

FOR IMMEDIATE RELEASE

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Alpha and Omega Semiconductor Introduces a New AlphaZBL™ AC-DC Active Bridge Rectifier Solution

AOZ7203AV Enables Improved Efficiency and Reduces Standby Power Consumption in High Power AC-DC Adaptors and Power Supplies

SUNNYVALE, Calif., March 2, 2023, [Alpha and Omega Semiconductor Limited](https://www.aosmd.com) (AOS) (Nasdaq: AOSL), a designer, developer, and global supplier of a broad range of power semiconductors, power ICs, and digital power products, today introduced an extension to its active bridge driver, AlphaZBL™ family. Available in an SOP-8L package, the [AOZ7203AV](#) is a self-powered dual driver IC for driving external high-voltage MOSFETs to replace two low-side diodes of bridge rectifier. The new device is suitable for use in adapters for high-end laptops and televisions, as well as power supplies for Desktops, Game consoles, and Servers.

The new AOZ7203AV features a high withstand voltage, a self-powered Vcc supply from the AC line, ultra-low operation current, and X-capacitor discharge (CB safety certified). A break-before-make circuit avoids the overlap of two gate driving while driving the low-side high voltage MOSFETs in an active bridge rectifier circuit. With an input voltage of up to 600V, the AOZ7203AV has a wide operating (-40°C to +125°C) ambient temperature range and driving low R_{DS(on)} HV MOSFETs to gain more efficiency improvement of AC power supply. These features make the AOZ7203AV an optimal solution for efficient replacement of lossy diodes in the bridge rectifier circuit of an AC-DC power supply.

“Today’s power-hungry gaming laptops, game consoles, and high-performance desktops demand high efficiency from the AC-DC power supply. Using the AOZ7203AV with AOS’ low-ohmic high-voltage external MOSFETs significantly improves the efficiency of the power converter as the typical rectifier-diode forward-conduction losses are reduced by 50 %. Efficiency can improve up to about 0.7 % at 90 V mains voltage.” said Armin Hsu, Power IC Senior Marketing Manager at AOS.

Technical Highlights

- The AOZ7203AV combined with two High Voltage MOSFETs replaces two low-side diodes in a bridge rectifier
- Increases efficiency and reduces power consumption
- Self-powered from AC mains
- Integrated X-capacitor discharge
- Low IC power consumption
- Two drivers in one package enable a more compact design
- Break-before-make circuit avoids overlapping gate drive signal to HV MOSFETs
- Very low external part counts

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- Undervoltage lockout
- Drain-source overvoltage protection for all external power MOSFETs
- Gate pull-down currents at startup for all external power MOSFETs

Pricing and Availability

The AOZ7203AV is immediately available in production quantities with a lead time of 14 weeks. The unit price in 1,000-piece quantities is \$1.68 USD. AOS products are offered in packages with Pb-free plating and are RoHS compliant.

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](#), [TVS](#), [Gate Drivers](#), [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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