



New Product Introduction

July 2020

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EconoPACK™ + with advanced H₂S protection – reliability that pays off

Ruggedness is determining the longevity and thus the reliability of modules when it comes to applications working in harsh environments. Especially the exposure to hydrogen sulfide (H₂S) has a critical impact on the lifetime of electronic components. To meet these requirements Infineon has developed an easy to integrate protection technology that can be implemented in existing system designs without any changes in functionality or performance. Infineon's advanced H₂S protection is blocking hydrogen sulfide entering the module before reaching sensitive components. This is not only unique, but also the most effective methodology.



The main features of our advanced H₂S protection is an unmatched ruggedness combined with a plug and play usability as well as the coverage of the whole current range, offering the maximum of flexibility to our customer.

Features

- > TRENCHSTOP™ IGBT4
- > High mechanical robustness
- > Advanced H₂S protection
- > 20 years of lifetime under "G3 severely level" acc. to ISA 71.04 standard
- > Emitter Controlled HE diode
- > NTC
- > PressFIT contact technology
- > T_{vj op} = 150°C

Benefits

- > Easy to integrate with plug and play usability – no change on other properties of the product
- > Unique technology and most-effective methodology
- > Unmatched ruggedness
- > Maximum flexibility by coverage of whole current range with full product portfolio
- > Compact modules
- > Easy and most reliable assembly

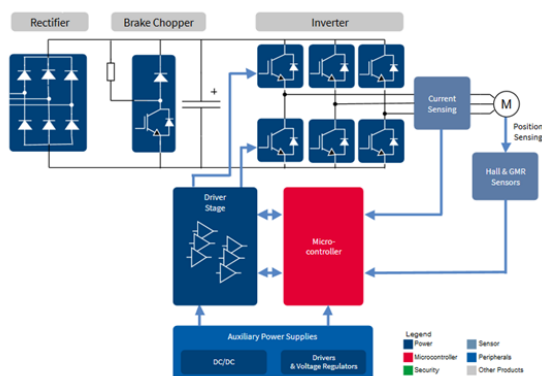
Target applications

- > Variable Frequency Drives (VFD) e.g. paper production, mining, wastewater, rubber industry

Competitive advantage

Our technology protects the module by blocking H₂S gas before reaching sensitive areas – which is not only unique, but also the most effective methodology

Application diagram



Product overview incl. data sheet link

OPN	SP Number	Package
FS300R12OE4B81BP5A1	SP002753986	AG-ECONOPP-281
FS300R17OE4B81BP5A1	SP002753992	AG-ECONOPP-281
FS450R12OE4B81BP5A1	SP002753998	AG-ECONOPP-281
FS500R17OE4DB81BP5A1	SP002754004	AG-ECONOPP-281

Product collaterals / Online support

[Family page](#)

[Video](#)

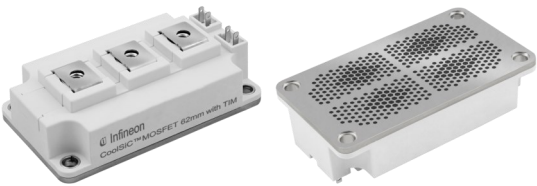
CoolSiC™ MOSFET 62mm module 1200 V

CoolSiC™ MOSFETs reduce the system complexity leading to lower system cost and size in mid to high power systems. Thanks to the outstanding material properties of SiC, solutions which have been possible in the low-voltage world (< 600 V) are now feasible at higher voltages as well.

Thanks to the superior trench technology in combination with the thick gate-oxide, CoolSiC™ MOSFETs offer highest reliability. In addition, our CoolSiC™ body diode is long-term stable and does not drift.

CoolSiC™ Trench MOSFET as industrial benchmark technology in 62mm package opens and enlarges the semiconductor module market for high volume application where Silicon IGBT technology reaches its limits.

This module family is targeting EV charging, energy storage systems, solar central inverters, auxiliary power supply for traction, server & IT infrastructure as well as commercial cooking.



Features

- > 1200 V Silicon Carbide trench technology
- > Highest gate-oxide reliability
- > With and without pre-applied thermal interface material (TIM)
- > 4 baseplate mounting holes
- > Half-bridge configuration
- > Low inductive module design of typically 20 nH and symmetrical internal construction
- > High speed switching module with very low losses

Benefits

- > Optimized thermal resistance to achieve R_{th} improvement for extended lifetime
- > Fast and cost-efficient module assembly without further soldering
- > Realize power inverter concepts for multiple applications
- > High switching frequency lowers filtering efforts and costs
- > Minimize cooling efforts due to very low switching losses
- > Less components lead to reduction in system size

Target applications

- > EV charging
- > Energy storage
- > Solar central
- > Aux. power supply for traction
- > Server & IT infrastructure
- > Commercial cooking

Competitive advantage

- > Superior gate oxide thickness for highest reliability
- > CoolSiC™ MOSFET body diode is long-term stable

Product overview incl. data sheet link

OPN	SP Number	Package
FF6MR12KM1BOSA1	SP001686408	AG-62MM-1
FF6MR12KM1PHOSA1	SP002485310	AG-62MM-1
FF3MR12KM1HOSA1	SP001686348	AG-62MM-1
FF3MR12KM1PHOSA1	SP005349768	AG-62MM-1
FF2MR12KM1HOSA1	SP002851510	AG-62MM-1
FF2MR12KM1PHOSA1	SP005349765	AG-62MM-1

Product collaterals / Online support

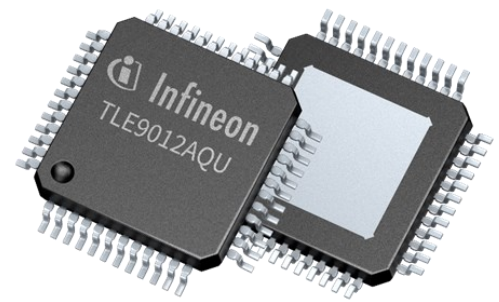
[Family page](#)

[Application note](#)

[Video](#)

TLE9012AQU - Battery monitoring and balancing IC

The TLE9012AQU is a multi-channel battery monitoring and balancing system IC designed for Li-Ion battery packs used in automotive, industrial and consumer applications. TLE9012AQU fulfills four main functions: cell voltage measurement, temperature measurement, cell balancing and isolated communication to main battery controller. Additionally, TLE9012AQU provides the necessary diagnosis tools to ensure proper function of the controlled battery.



