



## New Product Introduction

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March 2023

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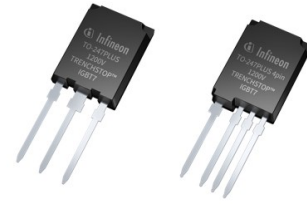
[REF 5QR1680BG 30W1 – 30 W auxiliary power supply for refrigerators](#)

[EVAL-6ED2231S12TM1 power evaluation board](#)

[AURIX™ MC-ISAR TC3x MCAL adds support for AUTOSARv4.4.0 with ASIL D drivers and SIL-2 compliance](#)

# 1200 V TRENCHSTOP™ IGBT7 S7

Hard-switching 1200 V, 8-120 A TRENCHSTOP™ IGBT7 S7 discrete in TO-247 package with EC7 diode inside. It offers low  $V_{CEsat}$  to achieve very low conduction losses in target applications and the co-packed very soft and fast emitter-controlled diode helps to minimize switching losses contributing to overall low total losses.



## Features

- > Very low  $V_{CEsat}$
- > Good controllability
- > Full rated freewheeling diode with improved softness
- > Robustness against harsh condition and HV-H3TRB
- > 8  $\mu$ s short circuit time
- > very tight parameter distribution
- > Maximum operating  $T_j$  of 175°C

## Benefits

- > Lowest losses on IGBT, high system efficiency for higher power output
- > Higher power density without heatsink redesign
- > Fast and easy replacement of predecessor T2 portfolio
- > High device reliability in harsh operating condition
- > Ease to design to meet EMI requirement

## Target applications

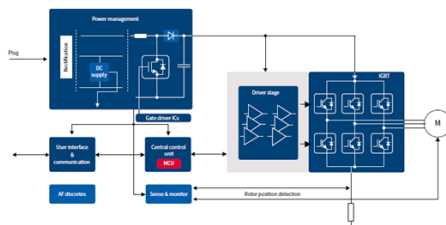
- > Motor control and drives
- > Uninterruptible Power Supplies (UPS)

## Competitive advantage

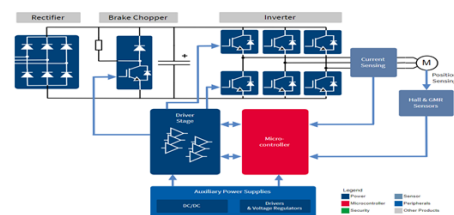
- > Best-in-class for industrial drives applications
- > Product with lower total losses and higher power from 8 A up to 120 A current rating portfolio
- > Very tight parameter distribution in production to guarantee Infineon standard quality and humidity ruggedness density
- > Infineon is no.1 in power semiconductor, with world-class front-end and back-end capacity
- > World-class production, quality, and business continuity support

## Block diagram

### > Embedded Inverter



### > Industrial Drive



## Product collaterals / Online support

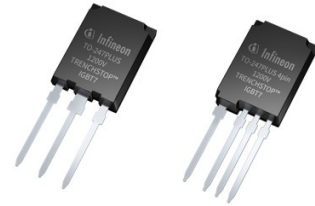
[Product family page](#)

## Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">IGQ100N120S7XKSA1</a>	SP005732722	PG-TO247-3
<a href="#">IGQ120N120S7XKSA1</a>	SP005732726	PG-TO247-3
<a href="#">IGQ75N120S7XKSA1</a>	SP005732720	PG-TO247-3
<a href="#">IKQ100N120CS7XKSA1</a>	SP005591270	PG-TO247-3
<a href="#">IKQ120N120CS7XKSA1</a>	SP005419717	PG-TO247-3
<a href="#">IKQ75N120CS7XKSA1</a>	SP005419715	PG-TO247-3
<a href="#">IKZA40N120CS7XKSA1</a>	SP005421466	PG-TO247-4

## 1200 V TRENCHSTOP™ IGBT7 H7

Hard-switching 1200 V, TRENCHSTOP™ IGBT7 H7 discrete in TO-247 3-pin package technology has been developed to fulfill the demand in „decarbonization applications“ such as solar photovoltaic, uninterruptible power supplies and battery chargers.



### Features

- > Excellent  $V_{CEsat}$  behavior thanks to the famous Infineon TRENCHSTOP™ technology
- > Fast switching behavior with low EMI emissions
- > Optimized diode for target applications, resulting in low  $Q_r$
- > Low gate resistor selection possible (down to 5  $\Omega$ ) whilst maintaining excellent switching behavior
- > Offering  $T_{J(max)}$  of 175°C

### Competitive advantage

- > Highest power density, first on the market with 140 A rating in 1200 V discretes
- > Optimized performance in application conditions
- > Lowest conduction losses - lowest  $V_{CEsat} = 2$  V
- > Lowest switching losses (specially using IKZA and IQY – 4pin packages)
- > Humidity robustness under harsh environment pass by Jedec Standard
- > Improved EMI performance

### Benefits

- > Technology with the highest power density with up to 140 A rating
- > Optimized performance in application conditions
- > Lowest conduction losses
- > Lowest switching losses
- > Humidity robustness under harsh environment
- > Improved EMI performance

