OptiMOS™ and StrongIRFET™ MOSFET

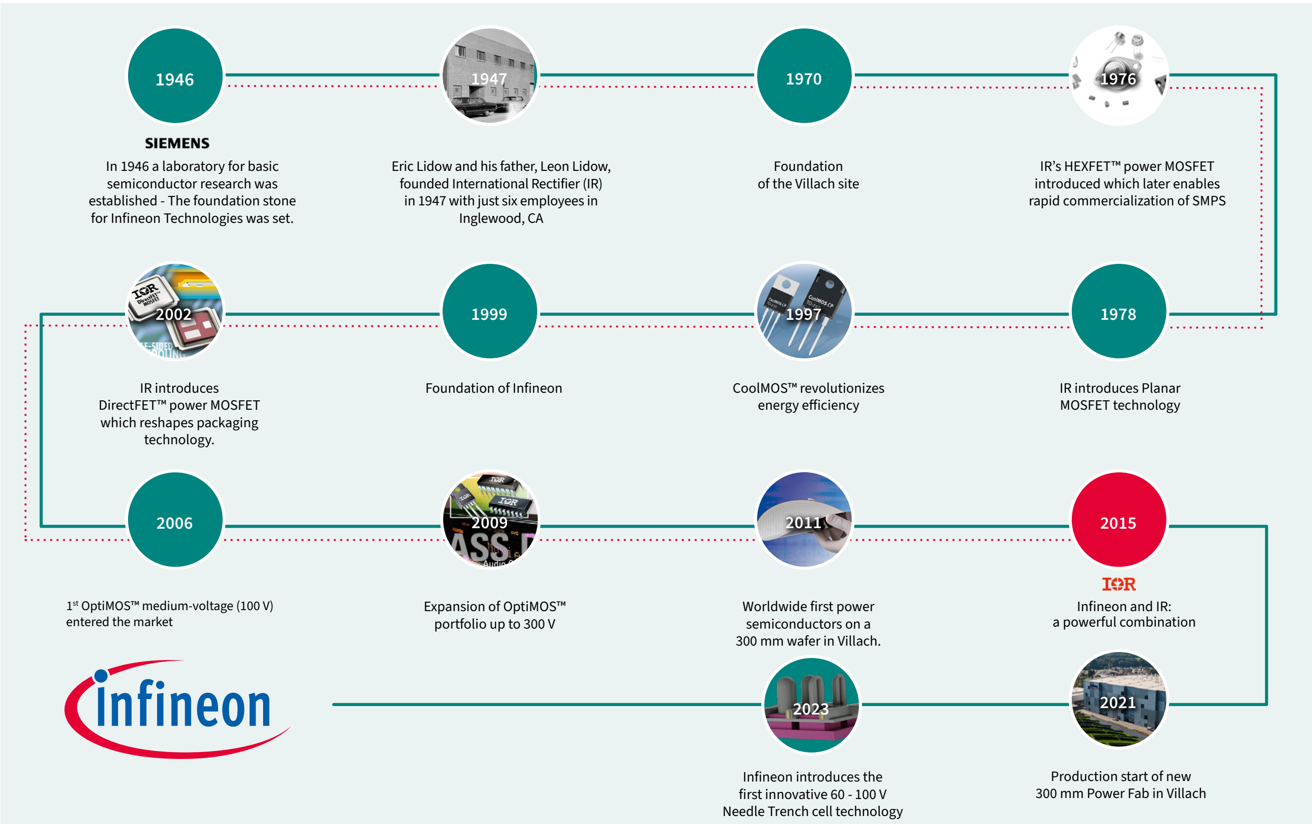
Selection guide 2024-2025

www.infineon.com/powermosfet-12V-300V

Contents

Infineon shapes power for growth through MOSFET innovation

With more than 40 years of experience in power MOSFET innovation, Infineon has led the way in solving the challenges design engineers face on a daily basis while enabling them achieve their targets. Although these targets may have changed over the years, the innovative spirit behind Infineon's product offering has persisted – from device design, technology, package and product development through manufacturing. Looking at the evolution of MOSFETs in the industry, numerous advancements in MOSFET technology have enabled the applications and trends that have become an indispensable part of our lives. Infineon power MOSFET innovation has proven that optimization at the component level brings significant system-level performance advantages and contributes to an easier, safer and greener future.



Click here to learn more:

- www.infineon.com/powermosfet-12V-300V
- www.infineon.com/optimos-strongirfet-packages
- www.infineon.com/optimos6
- www.infineon.com/optimos7
- www.infineon.com/strongirfet2
- www.infineon.com/smallsignal

OptiMOS™ and StrongIRFET™

15-300 V N-channel power MOSFETs

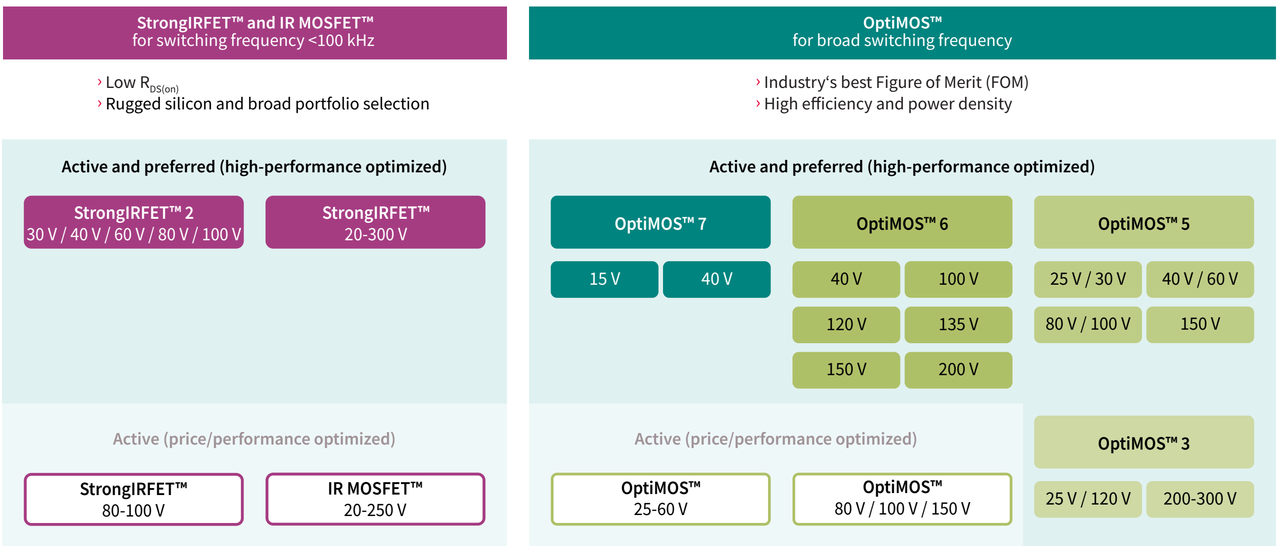
Infineon’s semiconductors are designed to bring greater efficiency, power density, and cost-effectiveness. The full range of OptiMOS™ and StrongIRFET™ power MOSFETs enables innovation and performance in applications such as switch mode power supplies (SMPS), battery powered applications, motor control, drives, inverters, and computing.

Infineon’s highly innovative OptiMOS™ and StrongIRFET™ families consistently meet the highest quality and performance demands in key specifications for power system designs such as on-state resistance ($R_{DS(on)}$) and figure of merit (FOM).

OptiMOS™ power MOSFETs provide best-in-class performance. Features include ultra low $R_{DS(on)}$, as well as low charge for high switching frequency applications. StrongIRFET™ power MOSFETs are designed for drives applications and are ideal for designs with a low switching frequency, as well as those that require a high current carrying capability.

Technology development and product family positioning

StrongIRFET™	OptiMOS™
Robust and excellent price/performance ratio	**Best-in-class technology**
– Optimized for switching frequency < 100 kHz	– Optimized for broad switching frequency
– Designed for industrial applications	– Designed for high performance applications
– High current carrying capability	– Industry's best figure of merit
– Rugged silicon	– High efficiency and power density



Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

With more than 40 years of experience in power MOSFET innovation, Infineon offers a broad portfolio of products. The product portfolio is divided into “active and preferred”, referring to the latest technology available offering best-in-class performance, and “active”, consisting of well-established technologies which complete this broad portfolio.

StrongIRFET™ 2 power MOSFETs are the latest generation to be added to the family. Available in 30 V, 40 V, 60 V, 80 V and 100 V , this family offers broad availability and excellent price/performance ratio and are suitable for a broad range of applications.

Building on its legacy of innovation, Infineon now unveils the industry’s premier 15 V trench power MOSFETs, using the brand-new OptiMOS™ 7 technology. The OptiMOS™ 7 15 V series primarily targets optimized DC-DC conversion for servers, computing, datacenter, and artificial intelligence applications.

OptiMOS™ 6 power MOSFETs 40 V, 80 V, 100 V, and 120 V are the newest addition to the OptiMOS™ product family. They are the perfect solution when best-in-class (BiC) products and high efficiency over a wide range of output power are required. For other voltage classes, from 15 V up to 150 V, OptiMOS™ 5 represents the latest generation in the market, offering low conduction losses and high switching performance.

For high and low frequency applications OptiMOS™ 3 power MOSFETs is our largest OptiMOS™ family and complements our existing product portfolio as well as providing additional options when best-in-class is not required. StrongIRFET™ is recommended for 20-300 V applications when the high performance is not essential and the cost is a more significant consideration.

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

Guidance for applications and voltage classes

OptiMOS™ and StrongIRFET™ portfolio, covering from 15 up to 300 V MOSFETs, can address a broad range of needs from low to high switching frequencies. The tables below provide a guidance on the recommended OptiMOS™ or StrongIRFET™ products for each major sub-application and voltage class.

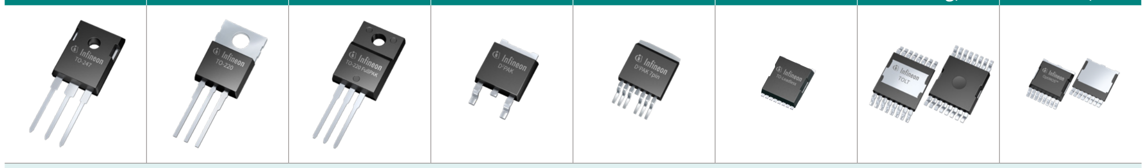
Recommended voltage			15 V to 30 V	40 V	60 V	75 V to 80 V	100 V	120 V to 150 V	200 V	250 V	300 V
Battery powered	Low power Power tools, multicopter, battery, industrial drives	OptiMOS™	✓	✓	✓	✓					
		StrongIRFET™	**✓**	**✓**	**✓**	**✓**					
	High power (LEV, LSEV)	OptiMOS™			✓		✓	**✓**	**✓**		
		StrongIRFET™			**✓**	**✓**	**✓**	✓	✓		
Inverters	Solar	OptiMOS™			**✓**	**✓**	**✓**	**✓**			
		StrongIRFET™			✓	✓	✓				
	Online UPS	slow switching									
		OptiMOS™	✓	✓	✓	✓	✓	✓	✓	✓	✓
		StrongIRFET™	**✓**	**✓**	**✓**	**✓**	**✓**	**✓**	**✓**	**✓**	**✓**
		fast switching									
		OptiMOS™	**✓**	**✓**	**✓**	**✓**	**✓**	**✓**	**✓**	**✓**	**✓**
		StrongIRFET™	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Offline UPS	OptiMOS™		✓	✓						
		StrongIRFET™		**✓**	**✓**						
SMPS	Adapter / Charger	OptiMOS™		**✓**	**✓**	**✓**	**✓**				
		StrongIRFET™		✓	✓	✓	✓				
	PC Power	OptiMOS™		**✓**	**✓**						
		StrongIRFET™		✓	✓						
	LCD TV	OptiMOS™			**✓**	**✓**	**✓**				
		StrongIRFET™			✓	✓	✓				
	Server	OptiMOS™		**✓**	**✓**	**✓**					
		StrongIRFET™	✓	✓	✓	✓					
	AC-DC	OptiMOS™				**✓**	**✓**	**✓**	**✓**		
		StrongIRFET™				✓	✓				
	Telecom	OptiMOS™	**✓**	**✓**	**✓**	**✓**	**✓**	**✓**			
		StrongIRFET™	✓	✓	✓	✓	✓				

StrongIRFET™ recommended	OptiMOS™ recommended
StrongIRFET™ available	OptiMOS™ available

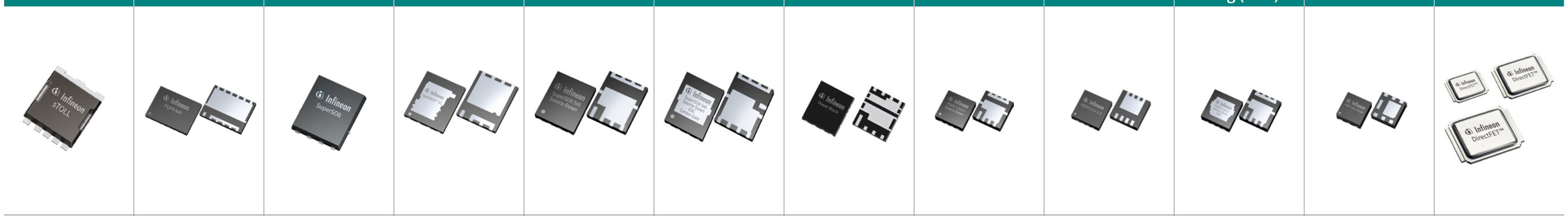
Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

Space-saving and high-performance packages



	TO-247	TO-220	TO-220 FullPAK	D^2PAK	D^2PAK 7-pin	TO-Leadless	TOLT (Top-side cooling)	TOLG (Gullwing leads)
	Optimized for high power applications and high current capability							
Special features	–						Optimized for top-side cooling	Optimized for TCoB[1] robustness
Height [mm]	5.0	4.4	4.5	4.4	4.4	2.3	2.3	2.3
Outline [mm]	40.15 x 15.9	29.5 x 10.0	29.5 x 10.0	15.0 x 10.0	15.0 x 10.0	11.7 x 9.9	15.0 x 9.9	11.7 x 9.9
Thermal resistance R_{thJC} [K/W]	2.0	0.5	2.5	0.5	0.5	0.4	0.4	0.4



	sTOLL	PQFN 8x6	SuperSO8	SuperSO8 dual-side cooling (DSC)	PQFN 5x6 Source-Down	PQFN 5x6 Source-Down dual-side cooling (DSC)	Power Block	PQFN 3.3x3.3 Source-Down	PQFN 3.3x3.3	PQFN 3.3x3.3 Source Down dual-side cooling (DSC)	PQFN 2x2	DirectFET™
	Optimized for high power in small form factor	Highest power density in the industry	For highest efficiency and power management	Optimized for dual-side cooling	Highest power density per area	Optimized thermal performance	Significant design shrink	Highest power density per area	High efficiency in small form factor	Optimized thermal performance	Enables significant space saving	Optimized for dual side cooling
Height [mm]	2.3	1.0	1.0	0.75	1.0	0.7	5.0 x 6.0: 1.0 6.3 x 6.0: 0.9 6.3 x 6.0 DSC: 0.7	1.0	1.0	1.0	0.9	Small: 0.65 Medium: 0.65 Large: 0.71
Outline [mm]	8.0 x 7.0	8.0 x 6.0	5.15x6.15	5.0 x 6.0	5.0 x 6.0	5.0 x 6.0	5.0 x 6.0 6.3 x 6.0	3.3 x 3.3	3.3 x 3.3	3.3 x 3.3	2.0 x 2.0	Small: 4.8 x 3.8 Medium: 6.3 x 4.9 Large: 9.1 x 6.98
Thermal resistance R_{thJC} [K/W]	0.6	0.5	0.8	0.5	0.45	0.45	1.5	1.4	3.2	1.4	11.1	0.5

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

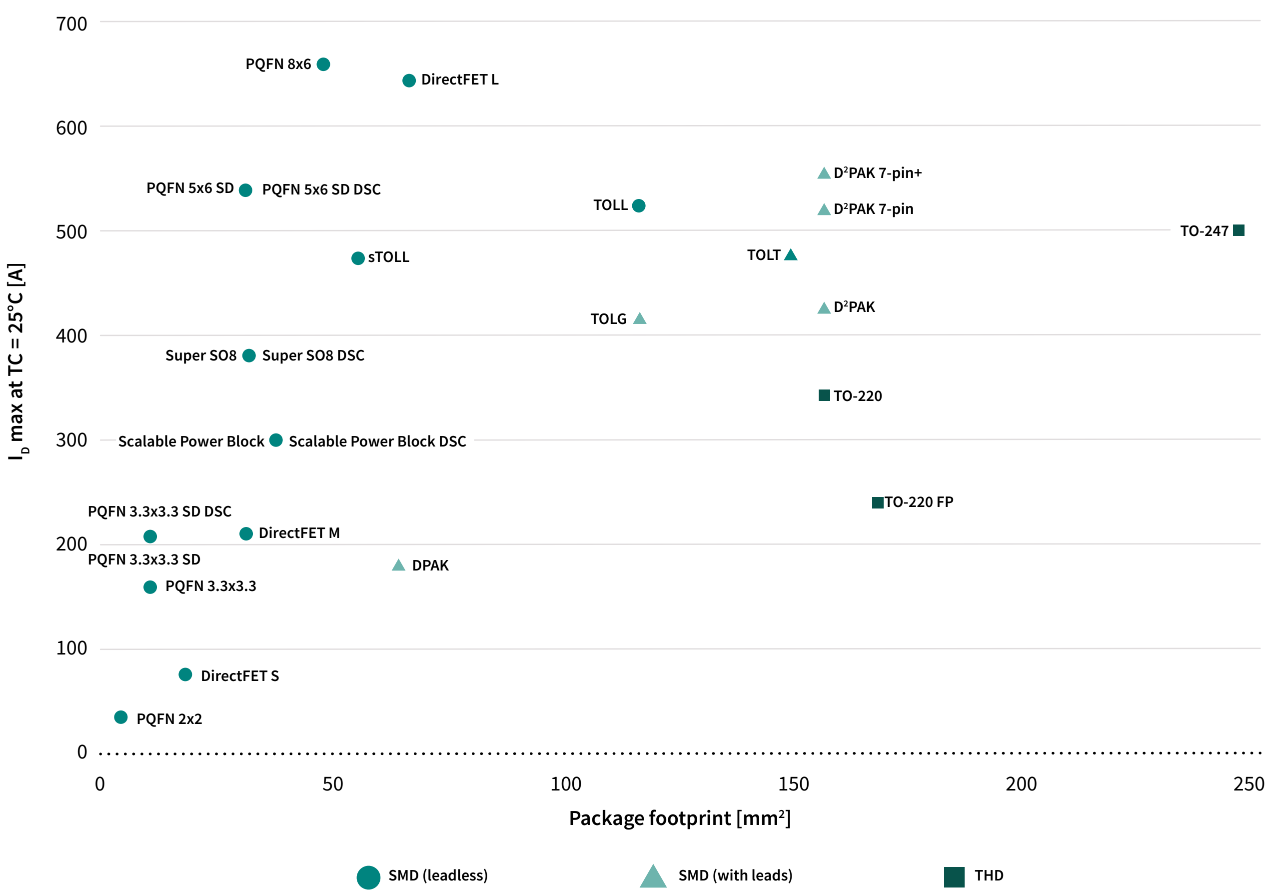
1) Temperature cycling on board

Discrete packages

Infineon has been making an impact in the MOSFET industry with innovation in MOSFET manufacturing techniques and processes as well as pioneering new packages to meet the changing demands of cutting-edge designs in various applications. OptiMOS™ and StrongIRFET™ technologies are available in different packages to address demands for high current carrying capability and significant space saving. The broad portfolio enables footprint reduction, boosted current rating, and optimized thermal performance. While the surface mount leadless devices are enabled for footprint reduction, through-hole packages are characterized by a high-power rating.