Features

- > Monitors up to 12 series connected cells
- > Supports communication of more than 20 devices
- > Supports hot plugging
- > Voltage calculation for SoC (State-of-Charge) and SoH (State-of-Health)
- > On-chip temperature measurement and monitoring
- > Integrated balancing switch allowing up to 150 mA balancing current
- > Communication interface (iso UART) for high-speed communication up to 2 Mbps
- > ISO 26262 ready, supporting ASIL-C BMS safety applications

Safety features

- > Two independent internal voltage references
- > Block voltage measurement based on different ADC
- > Configurable analog OV/UV comparators
- > End-to-end CRC secured communication
- > CRC secured configuration registers
- > Internal open load detection

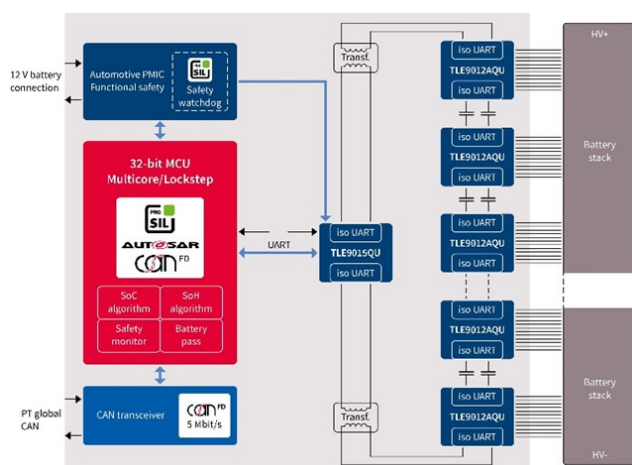
Benefits

- > Robust communication without need of transformers or common mode chokes
- > Best in class voltage measurement accuracy even after soldering thanks to stress sensor technology
- > Integrated diagnosis easing functional safety design
- > Integrated UART communication for systems with a microcontroller on local ground

Target applications

- > Mild Hybrid Electric Vehicle (MHEV)
- > Hybrid Electric Vehicle (HEV)
- > Plug-in Hybrid Electric Vehicle (PHEV)
- > Battery Electric Vehicle (BEV)
- > 12 V Li-Ion battery systems
- > Energy Storage System (ESS)
- > Home Energy Storage System (HESS)
- > eBike battery management system
- > Commercial, construction and agricultural vehicles (electric bus, truck, forklift, ...)

Application diagram



Competitive advantage

- > Capacitive communication optimizing system cost.
- > Hot plug tested reducing amount of necessary external components.
- > Built-in digital filtering reducing cost of external components.

Product collaterals / Online support

[Product page](#)

Product family page

Product brief

Application note: Cell supervision circuit

Application note: Software Li-Ion battery monitoring

eLearning

Product overview incl. data sheet link

OPN	SP Number	Package
TLE9012AQUXUMA1	SP002447668	PG-TQFP-48
TLE9012AQUDTRBMS2TOBO1	SP002836056	board

TLE9015QU—Battery management transceiver IC

The TLE9015QU is a general-purpose transceiver IC to be used in multi-cell battery systems to enable the communication between the main host microcontroller and the slaves in the battery.

The TLE9015QU enables communication by connecting several TLE9012AQU devices in a daisy chain inside a Li-Ion battery. By means of its two UART and iso UART interface pairs it can support ring communication ensuring a cost optimized robust system solution. It also enables bidirectional information flow by including an error management unit including several inputs and outputs that are programmable on each TLE9012AQU.



Features

- > Two UART ports for serial communication to host microcontroller
- > Two iso UART ports for daisy chain communication inside battery pack
- > Fully transparent communication scheme from μ C to sensing IC
- > Ring mode topology compatible (only 1 device needed)
- > CRC check for communication integrity (no CRC modification)
- > High robustness against external noise
- > General purpose error pin
- > Two external fault inputs with internal latching
- > Error output pin to trigger external microcontroller
- > Internal supply monitoring
- > Low energy sleep mode

Competitive advantage

- > Allows capacitive coupling even in harsh environments.
- > Error feedback to microcontroller activating wake up signal.

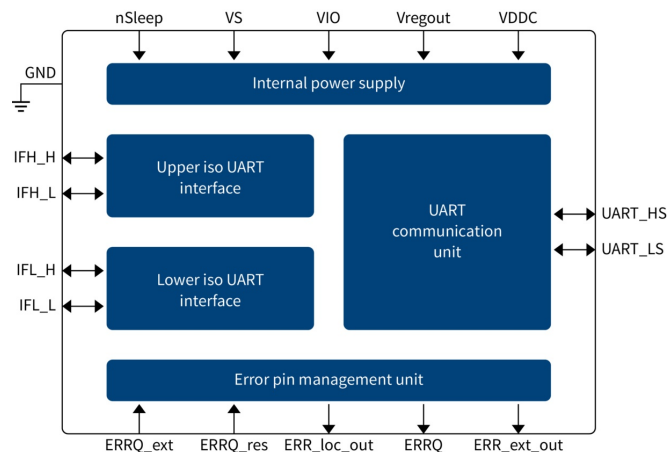
Benefits

- > Robust communication without need of transformers or common mode chokes
- > Master-on-top or master-on-bottom selectable without tedious configuration
- > Bi-directional communication scheme using error management logic
- > Ring mode topology ensuring a cost optimized robust system solution

Target applications

- > Hybrid Electric Vehicle (HEV)
- > Plug-in Hybrid Electric Vehicle (PHEV)
- > Battery Electric Vehicle (BEV)
- > Energy Storage System (ESS)
- > Home Energy Storage System (HESS)
- > Commercial, Construction and Agricultural Vehicles (CAV), other small vehicles (e.g. eScooter, eBike, etc.)

