



New Product Introduction

August 2024

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New OptiMOS™ 7 40 V product family in sTOLL 7x8 mm² package for high power efficiency tomorrows automotive designs and super-low R_{on} of 0.39 mΩ

Heatmap indicator				
AMERICAS	JAPAN	GC	AP	EMEA

OptiMOS™ 7 40 V in sTOLL 7x8 mm² package is Infineon's new automotive MOSFET high power MOSFET package family and is continuing the world wide success story of sTOLL 7x8 mm² in EPS, Braking, High Power Switches and Drives.



It presents a 25 percent R_{on} improvement when compared to the previous OptiMOS™ 6. This way, OptiMOS™ 7 offers the highest power density and energy efficiency at the industry's lowest on-state resistance in a high efficient sTOLL 7x8 mm² leadless package with very low world-class package resistance.

With leading best-in-class R_{on} A, Infineon underlines its leading-edge position for automotive power MOSFETs for the coming years.

Features

- > Very low drain-source on-resistance (R_{DS(on)}) of 0.39mΩ in 7x8 mm² footprint
- > Upto 280 A current capability
- > High avalanche capability
- > High safe operating area (or S-O-A) ruggedness
- > Fast switching times (turn on/off)
- > Leadless packages with copper-clip and robust automotive package design
- > Leading thin wafer copper-technology and 300 mm in-house production
- > IFX proven high standard automotive quality production

Target applications

- > Electric power steering
- > Braking
- > Power disconnect switches
- > Zone control units and E-fuse box
- > D-C to D-C
- > All high power automotive brushless (or B-L-D-C) drives in a wide variety

Benefits

- > Highest power density and efficiency on very small footprint of 7x8 mm²
- > Increased current capability
- > Improved design ruggedness
- > Superior switching performance
- > Small footprint and efficient cooling
- > Automotive quality product design
- > And high automotive quality production

Competitive advantage

- > New OptiMOS™ 7 40 V sTOLL 7x8 mm² family is setting an industry benchmark in terms of R_{on} A, power-density, current capability, switching performance, and automotive ruggedness. It is available in Infineon's famous robust package technology for the most efficient high power automotive designs

Product collaterals / Online support

[Product family page](#)

Product overview incl. datasheet link

OPN	SP Number	Package
IAUAN04S7N004AUJA1	SP005828526	PG-HSOF-5
IAUAN04S7N005AUJA1	SP005828528	PG-HSOF-5
IAUAN04S7N006AUJA1	SP005828530	PG-HSOF-5
IAUAN04S7N007AUJA1	SP005828532	PG-HSOF-5
IAUAN04S7N008AUJA1	SP005828534	PG-HSOF-5

OptiMOS™ 6 40 V power MOSFETs in PQFN 8x6 package

Heatmap indicator				
AMERICAS	JAPAN	GC	AP	EMEA

The new OptiMOS™ 6 40 V power MOSFETs in PQFN 8x6 package combine Infineon’s latest generation of MOSFET technology into a compact package with very low parasitics. This enables industry-best $R_{DS(on)}$ and power-density in any power package, delivering significant improvement in switching / conduction losses and current capability. These new products address a wide range of battery-powered, battery protection and battery formation applications requiring low package resistance and high-current handling MOSFETs and are suitable for both low and high switching frequencies.



The PQFN 8x6 family of MOSFETs is available in a compact 8x6 mm² leadless package to reduce the physical footprint and overall BOM of end products. The improved $R_{DS(on)}$ and ID ratings, continuous and pulsed, enable increased battery run time and higher power density. An unique advantage of this package is its footprint compatibility with PQFN 5x6 allowing the same board to be used for high, mid and low power solutions.

Features

- > High current capability in a compact 8x6 mm² footprint
- > Industry's lowest $R_{DS(on)}$ and FOM
- > Leadless package with ultra-low package parasitics (resistance and inductance)
- > Latest OptiMOS™ MOSFET technology
- > Footprint compatibility with PQFN 5x6

Benefits

- > Increased power density allows higher power designs in a compact board space
- > Very low conduction losses, low thermals and less device paralleling
- > Low EMI
- > Delivers benchmark performance with best-in-class power density and power efficiency
- > Simpler PCB design with scalability across various power levels

Target applications

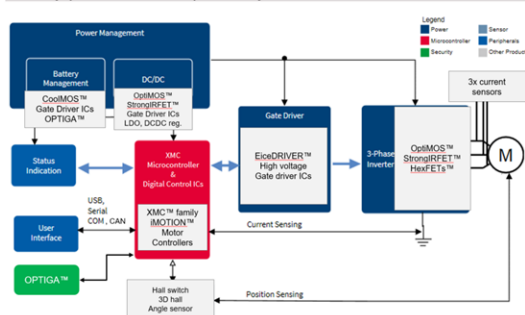
- > Power and gardening tools
- > Motor drives
- > Battery management
- > Energy storage systems
- > LEVs
- > Drones and multicopters
- > Robotics

