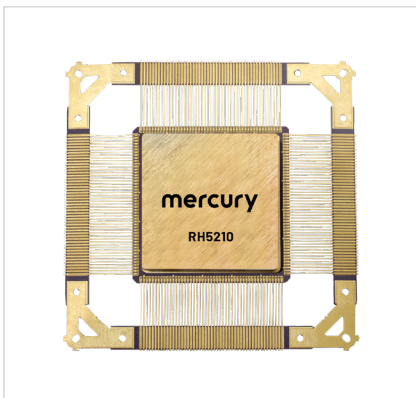


RH5210

Rad-Tolerant Multi-Output Power Module

Ultra-compact,
rad-tolerant
power solution

- Built specifically for Xilinx XQRKU060 FPGA
- Single module replaces 11 integrated power supplies and inductors
- Die-based designed to minimize SWaP
- All components rad-tolerant by design



The RH5210 multi-output power module is a radiation-tolerant solution designed for terrestrial and space applications. By leveraging die-level microelectronics packaging, these state-of-the-art power modules eliminate the need for several larger standalone regulators, significantly reduce the PCB space required for the FPGA power supply implementation, and make the RH5210 an idea solution for SWaP-focused applications.

This space-qualified power solution uses a single 5 V supply to support 11 integrated power supplies and their accompanying inductors. Additionally, the RH5210 reduces design time, complexity, power design and sequencing compared to using alternative discrete components available. DDR termination, on-core power regulator, and thermal-solution needs are all met in a single product.

Built specifically to support the highest-performing rad-tolerant FPGA, the Xilinx XQRKU060, the RH5210 is a simple drop-in module from a trusted, U.S. manufacturing source.

Highlights

- First in series of rad-tolerant power supplies built for commercial and space applications
- Replaces 11 integrated power supplies and inductors resulting in space savings of up to 50%
- Only multi-chip power solution for the Xilinx XQRKU060 FPGA available on the market

50%

more space savings

11

integrated
power supplies

5 V

single power supply

100%

rad-tolerant
components

APPLICATIONS

- Space: High-altitude orbiting vehicles such as LEO and MEO satellites
- Commercial equipment: Medical, remote robotic devices and compute systems
- Any electronic system with potential for radiation exposure

FEATURES

Multiple power supply outputs

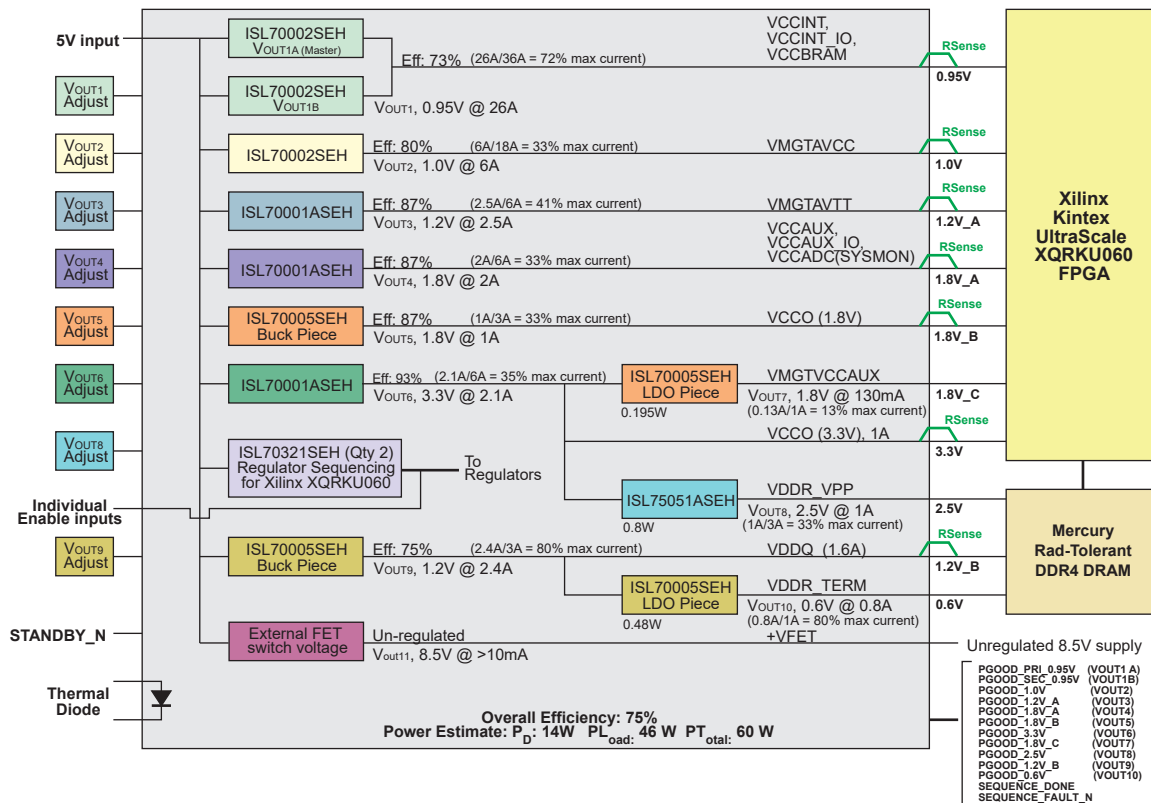
- 8 integrated rad-tolerant switching regulators
- 3 LDO regulators
- Externally adjustable supplies
- Minimal external components
- Internal soft start (fixed)
- Overcurrent protection
- Two VCCO user supplies
- DDR4 DRAM VDDQ, VPP and VTERM
- One high-voltage unregulated output for FET gate control