Block diagram



Product overview incl. data sheet link

OPN	SP Number	Package
TLE9015QUXUMA1	SP001702584	PG-TQFP-48
TLE9015QUTRXBRGTBO1	SP002836060	board

Product collaterals / Online support

- [Product page](#)
- [Product family page](#)
- [Product brief](#)
- [Application note: Cell supervision circuit](#)
- [Application note: Software Li-Ion battery monitoring](#)
- [eLearning](#)

Best-in-class OptiMOS™ 150 V MOSFET in SuperSO8

Latest MOSFET technology in a SuperSO8 5x6 package with high power density for improved robustness and low $R_{DS(on)}$ for reduced losses at good price-performance ratio.



Features

- > Lowest $R_{DS(on)}$
- > Increased temperature rating to 175°C
- > Reduced overshoot in SR applications

Benefits

- > Lower full load temperature
- > Less paralleling
- > Either more power handling at higher junction temperature or increased lifetime at same junction temperature
- > System cost reduction
- > Smaller / no snubber required

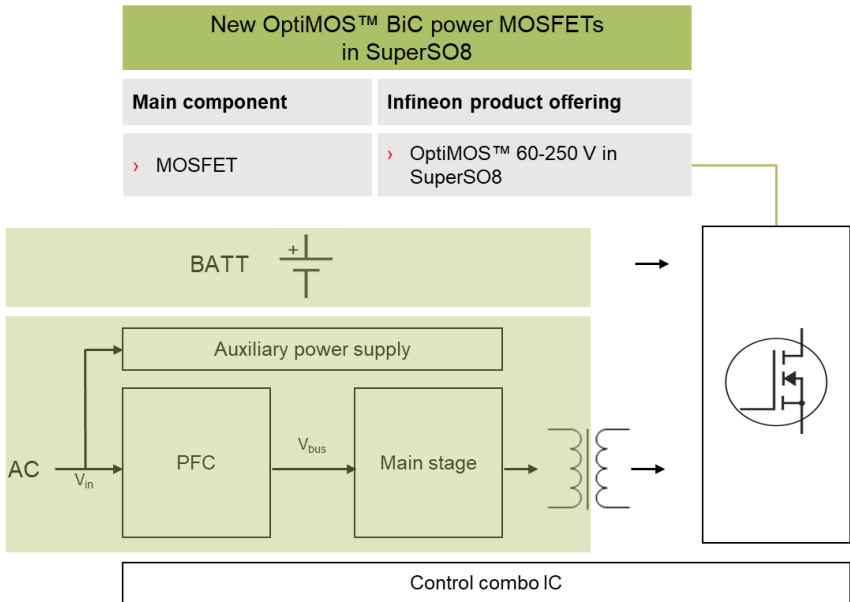
Target applications

- > Telecom
- > Server
- > Battery management
- > Drives
- > Class D Audio

Competitive advantage

- > Lowest $R_{DS(on)}$ in 5x6 footprint SMD package

Application diagram



Product overview incl. data sheet link

OPN	SP Number	Package
BSC074N15NS5ATMA1	SP004419136	PG-TSON-8

Product collaterals / Online support

[Product page](#)

OptiMOS™ PD MOSFETs

Infineon's new OptiMOS™ PD family is the new MOSFET portfolio representing the best fit for USB-Power Delivery and fast charger designs, supporting short lead times as well as fast quote response times.

Features

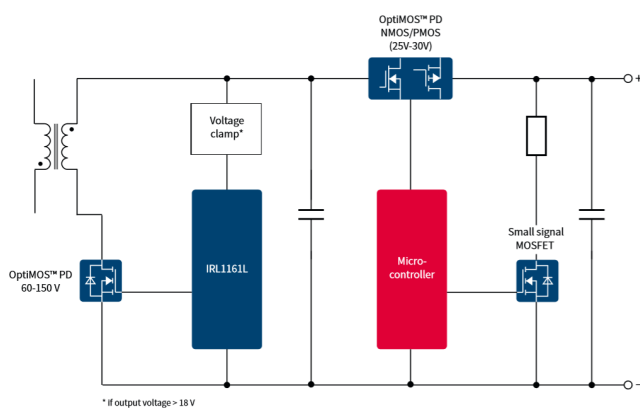
- > Logic level availability
- > Low on-state resistance ($R_{DS(on)}$) without increased charges
- > Low gate, output and reverse recovery charge
- > Excellent thermal behavior

Benefits

- > Logic level parts can be fully driven from 4.5 V
- > Lower overall losses
- > Lower switching losses
- > Highest efficiency and power density designs
- > Short lead times and fast quote response

Target applications

- > USB PD Charger Adapter
- > Smartphone Charger



Product overview incl. data sheet link

OPN	SP Number	Package
BSC0402NSATMA1	SP005399476	PG-TDSON-8
BSC0403NSATMA1	SP005399481	PG-TDSON-8
BSC0702LSATMA1	SP001589462	PG-TDSON-8
BSC0703LSATMA1	SP001614022	PG-TDSON-8
BSC0704LSATMA1	SP001614068	PG-TDSON-8
BSC0802LSATMA1	SP001614074	PG-TDSON-8
BSC0803LSATMA1	SP001614084	PG-TDSON-8
BSC0804LSATMA1	SP001861040	PG-TDSON-8
BSC0805LSATMA1	SP001861048	PG-TDSON-8
BSC0302LSATMA1	SP004486450	PG-TDSON-8
BSZ0602LSATMA1	SP001589450	PG-TSDSON-8
BSZ0702LSATMA1	SP001614090	PG-TSDSON-8
BSZ0703LSATMA1	SP001614096	PG-TSDSON-8
BSZ0704LSATMA1	SP001614102	PG-TSDSON-8
BSZ0803LSATMA1	SP001614108	PG-TSDSON-8
BSZ0804LSATMA1	SP001648318	PG-TSDSON-8
BSZ0905PNSATMA1	SP005399015	PG-TSDSON-8
BSZ0909LSATMA1	SP005424000	PG-TSDSON-8
BSZ0910LSATMA1	SP005424269	PG-TSDSON-8
BSZ0911LSATMA1	SP005424280	PG-TSDSON-8
ISZ0501NLSATMA1	SP005404838	PG-TSDSON-8
ISZ0901NLSATMA1	SP005404846	PG-TSDSON-8

