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Alpha and Omega Semiconductor Announces Application-Specific EZBuck™ Regulators to Power Intel Meteor Lake and Arrow Lake Platforms

AOZ22559QI and AOZ22539QI Constant On-Time Buck Converters Provide Highest Power Density Solution for Intel Meteor Lake and Arrow Lake CPU VCCPRIM_VNNAON Rails

SUNNYVALE, Calif., Feb. 22, 2024 – [Alpha and Omega Semiconductor Limited](#) (AOS) (Nasdaq: AOSL), a designer, developer, and global supplier of a broad range of discrete power devices, wide band gap power devices, power management ICs, and modules, today introduced its new application-specific EZBuck™ regulators. The [AOZ22559QI](#) and [AOZ22539QI](#) Constant On-Time Buck Converters are offered in a QFN 4 x 4 package, which is the industry's most compact footprint and is designed to support VCCPRIM_VNNAON rails in Intel Meteor Lake and Arrow Lake platforms.

Intel's Meteor Lake and Arrow Lake platforms require VCCPRIM_VNNAON rails with high currents, whereas supporting power implementations typically require either a controller with external discrete power FETs or a converter with a large package. In contrast, AOS's highly integrated solution includes all necessary power silicon in a single QFN 4 x 4 package, providing 15A in the AOZ22559QI and 12A in the AOZ22539QI Constant On-Time Buck Converters.

The AOZ22559QI and AOZ22539QI include features specifically designed to meet the specifications of the Intel Meteor Lake and Arrow Lake platforms. They have a nominal fixed voltage of 0.77V and are supplied in system states of S0 through S5. Intel also requires this solution to be capable of remote sensing to maintain accurate tolerance and account for ground bounce. AOS's AOZ22559QI and AOZ22539QI have passed all the validation requirements through stringent tests to ensure compliance with Intel specifications. In addition, Intel approved both the AOZ22559QI and AOZ22539QI as key components on their PCL (Platform Component List) for the VCCPRIM_VNNAON power architectures.

The AOZ22559QI and AOZ22539QI also feature a PGOOD output, an integrated bootstrap diode, and an integrated soft start. Protection features include cycle-by-cycle current limit, short-circuit protection (SCP), Overvoltage Protection (OVP), and thermal shutdown. The ILIM pin allows system designers to adjust current limit levels, enabling them to balance the power choke to the output, the output's current capability, and the component size.

Key Features

- Supports Intel Meteor Lake and Arrow Lake platform remote sensing with a nominal 0.77V output voltage
- Wide input voltage range: 5.5V to 25V

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- High Current Capability: 15A supporting Intel Itdc and 30A supporting Intel Iccmax
- Low RDS(ON) internal NFETs: 11mOhm HS FET, 4mOhm LS FET
- Adjustable current limit setting
- Thermally enhanced 4 x 4 QFN package

“The AOZ22559QI and AOZ22539QI offer designers an easy-to-use high-current solution for VCCPRIM_VNNAON rails, providing optimal power support for the Intel Meteor Lake and Arrow Lake platforms. In today’s ever-shrinking mobile laptop form factors, PCB real estate is at a premium. Utilizing AOS’s EZBuck™ technology delivers a highly integrated and feature-rich buck converter that efficiently and effectively solves the system designer’s continual space-constraint challenges,” said Wayne Lee, Sr. Marketing Manager, EZBuck™ Product Line at AOS.

Pricing and Availability

The AOZ22559QI and AOZ22539QI are immediately available in production quantities with a lead time of 12 weeks. The unit price for 1,000 pieces is \$1.4 for the AOZ22559QI and \$1.3 for the AOZ22539QI.

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 discrete power devices, wide band gap power devices, power management ICs, and modules, including a wide portfolio of [Power MOSFET](#), [SiC](#), [IGBT](#), [IPM](#), [TVS](#), [Gate Drivers](#), [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’ 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 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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