12 V applications the gate driver IC is capable of driving 6 MOSFETs, each with a maximum total gate charge of QgTOT = 300 nC, at a



Features

> Main board with the 3-phase gate driver IC, MOSFET power stage and auxiliary components
> Pre-flashed microcontroller board using the Infineon XC2785X-104F to establish a communication link between the driver IC and the PC
> USB cable to connect the microcontroller to a PC
> Graphical user interface for register easy access to the driver IC (available for Microsoft Windows only)

Benefits

> Quick evaluation of electrical tests, optimize design & performance
> Reference for own system development
> Simple debugging of hardware and software

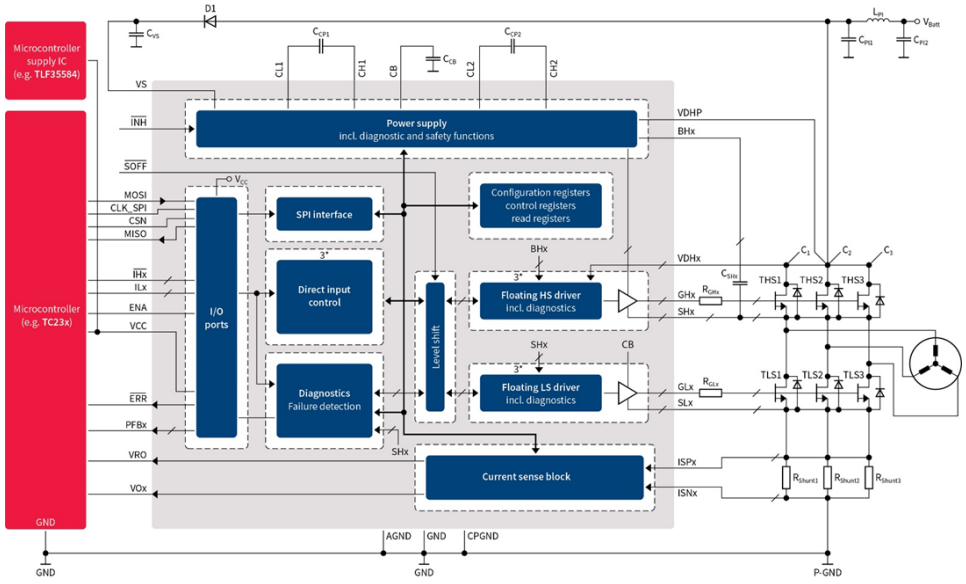
Target applications

> 48 V motor drives
> Cooling fans
> Water pump
> Oil pump
> HVAC compressor
> Commercial and agricultural vehicles

Competitive advantage

90 V max ratings at the motor connection pins
2 A gate current is sufficient for all applications
Smooth operation from 0…100% duty cycle
Highly configurable (levels suitable for 48 V)
Current sense amplifiers for motor control
Detailed diagnostics (e.g. which MOSFET has a short)
Software synergies between 12 V and 48 V applications

Block diagram



Product collaterals / Online support

Product page TLE9180D-21QK
Product page TLE9180D-31QK
Product brief

Product overview incl. data sheet link

OPN	SP Number	Package
TLE9180D21QKXUMA1	SP001615886	PG-LQFP-64
TLE9180D31QKXUMA1	SP001417250	PG-LQFP-64

OptiMOS™ 5 – 40 V MOSFETs in sTOLL Power MOS Package

Infineon introduces sTOLL as its latest high power leadless package in 7x8 mm2 with OptiMOS™-5 40 V for future automotive applications (JEDEC name is MO-319A and IEC name is HSOF-5).
sTOLL offers high current capability of 250 A, more than standard D2PAK (180 A), at a footprint of 56 mm2 which is even smaller than DPAK (65 mm2). In combination with Infineon's leading OptiMOS™-5 40 V power MOS technology, sTOLL offers best in class power density and power efficiency at Infineon's well known quality level for robust automotive packages.

Features

> JEDEC registered
> 7x8 mm² small footprint
> 250 A high current capability
> Leadless package with low package resistance and minimized stray inductance
> Leading 40 V Technology OptiMOS-5™ + OptiMOS-6™
> $R_{DS(on)}$ range: 0,6 mOhm – 1,4 mOhm
> AOI capable package for Automated Optical Inspection

Benefits

> High power + current density
> High thermal capacity lead-frame package
> Reduced conduction losses
> Optimized switching behavior
> Reduced form factor compared to traditional DPAK / D^2PAK
> Industry standard package (JEDEC MO-319A)

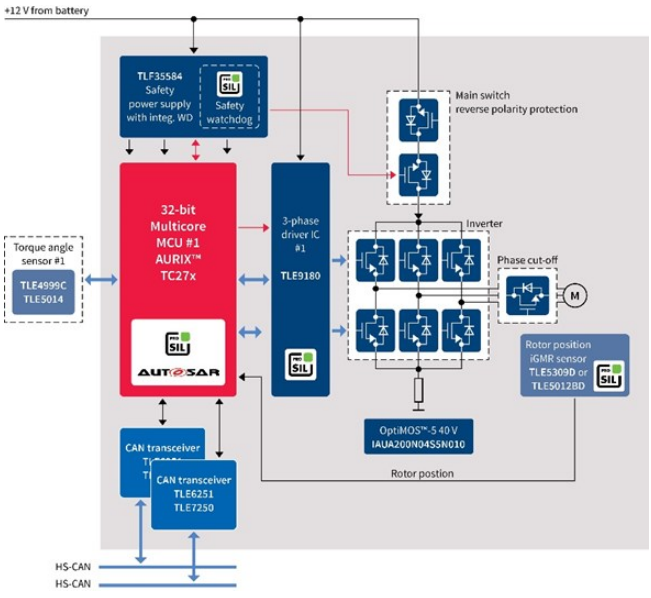
Target Applications

> 12V EPS
> 12V BLDC
> 12V-48V DC/DC

Competitive advantage

> Lowest $R_{DS(on)}$ in its class
> Highest current carrying capability
> Best in class $R_{DS(on)}$ x Q_g figure of merit (FOM)

