New Rectifiers Boost PFC Efficiency

Released on: September 7, 2007, 3:53 pm

Press Release Author: Qspeed Semiconductor

Industry: Aerospace

Press Release Summary: **Qspeed Semiconductor is introducing its Q-Series family of low Qrr, high softness factor, boost converter rectifier diodes.**

Press Release Body: Low Reverse Recovery Charge Devices Gain up to 1.5% Efficiency over Ultrafast

Santa Clara, California – September 10, 2007 – **Qspeed Semiconductor**, a designer and manufacturer of innovative, energy-saving power semiconductor devices, today introduced its **Q-Series rectifier family**. The new family of devices was designed specifically for use in power factor correction (PFC) circuits that deliver from 200 to 1000 W of power. Replacing an ultrafast diode with a Q-Series device typically realizes efficiency improvements of 0.5 to 1.5% in the boost converter stage, which are similar to those obtained by using exotic Silicon Carbide diodes. Developed using Qspeed's proprietary technology, the Q-Series family of devices has the lowest reverse-recovery-charge (QRR) and the best softness factor of any high-speed silicon rectifiers currently available on the market.

"Power supply designers no longer have to work around inferior diodes or use expensive Silicon Carbide devices," said **Michael T. Robinson, CEO of Qspeed Semiconductor**. *"Our Q-Series rectifiers make it easy to improve the efficiency of PFC boost converters and lower MOSFET operating temperatures while minimizing EMI generation, all without the use of snubbers and clamps."*

The **Q-Series product family** consists of three devices, which are rated to deliver continuous forward current values of 3, 5 and 8 A respectively. The 3 A device (LQA03TC600) would typically be used in boost converter stages that deliver from 200 to 400 W of continuous output power. The 5 A device (LQA05TC600) would find its home in converters that deliver from 400 to 700 W, while the zone for the 8 A device (LQA08TC600) is from about 700 to 1000 W.

"Until now, engineers looking to improve the operating efficiency of their AC-DC power supplies had to resort to using costly, Silicon Carbide diodes," said **Richard Francis, Qspeed's Chief Technology Officer**. *"With the lowest reverse recovery charge and the best turn-off softness factor of any commercially available silicon rectifier, the Q-Series parts are being adopted faster than any new power semiconductor I have ever seen."*

Pricing and Availability:
All three members of the **Q-series family** are currently available in high-volume production quantities. The 3 A LQA03TC600 sells for 78 cents each, in fifty-thousand-piece quantities. The 5 A LQA05TC600 is going for 88 cents each, in 50,000 piece lots. The 8 A LQA08TC600 is selling for only 1.08 U.S. dollars each, in 50 k piece orders.

About Qspeed Semiconductor:
Qspeed Semiconductor designs, manufactures and sells innovative, highly-efficient, energy-saving, power semiconductor devices. Presently, the company is focused on the active components currently used in offline power conversion equipment. Headquartered in Santa Clara, California, the company has manufacturing, testing, sales and logistics facilities located in Japan, Taiwan and Manila.

Where readers can get more information:
http://www.qspeed.com/pr2

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