Infineon offers innovative packages such as DirectFET™ and TO-Leadless (TOLL). DirectFET™ is designed for high frequency applications by offering the lowest parasitic resistance. This package is available in three different can sizes: small, medium, and large. TO-Leadless is optimized to dissipate power up to 375 W, increasing power density with a substantial reduction in footprint.

New package innovations include the SuperSO8 Source-Down package offering high power density and performance; the TOLG (Gullwing leads) optimized for TCoB (Thermal cycling on board) robustness; TOLT (top-side cooling) optimized for superior thermal performance; sTOLL optimized for high power in small form factor; and the SuperSO8 dual-side cooling (DSC) optimized for dual-side cooling in a standard 5x6 mm² footprint.



Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

OptiMOS™ 7 15 V

Infineon's latest technology with the industry's first 15 V trench power MOSFETs provides the next level of system efficiency and performance

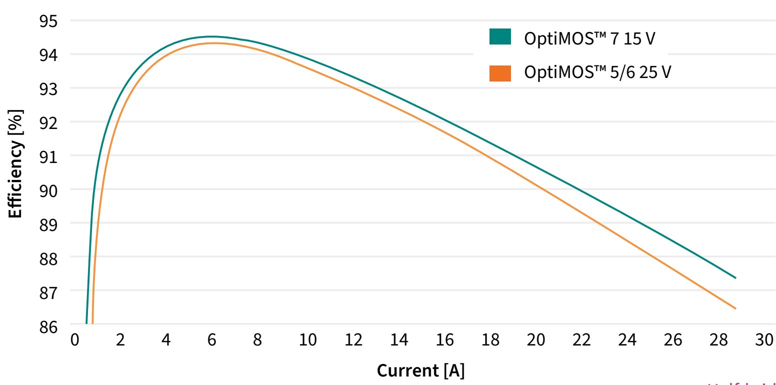
Infineon introduced the industry's first 15 V trench power MOSFETs, utilizing the brand-new OptiMOS™ 7 technology. This system and application-optimized technology targets DC-DC conversion with low server and computing applications output voltages.

Compared to OptiMOS™ 5 25 V, the OptiMOS™ 7 15 V MOSFET family offers a lower breakdown voltage, significantly reducing $R_{DS(on)}$ and $FOMQ_g/FOMQO_{SS}$. The best-in-class product portfolio comprises Source-Down PQFN 3.3x3.3 packages with bottom and dual-side cooling variants in Standard and Center-Gate footprints for flexible and optimal PCB design and a PQFN 2x2 package with a reinforced clip. The latter offers a pulsed current capability of more than 500 A, with an RthJC of 1.6 K/W. Reducing conduction and switching losses in combination with the Source-Down package, simplifies thermal management, pushing power density and efficiency to the next level.

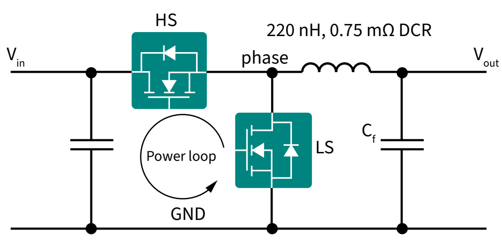
The high-side MOSFET uses the PQFN 2x2 (taking advantage of the lower switching losses) and the low-side MOSFET uses the Source-Down (taking advantage of the low conduction losses).

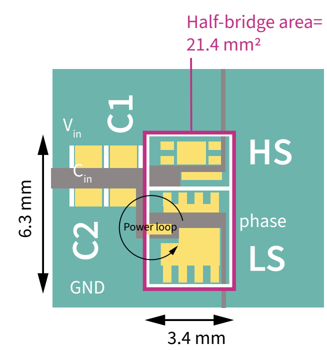
OptiMOS™ 7 15 V vs. OptiMOS™ 5 / 6 25 V

- Outstanding $FOMQ_g/FOMQ_{OSS}$ improves peak efficiency by 0.2 percent while enabling high frequency operation
- Lower $R_{DS(on)}$ improves full load efficiency by 0.85 percent while enabling output power increase



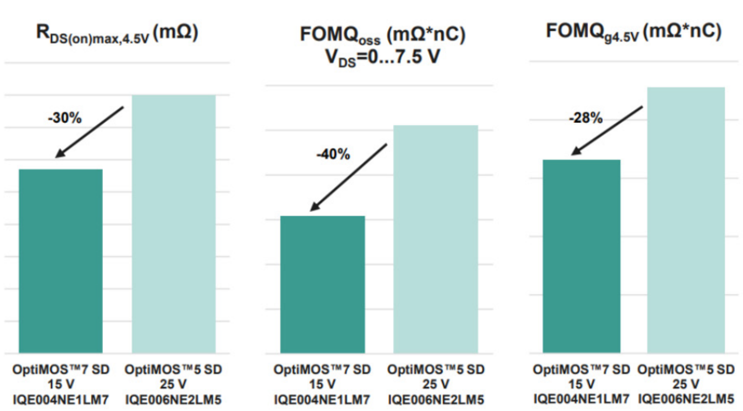
High-side: PQFN 2 x 2 Drain-down
Low-side: PQFN 3.3 x 3.3 Source-down





Features and benefits

Key features	Key benefits
– First 15 V trench power MOSFETs	– Improved efficiency in sub 12 V DC-DC output stages where 25 V MOSFETs are used
– Benchmark $R_{DS(on)}$ compared to 25 V node	– Reduced conduction losses
– Outstanding $FOMQ_g/FOMQ_{OSS}$	– Highest efficiency with best switching performance
– Ultralow package parasitics	– Center-Gate for ideal parallelization, Standard-Gate for easy layout fit-in
– Standard and Center-Gate footprints with dual-side cooling variants	– Better thermal management with significant space saving enablement



The OptiMOS™ 7 15 V product family offers a leap forward in technology supporting new trends in power distribution architectures, e.g., high ratio DC-DC conversion, enabling further advancements in server, datacom, and artificial intelligence applications while minimizing CO_2 footprint.

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

OptiMOS™ 7 40 V

Unleash maximum power with the next best-in-class OptiMOS™ 7 40 V power MOSFET in a SuperSO8 5x6

Infineon introduces the best-in-class 40 V power MOSFET in the latest OptiMOS™ 7 trench technology. This new product expands the OptiMOS™ 7 portfolio from the industry's first 15 V power MOSFETs to the lowest $R_{DS(on)}$ in a SuperSO8 5x6 40 V power MOSFET, minimizing the energy loss in the system and making it best fit in BMS applications. The $R_{DS(on)}$ is improved by 40 percent compared to the existing OptiMOS™ 6 40 V products. In addition, the SuperSO8 5x6 package makes a 50 percent PCB real estate area reduction possible when compared to the DirectFET™ (L) solution while making the need for parallelization obsolete.

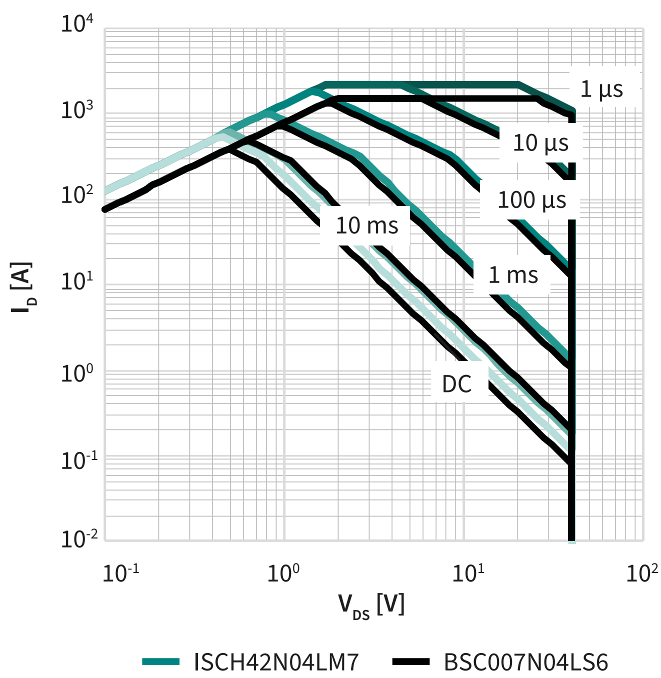
The new OptiMOS™ 7 40 V power MOSFET offers a leap forward in terms of $R_{DS(on)}$ reduction, a product feature highly beneficial in BMS applications, facilitating increased power density, improved system efficiency and cost reduction.

ISCH42N04LM7 has a higher DC current capability than the BSC007N04LS6 mainly driven by the lower $R_{DS(on)}$:
at 0.1 V DC > 40%
at 40 V DC > 30%

Also in short pulse regime and high V_{DS} there is noticeable current capability improvement:
at 40 V 1 ms > 20%
at 40 V 100 µs > 10%

Safe operating area

$I_D=f(V_{DS})$; $T_C=25°C$; D=0 parameter: t_p



Features and benefits

Key features	Key benefits
– BiC 40 V power MOSFET in a SuperSO8 5x6 in the market	– Best fit in BMS applications
– Outstanding $R_{DS(on)}$	– Energy loss minimization with highest power density
– Industry standard footprint	– Multiple sourcing possibility
– Wide safe operating area	– Increased reliability and robustness

Click here to learn more:

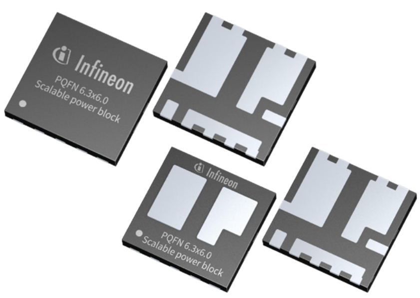
www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

OptiMOS™ Scalable Power Block

Symmetric half-bridge solution enabling 50 percent improvement in power density

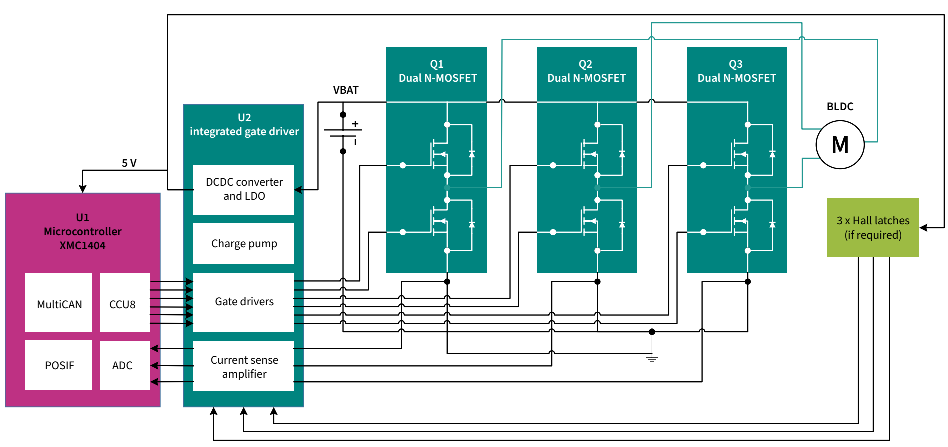
OptiMOS™ 6 40 V and OptiMOS™ 5 100 V Symmetric power block (Q1 and Q2 of similar $R_{DS(on)}$) integrates a low-side and a high-side MOSFET in a compact leadless SMD 6.3x6.0 mm² package targeting a variety of applications (drives, SMPS). By replacing two separate discrete packages, e.g., SuperSO8 (PQFN 5x6), customers can shrink the power section on the board by at least 50 percent.

The MOSFET half-bridge family features Infineon's proven OptiMOS™ 5 and 6 technologies, offering very low on-state resistance ($R_{DS(on)}$) and figure of merits (Q_g, Q_{gd}). The reduction in the package's parasitic inductance of the package results in improved switching performance and EMI, as well as reduced overall BOM cost. Optimized lead-frame and Cu-clip significantly improve the package's thermal performance. The dual-side cooling version of the package boosts the power throughput by an additional 25 percent.

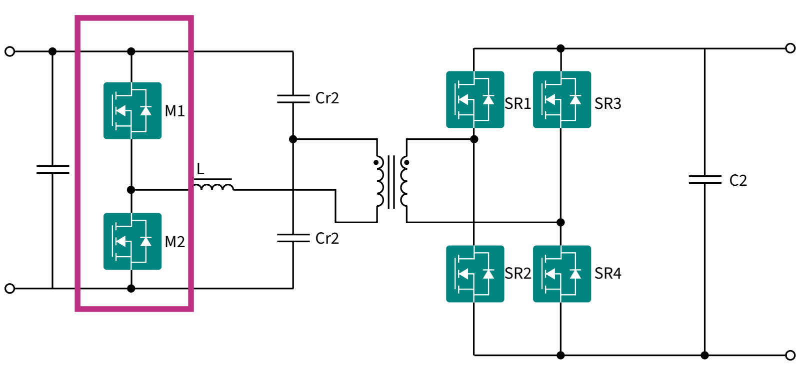


Integrated symmetric half-bridge solution using the latest OptiMOS™ silicon technology offered in both over-molded and dual-side cooling options for supreme power density and performance advantage.

Half-bridge replacement in Inverter circuit for drives



Power switches in LLC circuit



Features and benefits

Key features	Key benefits
– High chip/package ratio	– High power capability
– Optimized lead-frame and Cu-clip design	– Optimum thermal performance
– Internally connected low-side and high side (lowest loop inductance)	– Compact and simplified layout design
– Dual-side cooling available	– Superior switching performance/EMI

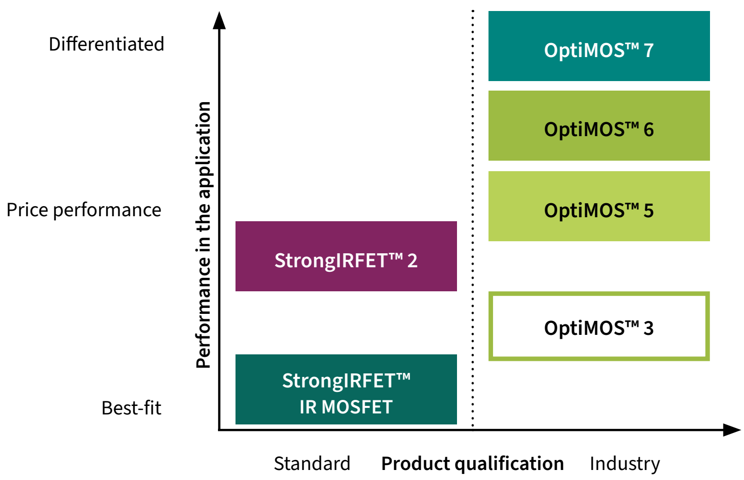
Click here to learn more:

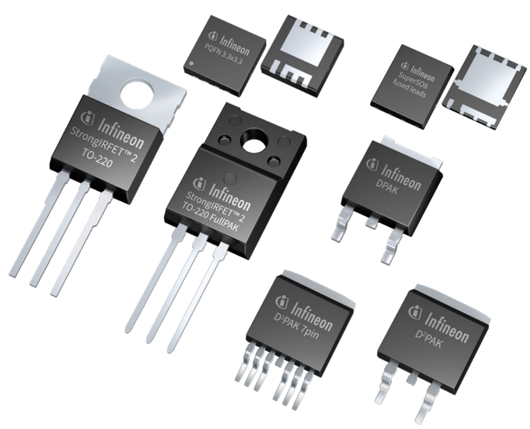
www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

StrongIRFET™ 2 MOSFETs – 30 V/40 V/60 V/80 V/100 V

Right-fit products for a broad range of applications

The new StrongIRFET™ 2 power MOSFETs are the latest generation of MOSFETs addressing a wide range of applications such as adapters, motor drives, e-scooters, battery management systems, light electric vehicles, robotics, power and gardening tools, and other consumer applications. Featuring broad availability and excellent price/performance ratio and robustness, this new technology offers right-fit products with an easy choice for designers interested in convenient selection and purchasing. Optimized for both low- and high-switching frequencies, the family supports a broad range of applications enabling flexibility in design.

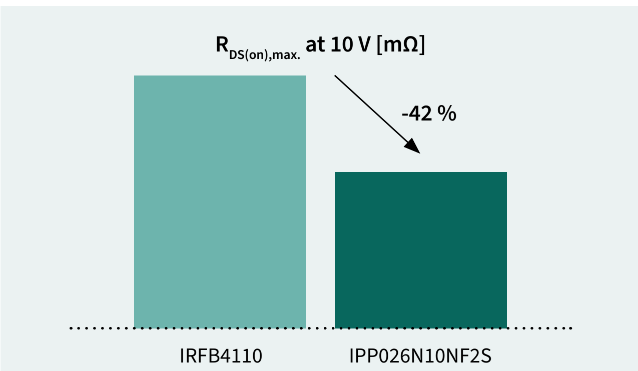


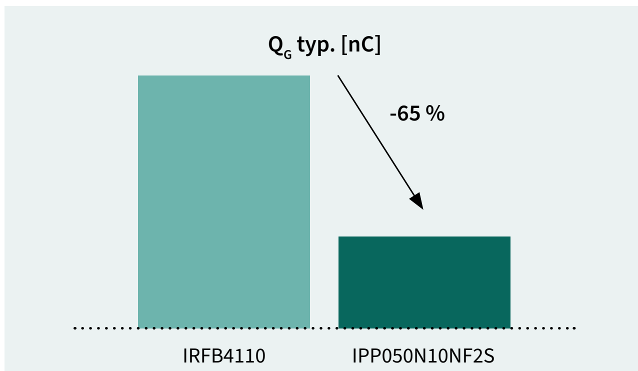


Features and benefits

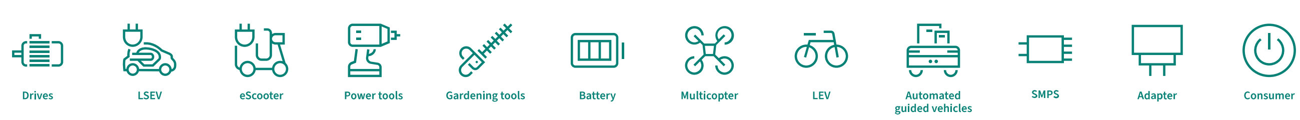
Key features	Key benefits
– Broad availability from distribution partners	– Increased security of supply
– Excellent price/performance ratio	– Right-fit products
– Ideal for high and low switching frequency	– Supports wide variety of applications
– Industry standard footprint	– Standard pin out allows for drop-in replacement
– High current rating	– Increased product ruggedness

StrongIRFET™ 2 vs. previous generation 100 V performance comparison





Compared to the previous StrongIRFET™ generation in 100 V TO-220 package, StrongIRFET™ 2 shows significant improvements such as ~40 percent lower $R_{DS(on)}$ and ~65 percent reduced Q_G. This results in better efficiency and longer life time.



Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

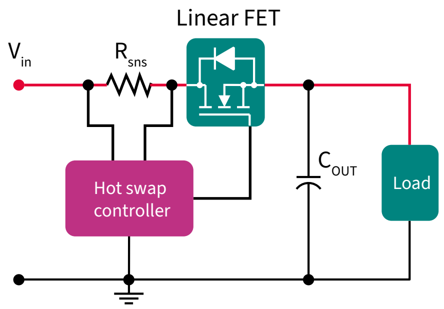
OptiMOS™ Linear FET

Combining a low $R_{DS(on)}$ with a wide safe operating area (SOA)

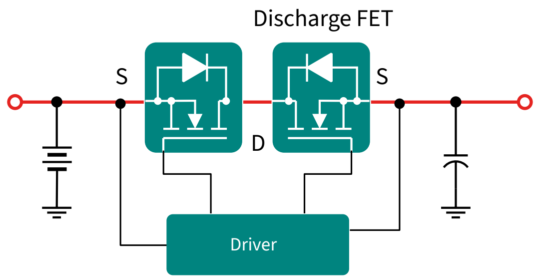
With Infineon's OptiMOS™ Linear FET you can avoid settling between on-state resistance ($R_{DS(on)}$) and linear mode capability – operation in the saturation region of an enhanced mode MOSFET. The OptiMOS™ Linear FET revolutionary approach offers the state-of-the-art $R_{DS(on)}$ of a trench MOSFET together with the wide safe operating area (SOA) of a classic planar MOSFET.