Block diagram



Product collaterals / Online support

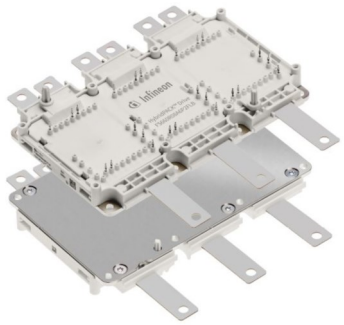
Product family page
Product brief
Application note
Selection guide

Product overview incl. data sheet link

OPN	SP Number	Package
IAUA200N04S5N010AUMA1	SP003127488	PG-HSOF-5
IAUA180N04S5N012AUMA1	SP003127494	PG-HSOF-5

HybridPack™ Drive Family

The HybridPACK™ Drive Family offers 3 variants of power modules for main inverters with a selection of collector current and blocking voltage: 660 A/750 V, 770 A/750 V, 820 A/750 V. Additional variants: 950 A/750 V and 380 A/1200 V, coming in Q3 2019.
Adapted baseplate structure for different cooling types. Flat baseplate without direct cooling structure, Pinfin for best cooling performance and Wave (Ribbon Bond) for a cost efficient solution between low and high performance.
One gate driver PCB fits all module variants, keeping the same module footprint.



Features

> 750 V EDT2 IGBT for up to Tvj = 175°C switching operation
> Variety of performances due to different cooling interfaces.
> Mechanical guiding elements and press-fit pins for the signal terminals.

Target Applications

> Automotive applications
> Hybrid electrical vehicles (H)EV
> Motor drives
> Commercial agriculture vehicles

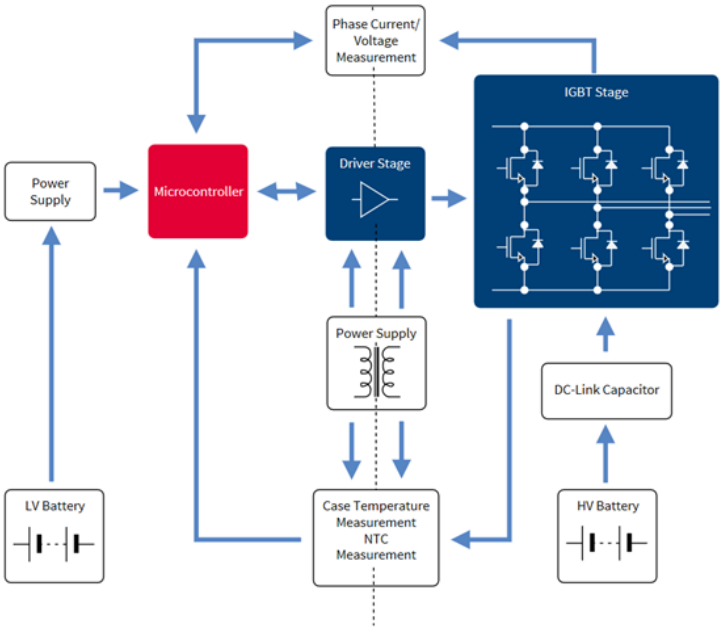
Benefits

> Benchmark IGBT chip with higher density and lower switching losses.
> Very compact and cost efficient inverter designs
> Reuse of existing package technology
> Broad portfolio of modules for different performance classes
> Support easy assembly processes

Competitive advantage

Quality, production capabilities and modular approach for designIn.

Block diagram



Product collaterals / Online support

Product family page
Product brief
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Product overview incl. data sheet link

OPN	SP Number	Package
FS660R08A6P2FBBPSA1	SP001632426	AG-HYBRIDD-1-2
FS660R08A6P2FLBBPSA1	SP001850450	AG-HYBRIDD-1-2
FS770R08A6P2BBPSA1	SP001706976	AG-HYBRIDD-1-3
FS770R08A6P2LBBPSA1	SP001987412	AG-HYBRIDD-1-3
FS820R08A6P2BPSA1	SP001499702	AG-HYBRIDD-1
FS820R08A6P2BBPSA1	SP001499708	AG-HYBRIDD-1
FS820R08A6P2LBBPSA1	SP001611366	AG-HYBRIDD-1

NLM0011 and NLM0010 - NFC-PWM configuration ICs

Infineon's NLM0011 is a dual-mode NFC wireless configuration IC with pulse width modulation (PWM) output, primarily designed for LED applications to enable NFC programming. In addition, advanced features such as the constant lumen output (CLO) as well as the on/off counting are integrated, with no need for an additional microcontroller. Since the NLM0011 is designed to work together with mainstream analog driver ICs, there are no firmware development efforts needed. It can be easily adapted into existing designs to replace the plug-in-resistor current configuration concept. The NLM0010 is a light version of the NLM0011 without CLO function. NLM0011 and NLM0010 NFC-PWM configuration ICs are compatible with existing analog LED driver designs and with the NFC-programming specification from the Module-Driver Interface Special Interest Group (MD-SIG).

