



Picor Introduces Cool-ORing(TM) Family Targeting Redundant Power Architectures in High-Availability Systems

Picor, a subsidiary of Vicor Corporation

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No. Smithfield, RI, August 4th, 2008 - Picor, a subsidiary of Vicor Corporation (NASDAQ:VICR) specializing in the design and development of high performance power management solutions, today announced the Cool-ORing(TM) Family of full-function Active ORing solutions (PI2121, PI2122, PI2123, PI2125) and discrete Active ORing controllers (PI2001, PI2002, PI2003). These solutions address the requirements of redundant power architectures implemented in today's high-availability systems such as servers, high-end computing and telecom and communications infrastructure systems.

The Cool-ORing PI2121 / PI2123 / PI2125 are complete full-function Active ORing solutions with integrated high-speed ORing MOSFET controllers and very low on-state resistance MOSFETs that address a variety of redundant bus applications, providing very low power dissipation while achieving very fast dynamic response, typically within 160 ns, to system level power source fault conditions. The PI2121 is an 8 Volt, 24 Amp solution suitable for less than or equal to 5Vbus applications, the PI2123 is a 15 Volt, 15 Amp solution suitable for less than or equal to 9.6Vbus applications and the PI2125 is a 30 Volt, 12 Amp solution suitable for 12Vbus applications.

The PI2121 / PI2123 / PI2125 solutions are offered in extremely small, high density, thermally enhanced 5mm x 7mm land grid array packages, maintaining full current ratings over a wide range of operating temperature. The high level of density is enabled by integrating a very low on-state resistance MOSFET into each product. The typical on-state resistances are 1.5m Ohm, 3m Ohm and 5.5m Ohm respectively for the PI2121, PI2123 & PI2125. Each product can also be paralleled to address higher current requirements through a master / slave feature, enabling an extremely scalable solution for a wide range of Active ORing requirements. The PI2121 / PI2123 / PI2125 detect normal forward, excessive forward, light load, and reverse current flow through their internal MOSFETs, and report fault conditions via an active low fault flag output. A temperature sensing function indicates a fault if the maximum junction temperature exceeds 160°C. The under-voltage and over-voltage thresholds are programmable via

external resistor dividers.

The PI2001 is a discrete high-speed Active ORing controller with similar functionality and feature set, for use with industry standard single or paralleled MOSFETs. The PI2003 controller is specifically optimized for use in -48 V redundant power architectures, and is suitable for systems requiring operation during input voltage transients up to 100 V for 100 ms. The low quiescent current of the PI2003 enables simple low-loss biasing directly from the -48V rail.

The Cool-ORing PI2122 is a complete full-function Active ORing solution with a circuit breaker feature, integrating a high-speed MOSFET controller and very low on-state resistance MOSFET in the high density thermally enhanced 5mm x 7mm land grid array package. The PI2122 is designed for use in redundant power system architectures, suitable for less than or equal to 5Vbus applications where added protection against load fault conditions is required. The PI2122 is a 7 Volt, 12 Amp solution with integrated back-to-back configured MOSFETs with an effective 6m Ohm typical on-state resistance enabling very high efficiency. The PI2122 provides very fast dynamic response to both input power source and output load fault conditions, typically within 140 ns and 170 ns respectively, acting as a true bi-directional switch. In addition to responding to a reverse current fault condition, when the PI2122 detects excessive forward current, over temperature, under and over-voltage faults, it will rapidly turn-off the internal MOSFETs to provide a load disconnect feature. The PI2122 also provides a user programmable auto-retry off-time during excessive forward current fault conditions.

The PI2002 is a high-speed Active ORing controller IC with a load disconnect feature that functions similar to the PI2122, but is designed for use with industry standard back-to-back N-channel MOSFETs.

"The Cool-ORing solutions can substantially reduce power dissipation by up to ten times versus conventional diode ORing solutions, eliminating the need for unnecessary thermal management overhead, while reducing board real estate by over 50% and maintaining benchmark dynamic response versus conventional Active ORing solutions," said Carl Smith, Director, Strategic Marketing and Business Development.

The full-function Cool-ORing solutions are available at \$1.98 for the PI2121 / PI2123 / PI2125 and \$2.18 for the PI2122 in 10,000-piece quantities.

The discrete Cool-ORing controllers are each available in two packages. The 3mm x 3mm 10-lead TDFN is available at \$0.84 for the PI2001 and PI2003 and \$0.92 for the PI2002 at 10,000-piece quantities. The 8-lead SOIC package option is available at \$0.76 for the PI2001 and PI2003 and at \$0.83 for the PI2002 in 10,000-piece quantities. All prices are in US dollars and are subject to change. Production volumes will be available from Q4'08.

For data sheets and other information, please visit the Picor Web site. To place an order, please visit www.vicorpower.com/support/sales/ for your local sales contact. Marketing Contact: Carl Smith Director, Strategic Marketing & Business Development Picor Corporation 401-235-1111 csmith@vicr.com

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