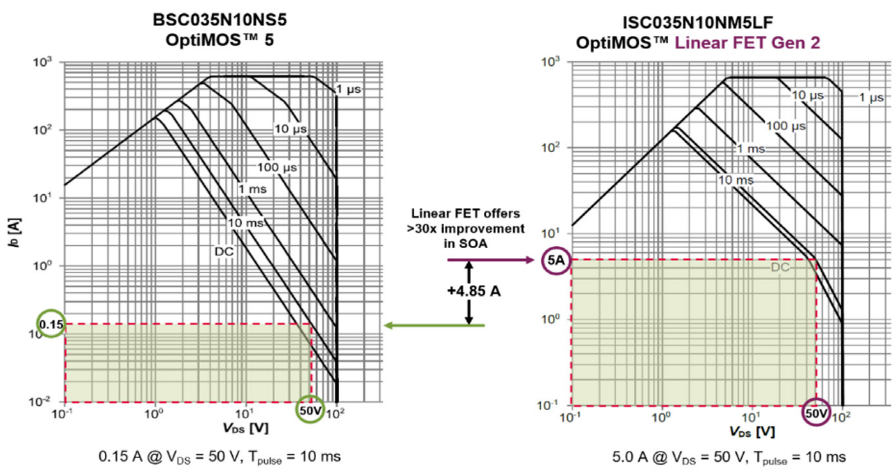
OptiMOS™ Linear FET MOSFETs prevent damage at the load by limiting high in-rush current. This product is the perfect fit for hot-swap, e-fuse (electronic fuse), and battery protection functions commonly found in telecom, servers, and battery management system (BMS). A new 100 V Linear FET in PQFN 3.3x3.3 is also a fit for soft start in Power-over-Ethernet (PoE) application.

Protection in eFuse/Hot-swap/Soft start circuit



Charge and Discharge FET in BMS circuit





OptiMOS™ Linear FET offers a much wider safe operating area (SOA) compared to standard OptiMOS™ MOSFETs with similar $R_{DS(on)}$.

Features and benefits

Key features	Key benefits
– Wide safe operating area (SOA)	– Rugged linear mode operation
– Low $R_{DS(on)}$	– Low conduction losses
– High maximum pulse current	– Higher in-rush current enabled
– High maximum continuous current	– Faster start-up and shorter down time
– Multiple packages: D²PAK, D²PAK 7-pin, TOLL, PQFN 5x6 and 3.3x3.3	– Compatible footprint for drop-in replacement

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

OptiMOS™ 6 120 V

Fully optimized best-in-application performance power MOSFET at 120 V

Infineon's extensive experience in trench MOSFET technology development, and the knowledge gained from customer support are the key motivators of the development of the new OptiMOS™ 6 120 V MOSFETs. The new OptiMOS™ 6 120 V power MOSFET technology offers devices with extremely low on-state resistance and very low gate charges, yielding the industry's best figure of merit (FOM). These features make the OptiMOS™ 6 the best fit for high-switching frequency applications, such as battery-powered power tools, solar applications, and SMPS.

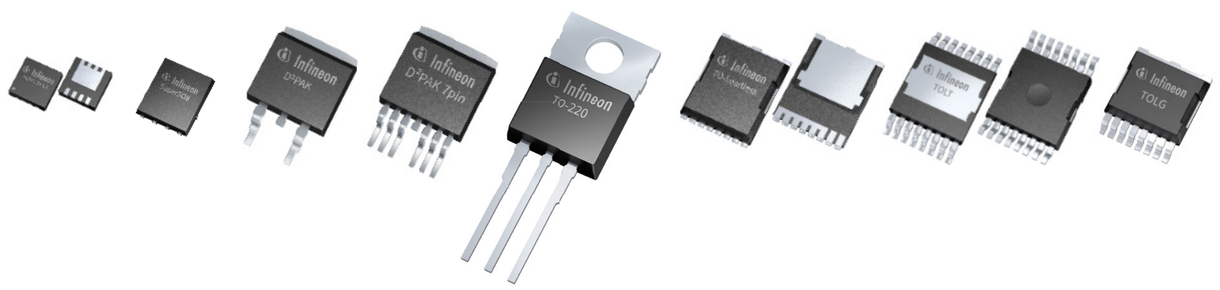
Features and benefits

Key features	Key benefits
– Industry's lowest $R_{DS(on)}$ in 120 V	– Highest efficiency
– Best balance between switching and conduction losses	– Less paralleling required
– Significantly improved FOMs compared to OptiMOS™ 3	– High power density

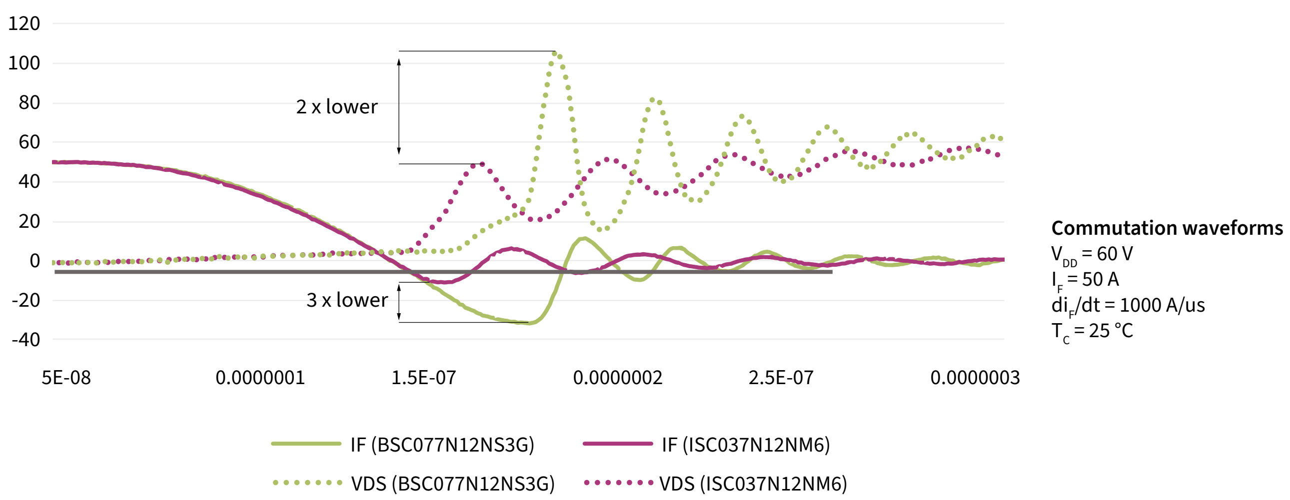
Key Applications

OptiMOS™ 6 120 V is available in logic level and normal level versions to accommodate different application requirements. It includes the following packages: PQFN 3.3x3.3, SuperSO8, D²PAK, D²PAK-7, TO-220, TOLL, TOLT, TOLG

- Gardening tools
- Power tools
- eScooter
- USB PD charger
- Solar



Lower reverse recovery voltage peak, resulting in significantly improved safety margins for your system design



- OptiMOS™ 6's reverse recovery voltage peak is two times lower compared to its predecessor resulting in much better safety margins in system design.
- Lower QRR decreases voltage overshoot and switching loss

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

OptiMOS™ 6 135 V and 150 V*

Best-in-application offering with the latest OptiMOS™ 6 products

The new OptiMOS™ 6 135 V and 150 V technologies were designed to fulfill the requirements of various applications, from synchronous rectification sockets in telecom and server SMPS to motor inverters in eForklifts and light electric vehicles (LEV), solar optimizers, and high-power USB chargers. With industry's lowest $R_{DS(on)}$, improved switching performance and excellent EMI behavior both technologies bring unparalleled efficiency, power density, and reliability into the highly competitive 150 V market. Both newly released product families bring significant improvements upon its predecessor OptiMOS™ 5 150V. This offering provides the customer best-in-application products with different possibilities. Our ability to scale sets us apart as the industry's leading supplier of power MOSFETs.

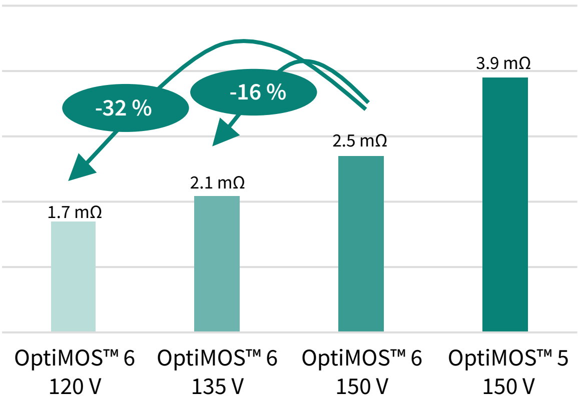
Features and benefits

Key features	Key benefits
– Best-in-class $R_{DS(on)}$ and FOMg in 135 V and 150 V	– Low conduction and switching losses, in hard and soft switching
– Lower $Q_{rr(typ)}$ and improved diode softness compared to OptiMOS™ 3	– Stable operation with improved EMI enabling less overshoot
– Tight $V_{gs(th)}$ spread	– Better paralleling performance
– High avalanche ruggedness	– Enhanced robustness
– Max junction temperature of 175°C and MSL1	– Longer lifetime and improved reliability

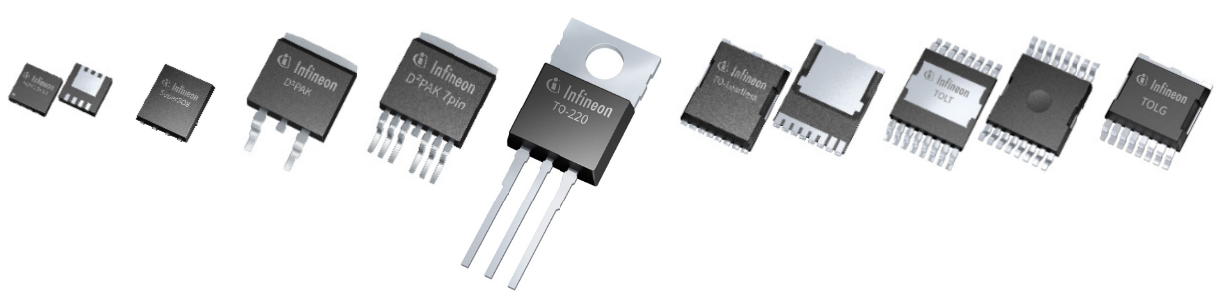
Key Applications

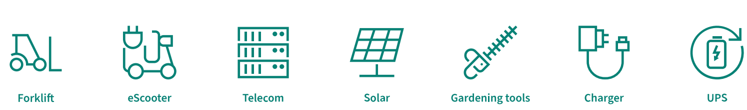
- Forklift
- eScooter
- Telecom and Server
- Solar
- Power and gardening tools
- Charger
- UPS

$R_{DS(on)}$ max at 10 V in TOLL



Which is the right MOSFET voltage for your application?
OptiMOS™ 6 135 V and 150 V new product families complement the recently released OptiMOS™ 6 120 V. With a complete portfolio, we offer our customers alternatives to choose between higher breakdown voltage margin and lower losses.





Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

* Coming soon

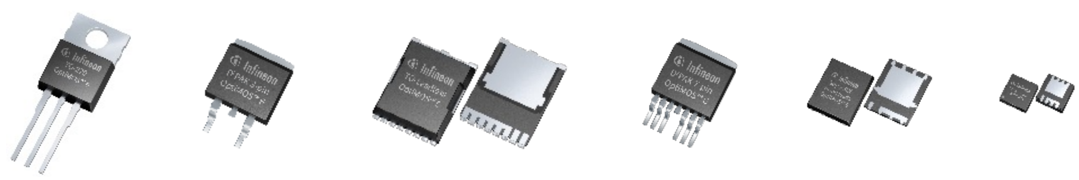
OptiMOS™ 6 200 V

Setting the new industry standard

The OptiMOS™ 6 200 V employs an advanced cell design to set the new technology standard in its voltage class. It addresses the need for high power density, efficiency, and reliability. The OptiMOS™ 6 200 V technology was designed for optimal performance in motor drive applications such as light electric vehicles (LEV), forklifts, and drones. It features industry-leading $R_{DS(on)}$, improved switching and current sharing capability, enabling high power density, less paralleling, and excellent EMI performance. The improved switching behavior makes the OptiMOS™ 6 200 V family an ideal choice for switching applications such as telecom, server, or audio. Additionally, the combination of wide SOA and industry-leading $R_{DS(on)}$ results in a perfect fit for static switching applications such as battery management systems (BMS).

Features and benefits

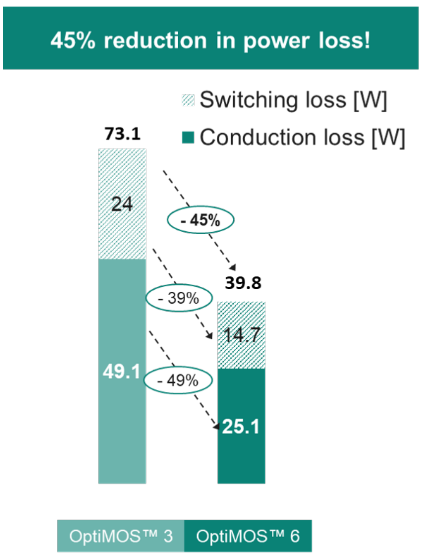
Key features	Key benefits
– Best-in-class $R_{DS(on)}$ in 200 V	– Low conduction lossses
– Lower $Q_{rr(typ)}$ and improved diode softness compared to OptiMOS™ 3	– Low switching losses
– Improved capacitance linearity	– Stable operation with improved EMI
– Wide SOA	– Enhanced robustness
– Tight $V_{GS(th)}$ parametric spread	– Less paralleling required and better current sharing

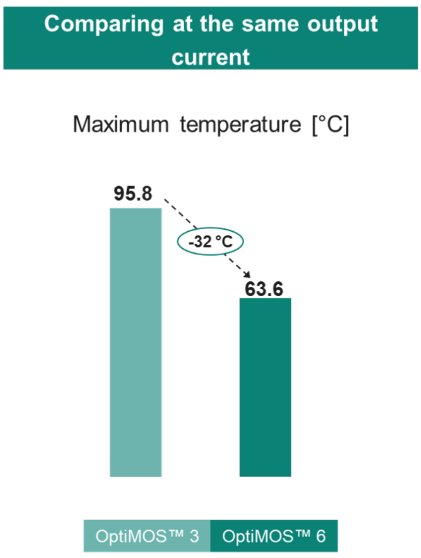


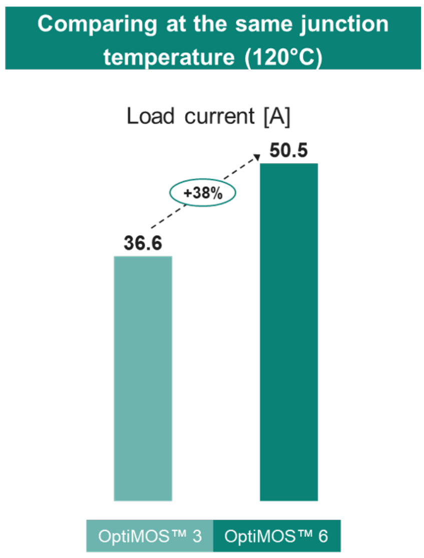
Application test results

OptiMOS™ 6 vs. OptiMOS™ 3 in 200 V

- 42 percent lower $R_{DS(on)}$ enables reduced conduction losses
- Improved switching behavior enables reduced switching losses







- At the same output power, the maximum device temperature reduction of 32°C was achieved.
- At the same Junction temperature, 38 percent higher load current was achieved.

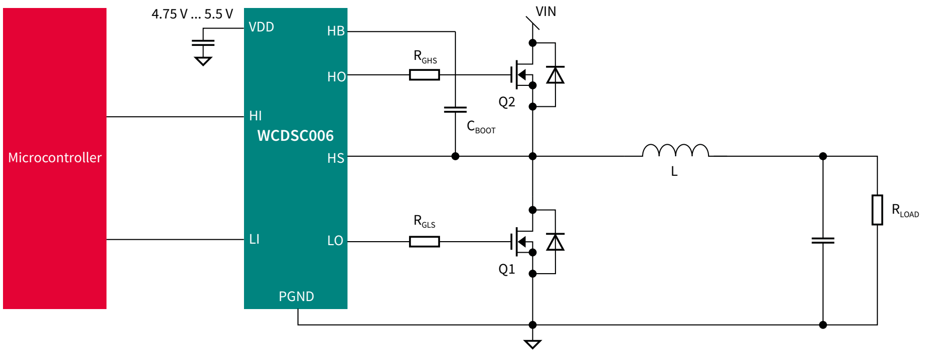
Click here to learn more:

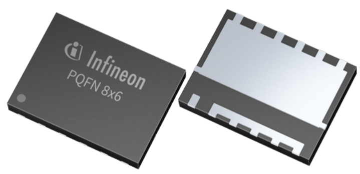
www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

OptiMOS™ 40 V in PQFN 8x6

A high-power density package family

Infineon's family of OptiMOS™ N-channel power MOSFETs in PQFN 8x6 packages are benchmark products optimized for very low $R_{DS(on)}$ and high-current capability, alongside Infineon's renowned quality standard for robust industry designs. This makes the PQFN 8x6 MOSFET package the ideal solution for various battery powered, battery protection, and battery formation applications requiring low package resistance and high-current handling MOSFETs. The PQFN 8x6 family of MOSFETs is available in a small 8x6 mm leadless package to reduce the physical footprint and overall BOM of end products. The improved $R_{DS(on)}$ and I_D ratings, continuous and pulsed, enable increased battery run time and higher power density.





Features and benefits

Key features	Key benefits
– >50% reduction in footprint compared to TOLL	– Power density increase enabling higher power designs while maintaining the space contraints
– Best-in-class continuous current rating and competitive avalanche energy rating	– Good design martin in worst case conditionals (e.g., in-rush motor stall/short)
– Excellent package area utilization	– Ultralow $R_{DS(on)}$ with good thermal resistance R_{thJC}
– Ultralow package parasitics	– EMI improvement due to lower device parasitics
– Footprint compatability with SuperSO8 5x6	– Simple PCB design change based on SuperSO8 provides scalability across varying power requirements

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

Small-signal/small-power MOSFETs -250 to 600 V

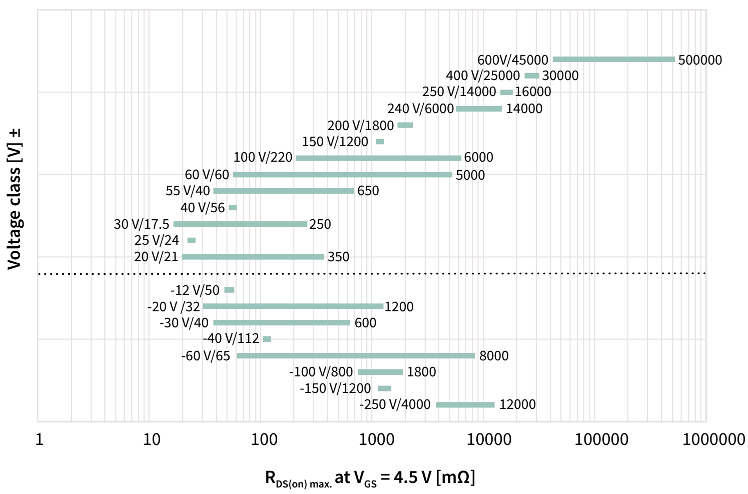
Combining latest high-performance silicon technology with small and innovative packaging

Small-signal/small power products are ideally suited for space-constrained automotive and non-automotive applications. With an optimal price/performance ratio and small footprint packages, Infineon's small-signal and small-power MOSFETs are the best fit for a wide range of applications and circuits. These include low-voltage drives, linear battery charger, battery protection, load switches, DC-DC converters, reverse polarity protection and many more.

