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Alpha and Omega Semiconductor Unveils New Generation of DrMOS Power Stage for High-Performance Graphics Add-in-Cards and Gaming Notebooks

AOZ531x DrMOS Family Achieves New Performance Benchmarks Advancing Next-Generation Graphics Cards and Gaming Notebooks

SUNNYVALE, Calif., Sep.15, 2020, 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 a new series of DrMOS targeting multiphase VR regulators powering high-performance GPU and memory in desktop Add-In Graphics Cards (AICs) and gaming notebooks. The AOZ531xQI series uses AOS latest generation of Gen Alpha MOSFET technology to provide benchmark performance in a 5mm x 5mm QFN package. The series comprises of three DC current levels for multiphase voltage regulator optimization.

The AOZ531xQI offers both performance and robustness to support high peak currents common in a GPU multiphase VR. AOS DrMOS guarantees this performance on the datasheet, and all devices in the AOZ531xQI family features high peak current capability, up to 120A for 10us and 80A for 10ms.

"The latest GPUs from industry leaders like AMD and Nvidia require the support of high frame rates, ray tracing, and multiple high-resolution screens to offer an immersive gaming experience. An efficient, robust power stage plays a critical role in a graphics card performance as the heatsink on a high-performance graphics card touches both the GPU as well as the power stages. Cooler operation results in higher peak performance of the card, and directly translates to a better gaming experience," said Peter Cheng, Power IC Senior Marketing Director at AOS.

Technical Highlights

The AOZ531xQI family of DrMOS supports both add-in card (12V input) and gaming laptop (20V input) input voltage operating range. Three performance levels (50A, 60A, and 65A) allow tradeoffs in the current/phase and number of phases.

- DC Operating Range: 2.5V to 20V for AOZ5311/2/3QI
- DC Operating Range: 2.5V to 25V for AOZ5316/7/8QI
- Universal standard QFN5x5 package
- Capable of up to 120A for 10us
- Capable of up to 80A for 10ms
- 3.3V and 5VPWM logic compatible
- True high impedance input at PWM when disabled for phase shedding operation
- Thermal warning indicator
- Ability to enable or disable diode emulation mode using #SMOD input

Part Number	DC Current Rating	Abs Max VIN Voltage	Optimization	Application
AOZ5311xQI	50A	25V	15-20A Thermal design current/ phase	Add-In Graphic Card
AOZ5316xQI	50A	30V	15-20A Thermal design current/ phase	Gaming Laptop
AOZ5312xQI	60A	25V	20-25A Thermal design current/ phase	Add-In Graphic Card
AOZ5317xQI	60A	30V	20-25A Thermal design current/ phase	Gaming Laptop
AOZ5313xQI	65A	25V	25-30A Thermal design current/ phase	Add-In Graphic Card
AOZ5318xQI	65A	30V	25-30A Thermal design current/ phase	Premium Gaming Laptop

Pricing and Availability

The AOZ531xQIseries is immediately available in production quantities with a lead-time of 12 weeks. The unit price in 1,000 pieces quantities is $1.24 for AOZ5311xQI, $1.35 for AOZ5312xQI, $2.10 for AOZ5313xQI, $1.30 for AOZ5316xQI, $1.40 for AOZ5317xQI, and $2.20 for AOZ5318xQI.

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, 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, 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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