Competitive advantage

- > Benchmark products enabling higher power and power density for a wide range of applications
- > Enables less MOSFET paralleling
- > Footprint backward compatibility with Industry standard PQFN 5x6 package enabling seamless upgrade for higher performance
- > Very low package parasitics and thermals
- > > 25% smaller footprint than competitor 8x8 solutions

Block Diagram

Battery powered three-phase system



Product collaterals / Online support

[Product family page](#)

Product overview incl. datasheet link

OPN	SP Number	Package
IQFH36N04NM6ATMA1	SP005634623	PG-TSON-12
IQFH39N04NM6ATMA1	SP005634629	PG-TSON-12
IQFH47N04NM6ATMA1	SP005634886	PG-TSON-12
IQFH55N04NM6ATMA1	SP005634645	PG-TSON-12

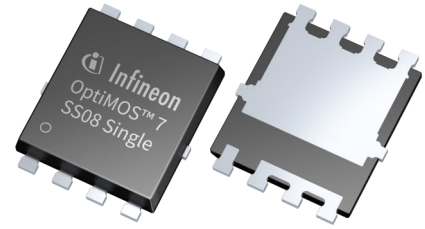
100 V SSO8 OptiMOS™ 7

Heatmap indicator				
AMERICAS	JAPAN	GC	AP	EMEA

OptiMOS™ 7 100 V SSO8 is offered in our versatile, robust, high current SSO8 5x6 mm² SMD package.

It is designed specifically for high performance, high quality and the robustness needed for demanding automotive applications. IAUCN10S7N021 is a true step forward in the category of power density.

With 47% reduced $R_{DS(on)}$ from prior best class leading to the Industry's best $R_{DS(on)}$ as well as the best FOM ($R_{DS(on)} \times Qg$). With this package Infineon offers the highest power density in 5x6 mm² with very low world-class package resistance and inductance.



Features

- > $R_{DS(on)}$ reduced 47% from prior best
- > Industry's best $R_{DS(on)}$
- > Fast switching times (turn on/off)
- > Industry's best FOM ($R_{DS(on)} \times Qg$)
- > Low package resistance and inductance
- > ID current 75% higher than prior best
- > High avalanche current capability

Benefits

- > Minimized conduction losses
- > Superior switching performance
- > Increased current carrying capability
- > Highest power density in 5x6mm package
- > High power efficiency
- > Small footprint and efficient cooling
- > Tight $V_{GS(th)}$; good for parallel use

Target applications

- > HV to 48 V DC-DC converter in electric vehicles
- > 48 V systems
- > 48 V to 12 V / 24 V DC-DC converter
- > 48 V / 24 V Electric Power Steering (EPS)
- > Light Electric Vehicles i.e. 2 and 3 wheelers

Competitive advantage

- > New OptiMOS™ 7 100 V SSO8 5x6 mm² family is setting an industry benchmark in terms of $R_{DS(on)}$ power-density, switching performance, and Automotive ruggedness. It is available in Infineon's famous robust package technology for the most efficient high power automotive designs

Product collaterals / Online support

[Product page](#)

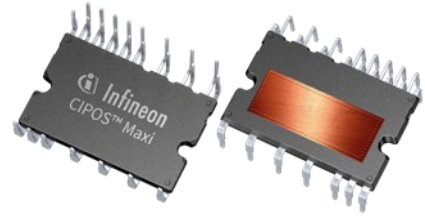
Product overview incl. datasheet link

OPN	SP Number	Package
IAUCN10S7N021ATMA1	SP005402875	PG-TDSON-8

CIPOS™ Maxi 1200 V IPM IM12BxxxC1 series

Heatmap indicator				
AMERICAS	JAPAN	GC	AP	EMEA

High-performance CIPOS™ Maxi transfer molded IPM IM12BxxxC1 series is based on the new 1200 V TRENCHSTOP™ IGBT7 and rapid diode Emcon 7 technology. Thanks to the latest micro-pattern trench design, it delivers exceptional control and performance. This leads to substantial loss reduction, heightened efficiency, and increased power density. The portfolio includes variants ranging from 10 A to 20 A, offered three new products: IM12B10CC1, IM12B15CC1 and IM12B20EC1.



The series integrates 6 TRENCHSTOP™ IGBT7 with an optimized 1200 V 6-channel SOI gate driver to increase reliability, provide excellent protection and optimize PCB size and system costs.

The smallest and most compact package in the 1200 V class, this IPM combines a power rating in excess of 4 kW with exceptional power density, reliability and performance. It offers excellent protections such as undervoltage lockout on all channels, all switches turnoff during protection, cross-conduction prevention, over-current protection, temperature monitoring.

