



# OptiMOS™ 20V–250V

## Always a step ahead with Infineon

The complete portfolio of the OptiMOS™ family in a wide voltage range is now available (20V, 25V, 30V, 40V, 60V, 75V, 80V, 100V, 120V, 150V, 200V, 250V). These benchmark technologies set new standards for power MOSFET featuring simultaneously the world's lowest on-state resistance  $R_{DS(on)}$  in their voltage class and the ideal switching behaviour.

Supported by an optimized portfolio in today's state of the art and high performance leadless SMD packages (CanPAK™<sup>2</sup>, SuperSO8 and S308), OptiMOS™ technologies offer the right products for a wide range of applications. The ideal switching performance and the lowest  $R_{DS(on)}$  allow to reduce significantly size of used packages and minimize the required boardspace by more than 90%. This translates to a higher power density in the system than typical today. From notebook or high-current motor control to fast switching DC-DC converters and class D audio amplifiers, OptiMOS™ family offers the highest efficiency and the minimal space requirements.

### Applications

- Notebooks and Desktop PCs
- VRM modules for servers
- Telecommunications
- Workstations and mainframes
- Synchronous rectification for AC-DC SMPS
- Motor control 12V-110V systems
- Isolated AC-DC converters
- Or-Ing switches and circuit breakers
- Class D audio amplifiers
- HID lamps (i.e. projectors, floodlights)
- Uninterruptable power supplies (UPS)
- LED lighting power supply

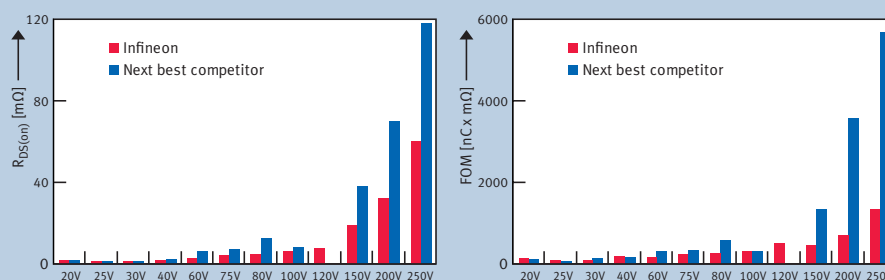
### Features

- World's lowest  $R_{DS(on)}$
- Best switching performance
- Very low  $Q_g$  and  $Q_{gd}$
- RoHS compliant - halogen free
- MSL 1 rated <sup>1)</sup>

### Benefits

- Highest efficiency
- Highest Power density
- Lowest board space consumption
- Minimal device paralleling required
- System cost improvement
- Environmentally friendly
- Easy-to-design-in products

### Highest Efficiency and Power Density with SuperSO8 products



1) CanPAK™<sup>2</sup> is rated for MSL 3.

2) CanPAK™ uses DirectFET™ technology licensed from International Rectifier Corporation. DirectFET™ is a registered trademark of International Rectifier Corporation.

# OptiMOS™ 20V–250V

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OptiMOS™ technologies in space saving leadless packages like CanPAK™<sup>1)</sup>, SuperSO8 and S308 slash power semiconductor space requirement by more than 90%. By featuring industry's lowest  $R_{DS(on)}$  and ideal switching performance, OptiMOS™ family sets new standards for highest efficiency and power density in the system. Additionally the high current capability (up to 180A in D<sup>2</sup>PAK 7pin, 100A in SuperSO8 or 40A in S308) makes OptiMOS™ devices the perfect choice for high current applications like motor control.

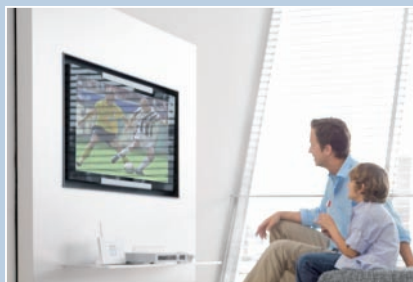
OptiMOS™ family features world's lowest  $R_{DS(on)}$

	S308 	SuperSO8 	CanPAK™ <sup>1)</sup> M 	D <sup>2</sup> PAK 7pin 	TO-220 	TO-220 FullPAK 
20V 2.5V rated		BSC019N02KS G 1.95mΩ <sup>2)</sup>				
25V	BSZ018NE2LS 1.8mΩ	BSC010NE2LS 1.0mΩ	BSB012NE2LX 1.2mΩ			
30V	BSZ021N03LS 2.1mΩ	BSC011N03LS 1.1mΩ	BSB012N03LX 1.2mΩ	IPB009N03L G 0.95mΩ	IPPO34N03L G 3.4mΩ	
40V LL	BSZ040N04LS G 4.0mΩ	BSC016N04LS G 1.6mΩ		IPB011N04L G 1.1mΩ	IPPO39N04L G 3.9mΩ	
40V NL	BSZ042N04NS G 4.2mΩ	BSC017N04NS G 1.7mΩ	BSB015N04NX3 G 1.5mΩ	IPB011N04N G 1.1mΩ	IPPO15N04N G 1.5mΩ	
60V LL	BSZ067N06LS3 G 6.7mΩ	BSC028N06LS3 G 2.8mΩ		IPB016N06L3 G 1.6mΩ	IPPO37N06L3 G 3.7mΩ	
60V NL	BSZ076N06NS3 G 7.6mΩ	BSC031N06NS3 G 3.1mΩ	BSB028N06NN3 G 2.8mΩ	IPB017N06N3 G 1.7mΩ	IPPO24N06N3 G 2.4mΩ	IPA032N06N3 G 3.2mΩ
75V		BSC042NE7NS3 4.2mΩ			IPPO23NE7N3 G 2.3mΩ	
80V	BSZ123N08NS3 G 12.3mΩ	BSC047N08NS3 G 4.7mΩ	BSB044N08NN3 G 4.4mΩ	IPB019N08N3 G 1.9mΩ	IPPO28N08N3 G 2.8mΩ	IPA028N08N3 G 2.8mΩ
100V	BSZ160N10NS3 G 16mΩ	BSC060N10NS3 G 6mΩ	BSB056N10NN3 G 5.6mΩ	IPB025N10N3 G 2.5mΩ	IPPO30N10N3 G 3mΩ	IPA030N10N3 G 3mΩ
120V		BSC077N12NS3 G 7.7mΩ		IPB036N12N3 G 3.6mΩ	IPPO41N12N3 G 4.1mΩ	
150V	BSZ520N15NS3 G 52mΩ	BSC190N15NS3 G 19mΩ	BSB150N15NZ3 G 15mΩ	IPB065N15N3 G 6.5 mΩ	IPPO75N15N3 G 7.5mΩ	IPA075N15N3 G 7.5mΩ
200V	BSZ900N20NS3 G 90mΩ	BSC320N20NS3 G 32mΩ			IPP110N20N3 G 11mΩ	
250V	BSZ16DN25NS3 G 168mΩ	BSC600N25NS3 G 60mΩ			IPP200N25N3 G 20mΩ	

All technologies also available in D<sup>2</sup>PAK, TO-262(I<sup>2</sup>PAK) and DPAK

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2)  $R_{DS(on)}$  @  $V_{GS} = 4.5V$



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