

ATV MOSFET
New Product Introduction

March 2025

public

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1 **40 V Product Families** **3**

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OptiMOS™ 7 40 V in S3O8 3x3 mm²

- Infineon is extending its Automotive Package MOSFET technology generation – OptiMOS™ 7 40V in industry standard S3O8 3x3 mm² (PG-TSDSON-8) power packages for robust automotive application.
- The S3O8 package offers Cu-clip connection with 60A current capability.
- In combination with Infineon's leading OptiMOS™ 7 40 V Power MOSFET technology, it offers highest power density and energy efficiency at the industry's lowest on-state resistance on a 3x3 mm² footprint.
- The package provides reduced switching losses, improved SOA ruggedness, and high avalanche current capability to facilitate highly efficient system design for tomorrow's automotive applications.



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]
IAUZN04S7N013	IAUZN04S7N013ATMA2	40	1.33	37	1.6	49.21	60
IAUZN04S7N020	IAUZN04S7N020ATMA2	40	1.96	29	1.8	56.84	60
IAUZN04S7N026	IAUZN04S7N026ATMA1	40	2.64	19	2.3	50.16	60
IAUZN04S7L046	IAUZN04S7L046ATMA1	40	4.59	12	3.3	55.08	60
IAUZN04S7N049	IAUZN04S7N049ATMA1	40	4.93	10	3.3	49.3	60

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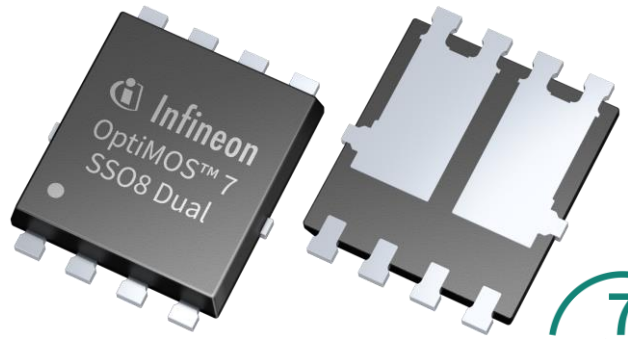
OptiMOS™ 7 40 V in Dual SSO8 5x6 mm²

- Infineon is extending its Automotive Package MOSFET technology generation – **OptiMOS™ 7 40 V** in industry standard **Dual SSO8 5x6 mm²** (PG-TDSON-8) power packages for robust automotive application.
- The Dual SSO8 package offers two N-channel MOSFETs in one standard 5x6 mm² footprint at a very high current capability.
- In combination with Infineon's leading OptiMOS™ 7 40 V Power MOSFET technology, it offers best-in-class power density and power efficiency at Infineon's high-quality level for robust automotive packages and lowest cost per channel.

Dual SSO8 5x6 mm²



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IAUCN04S7N019D	IAUCN04S7N019DATMA1	40	1.90	48	1.6	91.2	60
IAUCN04S7N024D	IAUCN04S7N024DATMA1	40	2.44	30	2.1	73.2	60
IAUCN04S7N040D	IAUCN04S7N040DATMA1	40	4.04	17	2.9	68.68	60
IAUCN04S7L053D	IAUCN04S7L053DATMA1	40	5.34	14	3.7	74.76	60
IAUCN04S7N056D	IAUCN04S7N056DATMA1	40	5.59	12	3.7	67.08	60

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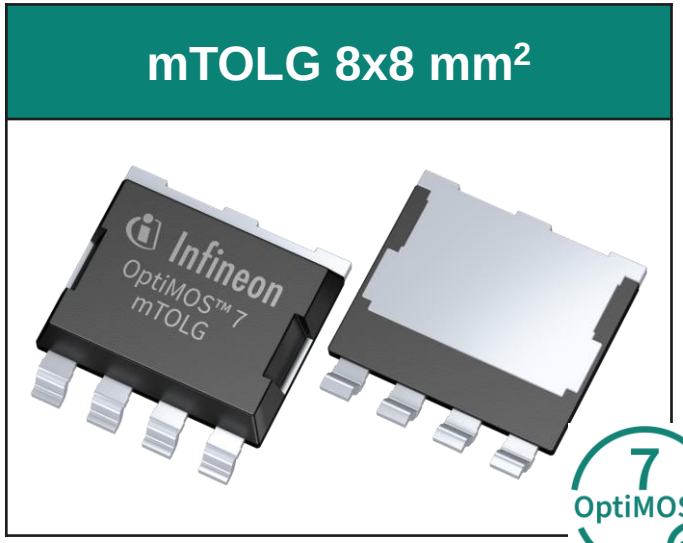
OptiMOS™ 7 40 V in mTOLG 8x8 mm²

- Infineon introduces OptiMOS™ 7 40 V automotive MOSFETs in its new mTOLG 8x8 mm² 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

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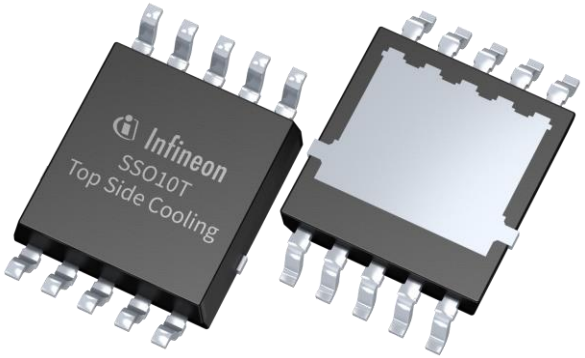
OptiMOS™ 6 40 V in SSO10T 5x7 mm²

- Infineon introduces its new top-side-cooling package SSO10T TSC in combination with its OptiMOS™ 6 MOSFET technology.
- The package offers excellent thermal performance by a direct top side cooling concept – no more heat transfer into or through the PCB.
- Additionally, the package enables an easy and compact double side PCB design, minimizing cooling effort and system costs for future automotive power designs.