Features

- > Fully isolated dual inline molded module with DCB
- > 1200 V TRENCHSTOP™ IGBT7
- > Rugged 1200 V SOI gate driver technology
- > Integrated bootstrap functionality
- > Overcurrent shutdown
- > Undervoltage lockout on all channels
- > Turn-off of all six switches during protection
- > Cross-conduction prevention
- > Allowable negative VS potential up to -11 V for signal transmission at $V_{BS}=15\text{ V}$
- > Low-side emitter pins accessible

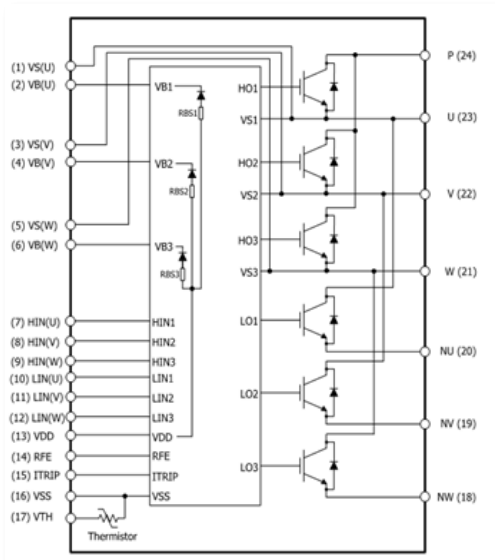
Benefits

- > Smallest package size in 1200 V IPM class with high power density and excellent performance
- > Gate driver technology with enhanced robustness for excellent protection
- > High efficiency
- > Fast switching speed up to 20 kHz
- > Adapted to fast-switching applications with lower power losses
- > Simplified design and manufacturing

Competitive advantage

- > IM12BxxxC1 has the smallest and most compact package in the 1200 V class

Block Diagram



Target applications

- > Fans
- > Pumps
- > Outdoor fan for HVAC
- > Low-power motor drives

Product collaterals / Online support

[Product family page](#)

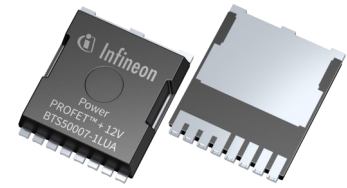
Product overview incl. datasheet link

OPN	SP Number	Package
IM12B10CC1XKMA1	SP006030149	PG-MDIP-24
IM12B15CC1XKMA1	SP006030153	PG-MDIP-24
IM12B20EC1XKMA1	SP006030157	PG-MDIP-24

Power PROFET™ + 12V – BTS50007-1LUA

Heatmap indicator				
AMERICAS	JAPAN	GC	AP	EMEA

The latest addition to the new Power PROFET™ + 12 V smart high-side switch family provides a very low $R_{DS(on)}$ down to 0.7 m Ω – in a small 8-pin leadless power package. The ability to drive high current loads up to 55 A and its state of the art integrated protections and diagnosis features makes Power PROFET™ + 12 V ideally suited to replace electromechanical relays, fuses and discrete circuits in power distribution and other high current applications in a 12 V board net.



Features

- > Lowest ohmic switch
- > Integrated protection functions (over-current, over-load, over-temperature, over-power)
- > Integrated diagnostic functions
- > Compatible to cranking pulses
- > Low stand-by current
- > Reverse ON for low power dissipation in reverse battery condition
- > Ground loss protection

Target applications

- > Suitable for resistive, inductive and capacitive loads
- > Replaces electromechanical relays, fuses and discrete circuits in power distribution and other applications in a 12 V board net
- > Most suitable for application with high current loads, such as heating system, fan and pump
- > PWM applications with low frequency

Benefits

- > PRO-SIL™ ISO 26262-ready for supporting the integrator in evaluation of hardware element acc. to ISO 26262
- > Accurate current sensing
- > Developed to support dependable power supply and distribution

Competitive advantage

- > One of the lowest ohmic switch available on the market able to drive high current loads up to 55 A (the BTS50005-1LUA able to drive 65 A)
- > Integrated solution for driving high current loads for easy design in
- > ISO 26262-ready providing Safety Application Note

Product collaterals / Online support

[Product page](#)

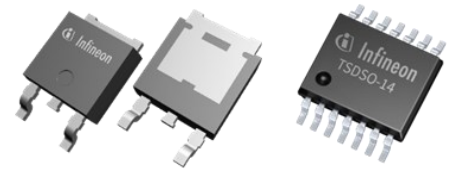
Product overview incl. datasheet link

OPN	SP Number	Package
BTS500071LUAUMA1	SP005558027	PG-HSOF-8

New OPTIREG™ linear voltage regulators TLS850A4TEV50 and TLS830A4EPV50

Heatmap indicator				
AMERICAS	JAPAN	GC	AP	EMEA

TLS850A4TEV50 and TLS830A4EPV50 are high performance, ultra-low quiescent current linear voltage regulators for 5.0 V supply, housed in a PG-TO252-3 and PG-TSDSO-14 package.



