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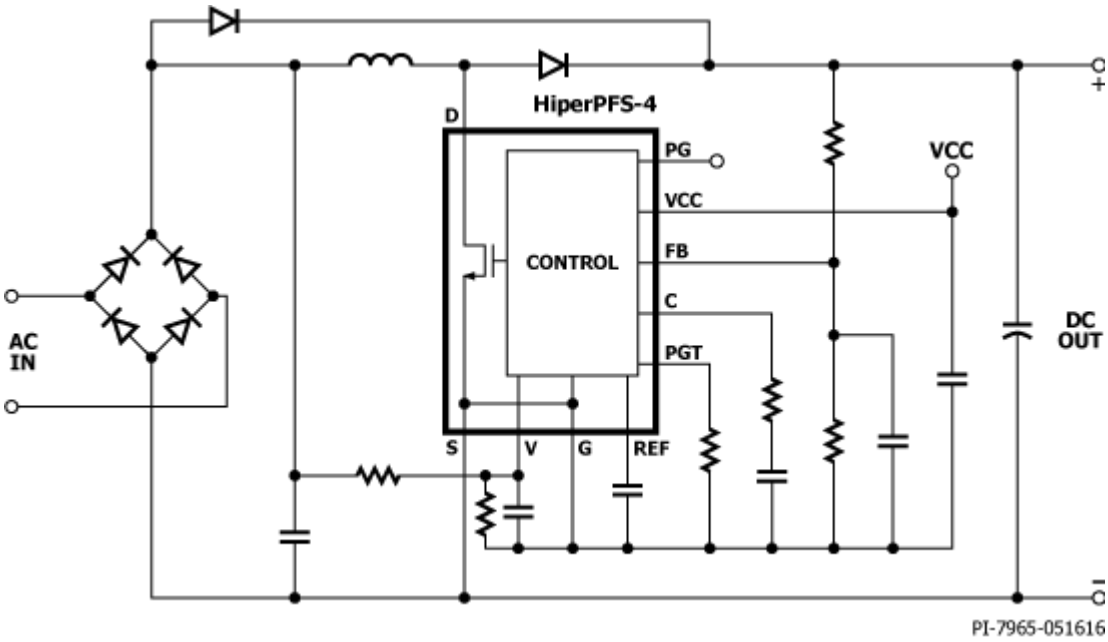
Thermally Efficient PFC Controller IC Enables 100-W Adapters With No Heatsinks

Power Integrations' HiperPFS-4 ICs are now available in low-profile, thermally efficient InSOP-24B surface-mount packaging. When paired with a PowiGaN-based InnoSwitch3 switcher IC or LYTSwitch-6 LED driver IC, the HiperPFS-4 allows power supply designs up to 100 W with no heatsinks on either the PFC stage or the flyback stage (see the figure).

Download the following design example reports to see the high efficiency, low component count and low no-load consumption made possible by these devices. One is the DER-602, a 100-W USB PD Type-C adapter, which is based on the HiperPFS-4 and PowiGaN-based InnoSwitch3-CP. Another is the DER-801 , a 100-W LED ballast with three-way dimming, which combines the HiperPFS-4 with the PowiGaN-based LYTSwitch-6. For more information, see the HiperPFS-4 product page or download the data sheet



(a)

(b)

Figure. The HiperPFS-4 incorporates a PFC controller, gate driver and 600-V MOSFET. The highly integrated device eliminates the need for external current-sense resistors and achieves 96.9% average efficiency at 115 Vac. An application circuit is shown here (a) along with the low-profile InSOP-24B surface-mount package (b).