Product collaterals / Online support

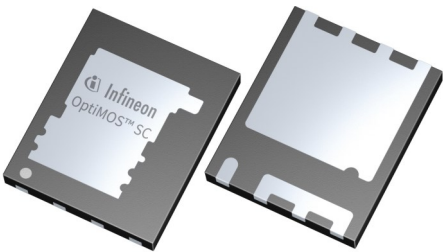
[Product page](#)

[Product brief](#)

[Application brief](#)

OptiMOS™ SC power MOSFETs

OptiMOS™ SC (super cool) is Infineon’s new medium voltage MOSFET portfolio featuring the latest OptiMOS™ 5 technology in a dual side cooled SuperSO8 package. The improved heat dissipation through the exposed clip on top of the package enables designs with highest power density and efficiency. This family includes a variety of 60 V and 100 V options.



Features

- > Reduced thermal resistance vs. non-dual cool option
- > (R_{thJC} top <1K/W for BiC devices)
- > Thermal capability of 175°C
- > Fits Standard SuperSO8 footprint
- > Latest OptiMOS™ 5 technology

Benefits

- > Improved heat dissipation
- > Superior thermal resistance
- > Drop-in replacement in designs using SuperSO8 package
- > Low $R_{DS(on)}$ and low switching losses

Target applications

- > Telecom
- > Server
- > Power tools
- > Drives

Competitive advantage

Dual side cooling option in SuperSO8 footprint for improved heat dissipation supporting highly efficient and high power density designs especially when a heat sink and forced airflow are deployed

Product overview incl. data sheet link

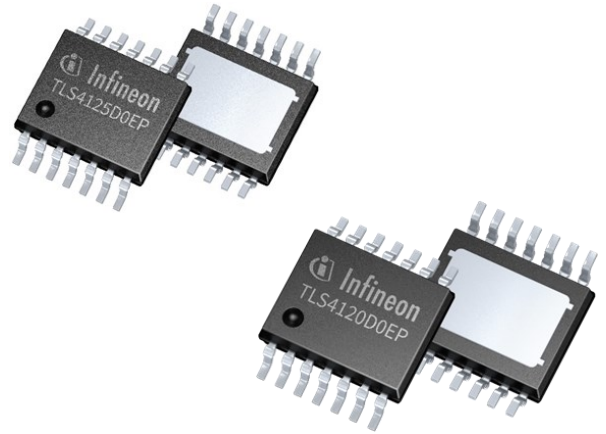
OPN	SP Number	Package
BSC014N06NSSCATMA1	SP005348850	PG-WSO8-8
BSC028N06NSSCATMA1	SP005348853	PG-WSO8-8
BSC040N10NS5SCATMA1	SP005348851	PG-WSO8-8
BSC070N10NS5SCATMA1	SP005348852	PG-WSO8-8

Product collaterals / Online support

[Product family page](#)

OPTIREG™ Switcher TLS412xDxx

The OPTIREG™ Switcher TLS412xD0x is a family of pin to pin compatible step-down DC/DC-converters. This family of devices is flexible and easy to use, requiring only 5 external components in a very small footprint. Designed to withstand a car battery connection at the input, the devices provide regulated output voltages down to 3 V and can deliver 2 A or 2,5 A. TLS412xD0x have been designed specifically for harsh automotive applications



Features

- > Wide input voltage range (3,7V – 40V)
- > Pin to pin compatible 2A and 2,5A devices.
- > Flexible reset with accurate timing selection
- > Low standby current consumption in on state: 31µA
- > Over- and under-voltage monitor
- > Selectable spread spectrum PWM
- > Flexible frequency selection and synchronization
- > 100% duty cycle operation

Benefits

- > Designed and qualified for harsh automotive environment
- > Ease of use as only 5 external components are required.
- > With peak efficiency at 94% it enables thermally optimized designs
- > Optimized for EMC critical applications with spread spectrum option

Target applications

- > ADAS, camera
- > Gateway, telematics, infotainment
- > Dashboard, cluster, lighting

Competitive advantage

- > Easy to use: Simple topology requiring only 5 external components.
- > Big flexibility in a small footprint
- > Reset timing selection via external resistor.
- > Switching frequency selectable via external resistor or synchronizable to external signal.
- > Best in class EMC performance as consequence of an optimized design and spread spectrum feature
- > Easy to design in as it requires very few external components and simulation tools are available.

Product overview incl. data sheet link/ User manual

OPN	SP Number	Package
TLS4120D0EPV33XUMA1	SP001650818	PG-TSDSO-14
TLS4120D0EPV50XUMA1	SP001650820	PG-TSDSO-14
TLS4120D0EPVXUMA1	SP001650822	PG-TSDSO-14
TLS4125D0EPV33XUMA1	SP001650824	PG-TSDSO-14
TLS4125D0EPV50XUMA1	SP001650826	PG-TSDSO-14
TLS4125D0EPVXUMA1	SP001650828	PG-TSDSO-14
TLS41205VBOARDTOB01	SP001927864	board
TLS412033VBOARDTOB01	SP001927868	board
TLS4120ADJBOARDTOB01	SP001927866	board
TLS4125ADJBOARDTOB01	SP001927870	board
TLS41255VBOARDTOB01	SP005339422	board
TLS412533VBOARDTOB01	SP005339426	board
TLS41205VCOREBOARDTOB01	SP005351022	board
TLS412033VCOREBOARDTOB01	SP005351024	board