### Target applications

- > Solutions for solar energy systems
- > Uninterruptible power supply (UPS)
- > EV charging
- > Industrial heating and welding

### Product collaterals / Online support

[Product family page](#)

### Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">IKQ100N120CH7XKSA1</a>	SP005578284	PG-TO247-3
<a href="#">IKQ140N120CH7XKSA1</a>	SP005578288	PG-TO247-3
<a href="#">IKQ50N120CH7XKSA1</a>	SP005578278	PG-TO247-3
<a href="#">IKQ75N120CH7XKSA1</a>	SP005578282	PG-TO247-3
<a href="#">IKW40N120CH7XKSA1</a>	SP005551390	PG-TO247-3
<a href="#">IKW50N120CH7XKSA1</a>	SP005560947	PG-TO247-3
<a href="#">IKW75N120CH7XKSA1</a>	SP005578265	PG-TO247-3
<a href="#">IKY100N120CH7XKSA1</a>	SP005578299	PG-TO247-4
<a href="#">IKY140N120CH7XKSA1</a>	SP005560949	PG-TO247-4
<a href="#">IKY50N120CH7XKSA1</a>	SP005578295	PG-TO247-4
<a href="#">IKY75N120CH7XKSA1</a>	SP005578297	PG-TO247-4
<a href="#">IKZA40N120CH7XKSA1</a>	SP005578267	PG-TO247-4
<a href="#">IKZA50N120CH7XKSA1</a>	SP005578271	PG-TO247-4
<a href="#">IKZA75N120CH7XKSA1</a>	SP005578273	PG-TO247-4

## X3 Compact POLARIS (1ED314x) - 6.5 A, 3 kV (rms) single-channel isolated gate driver with separate output, UL 1577 certified

The X3 Compact (1ED31xx) family is a small form factor & easy-to-use isolated gate driver family including a Miller Clamp option.

The recently released gate driver family receives a new addition with the inclusion of a DSO-8 150 mil narrow body package option (1ED314x).



### Features

- > For IGBTs (incl. IGBT7), SiC and Si MOSFETs
- > 6.5 A typical output current, 7 ns propagation delay matching
- > 45 ns propagation delay with 30 ns input filter
- > 35 V absolute maximum output supply voltage
- > Separate source and sink outputs
- > DSO-8 150 mil narrow-body package with 4 mm creepage distance
- > Options for 9.3 V, 12 V, 13.6 V undervoltage lockout (UVLO) protection with hysteresis

### Benefits

- > Integrated filters reduce the need for external filters
- > Tight IC-to-IC turn on propagation delay matching (7 ns max.) improves application robustness & improves system efficiency
- > Suitable for operation in fast switching applications
- > UL 1577 (planned) VISO = 3.6 kV (rms) for 1 s, 3 kV (rms) for 1 min
- > The precise threshold and timings, combined with UL 1577 certification enable superior application safety

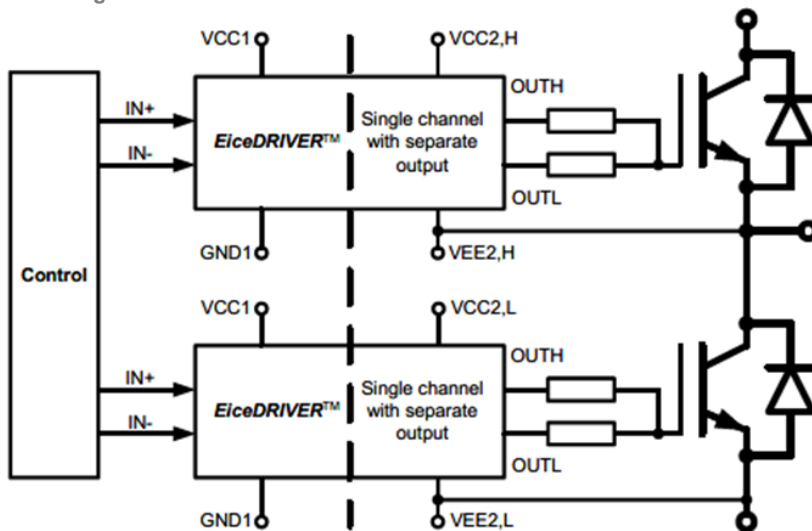
### Competitive advantage

- > Can cover up to 10 KW application
- > Integrated filters reduce the need for external filters and therefore optimize the customer's bill-of-material
- > The Miller Clamp option in combination with SiC MOSFETs or IGBT7 avoid harmful parasitic turn-ons and enable superior application safety

### Target applications

- > Industrial motor drives - compact, standard, premium, servo drives
- > Solar inverters
- > UPS systems
- > EV charging
- > Energy storage systems

### Block diagram



Product collaterals / Online support

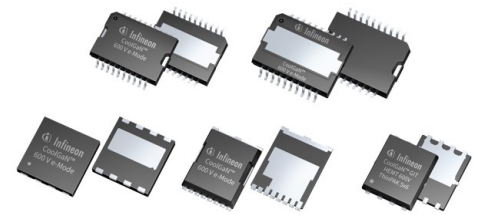
[Product family page](#)

Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">1ED3140MU12FXUMA1</a>	SP005586205	PG-DSO-8
<a href="#">1ED3141MU12FXUMA1</a>	SP005586201	PG-DSO-8
<a href="#">1ED3142MU12FXUMA1</a>	SP005586203	PG-DSO-8

## CoolGaN™ 600 V GIT HEMTs

Infineon's CoolGaN™ GIT HEMT is a highly efficient GaN (gallium nitride) transistor technology for power conversion in the voltage range up to 600V. With extensive experience on the semiconductor market, Infineon's GaN technology brought the e-mode concept to maturity with end-to-end production in high volumes. The pioneering quality ensures the highest standards and offers the most reliable and performing solution among all GaN HEMTs on the market.



Infineon's high performance CoolGaN™ e-mode HEMTs are available in top- as well as bottom-side cooled SMD packages. Allowing for highest efficiency and power density as well as best thermal behavior in the respective applications.

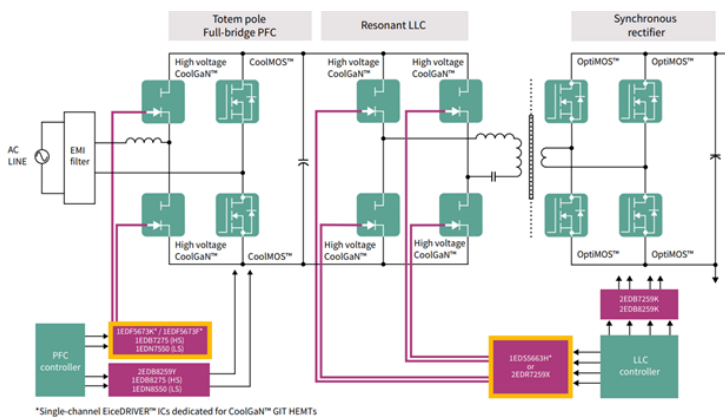
### Features

- > Enhancement mode transistor – normally OFF switch
- > Ultra fast 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

- > Improved system efficiency
- > High power density, small and light design
- > Higher operating frequency
- > Reduced EMI
- > BOM and overall cost savings
- > Highest reliability

### Block diagram



### Target applications

- > Industrial SMPS
- > Telecom SMPS
- > Datacenter SMPS
- > Low power SMPS
- > Charger / Adapter

Product collaterals / Online support

[Product family page](#)

### Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">IGLD60R070D1AUMA3</a>	SP005557209	PG-LSON-8
<a href="#">IGLD60R190D1AUMA3</a>	SP005557217	PG-LSON-8
<a href="#">IGLR60R190D1XUMA1</a>	SP005635196	PG-TSON-8
<a href="#">IGLR60R260D1XUMA1</a>	SP005635199	PG-TSON-8
<a href="#">IGLR60R340D1XUMA1</a>	SP005635202	PG-TSON-8
<a href="#">IGO60R070D1AUMA2</a>	SP005557222	PG-DSO-20
<a href="#">IGOT60R070D1AUMA3</a>	SP005557207	PG-DSO-20
<a href="#">IGT60R070D1ATMA4</a>	SP005557216	PG-HSOF-8

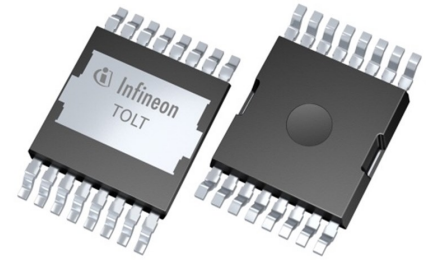




# OptiMOS™ 5 power MOSFET 60 V in TOLT

Infinion's latest TOLT package, the TO-leaded top-side cooling package for superior thermal performance, now comes in OptiMOS™ 5 60 V (IPTC007N06NM5 and IPTC0012N06NM5). This innovative package combined with the key features of OptiMOS™ 5 technology allows best-in-class products in 60 V as well as high current rating >400 A for high-power density designs.

With top-side cooling setup, the drain is exposed at the surface of the package enabling 95 percent of the heat to be dissipated directly to the heatsink achieving 20 percent better  $R_{thJA}$  and 50 percent improved  $R_{thJC}$  compared to TOLL package. With bottom-side cooling packages like TOLL or D<sup>2</sup>PAK, the heat is dissipated via the PCB to the heatsink causing high power losses.