The entire family includes different packages:
SOT-223, SOT-23, SOT-323, SOT-363, SOT-89, TSOP-6, and SC59

The product portfolio covers N-channel and P-channel enhancement mode MOSFETs as well as N-channel depletion mode products:
- -250 to -12 V P-channel enhancement mode (available in single and dual configurations)
- 20 to 600 V N-channel enhancement mode (available in single and dual configurations)
- -20/+20 V and -30/+30 V complementary (P + N channel) enhancement mode
- 60 to 600 V N-channel depletion mode

Key features	Key benefits
– Products available in Automotive, Industrial, and Standard qualification levels	– Suitable for automotive and high quality demanding applications
– Four $V_{GS(th)}$ classes available for 1.8 V, 2.5 V, 4.5 V, and 10 V gate drives	– Easy interface to MCU
– ESD protected P-channel parts	– Reduction of design complexity
– V_{DS} range from -250 to 600 V	– Wide selection of products available
– RoHS compliant and halogen free	– Environmentally friendly



Small-signal/small-power MOSFETs are available in seven industry-standard package types ranging from the largest SOT-223 to the smallest SOT-323.

Products are offered in single, dual and complementary configurations and are suitable for a wide range of applications, including battery protection, LED lighting, low-voltage drives, and DC-DC converters.

SOT-363	SOT-323	SOT-23	TSOP-6	SC59	SOT-89	SOT-223
						

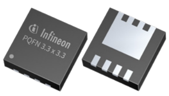
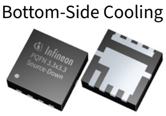
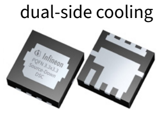
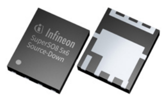
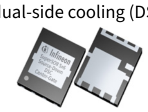
Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

OptiMOS™ power MOSFETs 15 -150 V Source-Down

An innovative PQFN 3.3x3.3 mm² and PQFN 5x6 mm² product family

Once again, Infineon is setting a new standard in MOSFET performance with the new Source-Down package to support the requirement for high power density and optimized system-level efficiency. In comparison with a normal Drain-Down device, in the Source-Down technology, the source potential is connected to the thermal pad. The OptiMOS™ power MOSFET 3.3x3.3 mm² Source-Down packages are now available in 15-150 V in BSC (bottom-side cooling) and in DSC (dual-side cooling). The latest addition to the family is the OptiMOS™ power MOSFET 5x6 mm² Source-Down, available in BSC. Optional Center-Gate footprint is also available for both families. Here the gate pin is moved to the center supporting easy parallel configuration of multiple MOSFETs. With the larger drain-to-source creepage distance, it is possible to connect the gates of multiple devices on a single PCB layer.

	Standard Drain-Down	New Source-Down Bottom-Side Cooling	New Source-Down dual-side cooling	SuperSO8	PQFN 5x6 Source-Down	PQFN 5x6 Source-Down dual-side cooling (DSC)
						
	PQFN 3.3 x 3.3 mm standard Drain-Down footprint	PQFN 3.3 x 3.3 mm Available in Standard and Center-Gate Source-Down footprint	PQFN 3.3 x 3.3 mm Available in Standard and Center-Gate Source-Down footprint	For highest efficiency and power manageme	Highest power density per area	Optimized thermal performance
R_{thJC} [C/W]	1.8°C/W	1.4°C/W	1.4°C/W	0.8°C/W	0.45°C/W	0.45°C/W

Features and benefits

Key features

- Major reduction in $R_{DS(on)}$, up to 30% due to larger silicon die in same package outline
- Improved R_{thJC} overcurrent PQFN package technology
- High power density
- Standard-Gate and Center-Gate footprint options
- Available in standard and logic level options

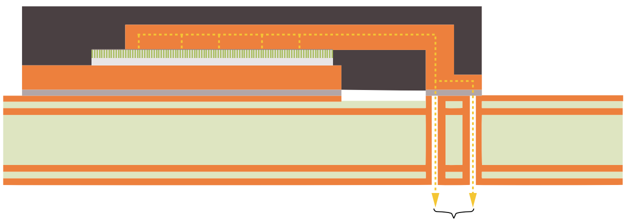
Key benefits

- Enabling highest power density and performance
- Superior thermal performance
- Form factor reduction
- Optimized layout possibilities
- Simplifying parallel configuration of multiple MOSFETs with Center-Gate footprints
- Simplified gate drive

Optimized thermal management

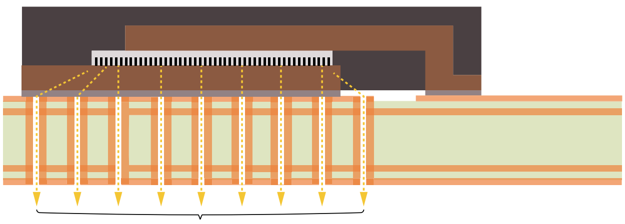
Drain-Down

PQFN 3.3x3.3



Source-Down

PQFN 3.3x3.3



In the Source-Down package technology, the heat is dissipated directly into the PCB through a thermal pad instead of over the bond wire or the copper clip. The package significantly improves the thermal resistance (R_{thJC}) of this product family. In most cases, thermal vias cannot be used on the thermal pad if it is connected to the noisy switch node potential. With Source-Down, the thermal pad of the low-side MOSFET is now on the ground potential enabling the use of thermal vias right underneath the device. This considerably improves the thermal performance and the power density in the end application.

Click here to learn more:

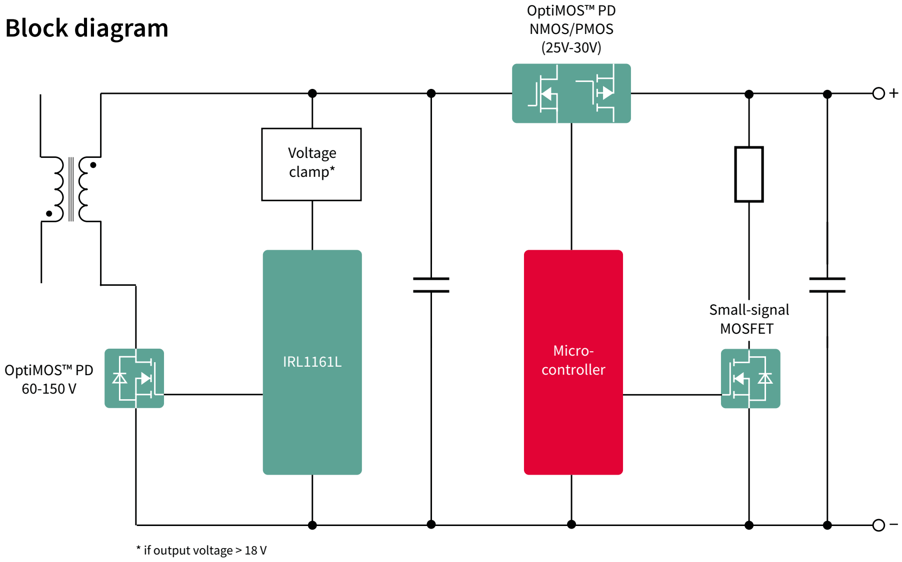
www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

OptiMOS™ PD

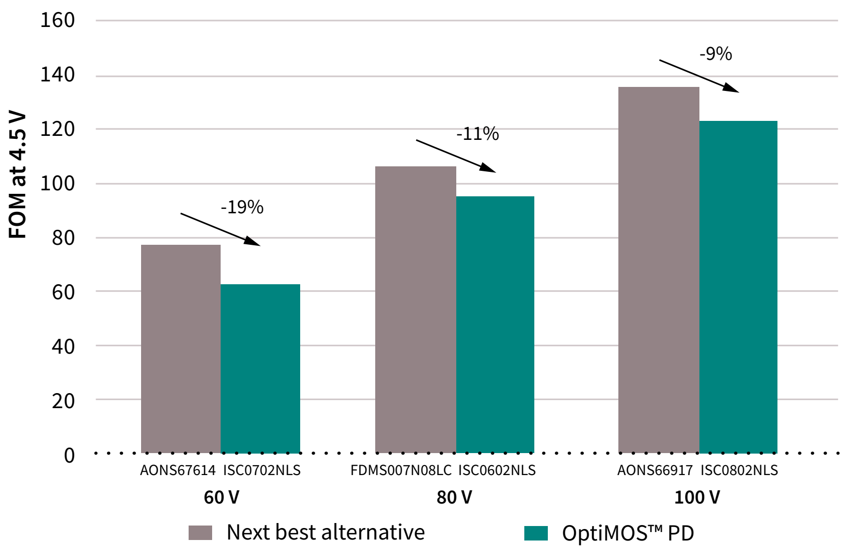
The best fit for USB-PD and fast charger designs

OptiMOS™ PD is Infineon‘s new MOSFET portfolio representing the best fit for USB-PD and fast charger designs and is available in 2 small standard packages: PQFN 3.3x3.3 and SuperSO8. Logic level availability enables parts to be fully driven from 4.5 V or directly from microcontrollers resulting in a lower part count in the application. The portfolio ranges from 25 V up to 150 V MOSFETs where 25 V and 30 V products represent the fit as load switch and 60-150 V parts are the optimal choice to function as synchronous rectification FETs in charger and adapter designs.

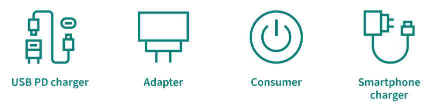
Block diagram



OptiMOS™ PD comparison of $R_{DS(on)}$ in 60 V, 80 V, and 100 V



The OptiMOS™ PD family features MOSFETs offering a low on-state resistance ($R_{DS(on)}$), less switching losses as well as low gate-, output- and reverse-recovery charges. The reduction in overall losses results in an excellent price/performance ratio leading to a decrease in total system BOM cost.

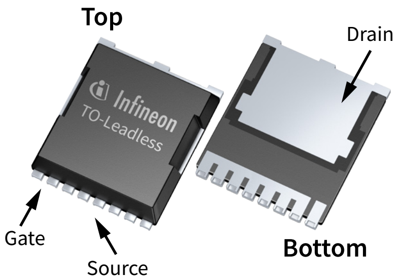


Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

TOLx family

TO-Leadless (TOLL)

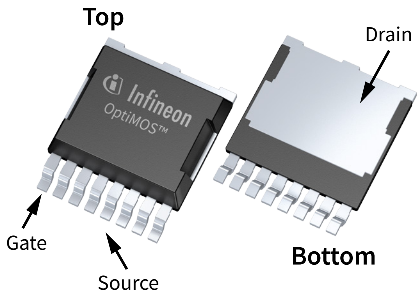


Optimized for high power applications

TO-Leadless is optimized to handle currents up to 500 A, increasing power density with a substantial reduction in footprint. A footprint reduction of 30 percent compared to D^2PAK, together with a height reduction of 50 percent, results in an overall space saving of 60 percent enabling much more compact designs.

Key features	Key benefits
– Best-in-class technology	– High performance capability
– High current rating > 500 A	– High system reliability
– 60% space reduction compared to D^2PAK 7-pin	– Optimized board utilization

TOLG (Gullwing leads)

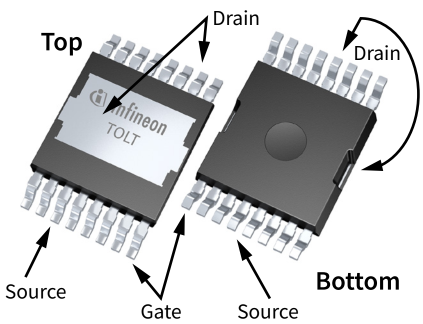


Optimized for better TCoB robustness

TOLG package offers a compatible footprint to the TO-Leadless with the additional feature of Gullwing leads resulting in two times higher TCoB performances compared to TO-Leadless. This package is excellent on aluminum insulated metal substrate boards (Al-IMS).

Key features	Key benefits
– Best-in-class technology	– High performance capability
– High current rating > 450 A	– High system reliability
– Low ringing and voltage overshoot	– High efficiency and lower EMI
– 60% space reduction compared to D2PAK 7-pin	– Optimized board utilization
– Gullwing leads	– High thermal cycling on board performance

TOLT (Top-side cooling)



Optimized for superior thermal performance

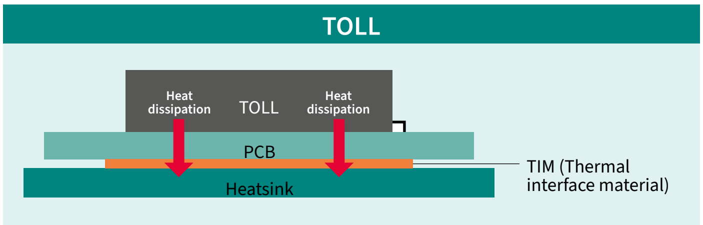
TOLT is the new top-side cooling package within the TOLx family. With top-side cooling, the drain is exposed at the surface of the package allowing for 95 percent of the heat to be dissipated directly to the heatsink, achieving 20 percent better R_{thJA} and 50 percent improved R_{thJC} compared to the TOLL package. With bottom-side cooling packages, like the TOLL or the D^2PAK, the heat is dissipated via the PCB to the heatsink resulting in high power losses.

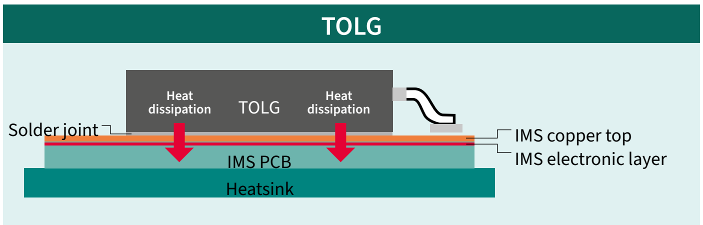
Key features	Key benefits
– Low $R_{DS(on)}$	– Reduction in conduction losses
– High current rating	– Increased product ruggedness
– Top-side cooling	– Superior thermal performance
– Negative standoff	– Minimize thermal resistance to heatsink

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

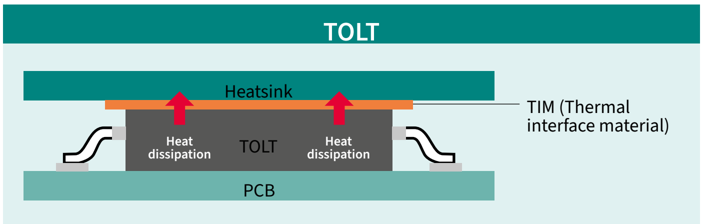
TOLx family – Cooling concept





With TOLL/TOLG, board mounting, the heat is dissipated through the PCB to the heatsink.
Due to the PCB thermal resistance, power losses occur.

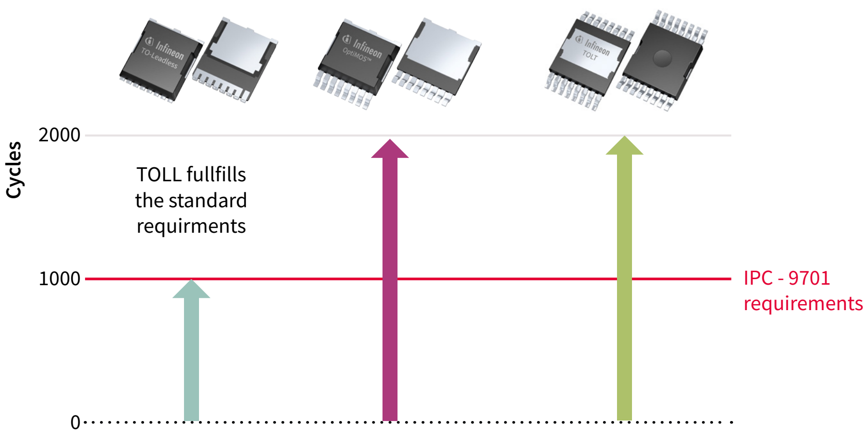
MOSFET (including chip, die attached and drain tab) → **Solder** → **PCB** → **TIM/ Thermal grease** → **Heatsink**



With top-side cooling setup, the drain pad is exposed on the top of the package allowing the majority of the heat to be dissipated into the top-mounted heatsink. This pulls heat away from the PCB resulting in at least 20 percent better R_{thJA} compared to standard over-molded TOLL.

MOSFET (including chip, die attached and drain tab) → **TIM/ Thermal grease** → **Heatsink**

Thermal cycling on IMS board (TCoB) performance



Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

OptiMOS™ 7 15 V logic level

DC-DC LED Mainboard Notebook Onboard VRD/VRM

$R_{DS(on),max}$ at V_{GS}=4.5 V [mΩ]	PQFN 3.3x3.3 Source-Down	PQFN 3.3x3.3 Source-Down dual-side cooling (DSC)	PQFN 2x2
< 1	IQE004NE1LM7 $R_{DS(on)}$=0.57 mΩ	IQE004NE1LM7SC $R_{DS(on)}$=0.57 mΩ	
	IQE004NE1LM7CG $R_{DS(on)}$=0.57 mΩ	IQE004NE1LM7CGSC $R_{DS(on)}$=0.57 mΩ	
2-4			ISK018NE1LM7 $R_{DS(on)}$=2.15 mΩ

OptiMOS™ and StrongIRFET™ 20 V (super) logic level

DC-DC LED Mainboard Notebook Onboard VRD/VRM

$R_{DS(on),max}$ at V_{GS}=4.5 V [mΩ]	PQFN 2x2	PQFN 3.3x3.3	SuperSO8
< 1			IRFH6200TRPBF 1) $R_{DS(on)}$=0.99 mΩ
2-4		IRLHM620TRPBF** 1) $R_{DS(on)}$=2.5 mΩ	
> 10	IRLHS6242TRPBF $R_{DS(on)}$=11.7 mΩ		

OptiMOS™ and StrongIRFET™ 25 V logic level

DC-DC LED Mainboard Motor control Notebook Onboard VRD/VRM

$R_{DS(on),max}$ at V_{GS}=10 V [mΩ]	PQFN 2x2	PQFN 3.3x3.3	SuperSO8	PQFN 3.3x3.3 Source-Down	PQFN 3.3x3.3 Source-Down DSC (dual-side cooling)	PQFN 5x6 Source-Down	PQFN 5x6 Source-Down DSC (dual-side cooling)
< 1			BSC004NE2LS5 $R_{DS(on)}$=0.45 mΩ	IQE006NE2LM5 $R_{DS(on)}$=0.65 mΩ	IQE006NE2LM5CGSC $R_{DS(on)}$=0.58 mΩ	IQDH29NE2LM5CG $R_{DS(on)}$=0.29 mΩ	IQDH29NE2LM5SC $R_{DS(on)}$=0.29 mΩ
				IQE006NE2LM5CG $R_{DS(on)}$=0.65 mΩ	IQE006NE2LM5SC $R_{DS(on)}$=0.58 mΩ	IQDH29NE2LM5 $R_{DS(on)}$=0.29 mΩ	IQDH29NE2LM5CGSC $R_{DS(on)}$=0.29 mΩ
		BSZ009NE2LS5 $R_{DS(on)}$=0.9 mΩ	BSC009NE2LS5I* $R_{DS(on)}$=0.95 mΩ			IQDH29NE2LM5SC Rds(on)=0.29 mΩ	
		BSZ011NE2LS5I $R_{DS(on)}$=1.1 mΩ				IQDH29NE2LM5CGSC Rds(on)=0.29 mΩ	
		BSZ013NE2LS5I* $R_{DS(on)}$=1.3 mΩ					
		BSZ014NE2LS5IF** $R_{DS(on)}$=1.45 mΩ	BSC015NE2LS5I* $R_{DS(on)}$=1.5 mΩ				
			BSC018NE2LS $R_{DS(on)}$=1.8 mΩ				
		BSZ018NE2LS $R_{DS(on)}$=1.8 mΩ					
2-4	ISK024NE2LM5 $R_{DS(on)}$=2.4 mΩ	BSZ031NE2LS5 $R_{DS(on)}$=3.1 mΩ					
			BSC026NE2LS5 $R_{DS(on)}$=2.6 mΩ				
			BSC032NE2LS $R_{DS(on)}$=3.2 mΩ				
4-10		BSZ060NE2LS $R_{DS(on)}$=6.0 mΩ	BSC050NE2LS $R_{DS(on)}$=5.0 mΩ				

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

* Optimized for resonant applications (e.g. LLC converter) ** Monolithically-integrated Schottky-like diode *** $R_{DS(on),max}$ at V_{GS}=4.5 V 1) 2.5 V_{GS} capable

Consumer Mainboard Notebook Server

OptiMOS™ 25 V in Power Block 5x6

Part number	Package	Monolithically-integrated Schottky-like diode	BV_{DSS} [V]	$R_{DS(on),\,max.}$ [mΩ] at V_{GS}=4.5 V max.		Q_G [nC] at V_{GS}=4.5 V typ.	
				High-side	Low-side	High-side	Low-side
BSG0810NDI	SuperSO8	✓	25	4.0	1.2	5.6	16.0
BSG0811ND	SuperSO8	–	25	4.0	1.1	5.6	20.0
BSG0813NDI	SuperSO8	✓	25	4.0	1.7	5.6	12.0

OptiMOS™ 25/30 V symmetrical and asymmetrical dual N-channel MOSFETs in 5x6 and 3x3 PQFN

Integrates the low-side and high-side MOSFET of a synchronous DC-DC converter into a single package.
The small outline and the interconnection of the two MOSFETs within the package minimize the loop inductance which boosts efficiency.

