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FOR IMMEDIATE RELEASE

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Alpha and Omega Semiconductor Releases αMOS5™ 600V FRD 95mohm and 125mohm Super Junction MOSFETs

New advanced HV MOSFETs optimized to meet the high efficiency needs in LLC, PSFB Converters and H-4 and Cyclo-Inverters of Solar/ESS applications

SUNNYVALE, Calif., Jan 3, 2024 – Alpha and Omega Semiconductor Limited (AOS) (Nasdaq: AOSL), a designer, developer, and global supplier of a broad range of discrete power devices, wide band gap power devices, power management ICs, and modules, today announced the release of two αMOS5™ 600V FRD Super Junction MOSFETs. αMOS5™ is AOS's market and application-proven high voltage MOSFET platform, designed to meet the high efficiency and high-density needs of servers, workstations, telecom rectifiers, solar Inverters, EV charging, motor drives and industrial power applications.

The design of today's mid-high power switched-mode power supply (SMPS) and solar inverter systems boil down to four major challenges – higher efficiency, higher density, lower system costs, and uncompromised robustness. High Voltage Super Junction MOSFETs are the dominant choice for topologies such as single/interleaved/dual boost/CrCM TP PFCs, LLC, PSFB, multi-level NPC/ANPC and so forth.

αMOS5™ has been the leading High Voltage Super Junction solution tailored for fast switching, ease-of-use and robustness in mission-critical applications. αMOS5™ FRD FETs are engineered with strong intrinsic body diode to handle hard commutation scenarios, when the freewheeling body diode is in reverse recovery due to abnormal operations, such as short-circuit or start-up transients. The two products released, the AOK095A60FD (TO-247) and AOTF125A60FDL (TO-220F), are 600V FRD FETs with 95mohm and 125mohm maximum Rdson, respectively. In tests conducted by AOS engineers, the body diodes of these two FRD FETs have survived high di/dt, under abnormal system conditions, even at elevated junction temperatures of up to 150°C. Additionally, AOS tests have shown that these devices' turn off energy (Eoff) are noticeably lower than the competition's, which contributes to higher efficiency in light or mid-load conditions.

"We defined our products for traditional power supplies, as well as DC/DC and DC/AC converters of solar inverters and ESS systems, where bi-directional topologies are needed. As energy storage-ready inverters become the trend and high voltage batteries are utilized increasingly in AC-coupled systems, the AOK095A60FD and AOTF125A60FDL will become industry leading solutions for bi-directional DC/DC and inverter/PFC applications that serve a wide range of power supplies, solar PV inverters, and ESS hybrid converters," said Richard Zhang, Senior Director of Product Line and Global Power Supply Business at AOS.

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Technical Highlights

- Rugged, fast recovery diode (FRD) with reduced Qrr for demanding use cases
- Engineered for both hard and soft switching topologies with ultra-low switching loss
- Strong UIS and SOA capabilities
- Engineered to prevent self turn-on
- Suitable for LLC, PSFB, CrCM Totem-Pole, Multi-level NPC and CrCM H-4/Cyclo Inverter applications

Pricing and Availability

The AOK095A60FD (600V 95mohm TO-247) is immediately available in production quantities with a lead time of 16 weeks. The unit price in 1,000-piece quantities is $3.75.

The AOTF125A60FDL (600V 125mohm TO-220F) is immediately available in production quantities with a lead time of 16 weeks. The unit price in 1,000-piece quantities is $3.22.

About AOS

Alpha and Omega Semiconductor Limited, or AOS, is a designer, developer, and global supplier of a broad range of discrete power devices, wide band gap power devices, power management ICs, and modules, including a wide portfolio of Power MOSFET, SiC, IGBT, IPM, TVS, Gate Drivers, 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's 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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