## Features

- > Low  $R_{DS(on)}$
- > High current rating > 300 A
- > Top-side cooling
- > Negative stand-off
- > Sn-free exposed pad

## Benefits

- > Increased system efficiency enabling extended battery life time
- > High power density
- > Superior thermal performance
- > Saving in cooling system
- > Minimized thermal resistance to heatsink

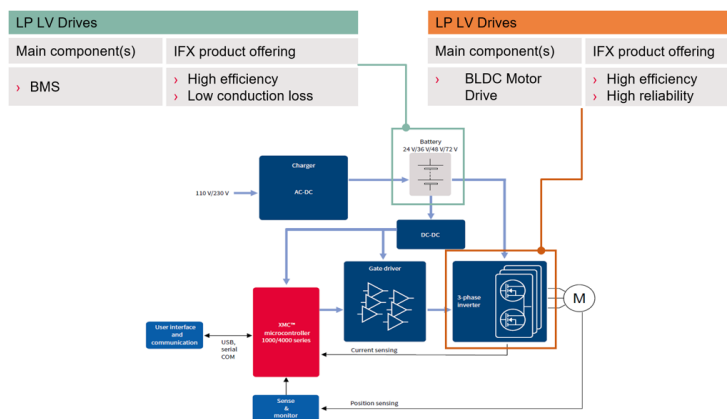
## Competitive advantage

- > Top-side cooling package for superior thermal performance

## Target applications

- > Power tools
- > Battery management system
- > E-bike
- > Automated guided vehicles

## Block diagram



## Product collaterals / Online support

[Product page IPTC007N06NM5](#)

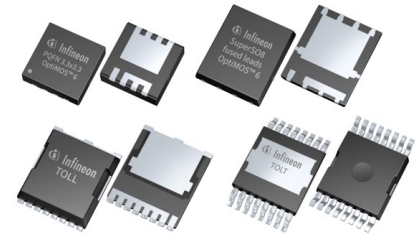
[Product page IPTC012N06NM5](#)

## Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">IPTC007N06NM5ATMA1</a>	SP005753483	PG-HDSOP-16
<a href="#">IPTC012N06NM5ATMA1</a>	SP005753485	PG-HDSOP-16

# OptiMOS™ 6 power MOSFETs 120 V

Infineon's OptiMOS™ 6 power MOSFETs 120 V bring significant improvements across all parameters compared to previous generations. The OptiMOS™ 6 120 V family is suitable for both hard- and soft-switching applications, at high- and low-switching frequencies, and is available in both normal and logic levels. It can be used in various applications such as industrial power supplies, solar, power chargers, low-voltage drives and power tools.



## Features

- > Industry's lowest  $R_{DS(on)}$  in 120 V
- > Best balance between switching and conduction losses for various applications
- > Lower  $R_{DS(on)}$  and FOMs where 150 V is not needed
- > Wide package selection: SMD for FR4 and IMS PCBs, top-side cooling and THD
- > Industrial qualification and  $T_{j,max} = 175^{\circ}C$  for superior power handling and ruggedness
- > Compared to OptiMOS™ 3, it has improvements of up to: 58% better  $R_{DS(on)}$ , 66% better FOMg, 90% better  $Q_{rr}$ , and 35% better FOMoss

## Benefits

- > Highest efficiency
- > Higher power density
- > Higher system reliability
- > Cost savings from less cooling needs
- > Cost savings from less number of paralleled devices
- > Cost savings through the flexibility to choose between different PCB materials

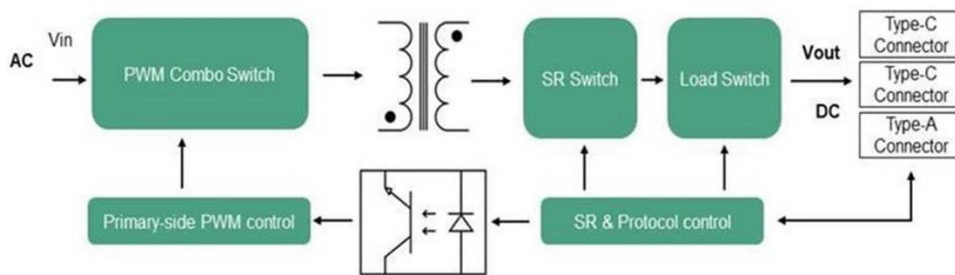
## Target applications

- > Power and gardening tools
- > Adapters and fast chargers
- > Solar
- > Telecom
- > Light electric vehicles

## Product collaterals / Online support

[Product family page](#)

## Block diagram



## Product overview incl. data sheet link

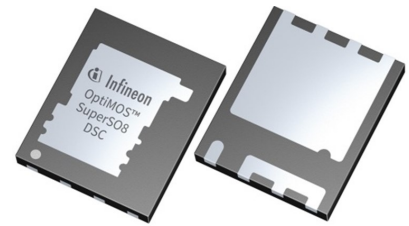
OPN	SP Number	Package
<a href="#">ISC030N12NM6ATMA1</a>	SP005578327	PG-TSON-8
<a href="#">ISC037N12NM6ATMA1</a>	SP005434366	PG-TSON-8
<a href="#">ISC073N12LM6ATMA1</a>	SP005586060	PG-TDSON-8
<a href="#">ISC104N12LM6ATMA1</a>	SP005586043	PG-TDSON-8
<a href="#">ISZ106N12LM6ATMA1</a>	SP005586116	PG-TDSON-8
<a href="#">ISZ330N12LM6ATMA1</a>	SP005578331	PG-TSDSON-8
<a href="#">IPT017N12NM6ATMA1</a>	SP005560061	PG-HSOF-8
<a href="#">IPTC017N12NM6ATMA1</a>	SP005586134	PG-HDSOP-16



## OptiMOS™ power MOSFETs 40 V - 150 V in SuperSO8 DSC

OptiMOS™ 6 power MOSFET 40 V and OptiMOS™ 5 power MOSFETs 40 V-150 V in SuperSO8 DSC (dual-side cooling) package offer all thermal management benefits of dual-side cooling solutions with industry-standard footprint.

