Intelligent power switch optimized for automotive PTC electric heaters

International Rectifier introduced the reliable AUIR3320S high-side intelligent power switch (IPS) optimized for automotive auxiliary positive temperature coefficient (PTC) electric heaters.

Offering very low on-state resistance (Rds(on)) of 4 mohm (max.) at 25°C, the AUIR3320S delivers higher current with a smaller heat sink to reduce system footprint. The new 40V device also features current sensing to allow precise monitoring of load current in order to provide additional data to the microcontroller for diagnostic applications.

Additionally, the AUIR3320S offers over-current and over-temperature protection, which results in more reliable operation even during short circuit protection, and smooth turn-on and turn-off waveform to limit EMI.

"PTC electric heaters are now widely adopted and offer improvements in cabin comfort. However, safety and reliability are critical design factors due to the high current required and the fact that the application resides in the interior of the vehicle. Featuring very low Rds(on), current sensing and a comprehensive range of protection features, the AUIR3320S provides a reliable, optimized solution for PTC heaters," said David Jacquinod, Product Marketing Manager, IR's Automotive Products Business Unit.

IR's automotive grade IPS products are subject to dynamic and static part average

testing combined with 100 percent automated wafer level visual inspection as part of IR's automotive quality initiative targeting zero defects. The devices are qualified according to AEC-Q100 standards, feature an environmentally friendly, lead-free and RoHS compliant bill of materials.

Specifications

Part Number	Topology	Package	Operating voltage	Max Rdson@25°C	Over-current shutdown	Over-temp shutdown
AUIR3320	High-side driver with current sense	D2PAK-5 leads	6-26V	4mohm	10-55A	165°C

Datasheets and qualification standards are available on the International Rectifier website at www.irf.com [1].

Availability and pricing

Pricing for the AUIR3320S begins at US $1.22 in 100,000-unit quantities. Production orders are available immediately. Prices are subjected to changes.

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http://www.ecnmag.com/products/2012/10/intelligent-power-switch-optimized-automotive-ptc-electric-heaters

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