



Product Brief

TOLL – Infineon’s Latest PowerMOS Package Optimized for High Current Automotive Electronics

The new TOLL package is optimized for high current automotive applications, such as Power Steering, Brushless DC-Drives, Battery Management, Battery Safety Switch. TOLL is a perfect solution for high power applications, where highest efficiency, outstanding EMI behavior and best thermal behavior in combination with space reduction are required.

A 60% smaller package size enables a very compact design. Compared to D²PAK 7pin, the new TOLL shows a substantial reduction in footprint of 30%. The 50% reduced height offers a significant advantage in applications where compact design is required. This TOLL product is AEC qualified.

Moreover low package parasitic inductances result in an improved EMI behavior and a 50% bigger solder contact area avoids electro-migration at high current levels, which results in improved reliability.

Key Features

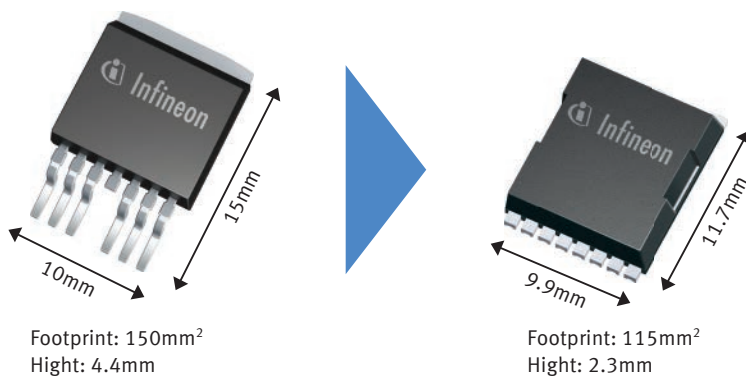
- Industry’s Lowest $R_{DS(on)}$
- Current Capability (300A)
- Very low Package Parasitics & Package Inductances

Key Benefits

- Reduced Paralleling & Cooling
- Highest System Reliability
- Reduced System Costs
- Compact Design

Applications

- Power Steering
- Brushless DC-Drives
- Battery Management
- Battery Safety Switch



Footprint: 150mm²
Height: 4.4mm




Footprint: 115mm²
Height: 2.3mm



TOLL – Infineon’s Latest PowerMOS Package

Optimized for High Current Automotive Electronics

TOLL is designed for high currents up to 300A. In combination with Infineon’s latest OptiMOS™ automotive silicon technology, TOLL achieves lowest $R_{DS(on)}$ in the market. This enables reduction in the number of parallel MOSFETs in all high current applications and increases power density.

	TO-Leadless	D ² PAK 7pin	D ² PAK
			
Power Density	●●●●	●●●	●●
Current Capability	●●●●	●●●	●●
Thermal Performance	●●●	●●	●
Height	●●●	●	●
Reliability	●●●●	●●●	●●●

Moreover low package parasitic inductances result in an improved EMI behavior and a 50% bigger solder contact area avoids electro-migration at high current levels, which results in improved reliability.

Product Summary

Package	Type	V_{DS} [V]	$R_{DS(on)}$ max. [mΩ]	Ordering Code
TOLL	IPLU300N04S4-R7	40	0.76	SP001097228

Published by
Infineon Technologies AG
85579 Neubiberg, Germany

© 2013 Infineon Technologies AG.
All Rights Reserved.

Visit us:
www.infineon.com

Order Number: B124-H9843-X-X-7600
Date: 11 / 2013

Attention please!

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenheitsgarantie"). With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office (www.infineon.com).

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office. Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.