SuperSO8 DSC have lower  $R_{thJC-top}$  than SuperSO8 and other PQFN 5 x 6 packages, allowing effective top-side cooling in combination with bottom-side cooling through the PCB. About 30% of the heat generated on the MOSFET die is transferred through the top and less heat is transferred to the PCB. Thus, either the PCB runs cooler at the same power dissipation for improved reliability or more power can be handled by the MOSFET for higher power density.



### Features

- > High performance silicon technology
- > Low top-side  $R_{thJC}$  (0.72 K/W)
- > Package rated to  $T_{Jmax}=175^{\circ}C$
- > Industry-standard footprint, compatible with SuperSO8 and PQFN 5 x 6 products

### Benefits

- > Lower conduction losses and switching losses
- > Improved heat dissipation
- > Superior power handling capability and ruggedness
- > Drop-in replacement for SuperSO8 and PQFN 5 x 6 products

### Competitive advantage

- > High performance silicon technology and low top-side  $R_{thJC}$  (0.72 K/W)

### Target applications

- > Power and gardening tools
- > Service robots and automated guided vehicles (AGVs)
- > Telecom power supplies
- > Server power supplies

### Product collaterals / Online support

[Product family page](#)

### Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">BSC007N04LS6SCATMA1</a>	SP005561090	PG-WSON-8
<a href="#">BSC009N04LSSCATMA1</a>	SP005351968	PG-WSON-8
<a href="#">BSC023N08NS5SCATMA1</a>	SP005561403	PG-WHSON-8
<a href="#">BSC030N10NS5SCATMA1</a>	SP005561083	PG-WHSON-8
<a href="#">BSC033N08NS5SCATMA1</a>	SP001691008	PG-WHSON-8
<a href="#">BSC093N15NS5SCATMA1</a>	SP005560939	PG-WHSON-8
<a href="#">BSC110N15NS5SCATMA1</a>	SP005561075	PG-WHSON-8
<a href="#">BSC160N15NS5SCATMA1</a>	SP005560955	PG-WHSON-8

## P-channel power MOSFETs in SuperSO8 and PQFN 3.3x3.3

The P-channel family of power MOSFETs offers high performance products with the best price / performance ratio in the industry by using cost - effective packages and a leading, reliable and mature silicon technology.



### Features

- > Available in 2 different packages
- > Wide  $R_{DS(on)}$  range
- > Logic level availability
- > Optimized for a wide range of applications
- > Broad availability at distribution partners

### Competitive advantage

- > P-channel power MOSFETs simplify the design complexity in medium and low power applications. Their easy interface to microcontroller unit (MCU), fast switching and avalanche ruggedness make them suitable for high quality demanding applications

### Product collaterals / Online support

[Product family page](#)

### Benefits

- > Industry standard package
- > Ideal for high and low switching frequency
- > Avalanche ruggedness
- > Easy interface to MCU
- > Improved efficiency at low loads due to low  $Q_f$
- > Reduced design complexity
- > Energy efficiency

### Target applications

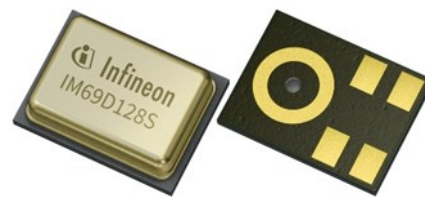
- > Battery protection
- > Reverse polarity protection
- > Linear battery chargers
- > Load switched
- > DC-DC converters
- > On-board charger
- > Motor control
- > Low voltage drive applications

### Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">ISC240P06LMATMA1</a>	SP005402527	PG-TDSON-8
<a href="#">ISC750P10LMATMA1</a>	SP005412113	PG-TDSON-8
<a href="#">ISC16DP15LMATMA1</a>	SP005412118	PG-TDSON-8
<a href="#">ISC800P06LMATMA1</a>	SP005412122	PG-TDSON-8
<a href="#">ISZ810P06LMATMA1</a>	SP005412126	PG-TSDSON-8
<a href="#">ISZ24DP10LMATMA1</a>	SP005412134	PG-TSDSON-8
<a href="#">ISZ56DP15LMATMA1</a>	SP005412138	PG-TSDSON-8
<a href="#">ISZ75DP15LMATMA1</a>	SP005412142	PG-TSDSON-8
<a href="#">ISZ15EP15LMATMA1</a>	SP005412146	PG-TSDSON-8

## IM69D128S - ultra-low power digital XENSIV™ MEMS microphone

Discover the IM69D128S – an ultra-low power digital microphone, designed for applications which require high SNR (low self-noise), long battery life, and high reliability. Great signal-to-noise ratio (SNR) of 69 dB(A) enables crystal clear audio experience without compromising on battery life. Enabled by a revolutionary digital microphone ASIC, the IM69D128S sets a new benchmark by cutting current consumption to 520  $\mu\text{A}$  – almost the half of what models with similar performance on the market can offer. Additionally, IM69D128S masters the art of switching between different power & performance profiles without any audible artifacts, i.e. glitches that the user can hear. This microphone is based on Infineon’s new sealed dual membrane MEMS technology which delivers high ingress protection (IP57) at a microphone level.



