DirectFET Chipset Combines Ultra Low Charge and RDS(on) with Low Gate Resistance to Minimize Conduction and Switching Losses

EL SEGUNDO, Calif. — International Rectifier, IR® announces the IRF6706S2PbF and IRF6798MPbF DirectFET® MOSFET chipset that provides best-in-class efficiency for 12V input synchronous buck applications including servers, desktops, and notebooks.

Featuring IR's latest generation MOSFET silicon technology, the IRF6706S2PbF and IRF6798MPbF 25V chipset combines industry leading Figures of Merit (FOM) with the superior switching and thermal characteristics of the DirectFET package to provide a solution optimized for high frequency DC-DC switching applications.

"IR continues to enhance the performance of power MOSFETs by improving critical parameters. The new IRF6706S2PbF and IRF6798MPbF DirectFET chipset combines low charge and low RDS(on) with the industry's lowest gate resistance to minimize conduction and switching losses traditionally associated with the sync and control socket of a typical synchronous buck converter," said Omar Hassen, executive director, Low Voltage DirectFET Products, Enterprise Power Business Unit.

The IRF6798MPbF Medium Can DirectFET provides on-state resistance (RDS(on)) of less than 1m? enabling extremely high efficiency across the entire load range. The new device features a monolithically integrated Schottky diode that reduces losses associated with body diode conduction and reverse recovery losses to further enhance the overall performance of the solution.

The IRF6798MPbF also delivers ultra low gate resistance (Rg) of 0.25? to eliminate Cdv/dt related shoot through. The IRF6706S2PbF Small Can DirectFET also features low charge and low RDS(on) to reduce switching and conduction losses, and extremely low Rg for fast switching.

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