The input voltage range of 3.2 V to 40 V and ultra-low quiescent current of typically 4.3 μA at light load make the devices perfectly suitable for automotive supply systems or other supply systems that are permanently connected to the battery.

Features

- > Output voltage 5 V $\pm 2\%$
- > Output current capability
 - > up to 500 mA in TLS850A4TEV50
 - > up to 300 mA in TLS830A4EPV50
- > Ultra-low quiescent current, typically 4.3 μA at light loads
- > Wide input voltage range from
 - > 3.2 V to 40 V in TLS830A4EPV50
 - > 3.7 V to 40 V in TLS850A4TEV50
- > Low dropout voltage, typically 190 mV, at output current below 100 mA

Benefits

- > Low I_q extends battery life, no enable function needed
- > Input voltage range starting at $V_{in} = 3.2$ V, suitable for very low cranking conditions
- > Low dropout voltage enhances overall system efficiency
- > Output current limitation enhances safety, protects components and maintains stability

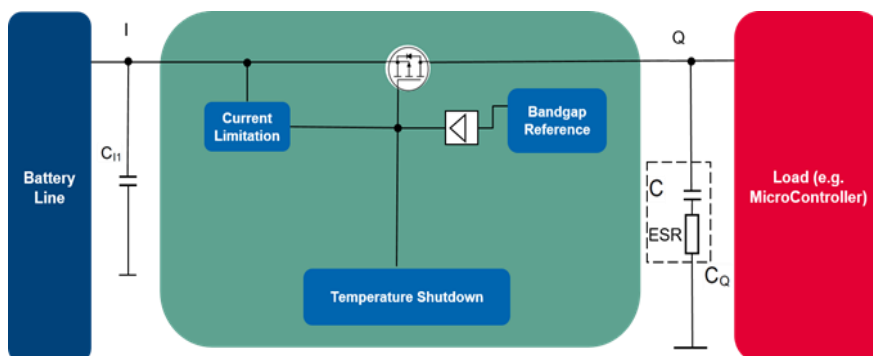
Target applications

- > Automotive supply systems or other supply systems that are connected to the battery permanently
- > Automotive systems that need to operate in cranking condition
- > General automotive applications
- > Automotive supply for CAN transceivers
- > Remote keyless systems

Competitive advantage

- > Very low current consumption
- > Suitable for cranking conditions
- > Easy to design
- > PCB space and cost savings

Block Diagram



Product collaterals / Online support

[Product page TLS850A4TEV50](#)

[Product page TLS830A4EPV50](#)

Product overview incl. datasheet link

OPN	SP Number	Package
TLS850A4TEV50ATMA1	SP005563093	PG-TO252-3
TLS830A4EPV50XUMA1	SP005563095	PG-TSDSO-14

Single switch IGBT module FZ1200R45HL4 and FZ1200R45HL4_S7

Heatmap indicator				
AMERICAS	JAPAN	GC	AP	EMEA

The well-known IHV B 4.5 kV single switch IGBT module has been upgraded to our latest chip generation, to meet the current and future requirements for industry applications MVD, T&D and Transportation.

It features the TRENCHSTOP™ IGBT4 and emitter controlled diode 4 in the standardized housing of 140 x 190 mm² and is offered as its predecessor with and without the unique S7-feature.



Typical appearance

Customers can easily switch from the predecessor FZ1200R45HL3 types, thanks to same mechanical and the very close electrical features.

Features

- > Full non truncated (RB-)SOA
- > High cosmic radiation stability (100 FIT @ 2900 V)
- > High TC (30.000 cycles @ DTc = 80 K) and PC (2 Mio cycles @ DTj =40 K) capability
- > Fire and smoke housing material classification according to EN45545-2 R22, R23: HL3
- > Low conduction losses at high output RMS currents
- > Unique S7-feature offers operation at $V_{GE} = 25 V$

Benefits

- > High efficient system design
- > Assure required lifetime of 30-40 years
- > Unbeatable robustness against overload and fault conditions
- > Enables operation at high DC-link voltage
- > Unique S7-feature leads to substantial performance improvement with >6% less power losses on system level