### Features

- > Very low self-noise / high SNR of 69 dB(A)
- > Ultra-low current consumption: 520  $\mu\text{A}$  in high performance profile; 420  $\mu\text{A}$  in power saving profile; 180  $\mu\text{A}$  in low power mode
- > Sealed dual membrane (SDM) technology with IP57 ingress protection at microphone level
- > Very high dynamic range and acoustic overload point (AOP) of 128 dB SPL
- > Very tight part-to-part phase and sensitivity matching ( $\pm 1$  dB)
- > Flat frequency response with an LFRO (low frequency roll-off) of 30 Hz
- > Small package size of 3.5 \* 2.65 \* 0.98 mm

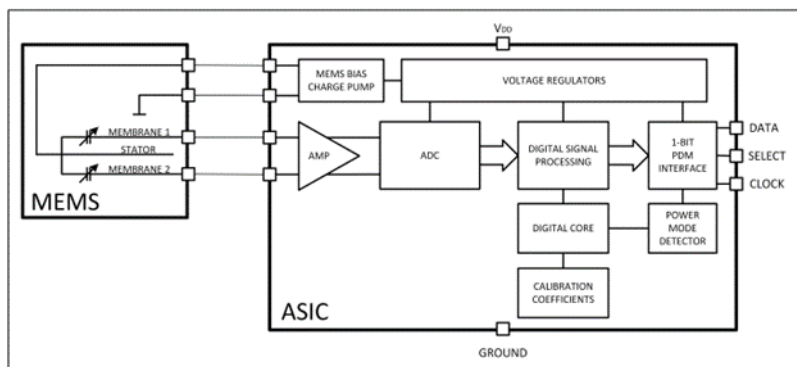
### Benefits

- > Substantial battery saving without compromising on acoustic performance
- > Crystal clear audio signals even for highest sound pressure levels
- > Enablement of advanced audio features (ANC, transparent hearing, audio zoom, beamforming)
- > PCB area savings for space-critical applications

### Target applications

- > True wireless earbuds and over-ear headsets
- > Active noise cancelling headphones
- > Smartphones
- > Wearables
- > Smart speakers
- > Hearing enhancement devices
- > Home automation and IOT devices

### Block diagram



### Product collaterals / Online support

[Product page](#)

### Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">IM69D128SV01XTMA1</a>	SP005738749	PG-TLGA-5

## IM70D122 - digital high sensitivity XENSIV™ MEMS microphone enabling high quality audio capturing for laptop & tablet applications

High performance digital XENSIV™ MEMS microphone IM70D122 makes the most out of Infineon's sealed dual membrane technology to meet a very high signal-to-noise ratio of 70 dB(A) and a very high sensitivity of -26 dBFS. Especially thanks to its high sensitivity and high SNR the IM70D122 is perfectly tailored for advanced audio capturing which can uplift the audio experience for laptops, tablets, cameras and conference systems. This microphone is based on Infineon's new sealed dual membrane MEMS technology which delivers high ingress protection (IP57) at a microphone level.



### Features

- > Very high 70 dB(A) signal-to-noise ratio
- > Very high sensitivity (-26 dBFS)
- > Selectable power modes for battery critical applications (980 / 260  $\mu$ A)
- > Sealed dual membrane (SDM) technology with IP57 ingress protection at microphone level
- > Acoustic overload point (AOP) of 122 dB SPL
- > Very tight part-to-part phase and sensitivity matching ( $\pm$  1 dB)
- > Flat frequency response with a low LFRO (low frequency roll-off) of 30 Hz

### Competitive advantage

- > Thanks to its high sensitivity and high SNR the IM70D122 is perfectly tailored for advanced audio capturing which can uplift the audio experience for laptops, tablets, cameras and conference systems

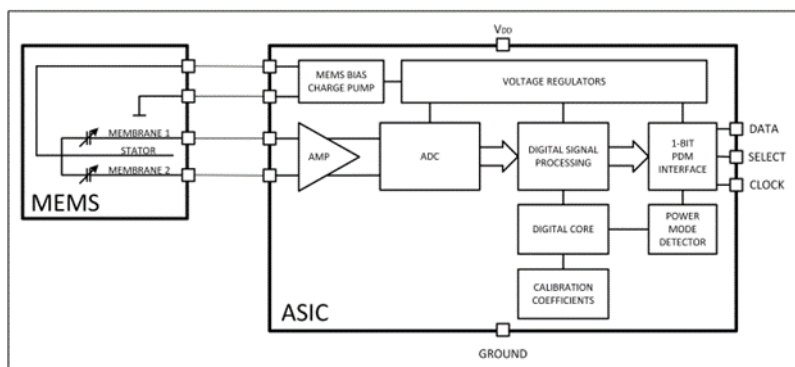
### Benefits

- > Far-field and low volume audio pick-up
- > Crystal clear audio signals even at high sound pressure levels
- > Enablement of advanced audio features (audio zoom, beamforming)