Part number	Package	Monolithically-integrated Schottky-like diode	BV_{DSS} [V]	$R_{DS(on),\,max.}$ [mΩ] at V_{GS}=4.5 V max.		Q_G [nC] at V_{GS}=4.5 V typ.	
				High-side	Low-side	High-side	Low-side
BSC0911ND*	asymmetrical dual 5x6	–	25	4.8	1.7	7.7	25
BSC0921NDI*	asymmetrical dual 5x6	✓	30	7	2.1	5.8	21
BSC0923NDI*	asymmetrical dual 5x6	✓	30	7	3.7	5.2	12.2
BSC0924NDI*	asymmetrical dual 5x6	✓	30	7	5.2	5.2	8.6

OptiMOS™ 40 V and 100 V in Symmetrical Power Block 6.3x6.0

Part number	Package	Dual-side cooling	BV_{DSS} [V]	$R_{DS(on)}$ [mΩ] at V_{GS} = 10 V max	Q_G [nC] at V_{GS} = 10 V typ.
ISG0613N04NM6H	Power Block 6.3x6.0	–	40 V	0.88	69
ISG0613N04NM6HSC	Power Block 6.3x6.0	✓	40 V	0.88	69
ISG0616N10NM5HSC	Power Block 6.3x6.0	✓	100 V	3.4	52

OptiMOS™/StrongIRFET ™ 30 V - 100 V dual N-channel MOSFETs

Integrates two independent N-channel MOSFETs into a single package for high power density and compact design.
Ideal for DC motors with power rating < 200 W

Part number	Package	Monolithically integrated Schottky like diode	BV_{DSS} [V]	$R_{DS(on),\,max.}$ [mΩ] at V_{GS}=10 V max.		Q_G [nC] at V_{GS}=10 V typ.	
				High-side	Low-side	High-side	Low-side
IRF7907*	asymmetrical dual SO8	–	30	16.4	11.8	6.7**	14**
IRLHS6376*	symmetrical dual PQFN 2x2	–	30	63**	63**	2.8**	2.8**
BSC072N04LD*	symmetrical dual 5x6	–	40	7.2	7.2	39	39
BSC076N04ND	symmetrical dual 5x6	–	40	7.6	7.6	28	28
BSC155N06ND	symmetrical dual 5x6	–	60	15.5	15.5	21	21
IRF7351	symmetrical dual SO8	–	60	17.8	17.8	24	24

Dual N-channel audio MOSFETs

Digital audio MOSFET half-bridges are specifically designed for class D audio amplifier applications.
They consist of two power MOSFET switches connected in half-bridge configuration.

Part number	Package	Monolithically-integrated Schottky like diode	BV_{DSS} [V]	$R_{DS(on),\,max.}$ [mΩ] at V_{GS}=4.5 V max.		Q_G [nC] at V_{GS}=4.5 V typ.	
				High-side	Low-side	High-side	Low-side
IRFI4212H-117P	half-bridge in TO220FP	–	100	72.5	72.5	12	12

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

* Logic level (capable of 4.5 V gate drive) ** $R_{DS(on)}$ at V_{GS}=4.5V 1) Coming soon

OptiMOS™ and StrongIRFET™ 30 V normal level

DC-DC Mainboard Motor control Notebook Onboard VRD/VRM

$R_{DS(on),\,max.}$ at V_{GS}=10 V [mΩ]	SuperSO8	TOLL (TO-Leadless)
< 1		IPT004N03L $R_{DS(on)}$=0.04 mΩ
2-4	IRF8788TRPBF $R_{DS(on)}$=2.8 mΩ	
	IRF7862TRPBF $R_{DS(on)}$=3.3 mΩ	
	IRF7832TRPBF $R_{DS(on)}$=4.0 mΩ	
4-10	IRF8736TRPBF $R_{DS(on)}$=4.8 mΩ	

OptiMOS™ and StrongIRFET™ 30 V logic level

DC-DC Mainboard Motor control Notebook Onboard VRD/VRM

$R_{DS(on),\,max.}$ at V_{GS}=10 V [mΩ]	TO-252 (DPAK)	TO-220
1-2		IPP011N03LF2S $R_{DS(on)}$=1.1 mΩ
		IPP018N03LF2S $R_{DS(on)}$=1.8 mΩ
		IPP020N03LF2S $R_{DS(on)}$=2.0 mΩ
2-4	IPD031N03L G $R_{DS(on)}$=3.1 mΩ	IPP023N03LF2S $R_{DS(on)}$=2.3 mΩ
		IPP033N03LF2S $R_{DS(on)}$=3.3 mΩ
4-10		IPP044N03LF2S $R_{DS(on)}$=4.4 mΩ
		IPP050N03LF2S $R_{DS(on)}$=5.0 mΩ

OptiMOS™ and StrongIRFET™ 30 V logic level

DC-DC Mainboard Motor control Notebook Onboard VRD/VRM

$R_{DS(on),\,max.}$ at V_{GS}=10 V [mΩ]	PQFN 3.3 x 3.3 Source-Down	PQFN 3.3x3.3 Source-Down DSC (dual-side cooling)	PQFN 5x6 Source-Down	PQFN 5x6 Source-Down DSC (dual-side cooling)	PQFN 3.3 x 3.3	SuperSO8
< 1	IQE008N03LM5 $R_{DS(on)}$=0.85 mΩ	IQE008N03LM5CGSC $R_{DS(on)}$ = 0.85 mΩ	IQDH35N03LM5 $R_{DS(on)}$ = 0.35 mΩ	IQDH35N03LM5SC $R_{DS(on)}$=0.35 mΩ		BSC005N03LS5 $R_{DS(on)}$=0.55 mΩ
	IQE008N03LM5CG $R_{DS(on)}$=0.85 mΩ	IQE008N03LM5SC $R_{DS(on)}$ = 0.85 mΩ	IQDH35N03LM5CG $R_{DS(on)}$ = 0.35 mΩ	IQDH35N03LM5CGSC $R_{DS(on)}$=0.35 mΩ		BSC005N03LS5I* $R_{DS(on)}$=0.5 mΩ
1-2						BSC011N03LS $R_{DS(on)}$=1.1 mΩ
						BSC011N03LSI* $R_{DS(on)}$=1.1 mΩ
					BSZ0500NSI* $R_{DS(on)}$=1.5 mΩ	
					BSZ019N03LS $R_{DS(on)}$=1.9 mΩ	
					BSZ0501NSI* $R_{DS(on)}$=2.0 mΩ	BSC0901NS $R_{DS(on)}$=1.9 mΩ
						BSC0501NSI** $R_{DS(on)}$=1.9 mΩ

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

*Monolithically-integrated Schottky-like diode **For more information on the product, contact our product support

OptiMOS™ and StrongIRFET™ 30 V logic level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	PQFN 3.3x3.3	SuperSO8	PQFN 2x2
2-4			ISK036N03LM5 $R_{DS(on)}$=3.6 mΩ
	BSZ0902NS $R_{DS(on)}$=2.6 mΩ		
	BSZ0502NSI** $R_{DS(on)}$=2.8 mΩ	BSC0902NS $R_{DS(on)}$=2.6 mΩ	
		BSC0902NSI* $R_{DS(on)}$=2.8 mΩ	
		BSC030N03LS G $R_{DS(on)}$ =3.0 mΩ	
		BSC0504NSI* $R_{DS(on)}$=3.7 mΩ	
	BSZ0904NSI** $R_{DS(on)}$=4.0 mΩ		
4-10	BSZ0506NS $R_{DS(on)}$=4.4 mΩ	BSC0906NS $R_{DS(on)}$=4.5 mΩ	
	BSZ065N03LS $R_{DS(on)}$=6.5 mΩ		

OptiMOS™ and StrongIRFET™ 40 V normal level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	TO-252 (DPAK)	TO-263 (D²PAK)	TO-263 (D²PAK 7-pin)	TO-220	PQFN 5.x6 Source-Down	PQFN 5x6 Source-Down DSC (dual-side cooling)	sTOLL	SuperSO8	TOLL (TO-Leadless)
<1					IQD005N04NM6CG $R_{DS(on)}$ = 0.5 mΩ	IQD005N04NM6SC $R_{DS(on)}$=0.47 mΩ	IST006N04NM6 $R_{DS(on)}$=0.6 mΩ	ISC007N04NM6 $R_{DS(on)}$=0.7 mΩ	IRL40T209 $R_{DS(on)}$=0.72 mΩ
					IQD005N04NM6 $R_{DS(on)}$ = 0.5 mΩ	IQD005N04NM6CGSC $R_{DS(on)}$=0.47 mΩ		ISC010N04NM6 $R_{DS(on)}$=1.0 mΩ	
			IPF009N04NF2S $R_{DS(on)}$ = 0.9 mΩ				IST010N04NM5 $R_{DS(on)}$=1.0 mΩ		
1-2								ISC012N04NM6 $R_{DS(on)}$ =1.2 mΩ	
		IPB012N04NF2S $R_{DS(on)}$ = 1.25 mΩ		IPP011N04NF2S $R_{DS(on)}$ = 1.15 mΩ					
				IPP013N04NF2S $R_{DS(on)}$ = 1.3 mΩ					
		IPB014N04NF2S $R_{DS(on)}$ = 1.45 mΩ	IPF013N04NF2S $R_{DS(on)}$ = 1.35 mΩ	IPP015N04NF2S $R_{DS(on)}$ = 1.5 mΩ				ISC015N04NM5 $R_{DS(on)}$=1.5 mΩ	
		IRFS7437TRLPBF $R_{DS(on)}$ =1.8 mΩ						ISC017N04NM5 $R_{DS(on)}$=1.7 mΩ	
								ISC019N04NM5 $R_{DS(on)}$=1.9 mΩ	
2-4	IPD023N04NF2S $R_{DS(on)}$ = 2.3 mΩ			IRFB7440PBF $R_{DS(on)}$ = 2.5 mΩ				IRFH7440TRPBF $R_{DS(on)}$ =2.4 mΩ	
	IPD029N04NF2S $R_{DS(on)}$ = 2.9 mΩ							ISC028N04NM5 $R_{DS(on)}$=2.8 mΩ	
4-10								ISC046N04NM5 $R_{DS(on)}$=4.6 mΩ	
								ISC058N04NM5 $R_{DS(on)}$=5.8 mΩ	

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

** Monolithically-integrated Schottky-like diode
*** $R_{DS(on)}$, max. at V_{GS}=4.5 V
**** Normal level
1) 2.5 V_{GS} capable

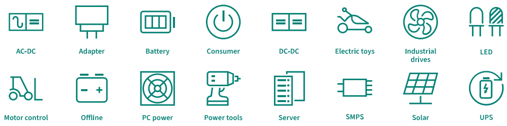
OptiMOS™ and StrongIRFET™ 40 V logic level

$R_{DS(on),\,max.}$ at V_{GS}=10 V [mΩ]	TO-263 (D2PAK)	PQFN 5x6 Source-Down	PQFN 2x2	PQFN 5x6 Source-Down DSC (dual-side cooling)	PQFN 3.3x3.3 Source-Down	PQFN 3.3x3.3 Source-Down DSC (dual-side cooling)	PQFN 3.3x3.3	SuperSO8	SuperSO8 dual-side cooling (DSC)
<1		IQDH45N04LM6CG $R_{DS(on)}$ = 0.45 mΩ		IQDH45N04LM6SC $R_{DS(on)}$=0.45 mΩ				ISCH42N04LM7 $R_{DS(on)}$=0.42 mΩ	BSC007N04LS6SC $R_{DS(on)}$=0.7 mΩ
				IQDH45N04LM6CGSC $R_{DS(on)}$=0.45mΩ				BSC007N04LS6 $R_{DS(on)}$=0.7 mΩ	BSC009N04LSSC $R_{DS(on)}$ = 0.94 mΩ
1-2					IQE013N04LM6 $R_{DS(on)}$ = 1.35 mΩ	IQE013N04LM6CGSC* $R_{DS(on)}$ = 1.35 mΩ			
	IRL40S212 $R_{DS(on)}$ =1.9 mΩ				IQE013N04LM6CG $R_{DS(on)}$ = 1.35 mΩ	IQE013N04LM6SC* $R_{DS(on)}$ = 1.35 mΩ		BSC010N04LS6 $R_{DS(on)}$ =1.0 mΩ	
								BSC010N04LSI $R_{DS(on)}$ =1.05 mΩ	
								ISC012N04LM6 $R_{DS(on)}$ =1.2 mΩ	
								BSC014N04LS $R_{DS(on)}$ =1.4 mΩ	
							BSZ018N04LS6 $R_{DS(on)}$=1.8 mΩ	BSC014N04LSI $R_{DS(on)}$ =1.45 mΩ	
								BSC019N04LS $R_{DS(on)}$ =1.9 mΩ	
2-4							BSZ021N04LS6 $R_{DS(on)}$ =2.1 mΩ		
							BSZ024N04LS6 $R_{DS(on)}$ =2.4 mΩ		
								BSC026N04LS $R_{DS(on)}$ =2.6 mΩ	
							BSZ028N04LS $R_{DS(on)}$ =2.8 mΩ		
							BSZ034N04LS $R_{DS(on)}$ =3.4 mΩ	BSC032N04LS $R_{DS(on)}$ =3.2 mΩ	
4-10			ISK057N04LM6 $R_{DS(on)}$ = 5.75 mΩ						
							BSZ063N04LS6 $R_{DS(on)}$ =6.3 mΩ		
								BSC059N04LS6 $R_{DS(on)}$ =5.9 mΩ	

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

* Coming soon



OptiMOS™ and StrongIRFET™ 60 V normal level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	TO-252 (DPAK)	TO-263 (D²PAK)	TO-263 (D²PAK 7-pin)	TO-262 (I²PAK)	PQFN 5x6 Source-Down	TO-220	TO-220 FullPAK	TO-247	SuperSO8 DSC (dual side cooling)
>1					IQD009N06NM5CG $R_{DS(on)}$ = 0.9 mΩ				
					IQD009N06NM5 $R_{DS(on)}$ = 0.9 mΩ				
1-2			IPB010N06N 1) $R_{DS(on)}$ =1.0 mΩ						
			IPF010N06NF2S $R_{DS(on)}$ = 1.05 mΩ						
			IPF012N06NF2S $R_{DS(on)}$ = 1.2 mΩ						
		IPB013N06NF2S $R_{DS(on)}$ = 1.3 mΩ	IPB014N06N $R_{DS(on)}$ = 1.4 mΩ						
						IPP014N06NF2S $R_{DS(on)}$=1.4 mΩ			BSC014N06NSSC $R_{DS(on)}$ = 1.4 mΩ
						IPP016N06NF2S $R_{DS(on)}$=1.6 mΩ			BSC016N06NSSC $R_{DS(on)}$ = 1.6 mΩ
						IPP019N06NF2S $R_{DS(on)}$=1.9 mΩ			
		IPB015N06NF2S $R_{DS(on)}$ = 1.5 mΩ							
			IPF016N06NF2S $R_{DS(on)}$ = 1.7 mΩ						
		IPB018N06NF2S $R_{DS(on)}$ = 1.8 mΩ							
						IPP020N06N 1) $R_{DS(on)}$ =2.0 mΩ		IRFP7530PBF $R_{DS(on)}$ =2.0 mΩ	
2-4	IPD025N06N 1) $R_{DS(on)}$ =2.5 mΩ								BSC028N06NSSC $R_{DS(on)}$ = 2.8 mΩ
	IPD028N06NF2S $R_{DS(on)}$ = 2.85 mΩ			IPI029N06N 1) $R_{DS(on)}$ =2.9 mΩ					
		IPB026N06N 1) $R_{DS(on)}$ =2.6 mΩ				IPP029N06N 1) $R_{DS(on)}$ =2.9 mΩ			
		IPB029N06NF2S $R_{DS(on)}$ = 2.9 mΩ					IPA029N06N 1) $R_{DS(on)}$ =2.9 mΩ		
						IPP030N06NF2S $R_{DS(on)}$=3.05 mΩ			
	IPD033N06N 1) $R_{DS(on)}$=3.3 mΩ								
	IPD038N06NF2S $R_{DS(on)}$ = 3.85 mΩ	IRFS7537TRLPBF $R_{DS(on)}$ =3.3 mΩ				IPP040N06NF2S $R_{DS(on)}$=4.00 mΩ		IRFP7537PBF $R_{DS(on)}$ =3.3 mΩ	
							IPA040N06N 1) $R_{DS(on)}$ =4.0 mΩ		
4-10						IPP040N06N 1) $R_{DS(on)}$ =4.0 mΩ			
	IPD053N06N 1) $R_{DS(on)}$ =5.3 mΩ								
		IPB057N06N 1) $R_{DS(on)}$ =5.7 mΩ				IRFB7545PBF $R_{DS(on)}$ =5.9 mΩ			
	IRFR7546TRPBF $R_{DS(on)}$ =7.9 mΩ						IPA060N06N 1) $R_{DS(on)}$ =6.0 mΩ		

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

1) 6 V rated ($R_{DS(on)}$ also specified at V_{GS}=6 V)

AC-DC, Adapter, Battery, Consumer, DC-DC, Electric toys, Industrial drives, LED, Motor control, Offline, PC power, Power tools, Server, SMPS, Solar, UPS