Features

> Configurable pulse width modulation (PWM) output
> NFC contactless interface ISO 15693
> Constant lumen output (CLO) with 8 configurable points
> Integrated operation-time counter (OTC) and on/off counter
> Non-volatile memory (NVM) including UID and password protection

Benefits

> Fast and cost effective implementation of NFC programming and CLO without the need of an additional microcontroller
> Compatible with existing analog LED driver design using “plug-in resistor” method
> Stable PWM output with 2.8 V amplitude and +/-0.1% duty cycle accuracy
> Internal voltage regulator (LDO) to avoid influence of instable external supply voltage
> Compatible with the MD-SIG “NFC Programming Specification”

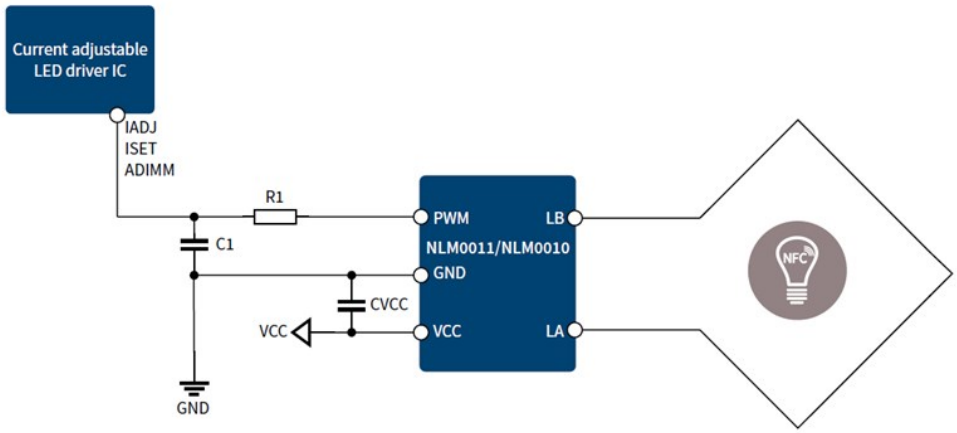
Target applications

> NFC
> SMPS
> Motor control

Competitive advantage

NLM0011 is the first NFC configuration IC with integrated constant lumen output (CLO) function.

Application diagram



Product collaterals / Online support

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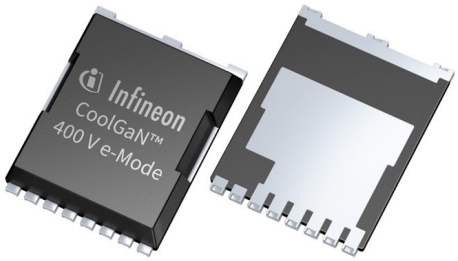
Application note
Whitepaper

Product overview incl. data sheet link

OPN	SP Number	Package
NLM0011XTSA1	SP002187978	PG-SOT23-5
NLM0010XTSA1	SP003094824	PG-SOT23-5
EVALNLM0011DCTOBO1	SP005298736	Board

IGT40R070D1 E8220 - CoolGaN™ 400V e-mode HEMT

The CoolGaN™ 400 V e-mode GaN HEMT is a derivative of the industry benchmark CoolGaN™ 600 V technology. This enhancement-mode power transistor overcomes the technology barriers, such as linearity and power loss, by introducing zero reverse recovery charge in the body diode and very small, linear input and output capacitances. The IGT40R070D1 E8220 is optimized for class D audio amplifier applications where it provides excellent audio experience.



Features

> Enhancement-mode transistor – normally-off switch
> Ultrafast switching
> No reverse recovery charge
> Capable of reverse conduction
> Low gate charge, low output charge
> Superior commutation ruggedness
> Qualified according to JEDEC Standards (JESD47 and JESD22)

Benefits

> Improves efficiency due to best figure-of-merit (FOM) in the 400 V class
> Exhibits very low noise level
> Lower THD compared to the best-in-class silicon switch
> Compatible with existing control ICs

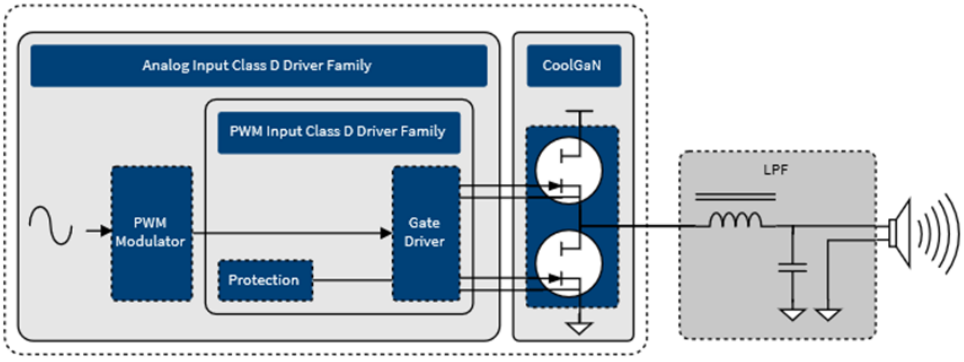
Target applications

> Class D audio amplifier

Competitive advantage

> Currently the only 400 V GaN offering in the market

Application diagram



Product collaterals / Online support

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Application brochure
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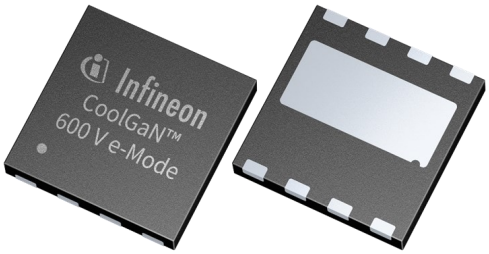
Product overview incl. data sheet link

OPN	SP Number	Package
IGT40R070D1E8220ATMA1	SP001946158	PG-HSOF-8-3

IGLD60R190D1 - CoolGaN™ 600V e-mode HEMT

The IGLD60R190D1 CoolGaN™ 600 V enhancement-mode (e-mode) power transistor offers fast turn-on and turn-off speed, minimum switching losses and enables simple half-bridge topologies with the highest efficiency.
The gallium nitride CoolGaN™ 600 V series is qualified according to a comprehensive GaN-tailored qualification well beyond existing standards. It addresses datacom and server SMPS, telecom as well as adapter, charger, wireless charging and numerous other applications that demand highest efficiency or power density.