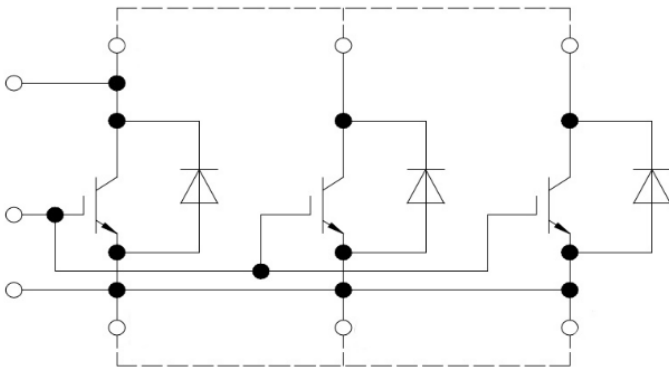
Target applications

- > Drives
- > Commercial and agriculture vehicles
- > Power transmission and distribution
- > Energy storage systems
- > Traction

Competitive advantage

- > Over 100k pcs IHV B FZ1200R45HL3 and FZ1200R45HL3_S7 are now the reliable workhorses enabling worldwide a stable green grid
- > The new FZ1200R45HL4 and FZ1200R45HL4_S7 will follow this heritage together with their bigger brothers FZ1800R45HL4 and FZ1800R45HL4_S7

Block Diagram



Product collaterals / Online support

[Product page FZ1200R45HL4](#)

[Product page FZ1200R45HL4_S7](#)

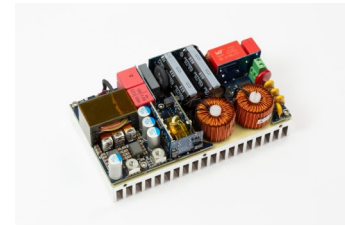
Product overview incl. datasheet link

OPN	SP Number	Package
FZ1200R45HL4BP5A1	SP005954488	AG-IHVB190-411
FZ1200R45HL4S7BP5A1	SP005954711	AG-IHVB190-411

REF_1KW_PSU_5G_SiC - 12 V/1 kW fan-less PSU for outdoor 5G edge computing and small cells

Heatmap indicator				
AMERICAS	JAPAN	GC	AP	EMEA

The PSU comprises a front-end AC-DC bridgeless totem-pole PFC converter followed by a back-end DC-DC isolated half-bridge (HB) LLC converter. The front-end converter provides power factor correction (PFC) and control of the total harmonic distortion (THD). The LLC converter provides safety isolation and a tightly regulated output voltage at 12 V_{DC}.



Features

- > CCM totem pole PFC
- > HB LLC
- > Full digital control in PFC and LLC
- > Natural / convection cooling
- > Overall dimensions: 150 mm x 80 mm x 27 mm

Benefits

- > Addresses outdoor edge computing SMPS
- > Innovative fan-less cooling concept
- > Attractive compact design in 50 W/in³ form factor for a 1000 W PSU
- > Low profile – 27 mm maximum PSU height
- > Very high efficiency for 12 V output PSU: 96.4% at 230 V_{AC}, 95% at 115 V_{AC}
- > Robust and reliable operation under different abnormal conditions
- > Relay replacement with static switch based on CoolMOS™ S7 SJ MOSFET

Target applications

- > AC-DC power conversion for telecom infrastructure
- > Server power supplies

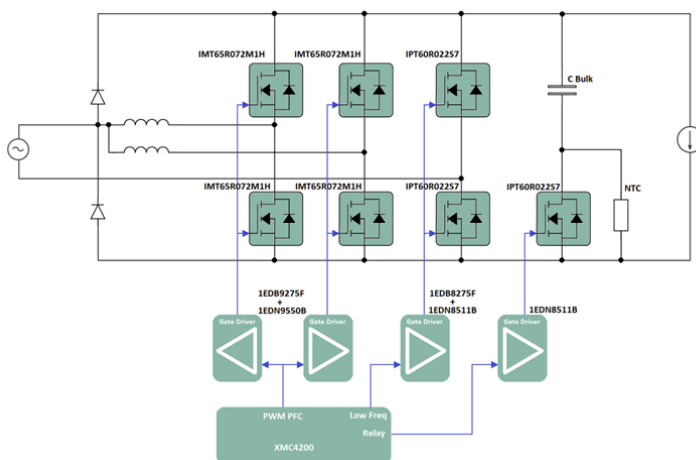
Competitive advantage

- > The REF_1kW_PSU_5G_SiC board is a high-performance power supply unit designed for edge computing applications. It offers a compact, fanless design with high power density and efficiency, making it ideal for space-constrained and energy-efficient systems. The board's robust and reliable operation ensures high uptime and reduced maintenance costs

Product collaterals / Online support

[Board page](#)

Block Diagram



Product overview incl. application notes link

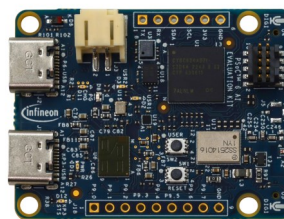
OPN	SP Number
REF1KWPSU5GSICTOBO1	SP005987382

CY8CKIT-062S2-AI PSoC™ 6 Artificial Intelligence evaluation kit with Imagimob Studio

Heatmap indicator				
AMERICAS	JAPAN	GC	AP	EMEA

Infineon's PSoC™ 6 Artificial Intelligence evaluation kit is your perfect partner for easy prototyping and collecting real-life data to build compelling ML products fast. Being only the size of a cracker, the hardware platform focused on Edge AI enables customers to evaluate Infineon's Machine Learning platform Imagimob Studio, as well as ready to deploy ML models, and other software products.

