

FOR IMMEDIATE RELEASE

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Alpha and Omega Semiconductor Releases Fast Switching 600V α MOS5™ Super Junction MOSFETs in SMD-type TOLL Package

Optimized for High-Density, High-Power Server Power Supplies, and PV Inverters

SUNNYVALE, Calif., Nov 10, 2020 – [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 announced the release of a Fast Switching 600V α MOS5™ Super Junction MOSFETs in SMD-type TOLL Package. α MOS5 is AOS's latest generation of high voltage MOSFET, designed to meet the high efficiency and high-density needs for Quick Charger, Adapter, PC Power, Server, Industrial Power, Telecom, and Hyperscale Datacenter applications.

The new α MOS5 TOLL product's footprint is only 115mm², which is 23% smaller than that of D2PAK. Its package thickness is 2.3mm, an almost 50% height reduction versus D2PAK. The reduced package inductance and parasitics of the TOLL package enable power designs to reach the next level of switching efficiency, EMI performance, and ease-of-use. The first Fast Switching α MOS5 TOLL product will be available as [AOTL125A60](#), a 600V device of 125mOhm. Upcoming α MOS5 TOLL products will provide a much wider range of Rds(on), covering applications from 200W to 3kW.

Furthermore, α MOS5 TOLL provides a current capability of up to 100A in a 125mohm device, supporting today's most demanding Server PFC and PV Inverter applications, which require both high current rating and small form factor. The Automated Optical Inspection (AOI) Capability and Enhanced Solder Contact Area of α MOS5 TOLL also help improve the system and board-level reliability of power supplies that need to serve long life cycles.

Additionally, α MOS5 High Voltage TOLL package features Kelvin Source connection, which significantly improves switching performance by reducing switch-on loss through separate power and drive sources.

“AOS has been one of the leading suppliers to launch TOLL products with our previous technologies and demonstrated our TOLL devices' high reliability in some of the most challenging application environments. The new release of the Fast Switching 600V TOLL family is an important milestone, allowing AOS to support broader and higher power applications, extending our solutions to Low Profile Server Power and Compact PV Inverter systems. α MOS5 600V TOLL product is an ideal replacement for D2PAK and TO-220(F) packages. It helps significantly reduce the design space by eliminating paralleling devices and reducing device height, thanks to its 30% reduction in Rds(on)*Area versus earlier generation products. Customer also benefits from α MOS5 600V TOLL's automated SMD assembly and high system reliability. Our High Voltage TOLL solution will make it possible for SMPS designers to achieve excellent power density with a compact, robust and reliable package that is easy to use.” said Richard Zhang, Director of High Voltage MOSFET Product Line at AOS.

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Pricing and Availability

As part of the new release, [AOTL125A60](#) (600V 125mOhm TOLL) is immediately available for production quantities. For 1000pcs, the unit price is \$3.3 for AOTL125A60.

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](#), [TVS](#), [HVIC](#), [GaN/SiC](#), [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, smartphones, battery packs, consumer and industrial motor controls, automotive electronics, 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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