Product collaterals / Online support

[Product page](#)

[Product brief](#)

[Application Note: Operation modes](#)

[Application Note: PCB layout](#)

[eLearning](#)

XENSIV™ - KP264 digital barometric air pressure sensor with SPI interface

The Infineon XENSIV™ KP264 is a miniaturized barometric air pressure sensor IC, based on a capacitive principle. It is surface micro-machined with a monolithic integrated signal conditioning circuit implemented in BiCMOS technology. Highly accurate, highly sensitive and reliable features makes the sensor the ideal fit for advanced automotive applications, but also industrial and consumer. The "green" 8 pin SMD housing is protected by a 4-hole-lid with dedicated small 0,6mm holes for best particle protection. With its Safety Manual including Safety Mechanisms, Use Case Description and Safety Analysis Result it is ready to support safety critical ISO 26262 applications.



Features

- > High accuracy pressure sensing (± 1.5 kPa)
- > Real 10-bit pressure resolution
- > Integrated temperature sensor
- > Real 10-bit temperature resolution
- > Self diagnosis features
- > "Green" 8 pin SMD housing with 4 small-hole lid
- > Automotive qualified
- > Functional safety ISO 26262 ready

Benefits

- > High accuracy pressure sensing
- > High protection against big particles
- > Proven technology in field
- > Functional safety ISO 26262 ready

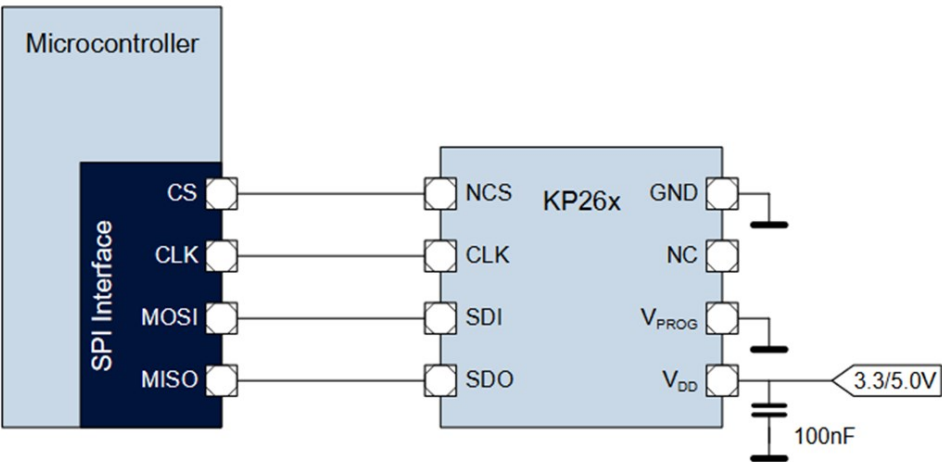
Target applications

- > Automotive applications
- > Industrial control
- > Consumer applications
- > Medical applications
- > Weather stations
- > Altimeter

Competitive advantage

The sensor converts a pressure into a 10-bit digital value and sends the information via the SPI interface. In addition, a temperature sensor is integrated on chip. A special reliability feature is the integrated diagnostic mode, which allows testing the sensor cells as well as the signal path. The sensor can be used in functional safety applications.

Application diagram



Product overview incl. data sheet link

OPN	SP Number	Package
KP264XTMA1	SP004854700	PG-DSOF-8

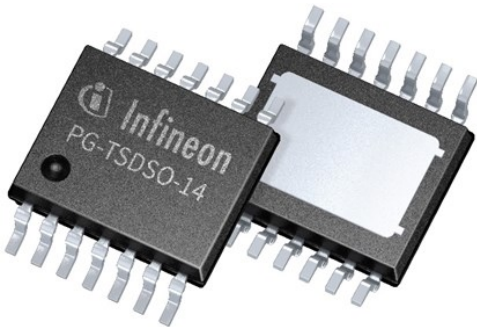
Product collaterals / Online support

[Product Page](#)

PROFET™+2 12V - BTS7200-4EPA: The first PROFET™+2 12V four channel high-side switch

BTS7200-4EPA is a four channel smart high-side switch and belongs to the PROFET™+2 12V product family. All PROFET™+2 12V family members provide state of the art diagnostics and protection features in a PG-TSDSO-14 exposed pad package. Moreover, the family provides outstanding energy efficiency with reduced current consumption, state of the art current sense accuracy (k_{ILIS}), benchmark low cranking voltage capability and faster switching/slew rate with no impact on EMC.

The whole portfolio is qualified for automotive applications according to AEC-Q100 Grade1.



Features

- > High-Side Switch with Diagnosis and Embedded Protection
- > Part of PROFET™+2 12V Family
- > Reverse ON for low power dissipation in Reverse Polarity
- > Switch ON capability while Inverse Current condition (Inverse ON)
- > Green Product (RoHS compliant)
- > Qualified in accordance with AEC Q100 grade1
- > Absolute and dynamic temperature limitation with controlled restart
- > Overcurrent protection (tripping) with Intelligent Restart Control
- > Undervoltage shutdown
- > Overvoltage protection with external components
- > Proportional load current sense
- > Open Load in ON and OFF state
- > Short circuit to ground and battery