Data collection is enabled via PSoC™ 6 MCU, as well as radar (BGT60TR13C), high-performance digital MEMS microphone (IM72D128), barometric air pressure sensor (DPS368) & IMU sensors (Bosch BMI-270, BMM-350). Connectivity is enabled with WiFi / BT BLE Combo (Murata LBEE5KL1YN).



Features

- > Designed for ease-of-use and end-to-end Machine Learning
- > Small form-factor (35x45 mm²), wireless, low cost
- > Solution approach with PSoC™ 6, QSPI Flash + multi-sensor input (radar, microphone, pressure & 6-axis motion sensors)
- > Production ready ML models: Imagimob Ready Models (siren, coughing, baby cry, snoring)
- > Complete ML to embedded SW journey: ModusToolbox™ and Imagimob Studio compatible

Target applications

- > Sound detection (siren, cough, snore, baby cry)
- > Presence detection, counting and tracking
- > Gesture sensing
- > Customized radar
- > Motion detection
- > Sensor fusion

Product collaterals / Online support

[Board page](#)

Benefits

- > Low-cost evaluation board with efficient form factor for easy prototyping
- > Rapid prototyping: Easy creation of sensor fusion-, ML-, acoustic-, time series- and radar models
- > Fast time to market at minimal development cost, for PSoC™ 6 and AURIX™
- > End-to-end: collect data, create, train, evaluate & deploy ML models fast
- > Seamless integration to ModusToolbox™ and Imagimob Studio with application code examples

Competitive advantage

- > Customizable models: users have control over model search and can customize any model according to their domain expertise. Models can be imported/exported between other tools to prevent lock-in
- > Proven technology: models built with Imagimob Studio are running in products on the market today – less risk for the customer
- > Ability to store data locally (protect IP): high data protection
- > No MCU lock-in: if changing hardware in the future, there is no need to reinvest in software platforms and learning
- > Cloud collaboration: simplify in-team and cross-team collaboration by providing a synchronized and shared workspace for projects, data and training jobs / model

Product overview incl. user manual / datasheet link

OPN	SP Number	Package
CY8CKIT-062S2-AI	SP006024345	kit
CY8C624AAZI-S2D44	SP005659145	PG-TQFP-128
CY8C624ABZI-S2D44	SP005661571	PG-VFBGA-124
CY8C624AFNI-S2D43T	SP005661581	SG-XFWLB-100
CY8C624ALQI-S2D42	SP005657087	PG-VQFN-68
BGT60TR13CSWXUMA1	SP005417703	PG-VF2BGA-40
IM72D128V01XTMA1	SP005738480	PG-LLGA-5
DPS368XTSA1	SP002157814	VLGA-8

Evaluation board EVAL_7116G_100V_SSO8

Heatmap indicator				
AMERICAS	JAPAN	GC	AP	EMEA

The EVAL_7116G_100V_SSO8 is a board for general-purpose evaluation of OptiMOS™ 6 100 V in SSO8 package together with TDI EiceDriver™ 1EDN7116G. The board has an optimized layout for a hard-switching half-bridge, as well as waveform measurement points and other useful features to enable easy lab bench characterization of the switch and the driver.



Features

- > Optimized layout
- > Different PWM inputs options
- > On-board deadtime generation
- > On-board temperature sensing
- > Different heatsink assembly options
- > Optimized measurement points

Benefits

- > Improved system efficiency
- > Measurement options flexibility
- > Easy lab bench characterization
- > Easy test setup configuration

Target applications

- > AI
- > Motor control
- > Photovoltaic
- > Server power supplies
- > Telecommunication infrastructure

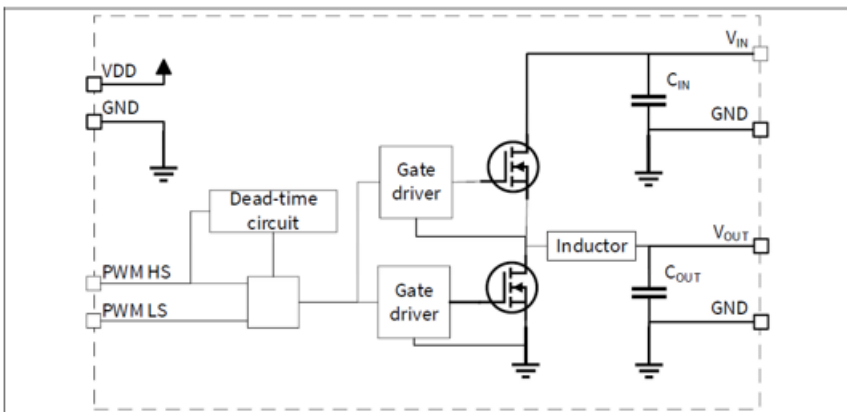
Competitive advantage

- > Competitive price
- > Optimized layout that enables high efficiency
- > Optimized measurement points that enable easy characterization of the switch and driver
- > Other useful features that enable easy test setup configuration

