

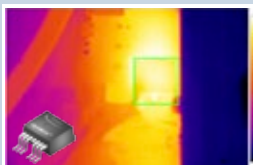
## New OptiMOS™ revolutionizes Oring 40 A in 30 mm<sup>2</sup> footprint

With the new OptiMOS™ product family Infineon sets a new standard in power density and Energy Efficiency for discrete power MOSFETs. Ultra low  $R_{DS(ON)}$  (0.9 m $\Omega$ ) together with a wide package portfolio (D<sup>2</sup>PAK-7, CanPAK™\*, SuperSO8, S308) gives the designer the possibility to meet today's challenges in application design. The products are developed to meet the space requirements in board design as well as to give the maximum safe operating area. Power density can further be increased with the double side cooling product like the BSB009NE2LS which merges a very low  $R_{DS(ON)}$  with the CanPAK™ package technology.

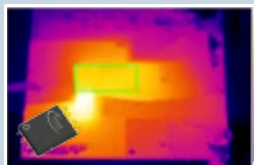
With the new OptiMOS™ products Infineon has the best solution to:

- Save overall system costs by reducing the number of Oring devices needed
- Reduce power losses and increase Energy Efficiency
- Save space with smallest packages like CanPAK™ or S308
- Minimize design effort due to the wide Safe Operating Area (SOA)
- Double side cooling

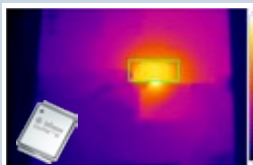
Performance on 2 layers board 70  $\mu$ m each, no airflow



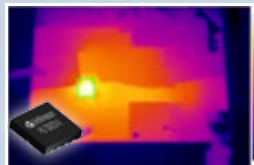
**D<sup>2</sup>PAK**  
**IPB009N03LS**  
 $V_{OUT} = 12V$   
 $I_{OUT} = 30A$   
continuous  
 $T_{package\_MAX} = 52^{\circ}C$



**SuperSO8**  
**BSC010NE2LS**  
 $V_{OUT} = 12V$   
 $I_{OUT} = 30A$   
continuous  
 $T_{package\_MAX} = 80^{\circ}C$



**CanPAK™**  
**BSB009N03LS**  
 $V_{OUT} = 12V$   
 $I_{OUT} = 20A$   
continuous  
 $T_{package\_MAX} = 70^{\circ}C$



**S308**  
**BSZ018NE2LS**  
 $V_{OUT} = 12V$   
 $I_{OUT} = 20A$   
continuous  
 $T_{package\_MAX} = 90^{\circ}C$

### Features

- Best in class on-state resistance
- Excellent 5V gate drive performance
- RoHS compliant and halogen free

### Benefits

- Save overall system costs by reducing the number of MOSFETs used in the Oring stage
- Lowest power losses
- Smallest footprint and highest power density with S308 & CanPAK™
- Easy to design-in
- Can be driven from 5V system rail

### Applications

- Oring-FET
- HOT-SWAP
- E-Fuse

# New OptiMOS™ revolutionizes Oring

## 30 A in 30 mm<sup>2</sup> footprint

### Package portfolio for Oring

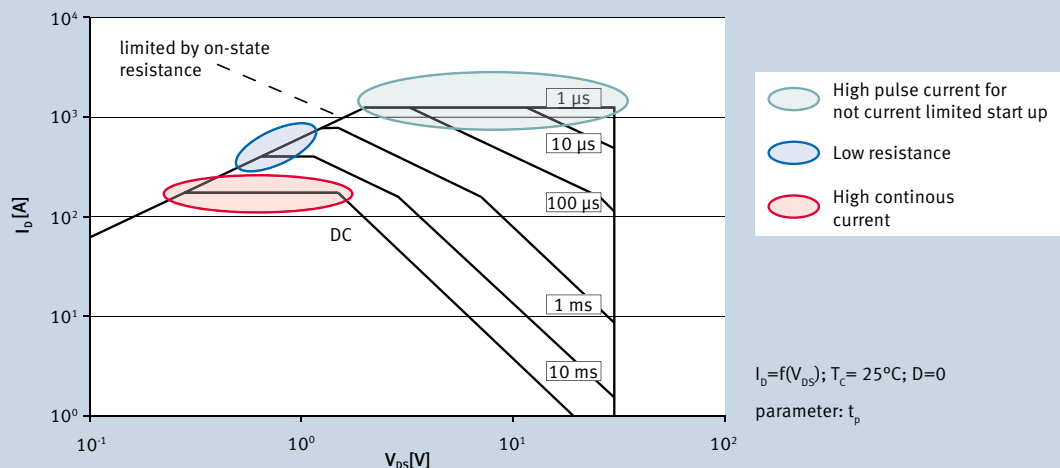
Four packages are recommended for the Oring application. The suitable choice depends on current and space requirements.

	D <sup>2</sup> PAK-7pin	SuperSO8	CanPAK™	S308
footprint [mm <sup>2</sup> ]	160	30	30	20
application current [A]*	40	40	40	25

\*may require airflow

### Safe Operating Area (SOA)

For the selection of the suitable product the engineer has to consult the SOA diagram. A wide SOA is advantageous (e.g.: IPB09N03LS) to reduce the risk of thermal runaway.



### Product Portfolio OptiMOS™ 25/30V

	D <sup>2</sup> PAK	SuperSO8	CanPAK™	S308
$\geq 0.9 \text{ m}\Omega$	IPB09N03LS		BSB008NE2LS; BSB009N03LS	
1.0 - 1.5 mΩ		BSC010NE2LS	BSB012NE2LX	
1.6 - 2.0 mΩ		BSC018NE2LS		BSZ018NE2LS
2.1 - 2.5 mΩ		BSC024NE2LS		

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