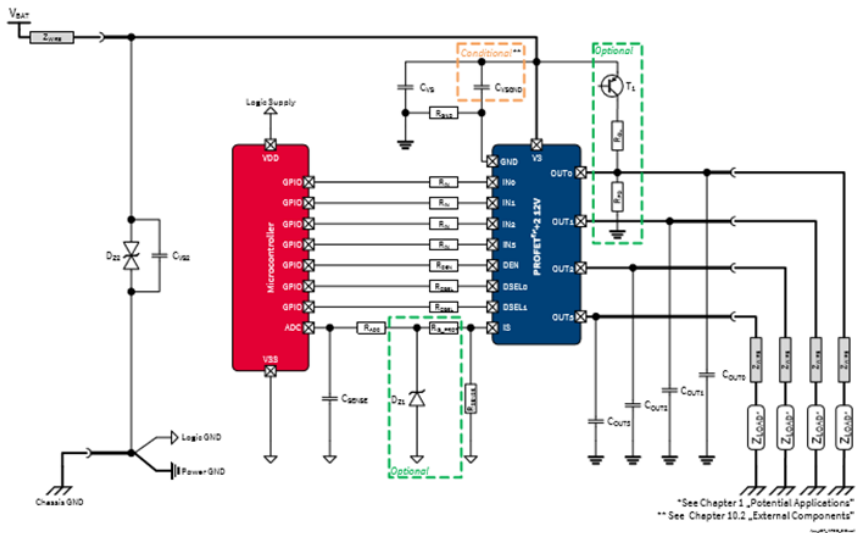
Benefits

- > 50% reduced internal operating current consumption
- > Simplified & cost efficient ground network
- > Outstanding current sense accuracy (k_{ILIS}) ≤ 5% @ nominal load current
- > Benchmark cranking voltage capability able to work down to 3.1 V
- > Smaller package size for area savings
- > Very low output leakage current (≤ 0.5 µA up to 85°C)

Target applications

- > Suitable for resistive, inductive and capacitive loads
- > Replaces electromechanical relays, fuses and discrete circuits
- > Driving capability suitable for 1 A loads (including relays) and high inrush current loads such as R5W lamps or equivalent electronic loads (e.g. LED modules)

Application diagram



Product overview incl. data sheet link

Product collaterals / Online support

[Product page](#)

[Product brief](#)

OPN	SP Number	Package
BTS72004EPAXUMA1	SP002193138	PG-TSDSO-14
BTS72004EPADAUGHBRDTOBO1	SP001782718	board

Infiniteon® Power Start 1800 V

Infiniteon Technologies Bipolar has expanded its product portfolio of soft starter modules with higher blocking voltages. The Infiniteon® Power Start modules are now available with blocking voltages of 1800 V in current classes starting at 800 A, 1400 A, 1900 A, and 2200 A.

Main benefit of the design concept in comparison to existing soft starter solutions is one slim foot-print (55 mm) fitting all current classes which allows contactor compatible designs (LxWxH 134x55x100 mm). Infiniteon® Power Start modules provide integrated heatsink and can be mounted without thermal grease.



Features

- > One slim foot-print
- > Reduction to essential components
- > Integrated heatsink & no thermal grease
- > Thermal capacity directly coupled to silicon
- > Double side cooling

Benefits

- > Less complexity – one fits all
- > Easy mounting
- > Faster time-to-market
- > Best Power to Price Ratio for cost sensitive applications

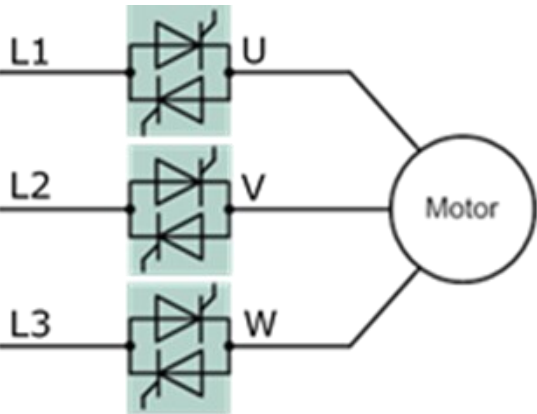
Target applications

- > Soft Starter
- > Bypass switch
- > Power controller
- > e.g. Water pumps, Mills, Belt Conveyors

Competitive advantage

One footprint covers all current classes, only one external housing needed

Block diagram



Product overview incl. data sheet link

OPN	SP Number	Package
STT800N18P55XPSA1	SP005421336	BG-PS55-1
STT1400N18P55XPSA1	SP005421325	BG-PS55-1
STT1900N18P55XPSA1	SP005421333	BG-PS55-1
STT2200N18P55XPSA1	SP005422828	BG-PS55-1

Product collaterals / Online support

[Family page](#)

[Product brief](#)

2EDF9275F & 2EDS9265H - Dual-channel isolated SiC MOSFET EiceDRIVER™ ICs

The two new family members of the 2EDi family are designed for the use in high-performance power conversion applications. Very strong 4 A/8 A source/sink dual-channel gate drivers increase efficiency in CoolSiC™ MOSFET half-bridges. The low propagation delay of 37 ns, combined with highly accurate and stable timing over temperature and production, enables further efficiency gains within and across galvanically isolated power stages or in multi-phase/multi-level topologies. The availability of functional and reinforced isolated drivers in DSO-16 package makes these a perfect fit for both primary side and (safe) secondary side control. Gate driver outputs come with a high 5 A reverse current capability and 150 V/ns CMTI robustness for high dv/dt power loops.



Features

- > Fast power switching with accurate timing
- > Optimized for area and system BOM
- > Robust against switching noise
- > Output-to-output channel isolation
- > Input-to-output channel isolation

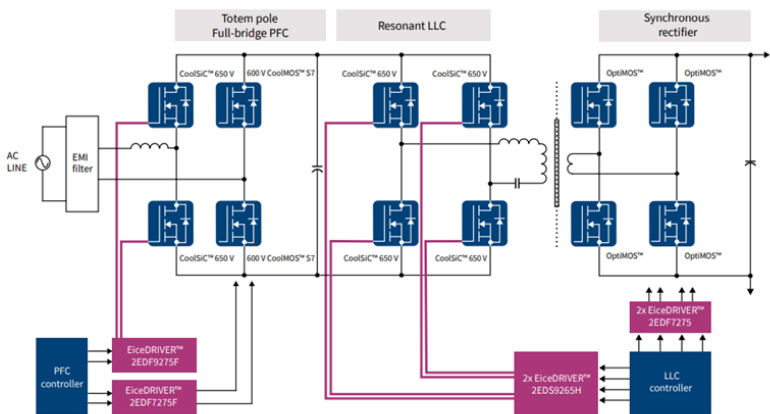
Benefits

- > Efficiency gain and lower losses
- > Improved thermal behavior at smaller form factor
- > Protection and safe operation
- > Flexible configurations
- > Regulatory safety

