

FOR IMMEDIATE RELEASE

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Alpha and Omega Semiconductor Introduces the New Generation PairFET™

Optimized PairFET reduces the temperature rise by 8 degrees C for Vcore power

SUNNYVALE, Calif., Dec. 17, 2015 – [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 introduced the new generation of high efficiency PairFETs. The [AOE6930](#) is an asymmetric package with integrated high-side and low-side MOSFETs. The product is designed with AOS's latest silicon technology to optimize the conducting resistance and the switching characteristics of both MOSFETs in order to attain the highest efficiency over the whole output range when working as the power stage for a Vcore power supply circuit. The combination of AOS's XSFET™ technology in this new generation PairFET package, gives the device an extra advantage in thermal dissipation. The device is ideal, but not limited to power supplies in computing, telecom and high power density point-of-load socket applications.

The latest generation of CPUs requires separate power supply circuits for each Vcore rail, which creates a challenge for the power supply designers. They have to fit more DC/DC circuits onto almost the same area, and at the same time improve the total power efficiency. As the most important components of the power stage, MOSFETs with ultra-low on-resistance, lowest switching loss, and compact yet low thermal resistance packages are essential to meet the design target. AOE6930 integrated the high-side and the low-side MOSFETs, with 7mOhms and 1.05mOhms maximum on-resistance, respectively, within a 5mm x 6mm DFN package. The low-side MOSFET source is connected directly to the exposed pad, which can easily be connected to the ground plane in PCB design. This feature provides the circuit designers a significant benefit in enhancing the thermal dissipation. Test results on an existing notebook PC design, under a typical 19.5V input, and 1.2V 21A output condition, the device showed over one percentage efficiency improvement, and reduced the temperature rise by 8 degrees C, in comparison with the current solutions found in the market.

"AOE6930 is the start of a new era of AOS solutions for CPU Vcore power supply circuits. This device is a great combination of AOS's silicon and packaging technologies, and it's further optimized with our application know-how in this area. Both the efficiency and thermal performance already showed the advantage over the existing solutions. This device is not limited to PC applications, it is also a good solution for other high frequency PWM circuit which requires best-in-class performance in efficiency and thermal design", said Lei Feng, Marketing Director of MOSFET product line at AOS.

Device Specification Table

Part Number	FET	V _{DS} (V)	V _{GS} (±V)	R _{DS(ON)} Max (mOhms)		V _{GS(th)} Max (V)	C _{iss} (pF)	C _{oss} (pF)	C _{rss} (pF)	Q _g (nC)	Q _{gd} (nC)
				10V	4.5V						
				AOE6930	High Side						
Low Side	30	12	0.83		1.05	1.9	5560	1670	200	42	12

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Pricing and Availability

The AOE6930 is immediately available in production quantities with a lead-time of 12-14 weeks. The unit price for 1,000 pieces is \$1.30.

About AOS

Alpha and Omega Semiconductor Limited, or [AOS](http://www.aosmd.com), 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.

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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