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FOR IMMEDIATE RELEASE

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Alpha and Omega Semiconductor Releases Automotive Qualified 1200V αSiC MOSFETs for Electric Vehicle Applications

SUNNYVALE, Calif., March 2, 2021 – Alpha and Omega Semiconductor Limited (AOS) (Nasdaq: AOSL) a designer, developer, and global supplier of a broad range of power semiconductors, power ICs, and digital power products, today announced the release of the new AEC-Q101 qualified 1200V silicon carbide (SiC) αSiC MOSFETs in optimized TO-247-4L package. Ideal for the high efficiency and reliability requirements of electric vehicle (EV) on-board chargers, motor drive inverters, and off-board charging stations, these 1200V SiC MOSFETs provide the industry-leading lowest on-resistance available for an automotive qualified TO-247-4L with a standard gate drive of 15V.

As the EV market accelerates into millions of units per year, vehicle manufacturers are increasingly implementing 800V electrical systems to reduce the system's size and weight while increasing range and enabling significantly faster charging speeds. AOS's 1200V automotive grade αSiC MOSFETs are specifically designed for these demanding applications by providing superior switching performance and efficiency over standard silicon devices.

The AOM033V120X2Q is a 1200V / 33mΩ SiC MOSFET based on our second generation αSiC MOSFET platform packaged in an optimized TO-247-4L. Unlike the standard 3 lead package, using an additional sense lead reduces the package inductance effects and enables the device to operate at a higher switching frequency with up to 75% reduction in switching losses compared to standard packaging. The recommended gate driving voltage of only 15V allows for the widest compatibility of gate drivers for ease of adoption in a variety of system designs. In addition, αSiC MOSFETs have a very low increase in on-resistance up to the rated 175° C to minimize power losses and further increase efficiency.

"For the continued transformation of transportation to EV technology, vehicle manufacturers making efforts to increase range and reduce the time spent charging. With our release of these automotive qualified 1200V αSiC MOSFETs, AOS can provide designers with next generation semiconductor technology to increase these efficiency targets. Our customers have selected our technology due to the combination of product performance, reliability, and volume capable supply chain," said David Sheridan, Sr. Director of Wide Bandgap Products at AOS.

The automotive αSiC MOSFET portfolio will expand later this year to include a broader range of on-resistance and additional package options.

Technical Highlights:

- AEC-Q101 Qualified and PPAP capable
- Maximum operating junction temperature to 175°C
- Low on-resistance increase with temperature
- Low Qrr and robust body diode
- Kelvin-source connection for fast low-loss switching

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Pricing and Availability

AOM033V120X2Q is immediately available for production quantities. Please contact your local sales representative for pricing.

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, 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'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 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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