SSO10T 5x7 mm²



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]
IAUCN04S6N007T	IAUCN04S6N007TATMA1	40	0.75	100	0.73	75	120
IAUCN04S6N009T	IAUCN04S6N009TATMA1	40	0.9	80	0.84	72	120
IAUCN04S6N013T	IAUCN04S6N013TATMA1	40	1.32	52	1.12	68.64	120
IAUCN04S6N017T	IAUCN04S6N017TATMA1	40	1.73	38	1.46	65.74	120

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OptiMOS™ 7 80 & 100 V in SSO8 5x6 mm²

- Infineon introduces a portfolio of MOSFETs in our next, leading edge, power semiconductor technology; OptiMOS™ 7 80 & 100 V. These products are offered in a versatile, robust, high current SSO8 5x6 mm² SMD package.
- These MOSFETs are designed specifically for the high performance, high quality and robustness needed for demanding automotive applications.
- Another advantage is improved switching performance. The benefits are reduced switching losses and faster switching times. These packages are great fits for motor drive and power conversion circuit applications. The reduced switching losses, coupled with the reduced conduction losses, bring the benefit of high energy efficiency.



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]
IAUCN08S7N013	IAUCN08S7N013ATMA1	80	1.3	89	0.69	116	175
IAUCN08S7N019	IAUCN08S7N019ATMA1	80	1.9	63	0.89	120	175
IAUCN08S7N024	IAUCN08S7N024ATMA1	80	2.4	51.5	1.0	124	150
IAUCN08S7N034	IAUCN08S7N034ATMA1	80	3.4	35.2	1.3	120	120
IAUCN08S7L110	IAUCN08S7L110ATMA1	80	11.0	14.8	2.6	163	40
IAUCN10S7N021	IAUCN10S7N021ATMA1	100	2.1	81	0.69	170	175
IAUCN10S7N040	IAUCN10S7N040ATMA1	100	4.0	39.3	1.06	157	120
IAUCN10S7N074	IAUCN10S7N074ATMA1	100	7.4	21.4	1.56	158	78
IAUCN10S7L180	IAUCN10S7L180ATMA1	100	18.0	11.0	2.6	198	39

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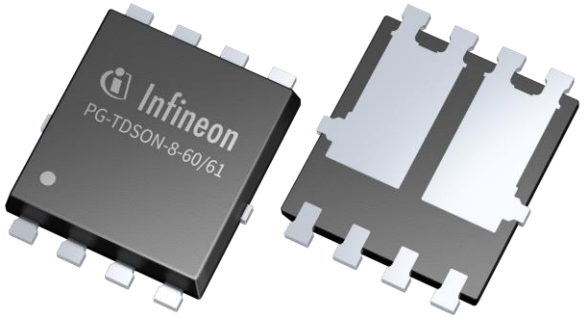
OptiMOS™ 5 100 V in Dual SSO8 5x6 mm²

- Infineon introduces its new generation of dual 100 V MOSFETs. These OptiMOS™ 5 100 V automotive MOSFETs are offered in our newly enhanced, dual SSO8 5x6 mm² surface mount package.
- They feature two independent MOSFETs integrated in one package for PCB area savings and higher power density. They are designed specifically for the high performance, high quality and robustness needed for demanding automotive applications.
- The Dual SSO8 (PG-TDSON-8) package was enhanced by use of copper clip interconnect technology, improving thermal performance. It also improves the continuous current rating by 200 percent over the prior generation; from 20 A to 60 A max. in the lowest on-resistance products.
- The upgrade to OptiMOS™ 5 100 V front-end technology, coupled with the package enhancements, greatly improves on-resistance.

SSO8 5x6 mm²



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]
IAUCN10S5L094D	IAUCN10S5L094DATMA1	100	9.4	23	1.6	216.2	60
IAUCN10S5L280D	IAUCN10S5L280DATMA1	100	28.0	7.6	4	212.8	20

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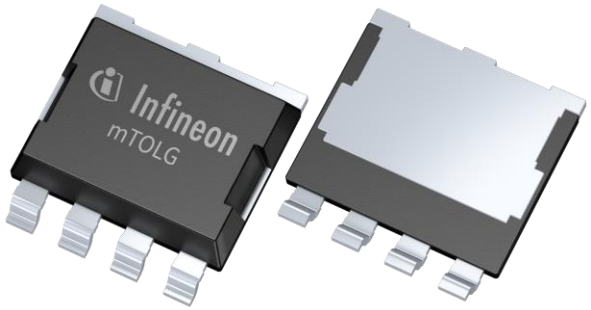
OptiMOS™ 5 80 & 100 V in mTOLG 8x8 mm²

- Infineon introduces OptiMOS™ 7 80 & 100 V automotive MOSFETs in its new mTOLG 8x8 mm² 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.

mTOLG 8x8 mm²



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IAUMN08S5N012G	IAUMN08S5N012GAUMA1	80	1.2	149	0.46	178.8	300
IAUMN08S5N013G	IAUMN08S5N013GAUMA1	80	1.3	138	0.49	179.4	250
IAUMN10S5N016G	IAUMN10S5N016GAUMA1	100	1.6	142	0.46	227.2	220
IAUMN10S5N017G	IAUMN10S5N017GAUMA1	100	1.7	131	0.49	222.7	200

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