Low Cost Primary Side Regulation (PSR) CV/CC Controller

FEATURES

- **Low Cost Solution with Dynamic BJT Base Driver Integrated**
- **Multi-Mode PSR Control**
- **Audio Noise Free Operation**
- **±4% CC and CV Regulation**
- **Optimized Dynamic Response**
- **Low Standby Power <70mW**
- **Programmable Cable Drop Compensation (CDC) in CV Mode**
- **Built-in AC Line & Load CC Compensation**
- **Build in Protections:**
  - **Short Load Protection (SLP)**
  - **Cycle-by-Cycle Current Limiting**
  - **Leading Edge Blanking (LEB)**
  - **Pin Floating Protection**
  - **VDD OVP & UVP & Clamp**
- **Available with KP211A/KP211B/KP211C Versions in SOT23-5L Package**

APPLICATIONS

- **Battery Chargers for Cellular Phones**
- **AC/DC Power Adapter and LED Lightings**

GENERAL DESCRIPTION

KP211 is a low cost and high performance Primary Side Regulation (PSR) controller for offline small power converter applications which can provide very tight output voltage regulation (CV) and output current control (CC) ideal for charging applications.

In CV mode, KP211 adopts Multi Mode Control which uses the hybrid of AM (Amplitude Modulation) mode and (Frequency Modulation) FM mode to improve system efficiency and reliability. In CC mode, the IC uses PFM control with line and load CC compensation. The IC can achieve audio noise free operation and optimized dynamic response. The built-in Cable Drop Compensation (CDC) function can provide excellent CV performance.

KP211 integrates functions and protections of Under Voltage Lockout (UVLO), VDD over Voltage Protection (VDD OVP), Cycle-by-cycle Current Limiting (OCP), Short Load Protection (SLP), Pin Floating Protection, VDD Clamping, etc.

TYPICAL APPLICATION CIRCUIT