ERICSSON

Press Release
May, 2007

Ericsson's cost-efficient, optimized DC/DC converter helps reduce global energy consumption

Based on an open-frame design with one side populated and utilizing a board-to-board technique, Ericsson Power Modules' PKD-E DC/DC converter is fully interoperable with the original lead-free PKD series introduced in 2000. The platform shift from ceramic hybrids to board-to-board helps to lower lifetime cost and reduces energy consumption during manufacturing at Ericsson Power Modules, as well as at CEMs when assembling the modules onto customers' boards.

Ericsson Power Modules has introduced three PKD-E products: the PKD4218LE SI providing 1.2V at 20A, the PKD4218HE SI providing 1.5V at 14A, and the 3.3V at 15A-rated PKD4510E SI. The products are aimed at existing PKD customers seeking cost-optimization programs, low building height applications requiring surface-mount DC/DC modules, and applications requiring fast time-to-market and a reliable power source.

Mostly targeting the telecom and datacom (router, servers, interface) industries, the PKD-E series also addresses a wide range of applications – such as process control – that use 48V distributed power architectures. The product is chiefly driven by cost-reduction programs, and by customers concerned with reducing the overall energy consumption and environmental impact of their businesses.

Using the single-side components mounting and board-to-board techniques, PKD-E offers a cost saving of 15-20 percent compared to the original PKD.

Combining the proven synchronous rectification topology and identical components used in the original PKD and PKM-E series, the PKD-E has a high efficiency that reduces heat and component stress. This results in an MTBF greater than 1.7 million hours.

Because PKD-E is fully interoperable (mechanically and electrically) with the original PKD, customers already using PKD can easily implement PKD-E when developing new applications or reducing cost on existing systems.

For versatility, PKD-E's low profile of just 7.7mm enables its use in compact systems. The PKD-E series products comply with the European RoHS directive and meet the requirements of high temperature, lead-free, and reflow soldering processes.

Compared to similar products available on the market, PKD-E offers market-leading performance and very high quality levels at a very competitive price.

PKD-E is the latest incarnation of an innovative and market-leading platform developed in 2000 in response to high volume demand for mid-power surface mount products and RoHS legislation. Based on a ceramic substrate and laser-welded lead frame, the original PKD released in 2001 was the first lead-free DC/DC converter product in the world.

The excellent market response to PKD and Ericsson's constant research to develop the most efficient products – which help to reduce environmental impact while also reducing cost and improving performances – motivated Power Modules to extend the board-to-board technique first developed for PKF/PKR to PKD-E.

The board-to-board technology introduced by Ericsson Power Modules in the BMP (board-mounted product) segment is an important step when it is necessary to comply with cost efficiency without compromising other parameters.

By simplifying the building practice, and using lower thermodynamic sub-assemblies, the PKD-E requires less energy during its manufacturing process and when being assembled into the customer's host equipment.

It is not always possible to accommodate full functionality on one side of a board. But when it is possible, the board-to-board technique is the best-optimized platform for reducing cost and overall energy consumption during manufacturing and final assembly. Ericsson Power Modules is the first company in the board-mounted power industry to use such technology in low and mid-power DC/DC converters.

Ericsson Power Modules was the first company in the power industry to release RoHS-compliant products several years before legislation came into force.

For designers and end users, PKD-E is the most optimized platform, contributing to reducing total cost of ownership while contributing to reducing global energy consumption. PKD-E is the ultimate mid-power surface-mount product.

Ericsson is shaping the future of Mobile and Broadband Internet communications through its continuous technology leadership. Providing innovative solutions in more than 140 countries, Ericsson is helping to create the most powerful communication companies in the world.

FOR FURTHER INFORMATION, PLEASE CONTACT

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Press release reference: E0089(A)
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About Ericsson Power Modules

Ericsson Power Modules is a supplier of world-class DC/DC power modules for distributed power architectures. With its global design, development, manufacturing and sales network, Ericsson Power Modules is a leading supplier of power solutions that meet the customer demand for high performance.