SPECIFICATIONS

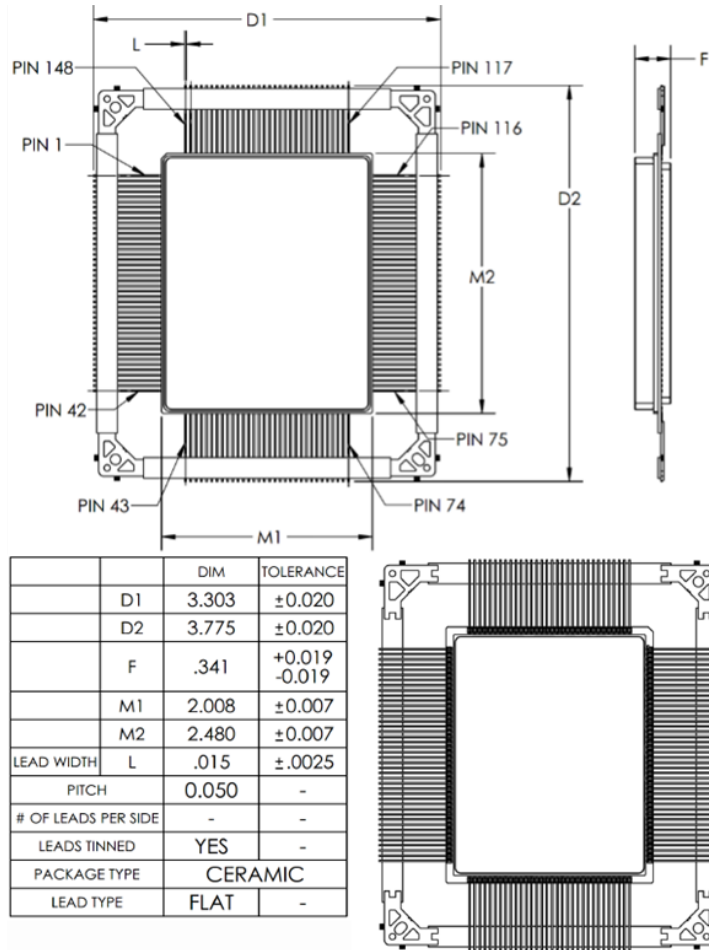
FEATURE	RH5210
Radiation Tolerant	Space qualified, Mil Perf 38534 class K
Size	51 x 63 mm
Temperature	Operating: -55° C to +125° C (max allowed Tj is 125° C); Storage: -65° C to +150° C
Supply Sequencing	Supports Xilinx XQRKU060 FPGA, option for manual external sequencing
Output Noise	Meets Xilinx requirements
Output Accuracy	Meets Xilinx requirements

BLOCK DIAGRAM OF RCQ-07FF-000MA

XILINX XQRKU060 APPLICATION



DEVICE OPTIONS



Corporate Headquarters

50 Minuteman Road
 Andover, MA 01810 USA
 +1 978.967.1401 tel
 +1 866.627.6951 tel
 +1 978.256.3599 fax

International Headquarters
 Mercury International

Avenue Eugène-Lance, 38
 PO Box 584
 CH-1212 Grand-Lancy 1
 Geneva, Switzerland
 +41 22 884 51 00 tel

Learn more

Visit: mrcy.com/contactus



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