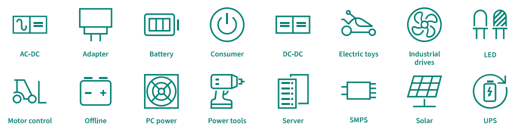
OptiMOS™ and StrongIRFET™ 60 V normal level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	PQFN 3.3x3.3	PQFN 3.3x3.3 Source-Down	PQFN 3.3x3.3 Source-Down DSC (dual-side cooling)	PQFN 5x6 Source-Down dual-side cooling (DSC)	SO8	SuperSO8	TOLT	TO-Leadless	sTOLL
<1				IQD009N06NM5SC $R_{DS(on)}$=0.9 mΩ			IPTC007N06NM5 $R_{DS(on)}$ = 0.7 mΩ	IPT007N06N [1] $R_{DS(on)}$ =0.7 mΩ	IST011N06NM5 $R_{DS(on)}$ = 1.1 mΩ
				IQD009N06NM5CGSC $R_{DS(on)}$=0.9 mΩ					
1-2						ISC010N06NM5 $R_{DS(on)}$ =1.05 mΩ	IPTC012N06NM5 $R_{DS(on)}$ = 1.2 mΩ		IST015N06NM5 $R_{DS(on)}$ = 1.5 mΩ
						BSC012N06NS $R_{DS(on)}$ =1.2 mΩ		IPT012N06N [1] $R_{DS(on)}$ =1.2 mΩ	
								IPT008N06NM5LF $R_{DS(on)}$ = 0.8 mΩ	
						BSC019N06NS [1] $R_{DS(on)}$ =1.9 mΩ			
2-4		IQE030N06NM5CG $R_{DS(on)}$ = 3 mΩ	IQE030N06NM5CGSC * $R_{DS(on)}$ =3.0 mΩ			BSC028N06NS [1] $R_{DS(on)}$ =2.8 mΩ			
		IQE030N06NM5 $R_{DS(on)}$ = 3 mΩ	IQE030N06NM5SC * $R_{DS(on)}$ =3.0 mΩ			ISC0702NLS $R_{DS(on)}$ =2.8 mΩ			
						BSC034N06NS [1] $R_{DS(on)}$ =3.4 mΩ			
						BSC039N06NS [1] $R_{DS(on)}$ =3.9 mΩ			
	BSZ042N06NS [1] $R_{DS(on)}$ =4.2 mΩ				IRF7855TRPBF $R_{DS(on)}$ =9.4 mΩ	IRFH7545TRPBF $R_{DS(on)}$ =5.2 mΩ			
						BSC066N06NS [1] $R_{DS(on)}$ =6.6 mΩ			
	BSZ068N06NS [1] $R_{DS(on)}$ =6.8 mΩ								
	BSZ100N06NS [1] $R_{DS(on)}$ =10.0 mΩ								
5-20						BSC097N06NS [1] $R_{DS(on)}$ =9.7 mΩ			
					IRF7351TRPBF $R_{DS(on)}$ =17.8 mΩ	BSC155N06ND $R_{DS(on)}$ =15.5 mΩ			

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

1) 6 V rated ($R_{DS(on)}$ also specified at V_{GS} = 6 V) * Coming soon



OptiMOS™ and StrongIRFET™ 60 V logic level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	TO-252 (DPAK)	PQFN 5x6 Source-Down	PQFN 5x6 Source-Down dual-side cooling (DSC)	PQFN 3.3x3.3 Source-Down	TO-263 (D^2PAK 7-pin)	TO-220	PQFN 2x2	PQFN 3.3x3.3	SuperSO8
< 1		IQDH88N06LM5CG $R_{DS(on)}$ = 0.88 mΩ	IQDH88N06LM5SC* Rds(on)=0.86 mΩ						ISC009N06LM5 $R_{DS(on)}$ = 0.9 mΩ
		IQDH88N06LM5 $R_{DS(on)}$ = 0.88 mΩ	IQDH88N06LM5CGSC* Rds(on)=0.86 mΩ						
1-2									ISC011N06LM5 $R_{DS(on)}$ = 1.1 mΩ
					IRLS3036TRL7PP $R_{DS(on)}$ =1.9 mΩ				ISC015N06NM5LF [1] $R_{DS(on)}$ = 1.5 mΩ
					IRLS3036TRL7PP $R_{DS(on)}$ =1.9 mΩ			ISZ034N06LM5 $R_{DS(on)}$ = 3.4 mΩ	
2-4				IQE022N06LM5 $R_{DS(on)}$ = 2.2 mΩ		IRLB3036PBF $R_{DS(on)}$ =2.4 mΩ			BSC027N06LS5 $R_{DS(on)}$ =2.7 mΩ
				IQE022N06LM5CG $R_{DS(on)}$ = 2.2 mΩ					
				IQE022N06LM5SC $R_{DS(on)}$ = 2.2 mΩ					
				IQE022N06LM5CGSC $R_{DS(on)}$ = 2.2 mΩ					
4-10	IPD048N06L3 G $R_{DS(on)}$ = 4.8 mΩ							BSZ040N06LS5 $R_{DS(on)}$ =4.0 mΩ	BSC065N06LS5 $R_{DS(on)}$ =6.5 mΩ
	IRLR3636TRPBF $R_{DS(on)}$ =6.8 mΩ							BSZ065N06LS5 $R_{DS(on)}$ =6.5 mΩ	BSC094N06LS5 $R_{DS(on)}$ =9.4 mΩ
	IPD079N06L3 G $R_{DS(on)}$ = 7.9 mΩ							BSZ099N06LS5 $R_{DS(on)}$ =9.9 mΩ	
	IPD088N06N3 G $R_{DS(on)}$ = 8.8 mΩ								
>10	IPD220N06L3 G $R_{DS(on)}$ = 22 mΩ						IRL60HS118 $R_{DS(on)}$ =17.0 mΩ		

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

1) Linear FET

*Coming soon

OptiMOS™ and StrongIRFET™ 75 V normal level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	TO-252 (DPAK)	TO-263 (D²PAK)	TO-263 (D²PAK 7-pin)	TO-220	TO-247
1-2			IRFS7730TRL7PP $R_{DS(on)}$ =2.0 mΩ		
					IRFP4368PBF $R_{DS(on)}$ =1.85 mΩ
2-4		IRFS7730TRLPBF $R_{DS(on)}$ =2.6 mΩ			IRFP3077PBF $R_{DS(on)}$ =3.3 mΩ
				IRFB7730PBF $R_{DS(on)}$ =2.6 mΩ	
				IRFB7734PBF $R_{DS(on)}$ =3.5 mΩ	
5-10				IRFB3307ZPBF $R_{DS(on)}$ =5.8 mΩ	
	IRFR3607PBF $R_{DS(on)}$ =9.0 mΩ	IRFS3607TRLPBF $R_{DS(on)}$=9.0 mΩ			

OptiMOS™ and StrongIRFET™ 80 V normal level/logic level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	TO-252 (DPAK)	TO-263 (D²PAK)	TO-263 (D²PAK 7-pin)	TO-220	TO-220 FullPAK	SuperSO8 DSC (dual-side cooling)	PQFN 5x6 Source-Down	PQFN 5x6 Source-Down dual-side cooling (DSC)	PQFN 3.3x3.3 Source-Down	PQFN 2x2	PQFN 3.3x3.3	SuperSO8	TO-Leadless
1-2							IQD016N08NM5CG $R_{DS(on)}$ = 1.6 mΩ	IQD016N08NM5SC* $R_{DS(on)}$=1.57 mΩ					
		IPB016N08NF2S $R_{DS(on)}$ = 1.65 mΩ	IPB015N08N5 $R_{DS(on)}$ =1.5 mΩ	IPP016N08NF2S $R_{DS(on)}$=1.6 mΩ			IQD016N08NM5 $R_{DS(on)}$ = 1.6 mΩ	IQD016N08NM5CGSC* $R_{DS(on)}$=1.57 mΩ					
			IPF014N08NF2S $R_{DS(on)}$ = 1.4 mΩ	IPP019N08NF2S $R_{DS(on)}$=1.9 mΩ									IPT010N08NM5 $R_{DS(on)}$=1.0 mΩ
		IPB019N08NF2S $R_{DS(on)}$ = 1.95 mΩ	IPF017N08NF2S $R_{DS(on)}$ = 1.7 mΩ										IPT012N08N5 $R_{DS(on)}$ =1.2 mΩ
													IPT012N08NF2S $R_{DS(on)}$ = 1.23 mΩ
2-4		IPB020N08N5 $R_{DS(on)}$ =2.0 mΩ	IPB019N08N5 $R_{DS(on)}$ =1.95 mΩ	IPP024N08NF2S $R_{DS(on)}$=2.4 mΩ		BSC023N08NS5SC $R_{DS(on)}$ = 2.3 mΩ							IPT013N08NM5LF $R_{DS(on)}$ = 1.3 mΩ
			IPF023N08NF2S $R_{DS(on)}$ = 2.3 mΩ	IPP023N08N5 $R_{DS(on)}$ =2.3 mΩ		BSC033N08NS5SC $R_{DS(on)}$ = 3.3 mΩ						BSC025N08LS5 $R_{DS(on)}$ =2.5 mΩ	IPT014N08NM5 $R_{DS(on)}$ =1.4 mΩ
		IPB024N08NF2S $R_{DS(on)}$ = 2.4 mΩ	IPF039N08NF2S $R_{DS(on)}$ = 3.9 mΩ									BSC026N08NS5 $R_{DS(on)}$ =2.6 mΩ	IPT019N08N5 $R_{DS(on)}$ =1.9 mΩ
												BSC030N08NS5 $R_{DS(on)}$ =3.0 mΩ	
		IPB031N08N5 $R_{DS(on)}$ =3.1 mΩ		IPP034N08N5 $R_{DS(on)}$ =3.4 mΩ									
4-10		IPB040N08NF2S $R_{DS(on)}$ = 4 mΩ		IPP040N08NF2S $R_{DS(on)}$=4.0 mΩ					IQE046N08LM5 $R_{DS(on)}$ = 4.6 mΩ			BSC037N08NS5 $R_{DS(on)}$ =3.7 mΩ	
		IPB049N08N5 $R_{DS(on)}$ =4.9 mΩ							IQE046N08LM5CG $R_{DS(on)}$ = 4.6 mΩ			BSC040N08NS5 $R_{DS(on)}$ =4.0 mΩ	
	IPD040N08NF2S $R_{DS(on)}$ = 4 mΩ	IPB055N08NF2S $R_{DS(on)}$ = 5.5 mΩ			IPA052N08NM5S $R_{DS(on)}$ =5.2 mΩ				IQE046N08LM5SC $R_{DS(on)}$ = 4.6 mΩ			BSC052N08NS5 $R_{DS(on)}$ =5.2 mΩ	
	IPD055N08NF2S $R_{DS(on)}$ = 5.5 mΩ			IPP055N08NF2S $R_{DS(on)}$=5.5 mΩ					IQE046N08LM5CGSC $R_{DS(on)}$ = 4.6 mΩ		BSZ070N08LS5 $R_{DS(on)}$ =7.0 mΩ		
											BSZ075N08NS5 $R_{DS(on)}$ =7.5 mΩ	BSC061N08NS5 $R_{DS(on)}$ =6.1 mΩ	
												BSC072N08NS5 $R_{DS(on)}$ =7.2 mΩ	
											BSZ084N08NS5 $R_{DS(on)}$ =8.4 mΩ		
>10												BSC117N08NS5 $R_{DS(on)}$ =11.7 mΩ	
										IRL80HS120 $R_{DS(on)}$=32.0 mΩ	BSZ110N08NS5 $R_{DS(on)}$ =11.0 mΩ		

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

* Coming soon

OptiMOS™ and StrongIRFET™ 80 V normal level/logic level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	TOLT (TO-Leaded top-side cooling)	sTOLL	PQFN 3.3x3.3 Source-Down	PQFN 3.3x3.3 Source-Down DSC (dual-side cooling)	SuperSO8
1-2	IPTC011N08NM5 $R_{DS(on)}$ = 1.2 mΩ	IST019N08NM5 $R_{DS(on)}$ = 1.9 mΩ			
	IPTC014N08NM5 $R_{DS(on)}$ = 1.4 mΩ				
3-5			IQE050N08NM5 $R_{DS(on)}$ = 5 mΩ	IQE050N08NM5SC $R_{DS(on)}$ = 5 mΩ	
			IQE050N08NM5CG $R_{DS(on)}$ = 5 mΩ	IQE050N08NM5CGSC $R_{DS(on)}$ = 5 mΩ	
5-20					IRF7854TRPBF $R_{DS(on)}$ = 13.4 mΩ

OptiMOS™ and StrongIRFET™ 100 V normal level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	TO-252 (DPAK)	TO-263 (D^2PAK)	TO-263 (D^2PAK 7-pin)	TO-220	TO-220 FullPAK	TO-247
1-2						IRF100P218 $R_{DS(on)}$=1.1 mΩ
			IPF016N10NF2S $R_{DS(on)}$=1.6 mΩ			IRF100P219 $R_{DS(on)}$=2.1 mΩ
			IPB017N10N5 $R_{DS(on)}$=1.7 mΩ			
			IPB017N10N5LF $R_{DS(on)}$=1.7 mΩ			
2-4		IPB020N10N5 $R_{DS(on)}$=2.0 mΩ		IPP023N10N5 $R_{DS(on)}$=2.3 mΩ	IPA030N10NF2S $R_{DS(on)}$=3.0 mΩ	IRFP4468PBF $R_{DS(on)}$=2.6 mΩ
		IPB020N10N5LF $R_{DS(on)}$=2.0 mΩ	IPB024N10N5 $R_{DS(on)}$=2.4 mΩ	IPP026N10NF2S $R_{DS(on)}$=2.6 mΩ		
		IPB026N10NF2S $R_{DS(on)}$ = 2.65 mΩ	IPB032N10N5 $R_{DS(on)}$=3.2 mΩ	IPP030N10N5 $R_{DS(on)}$=3.0 mΩ		
		IPB027N10N5 $R_{DS(on)}$=2.7 mΩ		IPP039N10N5 $R_{DS(on)}$=3.9 mΩ		
4-10	IPD050N10N5 $R_{DS(on)}$=5.0 mΩ	IPB033N10N5LF $R_{DS(on)}$=3.3 mΩ	IPF042N10NF2S $R_{DS(on)}$ = 4.25 mΩ			IRFP4110PBF $R_{DS(on)}$=4.5 mΩ
	IPD052N10NF2S $R_{DS(on)}$ = 5.2 mΩ	IPB043N10NF2S $R_{DS(on)}$ = 4.35 mΩ	IPF050N10NF2S $R_{DS(on)}$ = 5.05 mΩ	IRFB4110PBF $R_{DS(on)}$=4.5 mΩ		IRFP4310ZPBF $R_{DS(on)}$=6.0 mΩ
				IPP050N10NF2S $R_{DS(on)}$=5.0 mΩ		
		IPB050N10NF2S $R_{DS(on)}$ = 5.05 mΩ			IPA082N10NF2S $R_{DS(on)}$=8.2 mΩ	
		IRFS4310ZTRLPBF $R_{DS(on)}$=7.0 mΩ		IPP082N10NF2S $R_{DS(on)}$=8.2 mΩ	IPA083N10N5 $R_{DS(on)}$=8.3 mΩ	
				IPP083N10N5 $R_{DS(on)}$=8.3 mΩ		
				IRFB4410ZPBF $R_{DS(on)}$=9.0 mΩ		
10-25	IPD130N10NF2S $R_{DS(on)}$ = 13.0 mΩ			IPP129N10NF2S $R_{DS(on)}$=12.9 mΩ		
>25	IPD78CN10N G $R_{DS(on)}$=78.0 mΩ					

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

AC-DC Adapter Consumer DC-DC LED LEV Motor control SMPS Solar UPS

OptiMOS™ and StrongIRFET™ 100 V normal level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	DirectFET™	PQFN 3.3x3.3	PQFN 3.3x3.3 Source-Down	PQFN 3.3x3.3 Source-Down DSC (dual-side cooling)	PQFN 5x6 Source-Down	PQFN 5x6 Source-Down DSC (dual-side cooling)	SuperSO8	SuperSO8 DSC (dual-side cooling)	SO8	TOLL (TO-Leadless)	TOLT (TO-Leaded top-side cooling)	TOLG (TO-Leaded Gullwing)	sTOLL
1-2		ISZ080N10NM6 $R_{DS(on)}$= 8.0 mΩ									IPTC015N10NM5 $R_{DS(on)}$ = 1.5 mΩ	PTG014N10NM5 $R_{DS(on)}$ = 1.4 mΩ	
							ISC022N10NM6 $R_{DS(on)}$= 2.2 mΩ			IPT015N10N5 $R_{DS(on)}$ =1.5 mΩ		IPTG018N10NM5 $R_{DS(on)}$ = 1.8 mΩ	
							ISC027N10NM6 $R_{DS(on)}$= 2.7 mΩ			IPT015N10NF2S $R_{DS(on)}$ = 1.5 mΩ		IPTG025N10NM5 $R_{DS(on)}$ = 2.5 mΩ	
							ISC030N10NM6 $R_{DS(on)}$= 3.0 mΩ			IPT017N10NF2S $R_{DS(on)}$ = 1.75 mΩ	IPTC019N10NM5 $R_{DS(on)}$ = 1.9 mΩ		
2-4					IQD020N10NM5CGSC $R_{DS(on)}$ = 2.0 mΩ	IQD020N10NM5SC* $R_{DS(on)}$ =2.05 mΩ		BSC030N10NS5SC $R_{DS(on)}$ = 3.0 mΩ		IPT020N10N5 $R_{DS(on)}$ =2.0 mΩ			
					IQD020N10NM5 $R_{DS(on)}$ = 2.05 mΩ	IQD020N10NM5CGSC* $R_{DS(on)}$ =2.05 mΩ				IPT022N10NF2S $R_{DS(on)}$ = 2.25 mΩ			
	IRF7769L1TRPBF $R_{DS(on)}$ =3.5 mΩ							BSC040N10NS5SC $R_{DS(on)}$ =4.0 mΩ		IPT026N10N5 $R_{DS(on)}$ =2.6 mΩ			IST026N10NM5 $R_{DS(on)}$ = 2.6 mΩ
							BSC040N10NS5 $R_{DS(on)}$ =4.0 mΩ						
4-10							BSC050N10N5 $R_{DS(on)}$ =5.0 mΩ						
							ISC060N10NM6 $R_{DS(on)}$= 6.0 mΩ						
							BSC070N10NS5 $R_{DS(on)}$ =7.0 mΩ	BSC070N10NS5SC $R_{DS(on)}$ =7.0 mΩ					
							ISC080N10NM6 $R_{DS(on)}$= 8.0 mΩ						
		ISZ113N10NM5LF2 $R_{DS(on)}$ =11.3 mΩ					BSC098N10NS5 $R_{DS(on)}$ =9.8 mΩ						
10-25	IRF6644TRPBF $R_{DS(on)}$ =13.0 mΩ	ISZ230N10NM6 $R_{DS(on)}$= 23.0 mΩ											
							ISC230N10NM6 $R_{DS(on)}$ =23.0 mΩ		IRF7853TRPBF $R_{DS(on)}$ =18.0 mΩ				
>25	IRF6645TRPBF $R_{DS(on)}$ =35.0 mΩ												

Consumer DC-DC LED Motor control

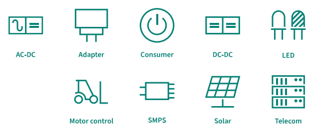
OptiMOS™ and StrongIRFET™ 100 V logic level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	TO-252 (DPAK)	TO-263 (D²PAK)	TO-220	PQFN 2x2	PQFN 3.3x3.3	SuperSO8
1-4						BSC034N10LS5 $R_{DS(on)}$ =3.4 mΩ
4-10			IRLB4030PBF $R_{DS(on)}$ =4.3 mΩ		BSZ096N10LS5 $R_{DS(on)}$ =9.6 mΩ	BSC070N10LS5 $R_{DS(on)}$ =7.0 mΩ
						BSC096N10LS5 $R_{DS(on)}$ =9.6 mΩ
10-25					BSZ146N10LS5 $R_{DS(on)}$ =14.6 mΩ	
	IRLR3110ZTRPBF $R_{DS(on)}$ =14.0 mΩ					BSC146N10LS5 $R_{DS(on)}$ =14.6 mΩ

