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## Alpha and Omega Semiconductor Introduces its first 2.38 mOhm Device for Battery Protection

### Ultra Low R<sub>ss</sub> keeps voltage drop and temperature rise to a minimum level

SUNNYVALE, Calif., June 21, 2016 (GLOBE NEWSWIRE) -- [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 AOC3862, a common-drain 12V dual n-channel MOSFET with an ultra-low on-resistance, typical 2.38 mOhm at 4.5V gate drive. This new device offers the best-in-class source-to-source on-resistance (R<sub>ss(on)</sub>), giving the battery protection circuit designer the lowest voltage drop and temperature rise in the protection circuit module. Additional backside protection of the AlphaDFN™ family provides added reliability and safety when mounting the small devices onto the PCB. The new device is particularly suitable for the protection circuit in high capacity battery packs, which are used in almost all new smart phones.

A photo accompanying this announcement is available at <http://www.globenewswire.com/NewsRoom/AttachmentNg/ec68b611-d909-402c-a7eb-8f5715cb4927>

In the design of smart phone battery packs, two technical factors have completely changed the protection circuit design during the past two years. First, a higher charging current is applied to charge the battery in a shorter time. Second, designers are utilizing as much space as possible to fit in more-active battery cells. These factors present additional challenges to protection board designers, to control the temperature rise to a minimum level within tighter board space. AOC3862 has very low R<sub>ss</sub>, typically 2.38 mOhm at 4.5V gate drive and 2.5 mOhm at 3.8V gate drive. This is realized by the reduction of both channel resistance and distribution resistance. The part is offered in a 3.55x1.77mm AlphaDFN package. This package technology further enhances power dissipation while providing protection to the chip for easier and safer handling when surface mounting.

"Keeping a low temperature in the battery pack is critical for longer battery life and safer operation. A battery protection board is shielded in a very limited space inside the battery pack, so thermal dissipation is always a big concern. AOC3862 is designed as an ultra low R<sub>ss</sub> device. With this part, we provide designers a way to cut down thermal production at the root, that is, to generate less temperature rise, before trying to dissipate it out," said Lei Feng, Sr. Marketing Director of MOSFET product line at AOS.

### Device Specification Table

Part Number	V <sub>SS</sub> (V)	V <sub>GS</sub> (V)	R <sub>SS(ON)MAX</sub> (mOhms)		R <sub>SS(ON)Typ</sub> (mOhms)	
			4.5V <sub>Gs</sub>	3.8V <sub>Gs</sub>	4.5V <sub>Gs</sub>	2.5V <sub>Gs</sub>
<a href="#">AOC3862</a>	12	8	3	3.2	2.38	2.5

### Pricing and Availability

The AOC3862 is immediately available in production quantities with a lead-time of 12-14 weeks. The unit price for 1,000 pieces is \$0.55.

### 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](#) and [Power IC](#) 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, 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](http://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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