On Semi Debuts Greenpoint Power Supplies

Productive Product: On Semiconductor announced an open ATX reference design meeting the new Energy Star performance requirements for power supplies in desktop PCs, scheduled to take effect this July. Five new power supplies based on the design are available.
On Semi's goal for the design is full-load power supply efficiency of 86.5 percent at high-line and 82.5 percent efficiency at 20 percent of load and low-line. This reduces power losses by approximately 50 percent, compared to typical power supplies on the market today which average 70 percent power efficiency, officials said. The design also meets IEC61000-3-2 power factor requirements. Full details are available here [1].

Products in the reference design include:

- NCP1653: A compact continuous conduction mode power factor correction controller for building cost-effective front-ends without range switches. It's offered in Pb-free 8-lead SOIC and PDIP packages and costs $0.80 in 2,500-unit quantities.
- NCP1562: This active-clamp pulse width modulation (PWM) voltage-mode controller has a ±5% duty cycle limit with a soft-stop to prevent the typical oscillations in the forward active-clamp topology. The device has a dual-mode over-current protection circuit that handles momentary and continuous over-current conditions differently. It's offered in Pb-free 16-lead TSSOP and SOIC packages and costs $1.60 in 2,500-unit quantities.
- NCP1027: It's a high-voltage switcher with a power MOSFET and a startup current source, connected to the bulk capacitor. To prevent lethal runaway in low input voltage conditions, an adjustable brown-out circuitry blocks the activity until sufficient input level is reached. Offered in a Pb-free 8-pin PDIP package, it costs $0.97 per unit in 1,000-unit quantities.
- NCP4330: This synchronous post-regulator replaces the mag-amp to provide higher efficiency in the output section of the ATX power supply. It has a Pb-free 8-pin SOIC package and costs $0.60 per unit in 2,500-unit quantities.
- MSR860: An 8 A, 600 V power rectifier with On Semi's Switchmode soft recovery feature. It's offered in a Pb-free TO-220 package, costing $1.07 USD in 50-unit quantities.

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[1] http://www.onsemi.com/ATX