

endura

technologies

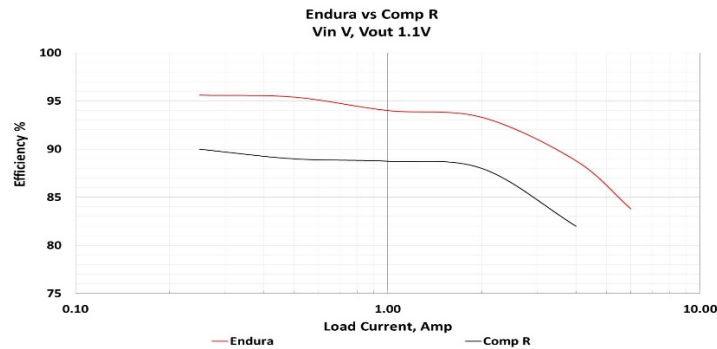
Case Study: Data Center Memory Enabling datacenter compute scalability

Background

The adoption of DDR5 memory modules in servers allows memory capacity to continue to scale in line with every increasing processor power, but also drives significant challenges for server design. Increasing memory capacity, increasing interface speeds, and the PMIC moving from the motherboard to the DIMM module all contribute to excess heat dissipation beyond the current cooling capacity of industry standard servers. Endura has been engaged by many of the leading DRAM module suppliers, including Kingston and Longsys, to design a solution that would enable memory capacity to continue to scale without the need for a complete overhaul in a server's cooling system.

Endura Solution

Endura's CHP2775 PMIC, built on the 55nm process node, is JEDEC5100 compliant and a drop-in replacement for the current PMIC solution. The CHP2775's high efficiency voltage conversion technology boosts overall efficiency and reduces the amount of wasted power that dissipates into heat. Endura's technology is highly scalable and maintains its high efficiency over the full spectrum of amp loads.



Benefits

CHP2775's high efficiency voltage conversion technology drives a full 7% increase in overall efficiency relative to current solutions on the market. For the average dual socket server (32 DIMMs), Endura's solution reduces heat dissipation and electricity consumption by approximately 18 watts. This increase in efficiency results in significant operational cost savings for the datacenter operator. Just on direct power system power consumption alone there is an annual electricity cost savings of approximately \$20 per server per year.