### Target applications

- > Laptop and tablet
- > Conference system
- > Camera
- > Smart speaker
- > Home automation and IoT devices

### Block diagram



Product collaterals / Online support

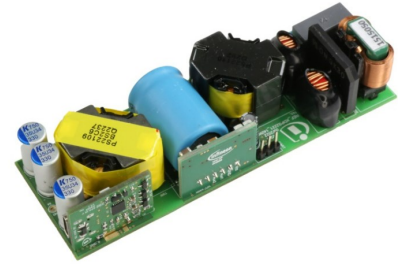
[Product page](#)

Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">IM70D122V01XTMA1</a>	SP005849761	PG-TLGA-5

## REF\_XDPS2221\_140W1 – 140 W board for ultra-high power density USB-C chargers/adapters

The reference board REF\_XDPS2221\_140W1 was developed for USB-PD applications with a wide input range and output voltage from 5 V to 28 V. The nominal output power of this design is 140 W.



### Features

- > Configurable PFC QRM operation for improved average efficiency
- > Pulse skipping for improved light-load efficiency
- > Automatic PFC disable / enable-control depending on operating conditions
- > Peak current mode control for robust and fast input and load control
- > Configurable multimode operation for increased part and light load efficiency
- > ZVS operation of high-side and low-side switch

### Competitive advantage

- > It features the industry's first PFC + hybrid flyback combo controller XDP™ digital power XDPS2221, CoolGaN™ 600 V GIT HEMTs (IGLD60R190D1) as the main switch, and on the secondary side the BSC040N10NS5 OptiMOS™ 5 N-channel MOSFET serving as the SR switch.

### Benefits

- > Low no-load input standby power performance
- > Low external BOM cost and count
- > High efficiency across various line / load conditions
- > High power density and high switching frequency

### Target applications

- > Adapters and chargers
  - > with ultra-high power density
  - > with extended power range (EPR)

### Product collaterals / Online support

[Board page](#)

### Product overview incl. data sheet link

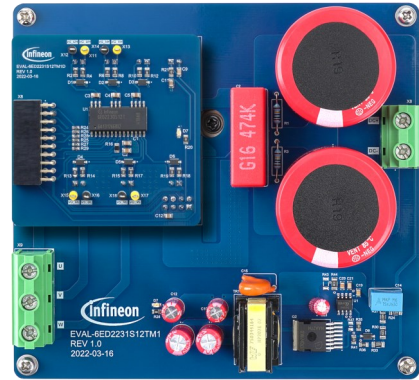
OPN	SP Number
<a href="#">REFXDPS2221140W1TOBO1</a>	SP005878061





## EVAL-6ED2231S12TM1 power evaluation board

EVAL-6ED2231S12TM1 power evaluation board features and demonstrates Infineon's CoolSiC™ MOSFET module and SOI gate driver technology for motor drives. It includes one EasyPACK™ 1B 1200 V CoolSiC™ MOSFET three-phase module, one three-phase Infineon silicon-on-insulator (SOI) gate driver IC for motor drive applications, and includes the M1 connector. In combination with either the EVAL-M1-101T which is the Control Board for iMOTION™ Modular Application Design Kit (MADK) or other control boards with compatible M1 connectors, EVAL-6ED2231S12TM1 board was developed to support customers during their first step designing applications with Infineon's EasyPACK™ 1B CoolSiC™ MOSFET module and three phase gate driver.



### Features

- > 1200 V Infineon SOI Technology
- > Integrated, ultra fast, low RDSON bootstrap diode
- > Output current: IO+ 350 mA, IO- 650 mA
- > Best-in-class minus VS performance; -100 V with repetitive 700 ns pulses
- > SOIC-28 package (with 4 pins removed for high clearance)
- > Over current protection (ITRIP +/- 5% reference)

### Benefits

- > Nominal DC input voltage 510 V
- > Design for max. 5 kW motor power output
- > Single shunt for current sensing
- > Sensing of DC-link voltage
- > Internal NTC-Thermistor for over temperature protection
- > +18 V and +3.3 V auxiliary power supplies on the board
- > M1 interface compatible with the iMOTION™ controller board

