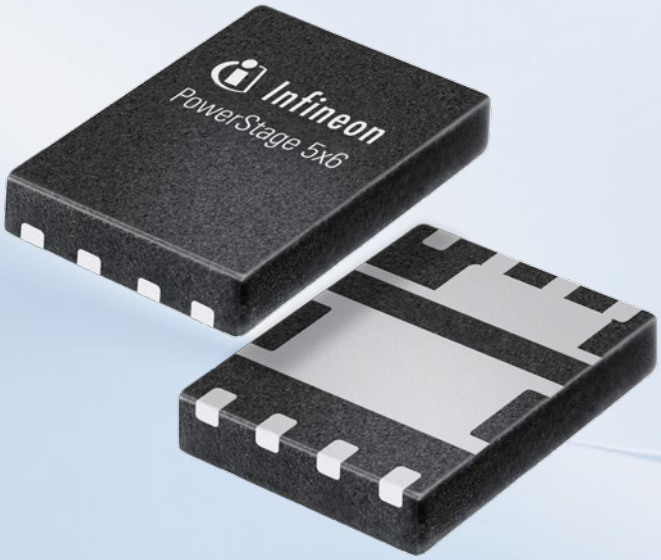
Product Brief



Power stage 5x6

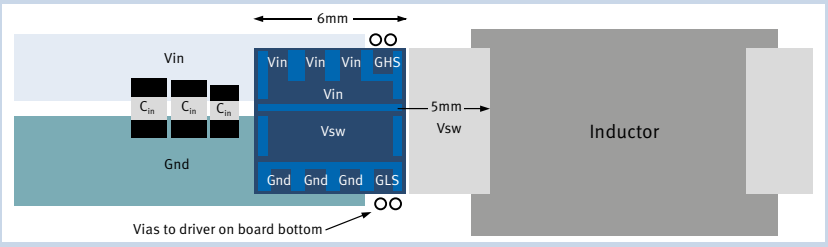
Asymmetric halfbridge handles 30A in a 30mm² footprint

Dual FET power stages in a single leadless SMD package integrate the low side and high side MOSFET of a synchronous DC/DC converter into a 5x6mm2 package outline. Customers can shrink their design up to 85% by replacing two seperate discrete packages such as SO-8 or Super SO8 with this new package. Both the small package outline and the interconnection of the two MOSFETs within the package minimize the loop inductance which boosts efficiency. With the new OptiMOS™ technology the power stage 5x6 achieves a peak efficiency of 93.5% and can handle an application current higher than 30A.

Standardizing power packages benefits the customer as the number of different package outlines available in the market place is minimized.

Easy and compact layout

- Improved power loop (connection to C_{in})
- Different die-pad size for low-side and high-side (larger die-pad for low-side due to higher power dissipation)
- Large area for gnd connection



www.infineon.com/powerstage

Features

- Asymmetric halfbridge in a small package outline 5.0x6.0mm
- Best in class on-state resistance
- Low profile (1mm)
- Internally connected low-side and high-side (lowest loop inductance)
- Optimized thermal design with a larger exposed die-pad for the low-side MOSFET
- Optimized pin-out
- Multiple sources available
- RoHS compliant and halogen free

Benefits

- Compact and simplified layout for a DC/DC converter
- Optimized layout with lowest loop inductivity
- Highest efficiency
- Environmentally friendly

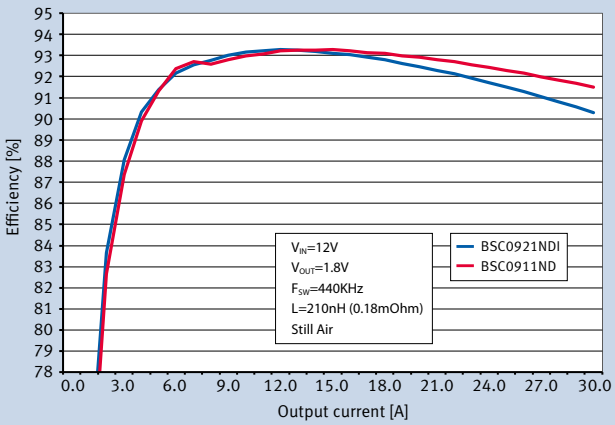
Applications

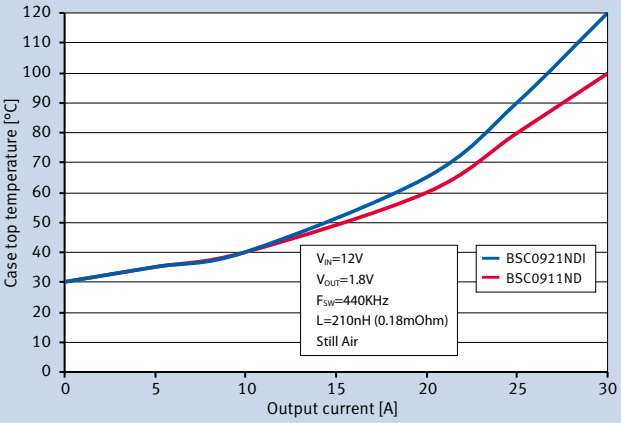
- Notebook core, peripheral
- Motherboard core, peripheral
- Server
- Telecom

Power stage 5x6

Asymmetric halfbridge handles 30A in a 30mm² footprint

The power stage 5x6 can handle in a very compact footprint up to 54W with a top side temperature lower than 100°C and peak efficiency of 93,5%.

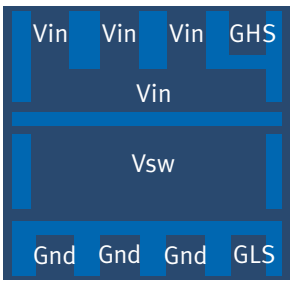


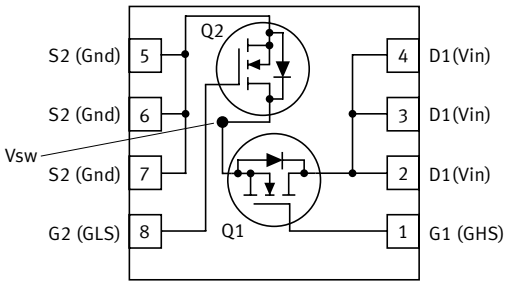


Product portfolio power stage 5x6

Part Number	Schottky Body Diode[1]	BV_{DSS} (V)	$R_{DS(on)}$ @V_{gs}=4,5 max		Q_g tot @V_{gs}=4,5 typ		Sample Status
			High Side	Low Side	High Side	Low Side	
BSC0910NDI[2]	Y	25	5.9 mOhm	1.6 mOhm	7.7 nC	25.0 nC	ES / Q2 2012
BSC0911ND	N	25	4.8 mOhm	1.7 mOhm	7.7 nC	25.0 nC	available
BSC0921NDI	Y	30	7.0 mOhm	2.1 mOhm	5.8 nC	21.0 nC	
BSC0923NDI	Y	30	7.0 mOhm	3.7 mOhm	5.2 nC	12.2 nC	
BSC0924NDI	Y	30	7.0 mOhm	5.2 mOhm	5.2 nC	8.6 nC	
BSC0925ND	N	30	6.4 mOhm	6.4 mOhm	5.2 nC	6.7 nC	

[1] Monolithic integrated Schottky-like diode
[2] release in Q2/2012





Published by
Infineon Technologies Austria AG
9500 Villach, Austria

Visit us:
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Order Number: B152-H9655-G1-X-7600-DB2011-0022
Date: 11 / 2012

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