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

* Coming soon



OptiMOS™ and StrongIRFET™ 120 V normal level/logic level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	TO-263 (D²PAK 7-pin)	PQFN 3.3x3.3	SuperSO8	TO-220	TO-263 (D²PAK)	TOLG (TO-Leaded Gullwing)	TOLL (TO-Leadless)	TOLT (TO-Leaded top-side Cooling)
1-2	IPF019N12NM6 $R_{DS(on)}$ = 1.9 mΩ					IPTG017N12NM6 $R_{DS(on)}$ = 1.7 mΩ		IPTC017N12NM6 $R_{DS(on)}$ = 1.7 mΩ
2-4			ISC030N12NM6 $R_{DS(on)}$ = 3.04 mΩ	IPP022N12NM6* $R_{DS(on)}$ = 2.2 mΩ	IPB022N12NM6* $R_{DS(on)}$ = 2.2 mΩ		IPT017N12NM6 $R_{DS(on)}$ = 1.7 mΩ	IPTC028N12NM6* $R_{DS(on)}$ = 2.8 mΩ
			ISC032N12LM6 $R_{DS(on)}$ = 3.2 mΩ		IPB035N12NM6* $R_{DS(on)}$ = 3.5 mΩ			
			ISC037N12NM6 $R_{DS(on)}$ = 3.7 mΩ					
4-10			ISC073N12LM6 $R_{DS(on)}$ = 7.3 mΩ					
			ISC078N12NM6 $R_{DS(on)}$ = 7.8 mΩ					
			BSC080N12LS $R_{DS(on)}$ = 8.0 mΩ					
10-25		ISZ106N12LM6 $R_{DS(on)}$ = 10.6 mΩ	ISC104N12LM6 $R_{DS(on)}$ = 10.4 mΩ		IPB133N12NM6* $R_{DS(on)}$ = 13.3 mΩ			
		ISZ330N12LM6 $R_{DS(on)}$ = 33.0 mΩ	ISC110N12NM6 $R_{DS(on)}$ =11.0 mΩ					
			BSC120N12LS $R_{DS(on)}$ =12.0 mΩ					
			ISC320N12LM6 $R_{DS(on)}$ = 32.0 mΩ					

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

* Coming soon

OptiMOS™ and StrongIRFET™ 135-150 V normal/logic level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	DirectFET™	PQFN 3.3x3.3	PQFN 5x6 Source-Down	PQFN 5x6 Source-Down DSC (dual-side cooling)	SuperSO8 DSC (dual-side cooling)	SuperSO8	TOLL (TO-Leadless)
1-10			IQD063N15NM5CGSC $R_{DS(on)}$ = 6.3 mΩ	IQD063N15NM5SC* $R_{DS(on)}$ =6.32 mΩ	BSC093N15NS5SC $R_{DS(on)}$ = 9.3 mΩ	ISC037N13NM6 $R_{DS(on)}$ =3.7 mΩ	IPT020N13NM6 $R_{DS(on)}$ = 2.0 mΩ
				IQD063N15NM5CGSC* $R_{DS(on)}$ =6.32 mΩ		ISC044N15NM6 $R_{DS(on)}$ = 4.4 mΩ	IPT025N15NM6* $R_{DS(on)}$ = 2.5 mΩ
						ISC055N15NM6 $R_{DS(on)}$ = 5.5 mΩ	IPT039N15N5 $R_{DS(on)}$ = 3.9 mΩ
						ISC079N15NM6 $R_{DS(on)}$ = 7.9 mΩ	IPT044N15N5 $R_{DS(on)}$ = 4.4 mΩ
						ISC046N13NM6 $R_{DS(on)}$ =4.6 mΩ	IPT054N15N5 $R_{DS(on)}$ = 5.4 mΩ
						BSC074N15NS5 2) $R_{DS(on)}$ =7.4 mΩ	IPT063N15N5 $R_{DS(on)}$ = 6.3 mΩ
						BSC088N15LS5 $R_{DS(on)}$ = 8.8 mΩ	
						BSC093N15NS5 $R_{DS(on)}$ =9.3 mΩ	
10-25	IRF7779L2TRPBF 2) $R_{DS(on)}$ =11.0 mΩ	ISZ143N13NM6 $R_{DS(on)}$ =14.3 mΩ			BSC110N15NS5SC $R_{DS(on)}$ = 11.0 mΩ	BSC105N15LS5 $R_{DS(on)}$ = 10.5 mΩ	
	IRF150DM115 $R_{DS(on)}$ = 11.3 mΩ	ISZ173N15NM6* $R_{DS(on)}$ = 17.3 mΩ			BSC160N15NS5SC $R_{DS(on)}$ = 16.0 mΩ	BSC152N15LS5 $R_{DS(on)}$ = 15.2 mΩ	
						BSC110N15NS5 $R_{DS(on)}$ =11.0 mΩ	
						BSC160N15NS5 $R_{DS(on)}$ =16.0 mΩ	
>25	IRF6775MTRPBF $R_{DS(on)}$ =56.0 mΩ						

OptiMOS™ and StrongIRFET™ 135-150 V normal/logic level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	TO-252 (DPAK)	TO-263 (D²PAK)	TO-263 (D²PAK 7-pin)	TO-262 (I²PAK)	TOLT (TO-Leaded top-side cooling)	TOLG (TO-Leaded Gullwing)	TO-220	TO-247
1-10		IPB029N15NM6* $R_{DS(on)}$ = 2.9 mΩ	IPF021N13NM6 $R_{DS(on)}$ = 2.1 mΩ	IPI051N15N5 $R_{DS(on)}$ =5.1 mΩ	IPTC020N13NM6 $R_{DS(on)}$ = 2.0 mΩ	IPTG020N13NM6 $R_{DS(on)}$ = 2.0 mΩ	IPP029N15NM6* $R_{DS(on)}$ = 2.9 mΩ	IRF150P220 $R_{DS(on)}$ =2.5 mΩ
		IPB044N15N5 $R_{DS(on)}$ =4.4 mΩ	IPF026N15NM6* $R_{DS(on)}$ = 2.6 mΩ		IPTC025N15NM6 $R_{DS(on)}$ = 2.5 mΩ	IPTG025N15NM6* $R_{DS(on)}$ = 2.5 mΩ	IPP051N15N5 2) $R_{DS(on)}$ =5.1 mΩ	IRF150P221 $R_{DS(on)}$ =4.8 mΩ
		IPB048N15N5 $R_{DS(on)}$ =4.8 mΩ	IPF031N13NM6 $R_{DS(on)}$ = 3.1 mΩ		IPTC039N15NM5 $R_{DS(on)}$ = 3.9 mΩ	IPTG029N13NM6 $R_{DS(on)}$ = 2.9 mΩ	IPP073N13NM6 $R_{DS(on)}$ =7.3 mΩ	IRFP4568PBF $R_{DS(on)}$ =5.9 mΩ
		IPB048N15N5LF $R_{DS(on)}$ =4.8 mΩ		IPI076N15N5 $R_{DS(on)}$ =7.6 mΩ	IPTC044N15NM5 $R_{DS(on)}$ = 4.4 mΩ	IPTG039N15NM5 $R_{DS(on)}$ = 3.9 mΩ	IPP076N15N5 $R_{DS(on)}$ =7.6 mΩ	
		IPB060N15N5 $R_{DS(on)}$ =6.0 mΩ			IPTC054N15NM5 $R_{DS(on)}$ = 5.4 mΩ	IPTG044N15NM5 $R_{DS(on)}$ = 4.4 mΩ	IPP089N15NM6* $R_{DS(on)}$ = 8.9 mΩ	
		IPB073N15N5 $R_{DS(on)}$ =7.3 mΩ			IPTC063N15NM5 $R_{DS(on)}$ = 6.3 mΩ	IPTG054N15NM5 $R_{DS(on)}$ = 5.4 mΩ		
						IPTG063N15NM5 $R_{DS(on)}$ = 6.3 mΩ		
10-25							IRFB4115PBF $R_{DS(on)}$ =11.0 mΩ	
		IRFS4321TRLPBF $R_{DS(on)}$ =15.0 mΩ					IRFB4321PBF $R_{DS(on)}$ =15.0 mΩ	IRFP4321PBF $R_{DS(on)}$ =15.5 mΩ
		IRFS4115TRLPBF $R_{DS(on)}$ =12.1 mΩ						
>25		IRFS4615TRLPBF $R_{DS(on)}$ =42.0 mΩ						
	IRFR4615TRLPBF $R_{DS(on)}$ =42.0 mΩ						IRFB5615PBF $R_{DS(on)}$ =39.0 mΩ	
							IRFB4019PBF $R_{DS(on)}$ =95.0 mΩ	

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

*Coming soon 2) 135 V

AC-DC · Adapter · Audio amplifier · Consumer · DC-DC · LED · LEV · Lighting · Motor control · PoE · SMPS · Solar · UPS

OptiMOS™ and StrongIRFET™ 200 V normal level

$R_{DS(on),max.}$ at V_{GS}=10 V [mΩ]	TO-252 (DPAK)	TO-263 (D^2PAK)	TO-263 (D^2PAK 7-pin)	TO-220	TO-247
4-10		IPB068N20NM6 $R_{DS(on)}$ = 6.8 mΩ	IPF067N20NM6 $R_{DS(on)}$ = 6.7 mΩ	IPP069N20NM6 $R_{DS(on)}$ = 6.9 mΩ	IRF200P222 $R_{DS(on)}$=6.6 mΩ
					IRFP4668PBF $R_{DS(on)}$ =9.7 mΩ
10-25		IPB107N20N3 G $R_{DS(on)}$ =10.7 mΩ	IPF129N20NM6 $R_{DS(on)}$ = 12.9 mΩ	IPP110N20N3 G $R_{DS(on)}$ =11.0 mΩ	
				IRFB4127PBF $R_{DS(on)}$ =20.0 mΩ	IRFP4227PBF $R_{DS(on)}$ =25.0 mΩ
		IRFS4127TRLPBF $R_{DS(on)}$ =22.0 mΩ			
>25				IRFB4227PBF $R_{DS(on)}$ =26.0 mΩ	
	IPD320N20N3 G $R_{DS(on)}$ =32.0 mΩ	IPB320N20N3 G $R_{DS(on)}$ =32.0 mΩ		IPP319N20NM6 [1)] $R_{DS(on)}$ = 31.9 mΩ	
		IPB339N20NM6 $R_{DS(on)}$ = 33.9 mΩ		IPP320N20N3 G $R_{DS(on)}$ =32.0 mΩ	
	IRFR4620TRLPBF $R_{DS(on)}$ =78.0 mΩ	IRFS4620TRLPBF $R_{DS(on)}$ =78.0 mΩ		IPP339N20NM6 $R_{DS(on)}$ = 33.9 mΩ	
				IRFB5620PBF $R_{DS(on)}$ =72.5 mΩ	
				IRFB4020PBF $R_{DS(on)}$ =100.0 mΩ	

AC-DC · Adapter · Audio amplifier · Consumer · DC-DC · LED · LEV · Lighting · Motor control · PoE · SMPS · Solar · UPS

OptiMOS™ and StrongIRFET™ 200 V normal level

$R_{DS(on),max.}$ at V_{GS}=10 V [mΩ]	DirectFET™	PQFN 3.3x3.3	SuperSO8	TOLL (TO-Leadless)	TOLG (TO-Leaded Gullwing)
1-25			ISC119N20NM6* $R_{DS(on)}$ = 11.9 mΩ	IPT067N20NM6 $R_{DS(on)}$ = 6.7 mΩ	
			ISC130N20NM6 $R_{DS(on)}$ = 13.0 mΩ		IPTG111N20NM3FD $R_{DS(on)}$ = 11.1 mΩ
			ISC151N20NM6 $R_{DS(on)}$ = 15.1 mΩ	IPT129N20NM6 $R_{DS(on)}$ = 12.9 mΩ	
>25			BSC320N20NS3 G $R_{DS(on)}$ =32.0 mΩ		
			BSC500N20NS3G $R_{DS(on)}$ =50.0 mΩ		
		ISZ520N20NM6 $R_{DS(on)}$ = 52.0 mΩ	IRFH5020TRPBF $R_{DS(on)}$ =55.0 mΩ		
		BSZ900N20NS3 G $R_{DS(on)}$ =90.0 mΩ	BSC900N20NS3 G $R_{DS(on)}$ =90.0 mΩ		
	IRF6785MTRPBF $R_{DS(on)}$ =100.0 mΩ				
		BSZ22DN20NS3 G $R_{DS(on)}$ =225.0 mΩ			

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

OptiMOS™ and StrongIRFET™ 250 V normal level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	TO-252 (DPAK)	TO-263 (D^2PAK)	TOLG (TO-Leaded Gullwing)	TO-220	TO-247	PQFN 3.3x3.3	SuperSO8	TOLL (TO-Leadless)
10-25		IPB200N25N3 G $R_{DS(on)}$ =20.0 mΩ	IPTG210N25NM3FD $R_{DS(on)}$ = 21.0 mΩ		IRF250P224 $R_{DS(on)}$=12.0 mΩ			
				IPP220N25NFD $R_{DS(on)}$ =22.0 mΩ	IRFP4768PBF $R_{DS(on)}$ =17.5 mΩ			IPT210N25NFD $R_{DS(on)}$=21.0 mΩ
					IRF250P225 $R_{DS(on)}$=22.0 mΩ			
>25							BSC430N25NSFD $R_{DS(on)}$=43.0 mΩ	
		IRFS4229TRLPBF $R_{DS(on)}$ =48.0 mΩ		IRFB4332PBF $R_{DS(on)}$ =33.0 mΩ	IRFP4332PBF $R_{DS(on)}$ =33.0 mΩ		BSC600N25NS3 G $R_{DS(on)}$ =60.0 mΩ	
	IPD600N25N3 G $R_{DS(on)}$ =60.0 mΩ	IPB600N25N3 G $R_{DS(on)}$ =60.0 mΩ		IRFB4229PBF $R_{DS(on)}$ =46.0 mΩ			BSC670N25NSFD $R_{DS(on)}$=67.0 mΩ	
				IPP600N25N3 G $R_{DS(on)}$ =60.0 mΩ	IRFP4229PBF $R_{DS(on)}$ =46.0 mΩ	BSZ16DN25NS3 G $R_{DS(on)}$ =165.0 mΩ		
						BSZ42DN25NS3 G $R_{DS(on)}$ =425.0 mΩ	BSC16DN25NS3 G $R_{DS(on)}$ =165.0 mΩ	

OptiMOS™ and StrongIRFET™ 300 V normal level

$R_{DS(on), max.}$ at V_{GS}=10 V [mΩ]	TO-220	TO-247	SuperSO8
0-25		IRF300P226 $R_{DS(on)}$=19.0 mΩ	
>25	IPP410N30N $R_{DS(on)}$ =41.0 mΩ		
		IRF300P227 $R_{DS(on)}$ = 40 mΩ	
			BSC13DN30NSFD $R_{DS(on)}$=130.0 mΩ

Power MOSFETs complementary

	Voltage [V]		PQFN 3.3x3.3	SO8
Complementary	-20/20	>50 mΩ	BSZ15DC02KD H*/** N: 55 mΩ, 5.1 A P: 150 mΩ, -3.2 A	
			BSZ215C H*/** N: 55 mΩ, 5.1 A P: 150 mΩ, -3.2 A	
	-30/30	27-64 mΩ		IRF9389TRPBF N: 27 mΩ, 6.8 A P: 64 mΩ, -4.6 A

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

*Products are qualified to Automotive AEC Q101 **$R_{DS(on)}$ specified at 4.5 V

Power P-channel MOSFETs

Automotive DC-DC eMobility Motor control Notebook Onboard

	Voltage [V]	TO-252 (DPAK)	TO-263 (D^2PAK)	TO-220	PQFN 3.3x3.3	SuperSO8	SO8	PQFN 2x2
P-channel MOSFETs	-20						BSO201SP H $R_{DS(on)}$=7.0 mΩ	
								IRLHS2242TRPBF** $R_{DS(on)}$=31.0 mΩ
	-30					BSC030P03NS3 G $R_{DS(on)}$=3.0 mΩ	IRF9310 $R_{DS(on)}$=4.6 mΩ	
		IPD042P03L3 G $R_{DS(on)}$=4.2 mΩ				BSC060P03NS3E G $R_{DS(on)}$=6.0 mΩ; ESD	IRF9317 $R_{DS(on)}$=6.6 mΩ	
					BSZ086P03NS3 G $R_{DS(on)}$=8.6 mΩ	IRFH9310 $R_{DS(on)}$=4.6 mΩ	IRF9321 $R_{DS(on)}$=7.2 mΩ	
		SPD50P03L G 1)* $R_{DS(on)}$=7.0 mΩ			BSZ086P03NS3E G $R_{DS(on)}$=8.6 mΩ			
						BSC084P03NS3 G $R_{DS(on)}$=8.4 mΩ		
					BSZ120P03NS3 G $R_{DS(on)}$=12.0 mΩ		BSO301SP H $R_{DS(on)}$=8.0 mΩ	
							IRF9388TRPBF $R_{DS(on)}$=11.9 mΩ	
							IRF9358 $R_{DS(on)}$=16 mΩ; dual	
					BSZ180P03NS3 G $R_{DS(on)}$=18.0 mΩ			
					BSZ180P03NS3E G $R_{DS(on)}$=18.0 mΩ; ESD			
								IRFHS9301TRPBF $R_{DS(on)}$=37.0 mΩ
							IRF9362 $R_{DS(on)}$=21 mΩ; dual	
							IRF9335 $R_{DS(on)}$=59 mΩ	
	-60	IPD380P06NM $R_{DS(on)}$= 38 mΩ	IPB110P06LM $R_{DS(on)}$= 11 mΩ	SPP80P06P H* $R_{DS(on)}$=23.0 mΩ	ISZ810P06LM $R_{DS(on)}$= 81 mΩ	ISC240P06LM $R_{DS(on)}$= 24 mΩ		
		IPD650P06NM $R_{DS(on)}$= 65 mΩ	SPB80P06P G* $R_{DS(on)}$=23.0 mΩ			ISC800P06LM $R_{DS(on)}$= 80 mΩ		
		SPD30P06P G* $R_{DS(on)}$=75.0 mΩ						
		IPD900P06NM $R_{DS(on)}$= 90 mΩ						
		SPD18P06P G* $R_{DS(on)}$=130.0 mΩ						
		SPD09P06PL G* $R_{DS(on)}$=250.0 mΩ						
		IPD25DP06NM $R_{DS(on)}$= 250 mΩ						
		SPD08P06P G* $R_{DS(on)}$=300.0 mΩ						
		IPD40DP06NM $R_{DS(on)}$= 400 mΩ						
	-100	SPD15P10PL G* $R_{DS(on)}$=200.0 mΩ	IPB320P10LM $R_{DS(on)}$= 32 mΩ		ISZ24DP10LM $R_{DS(on)}$= 245 mΩ	ISC750P10LM $R_{DS(on)}$=75 mΩ		
		SPD15P10P G* $R_{DS(on)}$=240.0 mΩ	IPB330P10NM $R_{DS(on)}$= 33 mΩ	IPP330P10NM $R_{DS(on)}$=33 mΩ				
		SPD04P10PL G* $R_{DS(on)}$=850.0 mΩ	IPB19DP10NM $R_{DS(on)}$= 185 mΩ					
		IPD11DP10NM $R_{DS(on)}$=111 mΩ						
		IPD18DP10LM $R_{DS(on)}$= 178 mΩ						
		IPD19DP10NM $R_{DS(on)}$= 186 mΩ						
	-150	IPD42DP15LM $R_{DS(on)}$= 420 mΩ	IPB720P15LM $R_{DS(on)}$= 72 mΩ		ISZ56DP15LM $R_{DS(on)}$= 560 mΩ	ISC16DP15LM $R_{DS(on)}$= 160 mΩ		
					ISZ75DP15LM $R_{DS(on)}$= 750 mΩ			
					ISZ15EP15LM $R_{DS(on)}$= 1500 mΩ			

