

Product brief

sTOLL – new 7x8 mm² power MOS package

Perfect choice for future automotive applications up to 250 A

Infineon introduces sTOLL as its latest high power leadless package in 7x8 mm² with OptiMOST™-5 40 V for future automotive applications (JEDEC name is MO-319A and IEC name is HSOF-5).

sTOLL offers high current capability of 250 A, more than standard D²PAK (180 A), at a footprint of 56 mm² which is even smaller than DPAK (65 mm²). In combination with Infineon's leading OptiMOST™-5 40 V power MOS technology, sTOLL offers best in class power density and power efficiency at Infineon's well known quality level for robust automotive packages.

With sTOLL 7x8 mm² as new package family Infineon challenges the traditional SMD packages like D²PAK (TO263) and DPAK (TO252) providing higher current capability in smaller form factor of 7x8 mm² without sacrificing thermal performance. Further sTOLL as leadless package minimizes stray inductances, package resistance and improves switching behavior over traditional packages DPAK/D²PAK significantly.

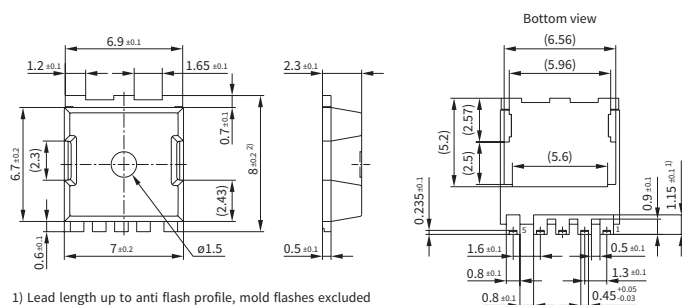
Infineon first sTOLL package family will be based on OptiMOST™-5 40 V technology for all future 12 V high current automotive applications, especially EPS, DC-DC and BLDC in CO₂ friendly vehicles. In a second step sTOLL package will be extended to higher voltage classes like 80 V and 100 V.

sTOLL 40 V product family ranges from 0.6 mΩ – 1.4 mΩ MOSFET devices

<https://www.infineon.com/cms/en/product/power/mosfet/20v-800v-automotive-mosfet/20v-40v-n-channel-automotive-mosfet/iaua200n04s5n010/>

Detailed sTOLL package information:

<https://www.infineon.com/cms/en/product/packages/PG-HSOF/PG-HSOF-5-1/>



1) Lead length up to anti flash profile, mold flashes excluded

2) Excluding burr

All dimensions are in units mm

The drawing is in compliance with ISO 128 and projection method 1 [1]

Key features

- > JEDEC registered
- > 7x8 mm² small footprint
- > 250 A high current capability
- > Leadless package with low package resistance and minimized stray inductance
- > Leading 40 V technology
- > OptiMOST™-5 + OptiMOST™-6
- > R_{DS(on)} range: 0.6 mΩ – 1.4 mΩ
- > AOI capable package for Automated Optical Inspection

Key benefits

- > High power + current density
- > High thermal capacity lead-frame package
- > Reduced conduction losses
- > Optimized switching behavior
- > Reduced form factor compared to traditional DPAK/D²PAK
- > Industry standard package (JEDEC MO-319A)
- > Automotive robust package

Key applications

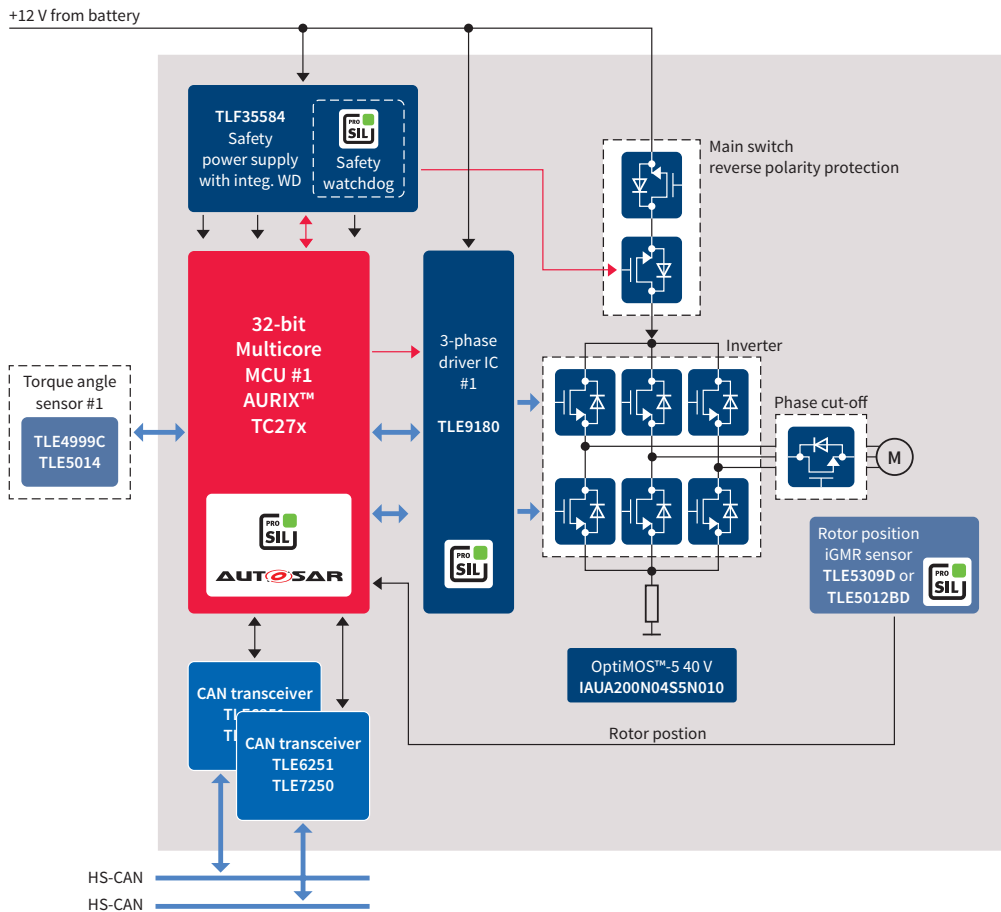
- > 12 V EPS
- > 12 V BLDC
- > 12–48 V DC-DC



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Application Diagram: 40 V sTOLL in an EPS system



Product table

Product name	Voltage [V]	R _{DS(on)} (max) [mΩ]	I _D (max) [A]
IAUA250N04S6N006	40	0.6	250
IAUA250N04S6N007	40	0.7	250
IAUA200N04S5N010	40	1.0	200
IAUA180N04S5N012	40	1.2	180
IAUA120N04S5N014	40	1.4	120

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