



Product Brief

400 V Depletion MOSFET in SOT-223

Ideal for constant current source applications

Infineon has launched a new 400 V Depletion MOSFET in the SOT-223 package, adding to the portfolio up to 600 V. This new space saving, low gate threshold voltage device is ideally suited for a variety of applications including lighting, SMPS and offline low voltage dropout Regulators. The product is qualified to AEC Q101, making it suitable for automotive applications and all applications demanding the highest levels of quality.

In constant current source applications the biggest challenge is to maintain the output current at different input voltages, especially in start-up circuits and offline voltage Regulators. A Depletion MOSFET can overcome this issue.

The graph below shows the output currents of a resistive solution and a Depletion MOSFET solution at different input voltages. The Depletion MOSFET solution delivers a constant current irrespective of the input voltage.

Key features

- > Low input capacitance
- > Low $V_{GS(th)}$ (-2.1 V to -1.0 V)
- > Small package size
- > Halogen free
- > Qualified according to AEC Q101

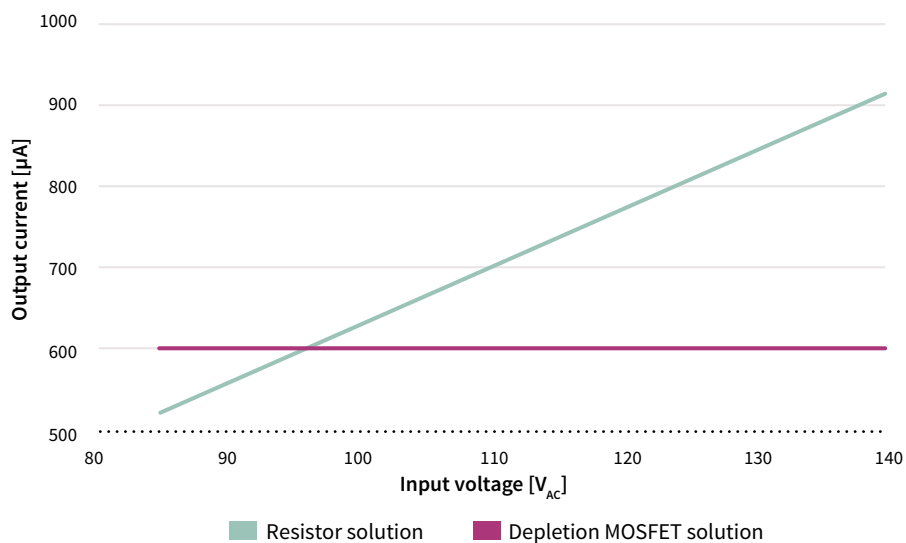
Key benefits

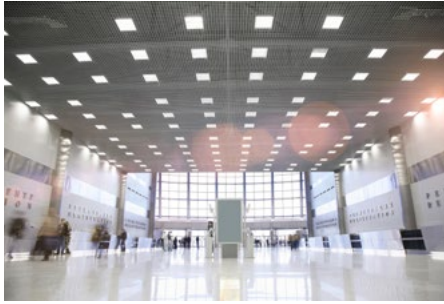
- > High efficiency
- > PCB space and cost saving
- > High system reliability
- > Easy to design-in