Features

> Enhancement-mode transistor – normally-off switch
> Ultrafast switching
> No reverse-recovery charge
> Capable of reverse conduction
> Low gate charge, low output charge
> Superior commutation ruggedness
> Qualified for industrial applications according to JEDEC standards (JESD47 and JESD22)

Benefits

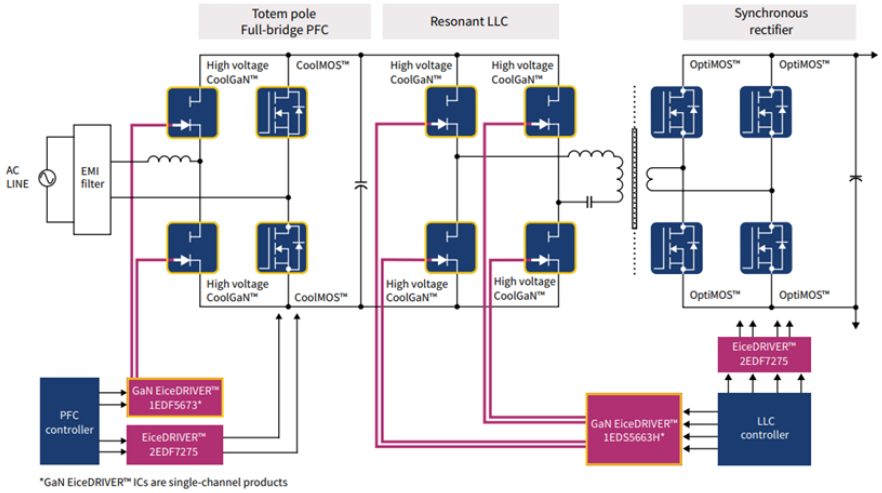
> Improves system efficiency
> Improves power density
> Enables higher operating frequency
> System cost reduction savings
> Reduces EMI

Target applications

> Server
> Telecom
> Adapter and charger
> Wireless charging

Application diagram—SMPS

High efficiency GaN switched mode power supply (SMPS)



Product collaterals / Online support

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Product overview incl. data sheet link

OPN	SP Number	Package
IGLD60R190D1AUMA1	SP001705426	PG-LSON-8-1

TLE8881-2TN - Alternator Regulator IC with LIN Interface

The TLE8881-2, latest addition to the Infineon LIN alternator regulator IC family, is a monolithic full featured regulator specifically designed for the closed loop voltage control of 12 V automotive multi-phase alternators with a rotating field winding. The TLE8881-2 is AEC-Q100 qualified and tailored to withstand the harsh conditions of the automotive environment. The regulator is able to communicate with an engine management or energy management ECU through a standard LIN interface (LIN 1.3 / LIN 2.1 / LIN 2.2). The battery voltage is regulated at a precise value between 10.6 V and 16 V. By using free-adjustable parameters, the regulator is able to operate even without any communication interface.

Features

> Full digital and fast PI regulation
> High-Side DMOS with $R_{DS(on)}$ of 60mΩ
> LIN 1.3, LIN 2.1, LIN2.2
> Very low stand-by current of 60µA
> Reverse battery protected up to -2.5 V
> High ESD resistivity of 8 kV
> Temperature range -40°C to 175°C
> Digital temperature compensation
>Available in TO-220-5-12 with straight leads

Benefits

> Assisting functions to simplify design-in into existing applications with MFC interface
> Compliant with various LIN generator regulator specifications (e.g. VDA, RSA-Nissan, HKMC)
> Flexibility
> Fully configurable LIN IDs and filters
> Enhanced EEPROM for customer specific adjustments
> Speed dependent current limitation
> Speed and voltage dependent regulation parameter settings
> Adapting overvoltage protection at low speed (Low HEO)

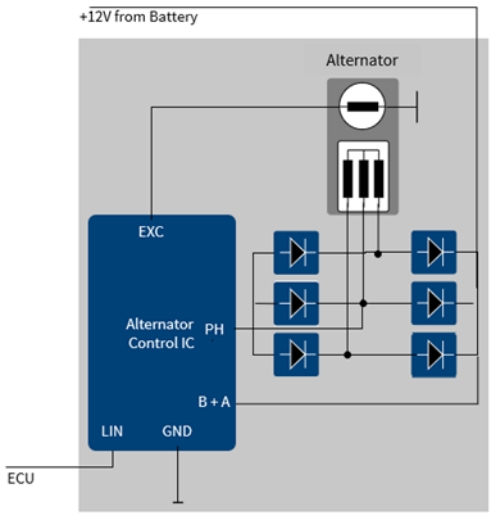
Target applications

> 12 V automotive alternators with LIN interface
> 12 V truck alternators with LIN interface
> 12 V aftermarket alternators
> 12 V industrial generators

Competitive advantage

> Easy switch from existing applications using MFC or LIN interface
> Flexibility (LIN interface and enhanced EEPROM)
> Enhanced regulation behavior

Application diagram—SMPS



Product collaterals / Online support

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Product overview incl. data sheet link

OPN	SP Number	Package
TLE88812TNAKSA1	SP002245760	PG-TO220-5
ACICBOARDTOBO1	SP001112446	board

TLE985x - H-Bridge Driver IC with integrated Arm® Cortex®-M0

The TLE985x H-Bridge MOSFET driver IC product family is the perfect fit for compact and cost effective motor control solutions. It targets automotive applications such as sunroof, window lift, power lift gate and auxiliary pumps.

