Product Overview

FL7930C: Single-Stage Flyback and Boundary-Mode PFC Controller for Lighting

For complete documentation, see the data sheet.

The FL7930C is an active power factor correction (PFC) controller for boost PFC applications that operate in critical conduction mode (CRM). It uses a voltage-mode PWM that compares an internal ramp signal with the error amplifier output to generate a MOSFET turn-off signal. Because the voltage-mode CRM PFC controller does not need rectified AC line voltage information, it saves the power loss of an input voltage-sensing network necessary for a current-mode CRM PFC controller.FL7930C provides over-voltage protection (OVP), open-feedback protection, over-current protection (OCP), input-voltage-absent detection, and under-voltage lockout protection (UVLO). The PFC-ready pin can be used to trigger other power stages when PFC output voltage reaches the proper level with hysteresis. The FL7930C can be disabled if the INV pin voltage is lower than 0.45 V and the operating current decreases to a very low level. Using a new variable on-time control method, total harmonic distortion (THD) is lower than in conventional CRM boost PFC ICs.

Features

- PFC-Ready Signal
- VIN-Absent Detection
- Maximum Switching Frequency Limitation
- Internal Soft-Start and Startup without Overshoot
- Internal Total Harmonic Distortion (THD) Optimizer
- Precise Adjustable Output Over-Voltage Protection
- Open-Feedback Protection and Disable Function
- Zero-Current Detector (ZCD)
- 150 µs Internal Startup Timer
- MOSFET Over-Current Protection (OCP)
  For more features, see the data sheet

Applications

- Lighting

Part Electrical Specifications

Product	Pricing ($/Unit)	Compliance	Status	Topology	V_I Min (V)	V_I Max (V)	V_O Max (V)	I_O Max (mA)	f_{SW} Typ (kHz)	Package Type
FL7930CMX-G	0.2933	Pb-free Halide free	Active		13	308 V_{AC}	Step up	500/800 - Source/Sink	Variable	SOIC-8

For more information please contact your local sales support at www.onsemi.com.

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