Product collaterals / Online support

[Board page](#)

Block Diagram



Product overview incl. user manual link

OPN	SP Number
EVAL7116G100VSSO8TOBO1	SP006053305

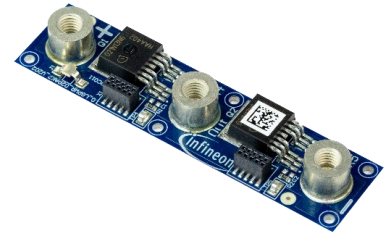
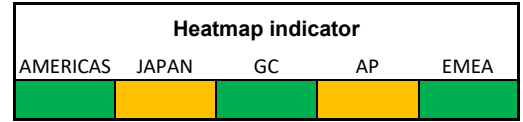
Modular half-bridge power PCB with OptiMOS™ 6 Power MOSFETs KIT_LGPWR_BOM016

This kit power board module utilizing the OptiMOS™ 6 power MOSFET 135 V in D²PAK 7-pin package represents the power building block of the LVD scalable power demo board platform. It serves as a single half-bridge with power and gate drive interconnections, enabling easy buildup of any half-bridge-based power topology.

Variations of the power board employing Infineon's power MOSFET family OptiMOS™ in the D²PAK , D²PAK -7 and the TO-Leadless packages demonstrate power MOSFET performance in terms of parallelization and thermal behavior.

Variations of the power boards:

- KIT_LGPWR_BOM003 (80 V TO-Leadless)
- KIT_LGPWR_BOM004 (60 V TO-Leadless)
- KIT_LGPWR_BOM005 (100 V D²PAK 7-pin)
- KIT_LGPWR_BOM006 (150 V D²PAK 7-pin)
- KIT_LGPWR_BOM007 (200 V D²PAK)
- KIT_LGPWR_BOM008 (250 V D²PAK)
- KIT_LGPWR_BOM009 (200 V D²PAK)
- KIT_LGPWR_BOM010 (100 V TO-Leadless)
- KIT_LGPWR_BOM013 (100 V TOLG)
- KIT_LGPWR_BOM015 (200 V D²PAK)
- KIT_LGPWR_BOM016 (135 V D²PAK 7-pin)



Benefits

Features

- > IMS PCB for increased cooling
- > SMD power terminals with M5 thread
- > Onboard test point terminals

- > Scalability and versatility
- > Rapid prototyping by building blocks: easy-to-use platform intended for initial evaluation of power MOSFETs in set-ups ranging from single half-bridge to three-phase inverter (motor drive topology)
- > Fast-built customized solutions: provides an easy approach to power MOSFET paralleling, without the need for soldering processes on Insulated Metal Substrate (IMS) boards

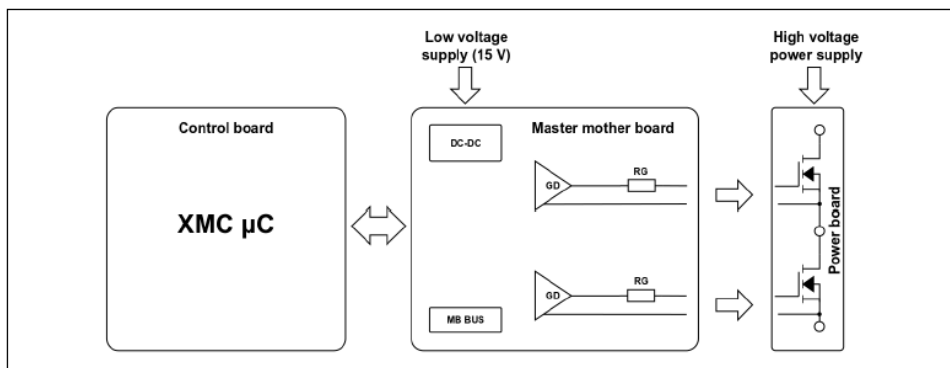
Target applications

- > LEV / forklift / e-scooter
- > Motor control & drives
- > Power tools

Product collaterals / Online support

[Board page](#)

Block Diagram



Product overview incl. user manual link

OPN	SP Number
KITLGPWRBOM16TOBO1	SP006060926

REF_3K3W_TP_SIC_TOLL - 3300 W bridgeless totem-pole PFC

Heatmap indicator				
AMERICAS	JAPAN	GC	AP	EMEA

The REF_3K3W_TP_SIC_TOLL is a full system solution utilizing Infineon's power semiconductors, drivers, and microcontrollers. It boasts a bridgeless totem-pole topology, ideal for high-end applications that demand exceptional efficiency and power density. The totem-pole design enables simplicity, reduces component count, and optimally utilizes the PFC inductor and switches allowing for high power density at limited system cost.



