



Power Integrations' New Power Supply Reference Design Enables 10 mW No-load Consumption, Targets European Ecodesign Standby Specifications

LinkSwitch^(R)-XT Design Meets the Needs of Efficiency-Conscious Producers of LCD Monitors, LCD-TVs, Appliances, and External Adapters

SAN JOSE, Calif., Jul 16, 2009 (BUSINESS WIRE) -- Power Integrations (Nasdaq:[POWI](#)), the leader in high-voltage integrated circuits for energy-efficient power conversion, today released a new Design Engineering Report ([DER-227](#)) which details the design of a 3-watt power supply circuit that consumes just 10 mW during no-load operation. This minuscule power consumption within the power supply leaves much more power available for use by electronic systems designed to comply with the standby power limits mandated by regulations such as the European Union's [Ecodesign Directive](#) for Energy-Using Products (EuP).

The EuP standard will limit standby power consumption to 500 mW, and many eco-minded manufacturers of consumer products and appliances are choosing even lower standby power budgets of 100 mW, 50 mW, or even 30 mW. A standby power supply that consumes only 10 mW at zero load allows a greater margin for other leaky circuit components, such as input filters, capacitors, and bias components, while still providing the power required to support valuable system standby activities. These include functions such as powering circuits to monitor an infrared remote control in consumer entertainment equipment, as well as hardware to sense a key-press to activate appliances or send automated wake-up signals such as those provided to an LCD monitor by a PC.

The power circuit described in [DER-227](#) is based on Power Integrations' LNK363DN, a member of the [LinkSwitch-XT](#) offline switcher IC family in an SO-8 package. This 3-watt, single-output, isolated power supply operates from a universal 85 to 265 VAC input, delivering 5 V at up to 0.6 A. It meets EN55022B/CISPR22B limits without the need for a Y capacitor, and meets the efficiency requirements of the European EuP Ecodesign Directive and [ENERGY STAR](#) EPS v 2.0.

Comments Andrew Smith, product marketing manager at Power Integrations: "Consumers are increasingly interested in green products. In response, equipment manufacturers are developing products that use energy more efficiently and the market is moving rapidly towards exceptionally low power use, particularly in standby mode. Our [EcoSmart](#)^(R) technology meets this need by drastically reducing power consumption in no-load and light-load conditions."

Smith continues: "The power supply described in [DER-227](#) also features careful transformer design and circuit bias component selection, combined with algorithms that switch only when required to maintain output voltage regulation, facilitating extremely low power consumption. This allows the supply to deliver power to the system immediately when it turns on, while consuming very little power itself."

[DER-227](#) is available now for download at www.powerint.com/PDFFiles/der227.pdf.

References

1. *3 W Single Output, <10 mW No-Load Consumption Isolated Adapter Using LinkSwitch-XT*, DER-227, Power Integrations (July 2009). www.powerint.com/PDFFiles/der227.pdf

About Power Integrations

Power Integrations is the leading supplier of high-voltage analog integrated circuits used in energy-efficient power conversion. The company's innovative technology enables compact, energy-efficient power supplies in a wide range of electronic products, in AC-DC, DC-DC and LED lighting applications. Since its introduction in 1998, Power Integrations' [EcoSmart](#)^(R) energy-efficiency technology has saved an estimated \$3.5 billion of standby energy waste and prevented millions of tons of CO₂ emissions. The company's Green Room web site (www.powerint.com/greenroom) provides a wealth of information about "energy vampires" and the issue of standby energy waste, along with a comprehensive guide to energy-efficiency standards around the world. Reflecting the environmental benefits of [EcoSmart](#) technology, Power Integrations is included in clean-technology stock indices sponsored by the Cleantech Group (Amex: CTIUS) and Clean Edge (Nasdaq: CELS). For more information, please visit <http://www.powerint.com>.

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