It integrates a 32-bit Arm® Cortex®-M0 core together with market proven peripherals such as two sets of ADCs, a HV-MON, a LIN Transceiver and a current-controlled H-Bridge driver. This enables a very cost effective solution on system level.

By using a MOSFET based motor applications the ECU height can be reduced and the "clicking" noise of the relay can be eliminated. Additionally, diagnostic functions for overcurrent protection of the motor are integrated. Furthermore, with PWM controlled motors the mechanical stress can be reduced by torque motor control and additional comfort functions like soft start/stop can be achieved.

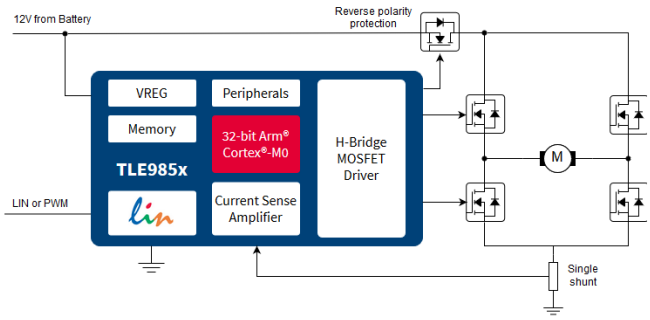
Features

> Arm® Cortex®-M0 MCU with up to 40MHz
> On chip oscillator & PLL
> Up to 96kB Flash memory with 4KB RAM
> H-Bridge MOSFET driver with current driven output stages
> One protected high-side switch
> 5V power supply output
> Integrated LIN transceiver compatible with LIN standard 2.2 and SAE J2602 supports fast programming via LIN

Target applications

> Automotive Motor Control for DC motors
> Single phase BLDC

Application diagram



Benefits

> cost and board space improvements

The TLE985x family allows driving MOSFETs at VBATT ≥ 6V with a low number of external components, providing a very cost effective solution on a system level

> MOSFET driver with adaptive control (Infineon patent)

Optimization of the system concerning EME (slow slew rates) and Pdiss (short dead times) simultaneously.

> Enable high levels of system reliability

Extensive diagnostics and protections are embedded within the System-on-Chip

Competitive advantage

> Smallest footprint & minimized number of external components save PCB space. Reduced qualification effort for integrated device
> Iddq best in class therefore less design efforts / better competitiveness for customer; ASIL-B on system level can be achieved
> 96KB flash to offer flexibility for increased SW functionality

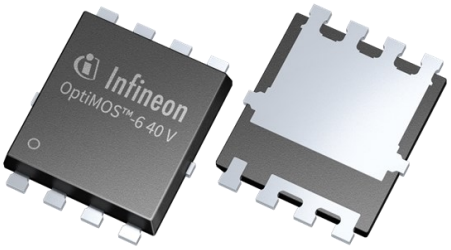
Product collaterals / Online support

Product family page
Product brief
Videos

Product overview incl. data sheet link

OPN	SP Number	Package
TLE9852QXXUMA1	SP005342074	PG-VQFN-48-31
TLE9853QXXUMA1	SP001724014	PG-VQFN-48-31
TLE9854QXWXUMA1	SP002746750	PG-VQFN-48-29
TLE9854QXXUMA1	SP001724016	PG-VQFN-48-31
TLE9855QXXUMA2	SP005354720	PG-VQFN-48-31
TLE9855EVALKITTOBO1	SP003549496	board
TLE985XEVALBOARDTOBO1	SP002245878	board

OptiMOS™6 - 40 V in SS08



Additional Products of the latest OptiMOS™-6 40 V are now available. This portfolio of 16 products in power MOS technology is in the 5 x 6 mm² SS08 leadless package with highest quality level and robustness for automotive applications.
The $R_{DS(on)}$ (max) from 0.8 mΩ to 4.4 mΩ) enables the customer to find the best product feet in the their applications. All of this enables the Best-inClass product FOM ($R_{DS(on)}$ x Q_g) and performance on the market.
The new SS08 product offers 120 A continuous current ratings, which is 20 percent higher than the standard DPAK at almost half of its footprint area. The footprint area of SS08 is 35 mm² and of the DPAK is 65 mm².

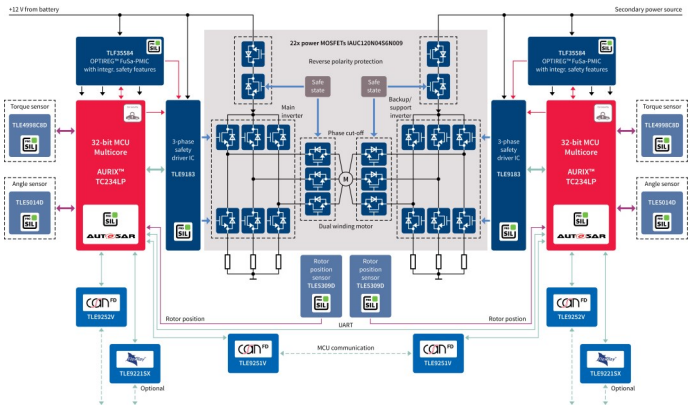
Features

> Higher current ratings
> $R_{DS(on)}$ range from 0.8 mOhm to 4.4 mOhm able to address the whole applications range from low-power (e.g. Body applications) to high-power (e.g. EPS)
> improved switching performances
> lower package resistance and inductance

Competitive advantage

Best in class FOM ($R_{DS(on)}$ x Q_g)

