



New High-Efficiency Power Supply Design from Power Integrations Keeps LCD Monitor Standby Usage Under 80 mW

TinySwitch^(R)-PK Design Consumes Only 80 mW Input Power While Delivering 30 mW, Easily Meeting Standby Requirements of European Ecodesign Directive and ENERGY STAR

SAN JOSE, Calif., Aug 18, 2009 (BUSINESS WIRE) -- Power Integrations (Nasdaq:[POWI](#)), the leader in high-voltage integrated circuits for energy-efficient power conversion, today published a new Design Engineering Report ([DER-229](#)) which details the design of a 27-watt power supply for LCD monitors and similar applications.

Based on Power Integrations' TNY380PN, a member of the [TinySwitch-PK](#) product family, the design is more than 80% efficient at full load under worst-case conditions. This 15-volt main output, 5-volt auxiliary output, power supply draws comfortably less than 80 mW input power when delivering 30 mW to the system in standby mode. Such ultra-low standby consumption ensures that there is ample power available for designers to incorporate remote ON/OFF functionality without exceeding the limits of several prominent OEM PC system integrators, and greatly exceeds the 1-watt specification of [ENERGY STAR](#) and the mandatory 500 mW requirement of the European Union Tier 2 [Ecodesign Directive](#) for Energy-Using Products (EuP).

TinySwitch-PK includes control and regulation functions that minimize power consumption at no-load. The IC also uses frequency jittering to reduce the size of the EMI (electromagnetic interference) filter, eliminating the need for X capacitors and their associated bleed resistors (required for safety compliance), which can themselves dissipate more than 30 mW.

The transformer used in [DER-229](#) was designed using Power Integrations' popular [PI Expert^{\(R\)}](#) power supply design software to reduce parasitic losses between windings. High switching frequency at full load suppresses acoustic noise from the power supply and enables the use of very small magnetic components, making the new design ideally suited for slim form-factor LCD monitors and similar space-constrained applications.

Comments Andrew Smith, product marketing manager at Power Integrations: "Many information technology equipment OEMs are embracing the philosophy that if low standby is good, then *really low* standby is even better. By delivering a power supply with a no-load consumption of less than 80 mW, customers can easily meet all known standby power regulations and the most advanced market-driven requirements, while leaving a large power budget available for other circuit functions. The design is also highly efficient in normal operation, enabling PSUs that easily meet full-load efficiency requirements."

Power Integrations has produced several ultra-low standby power design examples dissipating as little as 8 mW no-load for low-power adapter applications. Additional details are available on the company's new ultra-low-standby microsite (www.powerint.com/standby). [DER-229](#) is available now for download at www.powerint.com/PDFFiles/der229.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 \$3.6 billion of standby energy waste and prevented millions of tons of CO₂ emissions. The company's [Green Room](#) web site 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 www.powerint.com.

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