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Alpha and Omega Semiconductor Announces New TO-Leadless Packaging Technology for High Current 400A Applications

SUNNYVALE, Calif., September 27, 2018 – [Alpha and Omega Semiconductor Limited](#) (AOS) (Nasdaq: AOSL), a designer, developer and global supplier of a broad range of power semiconductors and power ICs, today introduced the TO-Leadless (TOLL) package in combination with 40V Shield-Gate Technology (SGT) to provide the highest current capability in its voltage class. The TOLL package has the highest current capacity because of AOS' innovative technology which utilizes a clip to achieve the 400A DC at 25°C capability. The TOLL packaging technology offers very low package resistance and inductance due to the clip technology in comparison to other TO-Leadless packages using standard wire-bonding technology which enables improved EMI performance.

The [AOTL66401](#) (40V) has a 30% smaller footprint compared to a TO-263 (D2PAK) package, including having higher current carry capability that enables the designer to reduce the number of devices in parallel. This new device offers a higher power density in comparison to existing solutions, and is ideally suited for industrial BLDC motor applications and battery management to reduce the number of MOSFETs. The AOTL66401 has a 0.7mOhm max rating at 10Vgs with a maximum drain current of 400A at 25°C and 350A at 100°C case temperature. The pulsed current is rated at 1600A, which is limited by the maximum junction temperature of 175°C.

“With the significant performance improvement, the TOLL with clip technology is a robust package which enables low package parasitics reducing EMI. The AOTL66401 simplifies new designs with the higher current density to enable savings in overall system cost due to a reduced number of devices in parallel. AOS' TOLL package is best suited for high power applications,” said Peter H. Wilson.

Technical Highlights

Part Number	V _{DS} (V)	V _{GS} (±V)	Continuous Drain Current (A)		Pulsed Drain Current (A)	R _{DS(ON)} Max (mOhm) @10V
			@25°C	@100°C		
AOTL66401	40	20	400	350	1600	0.7

Pricing and Availability

The AOTL66401 is immediately available in production quantities with a lead-time of 12-14 weeks. The unit price for 1,000 pieces is \$3.9.

About AOS

Alpha and Omega Semiconductor Limited, or [AOS](#), is a designer, developer and global supplier of a broad range of power semiconductors, including a wide portfolio of [Power MOSFET](#), [IGBT](#), [IPM](#), [Power IC](#) and [Digital Power](#) products. AOS has developed extensive intellectual property and technical knowledge that encompasses the latest advancements in the power semiconductor industry, which enables us to introduce innovative products to address the increasingly complex power requirements of advanced electronics. AOS differentiates itself by integrating its Discrete and IC semiconductor process technology, product design, and advanced packaging know-how to develop high performance power management solutions. AOS' portfolio of products targets high-volume applications, including portable computers, flat panel TVs, LED lighting, smart phones, battery packs, consumer and industrial motor controls and power supplies for TVs, computers, servers and telecommunications equipment. For more information, please visit www.aosmd.com.

Forward Looking Statements

This press release contains forward-looking statements that are based on current expectations, estimates, forecasts and projections of future performance based on management's judgment, beliefs, current trends, and anticipated product performance. These forward-looking statements include, without limitation, references to the efficiency and capability of new products, and the potential to expand into new markets. Forward looking statements involve risks and uncertainties that may cause actual results to differ materially from those contained in the forward-looking statements. These factors include, but are not limited to, the actual product performance in volume production, the quality and reliability of the product, our ability to achieve design wins, the general business and economic conditions, the state of the semiconductor industry, and other risks as described in the Company's annual report and other filings with the U.S. Securities and Exchange Commission. Although the Company believes that the expectations reflected in the forward looking statements are reasonable, it cannot guarantee future results, level of activity, performance, or achievements. You should not place undue reliance on these forward-looking statements. All information provided in this press release is as of today's date, unless otherwise stated, and AOS undertakes no duty to update such information, except as required under applicable law.

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