Block diagram



Benefits

> Reduced conduction losses and switching losses
> Optimized switching performance
> Reduced FOM factor compared to previous SFET5 40 V SS08 products
> 25% higher current ratings - compared to previous SFET5 40 V SS08

Target Applications

> Electric power steering,
> Engine cooling fan,
> Battery disconnection switch,
> Battery management,
> DC DC converter 48 V/12 V,
> Body applications (e.g. Wipers, window lift, seat-control…)

Product collaterals / Online support

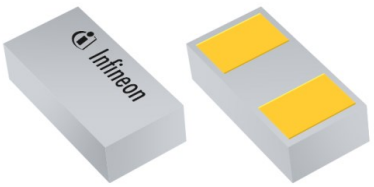
Product family page
Product brief

Product overview incl. data sheet link

OPN	SP Number	Package
IAUC120N04S6L009ATMA1	SP001618638	PG-TDSON-8
IAUC120N04S6N010ATMA1	SP001618640	PG-TDSON-8
IAUC120N04S6L012ATMA1	SP001790492	PG-TDSON-8
IAUC120N04S6N013ATMA1	SP001790490	PG-TDSON-8
IAUC100N04S6L014ATMA1	SP001700120	PG-TDSON-8
IAUC100N04S6N015ATMA1	SP001700154	PG-TDSON-8
IAUC100N04S6L020ATMA1	SP001790494	PG-TDSON-8
IAUC100N04S6N022ATMA1	SP001790496	PG-TDSON-8
IAUC100N04S6L025ATMA1	SP001700164	PG-TDSON-8
IAUC100N04S6N028ATMA1	SP001700166	PG-TDSON-8
IAUC80N04S6L032ATMA1	SP001700160	PG-TDSON-8
IAUC80N04S6N036ATMA1	SP001700162	PG-TDSON-8
IAUC60N04S6L039ATMA1	SP001700156	PG-TDSON-8
IAUC60N04S6N044ATMA1	SP001700158	PG-TDSON-8

Low Capacitance ESD Devices

Infineon enters the market with a range of 3 highly improved low clamping voltage, low capacitance, bi directional ESD/ transient protection diodes. All 3 devices ESD 106-B1-W0201 and ESD 132/134—B1-W0201 are Low Capacitance ESDs designed for applications like Super high speed I/O - USB 3.0 / 3.1, Firewire, DVI, HDMI, S-ATA, DisplayPort.



> ESD106-B1-W0201– Low Capacitance ESD Device
Bi-directional, 5.5 V, 0.13 pF, 0201, RoHS and halogen free compliant

> ESD132/B1-W0201– Low Capacitance ESD Device
Bi-directional, 5.5 V, 0.45 pF, 0201, RoHS and halogen free compliant

> ESD134-B1-W0201– Low Capacitance ESD Device
Bi-directional, 2.1 V, 0.3 pF, 0201, RoHS and halogen free compliant

Features

> Low Capacitance
> Improved Protection Performance
> Small Package

Benefits

> Better circuit protection
> Improved high speed signal performance
> Improved clamping performance

Target Applications

> High Speed I/O
> Capacitance Sensitive Applications
> LVDS signal applications

Product collaterals / Online support

Product family page
Application note

Product overview incl. data sheet link

OPN	SP Number	Package
ESD106B1W0201E6327XTSA1	SP002020140	SG-WLL-2
ESD132B1W0201E6327XTSA1	SP001704540	SG-WLL-2
ESD134B1W0201E6327XTSA1	SP001827706	SG-WLL-2

BGSA402ML10 - Low Resistance Antenna Tuning Switch

The BGSA402ML10 is a versatile shunt to ground 4xSingle-Pole Single-Throw (4xSPST) RF antenna tuning switch. It is optimized for low C_{off} as well as low R_{on} enabling applications up to 6 GHz.

The BGSA402ML10 is ideal for antenna tuning application. This chip integrates on-chip CMOS logic and power supply regulation. Its digital control interface is compliant with MIPI2.1 RFFE specification and each switch throw can be programmed individually or all together in the same RFFE ommand frame. Up to 4 instantiations of the same device can be controlled using the same RFFE bus thanks to its 4 states USID_Sel pin.

Features

> Multiple selectable switch configurations
> Ultra low R_{ON} resistance of 1.49 in ON state
> Low C_{OFF} capacitance of 170 fF in OFF state
> High RF operating voltage OFF state handling of >45 V
> Low harmonic generation
> MIPI RFFE 2.1 compliant control interface
> Support up to 4 default USID via USID_Sel pin state
> Supply voltage range: 1.65 to 3.6 V
> No RF parameter change within supply voltage range
> Small form factor 1.1 mm x 1.5 mm, MSL1, 260° C per JEDEC J-STD-020
> RoHS and WEEE compliant package

Benefits

> Performance stability over full temperature and power supply range
> Good small and large signal RF performance up to 6GHz