Applications

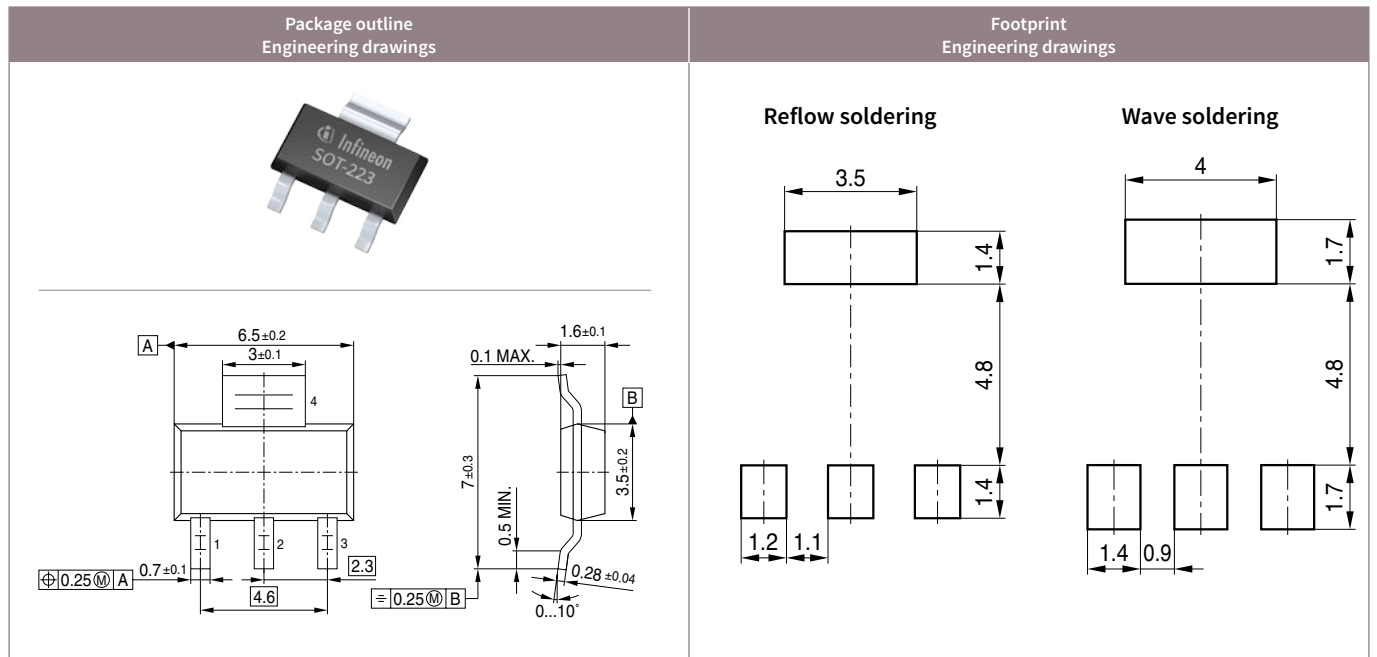
- > Lighting
- > SMPS
- > Low voltage dropout Regulator (LDO)
- > Battery charger

Output current versus input voltage





Package information SOT-223



Product information

Product	V_{DS} [V]	$R_{DS(on)}$ max. [Ω]	I_{DSS} min. [A]	$V_{GS(th)}$ min. [V]	C_{iss} max. [pF]
BSP179	400	24.0	0.04	-2.1	135

Published by
Infineon Technologies Austria AG
9500 Villach, Austria

© 2016 Infineon Technologies AG.
All Rights Reserved.

Please note!

THIS DOCUMENT IS FOR INFORMATION PURPOSES ONLY AND ANY INFORMATION GIVEN HEREIN SHALL IN NO EVENT BE REGARDED AS A WARRANTY, GUARANTEE OR DESCRIPTION OF ANY FUNCTIONALITY, CONDITIONS AND/OR QUALITY OF OUR PRODUCTS OR ANY SUITABILITY FOR A PARTICULAR PURPOSE. WITH REGARD TO THE TECHNICAL SPECIFICATIONS OF OUR PRODUCTS, WE KINDLY ASK YOU TO REFER TO THE RELEVANT PRODUCT DATA SHEETS PROVIDED BY US. OUR CUSTOMERS AND THEIR TECHNICAL DEPARTMENTS ARE REQUIRED TO EVALUATE THE SUITABILITY OF OUR PRODUCTS FOR THE INTENDED APPLICATION.

WE RESERVE THE RIGHT TO CHANGE THIS DOCUMENT AND/OR THE INFORMATION GIVEN HEREIN AT ANY TIME.

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.