



Low Start-up Current Wide V_{IN} Range Current Mode Flyback DC/DC Controller

MILPITAS, CA – January 30, 2007 – Linear Technology Corporation introduces the LTC3805, a current mode, programmable frequency PWM controller that reduces the size and complexity of flyback power supplies. This device contains all the features necessary to design high efficient single-ended isolated and non-isolated flyback converters rated up to 25 watts for telecommunications, networking equipment, Power-over-Ethernet (POE), automotive, consumer and general house keeping power supplies. With its ultra low 40uA start-up current, the IC allows the use of a high-value input resistor and a low-value capacitor for low power dissipation and quick power supply start-up.

The LTC3805 is ideal for wide input voltage range applications where the input can vary from 9V to 72V during start-up and will sustain operation from 4V to 72V after start up. This enables users to have one power supply for both 48V and 24V nominal input systems. With a standby quiescent current of only 360uA, makes it an excellent choice for automotive applications.

The LTC3805 can regulate output voltages as low as 0.8V and has an integrated soft-start function that limits inrush current, reducing output voltage overshoot. Its micro power hysteretic start-up circuit uses an internal Zener clamp to protect the part from input over voltage conditions. The operating frequency is selectable from 70kHz to 700kHz by one external resistor or for noise sensitive requirements can be synchronized to the same range. Constant frequency operation is maintained down to light loads, resulting is less low frequency noise generation over a wide range of load currents. The 100mV current sense threshold allows the use of a very small current sense resistor, which helps maintain high efficiency. With adjustable slope compensation, an LTC3805-based power supply achieves fast transient response with minimum output capacitance.

The LTC3805 is offered in a 10-Lead 3mm x 3mm DFN or 10-lead MSOP package and has an operating temperature range from -40°C to 85°C. The 1,000-piece price starts at \$1.39 each.


Photo Caption: Low Start-up Current Flyback DC/DC Controller

Summary of Features: LTC3805

- Start up Current of 40uA
- V_{IN} and V_{OUT} Limited Only by External Components
- Adjustable Slope Compensation
- Internal Soft Start
- Current Mode Control
- 70kHz to 700kHz Adjustable Constant Frequency Operation
- Synchronizable up to 700kHz

About Linear Technology

Linear Technology Corporation, a manufacturer of high performance linear integrated circuits, was founded in 1981, became a public company in 1986 and joined the S&P 500 index of major public companies in 2000. Linear Technology products include high performance amplifiers, comparators, voltage references, monolithic filters, linear regulators, DC-DC converters, battery chargers, data converters, communications interface circuits, RF signal conditioning circuits, and many other analog functions. Applications for Linear Technology's high performance circuits include telecommunications, cellular telephones, networking products such as optical switches, notebook and desktop computers, computer peripherals, video/multimedia, industrial instrumentation, security monitoring devices, high-end consumer products such as digital cameras and MP3 players, complex medical devices, automotive electronics, factory automation, process control, and military and space systems. For more information, visit www.linear.com

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