New Product Introduction
OptiMOS™ 7 40 V mTOLG

March 2025

public

OptiMOS™ 7 40 V in mTOLG

Package Description

mTOLG (HSOG-4)



L x W x H

8.0 x 8.0 x 1.6 mm³

I_{Dmax} (DC current) at Tj=25 °C: 250A

Cu-Clip soldered

Latest product family in production:
OptiMOS™ 7 with BiC: 0.5mΩ

Application Examples



BLDC motor | Electric power steering | Zonal architecture | Power distribution | DC-DC | Relay box junction box | Battery disconnect

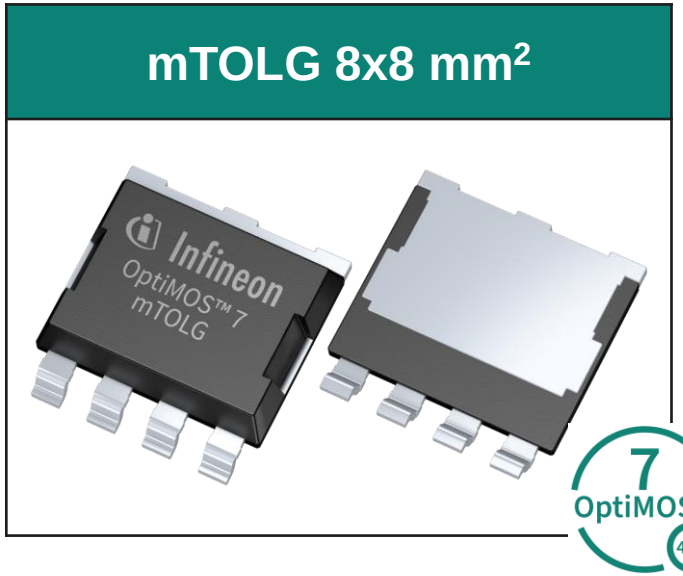
Key features	Key benefits
– Gullwing shaped leads – JEDEC listed package – LFPAK 8x8 compatible, with Gullwing design especially for IMS – Leading edge $R_{DS(on)}$ – Fast switching times (turn on/off) – Extended qualification beyond AEC-Q101 – mTOLG 8x8 is recommended on IMS boards, where gullwings offer better board level reliability	– Enhanced temperature cycling results – Recommended for metal substrate PCBs – Minimized conduction losses – Excellent switching performance – High power density for power drive and switching applications in 8x8 footprint – Latest OptiMOS™ 7 40V technology for optimized switching & power losses

Copyright © Infineon Technologies AG 2025. All rights reserved.

OptiMOS™ 7 40 V in mTOLG

New Product Introduction

- Infineon introduces OptiMOS™ 7 40 V automotive MOSFETs in its new mTOLG 8x8 mm^2 surface mount package. These MOSFETs are designed specifically for the high performance, high quality and robustness needed for demanding automotive applications.
- mTOLG package MOSFETs are recommended for aluminum (Al) based IMS substrates because of their enhanced temperature cycling (TCoB) performance.
- Featuring gullwing-shaped leads, they handle mechanical stress well during thermal cycling. This is especially beneficial to customers using AI based IMS boards which bend more as temperature changes.
- The mTOLG package also uses copper clip interconnect technology, which brings advantages for thermal performance, continuous current capability, on-resistance and package inductance. The leads of the mTOLG package are also compatible with automatic optical inspection (AOI) after soldering.



Product Name	Orderable Part Number (OPN)	V_{DS} [V]	$R_{DS(on)}$ max at V_{GS} 10V [mΩ]	Q_G typ. [nC]	R_{thJC} max. [K/W]	FOM [mΩ*nC]	I_D max. at 25°C [A]
IAUMN04S7N005G	IAUMN04S7N005GAUMA1	40	0.5	142	0.65	71	250
IAUMN04S7N006G	IAUMN04S7N006GAUMA1	40	0.6	103	0.78	61.8	200
IAUMN04S7N009G	IAUMN04S7N009GAUMA1	40	0.86	77	0.98	66.22	200
IAUMN04S7N011G	IAUMN04S7N011GAUMA1	40	1.14	52	1.21	59.28	150

Copyright © Infineon Technologies AG 2025. All rights reserved.


Infineon