Product brief

OptiMOS™ best-in-class power MOSFETs in SuperSO8 package

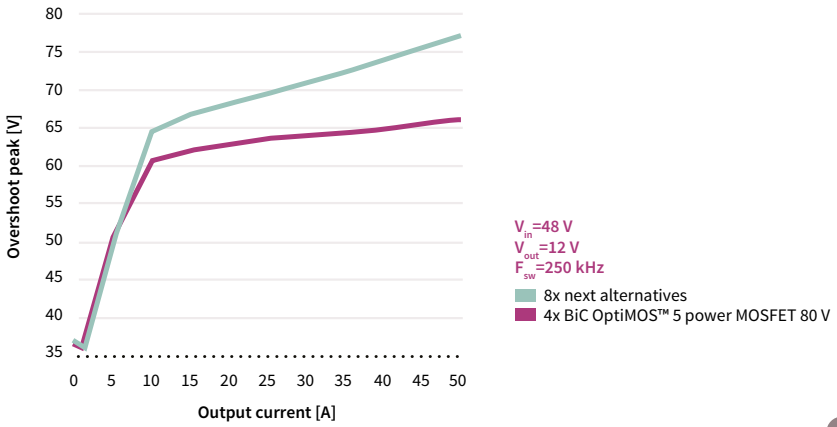
Lowest on-state resistance enables increased power density and efficiency at higher operating temperature

Infineon's OptiMOS™ 3 and 5 best-in-class (BiC) power MOSFETs in SuperSO8 package offer the lowest on-state resistance ($R_{DS(on)}$) enabling reduced losses at a good price/performance ratio. The new BiC MOSFETs in SuperSO8 package extend OptiMOS™ 3 and 5 product portfolio and enable higher power density in addition to improved robustness, responding to the need for lower system cost and increased performance. Low reverse recovery charge (Q_{rr}) improves the system reliability by providing a significant reduction of voltage overshoot, which minimizes the need for snubber circuits, resulting in less engineering cost and effort.

The 175°C rating facilitates designs with either more power, at a higher operating junction temperature, or longer lifetime at the same operating junction temperature. In addition, with the increase in the temperature rating, 20 percent improvement in the safe operating area (SOA) is achieved.

The new BiC MOSFETs in SuperSO8 package are ideal for applications such as telecom, server, three-phase inverter, as well as for class D audio applications. For example, in a 600 W telecom brick converter, the new BiC OptiMOS™ 5 power MOSFET 80 V yields 11 V less overshoot at full load, reducing parts count by half.

Lower overshoot at full load in 600 W telecom brick converter



Key features

- Lowest $R_{DS(on)}$ enables highest power density and efficiency
- Higher operating temperature rating to 175°C for increased reliability
- Low R_{thJC} for excellent thermal behavior
- Lower reverse recovery charge (Q_{rr})

Key benefits

- Lower full load temperature
- Less paralleling
- Reduced overshoot
- Increased system power density
- Smaller size
- System cost reduction
- Engineering costs and effort reduction

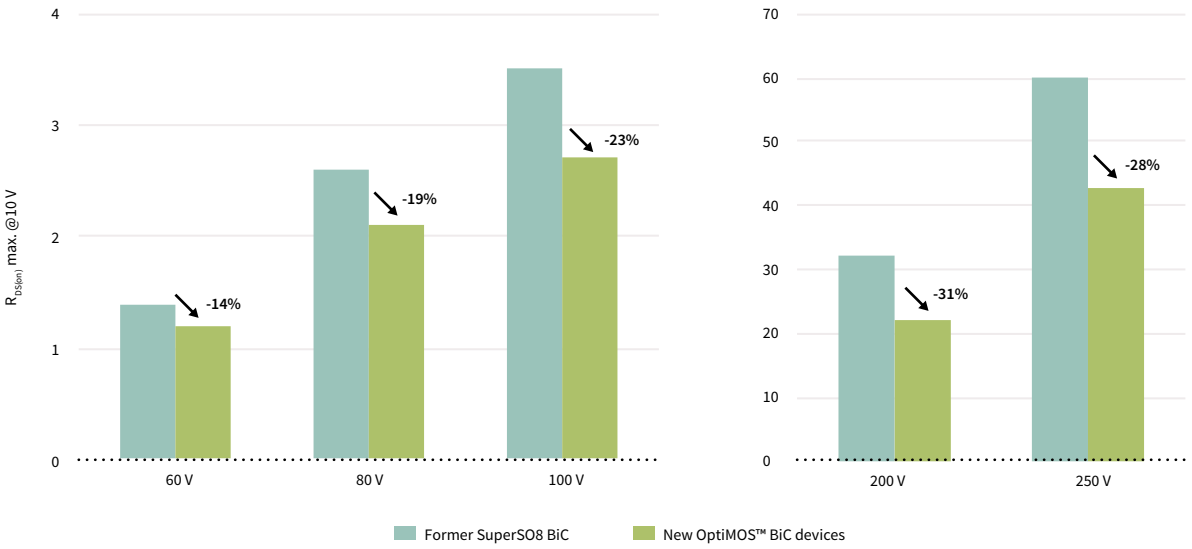
Target applications

- Server
- Telecom
- Power tools
- Low voltage drives
- Class D audio applications

www.infineon.com/superso8-175degrees

OptiMOS™ best-in-class power MOSFETs in SuperSO8 package

$R_{DS(on)}$ reduced by 31 percent for increased system power density and efficiency at good price/performance ratio



Product portfolio - new BiC OptiMOS™ 60-250 V in SuperSO8 package

Part number	$R_{DS(on)}$ max. @ V_{GS} = 10 V [mΩ]	Voltage [V]
BSC012N06NS	1.2	60 V
BSC021N08NS5	2.1	80 V
BSC027N10NS5	2.7	100 V
BSC220N20NSFD	22.0	200 V
BSC430N25NSFD	43.0	250 V

Published by
Infineon Technologies Austria AG
9500 Villach, Austria

Order Number: B111-I0756-V1-7600-EU-EC-P
Date: 02 / 2019

Additional information
For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings
Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.