Target applications

- > Industrial SMPS
- > Telecom DC-DC
- > Server
- > UPS
- > Battery
- > EV-charging
- > Smart grid

Application diagram



Product overview incl. data sheet link

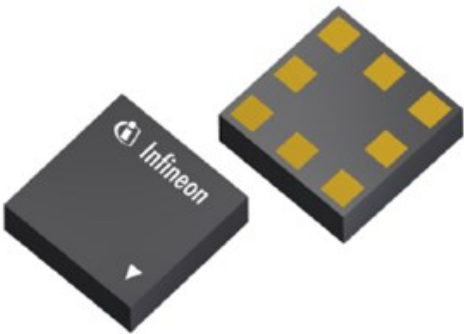
OPN	SP Number	Package
2EDF9275FXUMA1	SP005354403	PG-DSO-16
2EDS9265HXUMA1	SP005354404	PG-DSO-16

Product collaterals / Online support

- [Family page](#)
- [Product brief](#)
- [Solution brief](#)
- [Application note](#)

BGSA20VGL8/ BGSA20UGL8 - High RF Voltage Dual SPST Antenna Aperture Shunt Switch

The BGSA20VGL8/ BGSA20UGL8 are versatile Dual Single-Pole Single-Throw (SPST) RF antenna shunt aperture switches optimized for low C_{OFF} as well as low R_{ON} enabling applications up to 6.0 GHz. This single supply chip integrates 2 digital control pins. Unlike GaAs technology, the 0.1 dB compression point exceeds the switch maximum input power level, resulting in linear performance at all signal levels and external DC blocking capacitors at the RF ports are only required if DC voltage is applied externally. Due to its very high RF voltage ruggedness, it is suited for switching any reactive devices such as inductors and capacitors in RF matching circuits without significant losses in quality factors



Features

- > Dual SPST designed for high-linearity antenna aperture switching and
- > RF tuning applications
- > > 80 V (BGSA20UG) / 67V (BGSA20VG) RF voltage OFF state handling
- > Low R_{ON} resistance of 2.3 Ω (80V) / 1.6 Ω (67V) at each port in ON state
- > Low C_{OFF} capacitance of 200 fF (80 V) / 240 fF (67 V) at each port in OFF state
- > Low harmonic generation
- > GPIO control interface - including 4 control states
- > Supply voltage range: 1.65 to 3.6 V
- > No RF parameter change within supply voltage range
- > Small form factor 1.1 mm x 1.1 mm (MSL1, 260° C per

Benefits

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

Target applications

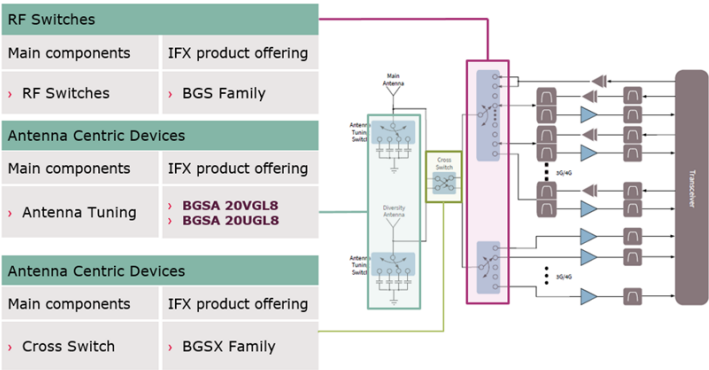
- > Suitable for EDGE/CDMA/WCDMA/C2K/LTE/5G Applications
- > Impedance Tuning/Antenna Tuning/Inductance Tuning/Tunable Filters

Competitive advantage

- > With BGSA20VG/ BGSA20UG, Infineon offers the smallest 2xSPST antenna aperture shunt switches on the market
- > These two products fulfil the latest Qualcomm chipset (SD865) 1.8 V nominal supply voltage rail requirement (VDD min: 1.65 V)

Block diagram

Application Block Diagram for RF Front End in a mobile phone



Product overview incl. data sheet link

OPN	SP Number	Package
BGSA20UGL8E6327XTSA1	SP004156086	PG-TSLP-8
BGSA20VGL8E6327XTSA1	SP004156090	PG-TSLP-8

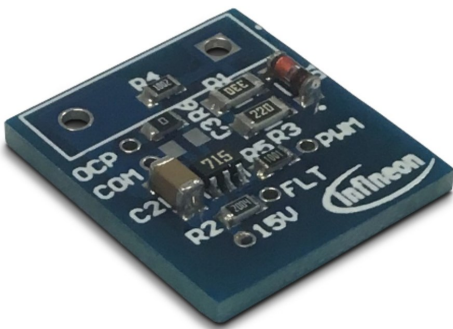
Product collaterals / Online support

[Product page BGSA20UGL8](#)

[Product page BGSA20VGL8](#)

EiceDRIVER™ EVAL-1ED44175N01B board available for quick, in-circuit evaluation in switched-mode power or PFC applications.

Infineon Technologies expands its EiceDRIVER™ low-side gate driver portfolio with 1ED44175N01B gate drivers. These are 25 V, single-channel low-side gate drivers with integrated fast over-current protection (OCP), fault reporting, and enable functionality in PG-SOT23-6 pin package. By integrating these features, the new gate drivers can provide cost and space savings compared solutions using an external OCP comparator. The new gate driver also feature an accurate current sensing threshold tolerance of ± 5 percent with sensing to shutdown in less than 1us to improve system reliability and robustness.



