Solid State Relay Includes Low On-State Resistance

International Rectifier today introduced a new RAD-Hard solid state relay (SSR) for power bus switching, heater control circuits and battery charging used in high reliability (hi-rel) space-qualified applications.

The RDHA701CD10A2N radiation-hardened DC single pole, single throw-type SSR is designed to improve reliability by replacing traditional electro-mechanical relays that are vulnerable to vibration and shock. The new SSR features very low on-state resistance (RDS (on)) to improve thermal efficiency and is offered in a low profile, hermetically sealed 8-lead ceramic package. Weighing only 0.8 g this surface mountable device uses just 0.37 inches by 0.47 inches of board space.

“IR’s RDHA701CD10A2N SSR improves reliability, reduces footprint and eliminates the need for additional filtering making it an attractive replacement to less reliable, heavier electro-mechanical relays,” said Fred Farris, Vice President of Sales and Marketing for IR’s HiRel Business Unit.

The new 100 V device is characterized for total dose levels up to 100 krad (Si). Neutron and TID test data are available in the radiation report section on the IR website. The RDHA701CD10A2N is a dual channel device rated at 100 V and 1 A with 1,000 V input to output and channel-to-channel isolation. Qualification in accordance with space level MIL-PRF-38534 Class “K” is complete and pending DLA approval for a fully compliant device. To support the reliability, MTBF has been calculated according to the space flight method at room temperature per MIL-HDBK-217F and has resulted in a minimum of 22.5 million hour per channel.

Specifications

Part Number	Package	Voltage (V)	Current (A)	Channels	Configuration	Rad level (Krad)
RDHA701CD10A2N	8 Pin Ceramic	100	1	2	SPST	100

A datasheet and application note for the device are available on the International Rectifier website at www.irf.com [1].

Availability and Pricing

Pricing for the RDHA701CD10A2N begins at US $831 each in 250-unit quantities. Production orders are available immediately. Prices are subject to change. This product is subject to U.S. export control laws and regulations.

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http://www.ecnmag.com/product-releases/2010/10/solid-state-relay-includes-low-state-resistance

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[1] http://www.irf.com