MOSFET Chipset Otimized for High Frequency, High Efficiency DC/DC Applications

International Rectifier introduced a 25 V synchronous buck converter DirectFET MOSFET chipset for point-of-load (POL) converter designs, and server, high-end desktop and notebook computer applications. The chipset combines the company's latest generation HEXFET MOSFET silicon and benchmark DirectFET packaging technology to provide a high density, single control and single synchronous MOSFET solution in the footprint of an SO-8, and with slim 0.7 mm profile. new IRF6710S2, IRF6795M and IRF6797M devices are characterized with very low on-resistance (RDS(on)) gate charge (Qg) and gate-to-drain charge (Qgd) to achieve desirable efficiency and thermal performance, and enable operation in excess of 25 A per phase. The IRF6710S2 is ideally suited as a control MOSFET due to the device’s low gate resistance of 0.3 Ohms and low Miller charge (Qgd) of 3.0 nC which reduces switching losses. The IRF6795M and IRF6797M feature low RDS(on) to reduce conduction losses while the integrated Schottky reduces diode conduction losses and reverse recovery losses, making these devices appropriate for high current synchronous MOSFET circuits. The IRF6795M and IRF6797M have a common MX footprint to allow easy migration from existing SyncFET devices. Pricing for the IRF6710S2TR1PbF begins at US $0.66 in 10,000-unit quantities. Pricing for the IRF6795MTR1PbF and IRF6797MTR1PbF begins at US $1.35 and US $1.65 respectively each in 10,000-unit quantities.

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