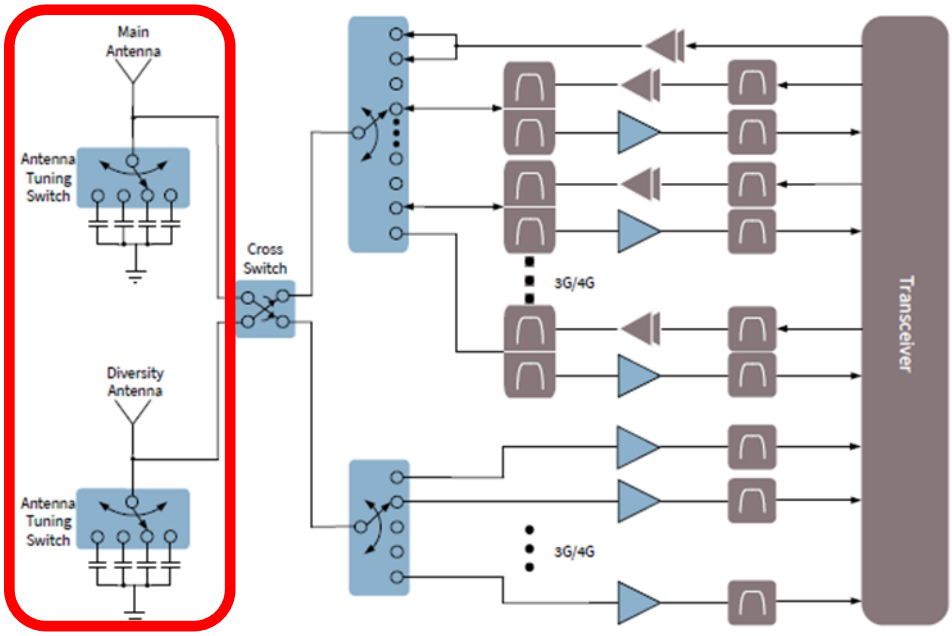
Target applications

> Designed for high-linearity antenna aperture switching and RF tuning applications

Competitive advantage

> Fulfils latest Qualcomm chipset (SD865) 1.8 V nominal supply voltage rail requirement
> Enables customer with capability to control up to 4 time the same device with the same RFFE MIPI bus

Application diagram—Antenna



Product collaterals / Online support

Product page

Product overview incl. data sheet link

OPN	SP Number	Package
BGSA402ML10E6327XTSA1	SP005060640	PG-TSLP-10

BGS12P2L6 - High Power SPDT RF Switch

The BGS12P2L6 is a general purpose high power SPDT switch, designed to cover a broad range applications from 0.05 to 6 GHz and therefore excellent for 5G sub-6 GHz. Its outstanding RF performance optimizes the transmitting path (TRx) of LTE/5G mobile phones. The chip integrates on-chip CMOS logic driven by a simple, single-pin CMOS or TTL compatible control input signal. Unlike GaAs technology, external DC blocking capacitors at the RF ports are only required if DC voltage is applied externally.

The BGS12P2L6 RF switch is manufactured in Infineon's patented MOS technology, offering the performance of GaAs with the economy and integration of conventional CMOS including the inherent higher ESD robustness. The device has a very small size of only 0.7 x 1.1 mm^2 and a maximum height of 0.31 mm.

Features

> High power handling up to 37dBm àoptimal for cellular trans-mitting paths (TRx)
> GPIO controlled
> Very small footprint [1.1 x 0.7 mm]
> Broad frequency range 0.05 – 6.0 GHz
> Low IL@2.7GHz: 0.31dBm, high ISO@2.7GHz: 35dBm

Benefits

> Easy integration into existing architectures àGPIO control
> Wideband applicable à5G sub-6GHz capable
> Higher system reliability through best-in-class RF performance

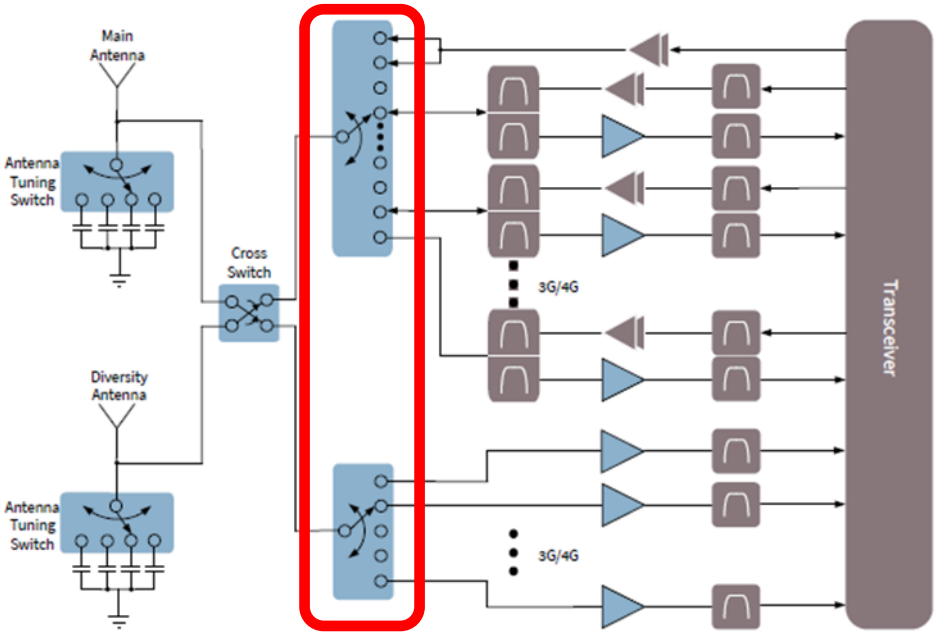
Target applications

> Mobile cellular TRx path (4G, 5G)
> Multipurpose RF switch for high power application

Competitive advantage

> High linearity up to 37dBm power handling
> Best-in-class insertion loss and Isolation levels up to 6GHz

Application diagram—Antenna



Product collaterals / Online support

Product page

Product overview incl. data sheet link

OPN	SP Number	Package
BGS12P2L6E6327XTSA1	SP002203562	PG-TSLP-6

eTZ950N22P70 / eTZ1100N16P70 - 70 mm Single Thyristor Modules

In order to serve the demand for cost improvement for larger modules Infineon Technologies Bipolar has completely redesigned their 70 mm modules in pressure contact technology keeping their standard dimensions but being consequently driven by the design-to-cost approach to reduce the amount of material used. The new modules have been reduced to their essential functions keeping the pressure contact technology and their well-known reliability leading to outstanding life time.

