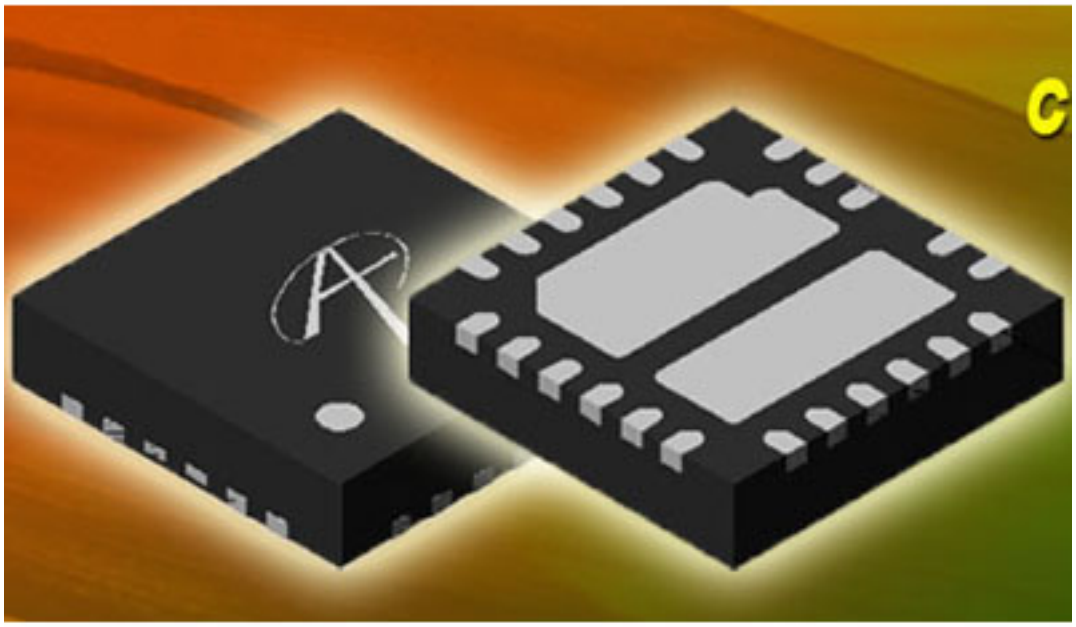
Regulators feature constant on-time control architecture



Alpha and Omega Semiconductor Limited released AOZ1237, the latest addition to a family of high efficiency, easy-to-use synchronous EZBuck regulators featuring a proprietary Constant On-Time (COT) control architecture that enables smaller solutions and simplifies designs. The AOZ1237 provides the perfect solution for next generation computing chipsets that are pushing the limits of DC/DC converter size; such as those in the latest notebook PCs, Ultrabooks, graphics cards, servers, data storage systems, and high-end smart TVs.

Power supplies which traditionally used DC/DC controller ICs with external MOSFETs are now requiring more integrated solutions to fit within the smaller printed circuit board (PCB) area. AOS’s low on-resistance MOSFET technology combined with advanced packaging technology enables high performance DC/DC regulators in small package sizes. The AOZ1237 provides 8A of continuous output current in a 4x4mm QFN package, while operating over a wide input voltage range of 2.7V to 24V. This new device can provide higher performance with minimal power

consumption, making it an ideal solution for system designers who want to reduce the PCB area and total system size without hindering performance. The proprietary COT architecture provides ultra-fast load transient response performance and allows stable and low voltage ripple operation with small size ceramic capacitors. Competing solutions require several external components when using all ceramic capacitors and need to generate a larger output ripple voltage to stabilize the circuit. Additionally, the input feed forward feature of AOZ1237 provides a constant switching frequency over the entire input voltage range, which further alleviates noise concerns for designers.

Pricing and availability

The AOZ1237 is immediately available in production quantities with a lead-time of 12 weeks. The unit price for 1,000 pieces is $2.25.

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