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

1) 5-leg * Products are qualified to Automotive AEC Q101 ** $R_{DS(on)}$ specified at 4.5 V

Small-signal/small-power N-channel

Automotive Consumer DC-DC eMobility Industrial drives Motor control Notebook Onboard Telecom

	Voltage [V]	SOT-223	TSOP-6	SOT-89	SC59	SOT-23	SOT-323	SOT-363
N-channel	20 V		BSL202SN [4] 36 mΩ, 7.5 A, SLL		BSR802N [5] 32 mΩ, 3.7 A, ULL		BSS816NW [5] 240 mΩ, 1.4 A, ULL	BSD214SN [4] 250 mΩ, 1.5 A, SLL
			IRLMS2002 [1,4] 45 mΩ, 6.5 A, SLL		BSR202N [4] 33 mΩ, 3.8 A, SLL	IRLML6244 [1,4] 27 mΩ, 6.3 A, SLL	BSS214NW [4] 250 mΩ, 1.5 A, SLL	BSD840N [5] 560 mΩ, 0.88 A, ULL, dual
			BSL806N [5] 82 mΩ, 2.3 A, ULL, dual			IRLML6246 [1,4] 66 mΩ, 4.1 A, SLL		BSD235N [4] 600 mΩ, 0.95 A, SLL, dual
						IRLML2502 [1,4] 80 mΩ, 4.2 A, SLL		
						BSS806N [5] 82 mΩ, 2.3 A, ULL		
						BSS806NE [5] 82 mΩ, 2.3 A, ULL, ESD		
						BSS205N [4] 85 mΩ, 2.5 A, SLL		
						BSS214N [4] 250 mΩ, 1.5 A, SLL		
	25 V					IRFML8244 [1,3] 41 mΩ, 5.8 A, LL		
	30 V		IRLTS6342 [1,4] 22 mΩ, 8.3 A, SLL			IRLML6344 [1,4] 37 mΩ, 5.0 A, SLL		BSD316SN [3] 280 mΩ, 1.4 A, LL
			IRFTS8342 [1,3] 29 mΩ, 8.2 A, LL			IRLML0030 [1,3] 40 mΩ, 5.3 A, LL		
			IRLMS1503 [1,3] 200 mΩ, 3.2A, LL			IRLML6346 [1,4] 80 mΩ, 3.4 A, SLL		
						BSS306N [3] 93 mΩ, 2.3 A, LL		
						IRLML2030 [1,3] 154 mΩ, 2.7 A, LL		
						BSS316N [3] 280 mΩ, 1.4 A, LL		
						IRLML2803 [3] 400 mΩ, 1.2 A, LL		
	40 V					IRLML0040 [1,3] 78 mΩ, 3.6 A, LL		
	55 V	IRFL024Z [1,2] 57.5 mΩ, 5.1 A, NL				BSS670S2L [3] 825 mΩ, 0.54 A, LL		
		IRLL2705 [1,3] 65 mΩ, 3.8 A, LL						
		IRFL4105 [1,2] 45 mΩ, 3.7 A, NL						
		IRLL024N [1,3] 100 mΩ, 3.5 A, LL						
		IRLL014N [1,3] 280 mΩ, 2.0 A, LL						
		IRFL014N [1,2] 160 mΩ, 1.9 A, NL						
	60 V	ISP670P06NMA* 67 mΩ, 3.7 A, NL	BSL606SN [3] 95 mΩ, 4.5 A, LL	BSS606N [3] 90 mΩ, 3.2 A, LL		IRLML0060 [1,3] 116 mΩ, 2.7 A, LL	BSS138W [3] 4 Ω, 0.28 A, LL	2N7002DW [3] 4 Ω, 0.3 A, LL, dual
		ISP12DP06NMA* 125 mΩ, 2.8 A, NL				IRLML2060 [1,3] 640 mΩ, 1.2 A, LL	SN7002W [3] 7.5 Ω, 0.23 A, LL	
		ISP25DP06LMA* 250 mΩ, 1.9 A, LL				2N7002 [1,3] 4 Ω, 0.3 A, LL		
		ISP25DP06NMA* 250 mΩ, 1.9 A, NL				BSS138I [1,3] 4 Ω, 0.23 A, LL		
		BSP295 [3] 500 mΩ, 1.8 A, LL				BSS138N [3] 4 Ω, 0.23 A, LL		
						SN7002I [1,3] 7.5 Ω, 0.2 A, LL		
						SN7002N [3] 7.5 Ω, 0.2 A, LL		
						BSS159N [6] 8 Ω, 0.13 A, depletion		
						ISS20EP06LMA* 2.0 Ω, 0.3 A, LL		
						ISS75EP06LMA* 7.5 Ω, 0.18 A, LL		
	100 V	BSP373N [2] 240 mΩ, 1.8 A, NL				IRLML0100 235 mΩ, 1.6 A, LL		
		BSP372N [3] 270 mΩ, 1.8 A, LL				BSS119N [3] 10 Ω, 0.19 A, LL		
		BSP296N [3] 800 mΩ, 1.2 A, LL				BSS123I [1,3] 10 Ω 0.19 A, LL		
		ISP16DP10LMA* 167 mΩ, 2.2 A, LL				BSS123N [3] 10 Ω 0.19 A, LL		
						BSS169I [1,6] 12 Ω, 0.09 A, depletion		
						BSS169 [6] 12 Ω, 0.09 A, depletion		
	150 V	IRFL4315 [1,2] 185 mΩ, 2.6 A, NL	IRF5802 [1,2] 1.2 Ω, 0.9 A, NL					
	200 V	BSP297 [3] 3 Ω, 0.66 A, LL	IRF5801 [1,2] 2.2Ω, 0.6 A, NL					
		BSP149 [6] 3.5 Ω, 0.14 A, LL, depletion						
	240 V	BSP88 [3] 7.5 Ω, 0.35 A, SLL		BSS87 [3] 7.5 Ω, 0.26 A, LL		BSS131 [3] 20 Ω, 0.11 A, LL		
		BSP89 [3] 7.5 Ω, 0.35 A, LL						
		BSP129 [6] 20 Ω, 0.05 A, LL, depletion						
	250 V					BSS139I [1,6] 30 Ω, 0.10 A, LL, depletion		
						BSS139 [6] 30 Ω, 0.10 A, LL, depletion		
	400 V	BSP324 [3] 22 Ω, 0.17 A, LL						
	600 V	BSP125 [3] 60 Ω, 0.12 A, LL		BSS225 [3] 45 Ω, 0.09 A, LL		BSS127I [1,3] 600 Ω, 0.021 A, LL		
		BSP135I [1,6] 60 Ω, 0.02 A, LL, depletion				BSS127 [3] 600 Ω, 0.021 A, LL		
		BSP135 [6] 60 Ω, 0.02 A, LL, depletion				BSS126I [1,6] 700 Ω, 0.021 A, LL, depletion		
						BSS126 [6] 700 Ω, 0.021 A, LL, depletion		

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

1) not qualified to Automotive AEC-Q101
2) $R_{DS(on)}$ specified at 10 V
3) $R_{DS(on)}$ specified at 4.5 V
4) $R_{DS(on)}$ specified at 2.5 V
5) $R_{DS(on)}$ specified at 1.8 V
6) $R_{DS(on)}$ specified at 0 V

Small-signal/small-power P-channel

Automotive | Consumer | DC-DC | eMobility | Industrial drives | Notebook | Onboard

	Voltage [V]	SOT-223	TSOP-6	SOT-89	SC59	SOT-23	SOT-323	SOT-363
P-channel MOSFETs	-250 V	BSP317P [3] 5 Ω, -0.43 A, LL		BSS192P [3] 15 Ω, -0.19 A, LL	BSR92P [3] 13 Ω, -0.14 A, LL			
		BSP92P [3] 15 Ω, -0.26 A, LL						
	-150 V	ISP14EP15LM [1,3] 1.4 Ω, -1.29 A, LL						
	-100 V				BSR316P [3] 2.2 Ω, -0.36 A, LL			
		BSP322P [3] 1 Ω, -1.0 A, LL						
		BSP316P [3] 2.3 Ω, -0.68 A, LL						
		ISP16DP10LM [1,3] 190 mΩ, -3.9 A, LL						
		ISP98DP10LM [1,3] 1.05 Ω, -1.55 A, LL						
		ISP20EP10LM [1,3] 2.2 Ω, -0.99 A, LL						
	-60 V	ISP650P06NM [1,2] 65 mΩ, -3.7 A, NL			BSR315P [3] 1.3 Ω, -0.62 A, LL	ISS17EP06LM [1,3] 2.2 Ω, -0.3 A, LL	BSS84PW [3] 12 Ω, -0.15 A, LL	
		ISP12DP06NM [1,2] 125 mΩ, -2.8 A, NL						
		ISP13DP06NMS [1,2] 125 mΩ, -2.8 A, NL				BSS83P [3] 3 Ω, -0.33 A, LL		
		BSP613P [2] 130 mΩ, -2.9 A, NL				ISS55EP06LM [1,3] 7 Ω, -0.18 A, LL		
		ISP25DP06NM [1,2] 250 mΩ, -1.9 A, NL				BSS84P [3] 12 Ω, -0.17 A, LL		
		ISP26DP06NMS [1,2] 260 mΩ, -1.9 A, NL						
		BSP170P [2] 300 mΩ, -1.9 A, NL						
		ISP25DP06LM [1,3] 310 mΩ, -1.9 A, LL						
		ISP25DP06LMS [1,3] 310 mΩ, -1.9 A, LL						
		BSP171P [3] 450 mΩ, -1.9 A, LL						
		ISP75DP06LM [1,3] 1 Ω, -1.1 A, LL						
		BSP315P [3] 1.4 Ω, -1.17 A, LL						
	-40 V		IRF5803 [1,2] 112 mΩ, -3.4 A, NL					
	-30 V		IRFTS9342 [1,2] 40 mΩ, -5.8 A, NL			IRLML9301 [1,3] 103 mΩ, -1.3 A, LL		
			BSL307SP [3] 74 mΩ, -5.5 A, LL			BSS308PE [3] 130 mΩ, -2.1 A, LL, ESD		
			BSL308PE [3] 130 mΩ, -2.1 A, LL, dual, ESD			IRLML5203 [1,3] 165 mΩ, -3.0 A, LL		
						BSS314PE [3] 230 mΩ, -1.5 A, LL, ESD		
						BSS315P [3] 270 mΩ, -1.5 A, LL		
						IRLML9303 [1,4] 270 mΩ, -2.3 A, LL		
						IRLML5103 [1,3] 1000 mΩ, -0.76A, LL		
	-20 V		BSL207SP [4] 41 mΩ, -6.0 A, SLL			IRLML2244 [1,4] 95 mΩ, -4.3 A, SLL	BSS209PW [4] 900 mΩ, -0.58 A, SLL	BSV236SP [4] 285 mΩ, -1.5 A, SLL
			IRLTS2242 [1,4] 55 mΩ, -6.9 A, SLL			IRLML6402 [1,4] 135 mΩ, -3.7 A, SLL	BSS223PW [4] 2.1 Ω, -0.39 A, SLL	BSD223P [4] 2.1 Ω, -0.39 A, SLL, dual
			IRLMS6802 [1,4] 100 mΩ, -5.6 A, SLL			IRLML2246 [1,4] 236 mΩ, -2.6 A, SLL		
			BSL211SP [4] 110 mΩ, -4.7 A, SLL			BSS215P [4] 280 mΩ, -1.5 A, SLL		
	-12 V					IRLML6401 [4] 125 mΩ, -4.3 A, ULL		

Small-signal/small-power complementary

Automotive | Consumer | DC-DC | Industrial drives | Notebook | Onboard

	Voltage [V]	TSOP-6	SOT-363
Complementary	-20/20	BSL215C [4] N: 250 mΩ, 1.5 A, SLL P: 280 mΩ, -1.5 A, SLL	BSD235C [4] N: 600 mΩ, 0.95 A, SLL P: 2.1 Ω, -0.53 A, SLL
	-30/30	BSL308C [3] N: 93 mΩ, 2.3 A, LL P: 130 mΩ, -2.0 A, LL	
		BSL316C [3] N: 280 mΩ, 1.4 A, LL P: 270 mΩ, -1.5 A, LL	

Click here to learn more:

www.infineon.com/powermosfet-12V-300V
www.infineon.com/optimos-strongirfet-packages
www.infineon.com/optimos6
www.infineon.com/optimos7
www.infineon.com/strongirfet2
www.infineon.com/smallsignal

1) not qualified to Automotive AEC-Q101
2) $R_{DS(on)}$ specified at 10 V
3) $R_{DS(on)}$ specified at 4.5 V
4) $R_{DS(on)}$ specified at 2.5 V
5) $R_{DS(on)}$ specified at 1.8 V
6) $R_{DS(on)}$ specified at 0 V

*Coming soon

Nomenclature

OptiMOS™

BSC 014 N 03 L [S] [X] [E] [G]

Package type
BSB = DirectFET™ (M Can)
BSC = SuperSO8
BSF = DirectFET™ (S Can)
BSK = PQFN 2x2
BSO = SO-8
BSZ = PQFN 3.3x3.3
IPA = FullPAK
SPB/IPB = D^2PAK
IPC = Chip product
SPD/IPD = DPAK
IPI = I^2PAK
SPP/IPP = TO-220
IPS = IPAK Short Leads
IPT = TO-Leadless

$R_{DS(on)}$ [mΩ]
Divide by 10 to get $R_{DS(on)}$ value e.g. 014 = 1.4 mΩ

However, if the sixth character is a C, the fourth and the fifth character indicate the $R_{DS(on)}$ e.g. 12C = 12 mΩ
For chip products chip area in mm^2 multiplied by 10

N = N-channel
P = P-channel
C = Complementary

Breakdown voltage [V]
Multiply by 10 to get voltage class e.g. 03 = 30 V
E = Extended, +5 V, e.g. E2 = 25 V

RoHS compliant

Features
F = Fast switching
R = Integrated gate resistor
E = ESD protection
A = Qualified according to Automotive AEC Q101

3 = Technology generation
I = Monolithically-integrated Schottky-like diode
FD = Fast diode
LF = Linear mode capability

Package options
SO-8/SuperSO8/PQFN 3.3x3.3/PQFN 2x2
S = Single chip
D = Dual chip

DirectFET™
X = MX footprint
N = MN footprint
Z = MZ footprint
Q = SQ footprint
T = ST footprint
H = SH footprint
J = SJ footprint

Level		to be used from V_{GS}
N = Normal level	(NL)	10.0
M = Logic level 5 V opt.	(LL)	4.5
L = Logic level	(ELL)	4.5
K = Super logic level	(SLL)	2.5
J = Ultra logic level	(ULL)	1.8

OptiMOS™ 30 V

BSC 0901 N X [I]

Package type

Consecutive number
without any correlation to product specification

Channels
N = N-channel
P = P-channel

I = Monolithically-integrated Schottky-like diode

D = Dual
E = ESD
S = Single

Small signal

BSX | ■ ■ (■) | S | N | W | E

"X" indicates the package
- D = SOT-363
- P = SOT-223
- R = SC59
- S = SOT-89, SOT-23, SOT-323
- L = TSOP-6

2-3 digits product identifier
meaning dependent on product generation

Only present in following case
S = Single (only for packages which are also used for multichip products)

Polarity
- N = N-channel
- P = P-channel
- C = Complementary (N-ch + P-ch)

Only present in following case
W = to distinguish SOT-323 from SOT-23

Additional features
E = ESD-protected MOSFET

StrongIRFET™ (from May 2015 to 2019)

IR | F | 135 | SA | 204

Drive voltage
- F = 4.5 V_{GS} capable for BV ≤ 30 V
- L = 2.5 V_{GS} capable for BV ≤ 30 V, 4.5 V_{GS} capable for BV ≥ 40 V

2 to 3 digit voltage
For example:
- 25 = 25 V
- 135 = 135 V

Package
1 or 2 letters
- B = TO-220
- BA = Super220
- C = Bare die or wafer
- DL = DirectFET™ 1.5 Large Can
- DM = DirectFET™ 1.5 Medium Can
- Can DS = DirectFET™ 1.5 Small Can
- Can FF = TO-220 FullPAK
- H = PQFN 5x6
- HB = Power Block 5x6
- HM = PQFN 3.0x3.0 or 3.3x3.3
- HS = PQFN 2x2
- I = TO-220 FullPAK
- K = SO-8
- L = SOT-223
- ML = SOT-23
- P = TO-247
- PS = Super247
- R = DPAK
- S = D²PAK
- SL = TO-262
- SA = D2 7-pin with pin 2 void
- SN = D2 7-pin with pins void
- SC = D2 7-pin with pin 4 void
- T = TollFET
- TS = TSOP-6
- U = IPAK

3 sequential digits
3 digits issued sequentially

New nomenclature for OptiMOS™ and StrongIRFET™ MOSFETs (2019 onward)

I | SC | 010 | N | 25 | L | I

Infineon

Package type
SC = SuperSO8
SD = SOT-363
SL = TSOP-6
SK = PQFN 2x2
SA = SO8
SP = SOT-223
SQ = CE2
SR = SC59
SS = SOT-89, SOT-23, SOT-323
ST = sTOLL
SZ = PQFN 3.3x3.3
PA = TO-220 FullPAK
PB = D^{2}PAK
PC = Chip Product
PD = DPAK
IPF = D^{2}PAK-7-pin
PI = I^{2}PAK
PP = TO-220
PS = IPAK Short Leads
PT = TO-Leadless
PW = TO-247
QA = PQFN 5x6
QB = PQFN 3x2
QC = PQFN 3x5
QD = PQFN 5x6 Source-Down
QE = PQFN 3.3x3.3 Source-Down
WS = DirectFET™ (S)
WM = DirectFET™ (M)
WL = DirectFET™ (L)
QF = PQFN 8x6

$R_{DS(on)}$ [mΩ]
Divide by 10 to get $R_{DS(on)}$ value
e.g. 012 = 1.2 mΩ

However, if the sixth character is D or E the fourth and the fifth characters indicate the $R_{DS(on)}$ e.g.
12D = 120 mΩ
12E = 1200 mΩ
For chip products chip area in mm^2 multiplied by 10

Version
N = N-channel
P = P-channel
C = Complementary
G = GaN

M|F = Product brand – family
(M = OptiMOS™, F = StrongIRFET™)

Features
D = Dual
H = Half-bridge
3 = Marketing generation with branding strategy
CG = Center gate
E = ESD protection
F = Fast switching
FD = Fast diode
SC = Dual-side cooling
I = Monolithically-integrated Schottky-like diode
LF = Linear mode
R = Integrated gate resistor

Last letter – requirement category:
A = Qualified according to AECQ 101
S = Standard
None = Industrial

Level to be used for V_{GS}

N = Normal level	(NL)	10.0 V
L = Logic level	(LL)	4.5 V
M = Logic level 5 V opt.	(ELL)	4.5 V
K = Super logic level	(SLL)	2.5 V
J = Ultra logic level	(ULL)	1.8 V

Breakdown voltage [V]
Divide by 10
e.g. E2 = 25 V
10 = 100 V
25 = 250 V

Infineon hotline – get connected with the answers! Wherever, whenever.

Infineon offers its toll-free service hotline as one central number, available 24/7 in English, Mandarin, and German.

– Germany (Toll-Free)	0800 951 951 951 (German/English)
– China, Mainland (Toll-Free)	4001 200 951 (Mandarin/English)
– USA (Toll-Free)	1 866 951 9519 (English/German)
– India (Toll-Free)	1 800 572 4924 NEW (English)
– Other countries	00* 800 951 951 951 (English/German)
– Direct access	+49 89 234 65555 (interconnection fee, German/English)

* Please note:
Some countries may require you to dial a code other than "00" to access this international number.
Please visit our service center for more information!

www.infineon.com

Published by
Infineon Technologies Austria AG
9500 Villach, Austria

Date: 09/2024