Product Brief

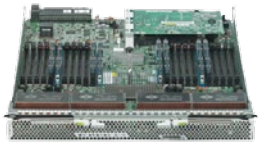
OptiMOS™ 100V, 120V, 150V

Highest Power Density and System Efficiency

Infineon's OptiMOS™ 100V, 120V and 150V families combine very low on-state resistance ($R_{DS(on)}$) and fastest switching behavior, providing outstanding performance to a wide range of industrial and consumer applications. From high current Motor Control applications to fast switching DC/DC converters or Class D Audio Amplifiers, Infineon's products offer excellent performance and the highest efficiency and minimal space requirements.

OptiMOS™ 100V-150V are available in high performance packages such as CanPAK™, S3O8, SuperSO8 and TO-Leadless, enabling designs with highest efficiency and power density. Additionally, the devices facilitate the change from leaded packages to small and high-efficient SMD packages such as SuperSO8.

For high-current applications requiring low ohmic parts the OptiMOS™ 100V and 150V products based in the new and exclusive TO-Leadless package sets new benchmarks in the market. In comparison to devices in the Best-in-Class D²PAK and D²PAK 7pin, products in TO-Leadless offer up to 40% higher current capability, up to 13% lower $R_{DS(on)}$, up to 27% lower Figure of Merit (FOM) and 60% space reduction.



Features

- Outstanding switching performance
- Excellent $R_{DS(on)}$ and FOM
- Very low Q_g and Q_{gd}
- RoHS compliant – halogen free

Benefits

- Increased efficiency
- Highest power density
- Less paralleling required
- Smallest board-space consumption
- Easy-to-design products
- Environmentally friendly

Application

- Motor Control for 48V–80V systems (i.e. domestic vehicles, forklift, trucks)
- Synchronous Rectification for AC/DC SMPS
- Isolated DC/DC converters (Telecom and datacom systems)
- OR-ing switches and circuit breakers in 48V systems
- Notebook Adapter
- Class D Audio Amplifiers
- Uninterruptible power supplies (UPS)

www.infineon.com/optimos

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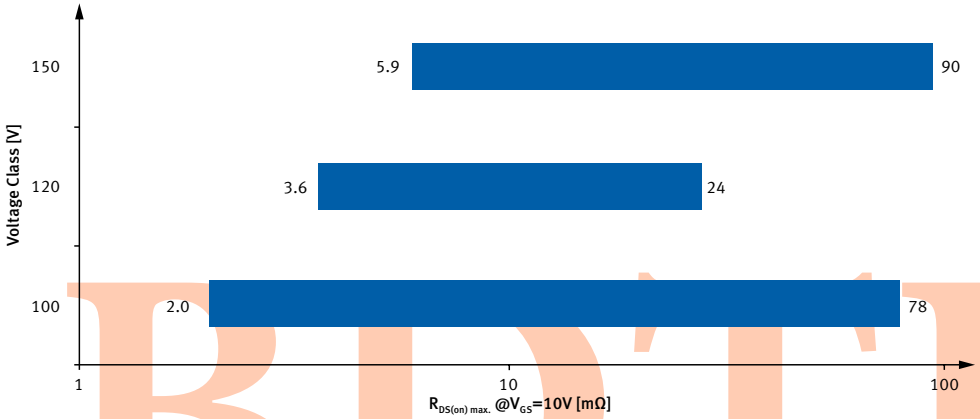
OptiMOS™ 120V technology opens up new possibilities for performance and cost optimized solutions. Where 150V part is not required but a 100V MOSFET is not enough, the OptiMOS™ 120V family is the perfect solution, providing a significant increase in performance over 150V technologies. Moreover, to optimize and simplify the design process, Infineon offers a broad range of $R_{DS(on)}$ in different packages.

Infineon offers the right MOSFET for each system



OptiMOS™ 100V, 120V and 150V Product Portfolio for best in class products per package

Voltage Class	CanPAK™ M CanPAK™ S	D²PAK D²PAK 7pin	TO-220 TO-220 FullPAK	SuperSO8	S3O8	TO-Leadless	Bare Die ($R_{DS(on)}$ typ.)
100V	BSB056N10NN3 G $R_{DS(on)}$=5.6mΩ	IPB027N10N3 G $R_{DS(on)}$=2.7mΩ	IPP030N10N3 G $R_{DS(on)}$=3.0mΩ	BSC046N10NS3 G $R_{DS(on)}$=4.6mΩ	BSZ150N10LS3 G $R_{DS(on)}$=15mΩ	IPT020N10N3 $R_{DS(on)}$=2.0mΩ	IPC302N10N3 $R_{DS(on)}$<3mΩ
	BSF134N10NJ3 G* $R_{DS(on)}$=13.4mΩ	IPB025N10N3 G** $R_{DS(on)}$=2.5mΩ	IPA030N10N3 G*** $R_{DS(on)}$=3.0mΩ				
120V		IPB038N12N3 G $R_{DS(on)}$=3.8mΩ	IPP041N12N3 G $R_{DS(on)}$=4.1mΩ	BSC077N12NS3 G $R_{DS(on)}$=7.7mΩ	BSZ240N12NS3 G $R_{DS(on)}$=24mΩ		IPC302N12N3 $R_{DS(on)}$<4mΩ
		IPB036N12N3 G** $R_{DS(on)}$=3.6mΩ					
150V	BSB165N15NZ3 G $R_{DS(on)}$=16.5mΩ	IPB072N15N3 G $R_{DS(on)}$=7.2mΩ	IPP075N15N3 G $R_{DS(on)}$=7.5mΩ	BSC190N15NS3 G $R_{DS(on)}$=19mΩ	BSZ520N15NS3 G $R_{DS(on)}$=52mΩ	IPT059N15N3 $R_{DS(on)}$=5.9mΩ	IPC302N15N3 4mΩ<$R_{DS(on)}$<7mΩ
		IPB065N15N3 G** $R_{DS(on)}$=6.5mΩ	IPA075N15N3 G*** $R_{DS(on)}$=7.5mΩ				

* CanPAK™ S
** D²PAK 7pin
*** TO-220 FullPAK

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