The small adapter boards are now available for testing 1ED44175N01B. The purpose of these boards is to provide fast, in-circuit evaluation in existing switched-mode power or PFC designs.

Features

- > -0.246 V over-current threshold with accurate $\pm 5\%$ tolerance
- > Fast Over-current detection with negative voltage input
- > Single pin for fault output and enable
- > Programmable fault clear time
- > IGBT Under voltage lockout protection
- > CMOS Schmitt-triggered inputs
- > 3.3 V, 5 V and 15 V input logic compatible
- > Output in phase with input
- > -10 VDC negative Input capability of OCP pin
- > 3 kV ESD HBM

Benefits

- > Integrated fast over-current protection and single-pin fault output and enable function provide potential space and cost savings
- > $\pm 5\%$ OCP threshold tolerance provides accurate and repeatable sensing
- > Less than 1us over-current detection to output shutdown
- > Flexible fault clear time set-up
- > Under-voltage lock out provides protection at low supply voltage

Target applications

- > Home appliances
- > Room air conditioners
- > Refrigerators
- > Small Home Appliances
- > Induction cooker
- > Induction rice cooker
- > Microwave oven
- > Power supplies (SMPS)

Competitive advantage

- > The only low-side gate driver with integrated overcurrent protection and less than 1us OC sense to output driver shutdown in a tiny SOT23 6-pin package.

Product overview incl. data sheet link

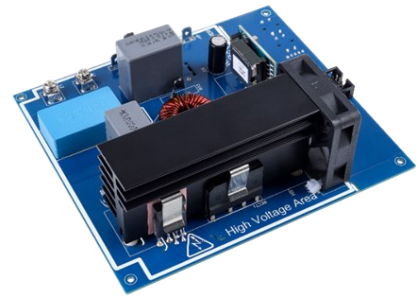
OPN	SP Number	Package
EVAL1ED44175N01BTOBO1	SP005408518	board

Product collaterals / Online support

- [Product page](#)
- [Online simulation](#)

Evaluation board of Integrated Power Device (IPD) Protect

The board implements a single-ended parallel-resonant (SEPR) converter for induction heating application in order to demonstrate the functionalities of the IEWS20R5135IPB during the typical operating conditions of an induction heating cooker.



Features

- > Input voltage: 200 – 250 Vac
- > Integrated control via Infineon XMC™ 1302
- > Easy to measure waveforms of IPD Protect for best understanding of device behavior
- > Optimized commutation loop
- > External connection of resonant coil for an easy exchange or replacement
- > Easy to replace the IPD Protect device
- > Direct access to the device for thermal camera measurements

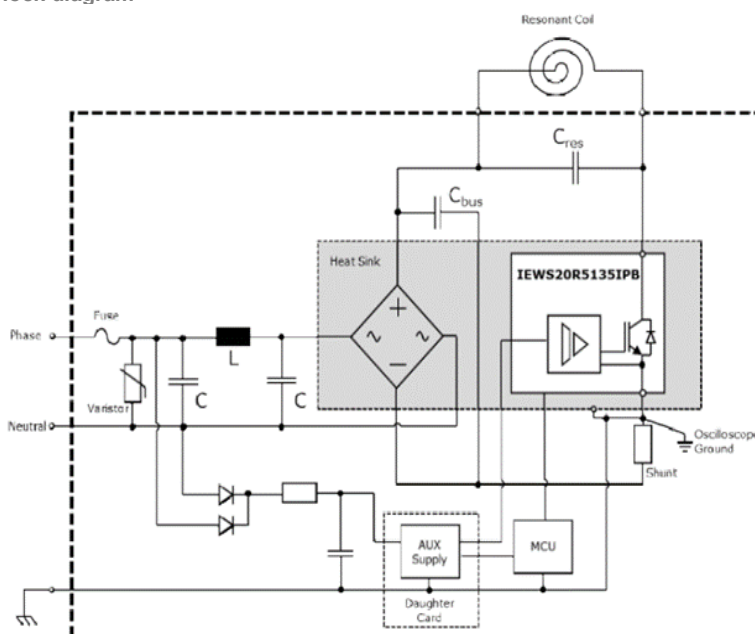
Benefits

This board also represents a design recommendation of the IPD Protect. Care has been taken to optimize the layout of the PCB in order to guarantee clean signals and reproducible behavior of the device in all operating conditions.

Target application

Induction heating cookers

Block diagram



Product overview incl. data sheet link

Product collaterals / Online support

[Product page](#)

[Application note](#)

OPN	SP Number	Package
EVALIHR5IPBAV1TOBO1	SP005415350	board

EVAL_HB_ParallelGaN

How to parallel CoolGaN™ 600 V HEMT in Half Bridge

The EVAL_HB_ParallelGaN is an evaluation platform for design engineers who want to investigate parallel operation of Infineon CoolGaN™ to reach higher power levels in their designs. With this evaluation board, it is possible to check dynamic and static current sharing of individual devices in parallel configuration up to MHz level. The board also makes a good reference for PCB layout practices to achieve trouble-free operation with extremely fast GaN devices. The board is designed with isolated control and high/low-side driver power supply and drivers provide negative voltage to the gates during off-time to minimize the risk of shoot-through currents due to high dV/dt. A heatsink with insulating thermal pad may be attached to the devices if continuous operation at high power is desired. Gate common-mode inductors included to prevent coupling through the source terminals of the devices that might lead to oscillations.



Features

- > Evaluate GaN paralleling benefits and issues in half-bridge environment
- > Configurable for buck, boost or pulsed operation for hard- or soft-switching
- > Static and dynamic current sharing can be monitored through separate shunt resistors
- > Adjustable dead time

Benefits

- > Doubling the current carrying capacity by effectively halving the $R_{DS(on)}$
- > Single driver can drive two parallel GaN devices

Target application

- > Power supplies (SMPS)

Product overview incl. data sheet link

OPN	SP Number	Package
EVALHBPARALLELGANTOBO1	SP005424557	board

Product collaterals / Online support

[Product page](#)

[Application note](#)