Features

- > SiC-based totem-pole PFC
- > Highest efficiency with CoolMOS™ and CoolSiC™
- > SMD solution for high power density
- > Digital control enabled by XMC1402

Benefits

- > Full Infineon's semiconductor solution
- > 98.9% high efficiency (@1650 W, 50% load)
- > Compact design (80 W/in³)
- > Low component count

Target applications

- > AC-DC power conversion for telecom infrastructure
- > Battery chargers
- > EV charging
- > Power conversion
- > Server power supplies

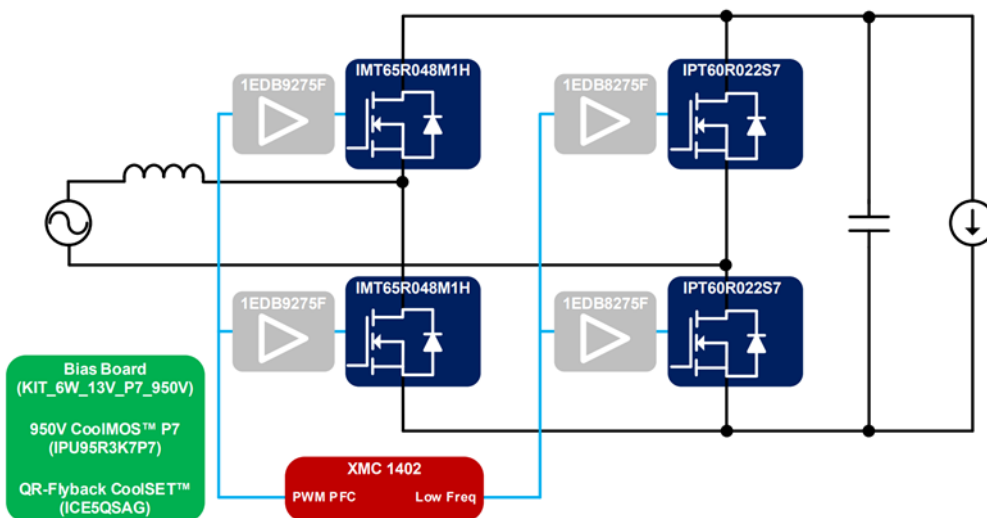
Competitive advantage

- > The REF_3K3W_TP_SIC_TOLL is an Infineon system solution for bridgeless totem-pole PFC, which achieves a peak efficiency of 98.9 percent with a 1U form factor and a power density of 80 W/in³. The REF_3K3W_TP_SIC_TOLL evaluation board implements Infineon CoolSiC™ MOSFET 650 V G1 and 600 V CoolMOS™ MOSFETs in TOLL package. The combination of CoolSiC™ and CoolMOS™ enables high performance in a compact form factor. The bridgeless topology implements full digital control on a XMC™ 1000 series Infineon microcontroller. The performance of the board in PFC operation is not only outstanding in steady-state conditions, offering high efficiency and high-quality input current, but also complies with power line disturbance and hold-up time requirements.

Product collaterals / Online support

[Board page](#)

Block Diagram



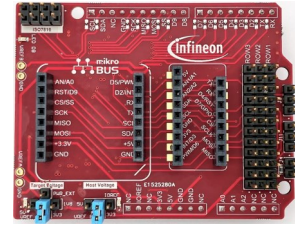
Product overview incl. application notes link

OPN	SP Number
REF3K3WTPSICTOLLTOB01	SP006052288

OPTIGA™ Trust Adapter

Heatmap indicator				
AMERICAS	JAPAN	GC	AP	EMEA

The OPTIGA™ Trust Adapter for Arduino is a PCB adapter to connect sample chips and add-on boards from the OPTIGA™ Trust product family to microcontroller evaluation kits using Arduino-compatible connectors. Add-on boards can be connected to the adapter via the Shield2Go or mikroBUS connector.



Features

- > Arduino-compatible
- > MikroBUS connector
- > Shield2Go connector
- > I2C, SPI & UART interface
- > Supply voltage: 3.3 V and 5 V

Benefits

- > Platform-independent evaluation
- > Easy plug-in and plug-out
- > Easy to evaluate
- > Quick prototyping

Product collaterals / Online support

[Board page](#)

Product overview incl. user manual link

OPN	SP Number
OPTIGATRUSTADAPTERTOBO1	SP006007975