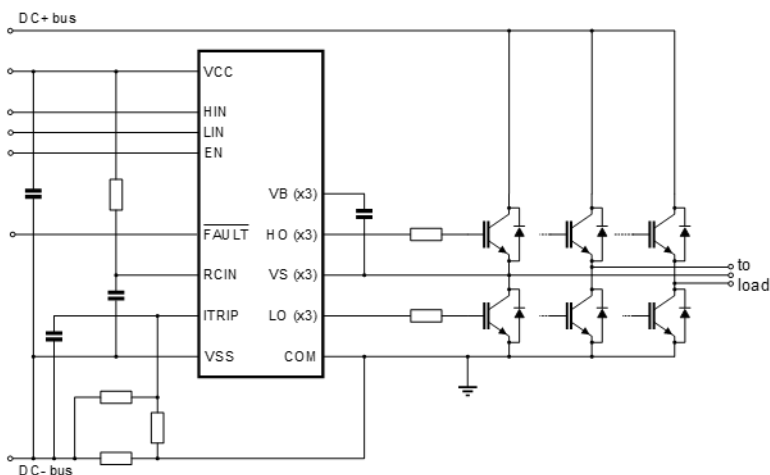
### Competitive advantage

- > 1200 V SOI technology gate driver can drive all kinds of 1200 V IGBT and 1200 V SiC solution as well.
- > And we can deliver almost same level of NPSOA area for below 10 KW application (HVAC, servo, pump etc)

### Target applications

- > Industrial drives
- > Embedded inverters for motor control in pumps or fans
- > Commercial air conditioning

### Block diagram



### Product collaterals / Online support

[Board page](#)

### Product overview incl. user manual link

OPN	SP Number
<a href="#">EVAL6ED2231S12TM1TOBO1</a>	SP005831712

## AURIX™ MC-ISAR TC3xx MCAL adds support for AUTOSARv4.4.0 with ASIL D drivers and SIL-2 compliance

To enable OEMs software the AURIX™ TC3zxx MCAL has been enhanced by adding support for ASRv4.4.0 to the available ASRv4.2.2 MCAL. Even further to ease support for ASIL D applications an update to the MC-ISAR TC3xx roadmap was done to offer drivers to be compliant to ASIL D. With the upcoming maintenance release 2.25.0 major drivers will be according ASIL D. The name of the new upcoming software product with ASIL D drivers is “MC-ISAR AS440 EXT TC3xx”. Also support for IEC 61508 SIL-2 will be provided with release 2.30.0.



### Features

- > AUTOSAR v4.2.2 and v4.4.0 compliant
- > MC-ISAR Basic: MCU,DIO, ICU, GPT, PWM , SPI , ADC, WDG, OCU, FLS, FEE, CAN, CanTrcv, LIN, BFX, CRC
- > MC-ISAR Com Enhanced: FlexRay, Ethernet
- > MC-ISAR MCD MCAL Complex Driver: Rich set of complex drivers in addition to standard AUTOSAR drivers:11 drivers, DMA, FLSloader, UART, DS-ADC, SMU Safety Management Unit DEMOCD: HSSL, SENT, I2C, IOM I/O Monitoring, STM System Timer, IRQ Interrupt Request
- > AUTOSAR BFX and CRC library
- > ASPICE L2
- > ASIL D process for FFI
- > MISRA 2012 amendment 1 (CERT-C) compliance (ASRv4.4.0)
- > ISO21434 continuous monitoring support
- > Major drivers according ASIL D for avoidance of systematic faults upcoming mid 2023
- > IEC 61508 SIL-2 support upcoming mid 2023

### Benefits

- > Supporting latest standards
- > Avoiding the need for additional driver for ASIL D argumentation
- > Eases software partitioning and gives more flexibility; driver can be executed in an ASIL D domain
- > Eases system level safety argumentation

### Target applications

- > All AUTOSAR application in all domains (engine, chassis, safety, body, etc.)
- > Drivers can be used even outside of AUTOSAR applications e.g. commercial agricultural vehicles (CAV), industrial, marine applications etc.

### Competitive advantage

- > Production released driver with qualification and safety case available
- > Major drivers according ASIL D for avoidance of systematic faults upcoming
- > ISO21434 continuous monitoring support
- > Service and support available through our partners

### Product collaterals / Online support

[Software page](#)

### Product overview

OPN	SP Number	Product Name	Discription
TC3422BASICPUSOFT1	SP005807429	TC3422_BASIC_PU	MC-ISAR TC3xx (AS422) BASIC Project License
TC3422COMEPUSOFT1	SP005807441	TC3422_COME_PU	MC-ISAR TC3xx (AS422) COM Enhanced Project License
TC3422MCDPUSOFT1	SP005807444	TC3422_MCD_PU	MC-ISAR TC3xx (AS422) MCD Project License
TC3440BASICPUSOFT1	SP005807711	TC3440_BASIC_PU	MC-ISAR TC3xx (AS440) BASIC Project License
TC3440COMEPUSOFT1	SP005807723	TC3440_COME_PU	MC-ISAR TC3xx (AS440) COM Enhanced Project License
TC3440MCDPUSOFT1	SP005807726	TC3440_MCD_PU	MC-ISAR TC3xx (AS440) MCD Project License
TC3440EBASICPUSOFT1	SP005876430	TC3440E_BASIC_PU	MC-ISAR TC3xx (AS440) Extended BASIC Project License with ASIL D Drivers
TC3440ECOMEPUSOFT1	SP005876435	TC3440E_COME_PU	MC-ISAR TC3xx (AS440) Extended COM Enhanced Project License
TC3440EMCDPUSOFT1	SP005876440	TC3440E_MCD_PU	MC-ISAR TC3xx (AS440) Extended MCD Project License with ASIL D Drivers