Due to higher junction temperature the Eco Block Modules are right fit for air-cooled applications. In order to get the optimal performance and keep the production fast & clean they will be also available with Thermal Interface Material (TIM).

Features

> Complete re-design of the pressure contact technology
> Consequent design-to-cost approach for less materials
> Best-in-class passivation
> Short on-fail capability
> Higher operational temperature
> Standard housing dimensions
> Ready for low housing height (IGBT compatible)

Benefits

> Best power-to-price ratio
> Reduced failure & system costs
> Predictable performance over entire lifetime
> Slim, sustainable and environmentally friendly

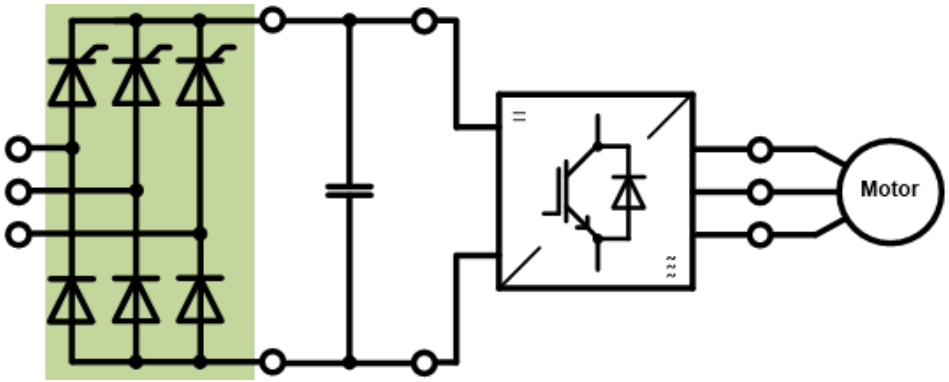
Target applications

> Motor control and drives
> Uninterruptible power supply (UPS)
> Wind energy systems

Competitive advantage

> Best price-performance ratio in the market

Application diagram



Product collaterals / Online support

Product page eTZ950N22P70
Product page eTZ1100N16P70
Product family page
Product brief
Production selection guide

Product overview incl. data sheet link

OPN	SP Number	Package
eTZ950N22P70HPSA1	SP004297450	BG-PB70ECO-1
eTZ1100N16P70HPSA1	SP004308620	BG-PB70ECO-1

CoolSiC™ MOSFET evaluation board for 7.5 kW motor drive

The EVAL-M5-E1B1245N-SiC is a complete evaluation board including a 3-phase CoolSiC™ MOSFET power module for motor drive applications. In combination with one of the available MADK control board options with the M5 32-pin connector, it demonstrates Infineon's silicon carbide power module technology.
It features the EasyPACK™ 1B 1200 V CoolSiC™ MOSFET power module FS45MR12W1M1_B11 in sixpack configuration which is optimized for motor drive applications with very high frequency switching operation such as General Purpose Drives and the fast growing servo drive and robotics market.
It is equipped with all assembly groups for sensorless field oriented control (FOC), over-temperature and over-current protection as well as short circuit protection.
The evaluation board was developed to support customers during their first steps designing motor drive applications with FS45MR12W1M1_B11.

Features

> EasyPACK™ 1B 1200 V CoolSiC™ MOSFET power module FS45MR12W1M1_B11 in sixpack configuration
> Low inductive design
> PCB size is 259 mm x 204 mm
> Input voltage 340 – 480 V_{AC}
> Overload and short-circuit hardware protection
> Maximum 7.5 kW motor power output
> Auxiliary power supply with 5 V

Benefits

> MADK is optimized to GPD / Servo drives with very high f_{sw}
> Equipped with all assembly groups for sensorless field oriented control (FOC)
> Overtemperature and overcurrent protection as well as short circuit protection

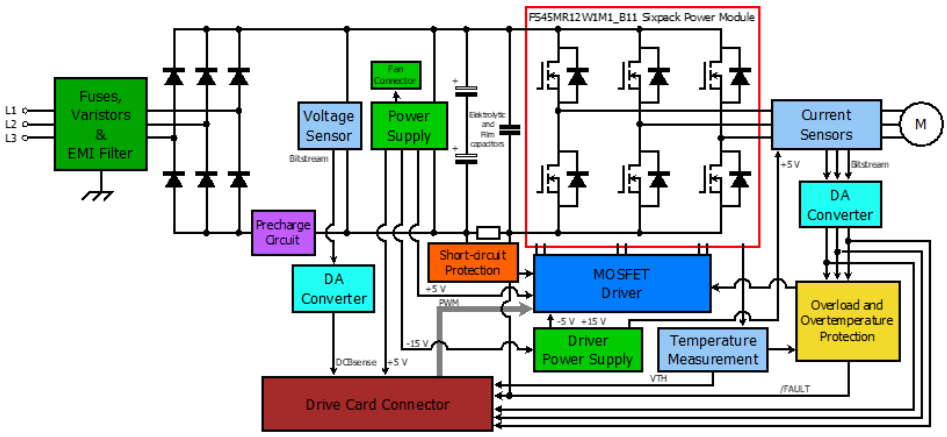
Target applications

> Motor control and drives

Competitive advantage

> EVAL-M5-E1B1245N-SiC is an evaluation board for motor drive applications comprising the silicon carbide sixpack power module FS45MR12W1M1_B11. Combined in a kit with one of the available MADK control board options, it demonstrates Infineon's silicon carbide power-module technology

Application diagram



Product collaterals / Online support

Product page
Application note
Product brief
Support forum
Webinar

Product overview incl. data sheet link

OPN	SP Number	Package
EVALM5E1B1245NSICTOBO1	SP005348966	board