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Alpha and Omega Semiconductor Launches 5A EZBuck™ DC-DC Regulator with Ultra Pulse Energy Mode (U-PEM)

New synchronous buck regulator with enhanced light load efficiency and lower output voltage

SUNNYVALE, Calif., April 19, 2017 – [Alpha and Omega Semiconductor Limited](#) (AOS) (Nasdaq: AOSL), a designer, developer and global supplier of a broad range of power semiconductors today announced the release of the [AOZ6605](#), a high efficiency and simple-to-use synchronous step-down regulator with PWM switching frequency of 650 kHz and input voltage range of 4.5V to 18V. The solution is ideal for consumer, networking and industrial applications such as LCD TVs, set-top boxes, cable modems, and power supplies.

Leveraging AOS’s co-package EZBuck™ design, the AOZ6605 integrates a 55mΩ high-side and 12mΩ low-side MOSFET, and provides 5A of continuous output current at over 90% efficiency and maintains it at 86% efficiency while in 10mA light load operation.

When operating in low output current conditions, the AOZ6605 will operate in an ultra pulse energy mode (U-PEM) to obtain high efficiency. Under heavy load steady-state conditions, the AOZ6605 will operate in fixed frequency and Continuous-Conduction Mode (CCM).

“As AOS’s latest generation of 5A DC-DC Buck Converter, AOZ6605 reduces standby current and improves light load efficiency to minimize standby power consumption. With an output voltage adjustable down to 0.6V, AOZ6605 becomes more intuitive and a more applicable DC/DC solution,” said Kenny Hu, Power IC Marketing Manager at AOS.

Technical Highlights

	AOZ6605	Major Competitor
Input Range	4.5V to 18V	4.5V to 18V
FET On-resistance (typ)	High-side: 55mOhms Low-side: 12mOhms	High-side: 68mOhms Low-side: 37mOhms
Package	Epad-SO8	Epad SO-8
Efficiency at 5A	92%	89%
Thermal (5A)	70.9 °C	74.9°C

Device Spec Table

Part Number	Operating Min (V)	Operating Max (V)	Max Load Current (A)	Min V _{OUT} (V)	Frequency (KHz)	Light Load Features	Soft Start	Package
AOZ6643	4.5	18	3	0.8V	500	No	Internal	DFN3X3-8L
AOZ6622	4.5	18	2	0.8V	550	Yes	Internal	DFN3X3-8L
AOZ6623	4.5	18	3	0.8V	550	Yes	Internal	DFN3X3-8L
AOZ6605	4.5	18	5	0.6V	650	Yes	External	DFN3X3-8L

Pricing and Availability

The AOZ6605 is immediately available in production quantities with a lead-time of 12 weeks. The unit price of 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](#), [IPM](#) 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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