

Power Integrations' New HiperPFS™ Design Enables 97%-Efficient Active Power Factor Correction in a 900-Watt Power Supply

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Design replaces passive PFC solutions in white goods, blowers, motor control drives, and computing applications; enables near-unity power factor with low parts count

SAN JOSE, Calif.--(BUSINESS WIRE)-- Power Integrations (Nasdaq:**POWI**), the leader in high-voltage integrated circuits for energy-efficient power conversion, today published a new design example report (**DER-274**) describing a 900-watt power supply with 97%-efficient active power factor correction (PFC). Based on the company's **HiperPFS™** family of highly integrated, high-efficiency PFC controller ICs, the design offers a smaller, lighter, higher efficiency alternative to passive PFC solutions for white goods, blowers, computers/servers, power supplies, and motor control drives.

The **HiperPFS** family of PFC controllers incorporates a continuous conduction mode (CCM) boost PFC controller, gate driver, and high-voltage power MOSFET in a single, low-profile eSIP™ package. Suitable for PFC applications from 85 W to 1 kW, **HiperPFS** devices employ an innovative control scheme that optimizes efficiency over the entire load range of the converter, particularly at light loads. This variable-frequency control technique also significantly reduces EMI filtering requirements due to its wide-bandwidth, spread-spectrum effect. Compared with designs that use discrete MOSFETs and controllers, **HiperPFS** devices dramatically reduce component count and board footprint, while simplifying system design and enhancing reliability.

The power supply detailed in **DER-274**, based on **HiperPFS** part number PFS729EG, is a general-purpose, high-efficiency evaluation platform that operates from 180 VAC to 264 VAC input and provides a regulated 380 VDC output voltage and a continuous output power of 900 W at 25°C.

Comments Edward Ong, product marketing manager at Power Integrations: "The **HiperPFS** family stands apart from competing PFC solutions for the high efficiency and high power factor that can be achieved across the load range, as well its ease of use and low external parts count. Designers of white goods, blowers, and water pump applications can use **HiperPFS** to meet high power factor and line harmonic standards."

HiperPFS ICs include Power Integrations' standard set of comprehensive safety features, such as integrated soft-start, undervoltage, overvoltage, brown-in/out, and hysteretic thermal shutdown protection. **HiperPFS** also provides cycle-by-cycle current limit for the power MOSFET, power limiting of the output for over-load protection, and pin-to-pin short-circuit protection.

This design example report (**DER-274**) is free to download now from the Power Integrations website at www.powerint.com/sites/default/files/PDFFiles/der274.pdf. The **HiperPFS** product introductory video, data sheet, application notes, and other design examples are available on the company's website at www.powerint.com/hiperpfs.

About Power Integrations

Power Integrations is the leading supplier of high-voltage 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™ energy-efficiency technology has saved an estimated \$4.9 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' stock is included in The Cleantech Index® and the NASDAQ® **Clean Edge**® Green Energy Index. For more information, please visit www.powerint.com.

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