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Alpha and Omega Semiconductor Introduces 25V and 80V MOSFETs in State-of-the-Art Packaging that Meets Increasing AI Server Power Demands

Designed to support high-power density and enhanced thermal performance, new MOSFETs in DFN 3.3x3.3 double-sided cooling source-down packaging feature center gate technology for easier routing on the PCB

SUNNYVALE, Calif., March. 17, 2026 – 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 introduced its AONC40202 25V MOSFET and AONC68816 80V MOSFET that are available in state-of-the-art DFN 3.3x3.3 double-sided cooling source-down packaging. Designed to support high power density in Intermediate Bus Converters (IBC) DC-DC applications in AI Servers, the AONC40202 and AONC68816 meet the stringent thermal requirements of AI servers and data centers.

The AONC40202 and AONC68816 feature an optimized top-clip design for the exposed drain contact. This double-sided thermal interface will remove heat from the heatsinks, keeping the part cooler. Designers have found that double-sided cooling is the optimal solution to reduce heat generation and thermal stress compared to single-sided cooling devices. The packaging technology used in the AONC40402 25V and AONC68816 80V MOSFETs features a large top clip, which enables a low thermal resistance rate value of Rthc-top(max) to be 0.9°C/W.

What's more, the AONC40202 has a continuous current capability of up to 405A, with a maximum junction temperature of 175° C. These capabilities provide significant system-level improvements such as enhanced thermal management, support higher power density, and afford increased operational efficiencies. In addition, the source-down packaging technology provides a larger source contact to the PCB, and its center-gate pin layout allows easier PCB routing, so the gate driver connection can be minimized.

"AOS designed these latest MOSFETs to specifically satisfy intensifying AI server power needs. In particular, the double-sided cooling DFN 3.3x3.3 source-down packaging delivers superior heat transfer and thermal performance compared to traditional DFN 3.3x3.3 packaging solutions. Beyond their thermal advantages, the AONC40202 and AONC68816 use the latest AlphaSGT™ Silicon Technology. This combination of enhanced thermal and Silicon technology offers AI power designers a more effective solution to increase power density while also enhancing manufacturability and overall application reliability," said Peter H. Wilson, Sr. Director of MOSFET product line at AOS.

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Technical Highlights

Part Number	Package	V_{DS} (V)	V_{GS} (±V)	T_J (°C)	Rthjc Max (C/W)		Continuous Drain Current (A)	Pulsed Drain Current (A)	$R_{DS(ON)}$ Max (mOhms) @10V
					Top	Bottom	@25°C	@25°C	
AONC40202	DFN3.3x3.3A	25	12	175	0.9	1.1	405	644	0.7
AONC68816	DFN3.3x3.3A	80	20	175	0.9	1.1	119	476	4.7

Pricing and Availability

The AONC40202 and AONC68816 MOSFETs are immediately available in production quantities with a lead time of 14-16 weeks. The unit prices in 1,000-piece quantities is $1.85 and 1.95, respectively.

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 bandgap power devices, power management ICs, and modules, including a wide portfolio of Power MOSFET, SiC, GaN, IGBT, IPM, TVS, HV 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' portfolio of products targets high-volume applications, including personal computers, graphics cards, data centers, AI servers, smartphones, consumer and industrial motor controls, TVs, lighting, automotive electronics, and power supply units for various 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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