Flyback controller surpasses Energy Star 5 requirements for 10-W to 65-W AC adapters

Texas Instruments announced a flyback controller that exceeds Energy Star 5 standby power requirements for 10-W to 65-W AC/DC adapters used with notebooks, motor control, smart meters, micro-inverters and other high-powered applications. Used in conjunction with the company's WEBENCH online design tool, the LM5023 flyback controller is positioned to simplify and speed high-voltage DC/DC designs. TheLM5023 isolated quasi-resonant pulse-width modulation (PWM) controller with integrated 700-mA driver offers high efficiency at up to 90 percent, low EMI and less than 10-mW of standby power. It provides 1-percent accurate output voltage regulation, eliminating the need for cable compensation. When coupled with the LMV431 shunt reference, it provides a competitively priced, 1-percent accurate flyback controller system, according to the company. It exceeds Energy Star 5 and European Commission 5-Star requirements for stand-by power (greater than 30 mW) and operates at low-power skip mode for ultra-low stand-by power, or less than 10 mW at 230 VAC. This minimizes energy-wasting vampire effect of AC/DC power supplies. Hiccup-mode overload protection reduces the stress on power components during overload conditions, increasing system reliability, and critical conduction mode results in higher efficiencies, reducing switching losses through lower EMI and the use of a less expensive rectifier diode.

Texas Instruments, www.ti.com [1]

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