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Alpha and Omega Semiconductor Announces Wireless Charging Transmitter Solutions

50W AOZ32034AQV Half-Bridge Power Stage Offers Power Dense Solution for Wireless Charging Applications

SUNNYVALE, Calif., March 3, 2022, – [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 [AOZ32034AQV](#), a new product in the family of coil drivers for wireless charging transmitter circuits of up to 50W. Packaged in a thermally enhanced QFN 4 x 4 package, the device is designed for wireless charging applications in charging stations, cordless power tools, vacuum cleaners, drones, and other consumer electronic equipment.

The AOZ32034AQV offers a higher power rating of up to 50W compared to the previous device in this family, the AOZ32033AQI, that was suited for 30W applications. Wireless charging circuits use a full-bridge topology with a resonant tank circuit to get the best power conversion efficiency. The AOZ32034AQV half-bridge power stage simplifies the implementation of this topology over discrete approaches. A key feature of this product family is the ability to adjust MOSFET gate drive using the slew rate control (SRC) pin. This allows a system designer to optimize the design by making trade-offs between EMI and efficiency. The device can be used for a wide range of input voltages from 4V to 28V.

“Wireless charging offers convenience in many applications. Implementations, especially in applications sensitive to EMI, can be complex. AOS’s new half-bridge power stage for coil drivers reduces these complexities while reducing solution footprint,” said Armin Hsu, Power IC Marketing Manager at AOS.

Technical Highlights

- Integrated Half-Bridge Power Stage and bootstrap diode with wide input voltage (4V to 28V) range enables reduced PCB size
- Low $R_{DS(ON)}$ internal N-FETs for both HS/LS supports TX circuit designs of up to 50W
- Adjustable MOSFET gate slew rate control (SRC) for an optimal trade-off between EMI and efficiency
- Robust and Reliable with built-in protection: OTP, VCC UVLO, Bootstrap UVLO
- Thermally enhanced QFN4x4 package

Coil Driver Family Product List

Part Number	Vin max.	Integrated MOSFET	Wireless Charging Transmitter (TX) Capability	Package
AOZ32033AQI	28V	11mohm	Up to 30W	18-Pin, QFN3x3
AOZ32034AQV	28V	7.5mohm	Up to 50W	23-Pin, QFN4x4

Pricing and Availability

The AOZ32034AQV is immediately available in production quantities with a lead-time of 24 weeks. The unit price in 1,000pc quantities is \$1.0 for AOZ32034AQV.

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](#), [TVS](#), [HVIC](#), [SiC/GaN](#), [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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